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BC Geological Survey
Assessment Report
38519

Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

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

TOTAL COST: $ 10,511.80

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): 5754286

PROPERTY NAME: Biddy-Vernon

CLAIM NAME(S) (on which the work was done): Biddy Jemima 1066293

COMMODITIES SOUGHT: Zn, Ag, Ge, Ga, In, Pb,

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 093N 010, 093N 075, 093N 076, 093N 114

MINING DIVISION: Omineca

NTS/BCGS: 093N 15/W, 093N.097

LATITUDE: 55 ° 57 '28 " LONGITUDE: 124 ° 46 '39 " (at centre of work)

OWNER(S):

1) Andris Kikauka

2) John Bakus

MAILING ADDRESS:

4199 Highway 101, Powell R, BC V8A 0C7

3-1572 Lorne St, Kamloops, BC V2C 1X6

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

1) same

2) same

MAILING ADDRESS:

same

same

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

NW trending belt of weakly metamorphosed Middle Devonian Otter Lakes Group dolomitic marble and sandy dolomites of the Silurian-Devonian Echo Lake Group contain stratabound collapse & solution breccia textures near and along N and E trending shears. Coarse grain reddish colour sphalerite (with low Pb values) correlate with elevated Ag-Ge-Ga-In-Cu-Cd-S. Higher grade massive sulphide is concentrated along N and E trending shear zones, massive galena is separate from sphalerite zones.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 6597, 7748, 16946, 19266, 20492

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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			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	19 samples ME-ICP41 multi-element	1066293	10,511.80
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:	10,511.80

Lat. 55 57' 28" N
Long. 124 46' 39" W
NTS 093 N/15 W
BCGS 093N.097
UTM 389027 E, 6,202,807 N (NAD 83)

GEOCHEMICAL REPORT
ON BIDDY-VERNON CLAIMS
MINERAL CLAIM ID (1066292, 1066293, 1066338, 1066400, 1066397, 1066441, 1067713)
Zn-Ag-Ge-Ga-In (+/-Pb) BEARING MINERALIZATION
WORK PRFORMED ON BIDDY JEMIMA (1066293)

OTTER LAKES,
GERMANSEN LANDING, BC
OMINECA MINING DIVISION

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

38,519

October 3, 2019

Mineral Titles Online

Mineral Claim Exploration and Development Work/Expiry Date Change

Confirmation

Recorder: KIKAUKA, ANDRIS ARTURS (114051)
Submitter: KIKAUKA, ANDRIS ARTURS (114051)
Recorded: 2019/SEP/06
Effective: 2019/SEP/06
D/E Date: 2019/SEP/06

Mineral Claim Exploration and Development Work/Expiry Date Change

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Confirmation

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Event Number: **5754286**

Work Type: Technical Work
Technical Items: Geochemical, PAC Withdrawal (up to 30% of technical work required)

Work Start Date: 2019/MAY/20
Work Stop Date: 2019/MAY/24
Total Value of Work: $ 10511.80
Mine Permit No:

Summary of the work value:

Title Number	Claim Name/Property	Issue Date	Good To Date	New Good To Date	# of Days For-ward	Area in Ha	Applied Work Value	Sub-mission Fee
1066292	V1	2019/FEB/04	2020/FEB/04	2024/apr/15	1532	36.24	$ 1192.67	$ 0.00
1066293	BIDDY JEMIMA	2019/FEB/04	2020/FEB/04	2024/apr/15	1532	162.97	$ 5363.16	$ 0.00
1066338	BIDDY N	2019/FEB/06	2020/FEB/06	2024/apr/15	1530	18.10	$ 594.26	$ 0.00
1066397	VERNON WEST 2	2019/FEB/08	2020/FEB/08	2024/apr/15	1528	54.35	$ 1779.83	$ 0.00
1066400	BIDDY N2	2019/FEB/08	2020/FEB/08	2024/apr/15	1528	18.10	$ 592.72	$ 0.00
1066441	SHOPLIFTER ZINC	2019/FEB/10	2020/FEB/10	2024/apr/15	1526	18.12	$ 591.89	$ 0.00
1067713	KING VERNON ZINC	2019/APR/04	2020/FEB/04	2024/apr/15	1532	54.35	$ 2243.12	$ 0.00
1068507	JEMINA VERNON	2019/MAY/13	2020/MAY/13	2024/apr/15	1433	90.57	$ 2647.74	$ 0.00

Financial Summary:

Total applied work value: $ 15005.39

PAC name: John Nick Bakus
Debited PAC amount: $ 4493.59
Credited PAC amount: $ 0

Total Submission Fees: $ 0.0

Total Paid: **$ 0.0**

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1.0 SUMMARY

The Biddy-Vernon property is situated 17 km north of Germansen Landing, approximately 20 km southwest of Omineca Arm on Williston Lake, and 115 kilometers NNW of Mackenzie (0.75 hr flight from nearest helicopter base). The Biddy-Vernon property is accessible by helicopter, and potentially accessed via existing trail along the north shore of Nina Lake giving access to the property from Germansen Landing to the southwest. Currently the Oslinka FSR (Big Ck valley HIVA 1500 Road) is within 3 km east of the existing trail network that exists on the Biddy-Vernon mineral claims.

The property is located on NTS Map Sheet 93N 15/W, TRIM 093N.096, centred on Latitude 55°57' 28"N and Longitude 124°46' 39"W. The topography of the claims is moderate to moderate-steep mountainous terrain, with level areas surrounding Otter Lakes. The property topography ranges from 950-1400 meters elevation above sea level.

Exploration in the Omineca Limestone Belt began in the 1920's. Many showings have since been found and most have been sporadically worked to the present. Much of the work prior to the early 1950's consisted of prospecting and hydraulic trenching. Although various claims were held in the vicinity of the property, no significant work was carried out until 1973 when large ground positions were acquired by Cominco, Canexplacer, Imperial Oil and others. This activity was initiated by the Geological Survey of Canada (Monger and Paterson, 1974) following a remapping of the region. The G.S.C. work showed that mineralized carbonates located in the vicinity of Nina Lake were Middle Devonian in age rather than Permian or Cambrian (Cache Creek Group) as previously thought, and thus a more favourable host rock.

The Biddy-Vernon Property is a lead-zinc-silver-germanium-gallium prospect located in north central British Columbia. It consists of. The property is underlain by a well bedded sequence of carbonate strata of late Silurian to Middle Devonian age - a rock package commonly referred to as the "Omineca Limestone Belt". Work carried out on the property has included geological, geochemical and geophysical surveys as well as trenching done at intervals since the 1920's. Mineralization consists of numerous low grade stratabound lead-zinc showings located within brecciated and dolomitized limestones. One showing returned assays averaging 5% zinc and 1.3 ounces silver per ton across six meters while at another location a two meter sample assayed 25% lead and 3 ounces silver per ton. Zinc occurs as the mineral sphalerite which itself contains variable germanium. Smelters consider anything over 0.02% (200 ppm) germanium of distinct economic interest as a by-product in zine ore.

Work in this area by Cominco Ltd. in the early 1970's has identified the geologic setting and mineralization controls, and extensive trenching at that time delincated several base-precious metal bearing mineralized zones. Work on the Nina property area by Cominco Ltd. included extensive geochemical sampling and geological mapping, followed by road access construction and trenching. The best surface showings occur in 4 separate zones the West Vernon, Biddy, Jemima and East Vernon zones where sphalerite and lesser galena mineralization. In 1986, Equinox results showed that sphalerite mineralization contained very high concentrations of

germanium (Ge) and that the recovery of Ge had potential to double the value of zinc mineralization. Mineralized zones were intersected in several holes although in most cases intersections were less than 2 m thick. The intersections found in drilling were essentially similar to results found on surface, which were poddy and erratically distributed. The most encouraging results were from the East Vernon area where two closely spaced holes intersected approximately 4 m of 5% Zn. Indications are that the East Vernon mineralization may be part of a more extensive zone that appears to strike discontinuously for approximately 150 m. Results from the Biddy area also indicate a narrow zone of mineralization striking over 200 m, however intersections in this zone were narrower and of lower grade. Drilling established that mineralization is generally hosted in brecciated dolostones and in several instances these zones may be conformable to bedding. The 1990 drill intersections of most interest were in holes 90-13 and 14 in the East Vernon area and 90- 6,8,10 and 11 in the Biddy area.

In 2019, the writer performed rock chip sampling of mapped and unmapped mineral zones located within a 300 meter radius of the Biddy Main Zone, and 50 meter radius of the Jemima Main Zone. A total of 15 rock samples (19BV-1 to 11, 16-19) were taken from the Biddy Main Zone outcrop and float (Fig 4A). A total of 4 rock samples (19BV-12 to 15) were taken from the Jemima Main Zone outcrop and float (Fig 4B). The 2019 rock samples BV-7 to 11, and BV-16-18 from Biddy (Main Zone) returned relatively high values of Zn-Ag, and are accompanied by elevated Ge-Ga-In-Cu. Rock sample BV-19 from Biddy (Main Zone North extension) returned relatively high values of Pb-Ag, and sample BV-19 is not associated with Ge-Ga-In-Cu. Rock sample 19BV-19 is mineralogically different than the Biddy Main Zone, and appears to be a shear related sulphide zone that may be a different age of emplacement than Biddy Main Zone (exposed from 6,203,900 N to 6,204,100 N covering approximately 200 meters of strike length). The Biddy Main Zone is characterized by large collapse breccia zones with minor sphalerite (rare galena) that are enhanced by shear related massive sulphide infilling. Patches, layers and bands of massive argentiferous reddish sphalerite are of primary interest due to high critical metal (Ge-Ga-In) content. The structural setting of the property indicates there are several cross faults in the area of Zn-Ag-Pb bearing mineralization that represent potential drill targets. Prior to drilling, the writer recommends approximately 12.75 line-kilometers of gravity geophysics to assess the presence of near surface massive sulphide bodies. Given that manto deposit types can form irregular shape sulphide bodies in karst terranes, and Mississippi Valley deposit types can form large-scale mineralized breccia zones, gravity geophysics is the preferred method to test for density contrasts prior to drilling.

The 2019 rock samples BV-12-15, from Jemima (Main Zone) returned relatively high values of Zn-Ag, and are accompanied by elevated Ge-Ga-In-Cu (Similar to Biddy Main Zone), as well as 2 samples from Jemima (BV-12, & 13) returned elevated Pb values.

A summary of 2019 rock chip sample descriptions and select geochemical analysis results are listed below:

BIDDY (JEMIMA) 2019 ROCK CHIP SAMPLE DESCRIPTIONS

Sample ID	Zone name	Easting	Northing	Elev (m)	Lithology	Alteration
19BID-1	Biddy (S)	388538	6203772	1273	dolomitic marble	breccia, carbonate
19BID-2	Biddy (S)	388533	6203788	1280	dolomitic marble, arenaceous	breccia, quartz, apatite
19BID-3	Biddy (S)	388468	6203820	1279	dolomitic marble	breccia, carbonate
19BID-4	Biddy (S)	388397	6203843	1258	dolomitic marble	breccia, carbonate
19BID-5	Biddy (S)	388367	6203870	1254	dolomitic marble	breccia, carbonate
19BID-6	Biddy(mid)	388340	6203903	1244	dolomitic marble	breccia, carbonate
19BID-7	Biddy(mid)	388324	6203904	1246	dolomitic marble	breccia, barite, carbonate
19BID-8	Biddy(mid)	388309	6203922	1231	dolomitic marble	breccia, carbonate
19BID-9	Biddy(mid)	388340	6203934	1233	dolomitic marble	breccia, carbonate
19BID-10	Biddy(mid)	388308	6203936	1233	dolomitic marble	breccia, carbonate
19BID-11	Biddy(mid)	388313	6203938	1229	dolomitic marble, arenaceous	breccia, carbonate
19BID-12	Jemima	389168	6202805	1364	dolomitic marble	breccia, shear, carbonate
19BID-13	Jemima	388183	6202790	1364	dolomitic marble	breccia, shear, carbonate
19BID-14	Jemima	389190	6202795	1361	dolomitic marble	breccia, carbonate
19BID-15	Jemima	389194	6202792	1360	dolomitic marble	breccia, carbonate
19BID-16	Biddy (N)	388310	6204007	1259	dolomitic marble	breccia, carbonate
19BID-17	Biddy (N)	388298	6204070	1255	dolomitic marble	breccia, barite, carbonate
19BID-18	Biddy (N)	388274	6204103	1233	dolomitic marble, arenaceous	breccia, silica, carbonate
19BID-19	Biddy (N)	388264	6204121	1232	dolomitic marble, arenaceous	breccia, shear, silica, carbonate

Sample ID	Mineralization	Sample Type	Strike	Dip	Width
19BID-1		angular float			
19BID-2	sphalerite	outcrop	155	24 W	50 cm
19BID-3		angular float			
19BID-4		outcrop	160	28 W	50 cm
19BID-5		angular float			
19BID-6		angular float			
19BID-7	sphalerite	angular float			
19BID-8	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	158	30 W	22 cm
19BID-9	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-10	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	177	50 W	20 cm
19BID-11	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	175	55 W	18 cm
19BID-12	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-13	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-14	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-15	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-16	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-17	sphalerite trace Ge-Ga-In-Cu-Cd minerals	outcrop	168	25 W	20 cm
19BID-18	sphalerite trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop	170	20 W	25 cm
19BID-19	galena	outcrop	170	27 W	22 cm

Sample ID	Zn ppm	Zn %	Pb ppm	Pb %	Ag ppm	Ge ppm	Ga ppm	In ppm	Ba ppm	Fe %	S %	Ca %	Cu ppm
19BID-1	126		2.6		0.04	0.36	0.08	<0.005	20	0.2	0.03	19.25	29.8
19BID-2	2980		6.8		1.28	14.55	0.17	0.104	70	10.4	1.23	5.2	134
19BID-3	325		1.8		0.54	0.27	0.1	<0.005	30	0.16	0.04	21	3.4
19BID-4	8130		2.3		0.61	1.66	0.2	0.041	20	0.2	0.31	20.3	27.3
19BID-5	93		1.1		0.03	0.49	0.12	<0.005	70	0.35	0.05	18.45	4.7
19BID-6	16		0.4		0.02	0.14	0.18	<0.005	30	0.11	0.02	19.6	0.9
19BID-7	7520		47		2.69	1.65	0.33	0.022	890	0.17	0.2	21.2	14.1
19BID-8	191000	19.1	139		77.6	13.25	5.46	0.253	10	0.21	9.15	14.6	156
19BID-9	244000	24.4	238		102	16.25	13.1	0.289	10	0.23	>10.0	12.8	178.5
19BID-10	>300000	>30.0	234		99.5	18.25	17.5	0.267	10	0.29	>10.0	11.25	149.5
19BID-11	3760		23.6		3.17	6.25	0.19	0.079	10	10.65	8.81	1.85	122.5
19BID-12	148500	14.85	51500	5.15	116	13.05	3.71	0.198	20	0.43	7.71	14.8	354
19BID-13	217000	21.7	2700		96.5	11.8	11.05	0.188	10	0.19	>10.0	14.25	422
19BID-14	74900	7.49	549		55.7	15.3	0.55	0.262	20	0.22	2.87	17.5	229
19BID-15	77700	7.77	648		65.8	22.9	0.54	0.243	30	0.24	2.8	16.7	252
19BID-16	63100	6.31	214		21.9	23.5	0.51	0.102	30	0.95	2.43	17.15	186
19BID-17	14200	1.42	547		2.82	2.12	0.25	0.022	350	0.14	0.41	20.3	30.9
19BID-18	064		151000	15.1	82.4	1.64	0.08	0.016	30	4.28	2.37	0.19	17.8
19BID-19	1280		>200000	>20.0	38.1	0.97	0.05	0.039	20	1.82	4.88	2.02	11.8

Sample ID	Au ppm	Cd ppm	Ce ppm	P ppm	Sb ppm	Hg ppm	Se ppm	Ba ppm	Sr ppm	Sb ppm	S %	Ca %
19BID-1	<0.02	0.94	4.71	260	0.23	0.47	<0.2	20	61.7	0.23	0.03	19.25
19BID-2	<0.02	19.65	91.9	4230	0.41	5.96	1.2	70	385	0.41	1.23	5.2
19BID-3	<0.02	11.8	6.05	110	0.36	2.23	0.2	30	63.3	0.36	0.04	21
19BID-4	<0.02	55.8	5.8	250	0.6	15.85	0.3	20	75.1	0.6	0.31	20.3
19BID-5	<0.02	0.74	8.39	280	0.2	0.22	<0.2	70	63.3	0.2	0.05	18.45
19BID-6	<0.02	0.27	4.84	20	0.06	0.06	<0.2	30	134	0.06	0.02	19.6
19BID-7	<0.02	63.2	5.46	180	0.61	19.7	0.3	890	136.5	0.61	0.2	21.2
19BID-8	<0.02	>1000	4.15	260	4.46	354	1	10	174.5	4.46	9.15	14.6
19BID-9	<0.02	>1000	3.95	430	6.3	436	1.1	10	149.5	6.3	>10.0	12.8
19BID-10	<0.02	>1000	4.13	440	6.03	457	0.9	10	175.5	6.03	>10.0	11.25
19BID-11	<0.02	26	104.5	8330	4.35	7.64	10.6	10	179	4.35	8.81	1.85
19BID-12	<0.02	>1000	7.07	270	45.4	336	17.2	20	148	45.4	7.71	14.8
19BID-13	<0.02	>1000	7.17	220	12.55	371	2.1	10	119.5	12.55	>10.0	14.25
19BID-14	<0.02	728	7.89	90	10.3	236	0.9	20	166.5	10.3	2.87	17.5
19BID-15	<0.02	747	7.05	90	8.54	312	1.3	30	170.5	8.54	2.8	16.7
19BID-16	<0.02	365	3.8	130	5.2	101	1.8	30	266	5.2	2.43	17.15
19BID-17	<0.02	95.5	6.55	190	1.48	29.1	0.5	350	410	1.48	0.41	20.3
19BID-18	<0.02	15	9.4	70	70.2	4.11	16.2	30	10.6	70.2	7.37	0.19
19BID-19	<0.02	11.45	2.34	150	177.5	7.5	6.6	20	162.5	177.5	4.88	2.02

Generally, the germanium values from Biddy and Jemima Zones would increase if fresh, unoxidized sample material (obtained by mechanical trenching and/or drilling) were taken versus the oxidized and weathered samples that were obtain from surface exposures. Also, single element analysis of Ge would be preferred to avoid possible cross-element interference from multi-element trace analysis. There is a positive correlation between high sphalerite/low galena with elevated Ge-Ga-In and a positive correlation with sphalerite mineralization and widespread collapse breccia gangue.

The Biddy-Vernon Zone has been drilled from a short distance from the showings (e.g. drill collars approximately 25-50 meters west & south & east of the showings. Future testing of the depth extension of Biddy Main and East Vernon Zones are recommended, as well as additional targets identified by positive gravity (high density) geophysical anomalies. the Biddy-Vernon Zone, requires detailed mapping of veining (cross-fault structures), ground magnetometer surveys, and geochemical sampling to determine future drill targets. The budget total for completing 12.75 line-km gravity geophysics (Fig 8), and completing 1,000 meters core drilling and detailed mapping, geochemical sampling would be approximately $600,000.

2.0 INTRODUCTION

This report provides details of previous exploration work, plus geochemical fieldwork completed in May 20-24, 2019 on the Biddy-Vernon mineral claims for the purpose of outlining tenor and extent of base, precious and critical metal mineralization. This report is intended to comply with data required for filing assessment.

3.0 LOCATION, ACCESS, & PHYSIOGRAPHY

The Biddy-Vernon property is situated 17 km northeast of Germansen Landing and approximately 20 km southwest of Omineca Arm on Williston Lake. The Biddy-Vernon property is accessible by helicopter, and currently the Oslinka FSR (Big Ck valley HIVA 1500 Road) is within 3 km east of the existing trail network that exists on the Biddy-Vernon mineral claims. The property is located on NTS Map Sheet 93N 15/W, TRIM 093N.096, centred on Latitude 55°57' 28"N and Longitude 124°46' 39"W. The topography of the claims is moderate to moderate-steep mountainous terrain, with level areas surrounding Otter Lakes. The property topography ranges from 950-1400 meters elevation above sea level.

The property has all-weather gravel road access to within 3 kilometers of the Biddy-Vernon claims. The Oslinka FSR (HIVA 1500 Road) has made access possible from the east (Williston Lake area) with construction of 3 kilometer access trail. Most vegetation cover consists of mixed coniferous (lodgepole pine, interior fir) forest except along watercourses where stands of willow dominate. The Biddy-Vernon property is accessible by helicopter (0.75 hr flight from nearest permanent helicopter base in Mackenzie),

The climate is intermontane northern interior, cool and wet in late fall, and thick snow cover in the higher elevations from November to March, which may curtail winter

exploration work locally. Temperatures range from highs of 25°C in the summer to lows of -35°C in the winter. There are typically hot dry spells in mid-summer. Mackenzie and Fort St James are resource-based communities that have infrastructure that presently supports several mining operations. Forest access roads throughout th property are maintained by various logging companies, and BC Ministry of Forests, Lands and Natural Resource Operations (FLNRO).

4.0 PROPERTY STATUS

The Biddy-Vernon Property consists of eight (8) contiguous mineral claims totalling about 452.6 hectares (1,117.8 acres) situated 20 km northeast of Germansen Landing, BC. The registered mineral claim owners are listed on MTO website as 50% Client ID 114051-Andris Kikauka, and 50% 223385-John Bakus. The following list sourced from BC MTonline and summarizes details of property status:

Title No.	Claim Name	Owner	Title Type	Issue Date	Good To Date	Area (ha)
1066292	V1	114051 (50%)	Mineral	2019/FEB/04	2024/APR/15	36.2404
1066293	BIDDY JEMIMA	114051 (50%)	Mineral	2019/FEB/04	2024/APR/15	162.9654
1066338	BIDDY N	114051 (50%)	Mineral	2019/FEB/06	2024/APR/15	18.1024
1066397	VERNON WEST 2	114051 (50%)	Mineral	2019/FEB/08	2024/APR/15	54.3528
1066400	BIDDY N2	114051 (50%)	Mineral	2019/FEB/08	2024/APR/15	18.1005
1066441	SHOPLIFTER ZINC	114051 (100%)	Mineral	2019/FEB/10	2024/APR/15	18.1205
1067713	KING VERNON ZINC	114051 (50%)	Mineral	2019/APR/04	2024/APR/15	54.35
1068507	JEMINA VERNON	114051 (50%)	Mineral	2019/MAY/13	2024/APR/15	90.5676

5.0 PROPERTY HISTORY

Exploration in the Omineca Limestone Belt began in the 1920's. Many showings have since been found and most have been sporadically worked to the present. Much of the work prior to the early 1950's consisted of prospecting and hydraulic trenching. Although various claims were held in the vicinity of the property, no significant work was carried out until 1973 when large ground positions were acquired by Cominco, Canexplacer, Imperial Oil and others. This activity was initiated by the Geological Survey of Canada (Monger and Paterson, 1974) following a remapping of the region. The G.S.C. work showed that mineralized carbonates located in the vicinity of Nina Lake were Middle Devonian in age rather than Permian or Cambrian (Cache Creek Group) as previously thought, and thus a more favourable host rock.

The Biddy-Vernon Property is a lead-zinc-silver-germanium-gallium prospect located in north central British Columbia. It consists of. The property is underlain by a well bedded sequence of carbonate strata of late Silurian to Middle Devonian age - a rock package commonly referred to as the "Omineca Limestone Belt". Work carried out on the property has included geological, geochemical and geophysical surveys as well as trenching done at intervals since the 1920's. Mineralization consists of numerous low grade stratabound lead-zinc showings located within

brecciated and dolomitized limestones. One showing returned assays averaging 5% zinc and 1.3 ounces silver per ton across six meters while at another location a two meter sample assayed 25% lead and 3 ounces silver per ton. Zinc occurs as the mineral sphalerite which itself contains variable germanium.

Work in this area by Cominco Ltd. in the early 1970's has identified the geologic setting and mineralization controls, and extensive trenching at that time delineated several heavily mineralized structures. This report summarizes the results of work programs I completed at Nina Lake to date and includes recommendations for further work. This should include delineating lead-zinc-germanium ore by drilling down dip extensions to surf ace exposures, and examining other targets with exploration potential. Work on the Nina property area by Cominco Ltd. included extensive geochemical sampling and geological mapping, followed by road access construction and trenching. Additional trenching was carried out in 1976 to better expose known showings and to determine the extent and grade of mineralization. The trenching program uncovered several mineralized zones, however, many of these trenches were backfilled to satisfy reclamation requirements.

In early 1986, Beaty Geological Ltd. identified lead-zinc-silver mineralization located in the vicinity of Nina Lake near Germansen Landing, B.C. as a prospect with previously unrecognized potential to be a significant germanium source. Follow-up work in the fall showed that the germanium is associated mainly with sphalerite. Furthermore, in concentrate form, the zinc mineralization seems to consistently carry economic values of germanium metal. Investigation suggests that smelters eonsider anything over 0.02% (200 ppm) germanium of distinct economic interest as a by-product in zinc ore.

Historic work suggests the best surface showings occur in 4 separate zones the West Vernon, Biddy, Jemima and East Vernon zones where sphalerite and lesser galena mineralization was originally uncovered by Cominco trenches and subsequently sampled by Equinox in 1986. The Equinox results showed that sphalerite mineralization contained high concentrations of germanium (Ge) and that the recovery of Ge had potential to double the value of zinc mineralization. Mineralized zones were intersected in several holes although in most cases intersections were less than 2 m thick. The intersections found in drilling were essentially similar to results found on surface, which were poddy and erratically distributed. The most encouraging results were from the East Vernon area where two closely spaced holes intersected approximately 4 m of 5% Zn. Indications are that the East Vernon mineralization may be part of a more extensive zone that appears to strike discontinuously for approximately 150 m. Results from the Biddy area also indicate a narrow zone of mineralization striking ever 200 m, however intersections in this zone were narrower and of lower grade. Drilling established that mineralization is generally hosted in brecciated dolostones and in several instances these zones may be conformable to bedding. The 1990 drill intersections of most interest were in holes 90-13 and 14 in the East Vernon area and 90- 6,8,10 and 11 in the Biddy area.

1990 Diamond Drilling 1990 by Equinox Res AR 20,492 (excerpt):

Drilling in the West Vernon area concentrated on mineralization associated with a significant east-west trending fault structure and on mineralization possibly associated with northeast trending faults. Hole 90-1 and 90-2 were aimed at intersecting subsurface extensions of the significant surface sphalerite mineralization (refer to analyses in Equinox report June 1988) found on the "A showing". This zone was extensively trenched by Cominco and was tentatively interpreted as a steeply plunging breccia pipe within and associated with an east-west trending fault. Hole 90-1 and 90-2 intersected minor sections of sphalerite mineralization, in the order of 1.2 m of 1.6% Zn, hosted in brecciated dolostones. These zones of brecciation are likely the down plunge extension of the surface mineralization, however these holes would indicate that mineralization is diminished compared to that on surface. In terms of breccia morphology the holes seem to affirm the concept of a steeply south dipping breccia body. Hole 90-3, located to the west of 90-1 and 90-2, was aimed at intersecting minor mineralization and brecciation associated with the same east-west fault associated with the "A showing". Two minor sections of less than 2% sphalerite were intersected in unbrecciated dolostones likely structurally above the surface extension of the east-west fault . The possible unmineralized extension of the fault was intersected at a greater depth. Holes 90-4 and 90-5 were meant to intersect possible fault (060/vertical) controlled mineralization uncovered in trench # 7. Neither hole intersected sphalerite or galena mineralization. Intersections at shallow depths of what was interpreted as syngenetic pyrite were found, but subsequent analyses indicate that the pyrite is not associated with any significant metal values.

Holes 90-6 through 11 were drilled in the Biddy area to investigate a narrow, perhaps conformable or strataform, zone of mineralization associated with brecciated dolestones. Holes 90-6 and 7, located west of the junction of trench # 45 and # 13, were aimed at intersecting extensions to moderately high grade mineralization sampled previously by Equinox . These holes are located at the most southern exposure of the apparent north-south trending mineralized breccia zone. Hole 90-6, located to the west of trenches # 45 and 43, intersected approximately 1 m of 2% Zn at a shallow level whilo 90-7 apparently intersected the same zone, though less mineralized. Mineralization was hosted in brecciated dolostones which, if considered extensions of the surface showings, indicates that brecciation and mineralization are conformable to bedding. Deeper intersections of brecciation and minor mineralization create uncertainty as to whether mineralization is stratabound. Hole 90-8 was positioned to try and intersect mineralization previously sampled by Equinox, opposite trench # 42, which is likely north along strike of the same breccia mineralization intersected and exposed on surface adjacent to 90-6 and 7. Among shorter sections, hole 90-8 intersected 1.8 m of 2.8% Zn, at a shallow level, within brecciated dolostones (table 2). These intersections and mineralization are similar to that in 90-6 and 7 and again suggest stratabound brecciation and mineralization. Hole 90-9 was positioned farther north along strike to intersect breccia hosted mineralization previously sampled by Equinox adjacent to trench # 18. Hole 90-9 did intersect shallow brecciated sections, but none were significantly mineralized. Hole 90-10 was fanned toward the north from the same site as 90-9 to try and intersect breccia hosted, and possibly fault (east-west) related lead, zinc mineralization. The trend of hole 90-10 is at a low angle to bedding and therefore the 1 m intersection of 2.7% Zn may represent an exaggerated width. The shallow depth of mineralization and brecciated host suggests this mineralization may be stratabound and continuous with the intersections in holes 90-6, 7 and Hole 90-11 the most northerly hole in the Biddy area, north of trench # 19, was positioned to intersect breccia hosted and perhaps fault (east-west) controlled Zn, Pb mineralization. Hole 90-11 intersected approximately 2 m of 1.3% Zn and 1% Pb at as greater depth than

any other Biddy area holes. was hosted in brecciated and highly arenaceous dolostones. The apparent geometry indicates steeply plunging mineralization perhaps related to east-west faults exposed on surface.

Holes 90-12, 13 and 14 were drilled in the East Vernon area to investigate sampled showings that appear to define a northerly trend of mineralization. Hole 90-12 was positioned to intersect breccia hosted mineralization, exposed in trench # 60, considered by Cominco to be controlled by 085' trending faults. Three short sections of less than 1% Zn were intersected within moderately brecciated dolostones. The mineralized intersections did not appear to correspond to the fault exposed on surface and again the possibility of stratabound brecciation and mineralization is indicated. Holes 90-13 and 14, collared in trench # 5, were positioned to intersect mineralization south along strike from 90-12. Both holes intersected mineralized sections: 3.8 m of 2.2% Zn and 4 m of 4.9% Zn in hole 90-14. Both of these closely spaced intersections were in brecciated dolostone and indicate a north-south strike and perhaps steeply dipping attitude of mineralization. Both the drill intersections and surface mineralization suggest a north-south semi-continuous zone of mineralization.

Results from the West Vernon Area were generally discouraging. Attempts at intersecting significant mineralization beneath the "A showing" were not successful indicating that brecciated zones below surface were poorly mineralized. Results from the Biddy Area suggest the existence of a semi-continuous zone, striking over 200 m, of stratabound, breccia hosted mineralization. Grades, however, are moderate and discontinuous, similar to those on surface. In general grades do not exceed 2-3% Zn over 2 m. The East Vernon Area was only tested by 3 holes, two of which were fanned from the same collar location, but this area produced the most encouraging results. The best intersection averages 4 m of 4.9% Zn. The three holes suggest that mineralization is controlled by a north-south striking narrow breccia zone which dips westward more steeply than bedding. The 1990 drill intersections of most interest are 90-13 and 14 in the East Vernon area and 90-6,8,10 and 11 in the Biddy area. The 1990 drill program did not test the Jemima showing.

Sulphide mineralization in the West Vernon area was tested by numerous trenches, attempting to identify extensions of known showings. An excellent showing "A" is a large pod of leached and brecciated large white zone which is 40 m long by 15 m wide. Mineralization is consistently between 5 and 7% Zn with silver to 2 oz./T. A pipe-like configuration is inferred within a major east-west strike slip fault. Drill testing of this target is recommended. The detailed geology is complex. No extension was discovered by trenching. A scattering of other showings are minor occurrences of disseminated orange or yellow sphalerite grains, or small shears of barite associated with galena.

6.0 GENERAL GEOLOGY

The Nina property is located near the center of the "Omineca Limestone Belt". This refers to a linear zone of Paleozoic-Proterozoic age carbonate and minor clastic sediments about 12 kilometers wide and 175 kilometers long. The carbonate belt occurs between Johansen Lake in the north and Manson Lake to the south. To the east, carbonate lithologies are fault-bounded by Cambrian-Proterozoic metamorphosed sediments/volcanics. The western edge of the carbonate is underlain by Triassic intermediate/mafic volcanics. The "Omineca Limestone Belt" is a well bedded sequence of carbonate strata about 300 meters thick. These rocks were subdivided (Monger and Paterson, 1974) into the following five subdivisions from oldest to youngest. 1)

Sheared, light grey, locally argillaceous, fine grained limestones ,including some dolomite. 2) Thin bedded, black dolomite and dolomitic limestone about 60 m thick. 3) Brown to dark grey calcareous phyllite and slaty, phyllite about 25 m thick. 4) Dark grey and grey, laminated, fetid dolomite interbedded with repeating units of light grey, fairly massive dolomite containing algal balls with concentric structure from 1 to 2 cm. 5) dark grey algal laminate dolomite containing rings filled with white crystalline dolomite. The massive beds are from 1 to 2 m thick, whereas the algal laminate beds average about 120 m. Dark grey crinoidal dolomite and sandy dolomite, possibly about 100 m thick, contains crinoid columns with twin axial canals. The sandy dolomite contains scattered quartz grains, possibly of windblown origin, in the dolomite matrix.. The sequence resembles structures of Late Silurian to Middle Devonian age located in the McDame area to the northwest in the Cassiar Mountains. It is unit 5) which is hosts solution-breccia, and manto type lead-zinc mineralization. The ages of rock units within this belt vary from Upper Triassic elates and greenstones in the vicinity of Manson Creek through Ordovician to Middle Devonian carbonates (with overlying Permo-Pennsylvanian shales and volcanics) in the Nina Lake area to the Middle Pennsylvanian carbonates, cherts, phyllites, conglomerates and volcanics in the Lay Range to the north. The general geology of the Biddy-Vernon property is shown on Figure 3. This map shows the main rock contacts and structural features. Nina Lake area strata form a homoclinal succession, interrupted by faulting and folding that dips westward.

The general geology, including major lithologic contacts and structural features, is shown on figure 3. The strata on the Biddy (north portion of property) forms an overall homoclinal succession, interrupted by open folds and faulting, that dips westward.

6.1 STRATABOUND (Sedex & Mississippi Valley) Zn-Pb-Ag MINERAL DEPOSIT TYPES (bullet points, after BCGS, LEFEBRE, 1995):

– Mississippi Valley-type Pb-Zn Alpine-type Pb-Zn, Appalachian Zn, Low-temperature epigenetic Pb-Zn. Related deposit type: Irish-type Zn-Pb is classified with MVT deposits in some studies. Commodities Pb, Zn, ± Ag (Cd, Ge, barite, fluorite) Examples: (Yukon): Goz (106C 020), Blende (106D 064), Craig (106C 073); (British Columbia - Canada/ International): Robb Lake (94B005), Monarch (82N020), Kicking Horse (82N282); Nanisivik, Pine Point, Polaris (Northwest Territories), characteristics: Epigenetic, low-temperature, stratabound deposits of galena, sphalerite, pyrite and marcasite, with associated dolomite, calcite and quartz gangue in platformal carbonate sequences having primary and secondary porosity. Age of mineralization: Proterozoic to Tertiary, with two peaks in Devonian to Permian and Cretaceous to Eocene time. Dating mineralization has confirmed the epigenetic character of these deposits; the difference between host rock age and mineralization age varies from district to district.. Precipitation is usually in the order pyrite (marcasite) → sphalerite → galena. Ore mineralogy (Principal and subordinate): Galena, sphalerite, barite, fluorite. Some ores contain up to 30ppm Ag. Although some MVT districts display metal zoning, this is not a common feature. Ore controls: Any porous unit may host ore; porosity may be primary (rare) or secondary. Dissolution collapse breccias are the most common host although fault breccias, permeable reefs, and slump breccias may also be mineralized. Dissolution collapse breccias may form through action of meteoric waters or hydrothermal fluids. Underlying aquifers may be porous sandstone or limestone aquifers; the limestones may show thinning due to solution by ore-bearing fluids. MVT deposits are distinct from syngenetic carbonate hosted Pb-Zn deposits (Mt. Isa, Australia; E14) and high-temperature epigenetic deposits or mantos (Midway, British

Columbia). Most deposits are small and fall in the range 1 to 10 Mt. Grades generally range between 5% to 10% combined lead-zinc, with a majority being decidedly zinc rich (Zn/Zn+Pb = 0.8). Silver content is not commonly reported since it typically occurs only in solid solution in base metal sulphides. MVT deposits tend to occur in clusters, usually referred to as districts. The Pine Point district, for example, contains more than 80 deposits, the Upper Mississippi Valley district more than 400. Deposits in such districts, therefore, can collectively contain extremely large tonnages. Of more than 80 deposits in the Pine Point district, 40 were mined for a total production of 80 Mt grading 6.5% Zn and 3% Pb. The largest deposit (X15) was 17.4 Mt and the richest deposit (N81) produced 2.7 Mt of ore grading 12% Zn and 7% Pb. The Robb Lake deposit in British Columbia contains 5.3 Mt grading 5.0% Zn and 2.3% Pb. The Craig deposit of Yukon has a geological resource of 964 500 tonnes averaging 13.5% Pb, 8.5% Zn and 123.4 g/t Ag. The Blende deposit contains a geological resource of 19.4 million tonnes grading 55.9 g/t Ag and 5.85% Pb-Zn.

-Sedimentary exhalative Zn-Pb-Ag: Examples (British Columbia - Canada/International): Cirque, Sullivan, Driftpile; Faro, Grum, Dy, Vangorda, Swim, Tom and Jason (Yukon, Canada), Red Dog (Alaska, USA), McArthur River and Mt. Isa (Australia). The principal sulphide minerals are pyrite, pyrrhotite, sphalerite and galena. Some deposits contain significant amounts of chalcopyrite, but most do not. Barite may or may not be a major component of the ore zone. Trace amounts of marcasite, arsenopyrite, bismuthinite, molybdenite, enargite, millerite, freibergite, cobaltite, cassiterite, valleriite and melnikovite have been reported from these deposits. These minerals are usually present in very minor amounts. Alteration mineralogy: Alteration varies from well developed to nonexistent. In some deposits a stockwork and disseminated feeder zone lies beneath, or adjacent to, the stratiform mineralization. Alteration minerals, if present, include silica, tourmaline, carbonate, albite, chlorite and dolomite. Economic factors Grade and tonnage: The median tonnage for this type of deposit worldwide is 15 Mt, with 10 % of deposits in excess of 130 Mt. The median grades worldwide are Zn - 5.6%, Pb - 2.8% and Ag - 30 g/t. The Sullivan deposit, one of the largest deposits of this type ever discovered, has a total size of more than 155 Mt grading 5.7% Zn, 6.6% Pb and 7 g/t Ag. Reserves at the Cirque are 32.2 Mt grading 7.9% Zn, 2.1% Pb and 48 g/t Ag

7.0 PROPERTY GEOLOGY

The Biddy-Vernon claims are located near the center of the "Omineca Limestone Belt". This refers to a linear zone of sediments about 12 km wide and 175 km long which runs between Johansen Lake in the North and Manson Lake to the south. On the east it is bounded by a Proterozoic metamorphic complex. The western edge is covered by Triassic volcanics. The general geology of the Nina Property area is Nina Lake (Otter Lakes) area strata form a homoclinal succession, interrupted by faulting and folding that dips westward from the high grade metamorphic axis of the Wolverine Volcanic Complex (Fig 3). Mineralized showings in the vicinity of Nina Lake (Otter Lakes) generally occur as semi-continuous zones within a relatively narrow part of the Middle Devonian stratigraphy. Average grade is 3-4% lead-zinc, with locally high grade areas developed. The sulphides are mainly stratabound, and the main localizing factor is moderate scale faulting.

The Biddy brecciated sulphide zone is interpreted as being gently, west dipping strata that is exposed along dip slope, and coarse grain (semi-massive) sulphides occur near and along moderate to steep dipping shear zones. The Vernon East and West are underlain by moderate-

steep dipping strata. There is complex E-W trending faulting at Vernon West, and has made drilling a target based on surface mapping difficult. Vernon East appears to be a stronger linear feature and should be drill tested depth & strike extension of the best previous drillholes.

The following property geology excerpt is sourced from AR 16,946 Equinox Resources 1986:

Mineralization on the property occurs within the Middle Devonian Dolostones in a narrow (50 - 70 m) stratigraphic interval just below the unconformable contact with Pennsylvanian argillites and slates. Mineralized zones within this interval are typically associated with secondary porosity, in the form of breccias and perhaps with primary porosity provided by especially arenaceous units. Within a mineralized zone associated with brecciation sphalerite, and rarely galena and pyrite, partly or wholly replace breccia fragments while the dolomite matrix is virtually unmineralized. Generally, a small fraction of the breccia fragments are mineralized and only when the greater proportion of fragmental material is mineralized. Adjacent to well mineralized zones sphalerite may be finely disseminated typically constituting less than 1% sphalerite. Within mineralized zones the mineralization is poddy and discontinuous in terms of strike continuation and width. Perhaps the best indications of a significant strike length of mineralization are found in the Biddy and East Vernon areas where north-south trending breccia zones containing poddy mineralization have been exposed over lengths in the order of 200 meters. The cause of these breccias is unclear, however Cominco data suggests that they may be "contraction breccias" associated with the dolomitization process and or related to faulting. The form and attitude of the breccias is not clear, but some small scale evidence and drill hole data suggest that breccias are not associated with faulting may be bedding parallel or stratabound.

The following lithologies are present in the area of the Biddy-Vernon (Fig 3):

Lithology Legend

LPnPgb Late Pennsylvannian to Late Permian gabbro, diorite

MPNH Mississippian to Permian Nina Creek Grp Mt Howell marine sediments-volcanics

DPBCG Late Devonian to Late Permian Big Creek Grp, Giiliand Tuff dacitic volcanics

DPBC Late Devonian to Late Permian Big Creek Grp mudstone, siltstone, shale

mDO Mid Devonian Otter Lakes Grp marble, calcareous sediments

ODEc Lower Ordovician to Late Devonian Echo Lake Grp dolomitic marble

ICmOR Early Cambrian to Late Ordovician Razorback Grp marble, slate, siltstone, argillite

ICmAK Early Cambrian Atan Grp Mt Kison marble

ICmAQ Early Cambrian Atan Grp Mt Brown arenite, quartzite

uPrIE Upper Proterozoic Ingenika Grp Espee Fm marble

uPrIS Upper Proterozoic Ingenika Grp Stelkuz Fm mudstone, siltstone, shale

The main lithology that hosts stratabound, sedimentary exhalative Pb-Zn-Ag mineralization is hosted in Middle Devonian Otter Lakes Group dolomitic marble, and sandy dolomites of the Silurian-Devonian Echo Lake Group. The zinc occurs primarily as reddish-orange sphalerite. Local high grade lenses occur in relatively wide fault zones. Trace amounts of yellow sphalerite have been observed as a late stage vein material associated with quartz and barite. Galena is very sporadic. Two areas contain well developed mineral showings to merit drilling, the Biddy-Jemima and East & West Vernon. Elsewhere in the Biddy area, minor mineralization occurs as trace specks and secondary oxides in suitably prepared zones (shrinkage breccia, joints, etc.). The best showing on the property is the Jemima occurence (Murrall and Pedley, 1976). Here dark orange sphalerite with rounded fragments of dark dolomite is found in several hand trenches across 60 m. The controlling fault trends toward the Biddy area and the two are likely continuous. The Biddy-Jemima connection is a prime target for developing ore reserves by drilling.

1990 Diamond Drilling 1990 by Equinox Res AR 20,492 (excerpt):

Drilling in the West Vernon area concentrated on mineralization associated with a significant east-west trending fault structure and on mineralization possibly associated with northeast trending faults. Hole 90-1 and 90-2 were aimed at intersecting subsurface extensions of the significant surface sphalerite mineralization (refer to analyses in Equinox report June 1988) found on the "A showing". This zone was extensively trenched by Cominco and was tentatively interpreted as a steeply plunging breccia pipe within and associated with an east-west trending fault. Hole 90-1 and 90-2 intersected minor sections of sphalerite mineralization, in the order of 1.2 m of 1.6% Zn, hosted in brecciated dolostones. These zones of brecciation are likely the down plunge extension of the surface mineralization, however these holes would indicate that mineralization is diminished compared to that on surface. In terms of breccia morphology the holes seem to affirm the concept of a steeply south dipping breccia body. Hole 90-3, located to the west of 90-1 and 90-2, was aimed at intersecting minor mineralization and brecciation associated with the same east-west fault associated with the "A showing". Two minor sections of less than 2% sphalerite were intersected in unbrecciated dolostones likely structurally above the surface extension of the east-west fault . The possible unmineralized extension of the fault was intersected at a greater depth. Holes 90-4 and 90-5 were meant to intersect possible fault (060/vertical) controlled mineralization uncovered in trench # 7. Neither hole intersected sphalerite or galena mineralization. Intersections at shallow depths of what was interpreted as syngenetic pyrite were found, but subsequent analyses indicate that the pyrite is not associated with any significant metal values.

Holes 90-6 through 11 were drilled in the Biddy area to investigate a narrow, perhaps conformable or strataform, zone of mineralization associated with brecciated dolostones. Holes 90-6 and 7, located west of the junction of trench # 45 and # 13, were aimed at intersecting extensions to moderately high grade mineralization sampled previously by Equinox . These holes are located at the most southern exposure of the apparent north-south trending mineralized breccia zone. Hole 90-6, located to the west of trenches # 45 and 43, intersected approximately 1 m of 2% Zn at a shallow level while 90-7 apparently intersected the same zone, though less mineralized. Mineralization was hosted in brecciated dolostones which, if considered extensions of the surface showings, indicates that brecciation and mineralization are conformable to bedding. Deeper intersections of brecciation and minor mineralization create uncertainty as to whether mineralization is stratabound. Hole 90-8 was positioned to try and intersect mineralization previously sampled by Equinox, opposite trench # 42, which is likely north along strike of the same breccia mineralization intersected and exposed on surface adjacent to 90-6 and 7. Among shorter sections, hole 90-8 intersected 1.8 m of 2.8% Zn, at a shallow level, within brecciated dolostones (table 2). These intersections and mineralization are similar to that in 90-6 and 7 and again suggest stratabound brecciation and mineralization. Hole 90-9 was positioned farther north along strike to intersect breccia hosted mineralization previously sampled by Equinox adjacent to trench # 18. Hole 90-9 did intersect shallow brecciated sections, but none were significantly mineralized. Hole 90-10 was fanned toward the north from the same site as 90-9 to try and intersect breccia hosted, and possibly fault (east-west) related lead, zinc mineralization. The trend of hole 90-10 is at a low angle to bedding and therefore the 1 m intersection of 2.7% Zn may represent an exaggerated width. The shallow depth of mineralization and brecciated host suggests this mineralization may be stratabound and continuous with the intersections in holes 90-6, 7 and Hole 90-11 the most northerly hole in the Biddy area, north of trench # 19, was positioned to intersect breccia hosted and perhaps fault (east-west) controlled Zn, Pb mineralization. Hole 90-11 intersected approximately 2 m of 1.3% Zn and 1% Pb at as greater depth than

any other Biddy area holes. was hosted in brecciated and highly arenaceous dolostones. The apparent geometry indicates steeply plunging mineralization perhaps related to east-west faults exposed on surface.

Holes 90-12, 13 and 14 were drilled in the East Vernon area to investigate sampled showings that appear to define a northerly trend of mineralization. Hole 90-12 was positioned to intersect breccia hosted mineralization, exposed in trench # 60, considered by Cominco to be controlled by 085' trending faults. Three short sections of less than 1% Zn were intersected within moderately brecciated dolostones. The mineralized intersections did not appear to correspond to the fault exposed on surface and again the possibility of stratabound brecciation and mineralization is indicated. Holes 90-13 and 14, collared in trench # 5, were positioned to intersect mineralization south along strike from 90-12. Both holes intersected mineralized sections: 3.8 m of 2.2% Zn and 4 m of 4.9% Zn in hole 90-14. Both of these closely spaced intersections were in brecciated dolostone and indicate a north-south strike and perhaps steeply dipping attitude of mineralization. Both the drill intersections and surface mineralization suggest a north-south semicontinuous zone of mineralization.

Results from the West Vernon Area were generally discouraging. Attempts at intersecting significant mineralization beneath the "A showing" were not successful indicating that brecciated zones below surface were poorly mineralized. Results from the Biddy Area suggest the existence of a semi-continuous zone, striking over 200 m, of stratabound, breccia hosted mineralization. Grades, however, are moderate and discontinuous, similar to those on surface. In general grades do not exceed 2-3% Zn over 2 m. The East Vernon Area was only tested by 3 holes, two of which were fanned from the same collar location, but this area produced the most encouraging results. The best intersection averages 4 m of 4.9% Zn. The three holes suggest that mineralization is controlled by a north-south striking narrow breccia zone which dips westward more steeply than bedding. The 1990 drill intersections of most interest are 90-13 and 14 in the East Vernon area and 90-6,8,10 and 11 in the Biddy area. The 1990 drill program did not test the Jemima showing.

Sulphide mineralization in the West Vernon area was tested by numerous trenches, attempting to identify extensions of known showings. An excellent showing "A" is a large pod of leached and brecciated large white zone which is 40 m long by 15 m wide. Mineralization is consistently between 5 and 7% Zn with silver to 2 oz./T. A pipe-like configuration is inferred within a major east-west strike slip fault. Drill testing of this target is recommended. The detailed geology is complex. No extension was discovered by trenching. A scattering of other showings are minor occurrences of disseminated orange or yellow sphalerite grains, or small shears of barite associated with galena.

8.0 2019 GEOCHEMICAL FIELDWORK

8.1 METHODS AND PROCEDURES

A total of 19 rock chip samples collected from outcrop and angular float using rock hammers and moils. Navigation was aided with Garmin 60Cx GPS receiver. Between 0.44-1.8 kg of rock chips were placed in marked poly ore bags. Rock samples were sent to ALS Minerals North Vancouver, for multi-element ME-MS41 ICP-AES analyses. (Appendix A). The analytical technique used by ALS is Prep 31 (dry, crush, pulverize) producing pulp to analyze 0.5 grams of rock sample pulp, using a aqua-regia acid digestion and MS-ICP analysis (package ME-MS41, Appendix A, & B).

8.2 BIDDY & JEMIMA 2019 ROCK CHIP GEOCHEMISTRY

In 2019, the writer performed rock chip sampling of mapped and unmapped mineral zones located within a 300 meter radius of the Biddy Main Zone, and 50 meter radius of the Jemima Main Zone. A total of 15 rock samples (19BV-1 to 11, 16-19) were taken from the Biddy Main Zone outcrop and float (Fig 4A). A total of 4 rock samples (19BV-12 to 15) were taken from the Jemima Main Zone outcrop and float (Fig 4B). The 2019 rock samples BV-7 to 11, and BV-16-18 from Biddy (Main Zone) returned relatively high values of Zn-Ag, and are accompanied by elevated Ge-Ga-In-Cu. Rock sample BV-19 from Biddy (Main Zone North extension) returned relatively high values of Pb-Ag, and sample BV-19 is not associated with Ge-Ga-In-Cu. Rock sample 19BV-19 is mineralogically different than the Biddy Main Zone, and appears to be a shear related sulphide zone that may be a different age of emplacement than Biddy Main Zone (exposed from 6,203,900 N to 6,204,100 N covering approximately 200 meters of strike length). The Biddy Main Zone is characterized by large collapse breccia zones with minor sphalerite (rare galena) that are enhanced by shear related massive sulphide infilling. Patches, layers and bands of massive argentiferous reddish sphalerite are of primary interest due to high critical metal (Ge-Ga-In) content. The structural setting of the property indicates there are several cross faults in the area of Zn-Ag-Pb bearing mineralization that represent potential drill targets. Prior to drilling, the writer recommends approximately 12.75 line-kilometers of gravity geophysics to assess the presence of near surface massive sulphide bodies. Given that manto deposit types can form irregular shape sulphide bodies in karst terranes, and Mississippi Valley deposit types can form large-scale mineralized breccia zones, gravity geophysics is the preferred method to test for density contrasts prior to drilling.

The 2019 rock samples BV-12-15, from Jemima (Main Zone) returned relatively high values of Zn-Ag, and are accompanied by elevated Ge-Ga-In-Cu (Similar to Biddy Main Zone), as well as 2 samples from Jemima (BV-12, & 13) returned elevated Pb values.

A summary of 2019 rock chip sample descriptions and select geochemical analysis results are listed below:

BIDDY (JEMIMA) 2019 ROCK CHIP SAMPLE DESCRIPTIONS

Sample ID	Zone name	Easting	Northing	Elev (m)	Lithology	Alteration
19BID-1	Biddy (S)	388538	6203772	1273	dolomitic marble	breccia, carbonate
19BID-2	Biddy (S)	388533	6203788	1280	dolomitic marble, arenaceous	breccia, quartz, apatite
19BID-3	Biddy (S)	388468	6203820	1279	dolomitic marble	breccia, carbonate
19BID-4	Biddy (S)	388397	6203843	1258	dolomitic marble	breccia, carbonate
19BID-5	Biddy (S)	388367	6203870	1254	dolomitic marble	breccia, carbonate
19BID-6	Biddy(mid)	388340	6203903	1244	dolomitic marble	breccia, carbonate
19BID-7	Biddy(mid)	388324	6203904	1246	dolomitic marble	breccia, barite, carbonate
19BID-8	Biddy(mid)	388309	6203922	1231	dolomitic marble	breccia, carbonate
19BID-9	Biddy(mid)	388310	6203934	1233	dolomitic marble	breccia, carbonate
19BID-10	Biddy(mid)	388308	6203936	1233	dolomitic marble	breccia, carbonate
19BID-11	Biddy(mid)	388313	6203938	1229	dolomitic marble, arenaceous	breccia, carbonate
19BID-12	Jemima	389168	6202805	1364	dolomitic marble	breccia, shear, carbonate
19BID-13	Jemima	389183	6202793	1364	dolomitic marble	breccia, shear, carbonate
19BID-14	Jemima	389190	6202795	1361	dolomitic marble	breccia, carbonate
19BID-15	Jemima	389194	6202792	1360	dolomitic marble	breccia, carbonate
19BID-16	Biddy (N)	388310	6204007	1259	dolomitic marble	breccia, carbonate
19BID-17	Biddy (N)	388298	6204070	1255	dolomitic marble	breccia, barite, carbonate
19BID-18	Biddy (N)	388274	6204103	1233	dolomitic marble, arenaceous	breccia, silica, carbonate
19BID-19	Biddy (N)	388264	6204121	1232	dolomitic marble, arenaceous	breccia, shear, silica, carbonate

Sample ID	Mineralization	Sample Type	Strike	Dip	Width
19BID-1		angular float			
19BID-2	sphalerite	outcrop	155	24 W	50 cm
19BID-3		angular float			
19BID-4		outcrop	160	28 W	50 cm
19BID-5		angular float			
19BID-6		angular float			
19BID-7	sphalerite	angular float			
19BID-8	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	158	30 W	22 cm
19BID-9	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-10	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	177	50 W	20 cm
19BID-11	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	175	55 W	18 cm
19BID-12	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-13	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-14	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-15	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-16	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-17	sphalerite trace Ge-Ga-In-Cu-Cd minerals	outcrop	168	25 W	20 cm
19BID-18	sphalerite trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop	170	20 W	25 cm
19BID-19	galena	outcrop	170	27 W	22 cm

Sample ID	Zn ppm	Zn %	Pb ppm	Pb %	Ag ppm	Ge ppm	Ga ppm	In ppm	Ba ppm	Fe %	S %	Ca %	Cu ppm
19BID-1	126		2.6		0.04	0.36	0.08	<0.005	20	0.2	0.03	19.25	29.8
19BID-2	2980		6.8		1.28	14.55	0.17	0.104	70	10.4	1.23	5.2	134
19BID-3	325		1.8		0.54	0.27	0.1	<0.005	30	0.16	0.04	21	3.4
19BID-4	8130		2.3		0.61	1.66	0.2	0.041	20	0.2	0.31	20.3	27.3
19BID-5	93		1.1		0.03	0.49	0.12	<0.005	70	0.35	0.05	18.45	4.7
19BID-6	16		0.4		0.02	0.14	0.18	<0.005	30	0.11	0.02	19.0	0.9
19BID-7	7520		47		2.69	1.65	0.33	0.022	890	0.17	0.2	21.2	14.1
19BID-8	191000	19.1	139		77.6	13.25	5.46	0.253	10	0.21	9.15	14.6	156
19BID-9	244000	24.4	238		102	16.25	13.1	0.289	10	0.23	>10.0	12.8	178.5
19BID-10	>300000	>30.0	234		99.5	18.25	17.5	0.267	10	0.29	>10.0	11.25	149.5
19BID-11	3760		23.6		3.17	6.25	0.19	0.079	10	10.65	8.81	1.85	122.5
19BID-12	148500	14.85	51500	5.15	116	13.05	3.71	0.198	20	0.43	7.71	14.8	354
19BID-13	217000	21.7	2700		96.5	11.8	11.05	0.188	10	0.19	>10.0	14.25	422
19BID-14	74900	7.49	549		55.7	15.3	0.55	0.262	20	0.22	2.87	17.5	229
19BID-15	77700	7.77	648		65.8	22.9	0.54	0.243	30	0.24	2.8	16.7	252
19BID-16	63100	6.31	214		21.9	23.5	0.51	0.102	30	0.95	2.43	17.15	186
19BID-17	14200	1.42	547		2.82	2.12	0.25	0.022	350	0.14	0.41	20.3	30.9
19BID-18	664		151000	15.1	82.4	1.64	0.08	0.016	30	4.28	7.37	0.19	17.8
19BID-19	1280		>200000	>20.0	38.1	0.97	0.05	.0.039	20	1.82	4.88	2.02	11.8

Sample ID	Au ppm	Cd ppm	Ce ppm	P ppm	Sb ppm	Hg ppm	Se ppm	Ba ppm	Sr ppm	Sb ppm	S %	Ca %
19BID-1	<0.02	0.94	4.71	260	0.23	0.47	<0.2	20	61.7	0.23	0.03	19.25
19BID-2	<0.02	19.65	91.9	4230	0.41	5.96	1.2	70	385	0.41	1.23	5.2
19BID-3	<0.02	11.8	6.05	110	0.36	2.23	0.2	30	63.3	0.36	0.04	21
19BID-4	<0.02	55.8	5.8	250	0.6	15.85	0.3	20	75.1	0.6	0.31	20.3
19BID-5	<0.02	0.74	8.39	280	0.2	0.22	<0.2	70	63.3	0.2	0.05	18.45
19BID-6	<0.02	0.27	4.84	20	0.06	0.06	<0.2	30	134	0.06	0.02	19.6
19BID-7	<0.02	63.2	5.46	180	0.61	19.7	0.3	890	136.5	0.61	0.2	21.2
19BID-8	<0.02	>1000	4.15	260	4.46	354	1	10	174.5	4.46	9.15	14.6
19BID-9	<0.02	>1000	3.95	430	6.3	436	1.1	10	149.5	6.3	>10.0	12.8
19BID-10	<0.02	>1000	4.13	440	6.03	457	0.9	10	175.5	6.03	>10.0	11.25
19BID-11	<0.02	26	104.5	8330	4.35	7.64	10.6	10	179	4.35	8.81	1.85
19BID-12	<0.02	>1000	7.07	270	45.4	336	17.2	20	148	45.4	7.71	14.8
19BID-13	<0.02	>1000	7.17	220	12.55	371	2.1	10	119.5	12.55	>10.0	14.25
19BID-14	<0.02	728	7.89	90	10.3	236	0.9	20	166.5	10.3	2.87	17.5
19BID-15	<0.02	747	7.05	90	8.54	312	1.3	30	170.5	8.54	2.8	16.7
19BID-16	<0.02	365	3.8	130	5.2	101	1.8	30	266	5.2	2.43	17.15
19BID-17	<0.02	95.5	6.55	190	1.48	29.1	0.5	350	410	1.48	0.41	20.3
19BID-18	<0.02	15	9.4	70	70.2	4.11	16.2	30	10.6	70.2	7.37	0.19
19BID-19	<0.02	11.45	2.34	150	177.5	7.5	6.6	20	162.5	177.5	4.88	2.02

9.0 DISCUSSION OF RESULTS

Generally, the germanium values from Biddy and Jemima Zones would increase if fresh, unoxidized sample material (obtained by mechanical trenching and/or drilling) were taken versus the oxidized and weathered samples that were obtain from surface exposures. Also, single element analysis of Ge would be preferred to avoid possible cross-element interference from multi-element trace analysis. There is a positive correlation between high sphalerite/low galena with elevated Ge-Ga-In and a positive correlation with sphalerite mineralization and widespread collapse breccia gangue.

10.0 CONCLUSIONS & RECOMMENDATIONS

The Biddy-Vernon Zone has been drilled from a short distance from the showings (e.g. drill collars approximately 25-50 meters west & south & east of the showings. Future testing of the depth extension of Biddy Main and East Vernon Zones are recommended, as well as additional targets identified by positive gravity (high density) geophysical anomalies. the Biddy-Vernon Zone, requires detailed mapping of veining (cross-fault structures), ground magnetometer surveys, and geochemical sampling to determine future drill targets. The budget total for completing 12.75 line-km gravity geophysics, and completing 1,000 meters core drilling and detailed mapping, geochemical sampling would be approximately $600,000.

11.0 REFERENCES

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Weeks, R.A. (1973): Gallium, Germanium and Indium in United States Minerals Resources, U.S. Geological Survey Prof. Paper 820, pp. 237-246.

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 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 geochemical sampling, and geological surveylng carried during May, 2019
6. I have a direct interest in the Biddy-Vernon mineral property. The recommendations in this report are intended to serve as a guideline, and 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 Technieal 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

October 3, 2019

ITEMIZED COST STATEMENT-
MINERAL TENURES 1066292, 1066293, 1066338, 1066400, 1066397, 1066441, 1067713, 1068507
FIELDWORK PERFORMED MAY 20-24, 2019 (BIDDY-JEMIMA SHOWINGS), WORK CONSISTED OF GEOCHEMICAL SURVEYS ON MINERAL TENURE 1066293
OMINECA MINING DIVISION, NTS 93N 15 W (TRIM 093N 096)

FIELD CREW:

A. Kikauka (Geologist) 5 days (surveying, mapping, sampling)	**$**	**2,887.50**

FIELD COSTS:

Equipment & supplies	**106.30**
Mob/demob	**685.50**
Meals and accommodations	**540.00**
Helicopter Charter (Yellowhead Helicopter, Mackenzie Base)	**4,560.00**
ICP AES (ALS ME-MS41) geochemical analysis geochemistry (19 rock samples)	**732.50**
Report	**1,000.00**
Total=	**$ 10,511.80**

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Finalized Date: 2-OCT-2019
This copy reported on 3-OCT-2019
Account: KIKAND

CERTIFICATE VA19217921

Project: Biddy

This report is for 19 Rock samples submitted to our lab in Vancouver, BC, Canada on 31-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
LOG-22	Sample login - Rcd w/o BarCode
PUL-QC	Pulverizing QC Test
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	
Ag-OG46	Ore Grade Ag - Aqua Regia	
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Pb-OG46	Ore Grade Pb - Aqua Regia	
Zn-OG46	Ore Grade Zn - Aqua Regia	
ME-MS41	Ultra Trace Aqua Regia ICP-MS	

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:

Saa Traxler, General Manager, North Vancouver

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Finalized Date: 2-OCT-2019
Account: KIKAND

Project: Biddy

CERTIFICATE OF ANALYSIS VA19217921

Sample Description	Method	WEI-21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
19 BID-1		0.82	0.04	0.08	0.9	<0.02	<10	20	<0.05	0.01	19.25	0.94	4.71	0.8	4	<0.05
19 BID-2		0.88	1.28	3.89	1.5	<0.02	<10	70	0.42	0.06	5.20	19.65	91.9	61.6	184	0.42
19 BID-3		0.98	0.54	0.04	2.3	<0.02	<10	30	<0.05	0.01	21.0	11.80	6.05	0.6	2	<0.05
19 BID-4		0.62	0.61	0.03	4.3	<0.02	<10	20	<0.05	0.01	20.3	55.8	5.80	0.5	1	<0.05
19 BID-5		0.72	0.03	0.13	1.6	<0.02	<10	70	0.05	0.01	18.45	0.74	8.39	1.6	6	0.09
19 BID-6		0.96	0.02	0.02	0.2	<0.02	<10	30	<0.05	0.01	19.60	0.27	4.84	0.3	2	<0.05
19 BID-7		0.56	2.69	0.06	1.8	<0.02	<10	890	<0.05	0.01	21.2	63.2	5.46	0.6	2	<0.05
19 BID-8		0.82	77.6	0.07	12.8	<0.02	<10	10	<0.05	0.01	14.60	>1000	4.15	0.9	2	0.07
19 BID-9		0.44	>100	0.09	15.1	<0.02	<10	10	<0.05	0.01	12.80	>1000	3.95	1.0	1	0.07
19 BID-10		0.88	99.5	0.12	13.1	<0.02	<10	10	<0.05	0.01	11.25	>1000	4.13	1.2	1	0.07
19 BID-11		0.78	3.17	1.61	51.6	<0.02	10	10	0.49	0.12	1.85	26.0	104.5	61.9	55	0.99
19 BID-12		0.98	>100	0.14	29.1	<0.02	<10	20	<0.05	0.04	14.80	>1000	7.07	2.2	7	0.11
19 BID-13		1.24	96.5	0.05	25.2	<0.02	<10	10	<0.05	0.01	14.25	>1000	7.17	1.2	2	0.10
19 BID-14		0.96	55.7	0.06	31.7	<0.02	<10	20	<0.05	0.01	17.50	728	7.89	1.6	3	0.07
19 BID-15		0.82	65.8	0.07	36.3	<0.02	<10	30	<0.05	0.01	16.70	747	7.05	1.5	4	0.06
19 BID-16		0.94	21.9	0.08	12.2	<0.02	<10	30	0.42	0.01	17.15	365	3.80	1.3	6	<0.05
19 BID-17		1.44	2.82	0.06	2.9	<0.02	<10	350	<0.05	0.01	20.3	95.5	6.55	0.6	4	<0.05
19 BID-18		0.86	82.4	0.63	88.5	<0.02	10	30	0.42	0.32	0.19	15.00	9.40	9.1	13	0.49
19 BID-19		1.72	38.1	0.27	18.3	<0.02	<10	20	0.21	0.15	2.02	11.45	2.34	2.8	8	0.20

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

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Finalized Date: 2-OCT-2019
Account: KIKAND

Project: Biddy

CERTIFICATE OF ANALYSIS VA19217921

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
19 BID-1		29.8	0.20	0.36	0.08	<0.02	0.47	<0.005	0.01	3.3	1.3	10.75	161	0.89	0.02	<0.05
19 BID-2		134.0	10.40	14.55	0.17	0.14	5.96	0.104	0.07	49.4	59.1	2.58	962	0.56	0.01	0.21
19 BID-3		3.4	0.16	0.27	0.10	<0.02	2.23	<0.005	<0.01	4.4	0.9	12.25	179	0.79	0.02	<0.05
19 BID-4		27.3	0.20	1.66	0.20	<0.02	15.85	0.041	<0.01	4.2	0.9	11.55	219	0.64	0.02	<0.05
19 BID-5		4.7	0.35	0.49	0.12	0.03	0.22	<0.005	0.01	5.2	2.4	10.70	190	0.54	0.02	<0.05
19 BID-6		0.9	0.11	0.14	0.18	<0.02	0.06	<0.005	<0.01	3.2	0.5	9.88	189	0.18	0.01	<0.05
19 BID-7		14.1	0.17	1.65	0.33	<0.02	19.70	0.022	<0.01	4.0	0.9	12.40	212	0.27	0.02	<0.05
19 BID-8		156.0	0.21	13.25	5.46	0.03	354	0.253	0.01	2.8	1.0	8.21	144	2.99	0.01	<0.05
19 BID-9		178.5	0.23	16.25	13.10	0.05	436	0.289	0.02	2.5	0.8	7.19	127	5.01	0.01	<0.05
19 BID-10		149.5	0.29	18.25	17.50	0.05	457	0.267	0.02	2.6	0.7	6.15	119	6.83	0.01	<0.05
19 BID-11		122.5	10.65	6.25	0.19	0.18	7.64	0.079	0.37	55.8	23.3	0.57	180	4.72	<0.01	0.14
19 BID-12		354	0.43	13.05	3.71	0.04	336	0.198	0.02	3.9	1.9	8.26	190	4.05	0.01	0.05
19 BID-13		422	0.19	11.80	11.05	0.03	371	0.188	0.02	4.3	0.5	7.61	162	2.73	0.01	<0.05
19 BID-14		229	0.22	15.30	0.55	0.02	236	0.162	0.01	4.6	0.6	9.88	207	2.22	0.01	<0.05
19 BID-15		252	0.24	22.9	0.54	0.03	312	0.243	0.01	4.1	0.7	9.61	237	1.85	0.01	<0.05
19 BID-16		186.0	0.95	23.5	0.51	0.24	101.0	0.102	0.01	2.4	0.9	9.66	151	5.86	0.01	9.43
19 BID-17		30.9	0.14	2.12	0.25	0.03	29.1	0.022	0.01	4.5	0.8	11.25	170	1.82	0.02	0.07
19 BID-18		17.8	4.28	1.64	0.08	0.61	4.11	0.016	0.37	4.0	8.6	0.21	12	4.84	0.01	0.16
19 BID-19		11.8	1.82	0.97	0.05	0.38	7.50	0.039	0.10	0.7	5.3	0.90	29	7.12	<0.01	0.16

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

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

Finalized Date: 2-OCT-2019
Account: KIKAND

Project: Biddy

CERTIFICATE OF ANALYSIS VA19217921

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
19 BID-1		3.3	260	2.6	0.2	0.002	0.03	0.23	0.4	<0.2	<0.2	61.7	<0.01	0.01	<0.2	<0.005
19 BID-2		118.0	4230	6.8	4.7	<0.001	1.23	0.41	10.7	1.2	0.2	385	0.01	0.02	8.7	0.027
19 BID-3		2.2	110	1.8	0.1	0.002	0.04	0.36	0.2	0.2	<0.2	63.3	<0.01	0.02	<0.2	<0.005
19 BID-4		3.7	250	2.3	0.1	0.001	0.31	0.60	0.2	0.3	0.2	75.1	<0.01	0.01	<0.2	<0.005
19 BID-5		5.1	280	1.1	0.5	0.001	0.05	0.20	0.4	<0.2	<0.2	63.3	<0.01	0.01	0.4	<0.005
19 BID-6		2.6	20	0.4	0.2	<0.001	0.02	0.06	0.1	<0.2	<0.2	134.0	<0.01	0.01	<0.2	<0.005
19 BID-7		4.3	180	47.0	0.1	<0.001	0.20	0.61	0.3	0.3	<0.2	136.5	<0.01	0.01	0.2	<0.005
19 BID-8		5.2	260	139.0	0.3	0.005	9.15	4.46	0.3	1.0	1.3	174.5	<0.01	0.02	0.3	<0.005
19 BID-9		5.7	430	238	0.3	0.008	>10.0	6.30	0.3	1.1	1.5	149.5	<0.01	0.01	0.4	<0.005
19 BID-10		6.6	440	234	0.4	0.012	>10.0	6.03	0.4	0.9	1.6	175.5	<0.01	0.01	0.4	<0.005
19 BID-11		177.0	8330	23.6	20.0	0.001	8.81	4.35	4.5	10.6	0.4	179.0	<0.01	1.65	8.0	0.010
19 BID-12		11.6	270	>10000	0.8	0.005	7.71	45.4	0.7	17.2	1.3	148.0	<0.01	0.01	0.5	<0.005
19 BID-13		9.8	220	2700	0.6	0.004	>10.0	12.55	0.5	2.1	1.3	119.5	<0.01	0.02	0.4	<0.005
19 BID-14		14.4	90	549	0.6	0.003	2.87	10.30	0.6	0.9	1.1	166.5	<0.01	0.02	0.3	<0.005
19 BID-15		19.8	90	648	0.4	0.003	2.80	8.54	0.7	1.3	1.6	170.5	<0.01	0.02	0.3	<0.005
19 BID-16		6.3	130	214	0.2	0.004	2.43	5.20	1.7	1.8	2.5	266	<0.01	0.01	0.4	<0.005
19 BID-17		4.3	190	547	0.3	0.001	0.41	1.48	0.4	0.5	0.2	410	<0.01	0.01	0.4	<0.005
19 BID-18		51.4	70	>10000	14.7	0.014	7.37	70.2	1.6	16.2	0.4	10.6	<0.01	0.02	1.5	<0.005
19 BID-19		18.3	150	>10000	4.8	0.002	4.88	177.5	1.3	6.6	2.3	162.5	<0.01	0.01	0.4	<0.005

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Finalized Date: 2-OCT-2019
Account: KIKAND

Project: Biddy

CERTIFICATE OF ANALYSIS VA19217921

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Ag-OG46	Pb-OG46	Zn-OG46
	Analyte	Tl	U	V	W	Y	Zn	Zr	Ag	Pb	Zn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	0.02	0.05	1	0.05	0.05	2	0.5	1	0.001	0.001
19 BID-1		<0.02	0.61	17	<0.05	5.32	126	0.6			
19 BID-2		0.07	1.03	154	<0.05	23.3	2980	8.9			
19 BID-3		0.02	0.41	8	<0.05	6.71	325	<0.5			
19 BID-4		0.02	0.60	8	<0.05	7.25	8130	<0.5			
19 BID-5		0.03	0.42	12	<0.05	6.21	93	1.3			
19 BID-6		<0.02	0.10	17	<0.05	4.27	16	<0.5			
19 BID-7		0.02	0.73	7	<0.05	5.36	7520	<0.5			
19 BID-8		0.67	2.49	6	0.08	4.04	>10000	1.1			19.10
19 BID-9		1.08	3.79	5	0.10	3.73	>10000	1.6	102		24.4
19 BID-10		0.94	4.23	6	0.12	3.82	>10000	2.1			>30.0
19 BID-11		0.34	1.20	80	0.06	41.6	3760	10.6			
19 BID-12		0.39	1.54	20	0.07	4.67	>10000	1.6	116	5.15	14.85
19 BID-13		0.30	1.78	14	0.06	4.71	>10000	1.1			21.7
19 BID-14		0.21	0.67	25	<0.05	5.44	>10000	0.8			7.49
19 BID-15		0.19	0.81	30	<0.05	4.92	>10000	0.9			7.77
19 BID-16		0.13	3.51	22	24.9	3.65	>10000	25.2			6.31
19 BID-17		0.04	1.25	14	0.15	6.37	>10000	1.3			1.420
19 BID-18		0.69	2.48	5	1.43	1.81	664	36.1		15.10	
19 BID-19		20.9	8.23	5	0.84	2.05	1280	17.1		>20.0	

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CERTIFICATE OF ANALYSIS VA19217921

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG46	CRU-31	CRU-QC	DISP-01
LOG-22	ME-MS41	ME-OG46	Pb-OG46
PUL-31	PUL-QC	SPL-21	WEI-21
Zn-OG46			

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Appendix B - Geochemical Methods

SAMPLE PREPARATION PACKAGE

PREP- 31

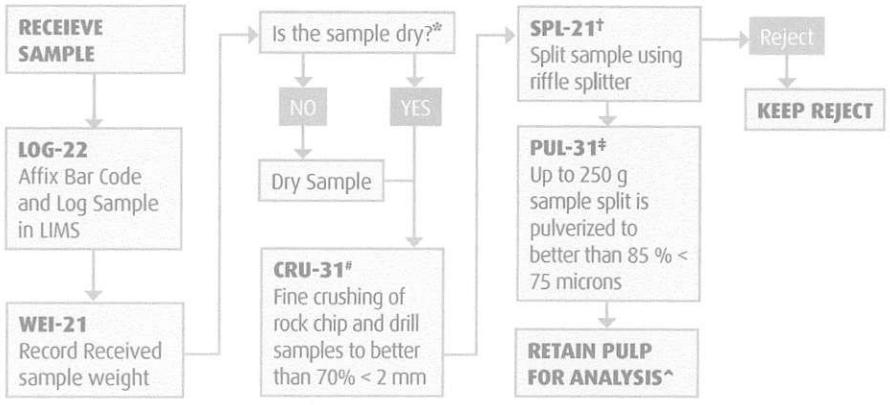
STANDARD SAMPLE PREPARATION: DRY, CRUSH, SPLIT AND PULVERIZE

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.

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GEOCHEMICAL PROCEDURE

ME- MS41

ULTRA- TRACE LEVEL METHODS USING ICP- MS AND ICP- AES

SAMPLE DECOMPOSITION

Aqua Regia Digestion (GEO-AR01)

ANALYTICAL METHOD

Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES)
Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

A prepared sample (0.50 g) is digested with aqua regia in a graphite heating block. After cooling, the resulting solution is diluted to with deionized water, mixed and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, ment spectral interferences.

ELEMENT	SYMBOL	UNITS	LOWER LIMIT	UPPER LIMIT
Silver	Ag	ppm	0.01	100
Aluminum	Al	%	0.01	25
Arsenic	As	ppm	0.1	10 000
Gold	Au	ppm	0.2	25
Boron	B	ppm	10	10 000
Barium	Ba	ppm	10	10 000
Beryllium	Be	ppm	0.05	1 000
Bismuth	Bi	ppm	0.01	10 000
Calcium	Ca	%	0.01	25
Cadmium	Cd	ppm	0.01	1 000
Cerium	Ce	ppm	0.02	500
Cobalt	Co	ppm	0.1	10 000
Chromium	Cr	ppm	1	10 000
Cesium	Cs	ppm	0.05	500
Copper	Cu	ppm	0.2	10 000
Iron	Fe	%	0.01	50
Gallium	Ga	ppm	0.05	10 000
Germanium	Ge	ppm	0.05	500
Hafnium	Hf	ppm	0.02	500

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ME- MS41

ELEMENT	SYMBOL	UNITS	LOWER LIMIT	UPPER LIMIT
Mercury	Hg	ppm	0.01	10 000
Indium	In	ppm	0.005	500
Potassium	K	%	0.01	10
Lanthanum	La	ppm	0.2	10 000
Lithium	Li	ppm	0.1	10 000
Magnesium	Mg	%	0.01	25
Manganese	Mn	ppm	5	50 000
Molybdenum	Mo	ppm	0.05	10 000
Sodium	Na	%	0.01	10
Niobium	Nb	ppm	0.05	500
Nickel	Ni	ppm	0.2	10 000
Phosphorus	P	ppm	10	10 000
Lead	Pb	ppm	0.2	10 000
Rubidium	Rb	ppm	0.1	10 000
Rhenium	Re	ppm	0.001	50
Sulphur	S	%	0.01	10
Antimony	Sb	ppm	0.05	10 000
Scandium	Sc	ppm	0.1	10 000
Selenium	Se	ppm	0.2	1 000
Tin	Sn	ppm	0.2	500
Strontium	Sr	ppm	0.2	10 000
Tantalum	Ta	ppm	0.01	500
Tellurium	Te	ppm	0.01	500
Thorium	Th	ppm	0.2	10000
Titanium	Ti	%	0.005	10
Thallium	Tl	ppm	0.02	10 000
Uranium	U	ppm	0.05	10 000
Vanadium	V	ppm	1	10 000
Tungsten	W	ppm	0.05	10 000
Yttrium	Y	ppm	0.05	500
Zinc	Zn	ppm	2	10 000
Zirconium	Zr	ppm	0.5	500

NOTE: In the majority of geological matrices, data reported from an aqua regia leach should be considered as representing only the leachable portion of the particular analyte.

APPENDIX C- BIDDY (JEMIMA) 2019 ROCK CHIP SAMPLE DESCRIPTIONS

Sample ID	Zone name	Easting	Northing	Elev (m)	Lithology	Alteration
19BID-1	Biddy (S)	388538	6203772	1273	dolomitic marble	breccia, carbonate
19BID-2	Biddy (S)	388533	6203788	1280	dolomitic marble, arenaceous	breccia, quartz, apatite
19BID-3	Biddy (S)	388468	6203820	1279	dolomitic marble	breccia, carbonate
19BID-4	Biddy (S)	388397	6203843	1258	dolomitic marble	breccia, carbonate
19BID-5	Biddy (S)	388367	6203870	1254	dolomitic marble	breccia, carbonate
19BID-6	Biddy(mid)	388340	6203903	1244	dolomitic marble	breccia, carbonate
19BID-7	Biddy(mid)	388324	6203904	1246	dolomitic marble	breccia, barite, carbonate
19BID-8	Biddy(mid)	388309	6203922	1231	dolomitic marble	breccia, carbonate
19BID-9	Biddy(mid)	388310	6203934	1233	dolomitic marble	breccia, carbonate
19BID-10	Biddy(mid)	388308	6203936	1233	dolomitic marble	breccia, carbonate
19BID-11	Biddy(mid)	388313	6203938	1229	dolomitic marble, arenaceous	breccia, carbonate
19BID-12	Jemima	389168	6202805	1364	dolomitic marble	breccia, shear, carbonate
19BID-13	Jemima	389383	6202793	1364	dolomitic marble	breccia, shear, carbonate
19BID-14	Jemima	389190	6202795	1361	dolomitic marble	breccia, carbonate
19BID-15	Jemima	389194	6202792	1360	dolomitic marble	breccia, carbonate
19BID-16	Biddy (N)	388310	6204007	1259	dolomitic marble	breccia, carbonate
19BID-17	Biddy (N)	388298	6204070	1255	dolomitic marble	breccia, barite, carbonate
19BID-18	Biddy (N)	388274	6204103	1233	dolomitic marble, arenaceous	breccia, silica, carbonate
19BID-19	Biddy (N)	388264	6204121	1232	dolomitic marble, arenaceous	breccia, shear, silica, carbonate

Sample ID	Mineralization	Sample Type	Strike	Dip	Width
19BID-1		angular float			
19BID-2	sphalerite	outcrop	155	24 W	50 cm
19BID-3		angular float			
19BID-4		outcrop	160	28 W	50 cm
19BID-5		angular float			
19BID-6		angular float			
19BID-7	sphalerite	angular float			
19BID-8	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	158	30 W	22 cm
19BID-9	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-10	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	177	50 W	20 cm
19BID-11	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	175	55 W	18 cm
19BID-12	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-13	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-14	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-15	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-16	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-17	sphalerite trace Ge-Ga-In-Cu-Cd minerals	outcrop	168	25 W	20 cm
19BID-18	sphalerite trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop	170	20 W	25 cm
19BID-19	galena	outcrop	170	27 W	22 cm

Sample ID	Zn ppm	Zn %	Pb ppm	Pb %	Ag ppm	Ge ppm	Ga ppm	In ppm	Ba ppm	Fe %	S %	Ca %	Cu ppm
19BID-1	126		2.6		0.04	0.36	0.08	<0.005	20	0.2	0.03	19.25	29.8
19BID-2	2980		6.8		1.28	14.55	0.17	0.104	70	10.4	1.23	5.2	134
19BID-3	325		1.8		0.54	0.27	0.1	<0.005	30	0.16	0.04	21	3.4
19BID-4	8130		2.3		0.61	1.66	0.2	0.041	20	0.2	0.31	20.3	27.3
19BID-5	93		1.1		0.03	0.49	0.12	<0.005	70	0.35	0.05	18.45	4.7
19BID-6	16		0.4		0.02	0.14	0.18	<0.005	30	0.11	0.02	19.6	0.9
19BID-7	7520		47		2.69	1.65	0.33	0.022	890	0.17	0.2	21.2	14.1
19BID-8	191000	19.1	139		77.6	13.25	5.46	0.253	10	0.21	9.15	14.6	156
19BID-9	244000	24.4	238		102	16.25	13.1	0.289	10	0.23	>10.0	12.8	178.5
19BID-10	>300000	>30.0	234		99.5	18.25	17.5	0.267	10	0.29	>10.0	11.25	149.5
19BID-11	3760		23.6		3.17	6.25	0.19	0.079	10	10.65	8.81	1.85	122.5
19BID-12	148500	14.85	51500	5.15	116	13.05	3.71	0.198	20	0.43	7.71	14.8	354
19BID-13	217000	21.7	2700		96.5	11.8	11.05	0.188	10	0.19	>10.0	14.25	422
19BID-14	74900	7.49	549		55.7	15.3	0.55	0.162	20	0.22	2.87	17.5	229
19BID-15	77700	7.77	648		65.8	22.9	0.54	0.243	30	0.24	2.8	16.7	252
19BID-16	63100	6.31	214		21.9	23.5	0.51	0.102	30	0.95	2.43	17.15	186
19BID-17	14200	1.42	547		2.82	2.12	0.25	0.022	350	0.14	0.41	20.3	30.9
19BID-18	864		151000	15.1	82.4	1.64	0.08	0.016	30	4.28	7.37	0.19	17.8
19BID-19	1280		>200000	>20.0	38.1	0.97	0.05	0.039	20	1.82	4.88	2.02	11.8

Sample ID	Au ppm	Cd ppm	Ce ppm	P ppm	Sb ppm	Hg ppm	Se ppm	Ba ppm	Sr ppm	Sb ppm	S %	Ca %
19BID-1	<0.02	0.94	4.71	260	0.23	0.47	<0.2	20	61.7	0.23	0.03	19.25
19BID-2	<0.02	19.65	91.9	4230	0.41	5.96	1.2	70	385	0.41	1.23	5.2
19BID-3	<0.02	11.8	6.05	110	0.36	2.23	0.2	30	63.3	0.36	0.04	21
19BID-4	<0.02	55.8	5.8	250	0.6	15.85	0.3	20	75.1	0.6	0.31	20.3
19BID-5	<0.02	0.74	8.39	280	0.2	0.22	<0.2	70	63.3	0.2	0.05	18.45
19BID-6	<0.02	0.27	4.84	20	0.06	0.06	<0.2	30	134	0.06	0.02	19.6
19BID-7	<0.02	63.2	5.46	180	0.61	19.7	0.3	890	136.5	0.61	0.2	21.2
19BID-8	<0.02	>1000	4.15	260	4.46	354	1	10	174.5	4.46	9.15	14.6
19BID-9	<0.02	>1000	3.95	430	6.3	436	1.1	10	149.5	6.3	>10.0	12.8
19BID-10	<0.02	>1000	4.13	440	6.03	457	0.9	10	175.5	6.03	>10.0	11.25
19BID-11	<0.02	26	104.5	8330	4.35	7.64	10.6	10	179	4.35	8.81	1.85
19BID-12	<0.02	>1000	7.07	270	45.4	336	17.2	20	148	45.4	7.71	14.8
19BID-13	<0.02	>1000	7.17	220	12.55	371	2.1	10	119.5	12.55	>10.0	14.25
19BID-14	<0.02	728	7.89	90	10.3	236	0.9	20	166.5	10.3	2.87	17.5
19BID-15	<0.02	747	7.05	90	8.54	312	1.3	30	170.5	8.54	2.8	16.7
19BID-16	<0.02	365	3.8	130	5.2	101	1.8	30	266	5.2	2.43	17.15
19BID-17	<0.02	95.5	6.55	190	1.48	29.1	0.5	350	410	1.48	0.41	20.3
19BID-18	<0.02	15	9.4	70	70.2	4.11	16.2	30	10.6	70.2	7.37	0.19
19BID-19	<0.02	11.45	2.34	150	177.5	7.5	6.6	20	162.5	177.5	4.88	2.02

MINFILE Record Summary
MINFILE No 093N 010

XML Extract / Inventory Report

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File Created: 24-Jul-1985 by BC Geological Survey (BCGS)
Last Edit: 07-Jul-1992 by David M. Melville (DMM)

SUMMARY Summary Help

Name	JEMIMA, BVD 1-4, B, VERNON	**NMI**	093N15 Zn1
		Mining Division	Omineca
		BCGS Map	093N097
Status	Prospect	**NTS Map**	093N15W
Latitude	055° 57' 28"	**UTM**	10 (NAD 83)
Longitude	124° 46' 39"	**Northing**	6202807
		Easting	389027
Commodities	Zinc, Lead, Silver, Germanium	**Deposit Types**	J01 : Polymetallic manto Ag-Pb-Zn
Tectonic Belt	Omineca	**Terrane**	Cassiar

Capsule Geology

The Jemima occurrence is located approximately 400 metres southwest of the Otter Lakes and approximately 19 kilometres north-northwest of Germansen Landing (Open File 1990-17). This occurrence has similar regional geology to that of the Biddy occurrence (093N 114).

Sulphide mineralization occurs as discontinuous and irregular- shaped pods within arenaceous dolomite and dolomite of the Otter Lakes Group. This carbonate replacement showing is near the geological contact between slates and argillites of the Upper Devonian-Lower Mississippian Big Creek Group and the Otter Lakes Group. Mineralization is in the form of sphalerite and galena. A grab sample analysed 115 grams per tonne silver, 0.67 per cent lead, 14.7 per cent zinc and 0.22 per cent germanium (Exploration in British Columbia 1989, page 195). A chip sample over 4 metres analysed 15.6 per cent combined lead-zinc (Assessment Report 7748).

Bibliography

EMPR BULL *91
EMPR EXPL *1989, pp. 193-196
EMPR FIELDWORK *1989, pp. 101-114; 1988, pp. 209-220
EMPR OF *1990-17; 1989-12
EMPR ASS RPT 6597, *7748, 16946, 19266, 20492
EMPR EXPL 1977-E203; 1979-283
GSC P 41-5; 42-2; 45-9; 75-33
GSC MEM 252
GSC MAP 876A; 1424A; 5249G

MINFILE Record Summary
MINFILE No 093N 075

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 07-Jul-92 by David M. Melville(DMM)

XML Extract/Inventory Report

SUMMARY

Summary Help

Name	W. VERNON, BVD 32, VERNON	**NMI**	093N15 Zn1
		Mining Division	Omineca
		BCGS Map	093N097
Status	Prospect	**NTS Map**	093N15W
Latitude	55° 56' 10" N	**UTM**	10 (NAD 83)
Longitude	124° 45' 31" W	**Northing**	6200366
		Easting	390145
Commodities	Zinc, Lead, Silver, Barite	**Deposit Types**	E12 : Mississippi Valley-type Pb-Zn
Tectonic Belt	Omineca	**Terrane**	Cassiar

Capsule Geology

The W. Vernon occurrence is located approximately 1 kilometre to the west of the northwest end of Echo Lake and is approximately 17 kilometres north-northwest of Germansen Landing (Open File 1990-17). This occurrence has similar regional geology to that of the Biddy occurrence (093N 114).

Sphalerite occurs as disseminated grains in fine-grained dolomite and/or breccia matrix in arenaceous dolomite. Galena primarily occurs massively with barite in small localized shear zones with varying amounts of sphalerite. Silver, in the form of argentiferous galena, is generally very low grade. The hostrocks are primarily dolomites and dolomitic breccias of the Middle Devonian Otter Lakes Group with lesser mineralization found within dolomites and arenaceous dolomites of the Silurian to Lower Devonian Echo Lake Group. Mineralization is typically found in the uppermost parts of the Otter Lakes Group, near the contact with the overlying shales of the Devonian to Mississippian Big Creek Group. A grab sample from this area analysed 61.22 grams per tonne silver and 5 to 7 per cent zinc (Assessment Report 16946).

Bibliography

EMPR BULL *91
EMPR EXPL *1989, pp. 193-196
EMPR FIELDWORK *1989, pp. 101-114; 1988, pp. 209-220
EMPR GEM 1973-380
EMPR AR 1952-99,106
EMPR OF *1990-17; 1989-12
EMPR ASS RPT 1653, *4815, *16946, 19266, *20492
GSC P 41-5; 42-2; 45-9; 75-33
GSC MEM 252
GSC MAP 876A; 1424A; 5249G

MINFILE Record Summary
MINFILE No 093N 076

XML Extract / Inventory Report

Print Preview | PDF | -- SELECT REPORT --

File Created: 24-Jul-1985 by BC Geological Survey (BCGS)
Last Edit: 07-Jul-1992 by David M. Melville (DMM)

SUMMARY Summary Help

Name	VERNON, B.V.D. 33, ZONE E	**NMI**	093N15 Zn1
		Mining Division	Omineca
		BCGS Map	093N097
Status	Showing	**NTS Map**	093N15E, 093N15W
Latitude	055° 56' 33"	**UTM**	10 (NAD 83)
Longitude	124° 45' 03"	**Northing**	6201064
		Easting	390649
Commodities	Zinc, Lead, Silver, Germanium	**Deposit Types**	E12 : Mississippi Valley-type Pb-Zn
Tectonic Belt	Omineca	**Terrane**	Cassiar

Capsule Geology

The Vernon occurrence is located approximately 1 kilometre northwest of the northwest end of Echo Lake and is approximately 17 kilometres north-northwest of Germansen Landing (Open File 1990-17). This occurrence has similar regional geology to that of the Biddy occurrence (093N 114).

Sphalerite occurs as disseminated grains in fine-grained dolomite and as breccia cement within arenaceous dolomite. Galena primarily occurs massively with barite in small localized shear zones with varying amounts of sphalerite. Silver, in the form of argentiferous galena, is generally very low grade. Minor quartz, calcite, and barite are associated with the sulphides. The hostrocks are primarily dolomites and dolomitic breccias of the Middle Devonian Otter Lakes Group and arenaceous dolomites of the Echo Lake Group (Silurian to Lower Devonian).

The mineralization at this locality may be related to a northeast-striking normal fault. A grab sample from this area analysed 84 grams per tonne silver, 5.2 per cent lead, 8.7 per cent zinc and 0.13 per cent germanium (Exploration in British Columbia 1989, page 195).

Bibliography

EMPR BULL *91
EMPR EXPL *1989, pp. 193-196
EMPR FIELDWORK *1989, pp. 101-114; 1988, pp. 209-220
EMPR OF *1990-17; 1989-12
EMPR GEM 1973-380
EMPR AR 1952-99,106
EMPR ASS RPT 1653, 4815, 16946, 19266, 20492
GSC P 41-5; 42-2; 45-9; 75-33
GSC MEM 252
GSC MAP 876A; 1424A; 5249G

MINFILE Record Summary
MINFILE No 093N 114

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 03-Jul-92 by David M. Melville(DMM)

XML Extract/Inventory Report

SUMMARY

Summary Help

Name	BIDDY, RAE, OMI, NICA	**NMI**	
		Mining Division	Omineca
		BCGS Map	093N096
Status	Prospect	**NTS Map**	093N15W
Latitude	55° 58' 04" N	**UTM**	10 (NAD 83)
Longitude	124° 48' 12" W	**Northing**	6203961
		Easting	387443
Commodities	Zinc, Lead, Silver, Germanium	**Deposit Types**	E14 : Sedimentary exhalative Zn-Pb-Ag
Tectonic Belt	Omineca	**Terrane**	Cassiar

Capsule Geology

The Biddy occurrence is located near the headwaters of Big Creek, approximately 7 kilometres north-northeast of Nina Lake and approximately 3 kilometres south-southwest of Razorback Mountain. It lies within 1 kilometre to the west of the Otter Lakes, near an old exploration gravel road that connects to the Germansen Landing road south of Nina Lake.

Regionally, the general area is divided by a major, layer parallel, thrust fault that separates para-autochthonous North American rocks of the Cassiar Terrane from rocks belonging to the Intermontane Superterrane represented by the Slide Mountain and Quesnel terranes (Ferri and Melville, in prep). This fault boundary roughly corresponds to the Omineca-Intermontane belts boundary. This regional stratigraphy forms part of a southwest-dipping homoclinal sequence that is cut by a series of northwest-striking normal faults to the north of the Biddy occurrence and northeast-striking normal faults to the south. With the exception of the easternmost portions of the pericratonic strata, all other rocks have been weakly metamorphosed up to chlorite grade (Ferri and Melville, in prep. and Exploration in British Columbia 1989, pages 193-196).

The Cassiar Terrane is represented by a Proterozoic to Mississippian carbonate and siliciclastic miogeoclinal wedge. These sequences of miogeoclinal rocks include the Proterozoic Ingenika Group, the Lower Cambrian Atan Group, the Cambrian (?) to Ordovician Razorback Mountain Group, the Silurian to Lower Devonian Echo Lake Group, the Middle Devonian Otter Lakes Group, the Upper (?) Devonian to Mississippian Big Creek Group and the Mississippian to Permian Cooper Ridge Group (Ferri and Melville, in prep.).

The Slide Mountain Terrane is represented by Upper Paleozoic oceanic rocks of the Nina Creek Group. The Pennsylvanian to Permian Nina Creek Group consists of a lower argillite-dominated sedimentary package and an upper pillowed to massive basalt-dominated sequence. Rocks belonging to the Quesnel Terrane lie to the west of the Nina Creek Group, across the Manson fault zone, and are represented by the Middle Triassic to Lower Jurassic Takla Group.

The Biddy occurrence is hosted within the Middle Devonian Otter Lakes Group and the Silurian to Lower Devonian Echo Lake Group. The Otter Lakes Group is characterized by approximately 150 to 200 metres of grey to black limestones and dolostones that are direct correlatives of the carbonates of the McDame Group in the Cassiar area (Ferri and Melville, in prep.). The Echo Lake Group is a thick succession of approximately 100 metres of limestone, dolomite, sandy dolomite and minor quartzite. It is divided into two units with the lower unit consisting primarily of carbonate and the upper unit, sandy dolomites and quartzites. Overlying these two groups is the Upper (?) Devonian to Lower Mississippian Big Creek Group that is approximately a 500 metre thick succession of blue-grey to dark grey shales, argillites and minor sandstones.

Mineralization is stratabound within a stratigraphic interval from the Otter Lakes-Big Creek contact downwards to the uppermost sandy dolomites of the Echo Lake Group. The sulphides occur as semimassive irregular-shaped pods in solution breccias (dolomitic breccias), as massive sulphides in localized shear zones and as disseminated blebs in arenaceous dolomites. Where brecciated, the mineralization is found towards the top of the Otter Lakes Group, near the Big Creek shale contact. The sulphides within the breccias may replace clasts, matrix or a combination of both suggesting multiphase fluid influx and deposition (Exploration in British Columbia 1989, pages 193-196). Mineralization consists of sphalerite and galena with associated barite and minor pyrite. Lead-lead dates from the galena have a Cambrian shale curve model age (Ferri and Melville, in prep.). The sphalerite is on average 0.05 per cent germanium (Assessment Report 16946). A grab sample from this occurrence analysed 4.11 per cent zinc, 28 grams per tonne silver and 0.120 per cent germanium (Exploration in British Columbia 1989, page 195). One of the best drillhole intersections analysed 1.3 per cent zinc and 1 per cent lead over a 2-metre interval (Assessment Report 20492).

Bibliography

EMPR BULL *91
EMPR EXPL *1989, pp. 193-196
EMPR FIELDWORK 1988, pp. 209-220; *1989, pp. 101-114
EMPR OF *1990-17; 1989-12
EMPR ASS RPT *16946, 19266, *20492
GSC P 41-5; 42-2; 45-9; 75-33
GSC MEM 252
GSC MAP 876A; 1424A; 5249G

Fig1 Biddy-Vernon General Location

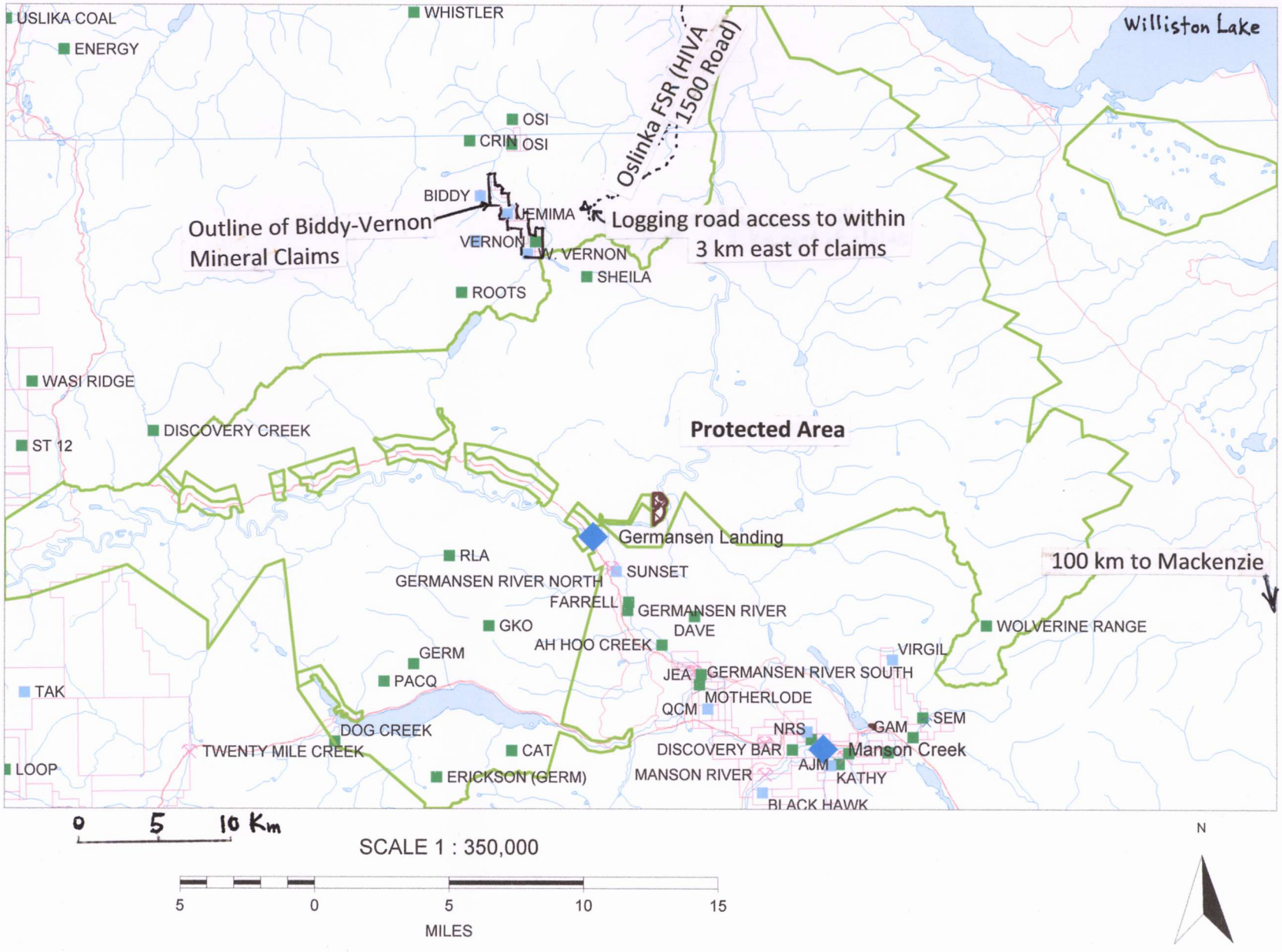
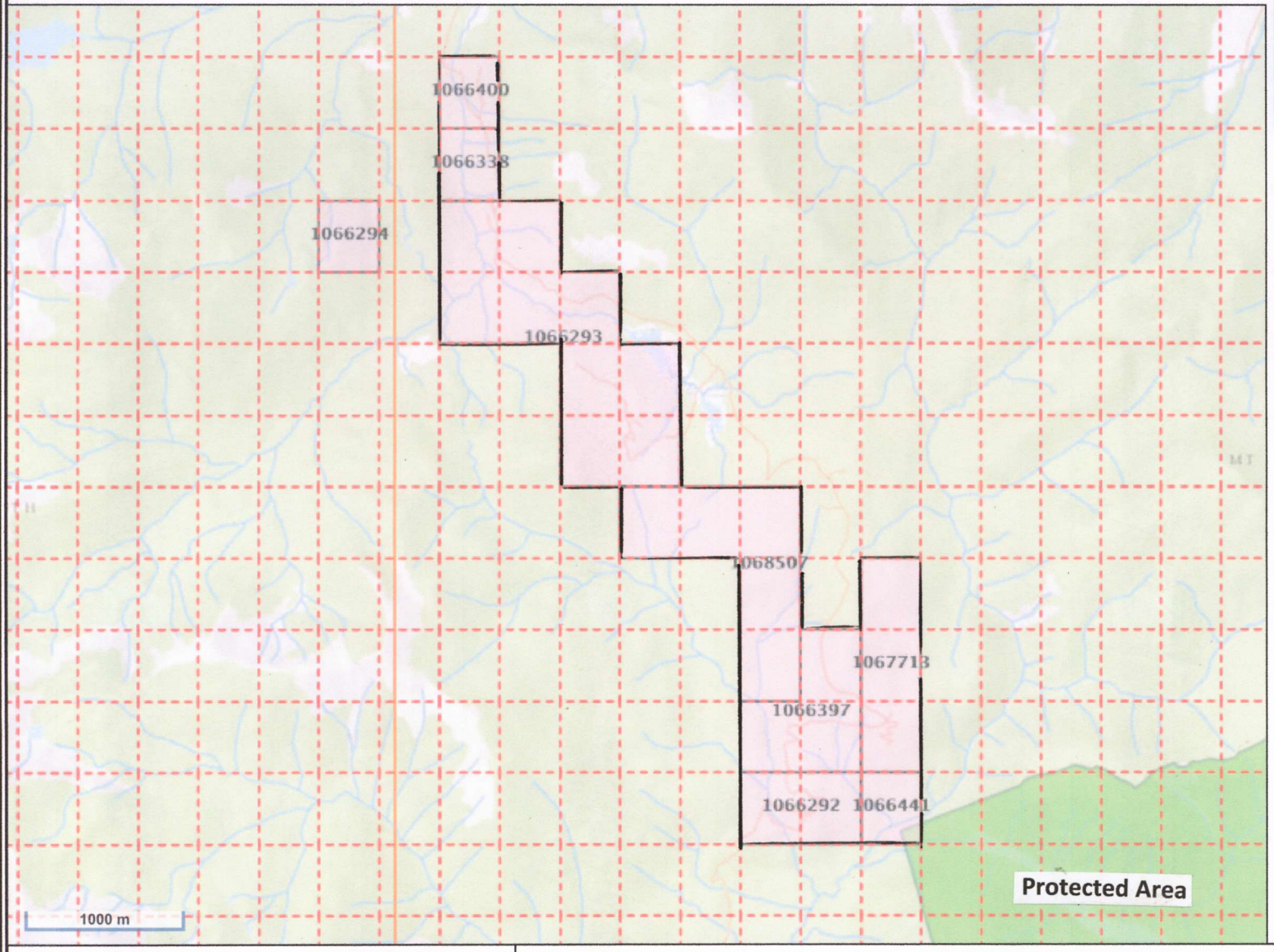


Fig 2 MTO Biddy-Vernon Claims



Legend

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

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 Filled
- Ecological Reserves
- Protected Areas - Tantalis - Colour Filled
- Protected Areas
- Provincial Parks - Tantalis - Colour Filled
- Provincial Parks
- Recreation Areas - Tantalis - Colour Filled

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.

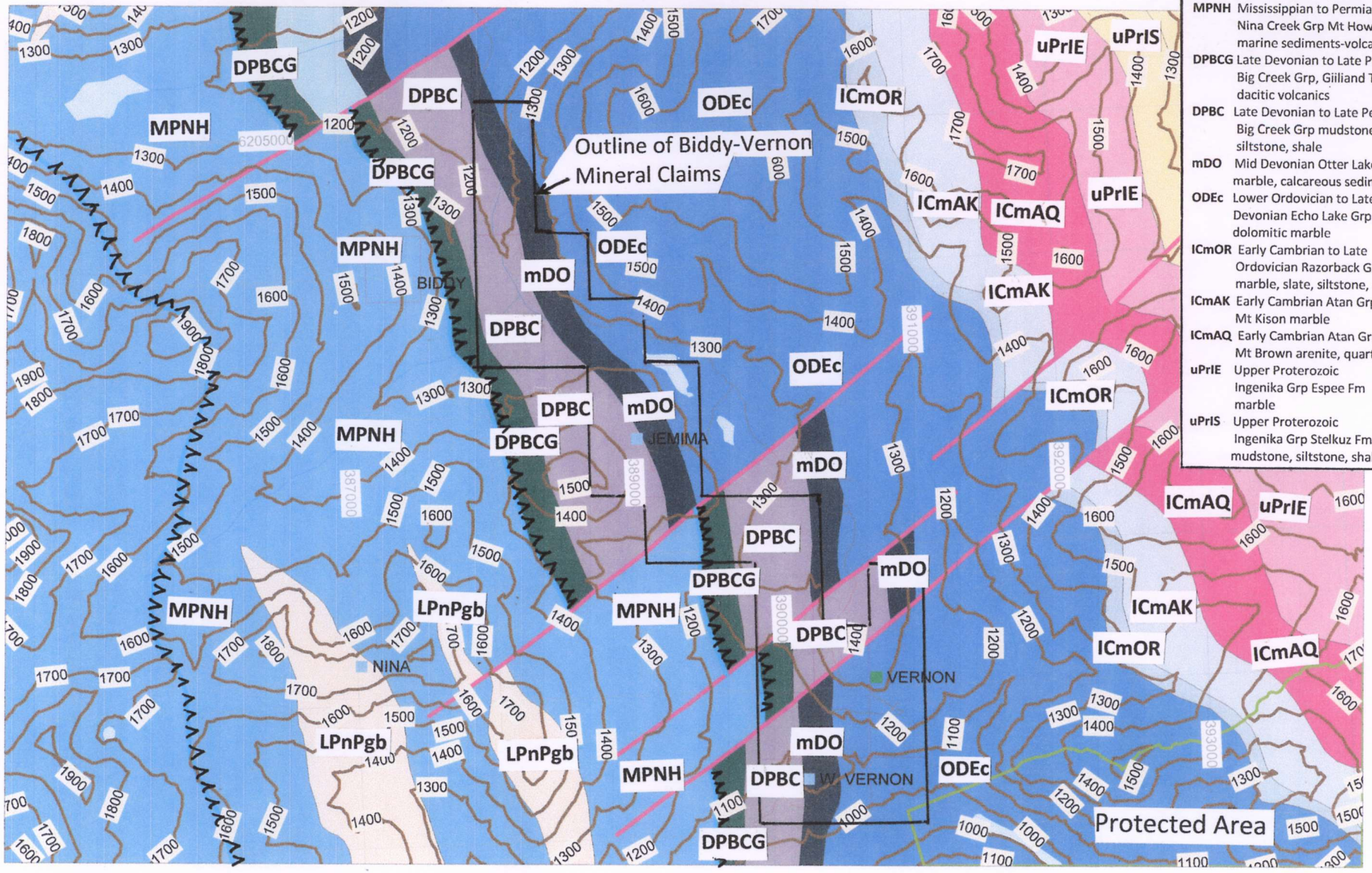
Printed using the Mineral Titles Online (MTO) application.NTS093N 15W, BCGS 093N.096 Omineca MD

Center: 55°57'17", -124°46'29"
Scale: 1 : 67710
SRS: EPSG:3857
UTM Zone: 10

N

Fig 3 Biddy-Vernon General Geology

NTS 093N 15W, BCGS 093N.096 Omineca Mining Division



Lithology Legend

- **LPnPgb** Late Pennsylvannian to Late Permian gabbro, diorite
- **MPNH** Mississippian to Permian Nina Creek Grp Mt Howell marine sediments-volcanics
- **DPBCG** Late Devonian to Late Permian Big Creek Grp, Giiliand Tuff dacitic volcanics
- **DPBC** Late Devonian to Late Permian Big Creek Grp mudstone, siltstone, shale
- **mDO** Mid Devonian Otter Lakes Grp marble, calcareous sediments
- **ODEc** Lower Ordovician to Late Devonian Echo Lake Grp dolomitic marble
- **ICmOR** Early Cambrian to Late Ordovician Razorback Grp marble, slate, siltstone, argillite
- **ICmAK** Early Cambrian Atan Grp Mt Kison marble
- **ICmAQ** Early Cambrian Atan Grp Mt Brown arenite, quartzite
- **uPrIE** Upper Proterozoic Ingenika Grp Espee Fm marble
- **uPrIS** Upper Proterozoic Ingenika Grp Stelkuz Fm mudstone, siltstone, shale

0 1 Km

SCALE 1 : 40,000

Thrust Fault

Fault

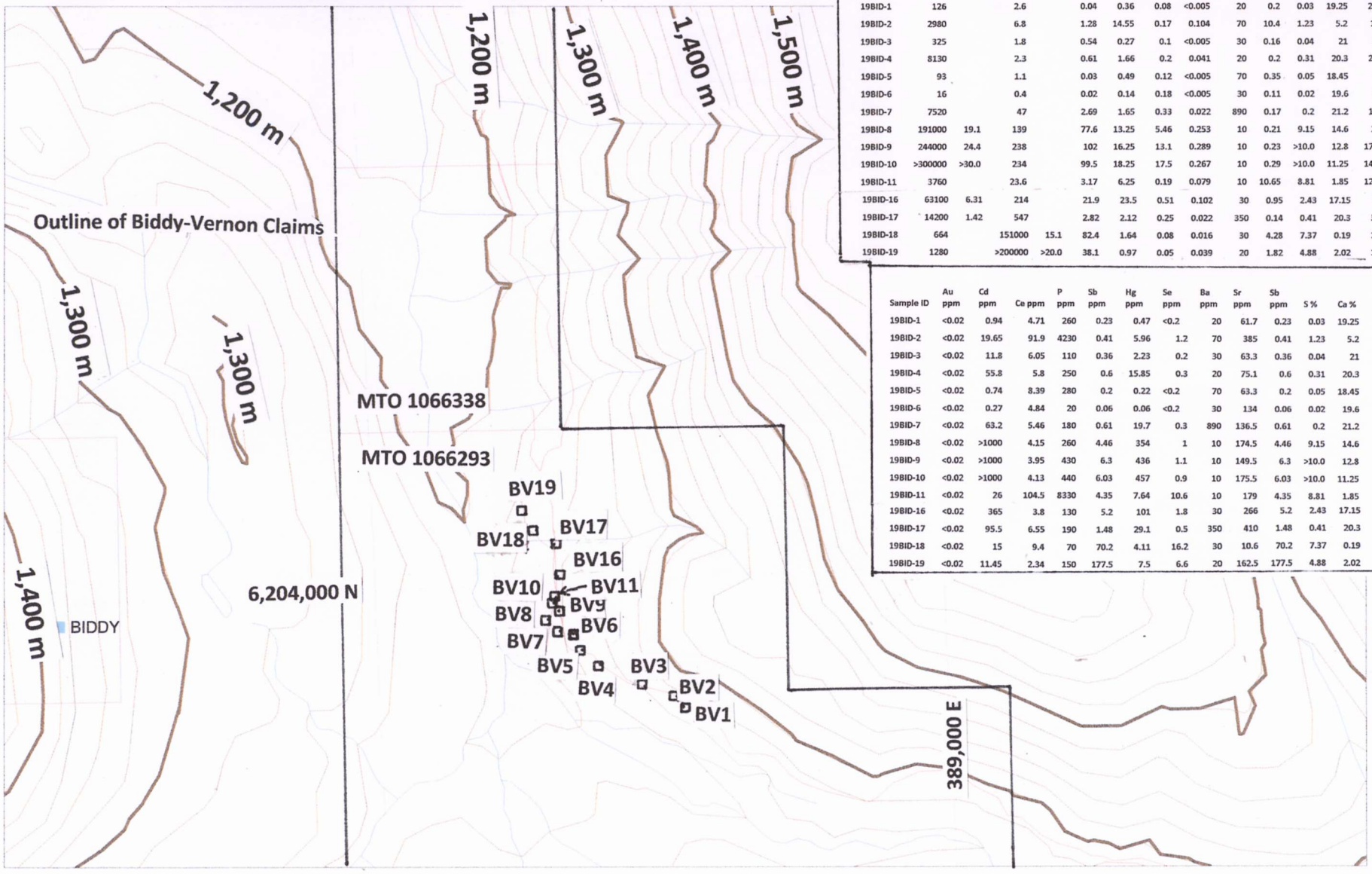
2,000 0 2,000 4,000 FEET

The main lithology that hosts stratabound, sedimentary exhalative Pb-Zn-Ag mineralization is hosted in Middle Devonian Otter Lakes Group dolomitic marble, and sandy dolomites of the Silurian-Devonian Echo Lake Group.

N

Fig 4A Biddy 2019 Rock Chip Samples

NTS 093N 15W, BCGS 093N.096 Omineca Mining Division



Sample ID	Zn ppm	Zn %	Pb ppm	Pb %	Ag ppm	Ge ppm	Ga ppm	In ppm	Ba ppm	Fe %	S %	Ca %	Cu ppm
19BID-1	126		2.6		0.04	0.36	0.08	<0.005	20	0.2	0.03	19.25	29.8
19BID-2	2980		6.8		1.28	14.55	0.17	0.104	70	10.4	1.23	5.2	134
19BID-3	325		1.8		0.54	0.27	0.1	<0.005	30	0.16	0.04	21	3.4
19BID-4	8130		2.3		0.61	1.66	0.2	0.041	20	0.2	0.31	20.3	27.3
19BID-5	93		1.1		0.03	0.49	0.12	<0.005	70	0.35	0.05	18.45	4.7
19BID-6	16		0.4		0.02	0.14	0.18	<0.005	30	0.11	0.02	19.6	0.9
19BID-7	7520		47		2.69	1.65	0.33	0.022	890	0.17	0.2	21.2	14.1
19BID-8	191000	19.1	139		77.6	13.25	5.46	0.253	10	0.21	9.15	14.6	156
19BID-9	244000	24.4	238		102	16.25	13.1	0.289	10	0.23	>10.0	12.8	178.5
19BID-10	>300000	>30.0	234		99.5	18.25	17.5	0.267	10	0.29	>10.0	11.25	149.5
19BID-11	3760		23.6		3.17	6.25	0.19	0.079	10	10.65	8.81	1.85	122.5
19BID-16	63100	6.31	214		21.9	23.5	0.51	0.102	30	0.95	2.43	17.15	186
19BID-17	14200	1.42	547		2.82	2.12	0.25	0.022	350	0.14	0.41	20.3	30.9
19BID-18	664		151000	15.1	82.4	1.64	0.08	0.016	30	4.28	7.37	0.19	17.8
19BID-19	1280		>200000	>20.0	38.1	0.97	0.05	0.039	20	1.82	4.88	2.02	11.8

Sample ID	Au ppm	Cd ppm	Ce ppm	P ppm	Sb ppm	Hg ppm	Se ppm	Ba ppm	Sr ppm	Sb ppm	S %	Ca %
19BID-1	<0.02	0.94	4.71	260	0.23	0.47	<0.2	20	61.7	0.23	0.03	19.25
19BID-2	<0.02	19.65	91.9	4230	0.41	5.96	1.2	70	385	0.41	1.23	5.2
19BID-3	<0.02	11.8	6.05	110	0.36	2.23	0.2	30	63.3	0.36	0.04	21
19BID-4	<0.02	55.8	5.8	250	0.6	15.85	0.3	20	75.1	0.6	0.31	20.3
19BID-5	<0.02	0.74	8.39	280	0.2	0.22	<0.2	70	63.3	0.2	0.05	18.45
19BID-6	<0.02	0.27	4.84	20	0.06	0.06	<0.2	30	134	0.06	0.02	19.6
19BID-7	<0.02	63.2	5.46	180	0.61	19.7	0.3	890	136.5	0.61	0.2	21.2
19BID-8	<0.02	>1000	4.15	260	4.46	354	1	10	174.5	4.46	9.15	14.6
19BID-9	<0.02	>1000	3.95	430	6.3	436	1.1	10	149.5	6.3	>10.0	12.8
19BID-10	<0.02	>1000	4.13	440	6.03	457	0.9	10	175.5	6.03	>10.0	11.25
19BID-11	<0.02	26	104.5	8330	4.35	7.64	10.6	10	179	4.35	8.81	1.85
19BID-16	<0.02	365	3.8	130	5.2	101	1.8	30	266	5.2	2.43	17.15
19BID-17	<0.02	95.5	6.55	190	1.48	29.1	0.5	350	410	1.48	0.41	20.3
19BID-18	<0.02	15	9.4	70	70.2	4.11	16.2	30	10.6	70.2	7.37	0.19
19BID-19	<0.02	11.45	2.34	150	177.5	7.5	6.6	20	162.5	177.5	4.88	2.02

Fig 4B Jemima 2019 Rock Chip Samples

NTS 093N 15W, BCGS 093N.096 Omineca Mining Division

Sample ID	Zn ppm	Zn %	Pb ppm	Pb %	Ag ppm	Ge ppm	Ga ppm	In ppm	Ba ppm	Fe %	S %	Ca %	Cu ppm
19BID-12	148500	14.85	51500	5.15	116	13.05	3.71	0.198	20	0.43	7.71	14.8	354
19BID-13	217000	21.7	2700		96.5	11.8	11.05	0.188	10	0.19	>10.0	14.25	422
19BID-14	74900	7.49	549		55.7	15.3	0.55	0.162	20	0.22	2.87	17.5	229
19BID-15	77700	7.77	648		65.8	22.9	0.54	0.243	30	0.24	2.8	16.7	252

Sample ID	Au ppm	Cd ppm	Ce ppm	P ppm	Sb ppm	Hg ppm	Se ppm	Ba ppm	Sr ppm	Sb ppm	S %	Ca %
19BID-12	<0.02	>1000	7.07	270	45.4	336	17.2	20	148	45.4	7.71	14.8
19BID-13	<0.02	>1000	7.17	220	12.55	371	2.1	10	119.5	12.55	>10.0	14.25
19BID-14	<0.02	728	7.89	90	10.3	236	0.9	20	166.5	10.3	2.87	17.5
19BID-15	<0.02	747	7.05	90	8.54	312	1.3	30	170.5	8.54	2.8	16.7

389,000 E

MTO 1066293

6,203,000 N

1,300 m

1,400 m

1,500 m

JEMIMA

BV12

BV14

BV13

BV15

0 200m

SCALE 1 : 5,000

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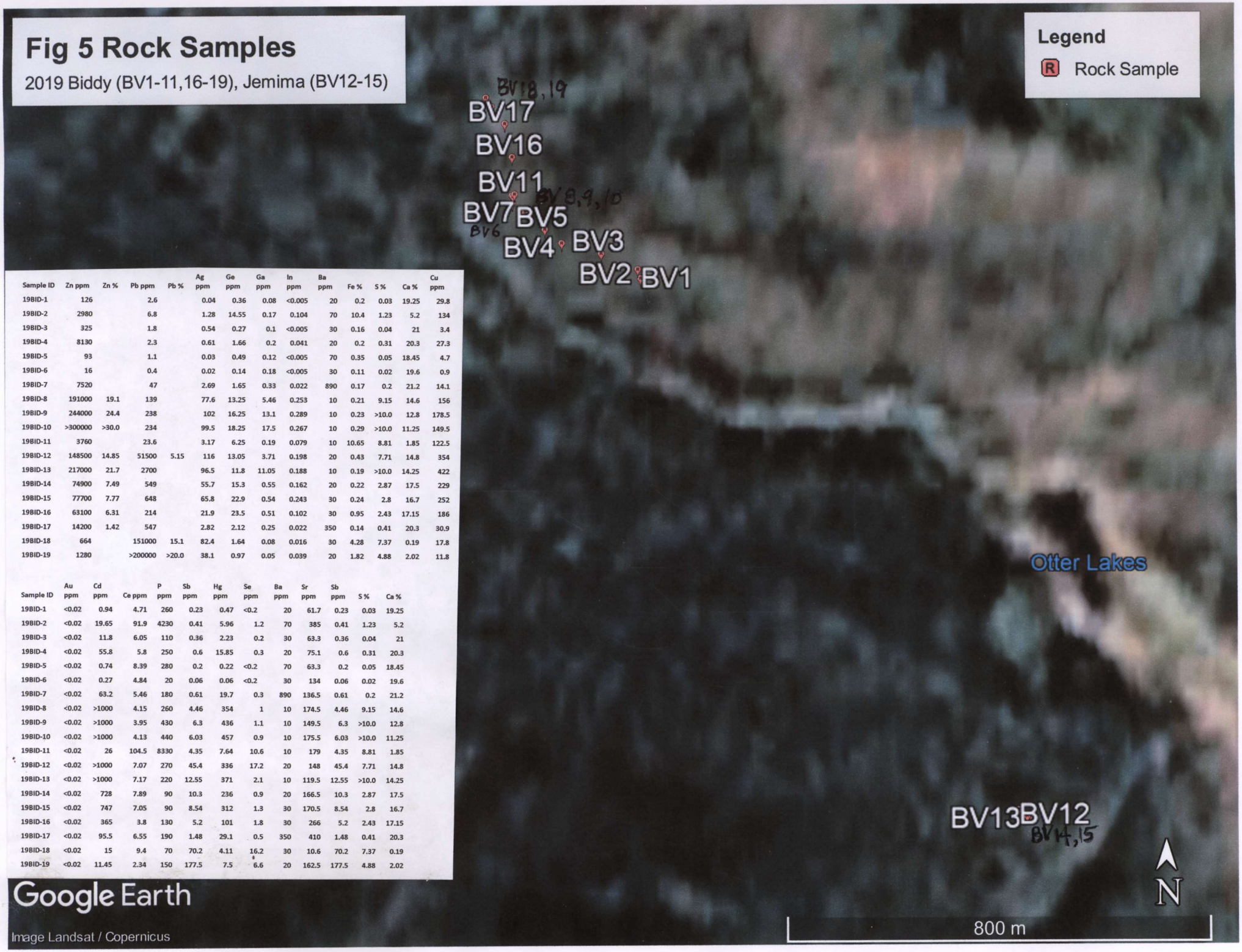
FEET

N

Rock Chip Sample

Fig 5 Rock Samples

2019 Biddy (BV1-11,16-19), Jemima (BV12-15)



Sample ID	Zn ppm	Zn %	Pb ppm	Pb %	Ag ppm	Ge ppm	Ga ppm	In ppm	Ba ppm	Fe %	S %	Ca %	Cu ppm
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19BID-2	2980		6.8		1.28	14.55	0.17	0.104	70	10.4	1.23	5.2	134
19BID-3	325		1.8		0.54	0.27	0.1	<0.005	30	0.16	0.04	21	3.4
19BID-4	8130		2.3		0.61	1.66	0.2	0.041	20	0.2	0.31	20.3	27.3
19BID-5	93		1.1		0.03	0.49	0.12	<0.005	70	0.35	0.05	18.45	4.7
19BID-6	16		0.4		0.02	0.14	0.18	<0.005	30	0.11	0.02	19.6	0.9
19BID-7	7520		47		2.69	1.65	0.33	0.022	890	0.17	0.2	21.2	14.1
19BID-8	191000	19.1	139		77.6	13.25	5.46	0.253	10	0.21	9.15	14.6	156
19BID-9	244000	24.4	238		102	16.25	13.1	0.289	10	0.23	>10.0	12.8	178.5
19BID-10	>300000	>30.0	234		99.5	18.25	17.5	0.267	10	0.29	>10.0	11.25	149.5
19BID-11	3760		23.6		3.17	6.25	0.19	0.079	10	10.65	8.81	1.85	122.5
19BID-12	148500	14.85	51500	5.15	116	13.05	3.71	0.198	20	0.43	7.71	14.8	354
19BID-13	217000	21.7	2700		96.5	11.8	11.05	0.188	10	0.19	>10.0	14.25	422
19BID-14	74900	7.49	549		55.7	15.3	0.55	0.162	20	0.22	2.87	17.5	229
19BID-15	77700	7.77	648		65.8	22.9	0.54	0.243	30	0.24	2.8	16.7	252
19BID-16	63100	6.31	214		21.9	23.5	0.51	0.102	30	0.95	2.43	17.15	186
19BID-17	14200	1.42	547		2.82	2.12	0.25	0.022	350	0.14	0.41	20.3	30.9
19BID-18	664		151000	15.1	82.4	1.64	0.08	0.016	30	4.28	7.37	0.19	17.8
19BID-19	1280		>200000	>20.0	38.1	0.97	0.05	0.039	20	1.82	4.88	2.02	11.8

Sample ID	Au ppm	Cd ppm	Ce ppm	P ppm	Sb ppm	Hg ppm	Se ppm	Ba ppm	Sr ppm	Sb ppm	S %	Ca %
19BID-1	<0.02	0.94	4.71	260	0.23	0.47	<0.2	20	61.7	0.23	0.03	19.25
19BID-2	<0.02	19.65	91.9	4230	0.41	5.96	1.2	70	385	0.41	1.23	5.2
19BID-3	<0.02	11.8	6.05	110	0.36	2.23	0.2	30	63.3	0.36	0.04	21
19BID-4	<0.02	55.8	5.8	250	0.6	15.85	0.3	20	75.1	0.6	0.31	20.3
19BID-5	<0.02	0.74	8.39	280	0.2	0.22	<0.2	70	63.3	0.2	0.05	18.45
19BID-6	<0.02	0.27	4.84	20	0.06	0.06	<0.2	30	134	0.06	0.02	19.6
19BID-7	<0.02	63.2	5.46	180	0.61	19.7	0.3	890	136.5	0.61	0.2	21.2
19BID-8	<0.02	>1000	4.15	260	4.46	354	1	10	174.5	4.46	9.15	14.6
19BID-9	<0.02	>1000	3.95	430	6.3	436	1.1	10	149.5	6.3	>10.0	12.8
19BID-10	<0.02	>1000	4.13	440	6.03	457	0.9	10	175.5	6.03	>10.0	11.25
19BID-11	<0.02	26	104.5	8330	4.35	7.64	10.6	10	179	4.35	8.81	1.85
19BID-12	<0.02	>1000	7.07	270	45.4	336	17.2	20	148	45.4	7.71	14.8
19BID-13	<0.02	>1000	7.17	220	12.55	371	2.1	10	119.5	12.55	>10.0	14.25
19BID-14	<0.02	728	7.89	90	10.3	236	0.9	20	166.5	10.3	2.87	17.5
19BID-15	<0.02	747	7.05	90	8.54	312	1.3	30	170.5	8.54	2.8	16.7
19BID-16	<0.02	365	3.8	130	5.2	101	1.8	30	266	5.2	2.43	17.15
19BID-17	<0.02	95.5	6.55	190	1.48	29.1	0.5	350	410	1.48	0.41	20.3
19BID-18	<0.02	15	9.4	70	70.2	4.11	16.2	30	10.6	70.2	7.37	0.19
19BID-19	<0.02	11.45	2.34	150	177.5	7.5	6.6	20	162.5	177.5	4.88	2.02

Fig 6 Rock Sample Location

2019 Biddy Showings, Otter Lakes Area

NTS 093N 15W, BCGS 093N.096 Omineca Mining Division

Sample ID	Zone name	Easting	Northing	Elev (m)	Lithology	Alteration
19BID-1	Biddy (S)	388538	6203772	1273	dolomitic marble	breccia, carbonate
19BID-2	Biddy (S)	388533	6203788	1280	dolomitic marble, arenaceous	breccia, quartz, apatite
19BID-3	Biddy (S)	388468	6203820	1279	dolomitic marble	breccia, carbonate
19BID-4	Biddy (S)	388397	6203843	1258	dolomitic marble	breccia, carbonate
19BID-5	Biddy (S)	388367	6203870	1254	dolomitic marble	breccia, carbonate
19BID-6	Biddy(mid)	388340	6203903	1244	dolomitic marble	breccia, carbonate
19BID-7	Biddy(mid)	388324	6203904	1246	dolomitic marble	breccia, barite, carbonate
19BID-8	Biddy(mid)	388309	6203922	1231	dolomitic marble	breccia, carbonate
19BID-9	Biddy(mid)	388310	6203934	1233	dolomitic marble	breccia, carbonate
19BID-10	Biddy(mid)	388308	6203936	1233	dolomitic marble	breccia, carbonate
19BID-11	Biddy(mid)	388313	6203938	1229	dolomitic marble, arenaceous	breccia, carbonate
19BID-16	Biddy (N)	388310	6204007	1259	dolomitic marble	breccia, carbonate
19BID-17	Biddy (N)	388298	6204070	1255	dolomitic marble	breccia, barite, carbonate
19BID-18	Biddy (N)	388274	6204103	1233	dolomitic marble, arenaceous	breccia, silica, carbonate
19BID-19	Biddy (N)	388264	6204121	1232	dolomitic marble, arenaceous	breccia, shear, silica, carbonate

Sample ID	Mineralization	Sample Type	Strike	Dip	Width
19BID-1		angular float			
19BID-2	sphalerite	outcrop	155	24 W	50 cm
19BID-3		angular float			
19BID-4		outcrop	160	28 W	50 cm
19BID-5		angular float			
19BID-6		angular float			
19BID-7	sphalerite	angular float			
19BID-8	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	158	30 W	22 cm
19BID-9	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-10	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	177	50 W	20 cm
19BID-11	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	outcrop	175	55 W	18 cm
19BID-16	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-17	sphalerite trace Ge-Ga-In-Cu-Cd minerals	outcrop	168	25 W	20 cm
19BID-18	sphalerite trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop	170	20 W	25 cm
19BID-19	galena	outcrop	170	27 W	22 cm

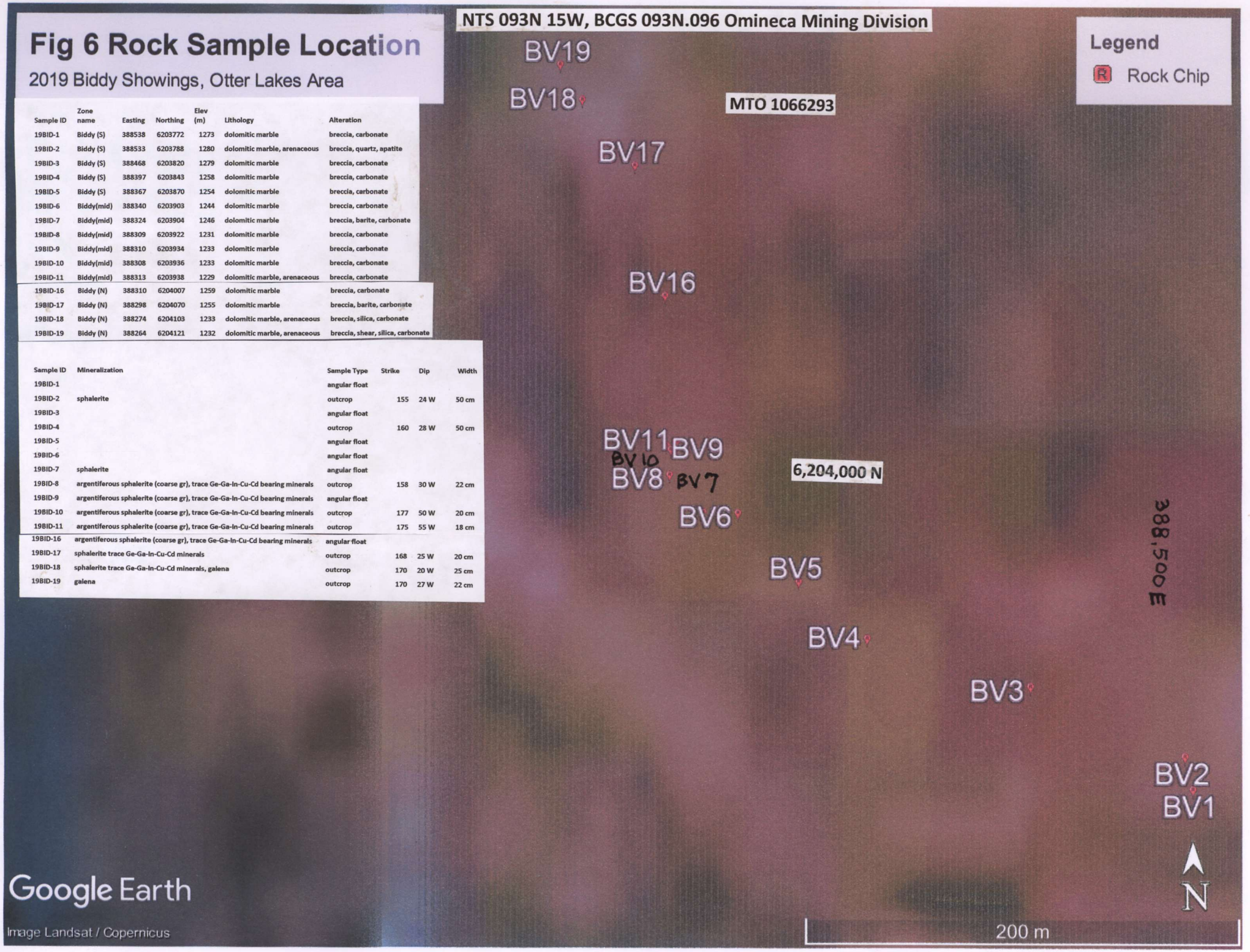


Fig 7 Jemima Rock Samples

700 meters southwest of Otter Lake

Sample ID	Zone name	Easting	Northing	Elev (m)	Lithology	Alteration
19BID-12	Jemima	389168	6202805	1364	dolomitic marble	breccia, shear, carbonate
19BID-13	Jemima	389183	6202793	1364	dolomitic marble	breccia, shear, carbonate
19BID-14	Jemima	389190	6202795	1361	dolomitic marble	breccia, carbonate
19BID-15	Jemima	389194	6202792	1360	dolomitic marble	breccia, carbonate

Sample ID	Mineralization	Sample Type	Strike	Dip	Width
19BID-12	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-13	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd minerals, galena	outcrop			25 cm
19BID-14	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			
19BID-15	argentiferous sphalerite (coarse gr), trace Ge-Ga-In-Cu-Cd bearing minerals	angular float			

Legend

R Rock Chip

MTO 1066293

BV12

BV13

BV14

BV15

6,202,800 N

389,200 E

Google Earth

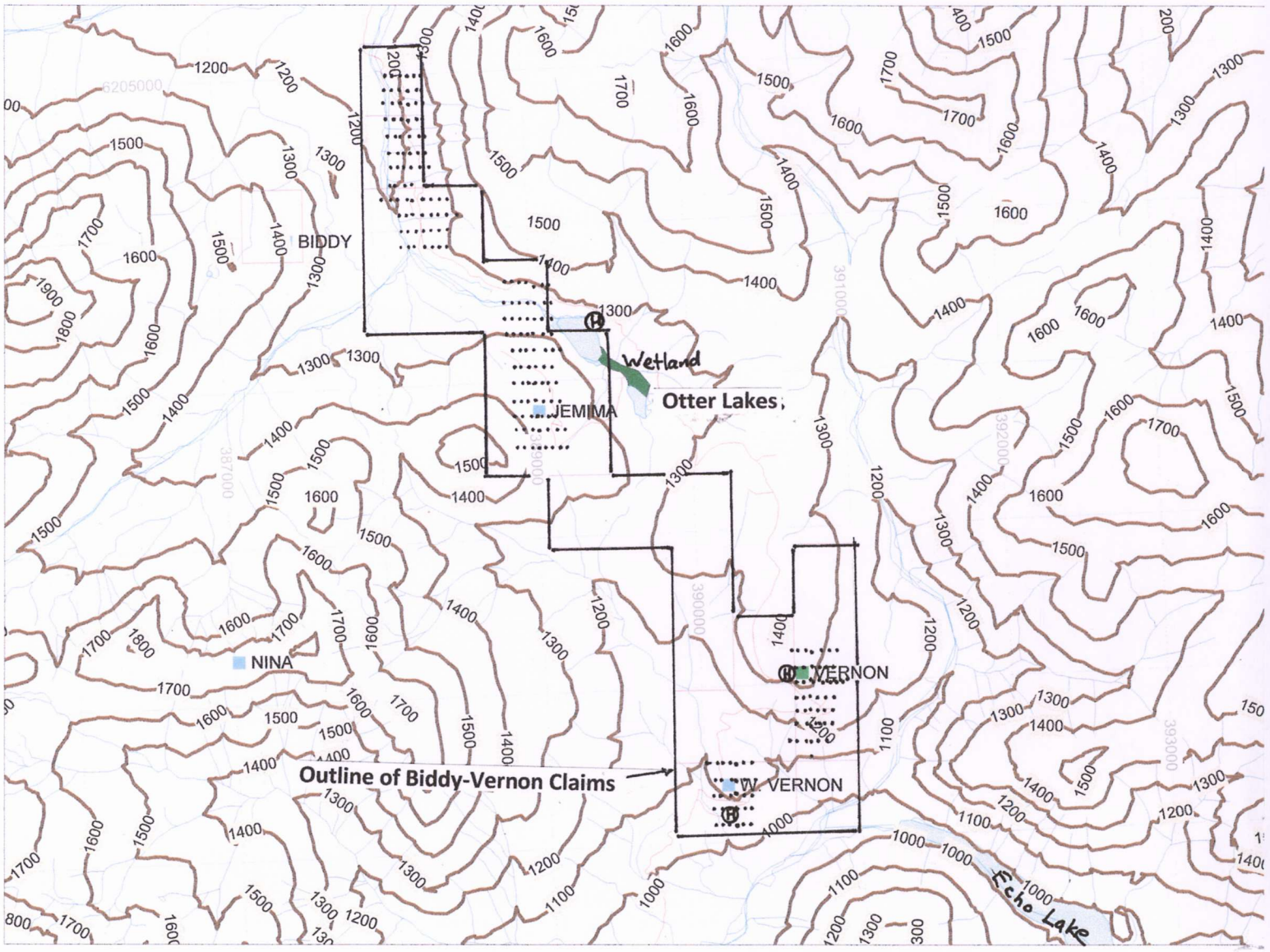
Image Landsat / Copernicus

N

100 m

Fig 8 Proposed Gravity Survey Grid Locations

Proposed Gravity Geophysical Survey 100 m Line Spacing (readings @50 m spacing)



0 1 Km

SCALE 1 : 40,000

2,000 0 2,000 4,000 6,000 FEET

Total = 12.75 kilometers line-grid

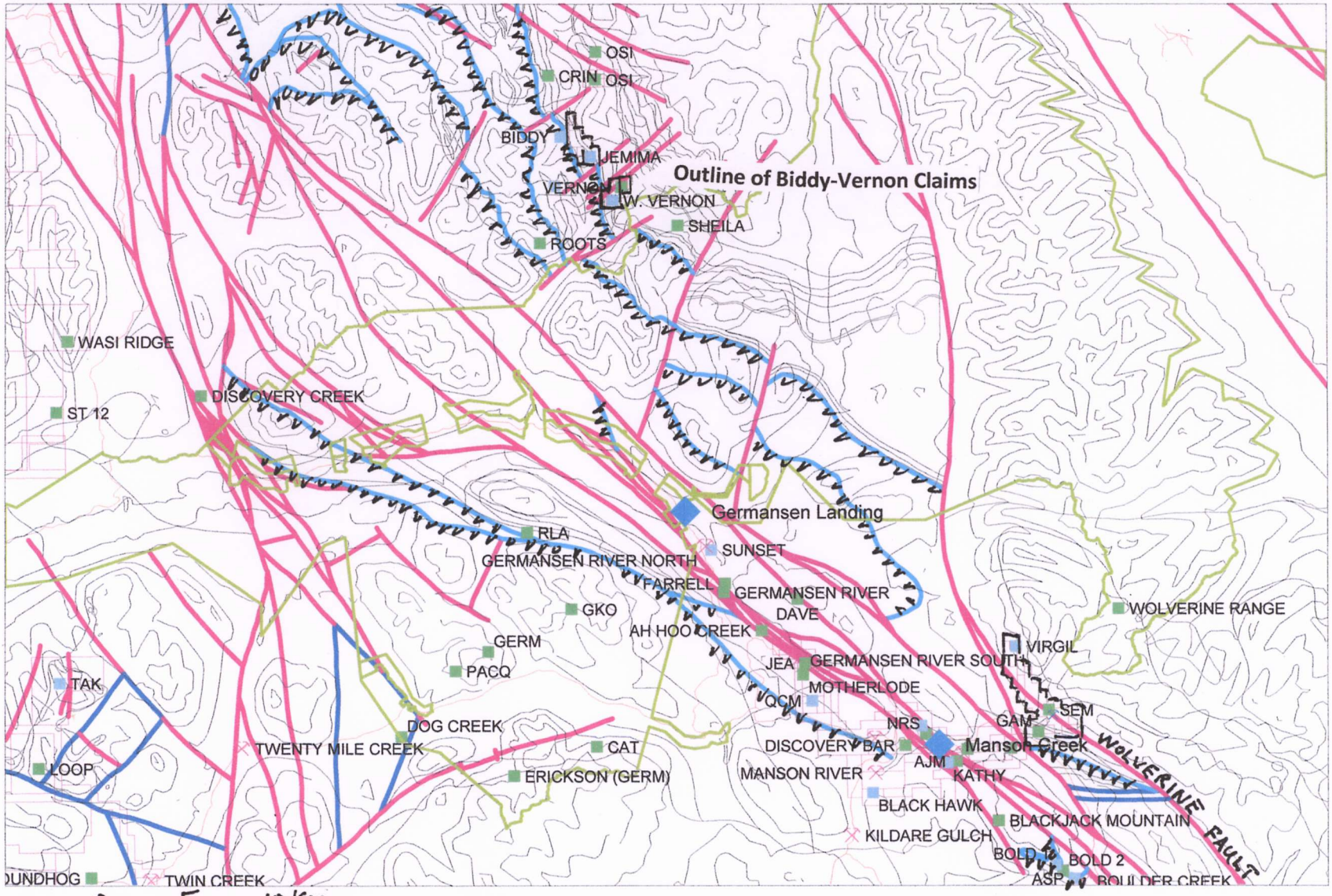
Ⓗ **Hèlipad**

N

NTS 093N 15W, BCGS 093N.096 Omineca Mining Division

Vernon-Biddy Ge-Ga-Zn-Pb-Ag & Lonnie-Virgil Nb-REE-Zr-Ti

NTS 093N 15W, BCGS 093N.096 Omineca Mining Division



SCALE 1 : 325,000

Fig 9

5 0 5 10 15
MILES

Thrust Fault

Fault

Protected Area