

ASX ANNOUNCEMENT

24 JANUARY 2022



Quarterly Report – December 2021

Meteoric Resources NL (ASX: MEI) (“Meteoric” or “the Company”) provides shareholders with its Quarterly Report for the three-month period ending 31 December 2021. The Company made significant progress at the Palm Springs Gold Project during the quarter, including impressive cyanide leach recoveries from metallurgical test work and more promising gold assays. In Brazil, Meteoric completed its latest drilling program at the Juruena Project.

Highlights from the quarter include:

Western Australia - Palm Springs Gold Project

- Metallurgical test work carried out on drilled core from the sulphide zone at the Butchers Creek Deposit has achieved excellent gold dissolution of 96.4% after only 24 hours leach time
- Ore from Butchers Creek has been deemed amenable to a low-cost processing route incorporating a standard CIL cyanide leach plant
- Final assays from drilling at the Butchers Creek Deposit in 2021 added further zones of gold mineralisation, enhancing the anticline hinge zone target
 - BCRD486 – **29m @ 2.0g/t Au** from 286m including – **2m @ 5.9g/t Au** from 291m including – **2m @ 8.8g/t Au** from 312m
 - BCRD482 – **9m @ 1.4g/t Au** from 311m
 - BCRD483 – **57m @ 1.6g/t Au** from 223m including - **18m @ 3.1g/t Au** from 234m
 - BCRD484 – **32m @ 1.4g/t Au** from 266m including - **4m @ 6.0g/t Au** from 266m
- These results further confirmed the thick zones of gold mineralisation in the hinge of the Butchers Creek Anticline cored by a high-grade zone that backs up previous results
- Results further enhance the excellent progress to date at Palm Springs and provide confidence for Meteoric to forge ahead with a scoping study looking at open pit and underground development scenarios with results due Q1 2022
- Additional new prospective areas have received Heritage clearance paving the way for an exciting 2022 regional exploration program to test for Butchers Creek extensions and repeats on several targets across the Company’s extensive tenement position

Brazil – Juruena Gold Copper Exploration

- The Global Resource for Juruena gold stands at 1.9Mt @ 6.3 g/t Au for 390Koz of gold with over 40% of the resource classified in the Indicated category underpinning an exciting development opportunity. Scoping Study commenced for the development of Dona Maria, Crentes and Querosene deposits with results due Q1 2022
- Final results from a three-hole program completed for 2400m of diamond drilling were received during the quarter – highlights include
 - Abundant porphyritic intrusives, where veining and alteration indicate the presence of a magmatic hydrothermal (porphyry) mineralised system; and
 - A 640m zone of anomalous copper at greater than 200 ppm Cu reported in hole JUDD043
- Meteoric is seeking a major partner to advance exploration for a Tier 1 porphyry deposit at Juruena

Corporate

- Completion of a \$1.7 million capital raising to fund ongoing development of its portfolio including a Scoping Study at Juruena and preliminary Mining Studies at Butchers Creek
- In addition, a Share Purchase Plan was oversubscribed raising \$1.088 million from existing shareholders
- Cash and liquid assets of over \$4 million

Palm Springs Gold Project, WA

During the quarter Meteoric announced the initial results of metallurgical test work carried out on drill core from the sulphide zone at the Butchers Creek Deposit, part of the Company's Palm Springs Project. The metallurgical test work program was designed as a series of sighter tests to gauge the complexity required to recover gold from Butchers Creek using standard sulphide ore screening techniques.

The initial metallurgical test results of Butchers Creek hole BCRD 484 (Composite #1) (ASX Announcement 13th December 2021), produced an outstanding result in that a low-cost simple "whole of ore" flowsheet using CIL only is indicated as being suitable for the project. Excellent cyanide leach recoveries in excess of 96%, with potential to improve on this result, were achieved without the added complication of capital and operating cost imposed by either gravity recovery or flotation.

The high recovery number will feed directly into the Scoping Study, and it is anticipated that it will have a substantial impact on mine design, as well as capital and operating cost estimates. The outcomes from the Scoping Study will drive the Company's Halls Creek strategy in 2022 and will be released in the first quarter 2022.

Meteoric also continued to achieve strong gold assays from the Butchers Creek Deposit. The results from final assays for 2021 (see ASX Announcement 26th October), have again confirmed Meteoric's model of broad, consistent intercepts averaging 2g/t of gold, which are ideal for open pit exploitation. Assays continued to deliver high-grade core with results consistently above 5g/t that sit inside this broad zone.

Brownfields exploration completed during 2021 identified new targets to the north and west of Butchers Creek that the Company is confident will open up exciting new drill targets and drive a far more active exploration plan for 2022 as state borders reopen.

The 2021 program further fleshed out the mineralisation model. Reported in September (ASX Announcement 22 September 2021), the orebody is exposed beneath the historic pit and plunges shallowly to the south, with drilling results supporting the presence of high-grade shoots occurring within the thick moderate-grade hinge zone. The orebody geometry suggests that development could proceed underground to the south from a substantially enlarged historic open pit.

Based on these results, Meteoric has moved into the following studies which will form the basis of a Scoping Study:

- Open pit optimisations to develop ore immediately beneath the historic pit;
- Underground development scenarios to exploit deepest portions of the resource;
- Additional metallurgical studies on 2021 drill core; and
- Assessing process route designs.

The 2021 drilling season was carefully planned to improve confidence in the high-grade portions of the resource (5.2Mt @ 1.9g/t Au [319,000 oz] comprising 3.3Mt @1.7 g/t Au Inferred and 1.9Mt @ 2.2g/t Au Indicated) by targeting the hinge zone position in areas with insufficient drilling and to test for continuations of mineralised syenite south of the current resource. The Company completed 10 drill holes for a total of 3,241m (1,959m RC and 1,282m DD), comprising nine RC pre-collars (only five received diamond tails) and one diamond tail re-entry of BCRC482 from the 2020 drill campaign.

Hole BCRD486

Drilling on Section 9660mN confirmed continuity of the partial hinge zone intersected 40m north in BCRC476 (21m @ 6.07g/t Au from 264m - ASX:MEI 30 November 2020). BCRD486 intersected a 48m thick zone of syenite on the shoulder of the hinge zone (not optimal) grading 29m @ 2.0g/t Au from 286m, including 2m @ 5.9g/t Au from 291m & 2m @ 8.8g/t Au from 312m.

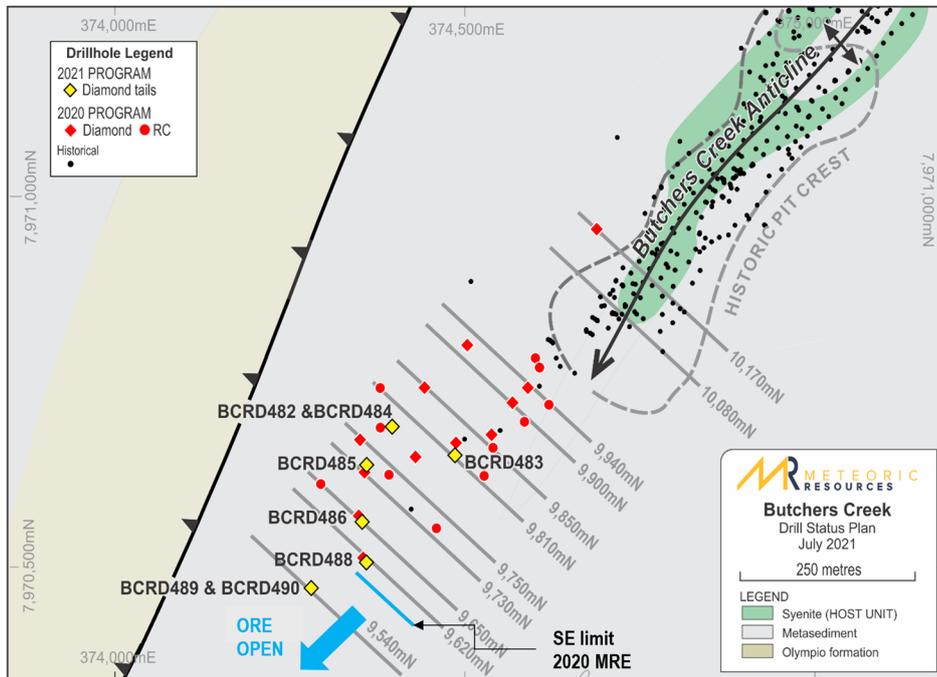


Figure 1. Project geology and collar plan showing historic drill holes and MEI's 2020 & 2021 programs.

Blue line shows SE limit of 2020 MRE. Solid blue arrow shows direction of fold plunge and orebody which remains open.

The presence of internal higher-grade zones within the broader mineralised intercept supports the existence of previously reported high-grade shoots within the broader hinge zone intersections. These shoots will be modelled for possible extraction by both open-pit and underground mining methods as part of the Scoping Study.

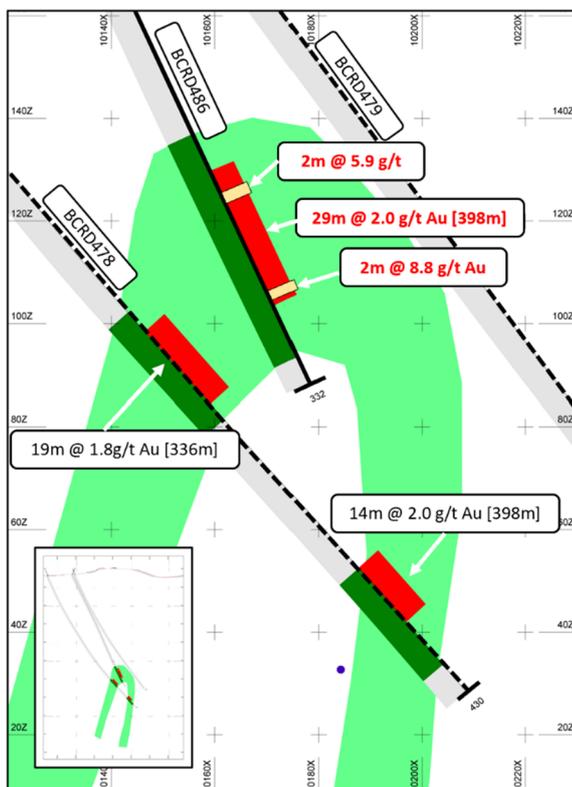


Figure 2. Detailed X-Section 9660m N: BCRD486 geology and mineralised intercept.

Hole BCRD486 intercepted the shoulder of the Hinge Zone with 29m @ 2.0 g/t Au with several internal high-grade zones of 2m @ 5.9 g/t Au and 2m @ 8.8g/t Au.

Solid drill traces are holes from 2021 Drilling Program. Geology is shown to left of trace and significant gold grades to right. Host Syenite = Green.

Dashed drill traces are from 2020 Drilling Program.

Inset shows complete X- Section from surface.

Holes BCRD482 and 484

Drilling on Section 9780mN confirmed continuity of the Hinge Zone intersected 40m south in BCRC475 (45m @ 2.54g/t Au from 259m - ASX:MEI 15/06/2020). BCRD484 intersected a 79m thick zone of syenite in the hinge zone grading 32m @ 1.4g/t Au from 266m (including 4m @ 6.0g/t Au from 266m), and 20m @ 0.7g/t Au from 311m (ASX:MEI 22 September 2021).

The presence of a higher-grade inclusion – 4m @ 6.0g/t Au supports the presence of postulated high-grade shoots within the hinge zone intersections.

BCRD482 intersected the limbs of the syenite a considerable distance from the hinge zone (60m and 100m respectively) but still intersected mineralisation of 9m @ 1.4g/t Au from 302m on the Western Limb and 9m @ 0.6g/t Au from 407m on the Eastern Limb

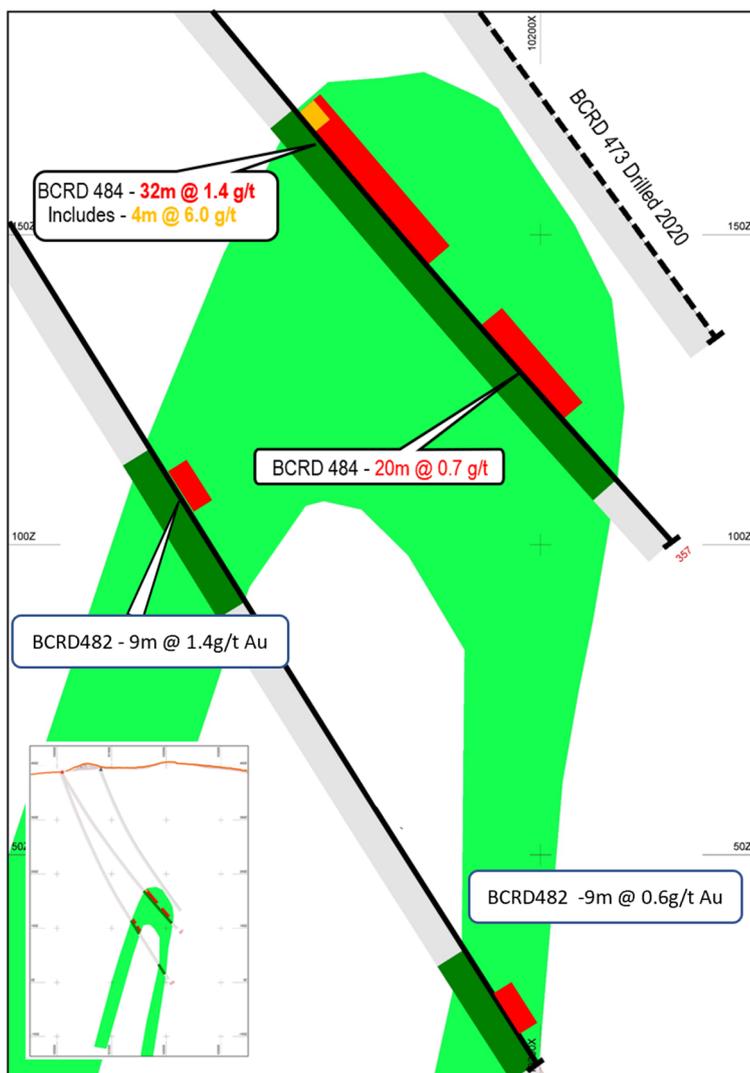


Figure 3. Detailed X-Section 9780m N: BCRD484 & 482 geology and mineralised intercepts.

Hole BCRD484 intercepted a broad hinge zone of 32m @ 1.4 g/t Au with an internal high-grade zone of 4m @ 6.0 g/t Au from 266m downhole. A further zone of 20m @ 0.7 g/t Au was intercepted from 311.

Hole BCRD482 intercepted a 29m interval of syenite on the Western Limb grading 9m @ 1.4g/t Au (a considerable 60m down dip from Hinge Zone).

Solid drill traces are holes from 2021 Drilling Program. Geology is shown to left of trace and significant gold grades to right. Host Syenite = Green.

Dashed drill traces are holes from 2020 Drilling Program.

Inset shows complete X- Section from surface.

Geology and Mineralisation

Drilling during 2021 confirmed gold mineralisation at Butchers Creek is stratabound within a single intermediate intrusive unit (syenite). The localisation of alteration, including intense sulfidation and related gold mineralisation within the syenite appears to be related to a rheology contrast between the syenite and the surrounding sedimentary rocks. The syenite deforms in a brittle manner allowing veining, fracturing and alteration to concentrate there. This is most prevalent in the hinge zone region of a northeast striking, shallowly southwest plunging fold where thick zones of mineralisation (up to 70m down hole) are often intersected.

Juruena Copper-Gold Porphyry Project, Brazil

Meteoric plans to forge ahead with development plans for exploiting the Juruena gold resources in conjunction with conducting the process for finding a project partner on the copper-gold porphyry exploration. The Company has commenced work on a Scoping Study for the development of the Dona Maria, Quereosene and Crentes gold deposits with Brazilian mining consultancy, GE 21. Meteoric anticipates reporting the results of the Scoping Study in Q1 2022. The Company has also commenced the application process for mining licences over the key areas proposed for open-pit and underground mining.

June 2021 Mineral Resources												
Country	Project	Deposit	Cut-Off (g/t Au)	Indicated Resource			Inferred Resources			Total Resource		
				Dry Tonnes	Grade (g/t Au)	Insitu Gold (oz)	Dry Tonnes	Grade (g/t Au)	Insitu Gold (oz)	Dry Tonnes	Grade (g/t Au)	Insitu Gold (oz)
Brazil	Juruena	Dona Maria < 100m depth	0.8	125,000	11.0	44,000	164,000	2.8	15,000	289,000	6.3	59,000
		Quereosene < 100m depth	0.8	25,000	27.4	22,000	151,000	13.5	65,000	176,000	15.4	87,000
		Crentes < 100m depth	0.8	-	-	-	897,000	1.9	54,700	897,000	1.9	54,700
		Sub total < 100m	0.8	150,000	13.7	66,000	1,212,000	3.5	134,700	1,362,000	4.6	200,700
		Dona Maria > 100m depth	2.5	130,000	16.2	84,000	274,000	6.4	57,000	404,000	10.9	141,000
		Quereosene > 100m depth	2.5	6,000	13.5	6,000	103,000	13.6	33,000	109,000	11.1	39,000
		Crentes > 100m depth	2.5	-	-	-	46,000	4.2	6,200	46,000	4.2	6,200
		Sub total > 100m	2.5	136,000	20.6	90,000	423,000	7.1	96,200	559,000	10.4	186,200
JURUENA TOTALS				286,000	17.0	156,000	1,635,000	4.4	230,900	1,921,000	6.3	386,900

Table 1. Juruena Project Mineral Resource Estimate – ASX:MEI 15th June 2021.

In October Meteoric announced results from the Deep Diamond drill hole program to test the Porphyry Au-Cu potential of a giant IP chargeability anomaly detected at the Juruena Project in late 2020. The drilling program completed three holes (JUDD042-044) for 2,421m of diamond drilling and intercepted a large Cu-Au enriched magmatic hydrothermal system centred on a series of intrusive, intermediate porphyries.

Within this enormous magmatic hydrothermal alteration system, Company geologists documented two (2) distinct geochemical associations: 1) an epithermal style of mineralisation with gold (Au) + silver (Ag) ± tellurium (Te), and 2) a porphyry style of mineralisation with characteristic propylitic alteration and anomalous copper (Cu) + molybdenite (Mo) grades (up to 0.9% Cu & up to 0.5% Mo) that represent copper enrichment which is two orders of magnitude above background (background 2 ppm Cu in unaltered granite at Juruena). Porphyry copper potential is best exemplified in JUDD043 with 640m @ 206 ppm Cu within a thick zone of propylitic alteration centered on a cluster of intermediate porphyry intrusives.

Although economic porphyry copper-gold mineralisation is yet to be discovered at Juruena, the drilling confirmed the presence of a significant porphyry system. The recognition of the porphyry system is underpinned by the diagnostic veining and alteration zones observed in the deep drilling. The potential for a discovery of an economic porphyry system remains high.

As exploration for Tier 1 porphyry copper deposits such as the Juruena target is high-cost and high-risk exploration, Meteoric is seeking a major partner to advance this exciting opportunity. The Alta Floresta Belt is currently the focus of many major mining and exploration companies carrying out belt-wide geophysical surveys to identify porphyry copper exploration targets.

Other Projects

Webb Diamond JV (Ownership 16% MEI / 82% Geocrystal Pty Ltd)

The Webb Diamond JV is focused on the evaluation of a large kimberlite field comprising 280 nulls-eye targets and covers an area of 400km². About 23% of the targets have been drill tested with 51 kimberlite bodies identified. There was no activity reported during the quarter.

Warrego North IOCG Project (Ownership 49% MEI / 51% Chalice Gold Mines Limited)

Located in the Northern Territory, the Warrego North Project is approximately 20km north west of the historical high-grade Warrego Copper-Gold Mine, the largest deposit mined in the area producing 1.3 Moz Au and 90,000 tonnes of copper.

Chalice Gold Mines Limited (ASX:CHN) can earn up to 70% interest in the project by sole funding \$800,000. There was no activity reported during the quarter.

Canadian Projects

The Company's Canadian cobalt projects (Mulligan, Mulligan East, Beauchamp, and Iron Mask) remain under review. There was no activity reported during the quarter.

Corporate

Capital raising

Meteoric announced on 3 November 2021 that it had firm commitments to raise \$1.7 million through the placement of 100 million new shares to sophisticated and professional investors at \$0.017 per share with a one-for-five attaching Option exercisable at \$0.024 expiring 28 May 2023.

The Company also offered shareholders the right to participate in a fully underwritten share purchase plan (SPP) on the same terms as above, to raise an additional \$1.02 million. The SPP closed oversubscribed on 8 December, with total applications amounting to \$1,088,100 received prior to the closure of the SPP.

Annual General Meeting

The Company held its Annual General Meeting on 30th November where all resolutions were passed.

ASX Additional Information

Meteoric provides the following information pursuant to ASX Listing Rule requirements:

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure spend during the quarter was **\$1,107,000**. Full details of exploration activity during the December 2021 quarter are set out in this report.
2. ASX Listing Rule 5.3.2: There were no substantive mining production and development activities during the quarter.
3. ASX Listing Rule 5.3.5: Payment to related parties of the Company and their associates during the quarter was \$190,000 cash.

End Notes

The information contained in this announcement relate to the Company's past exploration results extracted from, or set out in, the following ASX announcements which are referred to in this Quarterly Activities Report:

- The report released 22 September 2021, "Thick gold mineralised zones at Butchers Creek."
- The report released 25 October 2021, "640m Zone of Anomalous Copper Mineralisation."
- The report released 26 October 2021, "Thick gold mineralised zones at Butchers Creek."
- The report released 3 November 2021, "Successful Capital Raising to Fund

Ongoing Development.”

- The report released 13 December 2021, “Butchers Creek Metallurgical Test Work Confirms Gold Recoveries Above 96%.”
- The report released 13 December 2021, “Share Purchase Plan Closes Oversubscribed.”

This release has been authorised by the Board of Meteoric Resources NL.

For further information, please contact:

Dr Andrew Tunks

Managing Director

Meteoric Resources

E: ajtunks@meteoric.com.au

T: +61 400 205 555

Victoria Humphries

Investor and Media Relations

NWR Communications

E: victoria@nwrcommunications.com.au

T: +61 431 151 676

The information in this announcement that relates to mineral resource estimates and exploration results is based on information reviewed, collated and fairly represented by Mr Peter Sheehan who is a Member of the Australasian Institute of Mining and Metallurgy and a consultant to Meteoric Resources NL. Mr Sheehan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Sheehan consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

APPENDIX 1

TENEMENT HOLDINGS AS AT 31 DECEMBER 2021

Tenement	Status	Project	Ownership %	Change in Quarter
E80/4407	Granted	ANGAS HILL (Webb JV)	16%	-
E80/4815	Granted	LAKE MACKAY (Webb JV)	16%	-
E80/5121	Granted	WEBB DIAMONDS (Webb JV)	16%	-
E80/5471	Granted	WEBB DIAMONDS (Webb JV)	16%	-
E80/5496	Granted	WEBB DIAMONDS (Webb JV)	16%	-
E80/5499	Application	WEBB DIAMONDS (Webb JV)	16%	-
EL23764	Granted	WARREGO NORTH	49%	-
M80/0106	Granted	PALM SPRINGS	97%	-
M80/0315	Granted	PALM SPRINGS	97%	-
M80/0418	Granted	PALM SPRINGS	100%	-
P80/1766	Granted	PALM SPRINGS	100%	-
P80/1768	Granted	PALM SPRINGS	100%	-
P80/1839	Granted	PALM SPRINGS	100%	-
P80/1854	Granted	PALM SPRINGS	100%	-
P80/1855	Granted	PALM SPRINGS	100%	-
E80/4856	Granted	PALM SPRINGS	100%	-
E80/4874	Granted	PALM SPRINGS	100%	-
E80/4976	Granted	PALM SPRINGS	100%	-
E80/5059	Granted	PALM SPRINGS	100%	-

BRAZIL

Claim No.	Status	City	Ownership %	Change in Quarter
Juruena Project				
866.079/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.081/2009	Granted Exploration Permit	COTRIGUAÇU/MT, NOVA BANDEIRANTES/ MT	100%	-
866.082/2009	Granted Exploration Permit	COTRIGUAÇU/MT, NOVA BANDEIRANTES/ MT	100%	-
866.084/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.778/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.085/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.080/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.086/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.247/2011	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.578/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.105/2013	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.934/2012	Granted Exploration Permit	COTRIGUAÇU/MT	100%	-
866.632/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.633/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.294/2013	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-
866.513/2013	Granted Exploration Permit	COTRIGUAÇU/MT, NOVA BANDEIRANTES/ MT	100%	-

Novo Astro Project				
867.246/2005	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%	-

CANADA

Claim No.	Province	Project	Ownership %	Change in Quarter
Various	Ontario	IRON MASK	100%	-
Various	Ontario	MULLIGAN	100%	-
Various	Ontario	MULLIGAN EAST	100%	-
517797 - 517963	Ontario	BEAUCHAMP	100%	-