



Excellent Initial Metallurgical Testwork Results from El Zorro Up to 99% gold recovery

- Initial metallurgical testwork results indicate that Ternera material from El Zorro is free milling with gold recoveries up to 99%
- Gold recoveries reported were 94% at 250 µm grind size and 99% at 75µm grind size
- The material is amenable to gravity concentration with 55% to 75% of the gold reporting to the gravity concentration
- Ternera material is classified as hard to very hard with an initial bond work index of 20.4kWh/t
- Initial testwork indicates the potential to use a gold processing circuit consisting of conventional gravity concentration with CIL for Ternera
- Results indicate that treatment at coarser grind sizes does not compromise recoveries
- Mintrex Pty Ltd who is engaged as Tesoro's metallurgical and process engineering consultant, has reviewed results and will advise on future metallurgical testwork programs and flowsheet design.

Tesoro Resources Limited (Tesoro or the Company) (ASX: TSO) is pleased to announce the results of initial metallurgical testwork conducted on 50 kg of mineralised, fresh rock material from the Ternera deposit at the Company's El Zorro Gold Project, Chile.

Initial metallurgical results are positive and indicate that mineralised material from Ternera is free milling, with a high gravity recovered gold component and excellent cyanide leaching characteristics, amenable to conventional gravity and CIL processing methods.

The work completed consisted of cyanide leach tests, gravity recovery testwork and determination of bond work index (hardness) testwork. The work was carried out by ALS Laboratories Pty Ltd (Perth) and results reviewed and interpreted by Mintrex Pty Ltd.

Tesoro Managing Director Zeff Reeves commented:

"These initial metallurgical results tick another box for the El Zorro Gold Project. The high gravity and cyanide leach recoveries achieved in this work support the potential for processing of material from Ternera using conventional gravity and CIL processes at a relatively coarse grind size. This work will enable the development of a detailed metallurgical testwork program to fully define the project flowsheet and continue to progress the project toward development."

TERNERA TESTWORK RESULTS

Metallurgical testwork was conducted on a 50 kg, single fresh rock sample composited from mineralised zones from four drill holes. The calculated head grade for the sample was 2.39g/t Au.

The following testing was conducted on the sample:

- Detailed head assay analysis
- XRD mineralogical analysis
- Bond Ball Mill Work Index Test
- Gravity recoverable Gold (GRG) Test
- Gravity Cyanide Leach Tests

Head Assay and XRD Results

Metallurgical sample – ZDDHMET-01 was prepared and assayed for gold and additional base metals and deleterious elements. The sample returned a head assay grade of 2.39 g/t and low levels of base metals. Initial results indicate there is limited preg-robbing material and reagent consumers, thus the material is favourable for leaching and adsorption (CIL). Assay results presented in Table 1.

ANALYTE	ASSAY RESULT	UNITS
Au	2.39	g/t
As	<10	ppm
Ag	0.3	ppm
Al	8.08	%
Ba	300	ppm
Be	<5	ppm
Bi	<10	ppm
Ca	3.40	%
Cd	<5	ppm
Co	20	ppm
Cr	150	ppm
Cu	56	ppm
Fe	3.62	%
K	1.60	%
Li	25	ppm
Mg	2.12	%
Mn	600	ppm
Mo	<5	ppm
Na	2.87	%
Ni	60	ppm
P	500	ppm
Pb	10	ppm
SiO ₂	63.2	%
Sr	320	ppm
S _{TOTAL}	0.50	%
Ti	3800	ppm
V	90	ppm
Y	<100	ppm
Zn	126	ppm

Table 1 – ZDDHMET-01 Head Assay results

XRD Analysis (powder X-ray Diffraction) was carried out in order to determine and quantify the minerals present within the sample. Results indicate that the sample does not contain any significant amounts of sulphides and that most of the sample is composed of chlorite, calcic amphibole, plagioclase, and quartz. Smaller quantities of softer minerals such as mica and calcite are also present. XRD results are presented in Table 2.

Mineral or mineral group	ZDDHMET-01 Mass %
Pyrite	1
Clay minerals	1
Kaolinite	< 1
Chlorite	10
Annite - biotite - phlogopite	10
Muscovite	4
Calcic amphibole	13
Plagioclase	36
K feldspar	1
Quartz	22
Calcite	3

Table 2 – ZDDHMET-01 XRD analytical results

An initial Bond Ball Mill work index (BWi) is used to determine the resistance of the material to grinding in a ball mill. Results indicate BWi for the selected sample was 20.4 kWh/t. Although classified as "very hard" material, it is comparable to numerous operating gold mines around the world.

Gravity Recoverable Gold (GRG) Testwork

The sample ZDDHMET-01 was ground to a number of size fractions from 850 µm down to 75 µm to test for overall gravity recoverable gold.

The results show that the ore is very amenable to gravity concentration and ideally up to 76% of the gold at a grind size of 75 µm can report to the gravity circuit. The amount of gold reporting to the gravity circuit is directly related to grind size which will affect operating and capital costs. A summary of GRG at various grind sizes is presented in Table 3.

Material / Stage	GOLD
	GRG (%)
Gravity Recoverable Gold - Stage 1	41.96
[Gold in leach liquor from intensive cyanidation on Knelson concentrate]	
Gravity Recoverable Gold - Stage 2	26.99
[Gold in leach liquor from intensive cyanidation on Knelson concentrate]	
Gravity Recoverable Gold - Stage 3	7.64
[Gold in leach liquor from intensive cyanidation on Knelson concentrate]	
Intensive leach Tailing - Stage 3	0.10
Bulk Gravity Tailing - Stage 3	23.32
TOTAL GRG	76.59

Table 3 – ZDDHMET-01 GRG Testwork Results

Gravity and Leaching Testwork at different Grind Sizes

Gravity and cyanide leaching testwork were conducted on the sample at progressively finer grind sizes to determine cyanide leaching characteristics and gravity recoverable gold.

The sample was ground to 250 µm and then subjected to gravity concentration. The gravity concentrate was subjected to intensive leaching and the gravity tails divided into three samples and selectively:

- leached with cyanide at 250 µm;
- ground down to 106 µm; and leached with cyanide; and
- ground to 75 µm and leached with cyanide.

Gravity by the Knelson concentrators recovered 59.4% of the gold to the gravity concentrate at 250 µm. Leaching of the tails at different grind sizes recovered another 25.5% to 29.5% of the gold for overall gold extractions of **94.9% (at 250 µm), 98.3 % (at 106 µm) and 98.8% (at 75 µm)**.

The overall gold recoveries and leaching kinetics are presented in Figure 1.

Results indicate that the Ternera material can be treated at coarser grind sizes without materially compromising recoveries. Kinetics show that gold leaching can be achieved within 24 hours at all grind sizes evaluated. Initial results indicate there to be no benefit in grinding finer than 106 µm and due to the hardness of the ore, Mintrex have recommended that coarser grind sizes such as 150 to 180 µm be tested in future work, as coarser grind sizes have the potential to save energy and milling costs.

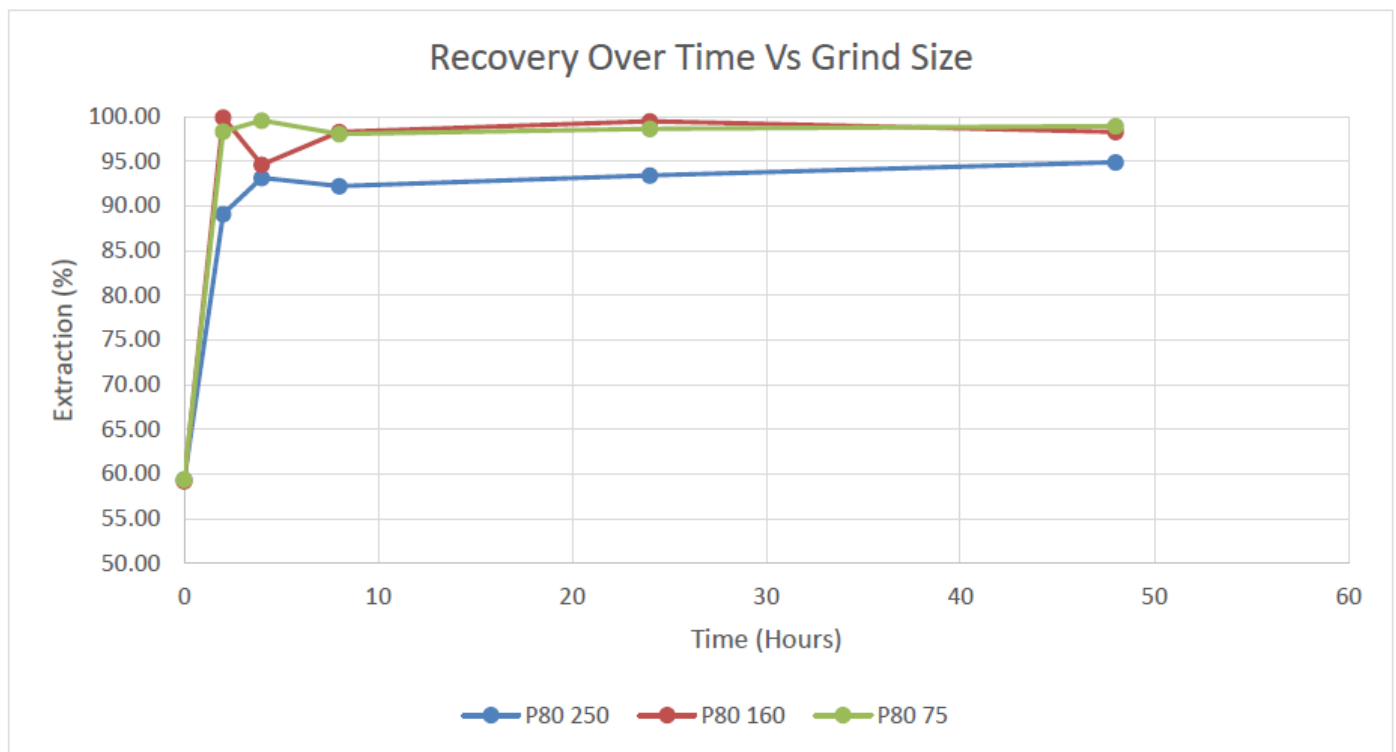


Figure 1 – ZDDHMET-01 Gold recovery kinetics at different grind sizes

METALLURGY NEXT STEPS

The Company intends to implement recommendations provided by Mintrex for a detailed metallurgical testwork program testing both transitional and fresh ore types of high and low gold grade domains. Testwork will consist of comminution (including High Pressure Grinding Roll), gravity, grind establishment and leaching characteristics to provide detailed inputs for future plant design during scoping or feasibility studies. This work is expected to commence during Q4 CY2020.

Authorised by the Board of Tesoro Resources Limited.

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About Tesoro

Tesoro Resources Limited was established with a strategy of acquiring, exploring and developing mining projects in the Coastal Cordillera region of Chile. The Coastal Cordillera region is host to multiple world class copper and gold mines, has well established infrastructure, service providers and an experienced mining workforce. Large areas of the Coastal Cordillera remain unexplored due to the unconsolidated nature of mining concession ownership, but Tesoro, via its in-country network and experience has been able secure rights to a district scale gold project in-line with the Company's strategy. Tesoro has rights to acquire up to 80% of the El Zorro Gold Project.



Future Performance

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