



BC Geological Survey
Assessment Report
38602



Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geochemical

TOTAL COST: \$2,854.55

AUTHOR(S): Andris Kikauka

SIGNATURE(S):

A. Kikauka

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2019

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): ~~5740491~~ 5762236

PROPERTY NAME: Marysville

CLAIM NAME(S) (on which the work was done): Mag 2 (1036819)

COMMODITIES SOUGHT: Magnesite

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 082GNW005

MINING DIVISION: Ft Steele

NTS/BCGS: 082G 12 W, 082G.051

LATITUDE: 49 ° 35 ' 24 " LONGITUDE: 115 ° 58 ' 00 " (at centre of work)

OWNER(S):

1) MGX Minerals Inc

2) Jared Lazerson

MAILING ADDRESS:

303-1080 Howe St, Vancouver, BC V6C 2T1

303-1080 Howe St, Vancouver, BC V6C 2T1

OPERATOR(S) [who paid for the work]:

1) same

2)

MAILING ADDRESS:

same

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

N to NE trending belt of Upper Proterozoic-Lower Cambrian Cranbrook Fm quartzite, slate, metamorphosed limestone, siltstone argillite, dolomite, magnesite beds dip steep to moderately west. Magnesite occurs as 3-30 meter wide lenses over 2,000 meter strike length as sparry (granola) coarse crystalline texture, re-crystallized chert occurs as milky-white micro-veinlet quartz sweats (minor serpentine & talc) at edges of the magnesite beds. Magnesite beds are competent, forming erosion resistant outcrops.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 30075, 31236, 31238, 34831, 35436, 36596, 36600, 37598

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 _____			
Photo Interpretation _____			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic _____			
Electromagnetic _____			
Induced Polarization _____			
Radiometric _____			
Seismic _____			
Other _____			
Airborne _____			
GEOCHEMICAL (number of samples analysed for...)			
Soil _____			
Silt _____			
Rock 10 samples ME-XRF26 whole rock oxides		Mag 2 (1036819)	2,854.55
Other _____			
DRILLING (total metres; number of holes, size)			
Core _____			
Non-core _____			
RELATED TECHNICAL			
Sampling/assaying _____			
Petrographic _____			
Mineralographic _____			
Metallurgic _____			
PROSPECTING (scale, area) _____			
PREPARATORY / PHYSICAL			
Line/grid (kilometres) _____			
Topographic/Photogrammetric (scale, area) _____			
Legal surveys (scale, area) _____			
Road, local access (kilometres)/trail _____			
Trench (metres) _____			
Underground dev. (metres) _____			
Other _____			
TOTAL COST:			2,854.55

Lat. 49 34' 40" N
Long. 115 58' 33" W
NTS 082 G/12 W
BCGS 082G.051
UTM 574,500 E, 5,493,100 N (NAD 83)

**GEOCHEMICAL REPORT
ON MARYSVILLE MAGNESITE PROPERTY
MTO ID 1029860, 1033194, 1033236, 1036819, 1044738, 1047074, & 1053039
MINERAL CLAIMS,
work done on MTO ID 1036819**

**PERRY CREEK
ST MARY'S RIVER,
MARYSVILLE, BC
FORT STEELE MINING DIVISION**

**Submitted by:
Andris Kikauka, P.Geo.
4199 Highway 101,
Powell R, BC V8A 0C7**

38,602

November 7, 2019

TABLE OF CONTENTS

	PAGE NO.
SUMMARY	1
1.0 INTRODUCTION	3
2.0 LOCATION, ACCESS, INFRASTRUCTURE, PHYSIOGRAPHY	3
3.0 PROPERTY STATUS & TENURE DETAILS	4
4.0 MARYSVILLE MAGNESITE PROPERTY HISTORY	5
5.0 REGIONAL GEOLOGY	7
6.0 2019 FIELDWORK PROGRAM	9
6.1 SCOPE & PURPOSE	9
6.2 METHODS AND PROCEDURES	10
6.3 GEOLOGY & MINERALIZATION (GEOCHEMISTRY)	10
7.0 DISCUSSION OF RESULTS	12
8.0 CONCLUSION	13
9.0 RECOMMENDATIONS	13
REFERENCES	14
CERTIFICATE	
ITEMIZED COST STATEMENT	

LIST OF FIGURES

FIG. 1 MINERAL TENURE & REGIONAL INFRASTRUCTURE

FIG. 1A MINERAL TENURE GENERAL LOCATION MAP

FIG. 2 MINERAL TENURE LOCATION (MTO)

FIG. 3 MARYSVILLE MAGNESITE GENERAL GEOLOGY

FIG. 4 MARYSVILLE 2019 ROCK SAMPLES CENTRAL ZONE (1:10,000)

FIG. 5 MARYSVILLE 2019 ROCK SAMPE LOCATIONS (GOOGLE EARTH)

FIG 6 MARYSVILLE 2019 ROCK SAMPLES CENTRAL ZONE (1:5,000)

APPENDIX A- ALS ME-XRF-26, GEOCHEMICAL ANALYSIS RPT VA19188728,

APPENDIX B- SAMPLE PREP & GEOCHEMICAL METHODS

APPENDIX C- ROCK CHIP SAMPLE DESCRIPTIONS AND ANALYSIS RESULTS

APPENDIX D- MINFILE DESCRIPTION

SUMMARY

Marysville magnesite occurrences are located about 7 km (4.5 miles) south-southwest of Marysville, BC and approximately 12 km (7.7 miles) south of Kimberly, BC (Fig 1, 2). The Marysville MTO tenures (1029860, 1033194, 1033236, 1036819, 1044738, 1047074, & 1053039) cover a total area of approximately 556.55 hectares (1,396.9 acres). The Marysville sediment hosted magnesite occurs as coarse crystalline stratabound layer that trends north-northeast, dip 50 to 80 degrees northwest, are 5-15 meters wide (up to 75 m width including interbedded magnesite, quartzite & siltstone), and individual magnesite lenses vary from 60-600 meter strike length (including minor fault offsets in the order of 5-75 meters). Stratabound magnesite forms a combined strike length of approximately 2,200 meters along a total strike length of 6,000 meters. Magnesite is hosted in Lower Cambrian Cranbrook Formation quartzite (with intercalated minor siltstone). Geological mapping suggests that the Cranbrook Formation is variable between 200 to 300 meters true thickness.

The magnesite beds in the north portion of the Central Zone (2019 rock chip sampling) contain variable amounts of quartz (10 rock chip samples range 9-16.5% SiO₂). Other impurities include trace amounts of serpentine and talc, as well as approximately 0.6% CaO and 1% Al₂O₃. Quartz present in the magnesite was probably deposited in the Cambrian(?) as chert and recrystallized during Cretaceous(?) deep burial low-grade regional metamorphism resulting in textures that include milky-white micro-veinlet quartz sweats, patches and bands of clear, glassy recrystallized chert. Silica can be removed from magnesite by flotation/gravity methods used for processing.

The writer performed fieldwork consisting of geochemical sampling and geological mapping on the south portion of Marysville magnesite. Fieldwork was carried out June, 2019. Technical work is recorded in this assessment report, and reported as Statement of Work MEM Event number 57. Geochemical sampling was carried out on exposed surface bedrock located in close proximity to historic mapped lenses of magnesite. A total of 10 rock chip samples were collected from 2 meter intervals from various surface outcrop (sample numbers 19Mary 1-10). Rock chip samples were analyzed by ALS Minerals, North Vancouver, BC, using Li Borate fusion, whole rock analysis ME-XRF-06 (XRF26). Fieldwork in 2018 was carried out on the south portion of the Central Zone, and work in 2019 focused on north extension of the Central Zone. 2019 rock sample geological descriptions and geochemical analysis results from the north portion of Marysville Central Zone (MTO ID 1036819, claim name Mag 2) are listed as follows:

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Type	Lithology
19MARY-1	Central Zone	574948	5493956	1338	sub-crop	sparry magnesite
19MARY-2	Central Zone	574960	5493988	1337	sub-crop	sparry magnesite
19MARY-3	Central Zone	574979	5494017	1335	sub-crop	sparry magnesite
19MARY-4	Central Zone	574996	5494029	1330	sub-crop	sparry magnesite
19MARY-5	Central Zone	575002	5494044	1327	outcrop	sparry magnesite
19MARY-6	Central Zone	575009	5494077	1327	outcrop	sparry magnesite
19MARY-7	Central Zone	575014	5494098	1318	outcrop	sparry magnesite
19MARY-8	Central Zone	575019	5494120	1311	outcrop	sparry magnesite
19MARY-9	Central Zone	575024	5494155	1306	outcrop	sparry magnesite
19MARY-10	Central Zone	575028	5494189	1301	outcrop	sparry magnesite

Sample ID	Alteration	Mineralization	Bed Strike	Bed Dip	Width (cm)
19MARY-1	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-2	weak qtz stringers, sweats <1 mm	magnesite	30	58 NW	200
19MARY-3	weak qtz stringers, sweats <1 mm	magnesite	31	60 NW	200
19MARY-4	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-5	weak qtz stringers, sweats <1 mm	magnesite	33	62 NW	200
19MARY-6	weak qtz stringers, sweats <1 mm	magnesite	32	66 NW	200
19MARY-7	weak qtz stringers, sweats <1 mm	magnesite	33	58 NW	200
19MARY-8	weak qtz stringers, sweats <1 mm	magnesite	35	58 NW	200
19MARY-9	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-10	weak qtz stringers, sweats <1 mm	magnesite			200

Sample ID	Al2O3%	BaO%	CaO%	Fe2O3%	K2O%	MgO%	MnO%	Na2O%	P2O5%	SO3%	SiO2%	Total%	LOI%	MgO%/Total%
19MARY-1	0.62	<0.01	1	0.7	<0.01	39.1	0.03	0.1	0.29	0.01	15.22	99.86	42.72	39.15
19MARY-2	0.67	<0.01	1.14	0.67	<0.01	41	0.07	0.09	0.26	0.02	11.12	99.83	44.71	41.07
19MARY-3	0.56	<0.01	0.62	1.35	0.01	41.2	0.04	0.1	0.1	0.02	10.41	99.93	45.43	41.23
19MARY-4	0.55	<0.01	0.37	1.25	<0.01	39.2	0.03	0.1	0.06	0.01	15.3	99.88	42.94	39.25
19MARY-5	0.49	<0.01	0.51	1.35	<0.01	39.9	0.04	0.09	0.09	0.01	13.38	99.91	43.97	39.94
19MARY-6	0.57	<0.01	0.62	1.22	<0.01	42.2	0.03	0.1	0.13	0.01	9.06	100.15	46.15	42.14
19MARY-7	0.43	<0.01	0.48	1.35	<0.01	40.3	0.04	0.1	0.09	0.01	13.08	100.1	44.18	40.26
19MARY-8	0.38	<0.01	0.39	1.31	<0.01	38.4	0.04	0.09	0.07	<0.01	16.55	99.75	42.45	38.5
19MARY-9	0.58	<0.01	0.49	1.37	<0.01	40.3	0.04	0.09	0.1	0.01	12.89	100.05	44.08	40.28
19MARY-10	0.54	<0.01	0.43	1.3	<0.01	39.9	0.03	0.09	0.08	0.01	14.24	100.4	43.68	39.74

The relatively high MgO content (38.5-42.14% MgO%/Total%) in samples 19MARY-1 to 10 is approximately 3% lower in MgO values than 2018 rock sample taken from the south portion of the Central Zone. Lower MgO content in north portion of Central Zone is partly explained by the relatively high SiO2 (9.06-16.55%) content. Overall, the Marysville Central Zone magnesite

compares favourably with other magnesite producers such as Baymag property near Radium Hot Springs, BC (NOTE: pure magnesite is about 47.6% MgO, and most BC magnesite deposits range from 90-95% MgCO₃). Impurity compounds of interest (Al₂O₃, CaO) approach specifications required for producing deadburn, calcined and fused magnesia. The relatively high SiO₂ and Fe₂O₃, may require beneficiation in order to remove iron-bearing mineral impurities (e.g. siderite), and silica in the form of re-crystallized chert (which is a hydrated form of quartz). Based on the range of %MgO and impurities Al₂O₃, SiO₂, CaO, Fe₂O₃, detailed mapping, geochemical sampling and core drilling is recommended in order to test the extent and purity of the Marysville magnesite, leading to metallurgical testing for suitability for use as a raw material for refractories in the steel industry as well as other industrial end uses such as agricultural, fire retardant, and/or specialized moisture/mold resistant filler, MgCl (road salt).

The magnesite member of the Cranbrook Formation quartzite is extensive throughout the local area as lenses along a 6 kilometer strike length. In the southern portion of Marysville magnesite there appears to be NNE trending, steeply west dipping layer approximately 1,000 meters in strike length, and in the range of 3-15 meters width of magnesite mineralization that represents a significant drill target, especially where the widest magnesite zones are located near the boundary of MTO tenures 1033194 and 1029860 (South Zone). The Central Zone represents similar geological setting as the South Zone with more difficult access due to higher elevation and moderate slope.

MGX is planning further evaluation of commercial applications for Marysville magnesite as well as geochemical analysis of rock samples and diamond drill core in order to determine grade and distribution of Marysville magnesite mineralization. A two phase drill program would be considered for the central zone after phase one drilling of south zone.

1.0 Introduction

This technical report has been prepared on behalf of MGX Minerals Inc, and describes property history and recent geological and geochemical fieldwork done on the Marysville Magnesite mineral (June 25-26, 2019). This report is prepared to comply with BC Ministry of Energy and Mines Mineral Act requirements for filing assessment reports.

2.0 Location, Access, Infrastructure, & Physiography

The Marysville Magnesite property consists of 7 contiguous MTO tenures that are located approximately 12 km (7.7 miles) south of Kimberly, BC (Fig 1, 2). The property is located on NTS map sheet 082G/12W and on TRIM map sheet 082G.051 in the Fort Steele Mining Division of southern British Columbia, Canada (Figure 2). The Marysville Magnesite occurrences are located near latitude 49°34' 40" N and longitude 115°58' 33" W. The property covers a north to northeast trending ridge forming quartzite with lenses of relatively pure magnesite, located approximately 1-6 km northwest of Perry Creek. Near Antwerp Creek canyon topography is steep, and N to NE trending cliffs less than 7 m (23 ft) high occur in the vicinity of a NNE trending, sub-vertical dipping major fault. Elevations on the claim block range from 1,000 to 1,550 meters (3,280-5,084 feet).

The Marysville magnesite property can be accessed using Perry Creek FSR, which is connected to paved Interprovincial Highway 95A located east of the property. There is good infrastructure in the form of paved highways, a CPR spur line and a major power line all of which are within 10 kilometres of the property. Marysville magnesite deposit is partly exposed on surface, as a series of NNE trending outcrops. A series of northwest trending, cross-cutting faults has resulted in some small scale dextral offsets (in the order of 5-75 meters) of geologic contacts.

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 Marysville, Cranbrook and Kimberly on Highway 95A. Both Kimberly and Cranbrook have suitable infrastructure to support mining and mineral processing.

3.0 Property Status

The Marysville magnesite claim consists of seven (7) contiguous mineral tenures (listed below) located within the Fort Steele Mining Division (Figure 2).

Tenure number	Claim Name	Issue Date	Good To Date	Area in hectares
1029860	Marysville South	2014/jul/25	2021/mar/02	188.56
1033194	Mag 1	2015/jan/07	2021/mar/02	125.68
1033236	Marysville Magnesium	2015/jan/08	2021/mar/02	20.95
1036819	Mag 2	2020/may/10	2022/oct/01	62.83
1044738	Mag 3	2020/may/10	2022/may/01	83.77
1047074	Mag 4	2020/may/10	2022/may/01	41.88
1053039	Mag 5	2020/may/10	2022/may/01	41.89

The total area of the mineral tenures that comprise the property is 556.55 hectares (1,396.9 acres). Details of the status of tenure ownership for the Marysville Magnesite 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 Marysville magnesite claim has not been surveyed.

The mineral tenures comprising the Marysville Magnesite mineral property are shown in Figure 2. The claim 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 tenures 1033194, 1036819, 1044738, 1047074, & 1053039 are owned 100% by MGX Minerals Inc, and mineral tenures 1029860 and 1033236 are owned 100% by Jared Lazerson (CEO MGX Minerals Inc).

4.0 Marysville Magnesite Property History

In 1932 the GSC announced the discovery of coarse crystalline magnesite in the area between Perry Creek and St Marys River. Cominco acquired the property and subsequent mapping and sampling (including a 2,700 tonne bulk sample shipped to Trail, BC) was carried out. Cominco held the mineral title for Marysville magnesite for several decades and did not file any assessment reports so there are public access documents for work done by Cominco on the property. A map published in EMPR Annual Report 1964 (pg 187) suggests that Cominco performed considerable stripping and trenching at the north end of the magnesite zone, at an elevation of 4,060 to 4,120 feet (1,237.5 to 1,255.8 m) for a length of about 500 feet (152.4 m) across widths of 50-60 feet (15.24-18.3 m). The main excavation where Cominco removed 2,700 tonnes came from a NE trending pit that is about 160 ft long and 50 ft wide. A total of 4 diamond drill holes appear to have been drilled 50-150 meters west of the trenches. Cominco did not pursue commercial production and the claims eventually lapsed.

The Marysville magnesite property was acquired by Magna Precious and Industrial Minerals Inc and in 2000 the property was optioned by Stralak Res Inc. It was announced that the main purpose of the property acquisition was for the production of magnesium chloride, considered to be suitable for the replacement of road salt with magnesium chloride. Stralak Res did not file any assessment work.

In 2008, D Fredlund performed prospecting on 125 hectares and filed an assessment report (AR 30,075). One sample was reported taken from the north portion of the claims and was analyzed by ALS Minerals and returned values of 41.9% MgO, 7.39% SiO₂, 0.39% Al₂O₃, 1.48% Fe₂O₃, 0.36% CaO. Conclusions of work done indicated that further work is recommended. The claims were allowed to lapse and MGX Minerals Inc has acquired the south portion of the Marysville magnesite zone.

In 2015, MGX Minerals Inc performed sampling and mapping in the north and central area of the property (fieldwork in 2017 focused on the south extension). Results from the 2015 rock chip samples are listed as follows:

SAMPLE DESCRIPTION	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SO3 %	SiO2 %	TiO2 %	Total %	LOI 1000 %
MARY-15-AR-1	0.47	0.02	1.02	1.04	0.04	40.7	0.03	0.07	0.11	0.01	11.63	0.03	100.45	45.28
MARY-15-AR-2	0.88	0.02	0.94	0.67	0.06	44.8	0.01	0.07	0.14	0.02	3.53	0.04	100.35	49.14
MARY-15-AR-3	0.67	0.01	0.56	1.8	0.03	44.3	0.03	0.07	0.08	<0.01	2.91	0.03	100.1	49.58
MARY-15-AR-4	1.1	0.01	0.62	0.81	0.19	44.9	0.01	0.09	0.08	<0.01	3.2	0.06	100.5	49.42
MARY-15-AR-5	0.6	0.01	0.56	0.92	0.06	45	0.02	0.07	0.08	0.01	2.7	0.02	100.05	49.99
MARY-15-AR-6	1.03	0.01	1.01	1.07	0.04	42.7	0.02	0.06	0.19	<0.01	6.9	0.04	100.2	47.1

In 2017, MGX Minerals Inc carried out geochemical rock sampling of the South Zone (near Antwerp Creek canyon), and the following list details location and whole rock geochemical analysis of rock chips from magnesite outcrop and float. Results from Marysville South Zone are listed as follows:

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Type
17Mary-1	Main Zone South	573564	5490871	1160	outcrop
17Mary-2	Main Zone South	573584	5491625	1183	outcrop
17Mary-3	Main Zone South	573615	5490639	1188	outcrop
17Mary-4	Main Zone South	573697	5491899	1241	outcrop
17Mary-5	Main Zone South	573723	5491938	1251	outcrop
17Mary-6	Main Zone South	573758	5491983	1276	outcrop
17Mary-7	Main Zone South	573295	5490521	1177	float
17Mary-8	Main Zone South	573184	5490743	1220	float

Sample ID	Al2O3%	CaO%	Fe2O3%	K2O%	MgO%	Na2O%	P2O5%	SO3%	SiO2%	TiO2%	Total%	LOI%
17Mary-1	0.65	0.61	2.12	0.05	42.4	0.14	0.11	<0.01	6.48	0.04	99.97	47.3
17Mary-2	0.65	0.54	2.43	0.06	43.8	0.14	0.11	<0.01	3.96	0.03	100.4	48.6
17Mary-3	0.81	0.95	0.53	0.24	45	0.15	0.06	<0.01	1.89	0.06	99.89	50.14
17Mary-4	0.7	0.57	0.88	0.13	45	0.15	0.03	<0.01	2.78	0.04	99.99	49.66
17Mary-5	1.29	0.8	0.47	0.03	44.2	0.14	0.04	<0.01	4.95	0.05	99.61	47.6
17Mary-6	1.68	0.87	0.66	0.07	45.8	0.15	0.08	<0.01	2.26	0.05	100.45	49.37
17Mary-7	0.96	0.99	0.84	0.02	44.3	0.15	0.09	0.01	5.93	0.05	100.05	46.66
17Mary-8	0.77	0.51	0.95	0.03	45	0.14	0.08	<0.01	3.05	0.05	99.72	49.1

In 2018 MGX Minerals Inc performed geochemical sampling of the south portion of Marysville Central Magnesite Zone. Geological descriptions and geochemical analysis results from Marysville Central Zone (MTO ID 1036819 & 1053039) are listed as follows:

Sample ID	Al2O3%	BaO%	CaO%	Fe2O3%	K2O%	MgO%	MnO%	Na2O%
18MA-1	1.12	<0.01	0.83	0.59	0.01	44.9	0.01	0.1
18MA-2	0.87	<0.01	1.06	0.48	0.21	41.9	0.01	0.1
18MA-3	0.83	<0.01	1.04	0.5	0.19	41.8	0.01	0.09
18MA-4	1.04	<0.01	1.42	0.82	0.01	43	0.01	0.09
18MA-5	1.01	<0.01	1.26	0.76	0.04	43.3	0.01	0.09
18MA-6	0.98	<0.01	1.16	0.79	0.01	43.8	0.01	0.09
18MA-7	0.87	<0.01	1.06	0.69	0.03	43.9	0.01	0.09
18MA-8	1	<0.01	1.22	0.81	0.02	42.6	0.01	0.09
average	0.96		1.13	0.68				

Sample ID	P2O5%	SO3%	SiO2%	TiO2%	Total%	LOI%	MgO%/Total%
18MA-1	0.07	0.02	2.98	0.04	99.6	48.93	45.08
18MA-2	0.12	0.02	8.39	0.05	99.53	46.32	42.1
18MA-3	0.11	0.01	8.48	0.06	99.44	46.32	42.04
18MA-4	0.44	0.02	5.58	0.04	99.53	47.06	43.2
18MA-5	0.33	0.01	5.31	0.05	99.64	47.47	43.46
18MA-6	0.26	0.02	4.41	0.04	99.52	47.95	44.01
18MA-7	0.15	0.02	3.93	0.04	99.42	48.63	44.16
18MA-8	0.32	0.02	6.31	0.04	99.36	46.92	42.87

5.0 Regional Geology

The Marysville Magnesite high purity magnesite deposit is hosted by Lower Cambrian age Cranbrook Formation, part of the Upper Proterozoic to Lower Cambrian Eager and Cranbrook Formations consisting of various lithologies including slate, siltstone, limestone, argillite, and magnesite. The magnesite layers occur in the upper part of the Cranbrook Formation. The Marysville Magnesite Creek deposit is classified as a stratabound magnesite deposit type that is most likely of a sedimentary origin as a platform carbonate deposition, and recrystallized by a burial process that has been subjected to Cretaceous (Laramide Orogeny)? low-grade regional metamorphism (200-300 degrees C, and 300-400 MPa pressure).

Lithological units in the area of Marysville Magnesite are described as follows:

Lithology Legend

Upper-Proterozoic-Lower Cambrian

H Eager Fm argillite, clastic sediments

G Cranbrook Formation magnesite
minor serpentine/talc
(upper portion of F quartzite)

F Cranbrook Formation quartzite

Middle Proterozoic Purcell Supergroup

E Purcell lava (basalt, andesite)

D Purcell intrusive sills

C Siyeh Fm argillite, clastic sediments

B Kitchener Formation dolomite

A Creston Formation quartzite

Bedrock geology of the area surrounding Marysville Magnesite magnesite occurrence has been mapped by the Geological Survey of Canada (Memoir 76). A description of lithologies are listed as follows:

Creston Formation: The oldest rocks in the area consist of Middle Proterozoic light to dark green and grey phyllitic siltstone, siltstone and sericitic quartzite. General attitude of bedding is N to NNE and dip is steep to the east. The Creston Formation has a fault contact with Cambrian Eager Formation to the north.

Kitchener Formation: Middle Proterozoic Kitchener Formation consists of dolomite, argillaceous dolomite, calcareous argillite and argillite. The bedding strikes N to NE and dips are steep to the W and NW. Cleavage and dragfolds suggest that beds are overturned and on the east limb of a large scale anticline.

Siyeh Formation: Middle Proterozoic Siyeh Formation conformably overlies the Kitchener Formation. Siyeh lithologies include fine grained, light to dark coloured, buff thin-bedded striped argillite,

Cranbrook Formation: Lower Cambrian Cranbrook Formation contains mainly quartzite, with interlayered magnesite and siltstone near the top of the section. The quartzites are medium to coarse grained white, pink, pale-green or brown. Quartzite beds vary from massive to 2-4 feet (0.61-1.22 m) thick, to 2-4 inches (5-10 cm) thick and cross-bedding is frequently preserved.

Eager Formation: The Lower Cambrian Eager Formation consists of argillite, argillaceous siltstone, minor schist, quartzite, and dolomite. The argillite is dark to light green and black slaty rocks that form thin bedded, well developed flow cleavage, and closely spaced fracture cleavage nearly parallel to bedding.

The Marysville magnesite occurrence is hosted in the upper member of the Lower Cambrian Cranbrook Formation. The magnesite member outcrops over widths of up to 75 meters wide (that includes interbedded quartzite and siltstone) near the east flank of the north-northeast trending ridge. Bedding is interpreted as compositional layering and not metamorphic banding/cleavage. Metamorphic grade is low (greenschist facies) and it is possible to identify compositional layering. The bedding in the magnesite zone trends NNE and dips steeply ENE. A series of NW trending (dextral offset 5-75 m) faults are roughly perpendicular to the magnesite beds.

Generally, magnesite deposits display the following geological features:

Depositional environment/Geological setting: The host sediments are deposited in a shallow marine environment adjacent to paleobathymetric highs or a lacustrine evaporitic environment.

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.

Gangue mineralogy (Principal and subordinate): Dolomite ± quartz ± chert ± talc ± chlorite ± sulphides ± sulphosalts, ± calcite, ± mica, ± palygorskite, ± aragonite, ± 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.

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.

In British Columbia the diagenetic recrystallization 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.

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.

6.0 2019 Field Program

6.1 Scope & Purpose

2019 geochemical sampling was carried out in order to evaluate mineral potential in a 50 X 350 m area (elongated north-northeast), located in the north-central portion of Marysville Magnesite property at 1,300-1,340 meters elevation, in the area where magnesite is partly exposed as sub-crop and outcrop located approximately 7,000 meters west-southwest of Wycliffe (Fig 4, 5, & 6). Previous geochemical rock chip sampling by MGX Minerals in 2015 outlined areas of magnesite in the north portion of the central zone, and due to favourable results from previous sampling of the central zone, the 2019 sampling focused on the northern extension of central magnesite layer.

6.2 Methods and Procedures

A total of 10 rock chip samples (sample ID 19MARY-1 to 10) were taken using rock hammer and moil across 2 meter intervals along exposures of bedrock in the Marysville central magnesite zones (Fig 4, 5 & 6). 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 0.5 to 1.6 kgs. Surveying of locations was assisted by Garmin 60Cx GPS receiver to an accuracy of 3-5 meters. Sample site descriptions were recorded and marked with flagging. Sample material was placed in marked poly ore bags and shipped to ALS Minerals, North Vancouver.

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

6.3 Property Geology & Mineralization

The writer performed fieldwork consisting of geochemical sampling and geological mapping on the south portion of Marysville magnesite. Fieldwork was carried out May June 25-26, 2019. Technical work is recorded in this assessment report and Statement of Work reported as MEM Event 5740491. Geochemical sampling was carried out on exposed surface bedrock located in close proximity to historic mapped lenses of magnesite. A total of 10 rock chip samples were collected from surface outcrop (samples 19MARY-1 to 10). Rock chip samples were analyzed by ALS Minerals, North Vancouver, BC, using Li Borate fusion, whole rock geochemical analysis.

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Type	Lithology
19MARY-1	Central Zone	574948	5493956	1338	sub-crop	sparry magnesite
19MARY-2	Central Zone	574960	5493988	1337	sub-crop	sparry magnesite
19MARY-3	Central Zone	574979	5494017	1335	sub-crop	sparry magnesite
19MARY-4	Central Zone	574996	5494029	1330	sub-crop	sparry magnesite
19MARY-5	Central Zone	575106	5494044	1327	outcrop	sparry magnesite
19MARY-6	Central Zone	575112	5494077	1327	outcrop	sparry magnesite
19MARY-7	Central Zone	575116	5494098	1318	outcrop	sparry magnesite
19MARY-8	Central Zone	575119	5494120	1311	outcrop	sparry magnesite
19MARY-9	Central Zone	575122	5494155	1306	outcrop	sparry magnesite
19MARY-10	Central Zone	575127	5494189	1301	outcrop	sparry magnesite

Sample ID	Alteration	Mineralization	Bed Strike	Bed Dip	Width (cm)
19MARY-1	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-2	weak qtz stringers, sweats <1 mm	magnesite	30	58 NW	200
19MARY-3	weak qtz stringers, sweats <1 mm	magnesite	31	60 NW	200
19MARY-4	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-5	weak qtz stringers, sweats <1 mm	magnesite	33	62 NW	200
19MARY-6	weak qtz stringers, sweats <1 mm	magnesite	32	66 NW	200
19MARY-7	weak qtz stringers, sweats <1 mm	magnesite	33	58 NW	200
19MARY-8	weak qtz stringers, sweats <1 mm	magnesite	35	58 NW	200
19MARY-9	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-10	weak qtz stringers, sweats <1 mm	magnesite			200

Sample ID	Al2O3%	BaO%	CaO%	Fe2O3%	K2O%	MgO%	MnO%	Na2O%
19MARY-1	0.62	<0.01	1	0.7	<0.01	39.1	0.03	0.1
19MARY-2	0.67	<0.01	1.14	0.67	<0.01	41	0.07	0.09
19MARY-3	0.56	<0.01	0.62	1.35	0.01	41.2	0.04	0.1
19MARY-4	0.55	<0.01	0.37	1.25	<0.01	39.2	0.03	0.1
19MARY-5	0.49	<0.01	0.51	1.35	<0.01	39.9	0.04	0.09
19MARY-6	0.57	<0.01	0.62	1.22	<0.01	42.2	0.03	0.1
19MARY-7	0.43	<0.01	0.48	1.35	<0.01	40.3	0.04	0.1
19MARY-8	0.38	<0.01	0.39	1.31	<0.01	38.4	0.04	0.09
19MARY-9	0.58	<0.01	0.49	1.37	<0.01	40.3	0.04	0.09
19MARY-10	0.54	<0.01	0.43	1.3	<0.01	39.9	0.03	0.09

Sample ID	P2O5%	SO3%	SiO2%	TiO2%	Total%	LOI%	MgO%/Total%
19MARY-1	0.29	0.01	15.22	0.03	99.86	42.72	39.15
19MARY-2	0.26	0.02	11.12	0.03	99.83	44.71	41.07
19MARY-3	0.1	0.02	10.41	0.04	99.93	45.43	41.23
19MARY-4	0.06	0.01	15.3	0.04	99.88	42.94	39.25
19MARY-5	0.09	0.01	13.38	0.03	99.91	43.97	39.94
19MARY-6	0.13	0.01	9.06	0.03	100.15	46.15	42.14
19MARY-7	0.09	0.01	13.08	0.03	100.1	44.18	40.26
19MARY-8	0.07	<0.01	16.55	0.03	99.75	42.45	38.5
19MARY-9	0.1	0.01	12.89	0.04	100.05	44.08	40.28
19MARY-10	0.08	0.01	14.24	0.04	100.4	43.68	39.74

The relatively high MgO content (38.5-42.14% MgO%/Total%) in samples 19MARY-1 to 10 is approximately 3% lower than 2018 rock sample taken from the south portion of the Central Zone. Lower MgO content in north portion of Central Zone is partly explained by the relatively high SiO2 (9.06-16.55%) content. Total CaO is considered an impurity, and CaO content can

influence quality of MgO end product. CaO values in Marysville Central Zone magnesite average from 10 rock samples = 0.62 % CaO, is considered relatively low compared to other magnesite deposits.

The relatively high MgO content (42.4-45.8% MgO) compares favourably with other magnesite producers such as Baymag property near Radium Hot Springs, BC (NOTE: pure magnesite is about 47.6% MgO). Impurity compounds of interest (Al₂O₃, CaO) approach specifications required for producing deadburn, calcined and fused magnesia. The relatively high SiO₂ and Fe₂O₃ may require beneficiation in order to remove iron-bearing mineral impurities (e.g. siderite). Based on the range of %MgO and impurities Al₂O₃, SiO₂, CaO, Fe₂O₃, detailed mapping and geochemical sampling is recommended in order to test the extent and purity of the Marysville magnesite, leading to metallurgical testing for suitability for use as a raw material for refractories in the steel industry as well as other industrial end uses such as agricultural, fire retardant, and/or specialized moisture/mold resistant filler, MgCl (road salt). MGX is planning further evaluation of commercial applications for Marysville magnesite as well as geochemical analysis of rock samples in order to determine grade and distribution of Marysville Magnesite.

In the central portion of Marysville magnesite a NNE trending, steeply west dipping layer approximately 3-15 meters width, and 400 meters strike length of magnesite mineralization occurs between 1,300-1,380 meters elevation. This magnesite represents a significant drill target and potential resource of raw magnesite. The southern zone of magnesite located near the boundary of MTO tenures 1033194 and 1029860 represents a similar magnesite zone that has better access for drilling. The central zone could be developed as a secondary drill target.

7.0 Discussion of Results

The Marysville mineral property contains layers and lenses of high purity magnesite hosted in the Cranbrook Formation. Geological mapping identified stratbound magnesite layers and lenses that striking north-northeast and dipping steeply northwest. The dominant structure appears to be steeply dipping, NE trending strata and sub-vertically oriented late-stage, cross faults generally striking northwest. The magnesite member of the Cranbrook Formation quartzite is extensive throughout the local area as lenses along a 6 kilometer strike length.

Based on the range of % MgO and impurities Al₂O₃, SiO₂, CaO, Fe₂O₃, detailed mapping and geochemical sampling is recommended in order to test the extent and purity of the Marysville magnesite, leading to metallurgical testing for suitability for use as a raw material for refractories in the steel industry as well as other industrial end uses such as agricultural, fire retardant, and/or specialized moisture/mold resistant filler, MgCl (road salt). MGX is planning further evaluation of commercial applications for Marysville magnesite as well as geochemical analysis of rock samples in order to determine grade and distribution of Marysville South Zone magnesite.

Marysville magnesite is a significant deposit with potential for several million tonnes, and the 'Southern Zone' offers well defined drill targets along 600 meters strike length in the area where the widest magnesite zones are located near the boundary of MTO tenures 1033194 and

1029860. The central zone (MTO tenures 1036819, & 1053039) host several isolated magnesite occurrence, and represent a secondary drill target as well as the southern zone (MTO tenures 1033194 and 1029860). Rock sampling of north portion of Central Zone suggests the south portion of the Central Zone has higher MgO grades and less silica, and confirms that Central Zone is a secondary target relative to the South Zone magnesite (primary target). The North Zone requires some evaluation, especially near the historic Cominco workings, in order to assess the nature and extent of magnesite mineralization.

8.0 Conclusion

Reviewing available data, the writer offers the following interpretations & conclusions:

- The Marysville magnesite compares favourably in size with other deposits in BC e.g. Baymag, Driftwood.
- Access to the property is relatively good with a reasonable access road connecting Marysville Magnesite to Cranbrook and Kimberley.
- There is good infrastructure in the form of a paved highway, CPR spur line and powerline all of which are located approximately 10 kilometres east of the property.
- Lower Cambrian Cranbrook Formation sandstone, clastic and carbonate sedimentary sequence has been subjected to regional metamorphism (heat and pressure from deep burial during Cretaceous orogeny events, and subsequent erosion) has resulted in recrystallization of the sediments into magnesite, slate, marble and other metamorphic equivalents.
- Marysville property has exposed Cranbrook Formation magnesite bearing magnesite lithology along a segmented ridge crest that strikes north-northeast and dips steeply. Magnesite exposed near the crest of the ridge is accessible by a network of trails developed by Cominco in 1960's.
- High purity magnesite has been mapped over a strike length of 6,000 metres and a maximum width of about 15 meters. Impure (interbedded quartzite/siltstone) magnesite occurs as 20-60 m wide layers that are parallel to high purity lenses.

9.0 Recommendations

Future exploration and development of Marysville Magnesite should be focused on defining the extensions of known magnesite formations of the South & Central Zones. In order to outline zones of high purity magnesite, geochemical data should be collected from the South & Central Zones and drill plan consisting of 50 m spaced fence of drill holes, directed perpendicular to magnesite bed, and drill collars located approximately 30-100 meters away from target. Based on new data interpretation and geochemical results, core drilling in the central and south portion of the property is recommended. In addition to drilling, a program of metallurgical testing (bulk sampling), for use in various end products is recommended.

10.0 References

EMPR Annual Report 1937-A25, 1941-78, 1959-176, 1961-150, 1964-187

EMPR Bulletin 76, p 77

EMPR Open File 1987-13 1988-14

EMPR Property File, Oct 27, 1994

GSC Map 396A, 15-1957, 11-1960

GSC Memoir 76

GSC Summary Report 1932, Part All

Henderson, G. G. L. (1954): Geology of the Stanford Range of the Rocky Mountains. EMPR Bulletin 35. pp.24-25, Figure 2

Leech, G. B. (1954): Canal Flats, British Columbia, GSC Paper 54-7, pp.18-19

CERTIFICATE AND STATEMENT OF QUALIFICATIONS

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 thirty 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 surveying, & geochemical sampling carried during June, 2019
6. I have a direct interest in Marysville mineral claims and MGX Minerals Inc. The recommendations in this report are considered to be general guidelines for proposed fieldwork, and are not intended to 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. Kikauka



November 6, 2019

ITEMIZED COST STATEMENT-

MARYSVILLE MINERAL TENURES 1029860, 1033236, 1033194, 1036819, 1044738, 1047074, 1053039

FIELDWORK PERFORMED JUNE 25-26, 2019,

**WORK PERFORMED ON MINERAL TENURES 1036819 (CLAIM NAME: MAG 2)
FORT STEELE MINING DIVISION, NTS 82G 12W (TRIM 082G 051)**

FIELD CREW:

A. Kikauka (Geologist) 2 days (surveying, mapping) \$ 1,155.00

FIELD COSTS:

Mob/demob/preparation	146.75
Meals and accommodations	137.50
Equipment & Supplies (bags, flags, tags, consumables)	15.55
Truck mileage & fuel	310.25
Li Borate Fusion ICP AES geochemical analysis (10 rock samples)	489.50
Report	600.00

Total= \$ 2,854.55



ALS Canada Ltd.
 2103 Dollarton Hwy
 North Vancouver BC V7H 0A7
 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
 www.alsglobal.com/geochemistry

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

Page: 1
 Total # Pages: 2 (A - B)
 Plus Appendix Pages
 Finalized Date: 31-AUG-2019
 This copy reported on 3-SEP-2019
 Account: KIKAND

APPENDIX A- Geochemical Analysis Certificates

CERTIFICATE VA19198728

Project: Marysville

This report is for 10 Rock samples submitted to our lab in Vancouver, BC, Canada on 10-AUG-2019.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOC-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
DISP-01	Disposal of all sample fractions

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-CRA05x	LOI for XRF	WST-SEQ

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


 Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.
 2103 Dollarton Hwy
 North Vancouver BC V7H 0A7
 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
 www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
 4199 HIGHWAY 101
 POWELL RIVER BC V8A 0G7

Page: 2 - A
 Total # Pages: 2 (A - B)
 Plus Appendix Pages
 Finalized Date: 31-AUG-2019
 Account: KIKAND

Project: Marysville

CERTIFICATE OF ANALYSIS VA19198728

Sample Description	Method Analyte Units LOD	WEI-21	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
		Recvd Wt. kg	Al ₂ O ₃ %	BaO %	CaO %	Cr ₂ O ₃ %	Fe ₂ O ₃ %	K ₂ O %	MgO %	MnO %	Na ₂ O %	P ₂ O ₅ %	SO ₃ %	SiO ₂ %	SrO %	TiO ₂ %
19MARY-1		0.50	0.62	<0.01	1.00	<0.01	0.70	<0.01	39.1	0.03	0.10	0.29	0.01	15.22	<0.01	0.03
19MARY-2		0.78	0.67	<0.01	1.14	<0.01	0.67	<0.01	41.0	0.07	0.09	0.26	0.02	11.12	<0.01	0.03
19MARY-3		1.18	0.56	<0.01	0.62	<0.01	1.35	0.01	41.2	0.04	0.10	0.10	0.02	10.41	<0.01	0.04
19MARY-4		1.54	0.55	<0.01	0.37	<0.01	1.25	<0.01	39.2	0.03	0.10	0.06	0.01	15.30	<0.01	0.04
19MARY-5		1.62	0.49	<0.01	0.51	<0.01	1.35	<0.01	39.9	0.04	0.09	0.09	0.01	13.38	<0.01	0.03
19MARY-6		1.18	0.57	<0.01	0.62	<0.01	1.22	<0.01	42.2	0.03	0.10	0.13	0.01	9.06	<0.01	0.03
19MARY-7		1.48	0.43	<0.01	0.48	<0.01	1.35	<0.01	40.3	0.04	0.10	0.09	0.01	13.08	<0.01	0.03
19MARY-8		1.12	0.38	<0.01	0.39	<0.01	1.31	<0.01	38.4	0.04	0.09	0.07	<0.01	16.55	<0.01	0.03
19MARY-9		1.08	0.58	<0.01	0.49	<0.01	1.37	<0.01	40.3	0.04	0.09	0.10	0.01	12.69	<0.01	0.04
19MARY-10		1.80	0.54	<0.01	0.43	<0.01	1.30	<0.01	39.9	0.03	0.09	0.08	0.01	14.24	<0.01	0.04

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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

Page: 2 - B
Total # Pages: 2 (A - B)
Plus Appendix Pages
Finalized Date: 31-AUG-2019
Account: KIKAND

Project: Marysville

CERTIFICATE OF ANALYSIS VA19198728

Sample Description	Method Analyte Units LOD	ME-XRF26	OA-GRA05x
		Total % 0.01	LOI 1000 % 0.01
19MARY-1		99.86	42.72
19MARY-2		99.83	44.71
19MARY-3		99.93	45.43
19MARY-4		99.88	42.94
19MARY-5		99.91	43.97
19MARY-6		100.15	46.15
19MARY-7		100.10	44.18
19MARY-8		99.75	42.45
19MARY-9		100.05	44.08
19MARY-10		100.40	43.68

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 31-AUG-2019
Account: KIKAND

Project: Marysville

CERTIFICATE OF ANALYSIS VA19198728

CERTIFICATE COMMENTS													
Applies to Method:	<p style="text-align: center;">LABORATORY ADDRESSES</p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table><tr><td>CRU-31</td><td>CRU-QC</td><td>DISP-01</td><td>LOG-22</td></tr><tr><td>ME-XRF26</td><td>OA-CRA0Sx</td><td>PUL-31</td><td>PUL-QC</td></tr><tr><td>SPL-21</td><td>WEI-21</td><td></td><td></td></tr></table>	CRU-31	CRU-QC	DISP-01	LOG-22	ME-XRF26	OA-CRA0Sx	PUL-31	PUL-QC	SPL-21	WEI-21		
CRU-31	CRU-QC	DISP-01	LOG-22										
ME-XRF26	OA-CRA0Sx	PUL-31	PUL-QC										
SPL-21	WEI-21												



ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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

Page: 1
Total # Pages: 2 (A - B)
Plus Appendix Pages
Finalized Date: 31-AUG-2019
This copy reported on 3-SEP-2019
Account: KIKAND

QC CERTIFICATE VA19198728

Project: Marysville

This report is for 10 Rock samples submitted to our lab in Vancouver, BC, Canada on 10-AUG-2019.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOC-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
DISP-01	Disposal of all sample fractions

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-CRA0Sx	LOI for XRF	WST-SEQ

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.
 2103 Dollarton Hwy
 North Vancouver BC V7H 0A7
 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
 www.alsglobal.com/geochemistry

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

Page: 2 - A
 Total # Pages: 2 (A - B)
 Plus Appendix Pages
 Finalized Date: 31-AUG-2019
 Account: KIKAND

Project: Marysville

QC CERTIFICATE OF ANALYSIS VA19198728

Sample Description	Method Analyte Units LOD	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
		Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SO3 %	SiO2 %	SrO %	TiO2 %	Total %
STANDARDS																
AMISO461																
Target Range - Lower Bound																
Upper Bound																
OREAS 218		13.41	0.03	10.05	0.04	12.12	0.23	7.24	0.19	2.95	0.11	0.35	48.90	0.02	1.11	96.90
Target Range - Lower Bound		13.04	<0.01	9.73	<0.01	11.63	0.20	6.81	0.16	2.75	0.07	0.31	48.02	<0.01	1.04	<0.01
Upper Bound		13.96	0.04	10.45	0.05	12.47	0.26	7.39	0.22	3.05	0.13	0.41	50.38	0.03	1.20	0.02
OREAS 220		13.56	0.03	9.63	0.04	11.41	0.46	7.22	0.17	2.74	0.18	0.33	49.93	0.03	1.29	97.17
Target Range - Lower Bound		13.12	<0.01	9.28	0.02	11.00	0.42	6.92	0.14	2.60	0.15	0.31	49.10	<0.01	1.19	<0.01
Upper Bound		14.04	0.05	10.00	0.06	11.80	0.51	7.50	0.20	2.90	0.21	0.41	51.50	0.05	1.37	0.02
SCH-1																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	99.77	<0.01	<0.01	99.80
Target Range - Lower Bound		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Upper Bound		0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
19MARY-10		0.54	<0.01	0.43	<0.01	1.30	<0.01	39.9	0.03	0.09	0.08	0.01	14.24	<0.01	0.04	100.40
DUP		0.56	<0.01	0.43	<0.01	1.30	<0.01	40.0	0.03	0.09	0.08	0.01	14.26	<0.01	0.04	100.50
Target Range - Lower Bound		0.53	<0.01	0.41	<0.01	1.27	<0.01	39.3	0.02	0.08	0.07	<0.01	14.03	<0.01	0.03	99.44
Upper Bound		0.57	0.02	0.45	0.02	1.33	0.02	40.6	0.04	0.10	0.09	0.02	14.47	0.02	0.05	101.45

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.
 2103 Dollarton Hwy
 North Vancouver BC V7H 0A7
 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
 www.alsglobal.com/geochemistry

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

Page: 2 - B
 Total # Pages: 2 (A - B)
 Plus Appendix Pages
 Finalized Date: 31-AUG-2019
 Account: KIKAND

Project: Marysville

QC CERTIFICATE OF ANALYSIS VA19198728

Sample Description	Method Analyte Units LOD	QA-CRA05x LOI 1000 % 0.01
STANDARDS		
AMIS0461		38.51
Target Range - Lower Bound		36.66
Upper Bound		40.54
OREAS 218		
Target Range - Lower Bound		
Upper Bound		
OREAS 220		
Target Range - Lower Bound		
Upper Bound		
SCH-1		2.70
Target Range - Lower Bound		2.58
Upper Bound		2.88
BLANKS		
BLANK		
Target Range - Lower Bound		
Upper Bound		
BLANK		0.01
Target Range - Lower Bound		<0.01
Upper Bound		0.02
DUPLICATES		
19MARY-10		43.68
DUP		43.57
Target Range - Lower Bound		42.52
Upper Bound		44.73

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 31-AUG-2019
Account: KIKAND

Project: Marysville

QC CERTIFICATE OF ANALYSIS VA19198728

CERTIFICATE COMMENTS													
Applies to Method:	<p style="text-align: center;">LABORATORY ADDRESSES</p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table><tbody><tr><td>CRU-31</td><td>CRU-QC</td><td>DISP-01</td><td>LOG-22</td></tr><tr><td>ME-XRF26</td><td>OA-GRA05x</td><td>PUL-31</td><td>PUL-QC</td></tr><tr><td>SPL-21</td><td>WEI-21</td><td></td><td></td></tr></tbody></table>	CRU-31	CRU-QC	DISP-01	LOG-22	ME-XRF26	OA-GRA05x	PUL-31	PUL-QC	SPL-21	WEI-21		
CRU-31	CRU-QC	DISP-01	LOG-22										
ME-XRF26	OA-GRA05x	PUL-31	PUL-QC										
SPL-21	WEI-21												



SAMPLE PREPARATION PACKAGE

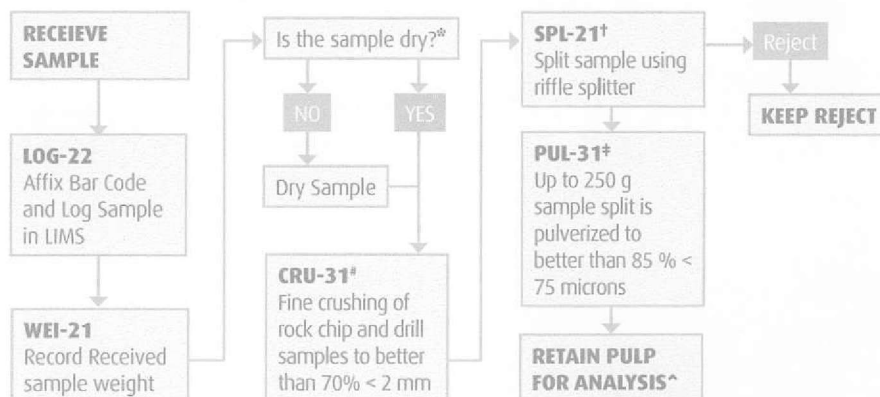
PREP- 31

STANDARD SAMPLE PREPARATION: DRY, CRUSH, SPLIT AND PULVERIZE

Sample preparation is the most critical step in the entire laboratory operation. The purpose of preparation is to produce a homogeneous analytical sub-sample that is fully representative of the material submitted to the laboratory. The sample is logged in the tracking system, weighed, dried and finely crushed to better than 70 % passing a 2 mm (Tyler 9 mesh, US Std. No.10) screen. A split of up to 250 g is taken and pulverized to better than 85 % passing a 75 micron (Tyler 200 mesh, US Std. No. 200) screen. This method is appropriate for rock chip or drill samples.

METHOD CODE	DESCRIPTION
LOG-22	Sample is logged in tracking system and a bar code label is attached.
DRY-21	Drying of excessively wet samples in drying ovens. This is the default drying procedure for most rock chip and drill samples.
CRU-31	Fine crushing of rock chip and drill samples to better than 70% of the sample passing 2 mm.
SPL-21	Split sample using riffle splitter.
PUL-31	A sample split of up to 250 g is pulverized to better than 85% of the sample passing 75 microns.

FLOW CHART - SAMPLE PREPARATION PACKAGE - PREP-31
STANDARD SAMPLE PREPARATION: DRY, CRUSH, SPLIT AND PULVERIZE



*If samples air-dry overnight, no charge to client. If samples are excessively wet, the sample should be dried to a maximum of 120°C. (DRY-21)

#QC testing of crushing efficiency is conducted on random samples (CRU-QC).

†The sample reject is saved or dumped pending client instructions. Prolonged storage (> 45 days) of rejects will be charged to the client.

‡QC testing of pulverizing efficiency is conducted on random samples (PUL-QC).

^Lab splits are required when analyses must be performed at a location different than where samples received.

WHOLE ROCK GEOCHEMISTRY
ME- XRF06
SAMPLE DECOMPOSITION
50% - 50% $\text{Li}_2\text{B}_4\text{O}_7$ - LiBO_2 (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 % $\text{Li}_2\text{B}_4\text{O}_7$ - 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_2O_3	%	0.01	100
Barium Oxide	BaO	%	0.01	100
Calcium Oxide	CaO	%	0.01	100
Chromium Oxide	Cr_2O_3	%	0.01	100
Ferric Oxide	Fe_2O_3	%	0.01	100
Potassium Oxide	K_2O	%	0.01	100
Magnesium Oxide	MgO	%	0.01	100
Manganese Oxide	MgO	%	0.01	100
Sodium Oxide	Na_2O	%	0.01	100
Phosphorus Oxide	P_2O_5	%	0.01	100
Silicon Oxide	SiO_2	%	0.01	100
Strontium Oxide	SrO_2	%	0.01	100
Titanium Oxide	TiO_2	%	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 C - ROCK SAMPLE DESCRIPTIONS

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Type	Lithology
19MARY-1	Central Zone	574948	5493956	1338	sub-crop	sparry magnesite
19MARY-2	Central Zone	574960	5493988	1337	sub-crop	sparry magnesite
19MARY-3	Central Zone	574979	5494017	1335	sub-crop	sparry magnesite
19MARY-4	Central Zone	574996	5494029	1330	sub-crop	sparry magnesite
19MARY-5	Central Zone	575002	5494044	1327	outcrop	sparry magnesite
19MARY-6	Central Zone	575009	5494077	1327	outcrop	sparry magnesite
19MARY-7	Central Zone	575014	5494098	1318	outcrop	sparry magnesite
19MARY-8	Central Zone	575019	5494120	1311	outcrop	sparry magnesite
19MARY-9	Central Zone	575024	5494155	1306	outcrop	sparry magnesite
19MARY-10	Central Zone	575028	5494189	1301	outcrop	sparry magnesite

Sample ID	Alteration	Mineralization	Bed Strike	Bed Dip	Width (cm)
19MARY-1	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-2	weak qtz stringers, sweats <1 mm	magnesite	33 66 NW		200
19MARY-3	weak qtz stringers, sweats <1 mm	magnesite	35 68 NW		200
19MARY-4	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-5	weak qtz stringers, sweats <1 mm	magnesite	35 72 NW		200
19MARY-6	weak qtz stringers, sweats <1 mm	magnesite	30 70 NW		200
19MARY-7	weak qtz stringers, sweats <1 mm	magnesite	30 54 NW		200
19MARY-8	weak qtz stringers, sweats <1 mm	magnesite	31 57 NW		200
19MARY-9	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-10	weak qtz stringers, sweats <1 mm	magnesite			200

Sample ID	Al2O3%	BaO%	CaO%	Fe2O3%	K2O%	MgO%	MnO%	Na2O%	P2O5%	SO3%	SiO2%	TiO2%	Total%	LOI%	*MgO%
19MARY-1	0.62	<0.01	1	0.7	<0.01	39.1	0.03	0.1	0.29	0.01	13.22	0.03	99.86	42.72	39.15
19MARY-2	0.67	<0.01	1.14	0.67	<0.01	41	0.07	0.09	0.26	0.02	11.12	0.03	99.83	44.71	41.07
19MARY-3	0.56	<0.01	0.62	1.35	0.01	41.2	0.04	0.1	0.1	0.02	10.41	0.04	99.93	45.43	41.23
19MARY-4	0.55	<0.01	0.37	1.25	<0.01	39.2	0.03	0.1	0.06	0.01	15.3	0.04	99.88	42.94	39.25
19MARY-5	0.49	<0.01	0.51	1.35	<0.01	39.9	0.04	0.09	0.09	0.01	13.38	0.03	99.91	43.97	39.94
19MARY-6	0.57	<0.01	0.62	1.22	<0.01	42.2	0.03	0.1	0.13	0.01	9.06	0.03	100.15	46.15	42.14
19MARY-7	0.43	<0.01	0.48	1.35	<0.01	40.3	0.04	0.1	0.09	0.01	13.08	0.03	100.1	44.18	40.26
19MARY-8	0.38	<0.01	0.39	1.31	<0.01	38.4	0.04	0.09	0.07	<0.01	16.55	0.03	99.75	42.45	38.5
19MARY-9	0.58	<0.01	0.49	1.37	<0.01	40.3	0.04	0.09	0.1	0.01	12.89	0.04	100.05	44.08	40.28
19MARY-10	0.54	<0.01	0.43	1.3	<0.01	39.9	0.03	0.09	0.08	0.01	14.24	0.04	100.4	43.68	39.74
average	0.539	0.01	0.61	1.187	0.01	40.2	0.04	0.095	0.127	0.01	13.1	0.03	99.99	44	40.2


*/total%

[MINFILE Home page](#) | [ARIS Home page](#) | [MINFILE Search page](#) | [Property File Search](#)
MINFILE Record Summary

MINFILE No 082GNW005

APPENDIX D - MINFILE
[XML Extract](#)

 File Created: 24-Jul-1985 by BC Geological Survey (BCGS)
 Last Edit: 20-Apr-2008 by Mandy N. Desautels (MND)

SUMMARY [Summary Help](#) 

Name	MARYSVILLE, PERRY CREEK	NMI	082G12 Mg1
Status	Past Producer	Mining Division	Fort Steele
Latitude	049° 34' 40"	BCGS Map	082G051
Longitude	115° 58' 33"	NTS Map	082G12W
Commodities	Magnesite	UTM	11 (NAD 83)
Tectonic Belt	Omineca	Northing	5492192
		Easting	574039
		Deposit Types	E09 : Sparry magnesite
		Terrane	Ancestral North America

Capsule Geology

Magnesite forms a bed which is conformably interbedded with quartzites of the Lower Cambrian Cranbrook Formation. It is underlain by a sequence of thinly banded, reddish quartzitic and buff magnesite beds and is overlain by magnesite interstratified with thin, greenish argillite beds and locally thin limestone. It varies from coarse to finely crystalline, weathers rough and commonly has a rusty brown surface. Fresh surfaces are pearly grey, white or cream-coloured and are cut by minor quartz veins or host to knots of quartz. The best bed of magnesite is about 15 metres thick and samples indicate the following chemistry: 4.54 per cent SiO₂, 2.4 per cent Fe₂O₃, 0.4 per cent Al₂O₃, 0.79 per cent CaO, 43.7 per cent MgO and 48 per cent Loss On Ignition.

Minor production has been reported for the Marysville deposit (Z.D. Hora, personal communication, 1990), but no figures are available.

Bibliography

EMPR AR 1937-A25; *1941-78; 1947-219; *1959-176; 1961-150; *1964-187
 EMPR BULL 76 p. 77
 EMPR OF 1987-13; *1988-14
 EMPR PF (Letter and graph from Richard B. Berg to Kirk Hancock, October 27, 1994)
 GSC MAP 396A; 15-1957; 11-1960
 GSC MEM 76; *207, pp. 18,56
 GSC SUM RPT 1932, Part AII, p. 101
 WWW http://www.infomine.com/index/properties/FORT_STEELE.html

Fig 1 General Location

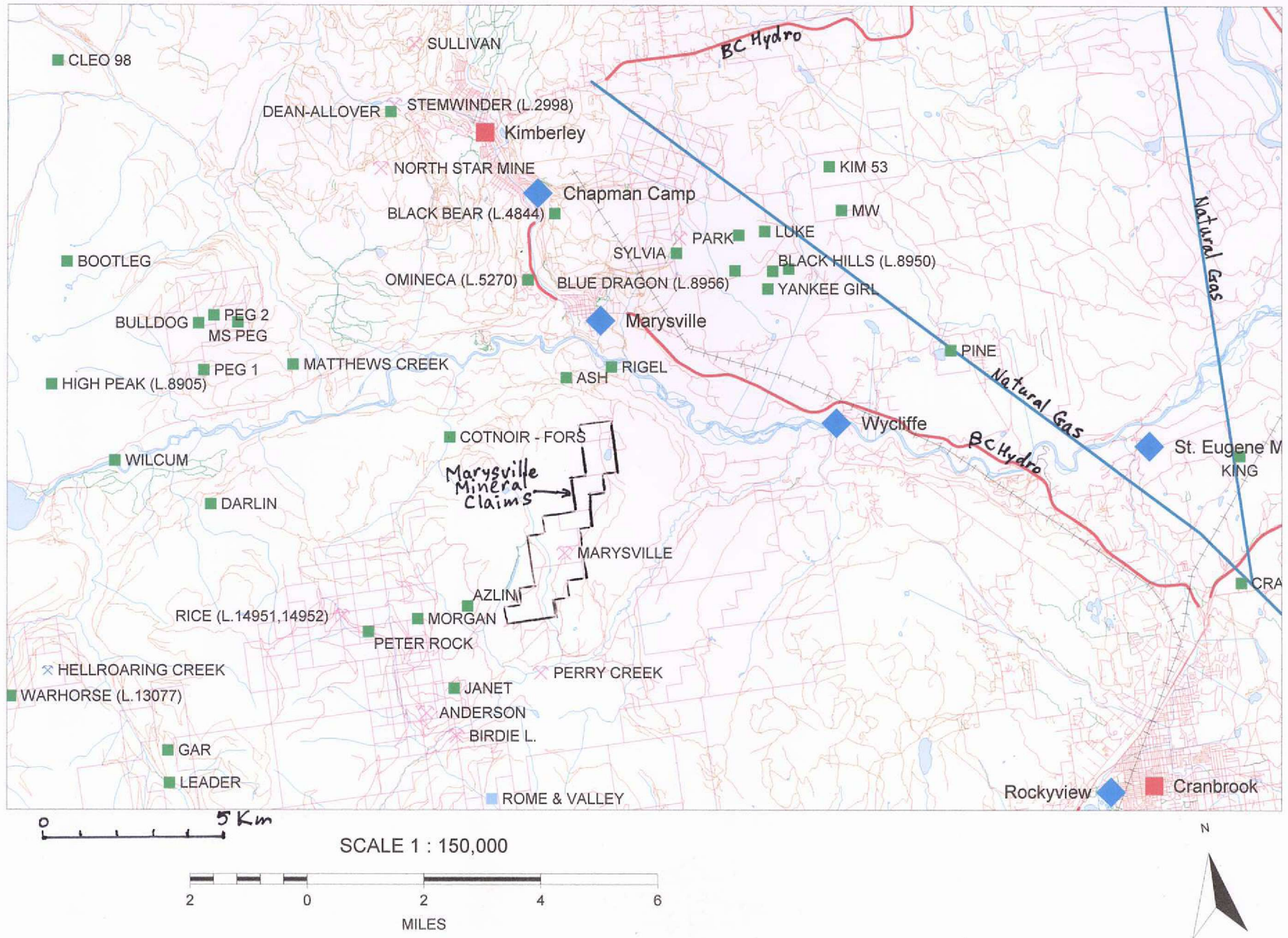
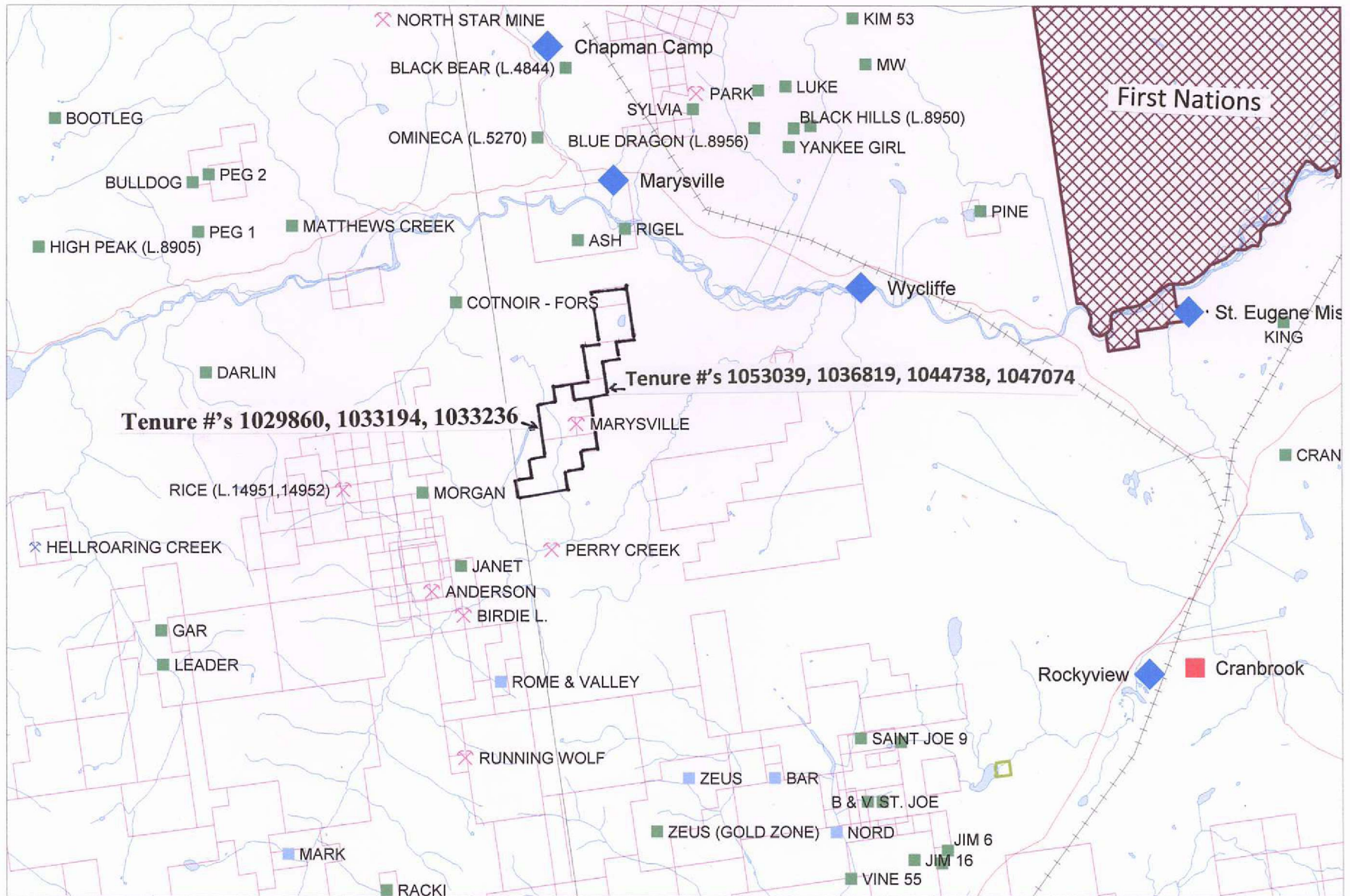


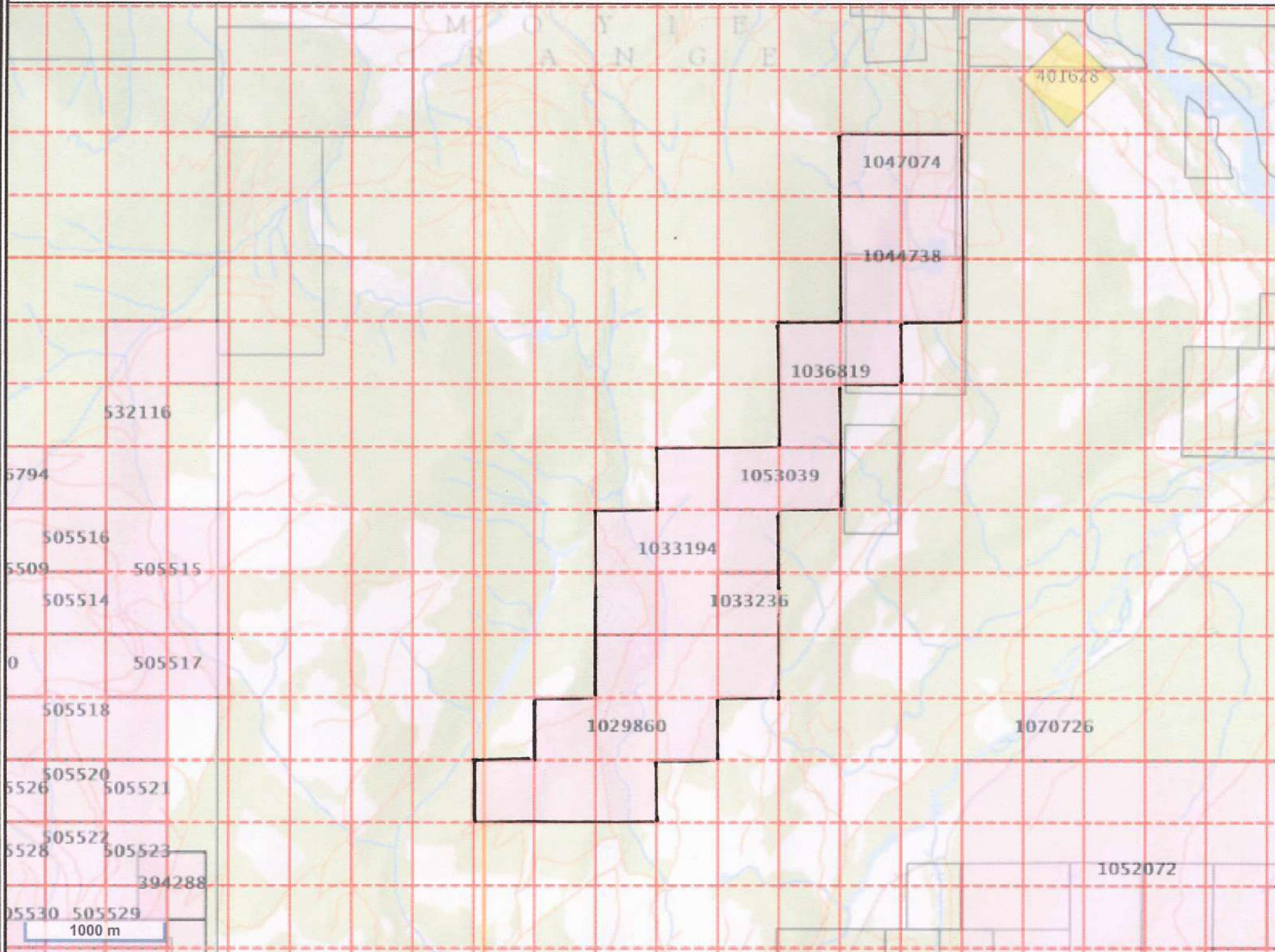
Fig 1A General Location Map



SCALE 1 : 150,000



Fig 2 MTO Mineral Claim Map



Legend

Mineral Titles (MTO)

- MTO Grid
- Title (current)
- LEASE
- CLAIM
- Reserves
- No Registration
- Conditional
- Heritage/Historic Site

Other Mining Layers

- Mineral Occurrences (MINFILE)
- Producer
- Past Producer
- Developed Prospect
- Other

Crown Land Layers (Tantalis)

- Land Act Survey Parcels - Tantalis - Legal Descriptions
- Label Text
- Land Act Survey Parcels - Tantalis - Outlined

Administrative Boundaries

- Federal Transfer Lands - Outlined
- Federal Transfer Lands - Colour Filled
- National Parks - Outlined
- National Park
- National Parks - Colour Filled
- Conservancy Areas - Tantalis - Colour Filled
- Conservancy Areas
- Ecological Reserves - Tantalis - Colour

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.

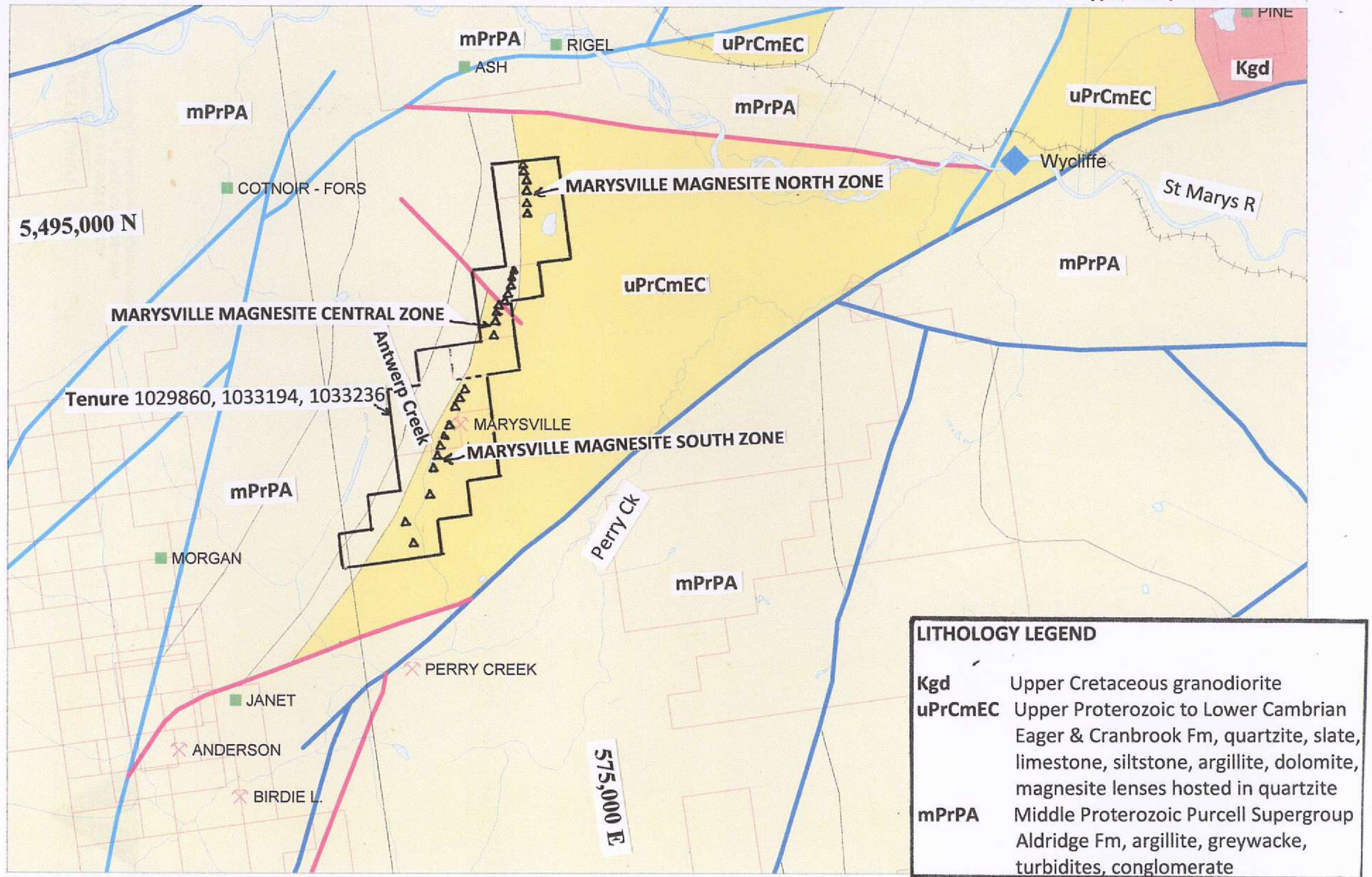
Printed using the Mineral Titles Online (MTO) application. NTS082G 12W, BCGS082G.051, Ft Steele MD

Center: 49°35'7", -115°59'0"
Scale: 1 : 67710
SRS: EPSG:3857
UTM Zone: 11



Fig 3 Marysville Magnesite General Geology

— Fault (Blue=Normal, Red=Unknown Type, Turquoise=Thrust)



0 3 Km SCALE 1 : 75,000 ▲ sparry magnesite

1 0 1 2 3 MILES

UTM Zone 11, NAD 83 Datum

Ft Steele Mining Division,
BCGS 082G.051, NTS 082G12W



Fig 4 Marysville 2019 Rock Chip Samples (Central Zone)

NTS 082G 12/W, BCGS 082G.051, Fort Steele Mining Division

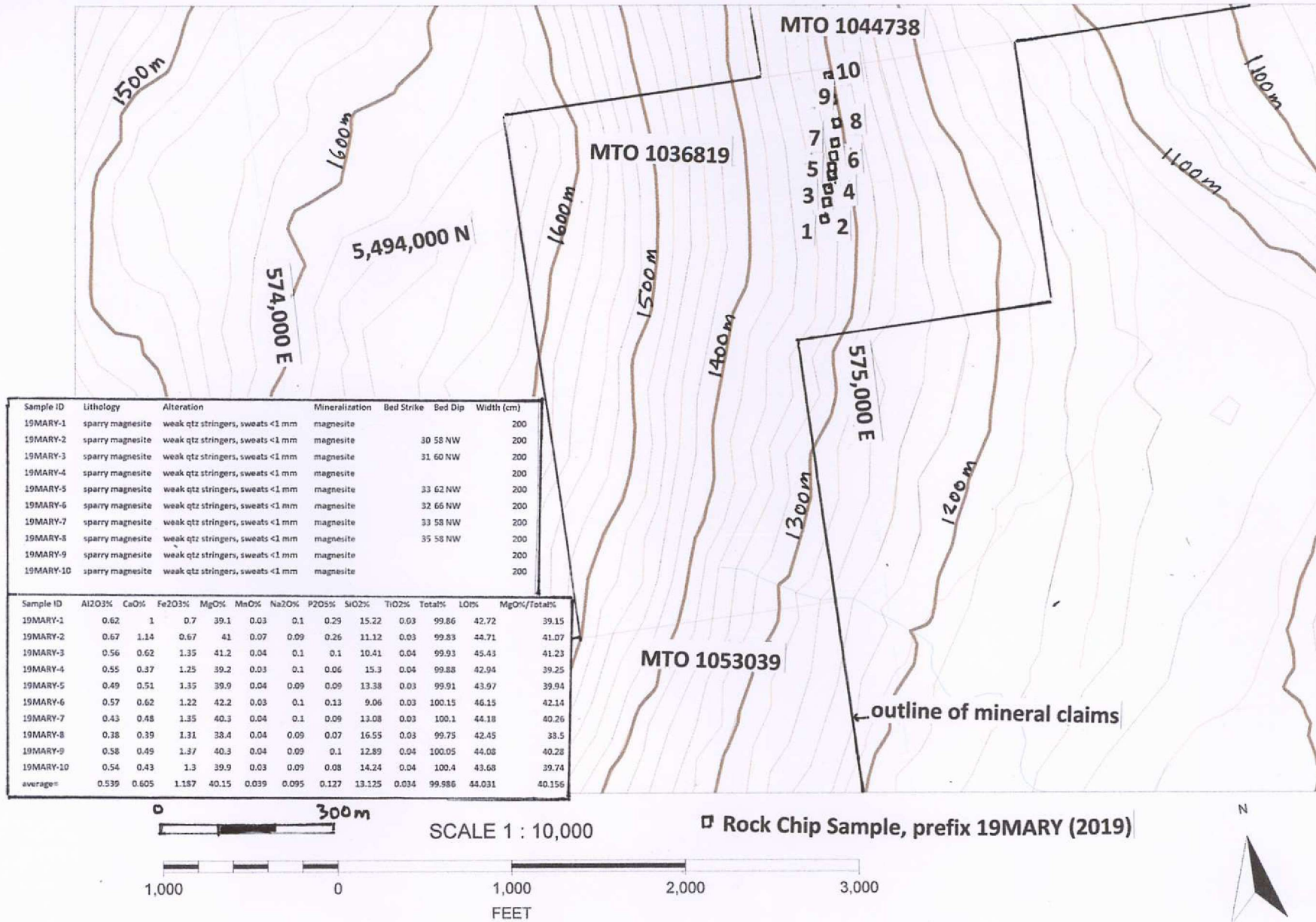


Fig 5 2019 Rock Samples 19-1 to 10

Central Zone (North Portion), Ma5-Ma8 2017 samples

NTS 082G 12/W, BCGS 082G.051, Fort Steele Mining Division

Legend

- 2017 rock sample
- 2019 rock sample
- MTO claim boundary
- Surface Trace Magnesite

Outline of 10-20 meter thick magnesite bearing strata (strike 036, dip -60 NW)

MTO 1044738

MTO 1036819

19-10

19-9

19-8

19-7

19-6

19-5

19-3 19-4

19-2

19-1

Ma5

Ma6

Ma7

Ma8

Google Earth

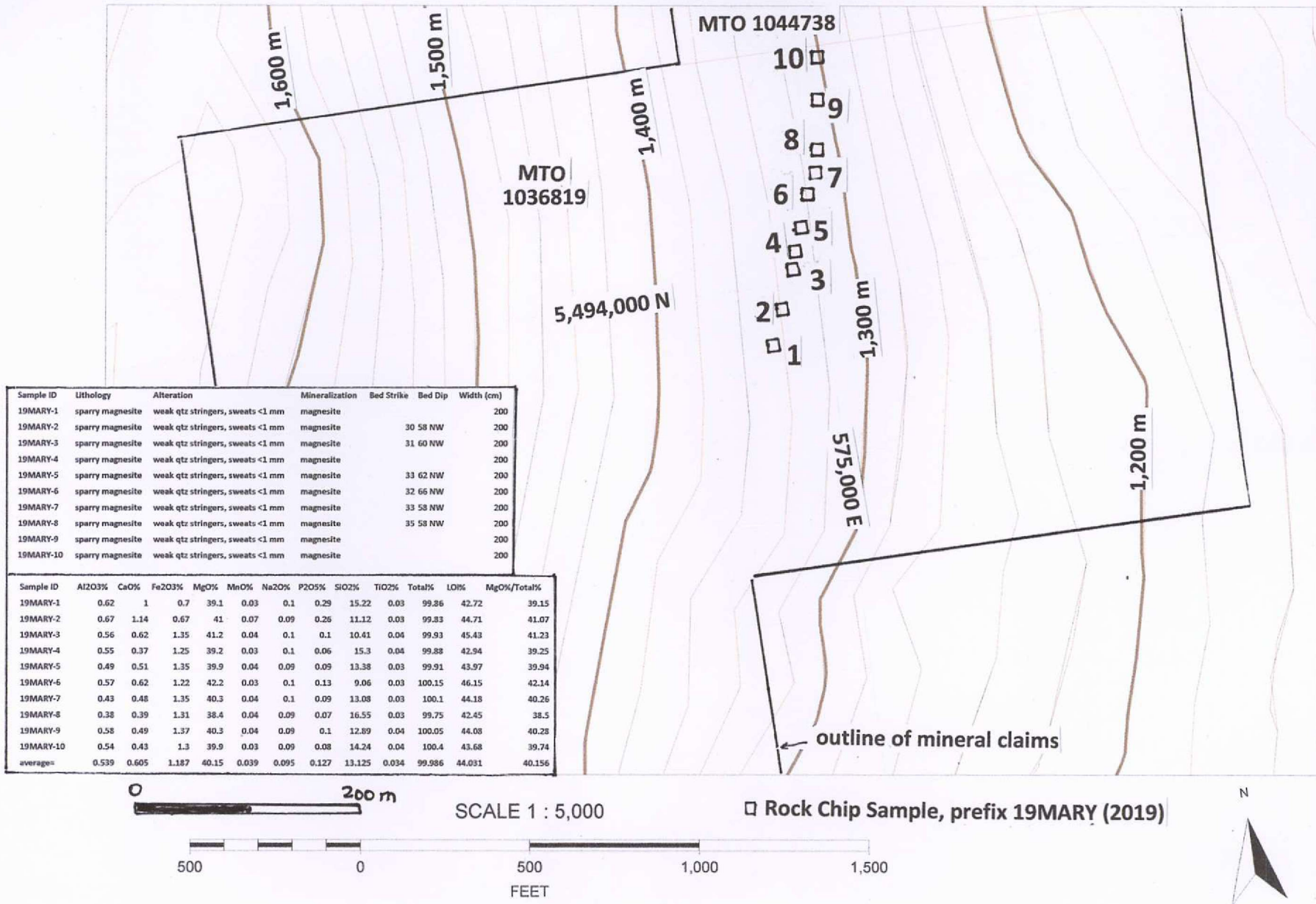
© 2018 Google
Image © 2019 Maxar Technologies



400 m

Fig 6 Marysville 2019 Rock Chip (Central Zone Detail)

NTS 082G 12/W, BCGS 082G.051, Fort Steele Mining Division



Sample ID	Lithology	Alteration	Mineralization	Bed Strike	Bed Dip	Width (cm)
19MARY-1	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-2	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite	30 58 NW		200
19MARY-3	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite	31 60 NW		200
19MARY-4	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-5	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite	33 62 NW		200
19MARY-6	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite	32 66 NW		200
19MARY-7	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite	33 58 NW		200
19MARY-8	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite	35 58 NW		200
19MARY-9	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite			200
19MARY-10	sparry magnesite	weak qtz stringers, sweats <1 mm	magnesite			200

Sample ID	Al2O3%	CaO%	Fe2O3%	MgO%	MnO%	Na2O%	P2O5%	SiO2%	TiO2%	Total%	LOI%	MgO%/Total%
19MARY-1	0.62	1	0.7	39.1	0.03	0.1	0.29	15.22	0.03	99.86	42.72	39.15
19MARY-2	0.67	1.14	0.67	41	0.07	0.09	0.26	11.12	0.03	99.83	44.71	41.07
19MARY-3	0.56	0.62	1.35	41.2	0.04	0.1	0.1	10.41	0.04	99.93	45.43	41.23
19MARY-4	0.55	0.37	1.25	39.2	0.03	0.1	0.06	15.3	0.04	99.88	42.94	39.25
19MARY-5	0.49	0.51	1.35	39.9	0.04	0.09	0.09	13.38	0.03	99.91	43.97	39.94
19MARY-6	0.57	0.62	1.22	42.2	0.03	0.1	0.13	9.06	0.03	100.15	46.15	42.14
19MARY-7	0.43	0.48	1.35	40.3	0.04	0.1	0.09	13.08	0.03	100.1	44.18	40.26
19MARY-8	0.38	0.39	1.31	38.4	0.04	0.09	0.07	16.55	0.03	99.75	42.45	38.5
19MARY-9	0.58	0.49	1.37	40.3	0.04	0.09	0.1	12.89	0.04	100.05	44.08	40.28
19MARY-10	0.54	0.43	1.3	39.9	0.03	0.09	0.08	14.24	0.04	100.4	43.68	39.74
average=	0.539	0.605	1.187	40.15	0.039	0.095	0.127	13.125	0.034	99.986	44.031	40.156