

Caspiche porphyry Au-Cu deposit, Maricunga Belt, Chile Exploration, discovery and resource development

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CASPICHE

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Abstract

The Caspiche property is located in Region III, Chile, within the Maricunga belt, a metallogenic province which hosts numerous large epithermal and porphyry gold±silver±copper deposits. In September, 2009, Exeter upgraded its Caspiche inferred resource to 19.6 million ounces of gold and 4.8 billion pounds of copper.

Anglo was the first company to explore the Caspiche area. Between 1986 and 1990, they explored and drilled 1,518 m in 12 holes aimed at assessing the potential of a silica ridge located in the centre of the Caspiche property. They found the target to be too small and the property remained idle until 1996 when it was optioned by Newcrest.

Newcrest was initially interested in the porphyry potential of the property. They undertook systematic surface sampling, mapped, ran dipole IP-Resistivity, and drilled 3,218 m in 14 holes, 12 of these aimed at testing the porphyry potential on the Caspiche Porphyry prospect. They reported porphyry mineralisation of sub-economic grades. In 1987 Newcrest flew a helimag survey which defined a strong magnetic high anomaly in the southwest of the Caspiche Porphyry prospect. During the 1997-98 season they drilled a further 4,123 m in 22 holes. An epithermal system 3 kilometres to the east of the Caspiche Porphyry was the focus of their drilling. Only 2 of the 22 holes drilled in their second campaign were drilled into the Caspiche Porphyry prospect, these aimed to test the magnetic anomaly and to test for oxide mineralization in the south. They found the magnetic anomaly to be related to a very low grade porphyry body. Their drilling on the epithermal target returned several good intersections, but the mineralisation proved to be discontinuous and Newcrest withdrew from the Caspiche property in 1998.

In 2004 Exeter recognised that Anglo American had retained a number of gold properties in the Maricunga, left over from the split out of Anglo Gold, and sought to negotiate them. An agreement was finally signed in December of 2005 involving 7 properties, 5 of which were reverted 2 months later.

Exeter mapped and sampled Caspiche and undertook a review of the previous available data. The Caspiche Epithermals prospect was the focus of Exeter's first drill campaign of 7 RC holes. During Exeter's second drill campaign a meticulous review of the data at Caspiche Porphyry was undertaken. This included 3D modelling of a hypothetical body which demonstrated the potential for the existence of an untested porphyry. Pre-existing data revealed subtle vectors supporting the model and hole CSR-13 was drilled to test this. This hole intersected 304 m @ 0.9 g/t Au and 0.26% Cu, and caused Exeter's share value to rise by 20%.

Additional drilling confirmed the existence of a large previously untested higher grade porphyry intrusion with intersections such as 792.5 m @ 0.96 g/t Au and 0.4% Cu from hole CSD-16 and 1,234 m grading 0.89 g/t Au and 0.33% Cu which included 708 m grading 1.22 g/t Au and 0.42% Cu from hole CSD-032.

Currently drilling is continuing on the property, aimed at increasing the classification of the current resource, to define additional mineralisation where zones have not been closed off, and to look for satellite deposits. A range of test programmes and preliminary development studies have commenced and are ongoing.

Exeter considers that the foundation of success originates by providing an environment whereby the entire team has a strong interest in the company's success through implementation of an employee option scheme. This has led to a highly productive workforce which through strong cooperation sidesteps many potential obstacles.

CASPICHE

Introduction

The Caspiche property is located in Region III, Chile, 650 kilometres north of Santiago and 120 kilometres east of the Region III capital of Copiapo (Figure 1). The property lies within the Maricunga belt, a metallogenic province which hosts numerous world class epithermal and porphyry gold+silver+copper deposits. Caspiche is positioned 10 kilometres north of the joint Barrick-Kinross Cerro Casale gold-copper deposit which contains reserves and resources of 24.1 million ounces of gold and 6.3 billion pounds of copper (Henderson, 2008), and 15 kilometres south of Kinross's Maricunga mine (previously Refugio mine) which holds 6.4 million ounces of gold (Bélanger, 2007). In September, 2009, Exeter upgraded its Caspiche inferred resource to 19.6 million ounces of gold and 4.8 billion pounds of copper.

Location and access

The geographic centre of the Caspiche tenements is located at 27° 41' south latitude and 69° 18' west longitude. Access to the project is by 183 km of paved and gravel road from Copiapó which also supports the nearby Refugio Gold Mine and Cerro Casale advanced gold-copper project. The topography within the property consists of broad open areas of moderate relief and prominent ridges with limited cliff zones of exposed bedrock (Figure 2). Elevation within the property ranges from 3,900 m to 4,700 m above sea level. Vegetation is sparse and limited to grasses, small thorny bushes, and small marsh areas at the junction of creeks. The climate is typical for the central Andean Cordillera with summer temperatures between 23°C and 5°C. In winter temperatures are around 0°C dropping to -15°C at night. Operating mines such as Refugio and La Coipa run year round, but exploration can be hampered in the winter months by infrequent snowstorms.

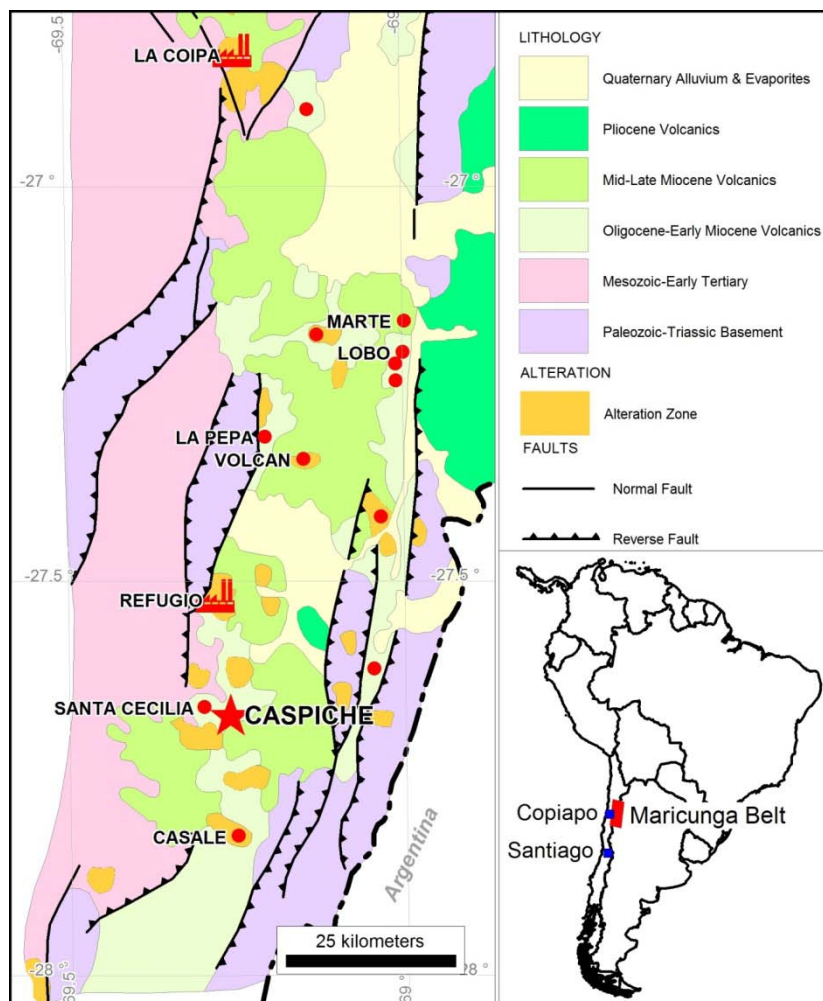


Figure 1. Caspiche location Map and Maricunga Deposits (Modified after Vila and Silitoe, 1991).

CASPICHE

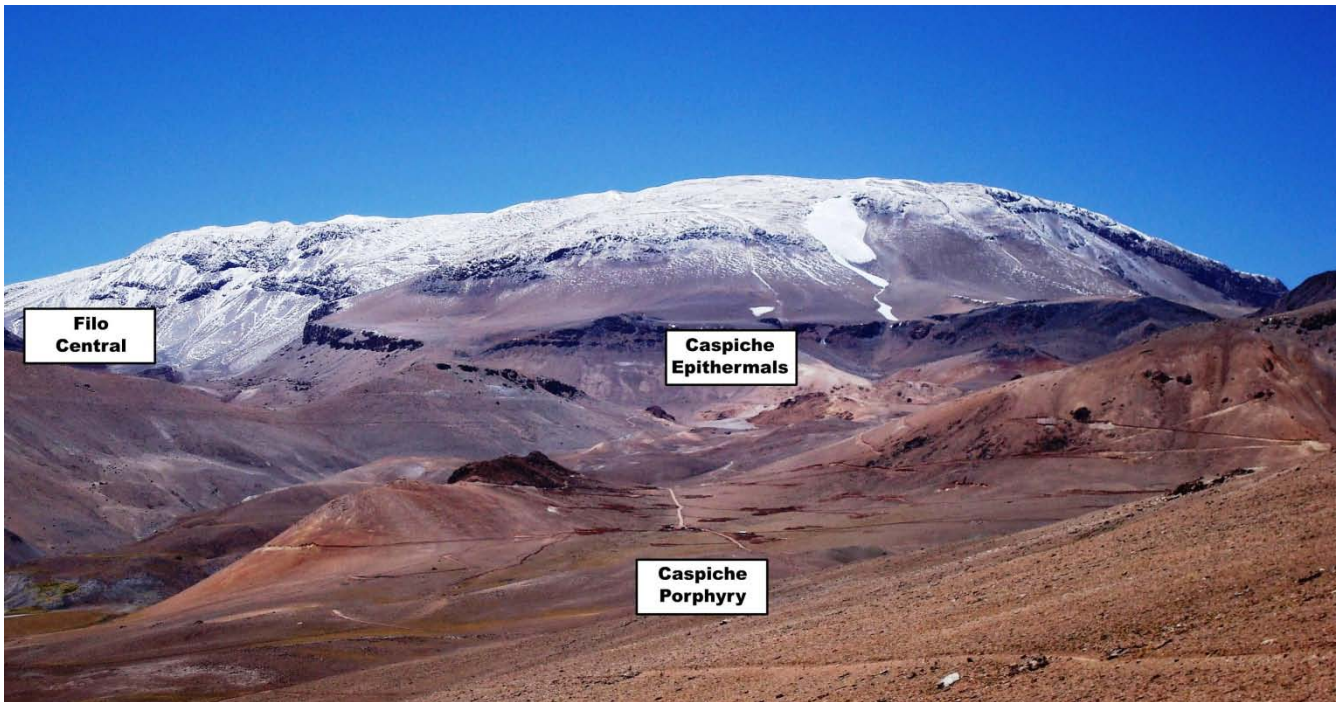


Figure 2. View of the Caspiche property looking toward the east.

Ownership

Exeter acquired Caspiche in October 2005 along with five additional properties through an agreement with Anglo American. Exeter has now met all the requirements of that agreement for the Caspiche property and currently plans to exercise the option for 100% ownership in January, 2011. Anglo American will be entitled to a 3% net smelter return from production.

Regional setting

The Caspiche property is located in the Maricunga metallogenic belt. North-south to north-northeast trending high-angle reverse faults form a series of horsts and graben blocks, and it is these graben structures that host significant mineralization (Vila and Sillitoe, 1991). Oligocene to late Miocene age volcanoes of andesitic to dacitic composition are generally restricted to the, and Paleozoic to Triassic basement rocks are exposed in intervening horst blocks.

Volcanism occurred in four events grouped into two main episodes. The initial event began in late Oligocene and lasted until early Miocene (26 to 20 Ma). West-northwest to north-northwest trending structures are observed as normal trans-tensional faults, dykes, veins and linear alteration zones, and are associated with mineralization in volcanic centres of late Oligocene to early Miocene age. The second event occurred during the middle Miocene (16 to 11 Ma). The third and fourth episodes of dacitic volcanism occurred in the late Miocene (11 to 7 Ma) and late Miocene to early Pliocene (7 to 5 Ma), respectively.

The deposits in the Maricunga are typically gold±copper± silver porphyry style such as Caspiche, Refugio, Cerro Casale, Marte and Lobo or high sulphidation epithermal gold+silver such as La Coipa and La Pepa. A strong northwest-southeast structural control to the mineralization is typical of many of the deposits. Some Maricunga deposits have epithermal alteration textures superimposed (telescoped) on to porphyry alteration textures.

CASPICHE

Pre-Exeter exploration

1981 to 1986

Prior to European settlement, indigenous inhabitants constructed kilns near several Maricunga deposits to produce copper and gold. The first recorded modern exploration around Caspiche dates to 1981 when three pioneer explorers M. Hernandez, D. Thomson, and M. Bernstein, landed a helicopter atop the bright white alteration of the Santa Cecilia prospect located 4 kilometres to the west of Caspiche. They sampled narrow bonanza veinlets which reportedly returned multi-ounce gold values and pegged tenements to cover the Santa Cecilia alteration centre. Mule supported exploration commenced the following year, but work was hampered due to the extreme remoteness of the site. The first two years saw minor mapping and collection of approximately 170 rock chip samples.

In 1985 signed an option to explore Santa Cecilia. Between 1985 and 1990 Anglo built a road to the property, mapped, sampled, tunnelled and drilled over 7000 m.

During the initial stages of fieldwork at Santa Cecilia, Anglo geologists had recognized two strongly silicified outcrops to the east and following positive rock chip sampling pegged the ground and proceeded to explore the area as a separate project. They called their project Caspiche after the native shrub of the same name which is common in the high cordillera.

Caspiche 1986 – 1990, Anglo American

Between 1986 and 1990, Anglo conducted three field campaigns on the Caspiche property.

They commenced in 1986 with rock-chip and grid-soil geochemical programs collecting a total of 842 rock-chip samples and 431 soil samples. The results indicated a gold, silver, copper anomaly measuring 650 by 300 m. Eighty rock chip samples collected over the anomaly returned values greater than 1 g/t Au, with the highest value being 5.45 g/t Au.

In 1987-88 Anglo drilled 568 m in 12 air track holes to an average depth of 50 m. The holes were drilled into the two zones of strong silicification to the north and south on the Caspiche Porphyry prospect, which exhibit ledge style vuggy residual silica alteration and contain associated gold-silver mineralization. The best intercept was from drill hole SHC-5 drilled into the northern silicified ridge at Caspiche Porphyry. The hole averaged 1.03 g/t Au and 6.1 g/t Ag over the entire 48 m intercept.

Anglo returned for a second drill campaign during the 1989-90 season and drilled 950 m in 6 reverse circulation holes with an average depth of 150 m. The best intersection for the program was drill hole SPC-05 which intersected an average grade of 0.45 g/t Au over the entire 150 m length of the hole. Anglo reported that the final 22 m intersected porphyry style mineralization, moderate silicification and moderate sericite-clay-pyrite alteration host in a diorite porphyry. The average grade for the porphyry intercept was 0.29 g/t Au.

In 1990 Anglo calculated a rudimentary (non JORC-compliant) estimate of the mineral inventory for the central silica ridge. They estimated 6.3 million metric tonnes averaging 0.45 g/t Au using a 0.1 g/t Au cut-off and a specific gravity of 2.3 gram/cm³, giving approximately 80,000 ounces of gold.

In 1990 Anglo returned the Santa Cecilia property to the owners and discontinued work on their Caspiche claims. Caspiche lay idle until Newcrest began exploring it in 1996.

Newcrest exploration, 1996 – 1998

Newcrest undertook a preliminary field evaluation of the Caspiche property in December 1995, and eventually signed an option agreement with Anglo in June 1996. The company was interested in the disseminated character of the mineralization and the fact that Anglo's drilling had not stepped off the outcropping silicification to test beneath the surrounding alluvial cover. Newcrest believed that there was potential for major structures on the flanks of these outcrops which merited testing. Newcrest geologists were particularly interested in following up the porphyry style mineralization that Anglo reported at the base the hole SPC-05.

CASPICHE

Upon commencement of work on the property Newcrest increased its land position by staking an additional 2,561 hectares of open ground, principally to the east of Anglo's 312 hectare Caspiche property.

During their first field season, 1996-97, Newcrest conducted geologic mapping, rock geochemistry, and drilled 3,218 m in 14 reverse circulation holes with an average depth of 230 m. They also ran 19.4 line kilometres of induced polarization-resistivity geophysics.

The induced polarization-resistivity survey was exploratory in nature with various line orientations. Only 50% of the lines crossed Exeter's current land holding. Lines were run using 200 m dipole spacing's on a pole-dipole configuration. The first line crossed the Caspiche Porphyry prospect. The induced polarization section shows a strong anomaly associated with what is now known as the mineralized Caspiche diorite porphyry. The silica ridge which was the primary object of Anglos drilling, located to the north of Caspiche Porphyry, is well defined in the resistivity pseudo-section.

Of the 14 holes drilled, 12 were aimed at testing targets on the Caspiche Porphyry prospect, following up on the disseminated mineralisation discovered by Anglo, and also to test the induced polarization geophysical target (Table1). The final 2 holes, CDH-13 and 14, were drilled on the Caspiche Epithermals prospect located 3 kilometres to the east, following up on anomalous Au and Hg surface geochemistry and high sulphidation epithermal style alteration of the volcanics in this prospect.

Table 1. Newcrest Reported Best Intercepts from 1996-97 Drill Program

Hole (depth)	From	To	Length	Au g/t	Cu %
CDH-2b (330m)	154	274	120	0.51	0.27
	234	270	36	0.74	0.25
CDH-3 (326m)	172	326	154	0.63	0.24
	232	326	94	0.73	0.23
	28	104	76	0.47	0.01
	104	172	68	0.41	0.18
	0	56	56	1.03	0.02
CDH-5 (200m)	126	200	74	0.50	0.22
	56	126	70	0.52	0.01
CDH-12 (330m)	98	144	46	0.55	0.22

Drill hole CDH-2b, 3 and 12 were the deepest holes drilled penetrating around 330 m into the Caspiche Porphyry prospect. The geological log from hole CDH-3 reported a "sulphide zone with potassic altered feldspar porphyry hosting quartz, haematite, pyrite, K feldspar, biotite, chalcopyrite, bornite and covellite stockwork veining". They also noted that "the best mineralization was at the end of the hole".

In October 1997 Newcrest conducted a 275 line-kilometre helicopter-borne aeromagnetic survey and during the 1997-98 field season they conducted a soil geochemistry orientation survey using Mobile Metal Ion (MMI), Enzyme Leach and standard ICP analyses methods. They undertook oxygen isotope, fluid inclusion and thin section petrography work, as well as K/Ar geochronology. Drilling for the season totalled 22 reverse circulation holes for a total of 4,123 m.

The resultant reduced-to-pole imagery from the aeromagnetic survey shows a strong magnetic high 750 m in diameter located in the vicinity of Caspiche Porphyry (Figure 3). A second magnetic anomaly located in the north of the property is coincident with weakly propylitic altered diorite porphyry.

Oxygen isotope studies returned a large degree of variation in the $\delta^{18}\text{O}$ values, from 5.8 to 17‰ (relative to standard mean ocean water). It was concluded that samples had been affected by diverse processes including hypogene porphyry, epithermal and oxidation. Liquid-rich fluid inclusions from veining in the base of hole CDH-03 gave equilibrium temperatures $>582^\circ\text{C}$ and up to 66 wt % equivalent NaCl whereas vapour-rich inclusions derived from boiling gave mixed equilibrium temperatures from 200° to 380°C and 5 – 11 wt % equivalent NaCl. The conclusion was that the co-existence of the different fluid inclusion types within the same veinlet indicated superimposition of different alteration events. A K/Ar age date from samples at the base of hole CDH-03 produced an age of $28.8 \pm 1.4\text{ Ma}$.

CASPICHE

A program was proposed which included a 1,750 m diamond drill component to drill Caspiche Porphyry to a depth of 600 m, but no diamond drilling was undertaken. The perceived better potential for encountering higher grade mineralisation on the Caspiche Epithermals to the east, combined with the perceived low grades intersected at Caspiche Porphyry to date in conjunction with a falling gold price resulted in only 2 holes being drilled on the Caspiche Porphyry prospect in the 1997-1998 season. The remaining 20 holes were aimed at testing the potential of the Caspiche Epithermals.

The 2 holes drilled at Caspiche Porphyry were aimed to test the aeromagnetic anomalous high as well as the continuation of oxide mineralisation in the south. Hole CDH-25 was collared into the centre of the magnetic anomaly and with a total depth of 332 m was the deepest hole drilled during the program. The best intersections from this hole were 58 m @ 0.36 g/t Au and 0.11% Cu from 48 to 106 m, and 20 m at 0.49 g/t Au and 0.14% Cu from 250 to 270 m. Hole CDH-24 drilled to the south did not intercept mineralization of consequence with the best assays reported being 0.25 g/t Au and 0.06% Cu.

Drilling on the Caspiche Epithermals prospect produced a number of significant but irregular intersections.

In 1998 Newcrest terminated the option agreement with Anglo for the Caspiche Porphyry property and later abandoned its Caspiche Epithermals tenements. The ground became vacant and was later picked up by Anglo.

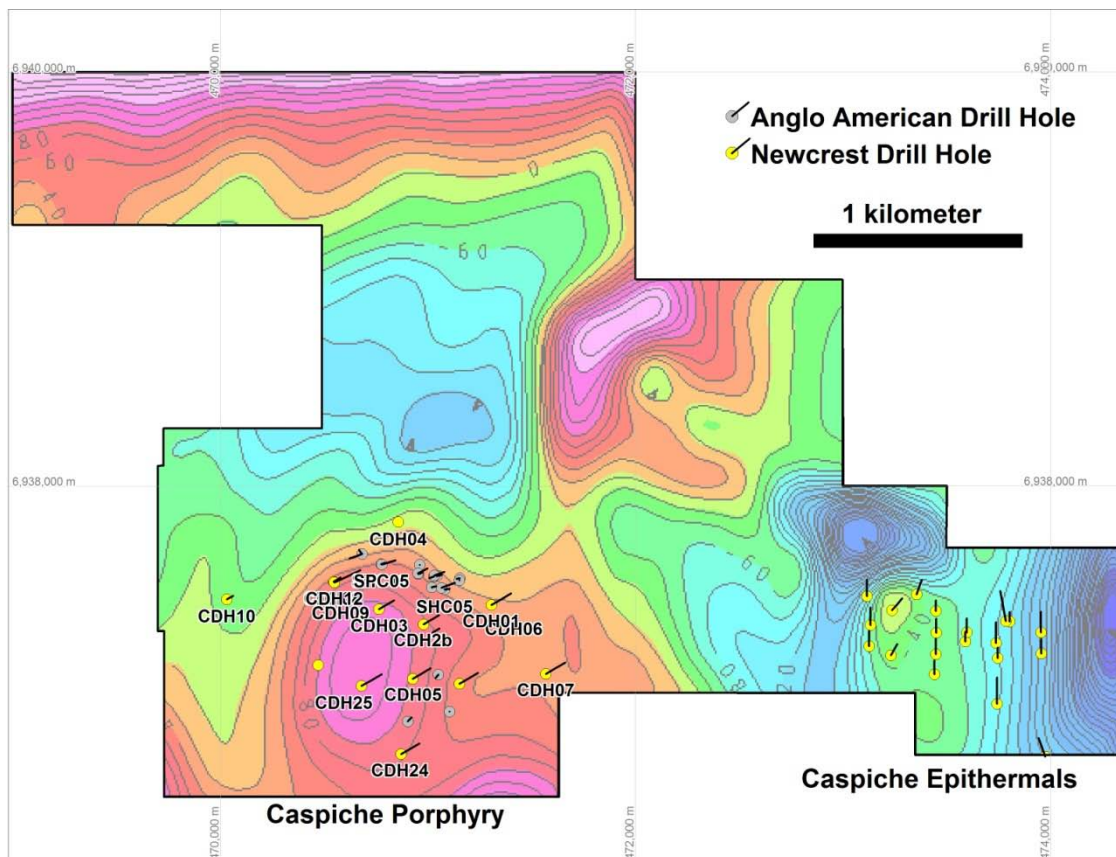


Figure3 . Anglo American and Newcrest drill holes on reduced to pole aeromagnetic image.

Exeter Exploration

Why Caspiche?

At the time Exeter became involved in Caspiche the company was looking for a project that would enable rapid growth and to spread the company's country risk outside Argentina. In order to fast track the grass roots process, as well as providing the impetus required to enter into a new country, an existing project was considered the best option. Since Exeter's technical expertise was based in Argentina it was logical to look for projects in bordering countries which, in the early stages of opening a new base, would permit the easiest transition for the company. Thus Chile was a logical place to look. In early 2004 Exeter recognised that Anglo

CASPICHE

American had retained a number of gold projects in the Maricunga following the split out of Anglo Gold. Recognising that these would be of limited interest to Anglo American Exeter approached them seeking to option the properties. In October 2005 after 18 months of negotiation during a time when there was still little appetite for gold in the Markets, Exeter acquired a total of 7 projects. After 2 months evaluation 5 of these were returned to Anglo American with Exeter retaining Caspiche and one other property. Under the terms of the agreement a minimum of 1,500 m of drilling was required by the first anniversary, and increasing annual drilling requirements thereafter.

Exeter's first drill campaign

When Exeter first commenced work on Caspiche the only documentation that was received was that held by Anglo, and this did not include the work undertaken by Newcrest on the Caspiche Epithermals prospect.

Exeter commenced field mapping and sampling the 18 square kilometre Caspiche property of which approximately 90% is covered by Quaternary alluvium. Approximately 160 rock chip samples were collected and assayed for Au and a suite of multi-elements. Selected rock chip samples were analysed by the Portable Infrared Mineral Analyzer (PIMA) to assist with alteration mapping. A program of controlled source audio-frequency magnetotellurics (CSAMT) was run with the hope of identifying silicified structures representative of high sulphidation ledge style mineralization.

Exeter commenced drilling at Caspiche in January, 2006, with seven holes for a total of 1,668 m. Reports by previous workers indicated that the porphyry potential at Caspiche Porphyry had been tested and found to be large but of sub-economic grade, and this was validated by their drill assays. Porphyry style mineralization does not outcrop at Caspiche Porphyry being entirely covered by Quaternary alluvium averaging 40 m thick. The outcropping siliceous ridges containing high sulphidation epithermal style massive and auriferous vuggy residual silica had been well tested by Anglo's earlier work. Consequently the focus of the initial drill campaign was on a zone of black silica matrix hydrothermal breccia identified during mapping at Caspiche Epithermals and a CSAMT anomaly on this prospect. Rock chip samples from this zone returned assays up to 6.58 g/t Au and 242 g/t Ag. Results from the initial drill campaign were discouraging with only one hole intersecting economically viable grades and widths (Table 2).

Table2. Significant results from Exeter's January 2006 drilling program. Eight holes for a total of 1,668 m.

Hole	From (m)	To (m)	Length (m)	Au g/t	Ag g/t
CSR-002	52	76	24	1.1	23
	172	178	6	1.7	16
CSR-006	144	166	22	1.5	2

Exeter's second drill campaign

Drilling in the Maricunga had proven to be expensive compared to Exeter's projects in Argentina. This, combined with the discouraging results, caused concerns as to whether we should continue with the program at Caspiche. All holes had intersected zones of vuggy residual silica "ledge" style mineralization, but not all of these contained economic grades. Exeter had by then obtained exploration results from Newcrest's previous work which mostly tended to down grade the Caspiche Epithermals.

Table 3. Significant results from holes drilled on the Caspiche Epithermals during Exeter's April 2006 drill program. Six holes for 1,686 m.

Hole	From (m)	To (m)	Length (m)	Au g/t	Ag g/t
CSR-008	42	58	16	1.3	5
CSR-010	166	202	36	1.3	26
CSR-011	96	108	12	1.2	4
CSR-012	94	110	16	2.1	2

The second drill program was scheduled for April of 2006. It was aimed at extending mineralisation intersected by holes CSR-002 and 006, testing additional CSAMT targets and testing targets identified by positive results from Newcrest's previous work. Since not all of the zones of vuggy residual silica were mineralised it was

CASPICHE

difficult to determine whether holes were intersecting mineralisation or not. However judging by appearance the holes being drilled at Caspiche Epithermals appeared similar to previous holes (Table 3).

Establishing a resource at the Epithermals was proving to be difficult because of the irregular nature of the mineralization there. All data from the property was scrutinised for potential for defining additional targets. In particular the data from the Caspiche Porphyry. Following a detailed review of the known Maricunga porphyry systems a number of hypothetical porphyry style mineralisation models were constructed using 3D software and the existing data to assess their potential. It gradually became clear that not only was there untested potential for the prospect to contain a large mineralised porphyry, but additionally the previous data provided vectors that all pointed to where that body may occur. Based on the model that was developed a hole was designed to test the proposed shallowest level of the proposed cupola zone of the porphyry. There remained three holes to be drilled on the Caspiche Epithermals. But armed with the strong indications of an untested massive porphyry target, as soon as the rig completed the hole it was on it was sent to test the new model. The coordinates and orientation were sent to the geologist on site on the next satellite phone schedule, with the instruction that once CSR-12 was completed the rig was to drill hole CSR-13 on the Caspiche Porphyry prospect.

The upper 40 m of hole CSR-13 encountered alluvium cover before entering bedrock. The site geologist was very enthused with the material being intersected and phoned through to comment on it, and on the deteriorating weather conditions which began to threaten a forced abandonment of the hole and demobilization to a lower elevation. However, buoyed by the good mineralization being intersected he elected to continue driving the hole down until the drillers informed that they had reached the maximum depth capacity of the drill rig, and the hole was forced to stop at 344 m, making it the deepest hole drilled to date on the Caspiche property. To date this hole still holds the record depth for RC drilling on the property. Due to the onset of winter conditions CSR-13 was the last hole drilled for the season.

Exeter announced the CSR-13 intersection in a company news release on May 24th, 2007. By the end of the day's trading on the 25th Exeter's share value had risen by over 20% from CDN\$2.35 to CDN\$2.87.

The intersection from hole CSR-13 was 304 m @ 0.9 g/t Au and 0.26% Cu.

Exeter's third drill campaign

Exeter made plans to recommence drilling for the 2007/2008 season as soon as weather conditions improved. A start date was set for October 1, 2006, and an agreement was negotiated with a drill company for 3 rigs. However after accepting the job at Caspiche the drill company redirected the rigs to another project at the last minute and with drill rigs in short supply it was not until January of 2007 that a rig was secured and drilling finally commenced.

Exeter continued to test the porphyry mineralization and collared its second hole both to verify results from a previous hole (CDH-5), and to check the model that suggested better mineralization would be intersected at depth beneath CDH-5. And so hole CSD-14 was collared 300 m to the south of hole CSR-13. CSD-14 intersected similar epithermal style mineralisation as that recorded for hole CDH-5 down to 200 m, which was the depth at which CDH-5 had been terminated. But at 220 m CSD-14 entered a quartz diorite stock containing intense stockwork veining. The hole was driven on and continued to intersect stock work mineralization down to its final depth of 740 m, and was forced to stop because of poor drilling conditions. It ended in mineralisation.

The next hole, CSD-15 was collared 400 m to the northwest. CSD-15 intersected 58 m of overburden followed by 38 m of epithermal style mineralization, and then went into porphyry wall-rock mineralization which continued until the end of the hole at 1,001.4 m.

Hole CSD-16 was collared midway between CSD-14 and 15, 200 m from each. CSD-16 penetrated bedrock at 73.5 m and entered an intensely silicified breccia unit for 100 m. At 180 m the hole intersected what is now recognised as the earliest and best mineralised intrusion on the property, early diorite porphyry, and continued to intersect spectacular stockwork veining to a depth of 792 m, once again ending in mineralization (Figure 4). It was subsequently extended to a depth of 957 m. The final porphyry intersection reported was 792.5 m @ 0.96 g/t Au and 0.4% Cu.

CASPICHE



Figure 4. Stockwork mineralization in drill hole CSD-016 (281.7 – 297.3 m).

By the end of the 2007-2008 season 13 additional holes had been drilled for a total of 7,073 m. Follow up drilling has continued to record significant continuous mineralised intercepts such as hole CSD-032 which reported 1,234 m grading 0.89 g/t Au and 0.33% Cu including 708 m grading 1.22 g/t Au and 0.42% Cu (Table 4).

Table 4. Selected intercepts from Caspiche Porphyry.

OXIDE GOLD MINERALIZATION						GOLD-COPPER MINERALIZATION					
Hole ID	From (m)	To (m)	Width (m)	Gold (g/t)	Copper (%)	Hole ID	From (m)	To (m)	Width (m)	Gold (g/t)	Copper (%)
CSD-027	0	150	150	1.06	0.01	CSD-032	95	1309	1214	0.90	0.33
CSR-013	40	214	174	0.88	0.01	CSD-023	102	1160	1058	0.70	0.35
CSR-020	6	126	120	1.16	0.01	CSD-016	165	957.5	792.5	0.96	0.40
CSR-022	22	150	128	0.86	0.01	CSD-035	120	1025.7	905.7	0.87	0.26
CSD-025	44	212	168	0.64	0.01	CSD-039a	126	1002	876	0.75	0.29

Project geology overview

Quaternary alluvium covers over 90% of the Caspiche property. Geology of the sub-alluvium bedrock at Caspiche Porphyry which is presented in figure 5 has been interpreted using drill hole data. The geological model for Caspiche Porphyry is the product of work by Exeter geologists and contributions from Dick Sillitoe (Sillitoe, 2008; 2009a; 2009b) and Greg Corbett (2008) (Figure 5).

Basement rocks at Caspiche comprise variably bedded Tertiary age volcanic sandstone and siltstone of the Caspiche Formation. In the vicinity of Caspiche Porphyry this unit is overlain by a 500 to 700 m thick sequence of homogeneous polymict, volcanic breccia which contains occasional plastic deformed felsite clasts indicating the material to be coeval with volcanism. The homogenous nature of this unit has led to the speculation that it is diatreme related in origin.

Two main porphyry intrusions, early and early inter-mineral phases, constitute the well mineralised Caspiche stock, with a third, late inter-mineral phase abutting it to the west and south (Sillitoe, 1999b). The well-mineralized stock measures roughly 300 x 400 m in plan view, with little appreciable change in total size over its defined 1,200-m vertical. The early porphyry is blind being concealed beneath an average of 100 m of pre-

CASPICHE

mineral volcanic breccia. Note that the geological map in figure 5 shows the early porphyry schematically projected through 150 meters of volcanic breccia to surface.

A late stage diatreme breccia has been observed in drill core on the western side of the Caspiche porphyry system, where it dips westward at approximately 30°. The breccia extends for a distance of at least 1 km in a north-south orientation and has been drilled to a thickness of 280 m. It is highly polymictic, matrix-supported and contains abundant mineralized clasts near to its contact with the wall-rocks.

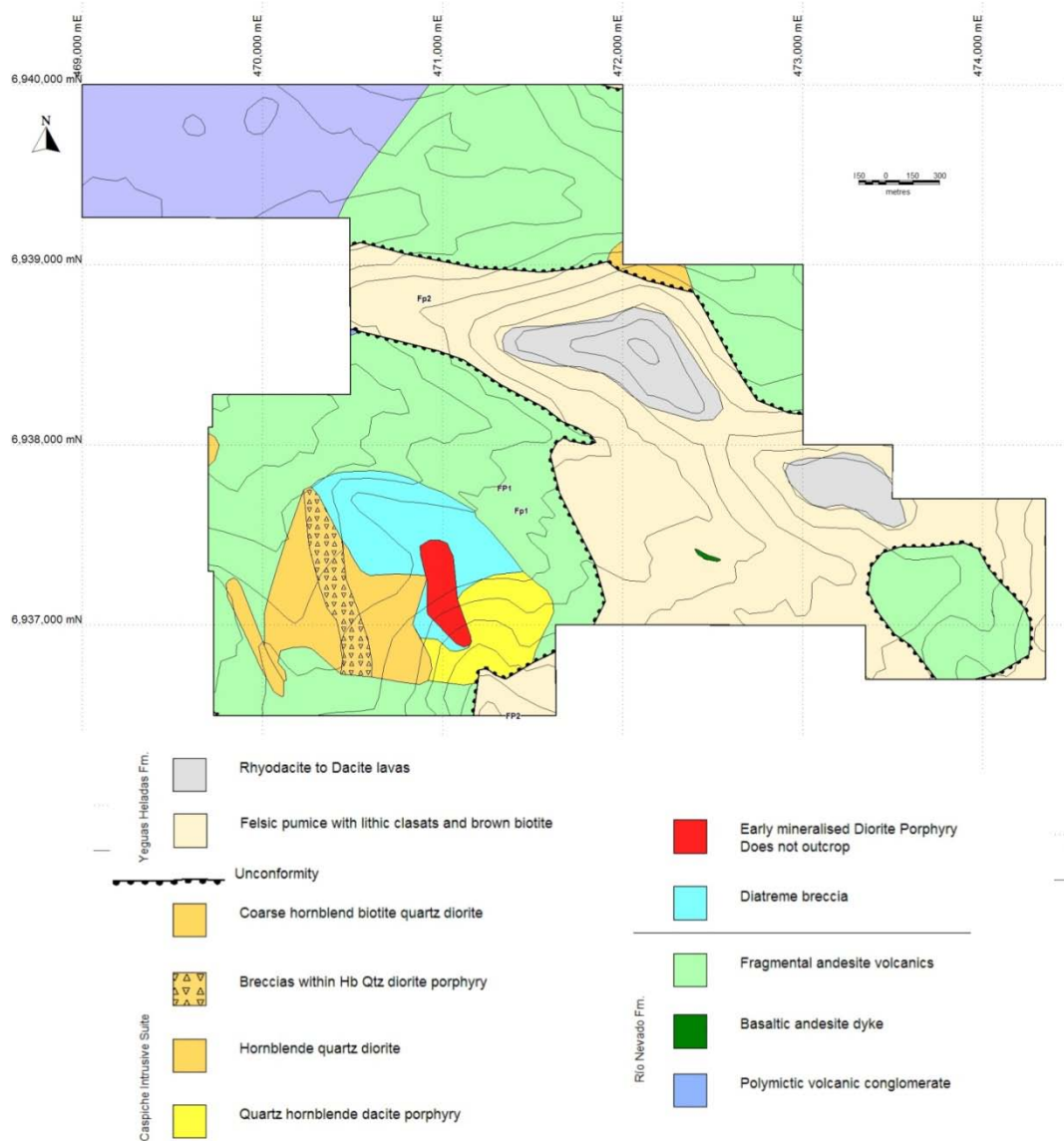


Figure 5. Interpreted sub-alluvium geologic map of Caspiche. Note in order to show the position of the early diorite porphyry stock at Caspiche Porphyry it is projected to surface through approximately 150 m of volcanic breccia.

Three dominant alteration types are recognised being potassic, intermediate argillic and advanced argillic. Potassic alteration is overprinted by intermediate argillic and both these are affected by the advanced argillic alteration assemblage. Massive silica and vuggy residual silica ridges crop out in the south and north of the Caspiche Porphyry prospect.

Potassic alteration is the earliest alteration phase and comprises early biotite dominant and later K-feldspar dominant phases. The biotite dominant phase is best developed in the basement volcanics and K-feldspar dominant is best developed in the early diorite stocks and adjacent volcanic breccia. Potassic alteration is more pronounced at deeper levels.

CASPICHE

Intermediate argillic alteration overprints much of the potassic alteration. The main effects of this overprint are to convert plagioclase to illite and magnetite to hematite (martitization). Due to this the porphyry mineralization is non magnetic to depths of around 400-500 m.

Siliceous ridges which outcrop on the northern and southern peripheries of the Caspiche Porphyry prospect are the surficial expression of high sulphidation epithermal style mineralization that extends to depths up to 200 m. These comprise strongly silicified volcanics as well as quartz-feldspar porphyry stock containing structurally controlled zones of vuggy residual silica and alunite up to 35 m wide which in drill core are observed to extend to depths of up to 250 m.

Oxidation effects are notable in the upper 100 m to 150 m and occasionally down to 200 m. The contact between oxide and sulphide material is sharp. Minor chalcocite is rarely observed on the oxide-sulphide contact, but there is no significant copper enrichment, presumably because copper-enriched solutions migrated laterally. Visually the contact is easy to pick and is geochemically sharp with a notable depletion in copper in the oxide zone, being less than 0.03% copper.

Dominant ore minerals include chalcopyrite, covellite and bornite, with bornite becoming the dominant mineral species with depth. Advanced argillic altered zones contain a high-sulphidation sulphide assemblage in which pyrite is accompanied by typically fine-grained intergrowths of enargite, tennantite, chalcopyrite, chalcocite, covellite and minor bornite.

Resource Definition

Once Exeter recognized the potential of the discovery, a drill program was designed to give the maximum possible resource tonnes using the minimum required drill m. For this purpose Exeter consulted closely with independent consultants thereby establishing the optimum drill spacing required to define a Canadian Institute of Mining Metallurgy (CIM) compliant inferred resource, The sulphide portion of the deposit has subsequently been systematically diamond drilled on 200 m (m) centres or closer with deep diamond drill holes (500-1500m depth) over a 13 month period (over 2 drill campaigns) enabling the establishment of the CIM compliant resource in tables 5 and 6 below. These programs were supplemented by shallower RC drilling focussed on the oxide resource over the 2007/08 season.

The near surface oxide resource has been almost totally depleted in copper making it potentially amenable to heap leaching for gold, as is common industry practice for such deposits. The sulphide material at depth would require a gold-copper flotation recovery path. Internationally recognized engineering groups and metallurgical laboratories are currently conducting metallurgical testwork and infrastructure studies on the project.

Table 5. Caspiche Inferred Mineral Resource Estimate, September 2009.

Material	AMEC Gold Equivalent Cut-off**	Million metric tons	Gold (g/t)	Gold (million ounces)	Silver (g/t)	Silver (million ounces)	Copper (%)	Copper (billion pounds)	EXETER Gold Equivalent (g/t)*	EXETER Gold Equivalent (million ounces)*
Oxide	0.2	100	0.50	1.6	2.49	8			0.5	1.7
Sulphide	0.3	1,017	0.55	18.0	3.94	129	0.22	4.84	0.98	32.0
Totals		1,117	0.55	19.6	3.81	137			0.94	33.7

Table 6. Caspiche Inferred Mineral Resource Estimate, September 2009. – HIGHER SULPHIDE CUT-OFF SCENARIO.

Material	AMEC Gold Equivalent Cut-off**	Million metric tons	Gold (g/t)	Gold (million ounces)	Silver (g/t)	Silver (million ounces)	Copper (%)	Copper (billion pounds)	EXETER Gold Equivalent (g/t)*	EXETER Gold Equivalent (million ounces)*
Sulphide	0.9	499	0.78	12.5	4.16	67	0.3	3.30	1.35	21.8

The mineral resource estimate was based on a total of 25,187 m of drilling, including 44 drill holes completed by both Exeter (22,127 m of drilling) and earlier third parties (3,060 m of drilling). Gold, copper and silver were

CASPICHE

estimated using Ordinary Kriging for most domains with the exception of the volumetrically small and poorly mineralized diatreme breccia unit which was estimated using the inverse distance squared estimation method.

To determine prospects of economic extraction the results were tabulated and reported within a break-even whittle open pit shell. Only mineralized material contained within the pit shells has been reported. Mining and process costs and process recoveries were estimated from benchmark studies of similar projects in Chile.

The attached figures (6, 7 and 8) show different views of the block model and the associated resource in plan, cross and long sectional view. It is apparent that the higher grade portion of the deposit demonstrated in table Y consists of coherent centrally located higher grade zone which contains the bulk of the metal. This geometry will doubtless assist with project scheduling and has advantages for both open cut and underground exploitation.

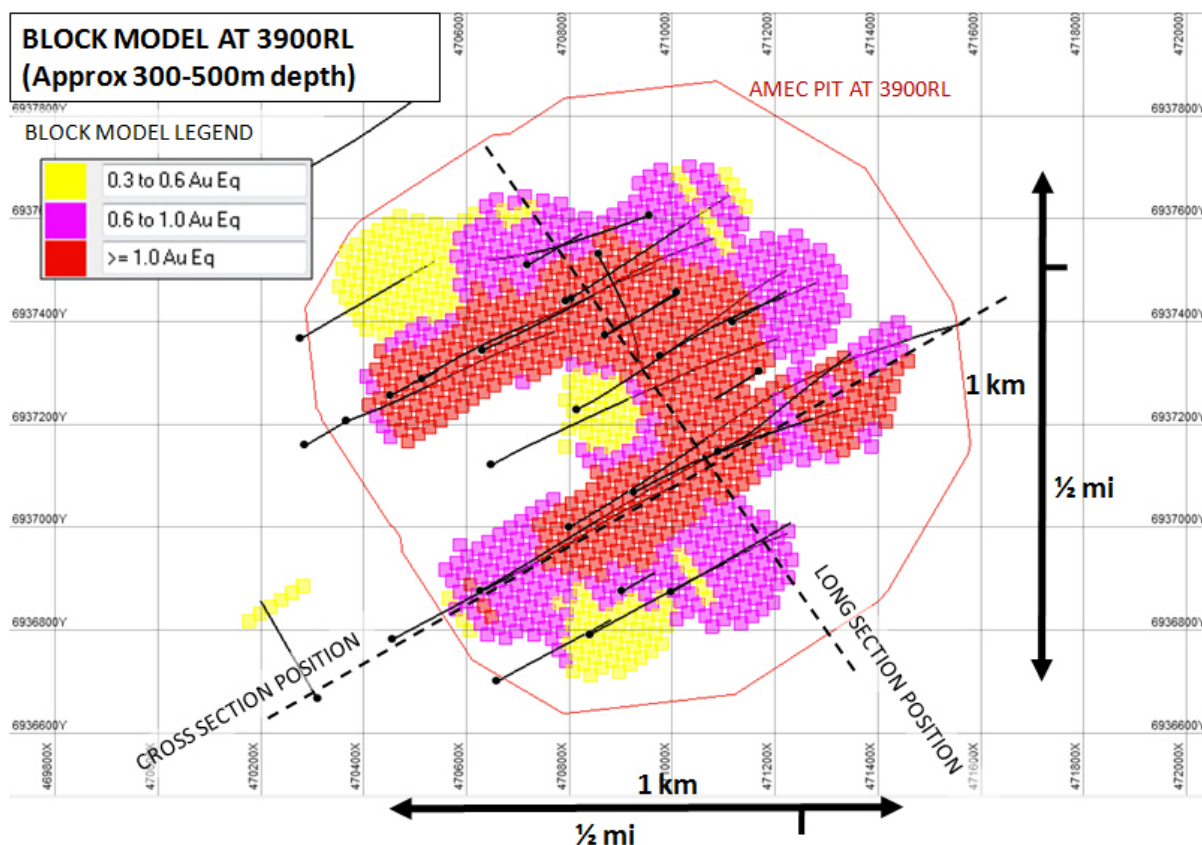


Figure 6. Plan view of the Caspiche deposit at 3900RL (approximately the middle of the currently defined resource. Exeter drilling is shown with drillhole pierce points obscured by blocks. The formula for the AMEC gold equivalent calculation is shown in the footnote below.

The mineral resource estimates were prepared under Canadian Institute of Mining Metallurgy and Petroleum (CIM) Definition Standards (2005) and CIM Best Practice Guidelines for preparing mineral resources and mineral reserves by independent consultants AMEC International of Chile, under the supervision of Rodrigo Marinho, CPG-AIPG

Modelling supports the geological interpretation that the deposit remains open in key locations at depth, to the south and to the west.

CASPICHE

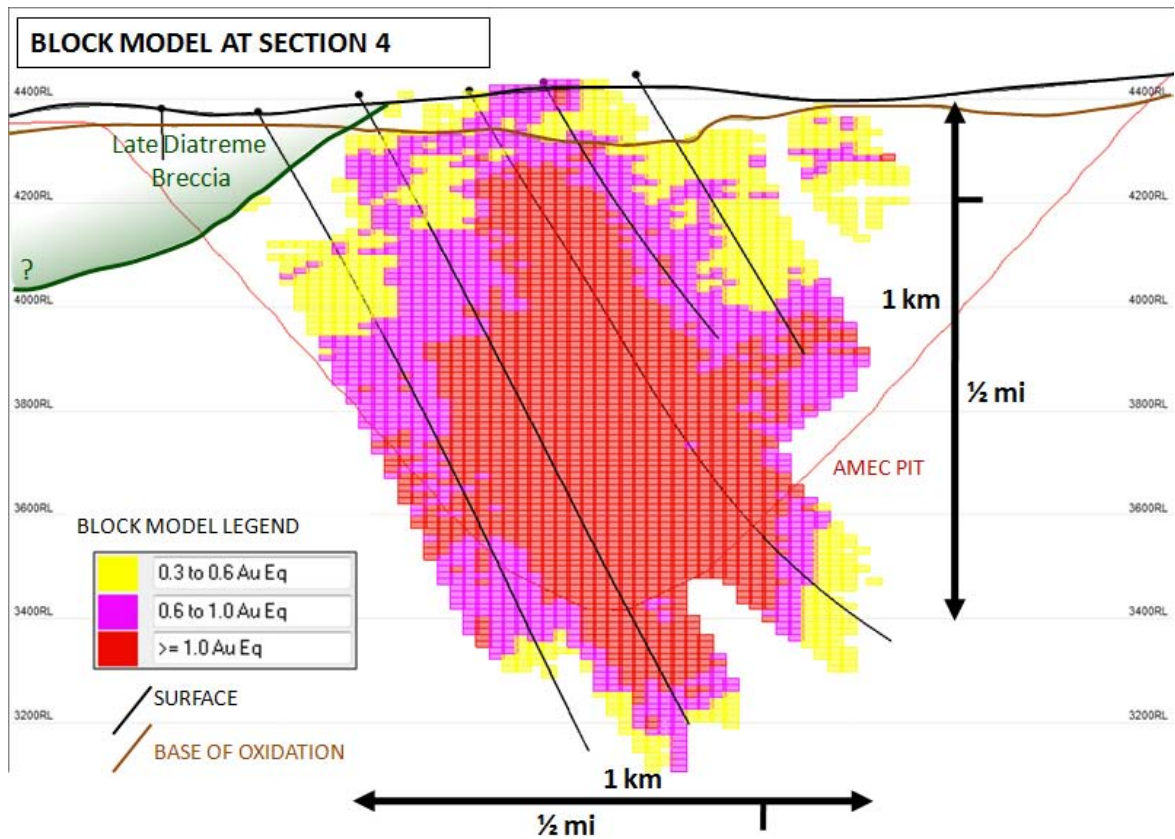


Figure 7. Cross section of the Caspiche deposit at the position marked in Figure 1. Exeter drilling is shown. The formula for the AMEC gold equivalent calculation is shown in the footnote below.

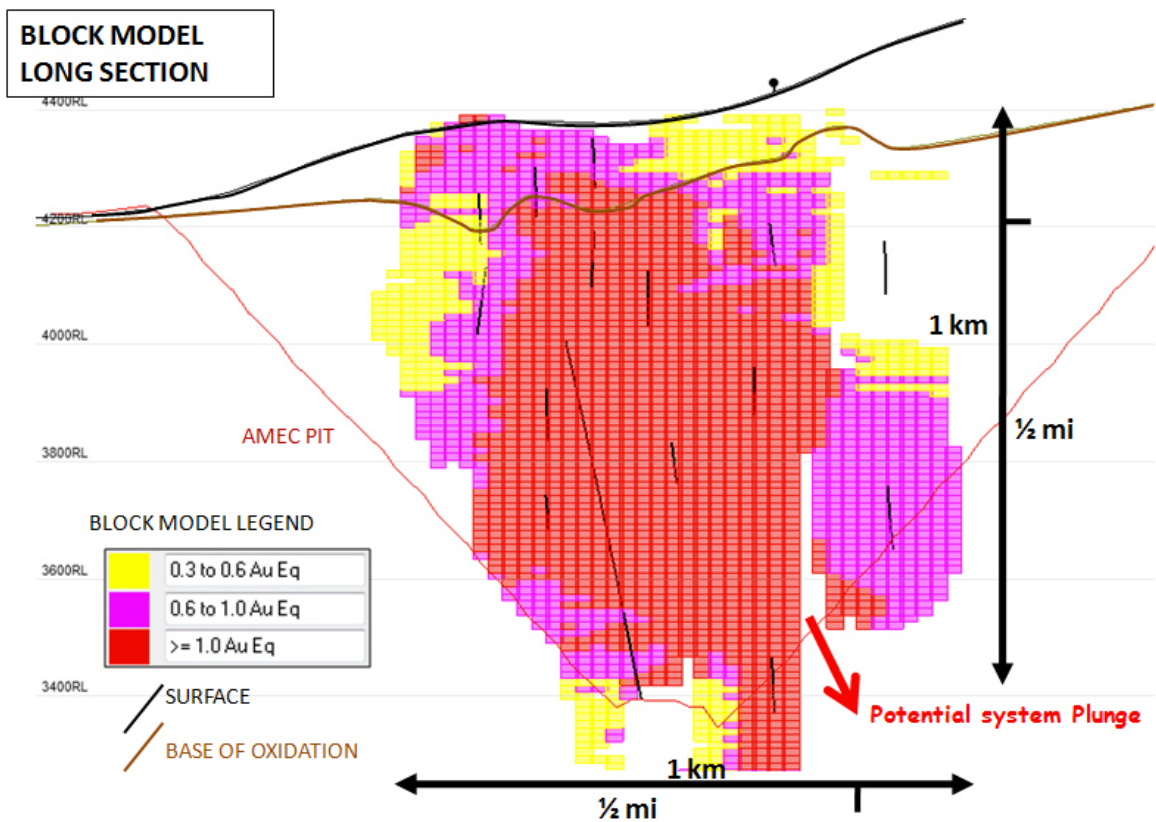


Figure 8. Long section of the Caspiche deposit at the position marked in Figure 1. Exeter drilling is shown. The formula for the AMEC gold equivalent calculation is shown in the footnote below.

CASPICHE

*Gold ("Au") equivalence for copper ("Cu") and silver ("Ag") was calculated by Exeter using assumed metal prices of US\$800/ounce ("oz") for Au, US\$12/oz for Ag and US\$2/pound ("lb") for Cu. The formula to calculate Au equivalence for Cu was pounds of Cu multiplied by 2 and divided by 800; Au equivalence for Ag was calculated using the formula oz of Ag multiplied by 12 and divided by 800, and in both cases assumes 100% recovery. Numbers in the tables have been rounded to the number of shown significant figures.

**AMEC chose to report the contained inferred resource above a Au equivalent cutoff. For this they used prices of US\$825/oz for Au and \$2.07/lb for Cu. The formula used to calculate Au equivalents is $Au(g/t) + Cu(\%) * (Cu \text{ Price } [\$/lb]/Au \text{ Price } [$/oz]) * (Rec \text{ Cu}/Rec \text{ Au}) * 0.06857 * 10000$. Where Rec = % recovery and 0.06857 = conversion g*lb/oz. Au and Cu are the block kriged Au and Cu grades. Projected metallurgical recoveries were 75% and 85% for Au and Cu in sulphide material and 50% for Au in the oxide zone. Recoveries are based on benchmarking of similar deposits.

Stage of development

The Caspiche project is currently in a resource definition stage in regard to the Caspiche Porphyry central zone that has been the principal subject of this paper. Exploration is continuing with three main objectives; to increase confidence levels in the current resource; to define additional economic mineralisation where zones have not been closed off and to look for satellite deposits.

In spite of the size and as-yet undefined limits of Caspiche Porphyry, a range of test programmes and preliminary development studies have been started and are ongoing.

Exeter's standard procedures of orientated core drilling, point load testing and geotechnical logging have already allowed preliminary Rock Mass Ratings (RMR) to be applied. Scout metallurgical testwork programs on oxide and sulphide intercepts have been carried out and new test programs are either underway or being planned shortly following geological interpretation. Baseline environmental monitoring programmes are under way and a series of strategic studies have been carried out to look at the power and water supplies necessary for a large tonnage operation. Subsequently we have identified potential sources of water and limestone and have taken steps to secure the appropriate rights.

All these programs and activities are directed towards assisting management to review alternative and appropriate development strategies for the project. As the concepts are sorted and developed by in-house engineers and external consultants, cost databases and scoping studies help us to assess the economic potential and aspects of feasibility even while exploration continues.

Conclusions and comments

Exeter saw an opportunity, and negotiated the Caspiche property, at a time when gold was at around US\$400 an ounce, and there was not a lot of appetite for it. It was a case of being in the right spot at the right time, partly by design, but equally luck did play a role.

Maricunga porphyry deposits typically have a strong magnetic response. However, the strong magnetic anomaly at Caspiche Porphyry was a bit of a "poison apple". It drew attention to Caspiche porphyry, but when it was determined to be associated with a poorly mineralised intrusive interest was quickly lost. Exeter was also attracted to the aeromagnetic anomaly initially, and thought it a favourable sign. Fortunately it had already been drill tested. The good mineralisation at Caspiche Porphyry is non magnetic to a depth of 400-500 m due to the overprinting of the earlier porphyry style mineralisation by advanced argillic alteration associated with the subsequent high sulphidation epithermal mineralisation. It is important not to adhere too strongly to generally accepted mineralisation models.

The exploration undertaken by previous workers was very helpful in making the discovery at Caspiche. Interrogation of this data greatly assisted the modelling of an initially hypothetical ore body at Caspiche Porphyry, through vectoring.

CASPICHE

Exeter has a very high level of productivity for the size of the workforce. The reason behind this is twofold: hard work and cooperation. Investors and consultants who spend any time on site tend to comment on the overall dedication of the team toward achieving the common goal. This dedication is brought about, to a large degree, by Exeter's corporate policy to include workers in the benefits of success through options. Exeter currently has near 10 million options issued almost all of which are held by employees, directors and consultants. The issuing of options extends right down to the foot soldiers of the company; many field technicians have been issued with options. When everyone has the same interest in ensuring success of the company there is a truly unified effort and many potential obstacles disappear.

Possibly the greatest underlying reason for Exeter's success and rapid growth is funding. Exploration expenditure on Caspiche, as well as Exeter's other exploration projects, rivals and in many cases surpasses the budgets that majors have to work with on similarly prospective areas. Exeter's corporate team has been successful in raising funds throughout the most trying times during the economic crisis.

Being a lightly structured company Exeter was able to move quickly to take advantage of opportunities when they are found. Additionally, funds that are generated go toward actual exploration, without the dilution which tends to take place in, top heavy, organizations.

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