Business Updates I 2018

November 2, 2018

The El Capitan Board of Directors reports the following updates on the state of the Company:

Amenability Test Results

Overview

On October 25, 2018 ECPN received from our metallurgical laboratory the results and analysis from the Amenability Tests performed on samples previously submitted by Dr. Clyde Smith.

Some of the observations taken into consideration for this undertaking were as follows:

- Precious metals concentrations of these samples consist mostly of gold and some platinum,
- Procedure consists of crushing material to talcum power consistency and separating the magnetic material from the non-magnetic material,
- Three recovery processes are used to determine maximum extraction level,
- None of the processes and/or procedures are out of the norm of metallurgical laboratories protocols,
- Precious metals concentrations appear to occur in the non-magnetic (hematite rich) fraction of the samples,
- In higher grade samples, i.e.: EC-10 and EC-11, the gold values seem to be in very fine size (<1.0μ) free particles.
- The mode of occurrence of the platinum is presently unknown and should probably be investigated further with microprobe analysis.

The gold and silver recovery processes deemed suitable for investigation for the purposes of this amenability testing are:

- Sodium Cyanide leach,
- Sodium and/or Ammonium Thiosulfate leach,
- Thiourea leach.

Sample Selection and Preparation

- Samples identified as EC-10 and EC-11, weighing 20.15 kg and 21.65 kg respectively,
- Crushed through a jaw crusher and reduced to all passing -1/4” size,
- Samples were further milled by passing them through an 8” roll mill followed by a disc pulverizer,
- Final particle size attained was all -100 mesh (-150μm).

A 1,000-gram aliquot of each sample was split and magnetically separated across an Eriez laboratory scale belt magnetic concentrator (Model: ERIEZ MFX/ 5-1 RE LAB SEP) yielding the following fractions:

Sample Number:	Magnetic Fraction: (wt%)	Non-magnetic Fraction: (wt%)
EC – 10	46.5	53.5
EC – 11	59.2	40.8

Table 1: Percentage of non-magnetic fraction in the samples EC-10 and EC-11 from El Capitan Mine, Lincoln County, NM used in the Extraction Procedures Development work.

All hydrometallurgical leach amenability tests performed and reported in the following pages of this report were at 30 gram (1 Assay Ton) size.

Amenability Test Results

- Sodium Cyanide leach
  - 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.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)
EC – 10 Non-mag	0.189		
4738C		0.178	94.2%
4739C		0.178	94.2%
4740C		0.180	95.2%
EC – 11 Non-mag	0.266		
4744C		0.233	87.6%
4745C		0.230	86.5%
4746C		0.238	89.5%

Table 2: Sodium Cyanide leach amenability test results performed on samples EC-10 and EC-11 and recovery percentages.

- Sodium and/or Ammonium Thiosulfate leach,
  - Ore : 30 gram (1AT)
  - Water : 100 mL
  - NaOH : 0.375 M
  - $Na_2S_2O_3.5H_2O$. : 0.1M
  - % Solids : 30 %
  - pH : 10.5
  - Oxidizer : Yes
  - T : Room Temp. (~20□C)

t : 48 hrs.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)
EC -10 Non-mag	0.189		
4749C		0.180	95.2%
4750C		0.177	93.7%
EC-11 Non-mag	0.266		
4753C		0.248	93.2%
4754C		0.241	90.6%

Table 3: Sodium Thiosulfate leach amenability test results performed on samples EC-10 and EC-11 and recovery percentages.

- Thiourea leach.
  - Ore : 30 gram (1AT)
  - Water : 190 mL
  - H_2SO_4 : 10 mL
  - NH_2CSNH_2 : 3.5 g
  - $Fe_2(SO_4)_3$: 0.5 g
  - % Solids : 15 %
  - T : Room Temp. (~20□C)
  - t : 1.5 hrs.

Sample ID:	Gold Assay (Calc) (opt)	Gold Recovered (opt)	Recovery (%)
EC -10 Non-mag	0.189		
4757C		0.178	94.2%
4758C		0.179	94.7%
EC-11 Non-mag	0.266		
4761C		0.245	92.1%
4762C		0.238	89.5%

Table 4: Thiourea leach amenability test results performed on samples EC-10 and EC-11 and recovery percentages.

Conclusions

All three laboratory-scale hydrometallurgical recovery methods tested under this project performed well, showing promising results varying from 82.9% to 97.6% and justifying further testing at bench scale and pilot scale levels. Across the three recovery methods the overall recovery was 0.2088 opt with 92.171% recovery percentage and this does not include the platinum metal group. Comparing these figures to the previously reported numbers in the 43-101 reported by Dr. Clyde Smith shows a significant increase in the recovered material. This increase can be attributed to the pre-treatment of the head ore via the fine grinding, isolating the precious metals, and removing the magnetic material. With the further testing to be performed at larger scale, other factors like the processing costs, plant costs, environmental costs, etc. for each of these methods will be determined and comparisons of their ROI (return on investment) will be detailed.