

# Exeter Resource Corporation : Detailed Metallurgical Testwork Confirms High Gold Recoveries on Caspiche Heap Leach Project

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VANCOUVER, BRITISH COLUMBIA--(Marketwired - Nov 12, 2014) - [Exeter Resource Corp. \(NYSE MKT:XRA\)\(TSX:XRC\)\(FRANKFURT:EXB\)](#) ("Exeter" or the "Company") is pleased to report new metallurgical heap leach results for Exeter's 1.7 million ounce<sup>a</sup> Caspiche oxide gold zone. The results are very encouraging, suggesting previous estimations for life of mine heap leach recoveries of approximately 80% were conservative. Exeter believes the leach tests for coarsely crushed -50mm material<sup>b</sup>, show potential for increased metallurgical recoveries, hence enhanced project cash flow.

Five newly tested PQ diamond drill cores provided a total of 74 bottle roll test samples and 17 column test samples, including 10 column tests on -50mm material. The column test materials were composited level by level to simulate mining intervals of two years within a ten year mine plan<sup>c</sup>. Well mineralized gravel, which overlie the oxide zone were also tested.

The test work was designed to systematically test the oxide zone to confidence levels approaching the requirements for a final feasibility study.

**Figure 1: Summary of Caspiche 50mm Column Test Results**

	Feed Size P <sub>80</sub> mm	Head Grade		Extraction		Reagents	
		g/t Au	g/t Ag	% Au	% Ag	kg/t NaCN	kg/t Lime
Composite	-38	0.74	7.6	78.4	32.9	1.27	2.6
Mineralized Gravel	-38	0.74	7.6	78.4	32.9	1.27	2.6
Years 1 & 2 (1 test)	-50	0.66	1.1	93.9	90.9	1.25	4.8
Years 3 & 4 (Ave of 2 tests)	-50	0.81	1.4	87.7	62.5	1.29	4.8
Years 5 & 6 (Ave of 2 tests)	-50	0.33	0.9	84.6	50.0	1.06	6.0
Years 7 & 8 (Ave of 2 tests)	-50	0.37	0.8	78.4	38.1	0.97	4.7
Years 9 & 10 (Ave of 2 tests)	-50	0.63	0.4	79.2	50.0	0.82	3.2
Other material	-50	0.47	2.1	83.0	57.1	0.89	5.0

## Important conclusions include:

- The overlying mineralized gravel previously considered to have lower recoveries in fact leach well and may be an ideal under layer for the heap.
- The first years contain the highest grades within the oxide zone and exhibit gold extractions averaging 90%. This suggests economics reported in previous studies, including the May 6, 2014 Preliminary Economic Assessment (PEA), may be improved.
- Gold head grades and extractions drop in later years, but still average 80%.
- Cyanide consumption averaged 1.1 kg/tonne although in practice ultimate heap leach consumptions are expected to average about 0.4 kg/tonne<sup>d</sup>.
- Test work on other mineralized material, currently outside the planned oxide gold open pit, also leached well, providing an extraction of 83%.
- Bottle roll tests correlate well with the column leach tests. This suggests mine planning will be able to utilise bottle roll tests on blast hole cuttings to estimate recoveries.

Exeter CEO Wendell Zerb, commenting on the results said: "This test work very successfully concludes a comprehensive program to evaluate the Caspiche oxide gold project. It not only confirms earlier work and our 2014 study projections, but enhances earlier results, especially in the important higher grade, early years of the oxide mine plan.

"Over 100 bottle roll tests and 48 column tests have now been carried out on the oxide zone, supporting

average gold extractions of 80% or higher. The relatively coarse crush size of 50mm means there is no need to agglomerate the feed, greatly simplifying heap construction and operation. I am very confident the stand-alone gold oxide project represents an attractive, first stage mine development option for Caspiche.

"Based on the PEA the mine would produce 122,000 gold equivalent ounces<sup>o</sup> ("oz") annually over a planned ten year mine life, including 148,000 oz annually in the first five years. Importantly, the project would have a small environmental footprint, a low energy requirement, and a low water requirement."

### Mineralization Tested

All samples tested at Caspiche since 2009 have been sourced from PQ diamond drill cores that were drilled through the surface oxide zone into the underlying gold - copper sulphide mineralization, generally to depths of 150 metres or greater. The oxide zone is comprised of highly altered, bleached, and acid leached Caspiche host rocks that are devoid of copper. Up to 20 metres of mineralized surface gravel are also amenable to heap leaching.

The locations of the PQ holes drilled for oxide metallurgical testing are shown in Figure 2 and full testing statistics are shown in Figure 3.

### Figure 2: PQ Drill Hole Locations Within the Caspiche Oxide Open Pit

[http://media3.marketwire.com/docs/978436\\_Figure2.pdf](http://media3.marketwire.com/docs/978436_Figure2.pdf)

### Figure 3: Metallurgical Testing Program Summary - Caspiche Heap Leaching

Testing	Testing Program			
	2009	2010	2014	Combined
Samples Tested	8	11	85	104
Number of Drill Holes	5	7	5	17
Drill Core, metres	452	630	449	1531
<u>Bottle Roll Tests</u>	-	-	-	-
13mm	8	-	-	8
1.7mm	8	11	74	93
<b>Total</b>	<b>16</b>	<b>11</b>	<b>74</b>	<b>101</b>
<u>Column Leach Tests</u>				
50mm	-	8	10	18
38mm	-	-	1	1
25mm	-	10	-	10
13mm	2	11	6	19
<b>Total</b>	<b>2</b>	<b>29</b>	<b>17</b>	<b>48</b>
Crusher Work Index Tests	-	7	5	12
Abrasion Index Tests	-	7	5	12
Load/Permeability Tests	-	8	7	15

### Metallurgical Test Details

As with all previous oxide test work, the program was carried out at McClelland Laboratories International (MLI) in Sparks, Nevada. The 50mm column test periods ran for 78 to 103 days, including 14 day relaxation periods once most of the gold had been leached.

The PQ core samples were prepared as 7.5 metre vertical sub-samples by MLI, to depths recommended by our mining consultants, NCL Ingeniería, so that each sample could be located in terms of the mining schedule. Each 7.5 metres length was crushed to a P<sub>80</sub> of 50mm, sub-sampled for assay and portions taken out for individual and composite bottle roll tests after crushing to a P<sub>80</sub> of 1.7mm. The remaining material was assembled into composites representing two year periods of a ten year life open pit.

### Bottle Roll Tests

The composite preparation described above allowed four-day bottle roll tests on individual 7.5 metre lengths to be compared to a bottle roll test of the ultimate composite, as well as to column tests on the same composite. Given a reasonable correlation exists, the relatively quick bottle roll test results can be used to predict column and operational heap leach results. The bottle roll crush size of 1.7mm is selected to mimic the approximate size of blast hole cuttings in operations. A summary of the test results is given in Figure 4.

**Figure 4: 2014 Testing Program Summary of Bottle Roll Test Results for 1.7mm Feed Size**

Year	No. of Samples	Extraction		Head Grade		Reagents kg/t	
		% Au	% Ag	g/t Au	g/t Ag	NaCN	Lime
Mineralized	8 (Avg.)	78.9	39.5	1.03	8.8	0.07	2.6
Gravel	Composite	80.6	44.7	0.98	7.6	0.07	2.3
Years 1 & 2	5 (Avg.)	88.2	59.6	0.68	2.2	0.08	5.5
	Composite	86.6	68.4	0.67	1.9	0.08	5.2
Years 3 & 4	9 (Avg.)	84.9	71.9	0.84	1.4	0.15	6.4
	Composite	85.4	73.8	0.88	1.4	0.07	6.0
Years 5 & 6	11 (Avg.)	83.0	40.0	0.34	1.1	0.17	7.3
	Composite	86.5	46.5	0.34	1.0	0.07	7.4
Years 7 & 8	8 (Avg.)	87.1	70.6	0.38	0.6	0.17	5.5
	Composite	84.4	77.4	0.39	0.7	0.25	5.9
Years 9 & 10	9 (Avg.)	86.0	61.8	0.66	0.4	0.15	3.8
	Composite	86.0	64.8	0.66	0.4	0.10	4.0
Miscellaneous	13 (Avg.)	83.6	63.1	0.41	1.4	0.13	6.0
	Composite	81.4	75.0	0.43	1.6	0.17	6.2
All (74 tests)	Minimum	65.5	11.1	0.15	0.2	0.07	1.5
All (74 tests)	Maximum	92.5	92.9	1.92	15.9	0.34	10.5
All (74 tests)	Average	84.0	59.4	0.59	2.1	0.13	5.5

The average percentage of gold extracted from the individual bottle roll tests agreed well with the equivalent test carried out on each composite.

Sodium cyanide consumptions in the bottle roll tests were very low, while lime consumptions were similar to those seen in the column tests. This is a relatively normal pattern and supports projections by MLI that operational sodium cyanide consumptions will be much lower than indicated in the column tests.

The gold extractions from individual 7.5 metre samples within a given composite varied by 10% to 15% from the mean value and from the composite extraction itself, but there were few extractions below 80% and most of those were in the transported gravel. The head grades also varied, but there was little correlation between gold head grade and gold extraction.

**Figure 5: Bottle Roll Test Gold Extraction versus Mine Year - Average and Variability**

[http://media3.marketwire.com/docs/978436\\_Figure5.pdf](http://media3.marketwire.com/docs/978436_Figure5.pdf)

## Column Tests

The 50mm column tests were leached for between 78 and 103 days, the time depending on the amount of gold and silver being leached each day. These leaching times include a rest cycle of 14 days and a final rinse cycle of seven days which assist in simulating actual heap leach performance.

There was sufficient 50mm crushed material available for the Year 3 to Year 10 composites to run duplicate column tests and review sampling variability. The results from these duplicate tests agreed very closely and provide additional confidence in production projections based on the column test work.

Figure 6 illustrates that for the 50mm composites that were column tested in this program, gold leaching was

significantly more rapid and complete in Years 1 to 4. Thereafter, the overall gold extraction reduces slightly as the pit becomes deeper and the gold extraction kinetics become modestly slower. However the Year 5/6 composite gold extraction was also high at almost 85%, in spite of being relatively low grade at 0.33 g/t gold.

The conclusions by both MLI and Exeter metallurgists from the Caspiche programs is that there is little evidence of correlation of gold extraction with gold head grade in the oxide zone, however while extraction appears to reduce gradually with depth, the levels are maintained at or close to 80%.

### **Figure 6: Caspiche 50mm Column Leach Tests - Gold Extraction Profiles**

[http://media3.marketwire.com/docs/978436\\_Figure6.pdf](http://media3.marketwire.com/docs/978436_Figure6.pdf)

### **Other Testwork**

Load-permeability tests were carried out on six selected 50mm column residues and the transported gravel residue (-38mm). The results indicated that permeability was acceptable when loads of up to the equivalent of a 120 metres high heap were applied. This is similar to previous results.

Bulk densities of the -50mm column charge material were 1.3 tonnes/m<sup>3</sup> and remained the same after leaching. Little to no slumping occurred in the columns and no drainage or solution channeling problems were encountered during leaching. Bond crusher work index tests gave results ranging from 5 to 10.5 kWh/tonne with impact hardness increasing with depth. Abrasion indices ranged from 0.03 which is quite low to 0.34 which is moderately abrasive.

Static acid rock drainage tests (ARD) on column residues ranged from low to moderate.

### **2014 Caspiche Preliminary Economic Assessment**

On May 6th, 2014 Exeter released the results of a PEA for Caspiche. The PEA evaluated a new lower capex approach to that considered in the January 2012 pre-feasibility study on Caspiche (refer to the Company's press release dated January 17, 2012) (the "January 2012 PFS") for the potential large scale development of the Caspiche gold-copper deposit. The PEA assessed options for open pit mining the near surface gold oxide zone, expanded open pit mining into the gold-copper zone, and underground mining of the central, higher grade portion of the gold-copper sulphide deposit. The PEA studies used measured and indicated mineral resources only.

Based on the PEA studies, Exeter believes the Caspiche deposit could be developed using standalone or staged mine plans depending on Company objectives and assumed economic parameters. The standalone open pit oxide option outlined in the PEA outlines a 30,000 tonnes per day ("tpd") heap leach oxide gold project, producing a projected average of 122,000 gold equivalent ounces<sup>e</sup> ("oz") annually over a planned ten year mine life, including 148,000 oz annually in the first five years. At US\$1,300/oz gold pre-tax net present value ("NPV"), is US\$355 million, generating an internal rate of return ("IRR") of 34.7%, and a payback period of 3.4 years from initial construction. (After-tax NPV 5% US\$279 million, IRR 30.2%).

The property is located 120 km ESE of Copiapó and is situated at the southern end of the Maricunga metallogenic belt, between the undeveloped Cerro Casale gold-copper project 12 km to the south, and the Maricunga Gold Mine (formerly Refugio), 15 km to the north. Access to the project is by 183 km of paved and treated gravel road from Copiapó. A power line servicing the Maricunga Mine (Kinross) passes within 12 km of Caspiche.

**The economic analysis contained in the PEA is considered preliminary in nature. No inferred mineral resources form part of the PEA studies and no mineral reserves for the PEA have been established. Mineral resources are not mineral reserves and have no demonstrated economic viability. There is no certainty that economic forecasts outlined in the PEA will be realized.**

Jerry Perkins, Exeter's VP Development and Operations and a "qualified person" ("QP") within the definition

of that term in National Instrument 43-101, Standards of Disclosure for Mineral Projects, has reviewed and approved the technical information in this news release.

Material	Class	Tonnes Mt	Au g/t	Ag g/t	AuEq <sup>1</sup> g/t	AuEq <sup>2</sup> Moz
Oxide	Measured	67.4	0.45	1.56	0.46	1.0
Oxide	Indicated	56.4	0.39	1.63	0.40	0.7
Total Oxide	Meas + Ind	123.8	0.43	1.59	0.43	1.7

1. The following formula was used in calculating AuEq values in each block of the model:

[http://media3.marketwire.com/docs/978436\\_Formula.pdf](http://media3.marketwire.com/docs/978436_Formula.pdf)

where Au, Ag and Cu are the block kriged gold, silver and copper grades, P<sub>Au</sub>, P<sub>Ag</sub> and P<sub>Cu</sub> are the gold, silver and copper prices (US\$1,250/oz, US\$15/oz and US\$2.75/lb, respectively). Note there are no copper values within the oxide zone and therefore no copper is recovered, the R<sub>Cu</sub> term in the formula should be zero when referring to the oxide only option.

2. AuEq = resource tonnes \* AuEq<sup>1</sup>.

1. Measured and indicated mineral resources - see NI 43-101 Technical Report on the Caspiche Project, Atacama Region, Chile" dated June 20, 2014 ("NI 43-101 Report"). For the purposes of the PEA, the April 2012 Mineral Resource was re-reported including the oxide only portion tabled above. Oxide material was reported above 0.18 g/t AuEq<sup>1</sup> cut-off. Note that the PEA does not include inferred mineral resources.
2. All references to crush sizes are to the 80% passing size, also known as a P<sub>80</sub> size.
3. Ten year mine plan associated with the NI 43-101 Report, modified from previous five-year mine plan.
4. Estimated by metallurgical consultants in the NI 43-101. Sodium cyanide consumptions in the bottle roll tests were very low. This is a relatively normal pattern and supports projections by MLI that operational sodium cyanide consumptions will be much lower than indicated in the column tests.
5. Gold equivalent oz (AuEq) value is based on gold and silver revenues (prices and recoveries involved).  

$$\text{AuEq oz [troy oz]} = [\text{Au g/t} * \text{Rec Au} * \text{tonnes}] / 31.1 + [\text{Ag g/t} * \text{Rec Ag} * \text{tonnes}] / 31.1 * \text{silver price troy oz} / \text{gold price troy oz}.$$
Recoveries are adjusted based on metallurgical characteristic of the resource.  
Metal price assumptions US\$1,300/oz Au, US\$20/oz Ag.

**Mineral resources are not mineral reserves and do not have demonstrated economic viability.**

## About Exeter

[Exeter Resource Corp.](#) is a Canadian mineral exploration company focused on the exploration and development of the Caspiche gold-copper discovery in Chile. The project is situated in the Maricunga gold district, between the Maricunga mine ([Kinross Gold Corp.](#)) and the Cerro Casale gold deposit ([Barrick Gold Corp.](#) and [Kinross Gold Corp.](#)). The project represents one of the largest mineral discoveries made in Chile in recent years. The newly completed PEA was initiated with the aim of indicating the development optionality of this world class discovery. Securing the rights to a viable water supply for a Caspiche mine is a priority for the Company.

The Company currently has cash reserves of C\$32 million and no debt.

EXETER RESOURCE CORPORATION

Wendell Zerb, P. Geol

President and CEO

**Safe Harbour Statement** - This news release contains "forward-looking information" and "forward-looking statements" (together, the "forward-looking statements") within the meaning of applicable securities laws and the United States Private Securities Litigation Reform Act of 1995, including in relation to the Company's belief as to the potential significance of water discovered, the potential to establish new opportunities for the advancement of Caspiche, results from preliminary economic assessment including estimated annual production rates, capital and production costs, water and power requirements and metallurgical recoveries, expected taxation rates, timing of water exploration and securing adequate water, potential to acquire new

projects and expected cash reserves. These forward-looking statements are made as of the date of this news release. Readers are cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the future circumstances, outcomes or results anticipated in or implied by such forward-looking statements will occur or that plans, intentions or expectations upon which the forward-looking statements are based will occur. While the Company has based these forward-looking statements on its expectations about future events as at the date that such statements were prepared, the statements are not a guarantee that such future events will occur and are subject to risks, uncertainties, assumptions and other factors which could cause events or outcomes to differ materially from those expressed or implied by such forward-looking statements. Such factors and assumptions include, among others, the effects of general economic conditions, the price of gold, silver and copper, changing foreign exchange rates and actions by government authorities, uncertainties associated with negotiations and misjudgments in the course of preparing forward-looking information. In addition, there are known and unknown risk factors which could cause the Company's actual results, performance or achievements to differ materially from any future results, performance or achievements expressed or implied by the forward-looking statements.

Known risk factors include risks associated with project development; including risks associated with the failure to satisfy the requirements of the Company's agreement with Anglo American on its Caspiche project which could result in loss of title; the need for additional financing; operational risks associated with mining and mineral processing; risks associated with metallurgical recoveries, water and power availability and changes in legislation affecting the use of those resources; fluctuations in metal prices; title matters; uncertainty and risks associated with the legal challenge to the easement secured from the Chilean government; uncertainties and risks related to carrying on business in foreign countries; environmental liability claims and insurance; reliance on key personnel; the potential for conflicts of interest among certain officers, directors or promoters of the Company with certain other projects; the absence of dividends; currency fluctuations; competition; dilution; the volatility of the Company's common share price and volume; tax consequences to U.S. investors; and other risks and uncertainties, including those described herein and in the Company's Annual Information Form for the financial year ended December 31, 2013 dated March 14, 2014 filed with the Canadian Securities Administrators and available at [www.sedar.com](http://www.sedar.com). Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. The Company is under no obligation to update or alter any forward-looking statements except as required under applicable securities laws.

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