

**NI 43-101 TECHNICAL REPORT  
ON THE  
EL CAPITAN PROJECT,  
LINCOLN COUNTY, NEW MEXICO**

**Prepared for  
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**Effective Date July 24, 2023**

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## 1 Summary

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The El Capitan project is located approximately 5 miles NNE of the town of Capitan, in Lincoln County, south-central New Mexico. The property consists of 112 Bureau of Land Management (BLM) unpatented lode claims and four patented claims covering a total area of approximately 2,320 acres. El Capitan Precious Metals Inc. and its subsidiary ECPN Technologies Inc. have 100% ownership of the claims. No property payments or royalties are due on the four patented claims. The author is not aware of any current environmental liabilities on the project.

The El Capitan deposit has been known as a potential iron ore resource for several decades, with early work by the U.S. Bureau of Mines in 1944 and 1948, and Kelley (1952). Small-scale iron ore production totaled approximately 250,000 tons in the years 1961-1988. El Capitan Precious Metals Inc. began work on the project in 2002 with a ground magnetic survey and a drill program of six shallow holes. Although only low precious metals values had been obtained from the deposit by fire assay over the years and no significant exploration had been conducted on the property, beginning in May 2004 Auric Metallurgical Laboratories of Salt Lake City, Utah, began reporting significant gold and platinum results on samples from the project using their proprietary caustic fusion assay method. These results prompted a 32-sample surface sampling and assay program conducted by the author in January 2005, which returned potential ore-grade gold and platinum results on all 32 samples, causing El Capitan to undertake three stages of exploration drilling. Following drilling, the company commissioned a study to verify the Auric proprietary caustic fusion assay method; based on the positive results of this report, the company undertook an initial resource calculation followed by a full technical report that reported a measured resource in 2007. Since that time, additional analytical testing has been carried out by the company, focused on developing viable assay and metallurgical extraction methods.

The El Capitan project is located at the most prominent structural intersection in New Mexico within the area of the greatest exposed concentration of Tertiary intrusions in the state. Regional air magnetic and gravity surveys indicate that the project is underlain by an interpreted large mafic or ultramafic intrusion. The El Capitan deposit is one of 16 Au-Ag-bearing occurrences in a 270-mile-long, north-south trending belt that traverses New Mexico within the Rio Grande Rift. The project is located within a 12-square-mile north-south-trending belt approximately 2 miles wide underlain by Permian (250-296 Ma) limestone and lesser quartz sandstone. These sedimentary rocks crop out intermittently between the bold outcrops of the Miocene-age Capitan aplite intrusion to the east and rhyolitic volcanics and lesser interbedded basaltic volcanics and conglomerate to the west. The rhyolites are dominantly ash flows and appear to be the extrusive equivalents of the aplite intrusion.

The El Capitan deposit is exposed in a shallow open pit within a nearly circular area of 1300 feet in diameter. Mineralization consists of a shallow west-dipping skarn body of oxide- and silicate-facies skarn hosted in limestone, sandstone, and aplite. Skarn mineralization includes two magnetite dominant zones, and a variety of skarn assemblages including hematite, calcite, phlogopite, diopside, quartz, tremolite, as well as crystalline limestone. Mineralization lies above the west-plunging Capitan aplite pluton. No zonal mineralogical pattern is apparent among skarn facies. The mineralized body is at least 3000 feet long in an east-west direction, at least 2000 feet wide north-south, and ranges in thickness up to 400 feet. All of the above-described rocks are cut by ubiquitous and commonly abundant hematite, oxidized to limonite or goethite on surface and in the upper parts of drill holes. Hematite occurs as a primary constituent in all skarn assemblages and as post-skarn fracture fillings, stockworks, breccia fillings, and replacements with calcite in skarn, limestone, sandstone, and aplite. Geologic evidence indicates that gold (Au) was introduced both during magnetite skarn formation and during hematite-calcite veining. Mineralization fits into three mineral-deposit classes: 1) skarn deposits; 2) Great Plains Margin deposits; and 3) hydrothermal gold-platinum deposits.

Drilling on the project has consisted of 37 holes of core, open-hole rotary, and reverse-circulation drilling totaling 12,763.5 feet, which took place between April 2005 and May 2006. Drill-hole spacing is irregular, ranging from 150 to 700 feet and averaging approximately 400 feet. The holes are located over an area of 3600 feet east-west by 2100 feet north-south and were drilled to variable depths ranging from 98 feet to 710 feet.

Until recent years, all drill samples were kept in secure storage and under intact chain of custody; the current status of drill samples can not be confirmed by the author. All drill samples were analyzed by Auric Metallurgical Labs using a proprietary caustic fusion assay method to generate results for Au, Ag, Pt, and Pd. The lab is independent of El Capitan Precious Metals. Although the fundamental principles of Auric's caustic fusion assay method have been

known for many years and are available in metallurgy textbooks, Auric is reluctant to release details of its method. For this reason, samples analyzed by Auric were subjected to an independent evaluation and verification study. Although questions remain regarding the verification study, it provided independent confirmation of Auric's caustic fusion assay process. Subsequent to Auric's analysis of drill samples, ongoing testing has involved additional laboratories; the author can only comment on sample preparation, analysis, and security and data verification for a limited subset of samples analyzed by other laboratories.

Since 2006, analytical results have been mixed. The Auric Metallurgical caustic fusion assay remains the sole consistently effective assay method used on the project. Focused analytical testing has been carried out since early 2012 in 13 stages; the author has had only intermittent contact with some of these methods. Although potentially encouraging results have been obtained from some methods, many were compromised by unacceptable quality control results. To date, no viable analytical testing method has been developed apart from Auric's caustic fusion assay.

Scanning electron microscope work on gravity concentrates has unequivocally proven the presence of gold at the El Capitan project. In this work, <10-micron grains of Au were imaged, either as individual solitary grains or as inclusions within magnetite; detections were confirmed by energy-dispersive spectrophotometry (EDS) analysis.

Hydrometallurgical extractions by Auric Metallurgical in 2005 and 2019 using sodium cyanide and sodium thiosulfate leaches on Au head ore grades of 0.017-0.089 opt Au (ounces per tonne Au) and non-magnetic concentrates of 0.189-0.266 opt Au have produced impressive recoveries in the range 72.6-98.3%. Extractions on Pt head grades of 0.015-0.44 opt Pt have also resulted in recoveries in the range 63.4-78%. To date, hydrometallurgy appears to hold the best promise for potential commercial production of precious metals. In addition, although requiring verification, pyrometallurgical and hydrometallurgical procedures developed by AuraSource Inc. in a laboratory in China show ore-grade Au and Pt values on an El Capitan concentrate sample as well as on samples from another deposit of similar geologic character to El Capitan. El Capitan Precious Metals should encourage AuraSource Inc. to establish a laboratory in the U.S.

A resource calculation based on Auric's caustic fusion drill hole assays was completed by Gemcom Software International in their Vancouver, B.C., Canada, offices, supervised by the author and two other consultants. Using a 0.01 opt Au cut-off grade, the study showed a measured resource of 141,444,000 short tons grading 0.020 opt Au, 0.011 opt Pt, with a contained 2,769,106 ounces Au and 1,517,868 ounces Pt. The deposit is apparently closed on the north, east, and south sides but open to the west. It should be noted that this resource calculation relies entirely on Auric Metallurgical Labs analyses using a non-standard analytical method.

The El Capitan project comes with the following three risks and uncertainties: 1) El Capitan samples have not consistently responded to standard fire assays and reliance has been placed on the caustic fusion assay method of Auric Metallurgical labs. Although independently verified, the method is non-standard and results will be questioned by the mining industry. In order to meet assay standards commonly required by the industry, the company should continue to seek a laboratory that can consistently produce verification assays using the Auric method. 2) Although hydrometallurgical extraction results produced by Auric Metallurgical are impressive, the company should continue to seek a laboratory that can consistently produce verification extractions using the Auric method. It is possible that the AuraSouce Inc. pyromettallurgical and hydrometallurgical methods may provide this verification. 3) All mining projects come with some level of permitting risk. Local opposition is likely the biggest permitting risk on this project. This could be most effectively mitigated by contracting with credible and professional permitting consultants who can guide the company through the permitting and community relations processes.

The author makes the following recommendations for the project that include a budget of US\$172,000.

- The 12 mi.<sup>2</sup> band of Permian limestone and quartz sandstone that is the host rock for the El Capitan deposit should be explored with a detailed ground magnetic survey conducted by a reputable geophysical survey company with results interpreted by an experienced consultant. Hyperspectral anomalies and ore-grade assays from anomalies show potential for additional El Capitan deposits. Magnetic anomalies should be geologically mapped and sampled followed by recommendations by the geologist for drilling.
- El Capitan Precious Metals should pursue an aggressive approach to metallurgical evaluation, a feasibility study, and potential production of a magnetite iron ore concentrate and production of Au, Pt, and possibly other precious metals. This would involve test work to determine the optimum method of magnetic concentration to produce a commercially viable iron ore and an optimum method for extracting Au, Pt, and

other precious metals. A three-phase laboratory study is recommended; with success at these stages, the project could be advanced to pilot plants and production. In addition, AuraSource Inc. should be encouraged to establish a pyrometallurgical or hydrometallurgical extraction facility in the U.S.

## **2 Introduction**

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This report has been prepared at the request of Mr. Douglas Sanders, Director of El Capitan Precious Metals, Inc., as an update to a report authored by me on the El Capital project dated March 22, 2022. The purpose of this report is to provide an explanation of the work conducted on the El Capitan project, located in Lincoln County, New Mexico, and to summarize the results of geologic investigations including mapping, drilling, assaying, metallurgical extractions, and calculation of a resource that could be used in determining the potential economic viability of the El Capitan deposit as a producing iron ore and precious metals mine.

In 2001, the Canadian government published National Instrument 43-101 in an attempt to establish rigorous high-quality standards for professional reports written on exploration and mining properties. As a result, NI 43-101 guidelines have been universally adopted by North American exploration and mining companies. This report complies with all aspects of the NI 43-101 guidelines. In particular, because the U.S. Securities and Exchange Commission does not recognize “resource” categories for deposits, this report uses the NI 43-101 resource category definitions.

### **2.1 Sources of Information**

The sources of information used in this report include published and unpublished reports on the project, published reports and maps on the regional geology, and project data generated by or under the direction of the author. The author has also reviewed and reported on selected test results that have not been generated under his direction nor independently verified, but that are included in this report because they are part of the project history. A detailed list of references and information sources is included at the end of the report.

The author has made numerous visits to the El Capital property beginning in December 2004. The author provided geological consulting services under an agreement with El Capitan Precious Metals, Inc. between January 2005 and January 2014 when he was responsible for directing all aspects of the geological exploration program described in this report. This work included reviewing and interpreting published materials on regional geologic studies, geologic mapping, designing and administering drill programs, geologic logging of all drill holes, maintaining chain of custody of samples, working intermittently with assayers and metallurgists, overseeing resource calculations, and making recommendations for continuing work on the project. This work included evaluation and direction of metallurgical studies focused on achieving production of commercially viable iron ore and precious metals products, and to complete NI 43-101 technical reports. The author was retained again in March 2022 to complete an updated NI 43-101 technical report.

### **2.2 Independence**

The author is an independent geological consultant and currently holds no stock or any incentive in El Capitan Precious Metals, Inc.

### **2.3 Current Personal Inspection**

The author’s most recent personal inspection of the property took place on July 18, 2023, during which he toured the property and obtained additional samples of concentrates and mineralized outcrops for future analytical or metallurgical test work.

## **3 Reliance on Other Experts**

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The author has relied on reports and opinions prepared by metallurgical engineer Mr. Richard Danielle, principally his report, “Summary Report of Evaluation and Validation of Auric Alkali Fusion Analytical Procedure at Wendell & Company,” dated September 1, 2005, as discussed in the Data Verification section of this report. The author has

also relied on reports and opinions prepared by analytical chemist Noel Palmer, PhD, in this report's section on Sample Preparation, Analysis, and Security, which is based in part on Dr. Palmer's report "Results of El Capitan Analytical Testing Stages 1, 2, 4, and 5," dated February 27, 2012. In both cases, the author has relied on the conclusions of these independent experts in support of analytical work on the project.

The sections on Environmental Liabilities and Permitting have been summarized from verbal and email communications during February 2012, with Ms. Vickie Maranville, Project Manager for environmental consultants AMEC, which provided permitting and environmental services to the company.

The section on Mineral Resource Estimates is based on resource modeling performed by Mr. Manuel Arre of Gemcom Software International in February 2007. Mr. Arre performed the calculations under the direction of the author, then-President of El Capitan, Mr. Kenneth Pavlich, and geological consultant David S. Smith.

Except in the case of reports by Noel Palmer and David Smith, and resource modeling by Mr. Manuel Arre, the author has not been able to fully verify the information in the above reports and communications but is of the opinion that they are generally accurate and reliable.

## **4 Property Description and Location**

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### **4.1 Property Description and Location**

The El Capitan project is located approximately five miles NNE of the town of Capitan, in Lincoln County, south-central New Mexico (Figure 1). The property is in Sections 9 through 16, Township 8 South, Range 14 East, New Mexico Principal Meridian, on the Capitan and Jacob Spring U.S. Geological Survey 1:24,000 topographic quadrangle maps. The center of the project is at approximate GPS coordinates 448450E, 3719950N, using datum WSG 84 Coordinate System.

The El Capitan property consists of three blocks of claims (Fig. 2):

- Four patented claims located in 1902 and patented in 1911 with Mineral Survey Numbers 1440, 1441, 1442, and 1443. No property payments or royalties are due on these claims.
- Twelve Bureau of Land Management (BLM) unpatented lode claims that were staked between 1996 and 2011. These claims are shown in gray in Figure 2. These claims have been maintained in good standing by payment of annual maintenance fees since 2012.
- One hundred Bureau of Land Management (BLM) unpatented lode claims that were staked on March 9, 2022, recorded in the Lincoln County BLM office on March 11, 2022, with payment of a total of \$22,500 acknowledged by the Santa Fe, NM, BLM office on March 15, 2022.

The 112 unpatented lode claims are named Smokey and consist of the following numbers: 1-6, 10-18, 20-24, 26-28, 30-53, 228-237, 254-264, 281-285, 298-302, 314-316, 328-331, 354-360, 381-391, 420-428.

On July 18, 2023, Commissioner Nicholas Morero in the Lincoln County government office, Carrizozo, NM, confirmed and provided documentation that these 112 claims are in good standing.

All of the above claims are in good standing with the BLM as of the effective date of this report. Surface lands in the property area are administered by the U.S. Forest Service.





Figure 1. Location El Capitan Project in New Mexico.



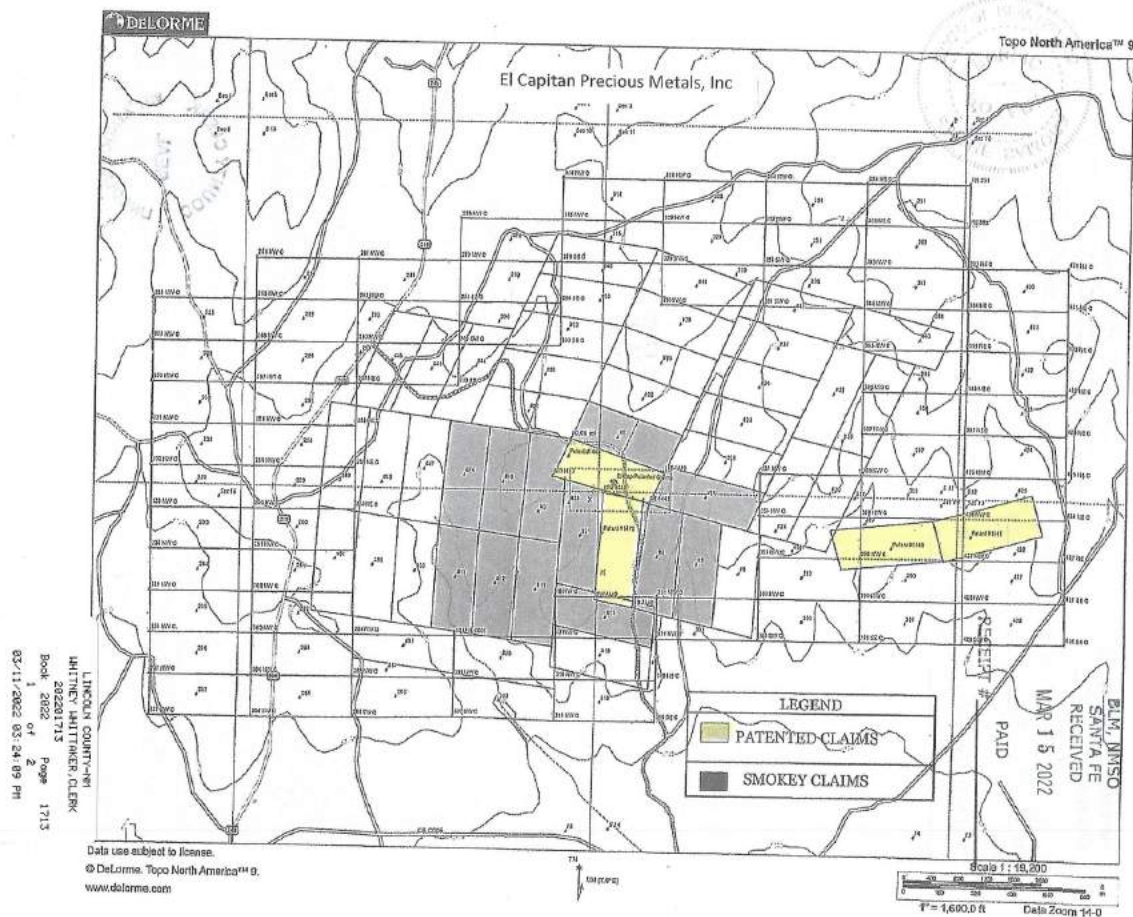


Figure 2. Map of El Capitan Precious Metals Inc. claim block. Four patented claims shown in yellow; 12 unpatented claims held since 1996-2011 in gray, and 100 uncolored unpatented claims staked and recorded in March 2022.

## 4.2 Nature of El Capitan's Interest

The El Capitan claims are owned by El Capitan Precious Metals Inc., a Nevada corporation in good standing as of the effective date of this report, and its subsidiary, ECPN Technologies Inc. The company has staked the unpatented lode claims in 1996, 2000, 2003, 2005, 2011, and 2022, and purchased a 100% equity interest in the four patented claims in January 2006.

## 4.3 Environmental Liabilities

The author is not aware of any current environmental liabilities on the project.

## 4.4 Permitting

Permitting for the El Capitan project is required for two functions: exploration drilling on areas outside of the central mine area and mining operations.

Two principal government agencies oversee exploration permitting for the project: the U.S. Forest Service (USFS) and the New Mexico Mining and Minerals Division (MMD). Through its permitting consultant, AMEC, El Capitan has previously submitted documents to both agencies. USFS requires approval of a Plan of Operations that has been submitted, revised, and re-submitted. A National Environmental Policy Act (NEPA) scope of work was also

submitted to the USFS, comments received, and incorporated into a revised NEPA scope of work. MMD requires approval of a Subpart 4 Exploration Permit, which has been submitted and administrative comments received; a MMD site visit has been conducted.

Permitting for small-scale mining operations is reportedly in place. The company holds a Minimal Impact Existing Mine Operation Permit (number LI00 ME) issued in June 1999 covering mining on the property. According to El Capitan's permitting consultant AMEC in March 2022, the mining permit was valid and remains in effect.

Both exploration and mining permitting could potentially be affected by the Mining Ordinance passed by Lincoln County in 2009. This requires a proposed mining operation to comply with all State and Federal permitting requirements and adds to these a Mining Operations Permit issued by the county. It was AMEC's opinion in March 2022 that this statute may apply to the exploration permitting, but should not affect the mining permit, since the mining permit was issued and in effect long before the Mining Ordinance was passed.

## **5 Accessibility, Climate, Local Resources, Infrastructure, Physiography**

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The project is located approximately six miles by road north of the town of Capitan, New Mexico. It may be reached by driving 5.5 miles north from Capitan on paved State Highway 48 to a dirt road turn-off to the east. This road leads to the deposit located 0.8 mile from the highway.

The claim block covers gently rolling to moderately rugged topography ranging in elevation from 6700-7100 feet above sea level. Elevations in the area of the main El Capitan deposit are 6780-6900 feet. Vegetation is sparse, consisting of scattered juniper trees with grass and rare small cactus ground cover. The climate of the area is amenable to year-round operations. Summer temperatures reach 95 degrees and winter temperatures may drop below freezing with brief periods of snow.

Surface rights for mining are administered by the U.S. Forest Service and are generally awarded in the southwestern U.S., subject to the permitting and environmental issues outlined above.

The property is currently supplied with power and telephone service. Water for a mining operation will probably only be available from wells drilled on the property. The gently rolling terrain of the main deposit should provide acceptable locations for plant sites and waste and tailings disposal.

The southwestern U.S. has ample skilled mining labor available from large population centers such as Phoenix and Tucson, Arizona. Local labor is also available from such nearby towns as Capitan, Ruidoso, and Roswell, New Mexico.

## **6 History**

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The El Capitan deposit has been known as a potential iron ore resource for several decades. The U.S. Bureau of Mines drilled approximately 140 shallow holes through an outcropping, shallowly-dipping magnetite skarn deposit in 1944 and 1948. The outcropping deposit was geologically mapped at a scale of 1:3600 in 1952 (Kelley, 1952). Small-scale iron ore production totaled approximately 250,000 tons in the years 1961-1988. El Capitan Precious Metals Inc. conducted a ground magnetic survey and a drill program of six shallow holes in 2002.

Although only low precious metals values had been obtained from the deposit by fire assay over the years, and no significant exploration had been conducted on the property, in May 2004 El Capitan Precious Metals submitted a few samples of magnetite skarn to Auric Metallurgical Labs in Salt Lake City, Utah. Auric separated the samples into magnetic and non-magnetic fractions and reported significant gold and platinum results on the non-magnetic fractions using their proprietary caustic fusion assay method.

The encouraging 2004 Auric assay results prompted a 32-sample surface sampling and assay program conducted by the author in January 2005. Auric reported potential ore-grade gold and platinum results on all 32 samples; this caused El Capitan Precious Metals Inc. to undertake three stages (Stage 1, Stage 2, Stage 3) of core, open-hole rotary, and reverse circulation drilling, under the direction of the author, which took place between April 2005 and May 2006.

Following the drilling campaigns, the company commissioned a study to verify the Auric proprietary caustic fusion assay method (Danielle, 2005). Based on the positive results of this report, the company undertook an initial

resource calculation (Smith, 2005), followed by NI 43-101 Technical Reports (Smith 2012, 2014). In 2007, Mr. Ken Pavlich became President and CEO of the company and served in this role until 2009. During this time a significant amount of testing work was undertaken in order to verify the presence of precious metals. Most of this work was done on four composite samples prepared from drill samples. A wide variety of tests were performed at numerous labs.

## **7 Geologic Setting and Mineralization**

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### **7.1 Regional Geology**

The El Capitan project is located at the most prominent structural intersection in New Mexico (Scholte, 2003), within perhaps the greatest exposed concentration of Tertiary intrusions in New Mexico (Cather et al, 1991; Figure 3). Air magnetic and gravity surveys suggest that the project is underlain by a large mafic or ultramafic intrusion (Figures 4, 5). The structural intersection is formed by the north-south-trending axis of the Pedernal uplift-Mescalero arch and the east-west-trending Capitan lineament (Figure 3). In the south, the Pedernal-Mescalero axis closely parallels the Sacramento uplift, an east-tilted fault block with evidence of at least three periods of deformation ranging from Precambrian to late Tertiary; in the north it closely parallels a series of faults and folds in the Picuris-Pecos trend. The Pedernal-Mescalero structural zone coincides generally with a belt of crustal thickening and alkalic intrusions (Bird, 1984) that marks the boundary between the tectonically active Rio Grande Rift (a branch of the Basin and Range) and Rocky Mountains on the west and the tectonically stable Great Plains on the east. The Pedernal-Mescalero axis appears to be offset approximately 8.5 miles across the Capitan lineament (Cather et al, 1991). The Capitan lineament is a well-defined basement fracture and magmatic zone that can be traced for over 270 miles from Socorro, New Mexico into western Texas; in the area of the El Capitan deposit the lineament is reflected by the Capitan pluton (Figure 3).

The Tertiary intrusions in the area form the Lincoln County porphyry belt that includes at least 11 stocks and laccoliths (Figure 3). The east-west elongate, 35 km-long Capitan pluton is a Miocene (26.5 Ma) aplite (granitic) laccolith that plunges westerly and underlies the El Capitan deposit. Thompson (1991) concluded that magmas in the porphyry belt were generated from both lower crustal and upper mantle sources, and McLemore (1991) concluded that a diversity of mineral deposit types in the El Capitan region resulted from several different complex magmatic fractionation and differentiation events. Figures 4 and 5, from Roberts, et al (1991), show coincident steep-gradient aeromagnetic and gravity anomalies. These anomalies cover an area of over 270 square miles, show northerly and easterly structural trends, and are interpreted to reflect a large mafic or ultramafic intrusion that underlies the Lincoln County porphyry belt and the El Capitan deposit. It is possible that precious metals-bearing hydrothermal fluids that formed the El Capitan deposit were differentiated from this buried mafic or ultramafic intrusion.

The El Capitan deposit is one of 16 Au-Ag-bearing occurrences in a 270-mile-long, north-south trending belt that traverses New Mexico within the Rio Grande Rift (Figure 6). McLemore (2001) has termed these occurrences Great Plains Margin deposits, has described the similarities between them, and has classified them as a distinct hydrothermal type located near Oligocene-Miocene (38-23 Ma) intrusions.

### **7.2 Property Geology**

The El Capitan deposit is located within a 10-square-mile north-south-trending belt approximately 2 miles wide underlain by Permian limestone and lesser quartz sandstone. These sedimentary rocks crop out intermittently between the bold outcrops of the Miocene Capitan aplite intrusion to the east and rhyolitic volcanics and lesser interbedded basaltic volcanics and conglomerate to the west. The rhyolites are dominantly ash flows and appear to be the extrusive equivalents of the aplite intrusion. Both the aplite and the rhyolites are unusually iron-rich; disseminations of limonite/goethite (original hematite) occur to some extent in most outcrops of these rocks. It is possible that the iron-rich composition of these rocks reflects crystallization from magmas that originated by differentiation from mafic/ultramafic magmas at depth; as noted above, coincident aeromagnetic and gravity anomalies in the region suggest deep mafic/ultramafic compositions.

### 7.3 Mineralization

The El Capitan deposit is exposed in a shallow open pit and outcrops within a nearly circular area 1300 feet in diameter (Figure 7). Kelly (1952) attributed the circular shape of the main El Capitan deposit to a solution collapse structure in the host San Andres limestone of Permian age. Drill results indicate, however, that the deposit extends in all directions beyond the area of surface exposure and that the circular shape is simply an erosional expression of a shallowly dipping skarn deposit.

Six east-west and seven north-south geologic cross-sections (Appendix 2) show the general geology of the deposit based on drill holes. These cross-sections show that the overall form of the El Capitan deposit is that of a flat-lying to shallow west-dipping body of skarn surrounded by crystalline limestone lying on the aplite intrusive contact. Interbeds of quartz sandstone interrupt the continuity of the skarn and crystalline limestone. The mineralized body is at least 3000 feet long in an east-west direction, at least 2000 feet wide north-south, and ranges in thickness up to 400 feet. Although potentially economic gold assays are concentrated in the skarn and crystalline limestone, potentially economic grades occur in all rock types, including fractured, stockwork, or brecciated quartz sandstone, limestone, and aplite.

The El Capitan skarn includes two magnetite-dominant zones (upper and lower magnetite bodies). The upper magnetite zone lies below a limestone cap that is bleached, fractured, and contains hematite-calcite fracture filling. This bleached, fractured, and veined limestone cap is nowhere more than a few tens of feet thick and it passes up-section into fresh limestone. Below the limestone cap rock and upper magnetite zone lie a variety of skarn assemblages including magnetite, hematite, calcite, phlogopite, diopside, quartz, tremolite, as well as crystalline limestone. These all lie above aplite of the Capitan pluton. At this stage, no zonal pattern has emerged among skarn facies. The aplite contact has a shallow westerly dip, ranging in depth, where drilled, from 100 feet in holes to the east to 450 feet in holes to the west (Appendix 2).

All of the above-described rocks are cut by ubiquitous and commonly abundant hematite, oxidized to limonite or goethite on surface and in the upper parts of drill holes. Hematite occurs as a primary constituent in all skarn assemblages and as post-skarn fracture fillings, stockworks, breccia fillings, and replacements with calcite in skarn, limestone, sandstone, and aplite. Hematite commonly exceeds 12% and ranges as high as 80% in some drill intervals. Fracture-filling and replacement hematite-calcite clearly represent a later-stage hydrothermal event that was superimposed on earlier rock types. An assumption that these fluids were derived exclusively from the aplite is questionable because fracture-filling hematite-calcite occurs in aplite in the deeper parts of some drill holes. It is therefore apparent that at least some portion of the hematite-calcite hydrothermal fluids were derived from a deeper source underlying the aplite intersected in drill holes.

Geologic evidence indicates that gold was introduced both during magnetite skarn formation and during hematite-calcite veining. Precious metals in the deposit appear to correlate with the presence of hematite-calcite: higher gold values (as assayed by Auric Labs) generally occur in both surface and drill samples with higher percentages of hematite. Two hematite-dominant samples from the El Capitan deposit studied at the Missouri Bureau of Mines in 1996 (Appendix 3) contained 2- to 35-micron crystals of electrum (Au-Ag alloy), native gold, and an unidentified possible Pt mineral as shown by reflected-light microscopy and scanning-electron microscopy with energy dispersive spectroscopy (SEM-EDS). SEM-EDS work conducted under the author's direction has revealed 1-micron crystals of Au with possibly small amounts of Pd as inclusions in magnetite crystals (see Analytical Testing, 2011-Present, below)

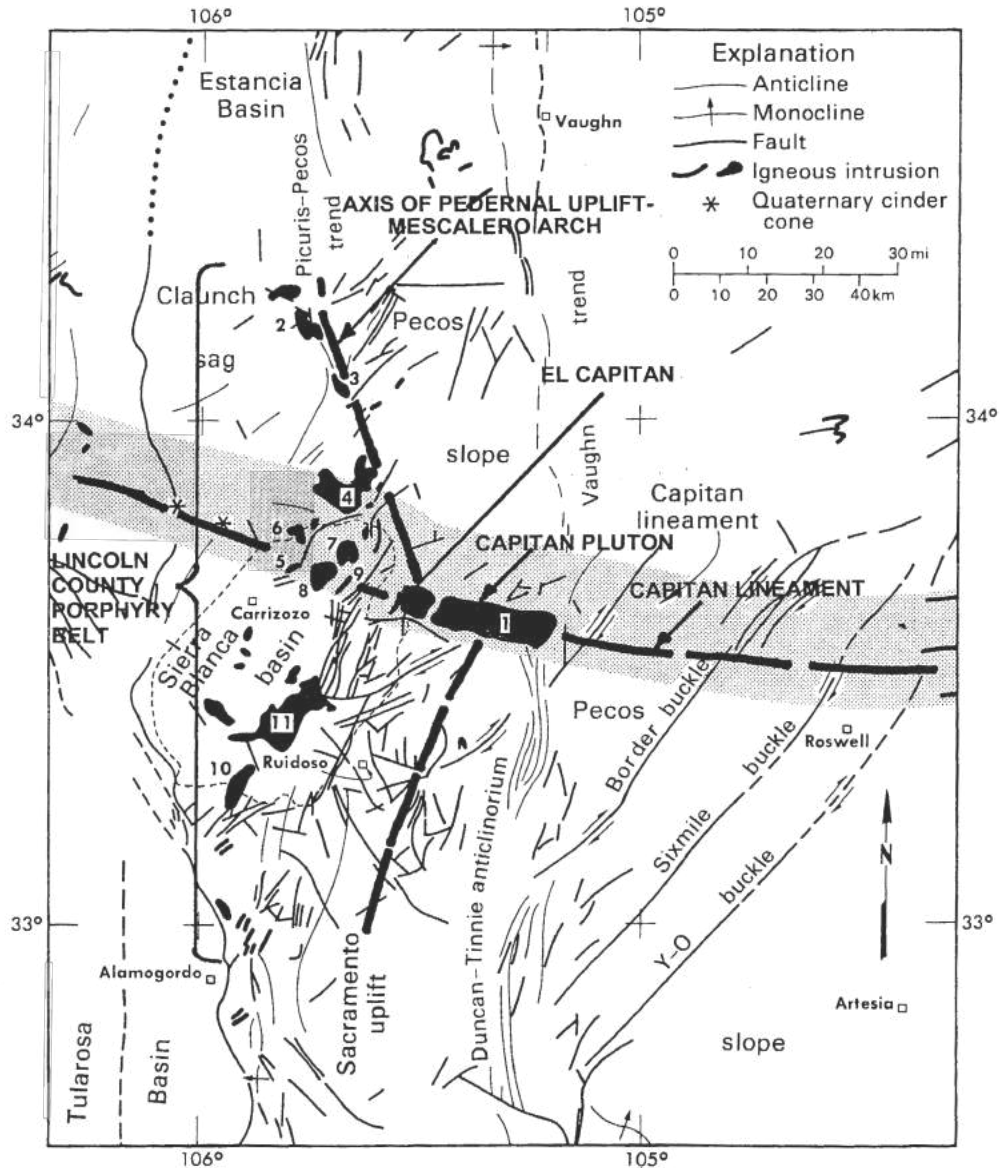


Figure 3. Tectonic map of El Capitan region (after Cather and others, 1991). Pedernal uplift-Mescalero Arch coincides with crestal area of Sacramento uplift, belt of igneous intrusions and Picuris-Pecos trend to north of Capitan pluton. Arch steps west 16 km to north of pluton.

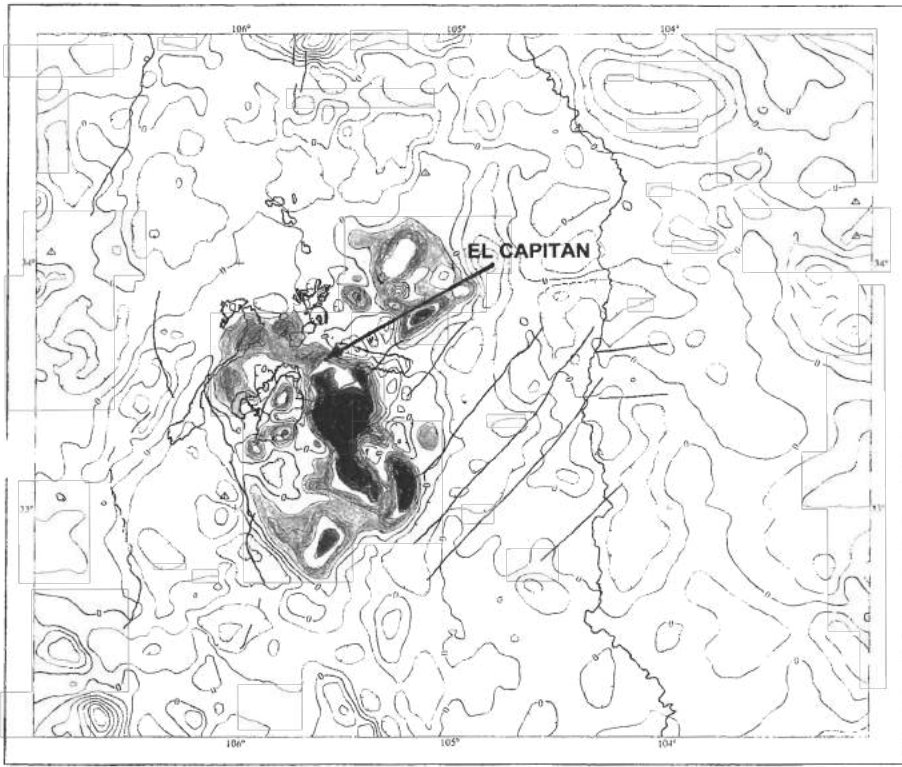


Figure 4. Aeromagnetic intensity map, El Capitan region (after Roberts and others, 1991). Contour interval 50 gammas except where steep gradient shows 500 gamma and higher contours.

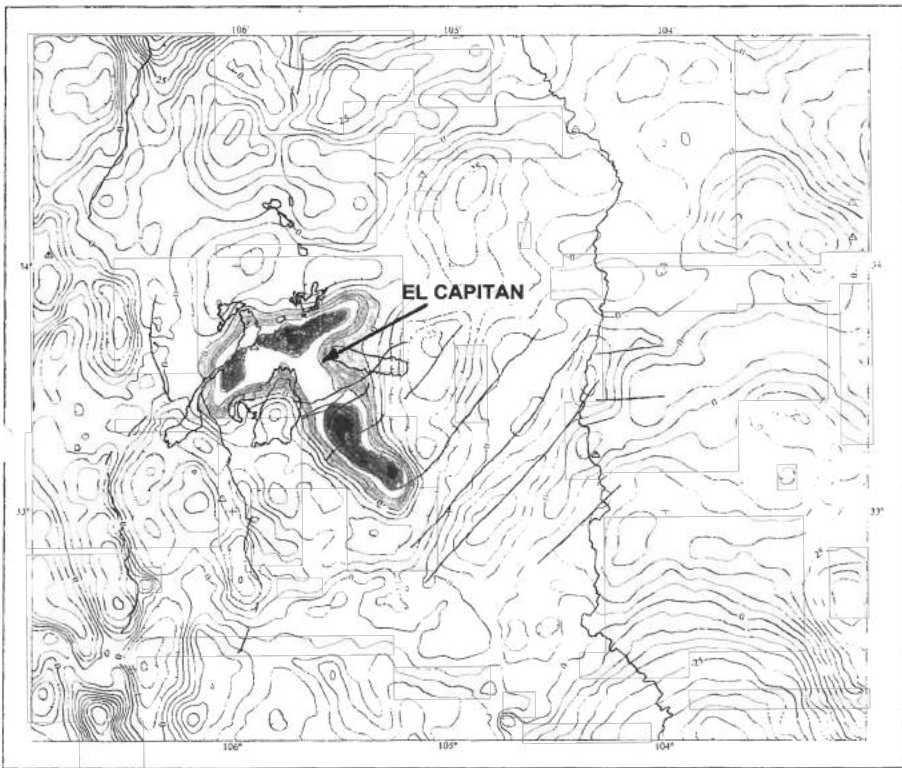


Figure 5. Residual gravity map, El Capitan region (after Roberts and others, 1991). Contour interval 5 milligals.



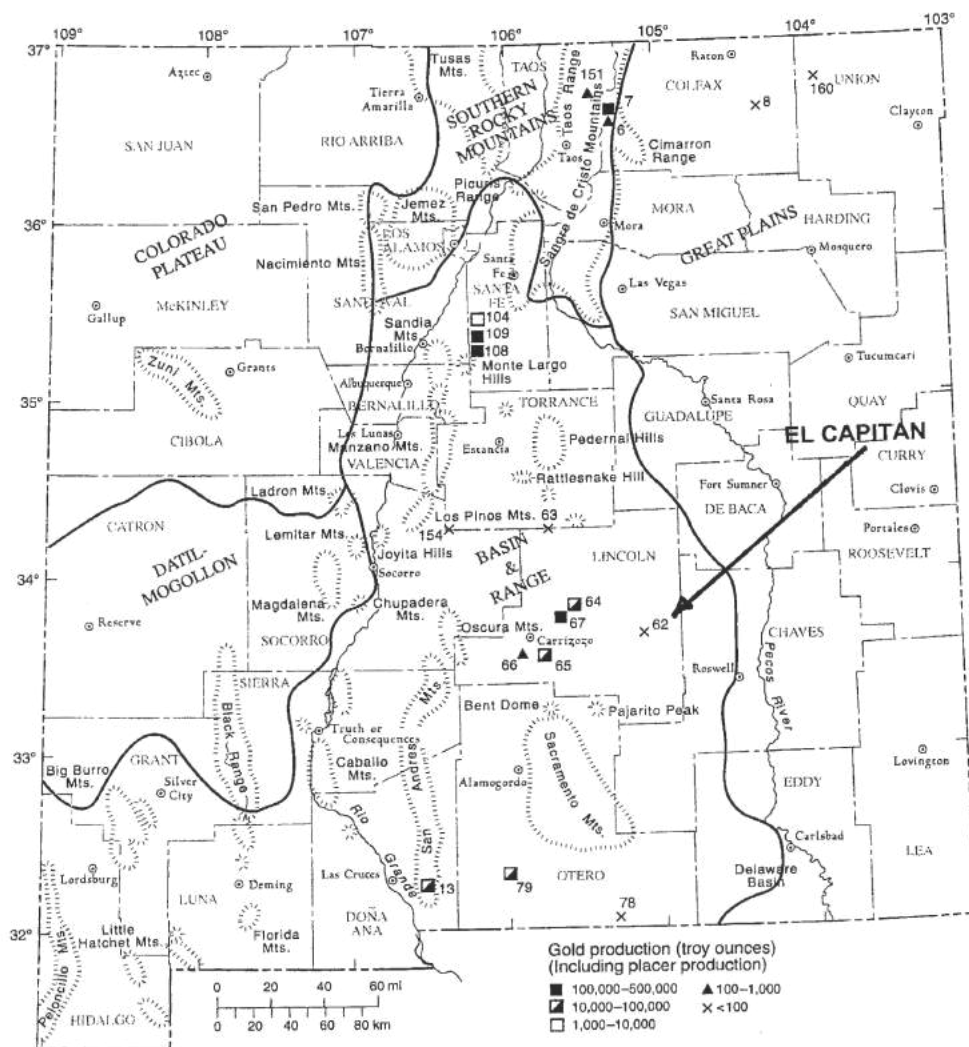
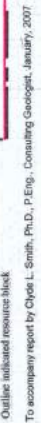


Figure 6. Great Plains Margin deposits in New Mexico (after McLemore, 2001).





## 8 Deposit Types

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The El Capitan deposit is principally a skarn deposit. It can also be classified as a Great Plains Margin deposit according to McLemore (2001), and the presence of platinum as reported by Auric Metallurgical Labs indicates that it may also be a hydrothermal gold-platinum group elements deposit. These deposit types are described below.

### 8.1 Skarn Deposits

The mineralization at El Capitan clearly falls into the category of skarn deposits. Skarns are a widely variable class of deposit formed by magmatic hydrothermal activity resulting from the interaction between dioritic to granitic intrusives and host rocks, typically Ca- or Mg-rich sedimentary rocks. Skarns are distinguished by coarse-grained, generally Fe-rich mixtures of Ca-Mg-Fe-Al-Mn silicate minerals formed by fluid metasomatism at relatively high temperature (Einaudi and Burt, 1982). The most economically important skarn deposits are formed in Ca-rich host rocks, dominantly limestone. Mineralogy of individual skarn deposits is highly variable, but generally includes varieties of garnet, pyroxene, and wollastonite; Fe-rich skarn deposits, such as El Capitan, also include magnetite, epidote, amphibole, and mica minerals.

Skarns are a major source of the world's tungsten, iron, copper, lead, zinc, and tin; in their iron-rich form, they typically form 5- to 200-million-ton deposits averaging about 40% Fe with accompanying Cu, Co, and Au (Einaudi et al, 1981). Skarn deposits in the southwestern U.S. include those in the Iron Mountain and Central mining districts, New Mexico; Christmas, Morenci, and Twin Buttes districts, Arizona; Bingham Canyon, Utah; and Yerington, Nevada (Einaudi et al, 1981).

Skarn deposits typically follow a three-stage progression from 1) contact metamorphism during intrusion of the mineralizing magma; to 2) formation of skarn mineralization as fluid is released during the magma's crystallization; and finally, to 3) retrograde alteration as the magma cools. During the main stage of skarn formation, fluids infiltrate along available structures, including intrusive contacts, fractures, dikes and sills, sedimentary contacts, or other zones of permeability (Einaudi et al, 1981). As the result of multi-stage formation and appropriation of this wide variety of pre-existing fluid pathways, skarn deposits often form complex and irregular bodies.

Einaudi et al (1981) note that sulfide minerals, and in some cases Fe-oxide minerals, typically precipitate during retrograde phases of skarn systems and cut across the earlier skarn formations. These are generally accompanied by hydrous, Ca-depleted silicates and carbonates, among them epidote, chlorite, and calcite; these minerals are evident at El Capitan. Thus, skarn minerals at El Capitan are likely retrograde in origin. More importantly, the retrograde nature of Fe oxides in late-stage, cross-cutting events matches the observation in the El Capitan deposit of hematite-calcite veins (retrograde) cutting across magnetite (main-stage skarn).

The limestone host rock, irregular form, association with nearby intrusives, and varied assemblage of Ca-rich silicate minerals, all place the El Capitan mineralization in the skarn category.

### 8.2 Great Plains Margin Gold-Silver Deposits

The El Capitan deposit is one of 16 Au-Ag-bearing occurrences in a 270-mile-long, north-south trending belt that traverses New Mexico within the Rio Grande Rift (Figure 6). McLemore (2001) has termed these occurrences Great Plains Margin deposits, has described the similarities between them, and has classified them as a hydrothermal deposit type located near alkaline Oligocene-Miocene (38-23 Ma) intrusions. They constitute a broad group of deposits containing both precious and base metals. The Au-rich subtype may also be classified as alkaline Au or alkaline-igneous-related Au deposits; Great Plains Margin Au deposits typically have high Au relative to other Au occurrences in New Mexico and contain generally low levels of Ag, less than 1 opt Ag.

Great Plains Margin deposits include Cu, Fe, Pb-Zn, and Au skarns or carbonate replacements. Fe skarns are hosted in Paleozoic or Cretaceous limestone or calcareous shale and contain predominantly magnetite and hematite, along with garnet, epidote, diopside, and other calc-silicate minerals; El Capitan contains all of these characteristics. McLemore (2001) notes anomalous precious-metals assays (>0.6 ppm Au, >15 ppm Ag) from Fe skarns in the Capitan Mountains (presumably the El Capitan occurrence) and states that fluid inclusions suggest a link between this Fe skarn and veins in the Capitan Mountains.

The origin of Great Plains Margin deposits is not fully clear, but McLemore (2001) notes that they correspond with a belt of alkaline igneous rocks occurring along the boundary between the Great Plains to the east and the southern

Rocky Mountains and Basin Range province to the west, and that there is evidence of their origin in these alkaline igneous rocks.

### 8.3 Hydrothermal Gold-Platinum Group Metals Deposits

Because assays from Auric Metallurgical Labs indicated the presence of potentially ore-grade platinum, the author investigated gold-platinum deposits formed as the result of hydrothermal processes. Gold occurs with platinum group metals (PGM) in several classes of mineral deposits, many of which are hydrothermal in origin. Because the production of PGM has come almost exclusively from large Precambrian ultramafic layered intrusions, such as the Bushveld or Stillwater complexes of South Africa and Montana, respectively, the majority of geologists are of the opinion that PGM are restricted to these high-temperature magmatic segregation environments. Beginning in the early 1970's, however, a few detailed studies confirmed that PGM could be mobilized with Au in relatively lower-temperature hydrothermal fluids (Stumpfl and Tarkian, 1976). Numerous studies of Au-PGM deposits and laboratory research on the thermochemistry of PGM solubility, transport, and deposition since that time have shown that Au-PGM occur in a variety of hydrothermal deposit classes, including porphyry copper, fracture-shear-zone-hosted, and sediment-hosted deposits (Appendix 4).

The Lincoln Country porphyry belt, which includes the Capitan pluton, is dominated by intrusions of alkaline composition (Cather et al, 1991) and is included in a belt of alkaline intrusive rocks that stretches through the eastern Rocky Mountains from British Columbia to New Mexico. Alkaline intrusions commonly occur in continental rifts, such as the Rio Grande Rift. Hydrothermal Au-PGM occur as minor constituents in porphyry copper mineralization in alkaline plutons within this belt, the best example being the Allard stock in the Colorado Mineral Belt. The 70-65 Ma Allard syenite stock had a copper resource that included 0.02 opt Au, 0.05 opt Pt, and 0.03 opt Pd (Werle et al, 1984). Although the El Capitan Au-PGM-Fe mineralization is hosted primarily in skarn, close proximity to the Capitan pluton and its possible genetic association with the pluton indicates that the El Capitan deposit is a member of the Au-PGM mineralized alkaline porphyry belt of the eastern Rocky Mountains.

Similarly, the Coronation Hill Au-PGM deposit in Australia exhibits a strong hematite-precious metals association that bears a resemblance to El Capitan. At Coronation Hill, hematite-calcite veinlets, breccias, disseminations, and alteration in a 2500-1600 Ma sedimentary section intruded by quartz feldspar porphyry and quartz diorite host a deposit grading 0.20 opt Au, 0.008 opt Pt, 0.028 opt Pd (Carville et al, 1990). Mernagh et al (1994) concluded that a calcium-rich, highly oxidized, acidic, moderately saline brine transported Au-PGM in chloride complexes. This conclusion corresponds with the results of numerous thermochemical studies showing that significant Au-Pt-Pd can only be transported in chloride complexes in acidic, moderately to extremely oxidized (hematite stable) hydrothermal fluids (Appendix 4).

## 9 Exploration

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The 32-sample surface sampling program conducted in January 2005 consisted of 28 samples in the main El Capitan deposit and four in a mineralized trend to the east. Near-vertical (slope corrections were made for non-vertical samples) continuous chip samples of approximately 10 pounds in weight were collected from outcropping mineralization over vertical lengths ranging from 4 to 45 feet at stations located with a GPS instrument and plotted as UTM coordinates. Samples were submitted to Auric Metallurgical Labs for caustic fusion assays.

Following encouraging assay results from a Stage 1 drill program (see below), the area of outcrop of the main El Capitan deposit was mapped at a scale of 1:2400. Figure 7 shows the distribution of various skarn assemblages consisting of magnetite, hematite, calcite, phlogopite, epidote (now identified petrographically as diopside), and tremolite; crystalline limestone; bleached and fractured limestone; and limestone.

An airborne hyperspectral survey was conducted over a 35-square mile area surrounding the El Capitan property by Earth Search Sciences, Inc. in February 2006. The data was interpreted by Joe Zamudio, Ph.D., who distinguished calc-silicate and hematite-goethite spectral signatures. A total of 38 samples were collected from outcropping mineralization or alteration at 24 anomaly locations and submitted for caustic fusion assay to Auric Metallurgical Labs. Auric reported significant gold and platinum results for several samples. These areas should be more fully explored.

## 10 Drilling

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A Stage 1 diamond drill program, consisting of 12 vertical HQ-size holes (EC-05-1 through EC-05-12; Table 1) totaling 1,027 feet, was conducted in April-May 2005. Because several Stage 1 drill holes terminated in favorable geology and/or assay intervals, the company conducted a Stage 2 drill program in June-August 2005. Stage 2 consisted of 10 vertical HQ core and open-hole rotary holes (EC-05-04A through EC-05-14; Table 1) totaling 2,091.5 feet. Eight Stage 2 holes were located adjacent to Stage 1 holes and are labeled with the designation "A"; for these holes, assays and geologic logs are available only for footages below the adjacent twin holes (Table 1). Favorable assay results from Stages 1 and 2 prompted the company to undertake a 23-hole Stage 3 reverse-circulation drill program (EC-06-15 through EC-06-37) totaling 9,645 feet in February-May 2006 (Table 1).

Drill core was logged in 1-foot intervals and rotary and reverse-circulation drill cuttings in 5-foot intervals with the aid of a binocular microscope (Appendix 5). Mineral percentages were estimated for each interval and lithologic divisions were designated. Although most core sampled and assayed was in five-foot intervals, in some cases core intervals were selected based on lithologic boundaries. Most rotary and reverse-circulation drill cuttings were sampled in 5-foot intervals; in cases where geology was uniform over significant lengths, such as in aplite with low hematite content deep in several holes, sample intervals were increased to 10 feet.

Drill-hole spacing is irregular, ranging from 150 to 700 feet and averaging approximately 400 feet. The holes are located over an area of 3600 feet east-west by 2100 feet north-south and were drilled to variable depths ranging from 98 feet to 710 feet (Table 1).

**Table 1. Drill-Hole Information**

Hole ID	UTM Coordinates <sup>1</sup>		Mine coordinates, ft <sup>2</sup>		Elevation, ft	Depth, ft
	E	N	E	N		
EC-05-01	448,596	3,720,145	50153.23	49861.08	6866.90	99
EC-05-02	448,702	3,720,149	50499.12	49877.16	6890.79	118
EC-05-03	448,566	3,720,091	50052.17	49684.19	6852.89	133
EC-05-04	448,749	3,720,092	50652.50	49688.93	6894.18	38
EC-05-4A	448,750	3,720,092	50656.42	49688.03	6895.09	<b>136</b>
EC-05-05	448,433	3,719,961	49617.09	49259.62	6817.08	103.5
EC-05-06	448,558	3,719,961	50028.57	49257.91	6815.33	81
EC-05-6A	448,561	3,719,960	50037.37	49255.48	6816.30	<b>206</b>
EC-05-07	448,757	3,719,966	50681.64	49276.03	6889.03	118
EC-05-7A	448,760	3,719,966	50689.92	49275.95	6889.17	<b>260</b>
EC-05-08	448,437	3,719,873	49630.60	48970.42	6780.25	89
EC-05-8A	448,445	3,719,876	49656.26	48979.05	6779.62	<b>280</b>
EC-05-09	448,589	3,719,878	50129.81	48985.87	6834.44	66
EC-05-9A	448,589	3,719,877	50130.62	48982.14	6834.22	<b>90.5</b>
EC-05-10	448,764	3,719,876	50702.95	48980.33	6881.23	62
EC-05-10A	448,765	3,719,876	50706.86	48979.04	6881.39	<b>210</b>
EC-05-11	448,516	3,719,758	49889.93	48593.51	6830.58	59
EC-05-11A	448,531	3,719,749	49937.27	48562.52	6838.89	<b>340</b>
EC-05-12	448,686	3,719,761	50448.02	48602.26	6882.99	60.5
EC-05-12A	448,682	3,719,762	50435.35	48604.69	6881.79	<b>405</b>
EC-05-13	448,247	3,719,903	49008.55	49070.36	6842.41	82
EC-05-14	448,302	3,719,818	49186.12	48790.32	6803.17	82
EC-06-15	448,491	3,720,211	49808.70	50078.64	6875.39	400
EC-06-16	448,652	3,720,254	50334.67	50219.52	6905.79	355
EC-06-17	448,849	3,720,197	50981.04	50033.56	6863.52	450
EC-06-18	448,440	3,720,098	49640.12	49709.08	6866.49	450
EC-06-19	448,883	3,720,112	51094.23	49755.31	6825.41	250
EC-06-20	448,315	3,719,999	49230.40	49382.09	6854.57	450
EC-06-21	448,873	3,719,964	51060.87	49269.61	6839.01	350
EC-06-22	448,897	3,719,867	51138.32	48949.98	6806.07	450
EC-06-23	448,413	3,719,743	49552.48	48543.06	6768.36	400
EC-06-24	448,826	3,719,762	50908.13	48605.89	6848.67	400
EC-06-25	448,528	3,719,624	49930.45	48152.85	6869.39	500
EC-06-26	448,688	3,719,625	50453.06	48158.12	6882.62	360
EC-06-27	449,103	3,719,956	51816.87	49241.64	6812.25	270
EC-06-28	449,098	3,719,859	51799.91	48924.14	6814.30	300
EC-06-29	448,934	3,719,759	51261.03	48596.53	6777.26	420
EC-06-30	448,593	3,720,106	50143.02	49734.70	6849.07	600
EC-06-31	448,602	3,719,967	50171.25	49278.13	6838.80	710
EC-06-32	448,601	3,719,877	50168.89	48982.15	6836.45	530
EC-06-33	448,603	3,719,762	50174.38	48607.18	6848.99	600
EC-06-34	448,190	3,720,010	48812.86	49419.41	6835.99	400
EC-06-35	448,125	3,719,910	48602.40	49085.57	6818.21	400
EC-06-36	448,180	3,719,823	48799.60	48797.94	6819.34	300
EC-06-37	448,010	3,719,910	48223.68	49088.47	6779.43	300
Total						12,763.5

<sup>1</sup>UTM coordinates are in meters, using 1927 North American Datum (NAD 27)

<sup>2</sup>Mine coordinates surveyed in feet by Ruidoso Land Surveying, Ruidoso, NM

**Numbers in bold type** - Assays and geologic logs available only for footages below adjacent twin holes

## **11 Sample Preparation, Analyses, and Security**

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Sample preparation, analyses, and security are reported below for the various phases of the project. For convenience, all testing is summarized in this section, some of which includes metallurgical testing.

### **11.1 Surface Sampling, 2004-2005**

In December 2004, the author first visited the El Capitan project and collected three samples. He submitted these to American Assay Labs of Sparks, Nevada. Because Auric Metallurgical Labs had been reporting positive precious-metals results in the non-magnetic fraction of El Capitan samples, American Assay was instructed to do a magnetic separation and assay both the magnetic and non-magnetic fraction. Assays of the three non-magnetic fraction samples returned results of: <0.003, 0.016, and 0.024 opt Au. The lab did not weigh the magnetic and non-magnetic fractions, so calculation back to head grade could not be done, but the results indicated to the author the presence of Au at the El Capitan project. To date, this is one of the few reliable testing results without pre-treatment on a chain-of-custody sample that have produced ore-grade numbers similar to Auric's caustic fusion assays (see below).

Based on these positive results, the author returned to the project in January 2005 for additional work. During this visit, he collected 32 samples, including 28 from the main pit area and four from a mineralized showing to the east. These samples were submitted under chain of custody to Auric Metallurgical Labs without prior preparation. Auric returned encouraging results in Au and Pt, with values up to 0.089 opt Au and 0.053 opt Pt. These results prompted El Capitan Precious Metals to undertake a Stage 1 drilling program, later expanded to include Stages 2 and 3 drilling.

### **11.2 Drill Sampling, 2005-2006**

#### ***11.2.1 Drill Sample Preparation and Security***

The author paid close attention to chain of custody for all drill samples and maintained the drill samples under secure storage since they were generated during all three phases of drilling. Drill core and cuttings were removed from the drill site by the independent consultant in charge at the time and transported to and stored in secure locked storage units in the town of Capitan, New Mexico, near the property. No personnel of El Capitan Precious Metals had access to or handled any drill core or cuttings. Core and drill cuttings recovery on the job ranged from good to excellent and samples are excellent representations of the deposit.

Sample preparation onsite consisted of cutting drill core lengthwise with an electric diamond saw. One half of the core was returned to the core box and retained as a geologic sample. The other half was quartered; one quarter was sent for assay and the other bagged in anticipation of future testing and retained in secure storage. Rotary and reverse-circulation drill cuttings were split at the drill discharge and bagged into two equivalent samples in 5-foot intervals by the drilling contractor under the supervision of an independent consultant. The one-quarter sawed core and one 5-foot sample bag of drill cuttings were sent under chain of custody by a certified shipping company to Auric Metallurgical for caustic fusion assays. One shipment of reverse-circulation drill samples sealed in buckets with tamper-evident tape was transported by El Capitan personnel to Auric Metallurgical in October 2006; Auric confirmed upon delivery that these samples arrived with all seals intact.

Drill core and cuttings were stored in a secure, locked storage facility in the town of Capitan, New Mexico with access by only the author, his associate, consulting geologist David S. Smith, and independent consultant George Stephens IV. In order to facilitate testing research, all drill samples were moved to secure storage in Denver, Colorado in December 2011. The status of drill samples that were stored in Capitan and in Denver cannot be confirmed by the author as of the effective date of this report.

#### ***11.2.2 Drill Sample Analytical Testing***

All drill samples were analyzed by Auric Metallurgical Labs who reported caustic fusion assay results for Au, Ag, Pt, and Pd in ounces per ton (opt; Appendix 6). The owner of Auric Metallurgical reported on July 13, 2023 that the lab was sold in March 2023 and no longer performs analytical services. Auric was located at 3260 West Directors Row, Salt Lake City, Utah, USA, 84104. The lab was independent of El Capitan Precious Metals. Auric was a duly registered mineral assay and analysis laboratory since 1996. The lab was a participating member in the Proficiency Testing Program for Mineral Laboratories operated by the Canadian Certified Reference Materials Project for the

Task Group Mineral Analysis Laboratories Working Group for the elements analyzed on El Capitan samples. In addition, Auric participated in an evaluation of accuracy of U.S. analytical laboratories administered by the Bureau of Land Management in 2002. Auric's results on blind standards selected by the BLM were excellent for all four elements tested: Au, Ag, Pt, Pd. Auric employed quality controls in its laboratory, including running blanks and standards for each 10 samples analyzed. Auric reported that during analyses of El Capitan samples, they used Nevada Bureau of Mines blank NBM-2a, standards NBM-5b, and CDN PGMS-6, -7, and -9.

Sample preparation methods employed by Auric were as follows (Appendix 7). The one-quarter core samples were passed through a Denver 4x6-inch jaw crusher to reduce to -0.25 inch. Both crushed core and rotary and reverse circulation materials were passed through a Jones riffle splitter several times to reduce sample size to approximately 150 grams. Samples were then passed through a 6-inch Bico-Braun pulverizer until samples passed an 80-mesh screen. Pulverized samples were placed in 3x5-inch yellow kraft paper sample envelopes and appropriately labeled.

Stage 1 drill samples were visually separated into magnetic and non-magnetic categories based on apparent magnetite contents, and 100-gram aliquots of high-magnetite samples were subjected to wet magnetic separation. Initial separate analyses of the magnetic and the non-magnetic fractions indicated significantly higher values in the non-magnetic fractions. Thereafter, Stage 1 assay results were provided only for non-magnetic fractions. (For these samples, the Au, Ag, and Pt results for non-magnetic fractions were recalculated back to whole-rock grades using the magnetic/non-magnetic percentages.) This practice was abandoned in Stages 2 and 3.

Auric reported that it used high-quality equipment in its laboratory (see equipment list in Appendix 7) and that it maintained service contracts with certified calibration companies. According to Auric, only reagent grade chemicals from reputable chemical suppliers were used, and each batch of incoming reagents was subjected to analysis to ensure its purity.

Auric developed a proprietary caustic fusion assay method. Although the fundamental principles of fusion assays have been known for many years and are available in metallurgy textbooks, Auric was reluctant to release details of its method. For this reason, samples analyzed by Auric were subjected to an independent evaluation and verification study (see Data Verification, below).

Splits from 79 core intervals prepared at Auric that contained significant magnetite were submitted to Lerch Bros., Hibbing, Minnesota for determinations of magnetite percentage and Fe content of the magnetite.

### 11.3 Analytical Testing, 2007-2009

During the period of 2007-2009, while the company was led by Ken Pavlich, a significant amount of testing work was undertaken in order to verify the presence of precious metals on the project. Most of this work was done on four composite samples prepared from drill samples. A wide variety of tests were performed at numerous labs.

Test work performed by Mr. Michael Thomas at MHS Research near Denver, Colorado, during 2006-2007 appeared to provide promising results, similar to Auric's, with assays returning potentially ore-grade values. The methods and sample origins are not clearly known to the author, but procedures appear to include a nickel-sulfide assay and a carbonate pre-roast. Results from this testing deserve scrutiny and possible follow-up.

A careful review done by consulting geochemist Mr. Ken Bright in 2008 (Bright, 2008; Appendix 9) evaluated the following work:

- The Mineral Lab, Inc.: XRF for major and trace elements.
- Acme Analytical Labs: trace elements, Au Ag and Pt by wet analysis.
- Becquerel Labs: Neutron activation analysis.
- ALS Chemex: 24-hour cyanide leach using extra strength (2%) cyanide, a catalyst called Leachwell (a Pb nitrate), and continuous rolling.
- Acme Lab and ALS Chemex: fire assay with ICP finish of various sample sizes, re-testing of fire-assay slag, and use of a carbonate-flour roast and a Na-peroxide sinter prior to fire assaying.
- MHS Research (Mike Thomas): flour and potassium carbonate pre-treatment, with the resulting beads analyzed by Acme Lab by ICP-ES after parting and leaching.



The highest result was 84 ppb Au (0.0025 opt Au), detected by neutron activation at Bequerel Labs. Bright concluded that the four composite samples tested “do not evidence economically significant amounts of any noble metal” (Bright, 2008). He did allow that this could be due to a sampling anomaly, and recommended a thorough testing of about 75 samples from the project at various labs for various methods, including repeating the initial caustic fusion and cyanide leach tests at Auric Metallurgical Labs (See Mineral Processing and Metallurgical Testing, below).

In 2008-2009, Copper State Analytical Labs (CSAL) of Prescott, Arizona, was contracted to analyze the composite samples using a 3-acid /MIBK extraction, with 20-hour digestion in a Parr bomb pressurized vessel. If the results from this test are valid, they indicate potentially ore-grade levels of Au in the composite samples tested. CSAL’s methods and procedures should be thoroughly evaluated, and a new suite of samples tested. In addition, CSAL performed hot cyanide-leach tests during the same period, again achieving potentially ore-grade results in the El Capitan composite samples. These results deserve follow-up.

The author was not involved in the analytical work during 2007-2009 and cannot comment directly on sample preparation and security, although it is his opinion that the work was handled in a generally professional and reliable manner.

#### **11.4 Analytical Testing, 2009-2011**

Following the departure of Ken Pavlich, the company undertook further research on assay and extraction techniques. The author was largely uninvolved during this period and until a thorough review of this work can be done, he cannot verify sample preparation, security, or results, except for the June 2009 sampling and analysis managed by David Smith, described below.

##### **11.4.1 June 2009 Surface Sampling and Testing**

In June 2009, independent consulting geologist David Smith collected a suite of 10 surface samples from within the El Capitan pit area (Smith, 2009). Two quality-control samples—a field blank and a field duplicate—brought the total number of samples to 12. Approximately 25 pounds of each sample was collected, to provide sufficient material for repeated testing. The intent of this sampling was to return to the sites originally sampled by the author in January 2005, in order to re-test those samples that had initially generated interest for the drilling program when analyzed by Auric Metallurgical Labs. The 12 samples collected by David Smith were sent under chain of custody to RDI in Denver, Colorado, for sample preparation. Splits of these samples were then sent to four different labs: American Assay Lab in Sparks, Nevada; Hazen Research in Golden, Colorado; Auric Metallurgical Labs in Salt Lake City, Utah; and Copper State Analytical Labs (CSAL) in Prescott, Arizona.

American Assay ran a 60-gram fire assays for Au and Ag and a multi-element ICP package; all precious-metals results were below or near the method detection limits. Hazen Research performed both a 60-gram fire assay and a 5-gram atomic absorption analysis for Au and Ag; all results were below or near the method detection limits. Auric declined to analyze the samples.

##### **11.4.2 Testing Review Report**

In October 2009, consulting analytical chemist Dr. Noel Palmer performed a review of the test work done up to that time on the project (Palmer and Smith, 2009; Appendix 10). Palmer noted the positive results from American Assay in 2005. He reviewed Richard Daniele’s verification of the Auric caustic fusion assay method, concluding that “it shows the caustic fusion technique successfully being applied to El Capitan samples at two different labs and returning ore-grade numbers,” and raising a number of questions for follow-up. This report also made a thorough review of the work done during 2007-2009 and recommended that the recommendations in Bright (2008) be followed, and it noted the positive results from Parr-bomb tests and hot cyanide leaching done at CSAL.

##### **11.4.3 Orlando Villa and Sundancer Resources**

Mr. Orlando Villa performed analytical services for El Capitan Precious Metals for several years, through his company Sundancer Resources Inc. (SRI), now based in Phoenix, Arizona.

Splits from the 10 surface samples taken by David Smith in June 2009 (see above) were sent to Copper State Analytical Labs, where they were apparently analyzed by Villa using a custom fire assay method and submitted to CSAL for analysis. CSAL split the beads, analyzed one half, and sent the other half to IPL Labs of Vancouver, B.C.,

for duplicate analysis. IPL returned assays as high as 0.364 opt Au, and CSAL reported assays as high as 0.408 opt Au. The average grade of the El Capitan samples was 0.063 opt Au and 3.99 opt Ag. However, in the opinion of the author the results are not reliable and remain unverified for two reasons: 1) recent testing directed by the author has pointed out serious quality-control issues with SRI's analytical work; and 2) SRI's work was not supervised by an independent observer and was therefore not under chain of custody. Results of SRI's custom assay methods deserve further evaluation but have so far not proven to be sufficiently accurate, precise, nor repeatable (see below).

In addition to custom assay methods of various sorts, SRI apparently has performed smelting tests; one such test is reported by El Capitan to have resulted in a net sale of approximately 40 ounces Ag to refinery Gannon & Scott in 2011 (see Mineral Processing and Metallurgical Testing, below). As well, SRI is reported to have treated a sample with a high-temperature roast in a plasma furnace, returning potentially ore-grade results; this sample was obtained by ECPN staff from its bulk stockpile of El Capitan mineralized rock and is therefore not a chain-of-custody sample. The author cannot comment on sample preparation and security for these tests, since he was not involved in the testing, but is of the opinion that they deserve evaluation and follow-up.

### **11.5 Analytical Testing, 2011-Present**

In October 2011, El Capitan Precious Metals approached the author to assist with further analytical testing on the project. The author and his associate David Smith have been continuously responsible for maintaining the drill samples under secure storage since drilling, but until late 2011 were only intermittently involved in analytical testing work. Since that time, the author, David Smith, and consulting geochemist Noel Palmer have begun conducting systematic analytical testing on the project at numerous labs, including some work at SRI as described below. El Capitan has commissioned additional analytical and extraction testing at Sundancer Resources; the author has not evaluated nor verified this additional SRI work.

#### **11.5.1 Analytical Testing Stages 1-5**

This work began in October 2011, with an attempt to validate one of SRI's custom fire assay methods, a large-sample (227 grams) assay with a pre-roast treatment and specialized flux. Named analytical testing Stages 1 through 5, this work was performed on two sets of samples: 1) 11 samples collected from the project by the author in October 2011, at the same sites and with the same sample numbers as those collected by David Smith in June 2009; and 2) 19 drill samples from the project, selected to be roughly representative of the different host rocks, skarn assemblages, magnetite and hematite content, and Auric assay results encountered in the drill holes. All samples were in storage at RDI in Denver, Colorado; RDI prepared splits and sent them to CSAL, SRI in care of CSAL, and Inspectorate Labs in Vancouver, B.C. This work is discussed in Palmer, et al (2012b).

Stage 1 consisted of the author and/or Noel Palmer personally observing all analytical steps taken by Orlando Villa of SRI while performing his 227-gram custom fire assay method on the surface samples. Villa produced beads that were then analyzed by CSAL. All samples were under chain of custody, and the author can verify that the results are free from tampering. Stages 2 and 4 consisted of Orlando Villa running the same 227-gram method with improvements recommended by Noel Palmer on the surface samples (Stage 2) and on the drill samples (Stage 4) described above. These stages were not observed by independent observers. Stage 3 was intended to be screen fire assays of different screen-size fractions but was postponed until further information can be gathered. Stage 5 consisted of standard fire assay, multi-element ICP, and whole-rock major-oxide analyses to fully characterize the bulk chemistry of the samples. These tests generated potentially ore-grade values in Au; however, the experiment uncovered serious quality-control issues with SRI's work, and the author was unable to verify the SRI method in its current form as a viable test for precious metals on the project. Full details are available in Palmer et al (2012).

During this phase of testing, SRI analyzed material remaining from six of the Stage 1-5 samples and submitted the beads under another name to CSAL for analysis. The resulting assays showed excellent values in Au and Ag, averaging 0.105 opt Au with a high of 0.147 opt Au, and averaging 56.5 opt Ag, with a high of 206.5 opt Ag. However, the author cannot verify the results of these assays, for the following seven reasons: 1) the samples contain no mineralogic evidence to support such extremely high Ag values (206.5 opt Ag is equivalent to 0.65% Ag, which would be immediately obvious in the sample as native Ag or Ag sulfide minerals); 2) although the samples were under intact chain of custody to CSAL, this chain of custody was broken once Orlando Villa worked on this material without the direct observation of the author or Noel Palmer; 3) except for one sample, the Au assays are consistently higher (by a factor of 2 to 23 times) than results for the same samples tested under direct observation and intact chain of custody during Stage 1, as well as during the unobserved and therefore broken chain of custody

during Stage 4; 4) the assays included 5.4 opt Ag in a certified pulp blank (CDN-BL-9 from CDN Resource Labs of Vancouver, B.C.) consisting of a blank granitic material, indicating continued quality-control problems with the method and/or SRI's work; 5) the method included a very large Ag inquart, which, if not measured extremely accurately, can lead to erroneous results for both Au and Ag; 6) the method used by CSAL for determination of Ag content in the beads is not optimum for a large Ag inquart and is subject to errors; and 7) the results of Stage 1, 2, and 4 testing revealed serious quality-control issues with SRI's work on the method reportedly used for these assays, rendering unreliable any SRI results from this method produced without independent observation.

### 11.5.2 Analytical Testing Stage 6—SEM and Microprobe Work

Stage 6 analytical testing consisted of gravity-separation tests followed by scanning electron microscope (SEM) work and electron microprobe (EPMA) analyses on the concentrates, and neutron activation analysis (NAA) on the concentrates, tails, and quality-control samples (Smith et al, 2012). Two 10-kg composite samples were each made from two sets of 20 drill samples: one set with high hematite content, the other with high Au assays according to Auric's drill-sample assay results. The two composites were ground and put through wet gravity-separation tests at RDI, using a Diester gravity-separation table and then upgraded on a Gemeni gravity table. Concentrates from both samples were sent to Noel Palmer, and the tails retained in secure storage at RDI. All samples were maintained under intact chain of custody.

SEM work was undertaken at two facilities: CAMCOR at the University of Oregon in Eugene, Oregon; and ICAL at Montana State University in Bozeman, Montana. This work located and verified the presence of Au on the project. At both CAMCOR and ICAL, <10-micron grains of Au were imaged, either as individual solitary grains or as inclusions within magnetite (Figures 8, 9) At both CAMCOR and ICAL, the presence of Au was confirmed by energy-dispersive spectrophotometry (EDS) analysis. Although this gives no indication of bulk precious-metals grades on the project, it is one of the few unequivocal and verifiable pieces of evidence that proves the presence of Au at the El Capitan project. In the author's opinion, this work sets the foundation for continued investigation of the geochemistry of precious-metals on the project.

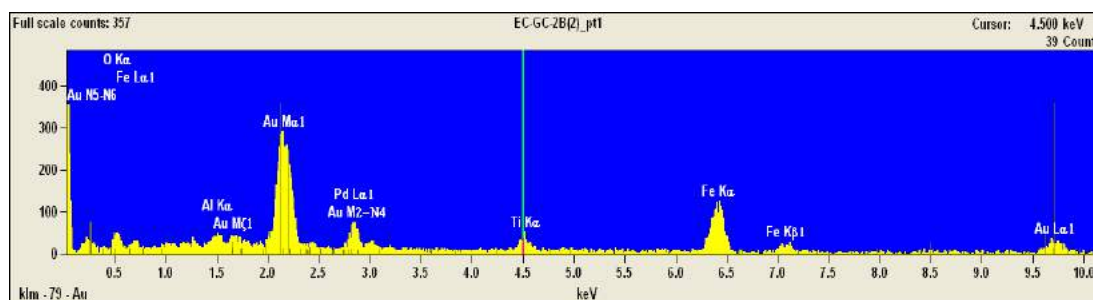


Figure 8. Au crystal in magnetite with accompanying EDS spectrum, sample EC-GC-2. From CAMCOR, University of Oregon.

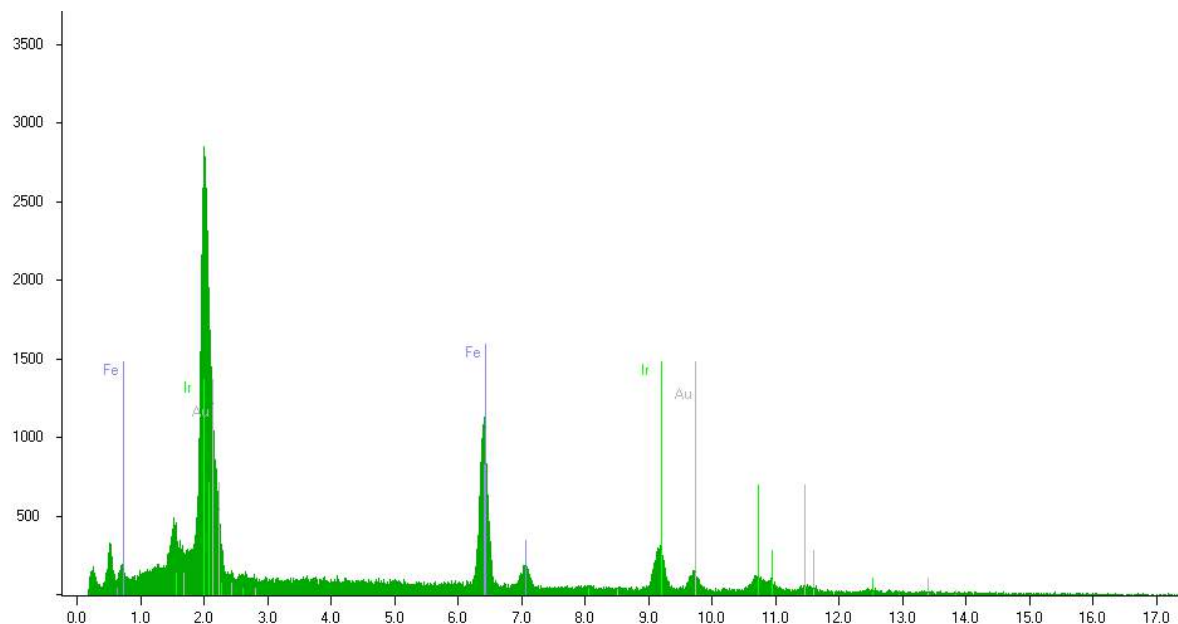


Figure 9. Au crystal on magnetite with accompanying EDS spectrum, EC-GC-1.  
From ICAL, Montana State University.

### 11.5.3 Analytical Testing Stage 7—SRI Custom Fire Assay

Stage 7 testing consisted of an attempt to verify the smaller (30-gram) version of SRI’s custom fire assay method investigated in Stages 1-5 (Palmer, et al, 2012 a). For this work, 39 samples were tested: 21 drill samples and 18 quality-control samples, including two standards, one pulp blank, one field blank, and four replicates. All samples were prepared by RDI and sent under chain of custody to the lab of Chris Christofferson in Smelterville, Idaho, where Noel Palmer visited and supervised the beginning of verification testing. Christofferson’s was the only independent lab found willing to run such a custom fire assay. Splits of the same 39 samples were also sent to Orlando Villa of SRI for analysis by the same method, with Christofferson’s lab providing analysis of SRI’s beads. Although not under chain of custody (SRI’s work was not observed), it was thought advantageous to have SRI analyses to compare with Christofferson’s using the same method.

Results of this testing were inconclusive and did not verify the SRI custom fire assay as a viable testing method. This was due to poor quality control results: both labs failed to return acceptable results on the QAQC standards, with results far out of control limits; and both labs were unable to acceptably replicate the two sets of triplicate samples.

### 11.5.4 Analytical Testing Stage 8—SRI 450-g Extraction

The initial intent of Stage 8 testing was to validate a custom 450-gram custom extraction method on samples from the project (Palmer and Smith, 2012). The method was developed by Orlando Villa of Sundancer Resources, a non-independent lab that does testing and research for El Capitan Precious Metals. Because of poor previous results by Villa, Stage 8 was not completed.

Sample material for Stage 8 was collected from the project by David Smith on May 11, 2012 and consisted of a bulk sample of approximately 4.5 tons of magnetite-dominant material and 1.5 tons of hematite-dominant material. The material was collected with a backhoe, placed in four large supersacks, and shipped to Hazen Research in Denver, Colorado under chain of custody. Bags 1, 3, and 4 were magnetite-rich, and bag 2 was hematite-rich; in subsequent communications, Hazen Research referred to the latter as the “Bag 2” sample. Hazen performed crushing, blending, and gravity separation testing.

On June 26-28, 2012, the author and Noel Palmer observed Orlando Villa perform his 450-gram custom extraction method on interim samples of Stage 8 material from the El Capitan project. This was an interim demonstration of

the method for investment banking firm Houlihan-Lokey's benefit. In attendance were El Capitan officers John Stapleton and Chuck Mottley, a technician videotaping the event, Villa's lab technician, and observers from Houlihan-Lokey.

Samples analyzed were gravity concentrates produced by Hazen Research from hematite-rich Bag 2 material from the El Capitan project. No QAQC samples were included in the sample suite, as this was intended to simply be a demonstration.

Using his extraction method, Villa produced two beads, which were sent to Inspectorate Labs in Sparks, Nevada for analysis. When calculated back to head grade of the starting sample, these results are not economic grades for Au: 0.0027 opt Au Sample 12 head grade; and 0.0013 opt Au Sample 34 head grade. As a result of these poor results, El Capitan decided to terminate Stage 8 testing.

#### ***11.5.5 Analytical Testing Stage 9—MSRDI Cyanide Bottle Rolls***

Stage 9 testing consisted of cyanide bottle roll tests at Mountain States Research and Development during May and June 2013 (MSRDI, 2013). Testing was done on a suite of six samples that included three samples from the project collected by the author from El Capitan's drill-sample archive in Denver, Colorado, and three QAQC samples. The focus of the testing was to duplicate cyanide bottle-roll tests previously done at CSAL. Two samples are reported by MSRDI to contain Au and Ag, but both were QAQC standards. Results showed no extraction of precious metals from the El Capitan samples.

#### ***11.5.6 Analytical Testing Stage 10—CSAL Pressure Digestion***

Stage 10 consisted of pressure-digestion-vessel testing done at CSAL in June 2013 (Smith, et al, 2012). This testing was done on a suite of 20 samples from El Capitan Precious Metals, including drill cuttings from the El Capitan project, surface material from the project, and quality-control samples. All samples were under chain of custody, assembled by the author from samples in storage at El Capitan's sample archive in Denver, Colorado, and from previously processed material in storage at Hazen Research in Denver. Blanks, standards, and duplicates were included in the sample suite as quality-control measures.

CSAL performed pressure digestion tests using Parr bomb pressure vessels under a proprietary method. The complete procedure is unknown to the author, but in general involves digesting a small sample under high pressure at elevated temperature.

The results initially appeared favorable. Although not high grade, results for Au indicated potentially ore-grade material in six of the 11 samples that originated from the El Capitan project. Although very high in some samples, Pt values were unreliable due to quality control problems. QAQC results for this testing were acceptable. However, subsequent testing during Stages 11 and 12 (see below) showed serious quality-control issues at CSAL, compromising the Stage 10 results. The author does not recommend further work with CSAL.

#### ***11.5.7 Analytical Testing Stage 11—CSAL Cyanide Bottle Rolls***

Stage 11 testing consisted of cyanide bottle-roll testing done at Copper State Analytical Labs (Smith and Smith, 2013). During July and August 2013, CSAL tested 20 samples from El Capitan Precious Metals. These samples included drill cuttings from the El Capitan project, surface material from the project, and quality-control samples, all under chain of custody and assembled by the author from samples in storage at El Capitan's sample archive in Denver, Colorado, and from previously processed material in storage at Hazen Research in Denver. Blanks, standards, and duplicates were included in the sample suite as quality-control measures.

CSAL performed cyanide bottle-roll tests in two batches according to the protocol set out by Ken Pavlich in 2009 (Appendix 1), with the two variations: 1) sample size was 100 g instead of 1 kg due to consumption of sample by Mountain States Lab; and 2) tests were stopped at 14 days because previous testing indicated no increase in gold during days 15-21. The cyanide bottle-roll tests ran for 14 days, with readings of Au, Ag, Pt, and Pd at 3, 7, and 14 days. Carbon was added as an aid to gold recovery; at the end of the test, the carbon was filtered and fire assayed. The final value for precious metals is the sum of the direct ICP reading of the solutions and the fire assay of the carbon.

Results of the testing were mixed, but showed the presence of potentially ore-grade Au in Batch 1. This group of samples returned values of Au ranging up to 0.093 opt Au, in sample 169720 from drill hole EC-05-05, 15-41 feet. The other samples in this batch showed similar levels of Au. Although not high in grade, five of the six samples

were over 0.01 opt Au, a typical cutoff grade for large open-pit gold mines in the U.S. QAQC samples were acceptable for Batch 1.

However, QAQC sample results for Batch 2 were far out of control limits, invalidating these results, compromising Stage 11 Batch 1 results, and indicating serious quality-control issues at CSAL. Blank sample results showed no contamination, but standards for Au were far out of control limits and duplicate results were wildly different. As a result, the author recommended no further work at CSAL. Instead, it was recommended that cyanide bottle-roll tests be conducted at a separate, reputable metallurgical laboratory (see Stage 13 testing, below).

#### ***11.5.8 Analytical Testing Stage 12—Weaver Creek Gravity Concentration***

Stage 12 testing consisted of processing two samples from the project at a gravity processing plant near Phoenix, Arizona, as requested by El Capitan Precious Metals (Smith and Smith, 2014a).

During July 30-31, 2013, David Smith observed the processing of two samples of material from the El Capitan project at a processing plant near Weaver Creek, Arizona, about 80 miles northwest of Phoenix. The plant is owned by Larry Lozensky, a shareholder of El Capitan Precious Metals, and is used to produce placer gold from alluvial gravels onsite. David Smith observed the plant operating and reported results from chain-of-custody samples from the project.

Two samples were analyzed. These were taken from the bulk samples collected by David Smith from the El Capitan project in May 2012 for Stage 8, and processed at Hazen Research in Denver, Colorado. Both samples were head grade and were not previously concentrated at Hazen Research. On July 30, 600 pounds of the hematite-rich material was processed through the Weaver Creek plant. The following day, 1,440 lbs of magnetite-rich material was processed. Processing generated six samples (two concentrate, two magnetic fraction, and two tails), to which three quality-control samples were added to make a total of nine samples sent to Copper State Analytical Labs (CSAL) and to Sundancer Research (SRI). Samples were maintained under chain of custody until delivered to the labs.

Results of the testing indicated that the processing plant was not effective at upgrading precious metals values of the head-grade material tested. Testing at CSAL consisted of cyanide bottle-rolls and pressure digestion tests. (Results from Stages 10 and 11 were pending during this time and the resulting QAQC problems at CSAL were not yet apparent.) Results for the cyanide bottle roll tests were all below detection limit for Au. Results for Pt were more positive, returning up to 0.029 opt Pt (calculated head grade), in the tails from the hematite sample. However, these results should be treated with caution since the QAQC result for Pt for the standard was substantially lower than the accepted value, because Pt is generally known for its low amenability to cyanide leach, and because of CSAL's history of poor quality control. Pressure-digestion results from CSAL were far out of control limits on blanks and standards and are not reliable.

Testing at SRI consisted of fire assay and a custom Ag-Pb collection assay. Results from SRI's fire assay showed contamination in the blank for Au, Ag, and Pt, and for the standard returned results far out of control limits for Au, Pt, and Pd. Results from SRI's Ag-Pb collection method were similar, showing high-grade Au and Ag in the blanks, and returning results far out of control limits for Au in the standard. The results for Au and Ag in the blanks, particularly in the Ag-Pb collection tests, indicate massive lab contamination for both elements. These values are up to 0.281 opt Au and 9.22 opt Ag in materials certified from a reputable supplier (CDN Resource Labs of Vancouver, B.C.) to be barren of gold and silver. Based on these and past results and on the fact that SRI is not an independent lab, it is the author's opinion that all SRI test results should be treated with great care: results should not be released to the public nor form the basis for corporate decisions without independent verification.

#### ***11.5.9 Analytical Testing Stage 13—McLelland Labs Cyanide Bottle Rolls***

Stage 13 testing consisted of cyanide bottle-roll tests conducted at McLelland Labs of Reno, Nevada, during October 2013 (Smith and Smith, 2014b). The intent of this testing was to replicate the apparently positive cyanide bottle-roll results achieved by CSAL in Stage 11 but compromised by poor quality-control results at CSAL.

The Stage 13 samples included drill cuttings from the El Capitan project, surface material from the project, and quality-control samples. All samples were under chain of custody. Independent contractor Mr. Court Brewster assembled the sample suite from samples in storage at El Capitan's sample archive in Denver, Colorado, and from previously processed material in storage at Hazen Research in Denver. This sample suite was essentially the same as that used in Stage 11 (CSAL cyanide bottle rolls) with minor modifications as necessary to accommodate sample

shortages in some drill intervals. Blanks, standards, and duplicates were included in the sample suite as quality-control measures.

McLelland Labs performed cyanide bottle-roll tests according to the protocol set out by Ken Pavlich in 2009 (Appendix 1), with two variations: 1) tests were stopped at 14 days because previous testing at Copper State Analytical Labs (CSAL) indicated no increase in gold during days 15-21; and 2) test were run at ambient room temperature due to the absence of heating equipment. A sample size of 1 kg was used. The cyanide bottle-roll tests ran for 14 days, with readings of Au, Ag, Pt, and Pd at 6 hours and at days 1, 2, 3, 7, 10, and 14. Based on advice from McLelland, carbon was not added as an aid to gold recovery. All QAQC results were acceptable, indicating excellent quality control at McLelland Labs.

The results showed no presence of Au, Ag, Pt, or Pd in the samples analyzed. It appears that the initially positive results from CSAL were spurious. As a cautionary measure, the author has recommended that the company have the two labs compare methods to try to identify and potentially repeat at McLelland any variation that may have aided CSAL's results.

#### ***11.5.10 Analytical Testing at SRI***

As discussed below, El Capitan Precious Metals has reported numerous results based on the work of Orlando Villa at Sundancer Resources (SRI). The author has observed and reported on some of SRI's work in Stages 1-4, 8, and 12 (Palmer et al, 2012b; Palmer and Smith, 2012; Smith and Smith, 2014a) but otherwise has not been involved in this work. Based on poor SRI results reported by the author, serious quality-control issues with the lab's results, and on the fact that SRI is not an independent lab, it is the author's opinion that all SRI test results should be treated with great care: results should not be released to the public nor form the basis for corporate decisions without independent verification.

## **12 Data Verification**

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### **12.1 Independent Evaluation and Verification of Auric Caustic Fusion Assay Results**

Because Auric's caustic fusion method is not a standard method used in the mining industry, El Capitan Precious Metals retained the services of a qualified person (QP), Mr. Richard Daniele, Metallurgical Engineer, of Daniele Metal-Mineral Services, Lakewood, Colorado, to undertake an independent third-party verification of the Auric results. Daniele was provided with geologic drill logs for the 12 Stage 1 drill holes; from these holes he selected 15 core intervals that he considered representative of the deposit. Following his introduction to the caustic fusion method in the Auric laboratory, one-quarter of the sawed core from the 15 core intervals was sent by the onsite consulting geologist to Daniele under chain of custody directly from the secure storage location. Daniele selected an independent laboratory run by Mr. Michael J. Wendell, Wendell and Company, Centennial, Colorado, at which the independent verification assays were performed. The 15 core interval samples were crushed, ground to approximately 80% minus 200 mesh, and split into two 100-gram samples. Fifteen duplicate 100-gram samples in random-numbered bags (DD-1 through DD-15) with no reference to core intervals were provided to Auric and Wendell in order to achieve blind analyses from both laboratories.

In his review of this work, Noel Palmer raised several questions about this work, such as the difference in magnetic separation procedures between Auric and Wendell, analytical issues with lanthanum, and the lack of reported quality-control sample results. These issues should be addressed in any repetition of the Auric caustic fusion assay method.

Nevertheless, it appears that the Daniele and Wendell results, although somewhat lower than the Auric results, provide an independent verification of the Auric results. Daniele concluded in his September 1, 2005 report (Daniele, 2005; Appendix 11) that the caustic fusion assay results performed at Wendell and Company demonstrated that the Auric procedure is a valid analytical procedure for difficult-to-analyze materials. Although the Wendell results averaged lower than the Auric results (30% lower for Au, 35% lower for Pt), Daniele concluded that Wendell's lack of familiarity with the use of lanthanum in solutions for atomic absorption spectrophotometer analyses, as employed by Auric in their caustic fusion procedure, resulted in the lower values. It is Daniele's opinion that greater familiarity with the lanthanum procedure would show improved results and a closer fit with the Auric results.



It is the author's opinion, subject to the uncertainties raised by Noel Palmer (Palmer and Smith, 2009), that the Auric caustic fusion assays on drill samples may be considered adequate for the current state of the project.

## 12.2 Data Verification, 2007-2009

The author has not attempted to verify the data produced during Ken Pavlich's leadership of the company, from 2007 to 2009. It is his opinion that the data contained in Bright (2008) is sound and verifiable, but the author has not undertaken to verify that data.

## 12.3 Data Verification, 2009-2011

The author has not attempted to verify the data produced from 2009-2011, with the exception of results from American Assay and Hazen research done on the 12 surface samples collected by David Smith in June 2009, as described above. Other results deserve attention, verification (if possible), and replication, as noted above and in Recommendations, below.

## 12.4 Data Verification, 2011-Present

Except for some sets of analyses done under broken chain of custody as noted above (Analytical Testing, 2011-Present) all work done under the author's supervision has been verified by the author, David Smith, or Noel Palmer by virtue of intact sample chain of custody combined with either physical presence at the site of analysis or analysis by trusted commercial laboratories. It is the author's opinion that the data generated under his direction is adequate for this technical report.

# 13 Mineral Processing and Metallurgical Testing

## 13.1 Auric Metallurgical Labs Hydrometallurgical Extractions, 2005

Auric Metallurgical Labs submitted a report to El Capitan dated May 15, 2005 which summarized the results of five hydrometallurgical extraction protocols on six surface samples collected from outcrop in the shallow open pit of the main El Capitan deposit. Auric concluded that the samples were particularly amenable to sodium cyanide, sodium cyanide followed by chlorination, and sodium thiosulfate leaches. The Au recoveries ranged from 66.7-92.5% of the calculated caustic fusion head grades and averaged 79.6%. The Pt recoveries ranged from 58.7-78.0% and averaged 67.4%. Table 2 is a summary of the test results on these three protocols, and Appendix 8 is the Auric report.

Table 2. Auric Metallurgical Labs hydrometallurgical extraction results, ounces per ton									
	Au (opt)					Pt (opt)			
Sample	Calc. Head	Na Cyanide	Na Cyan + Cl	Na Thiosulfate	Avg. % Recov.	Calc. Head	Na Cyanide	Na Thiosulfate	Avg. % Recov.
EC-1	0.017	0.011	0.014	0.012	72.6	0.023	0.019	0.011	65.2
EC-10	0.086	0.079	0.08	0.081	98.3	0.05	0.046	0.032	78
EC-11	0.089	0.081	0.084	0.082	92.5	0.023	0.016	0.011	58.7
EC-16	0.015	0.009	0.011	0.01	66.7	0.044	0.03	0.03	68.2
EC-22	0.018	0.011	0.014	0.011	66.7	0.015	0.009	0.01	63.4
EC-24	0.029	0.023	0.025	0.022	80.5	0.019	0.016	0.011	71.1

### 13.2 SRI Smelting and Extraction Tests, 2011

El Capitan Precious Metals has reported on two occasions (press releases of April 6, 2011 and July 14, 2011) the successful direct smelting of concentrates from the El Capitan project. Documents provided by the company state that the April 2011 results were generated from 200 pounds of 10:1 concentrate (apparently a sample from several tons of gravity concentrates produced by the company at the project in years past) and the July 2011 results from 20 pounds of the same concentrates. The April 2011 press release reported recovery of 1.2 opt Au equivalent calculated back to head grade, and the July 2011 press release reported “significant values that are consistent with those reported earlier this year.” The author was not involved in this work and cannot comment on its results. These results deserve scrutiny and replication; El Capitan Precious Metals initially requested that the author undertake an independent verification of SRI’s smelting methods, to be conducted as Stage 8 testing, but subsequently terminated this work after initial poor results (Palmer and Smith, 2012).

Since then, the company has reported additional results based on SRI’s work (press releases of November 7, 2013; December 20, 2013; January 5, 2014). These press releases include mention of a viable precious-metals extraction method but the author is unaware of independent third-party verification of the method. Apart from results reported for Stages 8 and 12 testing (above), the author has not been involved in this work and cannot comment on its results.

Based on results from SRI during Stages 1-4, 8, and 12 (Palmer et al, 2012b; Palmer and Smith, 2012; Smith and Smith, 2014a), on serious quality-control issues with the lab’s results, and on the fact that SRI is not an independent lab, it is the author’s opinion that all SRI test results should be treated with great care: results should not be released to the public nor form the basis for corporate decisions without independent verification.

### 13.3 Auric Metallurgical Labs Hydrometallurgical Extractions, 2019

The author collected two bulk samples (EC-10, EC-11) from bedrock on the El Capitan deposit and delivered them under chain of custody to Auric Metallurgical Labs in May 2019. Auric performed bench-scale (2,500-gram) sodium cyanide and sodium thiosulfate vat leach extractions on head ore and non-magnetic (hematite-dominant) concentrate samples for 72 and 96 hours. Test conditions used 4,000 ml DI water yielding 38.0-38.5% solids slurry; 16-20 g NaOH to establish pH 12.5-13.5; 5.0 g NaCN (0.125%) and 99.2 g Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>·5H<sub>2</sub>O (0.1M); and temperature 20°C. The tests produced Au prills using activated carbon adsorption and Au recoveries ranged from 73.3% to 91.6% (Table 3). These extractions confirmed results reported by Auric on six samples collected from outcrop in 2005. The 2005 and 2019 hydrometallurgical leach extraction results from Auric represent the most positive analytical or extraction results obtained on El Capitan potential ores and support arguments for potential economic commercial production of Au, and potentially other precious metals.

Table 3				
Bench-scale leach tests; 2,500 gram samples				
Sample	Assay (opt Au)	Leach	Time (hours)	Recovery
EC-10 Head	0.083	NaCN*	72	88.30%
EC-11 Head	0.076	"	72	84.40%
EC-10 Non-mag	0.189	"	72	91.60%
EC-11 Non-mag	0.266	"	72	89.90%
EC-10-Non-mag	0.189	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ·5H <sub>2</sub> O**	96	82.90%
EC-11 Non-mag	0.266	"	96	73.30%
*Sodium cyanide				
**Sodium thiosulfate				

### 13.4 AuraSource Inc.

The author met with Mr. Philip Liu, Chairman and CEO of AuraSource Inc., at his office in Phoenix, Arizona on March 3, 2021. Mr. Liu described the AuraSource proprietary technology and equipment that is housed in China and that has reportedly been used to extract Au and Pt from an El Capitan sample, as well as samples from the Iron Duke magnetite skarn deposit in New Mexico. (The author examined Iron Duke on March 5, 2022 and found that the geology of the deposit is extremely similar to El Capitan.) The AuraSource method involves shockwave ultrafine grinding, magnetic and gravity concentration, a vacuum continuous roasting pyrometallurgical process, and a pressure digestion with supercritical fluid extraction hydrometallurgical process. Table 4 shows an analytical result on an El Capitan concentrate using ICP-AES detection of 476.2 g/t Au (13.8 opt Au) and 283.1 g/t Pt (8.2 opt Pt). These results are reported purely to indicate that the AuraSource technology should be subjected to independent third party verification. Until the AuraSource technology and equipment have been brought to an accessible location in North America with chain of custody samples processed at this site, witnessed by the author, and confirmed by an independent laboratory, the author is unable to render an opinion on the viability of the AuraSource technology.

<b>Table 4</b>				
<b>Institute of New Materials Metallurgy*</b>				
<b>Physical and Chemical Testing Center, Northwest Institute of Mining and Metallurgy</b>				
<b>No. 19 Renmin Road, Baiyin City, Gansu Province, 730900, China</b>				
<b>Contact number: 0943-8227662/8261765</b>				
<b>Fax: 0943-8261765</b>				
<b>Contact persons: Pang Zenye, Zhang Chenjie</b>				
<b>Report Number: NW20210208001, February 8, 2021</b>				
<b>Approved by: Zhang Zhuzao</b>				
<b>Customer: Zhijin NewMaterial, Baiyin City Gansu, China</b>				
<b>Sample</b>	<b>Material</b>	<b>Detection</b>	<b>g/t Au</b>	<b>g/t Pt</b>
ZK001	El Capitan Concentrate	ICP-AES	476.2	283.1
ZK002	Iron Duke Concentrate	ICP-AES	232	2142
* The Institute guarantees the fairness, science, independence, and honesty of the test, is responsible for the results, and keeps samples confidential.				

## 14 Mineral Resource Estimate

A resource calculation based on El Capitan drill hole assays was completed by Gemcom Software International in their Vancouver, B.C., Canada, offices using their GEMS version 6.0.3 software. The author and two other consultants supervised the Gemcom resource calculations. The data used were caustic fusion assay results from Auric Metallurgical Labs on diamond drill core, open hole rotary, and reverse circulation samples from 37 vertical drill holes spaced approximately 400 feet apart and totaling 12,763.5 feet of drilling (Table 1, Appendix 6). It should be noted that this resource calculation is focused entirely on precious metals and does not include iron ore. The magnetite dominant portions of the El Capitan deposit show excellent potential for production of a commercial iron ore concentrate and future work should include a feasibility study that evaluates the economics of potential iron ore production.

The parameters used in the Gemcom computer model were as follows:

- The block model used blocks 100 feet square by 20 feet high
- Interpolation was by inverse distance squared

- Composites were based on 20-foot benches
- A 500-foot spherical search radius was used with no rock-type or directional limiting
- Interpolation used a minimum of two composites and a maximum of 12, with a maximum of four composites from any give drill hole
- The extent of the model in mine coordinates in feet (Table 1) was: E 47,000 – E 52,200; N 47,700 – N 50,600; vertical elevations 6,100-6,960 feet.

It is believed most reasonable to use a 0.01 ounces per ton (opt) Au cut-off grade. At this cut-off the calculation results are: 141,444,000 short tons grading 0.020 opt Au, 0.205 opt Ag, 0.011 opt Pt, with a contained 2,769,106 ounces Au; 28,997,185 ounces Ag; and 1,517,868 ounces Pt (Table 5).

Using a 0.02 opt Au cut-off, the calculation results are: 47,121,100 short tons grading 0.029 opt Au, 0.267 opt Ag, 0.013 opt Pt with a contained 1,344,452 ounces Au, 12,572,655 ounces Ag, 594,485 ounces Pt (Tables 5).

It should be noted that drill results show that the deposit is apparently closed on the north, east, and south sides but that significant values in drill hole EC-06-37 (Figure 7) indicate that the deposit is still open to the west. Additional drilling is recommended to close the deposit on the west side.

It is the author's opinion that the above calculation results allow the El Capitan deposit to be classified as a "measured resource" based on the Canadian National Instrument 43-101 definition: "...can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters to support mine planning and evaluation of the economic viability of the deposit...drill holes are spaced closely enough for geological and grade continuity to be reasonably assumed."

It should be emphasized that this resource calculation relies entirely on Auric Metallurgical Labs analyses using a non-standard testing method, and on the report by Mr. Richard Danielle (Danielle, 2005) representing the independent verification of the Auric caustic-fusion assay method.

<b>Table 5</b>					
<b>El Capitan tonnage, Au, Pt grades, contained ounces, ounces/ton, at Au cut-off grades</b>					
<b>Au cut-off (opt)</b>	<b>Tonnage</b>	<b>Au ounces</b>	<b>Pt ounces</b>	<b>Au (opt)</b>	<b>Pt (opt)</b>
0.03	13,326,000	548,032	184,271	0.041	0.014
0.02	47,127,000	1,344,452	594,485	0.029	0.013
0.01	141,445,000	2,769,106	1,517,868	0.02	0.011

### 13 Adjacent Properties

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The El Capitan project has no adjacent properties as defined by NI 43-101.

### 14 Other Relevant Data and Information

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The company has generated significant data and information that has not been reviewed by the author. A thorough review of all past testing should be done to choose potentially promising assay and extraction methods for replication and verification, in addition to those listed in this report.

### 15 Interpretation and Conclusions

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El Capitan Precious Metals Inc. has carried out a thorough exploration program, including 37 holes of exploration drilling totaling 12,763.5 feet, on the El Capitan project. Drill samples have been logged in detail and maintained under strict chain of custody, and caustic fusion assay results have been satisfactorily verified at an independent

third-party laboratory under the supervision of a Qualified Person. Other than the independently verified caustic fusion analytical results from Auric Metallurgical Labs, no other method has proved consistently reliable or verifiable. Standard fire assays have generally produced low values.

El Capitan is a Au-Pt-bearing magnetite skarn deposit and, as such, holds potential for production of both a magnetite iron ore concentrate and extracted Au, Pt, and possibly other precious metals. Magnetite is a strongly magnetic mineral that should produce a >62% total iron concentrate by simple magnetic separation; with Si, Al, P, S impurities within the range of commercial iron ores, El Capitan shows potential for production of a commercial iron ore concentrate.

The presence of Au at El Capitan has been unequivocally proven by scanning electron microscope results, which have generated photographs and spectra identifying Au in chain of custody gravity concentrates from drill samples on the project.

Hydrometallurgical extractions by Auric Metallurgical in 2005 and 2019 using sodium cyanide and sodium thiosulfate leaches on Au head ore grades of 0.017-0.089 opt Au and non-magnetic concentrates of 0.189-0.266 opt Au have produced impressive recoveries in the range 72.6-98.3%. Extractions on Pt head grades of 0.015-0.44 opt Pt have also resulted in good recoveries in the range 63.4-78%. To date, hydrometallurgy appears to hold the best promise for potential commercial production of precious metals. In addition, although requiring verification, the AuraSouce Inc. pyrometallurgical and hydrometallurgical procedures may hold promise.

A resource calculation has been completed by a recognized mining software company. The El Capitan deposit qualifies as a “measured resource” under the NI 43-101 definition. At a 0.01 ounces per ton (opt) Au cut-off grade, the calculated results are: 141,444,000 short tons grading 0.020 opt Au, 0.011 opt Pt, with a contained 2,769,106 ounces Au and 1,517,868 ounces Pt (Table 5). At current prices of nearly US\$2,000 per ounce Au and nearly \$1,000 per ounce Pt, El Capitan Precious Metals should move aggressively to advance the project.

It should be emphasized that the above Au-Pt resource does not include iron ore. Future work on the project should include a feasibility study that evaluates potential for production of a commercial iron ore concentrate in addition to production of Au, Pt, and possibly other precious metals.

## 15.1 Exploration Potential

The El Capitan deposit represents a fortuitous exposure of mineralization that lies beneath a cap of barren limestone. Had the deposit not been exposed by erosion it may not have been discovered. Figure 10 is a general geologic map of the area surrounding the El Capitan deposit. The map shows a 12 mi.<sup>2</sup>, north-south band of Permian limestone and quartz sandstone lying between a Miocene aplite intrusion to the east and rhyolitic volcanics to the west; the volcanics lie as cover rocks over the Permian limestone and quartz sandstone. The El Capitan deposit is a magnetite skarn that represents mineralization and replacement of Permian limestone host rocks by hydrothermal fluids probably derived from the aplite intrusion. This being the case, the entire 12 mi<sup>2</sup> area of Permian limestone and quartz sandstone must be considered prospective for additional El Capitan-type deposits.

An airborne hyperspectral survey over a 35-square mile area surrounding the El Capitan property by Earth Search Sciences, Inc. in February 2006 identified 24 anomalies of high iron content with hematite/goethite spectral signatures; hematite and goethite are oxidized equivalents of magnetite. A total of 38 samples were collected by the author from outcropping mineralization or alteration at the 24 anomaly locations and submitted for caustic fusion assay to Auric Metallurgical Labs. Of 38 samples collected, Auric reported potential ore-grade results on 16 samples that ranged 0.020-2.02 opt Au and 36 that ranged 0.033-0.074 opt Pt.

Two areas have been designated by the author as Priority #1 Exploration Areas:

- A 3.4 mi.<sup>2</sup> area stretching to the east and west from the El Capitan deposit (Fig. 10), that includes sample locations AN 6 and AN 8. At AN 6, one mile southeast of El Capitan, abundant magnetite/hematite float covers a wide area; three samples here assayed 0.022-2.071 opt Au. At AN 8, one mile to the southwest of El Capitan, in an area of abundant float, a 10-foot-wide hematite-calcite zone is exposed in a trench; one sample here assayed 0.165 opt Au. One hundred unpatented claims covering this area were staked and recorded by El Capitan Precious Metals Inc. on March 9-11, 2022.

- A 2.2 mi.<sup>2</sup> area surrounding the Weddige Prospect, 2.8 mi to the north of El Capitan (Fig. 10), that includes an outcrop of El Capitan-type magnetite skarn and abundant float with four samples that assayed 0.021-0.025 opt Au.

In addition, 16 hyperspectral anomalies located over a north-south, 2-mile-long belt along the base of the overlying volcanics are commonly characterized by hematite-bearing fractures cutting the volcanics. This mineralization could reflect underlying magnetite skarn mineralization.

A pre-2005 ground magnetic survey over the El Capitan deposit area showed magnetic anomalies over the deposit as well as others to the east and west. This survey is considered preliminary but it demonstrated the effectiveness of magnetic surveying in the area. The author recommends that El Capitan Precious Metals conduct a detailed magnetic survey over the entire 12 mi.<sup>2</sup> area of Permian limestone and quartz sandstone.

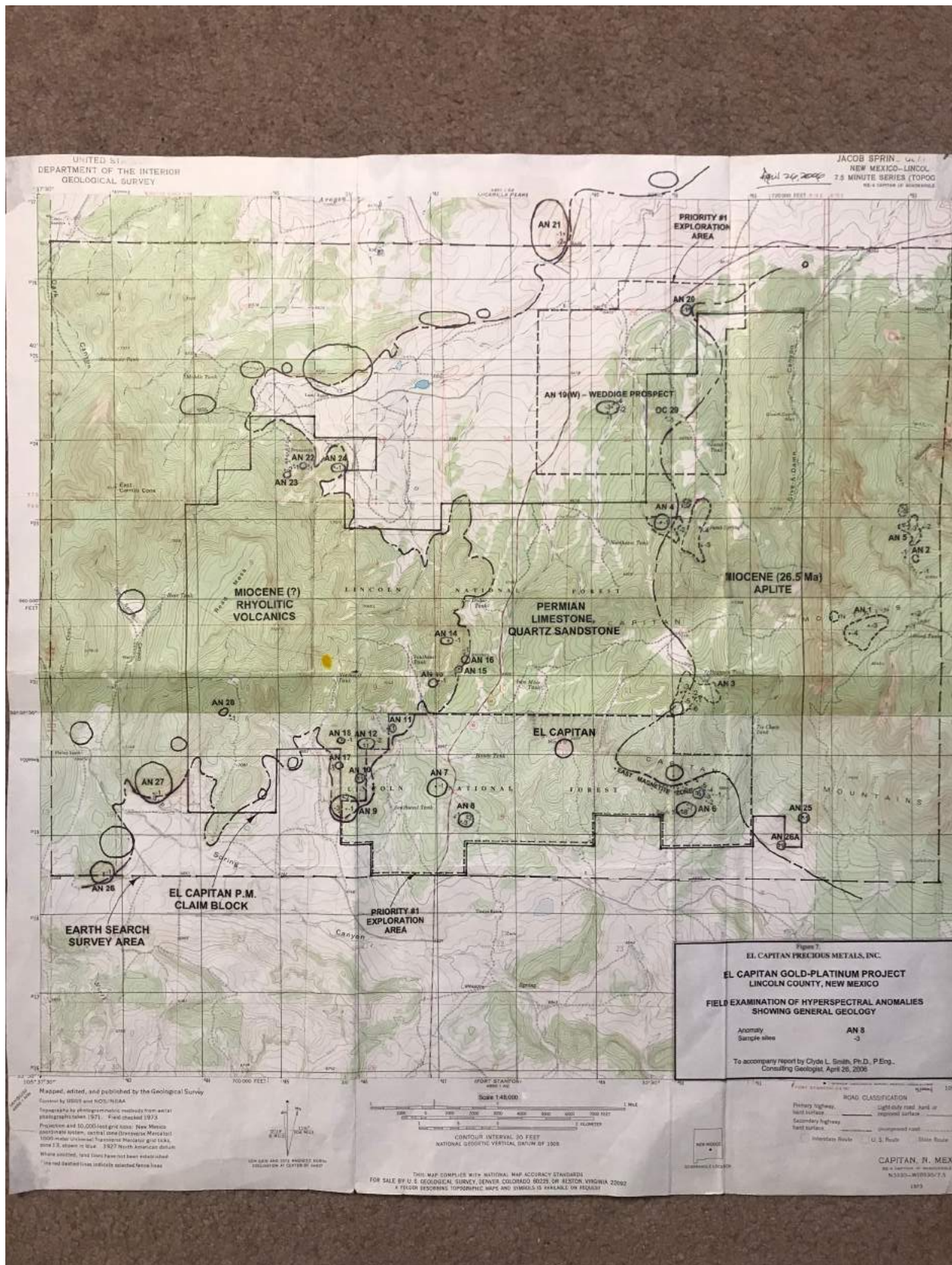




Figure 10. General geologic map of of 35-square-mile area surrounding the El Capitan deposit showing hyperspectral anomalies of high iron (hematite-goethite) content (black circles) and location of samples collected for Au and Pt caustic fusion assays (AN 1-29).

## **15.2 Project Risks and Uncertainties**

The El Capitan project comes with the following three risks and uncertainties:

### **15.2.1 Assay Risk**

To date, the only assay method on El Capitan mineralized samples that appears to be effective is the caustic fusion assay used by Auric Metallurgical Labs. As described above, independent verification of the method as a valid analytical procedure for difficult-to-analyze materials was achieved by Richard Daniele in the independent laboratory of Mike Wendell. The presence of Au in El Capitan samples has been confirmed by electron microscope. In addition, hydrometallurgical extractions have produced Au and Pt metal-in-hand. These results support the fact that Au occurs in El Capitan samples. However, in order to meet assay standards commonly required by the mining industry, the company should continue to seek a laboratory that can consistently produce verification assays on duplicate samples assayed by Auric.

### **15.2.2 Metallurgical Risk**

Hydrometallurgical extractions by Auric Metallurgical in 2005 and 2019 using sodium cyanide and sodium thiosulfate leaches on Au head ore grades of 0.017-0.089 opt Au and non-magnetic concentrates of 0.189-0.266 opt Au have produced impressive recoveries in the range 72.6-98.3%. Extractions on Pt head grades of 0.015-0.44 opt Pt have also resulted in good recoveries in the range 63.4-78%. Although, to date, the Auric hydrometallurgical extractions appear to hold the best promise for potential commercial production of precious metals, independent verification of the Auric results has not yet been achieved and the company should continue to seek a laboratory that can consistently produce verification extractions on duplicate samples treated by Auric. It is possible that the AuraSource Inc. pyrometallurgical and hydrometallurgical procedures may provide this verification.

### **15.2.3 Permitting Risk**

All mining projects come with some level of permitting risk. At the El Capitan project, three factors amplify somewhat the usual permitting risk: the project's location on U.S. Forest Service land, the recent Lincoln County Mining Ordinance, and the local opposition group Friends of the Capitans.

The project is located on Forest Service land. Permits for exploration and mining are routinely issued on Forest Service land, but the agency is known to have a more stringent permit application and review process than the Bureau of Land Management. This is augmented by past relations with the Forest Service, which included certain operations without permits and an exploration permit denial in 2008. These factors will increase the time and expense for permitting both exploration and mining activities.

In 2009, Lincoln County passed a new Mining Ordinance, intended to provide a "regulatory framework" for permitting mining operations in the county. The expressed intent of the ordinance is to "protect the health, safety, and welfare of its citizens." It requires a proposed mining operation to comply with all State and Federal permitting requirements, and adds to these a Mining Operations Permit issued by the county. Although this does not appear to be a significant risk to permitting the project, it may increase the time and expense for permitting any mining operation on the project.

In recent years a local opposition group has been formed in the area, named Friends of the Capitans, concerned about mining in Lincoln County and specifically targeting El Capitan. In 2008, the company responded to what it felt were incorrect or misleading statements made by the group (El Capitan, 2008). The Friends of the Capitans activity combined with the Lincoln County Mining Ordinance indicates that the company should pay extra attention to community relations efforts.

Local opposition is likely the biggest permitting risk. This can most effectively be mitigated by contracting with highly credible and professional permitting consultants who can guide the company through the permitting and community relations processes.

## 16 Recommendations

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The general geologic map of the area surrounding the El Capitan deposit (Fig. 10) shows a 12 mi.<sup>2</sup> band of Permian limestone and quartz sandstone. These rocks are the host rocks for the El Capitan deposit and should be considered prospective for additional El Capitan-type deposits. Magnetite is a highly magnetic mineral and responds to surveys conducted with magnetometers. It is recommended that the entire 12 mi.<sup>2</sup> band of potential host rocks be surveyed in detail by ground magnetometer conducted by a reputable geophysical survey company and interpreted by a geophysical consultant. The author has worked on previous projects with Magee Geophysics of Reno, Nevada and Thomas Weis, previously Chief Geophysicist of Newmont Mining, and recommends both for the El Capitan magnetic survey. The El Capitan property now consists of 116 claims that cover the deposit and the surrounding Priority #1 Exploration Area. If magnetic anomalies are located by the ground magnetic survey, these anomalies should be covered with additional staked claims. The anomalies should then be evaluated by geologic mapping and sampling with recommendations made for drilling.

During a meeting with Mr. Ahmet Altinay at Auric Metallurgical Labs in Salt Lake City in March 2022, the author requested that he provide recommendations and a budget for creating a magnetite concentrate (>62% total iron with acceptable Si, Al, P, S values) and performing hydrometallurgical extractions of Au and Pt on El Capitan bulk samples with the intent to scale up to a production facility. Although the Auric lab no longer exists, Mr. Altinay's recommendations should be undertaken at another lab with capability similar to Auric's. It is notable that Mr. Altinay remains available as a consultant.

The following is a summary of Mr. Altinay's recommendations, with some of the author's additions, on how to proceed with test work on El Capitan bulk samples:

- First phase: Analyses on laboratory prepared magnetic and non-magnetic (hematite-dominant) concentrates. Analyses of Fe, Si, Al, P, and S, on magnetite-dominant magnetic concentrates and analyses of Au, Ag, Pt, Pd, other platinum group elements, on non-magnetic concentrates. Following potential commercial grade analytical results on a magnetite concentrate and/or a precious metals concentrate, proceed to second phase.
- Second phase: Amenability tests at 30- and 100-gram sample sizes using a variety of hydrometallurgical leaches. It is notable that in 2005 and 2019, Auric achieved high hydrometallurgical leach recoveries on Au and Pt in amenability tests on El Capitan samples.
- Third phase: Bench-scale leach tests at 1.0 kg and 2.5 kg sample sizes using most successful leach methods from amenability tests to optimize leach recoveries.
- Pilot Plant phase: A pilot plant should be constructed in a lab that is similar to what was available at Auric Metallurgical. This plant should be capable of leaching batches of 0.5-2.0-tons. At this stage, the economic parameters and costs of production could be determined.
- Production site Plant phase: With successful recoveries in the lab pilot plant, a complete production plant should be constructed on site at the El Capitan mine.

A budget totaling \$172,000 (Table 6) is recommended for a magnetic survey; geologic mapping, sampling, and assaying; first, second, and third phase metallurgical test work on bulk samples; and project management.

In addition, Mr. Philip Liu should be encouraged to bring the AuraSource extraction metallurgy technology and equipment now housed in China to the U.S. This is the only means by which independent third-party verification of the AuraSource procedures can be achieved. Should AuraSource produce a commercial grade magnetite concentrate and achieve extractions of Au and Pt then these results could be compared to those of Auric and a decision made as to which processes should be installed at the El Capitan mine.

In March 2022, the author examined the Iron Duke magnetite-precious metals skarn deposit located near Orogrande, New Mexico, 115 mi. by highway to the south of the El Capitan deposit. The geology of the Iron Duke deposit is almost identical to El Capitan. Following successful metallurgical extractions at an El Capitan pilot plant, consideration should be given to entering into negotiations on joint production at a production facility located midway between El Capitan and Iron Duke where ore delivered by truck or rail to the site would be treated in a common production facility.

### 16.1 Budget

<b>Table 6</b>		
<b>El Capitan Budget through third phase metallurgical</b>		
Magnetic survey	Contractor: estimate 200 line km	US\$ 25,000.00
	Consultant: estimate 4 days @ \$1,000/day	4,000.00
Geology	Mapping, sampling: estimate 10 days @ 1,000.day	10,000.00
	Assays: estimate 50 @ \$40/sample	2,000.00
	Expenses, supplies	5,000.00
Metallurgical	First phase	8,000.00
	Second phase	8,000.00
	Third phase	90,000.00
Management	Minimum 5 days/mo. x 4 mo. @ \$5,000/mo.	20,000.00
Total		US\$ 172,000.

Budget estimates for the Pilot Plant, and production site Plana phases could be determined based on results through the third phase of metallurgical test work.

## 17 References

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- Auric Metallurgical Labs, 2005, Gold & Minerals Company Inc. El Capitan property, Lincoln County, NM, analytical and extractive procedures development program, Phase II: El Capitan ore extractive procedures development program; Prepared for Gold and Minerals Company Inc., 15 p.
- Auric Metallurgical labs, 2019, Bench scale hydrometallurgical recovery tests 4797C and 4798C performed on head ore samples EC-10 and EC-11 from El Capitan property, Lincoln County, NM; prepared for El Capitan Precious Metals Inc., 18 p.
- Bird, P., 1984, Laramide crustal thickening event in the Rocky Mountain foreland and Great Plains: *Tectonics*, v. 3, p. 741-758.
- Bright, K., 2008, Analysis of two composite samples representing Phase 1 and Phase 2 / 3 drilling of the El Capitan iron skarn and associated rocks, Lincoln County, New Mexico, USA, with particular attention to Au Pt Pd and Ag content: prepared for El Capitan Precious Metals Inc., February, 2008, 19 p.
- Carville, D.P., Leckie, J.F., Moorhead, C.F., Rayner, J.G., Durbin, A.A., 1990, Coronation Hill gold-platinum-palladium deposit: in Hughes, F.E., ed., *Geology of the Mineral Deposits of Australia and Papua New Guinea: the Australian Institute of Mining and Metallurgy*, Melbourne, p.759-762.
- Cather, S.M., Lucas, S.G., McLemore, V.T., and Colpitts, R.M., Jr., 1991, Second-day road log from Inn of the Mountain Gods to Hondo, Lincoln, Capitan and return to Inn of Mountain Gods, Guidebook 42, New Mexico Geological Survey, New Mexico Bureau of Mines.
- Danielle, R., 2005, Summary report of evaluation and validation of Auric alkali fusion analytical procedure at Wendell & Company: prepared for El Capitan Precious Metals Inc., September 1, 2005, 11 p.
- El Capitan Precious Metals Inc., 2008, Correcting inaccurate or misleading statements made by Friends of the Capitans: <http://www.elcapitanpmi.com/documents>, accessed February 26, 2012.
- Einaudi, M.T., and Burt, D.M., 1982, Introduction—terminology, classification, and composition of skarn deposits: *Economic Geology*, v. 77, p. 745-754.
- Einaudi, M.T., Meinert, L.D., and Newberry, R.J., 1981, Skarn deposits, in Skinner, B.J., ed., *Economic Geology 75<sup>th</sup> Anniversary Volume: Economic Geology Publishing Company*, p. 317-291.
- Hipwell, R.M., 2003, Geology, reserves and mineral review of the patented and unpatented lode claims held by El Capitan Ltd.: consulting report to El Capitan Precious Metals, Inc.
- Kelley, V. C., 1952, Origin and pyrometasomatic zoning of the Capitan iron deposit, Lincoln County, New Mexico: *Economic Geology*, v. 47, p. 64-83.
- Lincoln County, New Mexico, 2009, Lincoln County Mining Ordinance: <http://lincolncountynm.net/ord.htm>, accessed February 26, 2012.
- McLemore, V. T., 2001, Silver and gold in New Mexico: New Mexico Bureau of Geology and Mineral Resources, Resources Map 21.
- Mernagh, T.P., Heinrich, C.A., Leckie, J.F., Carville, D.P., Gilbert, D.J., Valenta, R.K., Wyborn, L.A.I., 1994, Chemistry of low-temperature hydrothermal gold, platinum, and palladium (uranium) mineralization at Coronation Hill, Northern Territory, Australia: *Economic Geology*, v. 89, p. 1053-1073.
- MSRDI, 2013, Final Summary Report on Cyanidation Test: report prepared for El Capitan Precious Metals, July 1, 2013, 15 p. (Stage 9 testing report)
- Palmer, N., and Smith, D.S., 2009, Review of Metallurgical Research El Capitan Project Capitan, New Mexico: prepared for El Capitan Precious Metals Inc., October 16, 2009, 16 p.
- Palmer, N., Smith, D.S., and Smith, C.L., 2012a, Results of El Capitan Analytical Testing Stage 7: report for El Capitan Precious Metals, February 21, 2012, 7 p.
- Palmer, N., Smith, D.S., and Smith, C.L., 2012b, Results of El Capitan Analytical Testing Stages 1, 2, 4, and 5: report for El Capitan Precious Metals, April 27, 2012, 10 p.

- Palmer, N., and Smith, D.S., 2012, Results from Orlando Villa Preliminary Demonstration: report for El Capitan Precious Metals, July 12, 2012, 3 p. (Stage 8 testing report)
- Roberts, D.G., Adams, D.C., and Keller, G.R., 1991, A geophysical analysis of the crustal structure in the Ruidoso area: Guidebook 42, New Mexico Geological Survey, New Mexico Bureau of Mines.
- Scholle, P.A., 2003, Geologic map of New Mexico: New Mexico Bureau of Geology and Mineral Resources.
- Smith, C.L., 2005, Report on surface samples collected Jan. 15-16, 2005, El Capitan Project, New Mexico: prepared for El Capitan Precious Metals Inc., January 21, 2005, 4 p.
- Smith, C.L., 2005, El Capitan gold-platinum group-iron project, Lincoln County, New Mexico, resource calculation report: prepared for El Capitan Precious Metals Inc., November 7, 2005, 50 p.
- Smith, C.L., 2007, Report on El Capitan gold-platinum project, including measured resource calculation, Lincoln County, New Mexico: prepared for El Capitan Precious Metals Inc., April 16, 2007, 291 p.
- Smith, C.L. 2012, NI 43-101 Technical Report on the El Capitan project, Lincoln County, New Mexico; consulting report prepared for El Capitan Precious Metals Inc., Feb. 29, 2012, 31 p., plus appendices.
- Smith, C.L., 2012a, Results of El Capitan Analytical Testing Stage 6: SEM and Microprobe Work: report for El Capitan Precious Metals Inc., July 21, 2012, 7 p.
- Smith, C.L. 2014, NI 43-101 Technical Report on the El Capitan project, Lincoln County, New Mexico; consulting report prepared for El Capitan Precious Metals Inc., January 6, 2014, 37 p., plus appendices.
- Smith, C.L., 2022, NI 43-101 Technical Report on the El Capitan Project, Lincoln County, New Mexico; prepared for El Capitan Precious Metals Inc., March 22, 2022.
- Smith, D.S., 2009, Report on surface sampling, El Capitan Project, New Mexico: prepared for El Capitan Precious Metals Inc., June 16, 2009, 1 p.
- Smith, D.S., Palmer, N., and Smith, C.L., 2012, Results of El Capitan Analytical Testing Stage 10: Pressure Digestion Tests at CSAL: report for El Capitan Precious Metals, August 25, 2013, 2 p.
- Smith, D.S., and Smith, C.L., 2012, Results of El Capitan Analytical Testing Stage 6: SEM and Microprobe Work: report for El Capitan Precious Metals, July 21, 2012, 7 p.
- Smith, D.S., and Smith, C.L., 2013, Results of El Capitan Analytical Testing Stage 11: Cyanide Bottle Roll Tests at CSAL: report for El Capitan Precious Metals, August 25, 2013, 4 p.
- Smith, D.S., and Smith, C.L., 2014a, Results of El Capitan Analytical Testing Stage 12: Weaver Creek Concentration: report for El Capitan Precious Metals, January 6, 2014, 5 p.
- Smith, D.S., and Smith, C.L., 2014b, Results of El Capitan Analytical Testing Stage 13: Cyanide Bottle Roll Tests at McLelland: report for El Capitan Precious Metals, January 6, 2014, 4 p.
- Stumpfl, E.F., and Tarkian, M., 1976, Platinum genesis: new mineralogical evidence: *Economic Geology*, v.71, p.1451-1460.
- Thompson, T. B., 1991, Genesis of gold associated with alkaline igneous rocks (abs.): *Geological Society of America Abstracts with Programs*, v. 23, p. 99-100.
- Werle, J.L., Ikramuddin, M., and Mutschler, F.E., 1984, Allard stock, La Plata Mountains, Colorado – an alkaline rock-hosted copper-precious metal deposit: *Canadian Journal of Earth Sciences*, v. 21, n. 6, p. 630-641.

## Certificate of Qualified Person

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I, Clyde L. Smith, Ph.D., do hereby certify that:

1. I am a consulting exploration geologist located at 106-1680 56<sup>th</sup> Street, Delta, British Columbia, Canada, V4L 2L6.
2. This certificate applies to “NI 43-101 Technical Report on the El Capitan Project, Lincoln County, New Mexico,” effective date July 24, 2023.
3. I am a Qualified Person as defined by and for the purposes of National Instrument 43-101 by virtue of my education, and experience. I have been certified as a Professional Engineer with the Association of Engineers and Geoscientists of British Columbia. I have a Ph.D. degree in geology, and I have over 50 years of experience in minerals exploration, with over 40 years focused on gold and precious metals exploration in the southwestern United States.
4. My most recent personal inspection of the El Capitan property was July 18, 2023.
5. I am responsible for the entire report “NI 43-101 Technical Report on the El Capitan Project, Lincoln County, New Mexico.”
6. I am independent of El Capitan Precious Metals Inc., and do not hold any interest in the project or securities in any of the companies involved.
7. I have had no involvement with the El Capitan project prior to December 2004.
8. I have read National Instrument 43-101 and am responsible for the entire content of report “NI 43-101 Technical Report on the El Capitan Project, Lincoln County, New Mexico,” which has been prepared in compliance with NI 43-101.
9. As of the effective date of the report, July 24, 2023, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated July 24, 2023, Benzonia, Michigan, USA.

A handwritten signature in black ink, appearing to read 'Clyde L. Smith', is written over a light blue rectangular background.

Clyde L. Smith, Ph.D., Consulting Geologist

## **Appendix 1**

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### **List of Unpatented Mineral Claims**



**El Capitan Precious Metals Inc.**  
**El Capitan Project Unpatented Lode Claims**

Registered owner  
El Capitan Precious Metals Inc.  
5871 Honeysuckle Rd.  
Prescott AZ 86305-3764

<b>Claim Name</b>	<b>BLM Serial Number</b>
SMOKEY 1	NMMC168752
SMOKEY 2	NMMC168753
SMOKEY 3	NMMC163908
SMOKEY #4	NMMC170126
SMOKEY #5	NMMC170127
SMOKEY #6	NMMC170128
SMOKEY #10	NMMC172142
SMOKEY #11	NMMC172143
SMOKEY #12	NMMC172144
SMOKEY #13	NMMC172145
SMOKEY #14	NMMC172146
SMOKEY #15	NMMC172147
SMOKEY #16	NMMC172148
SMOKEY #17	NMMC172149
SMOKEY #18	NMMC172150
SMOKEY #20	NMMC172152
SMOKEY #21	NMMC172153
SMOKEY #22	NMMC172154
SMOKEY #23	NMMC172155
SMOKEY #24	NMMC172156
SMOKEY #26	NMMC172158
SMOKEY #27	NMMC172159
SMOKEY #28	NMMC172160
SMOKEY #30	NMMC172270
SMOKEY #31	NMMC172271
SMOKEY #32	NMMC172272
SMOKEY #33	NMMC172273
SMOKEY #34	NMMC172274
SMOKEY #35	NMMC172275
SMOKEY #36	NMMC172276
SMOKEY #37	NMMC172277
SMOKEY #38	NMMC172278
SMOKEY #39	NMMC172279
SMOKEY #40	NMMC172280
SMOKEY #41	NMMC172281
SMOKEY #42	NMMC172282
SMOKEY #43	NMMC172283
SMOKEY #44	NMMC172412
SMOKEY #45	NMMC172413
SMOKEY #46	NMMC172414

<b>Claim Name</b>	<b>BLM Serial Number</b>
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SMOKEY #48	NMMC172416
SMOKEY #49	NMMC172417
SMOKEY #50	NMMC172418
SMOKEY #51	NMMC172419
SMOKEY #52	NMMC172420
SMOKEY #53	NMMC172421
SMOKEY #228	NM105749402
SMOKEY #229	NMMC172550
SMOKEY #230	NMMC172551
SMOKEY #231	NMMC172552
SMOKEY #232	NMMC172463
SMOKEY #233	NMMC172464
SMOKEY #234	NMMC172465
SMOKEY #235	NMMC172466
SMOKEY #236	NMMC172467
SMOKEY #237	NMMC172468
SMOKEY #254	NM105749412
SMOKEY #255	NM105749413
SMOKEY #256	NMMC172568
SMOKEY #257	NMMC172569
SMOKEY #258	NMMC172570
SMOKEY #259	NMMC172472
SMOKEY #260	NMMC172473
SMOKEY #261	NMMC172474
SMOKEY #262	NMMC172475
SMOKEY #263	NMMC172476
SMOKEY #264	NMMC172477
SMOKEY #281	NMMC172572
SMOKEY #282	NMMC172573
SMOKEY #283	NMMC172574
SMOKEY #284	NMMC172575
SMOKEY #285	NMMC172576
SMOKEY #298	NM105749428
SMOKEY #299	NMMC172578
SMOKEY #300	NMMC172579
SMOKEY #301	NMMC172580
SMOKEY #302	NMMC172581
SMOKEY #314	NM105749433
SMOKEY #315	NM105749434
SMOKEY #316	NMMC172583
SMOKEY #328	NM105749436
SMOKEY #329	NM105749437
SMOKEY #330	NMMC172529
SMOKEY #331	NMMC172585
SMOKEY #354	NM105749442
SMOKEY #355	NM105749438
SMOKEY #356	NMMC172532

<b>Claim Name</b>	<b>BLM Serial Number</b>
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SMOKEY #358	NMMC172704
SMOKEY #359	NMMC172705
SMOKEY #360	NMMC172706
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SMOKEY #382	NM105749448
SMOKEY #383	NMMC172535
SMOKEY #384	NMMC172536
SMOKEY #385	NMMC172727
SMOKEY #386	NMMC172728
SMOKEY #387	NMMC172729
SMOKEY #388	NMMC172730
SMOKEY #389	NMMC172731
SMOKEY #390	NMMC172732
SMOKEY #391	NMMC172733
SMOKEY #420	NM105749458
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SMOKEY #422	NM105749460
SMOKEY #423	NM105749461
SMOKEY #424	NM105749462
SMOKEY #425	NMMC172877
SMOKEY #426	NMMC172878
SMOKEY #427	NMMC172879
SMOKEY #428	NMMC172880

## **Appendix 2**

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### **Geologic Cross Sections**

E 49,000

E 50,000

E 51,000

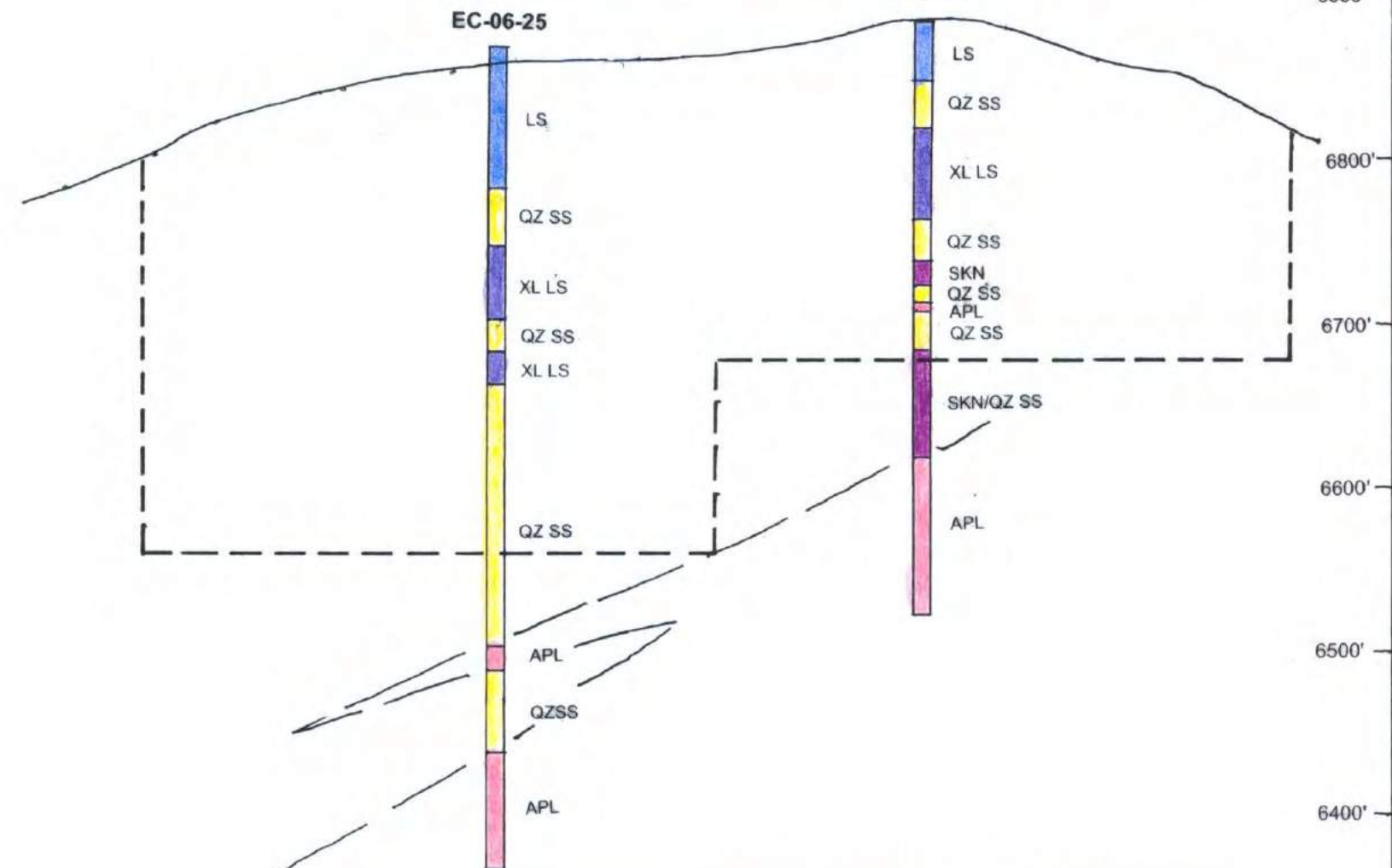
**EAST-WEST SECTION 1 (N 48,150)****EC-06-26****EC-06-25**

Figure 9.

**EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION**

Horizontal scale 1:2,400

Vertical  
Scale  
1:1,200

0 100' 200' 300' 400'

0  
50'  
100'

El Capitan Precious Metals, Inc. drill hole

**EC-05-01**

- Limestone (LS)
- Crystalline limestone (XL LS)
- Skarn (SKN; see geologic logs for detail)
- Quartz sandstone (QZ SS)
- Aplite (APL)

Outline indicated resource block

To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007



E 49,000

E 50,000

E 51,000

E 52,000

EAST-WEST SECTION 2 (N 48,600)

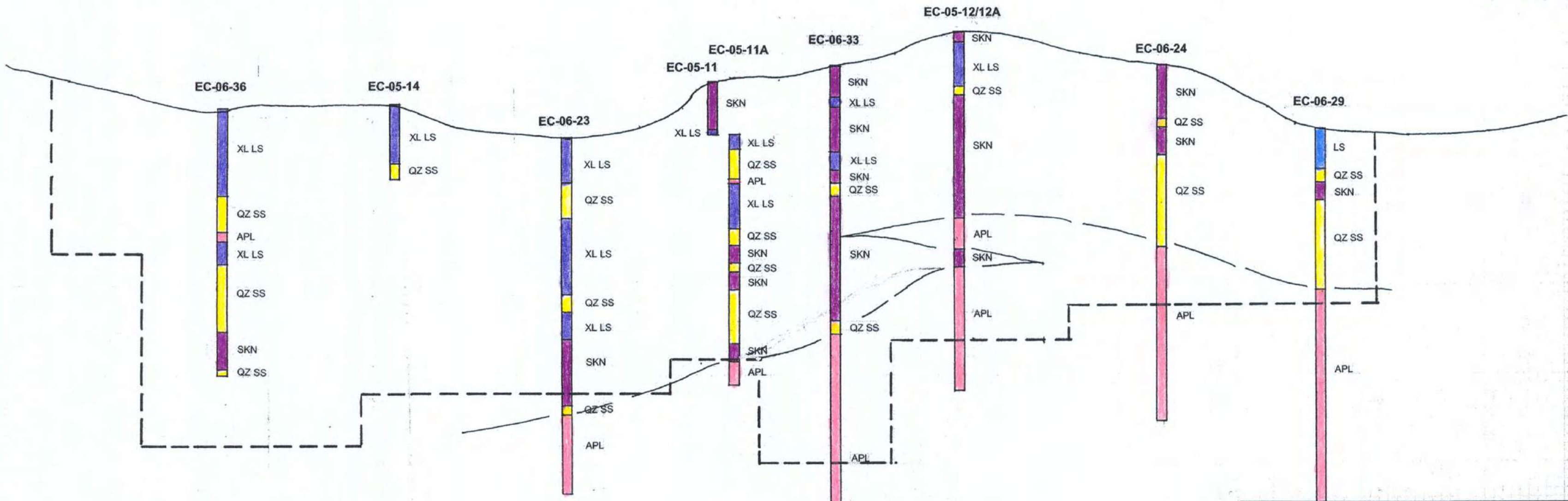


Figure 10.  
**EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION**

Horizontal scale 1:2,400  
Vertical Scale 1:1,200

0 100' 200' 300' 400'

0 50' 100'

El Capitan Precious Metals, Inc. drill hole

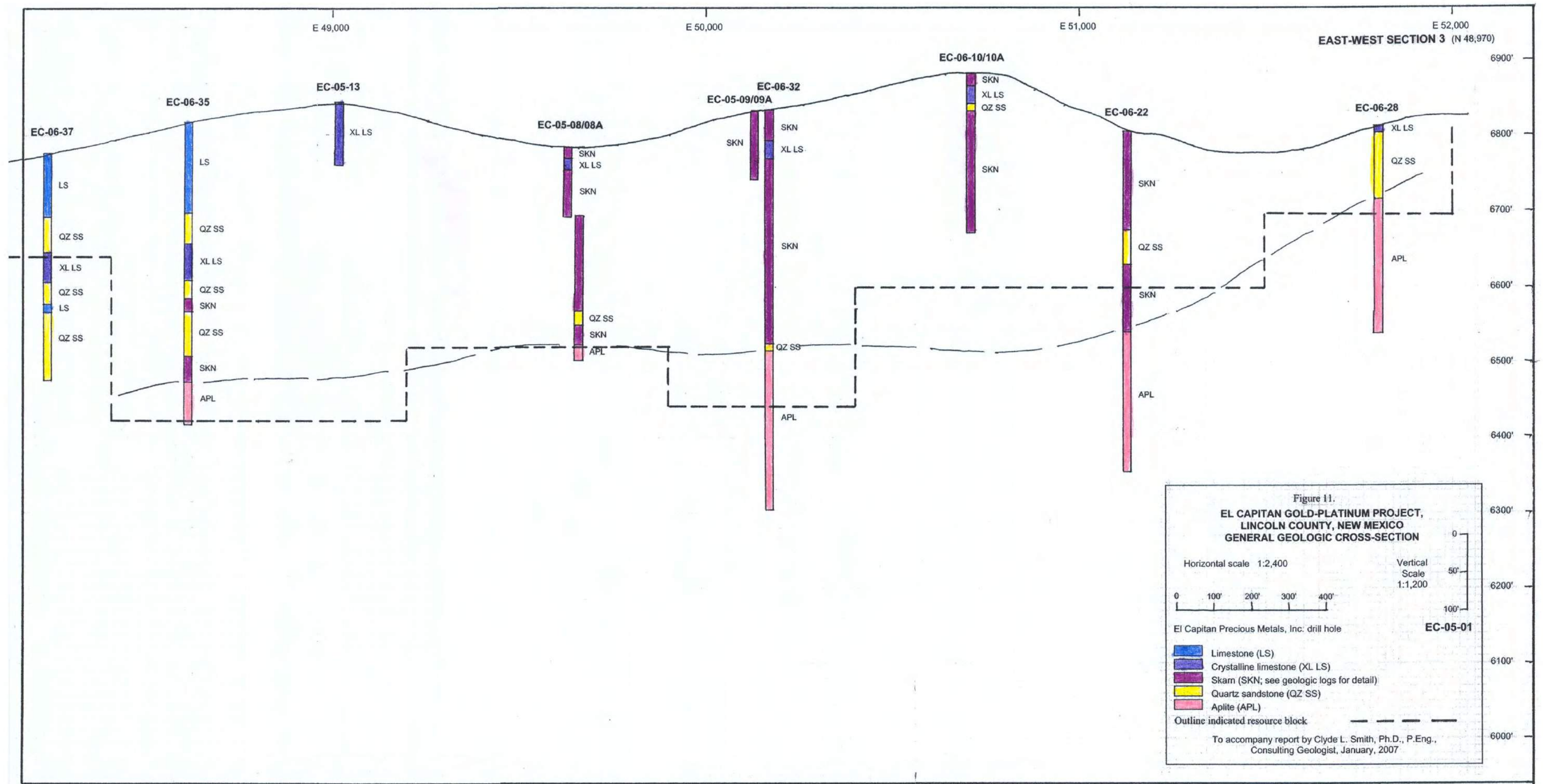
**EC-05-01**

- Limestone (LS)
- Crystalline limestone (XL LS)
- Skarn (SKN; see geologic logs for detail)
- Quartz sandstone (QZ SS)
- Aplite (APL)

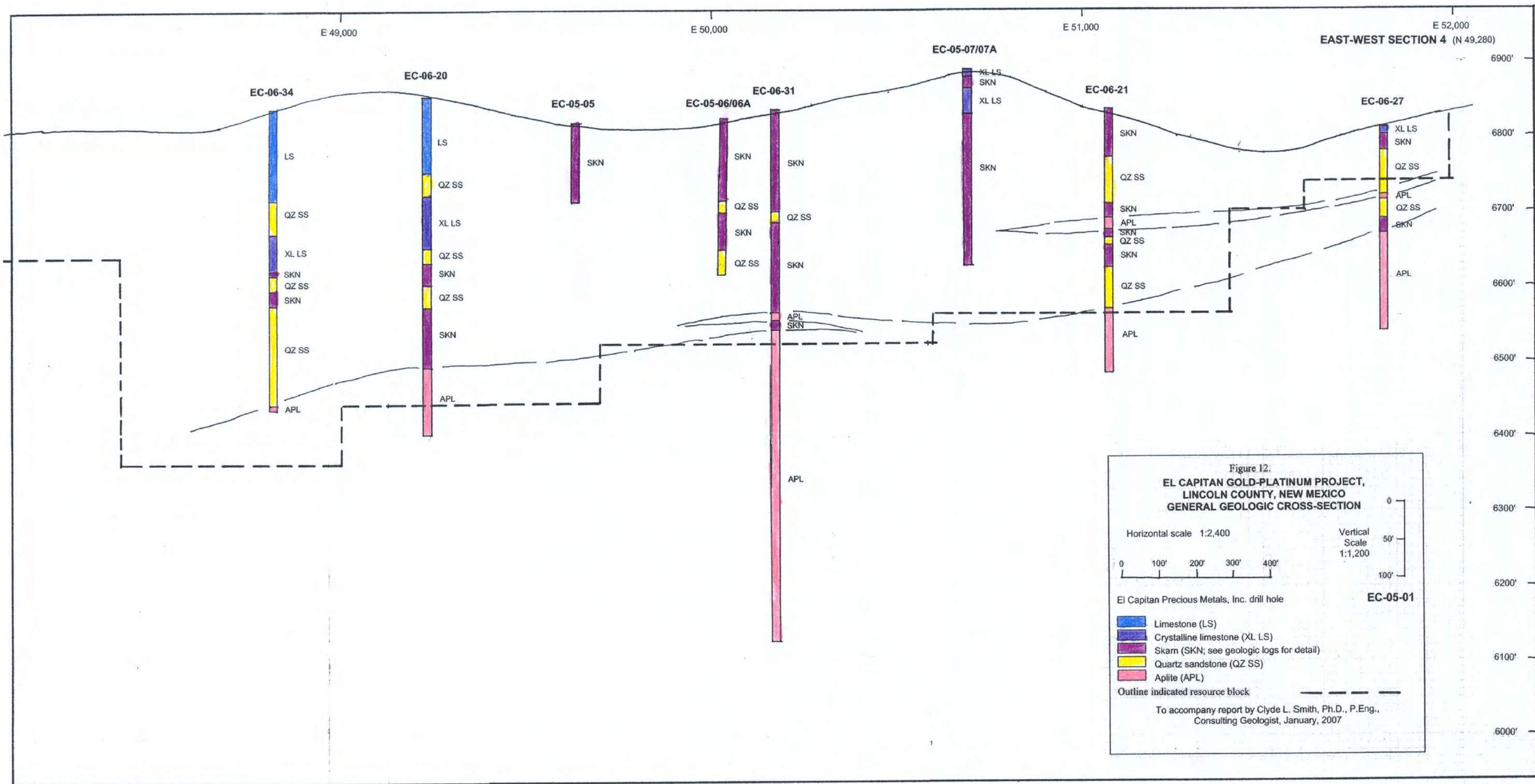
Outline indicated resource block

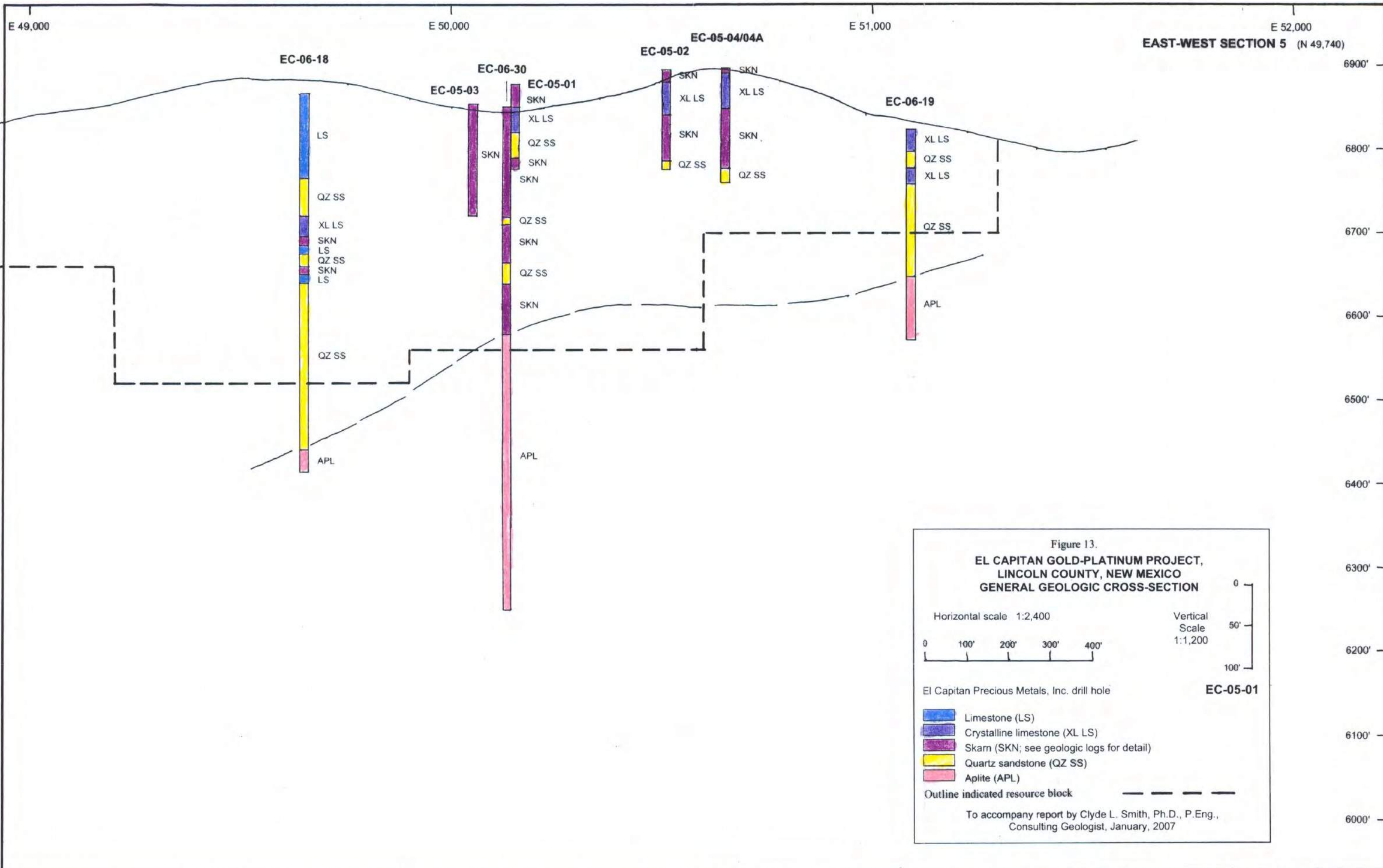
To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007



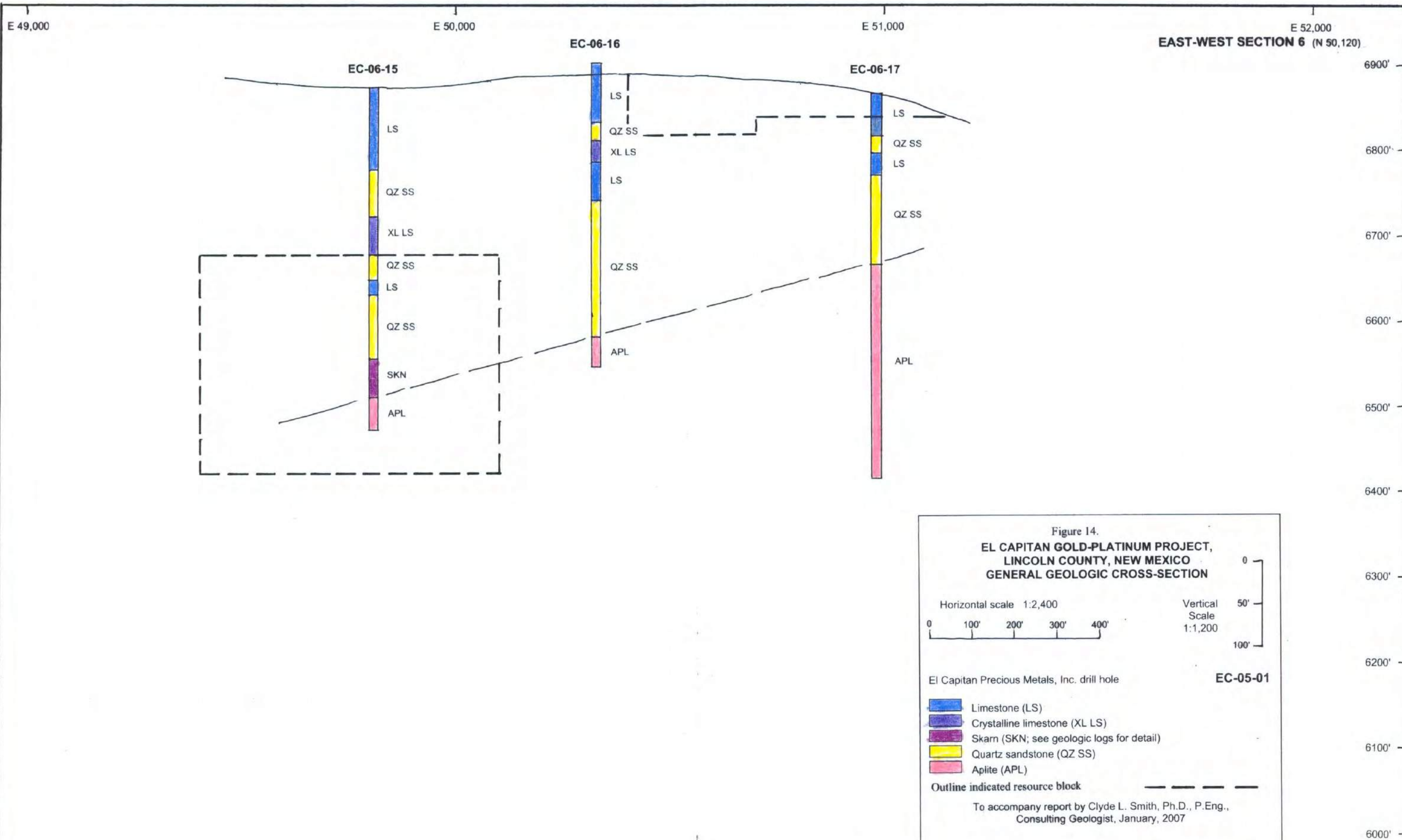












N 48,000

N 49,000

N 50,000

**NORTH-SOUTH SECTION 1 (E 51,810)**

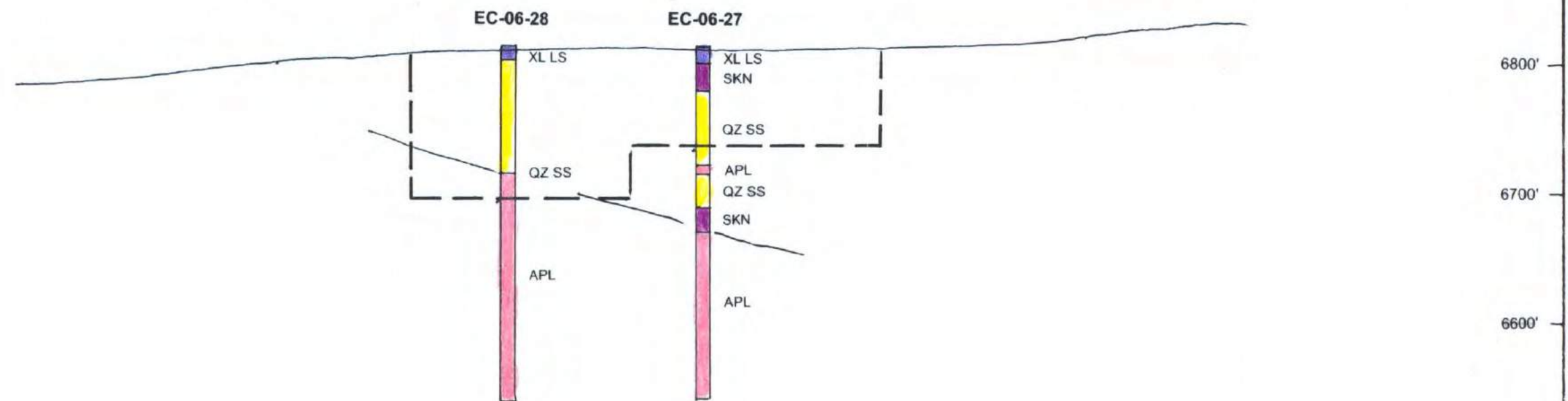
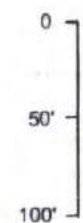


Figure 15.  
**EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION**

Horizontal scale 1:2,400

Vertical  
Scale  
1:1,200



El Capitan Precious Metals, Inc. drill hole

**EC-05-01**

- Limestone (LS)
- Crystalline limestone (XL LS)
- Skarn (SKN; see geologic logs for detail)
- Quartz sandstone (QZ SS)
- Aplite (APL)

Outline indicated resource block

To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007

N 48,000

N 49,000

N 50,000

## NORTH-SOUTH SECTION 2 (E 51,080)

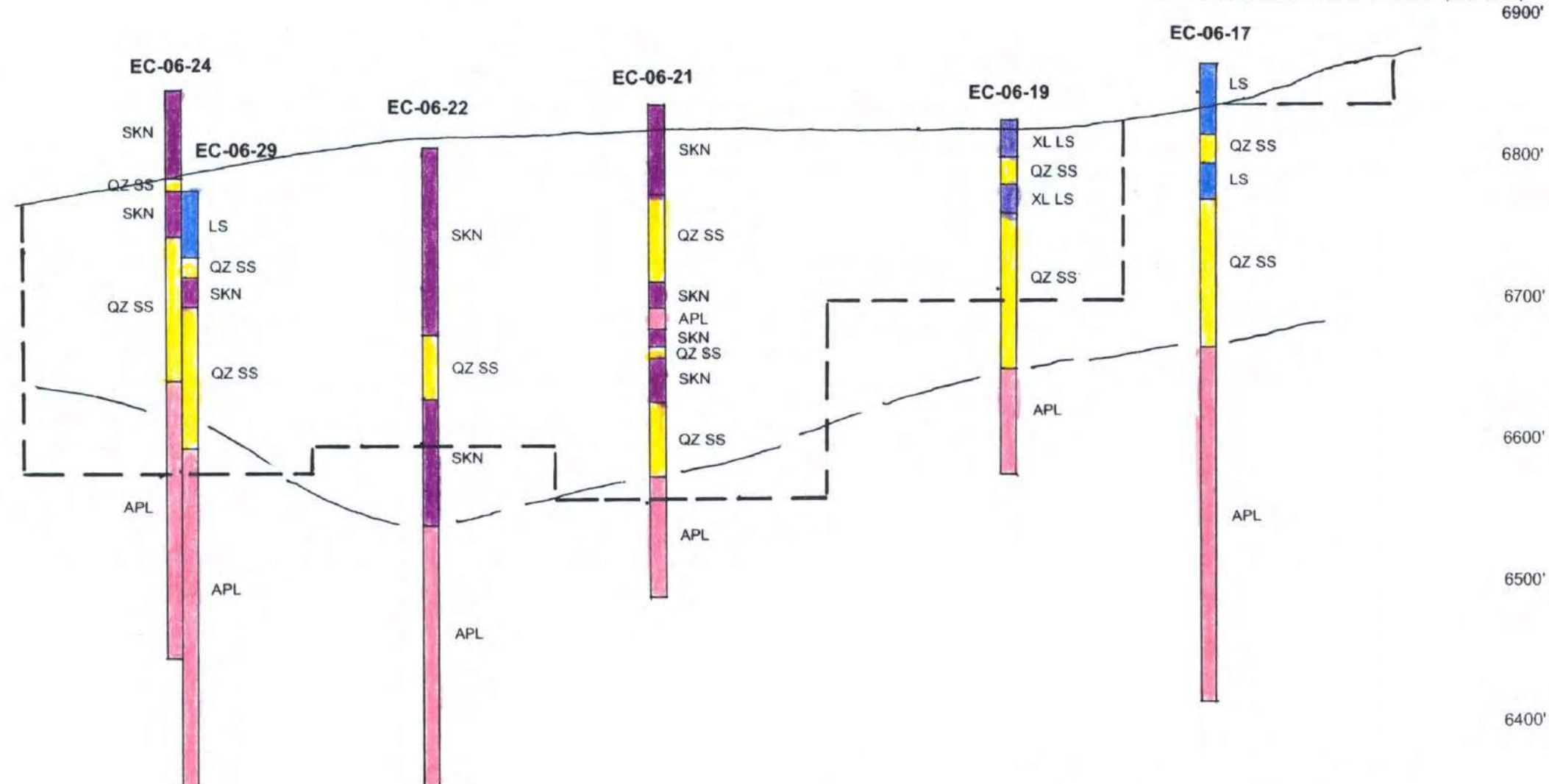


Figure 16.

EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION

Horizontal scale 1:2,400

Vertical  
Scale  
1:1,200

0 100' 200' 300' 400'

0  
50'  
100'

El Capitan Precious Metals, Inc. drill hole

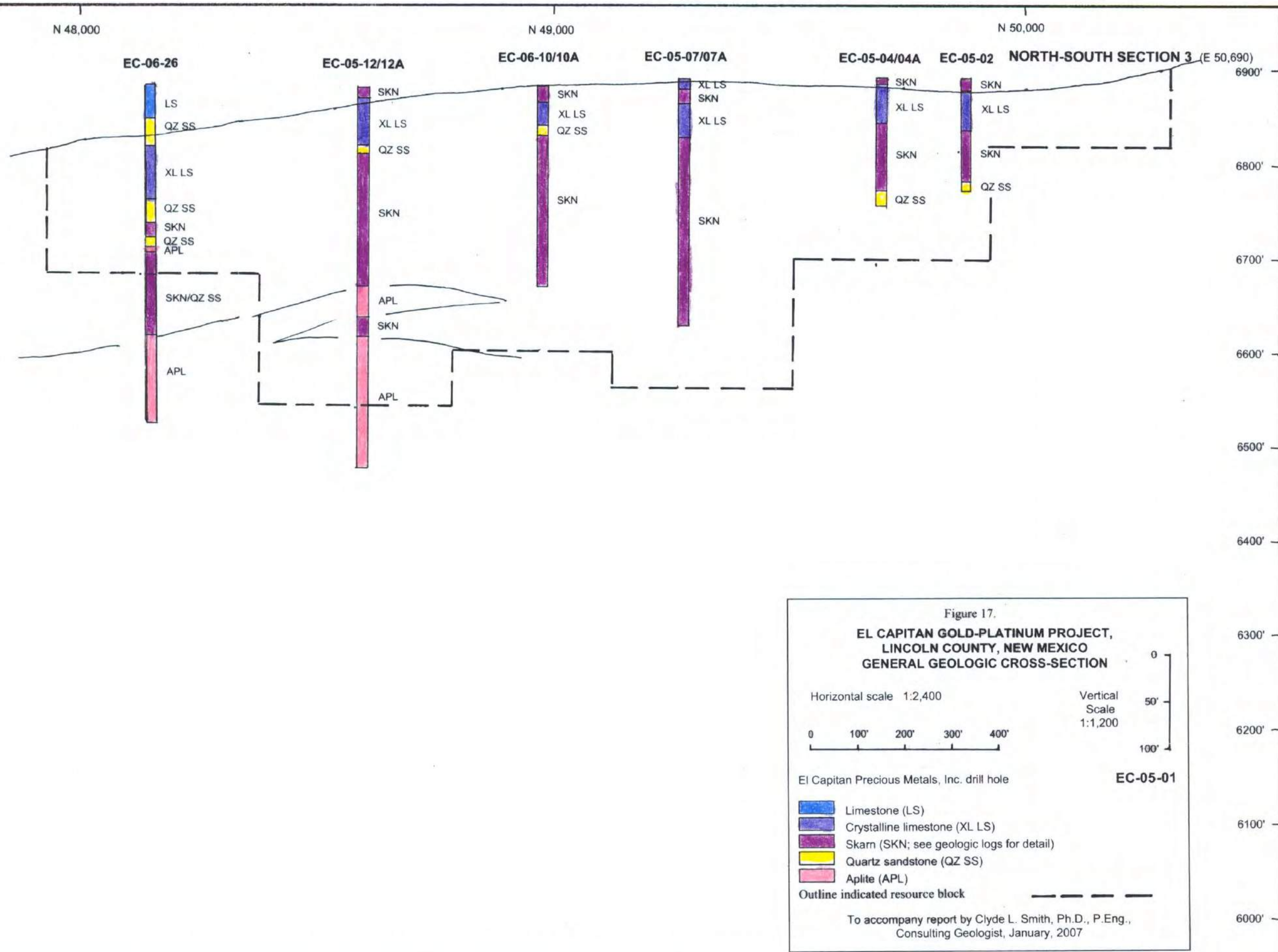
EC-05-01

- Limestone (LS)
- Crystalline limestone (XL LS)
- Skarn (SKN; see geologic logs for detail)
- Quartz sandstone (QZ SS)
- Aplite (APL)

Outline indicated resource block

To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007





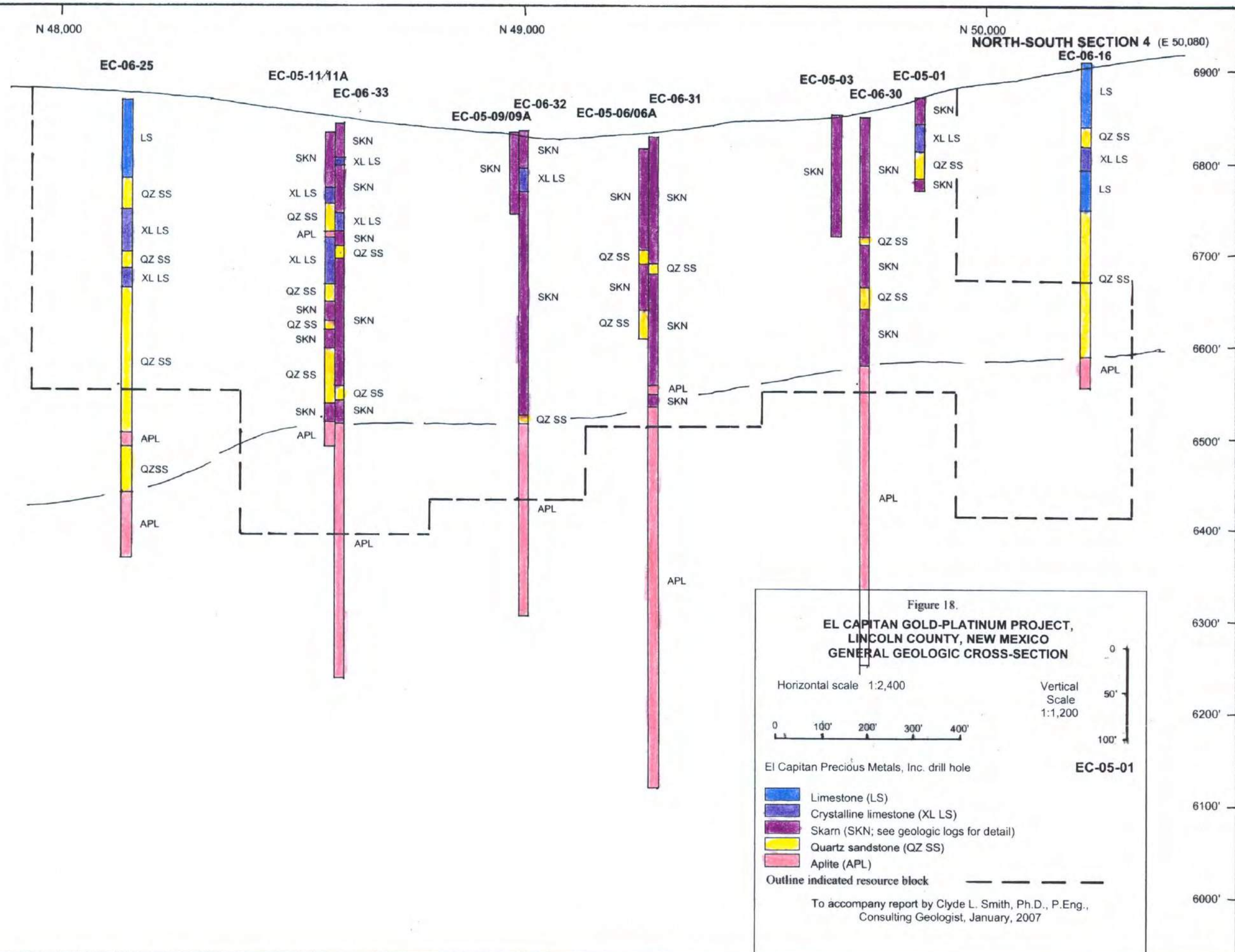


Figure 18.  
EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION

Horizontal scale 1:2,400

Vertical Scale 1:1,200

El Capitan Precious Metals, Inc. drill hole

EC-05-01

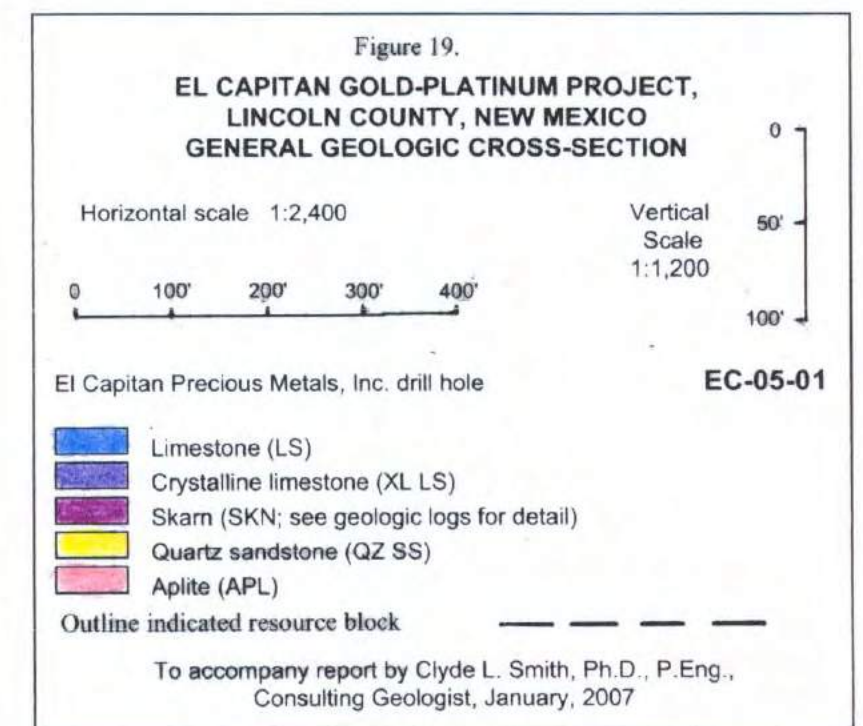
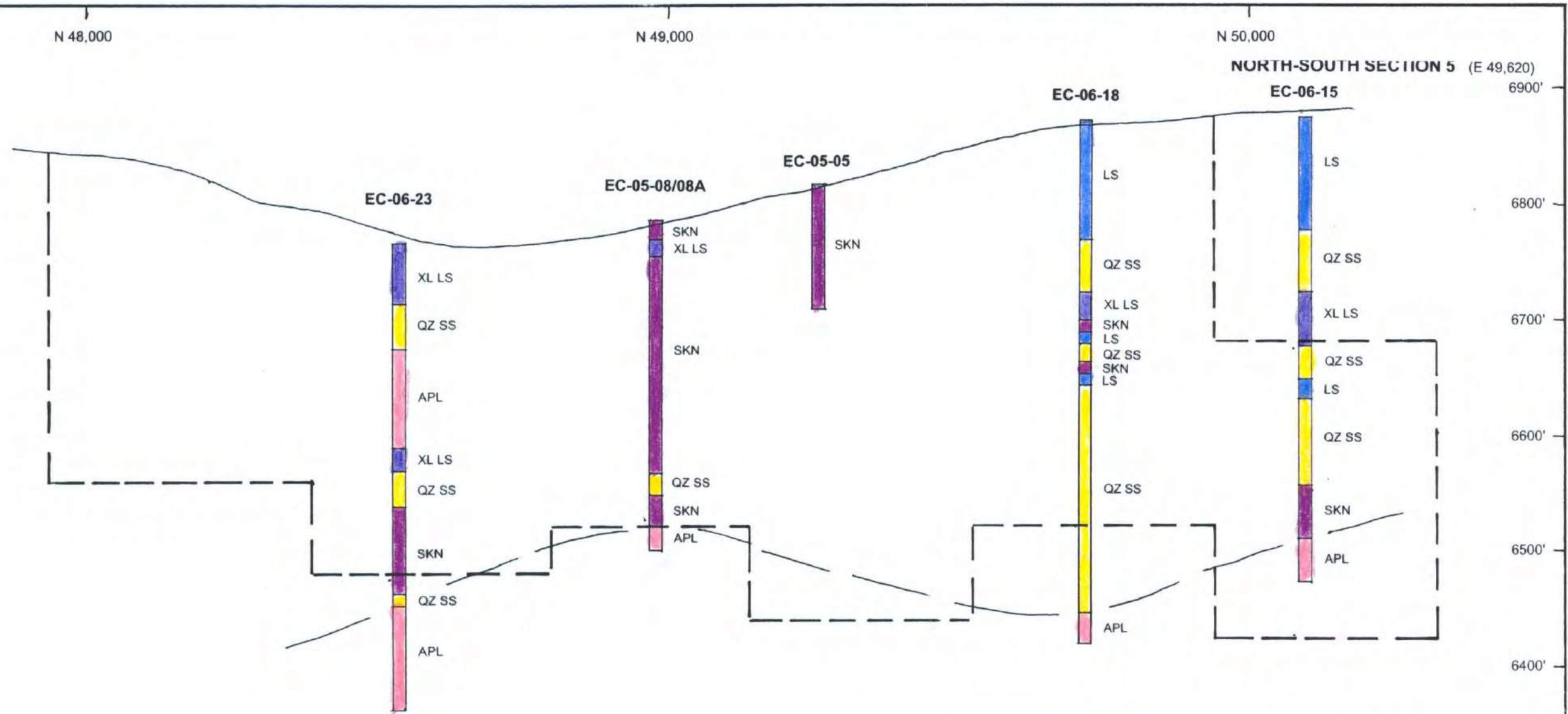
Legend:

- Limestone (LS)
- Crystalline limestone (XL LS)
- Skarn (SKN; see geologic logs for detail)
- Quartz sandstone (QZ SS)
- Aplite (APL)

Outline indicated resource block

To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007





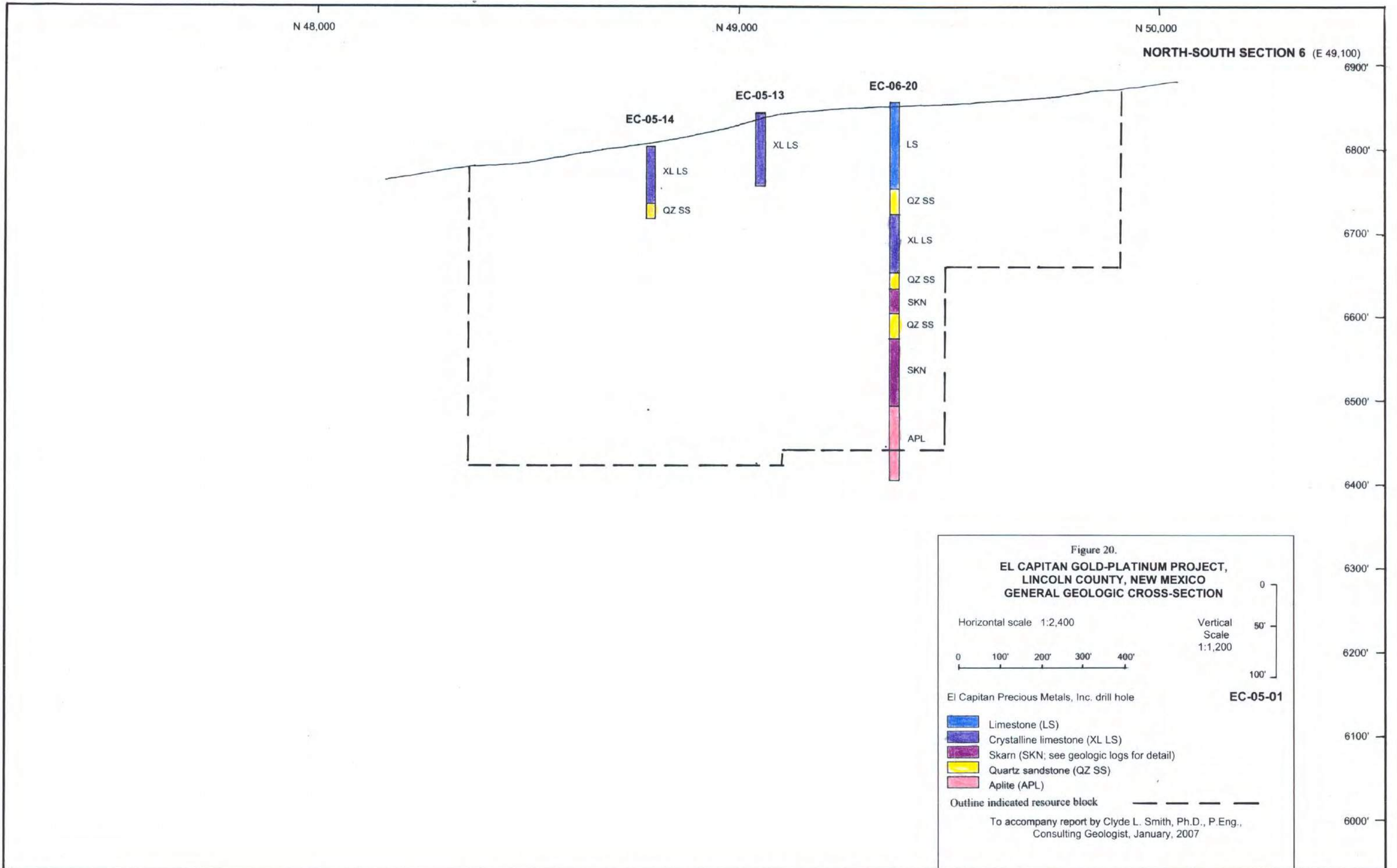


Figure 20.  
**EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION**

Horizontal scale 1:2,400  
Vertical Scale 1:1,200

0 100' 200' 300' 400'

0 50' 100'

El Capitan Precious Metals, Inc. drill hole **EC-05-01**

Limestone (LS)  
Crystalline limestone (XL LS)  
Skarn (SKN; see geologic logs for detail)  
Quartz sandstone (QZ SS)  
Aplite (APL)

Outline indicated resource block

To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007

N 48,000

N 49,000

N 50,000

**NORTH-SOUTH SECTION 7 (E 48,610)**

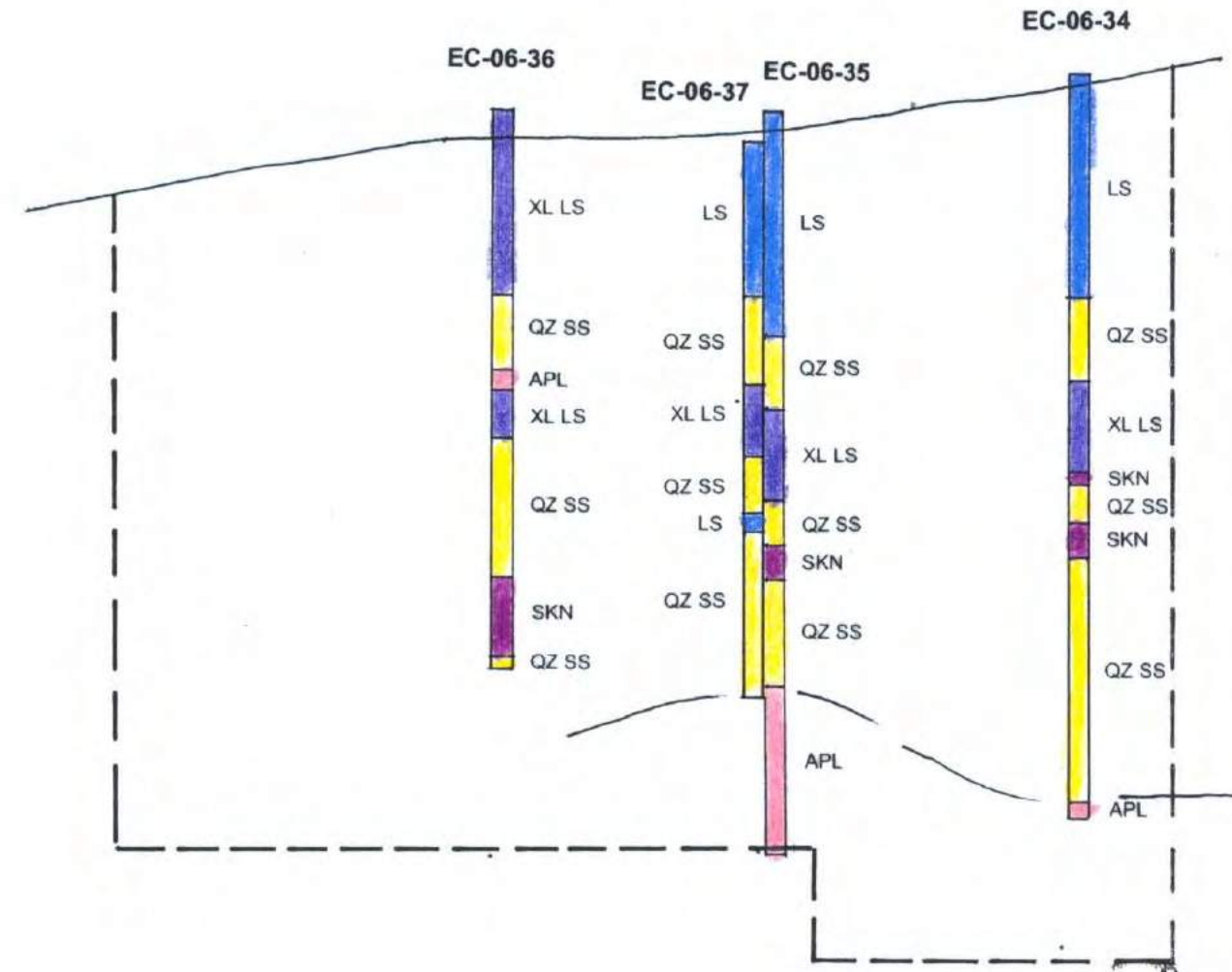


Figure 21.

**EL CAPITAN GOLD-PLATINUM PROJECT,  
LINCOLN COUNTY, NEW MEXICO  
GENERAL GEOLOGIC CROSS-SECTION**

Horizontal scale 1:2,400

Vertical  
Scale  
1:1,200

0 100' 200' 300' 400'

0  
50'  
100'

El Capitan Precious Metals, Inc. drill hole

**EC-05-01**

- Limestone (LS)
- Crystalline limestone (XL LS)
- Skarn (SKN; see geologic logs for detail)
- Quartz sandstone (QZ SS)
- Aplite (APL)

Outline indicated resource block

To accompany report by Clyde L. Smith, Ph.D., P.Eng.,  
Consulting Geologist, January, 2007

## **Appendix 3**

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### **Missouri Bureau of Mines Microscopy Report**



SEPT. 1996

# MICROSCOPY REPORT

**Volume 2 Issue 35****September 5, 1996****METALLURGY/CHEMISTRY LABS****El Capitan**

**Objective:** SEM analysis of the "unidentified mineral" phase detected during reflected light microscopy.

Five particles were located and marked for SEM analysis. Three particles were on the magnetic fraction and labeled 1-3. The other two particles were located on the non-magnetic fraction, labeled 1-2.

SEM-EDX analysis of the five particles gave the same spectrum. The spectrum was contained an iron, manganese, and chromium peak. These elements indicate contamination from a non-geologic source. Most of the Fe-Mn-Cr minerals exhibit a low reflectance between 7-23%. The reflectance of this phase is between 60-70%. Overlap of peaks was evaluated and these elements do not have major peak overlaps. The reflectance and the elemental composition might indicate a stainless steel contamination of sorts.

Another interesting phase identified during SEM analysis was the presence of arsenopyrite and galena with silver. These particles were examined due to the intense backscatter image. The brighter a backscatter image the higher the mean atomic number is for the phase. Several of the arsenopyrite particles were examined with only one of the galena particles examined. The arsenopyrite particles under reflected light did not exhibit any anisotropism. This indicates that there is an impurity in the crystal structure of the mineral. This could be a platinoïd element. These particles are approximately 35 $\mu$  in size and are irregular in shape, and liberated from the gangue. The elemental spectrum of these particles was difficult to interpret due to the very high background counts. It is possible that these particles contain Pt and Pd. If these particles contain Pt and Pd the elemental concentration is extremely low. The galena particle did contain a small silver peak.

SEM-EDS was conducted on the other particles identified during reflected light microscopy and the identifications concurred with gold and electrum being present.

or hematite with no relic magnetite. There are also magnetite particles with major hematite alteration. The next most abundant phase is limonite. It is liberated and as thin rims,  $\sim 5\mu$ , on totally altered hematite particles. Goethite and limonite are also attached in some particles. Most of the goethite is liberated and not attached to the other iron minerals.

There are there phases with extremely high reflectance. Two have been examined in the magnetic fraction. The third phase is native gold and it is mainly included in the quartz particles.

Size	Electrum	Au	Unid.
$2\mu$		2	4
$5\mu$	1	2	1
$30\mu$		2	2

A total of 14 particles were examined. The habit of the electrum and the unidentified are similar to that described in the magnetic fraction.



Aug. 1996

# MICROSCOPY REPORT

Volume 2 Issue 30

Aug. 1, 1996

## METALLURGY/CHEMISTRY LABS

### El Capitan

**Objective:** Identify possible Au, Ag, and Pt bearing phases.

Samples consisted of a head sample, non-magnetic fraction and a magnetic fraction.

#### 783 - Head Sample 1A

**Phases present** - Limonite, Quartz, Magnetite, Hematite, Goethite

Most of the particles are magnetite. Although most of the sample is magnetite, hematite is altering and replacing the magnetite in most particles. The average particle size is ~140 $\mu$ . The size range of <2-500 $\mu$ .

Some of the particles have been totally altered to hematite. These particles have jagged edges from possible meteoric water dissolution. In some cases the hematite particles are rimmed with goethite and limonite.

Most of the particles are liberated with very few middling particles, aside from the magnetite/hematite particles.

No indication of precious metal phases are apparent.

#### 784 - Magnetic Fraction 2A

**Phases present** - Magnetite, Hematite, Quartz, Electrum, unidentified phase.

The main mineral constituent in this sample is magnetite. The sample contains some magnetite particles that have no hematite

alteration. Most of the magnetite particles contain hematite alteration to some extent.

There are two extremely bright phases, reflectance >60. One of the phases is white and the other is a pinkish white. The particles are in the size range between 2-30 $\mu$ . The pinkish white phase has been identified as electrum, Au/Ag particle. A total of 10 electrum particles were identified.

Electrum	30 $\mu$	5 $\mu$	2 $\mu$
	1	4	5

A total of 29 particles of the unidentified phases were examined.

Unidentified	30 $\mu$	5 $\mu$	2 $\mu$
	2	17	10

Both of the phases are isotropic with extremely high reflectance. The habit of the phases is that of a native element such as gold, copper, or silver. They have a skeletal habit as if the mineral precipitated between grains or small pebbles of the matrix.

These phases are totally liberated and in one instance some quartz was attached to a 2 $\mu$  particle of the unidentified phase.

#### 783 - Non-Magnetic 3A

**Phases present** - Magnetite, Hematite, Quartz, Limonite, Goethite, Electrum, Gold, Unidentified phase.

The matrix of this sample is slightly different than the head or magnetic fraction. The main phase present is hematite. There are particles



## **Appendix 4**

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### **Hydrothermal Gold-Platinum Group Metals**

## APPENDIX 4

### HYDROTHERMAL GOLD-PLATINUM GROUP METALS

The history of mining of platinum group elements (PGE) is dominated exclusively by production of platinum and palladium with gold, chrome, nickel, copper and lesser PGE elements from magmatic segregation deposits in large ultramafic/mafic layered intrusions, mainly of Precambrian age. As a result, the majority of geologists are of the opinion that Pt, Pd are relatively chemically inert, extremely limited in geochemical mobility and restricted only to high temperature magmatic deposits of ultramafic/mafic composition. Beginning in the early 1970's, however, a few detailed studies provided surprising evidence that Pt, Pd could be mobilized in low temperature hydrothermal or aqueous fluids outside of ultramafic/mafic rocks (Stumpfl and Tarkian, 1976) and a gradual increase in multi-element analyses began to further demonstrate that significant Pt, Pd are present in a few deposits of classic hydrothermal character.

Today, significant Pt, Pd-bearing deposits, principally with Cu or U, have been identified in several geological environments completely removed from ultramafic/mafic rocks. Studies of these deposits have demonstrated unequivocally that these metals were transported and deposited from hydrothermal fluids of either magmatic or meteoric origin; in the largest deposits, Pt, Pd now constitute important economic metals. Of particular interest is the merging of results from geologic field studies and laboratory experiments that show that the hydrothermal fluids are of a special type: oxidized (high Eh) and acid (low pH) brines that transport Pt, Pd in a cogenetic association with Au in chloride chemical complexes.

The following are the major estimated reserves of platinum and palladium (after Macdonald, 1987):

	Age, Ma (millions of years ago)	Grade Pt+Pd+Au(oz/t)	Total ounces Pt+Pd+Au
Bushveld Complex, South Africa	2,100	0.25	1,480,000,000
Great Dike, Zimbabwe	2,500	0.15	190,000,000
Noril'sk, USSR	250	0.12	150,000,000
Stillwater, Montana, U.S.A.	2,700	0.72	53,000,000
Sudbury, Canada	1,700	0.03	6,000,000

Lesser PGE deposits are known in serpentinites formed from altered ultramafics (Ural Mountains, USSR; Hitura, Finland), placers from ultramafic sources (Urals, USSR) and paleoplacers (Witwatersrand, South Africa); total PGE production as a by-product with gold from Witwatersrand is estimated at 290,000 ounces (Macdonald, 1987).

Studies of hydrothermal Pt, Pd deposits have been conducted by Mihalik and others (1974), Stumpfl and Tarkian (1976), McCallum and others (1976), Finch and others (1983), Werle and others (1984), Mutschler and others (1985), Borg and others (1987), Macdonald (1987), Lechler and others (1988), Eliopoulos (1991), Mernagh and others (1994) and Tarkian and Koopmann (1995). In 1976, Stumpfl and Tarkian concluded, "Evidence from the magmatic, metamorphic and sedimentary environments reveals one coherent and continuing theme: the mobility of platinum group elements at low (hydrothermal) temperatures in aqueous solutions". Laboratory research has now resulted in a comprehensive understanding of the thermochemistry of Pt, Pd solubility, transport and deposition under a range of hydrothermal fluid conditions through the work of Mountain and Wood (1987, 1988), Wood and others (1989, 1991, 1992) Sassani and others (1990), McKibben and others (1990), Jaireth (1992), Gammons and others (1993a, 1993b, 1995, 1996) and Evstigneeva and Tarkian (1996).

### **Classification of hydrothermal platinum, palladium deposits**

The following is a preliminary classification of those hydrothermal platinum, palladium deposits and occurrences described to date in the geologic literature, including three deposits in Clark County, Nevada, all of which have been studied by the author.

#### **HYDROTHERMAL PLATINUM, PALLADIUM DEPOSITS**

- A) FRACTURE/SHEAR ZONE HOSTED; PROBABLE FELSIC INTRUSION RELATED
  - New Rambler, Wyoming; production: 171 oz Pt (0.13 oz/t Pt), 450 oz Pd (2.4 oz/t Pd)
  - Bunkerville, Clark Co., Nev.; resource: 3,600 oz Pt (0.18 oz/t Pt), 2,900 oz Au (0.25 oz/t Au)
  - Goodsprings, Clark Co., Nev.; production: 506 oz Pt, 762 oz Pd, 90,508 oz Au
  - Crescent Peak, Clark Co., Nev.; from 3 cm vein: 26.9 oz/t Pt, 0.26 oz/t Pd, 5.4 oz/t Au
  - Messina, South Africa; selected vein: 0.7 oz/t Pt, 3.7 oz/t Pd, 0.02 oz/t Au
- B) PORPHYRY COPPER HOSTED
  - 1. Alkaline pluton hosted
    - Allard stock, Colorado; Cu ore (13%): 0.05 oz/t Pt, 0.03 oz/t Pd, 0.02 oz/t Au
    - Copper King Mine, Montana; Cu ore (16%): 0.25 oz/t Pt, 0.12 oz/t Pd, 0.009 oz/t Au
    - Sappho, British Columbia; Cu ore (6%): 0.03 oz/t Pt, 0.02 oz/t Pd, 0.014 oz/t Au
  - 2. Calc-alkaline pluton hosted
    - Skouries, Greece; mineralized-altered porphyry: 0.006 oz/t Pd, 0.09 oz/t Au
    - Santo Tomas II, Philippines; reserves: 300,000 oz Pt (0.001 oz/t Pt); 1,700,000 oz Pd (0.005 oz/t Pd); 19,000,000 oz Au (0.06 oz/t Au)
- C) SEDIMENT HOSTED
  - 1. Carbonaceous shale hosted
    - Kupferschiefer, Germany-Poland; 1 cm layer: 0.32 oz/t Pt (over 1.5 km strike length), up to 29.4 oz/t Pd, 88.2 oz/t Au
    - Zambian Copperbelt, Zambia-Zaire; production to 1958: 50,000 oz PGE
    - Kalahari Copperbelt, Namibia; Cu ore: up to 0.004 oz/t Pt, 0.02 oz/t Au
  - 2. Unconformity related
    - Coronation Hill, Australia; resource: 50,400 oz Pt (0.008 oz/t Pt), 176,400 oz Pd (0.028 oz/t Pd), 1,260,000 oz Au (0.20 oz/t Au)

## Fracture/shear zone hosted; probable felsic intrusion related Pt, Pd deposits

This class includes small Pt, Pd occurrences in Cu-Au sulfide ores hosted in open space fillings in fracture or shear zones. The New Rambler and Bunkerville deposits are hosted in Precambrian rocks and occur with abundant felsic dikes and pegmatites; the Goodsprings area includes felsic plutons cutting Devonian host carbonates – the nearest pluton outcropping 5 km from the principal deposit. The above associations indicate that hydrothermal mineralization in these deposits is related to felsic intrusions.

At the **New Rambler**, Wyoming deposit, ten Pt-bearing Te, Bi, Sb minerals and electrum occur with chalcopyrite, pyrrhotite, pyrite, sphalerite and pentlandite. Mineralization was deposited from 270°-400°C fluids that produced three alteration assemblages of increasing intensity: propylitic, quartz-sericite-pyrite, silicification (McCallum and others, 1976). Evidence for hydrothermal mineralization includes: 1) fracture filling, 2) close association between ore and alteration, 3) Pt:Pd ratios characteristic of hydrothermal and not magmatic environments (Pt:Pd = 1:18 and Pt:Pd:other PGE = 100:1800:1; magmatic ratios typically average Pt:Pd = 1:1.5 and Pt:Pd: other PGE = 1:2:1). McCallum and others (1976) concluded that (magmatic) hydrothermal fluids leached metals from gabbro source rocks.

At **Bunkerville**, Clark Co., Nevada, located 100 km northeast of the Eldorado project, unidentified Pt, Pd and Au minerals occur with chalcopyrite, pentlandite, pyrrhotite, pyrite, polydymite ( $\text{NiNi}_2\text{S}_4$ ), sphalerite and molybdenite in an alteration assemblage of hornblende, carbonate, quartz, chlorite, epidote, kaolinite and sericite. Beal (1965) concluded that (magmatic) hydrothermal solutions remobilized metals from mafic rocks.

At the Boss Mine, the principal Pt, Pd deposit in the **Goodsprings**, Clark Co., Nevada district, located 55 km west of the Eldorado project, Pt, Pd and Au minerals occur in veinlets and disseminations in bitumen (see Appendix T) in a quartz-plumbojarosite ( $\text{Pb}(\text{Fe}(\text{SO}_4)_2(\text{OH})_6)_2$ )-Fe oxide assemblage with colloidal sulfates, chlorides, oxides and silicates, and elevated Fe, Ca, Cu, Pb, Ni, Ti and V (Jedwab and others, 1999). It appears that magmatically derived hydrothermal fluids were responsible for mineralization.

At **Crescent Peak**, Clark Co., Nevada, located 20 km southwest of the Eldorado project, a 3 cm Pt-Pd-Au-bearing Cu-Pb-Zn-Ag quartz vein includes pyrite, chalcopyrite, galena, sphalerite, covellite and acanthite; Lechler and others (1988) have reported native gold, ferronickel platinum ( $\text{Pt}_2\text{FeNi}$ ) and iridian osmium (Os, Ir). The metalliferous quartz vein cuts altered biotite granodiorite which is a marginal facies of a zoned Mesozoic (?) stock with a granite core. The granodiorite host exhibits four potassic, two quartz-sericite and one clay hydrothermal alteration phase. The apparent paragenetic relations are: 1) early-stage widespread K-feldspar-muscovite pegmatization, 2) widespread biotite, pyrite, 3) biotite, Mg-chlorite overlapped by quartz-sericite with pyrite, chalcopyrite, covellite veinlets, 4) the above assemblage with pyrite, galena, sphalerite veinlets and 5) latest-stage clay altered quartz-sericite immediately adjacent to the Pt-Pd-Au-bearing quartz vein. The Pt-Pd-Au-bearing quartz vein appears to represent late stage, lower temperature deposition from a hydrothermal fluid which differentiated within a fairly typical calc-alkaline pluton hosted porphyry copper system.

## Porphyry copper hosted

Porphyry copper deposits occur within or in roof rocks above felsic plutons. The two major plutonic rock categories based on chemical composition are alkaline, and calc-alkaline (a sub-division of subalkaline). The alkaline-subalkaline divisions are based on relative amounts of  $K_2O + Na_2O$  and  $SiO_2$  as shown in Figure 1, below, from Philpotts (1990). Alternatively, alkaline plutons have been defined as those which have  $K_2O + Na_2O > 0.3718 SiO_2 - 14.5$  (Muschler and others, 1985). The felsic alkaline rocks are distinguished by having relatively lesser  $SiO_2$  (60%) and CaO (1%) and relatively higher  $Al_2O_3$  (20%),  $K_2O$  (6%),  $Na_2O$  (7%), and  $Fe_2O_3$  (3%). In contrast, the felsic calc-alkaline subdivision has relatively higher  $SiO_2$  (70%) and CaO (2%) and lesser  $Al_2O_3$  (14%),  $K_2O$  (3%),  $Na_2O$  (4%) and  $Fe_2O_3$  (1%) than felsic alkaline or other felsic subalkaline rocks.

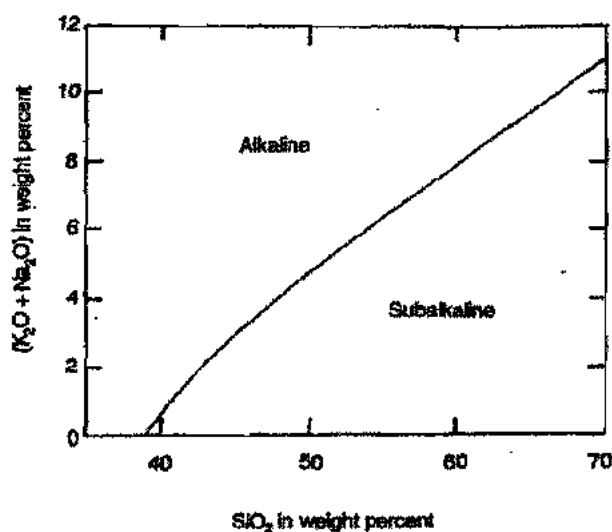


Figure 1. Alkaline and subalkaline plutonic rock divisions based on  $K_2O + Na_2O$  and  $SiO_2$

### Alkaline pluton hosted porphyry coppers

Hydrothermal Pt, Pd occur as minor constituents in Cu-Ag-Au porphyry copper mineralization in alkaline plutons in a belt that stretches through the eastern Rocky Mountains from southern British Columbia to Colorado (Finch and others, 1983; Mutschler and others, 1985). Alkaline intrusive rocks have long been recognized as indicators of continental rifting and extensional tectonic regimes. A detailed study of the **Allard stock**, Colorado at the south end of the Colorado Mineral Belt (Werle and others, 1984) showed that mineralization is localized in breccia pipes and stockworks in a complex epizonal 65-70 Ma age syenite intrusive suite which is greatly enriched in  $K_2O$  and  $Al_2O_3$ . Ore includes chalcopyrite, enargite, sphalerite, bornite, chalcocite, pyrite, magnetite, hematite, arsenopyrite, marcasite and galena with gangue minerals K-feldspar, quartz, calcite and fluorite in argillic, potassic and carbonate altered host rocks. Werle and others (1984) concluded that fractionation of syenitic magma produced a volatile-rich supercritical fluid that hydrofractured roof rocks releasing altering and mineralizing fluids that precipitated Pt, Pd-bearing Cu-Ag-Au ore minerals in breccia and stockwork.

### Calc-alkaline pluton hosted porphyry coppers

At **Skouries**, Greece, Cu-Ag-Au porphyry copper mineralization is localized in veins, stockworks and disseminations in an 18 Ma age calc-alkaline granitic stock. Pd occurs in an unidentified state in chalcopyrite, pyrite, bornite, magnetite and native gold ore with quartz gangue in intensely silicified, potassic and phyllic altered host rocks. Eliopoulos (1991) concluded that the Skouries porphyry host is an I-Type granitoid which exhibits extensive chemical interaction with upper crustal rocks.

The **Santo Tomas II**, Philippines porphyry copper deposit contains a total of 2,000,000 ounces of low-grade Pt+Pd in 328 million tons of Cu-Au ore. Merenskyite ( $Pd(Te,Bi)_2$ ) and native gold have been identified in bornite, chalcopyrite, pyrite, magnetite ore in a potassic and propylitic altered 9.2 Ma age diorite stock. Tarkian and Koopmann (1995) concluded that the diorite is an island arc/subduction related pluton from which a high salinity (35-60%) NaCl fluid deposited metals from chloride complexes at 358°-520°C.

### **Sediment hosted**

The sediment hosted category includes deposits which appear to have formed from dominantly acidic and oxidized meteoric basinal brines that leached and transported Pt, Pd, Au and other metals in Cl-complexes. Deposition occurred mainly by chemical reduction of the brines upon interaction with host strata (carbonaceous, pyritic, feldspathic) that contained reducing agents. It is important to point out that Pt, Pd, Au concentrations in carbonaceous shales appear to result only by deposition from hydrothermal fluids which have chemically interacted with the reducing environments that characterize these rocks; Pt, Pd and Au do not appear to represent intrinsic or primary constituents of these sediments (Coveney and others, 1992).

### Carbonaceous shale hosted

A 1 cm thick layer at the base of the **Kupferschiefer** ("copper shale"), Germany, Poland, contains local high values in Pt, Pd and Au (Macdonald, 1987; Coveney and others, 1992; Mountain and Wood, 1988). The Kupferschiefer is a Permian (250 Ma), 1 m thick carbonaceous-calcareous bed that underlies an area of 20,000 km<sup>2</sup> and includes large areas of economic Au-Ag-Pb-Zn ore. The Kupferschiefer bed lies at a contact between underlying volcanics and red beds and overlying carbonates, evaporites and red beds. Mineralogy is principally bornite, chalcocite, chalcopyrite, galena, sphalerite, tetrahedrite and pyrite; minor metals are Ni, Co, V and Mo. It has been proposed (Jowett, 1986) that metals were supplied to a shallow sea by late diagenetic convecting meteoric fluids that leached metals from volcanic detritus in underlying strata, that thermal energy for convection was supplied by continental rifting and that deposition took place by reduction in organic-rich shale.

The **Zambian Copperbelt**, Zambia, Zaire, has produced Pt, Pd as minor constituents in Cu-Co-U ores in an extensive, few meters thick, 900 Ma age carbonaceous sulfide-rich shale and arkosic sandstone bed which lies on Archean granitic and metamorphic basement. Principal ore minerals are chalcocite, bornite, chalcopyrite, pyrite, carrolite (Cu<sub>2</sub>CoS<sub>4</sub>) and linnaeite (Co<sub>3</sub>S<sub>4</sub>). Fleischer and others (1976) proposed that surface waters carried detrital metal and metal-rich fluid, probably leached from copper in basement rocks, into a near-shore, carbon- and sulfur-rich sedimentary environment within which reduction resulted in precipitation.

Sediment-hosted stratabound Cu-Ag deposits in the **Kalahari Copperbelt**, Namibia, contain significant potential by-product Pt and Au (Borg and others, 1987). The deposits are hosted in carbonaceous pyritic shales in the upper levels of a 1300-950 Ma age volcanic-sedimentary succession deposited in a failed continental rift system. The basal unit of the succession rests on 2000-1600 Ma granite-metasediment basement and consists of felsic volcanics characterized by considerably enriched values in Pt and Au. Overlying red beds were derived by erosion of the basement and felsic volcanics but are now depleted of Pt and Au, as well as Cu and Ag. Borg and others (1987) concluded that Pt and Au were contributed to basal felsic volcanics from a rift-related mantle plume and that low temperature circulating Cl-rich basinal brines of low pH and high Eh leached metals from the overlying red beds, precipitating Cu and Ag with minor Pt, Au and Ni by reduction upon encountering overlying carbonaceous, pyritic shales.

### Unconformity related

At **Coronation Hill**, Australia, a Pt-Pd-Au-U deposit is hosted in a fault zone in a variety of fractured and altered rock types within an Early Proterozoic (2500-1600 Ma) assemblage lying on an Archean basement of metasediments and felsic meta-igneous rocks. The Early Proterozoic section consists of basal carbonaceous shale, siltstone and carbonate overlain by chloritized volcanoclastics and carbonaceous shale; these units are intruded by quartz feldspar porphyry and quartz diorite and all of the above rock types have experienced early stage quartz-sericite-chlorite-kaolinite-sphene hydrothermal alteration. The altered units are overlain by a sedimentary breccia which in turn is capped by an unconformity (Kombolgie) above which lies a hematitic quartz sandstone (Carville and others, 1990). Principal minerals include very fine electrum, stibiopalladinite (Pd<sub>5</sub>Sb<sub>2</sub>) sudburyite (PdSb), native Pd, a Pt-Pd selenide ((Pt, Pd)Se<sub>2</sub>),

a Pt-Pd-Fe alloy, rare native Pd, uraninite, pitchblende and minor pyrite; minor metals are Ni, Co. Ore minerals appear to have no lithologic control, occurring in quartz-dolomite-calcite-hematite veinlets and breccias and as disseminations in all of the rock types which lie below the Kombolgie unconformity. Mineralization was accompanied by hematite alteration of variable intensity that affected all rock types, including the hematitic quartz sandstone above the unconformity. Highly oxidized fluids are indicated by complete oxidation of chlorite to hematite. Mernagh and others (1994) concluded that both reduction and neutralization of an oxidized, acidic meteoric ore fluid resulted in precipitation of ore minerals in fractured reducing rock types lying beneath the Kombolgie unconformity.

### **Solubility, transport, deposition of platinum, palladium**

Thermodynamic calculations (Mountain and Wood, 1987, 1988; Wood and others, 1989, 1991), analysis of data for modern geothermal systems (McKibben and others, 1990) and laboratory experimental results (Gammons and others, 1993, 1995, 1996; Estigneeva and Tarkian, 1996) over the past 12 years have contributed to an understanding of the solubility, transport and deposition of Pt, Pd. Research on a variety of Pt, Pd complexes, including chloride, hydroxide, oxanionic, ammonia, thiosulfate, sulfite and polysulfide (Mountain and Wood, 1987), has clearly demonstrated that significant Pt, Pd solubilities under most geologically reasonable conditions may only be achieved in chloride complexes. Figure 2 shows Eh(logf<sub>o2</sub>)-pH diagrams which demonstrate that the fields of the predominant aqueous Pt, Pd chloride species are restricted to acidic pH (Kaolinite or muscovite stable) and moderate-extreme oxidized Eh conditions (hematite stable) at 25°C. Mountain and Wood (1987) have shown that these fields are valid even at low chloride concentrations and up to 300°C (where the PtCl<sub>2</sub><sup>0</sup> field is greatly expanded). Wood and others (1992) further concluded that Pt, Pd chloride complexes may become increasingly important at magmatic temperatures of 400°C and higher.

The ubiquitous presence of significant Au with Pt, Pd in hydrothermal deposits underscores the importance of chloride complexes in the cogenetic solubility and transport of these three metals. Although a consensus has developed concerning the dominance of Au solubilities in bisulfide complexes, Figure 2 shows that the 1 ppm bisulfide (Au(HS)<sub>2</sub><sup>-</sup>) field is located at acidic to alkaline pH's and is restricted to a lower Eh, more reducing range, removed from the Pt, Pd chloride complexes fields. Corresponding Pt bisulfide solubilities (in Pt(HS)<sub>4</sub><sup>2-</sup>) in this field are only in the parts per trillion range, clearly indicating that no significant Pt solubility occurs in bisulfide complexes (Mountain and Wood, 1987). The cogenetic association of Au with Pt, Pd in hydrothermal mineral assemblages therefore requires that Au also be transported in chloride complexes when found in such assemblages. The coincidence of the 1 ppm solubility contours for Au with both Pt and Pd in chloride complexes shown in Figure 2 emphasizes that these metals were transported together in fluids from which Pt, Pd and Au-bearing hydrothermal deposits were formed.

Geologic evidence from a number of deposits and occurrences indicates that Pt, Pd and chloride complexes were destabilized upon encountering environments that brought about chemical reduction and/or neutralization of the oxidized and acidic hydrothermal fluids, thereby resulting in deposition. The dominance of Pt, Pd sulfide minerals in hydrothermal



assemblages suggests that sulfur was contributed to these minerals from the reducing environments that contained sulfur and into which the ore transporting fluids were introduced.

### **Summary of ore deposition in Pt, Pd hydrothermal deposits**

An abundant literature on fluid inclusions from **magmatic related** fracture/shear zone hosted precious and base metals deposits and porphyry copper hosted ore deposits as well as results from thermochemical studies has demonstrated that chlorine is a common and significant element in the ore fluids from which these deposits formed. It is therefore reasonable to conclude, in addition to the evidence presented above, that Pt, Pd, Au (and Cu, etc.; Mountain and Wood, 1988), when found in these classes of deposit, resulted from transportation in and deposition from chloride complexes. The common occurrence of hydrothermal alteration assemblages in fracture/shear zone and porphyry copper deposits indicates that wall rocks were attacked by acidic fluids, confirming the acidic nature of the chloride complex-bearing fluids. Although the oxidizing character of the fluids is rarely exhibited in the minerals in deposits of these types, it is believed that sulfur in the sulfide assemblages has been derived by interaction and reduction of the ore fluids with sulfur-bearing wall rocks. This phenomenon is particularly well exhibited at the Santo Tomas II porphyry copper deposit where most of the sulfide ore is localized along a diorite-metavolcanic wall rock contact (Tarkian, 1995).

The clearest understanding of hydrothermal Pt, Pd ore deposition in **sediment hosted** deposits is provided by studies of the Coronation Hill deposit (Wilde and others, 1989; Carville and others, 1990; Jaireth, 1992; Mernagh and others, 1994). Jaireth (1992) and Mernagh and others (1994) concluded that a very Ca-rich, atmospheric oxygen-saturated (highly oxidized), acidic, moderately saline meteoric brine (groundwater or sea water, based on isotopic data) transported Pt, Pd, Au and U in chloride complexes. Fluid inclusion evidence indicates that this fluid transported metal chloride complexes at 160°-225°C; similar Pt, Pd, Au, U elemental molar ratios in inclusions and ore indicate that metals were transported and deposited together from the same fluid (Wilde and others, 1988). It has been inferred that as the fluid migrated through the quartz sandstone aquifer above the Kombolgie unconformity it maintained a high oxidation state by progressively oxidizing  $\text{Fe}^{2+}$  minerals in the sandstone (magnetite, silicates), pushing a redox interface deeper into the aquifer and successively leaching and redepositing Pt, Pd, Au and U as it descended. Upon reaching strong redox barriers in feldspar-, magnetite- and graphite-bearing sediments or fluids containing methane or hydrocarbons beneath the unconformity, the chloride complexes became unstable, experienced chemical reduction, and precipitated ore minerals at 150°-170°C (Jaireth, 1972) in open space fractures in host rocks. Mernagh and others (1994) stressed that the ore forming process at Coronation Hill is genetically different from epithermal deposits that have resulted from ascending, deeper level, more reduced hydrothermal fluids. Data from several of the epithermal sediment hosted Carlin-type deposits in Nevada show that Pt, Pd values are not anomalous (Page and others, 1992); these

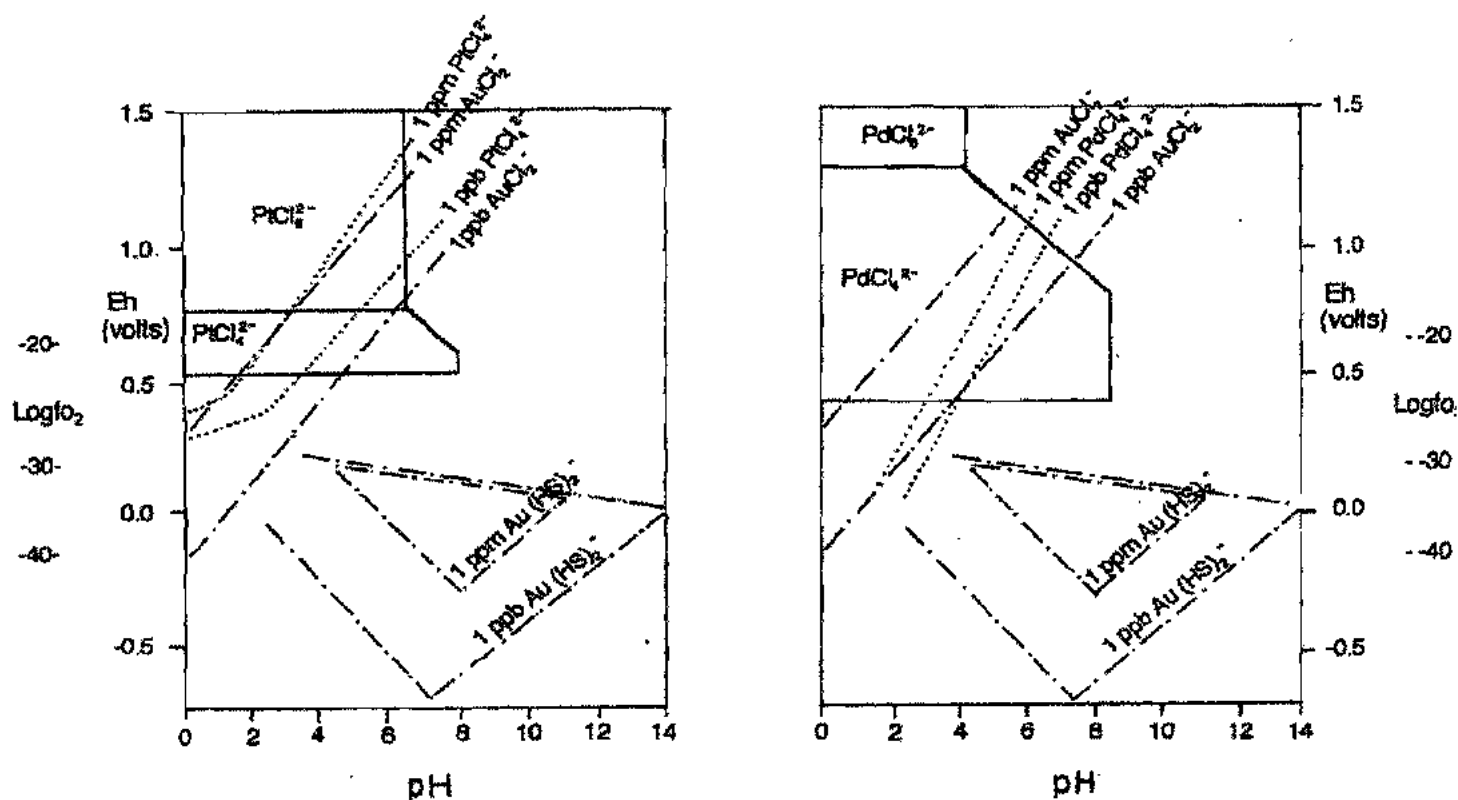


Figure 2. Eh ( $\log f_{O_2}$ )-pH diagrams for Pt and Pd at 25°C ( $\Sigma \text{Pt, Pd} = 10 \text{ ppb}$ ,  $\Sigma \text{Cl}^- = 1.0 \text{ m}$ ). Solid lines separate fields of predominance of aqueous species of Pt and Pd. Also shown are solubilities at 1 ppm and 1 ppb for Pt, Pd and Au in chloride and bisulfide (Au only) complexes at 300°C ( $\Sigma \text{Cl}^- = 1.0 \text{ m}$ ,  $\Sigma \text{S} = 0.1 \text{ m}$ ). Pt, Pd and Au solubilities as chloride complexes are similar; in the field of Au solubility in the bisulfide complex, however, Pt bisulfide complexes (not shown) are extremely low, in the range of 1 ppt (parts per trillion). Although fields shown are at 25°C, Mountain (1987) states that the Pt and Pd chloride fields shown provide an order of magnitude estimate of the total Pt, Pd solubilities as chloride complexes at 300°C. Figure 2 modified from Mountain (1987).

data tend to confirm that sediment hosted Pt, Pd-bearing deposits, such as Coronation Hill, are genetically distinct from the epithermal types.

As is the case for most classes of ore deposits, considerable speculation and debate has centered on the issue of the **source of metals** in the classes of deposits considered here. the hydrothermal Pt, Pd deposits appear to be divisible into those formed from magmatic fluids (fracture/shear zone hosted and porphyry copper hosted) and those formed from meteoric fluids (sediment hosted). In the case of porphyry coppers the magmatic hydrothermal fluids have clearly been generated by differentiation of plutons. Metals in these deposits were acquired from source rocks that were melted to produce magma. In the case of alkaline plutons, such as the Allard stock, rocks of these compositions are characteristic of continental rifts within which metals may have been derived from magma rising and differentiating from the ultramafic/mafic composition upper mantle or from the melting of basement rocks in the lower to upper crust. Calc-alkaline plutons, on the other hand, such as Santo Tomas II, generally represent magma generation by subduction of oceanic plates of dominantly mafic composition. Escape of magmatic fluids into fractured roof rocks, such as at Goodsprings or Crescent Peak, allows for deposition directly from these fluids or possible leaching of metals from country rocks traversed by the fluids, such as at New Rambler and possibly Bunkerville. In the case of the magmatic fluid types, metals have clearly been dominantly derived from the source rocks from which magmas were formed by melting; these source rocks may range from ultramafic to felsic and no specific composition appears to emerge, although the dominant association of major Pt, Pd deposits with ultramafic/mafic rocks would suggest that rocks of this composition probably supplied significant material to magmas.

Studies of sediment hosted Pt, Pd-bearing deposits provide a fairly clear picture of leaching and transport of metals in meteoric hydrothermal fluids. In the case of the Kupferschiefer and Kalahari deposits, underlying felsic volcanics and red beds in continental rift environments, have been identified as source rocks (Jowett, 1986; Borg and others, 1987). In the Kalahari situation, elevated levels of Pt, Pd in felsic volcanics have been attributed to a mantle plume that contributed these and other metals to felsic magma formed by melting of lower continental crust of mainly metasedimentary composition (Borg and others, 1987). In a similar manner, chlorite-altered volcanoclastics and quartz-feldspar porphyries underlying the Coronation Hill deposit (Mernagh and others, 1994) are probable source rocks for metals in this deposit. In the Zambian Copperbelt the ore beds lie on a metamorphic/granitic basement which appears to contain significant amounts of Cu-bearing veins and disseminations (Fleischer, 1976); this basement mineralization is a probable source for Pt, Pd and other metals in the deposits. The Kalahari example, supported by the Kupferschiefer, appears to provide the best clue as to source rocks for sediment-hosted hydrothermal Pt, Pd-bearing deposits: volcanic rocks that received metals by mixing with ultramafic/mafic magma introduced from the mantle in continental rift environments.

## References cited

- Beal, L.H., 1965, Geology and mineral deposits of the Bunkerville district, Clark County, Nevada: Nevada Bureau of Mines Bulletin 63.
- Borg, G., Tredoux, M., Maiden, K.J., Sellschop, J.P.F., and Wayward, O.F.D., 1987, PGE- and Au-distribution in rift-related volcanics, sediments and stratabound Cu/Ag ores of Middle Proterozoic Age in central SWA-Namibia: in Pritchard, H.M., et al., eds., Proceedings of the Symposium Geo-Platinum 87 held at the Open University, Milton-Keynes, Great Britain, April 22-23, 1987, Basking, Essex, G.B., Elsevier Applied Science Publications, p. 303-317.
- Carville, D.P., Leckie, J.F., Moorhead, C.F., Rayner, J.G., and Durbin, A.A., 1990, Coronation Hill gold-platinum-palladium deposit: in Hughes, F.E., ed., Geology of the Mineral Deposits of Australia and Papua New Guinea: The Australian Institute of Mining and Metallurgy, Melbourne, p. 759-762.
- Coveney, R.M., Jr., Murowchick, J.B., Grauch, R.I., Glascock, M.D., and Denison, J.R., 1992, Gold and platinum in shales with evidence against extraterrestrial sources of metals: in Chemical geology, 99: Elsevier Science Publishers B.V. Amsterdam, p. 101-114.
- Eliopoulos, D.G., and Economou-Eliopoulos, M., 1991, Platinum-group element and gold contents in the Skouries porphyry copper deposit, Chalkidiki Peninsula, northern Greece: Economic Geology, v. 86, p. 740-749.
- Evstigneeva, T., and Tarkian, M., 1996, Synthesis of platinum-group minerals under hydrothermal conditions: European Journal of Mineralogy, v. 8, p. 549-564.
- Finch, R.J., Ikramuddin, M., Mutschler, F.E., and Shannon, S.S., Jr., 1983, Precious metals in alkaline suite porphyry copper systems, western North America: Geological Society of America Abstracts with Programs, v. 15; 6, p. 572.
- Fleischer, V.D., Garlick, W.G., and Haldane, R., 1976, Geology of the Zambian Copperbelt: in Wolf, K.H., ed., Handbook of stratabound and stratiform ore deposits, chapter 6, p. 223-352.
- Gammons, C.H., 1995, Experimental investigations of the hydrothermal geochemistry of platinum and palladium: IV. The stoichiometry of Pt(IV) and Pd(II) chloride complexes at 100 to 300°C: Geochímica et Cosmochímica Acta, v. 59, no. 9, p. 1655-1667.
- \_\_\_\_\_, 1996, Experimental investigations of the hydrothermal geochemistry of platinum and palladium: V. Equilibria between platinum metal, Pt(II) and Pt(IV) chloride complexes at 25 to 300°C: Geochímica et Cosmochímica Acta, v. 60, no. 10, p. 1683-1694.
- Gammons, C.H., and Bloom, M.S., 1993, Experimental investigation of the hydrothermal geochemistry of platinum and palladium: II. The solubility of PtS and PdS in aqueous sulfide solutions to 300°C: Geochímica et Cosmochímica Acta, v. 57, p. 2451-2467.
- Gammons, C.H., Yu, Y., and Bloom, M.S., 1993, Experimental investigation of the hydrothermal geochemistry of platinum and palladium: III. The solubility of Ag-Pd alloy + AgCl in NaCl/HCl solutions at 300°C: Geochímica et Cosmochímica Acta, v. 57, p. 2469-2479.

- Jaireth, S., 1992, The calculated solubility of platinum and gold in oxygen-saturated fluids and the genesis of platinum-palladium and gold mineralization in the unconformity-related uranium deposits: *Mineralium Deposita*, v. 27, p. 42-54.
- Jedwab, J., Unconventional platinum group minerals (UPGM): [jjedwab@ulb.ac.be](mailto:jjedwab@ulb.ac.be).
- Jedwab, J., Badaut, D., and Beaunier, P., 1999, Discovery of a palladium-platinum-gold-mercury bitumen in the Boss Mine, Clark Co., Nevada: *Economic Geology*, v. 94, pp. 1163-1172.
- Jowett, E.C., 1986, Genesis of Kupferschiefer Cu-Ag deposits by convective flow of Rotliegende brines during Triassic rifting: *Economic Geology*, v. 81, no. 8, p. 1823-1837.
- Lechler, P.J., 1988, A new platinum-group-element discovery at Crescent Peak, Clark County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 88-1.
- McCallum, M.E., Loucks, R.R., Carlson, R.R., Cooley, E.P., and Doerge, T.A., Platinum metals associated with hydrothermal copper ores of the New Rambler Mine, Medicine Bow Mountains, Wyoming: *Economic Geology*, v. 71, p. 1429-1450.
- Macdonald, A.J., 1987, Ore Deposit Models #12, The platinum group element deposits: classification and genesis: *Geoscience Canada*, v. 14 no. 3, p. 155-166.
- McKibben, M.A., Williams, A.E., and Hall, G.E.M., 1990, Solubility and transport of platinum-group elements and Au in saline hydrothermal fluids: constraints from geothermal brine data: *Economic Geology*, v. 85, p. 1926-1934.
- Mernagh, T.P., Heinrich, C.A., Leckie, J.F., Carville, D.P., Gilbert, D.J., Valenta, R.K., and Wyborn, L.A.I., 1994, Chemistry of low-temperature hydrothermal gold, platinum, and palladium ( $\pm$  uranium) mineralization at Coronation Hill, Northern Territory, Australia: *Economic Geology*, v. 89, p. 1053-1073.
- Mihálik, P., Jacobsen, J.B.E., and Hiemstra, S.A., 1974, Platinum-group minerals from a hydrothermal environment: *Economic Geology*, v. 69, p. 257-262.
- Mountain, B., and Wood, S.A., 1987, Solubility and transport of platinum-group elements in hydrothermal solutions: thermodynamic and physical chemical constraints: in Pritchard, H.M., Potts, P.J., Bowles, J.F.W., and Cribb, S.J., eds., *Proceedings of the Symposium Geo-Platinum 87 held at the Open University, Milton-Keynes, Great Britain, April 22-23, 1987*, Basking, Essex, G.B.: Elsevier Applied Science Publications, p. 57-82.
- \_\_\_\_\_, 1988, Chemical controls on the solubility, transport, and deposition of platinum and palladium in hydrothermal solutions: a thermodynamic approach: *Economic Geology*, v. 83, p. 492-510.
- Mountain, B., Wood, S.A., and Fenlon, B.J., 1989, Thermodynamic constraints on the solubility of platinum and palladium in hydrothermal solutions: reassessment of hydroxide, bisulfide, and ammonia complexing: *Economic Geology*, v. 84, p. 2020-2028.
- Mutschler, F.E., Griffin, M.E., Stevens, D.S., and Shannon, S.S., Jr., 1985, Precious metal deposits related to alkaline rocks in the North American Cordillera – an interpretive review: in *Transactions, Geological Society of South Africa*, 88(2), p. 355-377.
- Page, N.J., Bagby, W.C., Madrid, R.J., and Moring, B.C., 1992, Platinum-group elements – occurrences in gold deposits in Nevada, Oregon and Idaho: in DeYoung,

- J.H., and Hammarstrom, J.M., eds., Contributions to commodity geology research: U.S. Geological Survey Bulletin 1877-G, p. G1-G8.
- Philpotts, A.R., 1990, Principles of igneous and metamorphic petrology: Simon and Schuster, 498 p., hardcover.
- Sassani, D.C., and Shock, E.L., October 1990, Speciation and solubility of palladium in aqueous magmatic-hydrothermal solutions: *Geology*, v. 18, p. 925-928.
- Stumpfl, E.F., and Tarkian, M., 1976, Platinum genesis: new mineralogical evidence: *Economic Geology*, v. 71, p. 1451-1460.
- Tarkian, M., and Koopmann, G., 1995, Platinum-group minerals in the Santo Tomas II (Philex) porphyry copper-gold deposit, Luzon Island, Philippines: *Mineralium Deposita*, v. 30, p. 39-47.
- Werle, J.L., Ikramuddin, M., and Mutschler, F.E., 1984, Allard stock, La Plata Mountains, Colorado – an alkaline rock-hosted porphyry copper – precious metal deposit: *Canadian Journal of Earth Sciences*, 21; 6, p. 630-641.
- Wilde, A.R., Bloom, M.S., and Wall, V.J., 1989, Transport and deposition of gold, uranium and platinum-group elements in unconformity-related uranium deposits: in Keays, R.R., Ramsay, W.R.H., and Groves, D.I., eds.: *Geology of gold deposits: the perspective in 1988: Economic Geology, Monograph 6*, p. 637-650.
- Wood, S.A., Mountain, B.W., and Fenlon, B.J., 1989, Thermodynamic constraints on the solubility of platinum and palladium in hydrothermal solutions: reassessment of hydroxide, bisulfide and ammonia complexing: *Economic Geology*, v. 84, p. 2020-2028.
- Wood, S.A., Mountain, B.W., and Pan, P., 1991, Hydrothermal transport of Pt and Pd – the relative importance of chloride vs bisulfide complexes: *Geological Society of America Abstracts with Programs*, p. A214.
- \_\_\_\_\_, 1992, The aqueous geochemistry of platinum, palladium and gold: recent experimental constraints and a re-evaluation of theoretical predictions: *The Canadian Mineralogist*, v. 39, no. 4, p. 955-982.

## **Appendix 5**

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### **El Capitan Drill Logs**



# DIAMOND DRILL CORE LOG

## DRILL HOLE: EC-05-01

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,596/3,720,145

**Elevation:** 6,867'

**Inclination:** -90°

**Date started:** April 29, 2005

**Date completed:** May 1, 2005

**Depth:** 99'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 5, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
												Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
<b>0-28' Magnetite (61%) - calcite (28%) - hematite (8%) skarn; minor calcite-hematite stockwork</b>												
0-1'	30	15	55						Cal-mag-hem skarn		Auger cuttings only, 1-3';	0-5'
1-2'	30	20	50						"		chunks of xline lms in	Non-mag wt %: 50.1
2-3'	40	10	50						"		interval; probable surface	Au: 0.013; Ag: 0.025;
3-4'	45	5	50						Cal-mag skarn		contamination, 0-4'	Pt: 0.032; Mag: 45.84
4-5'	55		45						Mag-cal skarn			Fe in mag: 67.63
5-6'	60	5	35						Mag-cal skarn			5-10'
6-7'	50	5	45						Mag-cal skn, cal-hem	Cal-hem veinlets	Excellent example of later	Non-mag wt %: 31.3
									stockwork (weak)	cut mag-cal skn	stage cal-hem veining	Au: 0.006, Ag: 0.035,
7-8'	60	10	30						"	"	"	Pt: 0.029, Mag 62.37,
8-9'	70	10	20						"	"	"	Fe in mag: 68.75
9-10'	65	10	20	5					"	" ; brecciated		10-15'
10-11'	65		25	10					Mag-cal skarn	Phlog with cal in vlts		Non-mag wt %: 29.0
11-12'	30	25	40	5					Cal-mag skn, cal-hem	Cal-hem flooding in	Excellent example of later	Au: 0.009
									stkwk (moderate)	fractures, brecciated	stage cal-hem veining,	Ag: 0.019
											rotated fragments	Pt: 0.021
12-13'	80	10	10						Mag-hem-cal skn			Mag: 64.46
13-14'	80	5	15						Mag-cal skn	Cal veinlets		Fe in mag: 69.23
14-15'	7	10	20						Mag-cal-hem skn,	Cal-hem vlts, brecc.	Later stage cal-hem	
									cal-hem stkwk (mod)		veining, rotated fragments	
15-16'	70	5	25						Mag-cal skn,			15-20'
									cal-hem stkwk (mod)			Non-mag wt %: 21.2
16-17'	80	10	10						Mag-cal hem skn	Massive		Au: 0.014
17-18'	80	5	15						Mag-cal skn	Massive		Ag: 0.025
18-19'	75	10	15						Mag-cal-hem skn,	Cal-hem veinlets		Pt: 0.019
									cal-hem stkwk (mod)			Mag: 72.22
19-20'	80		20						Mag-cal skn	Cal-mag veinlets		Fe in mag: 69.23
20-21'	65	5	30						Mag-cal skn,	Banded (flat)		20-28'
									cal-hem stkwk (weak)			Non-mag wt %: 38.5
21-22'	60	5	35						"			Au: 0.010

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
22-23'	55	10	35							Mag-cal hem skn	Banded (flat)		Ag: 0.032
23-24'	20	5	20	55						Phlog-mag-cal skn, cal-hem stkwk (weak)	"		Pt: 0.028 Mag: 56.09 Fe in mag: 68.43
24-25'	60	5	30	5						Mag-cal skarn			
25-26'	80	10	10							Mag-cal hem skn			
26-27'	80	10	10							"			
27-28'	80	10	10							"			
28-57' Crystalline limestone													
28-29'		5	95							Crystalline limestone, minor hem dissem.	Massive texture		28-38' Au: 0.006 Ag: 0.562 Pt: 0.025
29-30'			100							Xline ls	"		
30-31'		2	98							"	"		
31-32'		5	95							"	"		
32-33'		5	95							"	"		
33-34'		5	95							"	"		
34-35'		5	95							"	"		
35-36'		2	98							"	"		
36-37'			100							"	"		
37-38'			100							"	"		
38-39'			100							"	"		38-48' Au: 0.007 Ag: 0.019 Pt: 0.028
39-40'			100							"	"		
40-41'			100							"	"		
41-42'			100							"	"		
42-43'		2	98							"	Rare cal-hem veinlets		
43-44'			100							"	"		
44-45'			100							"	"		
45-46'			100							"	"		
46-47'			100							"	"		
47-48'			100							"	"		
48-49'			100							"	"		48-57.5' Au: 0.008 Ag: 0.538 Pt: 0.032
49-50'			100							"	"		
50-51'			100							"	"		
51-52'			100							"	"		
52-53'		5	95							Xline ls, cal-hem vlts		Gray ls bleached, replaced by cal, minor hem along vein margins	
53-54'		2	98							Xline ls	Rare cal-hem veinlets	Minor pyrrhotite with hem-cal in veinlet	
54-55'			100							"			
55-56'		2	98							"	Rare cal-hem veinlets		
56-57'		2	98							"	"		
57-74' Quartz sandstone with calcite cement, minor disseminated hematite (9%)													
57-58'		5	25			75				Quartz sandstone, calcite cement	Minor hem dissem.	Clear quartz grains in calcite cement	57.5-63'
58-59'		2	23			75				"	"	Hematite probably primary in sandstone	Non mag wt%: 96.9 Au: 0.011

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
59-60'		5	15			80				"	"	"	Ag: 0.022
60-61'		5	15			80				Quartz sandstone, calcite cement	Minor hem dissem.	Hematite probably primary in sandstone	Pt: 0.037
61-62'		10	15			65			10	"	"	Hematite & clay probably primary - from decom- posed mafic detritals	
62-63'		10	15			70			5	"	"	"	
63-64'		5	10			85				"	"	Bedding apparent from hematite layers, mod. dip	63-68'
64-65'		5	20			70			5	"	"	"	Non-mag wt %: 96.9
65-66'		10	15			70			5	"	"		Au: 0.009
66-67'		10	15			75				"	"		Ag: 0.085
67-68'		15	15			70				"	Rare cal-hem vlts; steeply dipping		Pt: 0.035
68-69'		20	15			60			5	"	Rare cal-hem vlts; blotchy texture		68-73'
69-70'		20	15			60			5	"	"		Au: 0.005
70-71'		10	15			75				"	Rare cal-hem vlts; disseminations	Dissem. hematite probably introduced	Ag: 0.020
71-72'		10	15			75				"	2.5" flat vein of hem-cal-qtz	"	Pt: 0.018
72-73'		5	15			75			5	"	Blotches of hem- cal-qtz	"	
73-74'		5	15			75			5	"	"	"	73-78'
74-84' Hematite-rich (29%) quartz sandstone with calcite cement													
74-75'		50	15			30			5	Hematite-rich quartz sandstone, cal cemen	Blotches of hem; flat vlts of hem-cal	"	Au: 0.007
75-76'		50	15			30			5	"	"	"	Ag: 0.026
76-77'		20	20			60				Quartz ss, cal cemen	Blotches of hem-cal	"	Pt. 0.039
77-78'		15	30			55				"	2" flat band of cal-hem	"	
78-79'		35	65							Xline ls, hem dissem.	Flat cal-hem veinlets	"	78-83'
79-80'		10	15			75				Qtz ss, cal cement	Rare cal-hem veinlets	"	Au: 0.006
80-81'		20	35			45				", hem dissem.	"	"	Ag: 0.032
81-82'		20	30			50				Qtz ss, cal cement, hem dissem.	Irregular zones, vlts, cal replacement	"	Pt: 0.024
82-83'		30	30			40				"	"	"	
83-84'		40	40			20				Hematite-rich quartz, ss, cal cement	"; flat hem-cal veinlets	"	83-89'
84-86' Hematite (70%) - calcite (15%) skarn													
84-85'		70	10	10		10				Hem-cal-phlog skn		10% detrital qtz grains	Pt. 0.016
85-86'		70	20			10				Hem-cal skn		"	

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	86-90' Calcite (55%) - hematite (30%) skarn												
86-87'		30	60			10				Cal-hem skn	Hem-cal blotches	10% detrital qtz grains	
87-88'		30	60			10				"		"	
88-89'		30	50		10	10				"		Large diopside xls	
89-90'		30	50		10	10				"			89-94'
	90-92' Phlogopite (93%) skarn												
90-91'		5		90		5				Phlogopite skarn			Au: 0.007
91-92'		5		95						"			Ag: 0.145
	92-99' Calcite (60%) - hematite (19%) - diopside (10%) skarn												
92-93'		20	60		10	10				Cal-hem skn			Pt: 0.034
93-94'		20	60		10	10				"			
94-95'		20	60		10	10				"			
95-96'		20	65		5	10				"			
96-97'		20	55		15	10				Cal-hem-diop skn			
97-98'		20	55		15	10				"			
98-99'		15	65	10	5	5				Cal-hem skn			
END OF HOLE													

# DIAMOND DRILL CORE LOG

**DRILL HOLE:** EC-05-02

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,702/3,720,149

**Elevation:** 6,891'

**Inclination:** -90°

**Date started:** April 23, 2005

**Date completed:** April 25, 2005

**Depth:** 118'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 5, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	0-5' Magnetite (79%) - calcite (12%) - hematite (9%) skarn												
0-1'	80	5	15							Mag-cal skarn		Auger cuttings only, 0-4';	0-4.5'
1-2'	80	10	10							"			Non-mag wt %: 21.5
2-3'	75	10	15							"			Au: 0.008; Ag: 0.025
3-4'	80	10	10							"			Pt: 0.029; Mag: 71.67
4-5'	80	10	10							"			Fe in mag: 69.31
	5-8' Crystalline limestone, minor hematite (7%)												
5-6'		2	98							Xline limestone	Rare cal-hem vlts	Ls bleached along vlts	4.5-7.5'
6-7'		5	95							" ; minor cal-hem disseminated, in vlts	Cal-hem vlts, diss.	"	Au: 0.025
7-8'		15	85							Xline ls, cal-hem vlts	Calhem vlts flat, steep		Ag: 0.061
													Pt: 0.009
	8-12' Hematite (80%) - calcite (20%) stockwork												
8-9'		80	20							Hem-cal stockwork	Brecciated	Complete replacement, brecciation, fracture-filling	7.5-12'
9-10'		80	20							"	"	"	Au: 0.033
10-11'		80	20							"	"	"	Ag: 0.071
11-12'		80	20							"	"	"	Pt: 0.008
	12-42' Crystalline limestone; minor disseminated hematite (4%)												
12-13'		5	95							Xline ls, minor hem di	Rare cal-hem vlts		12-20'
13-14'		5	95							"	"		Au: 0.021
14-15'		5	95							"	"		Ag: 0.047
		5	95							"	"		Pt: 0.008
15-16'		5	95							"	"		
16-17'		5	95							"	"		
17-18'		5	95							Xline ls, minor hem dissem, cal-hem vlts	"		
18-19'		5	95							"	"		

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
19-20'		5	95							"	"	
20-21'		5	95							Xline ls, minor hem dissem, cal-hem vlts	Rare cal-hem vlts	20-30' Au: 0.010 Ag: 0.214 Pt: 0.034
21-22'		5	95							"	"	
22-23'		5	95							"	"	
23-24'		5	95							"	"	
24-25'		5	95							"	"	
25-26'		5	95							"	"	
26-27'		5	95							"	"	
27-28'		5	95							"	"	
28-29'		5	95							"	"	
29-30'		5	95							"	"	
30-31'		5	95							"	"	
31-32'		10	90							Xline ls, cal-hem stk	Stockwork weak	30-40' Au: 0.007 Ag: 0.133 Pt: 0.009
32-33'		5	95							"	"	
33-34'		2	98							"	"	
34-35'			100							Xline ls	Contact of stkwk zone dips ~75°	
35-36'		2	98							Xline ls, minor cal- hem vlts		
36-37'		2	98							"		
37-38'		2	98							"		
38-39'			100							Xline ls	2% disseminated pyrite "	
39-40'		2	98							" ; minor hem dissem.		
40-41'		2	98							"		40-50' Au: 0.008
41-42'			100							Xline ls	2% disseminated pyrite	
<b>42-48' No core</b>												
42-43'										Fault gouge		Ag: 0.010 Pt: 0.020
43-44'												
44-45'												
45-46'												
46-47'												
47-48'												
<b>48-51' Quartz sandstone with calcite cement; minor disseminated hematite (13%)</b>												
48-49'		10	15			75				Qtz ss, cal cement	Hem in clusters	
49-50'		15	15			70				"	"	
50-51'		15	15			70				"		50-55'
<b>51-61' Diopside (40%) - calcite (32%) - hematite (24%) skarn</b>												
51-52'		30	60	5		5				Cal-hem skarn	Hem diss throughout	Au: 0.016 Ag: 0.039 Pt: 0.008
52-53'		25	15	5	50	5				Diopside-hem-cal skn	"	
53-54'		20	20	5	50	5				"	Hem in clusters, vlts	
54-55'		20	20	5	50	5				"	"	2% pyrite with calcite
55-56'		20	20		55	5				"	"	55-60' Au: 0.012 Ag: 0.682 Pt: 0.013
56-57'		25	25		50					"	"	
57-58'		25	20		55					"	"	
58-59'		25	25		50					"	"	
59-60'		25	50		25					Cal-diop-hem skn	"	

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
60-61'		25	65		10					"	"	60-65'
<b>61-69' Diopside (84%) - calcite (10%) skarn; minor hematite (5%)</b>												
61-62'		5	15		80					Diop-cal skn		Au: 0.008
62-63'		5	5	5	85					Diop skn		Ag: 0.029
63-64'		5	20		75					Diop-cal skn		Pt: 0.008
64-65'		5	5		90					Diop skn		
65-66'		5	5		90					"		65-70'
66-67'		5	5		90					"		Au: 0.018
67-68'		5	5		90					"		Ag: 0.049
68-69'		5	20		75					Diop-cal skn		Pt: 0.021
<b>69-74' Phlogopite (73%) - calcite (14%) skarn; minor hematite (9%)</b>												
69-70'		10	15	70	5					Phlog-cal skn		
70-71'		10	15	70	5					"		70-75'
71-72'		10	15	70	5					"		Non-mag wt %: 82.3
72-73'		10	15	70	5					"		Au: 0.007
73-74'		5	10	85						Phlog skn		Ag: 0.012
<b>74-78' Diopside (38%) - calcite (34%) - phlogopite (16%) - hematite (10%) skarn</b>												
74-75'		10	50		40					Cal-diop skn		Pt: 0.032
75-76'		10	50		40					"		75-80'
76-77'		10	20	10	55	5				Diop-cal skn		Non-mag wt %: 71.9
77-78'		10	15	55	15	5				Phlog-diop-cal skn		Au: 0.007; Ag: 0.018
<b>78-80' Calcite (25%) - diopside (20%) - magnetite (20%) - hematite (18%) - phlogopite (18%) skarn</b>												
78-79'	20	15	15	25	25					Phlog-diop-mag-hem-cal skn	Layered (flat)	Pt: 0.025
79-80'	20	20	35	10	15					Cal-mag-hem-diop skn		Mag: 16.12 Fe in mag: 67.06
<b>80-109' Magnetite (62%) - calcite (12%) - diopside (11%) skarn; minor hematite (6%)</b>												
80-81'	75	5	5						15	Mag-tremolite skn		80-85'
81-82'	70	5	10	5					10	Magnetite skn		Non-mag wt %: 33.6
82-83'	70	5	10	5					10	"		Au: 0.009; Ag: 0.015
83-84'	70	5	10	5					10	"		Pt: 0.033; Mag: 49.89
84-85'	55	5	10	5	15				10	Mag-diop skn		Fe in mag: 65.56
85-86'	65	5	15	5	5				5	Mag-cal skn		85-90'
86-87'	85		10	5						Magnetite skn		Non-mag wt %: 20.5
87-88'	80	5	15							"		Au: 0.008; Ag: 0.080
88-89'	80	5	15							"		Pt: 0.040; Mag: 67.19
89-90'	45	5	15	15	15	5				Mag-cal-phlog diop skn		Fe in mag: 66.68
90-91'	65	5	10	10	10					Mag skn		90-95'
91-92'	90	5	5							"		Non-mag wt %: 23.9
92-93'	75	5	5		15					Mag-diop skn		Au: 0.010; Ag: 0.090
93-94'	70	10			20					"	Cal-hem vlts (flat)	Pt: 0.035; Mag: 63.17
94-95'	50	10	20		20					Mag-diop-cal skn		Fe in mag: 55.35
95-96'	75	15	10							Mag-hem skn		95-100'
96-97'	80	5	5		5				5	Mag skn		Non-mag wt %: 52.3



FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
97-98'	70	5	5	5	10			5	"	Cal-hem vlts		Au: 0.008; Ag: 0.078
98-99'	75		5		20				Mag-diop skn	Cal-hem vlts		Pt: 0.042; Mag: 56.62
99-100'	15	15	50		20				Cal-diop-mag-hem skn			Fe in mag: 66.52
100-101'	70	5	10		15				Mag-diop skn			100-105'
101-102'	60		15		25				Mag-diop-cal skn			Non-mag wt %: 50.1
102-103'	10	5	20		65				Diop-cal skn			Au: 0.008; Ag: 0.025
103-104'	10	5	15	5	65				"			Pt: 0.025; Mag: 41.20
104-105'	60	5	10	10				5	Mag skn	Layered (flat)		Fe in mag: 69.47
105-106'	5	5		90					Phlogo skn	"		105-109'
106-107'	75	5	15	5					Mag skn	Cal-hem vlts (flat)		Non-mag wt %: 51.1
107-108'	80	5	15						Mag-cal skn	"		Au: 0.007; Ag: 0.035
108-109'	75	5	20						"	"		Pt: 0.028; Mag: 40.22
												Fe in mag: 69.55
<b>109-112' Crystalline limestone</b>												
109-110'			100						Cystalline limestone		2% dissem. Pyrite	109-118'
110-111'			100						"		"	Au: 0.015
111-112'			100						"		"	Ag: 0.029
<b>112-118' Quartz sandstone; minor disseminated hematite (7%)</b>												
112-113'		10	60			30			Qtz ss, cal cement, minor hematite	Hem dissem.		Pt: 0.009
113-114'		15				70		15	Qtz ss, clay matrix, minor hematite	"		
114-115'		5				80		15	Qtz ss, clay matrix	"		
115-116'						100			Quartz sandstone	"		
116-117'		5				85		10	Qtz ss, clay matrix	"		
117-118'		5				90		5	"	"		
END OF HOLE												

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-03**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,566/3,720,091

**Elevation:** 6,853'

**Inclination:** -90°

**Date started:** April 21, 2005

**Date completed:** April 23, 2005

**Depth:** 133'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 7, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
	0-15' Magnetite (41%) - hematite (31%) - calcite (20%) skarn; minor stockwork											
0-1'	35	40	20	5						Hem-mag-cal skarn	Auger cuttings only, 0-5'	0-5'
1-2'	35	40	20	5						"		Au: 0.011; Ag: 0.052
2-3'	35	40	20	5						"		Pt: 0.011
3-4'	35	40	20	5						"		Mag: 22.30
4-5'	35	40	20	5						"		Fe in mag: 66.84
5-6'	40	40	20							"		5-10'
6-7'	40	35	25							Mag-hem-cal skn/stk		Non-mag wt %: 24.5
7-8'	40	35	25							"		Au: 0.005; Ag: 0.022
8-9'	40	30	25	5						"		Pt: 0.010; Mag: 60.12
9-10'	45	25	25	5						Mag-hem-cal skn		Fe in mag: 67.95
10-11'	50	25	20	5						"	10-14'	
11-12'	45	20	30	5						Mag-cal-hem skn	Non-mag wt %: 43.0	
12-13'	60	30	10							Mag-hem skn	Au: 0008; Ag: 0.057	
13-14'	60	15			5					Mag-cal-hem skn/stk	Pt: 0.044; Mag: 34.97	
14-15'	20	5	20	5	50					Diop-mag-cal skn	Fe in mag: 68.43	
	15-23' Calcite (54%) - diopside (26%) - hematite (14%) skarn											
15-16'		15	75	5		5				Cal-hem skn		Au: 0.012
16-17'		20	70		10					"		Ag: 0.044
17-18'		20	20		55	5				Diop-hem-cal skn		Pt: 0.019
18-19'		20	15		65					"		" ; banded (flat)
19-20'		10	20	5	65					Diop-cal skn		
20-21'		10	80							Cal skn	20-23'	
21-22'		10	80	10						"	Au: 0.011; Ag: 0.040	
22-23'		10	70	10	10					"	Pt: 0.010	

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
23-24'	23-28' No core												
24-25'													
25-26'													
26-27'													
27-28'													
28-33' Calcite (82%) - hematite (15%) skarn													
28-29'		15	85							Cal-hem skn	Hem dissem.		28-35'
29-30'		15	85							"	"		Au: 0.013
30-31'		15	85							"	"		Ag: 0.067
31-32'		15	85							"	"		Pt: 0.018
32-33'		15	70	5		10				"	"		
33-48' Diopside (59%) - magnetite (13%) - hematite (12%) - phlogopite (10%) skarn													
33-34'	10	10	10	5	65					Diop skn	Hem dissem.		
34-35'	25	20	15	10	30					Diop-mag-hem-cal skn			
35-36'	10	10	10	5	65					Diop skn	Cal-hem in vlts		35-40'
36-37'	10	10	15		70	5				Diop-cal skn	" ; mag in clots		Au: 0.011; Ag: 0.240
37-38'	15	10	15	5	55					Diop-mag-cal skn	"		Pt: 0.010
38-39'	15	10	10	5	50	10				Diop-mag skn	"		Mag: 14.53
39-40'	10	10	15	10	50	5				Diop-cal skn	"		Fe in mag: 69.37
40-41'	10	10		5	75					Diop skn	"		40-45'
41-42'	10	10		5	75					"	"		Au: 0.007
42-43'	15	15		10	60					Diop-mag-hem skn	"		Ag: 0.077
43-44'	20	15		10	55					"	"		Pt: 0.015
44-45'		10		5	80	5				Diop-skn; hem in vlts			
45-46'	15	15		15	50	5				Diop-mag-hem-phlog skn	Mag in clots		45-50'
46-47'	15	15		15	50	5				"	"		Au: 0.013
47-48'	15	15		15	50	5				"	"		Ag: 0.037
48-125' Diopside (58%) - calcite (24%) - hematite (12%) skarn													
48-49'		10	45		45					Cal-diop skn	Hem dissem.		Mag: 17.24
49-50'		10	35		55					Diop-cal skn	"		Fe in mag: 69.07
50-51'		15	30		50	5				Diop-cal-hem skn	"		50-58'
51-52'		15	30		50	5				"	"		Au: 0.012
52-53'		15	30		50	5				"	"		Ag: 0.030
53-54'		15	30		50	5				"	"		Pt: 0.014
54-55'		15	30		50	5				"	"		
55-56'		15	30		50	5				"	"		
56-57'		15	30		50	5				"	"		
57-58'		15	30		50	5				"	"		
58-59'		10	10	5	75					Diop skn	"		58-65'
59-60'		10	10	5	70	5				"	"		Au: 0.009
60-61'		10	25	5	55	5				Diop-cal skn	"		Ag: 0.028
61-62'		15	20		65					Diop-cal-hem skn	" ; banded (flat)		Pt: 0.015
62-63'		15	20		60	5				Diop-cal-hem skn	Qtz-hem vlt (70°)		
63-64'		15	25	5	55					"			

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
64-65'		15	25		60					"	Cal-hem vlts (flat)	
65-66'		15	65		20					Cal-diop-hem skn	Hem diss, in vlt (40°)	65-70'
66-67'		15	20		75					Diop-cal skn		Au: 0.010
67-68'		15	25		60					Diop-cal-hem skn	Hem diss, in vlt (45°)	Ag: 0.029
68-69'		20	25		55					"		Pt: 0.017
69-70'		20	30		50					"	Hem diss in vlts (flat)	
70-71'		20	25	5	45	5				"	"	70-75'
71-72'		10	20	10	55	5				Diop-cal skn	Hem diss; cal-hem vlts (flat)	Au: 0.009
72-73'		10	25	5	55	5				"	"	Ag: 0.027
73-74'		15	25		65					Diop-cal-hem skn	Cal-hem vlts cut diop (flat)	Pt: 0.019
74-75'		10	20		65	5				Diop-cal skn		
75-76'		15	25		55	5				Diop-cal-hem skn		75-80'
76-77'		10	25		65					Diop-cal skn		Au: 0.009
77-78'		10	25		65					"		Ag: 0.025
78-79'		5	20	5	70					"		Pt: 0.023
79-80'		5	25	5	65					"		
80-81'		10	75		15					Cal-diop skn		80-85'
81-82'		5	25		70					Diop-cal skn		Au: 0.008
82-83'		10	25	10	50	5				"		Ag: 0.022
83-84'		5	25	10	60	5				"		Pt: 0.008
84-85'		15	25	5	50	5				Diop-cal-hem skn	Massive texture	
85-86'		15	25	5	50	5				"	"	85-90'
86-87'		10	20		60	10				Diop-cal skn	Coarsely crystalline	Au: 0.006
87-88'		10	20		60	10				"	"	Ag: 0.025
88-89'		15	20		55	10				Diop-cal-hem skn	"	Pt: 0.009
89-90'		15	20		55	10				"	"	
90-91'		15	20		55	10				"	"	90-95'
91-92'	5	15	15		60	5				"	"	Au: 0.010
92-93'		15	15		65	5				"	"	Ag: <0.001
93-94'	5	15	25	5	45	5				"	"	Pt: 0.009
94-95'		15	25		55	5				"	"	
95-96'	10	10	20	5	40	15				Diop-cal-qtz skn	"	95-100'
96-97'	10	10	20		55	5				Diop-cal skn	"	Au: 0.009
97-98'	10	10	20		55	5				"	"	Ag: 0.028
98-99'		10	10		80					Diop skn		Pt: 0.021
99-100'		10	20	10	60					Diop-cal skn	Coarsely crystalline	
100-101'	5	10	15		65	5				"	"	100-105'
101-102'		5	5		85	5				Diop skn		Au: 0.013
102-103'		10	15		70	5				Diop-cal skn	Cal vlts (45°)	Ag: 0.081
103-104'		20	20		60					Diop-cal-hem skn	Cal vlts (30°)	Pt: 0.040
104-105'		10	15		75					Diop-cal skn	Cal vlts	
105-106'		10	10		75	5				Diop skn	"	105-110'
107-107'		10	10		80					"	"	Au: 0.019
107-108'		15	20		65					Diop-cal-hem skn	Cal vlts (45°)	Ag: 0.033
108-109'		5	15		75	5				Diop-cal skn		Pt: 0.041
109-110'		10	30	5	50	5				"		

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
110-111'		10	30	5	45	10				"	Phlog, qtz, cal vltz (flat)		110-115'
111-112'		20	30		45	5				Diop-cal-hem skn			Au: 0.016
112-113'		10	20	20	45	5				Diop-cal-phlog skn			Ag: 0.025
113-114'		10	25		60	5				Diop-cal skn			Pt: 0.046
114-115'		15	25		35	15		10		Diop-cal-hem-qtz skn	Trem. In layer (flat)		
115-116'		25	30		40	5				Diop-cal-hem skn	Layered (flat)		115-120'
116-117'		10	30		50	10				Diop-cal skn	Hem dissem.		Au: 0.019
117-118'		15	40		40	5				Diop-cal-hem skn			Ag: 0.030
118-119'		5	25		70					Diop-cal skn	Layered (flat)		Pt: 0.044
119-120'		10	30		60					"	"		
120-121'		10	20		60	10				"			120-125'
121-122'		15	30		55					Diop-cal-hem skn	Hem dissem.		Au: 0.015
122-123'		5	20		75					Quartz sandstone	" ; cal-hem replacement network		Ag: 0.020
123-124'		5	20		75					"	"		Pt: 0.047
124-125'		15	20		65					"	"		
<b>125-133' Quartz (46%) - calcite (38%) - hematite (13%) skarn</b>													
125-126'		15	55		10	20				Cal-hem skn	Blotchy skn replacement, remnant quartz ss		125-130'
126-127'		15	20			65				Qtz ss	Hem dissem.; cal-hem repl. network		Au: 0,025
127-128'		5	15			80				Qtz-cal skn	Banded (flat)		Ag: 0.019
128-129'		10	40			50				"	"		Pt: 0.044
129-130'		15	85							Cal-hem skn	" ; hem dissem.		
130-131'		15	35			40				Qtz-cal-hem skn	"		130-133'
131-132'		15	35			40				"	"		Au: 0.008; Ag: 0.018
132-133'		10	20			70				Qtz ss			Pt: 0.030
END OF HOLE													

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-04**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,749/3,720,092

**Elevation:** 6,894'

**Inclination:** -90°

**Date started:** April 6, 2005

**Date completed:** April 7, 2005

**Depth:** 38'

**Core stored at:** Capitan Storage, 406 2nd St, Capitan, NM, Unit 24-A. Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, M.S., Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Ph.D., P.Eng., Consulting geologist, Vancouver, B.C., Ca

**One-quarter core shipped:** by UPS Ground on April 22, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT, 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
												Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
<b>0-5' Magnetite (56%) - calcite (21%) - hematite (20%) skarn</b>												
0-1'	55	20	20	5					Magnetite-hematite-calcite skarn		Auger cuttings only, 0-4'	0-4' Non-mag wt %: 30.9 Au: 0.125 Ag: 0.011; Pt: 0.000 Mag: 60.53 Fe in mag: 68.27
1-2'	55	20	20	5					"			
2-3'	55	20	23	2					"			
3-4'	55	20	23	2					"			
4-5'	60	20	18	2					"			
5-6'	<b>4-7' No core</b>											
6-7'	<b>7-38' Crystalline limestone; minor disseminated hematite (5%)</b>											
7-8'	5	5	90						Crystalline limestone minor hem. dissem.	Calcite veinlets, minor mag. hem; banded gray, white		7-15' Au: 0.041 Ag: 0.268 Pt: 0.009
8-9'		5	95						"			
9-10'		5	95						"			
10-11'		2	98						"			
11-12'		2	98						"		2% finely dissem. pyrite	
12-13'		2	98						"	Banded gray, white	"	
13-14'		20	75	5					Calcite -hematite stockwork in xline ls	Cal-hem stockwork (moderate)		
14-15'		5	95						Xline ls, minor cal- hem stockwork	Cal-hem stkwk (weak)		
15-16'		5	95						Xline ls, minor cal-hem in veinlets	Cal-hem veinlets; vuggy; banded		15-20' Au: 0.019 Ag: 0.000 Pt: 0.006
16-17'		5	95						"			
17-18'		5	95						"			
18-19'		5	95						"			

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay
19-20'		5	95							"		
20-21'		5	95							Xline ls, minor cal-hem in veinlets		20-30' Au: 0.030 Ag: 0.964 Pt: 0.008
21-22'		5	95							"		
22-23'		5	95							"		
23-24'		5	95							"		
24-25'		5	95							" Minor cal-hem veinlets; vuggy		
25-26'		5	95							"		
26-27'		10	90							"		
27-28'		5	95							" Cal-hem in narrow bands (flat) and dissem.		
28-29'		5	95							"		
29-30'		5	95							"		
30-31'		5	95							Xline ls, minor cal-hem in veinlets, dissem.	30-38' Au: 0.017 Ag: 0.324 Pt: 0.007	
31-32'		5	95							"		
32-33'		2	98							Xline ls, minor dissem. hem.		
33-34'		2	98							"		
34-35'			100							Xline ls		
35-36'		2	98							Xline ls, minor cal-hem in veinlets, dissem.		
36-37'		2	98							"		
37-38'		5	95							"		
END OF HOLE												



# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-04A (Core)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,750/3,720,092

**Elevation:** 6,895'

**Inclination:** -90°

**Date started:** June 26,2005

**Date completed:** June 29, 2005

**Depth:** 136' (assayed and logged: 38-136')

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter core shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
												?
<b>38-46' Crystalline limestone; minor disseminated hematite (5%)</b>												
38-39'		5	95						Xline ls, minor cal-hem in vlts, dissem.	Cal-hem in vlts, dissem	Hem. most abundant in fract. fillings: introduced	38-46' Au: 0.006
39-40'		5	95						"	"	1% pyrrhotite, dissem.	Ag: 0.000
40-41'		5	95						"	" ; 60° veinlet	"	Pt: 0.004
41-42'		2	98						"		1% sphalerite, dissem.	
42-43'		5	95						"	Cal-hem in vlts, dissem.		
43-44'		5	95						"	Banded, flat		
44-45'		10	90						"	Cal-hem vlts, 30°	1% pyrr., dissem.	
45-46'		2	98						"	Banded, 40°	5% pyrr., dissem.	
<b>46-87' Diopside (35%) - calcite (31%) - hematite (24%) skarn</b>												
46-47'		25	55		15	5			Cal-hem-diop skn	Hem evenly dissem.		46-50' Au: 0.014
47-48'		45	50		5				Cal-hem-diop skn	" ; vuggy		Ag: 0.054
48-49'		45	30		20	5			Hem-cal skn	" ; vuggy		Pt: 0.004
49-50'		50	40		5	5			Hem-cal skn	Hem evenly dissem.		
50-51'		30	35		30	5			Cal-hem-diop skn	Vuggy; banded 40°		50-55' Au: 0.015
51-52'		35	25		35	5			Hem-diop-cal skn	Vuggy		Ag: 0.040
52-53'		35	20	5	35	5			"	Banded, flat		Pt: 0.003
53-54'		30	15		35	20			Diop-hem-qtz skn	Hem evenly dissem.		
54-55'		30	5		60	5			Diop-hem skn	"		
55-56'		30	5		60	5			"	"		55-60' Au: 0.020
56-57'		25	60		15				Cal-hem-diop skn	"		Ag: 0.062
57-58'		30	35		35				Cal-diop-hem skn	" ; banded, flat		Pt: 0.005
58-59'		30	35		35				"	"		
59-60'		20	60			20			Cal-hem-qtz skn	"		
60-61'		25	60	10		5			Cal-hem skn	" ; banded, flat		60-65' Au: 0.017
61-62'		20	75			5			"	"		Ag: 0.048
62-63'		15	80	5					"	"		Pt: 0.004
63-64'		15	55	15		15			Cal-hem-phlog-qtz skn	"		

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS ?
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
64-65'		15	35	5	40	5				Diop-cal-hem skn	"	
65-66'		35	30	10	20	5				Hem-cal-diop skn	"	65-70'
66-67'		30	20	40	10					Phlog-hem-cal skn	"	Au: 0.022
67-68'		30	35	5	30					Cal-hem-diop skn	"	Ag: 0.035
68-69'		20	20		60					Diop-hem-cal skn	"	Pt. 0.007
69-70'		20	5		65	10				Diop-hem skn	Hem evenly dissem.	
70-71'		30	10	5	50	5				Diop-hem-cal skn	"	70-75'
71-72'		30	15		50	5				"	"	Au: 0.018
72-73'		15	15		60					"	" ; banded, flat	Ag: 0.034
73-74'		20	60	5	15					Cal-hem-diop skn	Hem-cal vlts, flat	Pt. 0.006
74-75'		20	75		5					Cal-hem skn	"	
75-76'		20	20		55	5				Diop-hem-cal skn		75-80'
76-77'		20	20		55	5				"		Au: 0.013
77-78'		20	60		20					Cal-hem-diop skn	Diop-cal-hem vlts, 45°	Ag: 0.098
78-79'		20	20	5	50	5				Diop-hem-cal skn	Coarsely xline, massive	Pt. 0.009
79-80'		20			75	5				Diop-hem skn	"	
80-81'		20	20	5	50	5				Diop-hem-cal skn	"	80-85'
81-82'		10	15	5	65	5				Diop-cal skn	"	Non-mag wt %: 78.4
82-83'	15	5	15	10	55					Diop-mag-cal skn		Au: 0.029
83-84'		20	10	5	65					"		Ag: 0.112
84-85'		15	15	5	65					Diop-hem-cal skn		Pt. 0.018
85-86'		10	20	5	55	10				Diop-cal skn	Coarsely xline, massive	85-89'
86-87'	20	15	5	10	45	5				Diop-mag-hem skn	Cal-hem vlts, flat	Non-mag wt %: 19.3
<b>87-89' Magnetite (65%) - hematite (18%) - calcite (10%) ska</b>												
87-88'	70	20	10							Mag-hem skn	Massive	Au: 0.033
88-89'	60	15	10	15						Mag-hem-phlog skn		Ag: 0.202
<b>89-118' Diopside (55%) - hematite (20%) - calcite (14%) ska</b>												
89-90'	20	20	10	10	40					Diop-mag-hem-cal-phlog skn	Cal vlts	Pt: 0.020
90-91'		15	10		75					Diop-hem-cal skn	"	90-95'
91-92'		15	15	20	50					"		Au: 0.019
92-93'		20	15		65					"		Ag: 0.075
93-94'	5	20	20	5	50					"		Pt: 0.017
94-95'		25	5	5	65					Diop-hem skn		
95-96'	10	20	10	10	50					Diop-mag-hem-cal-phlog skn	Banded, flat	96-100'
96-97'		20	15	5	60					Diop-hem-cal skn		Non-mag wt %: 81.8
97-98'	5	20	5	10	60					Diop-hem-phlog skn	Massive	Au: 0.022
98-99'		20	5		75					Diop-hem skn	"	Ag: 0.063
99-100'		15	5		80					"	"	Pt: 0.025
100-101'	10	20	20	10	40					Diop-hem-cal-mag-phlog skn	Banded, flat; cal vlts, flat	100-105'
101-102'		60		40						Hem-diop skn	Diop-hem vlt, flat	Au: 0.012
102-103'		20	30	5	45					Diop-cal-hem skn	Hem evenly dissem.	Ag: 0.060
103-104'		30	10		60					Diop-hem-cal skn	"	Pt: 0.022
104-105'		25	25	5	45					"	"	
105-106'		25	25		50					"		105-111'
106-107'	5	20	15	5	55					:	Banded, flat;	Non-mag wt %: 55.4

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS ?
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
										cal vlt, flat		
107-108'		20	20		60					"	Coarsely xline, massive	Au: 0.037
108-109'		20	25	5	50					"	Banded, flat	Ag: 0.335
109-110'	30	5	5	15	45					Diop-mag-phlog skn	"	Pt: 0.023
110-111'	20	15	5		60					Diop-mag-hem skn	2% gypsum (?)	
111-112'		20	25		45	10				Diop-cal-hem-qtz skn	Vuggy	111-115'
112-113;		20	30	5	45					Diop-cal-hem skn	Banded, flat	Au: 0.011
113-114'		15	5	5	75					Diop-hem skn	Vuggy	Ag: 0.029
114-115'	5	10	10	20	55					Diop-phlog-hem-cal skn	Banded, flat	Pt: 0.024
115-116'		10	10		80					Diop-hem-cal skn	Medium-grained	115-120'
116-117'		10	20		70					Diop-cal-hem skn	"	Au: 0.011
117-118'		20	25		40	15				Diop-cal-hem-qtz skn	Banded, flat	Ag: 0.035
<b>118- 136' Quartz sandstone with calcite cement, disseminated hematite (11%); minor diopside (17%) skarn</b>												
118-119'		2	13			85				Qtz ss	Hem dissem.	Pt: 0.027
119-120'		15	25			60				"	"	" ; hem dissem.
120-121'		15	25		30	30				Diop-qtz-cal-hem skn	"	Skarnitized qtz ss
121-122'		10	15			75				Qtz ss	"	Cal cement
122-123'		10	25		20	45				Qtz-cal-diop-hem skn	Hem dissem.	Hem-stained cal, cream-tan
												skarnitized qtz ss; banded, flat
123-124'		15	15			60				Qtz ss	"	
124-125'		15				85				Qtz ss; weak stockwork	Hem fract filling, replacement; weak stockwork	
125-126'		15	25		30	30				Diop-qtz-cal-hem skn	Mottled repl. texture	Skarnitized qtz ss
126-127'		10	20		35	35				"	" ; banded, flat	"
127-128'		10	30		5	55				Qtz ss	"	"
128-129'		10	30			60				"	Mottled texture	
129-130'		10	5			85				"	"	
130-131'		5	5			90				"		
131-132'		5	5		20	70				Diopside altered qtz ss	Banded, flat; cal vlt, flat	Skarnitized qtz ss
132-133'		20	5		20	55				"		"
133-134'		2	18		80					Diop-qtz skn	Banded, flat	"
134-135'		5	10		40	45				Diopside altered qtz ss	"	"
135-136'		15	15		30	40				"	Cal-hem vlt, 50°	
END OF HOLE												

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-05**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,433/3,719,961

**Elevation:** 6,817'

**Inclination:** -90°

**Date started:** April 26, 2005

**Date completed:** April 28, 2005

**Depth:** 103.5' (lost)

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 2, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
	0-10' Magnetite (65%) - hematite (18%) - calcite (17%) skarn												
0-1'	75	10	15							Magnetite-calcite skn		Auger cuttings and small chunks only, 0-9'	0-5'
1-2'	80	10	10							"		Ferruginous silica (jasper) in some chunks	Non-mag wt%: 35.9
2-3'	80	10	10							"		"	Au: 0.013
3-4'	80	10	10							"			Ag: 0.023
4-5'	60	20	20							Mag-hem-cal skn			Pt: 0.019
5-6'	50	30	20							"			Mag: 46.02
6-7'	50	30	20							"			Fe in mag: 63.97
7-8'	50	30	20							"			5-10'
8-9'	60	20	20							"			Au: 0.006; Ag: 0.026
9-10'	65	10	25							Mag-cal skarn			Pt: 0.016
													Mag: 20.54
													Fe in mag: 67.87
	10-15' Calcite (52%) - hematite (44%) skarn												
10-11'		50	50							Hem-cal skn			10-15'
11-12'		50	45			5				"	Hem dissem.		Au: 0.006
12-13'		40	55			5				Cal-hem skn	" ; cal vltz (flat)		Ag: 0.030
13-14'		40	55			5				"			Pt: 0.015
14-15'		40	55			5				"			
	15-41' Magnetite (42%) - hematite (29%) - calcite (24%) skarn												
15-16'	40	50	10							Hem-mag skn			15-20'
16-17'	30	50	20							Hem-mag-cal skn			Au: 0.004; Ag: 0.011
17-18'	40	30	30							Mag-hem-cal skn			Pt: 0.002
18-19'	40	30	30							"			Mag: 28.72
19-20'	40	30	20	5		5				"	Cal-hem vltz		Fe in mag: 59.66
20-21'	20	30	35	15						Cal-hem-mag-phlog skr	"		20-25'
21-22'	30	65	5							Hem-mag skn	Massive specular hematite		Non-mag wt%: 54.5
													Au: 0.006; Ag: 0.019

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay
22-23'	30	65	5							Hem-mag skn	Massive spec hem	Pt: 0.016
23-24'	30	65	5							"	"	Mag: 24.51
24-25'	35	50	15							Hem-mag-cal skn	" ; banded (flat)	Fe in mag: 64.84
25-26'	60	20	20							Mag-hem-cal skn	Massive spec hem	25-30'
26-27'	45	20	30			5				Mag-cal-hem skn	Layered (flat)	Non-mag wt%: 32.0
27-28'	55	20	25							"	"	Au: 0.017; Ag: 0.031
28-29'	50	20	30							"	Layered (contorted)	Pt: 0.016; Mag: 43.80
29-30'	45	20	35							"	"	Fe in mag: 62.53
30-31'	25	35	35			5				Cal-hem-mag skn	"	30-35'
31-32'	30	30	30	5		5				Mag-hem-cal skn	1" cal vein (40°)	Non-mag wt%: 53.2
32-33'	45	30	25							"		Au: 0.009; Ag: 0.035
33-34'	65	10	15	10						Mag-cal skn	Banded (flat)	Pt: 0.015; Mag: 45.27
34-35'	60	15	15	5						Mag-hem-cal skn	Cal vlts (45°)	Fe in mag: 62.53
35-36'	75	5	15	5						Mag-cal skn		35-41'
36-37'	65	5	20	10						"		Non-mag wt%: 49.2
37-38'	30	20	50							Cal-mag-hem skn	Banded (flat)	Au: 0.020; Ag: 0.032
38-39'	40	15	45							"	"	Pt: 0.014
39-40'	30	20	35	15						Cal-mag-hem-phlog skn		Mag: 39.93
40-41'	35	15	30	15		5				Mag-cal-hem-phlog skn		Fe in mag: 67.32
41-45' Calcite (49%) - phlogopite (30%) - hematite (15%) skarn												
41-42'		15	55	30						Cal-phlog-hem skn	Hem dissem	41-45'
42-43'		15	55	30						"	"	Au: 0.006
43-44'		15	45	30		10				"	" ; qtz vlt (flat)	Ag: 0.252
44-45'		15	40	30		15				Cal-phlog-hem-qtz skn		Pt: 0.000
45-46'	45-47' No core											
46-47'												
47-56' Diopside (38%) - calcite (25%) - phlogopite (17%) - hematite (11%) - quartz (10%) skarn												
47-48'		15	40	45						Phlog-cal-hem skn		47-50'
48-49'		10	25	10	45	10				Diop-cal skn		Au: 0.010; Ag: 0.019
49-50'		5	20	5	60	10				"		Pt: 0.008
50-51'		10	20	15	50	5				Diop-cal-phlog skn		50-55'
51-52'		10	20	5	45	20				Diop-cal-qtz skn	Qtz in irregular vlts	Au: 0.001
52-53'		10	25	25	35	5				Diop-cal-phlog skn	Qtz vlt (flat)	Ag: 0.126
53-54'		10	30	30	20	10				Cal-phlog-diop skn		Pt: 0.000
54-55'		10	25	5	50	10				Diop-cal skn		
55-56'		10	20	10	40	20				Diop-cal-qtz skn	Banded (flat)	55-60'
56-92' Diopside (51%) - calcite (24%) - quartz (16%) - hematite (12%) skarn												
56-57'		5	25		55	15				Diop-cal-qtz skn	Banded (flat)	Au: 0.010
57-58'		5	20		55	20				"	Cal-hem vlt (45°)	Ag: 0.041
58-59'		5	20		60	15				"		Pt: 0.014
59-60'		5	20		60	15				"		
60-61'		10	20		50	20				"		60-65'
61-62'		10	25		35	30				Diop-qtz-cal skn	irreg cal-hem vlts; wk stkw	Au: 0.014
62-63'		10	30		35	30				Diop-qtz-cal skn	Blotchy patches of cal-hem	Ag: 0.018
											Relic qtz ss texture - possibly replaced ss	Pt: 0.017

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
												possibly replaced ss	
63-64'			25		50	25				"			
64-65'		5	20		60	15				Diop-cal-qtz skn			
65-66'		5	15	10	60	10				Diop-cal skn			65-70'
66-67'		10	20		55	15				Diop-cal-qtz skn			Au: 0.014
67-68'		15	20		45	20				Diop-cal-qtz-hem skn			Ag: 0.766
68-69'		15	20		50	15				"	Layered (flat)		Pt: 0.022
69-70'		15	20		50	15				"			
70-71'		10	25		50	15				Diop-cal-qtz skn			70-75'
71-72'		20	35		35	10				Diop-cal-hem skn	Hem dissem.		Au: 0.013
72-73'		15	25		50	10				"	Qtz vlts (35°)		Ag: 0.226
73-74'		20	25		50	5				"			Pt: 0.006
74-75'		10	25		50	15				Diop-cal-qtz skn			
75-76'		15	20		45	20				Diop-cal-qtz-hem skn	Qtz vlts (flat)		75-80'
76-77'		15	20		45	20				"			Au: 0.010
77-78'		10	20		55	15				Diop-cal-qtz skn			Ag: 0.380
78-79'		10	20		55	15				"			Pt: 0.000
79-80'		10	20	5	55	10				Diop-cal skn			
80-81'		10	20		60	10				"			80-85'
81-82'		5	20	5	55	15				Diop-cal-qtz skn			Au: 0.015
82-83'		10	25	5	45	15				"	Vuggy texture		Ag: 0.207
83-84'		10	20		55	15				Diop-cal-qtz skn	"		Pt: 0.000
84-85'		10	20		55	15				"	"		
85-86'		15	20		50	15				Diop-cal-qtz-hem skn	"		85-90'
86-87'		20	20		45	15				Diop-cal-hem-qtz skn	"		Au: 0.010
87-88'		25	20		40	15				Diop-hem-cal-qtz skn	Cal-hem vlts (35°); hem in clots, clusters		Ag: 0.164
88-89'		25	35		35	10				Diop-cal-hem skn	Vuggy texture	Cal-hem reaction front against diop-cal-qtz skn	Pt: 0.000
89-90'		15	30		45	10				"	Cal-hem vlts (30°)		
90-91'		20	30		45	5				"			90-95'
91-92'		15	30		40	15				Diop-cal-hem-qtz skn	Vuggy texture		Au: 0.010
<b>92-97' Calcite (78%) - hematite (13%) skarn</b>													
92-93'		20	75			5				Cal-hem skn			Ag: 0.030
93-94'		15	80			5				"			Pt: 0.007
94-95'		5	80			15				Cal-qtz skn			
96-96'		10	80			10				Cal skn			95-100'
96-97'		15	75	5		5				Cal-hem skn			
<b>97-103.5' Diopside (39%)- calcite (37%) - hematite (12%) skarn</b>													
97-98'		15	40		35	10				Cal-diop-hem skn			Au: 0.010
98-99'		15	40		35	10				"			Ag: 0.060
99-100'		15	40		35	10				"			Pt: 0.007
100-101'		10	40		45	5				Diop-cal skn			100-103.5'
101-102'		5	45		45	5				"			Au: 0.007
102-103'		15	35	5	35	10				Diop-cal-hem skn	Vuggy texture		Ag: 0.031
103-103.5'	10	10	20	10	40	10				Diop-cal skn			Pt: 0.003
END OF HOLE													

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-06**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,558/3,719,961

**Elevation:** 6,815'

**Inclination:** -90°

**Date started:** April 28, 2005

**Date completed:** April 29, 2005

**Depth:** 81'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 2, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
												Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
<b>0-5' Magnetite (40%) - calcite (35%) - hematite (20%) skarn</b>												
0-1'	40	20	35	5					Mag-cal-hem skarn		Auger cuttings only, 0-14'	0-5'
1-2'	40	20	35	5					"			Non-mag wt %: 74.2
2-3'	40	20	35	5					"			Au: 0.552; Ag: 0.181
3-4'	40	20	35	5					"			Pt: 0.003; Mag: 16.74
4-5'	40	20	35	5					"			Fe in mag: 69.23
<b>5-10' Calcite (70%) - magnetite (20%) skarn; minor hematite (5%)</b>												
5-6'	20	5	70	5					Cal-mag skarn			5-10'
6-7'	20	5	70	5					"			Non-mag wt %: 56.8
7-8'	20	5	70	5					"			Au: 0.060; Ag: 0.041
8-9'	20	5	70	5					"			Pt: 0.010; Mag: 34.68
9-10'	20	5	70	5					"			Fe in mag: 67.32
<b>10-17' Magnetite (51%) - calcite (30%) skarn; minor hematite (8%)</b>												
10-11'	70	5	20	5					Mag-cal skarn			10-15'
11-12'	70	5	20	5					"			Non-mag wt %: 44.0
12-13'	70	5	20	5					"			Au: 0.031
13-14'	70	5	20	5					"			Ag: 0.026
14-15'		15	40			45			Cal-hem skn, qtz ss	Cal-hem vlts (flat); hem dissem.	This interval is a mixture of cal-hem skn and quartz sandstone	Pt: 0.000 Mag: 43.13 Fe in mag: 68.51
15-16'	40	10	45	5					Mag-cal skn, cal-hem skarn	1" cal-mag breccia (flat)	Mixture of mag-cal skn, cal-hem skn	15-21' Au: 0.007
16-17'	40	10	45	5					"	"	"	Ag: 0.025



FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
	17-27' Calcite (88%) - hematite (12%) skarn											
17-18'		10	90							Cal skn	Cal-filled vugs; 1" cal-mag breccia (flat)	Pt: 0.000
18-19'		20	80							Cal-hem skn	1/2" cal-hem breccia (flat) ; cal filled vugs	
19-20'		15	85							"	Cal-hem vlt (45°)	
20-21'		25	75							Cal-hem skn/stkwk	Cal-hem stkwk (mod); vlt <sup>s</sup> up to 1/2 " (most flat)	
21-22'		5	95							Cal skn	Hem dissem.	21-27'
22-23'		5	95							"	"	Au: 0.009
23-24'		10	90							"	" ; cal vlt <sup>s</sup> (flat)	Ag: 0.022
24-25'		10	90							"	"	Pt: 0.007
25-26'		10	90							"	Hem diss in patches; cal vlt <sup>s</sup> .	
26-27'		10	90							"	" ; cal vlt <sup>s</sup> (flat)	
	27-40' Magnetite (57%) - calcite (30%) - hematite (11%) skarn											
27-28'	70	10	20							Mag-cal skn	Layered (flat)	27-31'
28-29'	65	15	20							Mag-cal-hem skn	Layered (contorted)	Non-mag wt %: 28.7
29-30'	60	20	20							"	"	Au: 0.043; Ag: 0.019
30-31'	65	5	30							Mag-cal skn	Layered (flat)	Pt: 0.000
31-32'			100							Crystalline limestone	Cal vlt <sup>s</sup> (70-90°)	31-33'
32-33'	40	5	40							Mag-cal skn	Layered, brecciated (flat)	Au: 0.006; Ag: 0.134
												Pt: 0.043; Mag: 52.80
												Fe in mag: 61.62
33-34'	75	5	20							"	Cal-hem vlt <sup>s</sup> (contorted)	33-39'
34-35'	55	20	25							Mag-cal-hem skn	Cal-hem vlt <sup>s</sup> (flat)	Non-mag wt %: 38.2
35-36'	55	20	25							"	"	Au: 0.025; Ag: 0.041
36-37'	55	20	25							"	"	Pt: 0.005
37-38'	70	10	20							Mag-cal skn	"	Mg: 44.35
38-39'	60	10	30							"	ayered (flat); cal vlt <sup>s</sup> (flat)	Fe in mag: 61.78
39-40'	75	10	15							"	"	39-45'
	40-42' Diopside (33%) - phlogopite (30%) - calcite (20%) skarn; minor hematite (8%)											
40-41'	10	15	30		40	5				Diop-cal-hem skn	Cal vlt <sup>s</sup>	Au: 0.002
41-42'			10	60	25					Phlog-diop skn	Cal-hem vlt <sup>s</sup>	Ag: 0.024
	42-46' Quartz sandstone with calcite cement; minor hematite (5%)											
42-43'		5	15			80				Quartz sandstone	"	Pt: 0.040
43-44'		5	20			75				"	Hem diss.	
44-45'		5	20			75				"	" ; cal-hem vlt <sup>s</sup> (45°)	
45-46'		5	20			75				Quartz sandstone		
	46-49' Calcite (63%) - diopside (20%) - hematite (17%) skarn											
46-47'		15	65		20					Cal-diop-hem skn	Massive texture	Au: 0.003
47-48'		15	65		20					"	"	Ag: 6.538
48-49'		20	60		20					Cal-diop-hem skn	"	Pt: 0.037

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
												Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	49-53' Quartz sandstone with calcite cement; minor hematite (5%)											
49-50'		5	20			75				Qtz ss	Hem diss	
50-51'		5	20			75				"	"	50-55'
51-52'		5	20			75				"	"	Au: 0.010
52-53'		5	20		5	70				"	"	Ag: 0.335
	53-78' Diopside (67%) - calcite (19%) skarn; minor hematite (6%)											
53-54'		10	15		60	15				Diop-cal-qtz skn	Calcite filled vugs	Pt: 0.019
54-55'		5	20		65	10				Diop-cal skn	" ; massive texture	
55-56'		5	20		65	10				"	Banded (flat)	55-60'
56-57'		5	15		75	5				"	Coarsely crystalline	Au: 0.002
57-58'		15	65	5	15					Cal-hem-diop skn	Banded (flat)	Ag: 0.028
58-59'		15	15	5	65					Diop-hem-cal skn	"	Pt: 0.015
59-60'		5	10		85					Diop skn	Coarsely crystalline	
60-61'		15	15		70					Diop-hem-cal skn	Hem diss	60-65'
61-62'		10	15		75					Diop-cal skn	"	Au: 0.009
62-63'		15	20		65					Diop-cal-hem skn	"	Ag: 0.090
63-64'		10		5	85					Diop skn	"	Pt: 0.019
64-65'		10	85		5					Cal skn	" ; banded (flat)	
65-66'		10	35		55					Diop-cal skn	"	65-70'
66-67'		10	25		75					"		Au: 0.002
67-68'		5	30	5	60					"		Ag: 0.031
68-69'				5	85	10				Diop skn	Massive texture	Pt: 0.016
69-70'				5	85	10				"	"	
70-71'			5		90	5				"	"	70-75'
71-72'			5		90	5				"	"	Au: 0.010
72-73'				40	45	5	10			Diop-phlog skn	Banded (flat)	Ag: 0.130
73-74'	5		5	15	75					"	"	Pt: 0.014
74-75'		5	25		70					Diop-cal skn	Hem diss	
75-76'		5	25		70					"	"	75-78'
76-77'		5	25		70					"	"	Au: 0.097; Ag: 0.041
77-78'				20	80					Diop-phlog skn		Pt: 0.019
	78-81' Magnetite (55%) - diopside (18%) - calcite (10%) skarn											
78-79'	55	5	30	10						Mag-cal skn	Layered (20°)	78-81'
79-80'	80			5				15		Mag-trem skn	Massive texture	Non-mag wt %: 30.0
80-81'	30	5		5	55	5				Diop-mag skn	"	Au: 0.312; Ag: 0.098
												Pt: 0.018 Mag: 45.67
												Fe in mag: 68.01
END OF HOLE												

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-06A (Core)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,561/3,719,960

**Elevation:** 6,816'

**Inclination:** -90°

**Date started:** July 5, 2005

**Date completed:** July 8, 2005

**Depth:** 206' (assayed and logged: 81-206')

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter core shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt
	81-87' Magnetite (53%) - calcite (19%) - hematite (9%) skarn												
81-82'	40	5	25	15				15		Mag-cal-phlog-trem skn			81-87'
82-83'	40	5	35	15				5		Mag-cal-phlog skn			Non-mag wt %: 62.5
83-84'	35	20	25	15				5		Mag-cal-hem-phlog skn			Au: 0.210
84-85'	60	15	15	10						Mag-hem-cal-phlog skn			Ag: 0.108
85-86'	65	5	10	20						Mag-phlog-cal skn			Pt. 0.021
86-87'	80	5	5	10						Mag-phlog skn			
	87-110' Diopside (61%) - calcite (20%) - hematite (11%) skarn												
87-88'	10	5	15		70					Diop-cal-mag skn			87-95'
88-89'			5		95					Diop skn	Banded, flat	Mottled green and brown diop	
89-90'	5	10	10	15	60					Diop-phlog-hem-cal skn	"	"	Non-mag wt %: 75.9
90-91'	5		10		85					Diop-cal skn		"	Au: 0.105
91-92'	5		10		85					"			Ag: 0.124
92-93'	15	15	30		40					Diop-cal-mag-hem skn	Banded, 50°		Pt. 0.017
93-94'		10	20		70					Diop-cal-hem skn	Cal-hem vlts, flat		
94-95'	75	10	5	5				5		Mag-hem skn			
95-96'	10		15		75					Diop-cal-mag skn			95-100'
96-97'		10	20		70					Diop-cal-hem skn			Au: 0.042
97-98'		20	25		50			5		"			Ag: 0.099
98-99'		10	20		65	5				"			Pt: 0.011
99-100'		10	15	5	70					"			
100-101'		10	25	5	55			5		"	Cal vlts, flat		100-105'
101-102'		20	25		55					"	"		Au: 0.010
102-103'		20	25		50	5				"	"		Ag: 0.078
103-104'		30	25		40	5				"			Pt. 0.005
104-105'		15	30		50	5				"			
105-106'		15	25		55	5				"			105-110'
106-107'		10	20		70					"	Vuggy		Au: 0.018
107-108'		5	20		75					Diop-cal skn			Ag: 0.080
108-109'		5	30		65					"			Pt: 0.005

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite					Clay
109-110'		20	30		50					Diop-cal-hem skn	Banded, flat		
	110-125' Quartz sandstone with calcite cement, disseminated hematite (13%), minor diopside (12%) skarn												
110-111'		10	15			75				Qtz ss	" ; cal-hem vlts, pods	Cal-hem in fract fillings; intro	110-115'
111-112'		20	25		5	50				Skarnitized qtz ss	Banded, flat	Skarnified qtz ss	Au: 0.020
112-113'		15	15			60				"	Hem dissem. in pods	Cal-hem in pods: introduced	Ag: 0.107
113-114'		15	25		50	10				Diop-cal-hem-qtz skn	Banded, flat		Pt: 0.007
114-115'		10	15		60	15				"	"		
115-116'		10	15		40	35				Diop-qtz-cal-hem skn	"		115-120'
116-117'		5	15			80				Qtz ss		Cal cement	Au: 0.026
117-118'		15	25			60				"	Cal-hem vlts, 90°	The cal-hem vlts are probably feeder fractures; cal cement	Ag: 0.209 Pt: 0.009
118-119'		15	25			60				Qtz ss	Cal-hem vlts, 45°	"	
119-120'		15	30			55				"			
120-121'		15	30			55				"	Banded, flat		120-125'
121-122'		15	25		5	55				Skarnitized qtz ss	Convoluting layering		Au: 0.018
122-123'		5	10		20	65				"			Ag: 0.222
123-124'		10	25		5	60				"	Cal-hem vlts, 80°	Cal in repl pods; cal-hem in vlts - probable feeders	Pt: 0.006
124-125'		5	15			80				"	"	Fine-grained qtz replacement	
	125-173' Diopside (53%) - calcite (29%) - hematite (13%) skarn												
125-126'		5	5		70	20				Diop-qtz skn	Banded, flat; cal-hem vlts, 80°	Fine-grained diop	125-130'
126-127'		5	15		70	10				Diop-cal-qtz skn	"	"	Au: 0.018
127-128'		15	20		60	5				"			Ag: 0.188
128-129'		5	5		75	15				Diop-qtz skn	Banded, flat; cal-hem vlts, 80°		Pt: 0.007
129-130'		10	5		70	15				"	Banded, flat		
130-131'		15	20		65					Diop-cal-hem skn	Uniform, massive		130-135'
131-132'		15	20		65					"	"		Au: 0.016
132-133'		10	30		60					"	"		Ag: 0.117
133-134'		10	30		60					"	"		Pt: 0.004
134-135'		10	30		60					"	"		
135-136'		10	30		60					"	"		135-140'
136-137'		15	30		55					"	"		Au: 0.015
137-138'		10	25		60	5				"	"		Ag: 0.097
138-139'		10	30		55	5				"	"		Pt: 0.012
139-140'		20	20		65	5				"	"		
140-141'		10	20		70					"	Cal-hem in vlts, pods; cal vugs		140-145'
141-142'		10	20		65	5				"	"		Au: 0.014
142-143'		5	10	15	55	5				Diop-phlog-cal skn	Banded, flat		Ag: 0.065
143-144'		5	20	20	55					"	"		Pt: 0.017
144-145'		10	20		70					Diop-cal-hem skn	" ; vuggy		
145-146'		10	30		60					"			145-150'
146-147'		5	30		60	5				Diop-cal skn			Au: 0.010
147-148'		10	30		60					"			Ag: 0.039

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt
148-149'		10	30	60						"		Pt: 0.015	
149-150'		5	5	5	85					Diop skn			
150-151'		15	30		55					Diop-cal-hem skn	Cal-hem vlts, 90°	150-155'	
151-152'		10	30		60					"		Au: 0.013	
152-153'		5	30		60	5				Diop-cal skn	Cal-hem vlts, irregular	Ag: 0.034	
153-154'		10	25		60	5				Diop-cal-hem skn	Vuggy	Pt: 0.018	
154-155'		10	10		80					"	Cal-hem vlts, flat		
155-156'		20	30		50					"	Banded, flat	155-160'	
156-157'		15	30		50	5				"		Au: 0.015	
157-158'		15	30		50	5				"		Ag: 0.070	
158-159'		15	30		55					"		Pt: 0.010	
159-160'		20	20		60					"	Banded, flat		
160-161'		15	75		10					Cal-hem-diop skn	Hem dissem.	160-165'	
161-162'		15	65		20					Cal-diop-hem skn	" ; cal-hem-diop vlts,50°	Au: 0.013	
162-163'		20	70		10					Cal-hem-diop skn	Open, vuggy cal-hem vlts	Ag: 0.051	
163-164'		20	70		10					"	Cal-hem pods, flat	Irregular poddy replacement texture	Pt: 0.009
164-165'		5	25		70					Diop-cal skn			
165-166'		20	60		20					Cal-hem-diop skn		Irregular poddy replacement texture	165-169'
166-167'		10	50		40					Cal-diop-hem skn			Au: 0.018
167-168'		25	30		45					Diop-cal-hem skn	Banded, vuggy, flat		Ag: 0.028
168-169'		20	40		40					"			Pt: 0.008
169-170'		40	30		30					Hem-cal-diop skn	Banded; cal-hem repl. zones, flat		169-173'
170-171'		15	20		65					Diop-cal-hem skn			Au: 0.028
171-172'		20	30		50					"	Banded, vlts, flat		Ag: 0.022
172-173'		30	30		40					"			Pt: 0.016
173-206' Quartzite, calcite cement, disseminated hematite (13%);minor diopside (7%) skarn													
173-174'		15	15		5	65				Quartzite, calcite cement	Banded, flat	Hematitic quartzite: dissem.	173-178'
174-175'		20	30		5	45				"			Au: 0.026
175-176'		15	20		5	60				Quartzite, cal cement	Banded, flat cal-hem-diop	Hematitic quartzite: dissem.	Ag: 0.019
176-177'		15	25		5	55				"	Cal-hem-diop vlts, 70°		Pt: 0.005
177-178'		20	25		5	50				Qtzite, cal cem; weak stockwork	cal-hem-diop stkwk, weak vlts 80-90°	"	
178-179'		20	20		5	55				Qtzite, cal cem	Cal-hem vlts, flat; qtzite bleached along vlts	"	178-183'
179-180'		20	25		5	50				"	"	"	Au: 0.012
180-181'		20	25		5	50				"	Cal-hem vlts, 80-90°	"	Ag: 0.027
181-182'		15	30		5	50				"	"	"	Pt: 0.003
182-183'		15	30		5	50				"	"	"	
183-184'		15	20		30	35				Diopside altered qtzite	Skarnitized qtz ss		183-188'
184-185'		20	20		5	55				Qtzite, cal cem	Mottled; cal-hem pods bleach qtzite	Hematitic quartzite: dissem.	Au: 0.013
													Ag: 0.016

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt
185-186'		20	25		10	45				"	"	Pt: 0.021	
186-187'		20	25		10	45				"	"		
187-188'		15	25		20	40				Diop alt qtzite; cal cem	Diop-cal-hem 1cm vlt, 80	"	
188-189'		15	15		15	55				"		"	188-193'
189-190'		15	20		20	45				"		"	Au: 0.019
190-191'		15	15		5	65				Qtzite, cal cem	Mottled; cal-hem pods bleach qtzite	"	Ag: 0.025
191-192'		15	15		20	50				Diop alt qtzite, cal cem; weak stockwork	Cal-hem-diop stkwk, wea	"	Pt: 0.019
192-193'		15	15		20	50				"	"	"	193-197'
193-194'		20	20		20	60				Diop alt; cal cem		"	
194-195'		15	15		25	55				"		"	
195-196'		15	15		15	55				"		Hematitic quartzite: dissem.	Au: 0.018
196-197'		15	15		40	30				"		"	Ag: 0.038
197-198'		15	20		30	30				"	Diop-cal-hem patches	eg. diop-cal-hem replaceme	Pt: 0.021
198-199'		15	20		15	50				"; weak diop-cal-hem stkw	Weak fracture network; diop-cal-hem		197-200'
199-200'		15	15		5	65				Qtzite, cal cem	Cal-hem pods, flat		Au: 0.012
200-201'		15	20			65				"	"		Ag: 0.021
201-202'		20	25			55				"; weak cal-hem stkwk	Weak fracture network; cal-hem		Pt: 0.022
202-203'		30	30			40				"	" ; vuggy		200-206'
203-204'		30	30			40				Qtzite cal cem; mod. cal-hem stkwk	Mod. fracture network; cal-hem	Well fractured, incipient brecciation	
204-205'		30	30			40				"	"	"	
205-206'		30	30			40				"	"	"	
END OF HOLE													

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-07**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** Easting 448,757; Northing 3,719,966

**Elevation:** 6,889'

**Inclination:** -90°

**Date started:** April 7, 2005

**Date completed:** April 10, 2005

**Depth:** 118'

**Core stored at:** Capitan Storage, 406 2nd St, Capitan, NM, Unit 24-A. Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, M.S., Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Ph.D., P.Eng., Consulting geologist, Vancouver, B.C., Ca

**One-quarter core shipped:** by UPS Ground on April 22, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT, 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE, TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite					Clay
	0-10' Crystalline limestone; minor disseminated hematite (5%), magnetite (4%)											Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %	
0-1'	10	5	85							Crystalline limestone		Auger cuttings only, 0-3'	0-5'
1-2'	10	5	85							"			Au: 0.013
2-3'	10	5	85							"			Ag: 0.683
3-4'	10	5	85							"	Banded (flat)		Pt: 0.012
4-5'		25	75							Calcite-hematite dis- seminated in xline ls	Cal-hem dissem., interplacement, fracture filling		Mag: 3.34
5-6'			100							Crystalline limestone		White, finely xline	Fe in mag: 68.43
6-7'			100							"		"	5-10'
7-8'		5	95							Xline ls, minor cal-hem dissem.	Cal-hem dissem.	Replacement cal-hem	Au: 0.010
8-9'			100							Crystalline limestone	Banded	White, gray bands	Ag: 0.216
9-10'			100							"		"	Pt: 0.008
	10-18' Magnetite (64%) - calcite (20%) - hematite (14%) skarn												
10-11'	85		15							Magnetite-calcite skarn	Banded magnetite- calcite layers	Massive magnetite, rare calcite - minor hematite fractures	10-15'
11-12'	45	40	15							Magnetite-hematite- calcite skarn	"	Hematite primary or replacement?	Non-mag wt %: 24.8
12-13'	55	20	25							"	"	"	Au: 0.060
13-14'	70	10	20							Mag-cal skarn	"	"	Ag: 0.068
14-15'	60	20	20							Mag-hem-cal-skarn	"	"	Pt: 0.000
15-16'	75	5	20							Mag-cal skarn	Calcite fractures	"	Mag: 66.95
16-17'	55	15	25			5				Mag-cal-hem skarn	Calcite-quartz fractures, vuggy	Calcite early, quartz later	Fe in mag: 68.73
													15-20'
													Non-mag wt %: 16.2
													Au: 0.077



FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE, TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
17-18'	70	5	20			5				Mag-cal skarn	"	"	Ag: 0.361
	18-25' Magnetite (61%) - calcite (24%) - hematite (11%) skarn/stockwork												
	18-19'	65	10	20			5			Mag-cal skn, cal-hem stockwork	Calcite-hematite stockwork (weak)	Hem-cal replacement patches	Pt: 0.000 Mag: 70.64 Fe in mag: 70.56
	19-20'	80	5	15						"	"	"	20-25' Non-mag wt %: 23.8 Au: 0.043; Ag: 0.029 Pt: 0.000; Mag: 64.41 Fe in mag: 70.01
	20-21'	65	10	20			5			"	"	"	
	21-22'	55	10	30			5			"	"	"	
	22-23'	45	20	30			5			"	"	"	
	23-24'	70	10	20						"	"	"	
	24-25'	50	10	35			5			"	"	"	
	25-37' Crystalline limestone; disseminated hematite (16%)												
	25-26'		5	95						Cal-hem dissem. In xline ls	Cal-hem dissem. throughout, uniform texture	Minor phlogopite	25-30' Au: 0.126 Ag: 0.000 Pt: 0.000
	26-27'		10	90						"	"		30-37' Au: 0.148 Ag: 0.000 Pt: 0.000
	27-28'		25	75						"	"		
	28-29'		20	80						"	"		
	29-30'		20	80						"	"		
	30-31'		10	90						"	"		
	31-32'		10	90						"	Minor cal-hem-qtz veinlets		
	32-33'		20	80						"	"		
33-34'		20	80						"	"			
34-35'		20	80						"	"			
35-36'		20	80						"	"			
36-37'		10	90						"	"			
37-54' Crystalline limestone													
37-38'			100						Crystalline limestone	Banded (white, gray)	Either crystalline or re- crystallized ls; rare hem.	37-48' Au: 0.028 Ag: 0.023 Pt: 0.000	
38-39'			100						"	"	"	48-54' Au: 0.028 Ag: 0.103 Pt: 0.000	
39-40'			100						"	"	"		
40-41'			100						"	Massive (gray)	No mineralization, replacement		
41-42'			100						"	Rare cal-hem veinlets (flat)			
42-43'			100						"	"			
43-44'			100						"	"			
44-45'			100						"	"			
45-46'			100						"	"			
46-47'			100						"	"			
47-48'			100						"	"			
48-49'			99						"	Cal-minor pyrite, hem veinlet	Pyrite 1%		
49-50'		2	96						"	Dissem pyrite, hem	Pyrite 2%		
50-51'		1	96						"	"	Pyrite 3%		
51-52'		1	96						"	"	"		

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE, TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
52-53'		2	94							"	"	Pyrite 4%	
53-54'			95							"	Dissem. pyrite	Pyrrhotite 3% in needles, blades	
54-55'	54-60' No core												
55-56'													
56-57'													
57-58'													
58-59'													
59-60'													
60-85' Diopside (46%) - calcite (28%) - hematite (19%) skarn													
60-61'		80	20							Hematite-calcite skarn	Massive texture	Completely replaced with hem, cal	60-65' Au: 0.028 Ag: 0.092 Pt: 0.000
61-62'		70	30							"	"	"	
62-63'		40	20		40					Hem-cal-diop skarn		Diopside very fine-grained	
63-64'		50	49	1						Hematite-calcite skarn	Banded (flat)		
64-65'		40	50	2	8					"	"		
65-66'		20	75		5					Cal-hem skarn	"		65-70' Au: 0.006 Ag: 0.000 Pt: 0.000
66-67'		25	50	5	20					Cal-hem-diop skn			
67-68'		20	50		30					"			
68-69'		40	35		25					"			
69-70'		10	25		65					Diop-cal skn	Banded (flat)		
70-71'		10	20	65	5					"			70-80' Au: 0.019 Ag: 0.018 Pt: 0.019
71-72'			10	20	65			5		Diop-phlogopite-cal skn		Coarse-grained skarn	
72-73'			10	25	65					"		"	
73-74'		10	25		65					Diop-cal skn	Banded (flat)		
74-75'		5	20		75					"			
75-76'		5	30		65					"		Irregular skn replacement	
76-77'		5	25		70					"			
77-78'			20	10	70					Diop-cal skn		Minor fluorite in pods	
78-79'		35	20	35	10					Hem-phlog-cal-diop skn	Massive texture	Strong hem replacement	
79-80'		10	15	30	45					Diop-phlog-cal skn			
80-81'		10	40		50					Diop-cal skn			80-85' Au: 0.084 Ag: 0.068 Pt: 0.014
81-82'			20		80					"	Massive texture		
82-83'			20		80					"	Blotchy texture		
83-84'			18		80		2			"		Fluorite in pod	
84-85'			15	15	70					Diop-cal-phlog skn			
85-108' Diopside (37%) - magnetite (27%) - calcite (13%) - hematite (12%) skarn													
85-86'	40	10	20		30					Mag-diop-cal-hem skn			85-90' Non-mag wt %: 37.6 Au: 0.025; Ag: 0.071 Pt: 0.000; Mag: 48.11 Fe in mag: 66.41
86-87'	40	20	20		20					"			
87-88'	25	15	18	5	35		2			Diop-mag-cal-hem skn		Fluorite in pod	
88-89'	20	30	20	10	20					Hem-mag-cal-diop skn			
89-90'	30	25	10	25	10					Mag-hem-phlog skn			
90-91'	15	30	20	5	30					Hem-diop-cal-mag skn			90-95' Non-mag wt %: 30.1 Au: 0.011; Ag: 0.029 Pt: 0.000; Mag: 51.27 Fe in mag: 67.08
91-92'	10	30	25		30	5				Hem-diop-cal skn	Irreg. calcite veinlets		
92-93'	30	15	20		35					Diop-mag-cal-hem skn			
93-94'	70	5	15		10					Mag-cal skn			
94-95'	30	10	15		40	5				Diop-mag-cal skn		White clay in pods	

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE, TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
95-96'	25	10	10		45		5		5	Diop-mag skn		"	95-100'
96-97'	30	10	10	5	40				5	"		"	Non-mag wt %: 33.8
97-98'	30	20	20		30					Diop-mag-hem-cal skn			Au: 0.019; Ag: 0.029
98-99'	15	5	10	5	60	5				Diop-mag skn			Pt: 0.013 Mag: 46.65
99-100'	20	5	10	10	55					"			Fe in mag: 68.17
100-101'	20	5	10		60				5	"		White clay in pods	100-105'
101-102'	15	5	10		65				5	"		"	Non-mag wt %: 60.3
102-103'		10	10		70				10	Diopside skarn		White clay in pods, rare p	Au: 0.090; Ag: 0.049
103-104'	25	5	5		60				5	Diop-mag skarn			Pt: 0.019; Mag: 22.86
104-105'		5	5		90					Diopside skarn		Ham-cal in fractures only	Fe in mag: 68.01
105-106'	15	15	5		60				5	Diop-mag-hem skn			105-110'
106-107'	60			2	23				15	Mag-diop skn			Non-mag wt %: 34.8
107-108'	50		15		30				5	Mag-diop-cal skn			Au: 0.020; Ag: 1.418
<b>108-118' Diopside (68%) - calcite (19%) skarn</b>													
108-109'		5	15		70	5			5	Diop-cal skarn			Pt: 0.014; Mag: 37.80
109-110'		5	15		75	5				"			Fe in mag: 68.33
110-111'		5	15		75	5				"	Banded (flat)	Rare pyrite, gypsum	110-118'
111-112'		5	15		75	5				"			Au: 0.046
112-113'		5	15		75	5				"		Rare pyrite	Ag: 0.033
113-114'		5	20	5	65	5				"	Banded (flat)		Pt: 0.018
114-115'		5	20	10	60	5				"	"		
115-116'		5	20	5	65	5				"	"		
116-117'		5	15	5	75					"	"		
117-118'		5	40	10	45					"		Fine-grained	
END OF HOLE													

# ROTARY DRILL CUTTINGS LOG

**DRILL HOLE: EC-05-07A (Rotary)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Yellow Jacket Drilling, Phoenix, AZ

**Location (UTM):** 448,760/3,719,966

**Elevation:** 6,889'

**Inclination:** -90°

**Date started:** August 1, 2005

**Date completed:** August 3, 2005

**Depth:** 260' (assayed and logged: 118-260')

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-E. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 9

**Cuttings collected, bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter cuttings shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter cuttings shipped:**

One quarter cuttings shipped:

FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS							
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt						
Non-mag %																Au	Ag	Pt
118-135' Calcite (61%) - hematite (20%) - diopside (18%) skarn; minor magnetite (4%)																		
118-120'	10	5	50		35					Cal-diop-mag skn		76.8	0.070	0.038	0.012			
120-125'	2	28	60		10					Cal-hem skn		79.4	0.055	0.037	0.017			
125-130'	2	23	70		5					"		77.2	0.037	0.041	0.019			
130-135'	2	23	55		20					Cal-hem-diop skn		86.1	0.027	0.050	0.032			
135-155' Diopside (61%) - calcite (20%) - hematite (12%) skarn; minor magneti																		
135-140'		15	20		65					Diop-cal-hem skn		89.5	0.046	0.089	0.021			
140-145'	2	13	20		65					"			0.020	0.101	0.011			
145-150'	10	5	20	5	50					Diop-cal-mag skn		77.7	0.041	0.127	0.014			
150-155'	2	13	20		65					Diop-cal-hem skn		86.8	0.044	0.153	0.015			
155-220' Calcite (64%) - hematite (21%) - diopside (14%) skarn																		
155-160'	2	28	60		10					Cal-hem-diop skn			0.018	0.064	0.009			
160-165'			20		20					"			0.012	0.061	0.003			
165-170'	5	15	65		15					"			0.013	0.027	0.000			
170-175'			20		15					"			0.013	0.025	0.000			
175-180'			20		5					Cal-hem skn			0.022	0.025	0.004			
180-185'			20		10					Cal-hem-diop skn			0.024	0.053	0.007			
185-190'			20		15					"			0.014	0.048	0.000			
190-195'			25		10					"			0.017	0.031	0.000			
195-200'			15		15					"			0.009	0.022	0.000			
200-205'			25		25					"			0.010	0.025	0.000			
205-210'			25		15					"			0.007	0.019	0.000			
210-215'			20		10					"			0.005	0.016	0.000			
215-220'			25		15					"			0.003	0.016	0.000			
220-240' Calcite (44%) - diopside (40%) - hematite (16%) skarn																		
220-225'		15	55		30					Cal-diop-hem skn			0.003	0.075	0.001			
225-230'		15	45		40					"			0.004	0.048	0.002			

FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS					
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt				
												Non-mag %	Au	Ag	Pt	
230-235'		20	30		50					Diop-cal-hem skn			0.004	0.018	0.005	
235-240'		15	45		40					Cal-diop-hem skn			0.007	0.077	0.005	
	240-260' Calcite (67%) - hematite (21%) - diopside (10%) skarn															
240-245'		10	80		10					Cal-diop-hem skn				0.011	0.011	0.009
245-250'		25	65		10					"				0.008	0.088	0.009
250-255'		25	65		10					"				0.002	0.024	0.007
255-260'		25	65		10					"				0.002	0.017	0.007
END OF HOLE																

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-08**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,437/3,719,873

**Elevation:** 6,780'

**Inclination:** -90°

**Date started:** April 5, 2005

**Date completed:** April 6, 2005

**Depth:** 89'

**Core stored at:** Capitan Storage, 406 2nd St, Capitan, NM, Unit 24-A. Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, M.S., Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Ph.D., P.Eng., Consulting geologist, Vancouver, B.C., C

**One-quarter core shipped:** by UPS Ground on April 22, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT, 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
												Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
<b>0-10' Magnetite (64%) - calcite (26%) skarn</b>												
0-1'	60	2	30	6						Magnetite-calcite skarn	Auger cuttings only, 0-30'	0-5'
1-2'	48	2	40	10						"		Non-mag wt %: 44.7
2-3'	58	2	30	10						"		Au: 0.035; Ag: 0.030
3-4'	60		35	5						"		Pt: 0.013; Mag: 47.25
4-5'	80		15	5						"		Fe in mag: 68.01
5-6'	58	2	30	10						"		5-10'
6-7'	68	2	22	8						"		Non-mag wt %: 39.8
7-8'	70		20	10						"		Au: 0.017; Ag: 0.011
8-9'	70		20	10						"		Pt: 0.014; Mag: 51.47
9-10'	70		20	10						"		Fe in mag: 69.13
<b>10-16' Calcite (57%) - magnetite (31%) skarn</b>												
10-11'	25		65	10						Calcite-magnetite skarn		10-15'
11-12'	50		40	10						"		Non-mag wt %: 68.4
12-13'	25		65	10						"		Au: 0.035; Ag: 0.089
13-14'	40		50	10						"		Pt: 0.012; Mag: 13.71
14-15'	25	5	55	15						"		Fe in mag: 67.53
15-16'	20	5	65	10						"		15-20'
<b>16-30' Crystalline limestone; minor skarn; minor hematite (9%), magnetite (5%)</b>												
16-17'	5	5	85	5						Calcite skarn		Au: 0.034
17-18'	15	5	70	10						Cal-mag skarn		Ag: 0.0.025
18-19'	5	5	85	5						Calcite skarn		Pt: 0.012
19-20'	5	5	85	5						"		
20-21'	5	10	83	2						"		20-25'
21-22'	5	10	83	2						"		Au: 0.023
22-23'	2	10	86	2						"		Ag: 0.144
23-24'	2	10	86	2						"		Pt: 0.013

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
24-25'	5	10	70	15						Cal-phlog skarn			
25-26'	2	20	63	5	10					Cal-hem skarn		Diopside occurs in both	25-30'
26-27'	2	10	78	5	5					Cal skarn		green and brownish colors	Au: 0.046
27-28'	8	10	75	5	2					"			Ag: 0.010
28-29'	5	10	73	10	2					"			Pt: 0.018
29-30'	2	5	83	5	5					"			
<b>30-45' Calcite-hematite (16%) stockwork in crystalline limestone, minor diopside (9%) skarn</b>													
30-31'		25	75							Cal-hem stkw in xline ls	Hem-cal stkw (mod); hem in veinlets, dissem.	Limestone stained brown adjacent to veinlets	30-35' Au: 0.017 Ag: 0.146 Pt: 0.011
31-32'		30	70							"	"	"	
32-33'		10	90							"	"	"	
33-34'		10	85		5					"	"	Incipient diopside	
34-35'		28	65		5				2	"	Stkw (weak), hem dominantly as dissem.	1" clay gouge (flat)	
35-36'		15	80		5					"	"	Incipient diopside replacement	35-40' Au: 0.055 Ag: 1.514 Pt: 0.013
36-37'		15	83		2					"	"		
37-38'		15	55		30					Hem-cal stkw in xline ls; incipient skarn	Banded		
38-39'		15	70		15					"	"		
39-40'		15	75		10					Hem-cal stkw in xline ls	Stkw (weak); hem dominantly as dissem.	2% black organic?	
40-41'		15	83		2					"	"		40-45' Au: 0.017 Ag: 0.027 Pt: 0.014
41-42'		10	60		30					Hem-cal stkw in xline ls, incipient skn	"		
42-43'		5	68		25					"	"	Talc in fracture (2%)	
43-44'		10	90							Crystalline limestone	Hem. only in dissem.		
44-45'		15	85							"	"		
<b>45-54' Phlogopite (37%) - calcite (29%) - diopside (25%) skarn; minor hematite (4%)</b>													
45-46'		10	50	15	25					Cal-diop-phlog skarn	Hem only in dissem.		45-50' Au: 0.069 Ag: 0.027 Pt: 0.013
46-47'		10	50	15	25					"	"		
47-48'		2	58	15	25					"	Insig. hem below		
48-49'		2	30	15	33	10				"			
49-50'		5	30	20	35	10				"			
50-51'		5	20	5	65		5			Diop-cal skarn		Fluorite in cavity	50-54' Au: 0.017 Ag: 0.032 Pt: 0.018
51-52'			95	5						Phlog skarn		Fine-grained phlogopite	
52-53'			90	10						"			
53-54'	10		20	65	5					Phlog-cal skarn		53-59': 1' core only, cavity	
55-56'	<b>55-64' No core</b>												
56-57'													
57-58'													
58-59'													
59-60'													
60-61'													
61-62'													



FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite					Clay
62-63' 63-64'												Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %	
	64-69' Phlogopite (65%) - calcite (20%) skarn												
64-65'	5		20	65	5		5			Phlog-cal skarn		64-69': 4' core only	64-70'
65-66'	5		20	65	5		5			"			Non-mag wt %: 61.0
66-67'	5		20	65	5		5			"			Au: 0.007
67-68'	5		20	65	5		5			"			Ag: 0.022
68-69'	5		20	65	5		5			"			Pt. 0.030; Mag: 17.05
	69-76' Diopside (71%) - Phlogopite (19%) skarn												
69-70'				50	50					Diop-phlog skarn			Fe in mag: 53.16
70-71'				35	60	5				"			70-75'
71-72'				35	60	5				"			Au: 0.030
72-73'				5	90	5				Diopside skarn			Ag: 0.041
73-74'				5	90	5				"			Pt: 0.015
74-75'			20	5	70	5				Diop - cal skarn	Calcite in fractures		
75-76'			20		80					"			75-80'
	76-79' Calcite-hematite (15%) stockwork in crystalline limestone, minor diopside (13%) skarn												
76-77'		15	80		5					Cal-hem stkwk in xline ls	Stkwk (weak), hem. dominantly as dissem.		Au: 0.019
77-78'		10	40	25	25					Cal-hem stwk in xline ls, diopside skarn			Ag: 0.025
78-79'			20	70		10				"			Pt: 0.016
	79-83' Diopside (73%) - calcite (21%) skarn												
79-80'			30		70					Diop-cal skarn			
80-81'		2	20		73		5			"			80-89'
81-82'		5	15		75		5			"		2% black ilvaite (?)	Au: 0.043
82-83'		2	20		73		5			"	Distinct banded structure (flat); fractures (flat)	2% gypsum in fractures; hematite in fractures	Ag: 0.073
	83-85' Diopside (48%) - calcite (35%) skarn; calcite-hematite (10%) stockwork												
83-84'		15	40		40	5				Hem. dissem. In xline ls, diop skarn	Distinct banded structure (flat); fractures (flat)		
84-85'		5	30		55	5	5			Hem-cal stkwk in xline ls, diop skarn			
	85-89' Diopside (80%) - calcite (20%) skarn												
85-86'			20		80					Diop-cal skarn	Uniform texture		
86-87'			20		80					"	Blotchy, vuggy		
87-88'		1	19		80					"	Banded, vuggy	1% specular hematite	
88-89'			20		80					"	Uniform		
END OF HOLE													

# ROTARY DRILL CUTTINGS LOG

**DRILL HOLE: EC-05-08A (Rotary)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Yellow Jacket Drilling, Phoenix, AZ

**Location (UTM):** 448,445/3,719,876

**Elevation:** 6,780'

**Inclination:** -90°

**Date started:** August 20, 2005

**Date completed:** August 22, 2005

**Depth:** 280' (assayed and logged: 89-280')

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-E. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-C

**Cuttings collected, bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter cuttings shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter cuttings shipped:**

One quarter section sample															
FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS				
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt			
												Non-mag %	Au	Ag	Pt
89-95' 95-100'	89-100' Diopside (60%) - calcite (33%) - hematite (13%) skarn														
		5	35		60					Diop-cal skn		0.015	0.080	0.011	
		10	30		60					Diop-cal-hem skn		0.011	0.030	0.010	
100-105' 105-110' 110-115' 115-120' 120-125' 125-130' 130-135' 135-140' 140-145' 145-150' 150-155' 155-160' 160-165' 165-170' 170-175' 175-180' 180-185' 185-190' 190-195' 195-200' 200-205' 205-210'	100-215' Calcite (53%) - hematite (21%) - diopside (19%) skarn														
		15	60		25					Cal-diop-hem skn		0.033	0.105	0.028	
		25	70		5					Cal-hem skn		0.038	0.097	0.022	
	5	15	65		15					Cal-hem-diop skn	79.7	0.041	0.205	0.029	
	2	13	50	5	30					Cal-diop-hem skn		0.007	0.045	0.008	
		15	60		25					"		0.007	0.045	0.008	
		15	60	5	10					Cal-hem-diop skn		0.008	0.039	0.006	
		20	70		10					"		0.008	0.039	0.006	
		20	70		10					"		0.007	0.041	0.006	
		15	65	5	15					"		0.020	0.088	0.012	
		10	60	5	25					Cal-diop-hem skn		0.020	0.088	0.012	
	10	25	50	5	10					Cal-hem-mag-diop skn		0.019	0.076	0.010	
	2	23	60	5	10					Cal-hem-diop skn		0.019	0.076	0.010	
	5	25	60	5	5					Cal-hem skn		0.027	0.093	0.015	
	5	25	35	5	30					Cal-diop-hem skn		0.027	0.093	0.015	
		25	35	10	30					Cal-diop-hem-phlog skn		0.025	0.068	0.012	
		30	40	5	25					Cal-diop-hem skn		0.025	0.068	0.012	
		25	45	10	20					"		0.010	0.026	0.003	
		30	45	5	20					"		0.009	0.023	0.004	
		30	40	5	25					"		0.004	0.020	0.002	
	20	30	20	30					Cal-diop-hem-phlog skn		0.004	0.020	0.002		
	25	25	20	30					Diop-hem-cal-phlog skn		0.005	0.018	0.003		
	30	45	15	10					Cal-hem-phlog-diop skn		0.020	0.075	0.017		

FOOTAGE	MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS			
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			Au, Ag, Pt: opt			
												Non-mag %	Au	Ag	Pt
210-215'		10	70	5	15					Cal-diop-hem skn		0.006	0.010	0.003	
215-235' Quartz sandstone, calcite cement, minor disseminated hematite (4%); minor diopside (8%) - phlogopite (8%) skarn															
215-220'			15	5	5	75				Qtz-ss, cal cement		0.006	0.015	0.003	
220-225'		5	10	10	5	75				"		0.004	0.012	0.004	
225-230'		5	10	10	5	70				"		0.004	0.009	0.001	
230-235'		10	20	5	15	50				Qtz-ss, cal cement; cal-diop-hem skn (mixed)		0.007	0.013	0.001	
235-260' Calcite (45%) - hematite (27%) - diopside (21%) skarn															
235-240'		20	50	5	20			5		Cal-hem-diop skn		0.027	0.059	0.030	
240-245'		25	30	5	20			20		Cal-hem-diop-trem skn		0.006	0.019	0.004	
245-250'		30	40		30					Cal-hem-diop skn		0.019	0.043	0.012	
250-255'		40	45		15					"		0.015	0.047	0.009	
255-260'		20	60		20					Cal-hem-diop skn		0.002	0.020	0.004	
260-280' Muscovite aplite, minor hematite (5%) - calcite (5%) fracture-filling; minor diopside (5%) skarn															
260-265'		5	5		5					Aplite (muscovite)*		0.008	0.058	0.030	
265-270'		5	5		5					"		0.005	0.010	0.009	
270-275'		5	5		5					"		0.003	0.097	0.023	
275-280'		5	5		5					"		0.001	0.008	0.006	
END OF HOLE															
*Aplite contains disseminated and minor fracture-filling cal-hem. This is <u>not</u> a primary plutonic iron oxide but represents cal-hem mineralization of same type as seen in the skarns, etc. The presence of diopside is evidence that the aplite has also been skarnitized.															

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-09**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,589/3,719,878

**Elevation:** 6,834'

**Inclination:** -90°

**Date started:** May 2, 2005

**Date completed:** May 2, 2005

**Depth:** 66' (lost)

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 7, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
	0-21' Calcite (65%) - magnetite (25%) - hematite (9%) skarn											
0-1'	40	10	50							Calcite-magnetite skn	Auger cuttings, small chunks only, 0-19'; chunks of lms...apparent contam.	0-5' Non-mag wt %: 73.5 Au: 0.005 Ag: 0.020 Pt: 0.016 Mag: 22.26 Fe in mag: 67.85
1-2'	40	10	50							"		Au: 0.005 Ag: 0.020 Pt: 0.016 Mag: 22.26 Fe in mag: 67.85
2-3'	40	10	50							"		Au: 0.005 Ag: 0.020 Pt: 0.016 Mag: 22.26 Fe in mag: 67.85
3-4'	40	10	50							"		Au: 0.005 Ag: 0.020 Pt: 0.016 Mag: 22.26 Fe in mag: 67.85
4-5'	40	10	50							"		Au: 0.005 Ag: 0.020 Pt: 0.016 Mag: 22.26 Fe in mag: 67.85
5-6'	25	10	65							"		5-10' Non-mag wt %: 92.1 Au: 0.006 Ag: 0.038 Pt: 0.029
6-7'	25	5	75							"		5-10' Non-mag wt %: 92.1 Au: 0.006 Ag: 0.038 Pt: 0.029
7-8'	25	5	75							"		5-10' Non-mag wt %: 92.1 Au: 0.006 Ag: 0.038 Pt: 0.029
8-9'	25	5	75							"		5-10' Non-mag wt %: 92.1 Au: 0.006 Ag: 0.038 Pt: 0.029
9-10'	20	5	75							"		5-10' Non-mag wt %: 92.1 Au: 0.006 Ag: 0.038 Pt: 0.029
10-11'	20	10	70							"		10-15' Non-mag wt %: 94.2 Au: 0.007 Ag: 0.155 Pt: 0.034
11-12'	20	10	70							"		10-15' Non-mag wt %: 94.2 Au: 0.007 Ag: 0.155 Pt: 0.034
12-13'	20	10	70							"		10-15' Non-mag wt %: 94.2 Au: 0.007 Ag: 0.155 Pt: 0.034
13-14'	20	10	70							"		10-15' Non-mag wt %: 94.2 Au: 0.007 Ag: 0.155 Pt: 0.034
14-15'	20	10	70							"		10-15' Non-mag wt %: 94.2 Au: 0.007 Ag: 0.155 Pt: 0.034
15-16'	20	10	70							"		Mixture of mag-rich and mag-poor skn; percentages are averages est. from fine cuttings
16-17'	20	10	70							Cal-mag-hem skn	Layered (flat)	Mixture of mag-rich brecc. in qtz ss and mag-cal skn; percentage est. average
17-18'	20	10	70							Cal-mag-hem skn	Layered (flat)	Mixture of mag-rich brecc. in qtz ss and mag-cal skn; percentage est. average
18-19'	20	10	70							Cal-mag-hem skn	Layered (flat)	Mixture of mag-rich brecc. in qtz ss and mag-cal skn; percentage est. average
19-20'	40	15	45							Cal-mag-hem skn	Layered (flat)	Mixture of mag-rich brecc. in qtz ss and mag-cal skn; percentage est. average
20-21'	10	5	85							Cal-mag skn, xline ls	Layered (contorted)	Mixture of cal-mag skn and xline ls

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay					
	21-24' Calcite (45%) - magnetite (30%) - quartz (15%) - hematite (10%) skarn													
21-22'	30	10	40	5		15				Cal-mag-qtz (?) skn	Layered (flat, con- torted), brecciated	Qtz may be relic ss grains or part of skarn	Au: 0.007 Ag: 1.148 Pt: 0.035	
22-23'	30	10	45			15				"	"	"	Pt: 0.035	
23-24'	30	10	45			15				"	Layered (flat: cal vlts (flat)	"	Mag: 44.05 Fe in mag: 67.21	
	24-43' Magnetite (53%) - calcite (35%) - hematite (12%) skarn													
24-25'	50	10	40							Mag-cal-skn	Cal-qtz-mag vlts (90°); brecciated	Mixture of mag-cal-hem skn, xline ls		
25-26'	30	10	60							Cal-mag skn	"		25-30'	
26-27'	20	5	75							"	Layered (flat)		Non-mag wt %: 44.0	
27-28'	20	5	75							"			Au: 0.007; Ag: 0.102	
28-29'	35	10	55							"	Banded (flat)		Pt: 0.042; Mag: 44.90	
29-30'	60	15	25							Mag-cal-hem skn	Brecciated		Fe in mag: 69.85	
30-31'	50	15	35							"	Banded (flat); brecc		30-35'	
31-32'	50	15	35							"			Non-mag wt %: 38.2	
32-33'	50	15	35							"	Banded (flat), brecc		Au: 0.007	
33-34'	25	5	70							Mag-cal-hem skn, xline ls			Ag: 0.019	
													Pt: 0.026	
34-35'	70	15	15							Mag-cal-hem skn			35-40'	
35-36'	60	10	30							Mag-cal skn	Brecciated		Non-mag wt %: 32.0	
36-37'	70	15	15							Mag-cal-hem skn	" ; calcite vugs		Au: 0.183; Ag: 0.041	
37-38'	70	15	15							"	"		Pt: 0.026; Mag: 61.00	
38-39'	60	15	25							"	Brecciated		Fe in mag: 68.49	
39-40'	70	15	15							"	Layered (flat), vuggy		40-42.5'	
40-41'	60	10	30							Mag-cal-skn	" ; brecciated		Non-mag wt %: 28.6	
41-42'	80	10	10							Mag skn	Vuggy		Au: 0.011; Ag: 0.033	
42-43'	80	10	10							"			Pt: 0.025; Mag: 63.07	
													Fe in mag: 68.81	
43-44'	43-49' No core													
44-45'														
45-46'														
46-47'														
47-48'														
48-49'														
	49-55' Calcite (51%) - magnetite (17%) - quartz (13%) - hematite (11%) skarn													
49-50'	5	10	60	5		20				Cal-qtz skn	Brecciated	Qtz may be relic ss grains or part of skarn	48.5-55' Non-mag wt %: 80.1	
50-51'	5	10	65			20				"	Massive, vuggy		Au: 0.008	
51-52'		15	65			20				"	"		Ag: 0.051	
52-53'	80	10	10							Mag skn	Layered (flat)		Pt: 0.022	
53-54'		10	80			10				Cal skn	Vuggy		Mag: 17.18	
54-55'		10	80			10				"			Fe in mag: 65.62	

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
	55-66' Calcite (50%) - magnetite (30%) - hematite (17%) skarn												
55-56'	30	20	50							Cal-mag-hem skn	Banded (flat)		55-60'
56-57'	20	10	55		10	5				Cal-mag skn			Non-mag wt %: 69.9
57-58'	50	10	40							Mag-cal skn	Contact (20°)		Au: 0.020; Ag: 0.028
58-59'	20	20	60							Cal-mag-hem skn	Banded (flat)		Pt: 0.036; Mag: 26.33
59-60'	5	20	75							Cal-hem skn/stockwork	uggy (cal); stk (mod)		Fe in mag: 64.50
60-61'		25	75							Cal-hem skn/stkww	Stockwork (strong)		60-66'
61-62'	20	30	50							Cal-hem-mag skn/stkww	"		Non-mag wt %: 59.4
62-63'	70	10	15					5		Mag-cal skn	Banded (contorted)		Au: 0.010
63-64'	50	10	35			5				"	Layered (flat)		Ag: 0.079
64-65'	30	15	45	5		5				Cal-mag-hem skn	"		Pt: 0.045; Mag: 35.10
65-66'	30	15	45	5		5				"	"		Fe in mag: 69.77
END OF HOLE													

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-09A**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,589/3,719,877

**Elevation:** 6,834'

**Inclination:** -90°

**Date started:** July 9, 2005

**Date completed:** July 12, 2005

**Depth:** 90.5' (assayed and logged: 66-90.5')

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter core shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite					Clay
66-78' Calcite (50%) - magnetite (34%) - hematite (17%) sk													
66-67'	50	15	30			5				Mag-cal-hem skarn	Banded, flat	Cuttings only: 66-68.5'	66-71' Non-mag wt %: 73.2 Au: 0.008 Ag: 0.030 Pt: 0.030
67-68'	50	15	20			5				"			
68-69'	25	5	70							Xline ls; 1/2 interval is mag-cal-hem skarn			
69-70'	25	5	70							"			
70-71'	40	15	45							Cal-mag-hem skn	"	Irregular replacement	71-75' Non-mag wt %: 55.1 Au: 0.008; Ag: 0.020 Pt: 0.028
71-72'	40	15	45							"	"		
72-73'	40	15	45							"	Banded, 40°; vuggy		
73-74'	25	30	45							Cal-hem-mag skn			
74-75'	45	30	25							Mag-hem-cal skn	Numerous cal vlts, flat		75-79' Non-mag wt %: 66.2 Au: 0.004; Ag: 0.044
75-76'	5	25	70							Cal-hem skn	" ; few cal vlts, 90°		
76-77'	30	15	55							Cal-mag-hem skn	Banded, flat		
77-78'	30	15	55							"			
78-82' Calcite (68%) - hematite (29%) skarn; minor magnetite (4%)													
78-79'		30	70							Cal-hem skn	Hem. dissem.	Hematitic qtz ss	Pt: 0.033
79-80'	15	25	60							Qtz ss, cal cement			79-85'
80-81'		30	70							Cal-hem skn; weak stkwk			Au: 0.009
81-82'		30	70							"			Ag: 0.019
82-84' Quartz sandstone, calcite cement; calcite-hematite (15%) fracture-filling													
82-83'		10	25			65				Qtz ss. cal cement	Cal vlts, flat		Pt: 0.067
83-84'		20	20			60				"	Cal-hem vlt, 90°, 1 cm		
84-86' Hematite (50%) - calcite (50%) skarn													
84-85'		50	50							Hem-cal skn	Cal vlts. flat, 90°		

FOOTAGE	MINERALS									ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
85-86'		50	50							"	"		85-90.5'
86-87' 87-88'  88-89' 89-90'  90-90.5'	<b>86-88' Quartz sandstone, calcite cement</b>												
			30			70				Qtz ss, cal cement			Au: 0.007
			30			70				"			Ag: 0.017
	<b>88-90' Calcite (40%) - phlogopite (40%) - hematite (20%) skarn</b>												
		20	40	40						Cal-phlog-hem skn			Pt: 0.025
		20	40	40						"			
	<b>90-90.5' Quartz sandstone, calcite cement; calcite-hematite (15%) fracture-fill</b>												
		15	10			75				Qtz ss, cal cement			
END OF HOLE													



# DIAMOND DRILL CORE LOG

**DRILL HOLE:** EC-05-10

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,764/3,719,876

**Elevation:** 6,881'

**Inclination:** -90°

**Date started:** April 11, 2005

**Date completed:** April 12, 2005

**Depth:** 62' (lost)

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on April 22, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite					Clay
0-14' Calcite (61%) - magnetite (27%) - hematite (11%) skarn													
0-1'	20	10	70							Calcite-magnetite skn	Layered (flat)	Auger cuttings only, 0-4'	0-5'
1-2'	25	10	65							"			Au: 0.033
2-3'	30	10	60							"			Ag: 0.030
3-4'	30	10	60							"			Pt: 0.016
4-5'	30	10	60							"			
5-6'	30	10	60							Cal-mag skn/stkww	Cal vlt stkww (weak)	5-10'	
6-7'	50	10	40							Mag-cal skn/stkww	" (mod)	Non-mag wt %: 76.3	
7-8'	50	10	40							"	" (weak)	Au: 0.011; Ag: 0.043	
8-9'	30	10	60							Cal-mag skn/stkww	" (mod)	Pt: 0.018; Mag: 37.49	
9-10'	20	10	70							"	" (weak)	Fe in mag: 57.07	
10-11'	15	15	55			15				Cal-mag-hem qtz skn	Layered (flat)	10-15'	
11-12'	25	10	60			5				Cal-mag skn	Coarsely crystalline	Non-mag wt %: 89.2	
12-13'	10	10	80							Cal skn		Au: 0.007	
13-14'	15	15	70							Cal-mag-hem skn	Vuggy cal vlts; layered (flat)	Ag: 0.020 Pt: 0.016; Mag: 37.49	
14-39' Crystalline limestone, minor hematite (3%)													
14-15'		5	95							Crystalline limestone	Layered (flat)	Fe in mag: 59.07	
15-16'		10	90							" ; minor dissem hem	Minor hem dissem	15-20'	
16-17'		10	90							"	"	Au: 0.021	
17-18'		10	90							"	"	Ag: 0.566	
18-19'		10	90							"	"	Pt: 0.017	
19-20'			100							Xline ls	Cal vlt (45°)		
20-21'		5	95							"	"	20-25'	
21-22'			100							"	"	Au: 0.024	
22-23'			100							"	Banded (flat); cal vlt (45°)	Ag: 0.033 Pt: 0.022	
23-24'			100							"			
24-25'			100							"	Cal-hem vlt (45°)		

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay
25-26'		5	95							Xline ls	Minor hem dissem	25-30'  Au: 0.016 Ag: 0.039 Pt: 0.020
26-27'		5	95							"	"	
27-28'		5	95							"	"	
28-29'			100							"		
29-30'			100							"		30-35'  Au: 0.010 g: 0.167 Pt: 0.023
30-31'			100							"		
31-32'			100							"		
32-33'			100							"	Rare mag-pyrrhotite vlt (flat)	
33-34'		5	95							"	Minor hem dissem	35-39'  Au: 0.011 Ag: 0.026 Pt: 0.018
34-35'		5	95							"	"	
35-36'		5	95							"	"	
36-37'		5	95							"	"; cal-hem vlt (flat)	
37-38'	5		95							"	Minor mag dissem; vuggy	Minor dissem pyrite
38-39'	5		95							"	Minor mag, hem dissem	
39-49' Quartz sandstone, calcite cement; minor hematite (13%)												
39-40'		5	5			90				Qtz ss; cal cement	Hem dissem	39-49'  Au: 0.014 Ag: 0.040 Pt: 0.016
40-41'		10	15			75				"	Hem (specular) diss	
41-42'		10	10			80				"	"	
42-43'		10	10			80				"	"	
43-44'		15	20			65				qtz ss, cal cement; dissem hem	"	49-62' Calcite (42%) - hematite (18%) - phlogopite (11%) skarn; minor magnetite (4%)
44-45'		15	20			65				"	"	
45-46'		15	20			65				"	"	
46-47'		15	20			65				"	"	
47-48'		15	20			65				"	"	49-55'  Au: 0.029 Ag: 0.029 Pt: 0.021
48-49'		15	20			65				"	"	
49-50'		20	20	5	35	20				Diop-hem-cal-qtz skn	Cal-hem vlt (flat)	55-62'  Au: 0.029 Ag: 0.034 Pt: 0.011
50-51'	10	20	65			5				Cal-hem skn		
51-52'	5	20	70			5				"	Cal-hem vlt (flat)	
52-53'	5	20	60	15						Cal-hem-phlog skn/stkwk	Cal stkwk (strong)	
53-54'	10	10	60	20						Cal-phlog skn/stkwk	" (moderate)	55-62'  Au: 0.029 Ag: 0.034 Pt: 0.011
54-55'	10	10	60	20						"	"	
55-56'		20	5					75		Clay zone	Massive, soft pale greenish clay	
56-57'		10	5					85		"	"	
57-58'		10	20					70		"	"	60-61'  Au: 0.029 Ag: 0.034 Pt: 0.011
58-59'	5	20	45	30						Cal-phlog-hem skn		
59-60'		25	45	30						"	Cal-phlog vlt	
60-61'		25	40	20				15		Cal-hem-phlog skn		
61-62'	5	20	50					25		Cal-hem skn		END OF HOLE

# ROTARY DRILL CUTTINGS LOG

**DRILL HOLE: EC-05-10A (Rotary)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Yellow Jacket Drilling, Phoenix, AZ

**Location (UTM):** 448,765/3,719,876

**Elevation:** 6,881'

**Inclination:** -90°

**Date started:** August 3, 2005

**Date completed:** August 5, 2005

**Depth:** 210' (assayed and logged: 62-210')

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-E. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Cuttings collected, bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter cuttings shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter cuttings shipped:**

One quarter cuttings shipped.															
FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS				
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
	62-85' Calcite (32%) - phlogopite (24%) - magnetite (23%) - hematite (20%) skarn														
62-65'	10	30	45	15						Cal-hem-phlog-mag skn		74.1	0.017	0.128	0.022
65-70'	10	35	35	20						"		68.3	0.028	0.110	0.028
70-75'	15	10	45	30						Cal-phlog-mag-hem skn		72.6	0.034	0.094	0.031
75-80'	30	15	20	30	5					Mag-phlog-cal-hem skn		48.8	0.051	0.252	0.036
80-85'	50	10	15	25						"		33.7	0.031	0.090	0.031
	85-110' Diopside (56%) - calcite (27%) skarn; minor magnetite (5%), hematite (5%)														
85-90'	10	5	35	10	40					Diop-cal-mag-phlog skn		68.8	0.021	0.107	0.041
90-95'	10	5	25	10	50					"			0.020	0.043	0.018
95-100'	2	8	30		60					Diop-cal skn			0.020	0.043	0.018
100-105'	2	3	25	5	65	5				"			0.022	0.029	0.021
105-110'		5	20	10	65					Diop-cal-phlog skn			0.022	0.029	0.021
	110-140' Calcite (48%) - diopside (29%) - hematite (21%) skarn														
110-115'		15	50	5	30					Cal-diop-hem skn			0.017	0.040	0.010
115-120'	5	25	45		25					"			0.012	0.036	0.009
120-125'	5	25	50		20					Cal-hem-diop skn		81.0	0.019	0.077	0.028
125-130'		25	55		20					"		84.1	0.016	0.084	0.025
130-135'		20	50		30					Cal-diop-hem skn			0.009	0.028	0.018
135-140'	2	13	35		50					Diop-cal-hem skn			0.006	0.030	0.012
	140-200' Calcite (65%) - diopside (21%) - hematite (11%) skarn														
140-145'	2	13	45		40					Cal-diop-hem skn			0.007	0.024	0.007
145-150'		20	55		25					"			0.016	0.038	0.026
150-155'		20	60		20					"			0.018	0.038	0.026
155-160'	2	13	70		15					"			0.008	0.012	0.005
160-165'	5	10	60	5	20					"			0.014	0.018	0.018
165-170'		10	70	5	15					"			0.006	0.017	0.007
170-175'		10	75		15					"			0.004	0.010	0.007
175-180'		10	75		15					"			0.006	0.014	0.016
180-185'		10	75		15					"			0.001	0.008	0.004
185-190'	5	15	65		15					"			0.001	0.096	0.006

FOOTAGE	MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS			
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
190-195'	2	13	70		25					"		0.001	0.010	0.011	
195-200'	2	13	55		30					"		0.001	0.010	0.011	
	200-210' Muscovite aplite, minor magnetite (5%) - hematite (5%) - calcite (30%) fracture filling; minor diopside (15%) skarn														
200-205'	5	5	30		15					Aplite* (muscovite) mixed with cal-diop-hem skn		0.001	0.077	0.010	
205-210'	5	5	30		15					"		0.001	0.210	0.006	
END OF HOLE															
*Aplite contains disseminated and minor fracture-filling cal-hem. This is <u>not</u> a primary plutonic iron oxide but represents cal-hem mineralization of same type as seen in the skarns, etc. The presence of diopside is evidence that the aplite has also been skarnitized.															

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-11**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,516/3,719,758

**Elevation:** 6,831'

**Inclination:** -90°

**Date started:** April 18, 2005

**Date completed:** April 20, 2005

**Depth:** 59' (lost)

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on April 11, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite					Clay
	0-35' Magnetite (58%) - calcite (24%) - hematite (17%) skarn												
0-1'	70	10	20							Magnetite-calcite skn		Auger cuttings only, 0-4'	0-5'
1-2'	70	10	20							"			Non-mag wt %: 49.0
2-3'	60	20	20							Mag-hem-cal skn			Au: 0.011; Ag: 0.028
3-4'	60	20	20							"			Pt: 0.026; Mag: 37.17
4-5'	60	30	10							Mag-hem skn	Layered (flat)		Fe in mag: 60.99
5-6'	50	30	20							Mag-hem-cal skn	Layered (flat);		5-10'
											cal-hem stkwk (weak)		Au: 0182
6-7'	40	30	30							"			Ag: 0.129
7-8'	30	30	40							Cal-mag-hem skn	Layered (flat)		Pt: 0.022
8-9'	30	30	40							" ; cal-hem stkwk	Cal-hem stkwk (mod)		
9-10'	60	20	20							Mag-hem-cal skn;			
										cal-hem stkwk			
10-11'	60	15	25							Mag-cal-hem skn			10-20'
11-12'	60	15	25							"			Non-mag wt %: 15.3
12-13'	75	15	10							Mag-hem skn			Au: 0.009
13-14'	75	15	10							"			Ag: 0.021
14-15'	75	15	10							" ; cal-hem stkwk	Cal-hem stkwk (mod)		Pt: 0.015
15-16'	50	20	30							Mag-cal-hem skn;	"		Mag: 65.61
										cal-hem stkwk			Fe in mag: 66.57
16-17'	50	20	30							"	"		
17-18'	50	20	30							"	"		
18-19'	50	20	30							"	"		
19-20'	50	20	30							"	"		
20-21'	50	20	30							"	"		20-25'
21-22'	50	20	30							"	"		Non-mag wt %: 15.6
22-23'	50	20	30							"	" ; layered (flat)		Au: 0.009; Ag: 0.026
23-24'	90	5	5							Mag skn	Cal-hem vlts; vuggy		Pt: 0.020; Mag: 70.18
24-25'	80	10	10							" ; cal-hem stkwk	Cal-hem stkwk (mod)		Fe in mag: 61.46
25-26'	70	10	20							Mag-cal skn; cal-hem stkwk	"		25-30'

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite:
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
26-27'	80	10	10							Mag skn; cal-hem stkwk	Cal-hem stkwk (mod)	Non-mag wt %: 12.7
27-28'	80	10	10							"	"	Au: 0.007; Ag: 0.024
28-29'	80	10	10							"	"	Pt: 0.007; Mag: 79.43
29-30'	80	10	10							"	"	Fe in mag: 68.89
30-31'	50	10	40							Mag-cal skn	Banded (40°)	30-34'
31-32'	20	20	60							Cal-mag-hem skn	"	Non-mag wt %: 40.0
32-33'	40	10	50							Cal-mag skn	Banded (flat)	Au: 0.007; Ag: 0.024
33-34'	60	10	20	10						Mag-cal skn		Pt: 0.007; Mag: 46.76
		10	40	10						"		Fe in mag: 66.57
34-35'	40											34-39'
<b>35-39' Calcite (84%) - hematite (15%) skarn</b>												
35-36'		15	85							Cal-hem skn	Hem dissem	Au: 0.007
36-37'		15	85							"	"	Ag: 0.038
37-38'		15	85							"	"	Pt: 0.023; Mag: 19.90
38-39'	5	15	80							"	" ; banded (flat)	Fe in mag: 68.09
<b>39-53' Calcite (63%) - magnetite (21%) - hematite (15%) skarn</b>												
39-40'	40	10	50							Cal-mag skn	Banded (flat); cal-hem	39-45'
											vlts (50°)	Au: 0.007
40-41'	35	35	30							Mag-hem-cal skn	Banded (flat)	Ag: 0.131
41-42'	20	25	55							Ca-hem-mag skn	Banded (40°)	Pt: 0.016
42-43'	20	25	55							"	Banded (20°)	Mag: 29.00
43-44'		10	90							Cal skn	Massive texture	Fe in mag: 60.27
44-45'	30	10	55	5						Cal-mag skn	Banded (flat)	
45-46'	45	10	45							"	"	45-49'
46-47'	35	20	45							Cal-mag-hem skn	"	Au: 0.007; Ag: 0.028
47-48'	20	10	70							Cal-mag skn		Pt: 0.025; Mag: 16.42
48-49'	15	30	55							Cal-hem-mag skn	Layered (contorted)	Fe in mag: 57.95
49-50'		5	95							Cal skn	Cal-hem vlts	49-59'
50-51'		5	95							"	"	Au: 0.007
51-52'	20	10	70							Cal-mag skn	Layered (flat)	Ag: 0.025
52-53'	20	10	70							"	"	Pt: 0.022
<b>53-59' Crystalline limestone</b>												
53-54'		5	95							Crystalline limestone	Cal-hem vlts	
54-55'		5	95							"	"	
55-56'		5	95							"	"	
56-57'		5	95							"	"	
57-58'		5	95							"	"	
58-59'		5	95							"	"	
END OF HOLE												

# ROTARY DRILL CUTTINGS LOG

**DRILL HOLE: EC-05-11A (Rotary)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Yellow Jacket Drilling, Phoenix, AZ

**Location (UTM):** 448,531/3,719,749

**Elevation:** 6,839'

**Inclination:** -90°

**Date started:** August 8, 2005

**Date completed:** August 10, 2005

**Depth:** 340' (assayed and logged: 59-340')

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-E. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0000

**Cuttings collected, bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter cuttings shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS				
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
59-75'	NO SAMPLE														
	75-110' Quartz sandstone, calcite cement, disseminated and fracture-filling calcite-hematite (12%)														
75-80'	10	5	15			70				Qtz ss., cal cement	Mineralized w/ dissem, minor fracture-filling cal-hem	0.009	0.030	0.008	
80-85'	5	15	20			60				" ; mixed with minor diop-cal-hem skn	"	0.015	0.044	0.027	
85-90'	2	18	20			60				Qtz ss, cal cement; minor aplite	"	0.018	0.072	0.020	
90-95'	5	15	20			60				"	"	0.018	0.067	0.024	
95-100'	5	10	20			65				"	"	0.011	0.055	0.026	
100-105'	2	13	20			65				"	"	0.027	0.083	0.031	
105-110'		10	20			70				"		0.022	0.080	0.028	
	110-115' Muscovite aplite, minor hematite (5%) - calcite (5%)														
110-115'		10	10							Aplite (muscovite), minor qtz ss	Aplite contains dissem. and minor fracture-filling cal-hem that represents mineraliz.	0.017	0.073	0.030	
	115-165' Crystalline limestone, disseminated and fracture-filling hematite (11%) - calcite														
115-120'		5	85			10				Xline ls, minor qtz ss		0.003	0.025	0.009	
120-125'			100							Xline ls		0.007	0.023	0.003	
125-130'			100							"		0.004	0.018	0.003	
130-135'		5	95							"		0.007	0.015	0.004	
135-140'		15	85							"		0.007	0.015	0.004	
140-145'		25	75							"	Xline ls with high dissem, fracture-filling hem content	0.022	0.037	0.021	
145-150'		20	80							"	"	0.038	0.225	0.018	
150-155'		15	85							"	"	0.014	0.038	0.004	

FOOTAGE	MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS			
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
155-160'		15	85							"	"	0.011	0.045	0.007	
160-165'		10	90							"	"	0.037	0.102	0.037	
165-185' Quartz sandstone, calcite cement, disseminated and fracture-filling calcite - hematite (15%)															
165-170'		15	20			65				Qtz ss, cal cement	Qtz ss w/ high dissem, fracture-filling hem content	0.035	0.118	0.031	
170-175'		15	20			65				"	"	0.004	0.201	0.002	
175-180'		15	35	10	10	30				Mixed qtz ss, cal cement and cal-hem-diop skn		0.004	0.201	0.002	
180-185'		15	20	5	5	55				"		0.006	0.029	0.011	
185-195' Calcite (43%) - hematite (23%) - phlogopite (15%) skarn															
185-190'		25	50	15	5			5		Cal-hem-phlog skn		0.006	0.050	0.009	
190-195'		20	35	15	5	20		5		Mixed cal-hem-phlog skn, qtz ss	Qtz ss w/ high dissem, fracture-filling hem content	38.9	0.058	0.193	0.065
195-205' Calcite (43%) - magnetite (25%) - phlogopite (15%) - hematite (13%) skarn															
195-200'	30	15	35	15	5					Cal-mag-phlog-hem skn		0.058	0.193	0.065	
200-205'	20	10	50	15	5					"		61.4	0.044	0.099	0.068
205-215' Quartz sandstone, calcite cement, minor phlogopite - magnetite (8%) - hematite (8%) skarn															
205-210'	10	5	25	5		55				Mixed cal-mag-hem skn, qtz ss		0.044	0.099	0.068	
210-215'	5	10	25	15	5	40				"		0.014	0.041	0.002	
215-235' Calcite (78%) - phlogopite (10%) - hematite (9%) skarn															
215-220'	2	8	70	15	5					Cal-phlog skn		0.014	0.041	0.002	
220-225'	2	8	75	15						Mixed xline ls, minor cal-phlog skn		0.013	0.039	0.007	
225-230'	2	8	85	5						"		0.035	0.100	0.037	
230-235'	2	13	80	5						"		0.033	0.079	0.040	
235-295' Quartz sandstone, calcite cement, disseminated hematite (9%)															
235-240'		15	25			60				Qtz ss, cal cement		0.033	0.079	0.040	
240-245'		15	25			60				"		0.041	0.165	0.029	
245-250'		15	25			60				"		0.040	0.044	0.027	
250-255'	5	20	70		5					Cal-hem skn		0.029	0.030	0.034	
255-260'	5	15	25		5	60				Mixed qtz ss, cal cement, cal-hem skn		0.030	0.031	0.032	
260-265'	5	15	25		5	60				"		0.030	0.031	0.032	
265-270'		5	20			75				Qtz ss, cal cement		0.032	0.088	0.019	
270-275'	2	3	20			75				"		0.032	0.088	0.019	
275-280'		2	23			75				"		0.010	0.027	0.002	
280-285'	2	3	20			75				"		0.010	0.027	0.002	
285-290'			20			80				"		0.009	0.022	0.006	
290-295'		2	20		3	75				"		0.009	0.022	0.006	
295-315' Calcite (50%) - hematite (15%) skarn, minor quartz sandstone, calcite cement															
295-300'		15	50		15	20				Mixed cal-hem-diop skn, qtz ss		0.009	0.022	0.006	
300-305'		15	50		15	20				"		0.018	0.024	0.041	



FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS				
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
305-310'		15	50		15	20				"			0.021	0.033	0.026
310-315'	10	15	50		10	15				"			0.006	0.014	0.008
	315-340' Muscovite aplite, minor hematite (7%) - calcite fracture-filling														
315-320'		10			10					Aplite			0.002	0.013	0.006
320-'325'		5			10					"			0.005	0.017	0.030
325-330'		5	5		5					"			0.004	0.015	0.028
330-335'	2	8	5							"			0.005	0.288	0.034
335-340'	2	8	5							"			0.003	0.021	0.008
END OF HOLE															
*Aplite contains disseminated and minor fracture-filling cal-hem. This is <u>not</u> a primary plutonic iron oxide but represents cal-hem mineralization of same type as seen in the skarns, etc. The presence of diopside is evidence that the aplite has also been skarnitized.															

# DIAMOND DRILL CORE LOG

**DRILL HOLE:** EC-05-12

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,686/3,719,761

**Elevation:** 6,883'

**Inclination:** -90°

**Date started:** April 14, 2005

**Date completed:** April 15, 2005

**Depth:** 60.5'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A Contact: Mary Lee Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-4

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C., Canada

**One-quarter core shipped:** by UPS Ground on May 2, 2005 to: Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS	
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay	Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
0-11'	0-11' Magnetite (69%) - calcite (19%) - hematite (12%) skarn												
	75	5	20							Mag-cal skarn		Auger cuttings only, 0-2'	0-2' Non-mag wt %: 3.1 Au: 0.015; Ag: 0.037 Pt: 0.016; Mag: 0.44 Fe in mag: 66.89
	75	5	20							"			
	75	10	15							"	Layered (flat); cal-hem vlts		2-6' Non-mag wt %: 50.5 Au: 0.011 Ag: 0.143 Pt: 0.030
	60	15	25							Mag-cal-hem skn	"		
	60	15	25							" ; cal-hem stkwk	Cal-hem stkwk (weak)		
	65	15	20							"	Layered (flat);		
	65	15	20							"	Cal-hem stkwk(mod)		
	65	15	20							"	Layered (flat); cal-hem stkwk (weak)		6-11' Non-mag wt %: 19.4 Au: 0.007 Ag: 0.040 Pt: 0.030; Mag: 58.59 Fe in mag: 68.17
	70	15	15							"	"		
	80	10	10							Mag skn	Massive texture		
	70	15	15							Mag-hem-cal skn	Cal-hem vlts (flat)		
	11-60.5' Crystalline limestone, minor hematite (5%)												
	11-12'		5	95							Crystalline limestone		
12-13'		5	95							"	Cal-hem vlts (flat)		
13-14'		5	95							"	"		
14-15'		5	95							"	"		
15-16'		5	95							"	"		
16-17'		5	95							"	"		
17-18'		5	95							"	"		
18-19'		5	95							"	"		
19-20'		5	95							"	"		
20-21'		10	90							" ; cal-hem stkwk	Cal-hem stkwk (mod)		20-25' Au: 0.065
21-22'		5	95							"	"		

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt Magnetite: % Fe in magnetite: %
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
22-23'		5	95							"	"	Ag: 0.050
23-24'		5	95							"	"	Pt: 0.014
24-25'		5	95							Crystalline limestone	Hem dissem	25-30' Au: 0.067 Ag: 0.038 Pt: 0.014
25-26'		5	95							Crystalline limestone	Hem dissem; layered (flat); vuggy	
26-27'		5	95							"	"	
27-28'		5	95							"	Hem dissem; banded (flat); vuggy	
28-29'		5	95							"	Gouge and clay(?) -rich interval	30-35' Au: 0.010 Ag: 0.178 Pt: 0.014
29-30'		5	95							"	Hem dissem	
30-31'		5	95							"	" ; uniform texture	
31-32'		5	95							"	"	
32-33'		5	95							"	"	35-42' Au: 0.043 Ag: 0.052 Pt: 0.013
33-34'		5	95							"	"	
34-35'		5	95							"	"	
35-36'		5	95							"	"	
36-37'		5	95							"	"	42-50' Au: 0.019 Ag: 0.045 Pt: 0.013
37-38'		5	95							"	" ; cal-hem vlts (80°)	
38-39'		5	95							"		
39-40'		5	95							"	Hem dissem; uniform texture	
40-41'		5	95							"	Cal-hem vlts (20°)	50-60.5' Au: 0.038 Ag: 0.097 Pt: 0.012
41-42'		5	95							"	"	
42-43'		5	95							"	Hem dissem	
43-44'		5	95							"	Cal-hem vlts (flat)	
44-45'		5	95							"	"	Minor dissem pyrite
45-46'		5	95							"	"	
46-47'		5	95							"	"	
47-48'		5	95							"	"	
48-49'		5	95							"		Minor dissem pyrrhotite
49-50'		5	95							"		
50-51'		5	95							"		
51-52'		5	95							"		
52-53'		5	95							"	Cal-hem vlts	
53-54'		5	95							"		
54-55'		5	95							"		
55-56'		5	95							"		
56-57'		5	95							"		
57-58'		5	95							"	Cal hem vlts (flat)	
58-59'		5	95							"		
59-60'		5	95							"		
60-60.5'		5	95							"		
END OF HOLE												

# ROTARY DRILL CUTTINGS LOG

## DRILL HOLE: EC-05-12A (Rotary)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Yellow Jacket Drilling, Phoenix, AZ

**Location (UTM):** 448,682/3,719,762

**Elevation:** 6,882'

**Inclination:** -90°

**Date started:** August 19, 2005

**Date completed:** August 21, 2005

**Depth:** 405' (assayed and logged: 60.5-405')

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-E. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-

**Cuttings collected, bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter cuttings shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter cuttings shipped:**

One quarter cuttings shipped:															
FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS				
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
	60.5-70' Quartz sandstone, calcite cement, disseminated hematite (13%)														
60.5-65'		10	20			70				Qtz ss, cal cement		0.010	0.035	0.011	
65-70'		15	20			65				"		0.009	0.040	0.010	
	70-95' Calcite (44%) - hematite (27%) - diopside (21%) skarn														
70-75'		25	50			25				Cal-hem-diop skn		0.031	0.108	0.019	
75-80'	2	33	35		30					"		0.029	0.124	0.013	
80-85'		25	30	5	40					Diop-cal-hem skn		0.008	0.034	0.006	
85-90'		15	50	10	25					Cal-diop-hem-phlog skn		0.006	0.072	0.006	
90-95'	5	5	55	25	10					Cal-phlog-diop skn		0.007	0.066	0.005	
	95-110' Magnetite (38%) - calcite (22%) - phlogopite (22%) - hematite (12%) skarn														
95-100'	40	15	15	20	10					Mag-phlog-hem-cal-diop skn		15.7	0.041	0.205	0.019
100-105'	60	5	15	15	5					Mag-cal-phlog skn		11.3	0.039	0.212	0.021
105-110'	15	15	35	30	5					Cal-phlog-mag-hem skn		11.3	0.039	0.212	0.021
	110-130' Calcite (46%) - hematite (24%) - diopside (20%) skarn														
110-115'	5	20	40	15	20					Cal-hem-diop-phlog skn		67.8	0.040	0.218	0.035
115-120'	2	23	60	5	10					Cal-hem-diop skn		0.025	0.200	0.028	
120-125'	2	33	40	5	20					"		0.022	0.088	0.018	
125-130'		20	45	5	30					Cal-diop-hem skn		0.017	0.057	0.019	
	130-210' Diopside (55%) - calcite (22%) - hematite (11%) skarn														
130-135'	2	13	25		60					Diop-cal-hem skn		0.006	0.037	0.006	
135-140'	2	8	20		70					Diop-cal skn		0.006	0.037	0.006	
140-145'		5	15	5	75					"		0.007	0.033	0.006	
145-150'		15	15		30					Mixture diop-hem-cal skn, aplite		0.004	0.032	0.005	
150-155'		20	10	5	5					Mixture aplite, hem-cal skn		0.004	0.040	0.004	
155-160'		15	10	5	70					Diop-hem-cal skn		0.003	0.029	0.005	

FOOTAGE	MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS			
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
160-165'		15	55		30					Cal-diop-hem skn		0.007	0.055	0.004	
165-170'		10	30		60					Diop-cal-hem skn		0.010	0.052	0.003	
170-175'		10	20		50			20		Diop-cal-trem-hem skn		0.010	0.058	0.001	
175-180'		5	15		80					Diop-cal skn		0.010	0.058	0.001	
180-185'		10	30		60					Diop-cal-hem skn		0.060	0.309	0.033	
185-190'		10	30		60					"		0.060	0.309	0.033	
190-195'		10	30		60					"		0.011	0.041	0.007	
195-200'		10	20		70					"		0.011	0.041	0.007	
200-205'		10	20		70					"		0.013	0.044	0.007	
205-210'		15	10		25					Mixture aplite, diop-hem-cal skn		0.022	0.039	0.009	
210-235' Muscovite aplite, minor calcite (12%) - hematite (5%) fracture filling															
210-215'		5	15							Aplite* (muscovite)		0.025	0.047	0.014	
215-220'		5	15							"		0.025	0.047	0.014	
220-225'		5	10		5					"	Diop may be after aplite: endoskarn (?)	0.012	0.042	0.002	
225-230'		5	10		10					"	"	0.012	0.042	0.002	
230-235'		5	10							"		0.028	0.056	0.003	
235-245' Muscovite aplite, abundant calcite (18%) - hematite (18%) fracture-filling															
235-240'		15	15		5					"	Abundant fracture-	0.028	0.056	0.003	
240-245'		20	20							"	filling cal-hem. Aplite is strongly mineral- ized with fracture- filling, dissem cal-hem	0.030	0.116	0.005	
245-265' Diopside (53%) - calcite (20%) - hematite (15%) skarn															
245-250'		10	20		70					Diop-cal-hem skn, mixture aplite		0.025	0.105	0.007	
250-255'	5	15	20		60					"		0.027	0.095	0.015	
255-260'	2	18	25		55					Diop-cal-hem skn		0.007	0.044	0.001	
260-265'		15	15		25					Diop-cal-hem skn, aplite		0.010	0.038	0.001	
265-305' Muscovite aplite, minor calcite (12%) - hematite (9%) fracture-filling															
265-270'		15	15							Aplite	Aplite is strongly mineralized with fracture-filling, dissem cal-hem	0.010	0.026	0.001	
270-275'		15	15							"	"	0.028	0.100	0.003	
275-280'		15	10							"		0.006	0.098	0.001	
280-285'		10	15							"		0.033	0.047	0.008	
285-290'		5	10							"		0.035	0.044	0.009	
290-295'		5	10							"		0.007	0.030	0.001	
295-300'		5	10							"		0.011	0.030	0.001	
300-305'		5	10							"		0.015	0.062	0.002	
305-340' Muscovite aplite, diopside (36%) - calcite (14%) - hematite (9%) skarn															
305-310'		10	15		10					Aplite, diop-cal-hem skn		0.013	0.051	0.002	

FOOTAGE	MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS				
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			Clay	Au, Ag, Pt: opt			
												Non-mag wt %	Au	Ag	Pt
310-315'		15	15	5	15					Aplite, diop-hem-cal skn		0.014	0.049	0.005	
315-320'		15	15	5	65					Diop-hem-cal skn, minor aplite		0.040	0.225	0.011	
320-325'	2	8	15	5	40					Diop-cal-hem skn, aplite		0.033	0.183	0.009	
325-330'	5	5	20		45					"	Diop occurs locally as replacement in aplite. Probably from 205' to bottom of hole the skarn is endoskarn. Also, it is possible that limestone inclusions have been skarnitized.	0.027	0.066	0.007	
330-335'		5	10		40					"	"	0.030	0.075	0.007	
335-340'		5	10		40					"	"	0.005	0.009	0.001	
340-345'	NO SAMPLE														
	345-360' Muscovite aplite, minor diopside (15%) skarn														
345-350'		5	10		10					Aplite	Clearly diopside alt. aplite: endoskarn	0.004	0.012	0.001	
350-355'	2	3	5	5	5					"	"	0.002	0.009	0.001	
355-360'		5	5	5	20					Aplite, diop skn	"	0.002	0.019	0.001	
360-365'	NO SAMPLE														
	365-380' Muscovite aplite, diopside (33%) skarn														
365-370'		5	5	5	40					Diop skn, aplite	"	0.001	0.011	0.001	
370-375'		5	5	5	40					"	"	0.004	0.017	0.001	
375-380'		5	5	5	20					Aplite, diop skn	"	0.004	0.010	0.001	
	380-405' Muscovite aplite, minor calcite (5%) - hematite (5%)														
380-385'		5	5		10					Aplite*	Clearly diopside alt. aplite: endoskarn	0.001	0.009	0.001	
385-390'					5					"		0.004	0.017	0.008	
390-395'		10	10							"		0.004	0.014	0.006	
395-400'		5	5							"		0.004	0.070	0.003	
400-405'		5	5		5					"		0.007	0.233	0.002	
END OF HOLE															
*Aplite contains disseminated and minor fracture-filing cal-hem. This is <u>not</u> a primary plutonic iron oxide but represents cal-hem mineralization of same type as seen in the skarns, etc. The presence of diopside is evidence that the aplite has also been skarnitized.															

# DIAMOND DRILL CORE LOG

## DRILL HOLE: EC-05-13 (Core)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,247/3,719,903

**Elevation:** 6,842'

**Inclination:** -90°

**Date started:** June 22, 2005

**Date completed:** June 25, 2005

**Depth:** 82'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter core shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay
	0-10' Crystalline limestone, calcite-hematite (11%) fracture-filling											
0-1'		15	85							Crystalline limestone		0-10'
1-2'		5	95							"	Thin bands black constituent - probably carbon; 20'	Au: 0.044
2-3'		20	80							" ; weak stockwork	Cal-hem vlts, 90°, 20°; cal-hem weak stockwork	Ag: 0.216
3-4'		10	90							"	"	Pt: 0.038
4-5'		10	90							Xline ls	Numerous cal-hem vlts; flat	Xline ls is white
5-6'		5	95							"	Cal-hem vlts, flat; vuggy; cal-hem repl patches	Cal-hem repl patches
6-7'		2	98							"		
7-8'		30	70							"	Num. cal-hem vlts, flat	
8-9'		2	98							"		
9-10'		10	90							"		
	10-82' Crystalline limestone, minor calcite-hematite (3%) fracture-filling											
10-11'		5	95							Xline ls		10-20'
11-12'		5	95							"		Au: 0.048
12-13'		5	95							"		Ag: 0.335
13-14'		2	98							"		Pt: 0.037
14-15'		2	98							"		
15-16'		2	98							"		
16-17'		2	98							"		
17-18'		2	98							Fault gouge	Limonite color (after hem?) in crushed xline ls	
18-19'		2	98							"	"	

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
19-20'		2	98							"	"	
20-21'		2	98							"	Limonite color (after hem?) in crushed xline ls	20-30' Au: 0.006
21-22'		2	98							Xline ls	Rare cal-hem vlts	Ag: 0.201 Pt: 0.025
22-23'		2	98							"	Cal-hem vlts	
23-24'		5	95							"	Irreg cal-hem vlts, wisps	
24-25'		5	95							"	Irreg pattern of cal-hem replacement	This rock is altered, replaced
25-26'		5	95							"	Irreg patt of cal-hem vlts, wisps, repl	"
26-27'		5	95							"	"	"
27-28'		5	95							"	"	"
28-29'		5	95							"	"	"
29-30'		2	98							"	"	"
30-31'		2	98							"	"	"
31-32'		2	98							"	"	"
										Vuggy	Vugs appear to be cal-hem replacement pods	30-40' Au: 0.007 Ag: 0.029 Pt: 0.025
32-33'		2	98							"	"	"
33-34'		2	98							"	"	"
34-35'		2	98							"	" ; rare cal-hem vlts, flat	"
35-36'		2	98							"	"	"
36-37'		2	98							"	"	"
37-38'		2	98							"	"	"
38-39'		2	98							"	"	"
39-40'		2	98							"	Rare cal-hem vlts, flat	"
40-41'			100							Limestone		40-50' Au: 0.009 Ag: 0.017 Pt: 0.023
41-42'			100							"		"
42-43'		2	98							Xline ls	Rare cal-hem vlts, 90°	
43-44'		2	98							Limestone		
44-45'		2	98							Xline ls	Rare cal-hem vlts	
45-46'		2	98							"	"	
46-47'		2	98							"	"	
47-48'		2	98							"	"	
48-49'		2	98							"	"	
49-50'		2	98							"	Vuggy	Vugs appear to be cal-hem replacement pods
50-51'		2	98							"	" ; rare cal-hem vlts, flat	"
51-52'		2	98							"	"	"
52-53'		2	98							"	"	"
53-54'		2	98							"	"	"
54-55'		2	98							"	Rare cal-hem vlts, flat	
55-56'		2	98							"	"	
56-57'		5	95							"	Cal-hem vlt, 80°, 1 cm	
57-58'		5	95							"	Cal-hem vlts, 45°, wisps, pods	
58-59'		5	95							"	"	



FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
59-60'		5	95							"	"	
60-61'		5	95							"	"	60-70'
61-62'		2	98							"	"	Au: 0.007
62-63'		5	95							Xline ls	Cal-hem vlts, wisps, pods	Ag: 0.030
63-64'		5	95							"	"	Pt: 0.023
64-65'		5	95							"	"	
65-66'		2	98							"	Irreg fracture network; cal-hem vlts	
66-67'		5	95							Xline ls; weak stockwork	Network cal-hem vlts; some pods	
67-68'		5	95							"	"	
68-69'		2	98							Xline ls	Rare cal-hem vlts	
69-70'		2	98							"	"	
70-71'		2	98							"	"	70-82'
71-72'		2	98							"	"	Au: 0.008
72-73'		2	98							"	"	Ag: 0.032
73-74'		2	98							"	"	Pt: 0.023
74-75'		2	98							"	"	
75-76'		2	98							"	"	
76-77'		10	90							"	Irregular cal-hem vlts	
77-78'		2	98							"		
78-79'		2	98							"		
79-80'		2	98							"		
80-81'		2	98							"		
81-82'		2	98							"		
END OF HOLE												

# DIAMOND DRILL CORE LOG

**DRILL HOLE: EC-05-14 (Core)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Arizona

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Enviro-Drill, Inc., Albuquerque, New Mexico

**Location (UTM):** 448,302/3,719,818

**Elevation:** 6,803'

**Inclination:** -90°

**Date started:** June 25, 2005

**Date completed:** June 27, 2005

**Depth:** 82'

**Core stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A. Contact M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Core collected, sawed (quartered), bagged, and shipped to assayer by:** David S. Smith, Consulting geologist, Seattle, WA

**Core geologic log and confirmation of chain of custody sample by:** Clyde L. Smith, Consulting geologist, Vancouver, B.C.

**One-quarter core shipped:** to Auric Metallurgical Labs, 3260 Directors Row, Salt Lake City, UT 84104

**One-quarter core shipped:**

One quarter core shipped.												
FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
	0-11' Crystalline limestone, calcite-hematite (23%) stockwork											
0-1'		25	75							Crystalline limestone	Irreg fracture netowrk	0-5'
1-2'		20	80							"	" ; cal-hem vlts, flat, 90°	Au: 0.012
2-3'		10	90							"	" ; dissem hem	Ag: 0.077
3-4'		25	75							Xline ls; weak cal-hem stk	Multiple fracture directions	Pt: 0.007
											in stockwork	
4-5'		10	90							"	"	
5-6'		40	60							Strong cal-hem stockwork	"	5-10'
6-7'		20	80							Xline ls; mod cal-hem stk	"	Au: 0.028
7-8'		30	70							Mod. cal-hem stk	"	Ag: 0.105
8-9'		20	80							"	"	Pt: 0.015
9-10'		25	75							Strong cal-hem stk	"	
10-11'		25	75							"	"	10-20'
	11-19' Crystalline limestone											
11-12'		2	98							Xline ls		Au: 0.030
12-13'			100							"		Ag: 0.095
13-14'			100							"		Pt: 0.018
14-15'			100							"		
15-16'			100							"		
16-17'			100							"		
17-18'		6	95							"	Cal-hem vlts	
18-19'		2	98							"	Rare cal-hem pods, vlts	
	19-22' Crystalline limestone, calcite-hematite (18%) stockwork											
19-20'		15	85							Xline ls; mod cal-hem stk		
20-21'		20	80							"		20-25'

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				
21-22'		20	80						"			Au: 0.009
	22-66' Crystalline limestone											
22-23'	2	98							Xline ls	Rare cal-hem vlt		Ag: 0.078
23-24'	2	98							"	"		Pt: 0.003
24-25'	5	95							"	Cal-hem vlt, multiple directions		
25-26'	10	90							"	"		25-30'
26-27'	2	98							"	Rare cal-hem vlt, flat		Au: 0.005
27-28'	2	98							"	Zones of fract-fill; repl: flat	introduced fracture-filling and replacement calcite is cream tan color, finer grained, with hematite	Ag: 0.048 Pt: 0.003
28-29'	2	98							"	"		
29-30'		100							"			
30-31'	5	95							"	Zones of fract-fill, repl: flat		30-40'
31-32'	5	95							Xline ls, weak cal-hem stk			Au: 0.009
32-33'	5	95							Xline ls, mod cal-hem stk			Ag: 1.080
33-34'	2	98							"			Pt: 0.025
34-35'	2	98							"			
35-36'	2	98							"			
36-37'	2	98							Xline ls	Vuggy; hem dissem		
37-38'	2	98							"	"		
38-39'	2	98							"	"		
39-40'	2	98							"	"		
40-41'	2	98							"	" ; rare cal-hem vlt, 90°		40-50'
41-42'	2	98							"	"		Au: 0.004
42-43'	2	98							"	"		Ag: 0.029
43-44'	2	98							"	"		Pt: 0.031
44-45'	2	98							"	"		
45-46'	2	98							"	"		
46-47'	2	98							"			
47-48'	2	98							"			
48-49'	2	98							"	Extremely vuggy		
49-50'	2	98							"	Cal-hem vlt, 90°		
50-51'	2	98							"	"		50-60'
51-52'	2	98							"	"		Au: 0.003
52-53'	2	98							"	"		Ag: 0.052
53-54'	2	98							"	"		Pt: 0.020
54-55'		100							"			
55-56'	2	98							"	Cal-hem vlt, flat		
56-57'	2	98							"			
57-58'	2	98							"			
58-59'	2	98							"			
59-60'	2	98							"	Cal-hem vlt, flat		
60-61'	2	98							"	"		60-70'
61-62'	2	98							"	" ; hem dissem		Au: 0.008

FOOTAGE	MINERALS								ROCK TYPE	STRUCTURE TEXTURE	REMARKS	ASSAY RESULTS  Au, Ag, Pt: opt
	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
62-63'		2	98							"	Hem disseminated	Ag: 0.038
63-64'		2	98							"	Extremely vuggy	Pt: 0.048
64-65'		2	98							Xline ls	Cal-hem vls, flat	
65-66'		2	98							"	Hem disseminated	
66-82.5 Quartz sandstone, calcite cement												
66-67'		2	18			80				Qtz ss	Cal-hem vls, flat	
67-68'		2	8			90				"		
68-69'		2	8			90				"		
69-70'		2	8			90				"		
70-71'		2	18			80				"	Minor hem disseminated	70-82.5'
71-72'		5	20			75				" ; weak cal-hem stk	Hem disseminated	Au: 0.006
72-73'		5	20			75				"	"	Ag: 0.022
73-74'		2	18			80				Qtz ss		Pt: 0.030
74-75'		2	18			80				"		
75-76'		2	18			80				"		
76-77'		2	18			80				"		
77-78'		2	18			80				"	Crushed, faulted qtz ss	
78-79'		2	18			80				"		
79-80'		2	18			80				"		
80-81'		2	18			80				"		
81-82'		2	18			80				"		
END OF HOLE												

# **REVERSE CIRCULATION DRILL CUTTINGS LOG**

**DRILL HOLE: EC-06-15 (Reverse Circulation)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,491/3,720,211

**Elevation:** 6875'

**Inclination:** 90°

**Date started:** February 27, 2006

**Date completed:** February 28, 2006

**Depth:** 400'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C. L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C. L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-95' Limestone; crystalline limestone											
0	5		1	99							Limestone	Gray ls; 10% white xline ls	
5	10		2	98							"	Gray ls; 30% wht xline ls	
10	15		1	99							"	" ; 5% "	
15	20		1	99							"	" ; 5% "	
20	25		3	97							"	" ; 15% "	
25	30		2	98							Crystalline limestone	Wht xline ls; 10% gray ls	
30	35		2	98							"	" ; 20% gray ls	
35	40		1	99							Limestone; xline ls	Gray ls; 40% wht xline ls	
40	45		1	99							" ; "	" ; "	
45	50		2	98							Xline ls	Wht xline ls; 30% gray ls; diss hem; hem-cal vlts	
50	55		1	99							Xline ls; ls	Wht xline ls; 50% gray ls	
55	60		1	99							Xline ls; ls	Wht xline ls; 50% gray ls	
60	65		5	95							" ; "	" ; 40% " ; diss hem; hem-cal vlts	
65	70		2	98							Xline ls	" ; 5% "	
70	75		2	98							"	" ; 5% "	
75	80			100							Limestone	Gray ls; 5% wht xline ls	
80	85			100							"	" ; 5% "	
85	90			100							"	" ; 5% "	
90	95		1	99							"	" ; 5% "	
		95-150' Quartz sandstone, calcite cement; minor hematite (7%)											
95	100		10	40			50				Qtz ss, cal cement	Diss hem; hem-cal vlts	
100	105		2	38			60				"		
105	110		2	38			60				"		
110	115		5	35			60				"	Diss hem; hem-cal vlts	
115	120		5	35			60				"	"	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
120	125		10	30			60				"	Diss hem	
125	130		15	25			60				"	" ; hem-cal vlt	
130	135		10	30			60				"	" ; " ; 15% gray ls	
135	140		5	35			60				"	40% gray ls	
140	145		5	40			55				"		
145	150		5	40			55				"		
<b>150-195' Crystalline limestone; limestone</b>													
150	155		2	98							Xline ls	Wht xline ls; 15% gray ls	
155	160		1	99							Limestone	Gray ls; 5% wht xline ls	
160	165		1	99							"	" ; "	
165	170		1	99							Xline ls	Wht xline ls; 5% gray ls	
170	175		1	99							Limestone; xline ls	Gray ls; 50% wht xline ls	
175	180			100							Xline ls	Wht xline ls	
180	185		5	95							"	" ; 15% gray ls; diss hem; hem-cal vlt	
185	190		5	95							Limestone; xline ls	Gray ls; 40% wht xline ls	
190	195		10	90							" ; "	" ; 50% wht xline ls; diss hem	
<b>195-225' Quartz sandstone, calcite cement; minor hematite (7%)</b>													
195	200		5	35			60				Quartz sandstone	Diss hem	
200	205		8	32			60				"	"	
205	210		5	35			60				"	"	
210	215		8	32			60				"	"	
215	220		8	32			60				"	"	
220	225		8	32			60				"	"	
<b>225-240' Limestone; crystalline limestone</b>													
225	230		5	65			30				Limestone; xline ls; qtz ss	25% gray ls; 25% wht xline ls; 50% qtz ss	
230	235		1	99							Limestone	Gray ls; 5% wht xline ls	
235	240		2	98							Xline ls	Wht xline ls; 10% gray ls	
<b>240-315' Quartz sandstone, calcite cement; minor diopside-quartz skarn; minor hematite (5%)</b>													
240	245		2	38			60				Quartz ss; cal cement		
245	250		1	39			60				"		
250	255		1	39			60				"		
255	260		1	39			60				"		
260	265		5	35			60				"	Diss hem	
265	270		2	38			60				"		
270	275		5	35			60				"	Diss hem; hem-cal vlt	
275	280		8	32		10	50					10% fine-grained dark green diopside with minor diss tan mineral is characteristic; tan mineral is soft, elongate prismatic xls maybe rhombic	
280	285		5	15		40	40				Qtz ss; diopside skarn	40% f/g diop w/ tan mineral	
285	290		5	25		20	50				" ; "	20% f/g diop w/ tan mineral	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
290	295		5	25		20	50				" ; "	20% f/g diop w/ tan mineral	
295	300		5	25		20	50				" ; "	"	
300	305		10	30		5	55				Qtz ss, cal cement	5% f/g diop w/ tan mineral	
305	310		10	30			60				"		
310	315		8	32		5	55				"	5% f/g diop w/ tan mineral	
<b>315-360' Quartz (55%) - diopside (35%) skarn; quartz sandstone, calcite cement</b>													
315	320		2	3		50	45				Fine-grained diop-qtz skarn	Diop skn probably after qtz ss; minor diss tan mineral characteristic	
320	325		2	23		25	50				" ; qtz ss w/ cal cement	40% qtz ss	
325	330		2	3		55	40				F/g diop-qtz skn	10% qtz ss	
330	335		10	10		20	60				Qtz ss, cal cmt; f/g diop-qtz skn	20% diop-qtz skn	
335	340		2	3		40	55				F/g diop-qtz skn; qtz ss w/ calcite cement	20% qtz ss	
340	345		2	8		35	55				" ; "	30% qtz ss	
325	350		2	8		25	65				" ; "	40% qtz ss	
350	355		5	5		30	60				" ; "	30% qtz ss	
355	360		2	8		30	60				" ; "	"	
<b>360-400' Muscovite aplite</b>													
360	365		2								Aplite (muscovite)	Minor disseminated hematite	
365	370		1								"	"	
370	375		1								"	"	
375	380		1								"	"	
380	385		1								"	"	
385	390		1								"	"	
390	395		1								"	"	
395	400		1								"	"	
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-16 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,652/3,720,254

**Elevation:** 6906'

**Inclination:** 90°

**Date started:** March 1, 2006

**Date completed:** March 3, 2006

**Depth:** 355' lost

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS	
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay
From	To												
		0-70' Limestone; crystalline limestone											
0	5		2	88		5	5				Limestone; crystalline ls	Gray ls; 15% why xline ls; minor diop-qtz skn w/ minor diss tan mineral; 1% copper-colored metallic diss in ls, xline ls	
5	10		2	88		5	5				"	"	
10	15		2	68		15	15				" ; diop-qtz skarn	" ; " ; 30% diop-qtz skn; " ; " ; "	
15	20										Ls; crystalline ls;	Gray ls; 20% wht xline ls; minor diop-qtz skn...; ( no copper metallic)	
20	25			100							Xline ls	Wht xline ls; 10% gray ls	
25	30		1	99							Xline ls; ls	" ; 40% gray ls	
30	35		1	99							Ls; xline ls	Gray ls; 20% wht xline ls	
35	40		2	98							"	" ; 40% "	
40	45		1	99							Xline ls	Wht xline ls; 5% gray ls	
45	50		1	99							Ls; xline ls	Gray ls; 40% wht xline ls	
50	55		1	99							Ls	Gray ls	
55	60		1	99							"	"	
60	65		1	99							Ls; xline ls	" ; 40% wht xline ls	
65	70		3	97							"	" ; 40% "	
		70-90' Quartz sandstone, calcite cement; minor hematite (6%)											
70	75		5	35			60				Qtz ss; cal cement		
75	80		5	35			60				"		
80	85		2	38			60				"		
85	90		10	30			60				"	Diss hem	



FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		90-115' Crystalline limestone; quartz sandstone, calcite cement; minor hematite (10%)											
90	95		20	50			30				Xline ls; qtz ss	Wht xline ls; 30% qtz ss; diss hem	
95	100		15	75			10				" ; "	" ; 10% qtz ss; diss hem	
100	105		5	85			10				" ; "	" ; 30% qtz ss, diss hem	
105	110		10	60			30				" ; "	" ; 50% qtz ss; diss hem	
110	115		2	88			10				Xline ls	" ; 5% qtz ss	
		115-160' Limestone; crystalline limestone											
115	120			100							Limestone	Gray limestone	
120	125			100							"	"	
125	130			100							"	"	
130	135			100							"	"	
135	140			100							"	" ; 10% wht xline ls	
140	145			100							Xline ls; ls	Wht xline ls; 20% gray ls	
145	150		5	95							" ; "	50% gray ls diss hem;	
150	155			100								Gray ls	
155	160			90			10				Xline ls; ls; qtz ss, cal cement	50% wht xline ls; 30% gray ls; 20% qtz ss	
		160-295' Quartz sandstone, calcite cement											
160	165		15	30			55				Qtz ss, cal cement	Diss hem; hem-cal vlts	
165	170		10	30			60				" ; ls	20% gray ls diss hem; hem-cal vlts	
170	175		5	35			60				Qtz ss, cal cement	5% gray ls; diss hem; hem-cal vlts	
175	180		5	35			60				"	" , " , "	
180	185		10	30			60				"	" , " , "	
185	190		15	25			60				"	" , " , "	
190	195		5	95							Ls	Gray ls	
195	200		10	30			60				Qtz ss, cal cement	10% gray ls; diss hem; hem-cal vlts	
200	205		5	35			60				"		
205	210		2	38			60				"		
210	215		1	39			60				"		
215	220		1	39			60				"		
220	225		1	39			60				"		
225	230		2	38			60				"		
230	235		2	38			60				"		
235	240		2	38			60				"		
240	245		2	38			60				"		
245	250		5	35			60				"		
250	255		2	38			60				"		
255	260		5	35			60				"		
260	265		2	38			60				"		
265	270		10	30			60				"		
270	275		5	35			60				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
275	280		1	39			60				Qtz ss, cal cement		
280	285		5	35			60				Qtz ss, cal cement		
285	290		5	35			60				"		
290	295		2	38			60				"		
295-320' Quartz sandstone, calcite cement; minor hematite (10%)													
295	300		8	32			60				Qtz ss, cal cement	Diss hem	
300	305		10	30			60				"	"	
305	310		16	25			60				"	"	
310	315		10	30			60				"	"	
315	320		10	30			60				"	"	
320-355' Muscovite aplite; minor hematite (5%)													
320	325		5								Aplite (muscovite)	Diss hem; hem-cal vlt	
325	330		10								"	"	
330	335		10								"	"	
335	340		5								"	"	
340	345		5								"	Diss hem	
345	350		2								"	"	
350	355		2										
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-17 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,849/3,720,197

**Elevation:** 6864'

**Inclination:** 90°

**Date started:** March 12, 2006

**Date completed:** March 13, 2006

**Depth:** 450'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
0-50' Limestone; crystalline limestone													
0	5		1	99							Limestone	Gray ls; 30% wht xline ls	
5	10			100							"	" ; 5% "	
10	15		2	93		5					" ; minor diop-cal skn	Gray ls	
15	20		3	92		5					" ; "	" ; 10% wht xline ls	
20	25		2	93		5					" ; "	" ; 20% "	
25	30		1	99							Limestone; xline ls	" ; 40% wht xline ls	
30	35		1	99							Xline ls	Wht xline ls; 20% gray ls	
35	40		3	97							"	" ; 30% "	
40	45		5	95							"	" ; 5% "	
45	50		1	99							Limestone	Gray ls; 10% wht xline ls	
50-70' Quartz sandstone, calcite cement; minor hematite (7%)													
50	55		3	27			70				Quartz ss; calcite cement		
55	60		8	22			70				"	Diss hem	
60	65		8	22			70				"	"	
65	70		10	20			70				"	"	
70-95' Limestone; crystalline limestone; minor hematite (5%)													
70	75		2	98							Limestone	Gray ls; 40% wht xline ls	
75	80		2	98							"	"	
80	85		10	90							Xline ls	Wht xline ls; 20% gray ls; diss hem	
85	90		5	95							Limestone	Gray ls; 30% wht xline ls; diss hem	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
90	95		5	95							Xline ls	Wht xline ls; minor qtz ss	
<b>95-200' Quartz sandstone, calcite cement; minor diopside-quartz skarn</b>													
95	100		2	28			70				Qtz ss, cal cmt	Minor diop-qtz skn	
100	105		3	27			70				"		
105	110		5	25			70				"	Diss hem	
110	115		3	27			70				"		
115	120		5	25			70				"	Diss hem	
120	125		2	28			65				"		
125	130		2	28			65				"		
130	135		2	28			65				"		
135	140		2	28			65				"		
140	145		2	28			65						
145	150		2	28			65				Qtz ss, cal cmt		
150	155		2	18		30	50				Qtz ss; diop-qtz skn	Minor diop-qtz skn	
155	160		2	18		5	75				Qtz ss	"	
160	165		2	20		15	60				"	" ; diss hem	
165	170		5	20		15	65				"	"	
170	175		5	18		20	60				" ; diop-qtz skn	Minor diop-qz skn	
175	180		2	18		15	65				"		
180	185		2	18		10	70				"		
185	190		2	70		15	10						
190	195		5	70		15	10				"		
195	200		5	20			75				Qtz ss		
<b>200-450' Muscovite aplite; minor hematite (8%)</b>													
200	205		5								Aplite	Diss hem	
205	210		5								"	"	
210	215		5								"	"	
215	220		5								"	"	
220	225		5								"	"	
225	230		5								"	"	
230	235		5								"	"	
235	240		5								"	"	
240	245		5								"	"	
245	250		5								"	"	
250	255		5								"	"	
255	260		10								"	"	
260	265		5								"	"	
265	270		5								"	"	
270	275		5								"	"	
275	280		10								"	"	
280	285		10								"	"	
285	290		10								"	"	
290	295		10								"	"	
295	300		10								"	"	
300	305		10								"	"	
305	310		10								"	"	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
310	315		10								"	"	
315	320		10								"	"	
320	325		10								"	"	
325	330		10								"	"	
330	335		5								"	"	
335	340		5								"	"	
340	345		5								"	"	
345	350		5								"	"	
350	355		10								"	"	
355	360		10								"	"	
360	365		10								"	"	
365	370		10								"	"	
370	375		10								"	"	
375	380		10								"	"	
380	385		10								"	"	
385	390		10								"	"	
390	395		10								"	"	
395	400		10								"	"	
400	405		10								"	"	
405	410		10								"	"	
410	415		10								"	"	
415	420		10								"	"	
420	425		10								"	"	
425	430		10								"	"	
430	435		10								"	"	
435	440		10								"	"	
440	445		10								"	"	
445	450		10								"	"	
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-18 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,440/3,720,098

**Elevation:** 6866'

**Inclination:** 90°

**Date started:** March 25, 2006

**Date completed:** March 27, 2006

**Depth:** 450'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-100' Limestone, crystalline limestone											
0	5		1	99							Limestone	Gray ls; 5% wht xline ls	
5	10			100							"		
10	15		2	98							Limestone; xline ls	Gray ls; 50% wht xline ls; 5% hem-cal vlts	
15	20		1	99							Limestone	gray ls; 20% wht xline ls	
20	25			100							"	Gray ls	
25	30			100							"	"	
30	35		2	98							Limestone, xline ls	Gray ls; 20% wht ls; diss hem	
35	40		5	95							Xline ls	Wht xline ls; diss hem; hem-cal vlts	
40	45		2	98							Xline ls; limestone	80% wht xline ls; diss hem; hem-cal vlts	
45	50			100							Limestone	Gray ls	
50	55		1	99							Limestone, xline ls	20% wht xline ls	
55	60		1	99							"	"	
60	65		1	99							"	"	
65	70		2	98							"	30% wht xline ls	
70	75		2	98							Xline ls	80% wht xline ls	
75	80		2	98							"	Diss hem	
80	85		2	98							"	70% wht xline ls	
85	90			100							Limestone	5% wht xline ls	
90	95			100							"	"	
95	100		2	98							Xline limestone	80% wht xline ls; diss hem	
		100-145' Quartz sandstone; calcite cement; minor disseminated hematite (5%)											
100	105		5	35			60				Quartz ss; calcite cement	Diss hem	
105	110		5	35			60				"	"	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
110	115		2	38			60				Quartz ss; calcite cement	Diss hem	
115	120		2	38			60				"	"	
120	125		8	32			60				"	"	
125	130		10	30			60				"	"	
130	135		10	30			60				"	"	
135	140		5	30			65				"	"	
140	145		2	38			60				"	"	
<b>145-170' Crystalline limestone; limestone</b>													
145	150		2	98							Xline ls	Wht xline ls; diss hem	
150	155		1	99							Limestone; xline ls	30% wht xline ls	
155	160		1	99							"	5% wht xline ls	
160	165		1	99							Xline ls	95% wht xline ls	
165	170		2	98							Xline ls; limestone	50% wht xline ls	
<b>170-180' Calcite (80%) - hematite (12%) - magnetite (7%) skarn</b>													
170	175	10	15	75							Calcite-hematite-magnetite	60% skarn; 1 grain pyrite	
175	180	5	10	85							skarn; xline ls		
											"	25% skarn	
<b>180-190' Limestone; crystalline limestone</b>													
180	185	1	99								Xline ls; limestone	50% wht xline ls	
185	190	1	99								Limestone	5% wht xline ls	
<b>190-205' Quartz sandstone, calcite cement; minor disseminated hematite (5%)</b>													
190	195		5	35			60				Qtz ss; calcite cement	Diss hem; hem-cal vlts	
195	200		5	35			60				"	"	
200	205		5	35			60				"	"	
<b>205-215' Calcite (51%) - diopside (15%) - hematite (10%) - magnetite (6%) skarn; quartz sandstone, calcite cement</b>													
205	210	2	10	45		15	30				Cal-hem-mag skn; qtz ss, calcite cement	60% skn; diss hem; hem-cal	
210	215	10	10	60	5	15					Cal-diop-mag-hem skn		
<b>215-225' Limestone</b>													
215	220		5	95							Limestone	Gray ls; hem-cal vlts	
220	225		5	95							"	"	
<b>225-230' Calcite (60%) - diopside (15%) - magnetite (10%) - hematite (10%) - tremolite (5%) skarn</b>													
225	230	10	10	60		15			5		Cal-diop-mag-hem-trem skr	Cal-hem vlts	
<b>230-425' Quartz sandstone, calcite cement; disseminated hematite (10%)</b>													
230	235		5	35			60				Qtz ss, cal cem	Diss hem; cal-hem vlts	
235	240		5	35			60				"	"	
240	245		10	30			60				"	"	
245	250		10	30			60				"	"	
250	255		10	30			60				"	"	
255	260		10	30			60				"	"	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
260	265		15	25			60				"	"	
265	270		10	30			60				Qtz ss, cal cem	Diss hem; cal-hem vlts	
270	275		15	25			60				"	"	
275	280		10	30			60				"	"	
280	285		5	35			60				"	"	
285	290		5	35			60				"	"	
290	295		15	25			60				"	"	
295	300		20	25			55				"	"	
300	305		20	25			55				"	"	
305	310		5	35			60				"	"	
310	315		10	30			60				"	"	
315	320		10	30			60				"	"	
320	325		5	35			60				"	"	
325	330		5	35			60				"	"	
330	335		5	35			60				"	"	
335	340		5	35			60				"	"	
340	345		2	38			60				"	"	
345	350		1	39			60				"	"	
350	355		2	38			60				"		
355	360		2	38			60				"		
360	365		5	35			60				"	Diss hem	
365	370		8	32			60				"	Diss hem; hem-cal vlts	
370	375		8	32			60				"	"	
375	380		10	30			60				"	"	
380	385		10	30			60				"	"	
385	390		15	25			60				"	"	
390	395		12	28			60				"	"	
395	400		12	28			60				"	" ; " ; minor trem, diop	
400	405		15	25			60				"	"	
405	410		15	25			60				"	"	
410	415		18	22			60				"	"	
415	420		20	20			60				"	"	
420	425		25	15			60				"	"	
		425-450' Muscovite aplite											
425	430		1								Aplite (muscovite)	Minor diss hem	
430	435		1								"	"	
435	440		1								"	"	
440	445		1								"	"	
445	450		1								"	"	
END OF HOLE													



# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-19 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,883/3,720,112

**Elevation:** 6825'

**Inclination:** 90°

**Date started:** March 13, 2006

**Date completed:** March 14, 2006

**Depth:** 250'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-25' Crystalline limestone											
0	5		5	95							Xline ls	Diss hem	
5	10		5	95							"	"	
10	15		5	95							"	"	
15	20		10	90							"	"	
20	25		5	95							"	"	
		25-45' Quartz sandstone, calcite cement; minor hematite (5%)											
25	30		5	45			50				Qtz ss, cal cement		
30	35		5	45			50				"		
35	40		5	45			50				"		
40	45		5	65			30				"		
		45-65' Crystalline limestone; limestone											
45	50		5	85			10				Xline ls		
50	55		5	85			10				"		
55	60		2	98							Xline ls; ls		
60	65		2	98							"		
		65-175' Quartz sandstone, calcite cement											
65	70		2	38			60				Qtz ss, cal cement		
70	75		2	38			60				"		
75	80		1	39			60				"		
80	85		1	39			60				"		
85	90		2	38			60				"		
90	95		2	58			40				"		
95	100		2	48			50				"		
100	105		2	38			60				"		
105	110		2	38			60				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
110	115		2	38			60				"		
115	120		2	38			60				"		
120	125		2	38			60				"		
125	130		2	28			70				"		
130	135		1	29			70				"		
135	140		1	24			75				"		
140	145		1	24			75				"		
145	150			25			75				"		
150	155			25			75				"		
155	160		2	23			75				"		
160	165			20			80				"		
165	170			20			80				"		
170	175			30			70				"		
175-250' Muscovite aplite													
175	180		1	15			35				Muscovite aplite; qtz ss		
180	185		1	15			35				"		
185	190		2								Musc aplite		
190	195		1								"		
195	200		1								"		
200	205		2								"		
205	210		2								"		
210	215		2								"		
215	220		2								"		
220	225		2								"		
225	230		2								"		
230	235		2								"		
235	240		2								"		
240	245		2								"		
245	250		2								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-20 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,315/3,719,999

**Elevation:** 6855'

**Inclination:** 90°

**Date started:** March 4, 2006

**Date completed:** March 5, 2006

**Depth:** 450'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-100' Limestone; crystalline limestone											
0	5		1	99							Limestone	Gray ls; 5% xline ls; cal-hem vlt	
5	10		2	98							"	" ; " ; "	
10	15		2	98							"	" ; 20% " ; "	
15	20		2	98							"	" ; 10% " ; "	
20	25		2	98							"	" ; 5% " ; "	
25	30		2	98							"	" ; 20% " ; "	
30	35		3	97							Limestone; xline ls	" ; 30% " ; "	
35	40		3	97							Xline ls	Wht xline ls	
40	45		1	99							Xline ls; ls	" ; 50% ls	
45	50		1	99							Limestone	Gray ls; 20% wht xline ls	
50	55		1	99							"	" ; 20% "	
55	60		1	99							Xline ls	Wht xline ls; 5% ls	
60	65		2	98							"	" ; 30% ls	
65	70		2	98							" ; ls	" ; 50% ls	
70	75		1	99							" ; "	" ; 20% ls	
75	80		1	99							" ; "	" ; 5% ls	
80	85		1	99							" ; "	" ; 50% ls	
85	90		1	99							Limestone	Gray ls; 10% wht xline ls	
90	95			100							"		
95	100		1	99							"	" ; 40% wht xline ls	
		100-130' Quartz sandstone, calcite cement											
100	105	2		18			80				Qtz ss. calcite cement	5% ls	
105	110	1		19			80				"		
110	115	2		18			80				"		
115	120	3		17			80				"		
120	125	4		21			75				"	Dissem hem	
125	130	4		26			70				"	" ; 5% ls	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		130-160' Crystalline limestone											
130	135	2		78			20				Xline ls	Vht xline ls; 30% qtz ss, cal cem with diss pyrite	
135	140	2		98							"		
140	145	2		68			30				" ; qtz ss	Vht xline ls; 40% qtz ss; cal cem with diss pyrite	
145	150	1		99							Xline ls	Wht xline ls	
150	155		2	78			20				"	" ; 30% qtz ss, cal cement	
155	160		1	99							"		
		160-200' Crystalline limestone; limestone											
160	165			100							Limestone	Gray ls	
165	170			100							"	" ; 10% wht xline ls	
170	175			100							Xline ls	Wht xline ls; 10% gray ls	
175	180			100							Ls; xline ls	Gray ls; 40% xline ls with dissem pyrite	
180	185			100							Xline ls		
185	190		5	90			5				"	Wht xline ls; 5% qtz ss; diss hem	
190	195		2	98							Limestone	Gray ls; 20% wht xline ls; diss hem	
195	200		5	90			5				Xline ls	Wht xline ls; diss hem; minor pyrite	
		200-220' Quartz sandstone, calcite cement; minor hematite (5%)											
200	205	5		35			60				Qtz ss, calcite cement	dissem hem	
205	210	5		35			60				"	"	
210	215	5		35			60				"	"	
215	220	5		35			60				"	"	
		220-250' Diopside (43%) - calcite (38%) skarn; minor hematite (8%)											
220	225	10		75		15					Cal-diop-hem skarn		
225	230	10		65		15	10				"	15% qtz ss	
230	235	15		20		55	10				Diop-cal-hem skarn		
235	240	5		20		55	10		5		Diop-cal skn		
240	245	5		20		60	5		5		"		
245	250	5		25		60	10				"		
		250-280' Quartz sandstone, calcite cement; minor calcite-diopside-hematite skarn; minor hematite (13%)											
250	255		10	25		10	55				Qtz ss, cal cmt	Minor diop, diss hem	
255	260		10	25		10	55				"	"	
260	265		15	25		15	45				" ; minor diop-cal-hem skn	"	
265	270		15	25		10	50				"	"	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
270	275		15	25		5	55				Qtz ss, cal cmt	Diss hem	
275	280		15	25		15	45				" ; minor diop-cal-hem skn	"	
<b>280-360' Diopside (44%) - quartz (25%) - calcite (16%) - hematite (15%) skarn</b>													
280	285		15	15		55	15				Diop-cal-qtz-hem skn	Diss hem	
285	290		15	15		25	45				Qtz-diop-cal-hem skn	"	
290	295		20	15		50	15				Diop-hem-cal-qtz skn	"	
295	300		10	15		30	45				Qtz-diop-cal-hem skn	"	
300	305		5	15		50	30				Diop-qtz-cal skn	"	
305	310		5	15		30	45		5		Qtz-diop-cal skn	"	
310	315		5	15		35	40		5		"	"	
315	320		5	15		60	20				Diop-qtz-cal skn	"	
320	325		10	20		45	25				"	"	
325	330		15	15		60	10				Diop-cal-hem skn	"	
330	335		15	15		60	10				"	"	
335	340		15	15		60	10				"	"	
340	345		20	15		55	10				"	"	
345	350		20	15		55	10				"	"	
350	355		45	15		25	15				Hem-diop-cal-qtz skn	Massive hem	
355	360		20	20		10	50				Qtz-hem-cal-diop skn	Diss hem; hem-cal vlts	
<b>360-450' Muscovite aplite, minor hematite (5%)</b>													
360	365		5								Aplite	Diss hem; cal-hem vlts	
365	370		5								"	"	
370	375		2								"	"	
375	380		2								"	"	
380	385		8								"	"	
385	390		8								"	"	
390	395		5								"	"	
395	400		5								"	"	
400	405		5								"	"	
405	410		5								"	"	
410	415		5								"	"	
415	420		5								"	"	
420	425		5								"	"	
425	430		5								"	"	
430	435		5								"	"	
435	440		5								"	"	
440	445		5								"	"	
445	450		5								"	"	
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-21 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,873/3,719,964

**Elevation:** 6839'

**Inclination:** 90°

**Date started:** March 15, 2006

**Date completed:** March 16, 2006

**Depth:** 350'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, Utah

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-25' Calcite (77%) - diopside (12%) - hematite (11%) skarn											
0	5		10	70		20					Cal-diop-hem skn		
5	10		10	80		10					"		
10	15		10	75		15					"		
15	20		10	85		5					cal-hem skn		
20	25		15	75		10					Cal-hem-diop skn		
		25-65' Diopside (61%) - calcite (30%) skarn; minor hematite (9%)											
25	30		5	20		75					Diop-cal skn		
30	35		20	60		20					Cal-diop-hem skn		
35	40		5	10		85					Diop-cal skn		
40	45		5	10		85					"		
45	50		5	30		65					"		
50	55		10	50		40					Cal-diop-hem skn		
55	60		10	40		50					Diop-cal-hem skn		
60	65		10	20		70					Diop-cal-hem skn		
		65-125' Quartz sandstone, calcite cement											
65	70		5	35		10	50				Qtz ss, cal cem; minor diop-cal skn		
70	75		2	48			50				Qtz ss, cal cement		
75	80		10	30			60				"		
80	85		2	38			60				"		
85	90		2	38			60				"		
90	95		5	35			60				"		
95	100		5	35			60				"		
100	105		5	35			60				"		
105	110		5	35			60				"		
110	115		5	45		5	45				"		
115	120		5	45		5	45				"		
120	125		15	35		5	45				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		125-145' Diopside (59%) - calcite (19%) - hematite (14%) skarn											
125	130		15	15		60	10				Diop-cal-hem skn		
130	135		15	25		50	10				"		
135	140		15	20		65					"		
140	145		10	20		60	10				"		
		145-160' Muscovite aplite											
145	150		2								Aplite		
150	155		2								"		
155	160		2								"		
		160-170' Diopside (42%) - calcite (22%) - hematite (12%) skarn											
160	165		10	25		30	35				Diop-cal-hem skn; minor qtz ss		
165	170		15	20		55	10				Diop-cal-hem skn		
		170-180' Quartz sandstone, calcite cement											
170	175		10	25		5	60				Qtz ss, cal cement		
175	180		15	30			55				"		
		180-210' Diopside (52%) - calcite (28%) - hematite (11%) skarn											
180	185		15	20		65					Diop-cal-hem skn		
185	190		15	20		65					"		
190	195		15	25		60					"		
195	200		15	25		60					"		
200	205		2	48		50					Diop-cal skn		
205	210		5	30		65					"		
		210-265' Quartz sandstone, calcite cement											
210	215		5	35			60				Qtz ss, cal cement		
215	220		5	35			60				"		
220	225		5	30		65					Diop-cal skn		
225	230		2	33		5	60				Qtz ss; cal cement		
230	235		2	33		5	60				"		
235	240		2	33		5	60				"		
240	245		2	38			60				"		
245	250		2	38			60				"		
250	255		10	30		30	30				Qtz ss; diop-cal-hem skn		
255	260		5	35		10	50				Qtz ss, cal cement		
260	265		5	40		30	25				Qtz ss; diop-cal skn		
		265-300' Muscovite aplite											
265	270		3								Aplite		
270	275		3								"		
275	280		3								"		
280	285		3								"		
285	290		3								"		
290	295		3								"		
295	300		3								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
300	305		2								Aplite		
305	310		2								"		
310	315		2								"		
315	320		2								"		
320	325		1								"		
325	330		1								"		
330	335		1								"		
335	340		1								"		
340	345		1								"		
345	350		1								"		
END OF HOLE													



# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-22 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,897/3,719,867

**Elevation:** 6806'

**Inclination:** 90°

**Date started:** March 16, 2006

**Date completed:** March 17, 2006

**Depth:** 450'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
0-130' Diopside (54%) - calcite (35%) skarn; minor hematite (6%)													
0	5		5	25		70					Diop-cal skn		
5	10		5	25		70					"		
10	15		5	25		70					"		
15	20		5	25		70					"		
20	25		5	25	5	65					"		
25	30		5	25		65					"		
30	35		10	30		60					"		
35	40		5	35		50	10				"		
40	45		5	35		50	10				"		
45	50		2	43		45	10				"		
50	55		5	35		60					"		
55	60		5	30		55	10				"		
60	65		2	38		50	10				"		
65	70		5	35		50	10				"		
70	75		5	35		55	5				"		
75	80		5	35		55	5				"		
80	85		10	30		55	5				"		
85	90		10	30		55	5				"		
90	95	10	5	55		20	10				Cal-diop-mag-qtz skn		
95	100	5	5	80		10					Cal-diop skn		
100	105		10	60		30					Cal-diop-hem skn		
105	110		10	60		30					"		
110	115		10	20		70					Diop-cal-hem skn		
115	120		10	20		70					"		
120	125		10	20		55	15				Diop-cal-qtz-hem skn		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
125	130	5	10	20		65					"		
130-175' Quartz sandstone, calcite cement; minor diopside-calcite skarn													
130	135		5	30		5	60				Qtz ss, cal cmt; minor diop-cal skn		
135	140		5	30		10	55				"		
140	145		5	30		10	55				"		
145	150		5	25		20	50				"		
150	155		2	23		15	60				"		
155	160		5	30		5	60				"		
160	165		5	30		5	60				"		
165	170		10	30		5	55				"		
170	175		10	30		20	40				"		
175-265' Diopside (45%) - calcite (23%) skarn; minor quartz sandstone, calcite cement; minor hematite (5%)													
175	180		5	25		50	20				Diop-cal skn; minor qtz ss		
180	185		5	25		50	20				"		
185	190		5	25		50	20				"		
190	195		10	25		45	20				"		
195	200		5	25		65	5				"		
200	205		10	30		40	20				"		
205	210		5	30		45	20				"		
210	215		10	20		50	20				"		
215	220		10	20		65	5				"		
220	225		5	10		30					Diop-cal skn; 50% splite		
225	230		5	10		30					"		
230	235		5	25		40	30				Diop-cal skn; minor qtz ss		
235	240		5	25		40	30				"		
240	245		2	23		45	30				"		
245	250		2	28		30	40				"		
250	255		2	28		20	50				Qtz ss; minor diop-cal skn		
255	260		2	28		60	10				Diop-cal skn; minor qtz ss		
260	265		2	23		65	10				"		
265-450' Muscovite aplite													
265	270		1								Aplite		
270	275		2								"		
275	280		2								"		
280	285		2								"		
285	290		2								"		
290	295		2								"		
295	300		2								"		
300	305		2								"		
305	310		2								"		
310	315		2								"		
315	320		2								"		
320	325		2								"		
325	330		2								"		
330	335		2								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
335	340		2								"		
340	345		2								"		
345	350		2								"		
350	355		2								"		
355	360		2								"		
360	365		2								"		
365	370		2								"		
370	375		2								"		
375	380		2								"		
380	385		2								"		
385	390		2								"		
390	395		2								"		
395	400		3								"		
400	405		3								"		
405	410		3								"		
410	415		3								"		
415	420		3								"		
420	425		3								"		
425	430		3								"		
430	435		4								"		
435	440		4								"		
440	445		4								"		
445	450		4								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-23 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,413/3,719,743

**Elevation:** 6768'

**Inclination:** 90°

**Date started:** March 26, 2006

**Date completed:** March 28, 2006

**Depth:** 400'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-50' Crystalline limestone; limestone											
0	5	5	5	90							Crystalline limestone	Diss mag, hem	
5	10	5	5	90							"	"	
10	15	5	5	90							"	"	
15	20		10	90							"	Diss hem	
20	25		10	90							"	"	
25	30		5	95							Xline ls; ls	"	
30	35			100							Limestone		
35	40		2	98							"		
40	45		5	95							Xline ls; ls		
45	50		2	80			18				Xline ls; ls; qtz ss		
		50-90' Quartz sandstone, calcite cement											
50	55		2	38			60				Qtz ss; cal cement		
55	60		5	40			60				"	Diss hem	
60	65		5	55			40				Qtz ss; xline ls		
65	70		5	35			60				Qtz ss	Diss hem	
70	75		5	35			60				"	"	
75	80		2	38			60				"		
80	85		2	68			30				" ; xline ls		
85	90		2	78			20				Xline ls; qtz ss		
		90-175' Crystalline limestone											
90	95		2	98							Xline ls		
95	100			100							Limestone		
100	105			100							Ls; xline ls		
105	110		1	99							Xline ls		
110	115		3	97							"		
115	120		3	97							"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
120	125		5	95							Xline ls	Diss hem	
125	130		5	95							"	"	
130	135		5	90					5		"	"	
135	140		5	70			20		5		Xline ls; qtz ss	"	
140	145		5	70			20		5		" ; "	"	
145	150		5	75			20				" ; "	"	
150	155		2	78			20				" ; "	"	
155	160		5	85			10				Xline ls	"	
160	165		5	85			10				"	"	
165	170		5	95							Limestone; xline ls	"	
170	175		5	95							" ; "	"	
175-195' Quartz sandstone, calcite cement													
175	180		2	48			50				Qtz ss, cal cement		
180	185			50			50				"		
185	190			40			60				"		
190	195			40			60				"		
195-225' Crystalline limestone													
195	200		2	98							Xline ls		
200	205		5	95							"	Diss hem	
205	210		2	98							"		
210	215		5	95							"	Diss hem	
215	220		5	95							"	"	
220	225		5	95							"	"	
225-300' Calcite (67%) - quartz (14%) - hematite (14%) skarn													
225	230		10	60			30				Cal-qtz skn	Diss hem	
230	235		5	60			35				"	"	
235	240		10	70			20				"	"	
240	245		10	70			20				"	"	
245	250		5	70			25				"	"	
250	255		15	75			10				Cal-hem-qtz skn	"	
255	260		20	70			10				"	"	
260	265		25	65			10				"	"	
265	270		20	70			10				"	"	
270	275		15	75	5		5				Cal-hem skn	"	
275	280		20	65	5		10				Cal-hem-qtz skn	"	
280	285		15	60	5		10				"	"	
285	290		15	75			10				"	"	
290	295		10	55		20	5		10		Cal-diop-trem-hem skn	"	
295	300		10	60		15	5		10		"	"	
300-305' Quartz sandstone, calcite cement													
300	305		2	28			65		5		Qtz ss, cal cement		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		305-310' Calcite (75%) - diopside (15%) skarn											
305	310		5	75		15	5				Cal-diop skarn		
		310-400' Muscovite aplite											
310	315		3	17							Muscovite aplite		
315	320		2	3							"		
320	325		2	3							"		
325	330		1								"		
330	335		2								"		
335	340		2								"		
340	345		2								"		
345	350		1								"		
350	355		1								"		
355	360		1								"		
360	365		1								"		
365	370		1								"		
370	375		1								"		
375	380		1								"		
380	385		1								"		
385	390		1								"		
390	395		2								"		
395	400		2								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

## DRILL HOLE: EC-06-24 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,826/3,719,762

**Elevation:** 6849'

**Inclination:** 90°

**Date started:** March 18, 2006

**Date completed:** March 19, 2006

**Depth:** 400'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS	
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite				Clay
		0-20' Diopside (54%) - calcite (38%) - hematite (11%) skarn											
0	5		10	70		20					Cl-diop-hem skn		
5	10		10	30		60					Diop-cl-hem skn		
10	15		10	30		60					"		
15	20		15	20		75					"		
		20-30' Diopside (45%) - magnetite (35%) - calcite (10%) - hematite (10%) skarn											
20	25	30	10	10		50					Diop-mg-cl-hem skn		
25	30	40	10	10		40					Mg-diop-cl-hem skn		
		30-60' Diopside (53%) - calcite (35%) skarn; minor hematite (6%), pyrite (5%)											
30	35	5	10	65		20					Cal-diop-hem skn		
35	40		5	30		65					Diop-cal skn	2% pyrite	
40	45		5	25		65					"	5% pyrite	
45	50		5	30		60						5% pyrite; arsenopyrite?	
50	55		5	30		55					Diop-cal-pyrite skn	10% pyrite	
55	60		5	30		55						"	
		60-70' Quartz sandstone, calcite cement											
60	65		2	38		60					Qtz ss, cal cmt	2% pyrite	
65	70			40		60					"	2% pyrite	
		70-100' Diopside (67%) - calcite (23%) skarn; mixed with quartz sandstone, calcite cement, minor hematite (10%)											
70	75		2	28		50	20				Diop-cal skn; minor qtz ss	2% pyrite	
75	80		5	15		80					Diop-cal skn		
80	85		5	25		70					"		
85	90		10	30		10	30				Cal-diop-hem skn; qtz ss		
90	95		10	30		10	30				" ; "		
95	100		10	55		5	30						

FOOTAGE (feet)		MINERALS								ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite			
From	To											
		100-205' Quartz sandstone, calcite cement; minor hematite (8%)										
100	105		10	30			60				Qtz ss, cal cement	
105	110		10	30			60				"	
110	115		10	30			60				"	
115	120		15	30			55				"	
120	125		10	30		10	50				"	
125	130		5	30		10	55				"	
130	135		15	30		5	50				"	
135	140		5	30			65				"	
140	145		5	30			65				"	
145	150		10	30			60				"	
150	155		10	30			60				"	
155	160		5	25		15	55				"	
160	165		5	35		5	55				"	
165	170		5	35			60				"	
170	175		5	20		40	35				Diop-cal skn; qtz ss	
175	180		10	30		20	40				" , "	
180	185		2	38		5	55				Qtz ss	
185	190		5	35		10	50				"	
190	195		10	35		5	50				"	
195	200		10	30		25	35				Diop-cal skn; qtz ss	
200	205		5	30		25	40				" , "	
		205-400' Muscovite aplite										
205	210		2								Aplite	
210	215		2								"	
215	220		2								"	
220	225		2								"	
225	230		2								"	
230	235		2								"	
235	240		2								"	
240	245		2								"	
245	250		2								"	
250	255		4								"	
255	260		2								"	
260	265		2								"	
265	270		2								"	
270	275		2								"	
275	280		2								"	
280	285		2								"	
285	290		2								"	
290	295		2								"	
295	300		2								"	
300	305		2								"	
305	310		2								"	
310	315		2								"	
315	320		2								"	



FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
320	325		2								"		
325	330		2								"		
330	335		2								"		
335	340		2								"		
340	345		2								"		
345	350		2								"		
350	355		2								"		
355	360		2								"		
360	365		2								"		
365	370		2								"		
370	375		5								"		
375	380		5								"		
380	385		5								"		
385	390		2								"		
390	395		2								"		
395	400		2								"		
END OF HOLE													

# **REVERSE CIRCULATION DRILL CUTTINGS LOG**

**DRILL HOLE: EC-06-25 (Reverse Circulation)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,528/3,719,624

**Elevation:** 6869'

**Inclination:** 90°

**Date started:** March 20, 2006

Date completed: March 21, 2006

**Depth:** 500'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-85' Limestone, crystalline limestone											
0	5			100							Limestone	Gray ls; 5% wht xline ls; 1% copper colored metallic diss	
5	10		2	98							"	" ; 20% "	
10	15			100							"	" ; 5% "	
15	20		2	98							Crystalline ls; ls	60% wht xline ls; 40% gray ls	
20	25		2	98							Ls; xline ls	Gray ls; 10% wht xline ls	
25	30			100							Limestone		
30	35		2	98							"	Gray ls; 10% wht xline ls	
35	40		2	98							"	" ; 20% "	
40	45		1	99							"	" ; 20% "	
45	50		1	99							"	" ; 20% "	
50	55		5	95							Xline ls	Wht xline ls; diss hem	
55	60		1	99							"	"	
60	65		1	99							Limestone	Gray ls; 10% wht xline ls	
65	70			100							"		
70	75		5	95							"		
75	80		1	99							Crystalline ls		
80	85		2	68			30				Xline ls; qtz ss, cal cement	50% wht xline ls; 50% qtz ss, cal cement	
		85-120' Quartz sandstone, calcite cement											
85	90		2	28			70				Quartz ss, cal cement		
90	95		2	28			70				"		
95	100		2	48			50				"	20% gray ls	
100	105		2	28			70				Qtz ss		
105	110		2	28			70				"		
110	115		5	25			70				"		
115	120		5	35			60				"	20% wht xline ls	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		120-165' Crystalline limestone											
120	125		2	98							Crystalline limestone	10% wht xline ls 20% wht xline ls 20% gray ls     40 % gray ls; 1% diss pyrite "	
125	130		1	99							Limestone		
130	135		1	99							"		
135	140		2	98							Crystalline ls; ls		
140	145		1	99							Xline ls		
145	150		1	99							"		
150	155		1	99							"		
155	160		2	98							"		
160	165		1	99							"		
		165-185' Quartz sandstone, calcite cement											
165	170		2	28			70				Qtz ss, cal cmt	Diss hem; hem-cal vlts	
170	175		5	25			70				"		
175	180		2	28			70				Qtz ss, cal cmt		
180	185		2	28			70				"		
		185-205' Crystalline limestone											
185	190		5	95							Crystalline ls	Diss hem; hem-cal vlts	
190	195		2	98							"		
195	200			100							"		
200	205		2	93		5					"		
		205-365' Quartz sandstone, calcite cement											
205	210		1	29			70				Qtz ss, cal cmt	Diss hem; hem-cal vlts	
210	215		1	29			70				"		
215	220		1	29			70				"		
220	225		1	29			70				"		
225	230		2	28			70				"		
230	235		5	25			70				"		
235	240		2	28			70				"		
240	245		1	29			70				"		
245	250		1	29			70				"		
250	255			30			70				"		
255	260		1	29			70				"		
260	265		2	28			70				"		
265	270		2	28			70				"		
270	275		1	39			60				"		
275	280			40			60				"		
280	285			40			60				"		
285	290		1	39			60				"		
290	295		2	38			60				"		
295	300		2	38			60				"		
300	305		2	33			65				"		
305	310		1	34			65				"		
310	315		1	34			65				"		
315	320		1	34			65				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
320	325		1	34			65				Qtz ss, cal cmt		
325	330		1	34			65				"		
330	335			35			65				"		
335	340			35			65				"		
340	345			35			65				"		
345	350			35			65				"		
350	355		1	34			65				"		
355	360		1	34			65				"		
360	365		1	34			65				"		
		365-380' Muscovite aplite											
365	370		2								Aplite		
370	375		2								"		
375	380		2								"		
		380-430' Quartz sandstone, calcite cement											
380	385		1	34			65				Qtz ss, cal cmt		
385	390			35			65				"		
390	395			35			65				"		
395	400			35			65				"		
400	405			35			65				"		
405	410			35			65				"		
410	415			35			65				"		
415	420		1	34			65				"		
420	425		1	34			65				"		
425	430		2	33			65				"		
		430-500' Muscovite aplite											
430	435		1								Muscovite aplite		
435	440		1								"		
440	445		1								"		
445	450		1								"		
450	455		1								"		
455	460		1								"		
460	465		1								"		
465	470		1								"		
470	475		1								"		
475	480		1								"		
480	485		1								"		
485	490		1								"		
490	495		1								"		
495	500		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-26 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, Az

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,688/3,719,625

**Elevation:** 6883'

**Inclination:** 90°

**Date started:** March 23, 2006

**Date completed:** March 24, 2006

**Depth:** 360'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-35' Limestone, crystalline limestone											
0	5		1	99							Limestone	20% wht xline ls	
5	10		1	99							Crystalline ls		
10	15		2	98							"	20% gray ls	
15	20		2	98							"	"	
20	25			100							Limestone	10% wht xline ls	
25	30			100							"	"	
30	35			100							Crystalline ls	10% gray ls	
		35-65' Quartz sandstone, calcite cement											
35	40		2	28			70				Quartz ss, cal cement		
40	45		1	29			70				"		
45	50		1	29			70				"		
50	55		2	28			70				"		
55	60		2	28			70				"		
60	65		2	28			70				"		
		65-80' Crystalline limestone; quartz sandstone, calcite cement											
65	70		2	63			35				Xline ls; qtz ss, cal cmt	50% xline ls; 50% qtz ss calcite cement	
70	75		2	63			35				"	" , "	
75	80		2	63			35				"	" , "	
		80-120' Crystalline limestone; limestone											
80	85			100							Limestone		
85	90			100							"		
90	95		1	99							Crystalline ls		
95	100		1	99							"	10% gray ls	
100	105			100							"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
105	110		2	98							Crystalline ls		
110	115			100							"	30% gray ls	
115	120			100							Limestone	20% wht xline ls	
<b>120-145' Quartz sandstone, calcite cement</b>													
120	125		2	28			70				Quartz ss, calcite cement		
125	130		2	28			70				"		
130	135			30			70				"		
135	140			30			70				"		
140	145		2	28			70				"		
<b>145-160' Calcite (43%) - Magnetite (22%) - diopside (18%) skarn</b>													
145	150	40	10	35		5	10				Mag-cal-hem-qtz skarn		
150	155	20	10	30		30	5		5		Diopo-cal-mag-hem skarn		
155	160	5	2	63		20	5		5		Cal-diop skn	30% qtz ss, cal cmt	
<b>160-170' Quartz sandstone, calcite cement</b>													
160	165		1	29			70				Qtz ss, cal cmt		
165	170		2	28			70				"		
<b>170-175' Muscovite aplite</b>													
170	175		1								Aplite		
<b>175-200' Quartz sandstone, calcite cement</b>													
175	180		1	29			70				Qtz ss, cal cement		
180	185		1	29			70				"		
185	190		2	28			70				"		
190	195		2	28			70				"		
195	200		2	28			70				"		
<b>200-265' Skarnetized (diopside, 25%) quartz sandstone</b>													
200	205		1	4		25	70				Skarnetized qtz ss	F/g diopside, quartz	
205	210		1	4		25	70				"	"	
210	215			5		25	70				"	"	
215	220			5		25	70				"	"	
220	225			5		25	70				"	"	
225	230			5		25	70				"	"	
230	235			5		25	70				"	"	
235	240			5		25	70				"	"	
240	245			5		25	70				"	"	
245	250			5		25	70				"	"	
250	255		1	4		25	70				"	"	
255	260		1	4		25	70				"	"	
260	265		1	4		25	70				"	"	
<b>265-360' Muscovite aplite</b>													
265	270		2								Muscovite aplite		
270	275		2								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
275	280		1								"		
280	285		1								Muscovite aplite		
285	290		1								"		
290	295		1								"		
295	300		1								"		
300	305		1								"		
305	310		1								"		
310	315		1								"		
315	320		1								"		
320	325		1								"		
325	330		1								"		
330	335		1								"		
335	340		1								"		
340	345		1								"		
345	350		1								"		
350	355		1								"		
355	360		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

## DRILL HOLE: EC-06-27 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 449,103/3,719,956

**Elevation:** 6812'

**Inclination:** 90°

**Date started:** March 22, 2006

**Date completed:** March 23, 2006

**Depth:** 270'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-10' Crystalline limestone											
0	5		2	98							Crystalline limestone	20% gray ls	
5	10		2	98							"	"	
		10-30' Calcite (54%) - magnetite (25%) - quartz (16%) skarn											
10	15	15	5	60			20				Calcite-quartz-mag skarn		
15	20	15	5	60			20				"		
20	25	20	5	55			20				"		
25	30	50	5	40			5				"		
		30-90' Quartz sandstone, calcite cement											
30	35		5	30			65				Quartz ss, cal cement		
35	40			35			65				"		
40	45		2	33			65				"		
45	50			35			65				"		
50	55	2	3	30			65				"	Spots of mag replacement; diss hem; hem-cal vlt	
55	60	1	2	32			65				"	"	
60	65	2	1	32			65				"	"	
65	70		2	33			65				"		
70	75		2	33			65				"		
75	80		1	34			65				"		
80	85		2	33			65				"		
85	90		3	34			65				"		
		90-95' Muscovite aplite											
90	95		1								Muscovite aplite		
		95-120' Quartz sandstone, calcite cement; minor aplite, diopside skarn											



FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
95	100			35			65				Qtz ss, cal cement		
100	105	1	1	33			65				Qtz ss, cal cement		
105	110	5	2	13			30				Qtz ss, cal cement; aplite	50% qtz ss; 50% aplite	
110	115		2	13		20	65				Qtz ss, cal cmt; diop-qtz skn		
115	120		1	14		30	45		10		"		
120-140' Diopside (54%) - quartz (20%) skarn													
120	125		1	4		25	20				Diopside-qtz skarn; aplite	50% di-qtz skn; 50% aplite	
125	130		1	4		75	20				Diopside-qtz skarn		
130	135		5	5		60	20		10		"		
135	140		2	3		55	20		20		Di-trem-qtz skarn		
140-270' Muscovite aplite													
140	145		2								Muscovite aplite		
145	150		1								"		
150	155		1								"		
155	160		1								"		
160	165		1								"		
165	170		1								"		
170	175		1								"		
175	180		1								"		
180	185		1								"		
185	190		1								"		
190	195		1								"		
195	200		1								"		
200	205		1								"		
205	210		1								"		
210	215		1								"		
215	220		1								"		
220	225		1								"		
225	230		1								"		
230	235		1								"		
235	240		1								"		
240	245		1								"		
245	250		1								"		
250	255		1								"		
255	260		1								"		
260	265		1								"		
265	270		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

## DRILL HOLE: EC-06-28 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 449,098/3,719,859

**Elevation:** 6813'

**Inclination:** 90°

**Date started:** April 20, 2006

**Date completed:** April 21, 2006

**Depth:** 300'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS	
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
From	To													
		0-10' Crystalline limestone												
0	5		1	99								Crystalline limestone		
5	10		2	98								"		
		10-95' Quartz sandstone, calcite cement												
10	15		1	34			65					Qtz ss, calcite cement		
15	20		1	34			65					"		
20	25		1	34			65					"		
25	30		1	34			65					"		
30	35		1	34			65					"		
35	40		1	34			65					"		
40	45		1	34			65					"		
45	50		1	34			65					"		
50	55		1	34			65					"		
55	60		1	34			65					"		
60	65		1	34			65					"		
65	70		1	34			65					"		
70	75		1	34			65					"		
75	80		1	34			65					"		
80	85		1	34		10	55					"		
85	90		1	34		10	55					"		
90	95		1	34		10	55					"		
		95-300' Muscovite aplite												
95	100		5									Muscovite aplite	Hem-cal veinlets	
100	105		2									"	"	
105	110		2									"	"	
110	115		1									"		
115	120		1									"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
120	125		1								Muscovite aplite		
125	130		1								"		
130	135		1								"		
135	140		1								"		
140	145		1								"		
145	150		1								"		
150	155		1								"		
155	160		1								"		
160	165		1								"		
165	170		1								"		
170	175		1								"		
175	180		1								"		
180	185		1								"		
185	190		1								"		
190	195		1								"		
195	200		1								"		
200	205		1								"		
205	210		1								"		
210	215		1								"		
215	220		1								"		
220	225		1								"		
225	230		1								"		
230	235		1								"		
235	240		1								"		
240	245		1								"		
245	250		1								"		
250	255		1								"		
255	260		1								"		
260	265		1								"		
265	270		1								"		
270	275		1								"		
275	280		1								"		
280	285		1								"		
285	290		1								"		
290	295		1								"		
295	300		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-29 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,934/3,719,759

**Elevation:** 6777'

**Inclination:** 90°

**Date started:** April 24, 2006

**Date completed:** April 25, 2006

**Depth:** 420'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-45' Limestone											
0	5			100							Limestone		
5	10			100							"		
10	15			100							"		
15	20			100							"		
20	25			100							"		
25	30			100							Crystalline limestone		
30	35		5	95							Xline ls; ls	50% wht xline ls; 50% gray ls	
35	40			100							Limestone		
40	45		2	98							Xline ls; ls	50% wht xline ls; 50% gray ls	
		45-60' Quartz sandstone, calcite cement											
45	50		1	34			65				Quartz ss, calcite cmt		
50	55		2	33			65				"		
55	60		2	33			65						
		60-80' Quartz (54%) - magnetite (15%) - diopside (14%) - calcite (12%) skarn; minor hematite (6%)											
60	65	5	2	8		20	65				Qtz-diop skarn		
65	70	15	5	10		20	50				Qtz-diop-cal skarn		
70	75	25	10	15		10	40				Qtz-mag-cal-hem-di skn		
75	80	15	5	15		5	60				Qtz-mag-cal skarn		
		80-180' Quartz sandstone, calcite cement											
80	85	2	33				65				Qtz ss, cal cmt		
85	90	2	33				65				"		
90	95	2	33				65				"		
95	100	2	33				65				"		
100	105	2	33				65				"		
105	110	2	33				65				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
110	115	2	33				65				Qtz ss, cal cmt		
115	120	2	33				65				"		
120	125	2	33				65				"		
125	130	2	33				65				"		
130	135	2	33				65				"		
135	140	2	33				65				"		
140	145	1	34				65				"		
145	150	5	30				65				"		
150	155	5	30				65				"		
155	160	5	30				65				"		
160	165	5	30				65				"		
165	170	2	33				65				"		
170	175	2	33				65				"		
175	180	2	33				65				"		
		180-420' Muscovite aplite											
180	185		2								Muscovite aplite		
185	190		2								"		
190	195		2								"		
195	200		5								"		
200	205		2								"		
205	210		1								"		
210	215		1								"		
215	220		1								"		
220	225		1								"		
225	230		1								"		
230	235		1								"		
235	240		1								"		
240	245		1								"		
245	250		1								"		
250	255		1								"		
255	260		1								"		
260	265		1								"		
265	270		1								"		
270	275		1								"		
275	280		1								"		
280	285		1								"		
285	290		1								"		
290	295		1								"		
295	300		1								"		
300	305		1								"		
305	310		1								"		
310	315		1								"		
315	320		1								"		
320	325		1								"		
325	330		1								"		
330	335		1								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
335	340		1								"		
340	345		1								Muscovite aplite		
345	350		1								"		
350	355										"		
355	360										"		
360	365										"		
365	370										"		
370	375										"		
375	380										"		
380	385										"		
385	390										"		
390	395										"		
395	400										"		
400	405										"		
405	410										"		
410	415										"		
415	420										"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-30 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,593/3,720,106

**Elevation:** 6849'

**Inclination:** 90°

**Date started:** April 7, 2006

**Date completed:** April 9, 2006

**Depth:** 600'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS	
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
From	To													
		0-20' Magnetite (34%) - diopside (30%) - calcite (14%) - hematite (11%) skarn												
0	5	35	10	15	5	30	10					Mag-diop-cal-hem skarn		
5	10	35	10	15	5	30	10					"		
10	15	30	10	15	5	35						"		
15	20	35	15	10	5	25	10					"		
		20-30' Diopside (25%) - calcite (20%) - tremolite (20%) - magnetite (12%) - hematite (12%) skarn												
20	25	10	10	20	5	20	5		30			Trem-cal-diop-mag skn		
25	30	15	15	25	5	30	5		10			Diop-cal-mag-trem-hem skn		
		30-65' Calcite (73%) - hematite (10%) skarn												
30	35	5	10	50	5	20	5		5			Cal-diop skarn		
35	40	2	10	63	5	10	5		5			"		
40	45		10	70	5	5	5		5			Cal skn		
45	50		10	75	5	5	5					"		
50	55		10	85	5							"		
55	60		10	85	5							"		
60	65		10	85	5							"		
		65-120' Diopside (76%) - hematite (10%) skarn												
65	70	10	10	20		60						Diopside-cal-mag-hem skarn		
70	75	5	10	5		75	5					Diopside-hem skarn		
75	80	5	10	5		75	5					"		
80	85					90	10					Diopside-quartz skarn		
85	90		10		5	80	5					Diopside-hematite skarn		
90	95		10		5	80	5					"		
95	100		10		5	80	5					"		
100	105		10	15		70	5					Diopside-calcite-hem skarn		
105	110		10	10		65	5		10			"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
110	115		10	5		80	5				Diopside-hematite skarn		
115	120		10	10		80					Diop-cal-hem skarn		
120-130' Calcite (65%) - diopside (19%) - quartz (13%) skarn													
120	125		2	80		18					Calcite-diopside skarn		
125	130		2	40		18	40				Cal-qtz-diop skarn		
130-150' Diopside (64%) - calcite (16%) - quartz (10%) skarn													
130	135		5	20		55	20				Diopside-cal-qtz skarn		
135	140		5	20		50	10				"		
140	145		5	5		80	5				Diopside skarn		
145	150		5	20		70	5				Diopside-calcite skarn		
150-160' Quartz sandstone, calcite cement													
150	155		5	25			70				Quartz ss, calcite cmt		
155	160		5	25			70				"		
160-185' Diopside (69%) - quartz (19%) - calcite (15%) skarn													
160	165		5	20		20	55				Diopside-cal-qtz skarn		
165	170		5	10		75	10				Diopside skarn		
170	175		5	10		75	10				"		
175	180		2	13		75	10				"		
180	185		2	23		65	10				Diopside-calcite skarn		
185-210' Quartz sandstone, calcite cement													
185	190		2	23		10	65				Quartz ss, calcite cement		
190	195		5	25		20	50				"		
195	200		5	25		20	50				"		
200	205		5	25		5	65				"		
205	210		5	25		5	65				"		
210-235' Diopside (80%) - calcite (10%) - hematite (10%) skarn; quartz sandstone, calcite cement													
210	215		10	20		40	30				Diop-cal skn; qtz ss, cal cm	50% diop-cal-qtz skn; 50% qtz ss, cal cement	
215	220		10	20		40	30				"	"	
220	225		10	20		40	30				"	"	
225	230		10	20		40	30				"	"	
230	235		10	20		40	30				"	"	
235-270' Diopside (64%) - calcite (19%) skarn; minor hematite (7%)													
235	240		5	15		75	5				Diopside-calcite skarn		
240	245		5	15		75	5						
245	250		5	15		75	5						
250	255		5	15		75	5						
255	260		10	25		55	10				Diop-cal-qtz-hem skarn		
260	265		10	25		50	15				"		
265	270		10	25		45	20				"		



FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			

270-600' Muscovite aplite													
270	275	2									Muscovite aplite		
275	280	2									"		
280	285	2									"		
285	290	2									"		
290	295	2									"		
295	300	2									"		
300	305	2									"		
305	310	2									"		
310	315	2									"		
315	320	2									"		
320	325	2									"		
325	330	2									"		
330	335	2									"		
335	340	2									"		
340	345	2									"		
345	350	2									"		
350	355	2									"		
355	360	2									"		
360	365	2									"		
365	370	2									"		
370	375	2									"		
375	380	2									"		
380	385	2									"		
385	390	2									"		
390	395	2									"		
395	400	2									"		
400	405	1									"		
405	410	1									"		
410	415	1									"		
415	420	1									"		
420	425	1									"		
425	430	1									"		
430	435	1									"		
435	440	1									"		
440	445	1									"		
445	450	1									"		
450	455	1									"		
455	460	1									"		
460	465	1									"		
465	470	1									"		
470	475	1									"		
475	480	1									"		
480	485	1									"		
485	490	1									"		
490	495	1									"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
495	500		1								"		
500	505		1								Muscovite aplite		
505	510		1								"		
510	515		1								"		
515	520		1								"		
520	525		1								"		
525	530		1								"		
530	535		1								"		
535	540		1								"		
540	545		1								"		
545	550		1								"		
550	555		1								"		
555	560		1								"		
560	565		1								"		
565	570		1								"		
570	575		1								"		
575	580		1								"		
580	585		1								"		
585	590		1								"		
590	595		1								"		
595	600		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

## DRILL HOLE: EC-06-31 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,602/3,719,967

**Elevation:** 6839'

**Inclination:** 90°

**Date started:** April 10, 2006

**Date completed:** April 12, 2006

**Depth:** 710'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS	
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
From	To													
		0-50' Calcite (53%) - magnetite (35%) - hematite (12%) skarn												
0	5	20	10	70								Cal-mag-hem skarn		
5	10	20	10	70								"		
10	15	20	10	70								"		
15	20	35	10	55								"		
20	25	35	10	55								"		
25	30	40	15	45								"		
30	35	60	10	30								"		
35	40	40	15	45								"		
40	45	40	15	45								"		
45	50	40	15	45								"		
		50-80' Phlogopite (47%) - calcite (35%) - magnetite (10%) skarn; minor hematite (8%)												
50	55	15	5	55	30							Cal-phlog-mag skarn		
55	60	15	10	50	30							"		
60	65	15	10	50	30							"		
65	70	5	5	25	65							Phlog-cal skarn		
70	75	5	5	10	80							"		
75	80	5	10	20	45	20						Phlog-cal-diop skarn		
		80-95' Calcite (47%) - hematite (18%) - phlogopite (12%) - diopside (10%) skarn												
80	85		20	55	15	10						Cal-phlog-hem-diop skarn		
85	90		25	55	10	10						Cal-hem skarn		
90	95		10	30	10	10	40					" ; qtz ss, cal cmt		
		95-120' Calcite (38%) - magnetite (33%) - hematite (11%) ska												
95	100	30	10	20	10	30						Mag-di-cal-hem-phlog skn		
100	105	35	10	45	5	5						Mag-cal-hem skarn		
105	110	35	10	40	10	5						"		

FOOTAGE (feet)		MINERALS										ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
From	To													
110	115	35	10	40	10	5						Mag-cal-hem skarn		
115	120	30	15	45	5	5						"		
		120-135' Diopside (65%) - calcite (22%) skarn ; minor hemat												
120	125	5	15	20	5	55						Diop-cal-hem skarn		
125	130		5	15		80						Diop-cal skarn		
130	135		5	15		60	20					"	minor qtz ss, cal cmt	
		135-150' Quartz sandstone, calcite cement; minor hematite (10%)												
135	140		10	20		10	60					Qtz ss, cal cement		
140	145		10	20			70					"		
145	150		10	20			70					"		
		150-270' Diopside (67%) - calcite (16%) skarn; minor hematite (9%)												
150	155		10	20		70						Diop-cal-hem skarn		
155	160		15	20		65						"		
160	165		15	15	5	65						"		
165	170		10	10	5	75						"		
170	175		10	15		55	20					"	Minor qtz ss, cal cement	
175	180		10	15	5	50	20					"		
180	185		15	15	5	60	5					"		
185	190		15	15	5	60	5					"		
190	195		15	15		60	10					"		
195	200		10	15		75						"		
200	205		10	20		70						"		
205	210		10	20		65	5					"		
210	215		5	15		80						Diop-cal skarn		
215	220		2	8		90						Diopside skarn		
220	225		2	8		90						"		
225	230		10	20		50	20					Diop-cal-hem skarn	Minor qtz ss, cal cement	
230	235		10	20		50	20					"		
235	240		2	13		75	10					Diop-cal skarn		
240	245		2	13		75	10					"		
245	250		2	13		85						"		
250	255		2	18		80						"		
255	260		10	20		70						"		
260	265		10	20		50	20					Minor qtz ss, cal cement		
265	270		10	20		40	20		10			Diop-cal-trem-hem skn	"	
		270-280 Muscovite aplite												
270	275		5									Muscovite aplite		
275	280		5											
		280-295' Diopside (40%) - calcite (11%) - hematite (10%) skarn; aplite												
280	285		5	10		20	10					Diop-cal skn; aplite	50% diop-cal skn; 50% aplite	
285	290		10	10		20	5					Diop-cal-hem skn; aplite	" ; "	
290	295		15	15		20	5					" ; "	" ; "	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		295-700' Muscovite aplite											
295	300		5								Muscovite aplite		
300	305		2								"		
305	310		2								"		
310	315		1								"		
315	320		1								"		
320	325		1								"		
325	330		1								"		
330	335		1								"		
335	340		1								"		
340	345		1								"		
345	350		1								"		
350	355		1								"		
355	360		1								"		
360	365		1								"		
365	370		1								"		
370	375		1								"		
375	380		1								"		
380	385		1								"		
385	390		1								"		
390	395		1								"		
395	400		1								"		
400	405		1								"		
405	410		1								"		
410	415		1								"		
415	420		1								"		
420	425		1								"		
425	430		1								"		
430	435		1								"		
435	440		1								"		
440	445		1								"		
445	450		1								"		
450	455		5								"		
455	460		5								"		
460	465		5								"		
465	470		5								"		
470	475		5								"		
475	480		1								"		
480	485		1								"		
485	490		1								"		
490	495		1								"		
495	500		1								"		
500	505		1								"		
505	510		1								"		
510	515		1								"		
515	520		1								"		
520	525		1								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
525	530		1								Muscovite aplite		
530	535		5								"		
535	540		5								"		
540	545		5								"		
545	550		5								"		
550	555		10								"		
555	560		10								"		
560	565		10								"		
565	570		10								"		
570	575		10								"		
575	580		10								"		
580	585		10								"		
585	590		10								"		
590	595		10								"		
595	600		1								"		
600	605		1								"		
605	610		1								"		
610	615		1								"		
615	620		1								"		
620	625		1								"		
625	630		1								"		
630	635		1								"		
635	640		1								"		
640	645		1								"		
645	650		1								"		
650	655		1								"		
655	660		1								"		
660	665		1								"		
665	670		1								"		
670	675		1								"		
675	680		1								"		
680	685		1								"		
685	690		1								"		
690	695		1								"		
695	700		1								"		
700	705		1								"		
705	710		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-32 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,601/3,719,877

**Elevation:** 6836'

**Inclination:** 90°

**Date started:** April 14, 2006

**Date completed:** April 17, 2006

**Depth:** 530'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-40' Calcite (55%) - magnetite (36%) skarn; minor hematite (9%)											
0	5	20	10	70							Cal-mag-hem skn		
5	10	20	10	70							"		
10	15	20	10	70							"		
15	20	40	10	50							"		
20	25	25	5	70							"		
25	30	40	10	50							"		
30	35	80	10	10							Mag-cal-hem skn		
35	40	40	10	50							"		
		40-65' Crystalline limestone											
40	45		2	98							Crystalline ls		
45	50		2	98							"		
50	55		2	98							"		
55	60		2	98							"		
60	65		2	98							"		
		65-80' Calcite (65%) - magnetite (19%) - hematite (10%) skar											
65	70	20	10	65	5						Cal-mag-hem skn		
70	75	20	10	60	10						"		
75	80	15	10	70	5						"		
		80-105' Calcite (43%) - phlogopite (28%) - diopside (11%) - hematite (10%) skarn											
80	85		10	50	30				10		Cal-phlog-trem-hem skn		
85	90		10	40	30	10			10		"		
90	95		15	35	30	10			10		"		
95	100		10	25	30	25			10		Phlog-diop-trem-hem skn		
100	105		5	65	20	10					Cal-phlog-diop skn		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		105-145' Calcite (44%) - magnetite (39%) skarn; minor hematite (9%)											
105	110	40	5	45	10						Cal-mag-phlog skn		
110	115	30	10	50	10						Cal-mag-phlog-hem skn		
115	120	30	10	50	10						"		
120	125	30	10	50	10						"		
125	130	50	10	30	10						Mag-cal-phlog-hem skn		
130	135	60	10	20	10						"		
135	140	50	10	30	10						"		
140	145	20	5	75							Cal-mag skn		
		145-155' Quartz sandstone, calcite cement											
145	150	5	2	28			65				Qtz ss, cal cmt		
150	155	5	2	28			65				"		
		155-190' Diopside (58%) - calcite (25%) skarn; minor hematite (8%)											
155	160	5	10	70	5	10					Cal-phlog-hem skn		
160	165	5	5	10	10	70					Diop-cal-phlog skn		
165	170		5	15		80					Diopside-calcite skarn		
170	175		10	15	10	65					Diop-cal-phlog-hem skn		
175	180	10	5	15	10	60					Diop-cal-phlog-mag skn		
180	185		10	15	5	70					Diop-cal-hem skn		
185	190		10	35	5	50					"		
		190-230' Calcite (83%) - hematite (12%) skarn											
190	195		10	80		10					Cal-diop-hem skn		
195	200		10	75	5	10					"		
200	205		10	85		5					Cal-hem skn		
205	210		10	85		5					"		
210	215		10	90							"		
215	220		15	85							"		
220	225		15	85							"		
225	230		15	80		5					"		
		230-310' Diopside (61%) - calcite (17%) skarn; minor hemati											
230	235			15	70	15					Phlog-cal-diop skn		
235	240			15	10	75					Diop-cal-phlog skn		
240	245			20	15	65					"		
245	250			20	25	55					"		
250	255		5	20	10	65					"		
255	260		5	20	20	55					"		
260	265		5	20	20	55					"		
265	270		10	15	5	70					Diop-cal-hem skn		
270	275		10	15	5	70					"		
275	280		10	15	5	70					"		
280	285		10	15	5	70					"		
285	290		10	15	5	70					"		
290	295		10	20	10	60					Diop-phlog-hem skn		



FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
295	300		10	15	5	55			15		Diop-cal-trem-hem skn		
300	305		15	15	5	65					Diop-cal-hem skn		
305	310		10	20		70					"		
310-320' Quartz sandstone, calcite cement													
310	315		2	28		70					Qtz ss, cal cement		
315	320		2	28		70					"		
320-530' Muscovite aplite													
320	325		1								Muscovite aplite		
325	330		1								"		
330	335		1								"		
335	340		1								"		
340	345		1								"		
345	350		1								"		
350	355		1								"		
355	360		1								"		
360	365		1								"		
365	370		1								"		
370	375		1								"		
375	380		1								"		
380	385		1								"		
385	390		1								"		
390	395		1								"		
395	400		1								"		
400	405		1								"		
405	410		1								"		
410	415		1								"		
415	420		2								"		
420	425		2								"		
425	430		2								"		
430	435		2								"		
435	440		1								"		
440	445		1								"		
445	450		1								"		
450	455		1								"		
455	460		1								"		
460	465		1								"		
465	470		1								"		
470	475		1								"		
475	480		1								"		
480	485		1								"		
485	490		1								"		
490	495		1								"		
495	500		1								"		
500	505		1								"		
505	510		1								"		
510	515		1								"		
515	520		1								"		
520	525		1								"		
525	530		1								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
END OF HOLE													

# **REVERSE CIRCULATION DRILL CUTTINGS LOG**

## **DRILL HOLE: EC-06-33 (Reverse Circulation)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,603/3,719,762

**Elevation:** 6849'

**Inclination:** 90°

**Date started:** April 18, 2006

**Date completed:** April 20, 2006

**Depth:** 600'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS	
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay				
From	To													
		0-35' Calcite (53%) - magnetite (28%) - hematite (11%) skarn												
0	5	20	10	70								Cal-mag-hem skn		
5	10	20	10	70								"		
10	15	20	10	70								"		
15	20	20	10	70								"		
20	25	60	15	25								Mag-cal-hem skn		
25	30	40	15	45								"		
30	35	15	10	75								Cal-mag-hem skn		
		35-45' Crystalline limestone												
35	40	5	5	90								Crystalline limestone		
40	45	10	5	85								"		
		45-70' Calcite (47%) - phlogopite (35%) skarn; minor magnetite (9%), hematite (9%)												
45	50	15	10	75								Cal-mag-hem skn	50% xline ls	
50	55	15	10	65	10							"	"	
55	60	5	5	10	80							Phlog-cal skn		
60	65	5	5	10	80							"		
65	70	5	15	75	5							Cal-hem skn		
		70-85' Calcite (57%) - diopside (22%) - hematite (11%) skarn												
70	75		15	20	5	60						Diop-cal-hem skn		
75	80		15	70	10	5						Cal-hem-phlog skn		
80	85		10	80	10							"		
		85-95' Calcite (75%) - magnetite (15%) - hematite (10%) skarn												
85	90	15	10	75								Cal-mag-hem skn		
90	95	15	10	75								"	50% xline ls	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS		
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay					
		95-115' Crystalline limestone													
95	100			100							Crystalline ls " " 20% cal-mag-hem skn	50% cal-mag-hem skn			
100	105			100											
105	110			100											
110	115			100											
		115-130' Magnetite (40%) - calcite (40%)) - hematite (17%) skarn													
115	120	60	15	25							Mag-cal-hem skn " Cal-mag-hem skn				
120	125	40	15	40	5										
125	130	20	20	55	5										
		130-145' Quartz sandstone, calcite cement; minor hematite (7%)													
130	135	5	10	65			20				Cal-hem skn Qtz ss, cal cmt "	Minor qtz ss, cal cmt			
135	140		5	35		10	50								
140	145		5	35		10	50								
		145-175' Calcite (58%) - diopside (23%) - hematite (12%) skarn													
145	150		10	20		70					Diop-cal-hem skn Cal-diop-hem skn Cal-diop-phlog-hem skn " " Cal-diop-hem skn	Minor qtz ss, cal cmt			
150	155		15	60	5	20									
155	160		10	70	10	10									
160	165		10	70	10	10									
165	170		10	70	10	10									
170	175		15	60	5	15			5						
		175-190' Diopside (75%) - calcite (15%) - hematite (10%) skarn													
175	180		10	15		75					Diop-cal-hem skn " "				
180	185		10	15		75									
185	190		10	15		75									
		190-215' Calcite (80%) - diopside (10%) - hematite (10%) skarn													
190	195		10	80		10					Cal-diop-hem skn Cal-hem skn Cal-diop-hem skn " "				
195	200		10	90											
200	205		10	80		10									
205	210		10	80		10									
210	215		10	70		20									
		215-285' Diopside (85%) - calcite (15%) - hematite (10%) skarn													
215	220		10	20	5	65					Diop-cal-hem skn " " Diop-phlog-cal-hem skn " Diop-cal-hem skn " " Diop-phlog-cal skn				
220	225		10	20	5	65									
225	230		15	20	5	60									
230	235		10	15	20	55									
235	240		15	15	15	55									
240	245		10	15	5	70									
245	250		10	15	5	70									
250	255		10	15	5	70									
255	260		5	10	20	65									

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
260	265		10	15	5	70					Diop-cal-hem skn		
265	270		10	15	5	70					"		
270	275		5	15	5	75					Diop-cal-skn		
275	280		5	10	5	80					"		
280	285		10	10		80					Diop-cal-hem skn		
		285-300' Quartz sandstone, calcite cement											
285	290		5	20		10	65				Qtz ss, cal cmt		
290	295		2	28		70					"		
295	300		2	28		70					"		
		300-315' Calcite (73%) - diopside (20%) skarn; minor hematite (7%)											
300	305		10	70		20					Cal-diop-hem skn		
305	310		5	85		10					Cal-diop skn		
310	315		5	65		30					"		
		315-325' Diopside (75%) - calcite (17%) - hematite (12%) skarn											
315	320		5	15		80					Diop-cal skn		
320	325		10	20		70					Diop-cal-hem skn		
		325-340' Muscovite aplite; hematite (11%)											
325	330		10								Muscovite aplite	20% diop-cal-hem skn	
330	335		10								"	"	
335	340		15								"		
		340-600' Muscovite aplite											
340	345		1								Muscovite aplite		
345	350		1								"		
350	355		1								"		
355	360		1								"		
360	365		1								"		
365	370		1								"		
370	375		1								"		
375	380		1								"		
380	385		1								"		
385	390		1								"		
390	395		1								"		
395	400		1								"		
400	405		1								"		
405	410		1								"		
410	415		1								"		
415	420		1								"		
420	425		1								"		
425	430		1								"		
430	435		1								"		
435	440		1								"		
440	445		1								"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
445	450		1								"		
450	455		1								"		
455	460		1								"		
460	465		1								"		
465	470		1								"		
470	475		1								"		
475	480		1								"		
480	485		1								"		
485	490		1								"		
490	495		1								"		
495	500		1								"		
500	505		1								"		
505	510		1								"		
510	515		1								"		
515	520		1								"		
520	525		1								"		
525	530		1								"		
530	535		1								"		
535	540		1								"		
540	545		1								"		
545	550		1								"		
550	555		1								"		
555	560		1								"		
560	565		1								"		
565	570		1								"		
570	575		1								"		
575	580		1								"		
580	585		1								"		
585	590		1								"		
590	595		1								"		
595	600		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-34 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,190/3,720,010

**Elevation:** 6836'

**Inclination:** 90°

**Date started:** May 8, 2006

**Date completed:** May 11, 2006

**Depth:** 400'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-120' Limestone, crystalline limestone											
0	5			100							Ls, Xline ls	50% gray ls; 50% wht xline ls	
5	10			100							"	"	
10	15		2	98							Limestone	20% wht xline ls	
15	20		1	99							"	"	
20	25		1	99							"	"	
25	30		1	99							"	"	
30	35		1	98							"	"	
35	40		1	99							"	"	
40	45		1	99							"	"	
45	50		1	99							Crystalline ls		
50	55		1	99							"		
55	60		1	99							Limestone	40% wht xline ls	
60	65		1	99							"	50% wht xline ls	
65	70			100							"	10% wht xline ls	
70	75			100							"	40% wht xline ls	
75	80			100							"	40% wht xline ls	
80	85			100							"	30% wht xline ls	
85	90			100							"	20% wht xline ls	
90	95		1	99							Crystalline ls		
95	100		1	99							"		
100	105		1	99							"		
105	110		1	99							"		
110	115		1	99							Limestone		
115	120		1	99							"	20% wht xline ls	
		120-165' Quartz sandstone, calcite cement											
120	125		1	29			70				Qtz ss, cal cmt	20% gray ls	
125	130		1	29			70				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
130	135		1	29			70				"		
135	140		1	29			70				"		
140	145			30			70				"		
145	150			30			70				"		
150	155			30			70				"		
155	160			30			70				"		
160	165			30			70				"		
		165-215' Crystalline limestone											
165	170		1	99							Crystalline limestone		
170	175		1	99							"		
175	180		1	99							"		
180	185		1	99							"		
185	190		2	98							"		
190	195		2	98							"		
195	200		1	99							"		
200	205		1	99							"		
205	210		1	99							"	20% qtz ss, cal cmt	
210	215		1	99							"	40% gray ls	
		215-220' Calcite (60%) - diopside (30%) - hematite (10%) skarn											
215	220		10	60		30					Cal-diop-hem skarn		
		220-240' Quartz sandstone, calcite cement											
220	225		5	25		70					Qtz ss, cal cmt		
225	230		5	25		70					"	20% wht xline ls	
230	235		5	25		70					"		
235	240		5	25		70					"	40% wht xline ls	
		240-260' Calcite (64%) - diopside (24%) - hematite (12%) skarn											
240	245		10	85		5					Cal-hem skn		
245	250		15	55		30					Cal-diop-hem skn		
250	255		15	75		10					"		
255	260		10	40		50					Diop-cal-hem skn		
		260-395' Quartz sandstone, calcite cement											
260	265		2	28			70				Qtz ss, cal cmt		
265	270		2	28			70				"		
270	275		5	25			70				"		
275	280		5	25			70				"		
280	285		5	25			70				"		
285	290		5	25			70				"		
290	295		5	25			70				"		
295	300		2	28			70				"		
300	305		2	28			70				"		
305	310		2	28			70				"		
310	315		2	28			70				"		
315	320		2	28			70				"		



FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
320	325		1	29			70				"		
325	330		2	28			70				"		
330	335		2	28			70				"		
335	340		2	28			70				"		
340	345		2	28			70				"		
345	350		2	28			70				"		
350	355		2	28			70				"		
355	360		2	28			70				"		
360	365		2	28			70				"		
365	370		2	28			70				"		
370	375		2	28			70				"		
375	380		2	28			70				"		
380	385		2	28			70				"		
385	390		2	28			70				"		
390	395		2	28			70				"		
		395-400' Muscovite aplite											
395	400		1								Muscovite aplite		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-35 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,125/3,719,910

**Elevation:** 6818'

**Inclination:** 90°

**Date started:** May 3, 2006

**Date completed:** May 5, 2006

**Depth:** 400'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-120' Limestone, crystalline limestone											
0	5		1	99							Limestone	20% wht xline ls	
5	10		1	99							"	10% wht xline ls	
10	15		1	99							"		
15	20		1	99							"		
20	25		1	99							"		
25	30		1	99							"		
30	35		1	99							"		
35	40		1	99							"		
40	45		1	99							Crystalline ls		
45	50		1	99							"		
50	55		1	99							"		
55	60		1	99							"	30% gray ls	
60	65		1	99							"	"	
65	70		1	99							"	"	
70	75		1	99							"	"	
75	80		1	99							"	"	
80	85		1	99							"	40% gray ls	
85	90		1	99							"		
90	95		1	99							"		
95	100		1	99							"	30% gray ls	
100	105			100							Limestone		
105	110			100							"		
110	115			100							"		
115	120		5	95							"	10% qtz ss, cal cmt	
		120-160' Quartz sandstone, calcite cement											
120	125			30			70				Qtz ss, cal cmt		
125	130		2	28			70				"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
130	135		1	29			70				Qtz ss, cal cmt		
135	140		1	29			70				"		
140	145		1	29			70				"		
145	150		1	29			70				"		
150	155		1	29			70				"		
155	160		1	29			70				"		
		160-210' Crystalline limestone											
160	165		1	99							Crystalline limestone		
165	170		1	99							"		
170	175		1	99							"		
175	180		1	99							"		
180	185		1	99							"		
185	190		1	99							"		
190	195		1	99							"		
195	200		2	98							"		
200	205		2	98							"		
205	210		2	98							"	20% gray ls	
		210-235' Quartz sandstone, calcite cement											
210	215		3	27			70				Qtz ss, cal cmt		
215	220		10	20			70				"		
220	225		10	20			70				"		
225	230		5	25			70				"		
230	235		5	25			70				"		
		235-250' Calcite (70%) skarn; minor hematite (8%), magnetite (7%)											
235	240		10	70	5	15					Cal-diop-hem skn		
240	245	15	5	70	5	5					Cal-mag skn	40% gray ls	
245	250	5	10	70	5	5					Cal-hem skn	20% gray ls	
		250-310' Quartz sandstone, calcite cement											
250	255		5	25			70				Qtz ss, cal cmt		
255	260		5	25			70				"		
260	265		5	25			70				"		
265	270		5	25			70				"		
270	275		2	28			70				"		
275	280		2	28			70				"		
280	285		2	28			70				"		
285	290		5	25			70				"		
290	295		1	29			70				"		
295	300		1	29			70				"		
300	305		1	29			70				"		
305	310		5	25			70				"		
		310-345' Diopside (36%) - calcite (28%) - quartz (23%) - hematite (12%) skarn											
310	315		5	45		20	30				Cal-diop-qtz skn	30% qtz ss, cal cmt	
315	320		15	45		20	20				Cal-diop-qtz-hem skn		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
320	325		10	40		20	30				"		
325	330		15	25		30	30				Diop-qtz-cal-hem skn		
330	335		15	15		50	20				"		
335	340		15	15		50	20				"		
340	345		10	15		65	10				"	20% muscovite aplite	
345-400' Muscovite aplite													
345	350		1								Muscovite aplite		
350	355		1								"		
355	360		1								"		
360	365		1								"		
365	370		1								"		
370	375		1								"		
375	380		1								"		
380	385		1								"		
385	390		1								"		
390	395		1								"		
395	400		1								"		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE:** EC-06-36 (Reverse Circulation)

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,180/3,719,823

**Elevation:** 6819'

**Inclination:** 90°

**Date started:** May 5, 2006

**Date completed:** May 14, 2006

**Depth:** 300'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
		0-100' Crystalline limestone											
0	5		1	99							Limestone	20% gray ls 10% gray ls " 10% wht xline ls " 10% gray ls " 10% xline ls "<	

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
From	To	Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
130	135		2	28			70				"		
135	140		2	28			70				"		
140-150' Muscovite aplite													
140	145		1								Muscovite aplite	20% qtz ss, cal cmt	
145	150		1								"		
150-170' Crystalline limestone; limestone													
150	155			100							Crystalline ls		
155	160		1	99							Limestone	10% wht xlinels	
160	165		1	99							"	"	
165	170		1	99							Crystalline ls	20% gray ls	
170	175		1	99							"	"	
175-250' Quartz sandstone, calcite cement													
175	180		1	29			70				Qtz ss, cal cmt		
180	185			39			70				"		
185	190		5	25			70				"		
190	195		2	28			70				"	20% xline ls; 10% musc apl	
195	200		2	28			70				"	"	
200	205		2	28			70				"	"	
205	210		2	28			70				"	10% xline ls	
210	215		2	28			70				"	"	
215	220		2	28			70				"	20% xline ls	
220	225		2	28			70				"	"	
225	230		5	25			70				"	30% xline ls; 20% gray ls	
230	235		5	25			70				"	80% gray ls	
235	240		5	25			70				"	5% xline ls	
240	245		10	20			70				"		
245	250		5	25			70				"		
250-265' Calcite (82%) - hematite (18%) skarn													
250	255		15	85							Cal-hem skn		
255	260		20	80							"		
260	265		20	80							"		
265-295' Calcite (36%) - diopside (28%) - hematite (18%) skarn													
265	270		20	50		30					Cal-diop-hem skn		
270	275		20	30		50					Diop-cal-hem skn		
275	280		25	45		30					Cal-diop-hem skn		
280	285		20	50		30					"		
285	290		10	55		15	20				Cal-qtz-diop-hem skn		
290	295		10	55		15	20				"		
295-300' Quartz sandstone, calcite cement													
295	300		10	25			65				Qtz ss, cal cmt		
END OF HOLE													

# REVERSE CIRCULATION DRILL CUTTINGS LOG

**DRILL HOLE: EC-06-37 (Reverse Circulation)**

**Company:** El Capitan Precious Metals, Inc. Scottsdale, AZ

**Property:** El Capitan, Lincoln Co., New Mexico

**Drilling Company:** Harris Exploration Drilling, San Diego, CA

**Location (UTM):** 448,010/3,719,910

**Elevation:** 6779'

**Inclination:** 90°

**Date started:** May 13, 2006

**Date completed:** May 13, 2006

**Depth:** 300'

**Cuttings stored at:** Capitan Storage, 406 2nd St., Capitan, NM; unit 24-A; M.L. Nunley, P.O. Box 459, Ruidoso, NM 88355; (505) 937-0635

**Drilling supervised by:** C.L. Smith

**Cuttings shipped to assayer by:** G. Stephen IV

**Assayer:** Auric Metallurgical Laboratories, Salt Lake City, UT

**Geologic log by:** C.L. Smith

**Confirmation of chain-of-custody sample to assayer by:** C.L. Smith

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		0-85' Limestone, crystalline limestone											
0	5		1	99							Limestone		
5	10		1	99							"		
10	15		1	99							"	40% xline ls	
15	20		2	98							Crystalline limestone	10% gray ls	
20	25		1	99							Limestone	10% xline ls	
25	30		1	99							"	"	
30	35		1	99							"	"	
35	40		1	99							Xline ls	20% gray ls	
40	45		1	99							Limestone	20% xline ls	
45	50		1	99							"	30% xline ls	
50	55		2	98							Crystalline limestone		
55	60		2	98							"		
60	65		2	98							"		
65	70			100							Limestone		
70	75			100							"		
75	80		1	99							"		
80	85			100							"		
		85-130' Quartz sandstone, calcite cement											
85	90		25			75					Qtz sandstone, cal cement		
90	95		25			75					"	20% gray ls	
95	100		25			75					"	30% gray ls	
100	105	1	24			75					"		
105	110	1	24			75					"		
110	115	2	23			75					"		
115	120	2	23			75					"		
120	125	2	23			75					"		
125	130	2	23			75					"		

FOOTAGE (feet)		MINERALS									ROCK TYPE	REMARKS	ASSAY RESULTS
		Magnetite	Hematite	Calcite	Phlogopite	Diopside	Quartz	Fluorite	Tremolite	Clay			
From	To												
		130-170' Crystalline limestone, limestone											
130	135		1	99							Limestone	10% wht xline ls	
135	140		1	99							"	"	
140	145		1	99							"	"	
145	150		1	99							Crystalline limestone	10% gray ls	
150	155		1	99							"	20% gray ls	
155	160		1	99							"	"	
160	165		2	98							"	"	
165	170		2	98							"	30% gray ls	
		170-200' Quartz sandstone, calcite cement											
170	175		2	23			75				Qtz ss, cal cmt		
175	180		5	20			75				"		
180	185		5	20			75				"		
185	190		5	20			75				"		
190	195		5	20			75				"		
195	200		5	20			75				"		
		200-210' Limestone											
200	205		2	98							Limestone		
205	210		2	98							"		
		210-300' Quartz sandstone, calcite cement											
210	215		5	20			75				Qtz ss, cal cmt		
215	220		5	20			75				"		
220	225		1	24			75				"		
225	230		1	24			75				"		
230	235		1	24			75				"		
235	240		1	24			75				"		
240	245		1	24			75				"		
245	250		2	23			75				"		
250	255		2	23			75				"		
255	260		1	24			75				"		
260	265		1	24			75				"		
265	270		1	24			75				"		
270	275		1	24			75				"		
275	280		1	24			75				"		
280	285		1	24			75				"		
285	290		1	24			75				"		
290	295		1	24			75				"		
295	300		1	24			75				"		
END OF HOLE													



## **Appendix 6**

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### **Auric Caustic Fusion Assay Results on Drill Samples**

Note: In those cases where non-mag% is listed, Auric reported results only for this percentage of the sample. Auric separated these samples into magnetic (magnetite) and non-magnetic fractions and discarded the magnetic, having determined that all significant Au, Ag, Pt were contained in the non-magnetic fractions only. The Au, Ag, Pt numbers listed here have, therefore, been diluted from those reported by Auric in order to represent 100% of the samples.

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-01	0	5	0.007	0.013	0.016	31.00	45.84	67.63	50.1
EC-05-01	5	10	0.002	0.011	0.009	42.88	62.37	68.75	31.3
EC-05-01	10	15	0.003	0.006	0.006	44.63	64.46	69.23	29.0
EC-05-01	15	20	0.003	0.005	0.004	50.00	72.22	69.23	21.2
EC-05-01	20	28	0.004	0.012	0.011	38.38	56.09	68.43	38.5
EC-05-01	28	38	0.006	0.562	0.025	NS			
EC-05-01	38	48	0.007	0.019	0.028	NS			
EC-05-01	48	57.5	0.008	0.538	0.032	NS			
EC-05-01	57.5	63	0.011	0.021	0.036	NS			96.9
EC-05-01	63	68	0.009	0.082	0.034	NS			96.9
EC-05-01	68	73	0.005	0.020	0.018	NS			
EC-05-01	73	78	0.007	0.026	0.039	NS			
EC-05-01	78	83	0.006	0.032	0.024	NS			
EC-05-01	83	89	0.005	0.019	0.016	NS			
EC-05-01	89	94	0.007	0.148	0.034	NS			
EC-05-01	94	99	0.015	0.020	0.025	NS			
EC-05-02	0	4.5	0.002	0.005	0.006	49.67	71.67	69.31	21.5
EC-05-02	4.5	7.5	0.025	0.061	0.009	NS			
EC-05-02	7.5	12	0.033	0.071	0.008	NS			
EC-05-02	12	20	0.021	0.047	0.008	NS			
EC-05-02	20	30	0.010	0.214	0.034	NS			
EC-05-02	30	40	0.007	0.133	0.009	NS			
EC-05-02	40	50	0.008	0.010	0.020	NS			
EC-05-02	50	55	0.016	0.039	0.008	NS			
EC-05-02	55	60	0.012	0.682	0.013	NS			
EC-05-02	60	65	0.008	0.029	0.008	NS			
EC-05-02	65	70	0.018	0.049	0.021	NS			
EC-05-02	70	75	0.006	0.084	0.026	NS			82.3
EC-05-02	75	80	0.005	0.013	0.018	10.81	16.12	67.06	71.9
EC-05-02	80	85	0.003	0.005	0.011	32.71	49.89	65.56	33.6
EC-05-02	85	90	0.002	0.016	0.008	44.92	67.19	66.86	20.5
EC-05-02	90	95	0.002	0.022	0.008	34.96	63.17	55.35	23.9
EC-05-02	95	100	0.004	0.041	0.022	24.36	36.62	66.52	52.3
EC-05-02	100	105	0.004	0.013	0.013	28.62	41.20	69.47	50.1
EC-05-02	105	109	0.004	0.018	0.014	27.97	40.22	69.55	51.1
EC-05-02	109	118	0.015	0.029	0.009	NS			
EC-05-03	0	5	0.011	0.052	0.011	14.91	22.30	66.84	
EC-05-03	5	10	0.001	0.005	0.002	40.85	60.12	67.95	24.5
EC-05-03	10	14	0.003	0.025	0.019	23.93	34.97	68.43	43.0
EC-05-03	14	20	0.012	0.044	0.019	NS			
EC-05-03	20	23	0.011	0.040	0.010	NS			
EC-05-03	23	28	NS	NS	NS	NS			
EC-05-03	28	35	0.013	0.067	0.018	NS			
EC-05-03	35	40	0.011	0.240	0.010	10.08	14.53	69.37	

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-03	100	105	0.013	0.081	0.040	NS			
EC-05-03	105	110	0.019	0.033	0.041	NS			
EC-05-03	110	115	0.016	0.025	0.046	NS			
EC-05-03	115	120	0.019	0.030	0.044	NS			
EC-05-03	120	125	0.015	0.020	0.047	NS			
EC-05-03	125	130	0.025	0.019	0.044	NS			
EC-05-03	130	133	0.008	0.018	0.030	NS			
EC-05-04	0	4	0.039	0.003	0.000	41.32	60.53	68.27	30.9
EC-05-04	4	7	NS	NS	NS	NS			
EC-05-04	7	15	0.041	0.268	0.009	NS			
EC-05-04	15	20	0.019	0.000	0.006	NS			
EC-05-04	20	30	0.030	0.964	0.008	NS			
EC-05-04	30	38	0.017	0.324	0.007	NS			
EC-05-04A	0	38	NS	NS	NS	NS			
EC-05-04A	38	46	0.006	0.000	0.004	NS			
EC-05-04A	46	50	0.014	0.054	0.004	NS			
EC-05-04A	50	55	0.015	0.040	0.003	NS			
EC-05-04A	55	60	0.020	0.062	0.005	NS			
EC-05-04A	60	65	0.017	0.048	0.004	NS			
EC-05-04A	65	70	0.022	0.035	0.007	NS			
EC-05-04A	70	75	0.018	0.034	0.006	NS			
EC-05-04A	75	80	0.013	0.098	0.009	NS			
EC-05-04A	80	85	0.023	0.088	0.014	NS			78.4
EC-05-04A	85	89	0.006	0.039	0.004	NS			19.3
EC-05-04A	89	95	0.019	0.075	0.017	NS			
EC-05-04A	95	100	0.018	0.052	0.020	NS			81.8
EC-05-04A	100	105	0.012	0.060	0.022	NS			
EC-05-04A	105	111	0.020	0.186	0.013	NS			55.4
EC-05-04A	111	115	0.011	0.035	0.024	NS			
EC-05-04A	115	120	0.011	0.035	0.027	NS			
EC-05-04A	120	125	0.009	0.020	0.028	NS			
EC-05-04A	125	130	0.010	0.015	0.028	NS			
EC-05-04A	130	136	0.008	0.087	0.027	NS			
EC-05-05	0	5	0.005	0.008	0.007	29.44	46.02	63.97	35.9
EC-05-05	5	10	0.006	0.026	0.016	13.94	20.54	67.87	
EC-05-05	10	15	0.006	0.030	0.015	NS			
EC-05-05	15	20	0.004	0.011	0.002	17.13	28.72	59.66	
EC-05-05	20	25	0.003	0.010	0.009	15.89	24.51	64.84	54.5
EC-05-05	25	30	0.005	0.010	0.005	27.39	43.80	62.53	32.0
EC-05-05	30	35	0.005	0.019	0.008	28.31	45.27	62.53	53.2
EC-05-05	35	41	0.010	0.016	0.007	26.88	39.93	67.32	49.2
EC-05-05	41	45	0.006	0.252	0.000	NS			
EC-05-05	45	47	NS	NS	NS	NS			
EC-05-05	47	50	0.010	0.019	0.008	NS			
EC-05-05	50	55	0.001	0.126	0.000	NS			
EC-05-05	55	60	0.010	0.041	0.014	NS			
EC-05-05	60	65	0.014	0.018	0.017	NS			
EC-05-05	65	70	0.014	0.766	0.022	NS			
EC-05-05	70	75	0.013	0.226	0.006	NS			
EC-05-05	75	80	0.010	0.380	0.000	NS			
EC-05-05	80	85	0.015	0.207	0.000	NS			
EC-05-05	85	90	0.010	0.164	0.000	NS			
EC-05-05	90	95	0.010	0.030	0.007	NS			
EC-05-05	95	100	0.010	0.060	0.007	NS			
EC-05-05	100	103.5	0.007	0.031	0.003	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-06	0	5	0.410	0.134	0.002	11.59	16.74	69.23	74.2
EC-05-06	5	10	0.034	0.023	0.006	23.35	34.68	67.32	56.8
EC-05-06	10	15	0.014	0.011	0.000	29.55	43.13	68.51	44.0
EC-05-06	15	21	0.007	0.025	0.000	NS			
EC-05-06	21	27	0.009	0.022	0.007	NS			
EC-05-06	27	31	0.012	0.005	0.000	32.54	52.80	61.62	28.7
EC-05-06	31	33	0.006	0.134	0.043	32.54	52.80	61.62	
EC-05-06	33	39	0.010	0.016	0.002	27.40	44.35	61.78	38.2
EC-05-06	39	45	0.002	0.024	0.040	NS			
EC-05-06	45	50	0.003	6.538	0.037	NS			
EC-05-06	50	55	0.010	0.335	0.019	NS			
EC-05-06	55	60	0.002	0.028	0.015	NS			
EC-05-06	60	65	0.009	0.090	0.019	NS			
EC-05-06	65	70	0.002	0.031	0.016	NS			
EC-05-06	70	75	0.010	0.130	0.014	NS			
EC-05-06	75	78	0.097	0.041	0.019	NS			
EC-05-06	78	81	0.094	0.029	0.005	31.06	45.67	68.01	30.0
EC-05-06A	0	81	NS	NS	NS	NS			
EC-05-06A	81	87	0.131	0.068	0.013	NS			62.5
EC-05-06A	87	95	0.080	0.094	0.013	NS			75.9
EC-05-06A	95	100	0.042	0.099	0.011	NS			
EC-05-06A	100	105	0.010	0.078	0.005	NS			
EC-05-06A	105	110	0.018	0.080	0.005	NS			
EC-05-06A	110	115	0.020	0.107	0.007	NS			
EC-05-06A	115	120	0.026	0.209	0.009	NS			
EC-05-06A	120	125	0.018	0.222	0.006	NS			
EC-05-06A	125	130	0.018	0.188	0.007	NS			
EC-05-06A	130	135	0.016	0.117	0.004	NS			
EC-05-06A	135	140	0.015	0.097	0.012	NS			
EC-05-06A	140	145	0.014	0.065	0.017	NS			
EC-05-06A	145	150	0.010	0.039	0.015	NS			
EC-05-06A	150	155	0.013	0.034	0.018	NS			
EC-05-06A	155	160	0.015	0.070	0.010	NS			
EC-05-06A	160	165	0.013	0.051	0.009	NS			
EC-05-06A	165	169	0.018	0.028	0.008	NS			
EC-05-06A	169	173	0.028	0.022	0.016	NS			
EC-05-06A	173	178	0.026	0.019	0.005	NS			
EC-05-06A	178	183	0.012	0.027	0.003	NS			
EC-05-06A	183	188	0.013	0.016	0.021	NS			
EC-05-06A	188	193	0.019	0.025	0.019	NS			
EC-05-06A	193	197	0.018	0.038	0.021	NS			
EC-05-06A	197	200	0.012	0.021	0.022	NS			
EC-05-06A	200	206	0.010	0.044	0.023	NS			
EC-05-07	0	5	0.013	0.683	0.012	2.28	3.34	68.34	
EC-05-07	5	10	0.010	0.216	0.008	NS			
EC-05-07	10	15	0.015	0.017	0.000	46.01	66.95	68.73	24.8
EC-05-07	15	20	0.012	0.058	0.000	49.84	70.64	70.56	16.2
EC-05-07	20	25	0.010	0.007	0.000	45.09	64.41	70.01	23.8
EC-05-07	25	30	0.126	0.000	0.000	NS			
EC-05-07	30	37	0.148	0.000	0.000	NS			
EC-05-07	37	48	0.028	0.023	0.000	NS			
EC-05-07	48	54	0.028	0.103	0.000	NS			
EC-05-07	54	60	NS	NS	NS	NS			
EC-05-07	60	65	0.028	0.092	0.000	NS			
EC-05-07	65	70	0.006	0.000	0.000	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-07	70	80	0.019	0.018	0.019	NS			
EC-05-07	80	85	0.084	0.068	0.014	NS			
EC-05-07	85	90	0.009	0.027	0.000	31.95	48.11	66.41	37.6
EC-05-07	90	95	0.003	0.009	0.000	34.39	51.27	67.08	30.1
EC-05-07	95	100	0.006	0.010	0.004	31.80	46.65	68.17	33.8
EC-05-07	100	105	0.054	0.030	0.011	15.55	22.86	68.01	60.3
EC-05-07	105	110	0.007	0.493	0.005	25.83	37.80	68.33	34.8
EC-05-07	110	118	0.046	0.033	0.018	NS			
EC-05-07A	0	118	NS	NS	NS	NS			
EC-05-07A	118	120	0.054	0.029	0.009	NS			76.8
EC-05-07A	120	125	0.044	0.029	0.013	NS			79.4
EC-05-07A	125	130	0.029	0.032	0.015	NS			77.2
EC-05-07A	130	135	0.023	0.043	0.028	NS			86.1
EC-05-07A	135	140	0.041	0.080	0.019	NS			89.5
EC-05-07A	140	145	0.020	0.101	0.011	NS			
EC-05-07A	145	150	0.032	0.099	0.011	NS			77.7
EC-05-07A	150	155	0.038	0.133	0.013	NS			86.8
EC-05-07A	155	160	0.018	0.064	0.009	NS			
EC-05-07A	160	165	0.012	0.061	0.003	NS			
EC-05-07A	165	170	0.013	0.027	0.000	NS			
EC-05-07A	170	175	0.013	0.025	0.000	NS			
EC-05-07A	175	180	0.022	0.025	0.004	NS			
EC-05-07A	180	185	0.024	0.053	0.007	NS			
EC-05-07A	185	190	0.014	0.048	0.000	NS			
EC-05-07A	190	195	0.017	0.031	0.000	NS			
EC-05-07A	195	200	0.009	0.022	0.000	NS			
EC-05-07A	200	205	0.010	0.025	0.000	NS			
EC-05-07A	205	210	0.007	0.019	0.000	NS			
EC-05-07A	210	215	0.005	0.016	0.000	NS			
EC-05-07A	215	220	0.003	0.016	0.000	NS			
EC-05-07A	220	225	0.003	0.075	0.001	NS			
EC-05-07A	225	230	0.004	0.048	0.002	NS			
EC-05-07A	230	235	0.004	0.018	0.005	NS			
EC-05-07A	235	240	0.007	0.077	0.005	NS			
EC-05-07A	240	245	0.011	0.011	0.009	NS			
EC-05-07A	245	250	0.008	0.088	0.009	NS			
EC-05-07A	250	255	0.002	0.024	0.007	NS			
EC-05-07A	255	260	0.002	0.017	0.007	NS			
EC-05-08	0	5	0.016	0.013	0.006	32.12	47.23	68.01	44.7
EC-05-08	5	10	0.007	0.004	0.006	35.58	51.47	69.13	39.8
EC-05-08	10	15	0.024	0.061	0.008	9.26	13.71	67.53	68.4
EC-05-08	15	20	0.034	0.025	0.012	NS			
EC-05-08	20	25	0.023	0.144	0.013	NS			
EC-05-08	25	30	0.046	0.010	0.018	NS			
EC-05-08	30	35	0.017	0.146	0.011	NS			
EC-05-08	35	40	0.055	1.514	0.013	NS			
EC-05-08	40	45	0.017	0.027	0.014	NS			
EC-05-08	45	50	0.069	0.027	0.013	NS			
EC-05-08	50	54	0.017	0.032	0.018	NS			
EC-05-08	54	64	NS	NS	NS	NS			
EC-05-08	64	70	0.007	0.022	0.030	9.06	17.05	53.16	61.0
EC-05-08	70	75	0.030	0.041	0.015	NS			
EC-05-08	75	80	0.019	0.025	0.016	NS			
EC-05-08	80	89	0.043	0.073	0.016	NS			
EC-05-08A	0	89	NS	NS	NS	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-08A	89	95	0.015	0.080	0.011	NS			
EC-05-08A	95	100	0.011	0.030	0.010	NS			
EC-05-08A	100	105	0.033	0.105	0.028	NS			
EC-05-08A	105	110	0.038	0.097	0.022	NS			
EC-05-08A	110	115	0.033	0.163	0.023	NS			79.7
EC-05-08A	115	120	0.007	0.045	0.008	NS			
EC-05-08A	120	125	0.007	0.045	0.008	NS			
EC-05-08A	125	130	0.008	0.039	0.006	NS			
EC-05-08A	130	135	0.008	0.039	0.006	NS			
EC-05-08A	135	140	0.007	0.041	0.006	NS			
EC-05-08A	140	145	0.020	0.088	0.012	NS			
EC-05-08A	145	150	0.020	0.088	0.012	NS			
EC-05-08A	150	155	0.019	0.076	0.010	NS			
EC-05-08A	155	160	0.019	0.076	0.010	NS			
EC-05-08A	160	165	0.027	0.093	0.015	NS			
EC-05-08A	165	170	0.027	0.093	0.015	NS			
EC-05-08A	170	175	0.025	0.068	0.012	NS			
EC-05-08A	175	180	0.025	0.068	0.012	NS			
EC-05-08A	180	185	0.010	0.026	0.003	NS			
EC-05-08A	185	190	0.009	0.023	0.004	NS			
EC-05-08A	190	195	0.004	0.020	0.002	NS			
EC-05-08A	195	200	0.004	0.020	0.002	NS			
EC-05-08A	200	205	0.005	0.018	0.003	NS			
EC-05-08A	205	210	0.020	0.075	0.017	NS			
EC-05-08A	210	215	0.006	0.010	0.003	NS			
EC-05-08A	215	220	0.006	0.015	0.003	NS			
EC-05-08A	220	225	0.004	0.012	0.004	NS			
EC-05-08A	225	230	0.004	0.009	0.001	NS			
EC-05-08A	230	235	0.007	0.013	0.001	NS			
EC-05-08A	235	240	0.027	0.059	0.030	NS			
EC-05-08A	240	245	0.006	0.019	0.004	NS			
EC-05-08A	245	250	0.019	0.043	0.012	NS			
EC-05-08A	250	255	0.015	0.047	0.009	NS			
EC-05-08A	255	260	0.002	0.020	0.004	NS			
EC-05-08A	260	265	0.008	0.058	0.030	NS			
EC-05-08A	265	270	0.005	0.010	0.009	NS			
EC-05-08A	270	275	0.003	0.097	0.023	NS			
EC-05-08A	275	280	0.000	0.008	0.006	NS			
EC-05-09	0	5	0.004	0.015	0.012	15.10	22.26	67.85	
EC-05-09	5	10	0.006	0.035	0.027	NS			
EC-05-09	10	15	0.007	0.146	0.032	NS			
EC-05-09	15	20	0.005	0.030	0.031	11.62	18.42	63.06	
EC-05-09	20	25	0.003	0.566	0.017	29.61	44.05	67.21	
EC-05-09	25	30	0.003	0.045	0.018	31.36	44.90	69.85	
EC-05-09	30	35	0.003	0.007	0.010	NS			
EC-05-09	35	40	0.059	0.013	0.008	41.78	61.00	68.49	
EC-05-09	40	43	0.003	0.009	0.007	43.40	63.07	68.81	
EC-05-09	43	49	NS	NS	NS	NS			
EC-05-09	49	55	0.006	0.041	0.018	NS			
EC-05-09	55	60	0.014	0.020	0.025	16.98	26.33	64.50	
EC-05-09	60	66	0.006	0.040	0.027	24.49	35.10	69.77	
EC-05-09A	0	66	NS	NS	NS	NS			
EC-05-09A	66	71	0.006	0.022	0.022	NS			73.2
EC-05-09A	71	75	0.004	0.011	0.015	NS			55.1
EC-05-09A	75	79	0.003	0.029	0.022	NS			66.2

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-09A	79	85	0.009	0.019	0.067	NS			
EC-05-09A	85	90.5	0.007	0.017	0.025	NS			
EC-05-10	0	5	0.033	0.030	0.016	NS			
EC-05-10	5	10	0.008	0.033	0.014	22.15	37.49	59.07	76.3
EC-05-10	10	15	0.006	0.018	0.014	NS			89.2
EC-05-10	15	20	0.021	0.566	0.017	NS			
EC-05-10	20	25	0.024	0.033	0.022	NS			
EC-05-10	25	30	0.016	0.039	0.020	NS			
EC-05-10	30	35	0.010	0.167	0.023	NS			
EC-05-10	35	39	0.011	0.026	0.018	NS			
EC-05-10	39	49	0.014	0.040	0.016	NS			
EC-05-10	49	55	0.029	0.029	0.021	NS			
EC-05-10	55	62	0.029	0.034	0.011	NS			
EC-05-10A	0	62	NS	NS	NS	NS			
EC-05-10A	62	65	0.013	0.095	0.016	NS			74.1
EC-05-10A	65	70	0.019	0.075	0.019	NS			68.3
EC-05-10A	70	75	0.025	0.068	0.023	NS			72.6
EC-05-10A	75	80	0.025	0.123	0.018	NS			48.8
EC-05-10A	80	85	0.010	0.030	0.010	NS			33.7
EC-05-10A	85	90	0.014	0.074	0.028	NS			68.8
EC-05-10A	90	95	0.020	0.043	0.018	NS			
EC-05-10A	95	100	0.020	0.043	0.018	NS			
EC-05-10A	100	105	0.022	0.029	0.021	NS			
EC-05-10A	105	110	0.022	0.029	0.021	NS			
EC-05-10A	110	115	0.017	0.040	0.010	NS			
EC-05-10A	115	120	0.017	0.040	0.010	NS			
EC-05-10A	120	125	0.015	0.062	0.023	NS			81.0
EC-05-10A	125	130	0.013	0.071	0.021	NS			84.1
EC-05-10A	130	135	0.009	0.028	0.018	NS			
EC-05-10A	135	140	0.006	0.030	0.012	NS			
EC-05-10A	140	145	0.007	0.024	0.007	NS			
EC-05-10A	145	150	0.016	0.038	0.026	NS			
EC-05-10A	150	155	0.018	0.038	0.026	NS			
EC-05-10A	155	160	0.008	0.012	0.005	NS			
EC-05-10A	160	165	0.014	0.018	0.018	NS			
EC-05-10A	165	170	0.006	0.017	0.007	NS			
EC-05-10A	170	175	0.004	0.010	0.007	NS			
EC-05-10A	175	180	0.006	0.014	0.016	NS			
EC-05-10A	180	185	0.001	0.008	0.004	NS			
EC-05-10A	185	190	0.001	0.096	0.006	NS			
EC-05-10A	190	195	0.000	0.010	0.011	NS			
EC-05-10A	195	200	0.000	0.010	0.011	NS			
EC-05-10A	200	205	0.000	0.077	0.010	NS			
EC-05-10A	205	210	0.000	0.210	0.006	NS			
EC-05-11	0	5	0.005	0.014	0.013	22.67	37.17	60.99	49.0
EC-05-11	5	10	0.182	0.129	0.022	NS			
EC-05-11	10	20	0.001	0.003	0.002	43.68	65.61	66.57	15.3
EC-05-11	20	25	0.001	0.004	0.003	43.13	70.18	61.46	15.6
EC-05-11	25	30	0.001	0.003	0.001	54.72	79.43	68.89	12.7
EC-05-11	30	34	0.003	0.010	0.003	31.13	46.76	66.57	40.0
EC-05-11	34	39	0.007	0.038	0.023	13.55	19.90	68.09	
EC-05-11	39	45	0.007	0.131	0.016	17.48	29.00	60.27	
EC-05-11	45	49	0.007	0.028	0.025	9.52	16.42	57.95	
EC-05-11	49	59	0.007	0.025	0.022	NS			
EC-05-11A	0	59	NS	NS	NS	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-11A	59	75	NS	NS	NS	NS			
EC-05-11A	75	80	0.009	0.030	0.008	NS			
EC-05-11A	80	85	0.015	0.044	0.027	NS			
EC-05-11A	85	90	0.018	0.072	0.020	NS			
EC-05-11A	90	95	0.018	0.067	0.024	NS			
EC-05-11A	95	100	0.011	0.055	0.026	NS			
EC-05-11A	100	105	0.027	0.083	0.031	NS			
EC-05-11A	105	110	0.022	0.080	0.028	NS			
EC-05-11A	110	115	0.017	0.073	0.030	NS			
EC-05-11A	115	120	0.003	0.025	0.009	NS			
EC-05-11A	120	125	0.007	0.023	0.003	NS			
EC-05-11A	125	130	0.004	0.018	0.003	NS			
EC-05-11A	130	135	0.007	0.015	0.004	NS			
EC-05-11A	135	140	0.007	0.015	0.004	NS			
EC-05-11A	140	145	0.022	0.037	0.021	NS			
EC-05-11A	145	150	0.038	0.225	0.018	NS			
EC-05-11A	150	155	0.014	0.038	0.004	NS			
EC-05-11A	155	160	0.011	0.045	0.007	NS			
EC-05-11A	160	165	0.037	0.102	0.037	NS			
EC-05-11A	165	170	0.035	0.118	0.031	NS			
EC-05-11A	170	175	0.004	0.201	0.002	NS			
EC-05-11A	175	180	0.004	0.201	0.002	NS			
EC-05-11A	180	185	0.006	0.029	0.011	NS			
EC-05-11A	185	190	0.006	0.050	0.009	NS			
EC-05-11A	190	195	0.023	0.075	0.025	NS			38.9
EC-05-11A	195	200	0.023	0.075	0.025	NS			38.9
EC-05-11A	200	205	0.027	0.061	0.042	NS			61.4
EC-05-11A	205	210	0.027	0.061	0.042	NS			61.4
EC-05-11A	210	215	0.014	0.041	0.002	NS			
EC-05-11A	215	220	0.014	0.041	0.002	NS			
EC-05-11A	220	225	0.013	0.039	0.007	NS			
EC-05-11A	225	230	0.035	0.100	0.037	NS			
EC-05-11A	230	235	0.033	0.079	0.040	NS			
EC-05-11A	235	240	0.033	0.079	0.040	NS			
EC-05-11A	240	245	0.041	0.165	0.029	NS			
EC-05-11A	245	250	0.040	0.044	0.027	NS			
EC-05-11A	250	255	0.029	0.030	0.034	NS			
EC-05-11A	255	260	0.030	0.031	0.032	NS			
EC-05-11A	260	265	0.030	0.031	0.032	NS			
EC-05-11A	265	270	0.032	0.088	0.019	NS			
EC-05-11A	270	275	0.032	0.088	0.019	NS			
EC-05-11A	275	280	0.010	0.027	0.002	NS			
EC-05-11A	280	285	0.010	0.027	0.002	NS			
EC-05-11A	285	290	0.009	0.022	0.006	NS			
EC-05-11A	290	295	0.009	0.022	0.006	NS			
EC-05-11A	295	300	0.009	0.022	0.006	NS			
EC-05-11A	300	305	0.018	0.024	0.041	NS			
EC-05-11A	305	310	0.021	0.033	0.026	NS			
EC-05-11A	310	315	0.006	0.014	0.008	NS			
EC-05-11A	315	320	0.002	0.013	0.006	NS			
EC-05-11A	320	325	0.005	0.017	0.030	NS			
EC-05-11A	325	330	0.004	0.015	0.028	NS			
EC-05-11A	330	335	0.005	0.288	0.034	NS			
EC-05-11A	335	340	0.003	0.021	0.008	NS			
EC-05-12	0	2	0.000	0.001	0.000	NS	0.44	66.89	3.1



HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-12	2	6	0.005	0.072	0.015	NS			50.5
EC-05-12	6	11	0.001	0.008	0.006	39.94	58.59	68.17	19.4
EC-05-12	11	20	0.094	0.048	0.019	NS			
EC-05-12	20	25	0.065	0.050	0.014	NS			
EC-05-12	25	30	0.067	0.038	0.014	NS			
EC-05-12	30	35	0.010	0.178	0.014	NS			
EC-05-12	35	42	0.043	0.052	0.013	NS			
EC-05-12	42	50	0.019	0.046	0.013	NS			
EC-05-12	50	60.5	0.038	0.097	0.012	NS			
EC-05-12A	0	60.5	NS	NS	NS	NS			
EC-05-12A	60.5	65	0.010	0.035	0.011	NS			
EC-05-12A	65	70	0.009	0.040	0.010	NS			
EC-05-12A	70	75	0.031	0.108	0.019	NS			
EC-05-12A	75	80	0.029	0.124	0.013	NS			
EC-05-12A	80	85	0.008	0.034	0.006	NS			
EC-05-12A	85	90	0.006	0.072	0.006	NS			
EC-05-12A	90	95	0.007	0.066	0.005	NS			
EC-05-12A	95	100	0.006	0.032	0.003	NS			15.7
EC-05-12A	100	105	0.004	0.024	0.002	NS			11.3
EC-05-12A	105	110	0.004	0.024	0.002	NS			11.3
EC-05-12A	110	115	0.027	0.148	0.024	NS			67.8
EC-05-12A	115	120	0.025	0.200	0.028	NS			
EC-05-12A	120	125	0.022	0.088	0.018	NS			
EC-05-12A	125	130	0.017	0.057	0.019	NS			
EC-05-12A	130	135	0.006	0.037	0.006	NS			
EC-05-12A	135	140	0.006	0.037	0.006	NS			
EC-05-12A	140	145	0.007	0.033	0.006	NS			
EC-05-12A	145	150	0.004	0.032	0.005	NS			
EC-05-12A	150	155	0.004	0.040	0.004	NS			
EC-05-12A	155	160	0.003	0.029	0.005	NS			
EC-05-12A	160	165	0.007	0.055	0.004	NS			
EC-05-12A	165	170	0.010	0.052	0.003	NS			
EC-05-12A	170	175	0.010	0.058	0.001	NS			
EC-05-12A	175	180	0.010	0.058	0.001	NS			
EC-05-12A	180	185	0.060	0.309	0.033	NS			
EC-05-12A	185	190	0.060	0.309	0.033	NS			
EC-05-12A	190	195	0.011	0.041	0.007	NS			
EC-05-12A	195	200	0.011	0.041	0.007	NS			
EC-05-12A	200	205	0.013	0.044	0.007	NS			
EC-05-12A	205	210	0.022	0.039	0.009	NS			
EC-05-12A	210	215	0.025	0.047	0.014	NS			
EC-05-12A	215	220	0.025	0.047	0.014	NS			
EC-05-12A	220	225	0.012	0.042	0.002	NS			
EC-05-12A	225	230	0.012	0.042	0.002	NS			
EC-05-12A	230	235	0.028	0.056	0.003	NS			
EC-05-12A	235	240	0.028	0.056	0.003	NS			
EC-05-12A	240	245	0.030	0.116	0.005	NS			
EC-05-12A	245	250	0.025	0.105	0.007	NS			
EC-05-12A	250	255	0.027	0.095	0.015	NS			
EC-05-12A	255	260	0.007	0.044	0.001	NS			
EC-05-12A	260	265	0.010	0.038	0.001	NS			
EC-05-12A	265	270	0.010	0.026	0.001	NS			
EC-05-12A	270	275	0.028	0.100	0.003	NS			
EC-05-12A	275	280	0.006	0.098	0.000	NS			
EC-05-12A	280	285	0.033	0.047	0.008	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-05-12A	285	290	0.035	0.044	0.009	NS			
EC-05-12A	290	295	0.007	0.030	0.001	NS			
EC-05-12A	295	300	0.011	0.030	0.001	NS			
EC-05-12A	300	305	0.015	0.062	0.002	NS			
EC-05-12A	305	310	0.013	0.051	0.002	NS			
EC-05-12A	310	315	0.014	0.049	0.005	NS			
EC-05-12A	315	320	0.040	0.255	0.011	NS			
EC-05-12A	320	325	0.033	0.183	0.009	NS			
EC-05-12A	325	330	0.027	0.066	0.007	NS			
EC-05-12A	330	335	0.030	0.075	0.007	NS			
EC-05-12A	335	340	0.005	0.009	0.001	NS			
EC-05-12A	340	345	NS	NS	NS	NS			
EC-05-12A	345	350	0.004	0.012	0.000	NS			
EC-05-12A	350	355	0.002	0.009	0.000	NS			
EC-05-12A	355	360	0.002	0.019	0.000	NS			
EC-05-12A	360	365	NS	NS	NS	NS			
EC-05-12A	365	370	0.001	0.011	0.000	NS			
EC-05-12A	370	375	0.004	0.017	0.000	NS			
EC-05-12A	375	380	0.004	0.010	0.000	NS			
EC-05-12A	380	385	0.000	0.009	0.000	NS			
EC-05-12A	385	390	0.004	0.017	0.008	NS			
EC-05-12A	390	395	0.004	0.014	0.006	NS			
EC-05-12A	395	400	0.004	0.070	0.003	NS			
EC-05-12A	400	405	0.007	0.233	0.002	NS			
EC-05-13	0	10	0.044	0.216	0.038	NS			
EC-05-13	10	20	0.048	0.335	0.037	NS			
EC-05-13	20	30	0.006	0.201	0.025	NS			
EC-05-13	30	40	0.007	0.029	0.025	NS			
EC-05-13	40	50	0.009	0.017	0.023	NS			
EC-05-13	50	60	0.011	0.019	0.024	NS			
EC-05-13	60	70	0.007	0.030	0.023	NS			
EC-05-13	70	82	0.008	0.032	0.023	NS			
EC-05-14	0	5	0.012	0.077	0.007	NS			
EC-05-14	5	10	0.028	0.105	0.015	NS			
EC-05-14	10	20	0.030	0.095	0.018	NS			
EC-05-14	20	25	0.009	0.078	0.003	NS			
EC-05-14	25	30	0.005	0.048	0.003	NS			
EC-05-14	30	40	0.009	1.080	0.025	NS			
EC-05-14	40	50	0.004	0.029	0.031	NS			
EC-05-14	50	60	0.003	0.052	0.020	NS			
EC-05-14	60	70	0.008	0.038	0.048	NS			
EC-05-14	70	82	0.006	0.022	0.030	NS			
EC-06-15	0	5	0.024	0.523	0.012	NS			
EC-06-15	5	10	0.005	0.000	0.008	NS			
EC-06-15	10	15	0.006	0.382	0.008	NS			
EC-06-15	15	20	0.001	0.067	0.009	NS			
EC-06-15	20	25	0.003	0.282	0.009	NS			
EC-06-15	25	30	0.000	0.640	0.003	NS			
EC-06-15	30	35	0.006	0.601	0.005	NS			
EC-06-15	35	40	0.003	0.393	0.024	NS			
EC-06-15	40	45	0.003	0.052	0.017	NS			
EC-06-15	45	50	0.003	0.722	0.025	NS			
EC-06-15	50	55	0.004	0.258	0.020	NS			
EC-06-15	55	60	0.006	0.259	0.010	NS			
EC-06-15	60	65	0.005	0.393	0.010	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-15	65	70	0.002	0.352	0.011	NS			
EC-06-15	70	75	0.002	0.455	0.016	NS			
EC-06-15	75	80	0.008	0.483	0.014	NS			
EC-06-15	80	85	0.004	0.551	0.021	NS			
EC-06-15	85	90	0.002	0.474	0.009	NS			
EC-06-15	90	95	0.003	0.422	0.007	NS			
EC-06-15	95	100	0.002	0.474	0.010	NS			
EC-06-15	100	105	0.002	0.741	0.013	NS			
EC-06-15	105	110	0.002	0.459	0.025	NS			
EC-06-15	110	115	0.004	0.472	0.010	NS			
EC-06-15	115	120	0.002	0.415	0.009	NS			
EC-06-15	120	125	0.002	0.386	0.007	NS			
EC-06-15	125	130	0.002	0.323	0.011	NS			
EC-06-15	130	135	0.003	0.380	0.019	NS			
EC-06-15	135	140	0.001	0.232	0.013	NS			
EC-06-15	140	145	0.002	0.281	0.012	NS			
EC-06-15	145	150	0.004	0.505	0.007	NS			
EC-06-15	150	155	0.001	0.619	0.008	NS			
EC-06-15	155	160	0.003	0.282	0.017	NS			
EC-06-15	160	165	0.002	0.433	0.022	NS			
EC-06-15	165	170	0.006	0.499	0.019	NS			
EC-06-15	170	175	0.002	0.447	0.009	NS			
EC-06-15	175	180	0.004	0.051	0.002	NS			
EC-06-15	180	185	0.004	0.545	0.009	NS			
EC-06-15	185	190	0.004	0.610	0.021	NS			
EC-06-15	190	195	0.002	0.632	0.015	NS			
EC-06-15	195	200	0.002	0.755	0.029	NS			
EC-06-15	200	205	0.001	0.042	0.023	NS			
EC-06-15	205	210	0.003	0.092	0.013	NS			
EC-06-15	210	215	0.004	0.541	0.014	NS			
EC-06-15	215	220	0.226	1.125	0.015	NS			
EC-06-15	220	225	0.813	1.259	0.149	NS			
EC-06-15	225	230	0.022	0.000	0.030	NS			
EC-06-15	230	235	0.002	0.034	0.012	NS			
EC-06-15	235	240	0.003	0.137	0.010	NS			
EC-06-15	240	245	0.012	0.902	0.028	NS			
EC-06-15	245	250	0.002	0.244	0.000	NS			
EC-06-15	250	255	0.002	0.000	0.000	NS			
EC-06-15	255	260	0.002	0.000	0.019	NS			
EC-06-15	260	265	0.004	0.000	0.011	NS			
EC-06-15	265	270	0.001	0.000	0.017	NS			
EC-06-15	270	275	0.003	0.235	0.000	NS			
EC-06-15	275	280	0.002	0.000	0.000	NS			
EC-06-15	280	285	0.003	0.000	0.014	NS			
EC-06-15	285	290	0.003	0.000	0.014	NS			
EC-06-15	290	295	0.003	0.000	0.017	NS			
EC-06-15	295	300	0.001	0.661	0.016	NS			
EC-06-15	300	305	0.003	0.300	0.015	NS			
EC-06-15	305	310	0.004	0.475	0.007	NS			
EC-06-15	310	315	0.001	0.056	0.004	NS			
EC-06-15	315	320	0.000	0.023	0.001	NS			
EC-06-15	320	325	0.000	0.000	0.002	NS			
EC-06-15	325	330	0.000	0.268	0.002	NS			
EC-06-15	330	335	0.003	2.082	0.002	NS			
EC-06-15	335	340	0.001	0.220	0.001	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-15	340	345	0.264	0.703	0.004	NS			
EC-06-15	345	350	0.007	0.485	0.001	NS			
EC-06-15	350	355	0.001	0.056	0.001	NS			
EC-06-15	355	360	0.004	0.150	0.002	NS			
EC-06-15	360	365	0.001	0.207	0.002	NS			
EC-06-15	365	370	0.001	0.896	0.003	NS			
EC-06-15	370	375	0.001	0.296	0.003	NS			
EC-06-15	375	380	0.000	0.177	0.003	NS			
EC-06-15	380	385	0.003	0.148	0.004	NS			
EC-06-15	385	390	0.002	0.065	0.005	NS			
EC-06-15	390	395	0.003	0.331	0.002	NS			
EC-06-15	395	400	0.003	0.233	0.004	NS			
EC-06-16	0	5	0.004	0.346	0.004	NS			
EC-06-16	5	10	0.003	0.042	0.004	NS			
EC-06-16	10	15	0.003	0.101	0.004	NS			
EC-06-16	15	20	0.002	0.115	0.003	NS			
EC-06-16	20	25	0.001	0.279	0.002	NS			
EC-06-16	25	30	0.004	0.442	0.004	NS			
EC-06-16	30	35	0.003	0.170	0.005	NS			
EC-06-16	35	40	0.002	0.160	0.005	NS			
EC-06-16	40	45	0.002	0.221	0.006	NS			
EC-06-16	45	50	0.005	0.142	0.009	NS			
EC-06-16	50	55	0.003	0.217	0.002	NS			
EC-06-16	55	60	0.002	0.205	0.003	NS			
EC-06-16	60	65	0.008	0.142	0.007	NS			
EC-06-16	65	70	0.005	0.000	0.003	NS			
EC-06-16	70	75	0.004	0.216	0.003	NS			
EC-06-16	75	80	0.007	0.060	0.005	NS			
EC-06-16	80	85	0.007	0.082	0.001	NS			
EC-06-16	85	90	0.004	0.308	0.001	NS			
EC-06-16	90	95	0.005	0.175	0.001	NS			
EC-06-16	95	100	0.003	0.045	0.001	NS			
EC-06-16	100	105	0.022	0.128	0.001	NS			
EC-06-16	105	110	0.003	0.249	0.001	NS			
EC-06-16	110	115	0.005	0.250	0.001	NS			
EC-06-16	115	120	0.006	0.185	0.001	NS			
EC-06-16	120	125	0.005	0.517	0.012	NS			
EC-06-16	125	130	0.002	0.177	0.013	NS			
EC-06-16	130	135	0.001	0.158	0.015	NS			
EC-06-16	135	140	0.000	0.153	0.015	NS			
EC-06-16	140	145	0.005	0.000	0.013	NS			
EC-06-16	145	150	0.005	0.290	0.005	NS			
EC-06-16	150	155	0.005	0.092	0.005	NS			
EC-06-16	155	160	0.002	0.207	0.007	NS			
EC-06-16	160	165	0.004	0.199	0.008	NS			
EC-06-16	165	170	0.003	0.366	0.009	NS			
EC-06-16	170	175	0.004	0.216	0.009	NS			
EC-06-16	175	180	0.004	0.249	0.005	NS			
EC-06-16	180	185	0.003	0.000	0.003	NS			
EC-06-16	185	190	0.002	0.000	0.007	NS			
EC-06-16	190	195	0.004	0.000	0.003	NS			
EC-06-16	195	200	0.002	0.000	0.006	NS			
EC-06-16	200	205	0.002	0.000	0.003	NS			
EC-06-16	205	210	0.002	0.427	0.003	NS			
EC-06-16	210	215	0.002	0.169	0.003	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-16	215	220	0.003	0.000	0.007	NS			
EC-06-16	220	225	0.040	0.368	0.005	NS			
EC-06-16	225	230	0.003	0.057	0.006	NS			
EC-06-16	230	235	0.003	0.070	0.005	NS			
EC-06-16	235	240	0.002	0.140	0.001	NS			
EC-06-16	240	245	0.004	0.091	0.002	NS			
EC-06-16	245	250	0.006	0.141	0.003	NS			
EC-06-16	250	255	0.004	0.073	0.001	NS			
EC-06-16	255	260	0.003	0.023	0.001	NS			
EC-06-16	260	265	0.005	0.000	0.001	NS			
EC-06-16	265	270	0.003	0.044	0.001	NS			
EC-06-16	270	275	0.002	0.008	0.002	NS			
EC-06-16	275	280	0.002	0.000	0.005	NS			
EC-06-16	280	285	0.002	0.000	0.008	NS			
EC-06-16	285	290	0.004	0.204	0.008	NS			
EC-06-16	290	295	0.002	0.089	0.005	NS			
EC-06-16	295	300	0.002	0.125	0.011	NS			
EC-06-16	300	305	0.002	0.596	0.008	NS			
EC-06-16	305	310	0.001	0.060	0.011	NS			
EC-06-16	310	315	0.002	0.735	0.013	NS			
EC-06-16	315	320	0.001	0.059	0.013	NS			
EC-06-16	320	325	0.001	0.068	0.015	NS			
EC-06-16	325	330	0.001	0.059	0.013	NS			
EC-06-16	330	335	0.004	0.349	0.014	NS			
EC-06-16	335	340	0.003	0.966	0.001	NS			
EC-06-16	340	345	0.024	0.384	0.001	NS			
EC-06-16	345	350	0.003	0.294	0.001	NS			
EC-06-16	350	355	0.004	0.000	0.012	NS			
EC-06-17	0	5	0.017	0.196	0.003	NS			
EC-06-17	5	10	0.002	0.460	0.000	NS			
EC-06-17	10	15	0.002	0.000	0.000	NS			
EC-06-17	15	20	0.002	0.124	0.000	NS			
EC-06-17	20	25	0.003	0.000	0.000	NS			
EC-06-17	25	30	0.003	0.000	0.009	NS			
EC-06-17	30	35	0.004	0.066	0.011	NS			
EC-06-17	35	40	0.002	0.000	0.007	NS			
EC-06-17	40	45	0.035	0.196	0.021	NS			
EC-06-17	45	50	0.003	0.044	0.001	NS			
EC-06-17	50	55	0.005	0.000	0.002	NS			
EC-06-17	55	60	0.005	0.000	0.003	NS			
EC-06-17	60	65	0.005	0.205	0.003	NS			
EC-06-17	65	70	0.003	0.015	0.002	NS			
EC-06-17	70	75	0.004	0.076	0.000	NS			
EC-06-17	75	80	0.003	0.000	0.000	NS			
EC-06-17	80	85	0.001	0.000	0.002	NS			
EC-06-17	85	90	0.001	0.048	0.005	NS			
EC-06-17	90	95	0.004	0.015	0.004	NS			
EC-06-17	95	100	0.002	0.035	0.003	NS			
EC-06-17	100	105	0.002	0.114	0.005	NS			
EC-06-17	105	110	0.002	0.232	0.001	NS			
EC-06-17	110	115	0.001	0.181	0.003	NS			
EC-06-17	115	120	0.001	0.014	0.003	NS			
EC-06-17	120	125	0.003	0.272	0.008	NS			
EC-06-17	125	130	0.002	0.557	0.006	NS			
EC-06-17	130	135	0.002	0.186	0.004	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-17	135	140	0.001	0.013	0.004	NS			
EC-06-17	140	145	0.002	0.307	0.003	NS			
EC-06-17	145	150	0.002	0.265	0.004	NS			
EC-06-17	150	155	0.002	0.083	0.005	NS			
EC-06-17	155	160	0.000	0.069	0.003	NS			
EC-06-17	160	165	0.018	0.234	0.000	NS			
EC-06-17	165	170	0.001	0.161	0.006	NS			
EC-06-17	170	175	0.001	0.185	0.000	NS			
EC-06-17	175	180	0.000	0.100	0.002	NS			
EC-06-17	180	185	0.002	0.000	0.002	NS			
EC-06-17	185	190	0.002	0.054	0.006	NS			
EC-06-17	190	195	0.002	0.000	0.003	NS			
EC-06-17	195	200	0.004	0.000	0.002	NS			
EC-06-17	200	205	0.004	0.000	0.004	NS			
EC-06-17	205	210	0.001	0.406	0.013	NS			
EC-06-17	210	215	0.003	0.478	0.005	NS			
EC-06-17	215	220	0.003	0.000	0.011	NS			
EC-06-17	220	225	0.004	0.053	0.007	NS			
EC-06-17	225	230	0.002	0.000	0.006	NS			
EC-06-17	230	235	0.003	0.000	0.005	NS			
EC-06-17	235	240	0.001	0.000	0.015	NS			
EC-06-17	240	245	0.001	0.016	0.003	NS			
EC-06-17	245	250	0.003	0.050	0.002	NS			
EC-06-17	250	255	0.002	0.044	0.002	NS			
EC-06-17	255	260	0.010	0.065	0.004	NS			
EC-06-17	260	265	0.007	0.073	0.004	NS			
EC-06-17	265	270	0.003	0.065	0.003	NS			
EC-06-17	270	275	0.003	0.061	0.003	NS			
EC-06-17	275	280	0.005	0.045	0.000	NS			
EC-06-17	280	285	0.007	0.062	0.002	NS			
EC-06-17	285	290	0.011	0.088	0.004	NS			
EC-06-17	290	295	0.014	0.122	0.007	NS			
EC-06-17	295	300	0.013	0.100	0.006	NS			
EC-06-17	300	305	0.013	0.098	0.004	NS			
EC-06-17	305	310	0.005	0.113	0.003	NS			
EC-06-17	310	315	0.002	0.060	0.003	NS			
EC-06-17	315	320	0.000	0.000	0.000	NS			
EC-06-17	320	325	0.000	0.000	0.000	NS			
EC-06-17	325	330	0.000	0.000	0.000	NS			
EC-06-17	330	335	0.001	0.000	0.001	NS			
EC-06-17	335	340	0.004	0.019	0.003	NS			
EC-06-17	340	345	0.003	0.018	0.003	NS			
EC-06-17	345	350	0.003	0.020	0.003	NS			
EC-06-17	350	355	0.011	0.052	0.003	NS			
EC-06-17	355	360	0.010	0.050	0.002	NS			
EC-06-17	360	365	0.009	0.050	0.003	NS			
EC-06-17	365	370	0.003	0.013	0.003	NS			
EC-06-17	370	375	0.003	0.011	0.003	NS			
EC-06-17	375	380	0.002	0.010	0.003	NS			
EC-06-17	380	385	0.004	0.007	0.003	NS			
EC-06-17	385	390	0.004	0.012	0.003	NS			
EC-06-17	390	395	0.003	0.010	0.003	NS			
EC-06-17	395	400	0.001	0.000	0.000	NS			
EC-06-17	400	405	0.001	0.000	0.000	NS			
EC-06-17	405	410	0.002	0.009	0.001	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-17	410	415	0.004	0.054	0.004	NS			
EC-06-17	415	420	0.003	0.037	0.002	NS			
EC-06-17	420	425	0.001	0.000	0.000	NS			
EC-06-17	425	430	0.000	0.000	0.000	NS			
EC-06-17	430	435	0.000	0.000	0.000	NS			
EC-06-17	435	440	0.007	0.042	0.003	NS			
EC-06-17	440	445	0.006	0.039	0.003	NS			
EC-06-17	445	450	0.007	0.035	0.003	NS			
EC-06-18	0	5	0.015	0.326	0.007	NS			
EC-06-18	5	10	0.012	0.333	0.006	NS			
EC-06-18	10	15	0.004	0.033	0.001	NS			
EC-06-18	15	20	0.005	0.042	0.000	NS			
EC-06-18	20	25	0.004	0.145	0.000	NS			
EC-06-18	25	30	0.003	0.037	0.000	NS			
EC-06-18	30	35	0.002	0.035	0.000	NS			
EC-06-18	35	40	0.002	0.028	0.000	NS			
EC-06-18	40	45	0.002	0.030	0.000	NS			
EC-06-18	45	50	0.018	0.122	0.008	NS			
EC-06-18	50	55	0.020	0.173	0.010	NS			
EC-06-18	55	60	0.007	0.068	0.000	NS			
EC-06-18	60	65	0.012	0.068	0.004	NS			
EC-06-18	65	70	0.010	0.055	0.003	NS			
EC-06-18	70	75	0.009	0.092	0.000	NS			
EC-06-18	75	80	0.008	0.085	0.000	NS			
EC-06-18	80	85	0.002	0.037	0.000	NS			
EC-06-18	85	90	0.021	0.850	0.007	NS			
EC-06-18	90	95	0.017	0.544	0.004	NS			
EC-06-18	95	100	0.014	0.105	0.005	NS			
EC-06-18	100	105	0.008	0.022	0.000	NS			
EC-06-18	105	110	0.007	0.027	0.000	NS			
EC-06-18	110	115	0.007	0.025	0.000	NS			
EC-06-18	115	120	0.009	0.030	0.000	NS			
EC-06-18	120	125	0.035	0.031	0.011	NS			
EC-06-18	125	130	0.028	0.045	0.008	NS			
EC-06-18	130	135	0.022	0.068	0.007	NS			
EC-06-18	135	140	0.018	0.047	0.008	NS			
EC-06-18	140	145	0.044	0.212	0.012	NS			
EC-06-18	145	150	0.012	0.088	0.003	NS			
EC-06-18	150	155	0.006	0.075	0.003	NS			
EC-06-18	155	160	0.004	0.079	0.001	NS			
EC-06-18	160	165	0.011	0.100	0.000	NS			
EC-06-18	165	170	0.004	0.110	0.001	NS			
EC-06-18	170	175	0.033	1.076	0.004	NS			
EC-06-18	175	180	0.029	0.988	0.003	NS			
EC-06-18	180	185	0.037	0.855	0.003	NS			
EC-06-18	185	190	0.033	0.085	0.001	NS			
EC-06-18	190	195	0.018	0.205	0.002	NS			
EC-06-18	195	200	0.027	0.200	0.002	NS			
EC-06-18	200	205	0.018	0.230	0.001	NS			
EC-06-18	205	210	0.020	0.185	0.001	NS			
EC-06-18	210	215	0.004	0.044	0.000	NS			
EC-06-18	215	220	0.048	0.523	0.010	NS			
EC-06-18	220	225	0.062	0.700	0.010	NS			
EC-06-18	225	230	0.053	0.675	0.012	NS			
EC-06-18	230	235	0.030	0.115	0.006	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-18	235	240	0.022	0.096	0.004	NS			
EC-06-18	240	245	0.015	0.085	0.005	NS			
EC-06-18	245	250	0.016	0.088	0.003	NS			
EC-06-18	250	255	0.018	0.095	0.004	NS			
EC-06-18	255	260	0.018	0.090	0.005	NS			
EC-06-18	260	265	0.015	0.126	0.001	NS			
EC-06-18	265	270	0.017	0.125	0.002	NS			
EC-06-18	270	275	0.008	0.045	0.001	NS			
EC-06-18	275	280	0.008	0.052	0.001	NS			
EC-06-18	280	285	0.006	0.055	0.001	NS			
EC-06-18	285	290	0.021	0.075	0.002	NS			
EC-06-18	290	295	0.023	0.073	0.001	NS			
EC-06-18	295	300	0.021	0.068	0.001	NS			
EC-06-18	300	305	0.025	0.116	0.002	NS			
EC-06-18	305	310	0.021	0.096	0.002	NS			
EC-06-18	310	315	0.018	0.096	0.001	NS			
EC-06-18	315	320	0.016	0.049	0.001	NS			
EC-06-18	320	325	0.019	0.055	0.001	NS			
EC-06-18	325	330	0.023	0.116	0.002	NS			
EC-06-18	330	335	0.023	0.118	0.003	NS			
EC-06-18	335	340	0.021	0.100	0.002	NS			
EC-06-18	340	345	0.022	0.133	0.003	NS			
EC-06-18	345	350	0.006	0.042	0.000	NS			
EC-06-18	350	355	0.005	0.017	0.000	NS			
EC-06-18	355	360	0.011	0.028	0.000	NS			
EC-06-18	360	365	0.010	0.026	0.000	NS			
EC-06-18	365	370	0.031	0.205	0.004	NS			
EC-06-18	370	375	0.005	0.030	0.000	NS			
EC-06-18	375	380	0.005	0.009	0.000	NS			
EC-06-18	380	385	0.007	0.012	0.000	NS			
EC-06-18	385	390	0.006	0.017	0.000	NS			
EC-06-18	390	395	0.019	0.195	0.001	NS			
EC-06-18	395	400	0.020	0.084	0.001	NS			
EC-06-18	400	405	0.023	0.088	0.001	NS			
EC-06-18	405	410	0.018	0.039	0.001	NS			
EC-06-18	410	415	0.020	0.100	0.001	NS			
EC-06-18	415	420	0.024	0.105	0.002	NS			
EC-06-18	420	425	0.008	0.055	0.000	NS			
EC-06-18	425	430	0.007	0.058	0.000	NS			
EC-06-18	430	435	0.007	0.017	0.000	NS			
EC-06-18	435	440	0.007	0.012	0.000	NS			
EC-06-18	440	445	0.005	0.013	0.000	NS			
EC-06-18	445	450	0.006	0.015	0.000	NS			
EC-06-19	0	5	0.038	0.233	0.009	NS			
EC-06-19	5	10	0.041	0.185	0.006	NS			
EC-06-19	10	15	0.030	0.245	0.006	NS			
EC-06-19	15	20	0.017	0.099	0.003	NS			
EC-06-19	20	25	0.012	0.095	0.003	NS			
EC-06-19	25	30	0.018	0.115	0.001	NS			
EC-06-19	30	35	0.015	0.108	0.002	NS			
EC-06-19	35	40	0.021	0.087	0.010	NS			
EC-06-19	40	45	0.021	0.132	0.009	NS			
EC-06-19	45	50	0.019	0.107	0.007	NS			
EC-06-19	50	55	0.008	0.075	0.009	NS			
EC-06-19	55	60	0.011	0.787	0.028	NS			



HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-19	60	65	0.005	0.043	0.000	NS			
EC-06-19	65	70	0.002	0.033	0.000	NS			
EC-06-19	70	75	0.004	0.039	0.003	NS			
EC-06-19	75	80	0.000	0.038	0.000	NS			
EC-06-19	80	85	0.003	0.040	0.000	NS			
EC-06-19	85	90	0.008	0.058	0.000	NS			
EC-06-19	90	95	0.012	0.055	0.002	NS			
EC-06-19	95	100	0.011	0.094	0.001	NS			
EC-06-19	100	105	0.020	0.148	0.004	NS			
EC-06-19	105	110	0.018	0.125	0.003	NS			
EC-06-19	110	115	0.031	0.386	0.005	NS			
EC-06-19	115	120	0.033	0.400	0.012	NS			
EC-06-19	120	125	0.002	0.035	0.000	NS			
EC-06-19	125	130	0.002	0.045	0.000	NS			
EC-06-19	130	135	0.000	0.050	0.000	NS			
EC-06-19	135	140	0.000	0.050	0.000	NS			
EC-06-19	140	145	0.007	0.050	0.000	NS			
EC-06-19	145	150	0.017	0.102	0.000	NS			
EC-06-19	150	155	0.015	0.077	0.006	NS			
EC-06-19	155	160	0.015	0.075	0.004	NS			
EC-06-19	160	165	0.016	0.080	0.004	NS			
EC-06-19	165	170	0.015	0.067	0.003	NS			
EC-06-19	170	175	0.000	0.031	0.000	NS			
EC-06-19	175	180	0.000	0.028	0.000	NS			
EC-06-19	180	185	0.018	0.118	0.002	NS			
EC-06-19	185	190	0.021	0.202	0.003	NS			
EC-06-19	190	195	0.022	0.248	0.003	NS			
EC-06-19	195	200	0.017	0.098	0.002	NS			
EC-06-19	200	205	0.009	0.052	0.000	NS			
EC-06-19	205	210	0.011	0.055	0.000	NS			
EC-06-19	210	215	0.011	0.047	0.000	NS			
EC-06-19	215	220	0.015	0.048	0.000	NS			
EC-06-19	220	225	0.004	0.038	0.000	NS			
EC-06-19	225	230	0.004	0.034	0.000	NS			
EC-06-19	230	235	0.002	0.029	0.000	NS			
EC-06-19	235	240	0.001	0.030	0.000	NS			
EC-06-19	240	245	0.004	0.029	0.000	NS			
EC-06-19	245	250	0.007	0.065	0.002	NS			
EC-06-20	0	5	0.021	2.200	0.007	NS			
EC-06-20	5	10	0.016	1.850	0.005	NS			
EC-06-20	10	15	0.015	0.960	0.008	NS			
EC-06-20	15	20	0.016	0.105	0.008	NS			
EC-06-20	20	25	0.013	0.077	0.005	NS			
EC-06-20	25	30	0.030	0.097	0.008	NS			
EC-06-20	30	35	0.021	0.068	0.010	NS			
EC-06-20	35	40	0.009	0.066	0.010	NS			
EC-06-20	40	45	0.006	0.070	0.000	NS			
EC-06-20	45	50	0.013	0.058	0.000	NS			
EC-06-20	50	55	0.028	0.159	0.007	NS			
EC-06-20	55	60	0.004	0.047	0.001	NS			
EC-06-20	60	65	0.002	0.044	0.001	NS			
EC-06-20	65	70	0.021	0.072	0.014	NS			
EC-06-20	70	75	0.030	0.075	0.012	NS			
EC-06-20	75	80	0.000	0.025	0.002	NS			
EC-06-20	80	85	0.002	0.021	0.001	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-20	85	90	0.020	0.080	0.007	NS			
EC-06-20	90	95	0.019	0.093	0.005	NS			
EC-06-20	95	100	0.014	0.040	0.003	NS			
EC-06-20	100	105	0.037	0.227	0.011	NS			
EC-06-20	105	110	0.034	0.307	0.012	NS			
EC-06-20	110	115	0.033	0.315	0.014	NS			
EC-06-20	115	120	0.036	0.100	0.014	NS			
EC-06-20	120	125	0.010	0.096	0.002	NS			
EC-06-20	125	130	0.009	0.097	0.001	NS			
EC-06-20	130	135	0.009	0.112	0.001	NS			
EC-06-20	135	140	0.007	0.000	0.000	NS			
EC-06-20	140	145	0.007	0.000	0.000	NS			
EC-06-20	145	150	0.007	0.000	0.000	NS			
EC-06-20	150	155	0.009	0.065	0.003	NS			
EC-06-20	155	160	0.008	0.047	0.004	NS			
EC-06-20	160	165	0.018	0.217	0.006	NS			
EC-06-20	165	170	0.021	0.215	0.005	NS			
EC-06-20	170	175	0.011	0.088	0.004	NS			
EC-06-20	175	180	0.015	0.074	0.005	NS			
EC-06-20	180	185	0.000	0.025	0.000	NS			
EC-06-20	185	190	0.015	0.076	0.002	NS			
EC-06-20	190	195	0.012	0.115	0.001	NS			
EC-06-20	195	200	0.017	0.095	0.010	NS			
EC-06-20	200	205	0.016	0.081	0.009	NS			
EC-06-20	205	210	0.039	0.515	0.012	NS			
EC-06-20	210	215	0.044	0.423	0.012	NS			
EC-06-20	215	220	0.051	0.328	0.012	NS			
EC-06-20	220	225	0.016	0.316	0.004	NS			
EC-06-20	225	230	0.023	0.100	0.004	NS			
EC-06-20	230	235	0.009	0.185	0.006	NS			
EC-06-20	235	240	0.012	0.200	0.003	NS			
EC-06-20	240	245	0.014	0.700	0.003	NS			
EC-06-20	245	250	0.012	0.089	0.004	NS			
EC-06-20	250	255	0.017	0.100	0.008	NS			
EC-06-20	255	260	0.005	0.111	0.006	NS			
EC-06-20	260	265	0.002	0.020	0.004	NS			
EC-06-20	265	270	0.004	0.018	0.001	NS			
EC-06-20	270	275	0.004	0.030	0.001	NS			
EC-06-20	275	280	0.007	0.000	0.003	NS			
EC-06-20	280	285	0.008	0.000	0.001	NS			
EC-06-20	285	290	0.009	0.025	0.002	NS			
EC-06-20	290	295	0.012	0.038	0.003	NS			
EC-06-20	295	300	0.020	0.080	0.003	NS			
EC-06-20	300	305	0.020	0.080	0.004	NS			
EC-06-20	305	310	0.016	0.065	0.006	NS			
EC-06-20	310	315	0.016	0.062	0.006	NS			
EC-06-20	315	320	0.007	0.018	0.010	NS			
EC-06-20	320	325	0.006	0.019	0.012	NS			
EC-06-20	325	330	0.007	0.015	0.002	NS			
EC-06-20	330	335	0.014	0.090	0.008	NS			
EC-06-20	335	340	0.018	0.095	0.009	NS			
EC-06-20	340	345	0.020	0.121	0.014	NS			
EC-06-20	345	350	0.025	0.139	0.010	NS			
EC-06-20	350	355	0.040	0.287	0.010	NS			
EC-06-20	355	360	0.039	0.300	0.010	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-20	360	365	0.005	0.076	0.006	NS			
EC-06-20	365	370	0.005	0.040	0.003	NS			
EC-06-20	370	375	0.008	0.080	0.003	NS			
EC-06-20	375	380	0.005	0.073	0.002	NS			
EC-06-20	380	385	0.004	0.077	0.001	NS			
EC-06-20	385	390	0.009	0.084	0.001	NS			
EC-06-20	390	395	0.012	0.118	0.002	NS			
EC-06-20	395	400	0.011	0.067	0.002	NS			
EC-06-20	400	405	0.012	0.080	0.002	NS			
EC-06-20	405	410	0.010	0.091	0.001	NS			
EC-06-20	410	415	0.015	0.095	0.003	NS			
EC-06-20	415	420	0.014	0.092	0.003	NS			
EC-06-20	420	425	0.000	0.019	0.000	NS			
EC-06-20	425	430	0.001	0.020	0.000	NS			
EC-06-20	430	435	0.002	0.020	0.000	NS			
EC-06-20	435	440	0.000	0.041	0.000	NS			
EC-06-20	440	445	0.000	0.044	0.000	NS			
EC-06-20	445	450	0.007	0.052	0.000	NS			
EC-06-21	0	5	0.038	0.236	0.021	NS			
EC-06-21	5	10	0.055	0.414	0.026	NS			
EC-06-21	10	15	0.043	0.354	0.018	NS			
EC-06-21	15	20	0.012	0.202	0.006	NS			
EC-06-21	20	25	0.023	0.254	0.006	NS			
EC-06-21	25	30	0.018	0.165	0.007	NS			
EC-06-21	30	35	0.030	0.185	0.009	NS			
EC-06-21	35	40	0.015	0.098	0.003	NS			
EC-06-21	40	45	0.012	0.098	0.003	NS			
EC-06-21	45	50	0.013	0.090	0.002	NS			
EC-06-21	50	55	0.020	0.115	0.004	NS			
EC-06-21	55	60	0.044	0.377	0.013	NS			
EC-06-21	60	65	0.023	0.345	0.004	NS			
EC-06-21	65	70	0.012	0.075	0.002	NS			
EC-06-21	70	75	0.021	0.095	0.005	NS			
EC-06-21	75	80	0.015	0.100	0.004	NS			
EC-06-21	80	85	0.015	0.106	0.004	NS			
EC-06-21	85	90	0.013	0.118	0.003	NS			
EC-06-21	90	95	0.022	0.185	0.006	NS			
EC-06-21	95	100	0.020	0.128	0.005	NS			
EC-06-21	100	105	0.023	0.143	0.005	NS			
EC-06-21	105	110	0.024	0.144	0.004	NS			
EC-06-21	110	115	0.021	0.089	0.003	NS			
EC-06-21	115	120	0.020	0.088	0.003	NS			
EC-06-21	120	125	0.020	0.096	0.003	NS			
EC-06-21	125	130	0.019	0.132	0.003	NS			
EC-06-21	130	135	0.014	0.182	0.002	NS			
EC-06-21	135	140	0.031	0.188	0.012	NS			
EC-06-21	140	145	0.030	0.143	0.010	NS			
EC-06-21	145	150	0.020	0.107	0.008	NS			
EC-06-21	150	155	0.018	0.102	0.003	NS			
EC-06-21	155	160	0.015	0.101	0.004	NS			
EC-06-21	160	165	0.014	0.101	0.002	NS			
EC-06-21	165	170	0.020	0.128	0.002	NS			
EC-06-21	170	175	0.035	0.198	0.004	NS			
EC-06-21	175	180	0.033	0.228	0.011	NS			
EC-06-21	180	185	0.028	0.165	0.009	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-21	185	190	0.010	0.049	0.000	NS			
EC-06-21	190	195	0.009	0.038	0.000	NS			
EC-06-21	195	200	0.007	0.026	0.000	NS			
EC-06-21	200	205	0.012	0.048	0.001	NS			
EC-06-21	205	210	0.015	0.061	0.002	NS			
EC-06-21	210	215	0.017	0.032	0.003	NS			
EC-06-21	215	220	0.015	0.038	0.004	NS			
EC-06-21	220	225	0.007	0.052	0.000	NS			
EC-06-21	225	230	0.005	0.039	0.000	NS			
EC-06-21	230	235	0.006	0.033	0.000	NS			
EC-06-21	235	240	0.006	0.028	0.000	NS			
EC-06-21	240	245	0.006	0.031	0.001	NS			
EC-06-21	245	250	0.010	0.030	0.001	NS			
EC-06-21	250	255	0.020	0.070	0.000	NS			
EC-06-21	255	260	0.021	0.046	0.005	NS			
EC-06-21	260	265	0.017	0.090	0.003	NS			
EC-06-21	265	270	0.017	0.087	0.004	NS			
EC-06-21	270	275	0.019	0.095	0.003	NS			
EC-06-21	275	280	0.004	0.000	0.002	NS			
EC-06-21	280	285	0.003	0.000	0.000	NS			
EC-06-21	285	290	0.003	0.000	0.000	NS			
EC-06-21	290	295	0.003	0.006	0.000	NS			
EC-06-21	295	300	0.003	0.009	0.000	NS			
EC-06-21	300	305	0.001	0.011	0.000	NS			
EC-06-21	305	310	0.000	0.000	0.000	NS			
EC-06-21	310	315	0.000	0.000	0.000	NS			
EC-06-21	315	320	0.000	0.000	0.000	NS			
EC-06-21	320	325	0.001	0.007	0.000	NS			
EC-06-21	325	330	0.005	0.022	0.001	NS			
EC-06-21	330	335	0.005	0.017	0.000	NS			
EC-06-21	335	340	0.000	0.015	0.000	NS			
EC-06-21	340	345	0.008	0.021	0.002	NS			
EC-06-21	345	350	0.008	0.022	0.002	NS			
EC-06-22	0	5	0.040	0.181	0.020	NS			
EC-06-22	5	10	0.032	0.205	0.024	NS			
EC-06-22	10	15	0.042	0.197	0.022	NS			
EC-06-22	15	20	0.022	0.195	0.009	NS			
EC-06-22	20	25	0.026	0.202	0.013	NS			
EC-06-22	25	30	0.016	0.114	0.017	NS			
EC-06-22	30	35	0.018	0.108	0.014	NS			
EC-06-22	35	40	0.013	0.100	0.015	NS			
EC-06-22	40	45	0.014	0.105	0.005	NS			
EC-06-22	45	50	0.018	0.117	0.007	NS			
EC-06-22	50	55	0.023	0.115	0.006	NS			
EC-06-22	55	60	0.051	0.303	0.018	NS			
EC-06-22	60	65	0.025	0.182	0.010	NS			
EC-06-22	65	70	0.020	0.157	0.009	NS			
EC-06-22	70	75	0.028	0.160	0.012	NS			
EC-06-22	75	80	0.023	0.150	0.007	NS			
EC-06-22	80	85	0.023	0.145	0.006	NS			
EC-06-22	85	90	0.017	0.090	0.004	NS			
EC-06-22	90	95	0.021	0.085	0.003	NS			
EC-06-22	95	100	0.026	0.122	0.005	NS			
EC-06-22	100	105	0.025	0.116	0.005	NS			
EC-06-22	105	110	0.025	0.115	0.004	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-22	110	115	0.022	0.079	0.004	NS			
EC-06-22	115	120	0.017	0.075	0.003	NS			
EC-06-22	120	125	0.018	0.075	0.003	NS			
EC-06-22	125	130	0.018	0.077	0.003	NS			
EC-06-22	130	135	0.009	0.048	0.001	NS			
EC-06-22	135	140	0.011	0.050	0.001	NS			
EC-06-22	140	145	0.028	0.065	0.007	NS			
EC-06-22	145	150	0.017	0.078	0.006	NS			
EC-06-22	150	155	0.018	0.080	0.005	NS			
EC-06-22	155	160	0.013	0.057	0.004	NS			
EC-06-22	160	165	0.011	0.053	0.003	NS			
EC-06-22	165	170	0.019	0.066	0.004	NS			
EC-06-22	170	175	0.016	0.061	0.003	NS			
EC-06-22	175	180	0.042	0.203	0.017	NS			
EC-06-22	180	185	0.030	0.188	0.015	NS			
EC-06-22	185	190	0.007	0.040	0.002	NS			
EC-06-22	190	195	0.009	0.036	0.002	NS			
EC-06-22	195	200	0.009	0.039	0.001	NS			
EC-06-22	200	205	0.009	0.030	0.002	NS			
EC-06-22	205	210	0.004	0.029	0.001	NS			
EC-06-22	210	215	0.003	0.033	0.000	NS			
EC-06-22	215	220	0.005	0.035	0.001	NS			
EC-06-22	220	225	0.003	0.038	0.001	NS			
EC-06-22	225	230	0.003	0.035	0.001	NS			
EC-06-22	230	235	0.006	0.050	0.001	NS			
EC-06-22	235	240	0.004	0.044	0.001	NS			
EC-06-22	240	245	0.003	0.038	0.000	NS			
EC-06-22	245	250	0.007	0.041	0.000	NS			
EC-06-22	250	255	0.015	0.040	0.004	NS			
EC-06-22	255	260	0.016	0.088	0.004	NS			
EC-06-22	260	265	0.014	0.080	0.003	NS			
EC-06-22	265	270	0.010	0.065	0.002	NS			
EC-06-22	270	275	0.022	0.072	0.003	NS			
EC-06-22	275	280	0.003	0.012	0.000	NS			
EC-06-22	280	285	0.002	0.011	0.000	NS			
EC-06-22	285	290	0.002	0.010	0.000	NS			
EC-06-22	290	295	0.005	0.011	0.000	NS			
EC-06-22	295	300	0.007	0.012	0.000	NS			
EC-06-22	300	305	0.003	0.008	0.000	NS			
EC-06-22	305	310	0.003	0.007	0.000	NS			
EC-06-22	310	315	0.000	0.003	0.000	NS			
EC-06-22	315	320	0.000	0.003	0.000	NS			
EC-06-22	320	325	0.000	0.004	0.000	NS			
EC-06-22	325	330	0.001	0.005	0.000	NS			
EC-06-22	330	335	0.001	0.005	0.000	NS			
EC-06-22	335	340	0.002	0.005	0.000	NS			
EC-06-22	340	345	0.003	0.009	0.000	NS			
EC-06-22	345	350	0.007	0.011	0.002	NS			
EC-06-22	350	355	0.002	0.010	0.000	NS			
EC-06-22	355	360	0.002	0.008	0.000	NS			
EC-06-22	360	365	0.005	0.012	0.002	NS			
EC-06-22	365	370	0.001	0.006	0.000	NS			
EC-06-22	370	375	0.000	0.000	0.000	NS			
EC-06-22	375	380	0.000	0.000	0.000	NS			
EC-06-22	380	385	0.002	0.000	0.000	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-22	385	390	0.004	0.009	0.000	NS			
EC-06-22	390	395	0.000	0.000	0.000	NS			
EC-06-22	395	400	0.000	0.000	0.000	NS			
EC-06-22	400	405	0.001	0.000	0.000	NS			
EC-06-22	405	410	0.001	0.000	0.000	NS			
EC-06-22	410	415	0.003	0.011	0.000	NS			
EC-06-22	415	420	0.005	0.012	0.000	NS			
EC-06-22	420	425	0.002	0.010	0.000	NS			
EC-06-22	425	430	0.002	0.011	0.000	NS			
EC-06-22	430	435	0.010	0.029	0.003	NS			
EC-06-22	435	440	0.011	0.035	0.002	NS			
EC-06-22	440	445	0.007	0.017	0.002	NS			
EC-06-22	445	450	0.004	0.013	0.001	NS			
EC-06-23	0	5	0.015	0.075	0.020	NS			
EC-06-23	5	10	0.018	0.098	0.018	NS			
EC-06-23	10	15	0.077	0.227	0.018	NS			
EC-06-23	15	20	0.043	0.258	0.016	NS			
EC-06-23	20	25	0.012	0.108	0.008	NS			
EC-06-23	25	30	0.010	0.075	0.008	NS			
EC-06-23	30	35	0.008	0.063	0.003	NS			
EC-06-23	35	40	0.006	0.038	0.004	NS			
EC-06-23	40	45	0.008	0.038	0.004	NS			
EC-06-23	45	50	0.009	0.040	0.004	NS			
EC-06-23	50	55	0.012	0.044	0.007	NS			
EC-06-23	55	60	0.015	0.040	0.008	NS			
EC-06-23	60	65	0.015	0.048	0.007	NS			
EC-06-23	65	70	0.016	0.071	0.007	NS			
EC-06-23	70	75	0.010	0.065	0.002	NS			
EC-06-23	75	80	0.021	0.078	0.006	NS			
EC-06-23	80	85	0.019	0.070	0.005	NS			
EC-06-23	85	90	0.018	0.068	0.005	NS			
EC-06-23	90	95	0.015	0.063	0.005	NS			
EC-06-23	95	100	0.012	0.063	0.003	NS			
EC-06-23	100	105	0.030	0.100	0.010	NS			
EC-06-23	105	110	0.024	0.097	0.010	NS			
EC-06-23	110	115	0.022	0.057	0.009	NS			
EC-06-23	115	120	0.015	0.044	0.006	NS			
EC-06-23	120	125	0.006	0.048	0.001	NS			
EC-06-23	125	130	0.004	0.037	0.001	NS			
EC-06-23	130	135	0.004	0.038	0.000	NS			
EC-06-23	135	140	0.006	0.051	0.000	NS			
EC-06-23	140	145	0.019	0.085	0.012	NS			
EC-06-23	145	150	0.020	0.088	0.010	NS			
EC-06-23	150	155	0.025	0.087	0.013	NS			
EC-06-23	155	160	0.014	0.062	0.014	NS			
EC-06-23	160	165	0.012	0.060	0.009	NS			
EC-06-23	165	170	0.012	0.065	0.006	NS			
EC-06-23	170	175	0.017	0.073	0.006	NS			
EC-06-23	175	180	0.027	0.115	0.007	NS			
EC-06-23	180	185	0.027	0.117	0.008	NS			
EC-06-23	185	190	0.030	0.153	0.011	NS			
EC-06-23	190	195	0.060	0.227	0.028	NS			
EC-06-23	195	200	0.031	0.188	0.017	NS			
EC-06-23	200	205	0.030	0.189	0.014	NS			
EC-06-23	205	210	0.036	0.202	0.016	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-23	210	215	0.018	0.200	0.010	NS			
EC-06-23	215	220	0.011	0.227	0.005	NS			
EC-06-23	220	225	0.009	0.056	0.003	NS			
EC-06-23	225	230	0.012	0.037	0.004	NS			
EC-06-23	230	235	0.015	0.034	0.006	NS			
EC-06-23	235	240	0.016	0.040	0.007	NS			
EC-06-23	240	245	0.037	0.077	0.021	NS			
EC-06-23	245	250	0.035	0.082	0.020	NS			
EC-06-23	250	255	0.035	0.078	0.018	NS			
EC-06-23	255	260	0.027	0.066	0.011	NS			
EC-06-23	260	265	0.010	0.054	0.003	NS			
EC-06-23	265	270	0.013	0.058	0.003	NS			
EC-06-23	270	275	0.018	0.067	0.003	NS			
EC-06-23	275	280	0.019	0.069	0.003	NS			
EC-06-23	280	285	0.033	0.207	0.010	NS			
EC-06-23	285	290	0.035	0.332	0.012	NS			
EC-06-23	290	295	0.007	0.037	0.002	NS			
EC-06-23	295	300	0.004	0.028	0.000	NS			
EC-06-23	300	305	0.004	0.024	0.000	NS			
EC-06-23	305	310	0.014	0.027	0.003	NS			
EC-06-23	310	315	0.015	0.030	0.007	NS			
EC-06-23	315	320	0.015	0.031	0.010	NS			
EC-06-23	320	325	0.014	0.028	0.009	NS			
EC-06-23	325	330	0.005	0.025	0.001	NS			
EC-06-23	330	335	0.005	0.025	0.002	NS			
EC-06-23	335	340	0.005	0.025	0.001	NS			
EC-06-23	340	345	0.003	0.019	0.000	NS			
EC-06-23	345	350	0.003	0.023	0.000	NS			
EC-06-23	350	355	0.002	0.021	0.000	NS			
EC-06-23	355	360	0.002	0.030	0.000	NS			
EC-06-23	360	365	0.003	0.030	0.000	NS			
EC-06-23	365	370	0.007	0.055	0.002	NS			
EC-06-23	370	375	0.011	0.062	0.004	NS			
EC-06-23	375	380	0.010	0.066	0.002	NS			
EC-06-23	380	385	0.007	0.039	0.001	NS			
EC-06-23	385	390	0.008	0.041	0.001	NS			
EC-06-23	390	395	0.004	0.044	0.000	NS			
EC-06-23	395	400	0.004	0.029	0.000	NS			
EC-06-24	0	5	0.018	0.095	0.012	NS			
EC-06-24	5	10	0.075	0.443	0.023	NS			
EC-06-24	10	15	0.111	0.513	0.030	NS			
EC-06-24	15	20	0.054	0.221	0.018	NS			
EC-06-24	20	25	0.044	0.204	0.017	NS			
EC-06-24	25	30	0.021	0.185	0.017	NS			
EC-06-24	30	35	0.010	0.066	0.010	NS			
EC-06-24	35	40	0.008	0.050	0.006	NS			
EC-06-24	40	45	0.008	0.050	0.006	NS			
EC-06-24	45	50	0.038	0.100	0.011	NS			
EC-06-24	50	55	0.009	0.038	0.003	NS			
EC-06-24	55	60	0.019	0.033	0.005	NS			
EC-06-24	60	65	0.007	0.022	0.001	NS			
EC-06-24	65	70	0.006	0.021	0.001	NS			
EC-06-24	70	75	0.021	0.075	0.010	NS			
EC-06-24	75	80	0.020	0.072	0.011	NS			
EC-06-24	80	85	0.004	0.021	0.000	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-24	85	90	0.003	0.019	0.000	NS			
EC-06-24	90	95	0.005	0.009	0.000	NS			
EC-06-24	95	100	0.003	0.009	0.000	NS			
EC-06-24	100	105	0.002	0.007	0.000	NS			
EC-06-24	105	110	0.002	0.009	0.001	NS			
EC-06-24	110	115	0.009	0.019	0.001	NS			
EC-06-24	115	120	0.011	0.037	0.003	NS			
EC-06-24	120	125	0.030	0.117	0.015	NS			
EC-06-24	125	130	0.035	0.208	0.016	NS			
EC-06-24	130	135	0.028	0.211	0.012	NS			
EC-06-24	135	140	0.004	0.030	0.000	NS			
EC-06-24	140	145	0.003	0.022	0.000	NS			
EC-06-24	145	150	0.004	0.028	0.002	NS			
EC-06-24	150	155	0.004	0.025	0.002	NS			
EC-06-24	155	160	0.004	0.040	0.001	NS			
EC-06-24	160	165	0.003	0.035	0.001	NS			
EC-06-24	165	170	0.010	0.050	0.004	NS			
EC-06-24	170	175	0.011	0.072	0.004	NS			
EC-06-24	175	180	0.012	0.070	0.005	NS			
EC-06-24	180	185	0.025	0.107	0.011	NS			
EC-06-24	185	190	0.040	0.257	0.017	NS			
EC-06-24	190	195	0.005	0.041	0.002	NS			
EC-06-24	195	200	0.005	0.042	0.004	NS			
EC-06-24	200	205	0.007	0.048	0.003	NS			
EC-06-24	205	210	0.004	0.033	0.001	NS			
EC-06-24	210	215	0.004	0.035	0.002	NS			
EC-06-24	215	220	0.017	0.046	0.001	NS			
EC-06-24	220	225	0.012	0.049	0.003	NS			
EC-06-24	225	230	0.030	0.055	0.005	NS			
EC-06-24	230	235	0.015	0.058	0.002	NS			
EC-06-24	235	240	0.019	0.082	0.007	NS			
EC-06-24	240	245	0.019	0.095	0.011	NS			
EC-06-24	245	250	0.020	0.092	0.015	NS			
EC-06-24	250	255	0.005	0.033	0.005	NS			
EC-06-24	255	260	0.006	0.040	0.003	NS			
EC-06-24	260	265	0.006	0.046	0.007	NS			
EC-06-24	265	270	0.006	0.041	0.002	NS			
EC-06-24	270	275	0.003	0.037	0.000	NS			
EC-06-24	275	280	0.003	0.035	0.000	NS			
EC-06-24	280	285	0.002	0.021	0.000	NS			
EC-06-24	285	290	0.002	0.020	0.000	NS			
EC-06-24	290	295	0.004	0.018	0.001	NS			
EC-06-24	295	300	0.001	0.009	0.000	NS			
EC-06-24	300	305	0.000	0.006	0.000	NS			
EC-06-24	305	310	0.000	0.007	0.000	NS			
EC-06-24	310	315	0.000	0.000	0.000	NS			
EC-06-24	315	320	0.002	0.000	0.003	NS			
EC-06-24	320	325	0.002	0.005	0.003	NS			
EC-06-24	325	330	0.001	0.000	0.001	NS			
EC-06-24	330	335	0.001	0.000	0.001	NS			
EC-06-24	335	340	0.001	0.000	0.001	NS			
EC-06-24	340	345	0.001	0.000	0.000	NS			
EC-06-24	345	350	0.001	0.000	0.000	NS			
EC-06-24	350	355	0.004	0.009	0.003	NS			
EC-06-24	355	360	0.002	0.001	0.004	NS			



HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-24	360	365	0.001	0.001	0.001	NS			
EC-06-24	365	370	0.001	0.001	0.000	NS			
EC-06-24	370	375	0.001	0.005	0.000	NS			
EC-06-24	375	380	0.002	0.007	0.000	NS			
EC-06-24	380	385	0.001	0.005	0.001	NS			
EC-06-24	385	390	0.002	0.010	0.001	NS			
EC-06-24	390	395	0.001	0.000	0.000	NS			
EC-06-24	395	400	0.001	0.000	0.000	NS			
EC-06-25	0	5	0.049	0.188	0.009	NS			
EC-06-25	5	10	0.022	0.174	0.007	NS			
EC-06-25	10	15	0.015	0.180	0.005	NS			
EC-06-25	15	20	0.018	0.064	0.006	NS			
EC-06-25	20	25	0.008	0.075	0.003	NS			
EC-06-25	25	30	0.008	0.155	0.003	NS			
EC-06-25	30	35	0.003	0.158	0.001	NS			
EC-06-25	35	40	0.005	0.037	0.001	NS			
EC-06-25	40	45	0.003	0.033	0.001	NS			
EC-06-25	45	50	0.011	0.046	0.003	NS			
EC-06-25	50	55	0.010	0.031	0.002	NS			
EC-06-25	55	60	0.010	0.016	0.002	NS			
EC-06-25	60	65	0.010	0.025	0.002	NS			
EC-06-25	65	70	0.004	0.146	0.001	NS			
EC-06-25	70	75	0.003	0.098	0.000	NS			
EC-06-25	75	80	0.007	0.012	0.002	NS			
EC-06-25	80	85	0.006	0.040	0.001	NS			
EC-06-25	85	90	0.014	0.086	0.004	NS			
EC-06-25	90	95	0.015	0.091	0.004	NS			
EC-06-25	95	100	0.025	0.098	0.006	NS			
EC-06-25	100	105	0.023	0.112	0.007	NS			
EC-06-25	105	110	0.031	0.303	0.012	NS			
EC-06-25	110	115	0.037	0.335	0.015	NS			
EC-06-25	115	120	0.036	0.299	0.015	NS			
EC-06-25	120	125	0.014	0.075	0.009	NS			
EC-06-25	125	130	0.009	0.157	0.004	NS			
EC-06-25	130	135	0.007	0.160	0.004	NS			
EC-06-25	135	140	0.003	0.041	0.001	NS			
EC-06-25	140	145	0.004	0.028	0.002	NS			
EC-06-25	145	150	0.001	0.007	0.000	NS			
EC-06-25	150	155	0.001	0.007	0.000	NS			
EC-06-25	155	160	0.001	0.009	0.000	NS			
EC-06-25	160	165	0.005	0.061	0.002	NS			
EC-06-25	165	170	0.009	0.028	0.002	NS			
EC-06-25	170	175	0.029	0.321	0.009	NS			
EC-06-25	175	180	0.007	0.044	0.003	NS			
EC-06-25	180	185	0.038	0.275	0.015	NS			
EC-06-25	185	190	0.011	0.027	0.007	NS			
EC-06-25	190	195	0.017	0.031	0.005	NS			
EC-06-25	195	200	0.014	0.055	0.004	NS			
EC-06-25	200	205	0.008	0.041	0.002	NS			
EC-06-25	205	210	0.003	0.045	0.002	NS			
EC-06-25	210	215	0.002	0.050	0.000	NS			
EC-06-25	215	220	0.004	0.031	0.001	NS			
EC-06-25	220	225	0.014	0.062	0.003	NS			
EC-06-25	225	230	0.013	0.066	0.002	NS			
EC-06-25	230	235	0.002	0.017	0.000	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-25	235	240	0.002	0.012	0.000	NS			
EC-06-25	240	245	0.002	0.007	0.000	NS			
EC-06-25	245	250	0.003	0.019	0.000	NS			
EC-06-25	250	255	0.017	0.073	0.011	NS			
EC-06-25	255	260	0.021	0.090	0.013	NS			
EC-06-25	260	265	0.027	0.123	0.013	NS			
EC-06-25	265	270	0.022	0.145	0.012	NS			
EC-06-25	270	275	0.002	0.038	0.000	NS			
EC-06-25	275	280	0.002	0.034	0.000	NS			
EC-06-25	280	285	0.004	0.037	0.000	NS			
EC-06-25	285	290	0.006	0.040	0.002	NS			
EC-06-25	290	295	0.061	1.112	0.025	NS			
EC-06-25	295	300	0.066	1.676	0.028	NS			
EC-06-25	300	305	0.021	0.895	0.014	NS			
EC-06-25	305	310	0.002	0.018	0.000	NS			
EC-06-25	310	315	0.000	0.012	0.000	NS			
EC-06-25	315	320	0.000	0.009	0.000	NS			
EC-06-25	320	325	0.004	0.017	0.000	NS			
EC-06-25	325	330	0.006	0.022	0.001	NS			
EC-06-25	330	335	0.007	0.031	0.002	NS			
EC-06-25	335	340	0.007	0.030	0.002	NS			
EC-06-25	340	345	0.010	0.044	0.002	NS			
EC-06-25	345	350	0.012	0.060	0.004	NS			
EC-06-25	350	355	0.003	0.017	0.001	NS			
EC-06-25	355	360	0.009	0.020	0.003	NS			
EC-06-25	360	365	0.008	0.020	0.002	NS			
EC-06-25	365	370	0.014	0.055	0.010	NS			
EC-06-25	370	375	0.014	0.067	0.017	NS			
EC-06-25	375	380	0.005	0.066	0.009	NS			
EC-06-25	380	385	0.004	0.038	0.002	NS			
EC-06-25	385	390	0.006	0.050	0.001	NS			
EC-06-25	390	395	0.004	0.012	0.000	NS			
EC-06-25	395	400	0.009	0.018	0.003	NS			
EC-06-25	400	405	0.003	0.015	0.001	NS			
EC-06-25	405	410	0.005	0.041	0.002	NS			
EC-06-25	410	415	NS	NS	NS	NS			
EC-06-25	415	420	0.007	0.055	0.002	NS			
EC-06-25	420	425	0.006	0.074	0.003	NS			
EC-06-25	425	430	0.006	0.077	0.002	NS			
EC-06-25	430	435	0.008	0.024	0.005	NS			
EC-06-25	435	440	0.000	0.000	0.002	NS			
EC-06-25	440	445	0.000	0.000	0.000	NS			
EC-06-25	445	450	0.001	0.000	0.000	NS			
EC-06-25	450	455	0.008	0.042	0.000	NS			
EC-06-25	455	460	0.013	0.050	0.002	NS			
EC-06-25	460	465	0.008	0.019	0.001	NS			
EC-06-25	465	470	0.007	0.020	0.002	NS			
EC-06-25	470	475	0.062	1.818	0.013	NS			
EC-06-25	475	480	0.007	0.047	0.002	NS			
EC-06-25	480	485	0.007	0.051	0.002	NS			
EC-06-25	485	490	0.008	0.063	0.003	NS			
EC-06-25	490	495	0.014	0.093	0.003	NS			
EC-06-25	495	500	0.021	0.086	0.003	NS			
EC-06-26	0	5	0.011	0.044	0.010	NS			
EC-06-26	5	10	0.011	0.051	0.010	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-26	10	15	0.073	0.093	0.030	NS			
EC-06-26	15	20	0.055	0.117	0.027	NS			
EC-06-26	20	25	0.053	0.125	0.019	NS			
EC-06-26	25	30	0.046	0.116	0.014	NS			
EC-06-26	30	35	0.009	0.036	0.003	NS			
EC-06-26	35	40	0.004	0.030	0.001	NS			
EC-06-26	40	45	0.010	0.062	0.002	NS			
EC-06-26	45	50	0.037	0.068	0.014	NS			
EC-06-26	50	55	0.029	0.075	0.013	NS			
EC-06-26	55	60	0.031	0.078	0.013	NS			
EC-06-26	60	65	0.006	0.075	0.002	NS			
EC-06-26	65	70	0.007	0.082	0.002	NS			
EC-06-26	70	75	0.011	0.088	0.003	NS			
EC-06-26	75	80	0.033	0.211	0.013	NS			
EC-06-26	80	85	0.004	0.009	0.001	NS			
EC-06-26	85	90	0.004	0.009	0.002	NS			
EC-06-26	90	95	0.005	0.016	0.002	NS			
EC-06-26	95	100	0.009	0.021	0.002	NS			
EC-06-26	100	105	0.009	0.027	0.003	NS			
EC-06-26	105	110	0.045	0.422	0.010	NS			
EC-06-26	110	115	0.028	0.178	0.008	NS			
EC-06-26	115	120	0.018	0.095	0.006	NS			
EC-06-26	120	125	0.016	0.099	0.005	NS			
EC-06-26	125	130	0.009	0.016	0.004	NS			
EC-06-26	130	135	0.004	0.016	0.001	NS			
EC-06-26	135	140	0.022	0.067	0.006	NS			
EC-06-26	140	145	0.028	0.077	0.008	NS			
EC-06-26	145	150	0.015	0.057	0.004	NS			
EC-06-26	150	155	0.018	0.061	0.005	NS			
EC-06-26	155	160	0.006	0.014	0.002	NS			
EC-06-26	160	165	0.007	0.018	0.002	NS			
EC-06-26	165	170	0.007	0.016	0.002	NS			
EC-06-26	170	175	0.004	0.012	0.000	NS			
EC-06-26	175	180	0.061	0.198	0.021	NS			
EC-06-26	180	185	0.044	0.164	0.022	NS			
EC-06-26	185	190	0.015	0.096	0.008	NS			
EC-06-26	190	195	0.042	0.312	0.018	NS			
EC-06-26	195	200	0.008	0.013	0.002	NS			
EC-06-26	200	205	0.002	0.006	0.000	NS			
EC-06-26	205	210	0.004	0.012	0.000	NS			
EC-06-26	210	215	0.003	0.007	0.000	NS			
EC-06-26	215	220	0.003	0.006	0.000	NS			
EC-06-26	220	225	0.002	0.006	0.000	NS			
EC-06-26	225	230	0.002	0.004	0.000	NS			
EC-06-26	230	235	0.006	0.016	0.001	NS			
EC-06-26	235	240	0.001	0.000	0.000	NS			
EC-06-26	240	245	0.000	0.000	0.000	NS			
EC-06-26	245	250	0.000	0.000	0.000	NS			
EC-06-26	250	255	0.001	0.000	0.000	NS			
EC-06-26	255	260	0.000	0.000	0.000	NS			
EC-06-26	260	265	0.002	0.007	0.000	NS			
EC-06-26	265	270	0.003	0.009	0.000	NS			
EC-06-26	270	275	0.021	0.057	0.014	NS			
EC-06-26	275	280	0.018	0.072	0.011	NS			
EC-06-26	280	285	0.022	0.424	0.020	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-26	285	290	0.008	0.022	0.008	NS			
EC-06-26	290	295	0.006	0.019	0.008	NS			
EC-06-26	295	300	0.006	0.017	0.002	NS			
EC-06-26	300	305	0.002	0.009	0.001	NS			
EC-06-26	305	310	0.011	0.032	0.006	NS			
EC-06-26	310	315	0.013	0.036	0.003	NS			
EC-06-26	315	320	0.007	0.018	0.001	NS			
EC-06-26	320	325	0.007	0.022	0.000	NS			
EC-06-26	325	330	0.006	0.020	0.000	NS			
EC-06-26	330	335	0.002	0.006	0.000	NS			
EC-06-26	335	340	0.001	0.007	0.000	NS			
EC-06-26	340	345	0.000	0.003	0.000	NS			
EC-06-26	345	350	0.023	0.088	0.000	NS			
EC-06-26	350	355	0.004	0.014	0.000	NS			
EC-06-26	355	360	0.002	0.005	0.000	NS			
EC-06-27	0	5	0.019	0.098	0.013	NS			
EC-06-27	5	10	0.021	0.075	0.012	NS			
EC-06-27	10	15	0.034	0.078	0.016	NS			
EC-06-27	15	20	0.037	0.100	0.017	NS			
EC-06-27	20	25	0.016	0.067	0.009	NS			
EC-06-27	25	30	0.015	0.066	0.007	NS			
EC-06-27	30	35	0.016	0.066	0.007	NS			
EC-06-27	35	40	0.009	0.031	0.003	NS			
EC-06-27	40	45	0.022	0.102	0.006	NS			
EC-06-27	45	50	0.022	0.094	0.005	NS			
EC-06-27	50	55	0.012	0.062	0.006	NS			
EC-06-27	55	60	0.006	0.044	0.002	NS			
EC-06-27	60	65	0.009	0.061	0.002	NS			
EC-06-27	65	70	0.004	0.018	0.005	NS			
EC-06-27	70	75	0.005	0.022	0.005	NS			
EC-06-27	75	80	0.004	0.025	0.006	NS			
EC-06-27	80	85	0.003	0.031	0.004	NS			
EC-06-27	85	90	0.001	0.009	0.004	NS			
EC-06-27	90	95	0.000	0.003	0.000	NS			
EC-06-27	95	100	0.000	0.000	0.000	NS			
EC-06-27	100	105	0.000	0.000	0.001	NS			
EC-06-27	105	110	0.005	0.018	0.007	NS			
EC-06-27	110	115	0.003	0.000	0.002	NS			
EC-06-27	115	120	0.006	0.013	0.002	NS			
EC-06-27	120	125	0.005	0.023	0.003	NS			
EC-06-27	125	130	0.008	0.029	0.004	NS			
EC-06-27	130	135	0.007	0.040	0.001	NS			
EC-06-27	135	140	0.008	0.041	0.004	NS			
EC-06-27	140	145	0.003	0.037	0.000	NS			
EC-06-27	145	150	0.008	0.038	0.001	NS			
EC-06-27	150	155	0.014	0.082	0.001	NS			
EC-06-27	155	160	0.016	0.046	0.002	NS			
EC-06-27	160	165	0.016	0.055	0.003	NS			
EC-06-27	165	170	0.017	0.061	0.003	NS			
EC-06-27	170	175	0.004	0.009	0.001	NS			
EC-06-27	175	180	0.004	0.020	0.000	NS			
EC-06-27	180	185	0.005	0.020	0.000	NS			
EC-06-27	185	190	0.018	0.097	0.003	NS			
EC-06-27	190	195	0.021	0.103	0.004	NS			
EC-06-27	195	200	0.007	0.030	0.003	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-27	200	205	0.007	0.029	0.003	NS			
EC-06-27	205	210	0.006	0.029	0.001	NS			
EC-06-27	210	215	0.002	0.008	0.000	NS			
EC-06-27	215	220	0.002	0.010	0.000	NS			
EC-06-27	220	225	0.007	0.021	0.001	NS			
EC-06-27	225	230	0.003	0.012	0.000	NS			
EC-06-27	230	235	0.002	0.014	0.000	NS			
EC-06-27	235	240	0.002	0.003	0.000	NS			
EC-06-27	240	245	0.003	0.009	0.000	NS			
EC-06-27	245	250	0.007	0.033	0.002	NS			
EC-06-27	250	255	0.007	0.032	0.002	NS			
EC-06-27	255	260	0.009	0.034	0.002	NS			
EC-06-27	260	265	0.012	0.040	0.003	NS			
EC-06-27	265	270	0.006	0.015	0.001	NS			
EC-06-28	0	5	0.024	0.155	0.011	NS			
EC-06-28	5	10	0.027	0.160	0.015	NS			
EC-06-28	10	15	0.030	0.199	0.013	NS			
EC-06-28	15	20	0.011	0.087	0.006	NS			
EC-06-28	20	25	0.018	0.115	0.008	NS			
EC-06-28	25	30	0.010	0.121	0.003	NS			
EC-06-28	30	35	0.007	0.065	0.002	NS			
EC-06-28	35	40	0.009	0.087	0.002	NS			
EC-06-28	40	45	0.010	0.088	0.003	NS			
EC-06-28	45	50	0.009	0.078	0.002	NS			
EC-06-28	50	55	0.008	0.048	0.002	NS			
EC-06-28	55	60	0.008	0.039	0.002	NS			
EC-06-28	60	65	0.006	0.044	0.002	NS			
EC-06-28	65	70	0.019	0.061	0.003	NS			
EC-06-28	70	75	0.020	0.066	0.003	NS			
EC-06-28	75	80	0.006	0.054	0.001	NS			
EC-06-28	80	85	0.020	0.056	0.004	NS			
EC-06-28	85	90	0.023	0.112	0.014	NS			
EC-06-28	90	95	0.005	0.067	0.012	NS			
EC-06-28	95	100	0.014	0.088	0.010	NS			
EC-06-28	100	105	0.012	0.114	0.007	NS			
EC-06-28	105	110	0.012	0.112	0.007	NS			
EC-06-28	110	115	0.011	0.054	0.006	NS			
EC-06-28	115	120	0.008	0.060	0.002	NS			
EC-06-28	120	125	0.013	0.078	0.002	NS			
EC-06-28	125	130	0.006	0.045	0.001	NS			
EC-06-28	130	135	0.004	0.036	0.000	NS			
EC-06-28	135	140	0.011	0.041	0.002	NS			
EC-06-28	140	145	0.016	0.052	0.005	NS			
EC-06-28	145	150	0.006	0.050	0.002	NS			
EC-06-28	150	155	0.005	0.050	0.002	NS			
EC-06-28	155	160	0.007	0.032	0.002	NS			
EC-06-28	160	165	0.006	0.034	0.002	NS			
EC-06-28	165	170	0.006	0.023	0.002	NS			
EC-06-28	170	175	0.020	0.051	0.016	NS			
EC-06-28	175	180	0.021	0.055	0.016	NS			
EC-06-28	180	185	0.017	0.054	0.013	NS			
EC-06-28	185	190	0.012	0.058	0.010	NS			
EC-06-28	190	195	0.019	0.057	0.016	NS			
EC-06-28	195	200	0.021	0.154	0.017	NS			
EC-06-28	200	205	0.023	0.148	0.017	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-28	205	210	0.027	0.211	0.030	NS			
EC-06-28	210	215	0.004	0.009	0.000	NS			
EC-06-28	215	220	0.003	0.012	0.000	NS			
EC-06-28	220	225	0.003	0.008	0.000	NS			
EC-06-28	225	230	0.007	0.008	0.001	NS			
EC-06-28	230	235	0.008	0.017	0.002	NS			
EC-06-28	235	240	0.012	0.012	0.002	NS			
EC-06-28	240	245	0.002	0.010	0.000	NS			
EC-06-28	245	250	0.002	0.006	0.000	NS			
EC-06-28	250	255	0.005	0.012	0.000	NS			
EC-06-28	255	260	0.006	0.013	0.002	NS			
EC-06-28	260	265	0.004	0.017	0.001	NS			
EC-06-28	265	270	0.021	0.075	0.010	NS			
EC-06-28	270	275	0.022	0.077	0.010	NS			
EC-06-28	275	280	0.021	0.065	0.011	NS			
EC-06-28	280	285	0.027	0.068	0.012	NS			
EC-06-28	285	290	0.027	0.077	0.011	NS			
EC-06-28	290	295	0.025	0.082	0.012	NS			
EC-06-28	295	300	0.024	0.073	0.009	NS			
EC-06-29	0	5	0.031	0.220	0.014	NS			
EC-06-29	5	10	0.030	0.208	0.014	NS			
EC-06-29	10	15	0.033	0.185	0.021	NS			
EC-06-29	15	20	0.025	0.166	0.018	NS			
EC-06-29	20	25	0.015	0.041	0.011	NS			
EC-06-29	25	30	0.016	0.043	0.009	NS			
EC-06-29	30	35	0.013	0.039	0.019	NS			
EC-06-29	35	40	0.007	0.023	0.005	NS			
EC-06-29	40	45	0.007	0.021	0.003	NS			
EC-06-29	45	50	0.008	0.028	0.002	NS			
EC-06-29	50	55	0.022	0.102	0.016	NS			
EC-06-29	55	60	0.016	0.088	0.012	NS			
EC-06-29	60	65	0.004	0.054	0.000	NS			
EC-06-29	65	70	0.028	0.157	0.013	NS			
EC-06-29	70	75	0.034	0.217	0.016	NS			
EC-06-29	75	80	0.021	0.212	0.009	NS			
EC-06-29	80	85	0.008	0.084	0.002	NS			
EC-06-29	85	90	0.014	0.054	0.003	NS			
EC-06-29	90	95	0.005	0.038	0.001	NS			
EC-06-29	95	100	0.004	0.033	0.001	NS			
EC-06-29	100	105	0.006	0.030	0.002	NS			
EC-06-29	105	110	0.017	0.040	0.004	NS			
EC-06-29	110	115	0.003	0.016	0.001	NS			
EC-06-29	115	120	0.007	0.021	0.002	NS			
EC-06-29	120	125	0.020	0.082	0.006	NS			
EC-06-29	125	130	0.004	0.021	0.001	NS			
EC-06-29	130	135	0.005	0.055	0.001	NS			
EC-06-29	135	140	0.006	0.050	0.002	NS			
EC-06-29	140	145	0.004	0.031	0.000	NS			
EC-06-29	145	150	0.008	0.028	0.001	NS			
EC-06-29	150	155	0.019	0.061	0.007	NS			
EC-06-29	155	160	0.017	0.066	0.006	NS			
EC-06-29	160	165	0.024	0.115	0.007	NS			
EC-06-29	165	170	0.022	0.118	0.008	NS			
EC-06-29	170	175	0.018	0.107	0.004	NS			
EC-06-29	175	180	0.035	0.278	0.018	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-29	180	185	0.028	0.255	0.013	NS			
EC-06-29	185	190	0.009	0.031	0.004	NS			
EC-06-29	190	195	0.010	0.058	0.002	NS			
EC-06-29	195	200	0.012	0.051	0.002	NS			
EC-06-29	200	205	0.007	0.045	0.002	NS			
EC-06-29	205	210	0.003	0.043	0.000	NS			
EC-06-29	210	215	0.007	0.040	0.000	NS			
EC-06-29	215	220	0.008	0.037	0.004	NS			
EC-06-29	220	225	0.009	0.040	0.007	NS			
EC-06-29	225	230	0.009	0.048	0.006	NS			
EC-06-29	230	235	0.006	0.032	0.005	NS			
EC-06-29	235	240	0.007	0.037	0.005	NS			
EC-06-29	240	245	0.002	0.018	0.000	NS			
EC-06-29	245	250	0.002	0.013	0.000	NS			
EC-06-29	250	255	0.005	0.022	0.001	NS			
EC-06-29	255	260	0.005	0.018	0.001	NS			
EC-06-29	260	265	0.017	0.019	0.003	NS			
EC-06-29	265	270	0.004	0.014	0.003	NS			
EC-06-29	270	275	0.008	0.020	0.003	NS			
EC-06-29	275	280	0.011	0.029	0.003	NS			
EC-06-29	280	285	0.030	0.294	0.011	NS			
EC-06-29	285	290	0.006	0.051	0.004	NS			
EC-06-29	290	295	0.003	0.017	0.001	NS			
EC-06-29	295	300	0.000	0.012	0.000	NS			
EC-06-29	300	305	0.000	0.018	0.000	NS			
EC-06-29	305	310	0.000	0.009	0.000	NS			
EC-06-29	310	315	0.000	0.009	0.000	NS			
EC-06-29	315	320	0.000	0.013	0.000	NS			
EC-06-29	320	325	0.005	0.021	0.002	NS			
EC-06-29	325	330	0.003	0.009	0.002	NS			
EC-06-29	330	335	0.001	0.007	0.000	NS			
EC-06-29	335	340	0.002	0.009	0.000	NS			
EC-06-29	340	345	0.001	0.005	0.000	NS			
EC-06-29	345	350	0.005	0.006	0.003	NS			
EC-06-29	350	355	0.003	0.013	0.001	NS			
EC-06-29	355	360	0.004	0.014	0.002	NS			
EC-06-29	360	365	0.004	0.018	0.002	NS			
EC-06-29	365	370	0.008	0.031	0.004	NS			
EC-06-29	370	375	0.012	0.034	0.005	NS			
EC-06-29	375	380	0.003	0.022	0.002	NS			
EC-06-29	380	385	0.004	0.018	0.003	NS			
EC-06-29	385	390	0.005	0.021	0.002	NS			
EC-06-29	390	395	0.001	0.009	0.000	NS			
EC-06-29	395	400	0.002	0.013	0.000	NS			
EC-06-29	400	405	0.002	0.012	0.000	NS			
EC-06-29	405	410	0.001	0.007	0.000	NS			
EC-06-29	410	415	0.003	0.014	0.002	NS			
EC-06-29	415	420	0.001	0.012	0.000	NS			
EC-06-30	0	5	0.029	0.121	0.014	NS			
EC-06-30	5	10	0.020	0.104	0.010	NS			
EC-06-30	10	15	0.049	0.188	0.017	NS			
EC-06-30	15	20	0.055	0.227	0.021	NS			
EC-06-30	20	25	0.018	0.105	0.009	NS			
EC-06-30	25	30	0.015	0.086	0.007	NS			
EC-06-30	30	35	0.011	0.068	0.004	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-30	35	40	0.013	0.070	0.003	NS			
EC-06-30	40	45	0.038	0.198	0.018	NS			
EC-06-30	45	50	0.033	0.221	0.014	NS			
EC-06-30	50	55	0.037	0.201	0.009	NS			
EC-06-30	55	60	0.059	0.313	0.012	NS			
EC-06-30	60	65	0.048	0.288	0.012	NS			
EC-06-30	65	70	0.064	0.295	0.018	NS			
EC-06-30	70	75	0.037	0.254	0.009	NS			
EC-06-30	75	80	0.017	0.095	0.007	NS			
EC-06-30	80	85	0.012	0.089	0.012	NS			
EC-06-30	85	90	0.011	0.089	0.008	NS			
EC-06-30	90	95	0.014	0.100	0.037	NS			
EC-06-30	95	100	0.052	0.317	0.022	NS			
EC-06-30	100	105	0.055	0.266	0.024	NS			
EC-06-30	105	110	0.009	0.000	0.004	NS			
EC-06-30	110	115	0.010	0.000	0.004	NS			
EC-06-30	115	120	0.035	0.115	0.012	NS			
EC-06-30	120	125	0.033	0.102	0.011	NS			
EC-06-30	125	130	0.041	0.232	0.013	NS			
EC-06-30	130	135	0.007	0.051	0.001	NS			
EC-06-30	135	140	0.021	0.094	0.001	NS			
EC-06-30	140	145	0.018	0.098	0.001	NS			
EC-06-30	145	150	0.030	0.225	0.010	NS			
EC-06-30	150	155	0.059	0.274	0.014	NS			
EC-06-30	155	160	0.051	0.308	0.014	NS			
EC-06-30	160	165	0.070	0.268	0.017	NS			
EC-06-30	165	170	0.046	0.300	0.015	NS			
EC-06-30	170	175	0.055	0.285	0.016	NS			
EC-06-30	175	180	0.024	0.148	0.004	NS			
EC-06-30	180	185	0.009	0.000	0.001	NS			
EC-06-30	185	190	0.030	0.177	0.003	NS			
EC-06-30	190	195	0.047	0.185	0.011	NS			
EC-06-30	195	200	0.052	0.182	0.012	NS			
EC-06-30	200	205	0.037	0.097	0.006	NS			
EC-06-30	205	210	0.029	0.075	0.006	NS			
EC-06-30	210	215	0.007	0.000	0.001	NS			
EC-06-30	215	220	0.015	0.000	0.001	NS			
EC-06-30	220	225	0.012	0.000	0.001	NS			
EC-06-30	225	230	0.013	0.043	0.003	NS			
EC-06-30	230	235	0.004	0.000	0.001	NS			
EC-06-30	235	240	0.003	0.000	0.001	NS			
EC-06-30	240	245	0.002	0.000	0.001	NS			
EC-06-30	245	250	0.005	0.000	0.001	NS			
EC-06-30	250	255	0.003	0.011	0.001	NS			
EC-06-30	255	260	0.021	0.048	0.006	NS			
EC-06-30	260	265	0.029	0.097	0.003	NS			
EC-06-30	265	270	0.025	0.096	0.007	NS			
EC-06-30	270	275	0.030	0.111	0.004	NS			
EC-06-30	275	280	0.024	0.094	0.004	NS			
EC-06-30	280	285	0.020	0.090	0.002	NS			
EC-06-30	285	290	0.017	0.092	0.002	NS			
EC-06-30	290	295	0.019	0.079	0.004	NS			
EC-06-30	295	300	0.010	0.063	0.002	NS			
EC-06-30	300	305	0.006	0.000	0.001	NS			
EC-06-30	305	310	0.004	0.000	0.001	NS			



HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-30	310	315	0.006	0.017	0.002	NS			
EC-06-30	315	320	0.008	0.014	0.003	NS			
EC-06-30	320	325	0.006	0.019	0.002	NS			
EC-06-30	325	330	0.006	0.020	0.000	NS			
EC-06-30	330	335	0.004	0.018	0.000	NS			
EC-06-30	335	340	0.005	0.044	0.001	NS			
EC-06-30	340	345	0.005	0.026	0.000	NS			
EC-06-30	345	350	0.006	0.030	0.002	NS			
EC-06-30	350	355	0.008	0.037	0.001	NS			
EC-06-30	355	360	0.008	0.038	0.002	NS			
EC-06-30	360	365	0.009	0.038	0.002	NS			
EC-06-30	365	370	0.002	0.000	0.000	NS			
EC-06-30	370	375	0.002	0.000	0.000	NS			
EC-06-30	375	380	0.028	0.088	0.007	NS			
EC-06-30	380	385	0.024	0.069	0.004	NS			
EC-06-30	385	390	0.009	0.027	0.003	NS			
EC-06-30	390	395	0.012	0.035	0.003	NS			
EC-06-30	395	400	0.010	0.037	0.003	NS			
EC-06-30	400	405	0.009	0.035	0.003	NS			
EC-06-30	405	410	0.018	0.115	0.005	NS			
EC-06-30	410	415	0.021	0.176	0.006	NS			
EC-06-30	415	420	0.007	0.078	0.002	NS			
EC-06-30	420	425	0.013	0.082	0.007	NS			
EC-06-30	425	430	0.006	0.046	0.002	NS			
EC-06-30	430	435	0.004	0.031	0.000	NS			
EC-06-30	435	440	0.005	0.033	0.000	NS			
EC-06-30	440	445	0.005	0.038	0.001	NS			
EC-06-30	445	450	0.008	0.027	0.002	NS			
EC-06-30	450	455	0.009	0.033	0.002	NS			
EC-06-30	455	460	0.009	0.040	0.004	NS			
EC-06-30	460	465	0.017	0.100	0.002	NS			
EC-06-30	465	470	0.004	0.000	0.000	NS			
EC-06-30	470	475	0.025	0.106	0.004	NS			
EC-06-30	475	480	0.006	0.000	0.000	NS			
EC-06-30	480	485	0.021	0.074	0.003	NS			
EC-06-30	485	490	0.006	0.000	0.001	NS			
EC-06-30	490	495	0.006	0.000	0.001	NS			
EC-06-30	495	500	0.011	0.061	0.003	NS			
EC-06-30	500	505	0.004	0.028	0.001	NS			
EC-06-30	505	510	0.007	0.025	0.004	NS			
EC-06-30	510	515	0.008	0.030	0.004	NS			
EC-06-30	515	520	0.007	0.032	0.001	NS			
EC-06-30	520	525	0.005	0.030	0.001	NS			
EC-06-30	525	530	0.006	0.026	0.000	NS			
EC-06-30	530	535	0.031	0.072	0.011	NS			
EC-06-30	535	540	0.008	0.041	0.002	NS			
EC-06-30	540	545	0.012	0.044	0.002	NS			
EC-06-30	545	550	0.013	0.036	0.003	NS			
EC-06-30	550	555	0.008	0.021	0.001	NS			
EC-06-30	555	560	0.006	0.000	0.000	NS			
EC-06-30	560	565	0.007	0.018	0.002	NS			
EC-06-30	565	570	0.007	0.020	0.002	NS			
EC-06-30	570	575	0.002	0.000	0.000	NS			
EC-06-30	575	580	0.004	0.000	0.000	NS			
EC-06-30	580	585	0.005	0.000	0.000	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-30	585	590	0.005	0.000	0.001	NS			
EC-06-30	590	595	0.005	0.000	0.000	NS			
EC-06-30	595	600	0.008	0.026	0.001	NS			
EC-06-31	0	5	0.029	0.899	0.015	NS			
EC-06-31	5	10	0.031	0.691	0.017	NS			
EC-06-31	10	15	0.360	0.118	0.017	NS			
EC-06-31	15	20	0.130	2.082	0.019	NS			
EC-06-31	20	25	0.007	0.604	0.015	NS			
EC-06-31	25	30	0.014	0.322	0.017	NS			
EC-06-31	30	35	0.031	0.065	0.015	NS			
EC-06-31	35	40	0.015	0.389	0.022	NS			
EC-06-31	40	45	0.010	0.017	0.020	NS			
EC-06-31	45	50	0.010	0.267	0.016	NS			
EC-06-31	50	55	0.013	0.127	0.015	NS			
EC-06-31	55	60	0.021	0.000	0.015	NS			
EC-06-31	60	65	0.012	0.546	0.017	NS			
EC-06-31	65	70	0.009	0.180	0.021	NS			
EC-06-31	70	75	0.010	0.278	0.016	NS			
EC-06-31	75	80	0.013	0.235	0.015	NS			
EC-06-31	80	85	0.012	0.000	0.017	NS			
EC-06-31	85	90	0.018	0.007	0.016	NS			
EC-06-31	90	95	0.044	0.100	0.016	NS			
EC-06-31	95	100	0.021	0.000	0.016	NS			
EC-06-31	100	105	0.019	0.071	0.016	NS			
EC-06-31	105	110	0.018	0.091	0.004	NS			
EC-06-31	110	115	0.022	0.015	0.016	NS			
EC-06-31	115	120	0.043	0.000	0.017	NS			
EC-06-31	120	125	0.010	0.255	0.004	NS			
EC-06-31	125	130	0.019	0.090	0.004	NS			
EC-06-31	130	135	0.151	0.313	0.015	NS			
EC-06-31	135	140	0.025	0.121	0.016	NS			
EC-06-31	140	145	0.005	0.123	0.016	NS			
EC-06-31	145	150	0.015	0.119	0.003	NS			
EC-06-31	150	155	0.011	0.140	0.004	NS			
EC-06-31	155	160	0.014	0.000	0.025	NS			
EC-06-31	160	165	0.006	0.253	0.004	NS			
EC-06-31	165	170	0.011	0.038	0.004	NS			
EC-06-31	170	175	0.010	0.101	0.002	NS			
EC-06-31	175	180	0.022	0.100	0.016	NS			
EC-06-31	180	185	0.012	0.312	0.017	NS			
EC-06-31	185	190	0.009	0.027	0.016	NS			
EC-06-31	190	195	0.008	0.120	0.015	NS			
EC-06-31	195	200	0.017	0.345	0.015	NS			
EC-06-31	200	205	0.007	0.253	0.015	NS			
EC-06-31	205	210	0.015	0.160	0.017	NS			
EC-06-31	210	215	0.009	0.242	0.017	NS			
EC-06-31	215	220	0.008	0.231	0.017	NS			
EC-06-31	220	225	0.008	0.143	0.016	NS			
EC-06-31	225	230	0.010	0.000	0.016	NS			
EC-06-31	230	235	0.005	0.223	0.017	NS			
EC-06-31	235	240	0.000	0.089	0.018	NS			
EC-06-31	240	245	0.021	0.000	0.018	NS			
EC-06-31	245	250	0.014	0.082	0.017	NS			
EC-06-31	250	255	0.208	0.525	0.004	NS			
EC-06-31	255	260	0.062	0.232	0.018	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-31	260	265	0.041	0.091	0.018	NS			
EC-06-31	265	270	0.001	0.185	0.017	NS			
EC-06-31	270	275	0.055	0.845	0.017	NS			
EC-06-31	275	280	0.047	0.065	0.015	NS			
EC-06-31	280	285	0.041	0.447	0.016	NS			
EC-06-31	285	290	0.027	0.021	0.018	NS			
EC-06-31	290	295	0.035	0.166	0.003	NS			
EC-06-31	295	300	0.029	0.217	0.017	NS			
EC-06-31	300	305	0.020	0.242	0.001	NS			
EC-06-31	305	310	0.013	0.000	0.016	NS			
EC-06-31	310	315	0.010	0.130	0.015	NS			
EC-06-31	315	320	0.004	0.088	0.004	NS			
EC-06-31	320	325	0.003	0.000	0.015	NS			
EC-06-31	325	330	0.013	0.000	0.004	NS			
EC-06-31	330	335	0.004	0.000	0.046	NS			
EC-06-31	335	340	0.000	0.000	0.017	NS			
EC-06-31	340	345	0.014	0.000	0.020	NS			
EC-06-31	345	350	0.007	0.194	0.001	NS			
EC-06-31	350	355	0.006	0.049	0.016	NS			
EC-06-31	355	360	0.004	0.028	0.004	NS			
EC-06-31	360	365	0.020	0.195	0.001	NS			
EC-06-31	365	370	0.012	0.483	0.003	NS			
EC-06-31	370	375	0.021	0.488	0.001	NS			
EC-06-31	375	380	0.010	0.595	0.001	NS			
EC-06-31	380	385	0.004	1.327	0.001	NS			
EC-06-31	385	390	0.009	0.256	0.004	NS			
EC-06-31	390	395	0.008	0.229	0.003	NS			
EC-06-31	395	400	0.016	0.270	0.002	NS			
EC-06-31	400	405	0.005	0.054	0.015	NS			
EC-06-31	405	410	0.008	0.095	0.003	NS			
EC-06-31	410	415	0.005	0.000	0.015	NS			
EC-06-31	415	420	0.007	0.124	0.001	NS			
EC-06-31	420	425	0.010	0.516	0.002	NS			
EC-06-31	425	430	0.010	1.085	0.002	NS			
EC-06-31	430	435	0.005	0.354	0.001	NS			
EC-06-31	435	440	0.007	0.296	0.003	NS			
EC-06-31	440	445	0.003	0.370	0.004	NS			
EC-06-31	445	450	0.008	0.173	0.004	NS			
EC-06-31	450	455	0.004	0.730	0.004	NS			
EC-06-31	455	460	0.007	0.225	0.015	NS			
EC-06-31	460	465	0.004	0.915	0.012	NS			
EC-06-31	465	470	0.007	0.108	0.000	NS			
EC-06-31	470	475	0.004	0.012	0.000	NS			
EC-06-31	475	480	0.005	0.114	0.000	NS			
EC-06-31	480	485	0.008	0.900	0.004	NS			
EC-06-31	485	490	0.005	0.000	0.004	NS			
EC-06-31	490	495	0.005	0.369	0.015	NS			
EC-06-31	495	500	0.008	0.000	0.004	NS			
EC-06-31	500	505	0.003	0.343	0.002	NS			
EC-06-31	505	510	0.005	0.452	0.004	NS			
EC-06-31	510	515	0.003	0.576	0.000	NS			
EC-06-31	515	520	0.003	0.247	0.002	NS			
EC-06-31	520	525	0.002	0.084	0.003	NS			
EC-06-31	525	530	0.002	0.302	0.002	NS			
EC-06-31	530	535	0.001	0.411	0.002	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-31	535	540	0.004	0.137	0.003	NS			
EC-06-31	540	545	0.004	0.362	0.015	NS			
EC-06-31	545	550	0.010	0.186	0.002	NS			
EC-06-31	550	555	0.010	0.051	0.015	NS			
EC-06-31	555	560	0.004	0.200	0.004	NS			
EC-06-31	560	565	0.007	0.121	0.016	NS			
EC-06-31	565	570	0.004	0.249	0.003	NS			
EC-06-31	570	575	0.000	11.964	0.000	NS			
EC-06-31	575	580	0.000	0.180	0.000	NS			
EC-06-31	580	585	0.003	0.000	0.000	NS			
EC-06-31	585	590	0.003	0.584	0.015	NS			
EC-06-31	590	595	0.000	0.193	0.004	NS			
EC-06-31	595	600	0.009	0.166	0.004	NS			
EC-06-31	600	605	0.004	1.012	0.003	NS			
EC-06-31	605	610	0.006	0.782	0.018	NS			
EC-06-31	610	615	0.007	0.714	0.000	NS			
EC-06-31	615	620	0.003	0.618	0.000	NS			
EC-06-31	620	625	0.005	0.720	0.000	NS			
EC-06-31	625	630	0.002	0.672	0.000	NS			
EC-06-31	630	635	0.005	0.930	0.000	NS			
EC-06-31	635	640	0.001	0.000	0.017	NS			
EC-06-31	640	645	0.003	1.151	0.015	NS			
EC-06-31	645	650	0.008	2.358	0.004	NS			
EC-06-31	650	655	0.003	2.090	0.015	NS			
EC-06-31	655	660	0.006	0.767	0.017	NS			
EC-06-31	660	665	0.004	0.521	0.006	NS			
EC-06-31	665	670	0.003	0.281	0.004	NS			
EC-06-31	670	675	0.003	0.109	0.010	NS			
EC-06-31	675	680	0.007	0.053	0.009	NS			
EC-06-31	680	685	0.013	0.095	0.009	NS			
EC-06-31	685	690	0.010	0.026	0.015	NS			
EC-06-31	690	695	0.008	0.015	0.011	NS			
EC-06-31	695	700	0.006	0.035	0.006	NS			
EC-06-31	700	705	0.006	0.013	0.004	NS			
EC-06-31	705	710	0.005	0.042	0.006	NS			
EC-06-32	0	5	0.010	0.775	0.000	NS			
EC-06-32	5	10	0.046	0.406	0.016	NS			
EC-06-32	10	15	0.094	0.862	0.016	NS			
EC-06-32	15	20	0.007	0.562	0.005	NS			
EC-06-32	20	25	0.006	0.076	0.000	NS			
EC-06-32	25	30	0.004	0.526	0.016	NS			
EC-06-32	30	35	0.044	0.531	0.018	NS			
EC-06-32	35	40	0.087	0.314	0.019	NS			
EC-06-32	40	45	0.076	0.318	0.021	NS			
EC-06-32	45	50	0.006	0.604	0.018	NS			
EC-06-32	50	55	0.005	0.273	0.015	NS			
EC-06-32	55	60	0.004	0.485	0.015	NS			
EC-06-32	60	65	0.002	0.474	0.015	NS			
EC-06-32	65	70	0.047	0.413	0.015	NS			
EC-06-32	70	75	0.004	0.433	0.018	NS			
EC-06-32	75	80	0.001	0.733	0.003	NS			
EC-06-32	80	85	0.002	0.446	0.018	NS			
EC-06-32	85	90	0.009	0.372	0.003	NS			
EC-06-32	90	95	0.040	0.502	0.005	NS			
EC-06-32	95	100	0.039	0.559	0.003	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-32	100	105	0.005	0.331	0.018	NS			
EC-06-32	105	110	0.001	0.827	0.018	NS			
EC-06-32	110	115	0.006	0.509	0.019	NS			
EC-06-32	115	120	0.001	0.437	0.018	NS			
EC-06-32	120	125	0.005	0.444	0.019	NS			
EC-06-32	125	130	0.002	0.810	0.003	NS			
EC-06-32	130	135	0.012	0.338	0.003	NS			
EC-06-32	135	140	0.000	0.585	0.003	NS			
EC-06-32	140	145	0.004	1.904	0.018	NS			
EC-06-32	145	150	0.088	0.698	0.022	NS			
EC-06-32	150	155	0.008	0.839	0.005	NS			
EC-06-32	155	160	0.043	0.517	0.005	NS			
EC-06-32	160	165	0.004	1.268	0.005	NS			
EC-06-32	165	170	0.005	0.648	0.000	NS			
EC-06-32	170	175	0.002	0.889	0.015	NS			
EC-06-32	175	180	0.007	0.437	0.018	NS			
EC-06-32	180	185	0.006	0.312	0.018	NS			
EC-06-32	185	190	0.008	0.262	0.018	NS			
EC-06-32	190	195	0.003	0.272	0.018	NS			
EC-06-32	195	200	0.004	0.247	0.019	NS			
EC-06-32	200	205	0.045	0.130	0.005	NS			
EC-06-32	205	210	0.036	0.252	0.000	NS			
EC-06-32	210	215	0.039	0.246	0.015	NS			
EC-06-32	215	220	0.003	0.431	0.015	NS			
EC-06-32	220	225	0.002	0.273	0.000	NS			
EC-06-32	225	230	0.056	0.305	0.017	NS			
EC-06-32	230	235	0.010	0.000	0.000	NS			
EC-06-32	235	240	0.007	0.041	0.018	NS			
EC-06-32	240	245	0.006	0.379	0.005	NS			
EC-06-32	245	250	0.004	0.860	0.005	NS			
EC-06-32	250	255	0.012	0.429	0.003	NS			
EC-06-32	255	260	0.004	0.621	0.005	NS			
EC-06-32	260	265	0.001	0.791	0.018	NS			
EC-06-32	265	270	0.003	1.420	0.017	NS			
EC-06-32	270	275	0.005	0.783	0.016	NS			
EC-06-32	275	280	0.003	0.714	0.015	NS			
EC-06-32	280	285	0.008	0.000	0.000	NS			
EC-06-32	285	290	0.005	0.568	0.002	NS			
EC-06-32	290	295	0.003	1.128	0.015	NS			
EC-06-32	295	300	0.003	0.654	0.002	NS			
EC-06-32	300	305	0.004	0.297	0.017	NS			
EC-06-32	305	310	0.014	0.297	0.000	NS			
EC-06-32	310	315	0.015	0.447	0.000	NS			
EC-06-32	315	320	0.010	0.482	0.005	NS			
EC-06-32	320	325	0.007	0.629	0.000	NS			
EC-06-32	325	330	0.006	0.483	0.025	NS			
EC-06-32	330	335	0.007	0.735	0.026	NS			
EC-06-32	335	340	0.004	0.437	0.027	NS			
EC-06-32	340	345	0.004	0.395	0.020	NS			
EC-06-32	345	350	0.006	0.906	0.024	NS			
EC-06-32	350	355	0.044	0.465	0.018	NS			
EC-06-32	355	360	0.031	0.622	0.002	NS			
EC-06-32	360	365	0.057	0.382	0.005	NS			
EC-06-32	365	370	0.040	0.141	0.005	NS			
EC-06-32	370	375	0.038	0.178	0.005	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-32	375	380	0.012	0.659	0.005	NS			
EC-06-32	380	385	0.010	0.470	0.005	NS			
EC-06-32	385	390	0.000	0.601	0.003	NS			
EC-06-32	390	395	0.003	0.491	0.002	NS			
EC-06-32	395	400	0.004	0.359	0.002	NS			
EC-06-32	400	405	0.003	0.540	0.002	NS			
EC-06-32	405	410	0.003	0.393	0.005	NS			
EC-06-32	410	415	0.003	0.000	0.005	NS			
EC-06-32	415	420	0.002	0.507	0.000	NS			
EC-06-32	420	425	0.002	0.555	0.000	NS			
EC-06-32	425	430	0.001	0.489	0.000	NS			
EC-06-32	430	435	0.004	0.727	0.000	NS			
EC-06-32	435	440	0.002	0.404	0.000	NS			
EC-06-32	440	445	0.004	0.798	0.002	NS			
EC-06-32	445	450	0.003	0.411	0.018	NS			
EC-06-32	450	455	0.001	0.571	0.016	NS			
EC-06-32	455	460	0.002	0.285	0.000	NS			
EC-06-32	460	465	0.004	0.394	0.015	NS			
EC-06-32	465	470	0.002	0.288	0.015	NS			
EC-06-32	470	475	0.002	0.474	0.015	NS			
EC-06-32	475	480	0.002	0.296	0.000	NS			
EC-06-32	480	485	0.004	0.421	0.005	NS			
EC-06-32	485	490	0.003	0.458	0.000	NS			
EC-06-32	490	495	0.039	0.454	0.000	NS			
EC-06-32	495	500	0.004	0.631	0.000	NS			
EC-06-32	500	505	0.004	0.422	0.000	NS			
EC-06-32	505	510	0.003	0.000	0.000	NS			
EC-06-32	510	515	0.001	0.437	0.005	NS			
EC-06-32	515	520	0.003	0.377	0.016	NS			
EC-06-32	520	525	0.002	0.443	0.017	NS			
EC-06-32	525	530	0.002	0.323	0.005	NS			
EC-06-33	0	5	0.086	0.221	0.011	NS			
EC-06-33	5	10	0.018	0.084	0.009	NS			
EC-06-33	10	15	0.021	0.090	0.008	NS			
EC-06-33	15	20	0.027	0.092	0.012	NS			
EC-06-33	20	25	0.008	0.056	0.015	NS			
EC-06-33	25	30	0.009	0.060	0.010	NS			
EC-06-33	30	35	0.011	0.048	0.010	NS			
EC-06-33	35	40	0.015	0.040	0.012	NS			
EC-06-33	40	45	0.014	0.071	0.012	NS			
EC-06-33	45	50	0.015	0.077	0.006	NS			
EC-06-33	50	55	0.011	0.065	0.004	NS			
EC-06-33	55	60	0.010	0.067	0.007	NS			
EC-06-33	60	65	0.010	0.049	0.006	NS			
EC-06-33	65	70	0.006	0.000	0.001	NS			
EC-06-33	70	75	0.006	0.000	0.001	NS			
EC-06-33	75	80	0.005	0.000	0.001	NS			
EC-06-33	80	85	0.008	0.000	0.001	NS			
EC-06-33	85	90	0.007	0.000	0.001	NS			
EC-06-33	90	95	0.009	0.000	0.003	NS			
EC-06-33	95	100	0.010	0.051	0.003	NS			
EC-06-33	100	105	0.013	0.077	0.004	NS			
EC-06-33	105	110	0.009	0.000	0.001	NS			
EC-06-33	110	115	0.003	0.000	0.001	NS			
EC-06-33	115	120	0.005	0.000	0.001	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-33	120	125	0.005	0.000	0.001	NS			
EC-06-33	125	130	0.004	0.000	0.001	NS			
EC-06-33	130	135	0.007	0.000	0.001	NS			
EC-06-33	135	140	0.020	0.094	0.005	NS			
EC-06-33	140	145	0.022	0.138	0.004	NS			
EC-06-33	145	150	0.007	0.000	0.008	NS			
EC-06-33	150	155	0.005	0.000	0.006	NS			
EC-06-33	155	160	0.012	0.057	0.002	NS			
EC-06-33	160	165	0.011	0.055	0.002	NS			
EC-06-33	165	170	0.012	0.057	0.002	NS			
EC-06-33	170	175	0.010	0.049	0.011	NS			
EC-06-33	175	180	0.009	0.062	0.013	NS			
EC-06-33	180	185	0.007	0.048	0.001	NS			
EC-06-33	185	190	0.007	0.044	0.001	NS			
EC-06-33	190	195	0.006	0.059	0.001	NS			
EC-06-33	195	200	0.016	0.211	0.007	NS			
EC-06-33	200	205	0.014	0.202	0.005	NS			
EC-06-33	205	210	0.014	0.210	0.004	NS			
EC-06-33	210	215	0.018	0.216	0.006	NS			
EC-06-33	215	220	0.013	0.200	0.002	NS			
EC-06-33	220	225	0.012	0.115	0.002	NS			
EC-06-33	225	230	0.017	0.187	0.003	NS			
EC-06-33	230	235	0.015	0.195	0.003	NS			
EC-06-33	235	240	0.016	0.167	0.005	NS			
EC-06-33	240	245	0.016	0.183	0.005	NS			
EC-06-33	245	250	0.013	0.098	0.009	NS			
EC-06-33	250	255	0.011	0.091	0.014	NS			
EC-06-33	255	260	0.012	0.387	0.017	NS			
EC-06-33	260	265	0.011	0.316	0.018	NS			
EC-06-33	265	270	0.012	0.157	0.019	NS			
EC-06-33	270	275	0.010	0.435	0.019	NS			
EC-06-33	275	280	0.012	0.000	0.017	NS			
EC-06-33	280	285	0.013	0.093	0.016	NS			
EC-06-33	285	290	0.012	0.708	0.020	NS			
EC-06-33	290	295	0.020	1.302	0.028	NS			
EC-06-33	295	300	0.012	0.840	0.019	NS			
EC-06-33	300	305	0.012	0.000	0.016	NS			
EC-06-33	305	310	0.012	0.309	0.017	NS			
EC-06-33	310	315	0.011	0.000	0.017	NS			
EC-06-33	315	320	0.012	1.172	0.018	NS			
EC-06-33	320	325	0.011	0.021	0.018	NS			
EC-06-33	325	330	0.011	0.015	0.017	NS			
EC-06-33	330	335	0.011	0.000	0.017	NS			
EC-06-33	335	340	0.011	0.675	0.018	NS			
EC-06-33	340	345	0.011	0.000	0.014	NS			
EC-06-33	345	350	0.012	0.000	0.019	NS			
EC-06-33	350	355	0.011	0.000	0.020	NS			
EC-06-33	355	360	0.011	0.000	0.019	NS			
EC-06-33	360	365	0.011	0.000	0.018	NS			
EC-06-33	365	370	0.011	0.000	0.017	NS			
EC-06-33	370	375	0.010	0.000	0.006	NS			
EC-06-33	375	380	0.012	0.110	0.017	NS			
EC-06-33	380	385	0.011	0.000	0.022	NS			
EC-06-33	385	390	0.011	0.000	0.018	NS			
EC-06-33	390	395	0.011	0.000	0.020	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-33	395	400	0.011	0.000	0.017	NS			
EC-06-33	400	405	0.012	0.064	0.016	NS			
EC-06-33	405	410	0.012	0.000	0.018	NS			
EC-06-33	410	415	0.012	0.000	0.018	NS			
EC-06-33	415	420	0.012	0.060	0.020	NS			
EC-06-33	420	425	0.011	0.000	0.018	NS			
EC-06-33	425	430	0.012	0.000	0.017	NS			
EC-06-33	430	435	0.017	0.344	0.014	NS			
EC-06-33	435	440	0.009	0.044	0.006	NS			
EC-06-33	440	445	0.014	0.156	0.010	NS			
EC-06-33	445	450	0.006	0.019	0.006	NS			
EC-06-33	450	455	0.005	0.012	0.003	NS			
EC-06-33	455	460	0.004	0.010	0.003	NS			
EC-06-33	460	465	0.008	0.065	0.004	NS			
EC-06-33	465	470	0.006	0.078	0.003	NS			
EC-06-33	470	475	0.002	0.013	0.001	NS			
EC-06-33	475	480	0.004	0.054	0.002	NS			
EC-06-33	480	485	0.001	0.000	0.002	NS			
EC-06-33	485	490	0.002	0.009	0.001	NS			
EC-06-33	490	495	0.001	0.000	0.001	NS			
EC-06-33	495	500	0.006	0.144	0.011	NS			
EC-06-33	500	505	0.016	0.215	0.009	NS			
EC-06-33	505	510	0.006	0.174	0.005	NS			
EC-06-33	510	515	0.003	0.012	0.002	NS			
EC-06-33	515	520	0.002	0.000	0.002	NS			
EC-06-33	520	525	0.006	0.028	0.002	NS			
EC-06-33	525	530	0.002	0.012	0.001	NS			
EC-06-33	530	535	0.006	0.088	0.007	NS			
EC-06-33	535	540	0.002	0.000	0.001	NS			
EC-06-33	540	545	0.005	0.000	0.002	NS			
EC-06-33	545	550	0.005	0.073	0.002	NS			
EC-06-33	550	555	0.002	0.000	0.001	NS			
EC-06-33	555	560	0.001	0.000	0.001	NS			
EC-06-33	560	565	0.001	0.000	0.002	NS			
EC-06-33	565	570	0.001	0.000	0.001	NS			
EC-06-33	570	575	0.003	0.012	0.002	NS			
EC-06-33	575	580	0.017	0.598	0.002	NS			
EC-06-33	580	585	0.001	0.000	0.001	NS			
EC-06-33	585	590	0.005	0.377	0.010	NS			
EC-06-33	590	595	0.003	0.000	0.009	NS			
EC-06-33	595	600	0.004	0.045	0.003	NS			
EC-06-34	0	10	0.009	0.014	0.006	NS			
EC-06-34	10	20	0.007	0.023	0.010	NS			
EC-06-34	20	30	0.007	0.043	0.014	NS			
EC-06-34	30	40	0.007	0.326	0.013	NS			
EC-06-34	40	50	0.012	0.110	0.014	NS			
EC-06-34	50	60	0.031	0.044	0.012	NS			
EC-06-34	60	70	0.043	0.046	0.016	NS			
EC-06-34	70	80	0.031	0.093	0.012	NS			
EC-06-34	80	90	0.004	0.115	0.012	NS			
EC-06-34	90	100	0.009	0.069	0.017	NS			
EC-06-34	100	110	0.007	0.083	0.010	NS			
EC-06-34	110	120	0.009	0.067	0.013	NS			
EC-06-34	120	130	0.006	0.140	0.015	NS			
EC-06-34	130	140	0.007	0.041	0.016	NS			



HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-34	140	150	0.015	0.028	0.018	NS			
EC-06-34	150	160	0.017	0.728	0.016	NS			
EC-06-34	160	170	0.014	0.717	0.016	NS			
EC-06-34	170	180	0.009	0.012	0.013	NS			
EC-06-34	180	190	0.016	0.428	0.016	NS			
EC-06-34	190	200	0.011	0.668	0.015	NS			
EC-06-34	200	210	0.011	0.365	0.012	NS			
EC-06-34	210	215	0.012	0.292	0.011	NS			
EC-06-34	215	220	0.013	0.030	0.004	NS			
EC-06-34	220	225	0.006	0.015	0.007	NS			
EC-06-34	225	230	0.028	0.680	0.004	NS			
EC-06-34	230	235	0.010	0.308	0.005	NS			
EC-06-34	235	240	0.008	0.011	0.007	NS			
EC-06-34	240	245	0.009	0.267	0.004	NS			
EC-06-34	245	250	0.006	0.175	0.004	NS			
EC-06-34	250	255	0.003	0.013	0.002	NS			
EC-06-34	255	260	0.002	0.364	0.000	NS			
EC-06-34	260	265	0.008	0.258	0.003	NS			
EC-06-34	265	270	0.006	0.096	0.006	NS			
EC-06-34	270	275	0.002	0.005	0.009	NS			
EC-06-34	275	280	0.008	0.324	0.005	NS			
EC-06-34	280	285	0.005	0.132	0.007	NS			
EC-06-34	285	290	0.027	0.469	0.007	NS			
EC-06-34	290	295	0.017	0.391	0.010	NS			
EC-06-34	295	300	0.010	0.072	0.008	NS			
EC-06-34	300	310	0.004	0.028	0.010	NS			
EC-06-34	310	320	0.012	7.254	0.012	NS			
EC-06-34	320	330	0.008	0.128	0.013	NS			
EC-06-34	330	340	0.009	0.112	0.016	NS			
EC-06-34	340	350	0.003	0.115	0.013	NS			
EC-06-34	350	360	0.019	0.078	0.010	NS			
EC-06-34	360	370	0.009	0.017	0.015	NS			
EC-06-34	370	380	0.003	0.029	0.015	NS			
EC-06-34	380	390	0.005	0.029	0.021	NS			
EC-06-34	390	400	0.124	0.038	0.018	NS			
EC-06-35	0	10	0.037	0.860	0.014	NS			
EC-06-35	10	20	0.032	0.016	0.017	NS			
EC-06-35	20	30	0.018	0.033	0.017	NS			
EC-06-35	30	40	0.008	0.191	0.010	NS			
EC-06-35	40	50	0.007	0.136	0.006	NS			
EC-06-35	50	60	0.005	0.254	0.005	NS			
EC-06-35	60	70	0.004	0.346	0.009	NS			
EC-06-35	70	80	0.002	0.045	0.008	NS			
EC-06-35	80	90	0.003	0.347	0.013	NS			
EC-06-35	90	100	0.006	0.017	0.013	NS			
EC-06-35	100	110	0.005	0.054	0.010	NS			
EC-06-35	110	120	0.004	0.442	0.015	NS			
EC-06-35	120	130	0.001	0.050	0.013	NS			
EC-06-35	130	140	0.004	0.045	0.011	NS			
EC-06-35	140	150	0.001	0.172	0.012	NS			
EC-06-35	150	160	0.002	0.222	0.010	NS			
EC-06-35	160	170	0.008	0.193	0.008	NS			
EC-06-35	170	180	0.005	0.218	0.011	NS			
EC-06-35	180	190	0.003	0.349	0.008	NS			
EC-06-35	190	200	0.014	0.145	0.008	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-35	200	210	0.001	0.198	0.009	NS			
EC-06-35	210	215	0.002	0.104	0.007	NS			
EC-06-35	215	220	0.001	0.048	0.010	NS			
EC-06-35	220	225	0.002	0.075	0.011	NS			
EC-06-35	225	230	0.002	0.033	0.013	NS			
EC-06-35	230	235	0.000	0.037	0.013	NS			
EC-06-35	235	240	0.000	0.030	0.013	NS			
EC-06-35	240	245	0.001	0.022	0.013	NS			
EC-06-35	245	250	0.003	0.027	0.018	NS			
EC-06-35	250	255	0.006	0.028	0.015	NS			
EC-06-35	255	260	0.005	0.027	0.017	NS			
EC-06-35	260	265	0.002	0.064	0.017	NS			
EC-06-35	265	270	0.004	0.539	0.014	NS			
EC-06-35	270	275	0.001	0.151	0.014	NS			
EC-06-35	275	280	0.002	0.016	0.012	NS			
EC-06-35	280	285	0.000	0.025	0.000	NS			
EC-06-35	285	290	0.012	0.444	0.000	NS			
EC-06-35	290	295	0.006	0.582	0.002	NS			
EC-06-35	295	300	0.004	0.480	0.003	NS			
EC-06-35	300	305	0.005	0.336	0.011	NS			
EC-06-35	305	310	0.013	0.498	0.011	NS			
EC-06-35	310	315	0.010	0.528	0.011	NS			
EC-06-35	315	320	0.008	0.000	0.024	NS			
EC-06-35	320	325	0.004	0.906	0.000	NS			
EC-06-35	325	330	0.029	0.708	0.021	NS			
EC-06-35	330	335	0.012	1.194	0.015	NS			
EC-06-35	335	340	0.006	0.798	0.017	NS			
EC-06-35	340	345	0.006	0.582	0.032	NS			
EC-06-35	345	350	0.002	1.326	0.002	NS			
EC-06-35	350	360	0.005	1.236	0.000	NS			
EC-06-35	360	370	0.013	1.146	0.018	NS			
EC-06-35	370	380	0.008	1.194	0.016	NS			
EC-06-35	380	390	0.013	1.188	0.019	NS			
EC-06-35	390	400	0.009	1.218	0.021	NS			
EC-06-36	0	10	0.007	0.480	0.016	NS			
EC-06-36	10	20	0.008	0.942	0.004	NS			
EC-06-36	20	30	0.004	0.534	0.004	NS			
EC-06-36	30	40	0.006	0.000	0.009	NS			
EC-06-36	40	50	0.003	0.546	0.008	NS			
EC-06-36	50	60	0.006	0.540	0.004	NS			
EC-06-36	60	70	0.005	0.384	0.005	NS			
EC-06-36	70	80	0.006	0.570	0.004	NS			
EC-06-36	80	90	0.004	0.642	0.001	NS			
EC-06-36	90	100	0.004	0.480	0.000	NS			
EC-06-36	100	110	0.007	0.192	0.000	NS			
EC-06-36	110	120	0.009	0.702	0.000	NS			
EC-06-36	120	130	0.003	0.612	0.000	NS			
EC-06-36	130	140	0.001	1.788	0.000	NS			
EC-06-36	140	150	0.003	1.452	0.000	NS			
EC-06-36	150	160	0.104	0.714	0.034	NS			
EC-06-36	160	170	0.335	1.002	0.047	NS			
EC-06-36	170	180	0.056	0.672	0.028	NS			
EC-06-36	180	185	0.000	0.576	0.000	NS			
EC-06-36	185	190	0.000	1.392	0.000	NS			
EC-06-36	190	195	0.100	1.122	0.037	NS			

HOLE-ID	FROM	TO	AU	AG	PT	FE	Mag %	Fe analysis	non-mag %
EC-06-36	195	200	0.042	0.420	0.021	NS			
EC-06-36	200	205	0.000	1.086	0.000	NS			
EC-06-36	205	210	0.000	0.642	0.001	NS			
EC-06-36	210	215	0.013	0.720	0.001	NS			
EC-06-36	215	220	0.000	0.858	0.005	NS			
EC-06-36	220	225	0.023	0.744	0.012	NS			
EC-06-36	225	230	0.004	0.642	0.001	NS			
EC-06-36	230	235	0.006	0.660	0.002	NS			
EC-06-36	235	240	0.001	1.650	0.000	NS			
EC-06-36	240	245	0.011	0.000	0.003	NS			
EC-06-36	245	250	0.010	0.786	0.002	NS			
EC-06-36	250	255	0.016	1.170	0.007	NS			
EC-06-36	255	260	0.069	0.420	0.022	NS			
EC-06-36	260	265	0.037	0.870	0.013	NS			
EC-06-36	265	270	0.034	0.984	0.012	NS			
EC-06-36	270	275	0.113	1.278	0.012	NS			
EC-06-36	275	280	0.059	0.756	0.008	NS			
EC-06-36	280	285	0.075	1.056	0.013	NS			
EC-06-36	285	290	0.021	1.026	0.008	NS			
EC-06-36	290	295	0.041	0.792	0.014	NS			
EC-06-36	295	300	0.021	0.810	0.007	NS			
EC-06-37	0	10	0.025	0.666	0.008	NS			
EC-06-37	10	20	0.044	0.618	0.008	NS			
EC-06-37	20	30	0.034	0.450	0.008	NS			
EC-06-37	30	40	0.063	0.600	0.012	NS			
EC-06-37	40	50	0.015	2.046	0.004	NS			
EC-06-37	50	60	0.002	0.624	0.000	NS			
EC-06-37	60	70	0.003	0.720	0.000	NS			
EC-06-37	70	80	0.005	0.744	0.000	NS			
EC-06-37	80	90	0.001	0.504	0.000	NS			
EC-06-37	90	100	0.027	0.702	0.005	NS			
EC-06-37	100	110	0.008	0.834	0.000	NS			
EC-06-37	110	120	0.057	0.792	0.011	NS			
EC-06-37	120	130	0.019	1.068	0.002	NS			
EC-06-37	130	140	0.009	1.128	0.002	NS			
EC-06-37	140	150	0.008	0.846	0.002	NS			
EC-06-37	150	160	0.001	1.308	0.000	NS			
EC-06-37	160	170	0.003	0.804	0.000	NS			
EC-06-37	170	180	0.001	0.714	0.000	NS			
EC-06-37	180	190	0.008	0.696	0.002	NS			
EC-06-37	190	200	0.006	0.738	0.001	NS			
EC-06-37	200	210	0.011	0.642	0.003	NS			
EC-06-37	210	220	0.004	0.840	0.000	NS			
EC-06-37	220	230	0.001	0.738	0.000	NS			
EC-06-37	230	240	0.000	0.636	0.000	NS			
EC-06-37	240	250	0.013	0.708	0.002	NS			
EC-06-37	250	260	0.003	0.648	0.000	NS			
EC-06-37	260	270	0.004	0.990	0.000	NS			
EC-06-37	270	280	0.002	0.678	0.000	NS			
EC-06-37	280	290	0.004	0.768	0.000	NS			
EC-06-37	290	300	0.008	0.768	0.001	NS			

## **Appendix 7**

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### **Auric Metallurgical Labs Sample Preparation and Analytical Procedures**

**DETAILS REGARDING THE APPLIED PROCEDURES  
AND PROTOCOLS DEVELOPED FOR AND USED AT  
AURIC METALLURGICAL LABORATORIES, LLC,  
DURING THE ANALYSIS OF GEOLOGICAL SAMPLES  
FROM THE EL CAPITAN PROPERTY, LINCOLN  
COUNTY, NEW MEXICO:**

**Sample Preparation:**

All samples from the Phase 1 and Phase 2 drill program -- both Core (C) and Reverse Circulation (RC), of El Capitan were received sealed in cloth samples bags containing the material from the appropriately marked 5' interval. These bags, usually 5 to 6 of them, had been placed in plastic five-gallon buckets which were also marked as to their contents.

**Grinding and Splitting Operations:**

For the samples obtained from Core Drilling:

- 1) The quarter core samples were passed through a Denver brand 4"X6" jaw crusher, to reduce the size of all of the material to -1/4".
- 2) This material was passed through a Jones, riffle splitter a number of times to reduce the sample size to approximately 150 grams.
- 3) The samples were, then, pulverized through a disc pulverizer, 6" Bico-Braun, to all – 80 M (Mesh). Pulverizer was opened, cleaned with compressed air and a small amount of silica sand was run through to ensure cleaning between each sample.
- 4) The pulverized sample was placed in a 3"X5" yellow Craft Paper sample envelope, placed with the appropriate sample identification markings and forwarded to the lab.

For the samples obtained from Reverse Circulation Drilling:

- 1) The material is received in powder form is passed through a Jones, riffle splitter a number of times to reduce the size to approximately to 150 grams.
- 2) The samples were, then, pulverized through a disc pulverizer, 6" Bico-Braun, to all – 80 M (Mesh). Pulverizer was opened, cleaned with compressed air and a small amount of silica sand was run through to ensure cleaning between each sample.

### **Magnetic Concentration:**

Samples received from the Phase 1 drilling were visually separated into two categories based on their apparent magnetite contents. 100 gram aliquots of the samples with high magnetite contents were subjected to wet magnetic separation. Non-magnetic portions of these samples and all of the low magnetite samples were subjected to Caustic Fusion Assaying. This practice was later abandoned and all samples were assayed directly without being subjected to magnetic concentration.

### **Assaying and Analytical Procedures Used:**

Equipment used for the Caustic Fusion assaying of the ore samples from El Capitan project consisted of the following:

- Pulp scale, Acculab V-333 (used for reagents),
- Electronic Scale, Ibalance 201 (used for weighing pulp)
- Electric Fire Assay Furnaces (2) Cress C 1228, furnished with Watlow 942 pyrometer controls,
- Milligram scale, Mettler H 35 AR,
- Microgram scale, Mettler M-5,
- Hot plates,
- Pyrex beakers, 800 mL capacity,
- 1000  $\mu$ L Finn timer adjusted to deliver 1000  $\mu$ L
- Assortment of Class A pipettes 0.1 mL, 0.2 mL, 0.5 mL, 1 mL, 5 mL, 10 mL
- 100 mL volumetric flasks with stoppers (Class A)
- Heavy wall filtering flasks 1000 mL capacity, with tubulation
- Polypropylene Buchner filtration funnel,  $\varnothing = 90$  mm
- Thermo Electron, SOLAAR S-4 Atomic Absorption Spectrophotometer fitted with a Cetac ASX-510 Autosampler
- Thermo Jarrell Ash S-12 Atomic Absorption Spectrophotometer (with GAA cap.)
- Gold Hollow Cathode Lamp (Au HCL), single element
- Silver Hollow Cathode Lamp (Ag HCL), single element
- Platinum Hollow Cathode Lamp (Pt HCL), single element
- Palladium Hollow Cathode Lamp (Pd HCL), single element

Quality control measures used during the assaying of the El Capitan samples included running blanks (1 Background Sample, “NBM 2-a” for each 10 samples assayed- 10%) and standards (1 Standard, either “NBM-5b”, “CDN PGMS 6”, “CDN PGMS 7” or “CDN PGMS 9” for each 10 samples assayed- 10%).

All chemicals and ingredients used in the Caustic Fusion Assay procedures were purchased in the highest “Reagent” grade from reputable chemical suppliers, in 0.5 kg to 5 kg sizes and each incoming batch of chemical was subjected to analysis to insure its purity.

All pulp, milligram and microgram scales used in the AuRIC laboratory are under service contracts with a certified calibration company and receive maintenance and calibration services on bi-annual basis using “NIST Traceable” weights and procedures.

All analytical instruments (e.g. AA spectrophotometers, ICP spectrophotometers, etc.) and associated auto-samplers, auto-dilutors used in the AuRIC facility are kept under the manufacturers service contracts and serviced bi-annually by certified company technicians to insure their proper functioning and accuracy.

All single element standards used for calibrating these above mentioned analytical instruments are purchased from suppliers with ISO 9002-1994 certification and come with detailed “Certificate of Analysis and Direct Traceability to NIST”.

During the testing of the El Capitan samples, AuRIC was a participating member in the PTP-MAL program of CCRMP for the TG Labs MALWG (Proficiency Testing Program for Mineral Laboratories operated by the Canadian Certified Reference Materials Project for the Task Group Laboratories Mineral Analysis Laboratories Working Group) for the analysis of the elements of concern.

## **General:**

Caustic Fusion Assay method, as developed by AuRIC, was tested and approved as to its accuracy, scientific verifiability and repeatability by the QP (Qualified Person) employed by the client, El Capitan Precious Metals, Inc. The subject testing consisted of phases that took place in Salt Lake City, Utah at the facility of AuRIC Metallurgical Laboratories, LLC, which were followed by verification phases that were performed at two separate third party labs located in Denver, CO. Details of these works may be obtained from the designated QP company of Daniele Metal Mineral Services, Inc. located at 503 South Carr Street, Lakewood, CO 80226 or directly from El Capitan Precious Metals, Inc. located at 10876 East Tierra Dr., Scottsdale AZ 85259.

AuRIC Metallurgical Laboratories, LLC is a duly registered mineral assay and analysis laboratory located at 3260 West Directors Row, Salt Lake City, UT 84104 since 1996. The State of Utah does not have or require a certification for mineral analysts (In the USA, only the state of Arizona has an assayer certification program which is offered for resident businesses.)

## **Appendix 8**

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### **Auric Metallurgical Labs Extraction Tests**



**GOLD & MINERALS COMPANY, INC.  
EL CAPITAN PROPERTY, LINCOLN COUNTY, NM  
ANALYTICAL AND EXTRACTIVE PROCEDURES DEVELOPMENT  
PROGRAM**

**PHASE II. EL CAPITAN ORE EXTRACTIVE PROCEDURES  
DEVELOPMENT PROGRAM (1)**

**TASK 1**

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Table 1: Percentage of Non-Magnetic Fraction in the Samples of El Capitan Mine, Lincoln County, NM used in the Phase II, Task 1 Extraction Procedures Development work.

<b>AuRIC METALLURGICAL LABORATORIES, LLC ANALYTICAL EQUIPMENT</b>	<b>7</b>
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Table 2: Results of Standard Fire Assays on Head and Magnetic Fractions; Caustic Fusion Assays on Non-Magnetic Fractions and Calculated Head Grade on the six samples selected for the Extraction Amenableity Tests.

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<b>PROCESS TYPE I (CN<sup>-</sup> LIGAND TYPE PROCESSES)</b>	

**HYDROMETALLURGICAL EXTRACTION 1**

Table 3: Sodium Cyanide Leach test results, Recovery percentages (Hydrometallurgical Extraction 1).

**PROCESS TYPE II (Cl<sup>-</sup> LIGAND TYPE PROCESSES)**

**HYDROMETALLURGICAL EXTRACTION 2**

Table 4: Chlorine Leach test results, Recovery percentages (Hydrometallurgical Extraction 2).

## **PROCESS TYPE III (COMBINATION TYPE PROCESSES)**

### **HYDROMETALLURGICAL EXTRACTION 3**

Table 5: Chlorine Leach following Sodium Cyanide Leach test results, Recovery percentages (Hydrometallurgical Extraction 3).

## **PROCESS TYPE IV (THIOHYDROMETALLURGICAL PROCESSES)**

### **HYDROMETALLURGICAL EXTRACTION 4**

Table 6: Sodium Thiosulfate Leach test results, Recovery percentages (Hydrometallurgical Extraction 4).

### **HYDROMETALLURGICAL EXTRACTION 5**

Table 7: Thiourea Leach test results, Recovery percentages (Hydrometallurgical Extraction 5).

## **CONCLUSIONS**

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Chart 1: Gold Recovery by Various Processes

Chart 2: Platinum Recovery by Various Processes

## INTRODUCTION

AuRIC Metallurgical Laboratories, LLC of Salt Lake City, Utah has been contracted by El Capitan Precious Metals, Inc to conduct a Research & Development Project for the purpose of developing analytical and extractive protocols customized for measuring and recovering the Precious Metals content of El Capitan Mine located in Lincoln County, New Mexico.

Phase I of the Project, which is presently continuing towards the accomplishment of establishing repeatability of the developed procedures (Task 3), as well as oversight by an independent engineering company (Task 4), focused on developing alternative assay methods to produce reliable, repeatable and scientifically acceptable ways of measuring the Precious metals in the subject ore body. Phase II, on the other hand, will focus on developing suitable extraction methods for the Gold, Silver and Platinum values determined to be contained in the non-magnetic tailings of the iron ore produced from the El Capitan Mine.

Present segment of the undertaking, namely Phase II-Task 1, was defined in the original Business plan submitted also as an attachment to the Process Development Agreement between the parties as the "Refractory Ore Evaluation". Delays encountered in the completion of the ongoing drilling program being performed on the El Capitan site has necessitated the use of samples from the previous surface sampling program. The suite of 32 samples, collected from the mining claims held by the El Capitan Precious Metals, Inc. at Lincoln County, NM, by Dr. Clyde Smith, company geology consultant and Mr. Dave L. Lamberson of AuRIC Metallurgical Laboratories, LLC on the dates of January 15 – 16, 2005 had been extensively assayed and studied. For the analyses results of these samples please see Table 2.

Work performed in this section of the project included the application of three different hydrometallurgical extraction protocols on a group of medium to high grade samples to determine their amenability.

Decisions in choice of hydrometallurgical processes were made with consideration to the previously made observations that,

- precious metals concentrations consisted mostly of gold and platinum,
- and they occurred in the non-magnetic (hematite rich) fraction of the ore samples,
- in some of the higher grade samples, i.e.: EC-10 and EC-11, the gold values seemed to be in free particles,
- the mode of occurrence of the platinum is presently unknown.

Precious Metals Recovery Processes being tested for their amenability to the ore samples of El Capitan Mine are as follows:

1. Hydrometallurgical Extraction Process 1: Sodium Cyanide Leach,
2. Hydrometallurgical Extraction Process 3: Chlorine Leach,
3. Hydrometallurgical Extraction Process 2: Sodium Cyanide / Sodium Hydroxide Leach followed by Chlorine Leach,
4. Hydrometallurgical Extraction Process 4: Sodium Thiosulfate / Sodium Hydroxide Leach,
5. Hydrometallurgical Extraction Process 5: Thiourea Leach,

## **DISCLAIMER**

It should be noted that the Analytical Procedures and Protocols used in obtaining the various numbers and figures relating to the Precious Metals contents of the subject samples from the El Capitan ore body located in Lincoln County, New Mexico are presently under development and experimental. Any use of these results to infer validity or commercial feasibility of the subject ore body, prior to validation of the developed and finalized Analytical Protocols by a properly chosen third party engineering company or a Qualified Person (QP), should be done with great caution and/or proper disclaimers.

A sampling program under the supervision of Dr. Clyde Smith, Consulting Geologist has been started. First phase of the sampling program was performed between the dates of January 15- 16, 2005, producing 32 bedrock samples which formed the sample suite used in this Phase I – Task 2 of the Analytical Procedures Development Program. Future phases of the sampling program including Chain of Custody (COC) samples as well as a drilling program to generate data toward the feasibility study of the project are also under way.

## SAMPLE SELECTION AND PREPARATION

Samples selected for the first phase of the extraction protocol development work consisted of the following. Table 2, below, shows the relative ratios of the magnetic and non-magnetic fractions of the ore samples. Extraction tests were performed on some non-magnetic ore fractions, as well as some head ore samples.

Sample Number:	Magnetic Fraction: (wt%)	Non-magnetic Fraction: (wt%)
Sample # 3152	27.3	72.7
EC - 1	61.8	38.2
EC - 10	58.7	41.3
EC - 11	72.1	27.9
EC - 16	68.5	31.5
EC - 22	76.5	23.5
EC - 24	58.1	41.9

*In Phase I, Test*

**Table 1:** Percentage of Non-Magnetic Fraction in the Samples of El Capitan Mine, Lincoln County, NM used in the Phase II, Task 1 Extraction Procedures Development work.

The samples were passed through a 4"X6" Denver jaw crusher and reduced to all passing -1/4" size. Samples were further milled by passing them through a 6" Bico-Braun disc pulverizer. Final particle size attained was all -80 Mesh.

AuRIC Metallurgical Laboratories, LLC, Sample preparation equipment that were used in preparing the ore samples for the Phase II / Task 1 work consisted of:

- Jaw Crusher, 4"X6" Denver
- Roll Mill, 8" Strauss
- Disc Pulverizer, 6" Bico-Braun
- Sample Homogenizer
- Jones, Riffle Type Splitter
- Micro Splitter with Vibrator
- Taylor Mesh Screens and Screen Shaker

Magnetic concentrates were made from wet slurry prepared from each sample, by a hand-held magnet placed in a plastic sleeve. Magnetic and Non-Magnetic fractions thus obtained were flocculated and filtered through a 9cm Buchner funnel and dried in an electric drying oven.

All Hydrometallurgical Leach Amenability Tests performed and reported in the following pages of this report were at 30 gram (1 Assay Ton) size.

## **AuRIC METALLURGICAL LABORATORIES, LLC ANALYTICAL EQUIPMENT**

A wide range of research grade analytical equipment and instruments are used in the development of Analytical Protocols for the El Capitan Ore. Among these are:

- Pulp scale, Acculab V-333,
- Electric Fire Assay Furnaces (2) Cress C 1228, furnished with Watlow 942 ramping pyrometer controls,
- Milligram scale, Mettler H 35 AR,
- Microgram scale, Mettler Toledo MT 5,
- Microgram scale, Mettler M-5,
- Hot plates with magnetic stirrers,
- Pyrex beakers, 1000 mL, 800 mL and 250 mL capacity,
- 1000  $\mu$ L Finnpiquette adjusted to deliver 1000  $\mu$ L,
- Redox meter, Orion Model 250 A fitted with an Orion Combo Redox electrode,
- pH meter, Cole-Parmer fitted with a double-junction pH electrode,
- Heavy wall filtering flasks 1000 mL capacity, with tabulation,
- Polypropylene Buchner filtration funnels,  $\varnothing = 90$  mm,  $\varnothing = 70$  mm and  $\varnothing = 40$  mm,
- Racks for test tubes, 25 mL cap.,
- Atomic Absorption Spectrophotometer, Thermo-Jarrell Ash S-12
- Atomic Absorption Spectrophotometer, Thermo Electron, Solaar S-4 with a Cetac ASX-510 Autosampler,
- Gold Hallow Cathode Lamp (Au HCL), single element
- Silver Hallow Cathode Lamp (Ag HCL), single element
- Platinum Hallow Cathode Lamp (Pt HCL), single element
- Palladium Hallow Cathode Lamp (Pd HCL), single element
- Rhodium Hallow Cathode Lamp (Rh HCL), single element

# STANDARD FIRE AND CAUSTIC FUSION ASSAYS ON HEAD SAMPLES

AuRIC Test No:	Comments	Customer Sample ID:	Non-mag (wt%)	Gold: (opt)	Silver: (opt)	Platinum: (opt)	Palladium: (opt)
5197A	Head	Sample # 3152		0.011	0.076	0.008	0.001
5287A	Mag			0.007	0.096	0.004	0.003
1251F	Non-mag		27.3	0.132	0.690	0.060	0.019
—	Calc.			0.041	0.258	0.019	0.007
5361A	Head	EC - 1		0.008	0.731	0.006	0.001
5316A	Mag			0.006	0.310	0.000	0.001
1386F	Non-mag		38.2	0.035	1.198	0.060	0.003
—	Calc.			0.017	0.649	0.023	0.002
5370A	Head	EC - 10		0.082	0.500	0.018	0.004
5325A	Mag			0.008	0.386	0.022	0.002
1395F	Non-mag		41.3	0.198	0.111	0.090	0.015
—	Calc.			0.086	0.272	0.050	0.007
5371A	Head	EC - 11		0.075	0.102	0.011	0.001
5326A	Mag			0.007	0.362	0.014	0.001
1396F	Non-mag		27.9	0.300	0.000	0.045	0.012
—	Calc.			0.089	0.261	0.023	0.004
5376A	Head	EC - 16		0.009	0.072	0.014	0.001
5331A	Mag			0.007	0.390	0.014	0.001
1401F	Non-mag		31.5	0.032	0.000	0.108	0.001
—	Calc.			0.015	0.267	0.044	0.001
5382A	Head	EC - 22		0.006	0.001	0.007	0.001
5337A	Mag			0.005	0.093	0.011	0.001
1407F	Non-mag		23.5	0.060	0.162	0.030	0.003
—	Calc.			0.018	0.109	0.015	0.001
5384A	Head	EC - 24		0.006	0.117	0.011	0.002
5339A	Mag			0.006	0.104	0.010	0.002
1409F	Non-mag		41.9	0.061	0.162	0.032	0.001
—	Calc.			0.029	0.128	0.019	0.002

**Table 2:** Results of Standard Fire Assays on Head and Magnetic Fractions; Caustic Fusion Assays on Non-Magnetic Fractions and Calculated Head Grade on the six samples selected for the Extraction Amenability Tests.



## HYDROMETALLURGICAL EXTRACTION AMENABILITY TESTS

A number of different hydrometallurgical extraction protocols singly and in combination were applied to the selected ore samples from the El Capitan mine. Some of these tests were performed on the head ore samples, while some were done on non-magnetic fractions of the subject ore samples.

### PROCESS TYPE I (CN<sup>-</sup> LIGAND TYPE PROCESSES)

#### HYDROMETALLURGICAL EXTRACTION I (Sodium Cyanide Leach)

It was thought that the seemingly fine particle size ( $\sim 1\mu\text{m}$  or less) of free gold contained in some of the non-magnetic fraction samples from the El Capitan Mine, as well as the lack of any sulfide minerals or other potential refractory elements, warranted the investigation and amenability testing of the well-proven Sodium Cyanide technique.

Following parameters were used in the Sodium Cyanide Leach Test performed on the selected samples.

Ore	: 30 grams (1AT)
Water	: 100 mL
NaCN	: 1.0 %
CaO	: 0.5 %
% Solids	: 23 %
Oxidizer	: Yes
T	: Room Temp. ( $\sim 20^{\circ}\text{C}$ )
t	: 4 hrs.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)
Sample # 3152	0.041	0.039	95.1
EC - 1	0.017	0.011	64.7
EC - 10	0.086	0.079	91.9
EC - 11	0.089	0.081	91.0
EC - 16	0.015	0.009	60.0
EC - 22	0.018	0.011	61.1
EC - 24	0.029	0.023	79.3

**Table 3:** Sodium Cyanide Leach test results, Recovery percentages (Hydrometallurgical Extraction I).

## **PROCESS TYPE II (Cl<sup>-</sup> LIGAND TYPE PROCESSES)**

### **HYDROMETALLURGICAL EXTRACTION 2 (Chlorine Leach)**

Ore : 30 grams (1AT)  
 Water : 75 mL  
 NaOCl : 25 mL  
 HCl : 2.5 mL  
 % Solids : 23 %  
 T : Room Temp. (~20°C)  
 t : 1 hr.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)	Platinum Assay (Calc) (opt)	Platinum Recovered (opt)	Recovery (%)
Sample # 3152	0.041	0.033	80.5	0.019	0.016	84.2
EC - 1	0.017	0.010	58.8	0.023	0.017	73.9
EC - 10	0.086	0.069	80.2	0.050	0.044	88.0
EC - 11	0.089	0.072	80.9	0.023	0.013	56.5
EC - 16	0.015	0.009	60.0	0.044	0.024	54.5
EC - 22	0.018	0.011	61.1	0.015	0.009	60.0
EC - 24	0.029	0.019	65.5	0.019	0.014	73.7

**Table 4:** Chlorine Leach test results, Recovery percentages (Hydrometallurgical Extraction 2).

## **PROCESS TYPE III (COMBINATION TYPE PROCESSES)**

### **HYDROMETALLURGICAL EXTRACTION 3 (Sodium Cyanide / Sodium Hydroxide Leach followed by Chlorine Leach)**

Following parameters were used in the Sodium Cyanide / Sodium Hydroxide Leach Test performed on the samples,

Ore : 30 grams (1AT)  
 Water : 100 mL  
 NaCN : 1.0 %  
 CaO : 0.5 %  
 % Solids : 23 %  
 Oxidizer : Yes  
 T : Room Temp. (~20°C).  
 t : 4 hrs.

which was then, followed by re-slurrying the filtered and rinsed pulp with the following chemicals for the purpose of recovering the platinum values and any remaining gold values, as well as neutralizing any traces of cyanide that may have remained in the tailings.

Water : 80 mL  
 NaOCl : 20 mL  
 HCl : 2 mL  
 % Solids : 23 %  
 T : Room Temp. (~20°C)  
 t : 1 hr.

Head Assays			Cyanide Leach		Chlorine Leach			
Sample ID:	Gold Assay (Calc) (opt)	Pt Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)	Gold Recovered (opt)	Recovery (%)	Platinum Recovered (opt)	Recovery (%)
# 3152	0.041	0.019	0.039	95.1	<0.001	0.0	0.014	73.7
EC-1	0.017	0.023	0.011	64.7	0.003	17.7	0.019	82.6
EC-10	0.086	0.050	0.079	91.9	0.003	3.5	0.046	92.0
EC-11	0.089	0.023	0.081	91.0	0.003	3.4	0.016	89.6
EC-16	0.015	0.044	0.009	60.0	0.002	13.3	0.030	88.2
EC-22	0.018	0.015	0.011	61.1	0.003	16.7	0.009	60.0
EC-24	0.029	0.019	0.023	79.3	0.002	6.9	0.016	84.2

**Table 5:** Chlorine Leach following Sodium Cyanide Leach test results, Recovery percentages (Hydrometallurgical Extraction 3).

#### **PROCESS TYPE IV (THIOHYDROMETALLURGICAL PROCESSES)**

##### **HYDROMETALLURGICAL EXTRACTION 4 (Sodium Thiosulfate / Sodium Hydroxide Leach)**

Ore : 30 gram (1AT)  
 Water : 100 mL  
 NaOH : 0.375 M  
 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>·5H<sub>2</sub>O: 0.1M  
 % Solids : 23 %  
 pH : 10.5  
 Oxidizer : Yes  
 T : Room Temp. (~20°C)  
 t : 48 hrs.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)	Platinum Assay (Calc) (opt)	Platinum Recovered (opt)	Recovery (%)
Sample # 3152	0.041	0.040	97.6	0.019	0.010	52.6
EC - 1	0.017	0.012	70.6	0.023	0.011	47.8
EC - 10	0.086	0.081	94.2	0.050	0.032	64.0
EC - 11	0.089	0.082	92.1	0.023	0.011	47.8
EC - 16	0.015	0.010	66.7	0.044	0.030	68.2
EC - 22	0.018	0.011	61.1	0.015	0.010	66.7
EC - 24	0.029	0.022	75.9	0.019	0.011	57.9

**Table 6:** Sodium Thiosulfate Leach test results, Recovery percentages (Hydrometallurgical Extraction 4).

### HYDROMETALLURGICAL EXTRACTION 5 (Thiourea Leach)

Ore : 30 gram (1AT)  
 Water : 190 mL  
 H<sub>2</sub>SO<sub>4</sub> : 10 mL  
 NH<sub>2</sub>CSNH<sub>2</sub> : 3.5 g  
 Fe<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> : 0.5 g  
 % Solids : 23 %  
 T : Room Temp. (~20°C)  
 t : 1.5 hrs.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)	Platinum Assay (Calc) (opt)	Platinum Recovered (opt)	Recovery (%)
Sample # 3152	0.041	0.038	92.7	0.019	0.007	36.8
EC - 1	0.017	0.014	82.4	0.023	0.008	34.8
EC - 10	0.086	0.083	96.5	0.050	0.019	38.0
EC - 11	0.089	0.085	95.5	0.023	0.009	39.1
EC - 16	0.015	0.010	66.6	0.044	0.013	29.5
EC - 22	0.018	0.015	83.3	0.015	0.005	33.3
EC - 24	0.029	0.024	82.8	0.019	0.006	31.6

**Table 7:** Thiourea Leach test results, Recovery percentages (Hydrometallurgical Extraction 5).

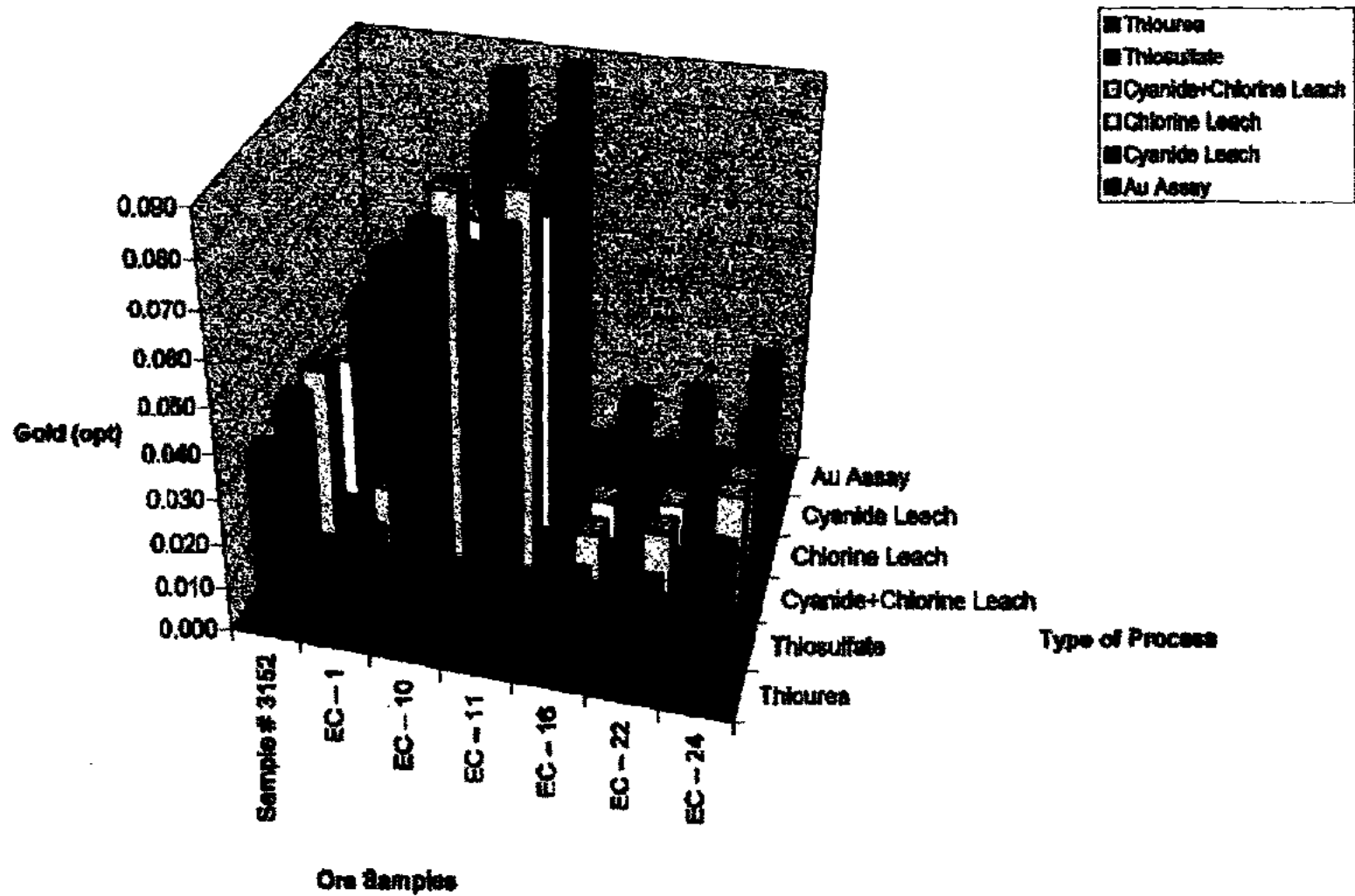
## **CONCLUSIONS**

Laboratory Scale Hydrometallurgical Recovery work, performed on the select samples from El Capitan mine, show them to be amenable to a number of different leaching techniques. Among the techniques that show promise and should be investigated further in laboratory, bench and pilot plant scale are:

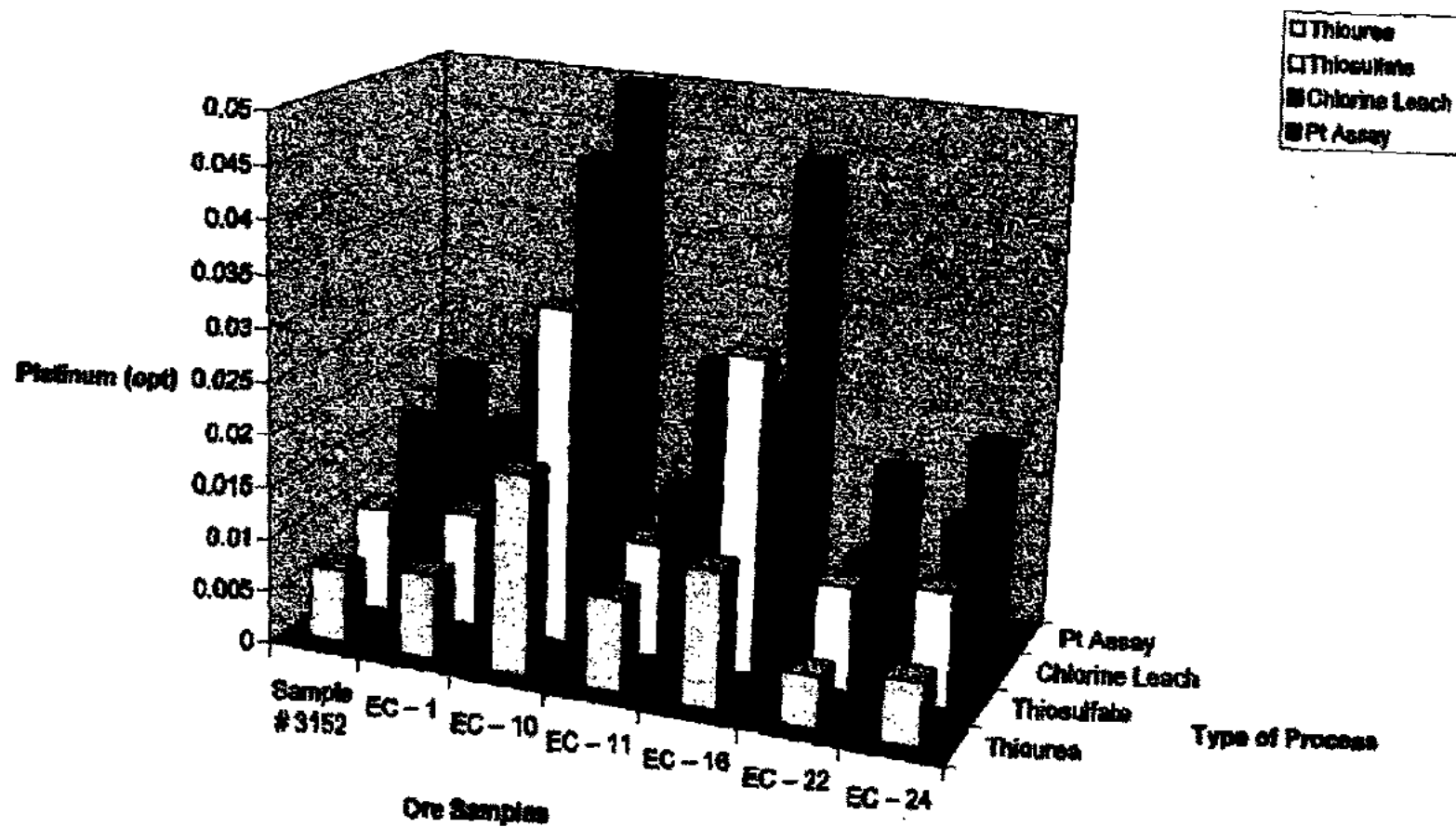
Sodium Cyanide Leach,  
Sodium Cyanide Leach followed by Chlorination,  
Sodium Thiosulfate Leach

Later stages of the hydrometallurgical work will investigate other factors like the processing costs, plant costs, environmental costs for each of these processes and make comparisons of their ROI (return-on-investment) ratios.

# Gold Recovery by Various processes



**Platinum Recovery by Various Processes**



## **Appendix 9**

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### **Ken Bright Metallurgical Review Report**



**Analysis of Two Composite Samples  
Representing Phase 1 and Phase 2 / 3 Drilling  
of the  
El Capitan Iron Skarn and Associated Rocks  
Lincoln County, New Mexico - USA  
with particular attention to  
Au Pt Pd and Ag Content**

by  
**Ken G. Bright  
February, 2008**

**Abstract** – Composite samples representing phase 1 and phase 2 / 3 of drilling on the El Capitan mineralized occurrence were made in 2007. Two splits of each sample (labeled RR-1 and RR-2 for phase 1, and ARR-1 and ARR-2 for phase 2/3) were provided to this author to proceed with a testing program to verify Au Pt Pd Ag content and further measure indications of other PGE such as Ir. The samples are reasonably homogenous as to matrix within a given split, but there was a potentially significant difference in matrix between the two splits of phase 1 drilling. Both samples demonstrate some sparse particle effect as evidenced by Au and Mo in particular. In analysis by ALS Chemex Labs, Acme Labs, Becquerel Labs, and SGS-Lakefield Research no value for Au Pt Pd or Ir was encountered over 100 ppb any one element, and no Ag was encountered over 1 ppm. In data provided by MHS Research Pt up to the 150-300 ppb (0.01 oz/ton) range was reported by NiS fusion and Ag was reported in the 3-10 ppm (up to 0.3 oz/ton) after a modified wet analysis. Au at M.H.S. Research was normally agreeing with the values from other labs.

In that it is possible to get a “black hole of negative data” (splits with little or no precious metal in them due to inability to satisfactorily produce a uniform composite sample due to sparse particle / nugget effect) the constraints of due diligence require that (1) a broader set of samples be simply tested for Au Pt Ag, and that (2) a reasonable minimum of original samples used to produce data by AuRic Metallurgical Labs (Salt Lake City) be included.

After technical discussion and review of comparable data from a property in Nevada, further investigation and potential certification of a conventional fusion (serving as a pretreatment of the sample) followed by a conventional assay, may be warranted. Determining true metal value in selected individual samples, then making adjustments to arrive at a procedure which can be certified by a market-acceptable lab, remains a goal of any further analysis. Normal leach by cyanide or thiosulphate-hydroxide of a bulk sample is a viable parallel course of action to better smooth out overall grade and indicate potential recoverability of noble metals.

## **Statement of the problems necessitating this investigation.**

### **The data and procedural protocol was credible.**

Data produced by AuRic Metallurgical Labs evidenced an ore containing Au in the general range 0.02-0.04 oz / ton; Pt in lesser quantities in the 0.005-0.02 oz / ton range; and Ag in the 0.1-0.4 oz / ton range. Ag was widely dispersed, with Au and Pt confined to narrower intervals. The method used by AuRic was not conventional, but was technically sound and the technology was documented in older analytical literature. Basically, a 5 gram sample was fused with sodium peroxide and potassium carbonate, leached, the solution neutralized and filtered, and Au Pt Pd Ag in the filtrate precipitated by Zn powder / collected with lead acetate, cupelled, weighed and parted, with Ag done by weight difference and Au Pt Pd by flame Atomic Absorption with background correction.

An independent lab (Wendell and Company – Michael J Wendell) evidently confirmed values on a small proof run in 2005, although values were said to be about 35% lower due to whatever circumstances, such as not using lanthanum chloride to aid in enhancing clarity of the target signals. Later research by MHS Research into the nature of the ore was aimed at developing an alternate method which could be verified at a market acceptable lab. This ongoing work appeared to be measuring Au, Ag, and the Platinum Group Metals (PGM or PGE) in quantities similar to AuRic via both lead fusion fire assay and nickel sulfide fusion. In late 2007 values seemed to be coming out of slag as well as the original fusion, which would evidence a refractory ore. There was still some question as to metal contributions from reagents used in the fusions and ongoing testing was expected to verify whatever was the truth.

Adding further credibility to AuRic data was demonstration of values from alternate techniques (such as cyanide leach in the presence of an oxidizer) which might be used in process recovery of values in the ore. These tests were also performed by AuRic on the same pulps used to test by caustic fusion. In looking at the data, it could be seen that there was no apparent evidence of contamination trains due to sample prep and handling. Source point contamination trains would have been evidenced by a descending or oscillating-descending train of values. There was also no evidence of a high reagent blank since quite a number of the values were zero in any given hole for a given element. When crudely plotting the down-hole data in two dimensions a geologically credible pattern of values for Au and Ag was evidenced. Further, there appeared to be two or three modes of occurrence as to Au Ag Pt ratios, with Ag apparently leached from some samples and building up down hole. This is typical of the geochemistry of Ag in the zone of oxidation, including in an iron skarn with layered lithological matrix chemistry. Ag may be leached from one zone and re-precipitated by either changes in acidity or by the chemical interaction with ferric-ferrous iron couples. [ The simplistic generalization is that Fe+2 ion interacting with Ag+1 ion precipitates Ag with Fe+2 oxidized to Fe+3. The reaction is reversible, the direction depending on the Fe+2 / Fe+3 ratio in solution]. Ag in the oxidizing environment is complex, however, and may leach and move to a precipitation site by chemical attrition.

A third tier of credibility was added by the competent, professional field work of Dr. Clyde Smith which demonstrated a plausible host situation for a precious metal containing iron skarn.

There was also a report of three products from metallurgical study being viewed by a Bureau of Mines in Missouri. In this study a head sample, a magnetic fraction, and a non-magnetic fraction were assessed under a scanning electron microscope. No metal was seen in the head sample, but some metal was observed in the magnetic sample and considerable metal was seen in the non-magnetic sample. A bright, unidentified substance of high reflectance was also seen which was noted as possibly a platinum group metal.

### **There are some yellow flags and one red flag in the “prior to 2008” data**

While all of the above data assessment seemed very positive, there were some yellow flags and one red flag. One yellow flag set had to do with two items in the AuRic data. First, this was a very large low grade Ag body which is unusual. Then there was apparent significant cyanide solubility by a quick shake test at room temperature of an ore that was deemed refractory. Added to this was the apparent reproducibility on a very small 5 gram sample. However, each “cautionary flag” above could easily be due to the character of the mineralogy. Certainly there *are* some large low grade Ag orebodies. We *do* have ores that for some reason are difficult by one method and amenable to another. We *do* have matrix situations where Au Pt Ag may be very fine-grained and very uniform.

AuRic’s procedural / lab protocol write-up was very professional and credible. However, AuRic did not store their mentioned check and blank data, which could be due to a programming choice or whatever. But it makes one uneasy that it cannot be viewed now; we elect, until otherwise known, to take the lab’s word that fused blanks, standards, and a high incidence of checks were carried through. In private investigation, a person who worked with AuRic for only one week said he did see a standard carried through the procedure, but did not recall a fused blank being used. This observation might be indicative, but is no proof of error.

The second yellow flag set was the observation that no metal was seen in the Bureau of Mines head grade sample; abundant metal was seen in the fractions after separation, and all of this metal was liberated except for one Au grain with matrix attached, and a large grain of high reflectance arsenopyrite. But... it is not uncommon when cutting a very small sample off of a low grade head sample to not observe grains of precious metal. The distribution of the metals in the fractions is very plausible and in keeping with the observed character of mineral emplacement on the property. It is also possible that the comminution (grinding) of the sample did effectively liberate all the metal grains. The “liberation threshold” is basically a matter of fineness of grind of the matrix vs. size of the metal particles. However, the clean separation of the metal particles did make me wonder if some contamination could have occurred during the processing work which produced the magnetic separations. The free particles do not point to contamination, but they open a moderate question as to the possibility. The samples are quite old and we do not know who made them (the Bureau?) or how they were made or where.

The red flag was the data set produced by ALS Chemex Labs in July of 2007. In this set of analyses, little or no Au was found by fire assay – ICP, by fire assay – gravimetric, by cyanide leach, or by nickel sulfide fusion. Pt Pd was also very low and Ag was not detected by fire assay or by wet procedures. Yet it was possible that there could be an explanation for each methods’ failure. For instance, the sparse particle effect or nugget effect could have provided the lab with a sample that indeed contained very low values. A magnetite-hematite dominant sample could easily have passed through ALS Chemex’ “Wonder Bread Factory” of a lab without being detected as a problem ore with a potential of slagging off appreciable values. (e.g.: Magnetite *is* amenable to fire assay, but if not specifically fluxed, a *portion* of values might be carried off with ferric iron. A good, clean lead recovery / silver inquart recovery would be deceptive as to an “acceptable fusion” and be passed by the uninformed lab technician). A number of ore occurrences are “refractory” to cyanide leach, especially if the time is short (or cut short by a hurried technician) or if there is some mineral phase which reacts to use up cyanide or to rob the pregnant solution or to catalyze dissociation (precipitation as a colloid) of the Au in solution. Magnetite in its pure form is also resistant to breakdown by an oxidizing acid attack such as used by ALS Chemex. Each possibility existed in the El Capitan samples, although one would expect some strong evidence of ore values, even if the values were low and inaccurate. *The total report from the lab was a strong red flag, responded to by El Capitan leadership.*

### **What about the composite samples used to attempt assessment of head grade?**

The composite samples were professionally made according to the specifications of Richard Daniel, a competent metallurgical engineer. The compositing process followed a well-designed protocol. I do not have comment as to strengths or weaknesses of the handling procedures; the design on paper is proper and correct, but we did not see what happened to the sample in the equipment (and if this author were looking at the equipment processing the sample it is very possible that no problem would be visually evidenced). A problem is not intimated, but a small possibility of particulate segregation of dense, heavy metal or of inadequate blending does exist. I did note ARR-2 to have some residual grit in it, which is a sign of not being up to pulverizing specs. However, the fineness of grind was borderline positive as to acceptability (a common practice in labs), so it was included by me in the testing protocol. There are some other observations as to the composite samples.

RR-1 and RR-2 (phase one drilling) represented separate splits of one composite sample, pulverized at different times. However, RR-1 resided a year in a desiccator where oxidation and moisture gain would be retarded. RR-2 resided in a poly bag, sealed in a 5 gallon bucket. It was evidently oxidized, agglomerated by the moisture + chemical reaction and appeared different in character to RR-1. Whole Rock Analysis (WRA) and Trace Elements done by Neutron Activation, X-Ray Fluorescence, and Acid Leach followed by Inductively Coupled Plasma – Mass Spectroscopy (ICP-MS) evidenced differences in the phase 1 sample (RR-1 and RR-2) in particular. Part of this would be from oxidation and destruction of carbonates / hydrated minerals; part would be from lack of homogeneity between the splits taken. For instance, RR-1 has about 35% Fe<sub>2</sub>O<sub>3</sub> and 21% SiO<sub>2</sub>; RR-2 has about 85% Fe<sub>2</sub>O<sub>3</sub> and 6% SiO<sub>2</sub>. The differences of that magnitude cannot be fully explained away by moisture gain, hydration, and oxidation-interaction with carbonates. The phase 2/3 sample was more uniform in character as seen in the trace element data. (It should also be recognized that some minor elemental differences may be due to the high Fe matrix effect on a particular method).

Any inhomogeneity of matrix would only be problematic if a sparse particle or nugget effect was unduly influencing the ores, or if the grade was very erratic between samples used to make up the composites. Nugget effect giving rise to inhomogeneity can and does occur in labs, but difficulties in data assessment is usually minimal to nil in samples of normal size for drill site sampling, especially in higher grade ores or in larger (1000g) samples that have been subjected to screen metal analysis (See appendix). A nugget effect producing variance of 0.26 vs. 0.29 oz/ton is normally accepted by data processing people, but that difference of 0.03 oz/ton becomes enormous at the 0.01-0.06 oz/ton range. The coarser and less abundant the particle of precious metal, the more difficult it is to accurately describe low head grades of that target element. Most ore occurrences also have a significant “very fine” (micron) sized component which leads to smoother, reproducible values in low grade samples.

There was evidence of some sparse particle or nugget effect between the splits (See Mo and Au), although each split was fairly uniform within itself. Some very low level (5-30 ppb range) values for Pt demonstrated tremendous variance, *perhaps* due to sparse particle or nugget effect. Some variance is to be expected in many samples and is normally acceptable. My sense is that instrumental noise and resultant corrections occur in the less than 20 ppb equivalent (for a 30g sample) range.

### **Design of the Testing Protocol**

In reading reports, reviewing procedures, and asking questions, a number of valid concerns surfaced. In as much as a 400g split of pulp would allow, a sample testing protocol was developed to address these issues and to work toward confirming (or re-stating) apparent head grade as evidenced by the content of RR-1 and RR-2 (phase 1 drilling sample composite) and ARR-1 and ARR-2 (phase 2/3 drilling sample composite). The testing protocol which this report covers was designed to progress toward answering the following 10 related areas of concern

(Numbered 1-10 in pages following). It is emphasized that whatever was really in *the four (4) 400g splits of the composite samples is the sole basis for the data* underlying the following answers to questions.

### **What was done**

(a) In a report of mineralogical and trace element / major element data commissioned separately by Daniele (Dec. 2007), 8 individual core pieces taken from splits which contributed to the composite samples, and also 1 composite sample (from phase 2/3 called sample #9, which was a cut of ARR-1, were analyzed by XRD for mineralogy. The same 9 samples, and 1 sample from phase 1 drilling (representative of RR-2) were analyzed by XRF for major and trace elements. *The Mineral Lab, Inc Report # 207927, 207933.*

(b) Parallel to this, phase 1 drilling composite samples RR-1, RR-2, and phase 2/3 drilling composites ARR-1 ARR-2 were analyzed for trace elements, Au Ag and Pt by wet analysis after ignition at 550 °C of a 15g sample. *Acme Lab – Vancouver File # A800087, A800086*

(c) Au and a trace element suite including Ag and Ir was analyzed by direct epithermal neutron activation of a 35-40 g sample. *Becquerel Labs # T08-000090*

(d) RR-1 and ARR-1 were submitted to SGS-Lakefield Research for Au Pt Pd and Rh by a caustic fusion followed by precipitation of noble metals by Te / stannous chloride, and analysis by ICP. *Lakefield SGS # CA03061-Dec07*

(e) The suite of 4 samples and one control made from 1 part Au standard and 2 parts phase 1 drilling composite (RR-1) were subjected to a 24 hour cyanide leach using extra strength (2%) cyanide, a catalyst called Leachwell (a Pb-nitrate), and continuous rolling. *ALS Chemex # 08000020 Reno*

(f) RR-1, -2, and ARR-2 were analyzed by fire assay – ICP using a descending weight of sample (30g – 15g - 7.5g) paired with constant flux amounts, with flux component ratios specifically targeted to the known matrix. (At least, that was my instruction-request). *Various Acme Lab and ALS Chemex reports*

In addition, the 15g run included several controls, including two which represented a 33:67 ratio of control matrix : El Capitan composite matrix.

In addition to that, 3 re-runs of captured slag from the 7.5g slag were re-fused in succession by Acme.

In addition to that, in a separate run, each pulp sample was first subjected to (f-1) a carbonate – flour roast and (f-2) to a Na-peroxide sinter prior to fusing through fire assay.

(g) RR-1 and ARR-1, and the same samples after roasting with flour + potassium carbonate, were fused by MHS Research (Mike Thomas) and the resulting doré bead (using 20mg liquid Ag inquart) taken to Acme Lab and analyzed by ICP – ES after parting and leaching. *Acme Lab # VAN08004302.1 of Feb 27, 2008.*

All of the above analyses address some concern or possibility of error in routine data.

## Questions and Answers

### 1. Are the phase 1 and phase 2/3 samples sufficiently homogeneous as to

- (a) general character and mineralogy?
- (b) target commodities Au Pt Ag?

Evidence from Data:

The individual samples used to make the composites were reasonably consistent as to elemental content, although some very evident mineralogical differences surfaced between samples. This is not necessarily a problem, although *it alerts one to potential homogeneity differences in any composite made from them.*

The sub-samples, taken by splitter from each composite, were reasonably consistent as to trace element content of the matrix within a given 400g split of the composites, although some variance between the duplicate splits did surface. That variance is marked for iron, calcium, silica, and L.O.I. between RR-1 and RR-2. There is evidence of some sparse particle or nugget effect in both drilling phase composites, particularly for Au and Mo. For data below 10 ppb each element we must remember a rule of thumb that confidence is 2 to 3 times detection limit, with values in that range usually being very close to repeatable, but not always the case. This is due mainly to instrumental drift or low level contamination carryover at any stage of the analytical process. So while we see considerable "evidence of sparse particle or nugget effect" in the very low level Au or Pt Pd data, my insight is that any number below 10 ppb might be that indeed, or might be "electronic nugget effect, especially for Pt Pd." Raw data is included in the appendix.

### 2. What is the total Au, total Pt, total Pd, total Ag content (+/- 15% of each metal) as evidenced by separate analytical approaches?

Evidence from data:

The Au is < 100ppb. Au is present from **7-8 ppb to 106 ppb** in the various samples. **Au in a given split is reproducible as to range by alternate methods from lab to lab.** This elevates my confidence as to what is in these four samples. It can also be stated:

The Pt is in the 0-300 ppb range

The Pd is < 100 ppb.

The Ag is in the *less than* 0.3 oz/ton – 10ppm (generally less than 4 ppm) range

$$[34.286 \text{ ppm} = 1 \text{ troy oz} / \text{short ton}; 0.0297 \text{ oz/tn} = 1 \text{ ppm} = 1000 \text{ ppb}]$$

Evidence from AuRic's caustic fusion points to significant values in many property samples, including ones from which the four composites were made. Could contaminated reagents have contributed an undulating amount of metal into the doré, punctuated by (a) occasional failure to recover any doré or (b) the impact of any standardization error or instrumental drift? Based on AuRic's statements of running a certified blank or certified standards every 10<sup>th</sup> sample, the possibility of ubiquitous reagent or other lab contamination was originally discounted by this author. The credibility support of alternate process techniques at AuRic (such as cyanide leach) applied to the same pulps seem to substantiate the caustic fusion values. Do we know for sure?

The caustic fusion process could add noble metal from reagents and lab ware. This should have been monitored by carrying a blank through the process on a systematic basis. Enhancement of a low level noble metal signal could make AA values read high, but very little such interference / enhancement should be evident when a clean noble metal bead is supplied to the parting procedure. The process could report low if any step of the fusion-to-wet-to-doré procedure is incomplete or interfered with chemically.

**This is what was found in the Four Samples**

**Table of Noble Metal Values**

Lab	Method	Weight (g)	Au (ppb)	Pt (ppb)	Pd (ppb)	Ag (ppm)	Ir (ppb)
<b>Phase 1 Drilling Sample RR-1</b>							
Becquerel	Direct NA	38.1	25	N/A	N/A	<2	<50
Becquerel	Direct NA	38.0	23	N/A	N/A	<2	<50
SGS – Lakefield	caustic fusion followed by Te ppt. – ICP	7.5	50	<20	<20	N/A	<20 Rh is 20 ppb
ALS Chemex	CN roll	30	60	N/A	N/A	N/A	N/A
Becquerel	NiS fusion – INA	20	13	<20	<20	N/A	<1
ALS Chemex	NiS fusion – ICP/MS of July 2007	30?	6 / <5 / <5	17 / 15 / 9	19/ 13 / 12	N/A	<2 Rh is 72 / 3 / 2
MHS Research	NiS fusion – GF/AA	30	67 (34 to 128)	207 (86-324)	59 (32/100)	---	Rh ave. is 37
MHS Research	FA - GF/AA	30	45 Range (x – y); population (x/y)	10 (<1-23)	5 (<1-19)		
ALS Chemex	FA – ICP	30	33	<5	<5	N/A	N/A
		15	21	<5	1		
		7.5	18	24	<1		
ALS Chemex	Ag by ac leach	1	-	-	-		<0.5
Acme	FA-ICP	30	26	<3	<2	N/A	
		15	17	<3	<2		
		7.5	7	<3	<2		
	Slag from 15g run		<2	<3	<2		
	Slag from above slag		<2	<3	5		
	Slag from above slag		<2	<3	<2		
	After flour-carbonate roast	7.5	12	<3	6		
	After Peroxide sinter	7.5	17	<3	9		
	Wet after ignition @550 C	15	26	<2	<10		
	Repeat	15	57	<2	<10		
	Wet after mod. aq regia leach	15	26	<2	<10		0.13
	Wet HCl / aq regia ICP/MS	5	31	<2	<10		0.16

Lab	Method	Weight (g)	Au (ppb)	Pt (ppb)	Pd (ppb)	Ag (ppm)	Ir (ppb)
Phase 1 Drilling Sample RR-2							
Becquerel Direct NA	37.9	7	N/A	N/A	<2	<50	
	38.0	5			<2	<50	
ALS Chemex CN roll	30	<10	N/A	N/A	N/A		
Becquerel NiS fusion – INA	20	7	<20	<20	N/A	<1	
MHS Research NiS fusion and Pb fusion GF/AA	did not run	-	-	-			
MHS Research FA – GF/AA	29						
ALS Chemex FA – ICP	30	22	<5	<1	N/A		
	15	<1	<5	2			
	7.5	<1	19	<2			
ALS Chemex Ag by ac leach	1	-	-	-	<0.5		
Acme FA – ICP	30	8	<3	<2	N/A	N/A	
	15	<2	<3	<2			
	7.5	10	<3	<2			
Slag from 15g run		<2	<3	<2			
Slag from above slag		<2	<3	7			
Slag from above slag		<2	<3	<2			
After flour-carbonate	7.5	<2	<3	2			
After peroxide sinter	7.5	<2	<3	3			
Wet after ignition @550 C	15	5	<2	<10			
Wet after modified aq.regia	15	6	2	<10	0.08		
Wet HCl / Aqua Regia – ICP/MS	5	4	2	<10	0.10		

Lab	Method	Weight (g)	Au (ppb)	Pt (ppb)	Pd (ppb)	Ag (ppm)	Ir (ppb)
Phase 2/3 Drilling ARR-1							
Becquerel direct NA	34.1	23	N/A	N/A	<2	<50	
	34.1	24			<2	<50	
SGS-Lakefield caustic fusion followed by Te ppt - ICP	7.5	30	<20	<20	N/A	N/A	
ALS Chemex CN roll	30	20	N/A	N/A	N/A	N/A	
Becquerel NiS fusion - INA	20	42	<20	<20	N/A	<1	
MHS Research NiS fusion followed by GF / AA	30	61 (29-106)	164 (43-315)	37 (9-80)			
MHS Research Pb - GF / AA	30	54 (35/65)	11 (1-29)	4.5 (1-13)			
ALS Chemex FA - ICP	30	17	6	1	N/A	N/A	
	15	31	<5	<1			
	7.5	13	<5	<1			
ALS Chemex Ag by ac leach	1	-	-	-	<0.5		
Acme FA / ICP	30	18	3	4	N/A	N/A	
	15	26	<3	<2			
	7.5	14	<3	<2			
Slag from 15g run		5	<3	<2			
Slag from above run		<2	<3	3			
Slag from above run		4	<3	<2			
After flour-carbonate	7.5	<2	4	<2			
After peroxide sinter	7.5	14	<3	18			
Wet after ignition @550 C	15	15	<2	<10			
Wet after mod aq regia	15	22	2	<10	0.50		
Wet HCl / aq regia ICP/MS	1	14	3	<10	0.38		



Lab	Method	Weight (g)	Au (ppb)	Pt (ppb)	Pd (ppb)	Ag (ppm)	Ir (ppb)
Phase 2/3 Drilling ARR-2							
Becquerel – Direct NA		36.3	84	N/A	N/A	<2	<50
		36.3	73			<2	<50
ALS Chemex CN roll		30	60	N/A	N/A	N/A	N/A
Becquerel - Ni S fusion / INA		20	73	<20	<20	N/A	<1
MHS Research NiS fusion and Pb fusion GF / AA did not run			-	-	-		
MHS Research FA – GF / AA		29					
ALS Chemex Labs FA – ICP		30	Spilled	Spilled	Spilled	N/A	N/A
		15	73	<5	<1		
		7.5	58	<5	<1		
ALS Chemex Ag by ac leach		1	-	-	-	1.1	
Acme FA - ICP		30	81	<3	3	N/A	N/A
		15	61	<3	<2		
		7.5	77	<3	<2		
Slag from 15g run			<2	<3	<2		
Slag from above run			3	<3	<2		
Slag from above run			4	<3	<2		
After flour –carbonate		7.5	55	<3	2		
After peroxide sinter		7.5	81	<3	21		
Wet after ignition @550 C repeat		15	56	<2	<10		
			61	<2	<10		
Wet after mod aq regia		15	77	<2	<10	0.51	
Wet HCl /aqua regia – ICP/MS		5	51	<2	<10	0.64	

#### Key to Methods:

**Direct Neutron Activation (DNA)** is epithermal radiation of a raw sample pulp

**CN Roll** is rolling a sample with 2% Na-cyanide solution for 24 hours, the reaction of which is catalyzed by 0.5% Leachwell Reagent 60X (a Pb nitrate) and 0.03% Na-hydroxide.

**Caustic Fusion followed by Te ppt** is fusion with Na-peroxide @ 700 C, followed by precipitation with Te catalyzed by stannous chloride; the precipitate is filtered and dissolved in HCl for measurement by Inductively Couple Plasma Emission Spectroscopy.

**FA – ICP** is a Pb-fusion fire assay using liquid Ag nitrate, followed by aqua regia leach of the doré bead in a microwave, followed by measurement by Inductively Coupled Plasma Emission Spectroscopy.

**After flour –carbonate** is a roast of the sample by a mixture of flour and Na-carbonate, followed by the fire assay protocol above, attempting to alter flux to compensate for the roast matrix

**After peroxide** is a sinter of the sample with 1:1 Na-peroxide, followed by the fire assay protocol above, attempting to alter the flux slightly to compensate for the sinter matrix.

**Wet after Ignition at 550 ° C** is an aqua regia leach of a sample that has been roasted raw (ignited), using a 15 g sample weight. This is followed by ICP / Mass Spectroscopy measurement.

**Wet after mod aq regia** is a sample that was not ignited, but was leached by 1:1:1 nitric:hydrochloric:water for 1 hour at 95 ° C. This is followed by ICP / Mass Spectroscopy measurement.

**Range** (such as 1-13) is range of values in ppb; **population** is recognition of two predominant populations of values (such as 35 / 65). It is not valid in the small scale to average various pre-treatments and varying weights, but in the overall reporting venue, it is indicative to report an average for M.H.S. Research values. Details of the differences between methods / pre-treatment procedures can be studied by viewing their report of March 02, 2008. As the values are all too low to draw firm conclusions from (since sparse particle effect and instrumental drift also contribute to differences), I have stated a provisional average. In some cases, a “no button” fusion or evidence of a problem in the data caused a value to be dismissed. Some values represent the sum of a fusion and re-fusion of one slag run.

Table of Control Sample Values

Lab	Sample Name (Method)	Wt.	Au (ppb) (accepted value)	Pt (ppb)	Pd (ppb)	Ag (ppm)	Ir (ppb)
Becquerel GR-1 (DNA)	47	8	-	-	<2	<50	
(Accepted value)		(6-12)	(5-15)	(35-55)	(0.3)	(<5)	
Acme FA – AA	15	9	12	51	-	-	
Becquerel RD-22 (DNA)	43	41	-	-	<2	<50	
(Accepted Value)		(40-75)	(85-250)	(200-500)	(1.4)	(<5)	
MHS Research Ni S Fusion/ +slag		16 / 55	243 / 267	491 / 557	0.1		
FA – GF / AA		34	387	540	<1		
ALS Chemex FA – ICP	15	47	95	441			
Acme FA – ICP	15	39	116	419			
Becquerel Au 90-3 (DNA)	37	739	-	-	73	<50	
		(700-830)	1600-1700	(380-450)	(68-78)	-	
ALS Chemex FA - ICP	15	776	1620	438	-	-	
Acme FA – ICP	15	742	1655	401	-	-	
Becquerel Au 90-1 (DNA)	41	4820	-	-	<2	<50	
		5900-6900	(5-15)	(0-10)	-	-	
M.H.S. Research Pb fusion GF/AA		7218	<5	<5	-		
ALS Chemex FA – ICP	15	6450	11	6	-		
Acme FA – ICP	15	6516	5	<2			
Becquerel STIL	30	357	-	-	<2	20	
STIL		(300-450)	3500-6000	14-19 ppM	(0.1-0.3)	(17-23)	
2 parts RR-1: 1 part STIL calc.		133	1667	5667	<2		
MHS Res. Ni S fusion 2RR-1:1 <sup>ST</sup>		138	1568	5970	<2		
ALS Chemex FA – ICP	15	360	6000	17.8 ppM	-	-	
Acme FA – ICP	15	390	4928	>10 ppM	-	-	
Becquerel 2RR-1: 1Au90-1	28	*1660	-	-	<2	<50	
		*(2050)	<10	<10	(<2)	(<50)	
ALS Chemex	15	*1610	9	10	<2	-	
Acme	15	*1586	4	7	(<2)	-	
Becquerel 2ARR-2: 1 STIL	30	170	-	-	<2	8	
		(170)	1220-2010	4675-6330	(0.7)	(7)	
ALS Chemex	15	157	2180	5420	-	-	
Acme	15	185	2078	6176	-	-	
Becquerel SARM-7b	20	270	3800	1500	N/A	79	
(Accepted value)		(255-285)	3690-3790	1500-1590	0.42	(75-105)	
MHS Research NiS fusion		278 / 289	4210/4287	2397/2276	0.1		
MHS Research NiS fusion + slag		347 / 316	4333/4438	2548/2380	0.2		
MHS Research Pb fusion GF/AA		#	#	#			
(Sample GXR-2)		N/A	N/A	N/A	(15-20 ppm)	-	
ALS Chemex Ag by ac leach	1				16.4		
Acme Ag by aq regia leach	15				13.9		
Acme Ag by HCl + aq regia	5				18.4		
MHS Research not given sample					---		
PTC-1a concentrate standard		1310	2720	4480	56		
M.H.S. Research NiS fusion		1312	2961	3805	27.9		
MHS Res NiS fusion + slag re-run		1541	3048	4080	28.4		

## Notes on Controls:

**GR-1 / GR-Pt** is a low level sample of mineralized Duluth Gabbro always reporting in the specified range.

**RD-22 / RD** is an intermediate level sample of mineralized Duluth Gabbro always reporting in the specified range.

**Au 90-3 or Au93-1** (my transcription error) is a standard sample for Au prepared by Dr. Wes Johnson of BC Dept of Mines / Bondar Clegg.

**Au 90 -1** is a standard sample for Au prepared by Dr. Wes Johnson.

**STIL** is a standard sample of Stillwater JM zone always reporting in the specified range.

**2RR-1: 1 Au90-1** is a weighed composite of 2 parts RR-1 : 1 part Au90-1. (direct weight)

**ARR-2:1STIL** is a weighed composite of 2 parts ARR-2 : 1 part STIL. (direct weight)

**SARM-7b** is a government certified standard for noble metals, especially PGE, from the Union of South Africa.

**GXR-2** is a certified USGS standard for Ag, base metals, and trace elements from Utah.

**PTC-1a** is a Canadian Government Cu Ni concentrate standard. The median published value is stated as the acceptable value.

### NOTES...

- Mixture of a 6000+ ppb standard with 2x the El Capitan high mag-hematite matrix apparently causes some depression of Au values (15-25% loss) when run by fire assay; however, in the case of neutron activation, there is no depression from the standard value as reported on this run. Conclusion: possible depression by the El Capitan high iron matrix exists for routine fire assay; the same data would say it is probable that the major portion of Au values still reports to the data.
- In El Capitan : standard matrix mixes, M.H.S. Research values indicated little Au Pt loss / depression of values by NiS fusion; for Pd there was an approximate 25% loss for both the RR and ARR matrix mixes.
- Ir values below the 50 ppb reporting limit for DNA by Becquerel were reported verbally for STIL and the mix of STIL with the El Capitan matrix.
- Values on lower weights (7.5 g etc.) used for fire assay procedures could have any crucible or systems contamination and / or background noise (drift) from instrumentation enhanced by an up to x 4 calculation factor. I.e., a procedure that is anchored by say a +/- 2 ppb detection limit and by rule a +/- 6 ppb worst case level of confidence on a 30 g sample might be +/- 8 ppb detection limit and +/- 24 ppb confidence on a 7.5 g sample. Fortunately, instrumental endpoints are quite sensitive and the detection limit reported is an overall systems confidence, thus enabling labs to report the same detection limit for smaller weights. A lower sample weight to active flux ratio may work to advantage in liberating small amounts of noble metal atoms trapped in a refractory matrix.
- In the careful work done by M.H.S. Research 15 g sample weights generally reported higher values than 30 g weights, leading to an indication that matrix is better attacked by a higher flux to sample ratio. There was no clear indication in the other labs data. A flour-carbonate roast seemed to enhance recovery of values overall, but values still reported in the 100 ppb Au range and < 50 ppb Pt Pd.
- Many slag re-runs by M.H.S. Research demonstrated a significant % of the metal was retained after an initial fusion. However, in most cases it was less than 10% of the total and in all cases above 100 ppb, there was no evidence of slagging off of more than roughly 10% of the original values. Below 100 ppb, some sample runs did evidence a significant % of loss to slag.
- # (Something is wrong here with the standard value so it is not reported as being indicative... maybe a tired old man transcription error. As this is read let us also look in the mirror). I have also noted the standard Duluth Gabbro to have the Au Pd values reversed. After careful inspection, there are no errors of significance.

**3. There seems to be evidence of other Platinum Group Elements (PGE) or (PGM) Platinum Group Metals in the deposit, such as Ir, Rh. Can this be confirmed? If so, are they interfering with Pt determinations? If present, what is the initial indication of grade?**

Evidence of the data:

Pt, Pd, and other PGE are analyzed to sensitive ppb levels and with reasonable accuracy by a nickel sulfide (NiS) fusion using neutron activation or ICP-MS endpoints in the mining analytical industry (Au is also analyzed, but may not be accurate). Au in the amount of 0.006 ppm, Pt and Pd of 0.2 ppm, Rh of 0.7 ppm and Ru of 0.2 ppm were seen in one sample, and Pt Pd Rh were observed in a succeeding sample in the "red flag" run by ALS Chemex of July 2007. It is possible that the values are genuine (see this author's report of Dec 2007), but are suspected (gut feel based on experience) to be enhanced by systems contamination. Genuine or not, these values were quite low. Values produced in a run by Becquerel Labs did not evidence any PGE over 0.02 ppm. Rh was analyzed at M.H.S. and reported up to 83 ppb (generally <50).

Ir was also specifically checked for by direct neutron activation without any chemical processing. The standardization was also checked at my personal request. The procedure, when using the large 30-40 g sample that we provided, reports Ir to +/- 50 ppb, but in our samples could see down below 10 ppb. A verbal insight about the ARR-2 : STIL control sample evidenced only 8 ppb, which agreed with the 20 ppb in the STIL sample when cut with the 33:67 % STIL:ARR-2. The bottom line is that there is less than 3 ppb Ir in the ARR-2 sample.

Should Ir have been present, as was thought to be the case, its natural habit is to occur as a Ir-Os alloy or as a Pt-Fe-Ir (and minor other PGE) alloy. The latter is a concern to liberation of all Pt values in any Pt assay without a knowledgeable custom approach. The reason for concern is that Ir-alloy nuggets can resist complete breakdown in fusion; Ir forms intermetallic compounds in cupellation; and Ir is only very slightly miscible in Ag prills in the final stages of cupellation. For the samples provided, there is no concern that any PGE is interfering in the assay recovery of Au Pt Pd.

**4. How is the Au Pt (Pd) Ag likely to be occurring?**

Evidence of the data:

The low levels subject insights to the realm of generalized conjecture. However, same may be of value.

Magnetite is known by geochemists to be a "sop" for mineralizing fluids active during the formation of the magnetite. Elemental values for Sn, Zn, etc. up 1%; Au Ag Cu up to several ppm; and Ti Cr are common "impurities" in magnetite rock. Au is normally as free Au along grain boundaries, with only very low content occluded in matrix crystals; Ag is often bound up with magnetite during its emplacement or during its oxidation into iron oxide-rich weathering products. The magnetite from RR-1 was noted by XRD as having Cu Zn Ni Mg Cr content. Some of the Ag might be bound up in magnetite; some Ag might be in hematite precipitates; some might be with Au as electrum noted by the Bureau of Mines report; and some might be associated with elevated contents in host rock. Au is likely to be free Au metal (or electrum if there is an overprint event to the skarn processes). Pt Pd can occur with hydrothermal overprints as odd minerals or as inclusions in secondary minerals like plumbojarosite. If Ir were found in any quantity it might occur as segregates of ferroplatinum alloys or Ir-Os metal segregates in ultrabasic dykes cutting other mineralization. Rh can occur as rhodian Au or in a PGE-Fe alloy.

**5. Is the Au Pt (Pd) Ag potentially cyanide soluble as outlined by AuRic data?**

Evidence of the data:

The cyanide leach on this report was done before any other analyses were complete. When data is compared, it confirms majority solubility of Au mirroring the amounts of total Au in the other procedures. It also demonstrated that the high Fe oxides in the phase 1 drilling composite was not absorbing or interfering with or preventing the cyanide leach of Au. Later studies might evidence some percent insolubility on (1) other matrices, or (2) when cyanide is applied under different parameters or strengths. AuRic data also evidenced a favorable % solubility.

- 6. It is attested that the ore matrices at the El Capitan deposit may be refractory, demonstrating problems in both fire assay and acid leach. Can this be confirmed? It is attested that carbon (C) on sample surfaces from another property caused direct neutron activation results to be grossly low. Is this true?**

Evidence of the data:

It is a known fact of pyrometallurgy that if ferric iron remains in a melt that it can carry off some of the noble metals into the slag phase; other components can cause incomplete melting or incomplete phase separation, leading to low values. An apparently clean, ample lead separation caused by the high reducing power of magnetite can mislead a technician into thinking the fusion is acceptable when appreciable losses have occurred. Phase 1 drilling in particular encountered a number of high magnetite samples. Was this a cause for low values in fire assay? In addition, a fairly pure magnetite, when first treated with an oxidizing acid, may not release elements occluded in its matrix during an acid leach procedure.

To test the fire assay refractory question, samples were chemically identified so as to leave out most of the empirical approach to fire assay science. Then samples were fire assayed with a constant amount of flux specific for each sample, using a descending (30-15-7.5 gram) weight, on one control run, so as to minimize inter-batch bias. As earlier data suggested pre-treatment might liberate more metal when subjected to fire assay, two pre-treatment approaches were also tested on a 7.5 g sample. To answer a question about values being retained in the slags, due to ferric iron and some other unknown, one sample was selected and the slag re-run 3 times. As the Au Pt Pd content of the sample was very low, a clear picture of the refractory nature of the samples could not be documented, but we can say with utmost confidence that in the four (4) samples tested that there is not any Au Pd over 100 ppb. It is not in the assay; it is not in the slag; and it is not in the environment. There may be Pt occasionally reporting up to 300 ppb.

In addition, when the El Capitan iron-rich or carbonate-silicate rich matrices were added to a known control sample in a 2 parts El Cap to 1 part control sample mix, there was no loss of value from the standard by direct neutron activation. In the fire assay test, for the iron-rich sample only, there was loss of Au in the 15-25% range. This data is based on one only fusion in each lab and because of that is a shaky "conclusion." The El Cap matrices were not interfering with Au recovery by neutron activation, but the iron-rich phase may be contributing to a partial loss of Au by routine fire assay, as expected. My sense is that fire assay, when properly fluxed, should not be more than 15% low at the worst. Even if the Au were 30% low, the data would be 70% of true value (i.e., an 0.04 oz / ton Au would return data of 0.03 oz / ton, or close to that, but not zero). One item that surfaces is the *value of composites which include an El Capitan matrix with a standard sample.*

To overcome a potential underestimation of the Ag content by acid leach of a high magnetite sample, one lab (Acme) agreed to run the samples a second time, commencing the acid attack with a pre-leach by concentrated HCl to incipient dryness, followed by the normal oxidizing acid procedure for a reliable wet Ag assay. There was some increase in trace element and Ag data when using this procedure, but in the case of Ag all amounts were in the < 1 ppm range. M.H.S. produced higher values when starting with excess HF before normal treatment.

It was thought that in routine cyanide shake tests that Au or Ag might be retarded from going into solution or reacting in solution with the El Capitan matrices. Addressing this issue

thoroughly at lesser strengths of cyanide or at lesser reaction times was not done, but two data points are clear: (1) what Au is present in the four samples can be leached by cyanide solution, and (2) the high iron oxide matrix is not apparently retarding release into, or retention by, the cyanide solution. It is also noted that AuRiC studies showed Au Pt to be leached fairly efficiently during 1 hour shake tests at room temperature. *Values on the four samples were too low to project a "cyanide soluble" conclusion to other property samples.*

Regarding the influence of carbon (C) on direct epithermal neutron activation data, the technically correct answer is that even % range carbon from bitumen, humic compounds, or carbonate does not depress Au readings. As a corroborating statement, note that Au in soils and organic muck and bitumen has long been measured to sensitive levels by this procedure, having a long track record of scrutiny by the geochemical community.

**7. Is the NiS fusion approach a preferred method of analysis for (a) the mag-hematite rich portions of the El Capitan occurrence? Or (2) the lower iron oxide portions dominated by hematite coatings in carbonate-silicate matrices?**

Evidence of the data:

To date NiS fusions have not evidenced high enough values to answer the question. NiS fusions suffer from the chemical constraints of pyrometallurgy the same as lead fusion fire assay, although some of the chemistry is of course different. In that all commercial laboratories provide a disclaimer for the Au data, we can say that this is not a preferred method for Au or Ag. It is a preferred approach for low levels of some PGE and could be employed by El Capitan to test composites or selected samples for total PGE. It is not generally considered by the industry to be superior to Pb-fusion fire assay for Pt Pd. Both procedures require intelligent application. It is also a \$70-\$120 / sample analysis and is slow to produce data sets in most labs. Repeated MHS assays may show up to 300 Pt ppb in samples that do not show by Pb fusion fire assay. This is unusual.

**8. Is there any corroborating elemental evidence of a secondary-to-the skarn-event? If so, is there any elemental evidence of mineralogy which might potentially interfere with future analysis and future process leaching?**

Evidence of the data:

The trace element data suggests an Fe-Mo-U-Ca(Sr) rich skarn and not a precious metals skarn (such as described by BiMoAg or AuCuAsW or AuAgTeAs... along with Fe-Ca). While a hydrothermal overprint event, or oxidation enrichment / change of the deposit may be in evidence, there is not trace element evidence (in the 4 samples) to suggest a precious metals bearing skarn. However, the presence of Au-Mo and minor As-Ag does document movement of a solution containing these elements. The U would be mobilized probably from the driving source of the fluids and the Ca(Sr) of course from mobilization of host rocks to the fluid migration. These are very generalized descriptions of what this author sees in the limited data of four composites, and are not to be construed as a professionally produced, or conclusive model, as to what happened at the El Capitan mineralized occurrence.

Au Ag is not occurring as a Bi or Te mineral compound, which could influence some analytical approaches or process approaches. High carbonates might influence some test tube acid leach approaches by consuming reactive acid or by boilover, both leading to low results. There is not a significant interfering element such as Cu. The high iron oxide, high calcium carbonate, and significant calcium-magnesium silicates might need to be addressed in process metallurgy. There is not an element in quantity, except for iron, that would need major consideration as an environmental hazard. There was no indicative, unusual SW or LW fluorescence.

## 9. The M.H.S. data

Evidence of the data and comment:

M.H.S. Research is performed by two competent and honest persons. The quality of their fusions and cupellations is impeccable. *Please see the notes under tables of sample and standard values.* I also note some generalizations.

- Sample splits that were kept from oxidative-moisture reaction in a desiccator appear to give up more metal to the fusion procedure than samples that have been kept in a poly bag in a bucket over several months, even if moisture is driven off at 105 °C. Perhaps, if this holds true as initially indicated, there is some compound formed that helps to catalyze polymerization during the fusion, resulting in early slagging off of some values. This is not a conclusion, but an open door to be considered.
- Pt Pd data is higher by NiS fusion than by Pb fusion. It is likely that this direction of bias between methods is correct, but I also note that Pt at M.H.S. seems to be on the high side of acceptable range for standards tested. Is this evidence of better recovery than the median reported by other labs(?) Or is this evidence of some GF/AA enhancement in the low range(?) Blanks fused and run with the samples did not evidence contamination or false signal contribution.
- Ag values, when done by wet acid attack – particularly if the initial attack is a strong reducing acid attack – are significantly higher than by corresponding wet acid attack at Acme or Chemex. I do not know right now if the difference is due to low level energy calibration at M.H.S. or due to failure of the chemical attack / retention of Ag in solution at other labs. The neutron activation Ag is + or – a few ppm, so this procedure cannot indicate truth at this level of Ag.
- A caustic-reducing roasting pre-treatment seems to benefit low level metal recovery, as is technically predictable for some refractory matrices such as the spinel family. Yet on the two samples (RR-1 and ARR-1) subjected to the methods study, values in the rock were not high enough to give clear indications of consequence to economics.

In order to eliminate this author's uneasiness over potential contamination from any part of the endpoint procedure at M.H.S., beads produced by M.H.S. were taken to Acme Lab and run by ICP-MS. Values were low... in fact they were 20-30 ppb lower than expected from previous analysis, or from M.H.S. data. It is believed that Acme's new lims system overcorrected for background noise on the instrumental measurement or some values were not thoroughly eluted from the larger than normal Ag bead during digestion. There was no evidence of Au Pt Pd above what is listed in the tables of values, with or without pre-roasting with flour and potassium carbonate.

## 10. What are the next steps to establishing head grade and going forward?

Evidence of the data:

If noble metals exist in quantity they are not in evidence in the four (4) only composite samples, as evidenced by analysis of the 400 g splits, which generally repeat as to range at more than one lab by more than one method. If was this my investment, I would want to affirm that either:

- (a) the four samples were a negative anomaly and that AuRic data is close to correct, or
- (b) there is something systematically wrong with Auric data, or of caustic fusion data finished on an AA instrument.

In my opinion, a giant stride toward determining the truth would be to analyze about 75 samples, consisting of 40 raw field splits never prepared by AuRic or anyone else (Core splits might be preferable); 10 pulps which AuRic produced good values on; the 10 rejects corresponding to those AuRic pulps; and about 6-8 controls (including blanks). A worthwhile addition would be to

also analyze 2-5 of the rejects (preferably) from the reconnaissance work to the east and west of the El Capitan pit, which samples produced exciting data by caustic fusion. The points below include analyses by AuRic Labs, which I understand is not going to happen, so we will have to make adjustment. But I would like to go ahead and publish the ideal. This is what I would do with the samples:

- (a) produce 700-900g pulps (-200 mesh / -75 microns) in a “process clean” lab using a ring and puck or saucer type grinding procedure after crushing all the sample to -10 mesh and splitting out 600-800 grams for pulverizing. Retain a library split of pulp, and reject if possible.
- (b) Re-submit the 10 AuRic pulps and rejects as 20 pulps, plus about 10 of the raw field samples now made into pulps, along with about 4-5 controls to AuRic for the exact cyanide soluble test they produced original data on before. A more expensive option and / or addition would be to also ask them to produce data by caustic fusion. Going from a single 5g fusion to 6 x 5g = 30g would move forward statistically in addressing nugget effect, but might change the sample to reagent balance deleteriously.
- (c) Submit the entire suite of about 75 samples to Becquerel Labs for their Au+33 analysis using a large (30-45g) vial. This will be a total Au Ir and Ag. The Au Ir in these samples should be accurate and represent an alternate non-chemical approach which would be expected to describe the total Au in the samples with confidence. The Ag should be weakly descriptive (+/- 5 ppm); trace elements reported are all in the same price package and will be potentially useful.
- (d) Submit the same entire suite or a smaller suite to Acme for their wet 15 gram Au Pt after ignition. I think they might also run Ag off of this larger (pre-treated by heat) digestion; I know they could... I would have to find out.
- (e) Run the same entire suite or smaller suite for Au Pt Pd by fire assay – ICP at ALS Chemex or Acme, hopefully identifying high magnetite / high carbonate samples beforehand.
- (f) Run selected samples or composites made by weight to ALS Chemex-Reno for large sample cyanide leach, perhaps using Leachwell reagent. At any rate, I like the idea of using a large sample to smooth out sparse particle / nugget effect and a 24 hour leach to make sure we are not underestimating a slow reacting sample matrix. Alternate bench scale “bulk” leach tests designed by Richard Daniele and Mike Thomas, in consultation with the El Capitan group, should be considered to both smooth out sparse particle effect and to indicate economic viability.
- (g) Run a few doré beads produced by Ahmet at AuRic. This might not be accomplished for several weeks, I suspect.
- (h) My sense is that some samples should be run by caustic fusion, mainly to satisfy the questions about this somehow being a superior approach. I understand that a small lab in Vancouver can do this as well as AuRic. It is worthy of note that SGS-Lakefield's data on RR-1 and ARR-1 was essentially a modified “caustic fusion” approach with a + or – 0.02 ppm (20 ppb) level of confidence (but if using the 3 sigma rule for confidence at detection limit one would increase this to + or – 60 ppb, which would be + or -0.0018 oz / ton).

#### **Important note post to the above recommendation:**

A meeting with a group of competent, credible, professionals with a track record of integrity was held in Vancouver. This group represents Muddy Creek Gold, Inc. They have a property in Nevada which was submitted to AuRic for analysis and to many other labs for conventional analysis. After many difficulties surfaced, they developed their own fusion – precipitation – doré procedure, allowing them to independently produce values on mineralized samples that did not report well to fire assay. They have also produced Au from a thiosulphate – sodium hydroxide leach of a 500 kilogram sample from the same sample location. *It seems necessary to verify a procedure similar to that used by AuRic: Does it or does it not produce real noble metal values*



that can be reproduced under the guidelines of scientific measurement? Technically the procedure is sound (the technology has also been around for a long time), although the process should be subject to reporting low if technique is not rigid and time temp parameters are not exacting. It is possible that El Capitan could work on a minimal joint investigative protocol, building on the significant months of research already done by Muddy Creek technicians.

I heard a strong consensus that AuRic would not work with people wanting to use another lab or who would question their data. This throws a monkey wrench into my recommendation above. If we cannot establish the credibility or find an error source (such as measurement enhancement or contamination), or expose an erroneous concept regarding AuRic's values, then we will need to do the next best thing regarding the important conclusions about the supposed superiority of "caustic fusion." That would be to adjust the recommended protocol (a-h above) to include some Muddy Creek samples, with more emphasis on a selected pre-treatment that could be then folded into a conventional, market-acceptable procedure. However, it is still believed that conventional procedures will evidence Au (Pt Pd Ag) if that metal is there, even if an alternate exotic procedure may be proven to give higher values.

### What will this second round of testing do?

If we have erratic or confusing data from the test runs, due to lab problems or due to sparse particle or nugget effect, conclusions will be more difficult. However, we hope to shed light on the subject as follows:

- (1) Can AuRic (**or the Muddy Creek Lab**) re-produce values on original pulps, rejects of those pulps, and new raw field splits of the same interval while passing test on true blanks / low level standards?
- (2) If for instance, values are positive in all samples, *including the blanks*, we can point toward a reagent or universal lab contribution to values.
- (3) If fused standards and fused blanks report accurately, but *samples report significantly positive*, then we have credence for the efficacy of caustic fusion.
- (4) If the values come back *high for the original pulps and rejects only* we would then sense there may be a problem with contamination or salting of the original samples.
- (5) If data comes back high on the original pulps only, the focus is on those pulps only. If this were the case, we would suggest a prep lab or furnace problem at AuRic.
- (6) If a non-chemical process such as neutron activation obtains corroborating values, or even good values, but a fire assay lab does not, we know we have a fire assay lab problem.
- (7) Data produced by a pre-treatment procedure or fusion-precipitation-doré procedure may evidence some problem with a conventional method, *especially if duplicate beads from the procedure (including blanks carried through the entire procedure) can be verified at an outside lab*. Data from a mini-bulk sample or samples, when subjected to cyanide or thiosulphate-hydroxide leach, may also prove the existence of noble metal. I note that a bulk leach approach was recommended by me as a desirable second step, prior to this round of testing / reporting.

*The recommended protocol could be cut down at this point in time, especially if the group is wanting to focus attention on proving the efficacy of alternate techniques (caustic fusion AND bench scale "bulk" leach) along side of proof by conventional techniques.* Right now, a significant limitation is the availability of a lab and personnel to run a peroxide-hydroxide fusion technique. Whatever is done should be done in consultation / agreement with those making decisions and giving input. We should not just "run a few samples," at least not without selected sample purpose and control samples. The output of the Muddy Creek Lab is about 6 samples per day, using a two day process. We might get them to run 12 fusions accommodating 9 samples and 3 controls. If values are erratic, we are still spinning our wheels, but if values are *clearly* indicative, we have made a giant stride forward.

Finally, data from separate approaches to analysis such as [ Direct Neutron Activation – Fire Assay-ICP – wet acid leach after ignition – and peroxide-hydroxide fusion... to doré ] should evidence a clear pattern of truth-in-analysis and if there is agreement, to establish head grade. The givens here are that we have a sufficient quorum of samples (perhaps someone who is statistically inclined should check this), AND that we are using 15 to 40g samples.

### **Insights as to Cost**

Lab expense of all of the above (any bulk testing or bench scale “bulk” testing is NOT included) would be about \$5900 plus whatever AuRic or any other caustic fusion lab charges (perhaps an additional \$3900-5900???, depending in part on sample size). One reason a peroxide sinter, or a caustic fusion employing Na-peroxide, is expensive is that Na-peroxide alone costs about \$1 / gram when you can get it, and its’ shelf life is only moderate. Using a large sample is very difficult because one has to either use small samples in standard zirconium, nickel, or iron crucibles or use a larger crucible that may either be very expensive or not accommodate the nature of the fusion.

Personnel and Logistics will add money to this testing protocol. My wild guess is \$15,000 - \$25,000. Ken Pavlich and your administrative people can estimate this much better than this author. I note it just to insure all decision input is financially realistic.

Consulting expense from me could be minimized, depending on your needs. I should be able to assist you from home for most items except to view or discuss a procedure with a critical person.

### **Conclusions**

*The four (4) splits of composite samples provided as 400g cuts do not evidence economically significant amounts of any noble metal.* The fact that Au values are reproducible as to range from lab to lab and procedure to procedure (and that Pt Pd Ag values are uniformly low) lends strong credence to this statement. The potential exists that these composite samples, in spite of being professionally and correctly made, do not accurately represent what is in the ground (Au Pt Pd Ag Rh Ir) as evidenced by drilling. That potential is slim in my estimation, but real, and should be addressed.

We hope that the data from a larger sample set, and from confirmatory testing, reverses the findings from the four samples representing two composites of the drilling phases. Bulk leach (with appropriate blanks and standards) and / or caustic fusion procedures may encourage the project by proving recoverable noble metal values sufficient to continue exploration.

If the lithological horizons sampled by drilling do not contain significant precious metal values as demonstrated by this second set of testing data (to come), it is expected that it would be difficult to justify continuance of the project except to test new exploration ideas. Whether or not I am involved, I do believe due diligence demands further testing that is thorough. Normally all questions or open loops are not completely addressed by data sets. However, I believe that sufficient data will emerge from this proposed round of testing to either go forward or to “fold the tents.” I sincerely hope the path toward confirmation and profit is the conclusion of the matter.

The serious nature of this testing is not underestimated. A defensible protocol and data set, for whatever direction the project goes, is necessary for all persons concerned.

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## **Appendix 10**

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### **Noel Palmer Metallurgical Review Report**

**Review of Metallurgical Research  
El Capitan Project  
Capitan, New Mexico**

**10-16-09**

Prepared for

**El Capitan Precious Metals Inc.**

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## **Introduction**

In 2007, El Capitan Precious Metals Inc. (ECPN) released a study (C. Smith, 2007) reporting that its El Capitan deposit in New Mexico contained approximately 2.8 million ounces of gold, with additional resources of silver and platinum. This resource estimate was based on assay results from 12,764 feet of drilling as reported by AuRIC Metallurgical Labs. Since 2007, El Capitan management has carried out extensive research on precious-metal assays and extraction methods in order to confirm the presence of precious metals and to develop an extraction protocol for mining. This report is a review of this work, primarily focused on the period 2007-2009, with additional review of some work before 2007. We have focused on those methods that appear to be the most promising, have played a prominent role in the project, or have given the most robust results.

### **American Assay Laboratories—2005**

In January 2005, American Assay Laboratories received 4 samples from the El Capitan deposit collected under chain of custody by Clyde Smith. Of particular interest is the sample labeled “El Cap non-magnetic #2,” which assayed 0.016 opt Au. American Assay also tested the magnetic fraction of this sample (<0.003 opt Au), but not the mag/non-mag percent, so direct calculation back to head grade is not possible for this sample. However, this sample was later re-sampled by Clyde Smith, labeled EC-2, and assayed by AuRIC, which also did a magnetic separation. AuRIC reported 0.024 opt Au in the non-magnetic fraction (97% of the sample), which calculates back to 0.022 opt Au. Applying AuRIC’s non-magnetic fraction to American Assay’s result generates 0.015 opt Au—using a standard fire assay method at a recognized lab. This is one of the few fire assays without pre-treatment on a chain-of-custody sample that have reproduced ore-grade numbers similar to AuRIC’s caustic fusion assay (see below).

### **AuRIC Metallurgical Labs—2005-2007**

The resource calculations for the El Capitan project have been based on AuRIC’s work on approximately 2,300 samples obtained from the project, most of which were drill core or drill cuttings, beginning in early 2005. AuRIC Metallurgical Labs is a licensed assay laboratory located in Salt Lake City, Utah. AuRIC reported ore-grade values in Au, Ag, and Pt using a caustic/alkali fusion assay on the El Capitan samples. Although the exact details of this fusion assay technique are proprietary to AuRIC, alkali/caustic fusion assay methods using sodium peroxide ( $\text{Na}_2\text{O}_2$ ) in the flux have been applied to a variety of mineralogical and extractive applications. Generally speaking, sodium peroxide is a very strong oxidizing agent that efficiently dissolves sulfide and/or refractory minerals. Specifically, the use of alkali fusion assay in the recovery of Au and other PGM has been documented in the scientific literature (Toteland, 1995; Enzweiler, 2003; Qi, 2003; Corbett, 1973).

Because standard fire assay results have been erratic at El Capitan, a number of questions have been raised about AuRIC’s work. First, it has been difficult to verify the statistical legitimacy of AuRIC’s assays. AuRIC reported that it ran standards and blanks during the work for El Capitan, but did not include details of this information with the data nor in assay reports. Statistical details such as repetitions, standard deviations, and percent errors produced by AuRIC are also lacking, as are details of instrumentation calibration. After several requests, ECPN has been unable to attain this quality-control data from AuRIC. The lack of this information makes it difficult to evaluate AuRIC’s work and raises a number of questions, most importantly: are the results from AuRIC valid? A valuable lesson can be learned from this situation with AuRIC, and in future work a number of checks will need to be put into place to ensure the legitimacy of all testing and extraction methods used.

The second issue with AuRIC’s work is that AuRIC’s proprietary caustic fusion assay is not a standard testing method accepted in the mining industry. As a result, ECPN requested a confirmation of AuRIC’s method performed by metallurgist Richard Danielle in 2005 (Danielle, 2005). Danielle chose to use Wendell and Co. as a verification laboratory. In this work, both AuRIC and Wendell were sent 15 El Capitan split samples that originated from 12 drill hole splits selected under the chain of custody of Dr. Clyde Smith. These samples were chosen based on the results of AuRIC’s previous caustic fusion assays as well as the sample’s geological indications of precious metal content. All samples that were chosen had hematite values of greater than 10% with no regard for magnetite content. At both labs, the caustic fusion technique was applied to all samples and Au, Pt, and Pd were quantified.

It is noteworthy that AuRIC performed a magnetic separation on 6 “high magnetite” samples (of the 15 total samples) before the fusion while Wendell did not. Results show that in all but 3 instances, AuRIC

returned higher values for Au, Pt, and Pd than Wendell; on average, Wendell's values were 30% lower for Au, 40% lower for Pt, and 23% lower for Pd compared to AuRIC. Danielle offered a scientific explanation as to why AuRIC consistently yielded larger numbers than Wendell: AuRIC uses lanthanum in their solutions during AA analysis as an ionization agent to improve the sensitivity of AA readings. Wendell did not use lanthanum in this way. Both Wendell and Danielle suggest that problems may have arisen from the addition of this step at AuRIC, but provide no other details regarding this dilemma, and offer no data provided to support this hypothesis.

From this study, Danielle's conclusions were three-fold: 1) AuRIC had developed a successful caustic fusion procedure, 2) the caustic fusion technique works well on "difficult to analyze materials," and 3) disagreements between data provided by AuRIC and Wendell are likely a result of spectroscopic downfalls (improper use of lanthanum in solution as ionizing agent). Although these conclusions may be true, they are not proven in Danielle's report. A number of questions are raised regarding the results of this study.

1. Why wasn't the same pre-treatment used for every sample at both facilities? As mentioned, AuRIC had the ability to separate the samples into magnetic/non-magnetic samples while Wendell did not. AuRIC thus separated six "high magnetite" samples into magnetic and non-magnetic fractions. In order to compare experiments between AuRIC and Wendell, every attempt to duplicate sample processing should have been made.

Moreover, Danielle states that AuRIC performed head analysis on four of the six samples on which AuRIC did magnetic separation (DD-1, DD-8, DD-11, DD-14). The reason for this added step is not included in the report by Danielle, but interesting data was obtained. The results for these four samples are shown in Table 1.

<b>Table 1</b>	<b>AuRic No.</b>	<b>DD-1 Au(opt)</b>	<b>DD-1 Pt</b>	<b>AuRic No.</b>	<b>DD-8 Au</b>	<b>DD-8 Pt</b>	<b>AuRic No.</b>	<b>DD-11 Au</b>	<b>DD-11 Pt</b>	<b>AuRic No.</b>	<b>DD-14 Au</b>	<b>DD-14 Pt</b>
Head	<b>F1792</b>	0.137	0.407	<b>F1770</b>	0.123	0.417	<b>F1776</b>	0.157	0.412	<b>F1782</b>	0.147	0.360
Head	<b>F1793</b>	0.131	0.407	<b>F1771</b>	0.142	0.385	<b>F1777</b>	0.200	0.400	<b>F1783</b>	0.145	0.445
absolute error		0.006	0.000		0.019	0.032		0.043	0.012		0.002	0.085
relative error (%)		4.500	0.000		14.3	8.0		24.1	3.0		1.400	21.0
non-magnetic	<b>F1615</b>	0.090	0.400	<b>F1617</b>	0.300	0.670	<b>F1608</b>	0.260	0.590	<b>F1609</b>	0.150	0.650
non-magnetic	<b>F1548</b>	0.132	0.284							<b>F1555</b>	0.102	0.293
absolute error		0.042	0.116								0.048	0.357
relative error (%)		37.8	33.9								38.1	75.7

Because duplicate samples were run for DD-1 and DD-14 head and non-magnetic fractions, the relative error can be calculated for each. The relative error (absolute error ÷ average) of the non-magnetic analyses is larger than the head analyses in both cases. This suggests that magnetic separation may introduce a substantial source of error to the experiment that reduces precision. One might wonder if this same effect was present in AuRIC's testing of the El Capitan surface and drill samples, where magnetic separations may have introduced a source of error regarding precision. We will not include discussion of this anomaly in this report, but it should be addressed in the future.

It should also be noted that in the case of DD-8 and DD-11, the results of the non-magnetic fraction are 20-50% (calculation now shown) larger for Au and Pt than for the head samples. DD-1 and DD-14, on the other hand, showed the opposite effect: the head samples generally had

higher Au and Pt (average 10-15%). The inconsistency in these results should have raised a flag of caution and prompted further study.

2. Why didn't Wendell and Co. verify the ability to quantify Au, Pt, and Pd in the sub-ppm concentration range while using lanthanum in their solutions on the AA spectrometer—as recommended by AuRIC? Furthermore, Wendell and Co. could have saved solutions for elemental quantification at an outside lab if they were unsure of their numbers. This would have been easy and inexpensive. Danielle also mentions that Wendell and Co. usually operates on ores 10-100x more concentrated than those found on El Capitan (based on AuRIC's numbers). Because of this, Wendell was nearing the detection limit of his AA spectrometer and should have taken extra measures to validate his quantifications.
3. Quantitative measurements for standard samples are mentioned but not reported. First, Danielle states that "standards" were used to familiarize Wendell with the caustic fusion technique. In this process, it was identified that the furnace at Wendell's lab was not working properly. Unfortunately, the results of these experiments that led to this conclusion are not documented in this report. Danielle also mentions standards NBM 4b and 5b in his report regarding the importance of accuracy and precision of a given method. However, there is no mention of these standards (or any others) being used in the sample set during the caustic fusion assay process to verify the total return, accuracy, absolute error of Au, Pt, or Pd. In a possible attempt to explain why these standards were not run alongside the El Capitan samples, Danielle stated "It is important to understand that precious metal Certified Standards are based on standard fire assay analysis." With this statement, Danielle implies that the results from a fire assay cannot be compared to the results from a caustic fusion assay. However, contacting the Nevada Bureau of Mines and Geology Analytical Laboratories revealed that this statement by Danielle is not true: fire assay along with other methods such as acid digestion and neutron activation analysis were used to quantify the total Au, Pt and Pd in NBMG's round-robin study of its standards. The reported numbers for total Au, Pt, and Pd by NBM represent an average of these different techniques. Therefore, these standards could have been used as a mass balance to study the validity of the caustic fusion technique on the 15 core samples.
4. Danielle did not report quantitative results for blank samples. Blanks that are included in a set of unknown samples can help identify unknown sources of contamination or other experimental downfalls such as spectroscopic interferences.
5. Precision alone does not validate a result, as implied by Danielle in his discussion of "Accuracy and Precision" (Section 5.3). The result of any experiment can be very reproducible (precise), but wrong. Moreover, precision alone is a relative concept, not absolute. In an experiment, the type of precision being discussed needs to be qualified. When talking about uncertainties in a given set of measurements, 'percent error' ( $\text{absolute error} \div \text{average of measurement}$ ), standard deviations, and percent standard deviations are often reported as measures of precision. Danielle never defines what type of precision he is talking about, although it appears as if he is using "percent error" to measure precision. Danielle states that AuRIC's precision was 10% for Au, 7% for Pt, and 13% for Pd, and Wendell's precision was 20% for Au, 11% for Pt and 26% for Pd. Danielle also references the statistics for standard NBM 5b, for which the precision in NBMG's round robin study was 27% for Au, 23% for Pt, and 27% for Pd. Thus, by this measure of precision, both AuRIC and Wendell were more precise than NBMG's round-robin standard study. Danielle suggests that this makes the results for the El Capitan samples valid. However, this



assumption between different experimental techniques cannot be made without statistical proof (a *t* test). The data reported by Danielle does nothing but prove that the results are reproducible within the given set of experimental conditions.

The data provided by Danielle in his report is interesting because it shows the caustic fusion technique successfully being applied to El Capitan samples at two different labs and returning ore-grade numbers. The technique may indeed work as stated by Danielle, but he did not present a rigorous mass balance. Unfortunately Danielle's report leaves a number of questions outstanding about the validity of AuRIC's work that need to be addressed in the future.

The results produced by AuRIC may very well be accurate, but without the ability to scrutinize their work in detail and address the issues raised by Danielle's confirmation report, we cannot know for sure. Because AuRIC did so much work that is central to the value of the El Capitan project, it would be beneficial to answer these questions. AuRIC has so far declined to have further involvement in the project, although it has indicated a possibility for future work under a suitable contract. If AuRIC is to be re-engaged on the project, which would be to ECPN's advantage, ECPN should negotiate a contract carefully, with all terms clearly understood by both parties. Regardless of AuRIC's future involvement, its caustic fusion assay deserves more study to help prove the presence of precious metals at El Capitan.

### **Ken Bright Research—2007-2009**

From early 2007 to early 2009, ECPN was led by President Ken Pavlich. Under his direction, the company did extensive research on two composite samples derived from drill samples on the El Capitan project with the intent of reproducing ore-grade results reported by AuRIC. The general approach was to validate the content of Au and PGMs in the composite samples by correlating the results from a variety of different labs and techniques with the inclusion of blanks, standards, and spiked samples. This work culminated in research and a report by Ken Bright (Bright, 2008), in which Bright concluded that no precious metals existed in the two composite samples.

Ken Bright's research used two 400-g splits of two different composite samples: RR-1 and RR-2 (representing phase 1 drilling) and ARR-1 and ARR-2 (representing phases 2 and 3 drilling). It should be emphasized that all conclusions by Ken Bright and Ken Pavlich were based on these four 400-g splits. Such a small sample set raises the question: do these composite samples represent the potential ore-grade material found in the El Capitan deposit? The individual samples that made up the composites were chosen, based on AuRIC's assay results, so that the resulting composites would contain ore-grade precious metals. All work on these composites then proceeded with the assumption that the composites were ore-grade. But if AuRIC's results were inaccurate, it is possible that the composites were not ore grade. Because the veracity of AuRIC's work cannot be confirmed, the grade of the composite samples is not accurately known, and might not be ore-grade as expected.

To further compound this uncertainty amongst the samples, differences in sample storage and handling were reported. For example, reports indicate that during the first year, RR-1 was stored in a desiccator while RR-2 was stored in a poly bag in a sealed 5 gallon bucket. Observations about the samples after storage for 1 year indicated that RR-2 had oxidized due to exposure to the atmosphere. Exposure to the atmosphere would not cause loss of precious metals, however it may alter the chemical state of the ore matrix, which could affect precious-metal behavior during testing. It is uncertain how these changes in chemical state would affect how a sample would respond to fire/fusion, but hypotheses can be derived. In addition, differences in composition between RR-1 and RR-2 were also observed: their  $\text{Fe}_2\text{O}_3$  and  $\text{SiO}_2$

contents were 35%/21% and 85%/6%, respectively. These differences cannot be explained by water/O<sub>2</sub> exposure and indicate a heterogeneous split of the composite sample.

Techniques used in Bright's report to quantify the total precious metal content included (often with modifications): fire assay, alkali fusion assay, nickel-sulfide assay, total dissolution (HF/HCl/HNO<sub>3</sub>), cyanide leaching, various pre-treatments followed by fire assay or ICP-MS, re-assay of slags, and neutron activation analysis. The latter technique (neutron activation analysis - NAA) stands out in this suite of techniques as being the only non-destructive elemental probe of a solid sample. Using NAA, solid samples can be studied, multi-elements can be detected, and the detection limit is equal to but usually lower than those attainable by ICP-MS (inductively coupled plasma/mass spectrograph) or GFAA (gas-fired atomic absorption). Interferences occur in NAA studies when testing for Au, but usually these interferences cause numbers larger than the actual values. NAA has often been called a referee technique for total elemental determination because of its ability to probe samples in a non-destructive and accurate fashion, and is often employed to verify the mass balance for new elemental extraction techniques.

Samples were sent to a variety of commercial and research labs for study using the aforementioned metallurgical techniques. Labs and associated techniques included The Mineral Lab (XRD, XRF), Acme Lab (acid leach after ignition, fire assay), Becquerel Labs (NAA), SGS Lakefield (caustic fusion with Te/stannous chloride), ALS Chemex (fire assay and CN leach), and MHS Research – Mike Thomas (fire assay Pb and NiS fusion, 4 acid decomposition). It was common in this work for the re-assay of slag material to occur.

In all of this work, none of the composite samples yielded ore-grade concentrations of precious metals.. Most results were less than 100 ppb with a range of approx 15-20 ppb (0.00044 opt) for Au, 0-300 ppb for Pt, and <0.3 opt Ag. It is interesting to note that work at MHS Research yielded values for Pt up to 150-300 ppb (0.01 opt) and 3-10 ppm for Ag after a modified wet analysis and NiS fusion. Au values at MHS Research were in agreement with all other labs.

To validate the analytical techniques used, standard ore samples were treated with the same procedures as the unknown El Capitan samples and sent to each lab used in this study. These standards encompassed a range of mineralogical content as well PGM concentrations (page 11, Bright, 2008). Out of all the standards, the 2AAR-2-1STIL (2 parts AAR-2 and 1 part STIL) and 2AAR-1-1STIL (2 parts AAR-2 and 1 part STIL) served interesting purposes. Pure STIL (derived from the Stillwater PGM deposit in Montana) has accepted gold values of 300-450 ppb, or 0.009-0.014 opt, a similar content to those thought to be in the El Capitan deposit. These numbers were confirmed with NAA (Becquerel) to be 357 ppb in the STIL standard. This standard was blended with composites AAR-1 and AAR-2 in a 2:1 composite/standard ratio. Using neutron activation analysis, the Au concentration in each sample was 133 ppb for 2RR-1-1STIL and 170 ppb for 2RR-2-1STIL. These Au concentrations represent 1/3 the accepted value of pure STIL (300-450ppb), directly in line with the dilution of 2 parts AAR with 1 part STIL – indicating no appreciable contribution of Au from the El Capitan ARR-1 and ARR-2 samples. This standard was not mixed with RR-1 or RR-2 for a similar comparison.

The fact that the precious metal concentrations are so low according to every quantitative analytical technique outlined by Ken Bright implies there are no precious metals in these particular composite samples. Bright's conclusion that no precious metals existed in the two composite samples is scientifically justified. However, as Bright pointed out, it is possible that these two composite samples represent a sampling anomaly. This is a factor that could be addressed with a larger and more carefully chosen

sample set. There are still several reasons to believe that economic-grade ore exists on the El Capitan project, and we believe that further studies should be performed, as Bright recommended.

## Copper State Analytical Labs—2008-2009

In August, 2008, Copper State was contracted by ECPN, under Ken Pavlich's direction, to determine the total gold and PGM content in its two composite samples using 2-acid digest, 3-acid digest, (in both pressurized Parr Bombs and non-pressurized vessels) aqua-regia/MIBK extraction. Using pressurized vessels (eg. Parr Bombs) to dissolve solid samples has become increasingly popular in the scientific community because of their ability to digest samples that non-pressurized vessels cannot. Paper trails indicate that samples tested were the same Phase 1 RR-1/RR-2 composite ("EC Comp #1") and Phase 2/3 AAR-1/AAR-2 composite ("EC Comp #2") used by Ken Pavlich and Ken Bright in their studies. Data reported from these studies are listed in Table 2.

Table 2		Original Results						Re-Assay Results					
Sample	Description	Au	Ag	Pt	Pd	Ir		Au	Ag	Pt	Pd	Ir	
1	100% EC Comp #1	0.194	0.767	nd	nd	Nd	3 acid digest	0.015	0.270	nr	nr	nr	2 acid/MIBK
2	75% : 25% EC Comp #1 : #2	0.265	0.250	nd	nd	Nd	3 acid digest	0.029	0.440	nr	nr	nr	2 acid/MIBK
3	50% : 50% EC Comp #1 : #2	0.304	0.530	nd	nd	nd	3 acid digest	0.025	0.390	nr	nr	nr	2 acid/MIBK
4	25% : 75% EC Comp #1 : #2	0.402	0.432	nd	nd	nd	3 acid digest	0.006	0.410	nr	nr	nr	2 acid/MIBK
5	100% EC Comp #2	0.484	0.465	0.095	nd	nd	3 acid digest	0.018	0.390	nr	nr	nr	2 acid/MIBK
9	100% EC Comp #1	0.226	0.388	nd	nd	nd	3 acid digest	0.015	0.480	nr	nr	nr	2 acid/MIBK
10	100% EC Comp #2	0.456	nd	0.098	nd	nd	3 acid digest	0.009	0.060	nr	nr	nr	2 acid/MIBK
	100% EC Comp #1	0.775	1.150	nd	2.542	1.021	2 acid digest	0.048	0.050	nr	nr	nr	2 acid digest
	100% EC Comp #2	1.846	nd	nd	2.182	nd	2 acid digest	0.091	0.050	nr	nr	nr	2 acid digest
5	100% EC Comp #2	0.484	0.465	0.095	nd	nd	3 acid digest	0.415	nd	0.115	nd	nd	3 acid digest
10	100% EC Comp #2	0.456	nd	0.098	nd	nd	3 acid digest	0.408	nd	0.102	nd	nd	3 acid digest
	100% EC Comp #1	0.775*	1.15*	nd*	2.542*	1.021*	2 acid digest	0.253	1.060	nd	0.531	0.277	3 acid digest
	100% EC Comp #2	1.846*	nd*	nd*	2.182*	nd*	2 acid digest	0.362	1.591	nd	0.692	nd	3 acid digest

NOTE: nd = not detected / nr = not run

The first round of testing at Copper State (named "Original Results" in Table 2) produced significant amounts of Au, Pt, and Ag in all samples using a pressurized and non-pressurized 3-acid digest and 2-acid digest. Surprisingly, these results were on average 10x larger than results reported by AuRic using a caustic fusion assay. Because of this discrepancy, Ken Pavlich suggested a re-assay of these composite samples by Copper State. In the second round of testing (named "Re-Assay"), digest time was increased from 4 hours to 20 hours, (the reason for increasing the digest time is unclear), and a 2-acid/MIBK extraction was used. The results of this second round of testing consistently yielded smaller amounts of Au, Pt, and Ag in all samples when compared to the first round. These results are curious because conventional wisdom with total digests is that increasing digest time generally increases yield – up to a point. Copper State has not offered an explanation for this observation nor has it yet provided the results from internal blanks and Copper State standards to prove that the techniques were working properly.

The most comparable results between the original and re-assay digests are Sample 5 and Sample 10, for which a 3-acid digest was used in both rounds of testing. The first round of digest yielded 0.484 opt and 0.456 opt Au for Sample 5 and 10, respectively, while the second round of digest yielded 0.415 opt and 0.408 opt Au. This represents a 14% and 10% drop in yielded Au. Regarding the other digest methods (2-acid/MIBK and the 2 acid digestion), the original results are significantly larger than the re-assay results, in most cases by an order of magnitude or more. These changes in total Au content may be a result of

different digest techniques. However, the results of the internal standards indicates that something else is going on. During this work, Copper State reportedly tested 2 different standards (NBM 5b, NBM 6b at 100% content) and 1 mixture of these standards (NBM-5b 50% and NBM-6b 50%). The results for the standard ore samples in the original and re-assay methods are listed in Table 3.

<b>Table 3</b>	<b>3-acid, 4-Hour Parr Bomb + ICP Finish</b>				<b>3-acid, 20-Hour Parr Bomb + ICP Finish</b>			
	<b>Original Results (opt)</b>				<b>Re-assay Results (opt)</b>			
<b>Description</b>	<b>Pt</b>	<b>Pd</b>	<b>Au</b>	<b>Ag</b>	<b>Pt</b>	<b>Pd</b>	<b>Au</b>	<b>Ag</b>
<b>Copper State (opt)</b>								
100% NBM 5b	0.158	< 0.01	0.253	1.121	<0.03	<0.03	0.053	0.589
50% : 50% NBM 5b : 6b	0.117	1.646	0.362	15.934	0.110	0.482	0.039	0.297
100% NBM 6b	0.178	1.064	< 0.01	0.340	0.174	1.070	<0.03	0.141
<b>Accepted value in standard (opt)</b>								
100% NBM 5b	0.009	0.022	0.047	na	0.009	0.022	0.047	na
50% : 50% NBM 5b : 6b	0.180	0.576	0.035	na	0.180	0.576	0.035	na
100% NBM 6b	0.352	1.130	0.023	na	0.352	1.130	0.023	na
<b>Difference (opt)</b>								
100% NBM 5b	0.1490		0.2066	na			0.006	na
50% : 50% NBM 5b : 6b	-0.0632	1.0700	0.3274	na	-0.070	-0.094	0.004	na
100% NBM 6b	-0.1738	-0.0661		na	-0.178	-0.060		na
<b>Absolute error (%)</b>								
100% NBM 5b	1659%	>95%	441.7	na	>66%	>36%	13%	Na
50% : 50% NBM 5b : 6b	35%	185%	938.7	na	39%	16%	12%	Na
100% NBM 6b	49%	5.80%	>56%	na	51%	5.30%	>37%	Na
<b>Average absolute error (%)</b>	581%	95%	478%	na	52%	19.10%	20.70%	Na

The first round of digest of NBMG standards with a 4-hour Parr Bomb-HF/HNO<sub>3</sub>/HCl had significant percent errors compared to the accepted values, ranging from 5.8% to 1659%. The majority of the samples had errors of 95% or greater. These results are unacceptable and should have prompted Copper State to verify the technique. The second round of testing performed much better in comparison with the standards, coming within 13% of the accepted value for two out of the three standards. One issue with the standards used is that they do not represent an ideal mineralogical or chemical match to the El Capitan samples. NBM-5b is a carbonate-hosted hydrothermal Au-Pt-Pd ore and NBM-6b is a mafic intrusive-hosted Pt-Pd ore. Regardless, the fact that these standards responded so erratically in the first round of digests makes one question the results of the composites studied at the same time by Copper State. If a lab cannot get a standard ore sample to respond consistently, how can we expect the unknowns to respond?

The results of Copper State's Parr bomb total digest testing are mixed: results for the original first round are unacceptable, based on the lack of agreement between Copper State's results on the standards and the accepted values. The re-assay second round of tests agreed more closely with the standards, and are intriguing. If the results from the second round are valid, they indicate ore-grade levels of Au in the composite samples tested. Copper State's methods and procedures should be thoroughly evaluated and a new suite of samples tested.

In March of 2009, two composite samples that were splits from RR-1/RR-2 (Composite #1) and ARR-1/ARR-2 (Composite #2) from Ken Pavlich's work were given to Copper State for hot cyanide leaching tests. Composite #1 yielded ore-grade results for both Au and Ag (average 0.037 opt Au and 2.27 opt Ag) while composite #2 yielded less Au and Ag (average 0.015 opt Au and 0.173 opt for Ag. These results are very interesting because they indicate ore-grade material from samples that Ken Pavlich and Ken Bright had concluded did not contain appreciable amounts of any precious metals.

## Surface Re-Sampling—2009

Drilling at El Capitan started in April 2005, largely based on AuRIC's assay results from 28 samples collected by Clyde Smith in January 2005 (C. Smith, 2005). Because of the questions about AuRIC's work, in 2009 ECPN directed a partial re-sampling of these original surface samples. Sampling was done by David Smith in June 2009 (D. Smith, 2009). Samples were sent under chain of custody to Resource Development Inc. in Denver for crushing to -¼ inch and thorough blending, and 500-g splits then sent to American Assay, Hazen Research, and Orlando Villa for testing. (See below for more details on Villa's work.) The results from fire assay at American Assay and Hazen are shown in Table 4.

<b>Table 4</b>		<b>American Assay</b>			
Element Method Detection Limit Units	Au FA60 0.001 OPT	<b>Hazen Research</b>			
		Au 60g FA 0.001 OPT	Au 5g AA 0.005 OPT	Ag 60g FA 0.05 OPT	Ag 5g AA 0.01 OPT
<b>Sample</b>					
29	<0.001	<0.001	<0.005	<0.05	<0.01
BLANK	<0.001				
30 (same as 37)	<0.001	<0.001	<0.005	<0.05	<0.01
31	<0.001	<0.001	<0.005	<0.05	<0.01
32	<0.001	<0.001	0.001	<0.05	<0.01
33	<0.001	<0.001	<0.005	<0.05	<0.01
STD	<0.001				
34	<0.001	<0.001	<0.005	<0.05	<0.01
35	<0.001	<0.001	<0.005	0.07	<0.01
36	<0.001	<0.001	<0.005	<0.05	<0.01
37 (same as 30)	<0.001	<0.001	<0.005	<0.05	<0.01
38	<0.001	<0.001	<0.005	<0.05	<0.01
39	<0.001	<0.001	<0.005	<0.05	<0.01
40	<0.001	<0.001	<0.005	<0.05	<0.01

Both American Assay and Hazen Research returned numbers below their detection limits of 0.001 opt Au and <0.1 ppm Ag. No Au was found in any of the 12 samples using the American Assay fire assay, and only small amounts of Ag. It has been suggested that Hazen Research sends their samples offsite to have the fire assay performed, and they do the subsequent elemental determination. This information will need to be determined. However, results obtained from both labs indicate low numbers for Au and Ag, as well as other PGM when detected in the follow-up work. These results are a negative reproduction of a previously successful fire assay of an El Capitan sample. Hazen did not report including blanks or a known standard to the fire assay mix.

The intent of this re-sampling is valid—to reproduce AuRIC's results on the original surface samples that led to drilling in 2005. Although the results from American Assay and Hazen Research so far have not confirmed AuRIC's numbers, this approach should be continued with more thoughtfully developed sample set and rigorous quality control measures and testing method evaluations.

## Orlando Villa—2009

In 2009 ECPN's new management, headed by President and CEO Chuck Mottley, began a new series of tests run by Orlando Villa, an assayer working near Prescott, Arizona. Villa holds an MBA from Arizona State University and has numerous years of assay experience but no formal analytical training. Villa's procedure involves use of a "house flux," (composition unknown) followed by nitric acid dissolution to remove base metals and iron, then fire assaying of a 230-gram sample. The resulting beads are sent to outside labs for precious-metal analysis. The results of Villa's work are interesting and deserve evaluation, but it should be noted that Villa is not a licensed assayer in a recognized lab, and his process has not yet been reviewed, observed, or verified.

In 2009, Villa tested the 12 chain-of-custody samples collected from the El Capitan project by David Smith in June 2009 (D. Smith, 2009). The beads from these fire assays were cut in half and sent to two different labs for elemental determination: Copper State and IPL (International Plasma Labs in Vancouver, B.C.). The results obtained in this study (side by side for each lab) are shown in Table 5, along with the previous results obtained by Auric on samples from the same location.

Villa also assayed a sample collected by ECPN, which was ground to -100 mesh, treated with a high-temperature roast in a plasma furnace, and then reground. This sample was obtained by ECPN staff from its bulk stockpile of El Capitan mineralized rock; it is not a chain-of-custody sample. Results, which show ore-grade Au, are included in Table 5.

<b>Table 5</b>									
El Capitan	IPL	CSAL	Average	IPL	CSAL	Average	IPL	CSAL	Average
Sample ID	Au (opt)	Au ((opt)	Au (opt)	Ag (opt)	Ag (opt)	Ag (opt)	Pt (opt)	Pt (opt)	Pt (opt)
MX-EC P/T	0.015	0.037	<b>0.026</b>	2.05	1.78	<b>1.92</b>	<0.001	<0.003	<b>ND</b>
#29	0.031	0.075	<b>0.053</b>	4.88	2.09	<b>3.48</b>	<0.001	<0.003	<b>ND</b>
#30 (duplicate of #37)	0.012	0.030	<b>0.021</b>	2.09	1.84	<b>1.97</b>	<0.001	<0.003	<b>ND</b>
# 31	0.007	0.007	<b>0.007</b>	2.40	1.51	<b>1.95</b>	<0.001	<0.003	<b>ND</b>
# 32	0.364	0.408	<b>0.386</b>	25.15	1.54	<b>13.35</b>	<0.001	<0.003	<b>ND</b>
# 33 (blank)	0.001	0.005	<b>0.003</b>	0.34	0.97	<b>0.66</b>	<0.001	<0.003	<b>ND</b>
# 34	0.128	0.120	<b>0.124</b>	10.95	0.56	<b>5.75</b>	<0.001	<0.003	<b>ND</b>
# 35	0.003	0.005	<b>0.004</b>	1.30	0.26	<b>0.78</b>	<0.001	<0.003	<b>ND</b>
# 36	0.004	0.007	<b>0.006</b>	0.56	0.87	<b>0.72</b>	<0.001	<0.003	<b>ND</b>
# 37 (dupliate of #30)	0.006	0.009	<b>0.008</b>	1.02	1.28	<b>1.15</b>	<0.001	<0.003	<b>ND</b>
# 38	0.003	0.005	<b>0.004</b>	0.94	1.20	<b>1.07</b>	<0.001	<0.003	<b>ND</b>
# 39	0.046	0.043	<b>0.045</b>	5.13	2.17	<b>3.65</b>	<0.001	<0.003	<b>ND</b>
# 40	0.002	0.007	<b>0.005</b>	0.35	0.84	<b>0.59</b>	<0.001	<0.003	<b>ND</b>

It should be noted that although Copper State and IPL each received ½ the dore bead, the results from elemental determination were not identical (for calculated opt) as one would expect. In the case of Au, Copper State consistently reported numbers larger than IPL. In the case of Ag, IPL generally reported larger numbers than Copper State. Both labs reported below detection limit for all samples with Pt. There is a chance that the samples split from the bead and sent to each lab were not homogenous in elemental content, and these differences could represent sampling issues. To explore this lack of consistency one would need to get the experimental and spectroscopic details from each lab in the elemental determinations.

The blank (sample #33) returned low Au concentrations (0.001 opt-IPL and 0.005 opt-Copper State), low Pt concentrations (<0.001 opt-both), and moderate Ag concentrations (0.34 opt-IPL and 0.97 opt-Copper State). These small amounts of silver observed in the blank suggesting internal contamination at some point in the bead production. While this contamination is mild, it represents more silver returned in sample #40 (IPL and Copper State), #36 (Copper State), and #34 (Copper State). These baseline values of Ag

are interesting in contrast with the large amount of Ag returned in other El Capitan pre-treated samples (for example #32). Such a large range of Ag values cannot be explained solely on heterogeneous bead production, and either represents experimental downfalls or sampling anomalies.

Samples #29, #30, #32, #34, and #39 all yielded ore-grade numbers for both Au and Ag. Samples #31, #35, #36, #38 and #40 returned lesser numbers, although still detectable on the instruments over the blank sample. In particular, sample #30 and #37 were duplicate samples extracted from the same hematite-rich outcrop sampled by Clyde Smith in 2005 for analysis by AuRIC (sample EC-2).

These samples represent some positive results. A preliminary conclusion can be drawn from these experiments: acid or plasma furnace pre-treatment may allow for fire assay to adequately extract Au and other PGM from El Capitan samples. It is our opinion that this observation needs to be tested and validated with a large suite of El Capitan samples. If these methods are determined to be valid, fundamental work needs to be done to help explain why these pre-treatments allow for precious metal liberation.

### **Planet Research—2009**

Although we have seen no results from this work, ECPN management has given us verbal reports of positive results from testing done by Planet Research using proprietary reagents (Petrolux) to selectively extract precious metals from El Capitan samples. If it appears worthwhile, this work should be evaluated, observed, and verified.

### **Conclusions**

Previous metallurgical work at El Capitan has generated a number of results that point to the presence of precious metals. These include:

- American Assay's single fire-assay result from 2005
- AuRIC's extensive testing of drill samples using caustic fusion assay
- Copper State's Parr bomb total digestion results
- Orlando Villa's recent fire assays with pre-treatment
- One intriguing value from Villa's fire assay following plasma-furnace pre-treatment

Of particular interest are the recent efforts using pre-treatments (Villa and plasma furnace) followed by fire assay that have shown the potential to work on El Capitan samples. However, these methods have yet to be verified on chain-of-custody samples, and a number of studies have drawn question to the results above, in particular the American Assay and Hazen Research assays of the 2009 surface re-sampling and the extensive research by Ken Bright. In these cases in which precious metal content was low, the results may or may not be an artifact of sampling anomalies. This issue is one among several that need to be addressed in the future, including sample selection and chain of custody, rigorous quality-control measures, evaluation of lab procedures and instrumentation, and, if necessary, external validation of promising methods.

It would be surprising if so many separate lines of testing suggesting ore grade material at El Capitan were all false. Even so, the data available to us does not provide irrefutable and repeatable evidence for the presence of precious metals. Our conclusion is that the studies we reviewed have not definitively proven nor disproven the presence of ore-grade precious metals in the El Capitan system.

## References

Bright, Ken G. **Analysis of Two Composite Samples Representing Phase 1 and Phase 2/3 Drilling of the El Capitan Iron Skarn and Associated Rocks, Lincoln County, New Mexico – USA with particular attention to Au, Pt, Pd, and Ag Content.** (February, 2008).

Corbett, James A.; Godbeer, William C.; Watson, Norman C. **Application of sodium peroxide sintering techniques to the analysis of minerals and rocks by atomic absorption spectroscopy.** Proceedings - Australasian Institute of Mining and Metallurgy (1974), 250 51-4.

Danielle, Richard. **Report on Evaluation and Validation of AuRIC Metallurgical Laboratories Alkali Fusion Analytical Procedure and Results.** (September 1, 2005).

Enzweiler, Jacinta; Potts, Philip J.; Jarvis, Kym F. **Determination of platinum, palladium, ruthenium and iridium in geological samples by isotope dilution inductively coupled plasma mass spectrometry using a sodium peroxide fusion and tellurium coprecipitation.** Analyst (Cambridge, United Kingdom) (1995), 120(5), 1391-6.

Qi, Liang; Gregoire, D. Conrad; Zhou, Mei-Fu; Malpas, John. **Determination of Pt, Pd, Ru and Ir in geological samples by ID-ICP-MS using sodium peroxide fusion and Te co-precipitation.** Geochemical Journal (2003), 37(5), 557-565.

Smith, Clyde L. **El Capitan Precious Metals, INC. Report on El Capitan Gold-Platinum Project, Including Measured Resource Calculation, Lincoln County, New Mexico.** (April 16, 2007)

Smith, Clyde L. **Report on Surface Samples Collected Jan. 15-26, 2005, El Capitan Project, New Mexico.** (January 21, 2005)

Smith, David S. **Report on Surface Sampling, El Capitan Project, New Mexico.** (June 16, 2009)

Totland, Marina M.; Jarvis, Ian; Jarvis, Kym E. **Microwave digestion and alkali fusion procedures for the determination of the platinum-group elements and gold in geological materials by ICP-MS.** Chemical Geology (1995), 124(1-2), 21-36.



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## Experience

### *Consulting Exploration Geologist, 2004-present*

Consultant and Project Manager for resource companies on precious metals exploration projects worldwide. Services include project management, advanced geologic studies and interpretation, drill program management, project evaluation and valuation, project and land acquisition, report writing and editing including NI 43-101 reports, due diligence, sustainability strategy, geologic research, geologic mapping, drill core and cutting logging, sample security and chain of custody, claim staking, sampling program design and management. Project locations include Nevada, Colorado, Arizona, New Mexico, British Columbia, China, Mexico.

### *CH2M HILL Inc., Seattle, Washington, 1998-2004*

Communications Manager and Project Manager for firm-wide Environmental Performance and Sustainable Development programs for global 14,000-employee engineering company. Set strategy for program communications, developed and managed annual budget, created and maintained 150-page corporate intranet web site on sustainability, developed and wrote stories, and managed production and distribution of communications to staff worldwide. Communications included corporate sustainability reports, web sites, newsletters, brochures, posters, company-wide emails, and white papers. As Technical Writer and Editor, produced technical reports in environmental, transportation, water supply, and wastewater fields for clients such as U.S. Environmental Protection Agency, U.S. Department of Energy, Air Force Center for Environmental Excellence, U.S. Navy, World Federation of Engineering Organizations, Unocal, Los Angeles Department of Water and Power, City of Vancouver B.C.

### *La Esperanza Gold Explorations Ltd., Vancouver, B.C. and Mazatlán, México, 1995-1998*

Chief Geologist involved in discovering a 750,000-ounce gold deposit in Michoacán, Mexico. Responsible for evaluating the potential of gold exploration targets and managing exploration projects in the states of Durango, Jalisco, Michoacán, Nayarit, and Sinaloa in western Mexico. Developed property and regional exploration strategy, managed five geologists and crews of 20 men, developed and managed annual budgets up to US\$850,000. Oversaw all aspects of project geology, from initial sampling and mapping through advanced drilling and research.

### *American Copper and Nickel Co., Denver, Colorado, 1991*

Field Geologist for INCO's American subsidiary. Mapped, sampled, and coordinated data for gold exploration effort surrounding the Mineral Hill Mine in Jardine, Montana; performed underground mapping and core logging in Archean lode gold deposit and metasedimentary rocks. Completed Master's thesis research, published in *Economic Geology*.

### *Leggette, Brashears and Graham Inc., St. Paul, Minnesota, 1988-1990*

Hydrogeologist and Project Manager in the groundwater remediation business in Minnesota, Wisconsin, South Dakota, and Illinois. Monitored groundwater well design and installation, performed aquifer pumping tests, logged drill holes, sampled groundwater and soil, monitored groundwater levels, wrote reports, served as laboratory liaison, took health and safety training. Projects consisted of hydrogeologic investigations, underground tank excavations, multi-phase groundwater remediation investigations, long-term groundwater cleanup projects.

## Education

*MBA in Sustainable Business, 2007, Bainbridge Graduate Institute, Bainbridge Island, Washington*

*Master of Science, Ore Deposits Geology, 1995, University of Oregon, Eugene, Oregon*

*Bachelor of Arts, Geology, 1986, Carleton College, Northfield, Minnesota*

## Publications

Smith, D. S., 1996, Hydrothermal alteration at the Mineral Hill Mine, Jardine, Montana: A lower-amphibolite facies Archean lode gold deposit of probable synmetamorphic origin: *Economic Geology*, vol. 91, p. 723-750.

Profiled in Business Week online, Designing Sustainable Leadership, October 4, 2007

[http://www.businessweek.com/innovate/content/oct2007/id2007104\\_718797.htm?chan=search](http://www.businessweek.com/innovate/content/oct2007/id2007104_718797.htm?chan=search)

## Awards

Award of Excellence in Technical Reports, 2001-2002, from Society for Technical Communications.

Reviewer of the Year, 1996, from *Mineralium Deposita*, Europe's top mineral deposits research journal.

## Noel Palmer, Ph.D.

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### Education

Ph.D. Chemistry, University of Idaho, Moscow, ID 83843

- Analytical Methods, Spectroscopic and Electrochemical study on natural soil and mineral samples.
- Specialized coursework in Subsurface Studies, Geology, Hydrology, Geochemistry Soil Microbiology, Soil Physics, Spectroscopic Methods.
- Advisor: Ray von Wandruzka, University of Idaho Chemistry Dept, [rvw@uidaho.edu](mailto:rvw@uidaho.edu)

M.S Chemistry, University of Idaho, Moscow, ID 83843

- GPA 3.85
- Analytical chemistry with specialized coursework in Instrumental Techniques, Soil Chemistry, Environmental Chemistry.
- Advisor: Ray von Wandruzka, University of Idaho Chemistry Dept, [rvw@uidaho.edu](mailto:rvw@uidaho.edu)

B.S. Chemistry, University of Wyoming, Laramie, WY 82071

- GPA 3.5

### Work Experience

Senior Research Scientist, Soil Chemistry Research Lab, University of Idaho

August 2000-August 2003

- General management of Soil Chemistry research laboratory. PI Daniel Strawn, Soils Dept, PSES College.
- Primary use and maintenance of: Thermo Jarrall Ash IRIS ICP-AES, Perkin Elmer FT-IR with microscope accessory, Mettler Toledo Auto-titrator, high speed centrifuge, anoxic glove box.
- Other instrumental skills: XAFS, NMR, EPR Spectroscopy, XRD, GC-MS, HPLC.
- Training of graduate and undergraduate students in general laboratory practice.
- Management and disposal of hazardous wastes.
- Field sampling techniques for soils and water systems.
- Data management and reporting (see publications).
- Website development and maintenance.
- \*Supervisor: Dan Strawn, University of Idaho Soils Dept, [dgstrawn@uidaho.edu](mailto:dgstrawn@uidaho.edu)

Caretaker, Protection Island National Wildlife Refuge, U.S. Fish & Wildlife Service

August 2003 – February 2004

- Maintain facilities on no-public-use refuge
- Gather, compile, and report data and findings
- 40 hours per week, volunteer position
- \*Supervisor: Pam Sanguinetti, Biological Technician, USFWS WA Maritime National Wildlife Refuge Complex; 360-457-8451; [pam\\_sanguinetti@fws.gov](mailto:pam_sanguinetti@fws.gov)

## Awards and Fellowships

- Inland Northwest Research Alliance (INRA) Fellowship, 2005-2007.
- National Science Foundation GK-12 Fellowship, 2008-2009.
- International Humic Substances Society (IHSS) Malcom Renfrew Award (2006) for student research.
- Outstanding Teaching Assistant Award, University of Idaho Chemistry Department.

## References

\*All supervisors may be contacted to discuss my qualifications and performance.

## Publications and Meetings

Palmer, Noel E.; von Wandruszka, Ray., **The Role of Quinoid Moities on Humic Materials in the Reduction of Arsenates.** submitted to Organic Geochemistry 2009.

Palmer, Noel E.; von Wandruszka, Ray. **The Influence of Aggregation on the Redox Properties of Humci Materials.** Environmental Chemistry (2008), 6(8), 178-184.

Palmer, Noel E.; Freudenthal, John H.; von Wandruszka, Ray. **Reduction of Arsenates by Humic Materials.** Environmental Chemistry (2006), 3(2), 131-136.

Strawn, Daniel G.; Palmer, Noel E.; Furnare, Luca J.; Goodell, Carmen; Amonette, James E.; Kukkadapu, Ravi K. **Copper sorption mechanisms on smectites.** Clays and Clay Minerals (2004), 52(3), 321-333.

Palmer, Noel E.; von Wandruszka, Ray. **Dynamic light scattering measurements of particle size development in aqueous humic materials.** Fresenius' Journal of Analytical Chemistry (2001), 371(7), 951-954.

Del Negro, Andrew S.; Palmer, Noel E.; Patrick Sullivan, B. **Preparation and photophysical studies of 5-phosphino and 5,6-diphosphino substituted 1,10-phenanthroline complexes of Re(I).** Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998).

Palmer, Noel; von Wandruszka, Ray. **The Effect of Aggregation on the Reduction Potentials of Aqueous Humates and Fulvates.** Abstracts, Joint 63rd Northwest and 21st Rocky Mountain Regional Meeting of the American Chemical Society, Park City, UT, United States, June 15-18 (2008).

Palmer, Noel; Von Wandruszka, Ray. **Reduction of arsenic by humic acids adsorbed on mineral surfaces.** Abstracts, 62nd Northwest Regional Meeting of the American Chemical Society, Boise, ID, United States, June 17-20 (2007).

Palmer, Noel; von Wandruszka, Ray; Smieja, Joanne. **Arsenate reduction by humic materials.** Abstracts, Joint Regional Meeting of the Northwest and Rocky Mountain Sections of the American Chemical Society, Logan, UT, United States, June 6-9 (2004).

## **Appendix 11**

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### **Auric Process Validation Report**

**SUMMARY REPORT**  
**OF**  
**EVALUATION and VALIDATION OF AuRIC**  
**ALKALI FUSION ANALYTICAL PROCEDURE**  
**AT**  
**WENDELL & COMPANY**

**September 1, 2005**

**Richard A. Daniele**  
**Metallurgical Engineer**

# ***DANIELE METAL-MINERAL SERVICES***

## **INTRODUCTION**

AuRIC Metallurgical Laboratories, LLC (AuRIC) recommended Richard A. Daniele, Metallurgical Engineer, Daniele Metal-Mineral Services (MetMin), as a candidate to provide independent evaluation services to El Capitan Precious Metals, Inc. (ECPM). The independent evaluation services were threefold:

1. Evaluate and validate the alkali fusion analytical procedure developed by AuRIC for suitability as a viable analytical method for gold, platinum, and palladium.
2. Find a second laboratory knowledgeable in alkali fusion analytical procedures to confirm the validity and viability of the AuRIC procedures.
3. Demonstrate the validity and viability of the AuRIC procedures at the second laboratory, first by using Certified Standards, and then followed by parallel, duplicate assays at both AuRIC and the second laboratory.

The second laboratory chosen was the Michael J. Wendell, Wendell & Company, laboratory in Centennial, Colorado

Mr. Daniele and MetMin have no responsibility as to the precious metal content of the materials in the El Capitan Project, or to the use or validity of the results of any El Capitan materials. Mr. Daniele's sole purpose is to validate the AuRIC analytical procedure, and find a second laboratory, Wendell & Company, to duplicate the procedure.

## **PURPOSE**

The Purpose of this Summary Report of Evaluation and Validation of AuRIC Alkali Fusion Procedure at Wendell & Company (Report) is to provide the analytical data obtained and an analysis of that data to reach a conclusion.

## **VALIDATION PROCEDURE**

The evaluation and validation procedure for this Report included five items as follows:

1. Familiarize Wendell & Company with the AuRIC alkali fusion procedure, and test the procedure on Certified standards.
2. Obtain core samples for the 15 samples previously selected from the geologic logs provided by Dr. Clyde L. Smith which encompass 12 drill holes. Crush the total sample, and grind (to approximately 80 percent minus 200 mesh) 200 grams of each sample; split each sample into 100 grams, and package the samples for AuRIC and Wendell & Company for analyses.

3. Request AuRIC and Wendell & Company to analyze the 15 samples as received (head samples) in duplicate according to the AuRIC alkali fusion procedure.
4. Participate with Wendell & Company in performing the AuRIC alkali fusion procedure.
5. Collect the analytical data from both laboratories, and evaluate the data to determine the validity of the AuRIC alkali fusion procedure.

### **1. Wendell & Company Familiarization**

The Wendell & Company familiarization using Certified Standards was accomplished with the assistance of Mr. Ahmet B. Altinay, AuRIC, and Mr. Richard A. Daniele, MetMin. Four Certified Standards, analyzed three times, were used for the familiarization. Messrs. Wendell, Altinay, and Daniele learned during the first round of the familiarization that the Wendell & Company gas furnace was not sufficiently uniform in temperature to effectively perform the procedure. The second round fusion was performed in an electric furnace, and a new electric furnace was purchased for the third round. The new electric furnace was used for all the fusions in the 15 sample duplicate validation.

### **2. Geologic Logs**

The 15 samples that were selected were based on the hematite values on the log sheets of 20 percent or greater hematite values. Although this yielded a good number of sample possibilities, not all drill cores had 20 percent or greater hematite. The hematite range was lowered to 10 to 20 percent so that there was a sample from all 12 drill holes. When the samples were selected, they were based solely on hematite content with no regard for the magnetite content.

### **3. Request for Analysis of 15 Sample**

Both AuRIC and Wendell & Company were provided with 15 sample bags each containing 100 grams of sample ground to approximately 80 percent minus 200 mesh. Each laboratory was requested to analyze each sample in duplicate. The sample bags were numbered DD-1 through DD-15. The sample bag numbers were random and did not indicate a core hole number or sequence. The idea was to have a blind analysis for both parties. Since AuRIC had performed many analyses previously, the lack of sample source and location kept both laboratories on an equal basis.

Nevertheless, AuRIC, based on its considerable experience with the ECPM material, chose to perform a magnetic separation on six "high magnetite" samples. Instead of analyzing the entire sample (head sample), AuRIC analyzed the non-magnetic fraction only. Fortunately, four of the six high magnetite samples had been previously analyzed without magnetic separation so that data was available.



#### **4. Wendell & Company Participation**

Messrs. Wendell and Daniele worked together on the alkali fusion analyses in order to maximize to the greatest extent possible their recently obtained familiarity with the AuRIC alkali fusion procedure. The new electric furnace performed well, but as with any new piece of equipment there is a learning curve. For example, a ceramic barrier was placed between the fusion samples and the thermocouple to protect the thermocouple from potential sample splash. After a number of fusions with no splash on the barrier and discussions about temperature uniformity, the barrier was removed. Although there was no direct evidence that this made a difference in the fusions, the liquid fluidity during the stirring stages appeared to be generally better.

The most significant difference, in Mr. Daniele's opinion, between AuRIC and Wendell & Company is the use of lanthanum to enhance platinum readings in the atomic absorption spectrophotometer. Mr. Wendell's typical samples generally contain multiple troy ounces per ton of gold and platinum; therefore, he did not have a need to use lanthanum. In order to comply with the AuRIC procedure, Mr. Wendell prepared new standards for gold, platinum, and palladium with the prescribed amount of lanthanum, and added lanthanum to the solution from the parted (dissolved) dores. (The dore is the tiny bead, approximately 2 milligrams in weight that contains the extracted gold, platinum, and palladium).

#### **5. Data Analysis and Evaluation**

Each laboratory had 15 samples to analyze in duplicate, a total of 30 samples. Each sample went through a fusion process. AuRIC has the ability to process six fusion samples at a time, whereas Wendell & Company can process only four fusions samples at a time. Each sample was analyzed for gold (Au), platinum (Pt), and palladium (Pd) which results in 90 analyses from each laboratory or 180 minimum total. The analyses are presented in Table 1, Verification Testing, which is located at the end of the Report.

Information on Table 1 is presented in two sub-sections:

- 5.1 Table 1 Description
- 5.2 Data Analysis and Evaluation
- 5.3 Accuracy and Precision

##### **5.1 Table 1 Description**

The precious metal values obtained from these analyses were all low. If the values were converted to troy ounces per ton, it would be difficult to distinguish differences between samples and laboratories. Therefore, the values reported in Table 1 are reported as parts per million (PPM, ppm) in the solution analyzed.

The heading for each sample in Table 1 is arranged in order of the core hole sequence, e.g. EC-05-01, EC-05-02, etc. Along with the core hole number is the depth of the sample increment

selected, e.g. zone 73-78', zone 7.5- 12', etc. The data is presented in this sequence to aid the geologist. Each sample also has the DD-number. These numbers are random, not sequential in Table 1. Also, in the heading is an AuRIC note that says head, in-between, or needs mag sep (magnetic separation).

Magnetic separation is discussed above in Section 3. AuRIC has a procedure for determining whether a head sample is magnetic or not. It is AuRIC's practice, if a head sample is magnetic, to separate the sample into a magnetic and non-magnetic fraction, and subject the non-magnetic portion to the alkali fusion procedure. Those samples with "Needs Mag Sep" were separated by AuRIC and the non-magnetic fraction analyzed.

Table 1 is further divided into a data heading with an AuRIC Number column and a Wendell Number column. With each column the three elements analyzed: Au, Pt, and Pd are listed for each laboratory. AuRIC uses sequential numbers for every sample while Wendell & Company uses the same number for the same sample material. There are two instances where Wendell & Company has a duplicate of the duplicate (EC-05-01 & EC-05-02, zone 55-60'). The same sample pair was processed on consecutive days by mistake.

AuRIC also has additional analyses beyond the duplicate pairs. These additional analyses are from earlier AuRIC analyses and were included in Table 3, ECPM Core Analyses, in the first MetMin Report, Preliminary Report of Evaluation and Validation AuRIC Metallurgical Laboratories Alkali Fusion Analytical Procedure, July 9, 2005. Four of these samples were analyzed as head samples even though they are from core hole increments that were classified for this test as "Needs Mag Sep" in Table 1. This analytical data supplements the current analytical data.

## **5.2 Data Analysis and Evaluation**

To simplify the analysis the PPM values were averaged for each element for each laboratory. An assumption was made that if a value in an element set was more than three times the lowest value in that set, that particular value was discarded as an anomaly. This situation occurred only three times, twice for AuRIC and once for Wendell & Company. In these three situations there are two average lines, one with all the data and one without the anomaly data. All evaluations are based on the anomaly data being excluded. The anomalies are Wendell & Company: EC-05-02, zone 55-60'; AuRIC: EC-05-07 and EC-05-10, zone 0-5'.

In all but three instances the AuRIC analytical values were higher than the Wendell & Company values. Wendell & Company was higher in gold in EC-05-11, zone 5-10'; and in palladium in EC-05-02, zone 55-60' and EC-05-12. Palladium values are so low in all instances that a small change in the third decimal place can have a big impact on the relationship within any data set.

Since the AuRIC values are virtually always higher than the Wendell & Company values, Table 1 presents a comparison in terms of the Wendell & Company value compared to the AuRIC value. For all the analyses presented the Wendell & Company values for gold averaged 70 percent of the AuRIC values, for platinum 60 percent of AuRIC, and for palladium 77 percent of AuRIC. Wendell & Company fared better when considering the "problem" high magnetite

samples. For the six high magnetite samples Wendell & Company averaged the same 70 percent on gold, a higher 65 percent on platinum, and a slightly higher 79 percent on palladium.

Among the six high magnetite samples there were four samples for which AuRIC had also performed head analyses, not analyses on the non-magnetic portion after a magnetic separation. For the four samples there were six results: three times the head sample gave higher results, once lower results, and twice mixed results. The mixed results were when the gold was lower and the platinum the same, and when the gold was the same and the platinum was lower. This data is from core holes EC-05-04, 05, 11 zone 5-10', and 08. The significance of this data is not clear since these 15 samples represent such a small portion of all the analyses performed by AuRIC on the 12 core holes.

### **5.3 Accuracy and Precision**

Accuracy is the most important measure of performance. To determine accuracy Certified Standards have been developed. It is important to understand that precious metal Certified Standards are based on standard fire assay analysis. For hard to analyze materials other methods are used such as the alkali fusion method. The alkali fusion has many more steps than fire assay, and every step is a chance for some losses to occur. In the alkali fusion procedure the accuracy can be expected to drop due to the additional steps. It is at this point that another measure of analytical performance, precision, is important. Precision is the difference between analyses of the same sample by the same procedure.

For example, the Nevada Bureau of Mines Certified Standards 4b and 5b can provide some insight to accuracy and precision. NBM 4b is a gold only standard with the "accurate" value of 0.411 ppm solids, but the precision allowed is 0.07 ppm solid or 17 percent plus or minus. Therefore an acceptable gold result is from 0.341 to 0.481 ppm solid.

NBM 5b is a gold, platinum, and palladium standard. The "accurate" values are 1.650 ppm gold in the solid, 0.317 ppm platinum, and 0.776 ppm palladium. For gold the allowable precision is 0.45 ppm or 27 percent plus or minus which is a range of 1.20 ppm solid to 2.10 ppm solid. For platinum the allowable precision is 0.072 ppm or 23 percent plus or minus which is a range of 0.245 ppm solid to 0.389 ppm solid. For palladium the allowable precision is 0.211 ppm or 27 percent plus or minus which is a range of 0.565 ppm solid to 0.987 ppm solid.

The previous three paragraphs are the important base upon which the following analysis is based. AuRIC's average precision across the 15 samples was for gold, 10 percent; for platinum, 7 percent; and for palladium, 13 percent. Wendell & Company's average precision across the 15 samples was for gold 25 percent. However, if one deletes the three highest spreads, the average precision drops to 20 percent. The reason for suggesting dropping the three highest values is that those three samples were in the first two charges of the brand new electric furnace and may be the result of the learning curve. Wendell & Company's average precision for platinum was 11 percent, and for palladium was 26 percent.

## CONCLUSIONS

The following Conclusions are arranged by priority with the highest priority listed first.

1. On unknown samples, the AuRIC values are the values to match because of AuRIC's experience with their alkali fusion analytical procedure and the excellent level of precision demonstrated in this 15 sample test of duplicates.
2. Wendell & Company demonstrated that the AuRIC alkali fusion procedure is a valid analytical procedure for difficult to analyze materials. Although the Wendell & Company values for gold, platinum, and palladium were less than the AuRIC values, 30, 35, and 23 percent less for gold, platinum, and palladium respectively; the Wendell & Company precision was within acceptable ranges, 11 to 26 percent.
3. In Mr. Daniele's opinion the biggest reason that the Wendell & Company analytical values were consistently lower than the AuRIC values is that Wendell & Company had not used lanthanum previously in their solutions for atomic absorption spectrophotometer analyses. The learning curve with lanthanum influenced the results because of unfamiliarity with assay solutions, standards, auto-zero, and blanks containing lanthanum.

**Table 1**  
**VERIFICATION TESTING**  
(PPM of Solutions)

Core No.: Zone:		Sample No.		AuRIC:		Head	
EC-05-01 73-78'		DD-3					
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1760	0.218	0.421	0.056	1038	0.125	0.19	0.046
F1761	0.206	0.457	0.06	1038	0.118	0.22	0.059
				1038	0.164	0.27	0.049
				1038	0.145	0.25	0.04
Average:	0.212	0.439	0.058		0.138	0.23	0.048
% AuRIC					65%	52%	83%
Core No.: Zone:		Sample No.		AuRIC:		Head	
EC-05-02 7.5-12'		DD-9					
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1772	0.193	0.351	0.027	1044	0.085	0.14	0.018
F1773	0.193	0.385	0.052	1044	0.1	0.3	0.028
F1606	0.08	0.23					
Average:	0.155	0.322	0.04		0.092	0.22	0.023
% AuRIC					59%	68%	58%
Core No.: Zone:		Sample No.		AuRIC:		Head	
EC-05-02 55-60'		DD-4					
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1762	0.22	0.456	0.05	1039	0.158	0.22	0.044
F1763	0.2	0.467	0.05	1039	0.533	0.23	0.069
F1607	0.27	0.72		1039	0.129	0.25	0.04
				1039	0.214	0.23	0.053
Average:	0.23	0.548	0.05		0.258	0.23	0.052
Ave. w/o							
0.533					0.167		
% AuRIC					73%	42%	104%

Core No.: Zone:		Sample No.			Needs		
EC-05-03 10-14'		DD-2			Mag Sep		
AuRIC					AuRIC:		
No.	Au	Pt	Pd	Wendell No.	Au	Pt	Pd
F1794	0.146	0.456	0.064	1037	0.159	0.3	0.032
F1795	0.137	0.398	0.05	1037	0.088	0.28	0.049
Average:	0.142	0.427	0.057		0.124	0.29	0.04
% AuRIC					87%	68%	70%

Core No.: Zone:		Sample No.			Needs		
EC-05-04 0-4'		DD-11			Mag Sep		
AuRIC					AuRIC:		
No.	Au	Pt	Pd	Wendell No.	Au	Pt	Pd
F1776	0.157	0.412	0.041	1046	0.113	0.27	0.026
F1777	0.2	0.4	0.041	1046	0.092	0.28	0.023
F1608*	0.26	0.59					
*No Mag Sep							
Average:	0.206	0.467	0.041		0.102	0.28	0.024
% AuRIC					50%	60%	58%

Core No.: Zone:		Sample No.			Needs		
EC-05-05 20-25'		DD-14			Mag Sep		
AuRIC					AuRIC:		
No.	Au	Pt	Pd	Wendell No.	Au	Pt	Pd
F1782	0.147	0.36	0.034	1049	0.125	0.3	0.02
F1783	0.145	0.445	0.048	1049	0.092	0.37	0.026
F1609*	0.15	0.65					
F1555*	0.102	0.293					
*No Mag Sep							
Average:	0.136	0.437	0.041		0.108	0.34	0.023
% AuRIC					79%	78%	56%

<b>Core No.:</b> <b>EC-05-06</b>	<b>Zone:</b> <b>0-5'</b>	<b>Sample No.</b> <b>DD-13</b>			<b>AuRIC:</b>	<b>In-between</b>	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1780	0.139	0.58	0.07	1048	0.073	0.3	0.037
F1781	0.184	0.495	0.056	1048	0.048	0.31	0.022
F1610	0.34	0.54					
Average:	0.221	0.538	0.063		0.06	0.3	0.03
% AuRIC					27%	56%	46%

<b>Core No.:</b> <b>EC-05-07</b>	<b>Zone:</b> <b>60-65'</b>	<b>Sample No.</b> <b>DD-7</b>			<b>AuRIC:</b>	<b>Head</b>	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1768	0.12	0.407	0.052	1042	0.085	0.29	0.033
F1769	0.144	0.393	0.052	1042	0.058	0.29	0.061
F1611	0.11	0.49					
F1517	0.45	0					
Average:	0.201	0.43	0.052		0.072	0.29	0.047
Ave. w/o							
0.45	0.125						
% AuRIC					58%	67%	90%

<b>Core No.:</b> <b>EC-05-08</b>	<b>Zone:</b> <b>30-35'</b>	<b>Sample No.</b> <b>DD-5</b>			<b>AuRIC:</b>	<b>Head</b>	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1764	0.139	0.414	0.049	1040	0.091	0.23	0.038
F1765	0.133	0.428	0.048	1040	0.133	0.22	0.041
F1612	0.16	0.86					
F1517	0.28	0.19					
Average:	0.18	0.473	0.048		0.122	0.22	0.04
% AuRIC					68%	46%	83%

<b>Core No.:</b> <b>EC-05-09</b>	<b>Zone:</b> <b>60-66'</b>	<b>Sample</b>			<b>AuRIC:</b>	<b>Needs</b>	
		<b>No.</b>	<b>DD-10</b>			<b>Mag</b>	<b>Sep</b>
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1774	0.134	0.397	0.044	1045	0.066	0.26	0.029
F1775	0.184	0.405	0.046	1045	0.091	0.25	0.047
Average:	0.159	0.401	0.045		0.078	0.26	0.038
% AuRIC					49%	65%	84%

<b>Core No.:</b> <b>EC-05-10</b>	<b>Zone:</b> <b>0-5'</b>	<b>Sample</b>			<b>AuRIC:</b>	<b>In-</b>	
		<b>No.</b>	<b>DD-15</b>			<b>between</b>	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1784	0.119	0.427	0.036	1050	0.077	0.21	0.018
F1785	0.13	0.443	0.055	1050	0.082	0.3	0.024
F1613	0.13	0.63					
F1526	0.55	0.27					
Average:	0.232	0.442	0.046		0.08	0.26	0.021
Ave. w/o							
0.55	0.126						
% AuRIC					63%	59%	46%

<b>Core No.:</b> <b>EC-05-10</b>	<b>Zone:</b> <b>39-49'</b>	<b>Sample</b>			<b>AuRIC:</b>	<b>Head</b>	
		<b>No.</b>	<b>DD-6</b>				
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1766	0.135	0.419	0.043	1041	0.123	0.22	0.059
F1767	0.136	0.382	0.05	1041	0.094	0.25	0.067
F1614	0.11	0.37					
F1534	0.236	0.269					
Average:	0.154	0.36	0.046		0.108	0.24	0.063
% AuRIC					70%	67%	137%



Core No.:	Zone:		Sample		AuRIC:	Needs	
EC-05-11	5-10'		No. DD-1			Mag Sep	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1792	0.137	0.407	0.056	1036	0.185	0.28	0.062
F1793	0.131	0.407	0.055	1036	0.099	0.25	0.033
F1615*	0.09	0.4					
F1548*	0.132	0.284					
* No Mag							
Sep							
Average:	0.122	0.374	0.056		0.142	0.26	0.048
% AuRIC					116%	70%	86%

Core No.:	Zone:		Sample		AuRIC:	In-	
EC-05-11	39-45'		No. DD-12			between	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1778	0.133	0.507	0.057	1047	0.147	0.23	0.016
F1779	0.15	0.549	0.064	1047	0.137	0.25	0.016
F1616	0.19	0.36					
F1542	3.02	0.369					
Average:	0.873	0.446	0.06		0.142	0.24	0.016
Ave w/o							
3.02	0.158						
% AuRIC					90%	54%	27%

Core No.:	Zone:		Sample		AuRIC:	Needs	
EC-05-12	6-11'		No. DD-8			Mag Sep	
AuRIC				Wendell			
No.	Au	Pt	Pd	No.	Au	Pt	Pd
F1770	0.123	0.417	0.055	1043	0.076	0.24	0.073
F1771	0.142	0.385	0.052	1043	0.069	0.24	0.057
F1617*	0.3	0.67					
* No Mag							
Sep							
Average:	0.188	0.491	0.054		0.072	0.24	0.065
% AuRIC					38%	49%	120%