BC Geological Survey Assessment Report 35289

NTS 082J 13E, TRIM 082J.082 LAT. 50 49' 26" N LONG. 115 38' 51" W

GEOLOGICAL, & GEOCHEMICAL REPORT ON MINERAL TENURES 1028136 & 1030825 EON & EON NORTH MAGNESITE MINERAL OCCURRENCES RADIUM HOT SPRINGS, B.C.

Golden Mining Division

by

Andris Kikauka, P.Geo. 4199 Highway 101, Powell River, BC V8A 0C7

> GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

February 5, 2015



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Minister of Freezeward Mines	UU MAR 0 5 201	5 凹	Assessment Report
Ministry of Energy and Mines BC Geological Survey			Title Page and Summary
TYPE OF REPORT (type of survey(s)):	MINISTRY OF ENERGY AN	D MINES	TOTAL COST:
Geological, Geochemical			\$2,336.01
AUTHORIS): <u>Andris Kikauka</u>		SIGNATURE(S):	A. Kikanka
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):		· · · · · · · · · · · · · · · · · · ·	YEAR OF WORK: 2014
STATEMENT OF WORK - CASH PAYMENTS EVENT	NUMBER(S)/DATE(S):	5538211	
property NAME: <u>Eon magnesite</u>	2		•
CLAIM NAME(S) (on which the work was done):	Eon 1028136	Eon North 1	030825
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COMMODITIES SOUGHT: Mg CO 3	magnesite	•	
MINERAL INVENTORY MINFILE NUMBER(S), IF KNO	•		<u></u>
Mining Division: Golden		NTS/BCGS: 082J	13E, 082J.082
LATITUDE: 50 ° 49 ' 26 "			
OWNER(S):	· · · · · · · · · · · · · · · · · · ·		
1) MGX Minerals Inc	2)		<u>.</u>
Jared Lazerson			
MAILING ADDRESS: 303 - 1080 Ho	west		
Vancouver BC	V6C 2T1		
OPERATOR(S) [who paid for the work]:	-		
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Mid Combrian Cathedra			that has apparent NE
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TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area) Ground, mapping <u>1:10,00</u>	3 hostares	1030825	1,041.80
			.,011.00
GEOPHYSICAL (line-kilometres)			· · · · · · · · · · · · · · · · · · ·
Ground			
Magnetic			· · · · · · · · · · · · · · · · · · ·
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Induced Polarization			· · · · · · · · · · · · · · · · · · ·
Seismic			•
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
Sitt	+ f ME YOF at	1030025	1004 21
•	orate fusion ME-XRF06_	1030825	1,294.21
Other			
 DRILLING (total metres; number of holes, size) 			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
			<u> </u>
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric			
(scale, area)			
•	trail		<u></u>
Underground dev. (metres)		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Other			H = = = 1
		TOTAL COST:	\$2,336.01

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SUMMARY

The Eon magnesite property consists of 2 contiguous claims (1028136, 1030825) totalling approximately 306.24 hectares (756.7 acres) located approximately 40 km (24.1 miles) northeast of Radium Hot Springs, BC (Fig 1, 2). The mineral claims are located approximately 5 kilometers northeast of Mt Brussilof magnesite mine in the Mitchell River valley. MGX Minerals (CSE: XMG) has carried out geological mapping and geochemical rock chip sampling (September, 27-28, 2014 on the Eon North Magnesite Zone), located on the northeast portion of the mineral property.

Sparry magnesite is associated with 'reef-like' coarse crystalline dolomite, recognized by its hardness, coarse crystalline texture, massive appearance, high density, white colour and partial reaction with dilute HCl. Magnesite with minor dolomite, occurs as lenses in the upper portions of Middle Cambrian Cathedral Formation. The Eon magnesite lenses appear to have shallow to moderate dip. Four rock chip samples taken on the Eon magnesite property were geochemically analyzed by Li Borate fusion, whole rock analysis ME-XRF-06 (XRF26), performed by ALS Minerals, North Vancouver, BC (Appendix A). Descriptions and whole rock analysis of four rock chip samples from Eon North claim (MTO ID # 1030825) are summarized as follows:

10.4	Fastin -	Manthina						bedding	-	
ID #	Easting	Northing	Elev (m)	width (m))	litholog	SY	strike	bedding dip	
14EON-01	597755	5631753	2268	3	2	Cathed	ral Fm	42	2 19 NW	
14EON-02	597758	5631792	2297	7	2	Cathed	ral Fm	44	1 20 NW	
14EON-03	597766	5631777	2311	L	2	Cathed	ral Fm	55	5 20 NW	
14EON-04	597783	5631793	2318	3	2	Cathed	ral Fm			
ID#	minerals		% MgO	% CaO	% A	1203	% Fe2O	3%	SiO2	
14EON-01	magnesite,	dolomite	22.5	29.5		0.02	0.	32	0.05	
14EON-02	magnesite,	dolomite	30.8	19.45		0.03	0.	43	0.05	
14EON-03	magnesite		39.2	9.04		0.05	0.	53	0.05	
14EON-04	magnesite,	dolomite	21.7	30.5		0.03	0.	32	0.08	

Sample 14EON-03 has the highest proportion of magnesite vs dolomite, but all samples are considered to be MgO enriched dolomite, unlike the nearly pure 45-47% MgO that occurs in portions of the Mount Brussilof magnesite deposit.

Additional detailed geological mapping, and geochemical sampling of the Eon North claim are recommended to identify depth extension of magnesite mineralizationfound in rock sample 14EON-03 (at 2,311 m, 7,580.1 ft elevation) on MTO 1030825, Eon North. Further geological mapping and geochemical sampling of the Eon claim is recommended to identify extensions of magnesite (at 2,100 m, 6,888 ft elevation) on MTO 1028136, Eon. The Eon North magnesite appears to be cut by a north trending fault zone that affects the magnesite horizon. There may be

extensions that are down-dropped and/or thrust up and/or displaced horizontally by faults. Bedrock is well exposed near the center of a large bowl shaped cirque where rock sample 14EON-03 (at 2,311 m, 7,580.1 ft elevation) is located. Further detailed mapping along the fault zone may identify possible extensions of the smaller magnesite zone outlined in 2014 sampling.

1.0 Introduction

This technical report has been prepared on behalf of MGX Minerals Inc, and describes geological, and geochemical fieldwork on the Eon magnesite mineral occurrences carried out in September, 27-28, 2014.

2.0 Location, Access, Infrastructure, & Physiography

The Eon magnesite property consists of 2 contiguous claims (1028136, 1030825) totalling approximately 306.24 hectares (756.7 acres) located approximately 40 km (24.1 miles) northeast of Radium Hot Springs, BC (Fig 1, 2). The mineral claims are located approximately 5 kilometers northeast of Mt Brussilof magnesite mining lease in the Mitchell River valley. The Eon mineral property is located on NTS map sheet 082J/13E and on TRIM map sheet 082J 082. The center of the magnesite showings are located at Latitude 50°49' 26" N and Longitude 115°38' 51" W. The property covers a large exposure of the Cathedral Formation located between Aurora and Assiniboine Creeks in the Golden Mining Division of southern British Columbia, Canada. (Figure 2).

From Radium Hot Springs, the Eon magnesite property can be accessed by paved Interprovincial Highway 93 N, after 20 km turn right on Settler's Road, after 11 km turn left, cross Kootenay River and proceed 19 km up Mitchell River valley. There is good infrastructure in the form of paved highways and all weather forest/mine service roads.

Magnesite, dolomite and limestone of the Cathedral Formation weathers prominently and parts of the Eon coarse crystalline carbonate facies are exposed as cliff areas and isolated ridges within relatively steep mountain topography, at an elevation of 2,100 meters (6,888 feet), and along ridge in a cirque approximately 1 kilometer southeast of the summit of Eon, at an elevation of 2,300 meters (7,544 feet). Numerous cliff exposures are present, with some cliff walls greater than 15 meters (50 feet) high. Topography on the claim is moderate to steep and greatly influenced by Main Ranges thrust faults 1-6 kilometers east of Eon property. Slopes can be very steep where resistant crystalline dolomite, limestone, and/or magnesite locally forms steep cliffs more than 50m (164 ft) high. The Eon magnesite lenses appear to have shallow to moderate dip. Elevations on the claim block range from 1,560 to 2,800 meters (5,117 to 9,184 feet).

Vegetation on the property consists mainly of Lodgepole Pine with lesser Douglas Fir and Western Yellow Larch, with minor birch and aspen. The nearest towns are Radium Hot Springs, alternately Invermere, on Highway 93/95.

3.0 Property Status

The Eon magnesite claims consists of two (2) contiguous mineral tenures (listed below) that are located within the Golden Mining Division (Figure 2).

Tenure number	Claim Name	Issue Date	Good To Date	Area in hectares
1028136	Eon	2014/may/07	2017/aug/21	102.09
1030825	Eon North	2014/sep/07	2017/aug/21	204.15

The total area of the mineral tenures that comprise the property is 306.39 hectares (757.1 acres). Details of the status of tenure ownership for the Eon property were obtained from the Mineral-Titles-Online (MTO) electronic staking system managed by the Mineral Titles Branch of the Province of British Columbia. This system is based on mineral tenures acquired electronically online using a grid cell selection system. Tenure boundaries are based on lines of latitude and longitude. There is no requirement to mark claim boundaries on the ground as these can be determined with reasonable accuracy using a GPS.

The mineral tenures comprising the Eon magnesite property map shown in Figure 2 was generated from GIS spatial data downloaded from the Government of BC GeoBC website. These spatial layers are the same as those incorporated into the Mineral-Titles-Online (MTO) electronic staking system that is used to locate and record mineral tenures in British Columbia. Information posted on the MTO website indicates that mineral tenure 1028136 are owned 100% by Jared Lazerson, and mineral tenure 1030825 are owned 100% by Andris Arturs Kikauka. The mineral tenures are held on behalf of MGX Minerals Inc.

There has not been any mining or other exploration related physical disturbances on the Eon magnesite property that would be considered an environmental liability. The author is not aware of any environmental issues or liabilities related to historical exploration or mining activities that would have an impact on future exploration of the property.

4.0 Geology and Mineralization of Mount Brussilof Magnesite Property

The Mount Brussilof deposit was discovered by the Geological Survey of Canada during regional mapping (Leech, 1965). Bayakal Minerals Ltd. and Brussilof Resources Ltd. staked and explored the deposit. In 1971, the two companies merged to form Baymag Mines Co. Ltd. Refratechnik GmbH. acquired Baymag Mines in 1979. In 1980, proven and probable geological reserves were 9.5 million tomes grading over 95 per cent magnesia in the calcined product and 13.6 million tonnes of 93 to 95 percent magnesia in calcined product. Possible reserves were estimated at 17.6 million tonnes averaging 92.44 per cent magnesia in calcined product (Simandl, G., 1992). The Mount Brussilof deposit is hosted by rocks of the Foreland tectonostratigraphic belt and is within the "Kicking Horse Rim", and lies east of a Cambrian bathymetric feature commonly referred to as the Cathedral escarpment. Leech (1965) described the same feature in the Mount Brussilof mine area as a "faulted facies change". In any event, the carbonate rocks east of this feature, which host the magnesite mineralization, were deposited in a

shallower marine environment than their stratigraphic equivalents to the west. The stratigraphic relationship between rocks east of the Cathedral escarpment, and their deeper water equivalents to the west, commonly referred to as the Chancellor Formation (Fig 3B). Known occurrences of sparry carbonate, other thatt veins of calcite or dolomite a few centimetres thick, are located east of the Cathedral paleo-escarpment. The formations described below are listed from oldest to youngest. The Gog Formation is a rusty, grey or buff, medium to coarse-grained, massive to thick-bedded Lower Cambrian sandstone more than 250 meters thick. The Naiset Formation comprises thinly bedded, brown and graen Middle Cambrian shale overlying the Gog Formation. It is 65 to 170 metres thick, characterized by blue-green chlorite spots and by a well-developed cleavage oblique to bedding. Near the Cathedral escarpment this shale may become grey or partially converted to talc and serpentine. The Cathedra I Formation, which hosts the magnesite deposits, is also Middle Cambrian in age. It is about 340 metres thick and consists of baff, white and grey limestones and dolomites. Laminations, ripple marks, intraformational breccias, algal mats, ooliths, pisolites, fenestrae and borrows arc well preserved. Pyrite is common either as disseminations or pods and veins. (Simandl, G., 1992).

The Stephen Formation consists of tan to grey, thirdy bedded to laminated shale about 16 metres thick, with a cleavage subparallel to bedding. It is of Middle Cambrian age and contains abundant fossil fragments and locally preserved trilobites and inarticulate brachiopods. The Eldon and Pika formations cannot be subdivided in the map area. The lowermost beds of the Eldon Formation, overlying the Stephen Formation, arc black limestones approximately 50 meters thick. This basal unit is very distinctive, containing millimetre to centimeter scale argillaceous layers that weather to a rusty red colour. Elsewhere these formations can't be readily distinguished from the Cathedral Formation, except by fossil evidence. The Arctomys Formation, also Middle Cambrian in age, is characterized by green and purple shale and siltstones interbedded with beige, fine to medium grained dolomites. Mud cracks and halite crystal prints are commonly preserved. The thickness of this formation was not determined, as the base marked the llmit of mapping. All the formations are well exposed over the area, except the recessive Stephen Formation, not observed in the southern part of the map area. It is not clear if this lack of exposure is due to lack of outcrops or non-deposition (Simandl, G., 1992).

Rocks west of the Cathedral escarpment arc strongly deformed. The deformation is characterized by numerous small-scale folds with sub-horizontal fold axes oriented 160°. Minor thrust faults, and a well-developed steeply dipping cleavage striking 160' are other typical features. Along the Cathedral escarpment, cleavage is sub-vertical, closely spaced and injected by dolomite, calcite and siderite(?) veins. East of the Cathedral escarpment, cleavage is generally absent in carbonates (Cathedral, Eldon and Pika formations), well developed in the Stephen Formation and strongly developed in the Naiset Formation (Simandl, G., 1992).

Faults near the Brussilof magnesite deposit have near vertical displacements of tens to hundreds of meters. In the northeastern comer of the study area, deformation in the Naiset Formation is similar to that of the Chancellor Formation, due to a thrust fault outcropping farther east. Sparry carbonate rocks occur within the Cathedral, Eldon and Pika Formations. They consist mainly of coarse dolomite and magnesite crystals in varying propartions. Magnesite-rich sparry carbonates are restricted to the Cathedral Formation, where they form lenses, pods and irregular masses. Barren Cathedral Formation consists mainly of fine to medium grained, massive or laminated

dolomites interbedded with limestones. Parts of the Cathedral Formation are entirely altered to sparry magnesite, forming deposits of economic interest. Sparry carbonates are separated from limestone by envelopes of light grey, massive dolomite, which may contain needle-shaped quartz crystals. The contacts between sparry carbonate masses and the fine-grained dolomite are sharp and may be concord & or discordant. Magnesitic sparry carbonate is usually white or light grey in colour and buff when weathered. It consists of regularly spaced, alternating white and grey magnesite layers, randomly oriented centimetre-scale white magnesite crystals or a mixture of light grey and white magnesite crystals. Common impurities in magnesite ore are isolated rhombohedral dolomite crystals, calcite veins, pyrite veins, sub-vertical fractures filled by a mixture of beige anhydrite, calcite and chlorite, coarse radiating or single quartz crystals and coarse pyrite pyritohedrons and octahedrons disseminated within sparry magnesite. Chalcocite, fersmite, phlogopite, talc and coarse, white, acieular palygorskite were also observed in the Mount Brussilof mine. Boulangerite, huntite and brucite were reported from laboratory analysis. Where fine-grained dolomite is not entirely converted to magnesite, replacement features such as coarse, white carbonate crystals growing perpendicular to fracture planes, or partings and lenses of fine-grained dolomite enclosed by sparry carbonates, are common. Bipolar growths of zoned magnesite crystals, magnesite pinolite, rosettes and coarse carbonate crystals having lozenge shaped cross-sections. All these features are interpreted as replacement textures. Sparry dolomite rock consists mainly of dolomite rhombs. It forms lenses, veins or irregular masses in finegrained dolomite and occurs at same stratigraphic horizons. Dolomite veins cut magnesite ore at mine; however, magnesite veins were never observed to cut sparry dolomite (Simandl, G., 1992).

5.0 General Geology

Magnesite often occurs in the upper part of the Cathedral Formation. Lithological units in the area of Eon are described as follows (Fig 3B):

LITHOLOGY LEGEND

The area of the Eon magnesite deposits were first mapped by Leech (1965). This deposit type is characterized by stratabound and typically stratiform, lens-shaped zones of coarse-grained magnesite mainly occurring in carbonates but also observed in sandstones or other clastic sediments. Magnesite exhibits characteristic sparry texture. The Eon magnesite occurrences are

classified as sparry magnesite deposits (E09) by the B.C. Ministry of Energy and Mines (Simandl and Hancock, 1998). Recrystallized magnesite mineralization (approximate strike lengths of 100-1,000 meters, and 10-100 m width) occurs as replacement of porous, carbonate reef mounds in the upper portions of Middle Cambrian Cathedral Formation.

There are two preferred theories regarding the origin of sparry magnesite deposits:

1. Replacement of dolomitized, permeable carbonates by magnesite due to interaction with a metasomatic fluid.

2. Diagenetic recrystallization of a magnesia-rich protolith deposited as chemical sediments in marine or lacustrine settings. The sediments would have consisted of fine-grained magnesite, hydromagnesite, huntite or other low temperature magnesia-bearing minerals.

The main difference between these hypotheses is the source of magnesia; external for metasomatic replacement and in situ in the case of diagenetic recrystalization. Temperatures of homogenization of fluid inclusions constrain the temperature of magnesite formation or recrystalization to 110° to 240°C. In British Columbia the diagenetic recrystalization theory may best explain the stratigraphic association with gypsum and halite casts, correlation with paleotopographic highs and unconformities, and shallow marine depositional features of the deposits (Simandl and Hancock, 1998).

5.1 Geology and Mineralization of Sparry Magnesite Deposit Types

Capsule descriptions of geology and mineralization of sparry magnesite deposits are summarized as follows (source: Lefebure, 1996), Ministry of Energy and Mines, Mineral Deposit Models.

SYNONYMS: Veitsch-type, carbonate-hosted magnesite, erystalline magnesite.

COMMODITY: Magnesite.

EXAMPLES (British Columbia (MINFILE) - Canada/International): Mount Brussilof (082JNW001), Marysville (082GNW005), Brisco area and Driftwood Creek (082KNE068); Veitsch, Entachen Alm, Hochfilzen, Radenthein and Breitenau (Austria), Eugui (Navarra Province, Spain), deposits of Ashan area, Liaoning Province (China), Satka deposit (Russia).

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Stratabound and typically stratiform, lens-shaped zones of coarsegrained magnesite mainly occurring in carbonates but also observed in sandstones or other clastic sediments. Magnesite exhibits characteristic sparry texture.

TECTONIC SETTING: Typically continental margin or marine platform, possibly continental settings, occur in belts.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: The host sediments are deposited in a shallow marine environment adjacent to paleobathymetric highs or a lacustrine evaporitic environment.

AGE OF MINERALIZATION: Proterozoic or Paleozoic.

HOST/ASSOCIATED ROCK TYPES: Magnesite rock, dolostone, limestones, shales, chert. Associated with sandstone, conglomerate and volcanics and their metamorphic equivalents.

DEPOSIT FORM: Commonly strata, lenses or rarely irregular masses, typically few hundred metres to several kilometres in strike length. Shortest dimension of the orebody (metres to tens of metres) is commonly normal to the bedding planes.

TEXTURE/STRUCTURE: The magnesite-bearing rocks exhibit sparry, pinolitic, zebra-like, or xenotopic (anhedral) textures on the fresh surface. Magnesite or dolomite pseudomorphs after sulphates. "Box-textures", rosettes, monopolar and antipolar growths are locally present.

ORE MINERALOGY: Magnesite.

GANGUE MINERALOGY (Principal and *subordinate*): Dolomite \pm quartz \pm chert \pm talc \pm chlorite \pm sulphides \pm sulphosalts, \pm calcite, \pm mica, \pm palygorskite, \pm aragonite, \pm clay (as veinlets), organic material. In highly metamorphosed terrains, metamorphic minerals derived from above precursors will be present.

ALTERATION MINERALOGY: Talc may form on quartz-magnesite boundaries due to low temperature metamorphism.

WEATHERING: Surface exposures are typically beige or pale brown and characterized by "granola-like" appearance. Most sulphides are altered into oxides in near surface environment.

ORE CONTROLS: Deposits are stratabound, commonly associated with unconformities. They are typically located in basins characterized by shallow marine depositional environments. Lenses may be located at various stratigraphic levels within magnesite-hosting formation.

GENETIC MODELS: There are two preferred theories regarding the origin of sparry magnesite deposits:

1) Replacement of dolomitized, permeable carbonates by magnesite due to interaction with a metasomatic fluid.

2) Diagenetic recrystallization of a magnesia-rich protolith deposited as chemical sediments in marine or lacustrine settings. The sediments would have consisted of fine-grained magnesite, hydromagnesite, huntite or other low temperature magnesia-bearing minerals.

The main difference between these hypotheses is the source of magnesia; external for metasomatic replacement and in situ in the case of diagenetic recrystalization. Temperatures of homogenization of fluid inclusions constrain the temperature of magnesite formation or recrystalization to 110 to 240°C. In British Columbia the diagenetic recrystalization theory may

best explain the stratigraphic association with gypsum and halite casts, correlation with paleotopographic highs and unconformities, and shallow marine depositional features of the deposits. A number of recent cryptocrystalline sedlmentary magnesite deposits, such as Salda Lake in Turkey and the Kunwarara deposit in Queensland, Australia, huntite-magnesitehydromagnesite deposits of Kozani Basin, Northern Greece, and the magnesite- or hydromagnesite- bearing evaporitic occurrences from Sebkha el Melah in Tunesia may be recent analogs to the pre-diagenetic protoliths for British Columbia sparry magnesite deposits.

ASSOCIATED DEPOSIT TYPES: Sediment-hosted talc deposits and Mississippi Valley-type deposits are geographically, but not genetically, associated with sparry magnesite in British Columbia. The magnesite appears older than cross-cutting sparry dolomite that is commonly associated with MVT deposits.

COMMENTS: Magnesite deposits can survive even in high grade metamorphic environments because of their nearly monomineralic nature.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Tracing of magnesite boulders and blocks with pinolitic texture. Magnesite grains in stream sediments.

GEOPHYSICAL SIGNATURE: N/A.

OTHER EXPLORATION GUIDES: Surface exposures are beige, pale brown or pale gray. White fine-grained marker horizons are useful in southwest British Columbia. "Granola-like" weathering texture is a useful prospecting indicator. Magnesite may be identified in the field using heavy-liquids. In British Columbia the deposits are often associated with unconformities, paleotopographic highs within particular stratigraphie horizons.

ECONOMIC FACTORS

TYPICAL GRADE AND TONNAGE: Grades range from 90 to 95% MgCO₃ with the resources ranging from several to hundreds of million tonnes. British Columbia deposits are characterized by lower iron content than most of the European deposits.

ECONOMIC LIMITATIONS: There is large but very competitive market for magnesia-based products. China is the largest exporter of magnesite. Quality of primary raw materials, cost of energy, cost of transportation to markets, availability of existing infrastructure, and the quality of finished product are major factors achieving a successful operation.

END USES: Magnesite is used to produce magnesium metal and caustic, dead-burned and fused magnesia. Caustic magnesia, and derived tertiary products are used in chemical and industrial applications, construction, animal foodstuffs and environmental rehabilitation. Fused and deadburned magnesia are used in high-performance refractories. Magnesium metal has wide range of end uses, mostly in the aerospace and automotive industries. The automotive market for magnesium metal is expected to expand rapidly with current efforts to reduce the weight of vehicles to improve fuel economy and reduce harmful emissions.

IMPORTANCE: Sparry magnesite deposits account for 80% of the world production. Significant quantities of magnesite are also produced from ultramafic-hosted deposits and fine grained or nodular deposits.

5.2 Property Geology

The Eon magnesite zones are hosted by Middle Cambrian Cathedral Formation. The Cathedral Formation consists of about 300-600 meters (984-1,968 feet) thick succession of mainly carbonate (dolomite, limestone and minor magnesite lenses) forming steep topography. Much more recessive slate, siltstone, argillite units occur above and below carbonate cliff units. Tracing carbonate reef lithology units laterally, there is rapid and abrupt lithology changes between highly porous coral reef mounds and calcareous muds. Deposits of replacement texture magnesite in the Cathedral Formation are a result of either diagenetic recrystallization of sedimentary magnesite or hydrothermal origin (Simandl, 2004).

Sparry magnesite is associated with 'reef-like' mounds of coarse crystalline dolomite, recognized by its hardness, coarse crystalline texture, massive appearance, white colour, higher density and partial reaction with dilute HCl. The magnesite/dolomite occurs as lenses in the upper portions of Middle Cambrian Cathedral Formation.

6.0 2014 Field Program

6.1 Scope & Purpose

The 2014 rock sampling was carried out in order to gather geological and geochemical data on the subject property. The results of 2014 mapping and sampling are used to make recommendations for advancing future exploration. Fieldwork was carried out on behalf of MGX Minerals Inc.

6.2 Methods and Procedures

The 2014 mapping and sampling program involved a total of 4 rock chip samples taken across 2 meter intervals along exposures of bedrock with magnesite present. Rock chip samples were taken with rock hammer and chisel and consist of acorn to walnut sized bedrock pieces for a total weight ranging from 1.1 to 1.38 kgs. Sample material was placed in marked poly ore bags and shipped to ALS Minerals Ltd, in North Vancouver, BC.

ALS Minerals Ltd crushed, split and pulverized samples using prep-31 code, crushing to better than 70% passing a 2 mm screen. A split of 250 grams is pulverized to better than 85% passing a 75 micron screen. The sample pulp is analyzed using ME-XRF-06 (XRF-26) Li borate flux major oxide whole rock geochemical analytical methods (Appendix A).

6.3 Property Geology & Mineralization

Sparry magnesite is associated with 'reef-like' coarse crystalline dolomite, recognized by its hardness, coarse crystalline texture, massive appearance, white colour, higher density and partial reaction with dilute HCl. The magnesite/dolomite occurs as lenses in the upper portions of Middle Cambrian Cathedral Formation. Descriptions and whole rock analysis of four rock chip samples from Eon North claim (MTO ID # 1030825) are summarized as follows:

Easting	Northing	Elev (m)	width (m))	litholog	SY.	strike	•	lding dip
597755	5631753	2268	3	2	Cathed	ral Fm	4	12 19	NW
597758	5631792	2297	,	2	Cathed	ral Fm	2	4 20	NW
597766	5631777	2311	L	2	Cathed	ral Fm	5	55 20	NW
597783	5631793	2318	3	2	Cathed	ral Fm			
minerals		% MgO	% CaO	% A	1203	% Fe2O	93 9	6 SiO2	
magnesite,	dolomite	22.5	29.5		0.02	0	.32	0.0	5
magnesite,	dolomite	30.8	19.45		0.03	0	.43	0.0	5
magnesite		39.2	9.04		0.05	0	.53	0.0	5
magnesite,	dolomite	21.7	30.5		0.03	0	.32	0.08	3
	597755 597758 597766 597783 minerals magnesite, magnesite, magnesite	597755 5631753 597758 5631792 597766 5631777 597783 5631793 minerals magnesite, dolomite magnesite, dolomite	597755 5631753 2268 597758 5631792 2297 597766 5631777 2311 597783 5631793 2318 minerals % MgO magnesite, dolomite 22.5 magnesite, dolomite 30.8 magnesite 39.2	597755 5631753 2268 597758 5631792 2297 597766 5631777 2311 597783 5631793 2318 minerals % MgO % CaO magnesite, dolomite 22.5 29.5 magnesite, dolomite 30.8 19.45 magnesite 39.2 9.04	597755 5631753 2268 2 597758 5631792 2297 2 597766 5631777 2311 2 597783 5631793 2318 2 minerals % MgO % CaO % A magnesite, dolomite 22.5 29.5 magnesite, dolomite 30.8 19.45 magnesite 39.2 9.04	597755 5631753 2268 2 Cathed 597758 5631792 2297 2 Cathed 597766 5631777 2311 2 Cathed 597783 5631793 2318 2 Cathed 597783 5631793 2318 2 Cathed minerals % MgO % CaO % Al2O3 magnesite, dolomite 22.5 29.5 0.02 magnesite, dolomite 30.8 19.45 0.03 magnesite 39.2 9.04 0.05	597755 5631753 2268 2 Cathedral Fm 597758 5631792 2297 2 Cathedral Fm 597766 5631777 2311 2 Cathedral Fm 597783 5631793 2318 2 Cathedral Fm 597783 5631793 2318 2 Cathedral Fm minerals % MgO % CaO % Al2O3 % Fe2O magnesite, dolomite 22.5 29.5 0.02 0 magnesite, dolomite 30.8 19.45 0.03 0 magnesite 39.2 9.04 0.05 0	EastingNorthingElev (m)width (m)Iithologystrike597755563175322682Cathedral Fm4597758563179222972Cathedral Fm4597766563177723112Cathedral Fm4597783563179323182Cathedral Fm4597783563179323182Cathedral Fm4minerals% MgO% CaO% $A \mid 2 \cup 3$ % $F \in 2 \cup 3$ 9magnesite, \cup olomite30.819.450.030.434magnesite39.29.040.050.534	597755 5631753 2268 2 Cathedral Fm 42 19 597758 5631792 2297 2 Cathedral Fm 44 20 597766 5631777 2311 2 Cathedral Fm 55 20 597783 5631793 2318 2 Cathedral Fm 55 20 597783 5631793 2318 2 Cathedral Fm 55 20 minerals % MgO % CaO % Al2O3 % Fe2O3 % SiO2 magnesite, dolomite 22.5 29.5 0.02 0.32 0.05 magnesite, dolomite 30.8 19.45 0.03 0.43 0.05 magnesite 39.2 9.04 0.05 0.53 0.05

Sample 14EON-03 has the highest proportion of magnesite (39.2% MgO) vs calcite/dolomite (9.04% CaO), but all samples are considered to be "MgO enriched dolomite", unlike the nearly pure 45-47% MgO that occurs in portions of the Mount Brussilof "magnesite" deposit. Results indicate MgO content ranges from 21.7 to 39.2% MgO at Eon North showings (2,268-2,318 m elevation). The extent of Eon North magnesite horizon is unknown, and a north trending fault zone affects the continuity of strata of the Eon North showings.

7.0 Discussion of Results

A magnesium oxide content of 39.2% MgO suggests there is potential for development of magnesite resources on the subject property. MgO content approaches specifications required for producing calcined or deadburned magnesite. Impurities such as SiO2, talc/serpentine and Fe bearing minerals (siderite, pyrite) are not present in any significant amount, however CaO impurities occur as isolated dolomite crystals, and dolostone/ limestone beds. The high content of CaO appears to be a limiting factor in the development of high grade magnesite from the property. The irregular nature of facies changes in reef mound environment of deposition make it hard to predict lateral continuity of magnesite mineralization, but the Eon and Eon North claims have good potential for the discovery an ore zone similar to the Mt Brussilof Magnesite deposit.

8.0 Conclusion

Reviewing available data, the writer offers the following interpretations & conclusions:
High purity coarsely crystalline magnesite is the main exploration target on the Eon and Eon North claims. Mapping and sampling the extent of magnesite mineralization zones present on the property is recommended.

• Access to the property is relatively good with a reasonable access road connecting to Highway 93, Radium Hot Springs, BC.

• There is good infrastructure in the form of a forest/mine access roads, and paved highways.

• The Eon magnesite occurrences are classified as a sparry magnesite deposits that are most likely of an evaporitic origin, that are characterized by pure beds of magnesite with relatively low levels of impurities.

• The local coarse crystallinity of the magnesite is believed to be related to recrystallization as a result of replacement of dolomitized, permeable carbonates by magnesite due to interaction with a metasomatic fluid or diagenetic recrystallization of a magnesia-rich protolith deposited as chemical sedimeuts in marine or lacustrine settings.

9.0 Recommendations

Future exploration and development of the Eon magnesite property should be foensed on defining magnesite mineralization on the Eon 1028136 claim at 2,100-2,200 m elev (Fig 4). Further geological mapping and geochemical sampling of the Eon claim is recommended to identify extensions of magnesite. Magnesite mineralization located on the Eon North 1030825 claim at 2,268-2,318 m elev (Fig 5) requires detailed geological mapping, and geochemical sampling of the Eon North in order to identify depth extension of magnesite mineralization found in rock sample 14EON-03 (at 2,311 m, 7,580.1 ft elevation).

10.0 References

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CERTIFICATE AND DATE

I, Andris Kikauka, of 4199 Highway, Powell River, BC am a self-employed professional geoscientist. I hereby certify that:

1. I am a graduate of Brock University, St. Catharines, Ont., with an Honours Bachelor of Science Degree in Geological Sciences, 1980.

2. I am a Fellow in good standing with the Geological Association of Canada.

3. I am registered in the Province of British Columbia as a Professional Geoscientist.

4. I have practiced my profession for twenty five years in precious and base metal exploration in the Cordillera of Western Canada, U.S.A., Mexico, Central America, and South America, as well as for three years in uranium exploration in the Canadian Shield.

5. The information, opinions, and recommendations in this report are based on fieldwork carried out in my presence on the subject property during which time a technical evaluation consisting of geological mapping, surveying, geochemical rock sampling of mineralized zones carried out Sept 27-28, 2014.

6. I have a direct interest in the Eon Property and MGX Minerals Inc. The recommendations in this report cannot be used for the purpose of public financing.

7. I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. This technical work report supports requirements of BCEMPR for Exploration and Development Work/Expiry Date Change.

Andris Kikauka, P. Geo.,

A. Kikanka

Feb 5, 2015



ITEMIZED COST STATEMENT-EON MINERAL TENURES 1028136, 1030825 FIELDWORK PERFORMED SEPT 27-28, 2014, WORK PERFORMED ON MINERAL TENURES 1030825 GOLDEN MINING DIVISION, NTS 82J 13E (TRIM 082J 082)

FIELD CREW:

A. Kikauka (Geologist) 2 days (surveying, mapping) \$ 1,000.00

FIELD COSTS:

Mob/demob/preparation	192.30
Meals and accommodations	221.00
Truck mileage & fuel	308.20
Li Borate Fusion ICP AES geochemical analysis (4 rock samples)	164.51
Report	450.00

Total= \$ 2,336.01

Eon Magnesite Property General Location Fig 1

MOUNT ASSINIBOINE 0821NW014

MOUNT BRUSSILOF X082JNW001

LEECH 2 082JNW006

LEECH 3 082JNW012

VANO 082JNW010 MILLER PASS

ALBERT RIVER 082JNW017 082JNW002

JOFFRE 082JN

RADIUM HOT SPRINGS

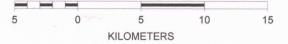
ATHALMER 082KNE078

STODDART CREEK 082JNW005 HIGHMONT 082JNW015

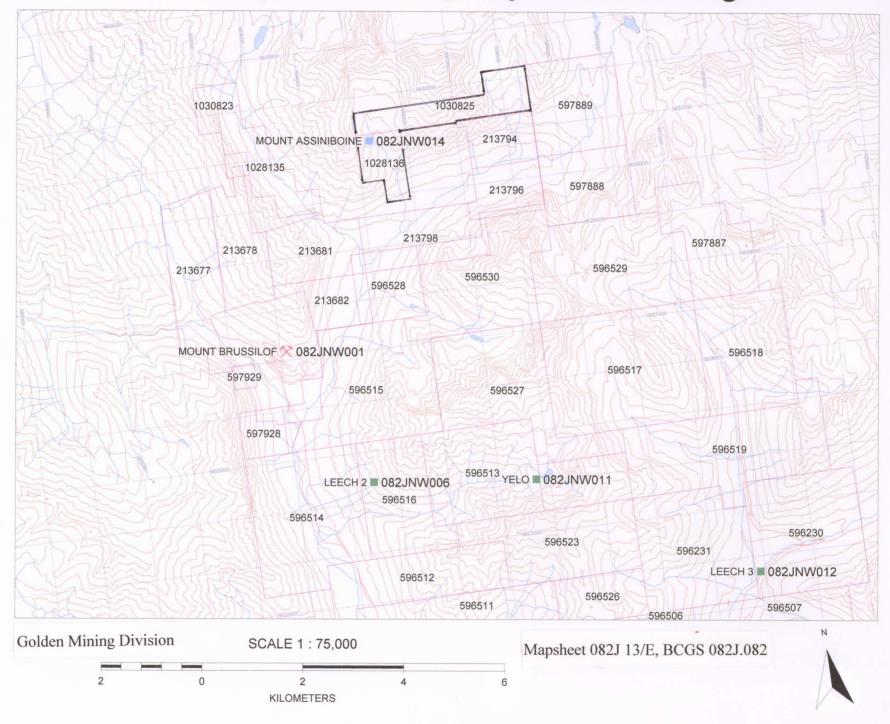
BURNAIS 082JNW004

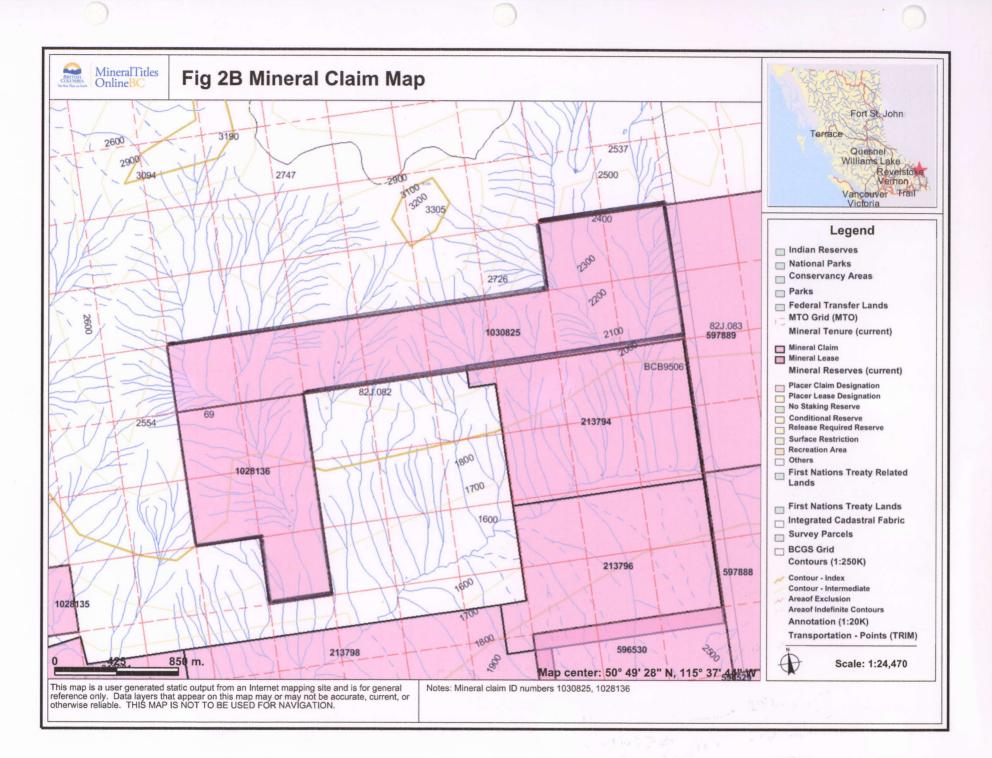
SWANSEA = 082JNW009 082KSE090 INVERMEREOSE 1 = 082JSW007 TOBY CREEK WINDERMERE 082JSW028

SCALE 1 : 300,000

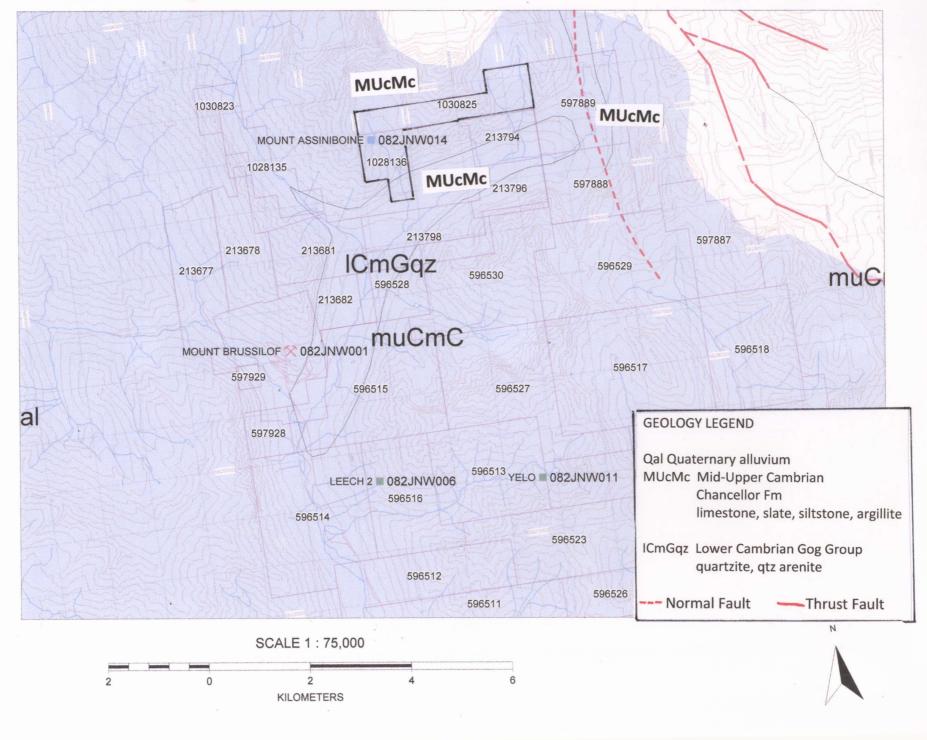


Eon Magnesite Property Location Fig 2





Eon Magnesite Property General Geology Fig 3



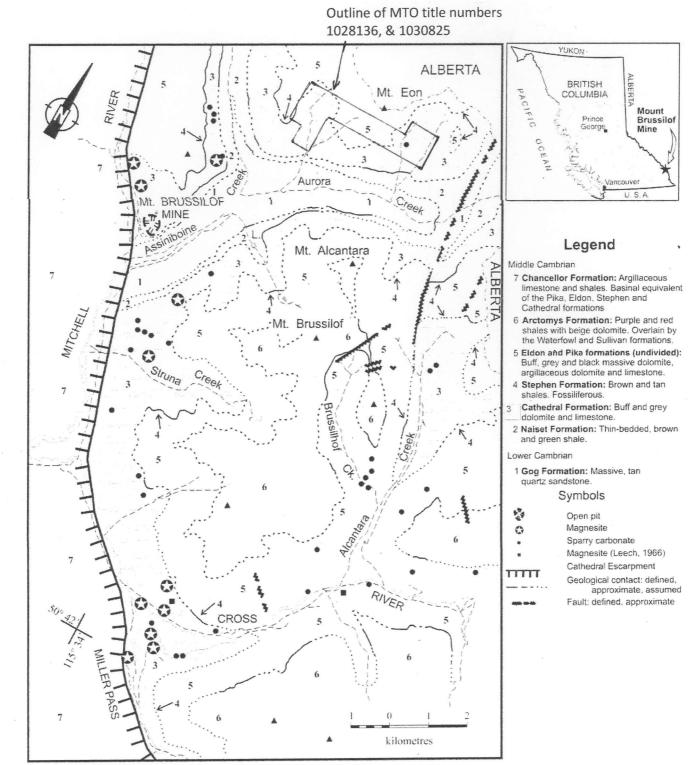
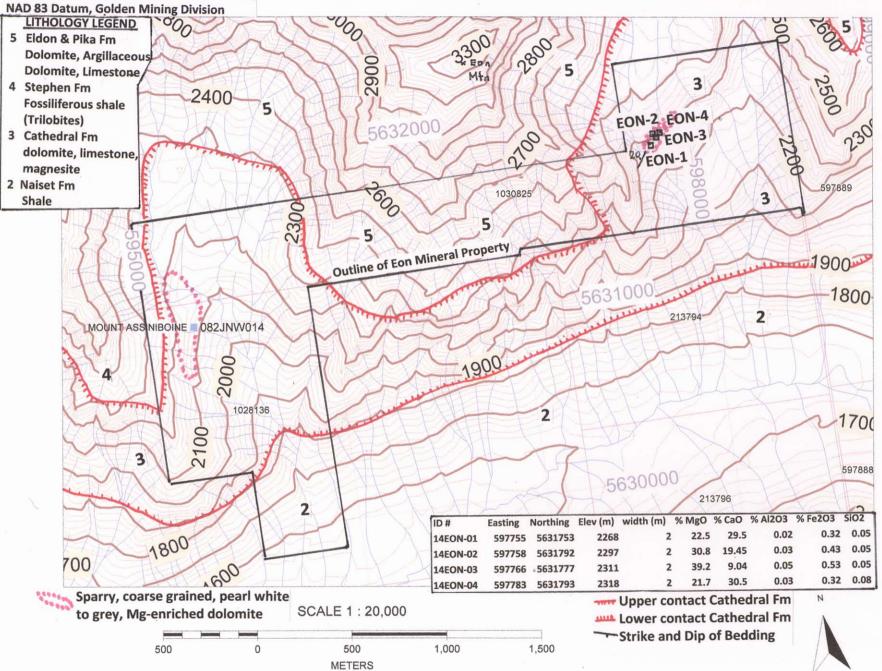


Fig 3B Mount Brussilof Area Geology & Mineralization

(Source: Simandl, 2004)

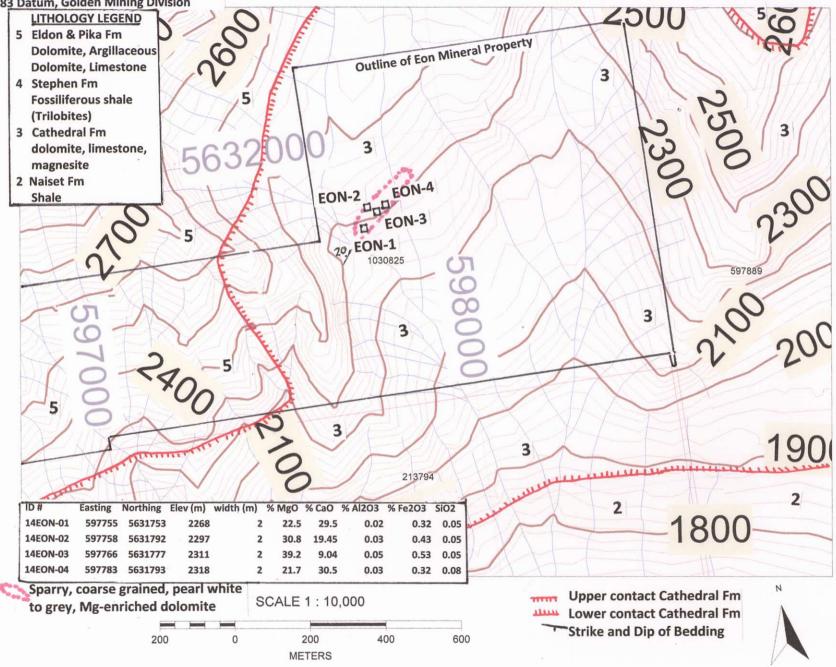
Eon Magnesite Property 2014 Rock Chip Location Fig 4

NTS 082J 13/E, BCGS 082J.082, UTM Zone 11,



Eon Magnesite Property Geology & Mineralization Fig 5

NTS 082J 13/E, BCGS 082J.082, UTM Zone 11, NAD 83 Datum, Golden Mining Division



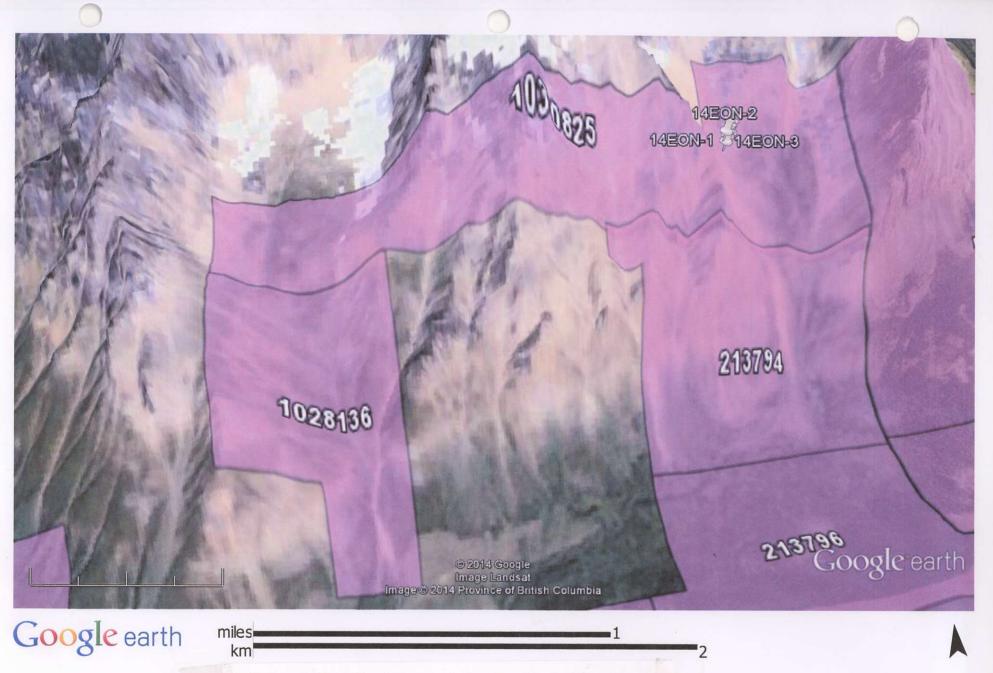


Fig 6 Google Earth Rock Sample & Eon-Eon North Claim Location Mapsheet 082J 13/E, BCGS 082J.082, Golden Mining Division ALS Canada Ltd.

(ALS)

Minerals

2103 Dollarton Hwy North Vancouver BC V7H 0A7 Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: KIKAUKA, ANDRIS 4199 HIGHWAY 101 POWELL RIVER BC V8A 0C7

Page: 2 - A Total # Pages: 2 (A - B) Plus Appendix Pages Finalized Date: 8-OCT-2014 Account: KIKAND

Project: EON

CERTIFICATE OF ANALYSIS VA14141068

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-XRF26 Al2O3 % 0.01	ME-XRF26 BaO % 0.01	ME-XRF26 CaO % 0.01	ME-XRF26 Cr2O3 % 0.01	ME-XRF26 Fe2O3 % 0.01	ME-XRF26 K2O % 0.01	ME-XRF26 MgO % 0.01	ME-XRF26 MnO % 0.01	ME-XRF26 Na20 % 0.01	ME-XRF26 P2O5 % 0.01	ME-XRF26 SO3 % 0.01	ME-XRF26 SiO2 % 0.01	ME-XRF26 SrO % 0.01	ME-XRF26 TiO2 % 0.01
14 EON-1 14 EON-2 14 EON-3 14 EON-4		1.02 1.10 1.38 1.18	0.02 0.03 0.05 0.03	0.03 0.02 0.02 0.02	29.5 19.45 9.04 30.5	<0.01 <0.01 <0.01 <0.01	0.32 0.43 0.53 0.32	<0.01 <0.01 <0.01 <0.01	22.5 30.8 39.2 21.7	0.02 0.02 0.02 0.03	0.08 0.10 0.14 0.09	<0.01 <0.01 <0.01 <0.01	0.02 0.05 0.14 <0.01	0.05 0.05 0.05 0.08	0.01 0.01 <0.01 0.01	<0.01 <0.01 <0.01 <0.01
			Apper	ndix A	Rock Sa	mple Ge	ochemic	cal whole	e rock ar	nalvsis c	ertificate	2				

)



WHOLE ROCK GEOCHEMISTRY

ME- XRF06

SAMPLE DECOMPOSITION

50% - 50% Li₂ B₄ O₇ - LiBO₂ (WEI- GRA06)

ANALYTICAL METHOD

X-Ray Fluorescence Spectroscopy (XRF)

A calcined or ignited sample (0.9 g) is added to 9.0g of Lithium Borate Flux (50 % - 50 % $L_2 B_4 O_7 - LiBO_2$), mixed well and fused in an auto fluxer between 1050 - 1100°C. A flat molten glass disc is prepared from the resulting melt. This disc is then analysed by X-ray fluorescence spectrometry.

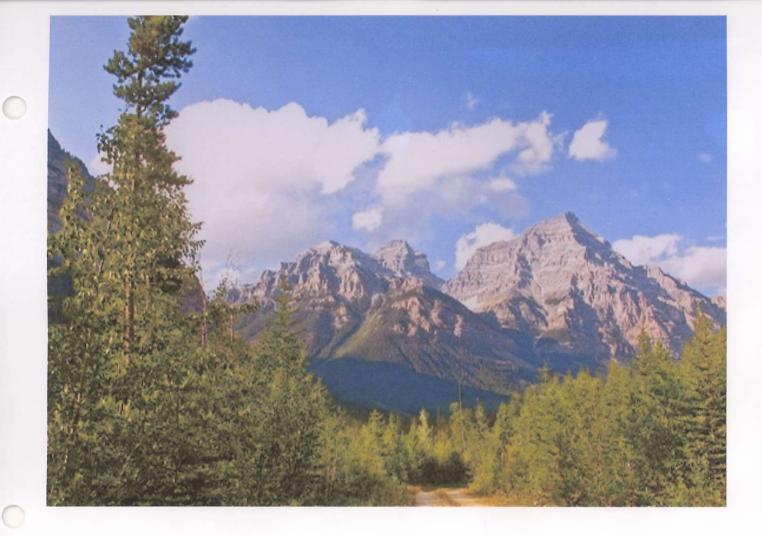
ELEMENT	SYMBOL	UNITS	LOWER LIMIT	UPPER LIMIT
Aluminum Oxide	Al ₂ O ₃	%	0.01	100
Barium Oxide	BaO	%	0.01	100
Calcium Oxide	CaO	%	0.01	100
Chromium Oxide	Cr ₂ O ₃	%	0.01	100
Ferric Oxide	Fe ₂ 0 ₃	%	0.01	100
Potassium Oxide	K ₂ O	%	0.01	100
Magnesium Oxide	MgO	%	0.01	100
Manganese Oxide	Mgo Mn O	%	0.01	100
Sodium Oxide	Na ₂ 0	%	0.01	100
Phosphorus Oxide	P ₂ O ₂	%	0.01	100
Silicon Oxide	SiO ₂	%	0.01	100
Strontium Oxide	SrO ₂	%	0.01	100
Titanium Oxide	TiO ₂	0/0	0.01	100
Loss On Ignition	LOI	%	0.01	100
	Total	%	0.01	101

NOTE: Since samples that are high in sulphides or base metals can damage Platinum crucibles, a ME- ICP06 finish method can be selected as an alternative method.

	Appendix B Rock Sample Descriptions									
ID #		Easting	Northing	Elev (m)	width (m)	% MgO	% CaO	% Al2O3	% Fe2O3	SiO2
14EON	I-01	597755	5631753	2268	2	22.5	29.5	0.02	0.32	0.05
14EON	I-02	597758	5631792	2297	2	30.8	19.45	0.03	0.43	0.05
14EON	1-03	597766	5631777	2311	2	39.2	9.04	0.05	0.53	0.05
14EON	I-04	597783	5631793	2318	2	21.7	30.5	0.03	0.32	0.08

•

ID #	minerals	comments	bedding strike	bedding dip
14EON-01	magnesite, dolomite	sparry, coarse grained, pearl white to grey	42	19 NW
14EON-02	magnesite, dolomite	sparry, coarse grained, pearl white to grey	44	20 NW
14EON-03	magnesite	sparry, coarse grained, pearl white to grey	55	20 NW
14EON-04	magnesite, dolomite	sparry, coarse grained, pearl white to grey		



Appendix C Photos

Mount Eon in right center of photo. Magnesite zones located approximately 1 kilometer southeast and southwest of Mount Eon. Assiniboine Creek valley in left center of photo.



Rock Sample	width		%	%	%	%	%
ID #	(m)	minerals	MgO	CaO	Al2O3	Fe2O3	SiO2
14EON-03	2	magnesite	39.2	9.04	0.05	0.53	0.05

MINFILE Mineral Inventory



MINFILE Home page ARIS Home page MINFILE Search page Property File Search

MINFILE Record Summary MINFILE No 082JNW014 XML Extract/Inventory Report			rint Preview Created: t Edit:	MSWORD V 17-Apr-91 17-Apr-91	MINFILE Detail V New Wind by George Owsiack(GO) by George Owsiack(GO)	
SUMMARY						Summary Help 🔞
		NMI				
Name	MOUNT ASSINIBOINE	Mining Division BCGS Map	082J082			
Status	Prospect	NTS Map	082J13E			
Latitude	50° 49' 26" N		UTM 11 (NAD 83)			
Longitude <u>115° 38' 51" W</u>	<u>115º 38' 51" W</u>	Northing	5631113			
		Easting	595261			
Commodities	Magnesite	Deposit Types				
Tectonic Belt	Foreland	Terrane	Ancestral North America			
Capsule Geology	The Mount Assiniboine occurrence area is un and uplifted into an anticlinal form. This anti- from 5 to 35 degrees southwest and strike r	clinal feature has its central axis located in	n the valley	of Assiniboine	Creek. West of t	his axis, the rocks dip

ast of the axis, the rocks are essentially flat-lying. The entire property is underlain at shallow depth by the Main Ranges thrust fault along which the rocks have moved eastward several kilometres.

Two distinct types of dolomite of the Middle Cambrian Cathedral Formation occur on the property. A "granola" textured dolomite is host to the magnesite mineralization and is generally underlain and sometimes enclosed by a tight, crystalline, sometimes argillaceous dolomite. The host rock which contains the magnesite mineralization is a very coarse-grained, recrystallized dolomite which occurs as massive, tan coloured, resistant outcrops. Magnesite mineralization in outcrop exposures is recognized by its extreme hardness, white colour, massive appearance and the presence of large rhombic crystals of dolomite spar with minor pyrite.

Two areas of significant buildup of coarse-grained magnesite- bearing dolomite were identified. The best area occurs in a cirque occupied by Eon Creek where 274 metres of Cathedral Formation hosts a 104 metre thick zone of rock which assays a high of 28.88 per cent MgO. The second area may represent the updip continuation of the Baymag orebody (082JNW001) to the south. The Cathedral Formation reaches a maximum thickness of 186 metres and contains 101 metres of favourable magnesite-bearing rock which assays a high of 43.07 per cent MgO (Assessment Report 19092).

Bibliography EMPR ASS RPT 18203, *19092 EMPR OF 1992-14 GSC OF 634

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