

Ministry of Energy and Mines  
BC Geological Survey

Assessment Report  
Title Page and Summary

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

TOTAL COST: \$ 23,903.24

AUTHOR(S): Jacques Houle, P.Eng.

SIGNATURE(S):



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

YEAR OF WORK: 2011

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 4862849 4862856, 4862857 / 2011/May/13

PROPERTY NAME: Mt. Sicker, Sognidoro, Volcanics

CLAIM NAME(S) (on which the work was done): 513291, 517577, 516629 / 513288, 516626 / 550746

COMMODITIES SOUGHT: Copper, Lead, Zinc, Silver, Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092B001,-002,-003,-004,-028,-040,-041,-086,-087,-088,-089; 092C-144,-156

MINING DIVISION: Victoria

NTS/BCGS: 092B081, 092B082, 092C100

LATITUDE: 48 ° 52 '3 " LONGITUDE: 123 ° 44 '55 " (at centre of work)

OWNER(S):

1) Connie McCombs

2) Rock-Con Resources Inc.

MAILING ADDRESS:

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

1) Knappett Industries (2006) Ltd.

2)

MAILING ADDRESS:

PO Box 37090, RPO Country Club

Nanaimo, B.C. V9T 6N4

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

chert, siliclastics, volcanoclastics, calc-alkaline volcanics, gabbro, diorite, mississippian, permian, devonian, triassic, volcanogenic

massive sulphides, quartz-sulphide veins

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: refer to Table 3 in technical report

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			\$ 3,442.13
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying		513291,517577,516629/513288,516629	\$ 9,971.86
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 Technical Report			\$ 10,489.25
		TOTAL COST:	\$ 23,903.24

**Assessment Report for  
Prospecting and Geochemistry**

On the

**Vancouver Island South Group Properties**

Victoria Mining Division, British Columbia, Canada

**Mt. Sicker Property** BCGS Map Sheets 092B081,-082  
UTM Zone 10N 441500E, 5413000N

**Sognidoro Property** BCGS Map Sheet 092C100  
UTM Zone 10N 421500E, 5422000N

**Volcanics Property** BCGS Map Sheet 092B082  
UTM Zone 10N 446500E, 5413250N

For

**Rock-Con Resources Inc.**

P.O. Box 37090, RPO Country Club, Nanaimo, B.C. V9T 6N4

By

Jacques Houle, P.Eng.

6552 Peregrine Road, Nanaimo, B.C. V9V 1P8

**May 31, 2011**

**BC Geological Survey  
Assessment Report  
32278**

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## **Introduction**

### **Property location, access and physiography**

The South Group Properties consist of four non-contiguous groups of cell mineral claims located west of city of Duncan and north of the Cowichan River, near the southeast coast of Vancouver Island. Three of the four properties which are the subject of this report are located in the Victoria Mining Division, and are approximately centred at NAD 83 UTM Zone 10N co-ordinates on the following BCGS map sheets:

- Mt. Sicker Property – 441500E, 5413000N – 092B081 & 092B082
- Sognidoro Property – 421500E, 5422000N – 092C100
- Volcanics Property - 446500E, 5413250N – 092B082

The eastern portion of the Mt. Sicker Property is accessed from the Trans-Canada Highway 1 west along Mt. Sicker Road and various old mining roads and newer logging roads along the east side of the Chemainus River. The western portion of the Property is accessed from Highway 1 west along Copper Canyon Main along the west side of the Chemainus River.

The Sognidoro Property can be accessed either from Highway 1 west along Copper Canyon Main, or north from Highway 18 along the Duncan Access Road, and then west along Copper Canyon Main which becomes the Chemainus River Road following the north side of the Chemainus River. The eastern portion of the Sognidoro Property is accessed from the Chemainus River Road north along Rheinhart Road; the western portion of the Property is accessed north along logging roads C16, C17, and C18.

The Volcanics Property is accessed from the Trans-Canada Highway 1 west along Mt. Sicker Road and various old mining roads and newer logging roads along the north side of Mt. Sicker.

The topography of the South Group Properties is generally similar, and consists of rounded mountains incised by moderately steep canyons, with elevations ranging from less than 100 metres to just over 1000 metres. The climate is mild and wet during the fall to spring period, and warm and dry in the summer, with snow accumulations of several metres generally persisting through the winter at elevations above 500 metres.

### **Property definitions, owner, operator, geology and history**

The owner of the South Group Properties is Connie McCombs, and the operator is Rock- Con Resources Inc., through an agreement with Ms. McCombs. See Figures 1 and 2 for mineral tenure and infrastructure maps of the properties at 1:100,000 scale.

The cell mineral claims which constitute the Vancouver Island South Group Properties, with details and status as of the date of this report, are listed in Table 1 below:

**Table 1 – Cell Mineral Claims and Status as of May 20, 2011**

Tenure Number	Claim Name	Owner	Map Number	Issue Date	Good To Date	Status	Area (ha)
<b>Mt. Sicker Property</b>							
501465	L109	131341 (100%)	092B	2005/jan/12	2013/jul/05	GOOD	21.241
501774	L108	131341 (100%)	092B	2005/jan/12	2013/jul/05	GOOD	21.239
510156	055A055D	131341 (100%)	092B	2005/apr/04	2013/jul/05	GOOD	42.48
513291		131341 (100%)	092B	2005/may/25	2013/jul/05	GOOD	84.988
513390		131341 (100%)	092B	2005/may/26	2013/jul/05	GOOD	84.96
516629		131341 (100%)	092B	2005/jul/10	2013/jul/05	GOOD	382.371
516963		131341 (100%)	092B	2005/jul/11	2013/jul/05	GOOD	42.487
516972		131341 (100%)	092B	2005/jul/11	2013/jul/05	GOOD	42.494
516976		131341 (100%)	092B	2005/jul/11	2013/jul/05	GOOD	21.244
516980		131341 (100%)	092B	2005/jul/11	2013/jul/05	GOOD	84.951
517577	LENORATYEE	131341 (100%)	092B	2005/jul/12	2013/jul/05	GOOD	42.496
533072	HOLYOAK	131341 (100%)	092B	2006/apr/26	2013/jul/05	GOOD	127.422
<b>Subtotal Mt. Sicker Property</b>							<b>998.373</b>
<b>Volcanics Property</b>							
550746	VOLCANICS	131341 (100%)	092B	2007/jan/30	2015/may/17	GOOD	106.2599
<b>Subtotal Volcanics Property</b>							<b>106.2599</b>
<b>Sognidoro Property</b>							
502283	Mya	131341 (100%)	092C	2005/jan/12	2012/apr/30	GOOD	169.696
513288		131341 (100%)	092C	2005/may/25	2012/apr/30	GOOD	169.664
513295		131341 (100%)	092C	2005/may/25	2012/apr/30	GOOD	84.85
513414		131341 (100%)	092C	2005/may/27	2012/apr/30	GOOD	42.426
513426		131341 (100%)	092C	2005/may/27	2012/apr/30	GOOD	63.653
513451		131341 (100%)	092C	2005/may/27	2012/apr/30	GOOD	254.639
513485	MIKE	131341 (100%)	092C	2005/may/27	2012/apr/30	GOOD	339.494
514351	KIDS EAST	131341 (100%)	092C	2005/jun/11	2012/apr/30	GOOD	84.847
514360	DEPOSIT S	131341 (100%)	092C	2005/jun/11	2012/apr/30	GOOD	63.667
514369	JAS	131341 (100%)	092C	2005/jun/11	2012/apr/30	GOOD	63.622
516626		131341 (100%)	092C	2005/jul/10	2012/apr/30	GOOD	593.939
516665		131341 (100%)	092C	2005/jul/11	2012/apr/30	GOOD	42.441
516667		131341 (100%)	092C	2005/jul/11	2012/apr/30	GOOD	21.218
530544	DOME	131341 (100%)	092C	2006/mar/25	2012/apr/30	GOOD	63.67
567273	MARIA	131341 (100%)	092C	2007/oct/02	2012/apr/30	GOOD	42.422
854527	WEST 14	131341 (100%)	092C	2011/may/14	2012/may/14	GOOD	318.2614
854528	NORTH3	131341 (100%)	092C	2011/may/14	2012/may/14	GOOD	63.6114
<b>Subtotal Sognidoro Property</b>							<b>2482.121</b>
<b>Meade Property</b>							
504209	Meade	131341 (100%)	092C	2005/jan/18	2013/nov/29	GOOD	85.029
843606	WEST 2	131341 (100%)	092C	2011/jan/19	2012/jan/19	GOOD	42.5115
<b>Subtotal Meade Property</b>							<b>127.5405</b>



According to the BCGS 2005 MapPlace Geology shown in Figure 3, the South Group Properties are underlain by rock types with map unit colours, nomenclature, lithologies, and structural/stratigraphic relationships as follows:



**uKN** – Upper Cretaceous Nanaimo Group – undifferentiated sedimentary rocks

- **Erosional Unconformity, locally Fault Contact** -



**EMJlgd** – Early to Middle Jurassic Island Plutonic Suite – granodioritic intrusive rocks

- **Intrusive Contact** -



**LTrMH** – Late Triassic Mount Hall – gabbroic to dioritic intrusive rocks

- **Intrusive, locally Fault Contact** -



**MPnBFch** – Mississippian to Permian Buttle Lake Group - Fourth Lake Formation – chert, siliceous argillite, siliclastic rocks

- **Conformity, locally Fault Contact** -



**uDSiM** – Middle to Upper Devonian Sicker Group – McLaughlin Ridge Formation – volcanoclastic rocks

- **Conformable Contact** -



**uDSIN** – Middle to Upper Devonian Sicker Group – Nitinat Formation – calc-alkaline volcanic rocks (Meade Property only)

The main host rocks for volcanogenic massive sulphide mineralization on Vancouver Island are those of the Mississippian to Devonian age Buttle Lake and Sicker Groups. In the area of the South Group Properties, the McLaughlin Ridge Formation of the Devonian Sicker Group is the main host of volcanogenic massive sulphide (VMS) mineralization; and quartz-sulphide mineralization can also be hosted in the Late Triassic Mount Hall gabbroic to dioritic rocks. The detailed reports for all BC MINFILE occurrences situated on the South Group Properties are listed in Table 2; the BC ARIS reports from historic work in the immediate area of the South Group Properties is listed in Table 3; and the appropriate BC Mineral Deposit Profiles (G-06 Noranda-Kuroko VMS and I05 Polymetallic Veins) for the mineral occurrences on the South Group Properties appear in Appendix 8. It should be noted that much of the historical data for

the Mt. Sicker Property was done on crown granted mineral claims and/or predates the ARIS system and is therefore not well documented, but much data is available online in the BC Minister of Mines Reports, and in the BC Property File data.

**Table 2 – BC MINFILE Occurrences situated on the South Group Properties**

<b>MINFILE Number</b>	<b>MINFILE Name</b>	<b>Status</b>	<b>Mineral Deposit Type</b>	<b>Commodities</b>	<b>Stratigraphic Age and Host Rock</b>	<b>Property</b>
092B 001	Lenora	Past Producer	G06 – Noranda-Kuroko VMS	Cu, Au, Ag, Pb, Zn, Cd, Barite	Devonian McLaughlin Ridge - volcanics	Mt. Sicker
092B 002	Tyee	Past Producer	G06 – Noranda-Kuroko VMS	Cu, Au, Ag, Pb, Zn, Cd, Barite	Devonian McLaughlin Ridge - volcanics	Mt. Sicker
092B 003	Richard III	Past Producer	G06 – Noranda-Kuroko VMS	Cu, Au, Ag, Pb, Zn, Cd, Barite	Devonian McLaughlin Ridge - volcanics	Mt. Sicker
092B 004	Victoria	Past Producer	G06 – Noranda-Kuroko VMS	Cu, Au, Ag	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092B 028	Rose	Showing	Metamorphic	Mica, Sericite	Devonian McLaughlin Ridge – sediments	Mt. Sicker
092B 040	Sharon Copper	Prospect	G06 – Noranda-Kuroko VMS	Cu	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092B 041	Water Power-Brenton	Showing	G06 – Noranda-Kuroko VMS	Cu, Ag	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092B 086	Copper Canyon	Showing	none stated	Cu	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092B 087	Key City	Prospect	none stated	Cu	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092B 088	Queen Bee	Showing	G06 – Noranda-Kuroko VMS	Cu, Zn, Au	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092B 089	Belle	Showing	G06 – Noranda-Kuroko VMS	Cu	Devonian McLaughlin Ridge – volcanics	Mt. Sicker
092C 057	Meade Creek	Past Producer	C01 – Surficial Placers	Au	Gravel, unconsolidated sediments	Meade
092C 144	Sognidoro	Prospect	I05 – Polymetallic veins Ag-Pb-Zn-Au; Q05 – Jasper	Au, Ag, Cu, Magnetite, Gemstones, Pb, Zn, Mo	Carboniferous Fourth Lake - sediments	Sognidoro
092C 156	Soul Quarry	Showing	Industrial Mineral	Dimension Stone, Marble, Jasper	Devonian McLaughlin Ridge – volcanics	Sognidoro

**Table 3 – ARIS Reports publicly available as of May 20, 2011**

Report Number	Year	Author	Owner/Operator	Work Program / MINFILE Number	Property
00936	1967	Tikkanen, G.D.	Cominco Ltd.	Geophysical (ground) / 092B040, 092B041, 092B041	Mt. Sicker
01104	1967	Sheppard, E.P., Basco, D.M.	Mt. Sicker Mines Ltd.	Geological / 092B001, 092B002, 092B003, 092B004, 092B087	Mt. Sicker
01714	1968	Sheppard, E.P.	Mt. Sicker Mines Ltd.	Geophysical (ground) / 092B001, 092B002, 092B003, 092B004, 092B087	Mt. Sicker
03099	1971	Whittles, A.B.L., Loring, F.C.	Kinneard, G., Whittles, A.B.L., Loring, F.C.	Geophysical (ground), Geochemical / 092B004, 092B086	Mt. Sicker
03741	1972	Not specified	Mt. Sicker Mines Ltd.	Linecutting /no MINFILE	Mt. Sicker
03950	1972	Watson, I.M.	Mt. Sicker Mines Ltd. / Ducanex Resources Ltd.	Geological / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089	Mt. Sicker
03951	1972	Walcott, P.E.	Mt. Sicker Mines Ltd. / Ducanex Resources Ltd.	Geophysical (ground) / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089	Mt. Sicker
04626	1973	Whittles, A.B.L.	Kinneard, G., Whittles, A.B.L., Loring, F.C.	Geophysical (ground), Geological, Geochemical / 092B004, 092B086	Mt. Sicker
05164	1974	Carter, J.S.	Dresser Minerals Division	Diamond Drilling (4 holes totalling 830 m.) / 092B001, 092B002, 092B003	Mt. Sicker
06216	1976?	Deighton, J.R.	Deighton, J.R.	Geological / 092B028, 092B040, 092B041	Mt. Sicker
06518	1977	Deighton, J.R.	Deighton, J.R.	Geological / 092B028, 092B040, 092B041	Mt. Sicker
06548	1977	Somerville, R.	Imperial Oil Ltd.	Geochemical, Geophysical (ground) / 092B028, 092B040, 092B041	Mt. Sicker
06599	1977	Deighton, J.R.	Deighton, J.R.	Geochemistry / 092B086	Mt. Sicker
06600	1977	Deighton, J.R.	Deighton, J.R.	Geological / 092B004, 092B086	Mt. Sicker
06699	1978	Deighton, J.R., Vyselaar, J.	Deighton, J.R., Utah Mines Ltd.	Geological, Geophysical (ground) / 092B028, 092B041	Mt. Sicker
06972	1978	Whittles, A.B.L.	Loring, F.C.	Geophysical (ground), Geological / 092B004, 092B086	Mt. Sicker
07183	1979	Pauwels, A.	Union Miniere Explorations and Mining Corp. Ltd.	Geophysical (ground) / 092B004, 092B086, 092B110	Mt. Sicker
07273	1979	Pauwels, A.	Union Miniere Explorations and Mining Corp. Ltd.	Geochemical / 092B041	Mt. Sicker
07323	1979	Somerville, R.	Esso Minerals Canada	Diamond Drilling (448 m. in 6 holes) / 092B028, 092B040, 092B041, 092B110	Mt. Sicker

07434	1979	Pauwels, A.	Union Miniere Explorations and Mining Corp. Ltd.	Geochemical / 092B004, 092B086	Mt. Sicker
07714	1979	Ronning, P.A., Allen, G.	Postuk, P., S.E.R.E.M. Ltd.	Geological, Geochemical / 092B088, 092B089	Mt. Sicker
07875	1980	Allen, G., van Houten, C.G., Ronning, P.	S.E.R.E.M. Ltd., Mt. Sicker Mines Ltd.	Geological, Geochemical / 092B001, 092B002, 092B003, 092B004, 092B087, 092B088, 092B089, 092B099	Mt. Sicker
08264	1980	van Houten, C.G., Ronning, P.	S.E.R.E.M. Ltd., Mt. Sicker Mines Ltd.	Diamond Drilling (1,236 m. in 7 holes) / 092B001, 092B002, 092B003, 092B004, 092B087, 092B088, 092B089, 092B099	Mt. Sicker
11329	1983	Sorbara, J.P.	Cominco Ltd.	Geological, Geochemical / 092B028, 092B041	Mt. Sicker
12172	1984	Davidson, A.J.	Corporation Falconbridge Copper	Diamond Drilling (176 m. in 1 hole) / 092B001, 092B002, 092B003, 092B004, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
12317	1984	Davidson, A.J.	Corporation Falconbridge Copper	Diamond Drilling (394 m. in 2 holes) / 092B001, 092B002, 092B003, 092B004, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
12379	1984	Britten, R.	Esso Resources Canada Ltd.	Geological, Geochemical / 092B040, 092B110	Mt. Sicker
13744	1985	Hendrickson, G.A.	Esso Resources Canada Ltd., Kidd Creek Mines Ltd.	Geophysical / 092B040, 092B110	Mt. Sicker
14411	1986	Enns, S.G.	Esso Resources Canada Ltd., Kidd Creek Mines Ltd.	Diamond Drilling (1,534 m. in 7 holes) / 092B040, 092B110	Mt. Sicker
14735	1986	Lefebure, D.V.	Corporation Falconbridge Copper	Diamond Drilling (1,502 m. in 5 holes) / 092B001, 092B002, 092B003, 092B004, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
15719	1987	Gibson, H.L.	Corporation Falconbridge Copper	Diamond Drilling (3,115 m. in 11 holes) / 092B001, 092B002, 092B003, 092B004, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
16716	1987	Wells, G.S.	Minnova Inc.	Diamond Drilling (3,217 m. in 15 holes) / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
16871	1987	Wells, G.S.	Minnova Inc.	Diamond Drilling (176 m. in 1 hole) / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
17649	1988	Klemmer, S.G.	Esso Resources Canada Ltd., Falconbridge Ltd.	Diamond Drilling (195 m. in 1 hole) / 092B040, 092B110	Mt. Sicker

17834	1988	Wells, G.S.	Minnova Inc.	Diamond Drilling (477 m. in 1 hole / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
17836	1988	Wells, G.S.	Minnova Inc.	Diamond Drilling (151 m. in 1 hole / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
18859	1989	Wells, G.S.	Minnova Inc.	Diamond Drilling (3,103 m. in 8 holes / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
19754	1990	Wells, G.S.	Minnova Inc.	Diamond Drilling (763 m. in 3 holes / 092B001, 092B002, 092B003, 092B004, 092B086, 092B087, 092B088, 092B089, 092B090	Mt. Sicker
19765	1989	Stewart, R., Vande-Guchte, M.	Falconbridge Ltd.	Diamond Drilling (1,056 in 2 holes) / 092B028, 092B041	Mt. Sicker
00935	1966	Tikkanen, G.D.	Cominco Ltd.	Geophysical (ground) / no MINFILE	Sognidoro
11097	1983	Quin, S.P., De Carle, R.	Imperial Metals Corporation	Geophysical (airborne) / no MINFILE	Sognidoro
11098	1983	Quin, S.P.	Imperial Metals Corporation	Geological, Geochemical / no MINFILE	Sognidoro
11401	1983	Zastavnikovich, S.	Canamin Resources Ltd.	Geochemical / 092C144	Sognidoro
11564	1983	Freeze, A.C.	Cominco Ltd.	Geological, Geochemical / no MINFILE	Sognidoro
12173	1984	Stevens, E.	Stevens, E.	Prospecting / no MINFILE	Sognidoro
12378	1984	Quin, S.P., De Carle, R.	Imperial Metals Corporation	Geophysical (airborne) / no MINFILE	Sognidoro
12909	1984	Francis, A.	Francis, A.	Prospecting / no MINFILE	Sognidoro
13468	1985	Clark, A.M.S.	Imperial Metals Corp.	Geophysical (ground) / no MINFILE	
13568	1984	McDougall, J.J.	Canamin Resources Ltd.	Geological, Geochemical / 092C144	Sognidoro
14793	1985	Clark, A.M.S.	Imperial Metals Corp.	Geological, Geophysical, Geochemical / no MINFILE	Sognidoro
15082	1985	Poloni, J.R.	Trek Resources Ltd.	Geochemical, Diamond Drilling (123 m. in 1 hole) / no MINFILE	Sognidoro
15883	1987	Specogna, M.	Canamin Resources Ltd.	Geophysical (ground) / 092C144	Sognidoro
16478	1987	Baknes, M., Gorc, D.	Imperial Metals Corp.	Geological, Geochemical / no MINFILE	Sognidoro
16802	1987	Thomae, B.Y., Hawkins, T.G.	Canamin Resources Ltd.	Geological, Geochemical / 092C144	Sognidoro
17447	1988	Francis, A.	Francis, A.	Prospecting, Geochemical / no MINFILE	Sognidoro

18731	1989	Body, T.W.	Trek Resources Ltd.	Geochemical, Percussion Drilling (24 holes totalling 394 m.) / no MINFILE	Sognidoro
11841	1983	Burge, C.	Lieberman, P.	Geochemical, Diamond Drilling (2 holes totalling 107 m.) / no MINFILE	Volcanics
14891	1986	Neale, T., Hawkins, T.G.	International Cherokee Dev. Ltd.	Geological, Geochemical / 092C057	Meade
16122	1987	Thomae, B.Y., Allen, G.J.	International Cherokee Dev. Ltd.	Geological, Geochemical / 092C057	Meade
18640	1989	Yip, G.	International Cherokee Dev. Ltd.	Geochemical, Geological / 092C057	Meade

The history of the Mt. Sicker Property is long and very complex, and is summarized in the Capsule Geology of the first eleven BC MINFILE reports listed in Table 2, along with the last three covering the other three properties: Sognidoro, Volcanics and Meade. Periodic snapshots of early history (pre-1965) are available in the provincial and federal reports and publications referenced in the bibliographies of the MINFILE reports. More detailed recent history (post-1965) for all the South Group Properties is available in the BC ARIS reports listed in Table 3. A brief summary of the early history for the Mt. Sicker Property is as follows:

**1895 to 1898** – prospecting, discovery, staking and underground mine development of the Mt. Sicker sulphide deposit, including three of the four MINFILE past producers: Lenora, Tyee, and Richard 3, (092B001-003) covered by the Mt. Sicker Property.

**1897 to 1903** – prospecting, discovery, staking and underground development of the MINFILE past producer Victoria (092B004), the western continuation of the Mt. Sicker sulphide deposit east of the Chemainus River, covered by the Mt. Sicker Property.

**1898 to 1964** – intermittent, combined production from the 4 past producers covered by the Mt. Sicker Property totalling 277,517 tonnes averaging 3.4% copper, 0.14% lead, 1.6% zinc, 90 g/t silver and 4.2 g/t gold from sulphide ore, shipped to smelters at Crofton, B.C. and Tacoma, U.S.A.

**1897 to 1920** – prospecting, discovery, staking and surface exploration of the MINFILE showing Belle (092B089) located north of the Mt. Sicker sulphide deposit, covered by the Mt. Sicker Property.

**1897 to 1924** - prospecting, discovery, staking and underground exploration of the MINFILE past producer Key City (092B087), a portion of the Mt. Sicker sulphide deposit between the Lenora and Victoria past producers, covered by the Mt. Sicker Property.

**1898 to 1903** – prospecting, discovery, staking and underground exploration of the MINFILE showing Queen Bee (092B088), located near the Belle showing, north of the Mt. Sicker sulphide deposit, and covered by the Mt. Sicker Property.

**1902 to 1928** – prospecting, discovery, staking and underground exploration of the MINFILE showing Copper Canyon (092B086), the western continuation of the Mt. Sicker sulphide deposit located west of the Chemainus River and the Lenora past producer, and covered by the Mt. Sicker Property.

**1903 to 1927** – prospecting, discovery, staking and underground exploration of the MINFILE prospect Sharon (092B040), located northwest of the Mt. Sicker deposit, and covered by the Mt. Sicker Property.

**1903 to 1923** – prospecting, discovery, staking and surface exploration of the MINFILE showing Water Power – Brenton (092B041), located northeast of the Sharon prospect, and covered by the Mt. Sicker Property.

## **List of Claims and Work Completed**

### **Mt. Sicker Property:**

Prospecting, outcrop and float rock sampling, rock geochemistry, data compilation and report writing were completed periodically between October 10, 2010 and May 31, 2011. Field work was completed on cell mineral claims 513291, 517577 and 516629, by Mr. Brant Protasiewich and Mr. Harry Young, and consisted of traveling by pickup trucks along logging roads, traversing on foot, prospecting and sampling using hand tools. Forty six (46) select rock samples were taken from 4 areas (Lenora, Victoria, Copper Canyon and Queen Bee), and shipped in 6 batches to ALS Canada in Vancouver. Samples were analyzed for 51 element ICP geochemistry, plus 7 for gold geochemistry, and the following for over limit assays by element: 2 for gold, 10 for silver, 26 for copper, 4 for lead, and 14 for zinc.

### **Sognidoro Property:**

Prospecting, outcrop and float rock sampling, rock geochemistry, data compilation and report writing were completed periodically between September 18, 2010 and May 31, 2011. Field work was completed on cell mineral claims 513288 and 516626, by Mr. Brant Protasiewich and Mr. Harry Young, and consisted of traveling by pickup trucks along logging roads, traversing on foot, prospecting and sampling using hand tools. Ten (10) select rock samples were taken from 2 areas (Sogni and Trek), and shipped in

2 batches to ALS Canada in Vancouver. Samples were analyzed for 51 element ICP geochemistry, plus gold geochemistry, and the following for over limit assays by element: 1 for gold, and 2 for copper.

### **Volcanics Property:**

Prospecting, outcrop and float rock sampling, rock geochemistry, data compilation and report writing was completed between March 17, 2011 and May 31, 2011 by Mr. Brant Protasiewich and Mr. Harry Young. Field work was completed on cell mineral claim 550746 by Mr. Brant Protasiewich and Mr. Harry Young, and consisted of traveling by pickup trucks along logging roads, traversing on foot, prospecting and sampling using hand tools. Seven (7) select rock samples were taken, and shipped to ALS Canada in Vancouver. Samples were analyzed for 51 element ICP geochemistry.

For all sixty three (63) samples from the three properties, ample location data was compiled by Ms. Connie McCombs, rock sample descriptions were completed by Mr. Brant Protasiewich, cost data was compiled by Mr. Rocky Ostaffy and the author, and the technical data was compiled, maps plotted, and the report written by the author.

## **Technical data, interpretation, conclusions, recommendations**

### **Rock Sample Highlights – Mt. Sicker Property**

Rock sample locations relative to cell mineral claims boundaries appear in Figure 5, and sample locations and selected elevated geochemistry values for the four (4) sampling areas appear as Figures 6 to 23 inclusive. Tables of rock sample locations, descriptions, geochemistry and geochemistry highlights appear in Appendix 1, and analytical certificates from ALS Minerals appear in Appendix 4.

All 46 samples taken consisted of sulphide-bearing rocks, with 35 of 46 samples exceeding 10% sulphur. Most samples yielded elevated values of target (gold, silver, copper, lead, zinc) and/or indicator elements for volcanogenic massive sulphide deposits, including:

- 18 of 46 samples exceeding 1 ppm gold, up to 21.1 ppm gold
- 32 of 46 samples exceeding 10 ppm silver, up to 337 ppm silver
- 39 of 46 samples exceeding 500 ppm copper, up to 28.9% copper
- 14 of 46 samples exceeding 500 ppm lead, up to 2.78% lead
- 26 of 46 samples exceeding 500 ppm zinc, including 2 exceeding 30% zinc



- Multiple samples with elevated values in arsenic, barium, bismuth, cobalt, gallium, mercury, indium, molybdenum, phosphorus, antimony, selenium, tellurium and/or yttrium

The geochemistry results from the selected rock samples confirm the presence, and economic base and precious metal grades of volcanogenic massive sulphide mineralization at the historic mine workings on the Mt. Sicker Property.

More systematic technical work is warranted on the Mt. Sicker Property, including:

- Geo-referencing, 3-D compilation and modeling of historic underground workings and selected historic exploration data
- Systematic modern exploration, initially from surface and possibly involving rehabilitation and utilization of historic underground workings
- Initiation of baseline environmental studies to determine impacts of historic industrial (including mining and forestry) and residential infrastructure on the property prior to any possible future disturbance by current owners/operators

### **Rock Sample Highlights – Sognidoro Property**

Rock sample locations relative to cell mineral claims boundaries appear in Figure 24, and sample locations and selected elevated geochemistry values for the two (2) sampling areas appear as Figures 25 to 30 inclusive. Tables of rock sample locations, descriptions, geochemistry and geochemistry highlights appear in Appendix 2, and analytical certificates from ALS Minerals appear in Appendix 4.

Most of the ten (10) samples taken consisted of sulphide-bearing rocks which yielded elevated values of some target (gold, copper) and/or indicator elements for volcanogenic massive sulphide deposits or polymetallic vein deposits, including:

- 2 of 10 samples exceeding 1 ppm gold, up to 2.34 ppm gold
- 4 of 10 samples exceeding 2000 ppm copper, up to 1.845% copper
- One or more samples with elevated values in arsenic, gallium, nickel and/or phosphorus

The geochemistry results from the selected rock samples confirm the presence of volcanogenic sulphide and/or polymetallic vein mineralization on the Sognidoro Property.

More systematic technical work is warranted on the Sognidoro Property, including:

- Geo-referencing and compilation of historic exploration data

- Grid-based soil geochemistry and geological mapping across the northern portion of the Sognidoro Property encompassing the 2 areas of known mineralization

### **Rock Sample Highlights – Volcanics Property**

Rock sample locations relative to cell mineral claims boundaries appear in Figure 31, and elevated geochemistry values for copper in ppm appears in Figure 32. Tables of rock sample locations, descriptions, geochemistry and geochemistry highlights appear in Appendix 3, and analytical certificates from ALS Minerals appear in Appendix 4.

Most of the seven (7) samples taken consisted of lean, sulphide-bearing rocks which yielded weakly elevated values of one target (copper) and/or indicator elements for volcanogenic massive sulphide deposits or polymetallic vein deposits, including:

- 1 of 7 samples exceeding 500 ppm copper, up to 1080 ppm copper
- One or more samples with elevated values in bismuth, gallium, nickel and/or lithium

The elevated copper value in one rock sample and the favourable geological setting of the Volcanics Property suggest the possibility of volcanogenic sulphide and/or polymetallic vein mineralization on the Volcanics Property.

More systematic technical work is warranted on the Volcanics Property, including:

- Geo-referencing and compilation of historic exploration data
- Grid-based soil geochemistry and geological mapping over the Property

## **Qualifications of Author**

I, Jacques Houle, P.Eng., do hereby certify that:

1. I am currently employed as a consulting geologist by:  
Jacques Houle, P.Eng. Mineral Exploration Consulting

6552 Peregrine Road

Nanaimo, British Columbia, Canada V9V 1P8

2. I graduated with a B.A.Sc. degree in Geological Engineering with specialization in Mineral Exploration from the University of Toronto in 1978.
3. I am a member of the Association of Professional Engineers and Geoscientists of B.C.
4. I have worked as a geologist for 33 years since graduating from university.
5. I am the author responsible for the preparation of the Technical Report titled "Assessment Report for Prospecting and Geochemistry on the Vancouver Island South Group Properties" for Rock-Con Resources Ltd. dated May 20, 2011.
6. I have had prior involvement with the Properties that are the subject of the Assessment Report, as an acquaintance of the late Mr. Alan Francis, and Ms. Connie McCombs. I visited the Sognidoro Property when I was Regional Geologist with the B.C. Ministry of Energy and Mines.
7. I am not aware of any material fact or material change with respect to the subject matter of the Assessment Report that is not reflected in the Assessment Report, the omission to disclose which makes the Assessment Report misleading.
8. I hold no financial interest and no shares, nor do I expect to receive or acquire any interest or shares in Rock-Con Resources Inc.
9. I am independent of Rock-Con Resources Inc.

Dated this 31st day of May, 2011



Signature of Author



Jacques Houle, P.Eng.

Printed name of Author

Seal of Author

## References

### **B. C. Ministry of Energy and Mines websites:**

Assessment Reports

<http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx>

Geological Survey Publications

<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Pages/default.aspx>

Landowner Notification

<http://www.empr.gov.bc.ca/Titles/MineralTitles/Admin/Notices/Pages/LandownerNotification.aspx>

MapPlace

<http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/Pages/default.aspx>

Mineral Deposit Profiles

<http://www.empr.gov.bc.ca/Mining/Geoscience/MineralDepositProfiles/Pages/default.aspx>

MINFILE

<http://www.empr.gov.bc.ca/Mining/Geoscience/MINFILE/Pages/default.aspx>

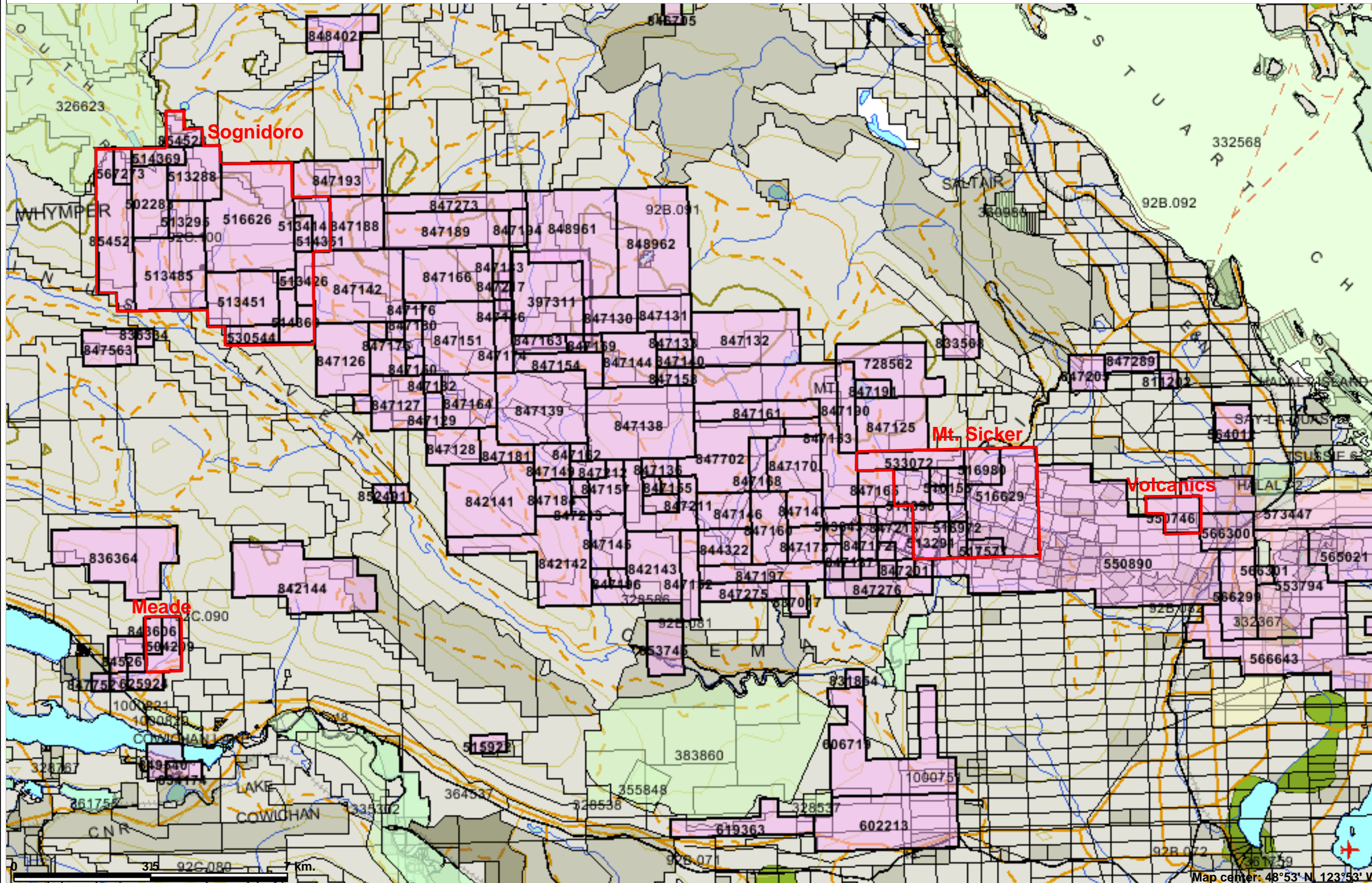
Mineral Titles Online

<https://www.mtonline.gov.bc.ca/mtov/home.do>



# Rock-Con South Island Properties

## Figure 1



### Legend

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- Mineral Tenure (current)
- Mineral Claim
- Mineral Lease
- Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others
- Survey Parcels
- BCGS Grid
- Contours (1:250K)
- Contour - Index
- Contour - Intermediate
- Area of Exclusion
- Area of Indefinite Contours
- Annotation (1:250K)
- Transportation - Points (1:250K)
- Airfield
- Anchorage - Seaplane
- Ferry Route
- Helipoint
- Seaplane Base
- Air Field
- Airport
- Air Feature - Condition Unknown
- Airport.Abandoned
- Transportation - Lines (1:250K)
- Ferry Route
- Aerial Cableway
- Road (Gravel Undivided) - 1 Lane
- Road (Gravel Undivided) - 3 Lanes
- Road - Paved.Lanes.2or More.Divided
- Road (Paved Undivided) - Not Elevated - 1 Lane
- Road (Paved Undivided) - Not Elevated - 2 Lanes
- Road - Paved.Lanes.3or More.Undivided
- Road (Unimproved)
- Road - Loose.access.Dry Weather
- Road (Winter Road)
- Road - Paved.Lanes.2.Undivided
- Road - Paved.Lanes.2.Undivided.U/C
- Road - Paved.Divided.access.Non Standard
- Track - Cart/Tractor
- Causeway (Railway)
- Cut (Roadway)

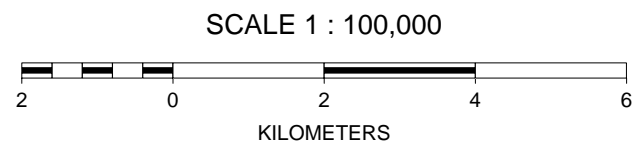
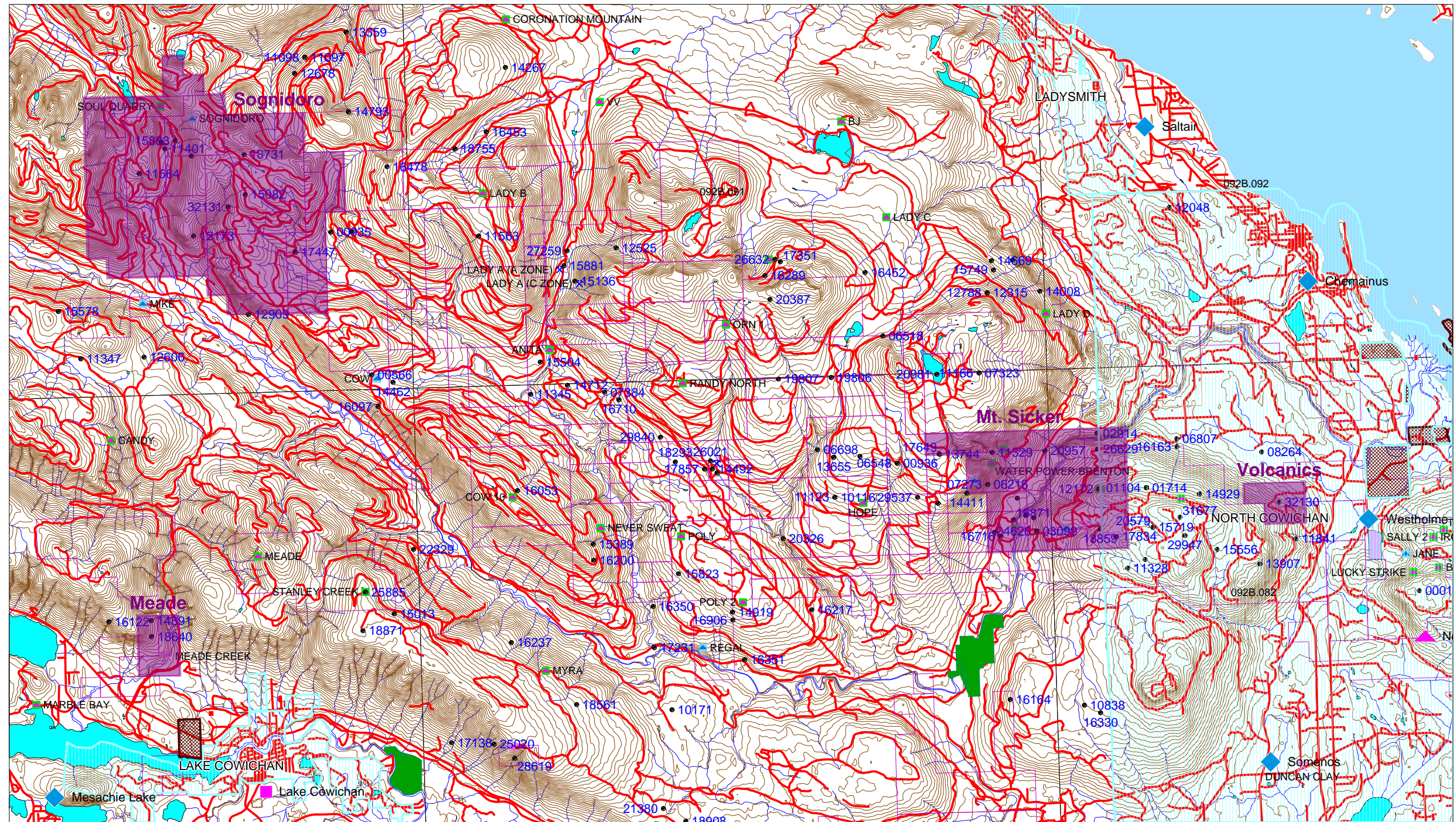


Scale: 1:100,000

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.

Map center: 48°53' N, 123°53' W





**Rock-Con South Island Properties  
Infrastructure (MapPlace)**

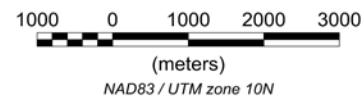
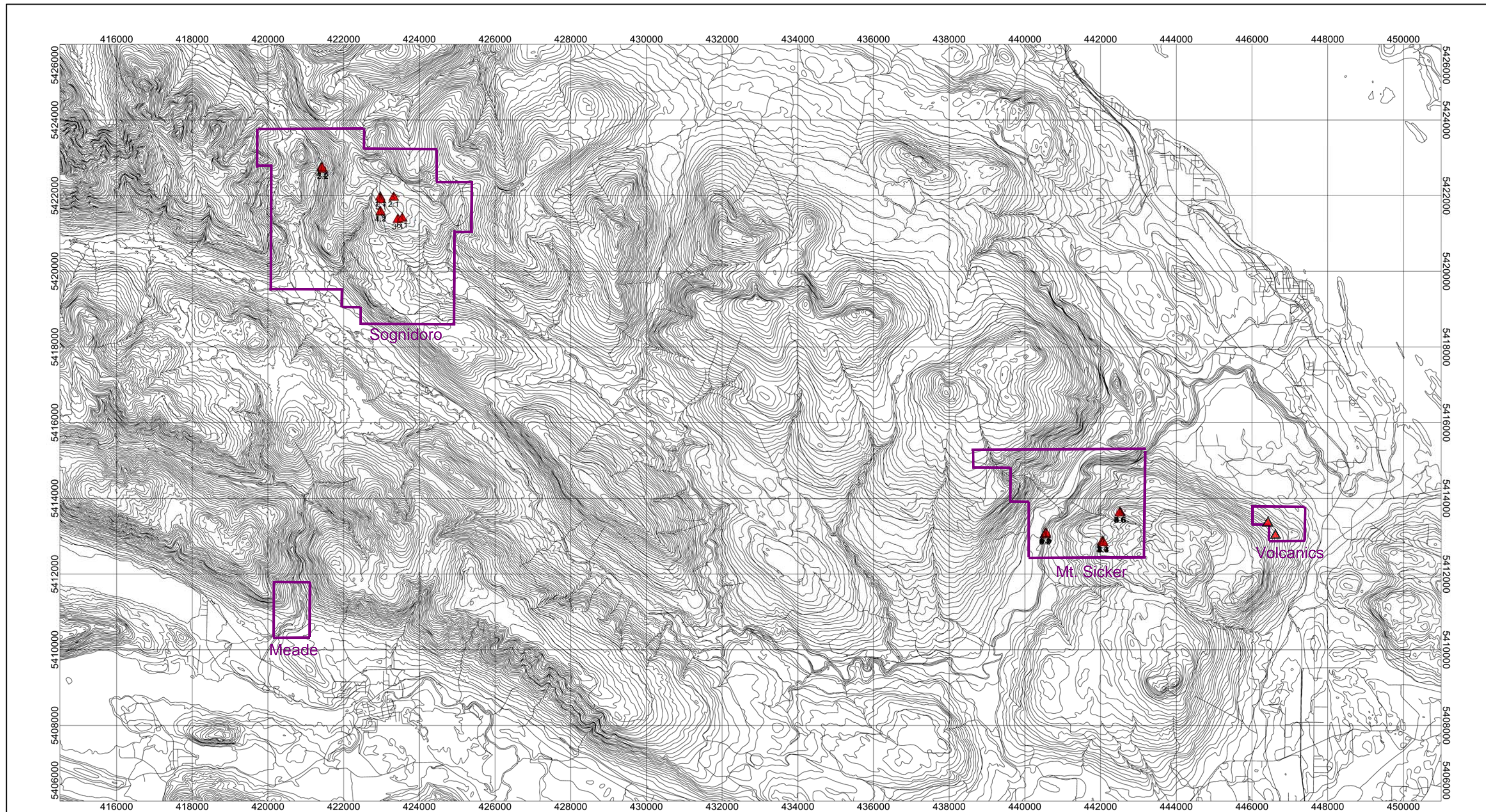
**Figure 2**





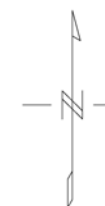




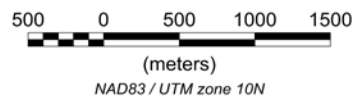
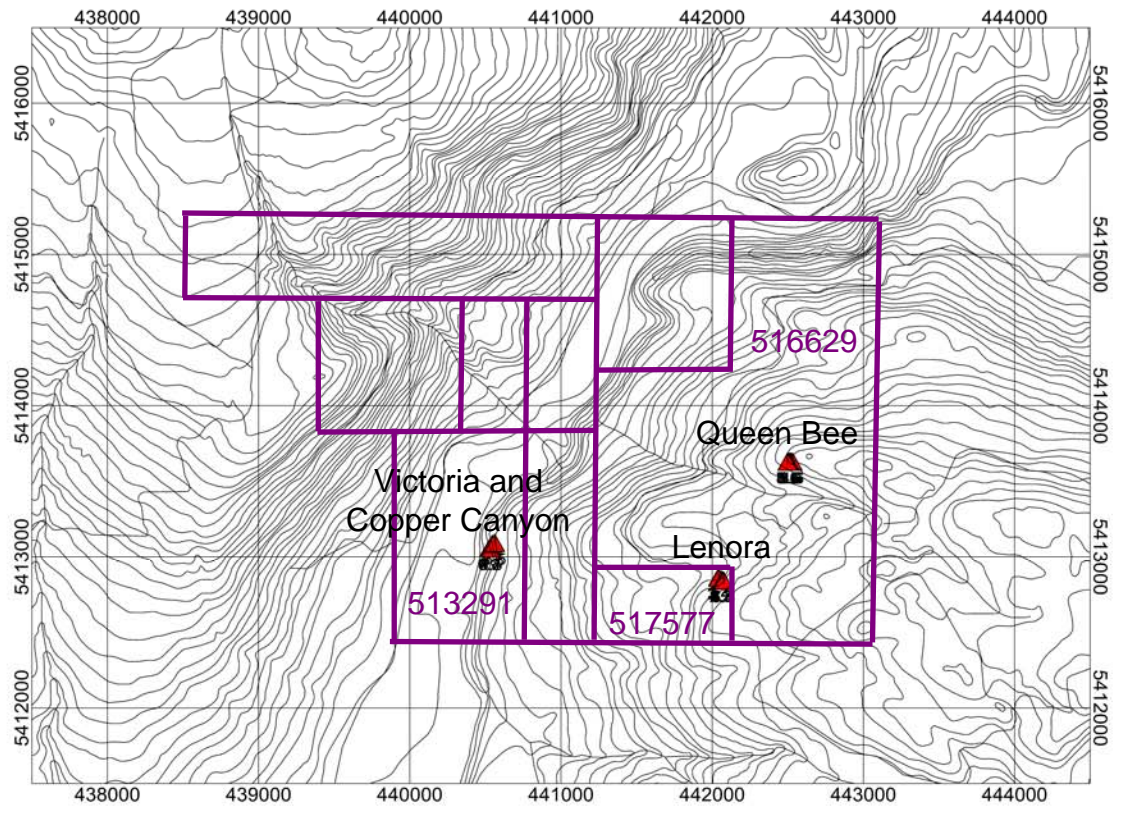


**Rock-Con South Island Properties**  
2010/2011 Rock Sample Locations

Figure 4



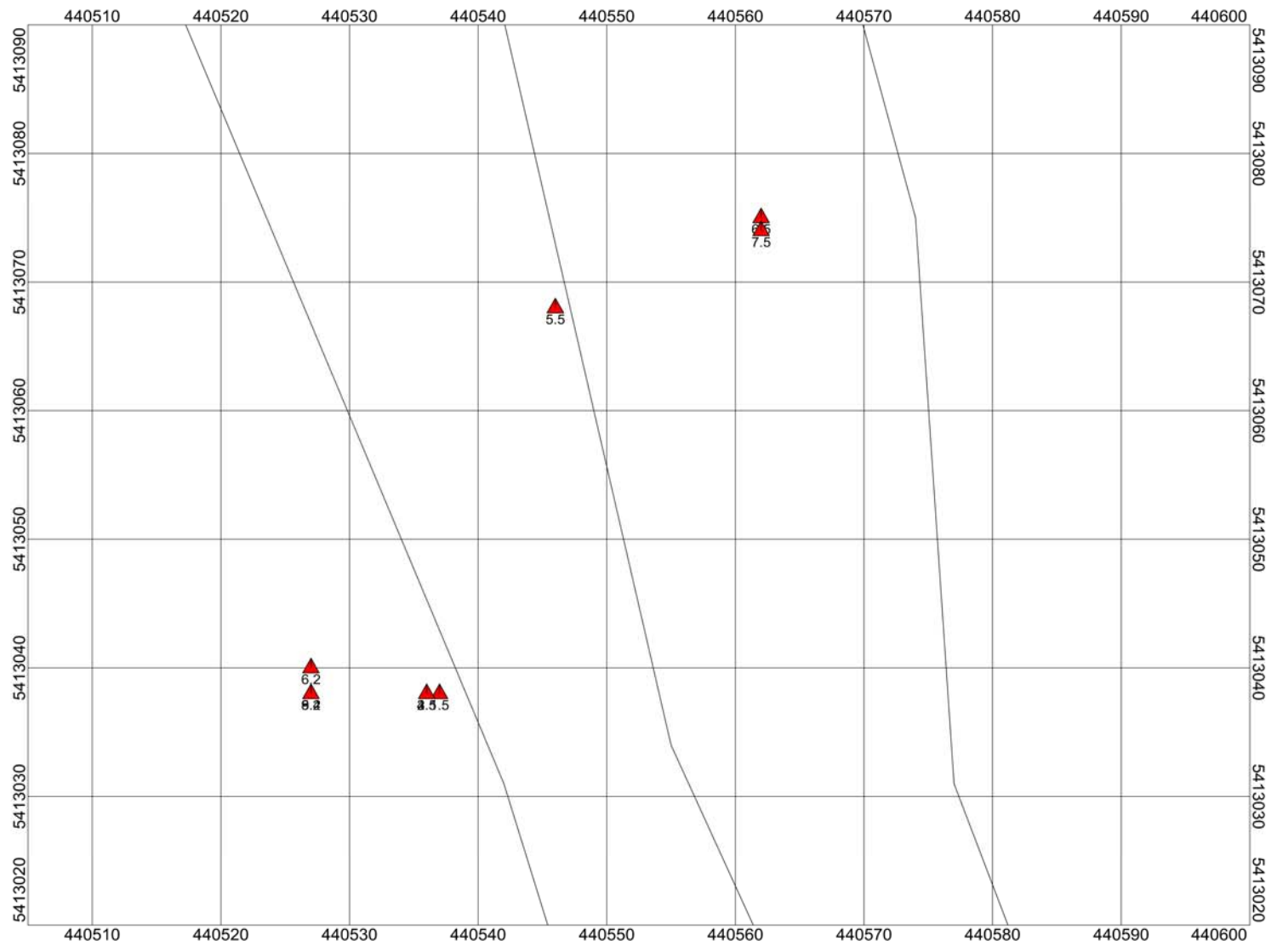




**Rock-Con Mt. Sicker Property**  
2010/2011 Rock Sample Locations

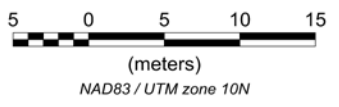
Figure 5





**Rock-Con Mt. Sicker Property**  
 Victoria and Copper Canyon Areas  
 2010 Rock Sample Locations

Figure 6



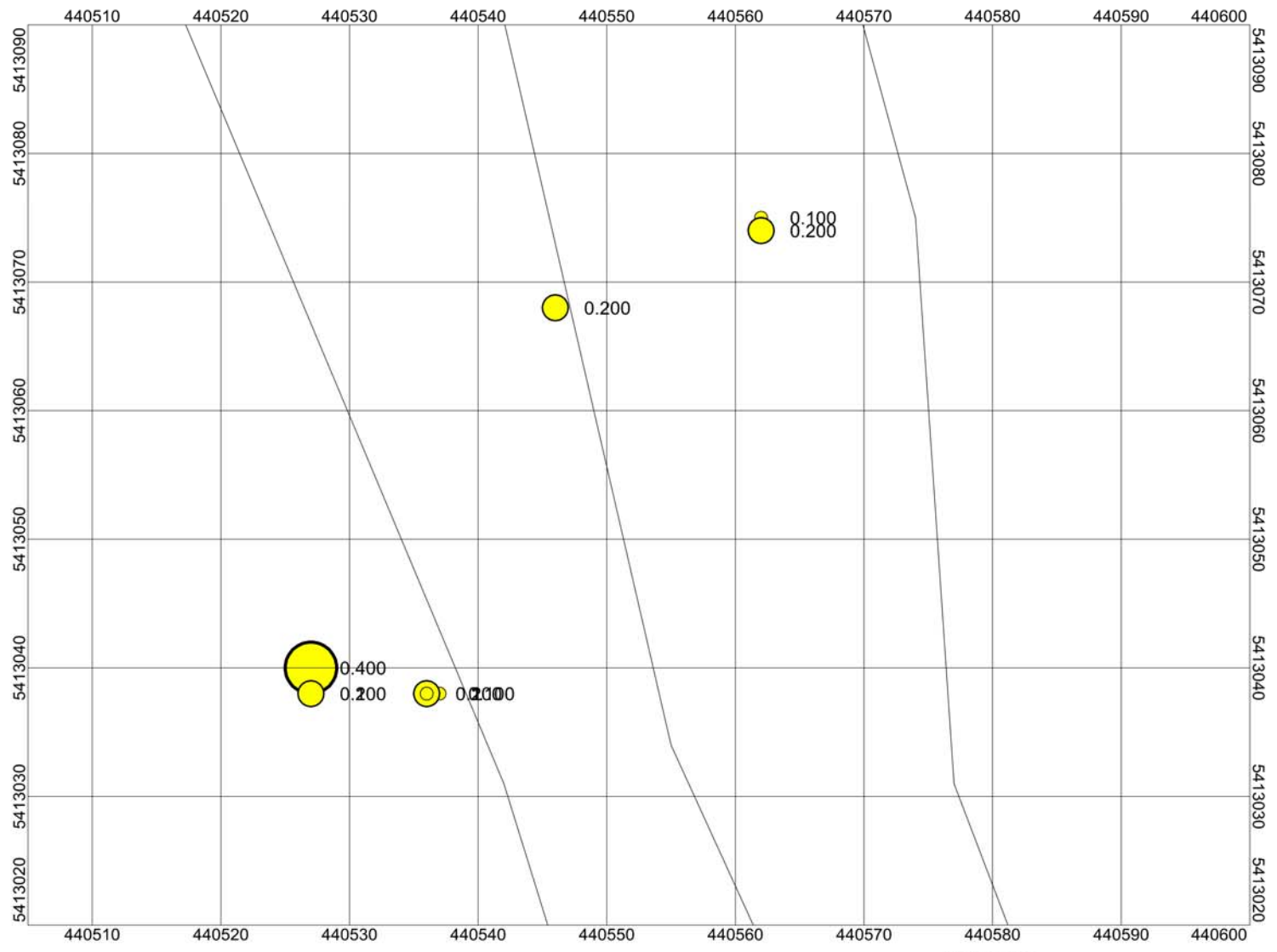
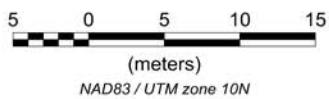
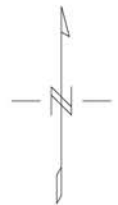
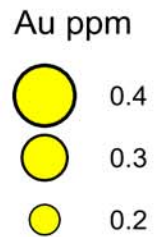


Figure 7



**Rock-Con Mt. Sicker Property**  
 Victoria and Copper Canyon Areas  
 Gold ppm in Rocks



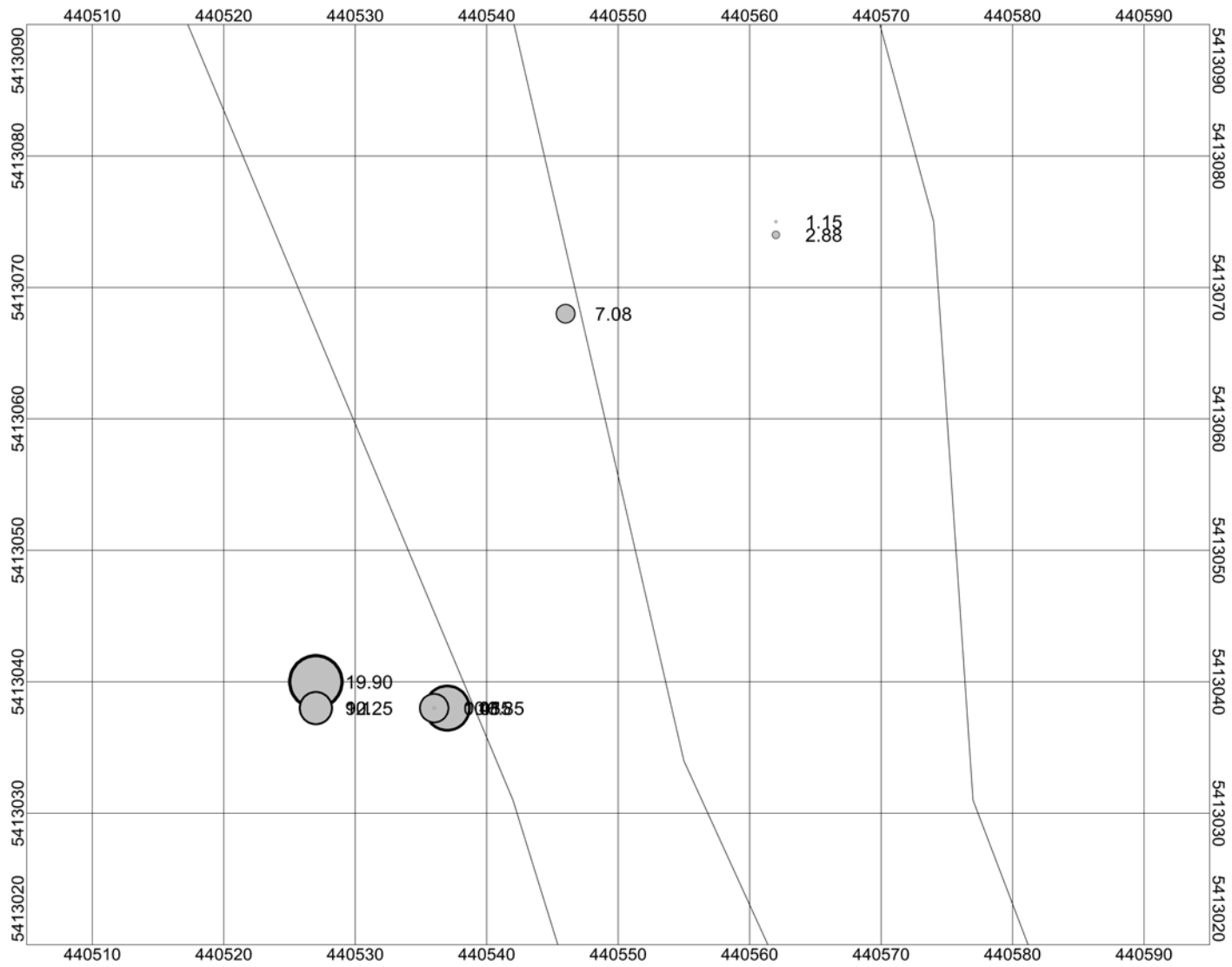
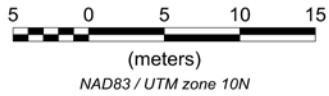
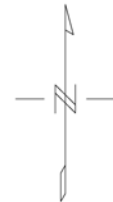
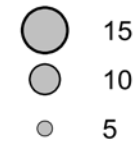


Figure 8



**Rock-Con Mt. Sicker Property**  
 Victoria and Copper Canyon Areas  
 Silver ppm in Rocks

Ag ppm



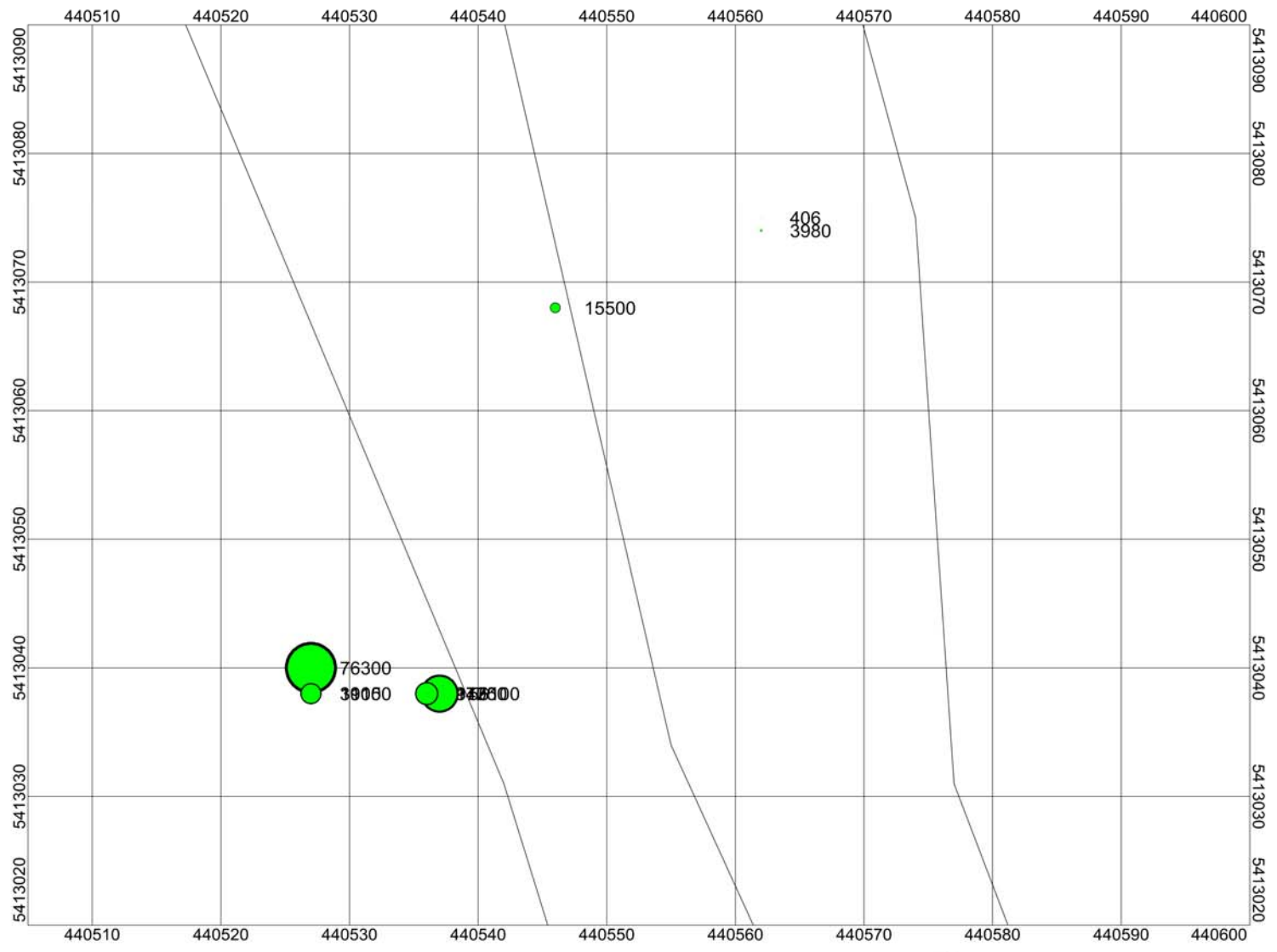
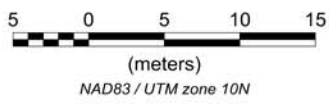
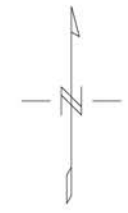
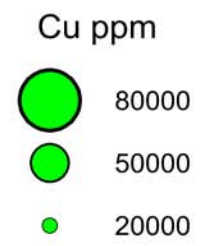


Figure 9



**Rock-Con Mt. Sicker Property**  
Victoria and Copper Canyon Areas  
Copper ppm in Rocks



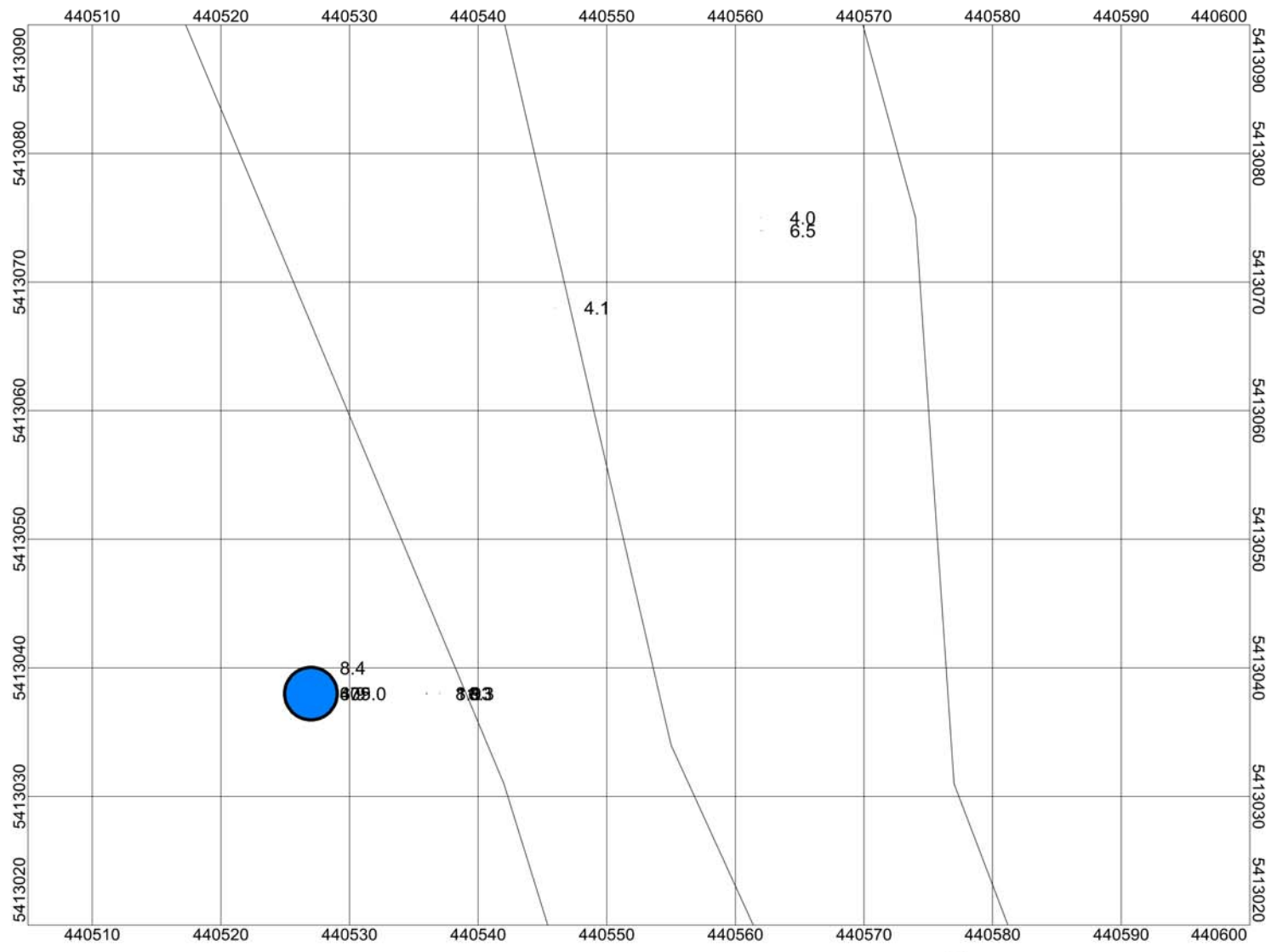
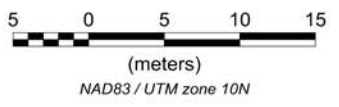
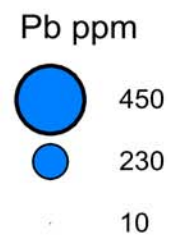


Figure 10

**Rock-Con Mt. Sicker Property**  
 Victoria and Copper Canyon Areas  
 Lead ppm in Rocks



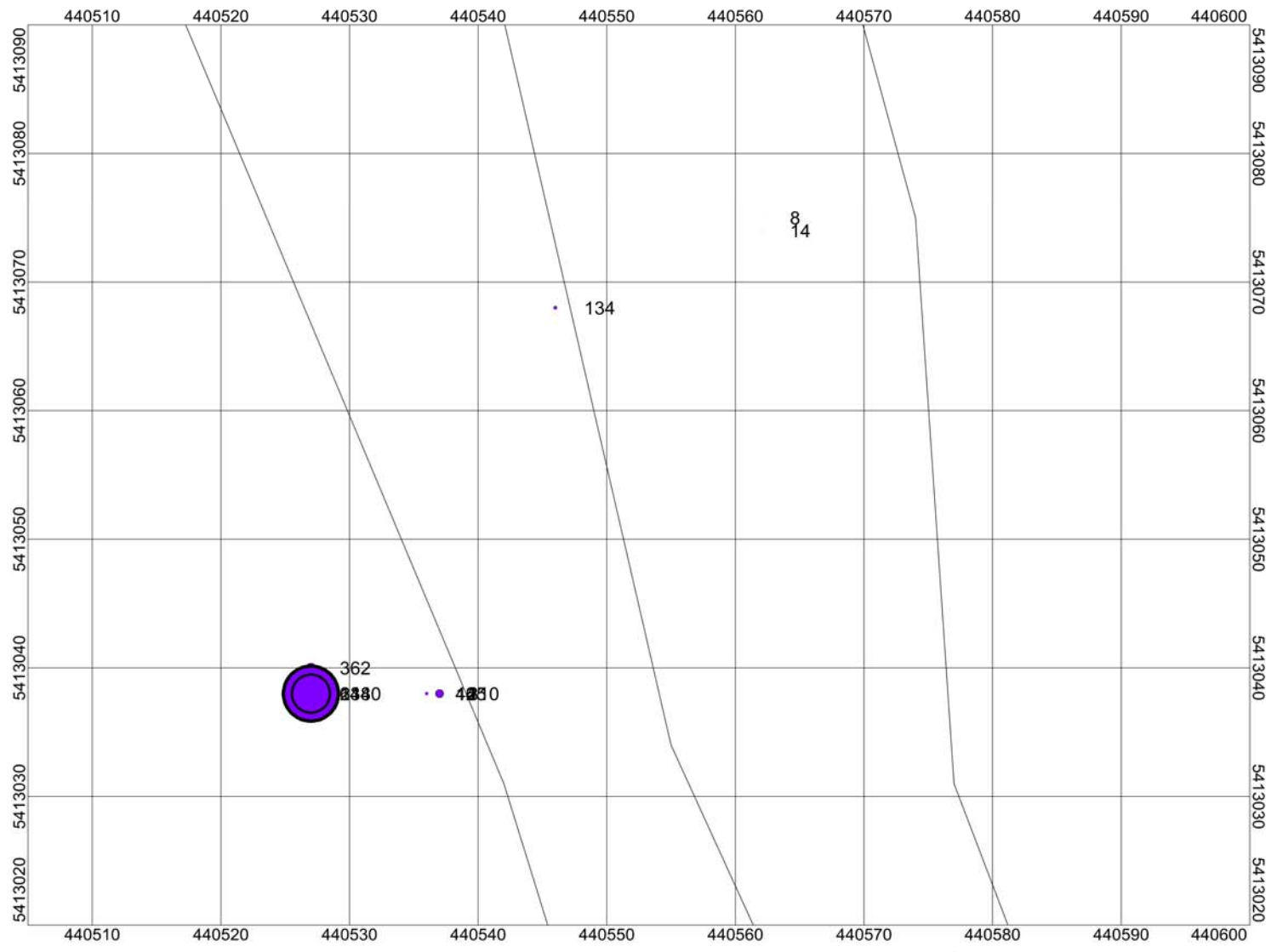
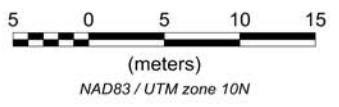
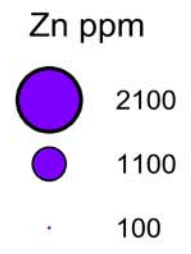


Figure 11



**Rock-Con Mt. Sicker Property**  
Victoria and Copper Canyon Areas  
Zinc ppm in Rocks







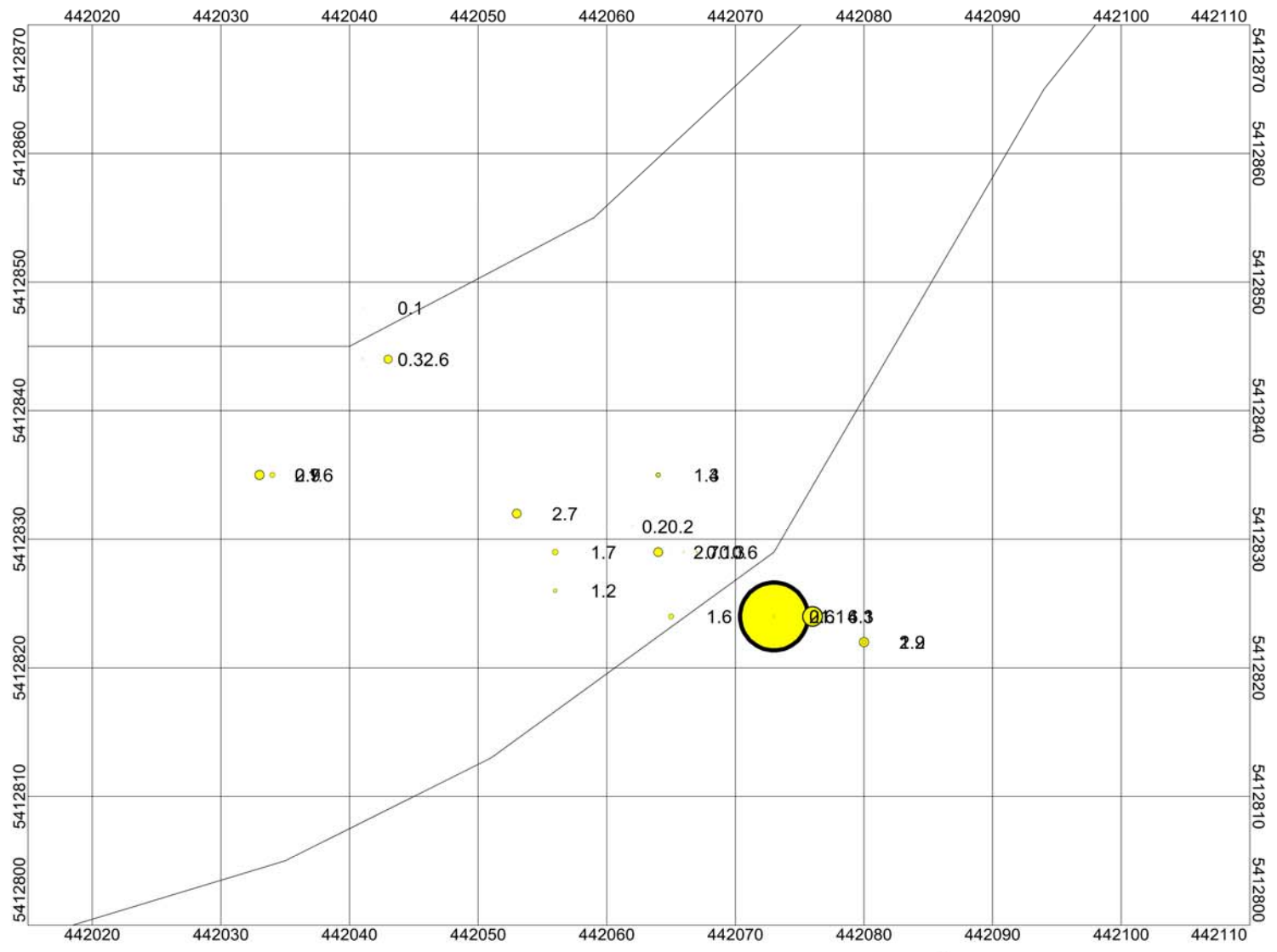
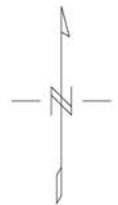
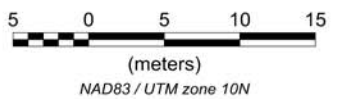
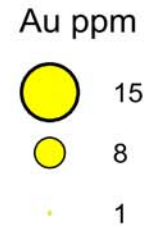


Figure 13

**Rock-Con Mt. Sicker Property**  
 Lenora Area  
 Gold ppm in Rocks



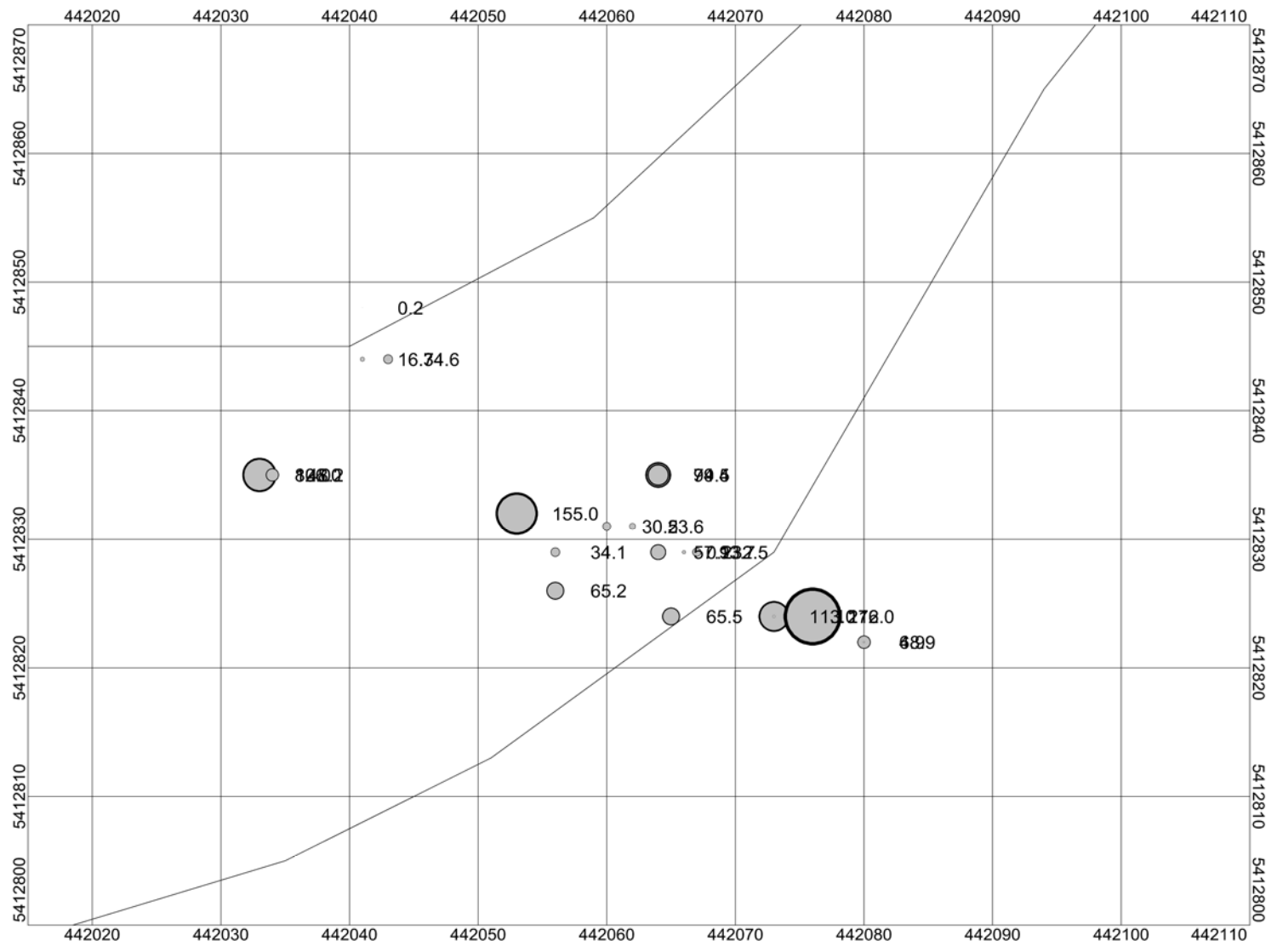
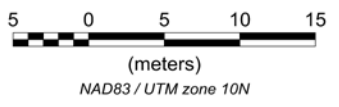
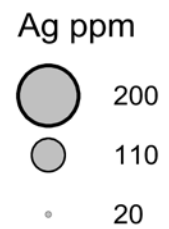


Figure 14

**Rock-Con Mt. Sicker Property**  
 Lenora Area  
 Silver ppm in Rocks



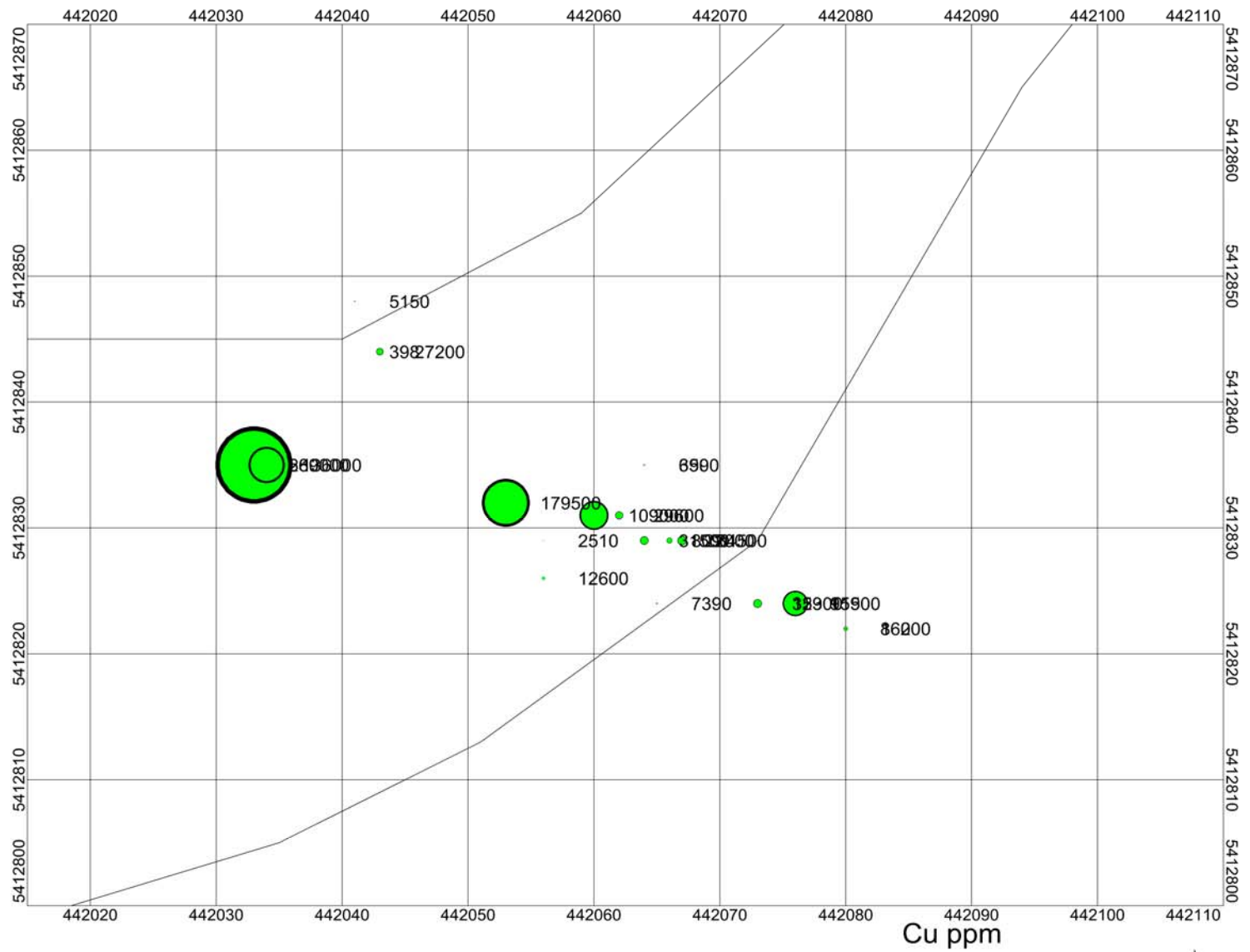
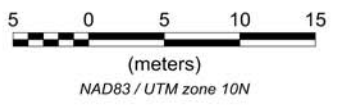
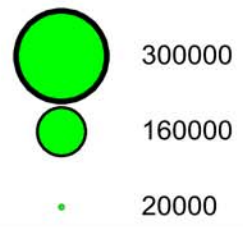


Figure 15



**Rock-Con Mt. Sicker Property**  
 Lenora Area  
 Copper ppm in Rocks



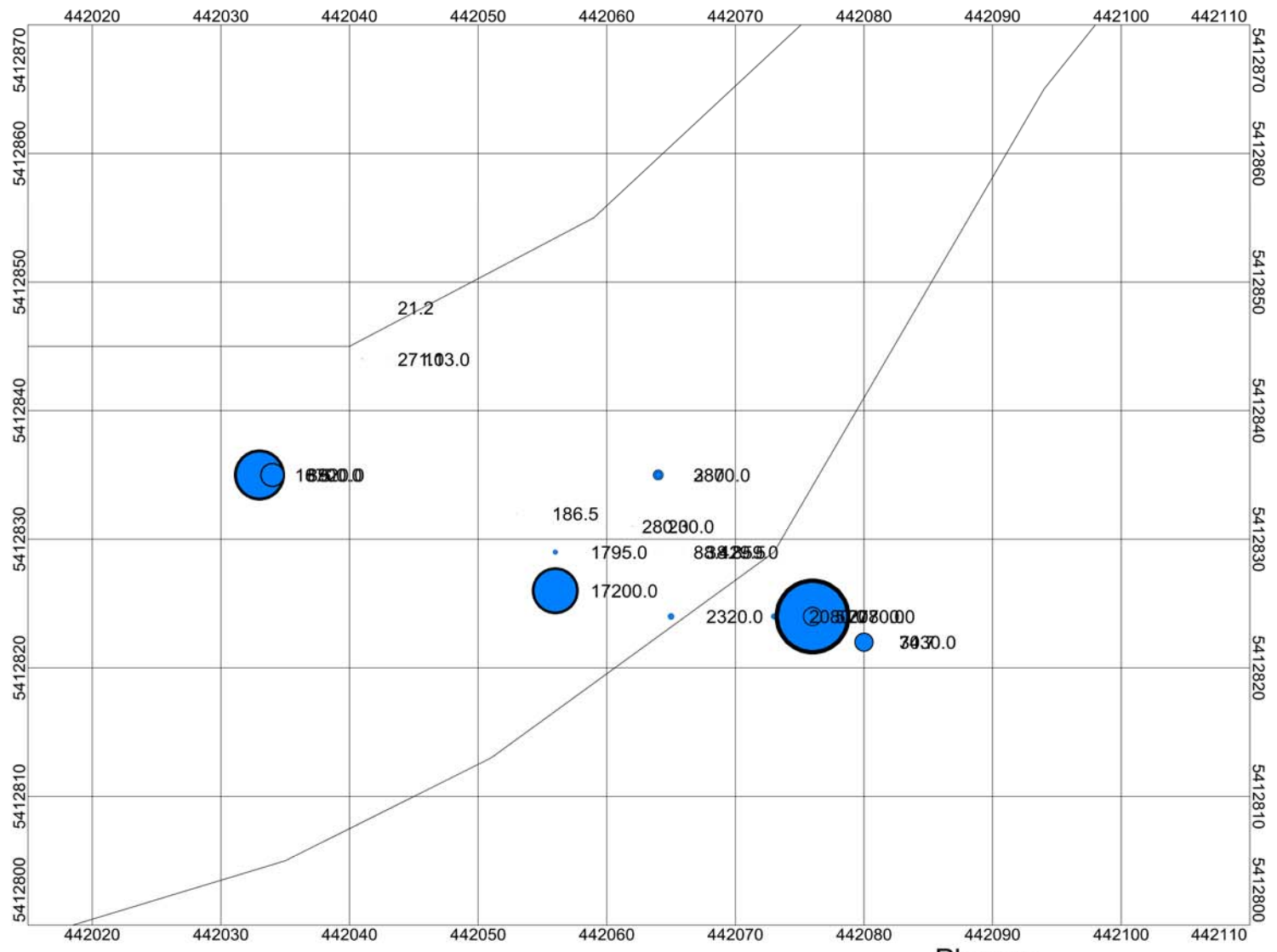
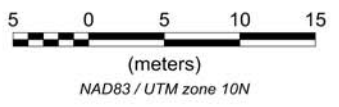
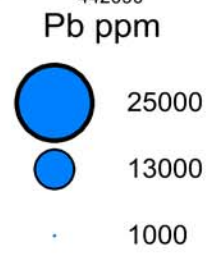


Figure 16

**Rock-Con Mt. Sicker Property**  
 Lenora Area  
 Lead ppm in Rocks



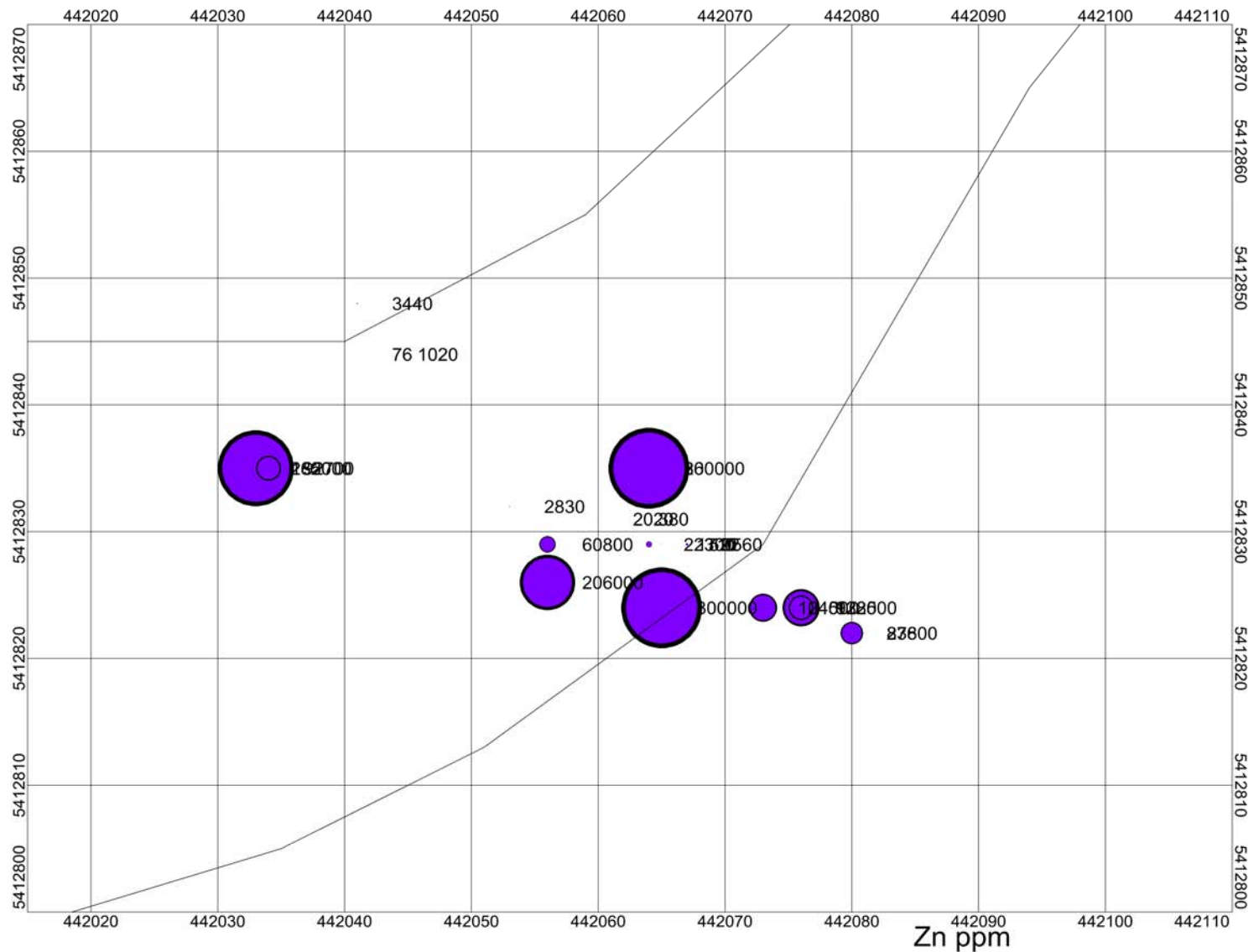
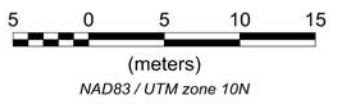
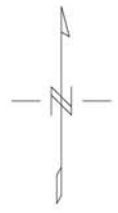
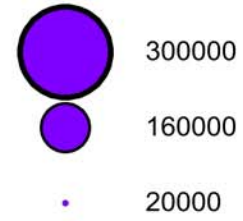
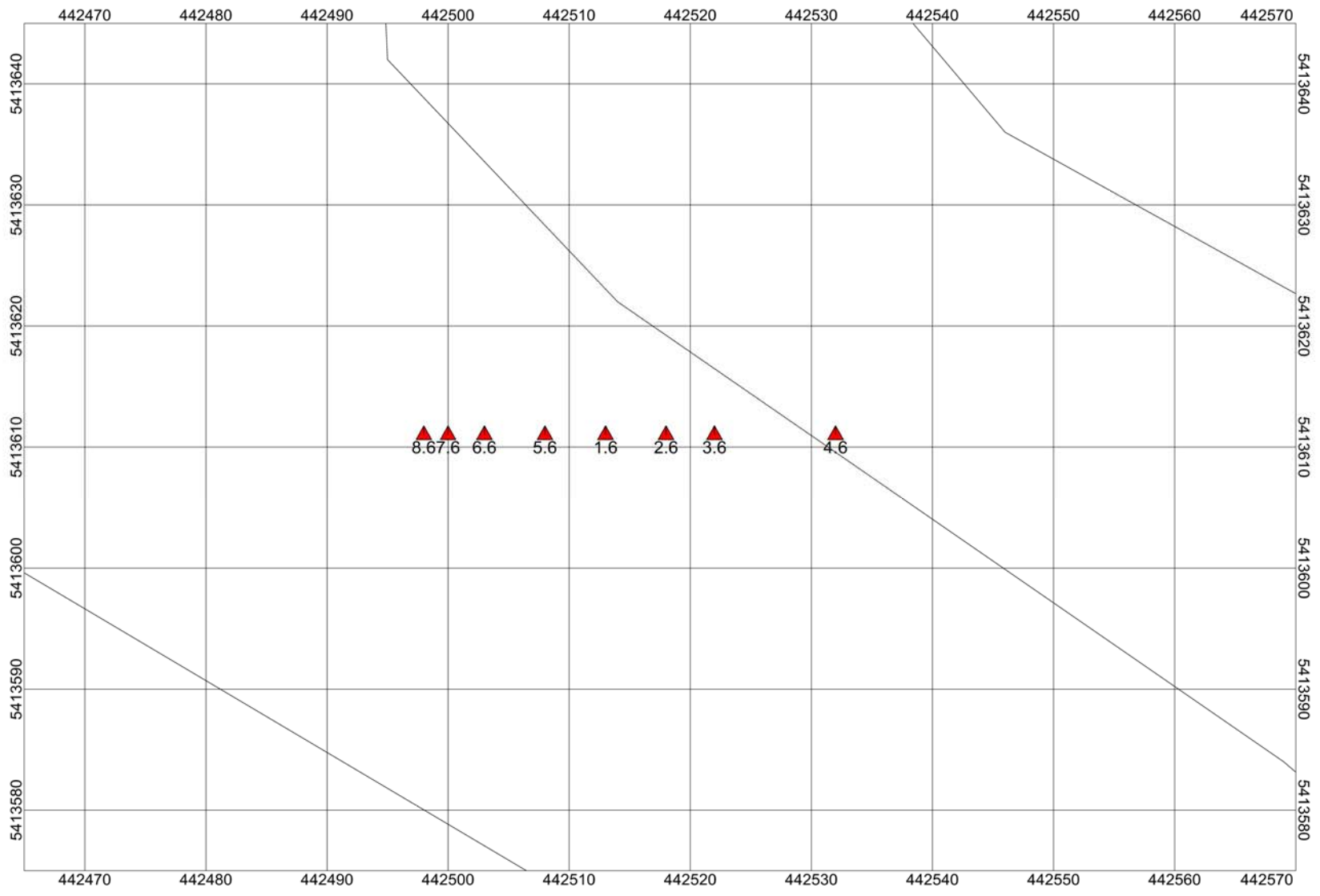


Figure 17



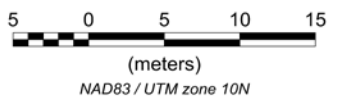
**Rock-Con Mt. Sicker Property**  
 Lenora Area  
 Zinc ppm in Rocks





**Rock-Con Mt. Sicker Property**  
 Queen Bee Area  
 2011 Rock Sample Locations

Figure 18



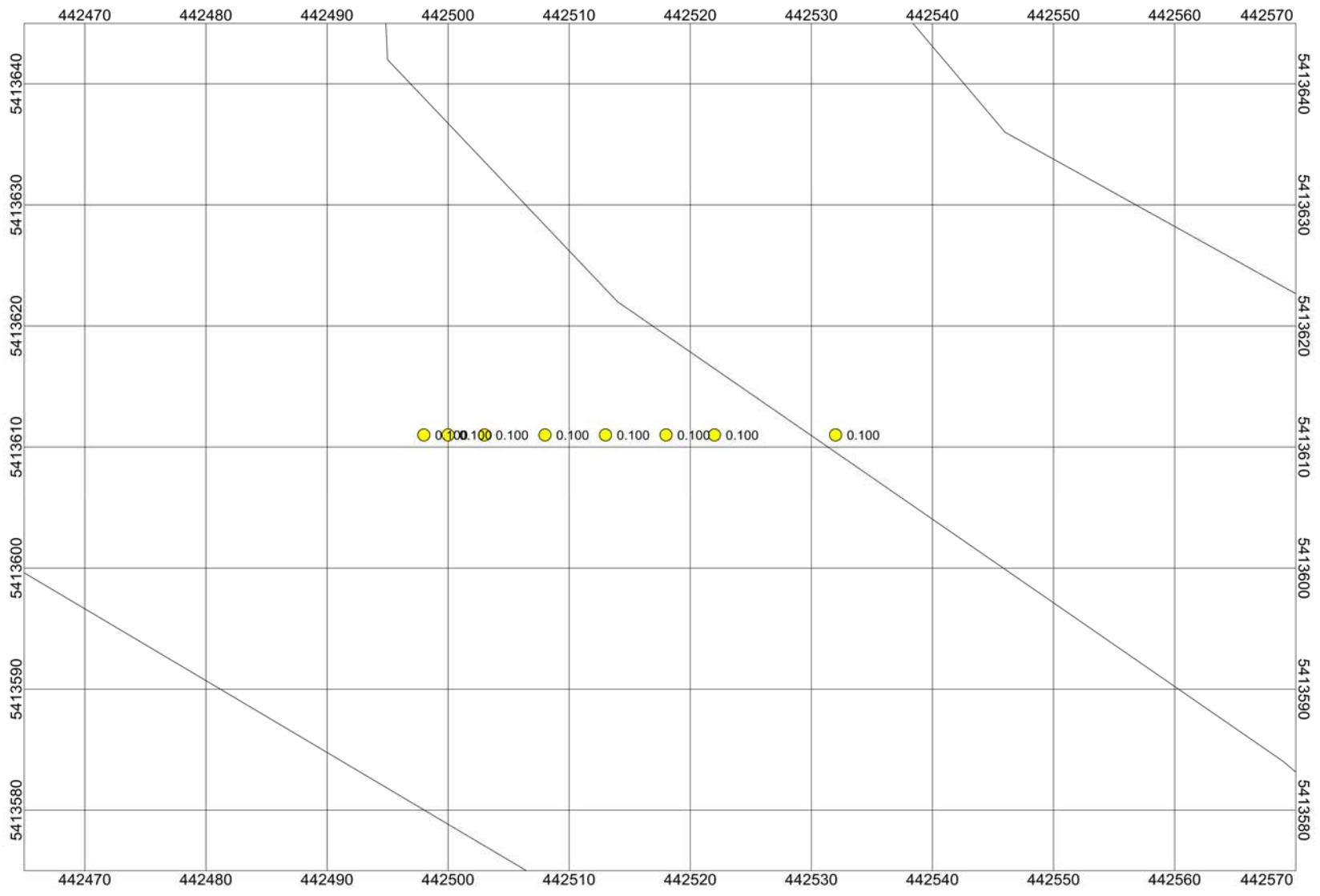
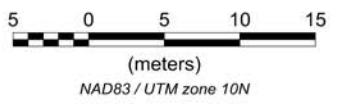
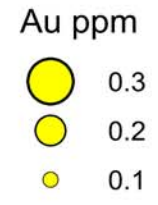


Figure 19

**Rock-Con M. Mt. Sicker Property**  
 Queen Bee Area  
 Gold ppm in Rocks



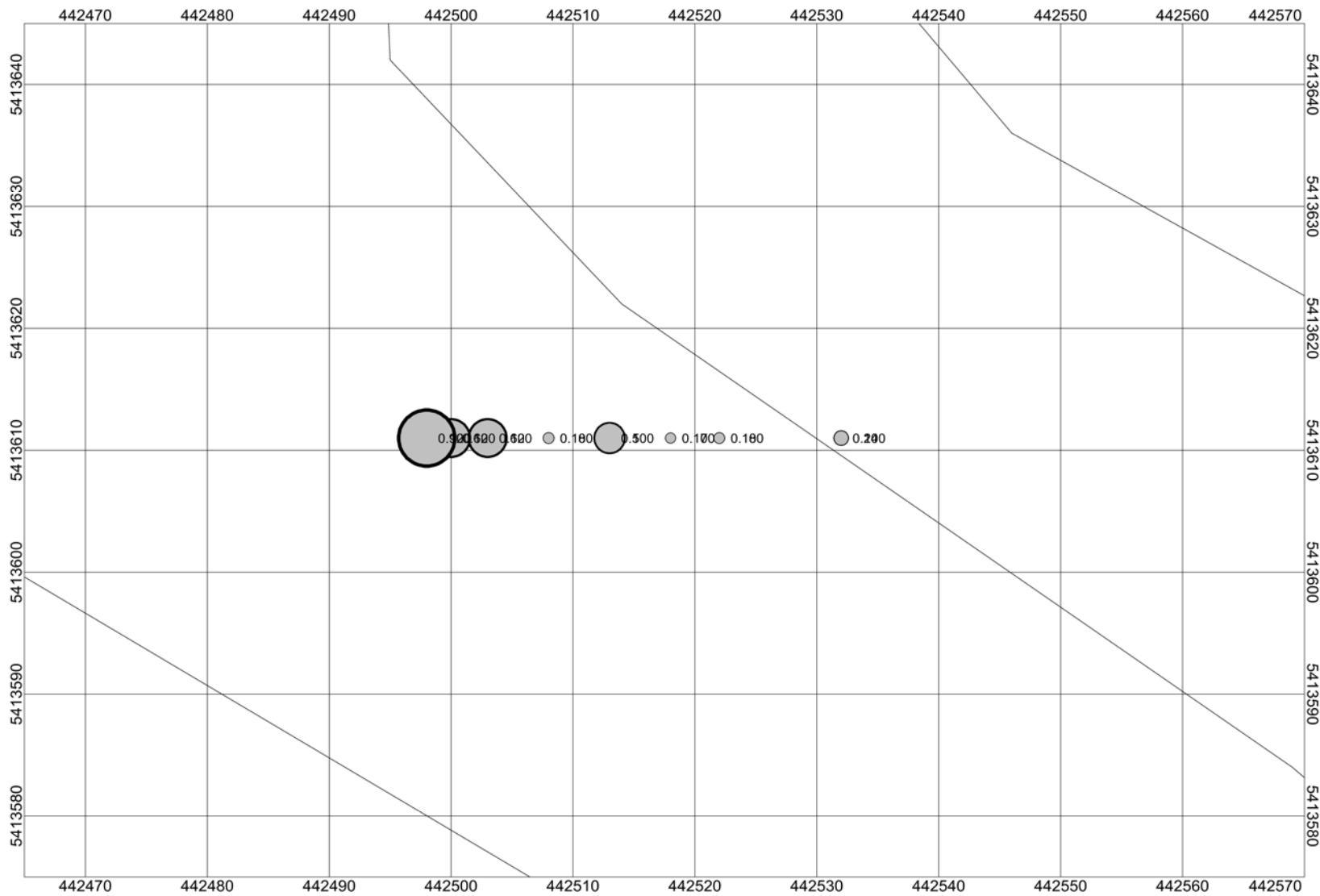
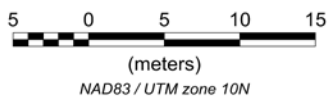
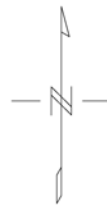
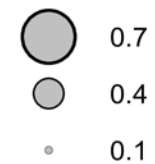


Figure 20

**Rock-Con M. Mt. Sicker Property**  
 Queen Bee Area  
 Silver ppm in Rocks



Ag ppm





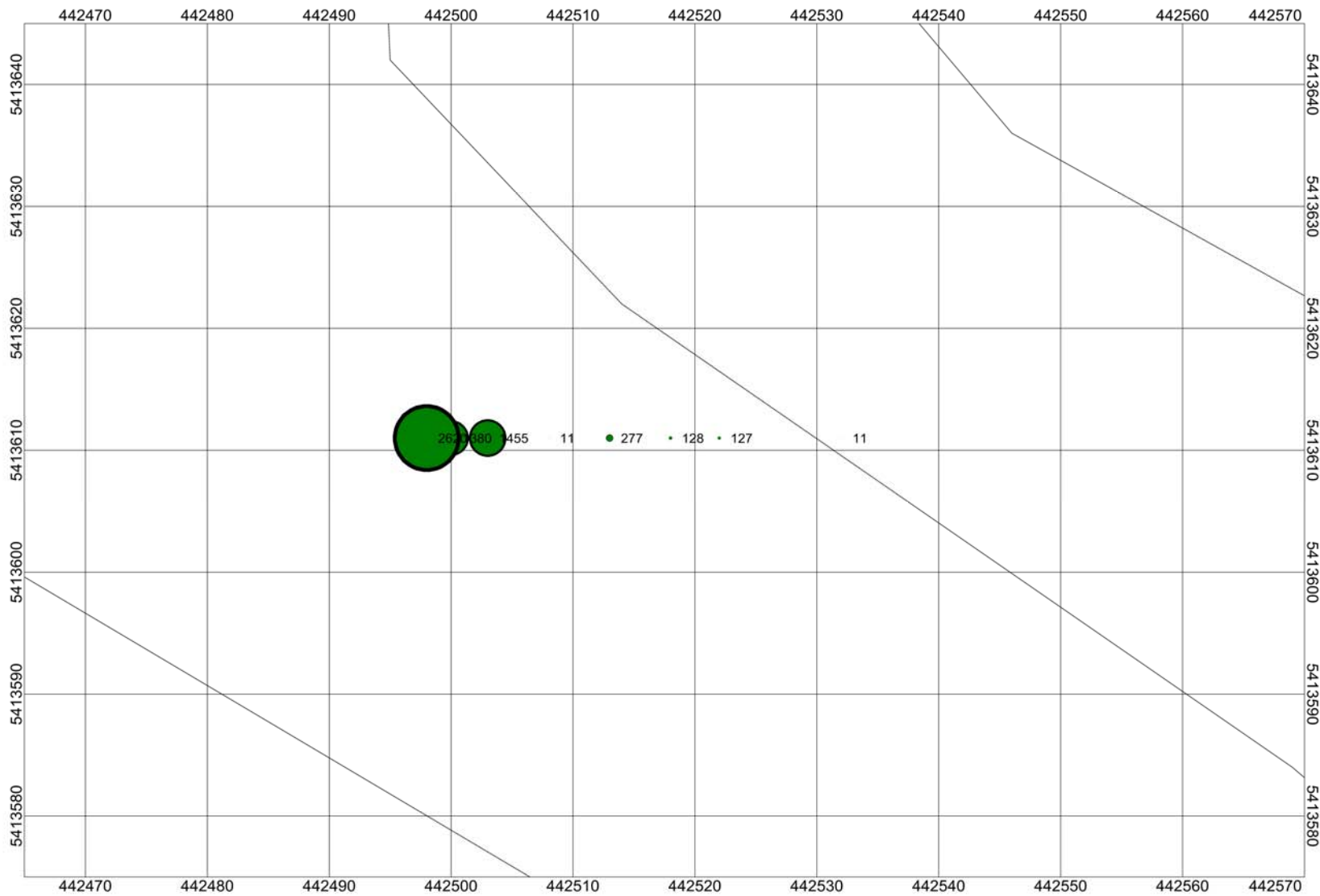
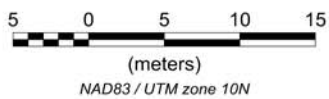
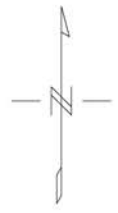
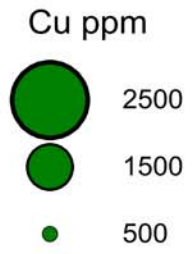


Figure 21



**Rock-Con M. Mt. Sicker Property**  
 Queen Bee Area  
 Copper ppm in Rocks



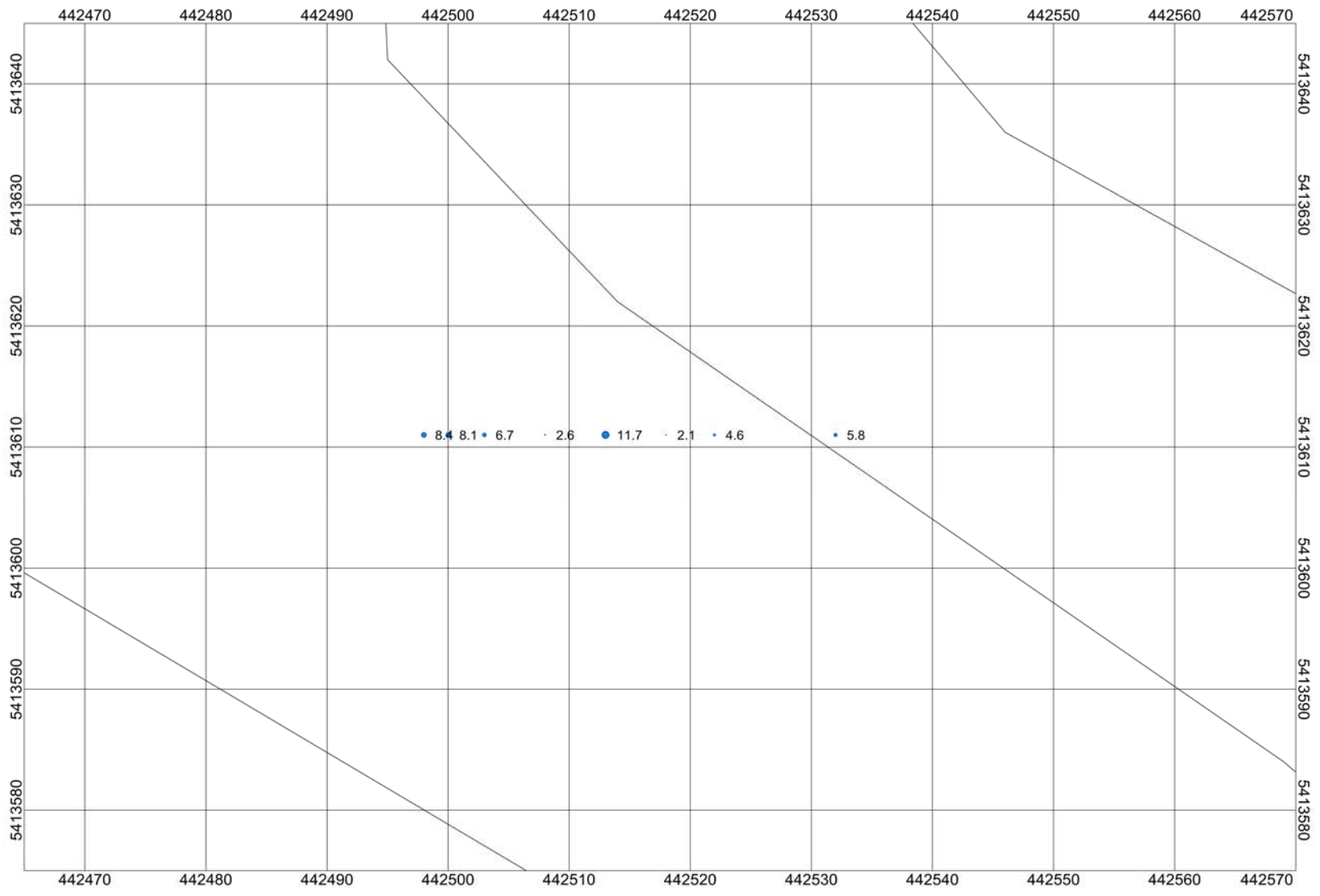


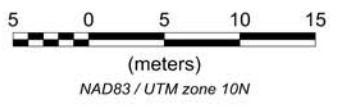
Figure 22

**Rock-Con M. Mt. Sicker Property**

Queen Bee Area  
Lead ppm in Rocks

Pb ppm

- 10
- 6
- 2



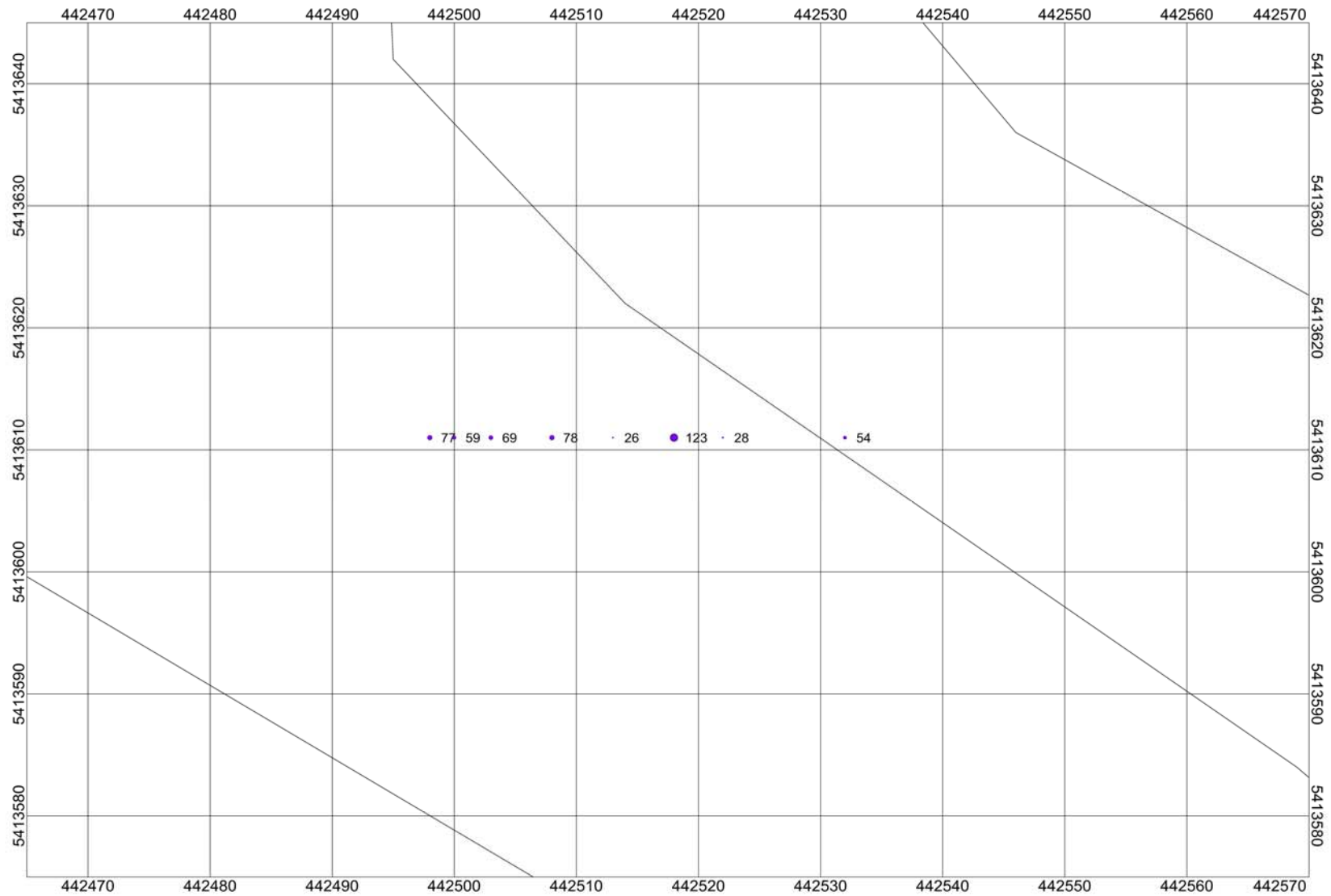
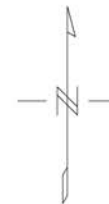
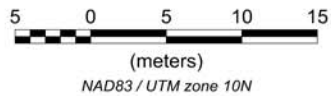
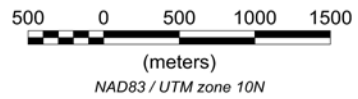
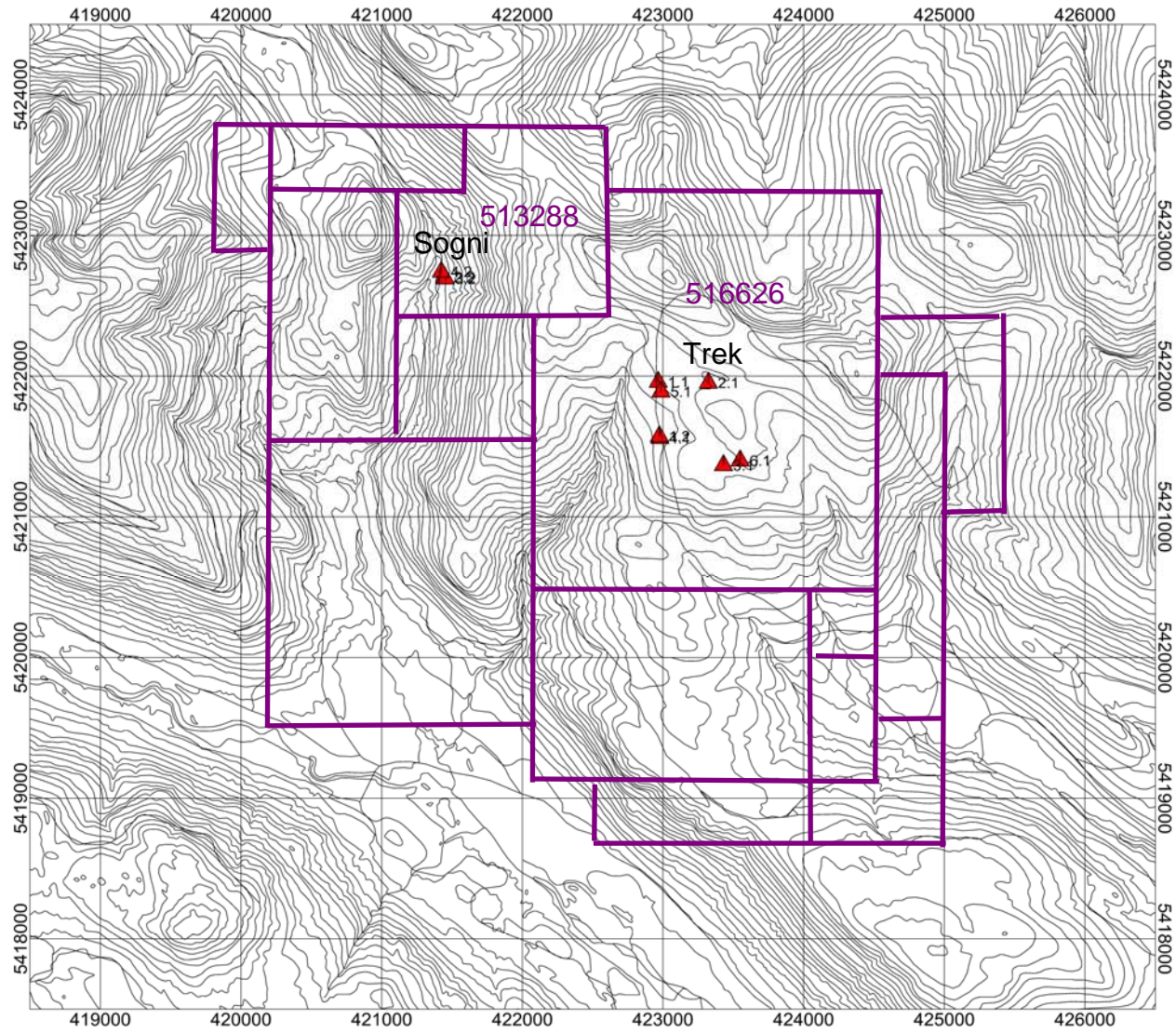


Figure 23

**Rock-Con M. Mt. Sicker Property**  
 Queen Bee Area  
 Zinc ppm in Rocks

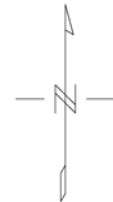
Zn ppm  
 ● 125  
 ● 75  
 ● 25

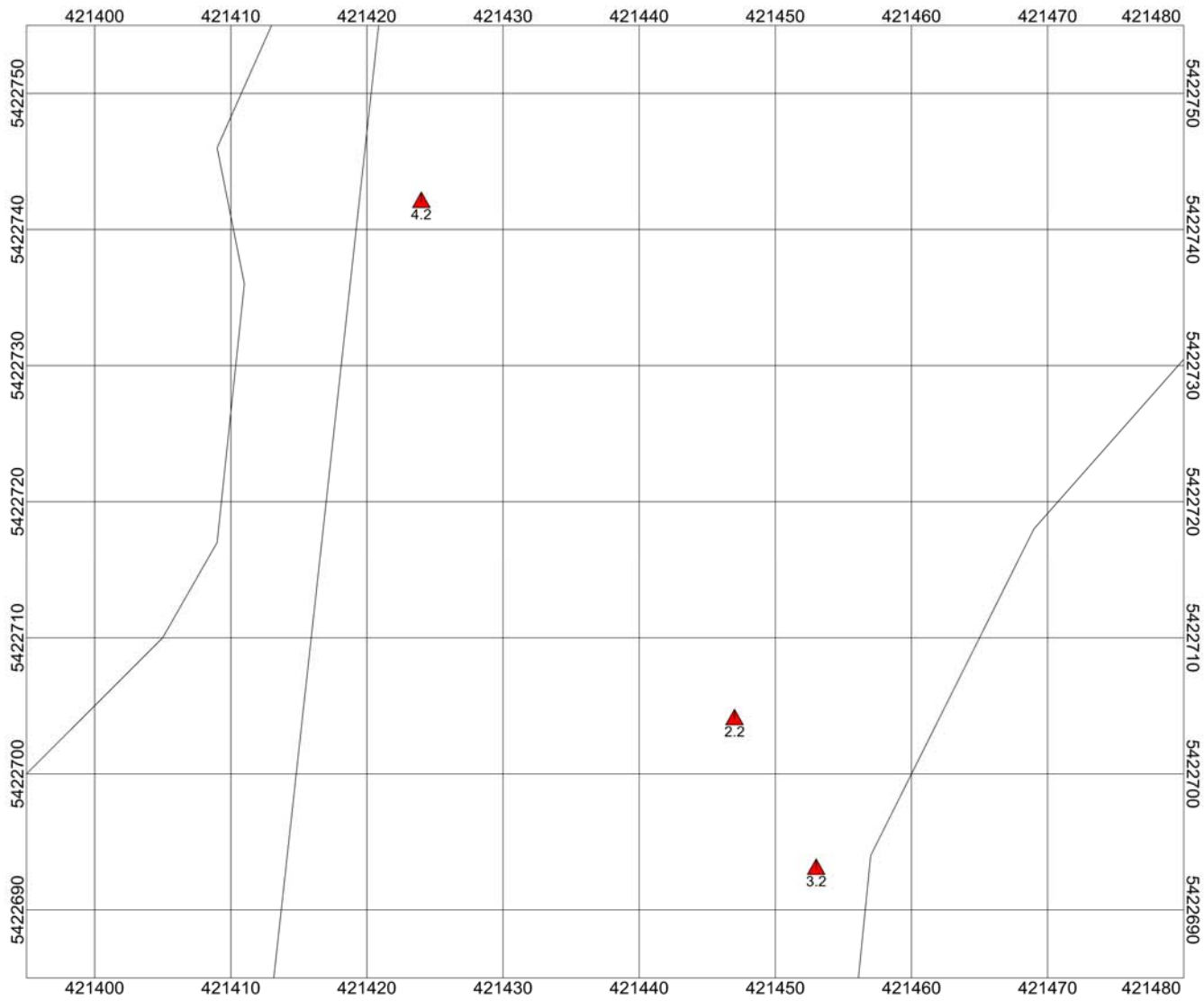




**Rock-Con Sognidoro Property**  
2010 Rock Sample Locations

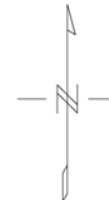
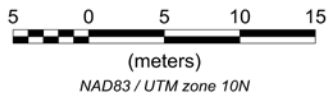
Figure 24





**Rock-Con Sognidoro Property**  
 Sogni Area  
 2010 Rock Sample Locations

Figure 25



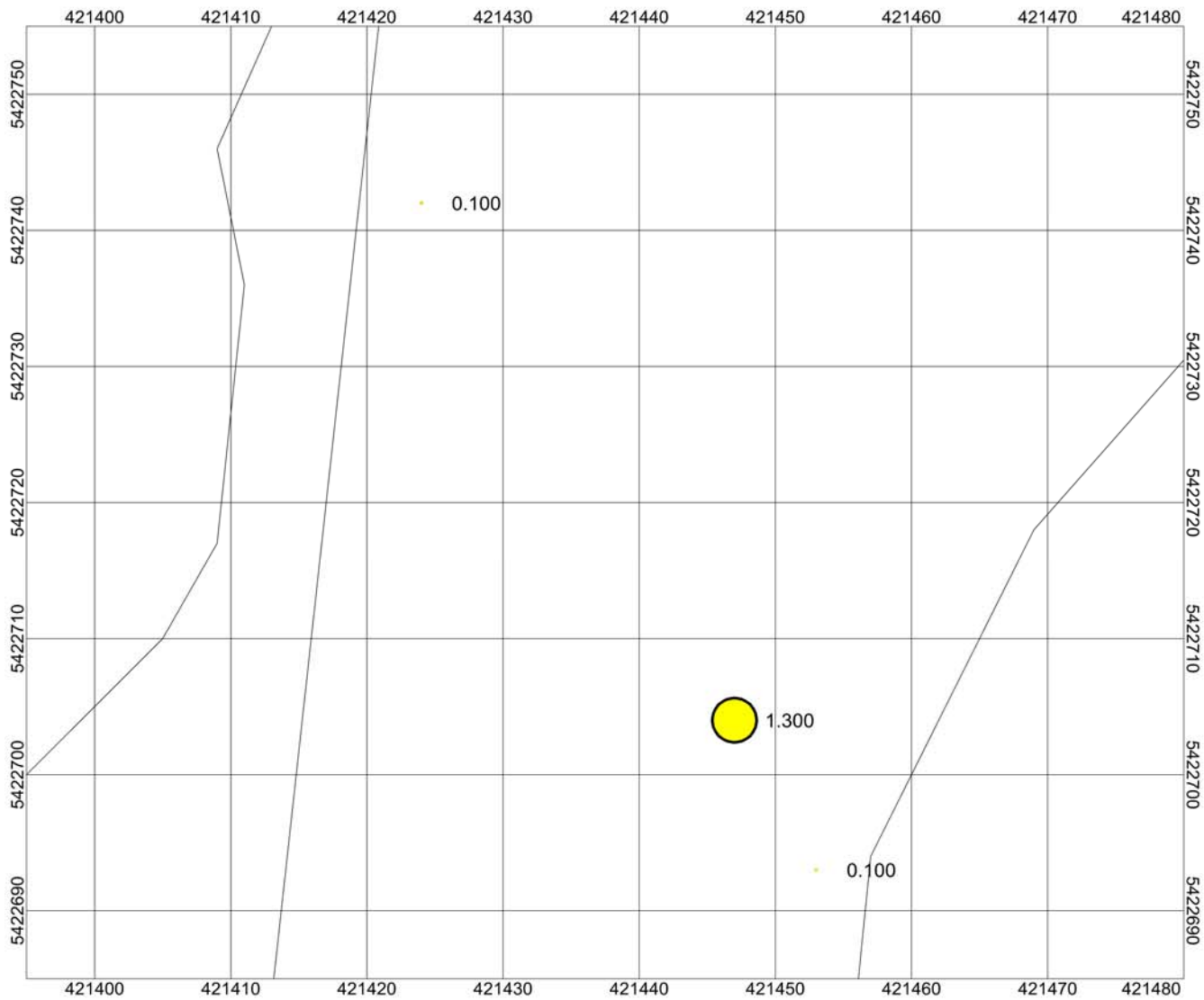
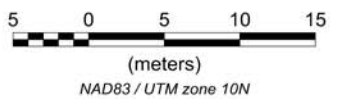
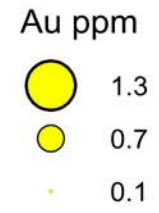


Figure 26



**Rock-Con Sognidoro Property**  
 Sogni Area  
 Gold ppm in Rocks



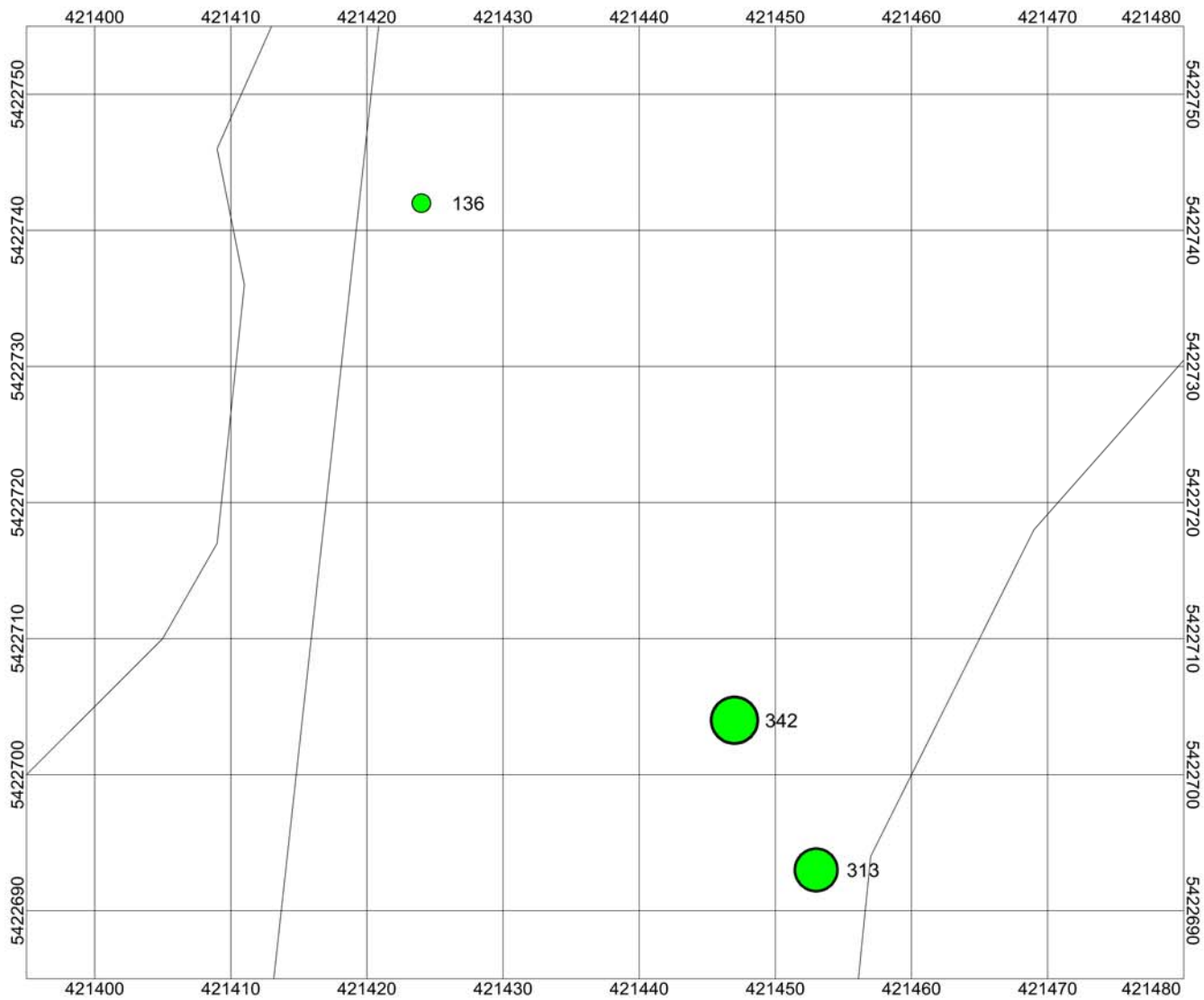
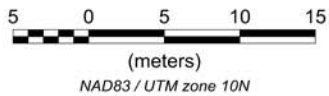
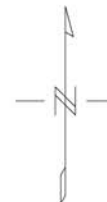
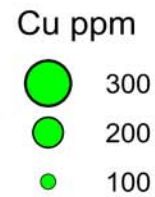


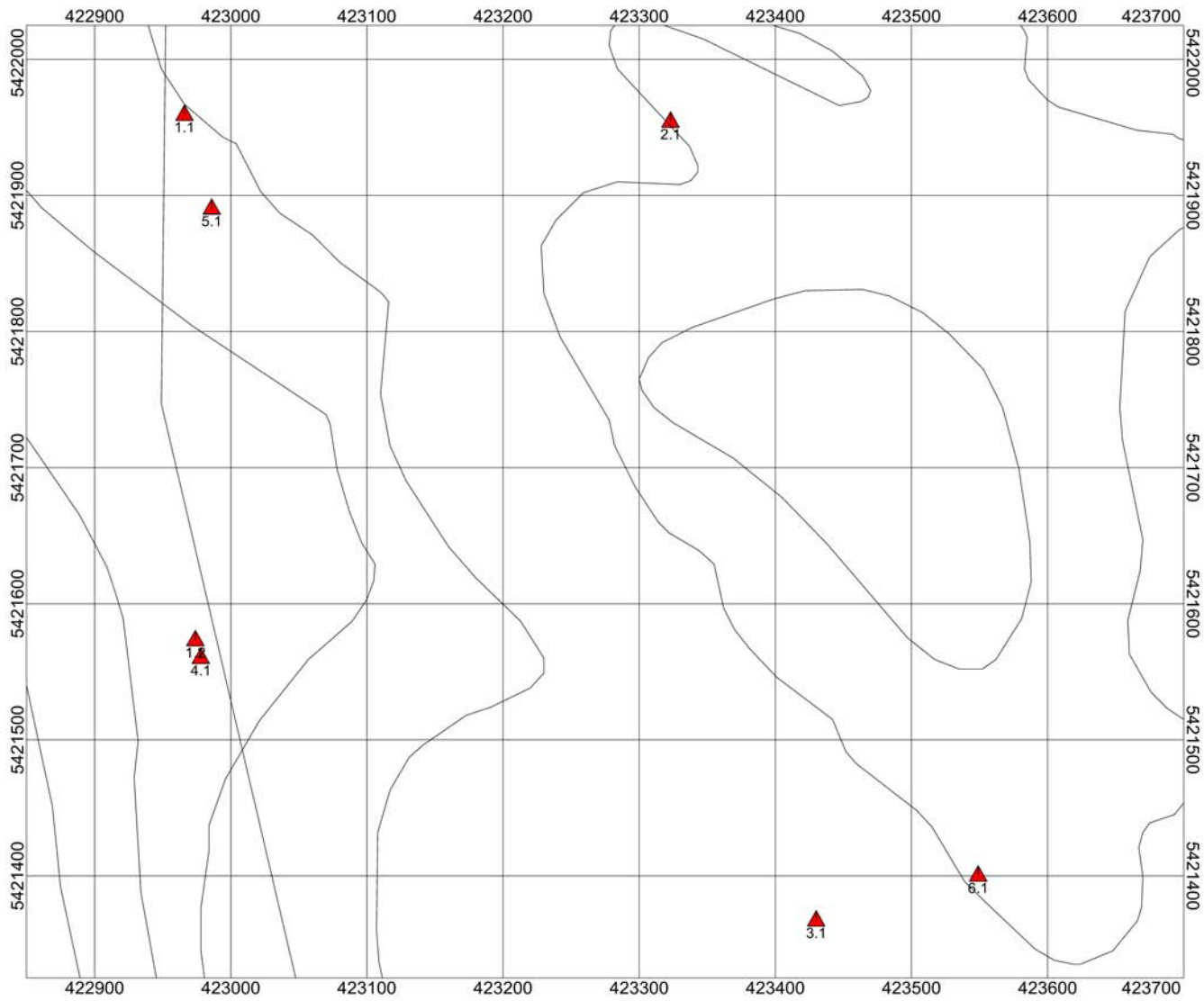
Figure 27



**Rock-Con Sognidoro Property**  
 Sogni Area  
 Copper ppm in Rocks

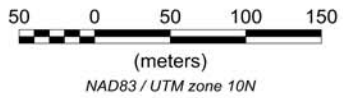






**Rock-Con Sognidoro Property**  
Trek Area  
2010 Rock Sample Locations

Figure 28





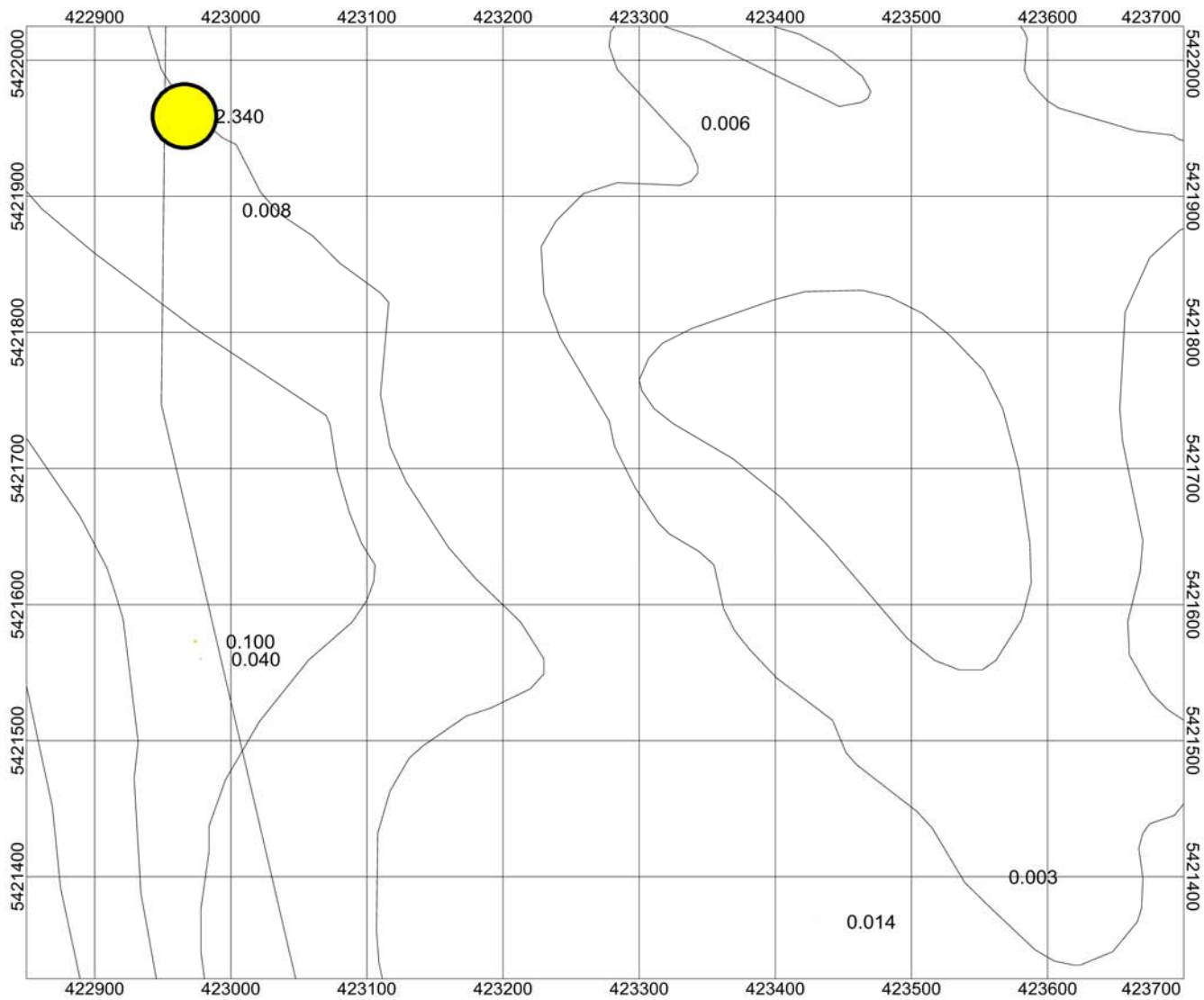
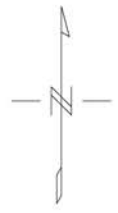
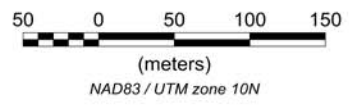
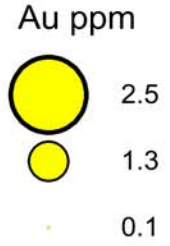


Figure 29

**Rock-Con Sognidoro Property**  
**Trek Area**  
**Gold ppm in Rocks**



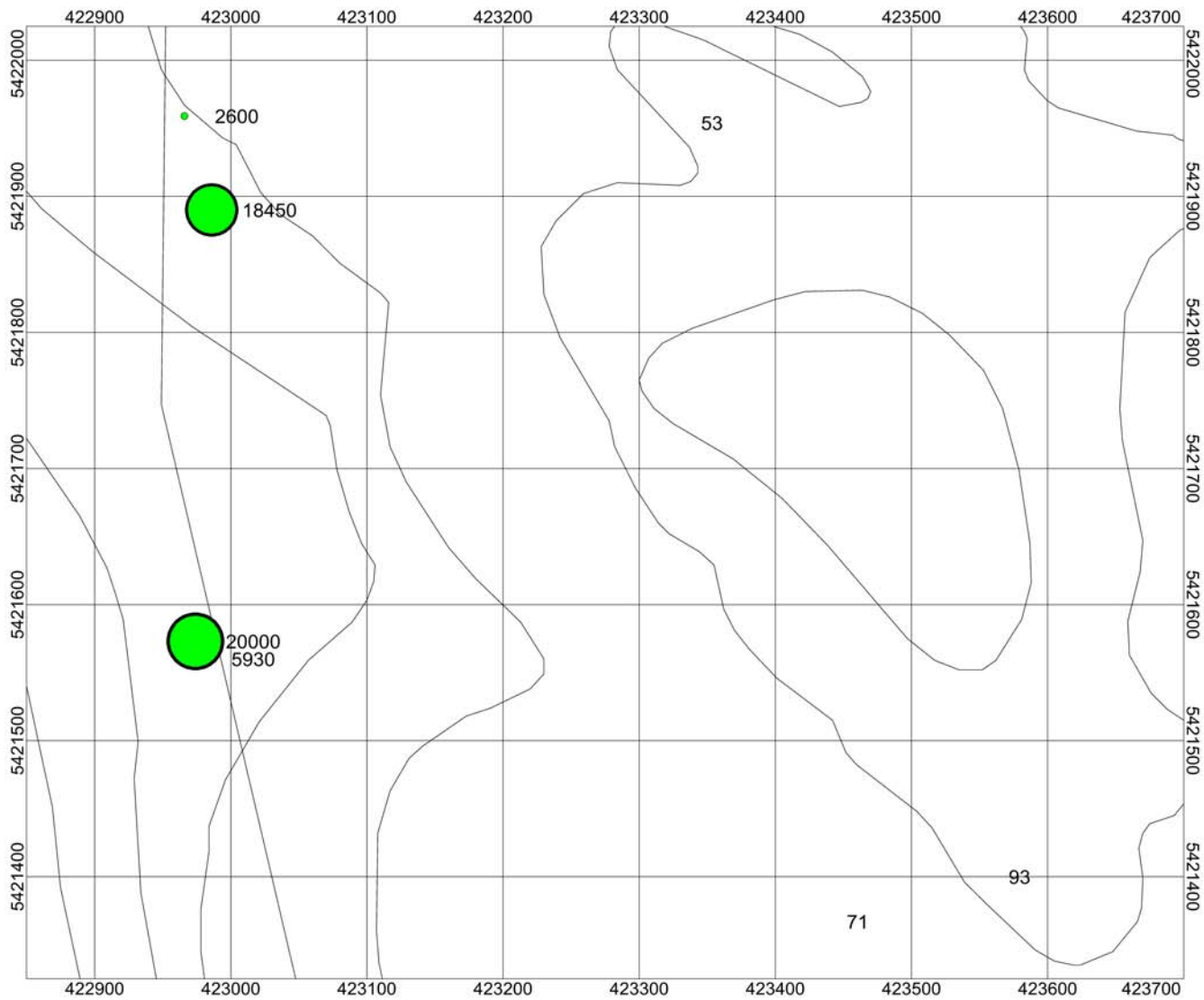
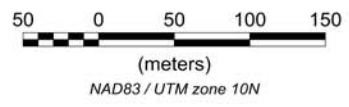
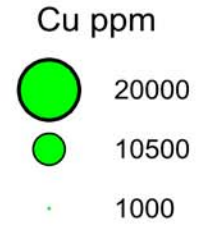
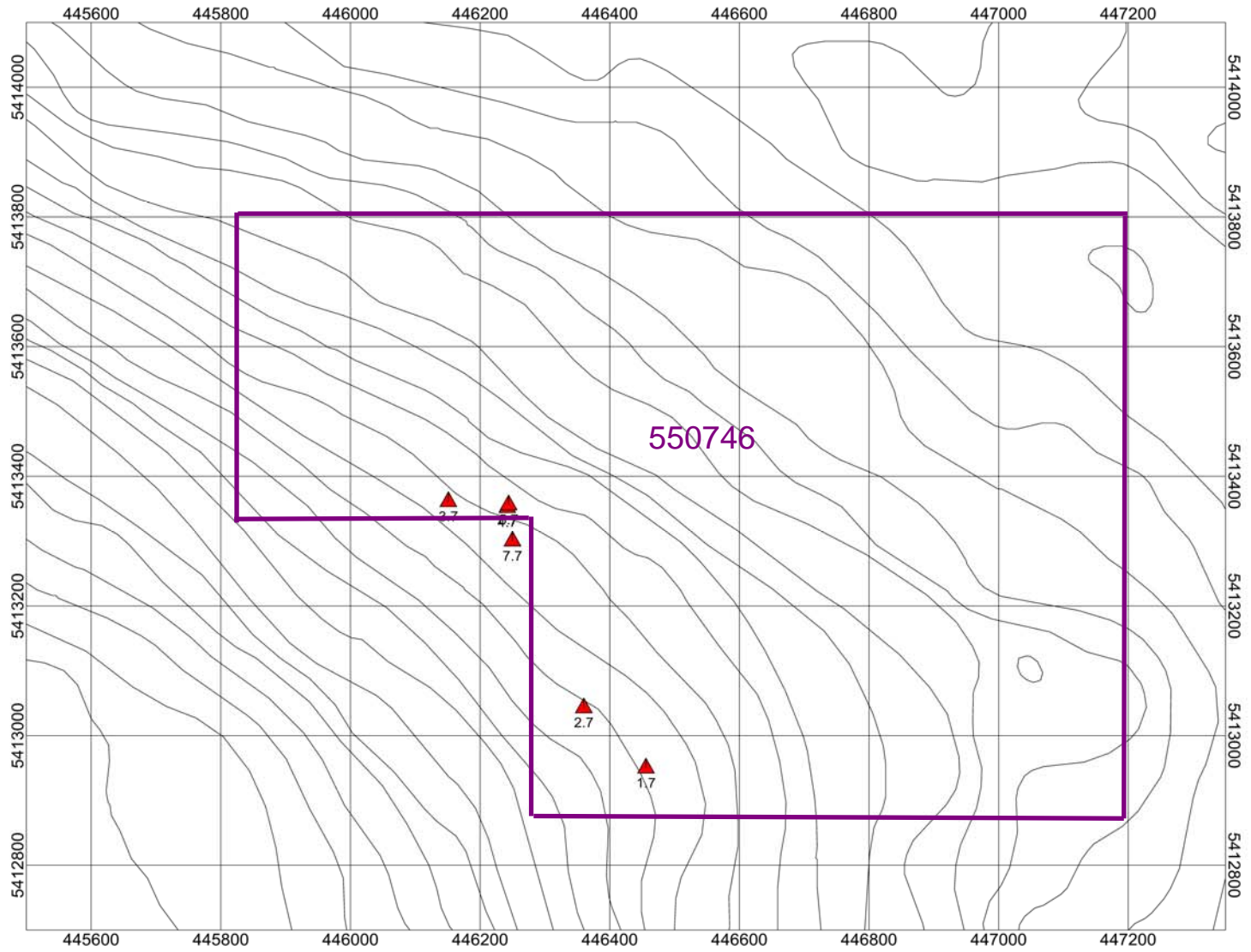


Figure 30



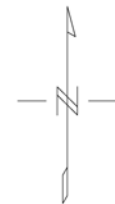
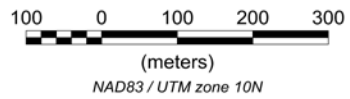
**Rock-Con Sognidoro Property**  
**Trek Area**  
**Copper ppm in Rocks**





**Rock-Con Volcanics Property**  
Rock Sample Locations  
2011 Sampling

Figure 31



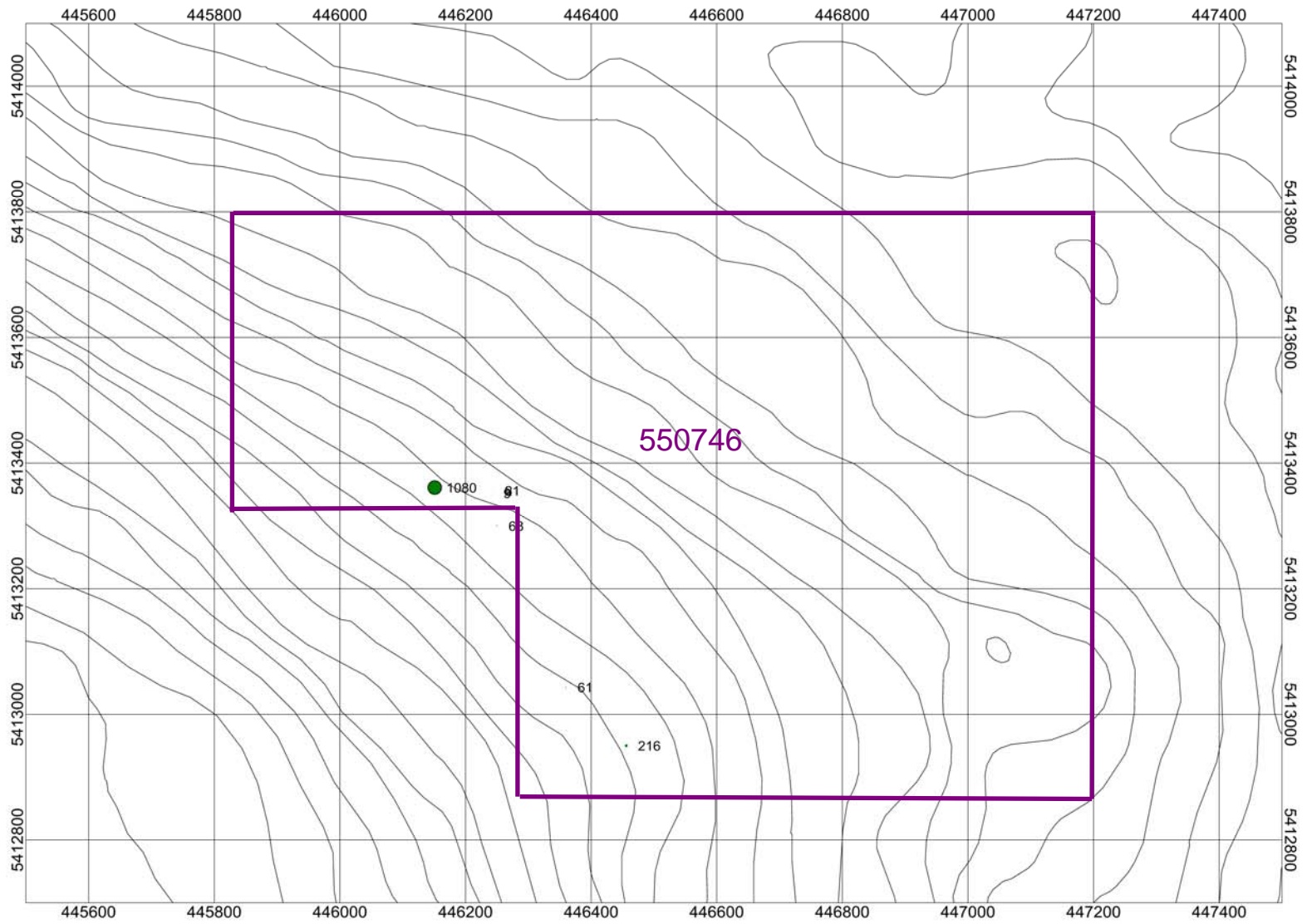
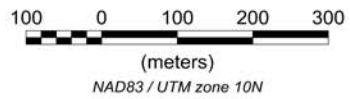
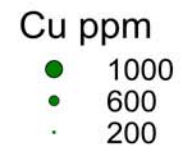


Figure 32



**Rock-Con Volcanics Property**  
 Cu ppm in Rocks  
 2011 Sampling



## **Appendix 1**

### **2010 & 2011 Rock Sample Data – Mt. Sicker Property**

#### **Rock Sample Locations**

#### **Rock Sample Descriptions**

#### **Rock Sample Geochemistry Details**

#### **Rock Sample Geochemistry Highlights**

2010&2011 Rock Sample Locations for Rock-Con Properties

Sample #	Sample #	Date	Sampler	Property	Location	Details	UTM Zone	Easting	Northing	Elevation
5B	5.2	10-Oct-10	Brant & Harry	Mt.Sicker	Copper Canyon adit	Mouth of adit	10N	440527	5413038	
6B	6.2	10-Oct-10	Brant & Harry	Mt.Sicker	Down stream from Copper Canyon adit	Quartz vien at river	10N	440527	5413040	
1C	1.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442056	5412829	
2C	2.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442056	5412826	
3C	3.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442060	5412831	
4C	4.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442062	5412831	
5C	5.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442064	5412829	
6C	6.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442066	5412829	
7C	7.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442065	5412829	
8C	8.3	14-Nov-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442067	5412829	
1D	1.4	05-Dec-10	Brant & Harry	Mt.Sicker	Lenora adit	chip sample from 15 feet in Graphite Schist Lenora adit	10N	442041	5412848	
2D	2.4	05-Dec-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample from the road at the end of Lenora pit	10N	442041	5412844	
3D	3.4	05-Dec-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample from the road at the end of Lenora pit	10N	442043	5412844	
4D	4.4	05-Dec-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442065	5412824	
5D	5.4	05-Dec-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442073	5412824	
6D	6.4	05-Dec-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442073	5412824	
7D	7.4	05-Dec-10	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip samples across 6 meters 25 meters	10N	442076	5412824	
8D	8.4	05-Dec-10	Brant & Harry	Mt.Sicker	Copper Canyon adit entrance	Mouth of adit chip from 1.5 ft.across east side Quartz vien	10N	440527	5413038	
9D	9.4	05-Dec-10	Brant & Harry	Mt.Sicker	Copper Canyon adit entrance	Mouth of adit chip from 1.5 ft.across Quartz west side vien	10N	440527	5413038	
1E	1.5	11-Dec-10	Brant & Harry	Mt.Sicker	Victoria 1 adit entrance	Mouth of adit chip from 2 ft across from 8 ft mineralized zone	10N	440537	5413038	
2E	2.5	11-Dec-10	Brant & Harry	Mt.Sicker	Victoria 1 adit entrance	Mouth of adit chip from 2 to 4 ft across from 8 ft mineralized zone	10N	440536	5413038	
3E	3.5	11-Dec-10	Brant & Harry	Mt.Sicker	Victoria 2 taillings at entrance	Mouth of adit tailling pile	10N	440536	5413038	
4E	4.5	11-Dec-10	Brant & Harry	Mt.Sicker	Victoria 1 adit entrance	Mouth of adit chip from 4 to 6 ft across from 8 ft mineralized zone	10N	440536	5413038	
5E	5.5	11-Dec-10	Brant & Harry	Mt.Sicker	Near Victoria adit	chip from Quartz vien near river	10N	440546	5413068	
6E	6.5	11-Dec-10	Brant & Harry	Mt.Sicker	down stream from Victoria adit	chip from Quartz vien near river	10N	440562	5413075	
7E	7.5	11-Dec-10	Brant & Harry	Mt.Sicker	down stream from Victoria adit	chip from Quartz vien near river	10N	440562	5413074	
	1.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	from inside adit 5 m. into adit	10N	442513	5413611	
	2.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	from inside adit 10 m. into adit	10N	442518	5413611	
	3.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	from inside adit 14 m. into adit	10N	442522	5413611	
	4.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	from inside adit 24 m. into adit	10N	442532	5413611	
	5.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	from inside adit	10N	442508	5413611	
	6.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	tailings 5 m. west of adit portal	10N	442503	5413611	
	7.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	tailings from lower side of railway grade - below adit portal	10N	442500	5413611	
	8.6	05-Feb-11	Brant & Harry	Mt.Sicker	Queen Bee adit area	tailings same as 8.7 - 10 m. west	10N	442498	5413611	
	1.8	21-Mar-11	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample of quartz to grey felsic rock	10N	442033	5412835	
	2.8	21-Mar-11	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample of grey felsic rock to quartz	10N	442033	5412835	
	3.8	21-Mar-11	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample of grey felsic 1m from sample 8.2	10N	442034	5412835	
	4.8	21-Mar-11	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample from 6 " quartz vein	10N	442053	5412832	455
	5.8	21-Mar-11	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample from quartz vein	10N	442064	5412835	462
	6.8	21-Mar-11	Brant & Harry	Mt.Sicker	Mt Sicker Lenora pit.near adit	chip sample from 1' vein	10N	442064	5412835	462
	7.8	21-Mar-11	Brant & Harry	Mt.Sicker	on road near Lenora pit	chip sample from grey felsic contact to quartz	10N	442080	5412822	469
	8.8	21-Mar-11	Brant & Harry	Mt.Sicker	on road near Lenora pit	chip sample from quartz contact to grey felsic	10N	442080	5412822	469
	1.9	24-Mar-11	Brant & Harry	Mt.Sicker	tailings- green water adit. Lenora #2 adit	tailings. grab sample	10N	442029	5412888	437
	2.9	24-Mar-11	Brant & Harry	Mt.Sicker	green water adit. Lenora #2 adit	grab sample from adit entrance	10N	442029	5412888	437
	3.9	24-Mar-11	Brant & Harry	Mt.Sicker	grey felsic. outcrop- on road	rock chip sample from outcrop on road	10N	442076	5412824	469
	4.9	24-Mar-11	Brant & Harry	Mt.Sicker	tailings green water adit. Lenora #2 adit	tailings grab sample	10N	442029	5412888	437







2010&2011 Rock Sample Geochemistry Highlights

Sample #	Sample #	Property	Easting	Northing	Elevation	Au ppm	Ag ppm	As ppm	Ba ppm	Bi ppm	Cd ppm	Co ppm	Cu ppm	Ga ppm	Hg ppm	In ppm	Li ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Te ppm	Y ppm	Zn ppm	Ca %	Fe %	S %
5B	5.2	Mt. Sicker	440527	5413038		<0.2	10.25	31.7	<10	26.2	3	127	19000	0.73	0.54	0.043	0.7	9.63	1.7	<10	6.9	0.69	97.2	41.6	0.62	63	0.46	24.8	>10.0
6B	6.2	Mt. Sicker	440527	5413040		0.4	19.9	12.3	30	19.45	16.2	3.6	76300	0.87	0.32	0.812	0.6	25.3	0.6	40	8.4	1.01	19.2	18.05	6.08	362	3.67	11.25	9.29
1C	1.3	Mt. Sicker	442056	5412829		1.74	34.1	37.6	20	25.7	0.8	2510	1.58	7.82	1.865	0.1	107.5	36.6	10	1795	5.99	65.4	20.8	0.4	60899	0.46	22.4	>10.0	
2C	2.3	Mt. Sicker	442056	5412826		1.175	65.2	57	120	11.7	>1000	2.4	12600	14.9	31.9	0.249	0.6	345	19.2	20	17200	44.8	76.7	19.15	5.05	206000	17.15	3.51	>10.0
3C	3.3	Mt. Sicker	442060	5412831		0.2	30.5	253	10	7.79	8.37	3.3	109000	1.16	0.45	0.215	0.4	54.2	1.5	30	280	71.9	19.9	4.04	2.45	2020	1.91	14.8	>10.0
4C	4.3	Mt. Sicker	442062	5412831		0.2	23.6	342	10	6.19	1.67	8.5	29600	0.64	0.27	0.252	0.4	59.6	3.2	50	230	36.2	26.2	4.66	4.26	380	2.21	17.15	>10.0
5C	5.3	Mt. Sicker	442064	5412829		2.74	57.9	80.7	10	4.29	114.5	10.1	31500	1.28	5.97	0.342	1.3	161	21.7	10	88.4	5	39.1	8.05	0.59	22300	0.02	13.9	>10.0
6C	6.3	Mt. Sicker	442066	5412829		0.3	13.65	167	10	2.4	2.77	10.4	22000	0.51	0.23	0.124	0.1	89.9	5.6	10	129.5	9.96	25.2	2.27	1.45	522	1.09	14.15	>10.0
7C	7.3	Mt. Sicker	442065	5412829		<0.2	0.23	6.3	2640	0.04	9.33	1.4	809	1.63	0.02	<0.005	2.9	1.46	0.6	100	38.8	0.13	0.5	0.02	12.85	1710	4.29	1.17	0.13
8C	8.3	Mt. Sicker	442067	5412829		0.6	32.5	38.5	50	3.62	48.4	0.8	34500	6.56	0.87	0.149	0.5	14.9	1.2	330	859	34.6	6.9	3.4	6.36	9560	2.51	4.35	2.11
1D	1.4	Mt. Sicker	442041	5412848		<0.2	0.23	26	80	0.35	46	15.8	5150	3.2	0.07	0.07	7.3	1.14	4.3	270	21.2	0.2	4.8	0.57	25.6	3440	10.85	6.23	6.26
2D	2.4	Mt. Sicker	442041	5412844		0.3	16.7	20.1	30	3.1	0.5	6.6	398	1.18	0.06	0.017	0.4	478	3.3	<10	271	2.81	44.5	4.15	0.37	76	0.04	23.7	>10.0
3D	3.4	Mt. Sicker	442043	5412844		2.57	34.6	90.9	20	2.36	0.6	2.9	27200	0.78	0.53	0.049	0.3	178	4	10	113	16.7	16.2	4.21	2.45	1020	1.38	9.48	>10.0
4D	4.4	Mt. Sicker	442065	5412824		1.585	65.5	236	20	17.3	>1000	27.5	7390	1.33	59	3.19	0.5	2.52	17.2	10	2320	20.1	37	13.3	2.23	>300000	0.99	8.01	>10.0
5D	5.4	Mt. Sicker	442073	5412824		21.1	113	87.9	80	47.3	504	1.8	32300	6.09	16	2.14	0.5	110.5	28.2	10	2080	11.8	46.8	68.4	0.64	104500	0.6	20.9	>10.0
6D	6.4	Mt. Sicker	442073	5412824		0.6	11.1	41.8	30	1.14	11.65	56.2	1590	0.9	1.13	0.067	0.1	173.5	30.4	10	20.5	5.33	16	1.25	0.31	1240	0.08	11.55	>10.0
7D	7.4	Mt. Sicker	442076	5412824		4.28	176	208	10	3.78	658	0.7	11900	7.91	18.1	0.148	0.1	95.1	2.8	10	27800	740	21.8	22.3	0.11	138500	0.27	2.02	>10.0
8D	8.4	Mt. Sicker	442057	5413038		0.2	9.12	27.8	10	13.6	10.65	99.9	10050	0.52	1.32	0.033	0.2	14.85	20.4	<10	375	13.95	95.2	21.8	0.41	2140	0.38	23.8	>10.0
9D	9.4	Mt. Sicker	440527	5413038		0.2	12.25	36.2	30	45	11.05	111	31100	0.74	0.99	0.102	0.5	9.8	0.7	10	409	10.75	115	55.6	0.89	1480	0.84	25.9	>10.0
1E	1.5	Mt. Sicker	440537	5413038		<0.2	16.85	44.8	10	63.5	22.2	21.8	56100	1.75	0.17	2.59	0.9	5.62	3	20	6.3	1.22	38.4	53.7	1.53	310	2.87	25.5	>10.0
2E	2.5	Mt. Sicker	440536	5413038		<0.2	10.85	52.9	20	28.8	9.45	35.8	34200	1.5	0.14	0.899	0.8	18.7	3.1	90	8.1	1.32	42.7	28.7	2.07	125	3.38	26.9	>10.0
3E	3.5	Mt. Sicker	440536	5413038		0.2	0.41	55.1	20	3	0.09	161	977	1.21	2.75	0.012	0.4	18.45	1.9	30	3.9	0.13	60.5	0.75	14	0.05	23.7	>10.0	
4E	4.5	Mt. Sicker	440536	5413038		<0.2	1.05	21.9	10	9.79	0.56	72.6	1765	2.14	0.05	0.071	2	7.14	1.2	50	11.3	0.27	45.1	13.2	4.12	46	4.12	24.8	>10.0
5E	5.5	Mt. Sicker	440546	5413068		0.2	7.08	11.2	40	2.89	7.53	20.5	15500	1.94	0.08	0.384	2.2	8.07	1.3	110	4.1	0.21	17.5	3.77	2.22	134	0.99	8.8	7.65
6E	6.5	Mt. Sicker	440562	5413075		<0.2	1.15	11.8	10	2.86	0.2	41.1	406	0.43	0.03	0.01	0.3	6.11	1.2	20	4	0.15	24.8	4.33	0.5	8	0.32	10.25	>10.0
7E	7.5	Mt. Sicker	440562	5413074		0.2	2.88	67.2	10	5.03	1.07	104	3980	1.04	0.72	0.098	0.3	11.75	2.8	20	6.5	0.85	53.7	7.11	1.28	14	0.4	17.8	>10.0
1.6	Mt. Sicker	442513	5413611		<0.2	0.5	122.5	20	0.11	0.03	98.5	277	3.1	0.04	0.017	6.9	1.47	32.1	1080	11.7	1.98	14.2	0.87	7	26	0.52	11.95	>10.0	
2.6	Mt. Sicker	442518	5413611		<0.2	0.17	57.2	80	0.07	0.64	35.6	127.5	2.2	0.55	0.031	20.1	2.07	7.5	180	2.1	11.7	1.2	0.07	13.6	123	4.47	11.25	0.64	
3.6	Mt. Sicker	442522	5413611		<0.2	0.18	97.3	40	0.04	0.02	33.9	126.5	2.62	0.03	0.014	4.2	0.76	13.4	1720	4.6	1	6.6	0.6	10.95	28	0.72	6.18	4.99	
4.6	Mt. Sicker	442522	5413611		<0.2	0.24	16.3	30	0.92	0.03	49.4	10.6	6.32	0.41	<0.005	13.5	3.82	20.8	150	5.8	0.26	4.5	1.28	3.97	54	0.62	15.25	>10.0	
5.6	Mt. Sicker	442508	5413611		<0.2	0.18	56.1	20	0.04	0.08	24.2	11.3	10.95	0.17	0.011	30.3	3.61	17.2	500	2.6	0.46	0.7	0.02	11.3	78	3.77	23	1.85	
6.6	Mt. Sicker	442503	5413611		<0.2	0.62	88.6	30	0.39	0.13	386	1455	7.98	0.11	0.124	22.7	5.17	11.5	1480	6.7	0.83	35.8	0.39	12.05	69	0.75	18.35	>10.0	
7.6	Mt. Sicker	442500	5413611		<0.2	0.62	78.3	30	0.54	0.1	543	1380	10.8	0.18	0.473	31.8	5.98	13.6	1560	8.1	2.77	42.7	0.52	11.4	59	0.53	22.6	>10.0	
8.6	Mt. Sicker	442498	5413611		<0.2	0.92	129	40	0.52	0.21	393	2620	12.55	0.19	0.636	41.4	9.5	13.2	1180	8.4	4.22	38.9	0.45	14.75	77	1.08	22.8	>10.0	
1.8	Mt. Sicker	442033	5412835		0.7	80	57.2	30	0.44	17.55	9.7	86000	0.35	1.39	0.363	0.3	85.5	2.6	50	16.5	3.99	9.5	1.82	2.08	1650	8.05	9.93	7.19	
2.8	Mt. Sicker	442033	5412835		2.87	126	54.2	60	37.2	>1000	2.7	289000	9.81	38.9	0.895	1.3	399	12	40	18700	29.8	93.4	42.3	4.72	282000	0.85	6.41	>10.0	
3.8	Mt. Sicker	442034	5412835		1.59	48.2	253	10	20.9	562	32.3	136000	7.36	14.2	1.385	1.8	99	6.6	20	8920	29	79.6	30.8	2.53	92700	6.2	23.3	>10.0	
4.8	Mt. Sicker	442053	5412832	455	2.74	155	124	30	6.6	11.2	6	179500	0.61	1.67	0.224	0.2	132.5	9.9	<10	186.5	9.62	36.4	9.52	0.4	2830	0.04	20	>10.0	
5.8	Mt. Sicker	442064	5412835	462	1.385	94.4	114.5	20	28.9	>1000	14	3500	1.59	28.8	2.08	0.5	2.4	5.4	60	3870	24.8	48	20.7	0.27	260000	0.09	4.26	7.66	
6.8	Mt. Sicker	442064	5412835	462	1.25	79.5	185	20	13.6	>1000	22.5	6990	1.54	50.9	3.02	0.5	5.57	9.5	20	2300	23.9	45.1	10.15	1.6	300000	0.76	7.31	>10.0	
7.8	Mt. Sicker	442080	5412822	469	2.87	48.9	126.5	20	17.95	433	2	16000	3.71	13.15	0.318	0.2	163.5	7.4	10	7030	17.15	37.2	20.1	0.16	83800	0.41	5.07	>10.0	
8.8	Mt. Sicker	442080	5412822	469	1.235	6.92	75.8	20	0.35	22.8	8.7	8620	0.43	0.49	0.347	0.1	102.5	7.3	100	34.7	4.28	6.6	0.68	0.98	2760	0.54	2.71	2.89	
1.9	Mt. Sicker	442029	5412888	437	13.4	337	2260	40	67.8	220	1.2	137000	2.99	19.3	2.11	0.2	219	18.3	10	3170	65.2	41.2	88.7	5.05	54700	2.1	24.3	>10.0	
2.9	Mt. Sicker	442029	5412888	437	3.09	128	1735	110	1.6	44.1	17.8	179500	1.02	1.46	0.716	0.2	12.5	2.4	<10	182	97.3	21.2	6.12	1.94	6850	4.07	28.4	>10.0	
3.9	Mt. Sicker	442076	5412824	469	6.09	212	1065	40	74.4	455	2.3	95500	5.34	6.02	2.28	2	253	13	340	7070	64.3	60.5	46.4	2.51	92200	1.6	15.95	>10.0	
4.9	Mt. Sicker	442029	5412888	437	2.21	131	488	40	29.2	741	2.8	22900	16																

## **Appendix 2**

### **2010 Rock Sample Data – Sognidoro Property**

#### **Rock Sample Locations**

#### **Rock Sample Descriptions**

#### **Rock Sample Geochemistry Details**

#### **Rock Sample Geochemistry Highlights**

**2010 Rock Sample Locations for Rock-Con Properties**

Sample #	Sample #	Date	Sampler	Property	Location	Details	UTM Zone	Easting	Northing	Elevation
1	1.1	18-Sep-10	Brant & Harry	Sognidoro	Between B-24 and B-22 off Boulder main	chip from quartz vien 1/2 ft.thick with numerous cross cutting viens in green jasper	10N	422966	5421959	929
2	2.1	18-Sep-10	Brant & Harry	Sognidoro	B-22 off Boulder main Trek Res. drill hole 1-84	chip from drill hole pit in quartz sericite schist	10N	423323	5421954	931
3	3.1	18-Sep-10	Brant & Harry	Sognidoro	B-22 off Boulder main further East from sample 2	chip from quartz sericite schist in center of formation w.112m over L. 310m at surface	10N	423430	5421367	935
4	4.1	18-Sep-10	Brant & Harry	Sognidoro	Past B-24 turn off at culvert next to road	chip from red jasper at contact to purple jasper with numerous quartz viens	10N	422978	5421560	917
5	5.1	18-Sep-10	Brant & Harry	Sognidoro	Along strike of sample 1 formation	chip from sample 1 formation 50m west	10N	422986	5421890	934
6	6.1	18-Sep-10	Brant & Harry	Sognidoro	B-22 off Boulder main further East along strike from sample 2 and 3	chip from B-22 near schist contact	10N	423549	5421400	936
1B	1.2	10-Oct-10	Brant & Harry	Sognidoro	B-24 off Boulder main	Quartzs vien cross cut maroon purple Jasper	10N	422974	5421573	
2B	2.2	10-Oct-10	Brant & Harry	Sognidoro	1 Km south of Rheinheart Lake on by road at small creek	Red Jasper out crop with quartz viens near contact maroon Schist	10N	421447	5422704	
3B	3.2	10-Oct-10	Brant & Harry	Sognidoro	On road 5 meters from sample 2.2	Red Jasper along strike	10N	421453	5422693	
4B	4.2	10-Oct-10	Brant & Harry	Sognidoro	Float up small creek from sample 2.2 3.2	Quartz with Jasper fragments	10N	421424	5422742	





2010 Rock Sample Geochemistry Highlights

Sample #	Sample #	Property	Easting	Northing	Elevation	Au ppm	Ag ppm	As ppm	Ba ppm	Bi ppm	Cd ppm	Co ppm	Cu ppm	Ga ppm	Hg ppm	In ppm	Li ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Te ppm	Y ppm	Zn ppm	Ca %	Fe %	S %	
1	1.1	Sognidoro	422966	5421959	929	2.34	1.73		5	20	0.07	0.03	14.7	2600	2.32	1.62	<0.005	9.3	1.8	6.8	430	0.9	0.1	7.5	0.89	1.92	38	0.28	2.11	0.07
2	2.1	Sognidoro	423323	5421954	931	0.006	0.07	8.1	40	0.33	0.1	34.5	53.4	10.8	0.04	0.026	26.7	1.02	10.1	2260	5	0.25	23.6	0.9	6.96	166	0.55	9.56	4.96	
3	3.1	Sognidoro	423430	5421367	935	0.014	0.07	8.6	80	0.45	0.1	43.1	71.4	4.4	0.01	0.018	8.4	3.85	11.9	860	5.3	0.3	47.5	0.94	6.02	58	0.21	9.44	8.79	
4	4.1	Sognidoro	422978	5421560	917	0.04	1.15	14.4	50	0.05	0.13	16.9	5930	1.34	0.01	<0.005	1.6	2.49	45.8	550	6.3	1.05	0.4	0.1	3.94	31	2.76	11.88	0.27	
5	5.1	Sognidoro	422986	5421890	934	0.008	2.5	7.3	340	0.01	0.18	66.6	18450	6.68	0.57	0.007	72.8	0.88	45	1940	2.5	0.27	0.3	0.02	6.44	145	2.61	6.8	0.49	
6	6.1	Sognidoro	423549	5421400	936	<0.005	0.05	6.2	80	0.16	0.3	36.8	93.1	4.03	0.25	0.011	10	0.49	17.1	1560	6.1	0.34	0.9	0.43	5.64	181	2.55	5.15	2.31	
1B	1.2	Sognidoro	422974	5421573		<0.2	2.74	6.8	100	0.04	0.19	32.1	20000	3.47	0.84	0.006	36.6	0.56	27	1880	2.9	0.3	0.7	0.02	6.11	73	2.93	5.35	0.38	
2B	2.2	Sognidoro	421447	5422704		1.3	1.87	681	10	0.53	0.11	58.2	342	15.95	0.14	0.058	15.1	53.7	149	1250	86.6	7.58	7.3	2.26	2.9	72	0.22	27.1	>10.0	
3B	3.2	Sognidoro	421453	5422693		<0.2	0.56	29	10	0.37	0.1	17.6	313	1.46	0.12	0.008	1.4	11.2	51.1	360	24.6	2.75	8	0.53	3.21	15	0.61	9.83	7.51	
4B	4.2	Sognidoro	421424	5422742		<0.2	0.23	3.6	10	0.19	0.09	13.6	136	1.66	0.03	0.006	0.2	30.2	35.4	550	2.4	0.25	2.2	0.09	1.42	14	1.35	15.05	0.92	

## **Appendix 3**

### **2011 Rock Sample Data – Volcanics Property**

#### **Rock Sample Locations**

#### **Rock Sample Descriptions**

#### **Rock Sample Geochemistry Details**

#### **Rock Sample Geochemistry Highlights**

**2010&2011 Rock Sample Locations for Rock-Con Properties**

Sample #	Sample #	Date	Sampler	Property	Location	Details	UTM Zone	Easting	Northing	Elevation
	1.7	17-Mar-11	Brant & Harry	Volcanics	end of Hidden Hills Rd- outcrop at end of road	chip sample rhyolite outcrop	10N	446456	5412950	327
	2.7	17-Mar-11	Brant & Harry	Volcanics	Hidden Hills Rd outcrop near roads end.	chip sample from ditch. approx. 100 m along ditch from sample 1.7 location	10N	446360	5413043	348
	3.7	17-Mar-11	Brant & Harry	Volcanics	west of Hidden Hills Rd. 50 m	chip sample- follow run-off creek to outcropping	10N	446151	5413361	309
	4.7	17-Mar-11	Brant & Harry	Volcanics	50 m off of Hidden Hills Rd- outcrop	chip sample from outcrop. Along strike	10N	446242	5413352	293
	5.7	17-Mar-11	Brant & Harry	Volcanics	50 m off of Hidden Hills Rd- outcrop	chip sample from outcrop. Along strike	10N	446244	5413356	277
	6.7	17-Mar-11	Brant & Harry	Volcanics	50 m off of Hidden Hills Rd- outcrop	chip sample from outcrop. Along strike	10N	446244	5413356	277
	7.7	17-Mar-11	Brant & Harry	Volcanics	Hidden Hills Rd- outcrop	chip sample from ditch	10N	446250	5413300	294







2010&2011 Rock Sample Geochemistry Highlights

Sample #	Sample #	Property	Easting	Northing	Elevation	Au ppm	Ag ppm	As ppm	Ba ppm	Bi ppm	Cd ppm	Co ppm	Cu ppm	Ga ppm	Hg ppm	In ppm	Li ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Te ppm	Y ppm	Zn ppm	Ca %	Fe %	S %
	1.7	Volcanics	446456	5412950	327	<0.2	0.25	12.8	20	5.27	0.02	22.9	216	10.15	1.73	0.02	6.8	17.85	0.9	220	8.4	0.21	20.7	4.7	0.8	40	0.02	16.6	7.79
	2.7	Volcanics	446360	5413043	348	<0.2	0.06	2.1	130	0.52	0.01	12.3	61.3	5.73	0.31	0.006	10.9	1.99	3.9	820	1.2	0.06	2.7	0.6	3.89	31	0.3	6.23	2.67
	3.7	Volcanics	446151	5413361	308	<0.2	0.37	4.6	40	0.14	0.97	254	1080	5.06	0.01	0.014	6.4	0.62	19	510	9.3	0.16	10.8	0.24	4.17	37	0.48	9.23	5.43
	4.7	Volcanics	446242	5413352	293	<0.2	0.03	1.3	40	0.46	0.15	17.8	8.8	5.33	0.04	0.016	6.8	0.4	4.6	690	3.9	0.11	1.8	0.79	4.24	37	0.34	7.19	2.1
	5.7	Volcanics	446244	5413356	277	<0.2	0.03	4.9	50	0.08	0.02	15.6	20.8	4.3	<0.01	<0.005	5.7	0.17	7.8	1210	1.4	0.08	1.2	0.37	4.82	78	0.49	6.38	1.76
	6.7	Volcanics	446244	5413356	277	<0.2	0.07	1.2	30	0.54	0.03	25.9	6.3	4.64	0.01	0.009	6.1	0.16	5.5	880	4	0.07	1.9	2.06	4.11	60	0.72	7.27	4.14
	7.7	Volcanics	446250	5413300	294	<0.2	0.06	1.6	50	0.18	<0.01	15.7	67.5	9.07	0.04	0.007	12.2	0.45	10.8	490	1.6	0.05	3.3	0.18	1.64	61	0.07	5.56	2.47

## **Appendix 4**

### **2010 & 2011 ALS Minerals Analytical Certificates**



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Page: 1  
 Finalized Date: 12- JAN- 2011  
 This copy reported on  
 13- JAN- 2011  
 Account: KNAIND

**CERTIFICATE VA11001995**


Project:  
 P.O. No.:  
 This report is for 7 Rock samples submitted to our lab in Vancouver, BC, Canada on 5- JAN- 2011.  
 The following have access to data associated with this certificate:  
 KNAPPETT INDUSTRIES      CONNIE MCCOMBS

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME- OG46	Ore Grade Elements - AquaRegia	ICP- AES
Cu- OG46	Ore Grade Cu - Aqua Regia	VARIABLE
ME- MS41	51 anal. aqua regia ICPMS	

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Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS VA11001995**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- MS41 Ag ppm	ME- MS41 Al %	ME- MS41 As ppm	ME- MS41 Au ppm	ME- MS41 B ppm	ME- MS41 Ba ppm	ME- MS41 Be ppm	ME- MS41 Bi ppm	ME- MS41 Ca %	ME- MS41 Cd ppm	ME- MS41 Ce ppm	ME- MS41 Co ppm	ME- MS41 Cr ppm	ME- MS41 Cs ppm
1 E		0.02	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
2 E		0.88	16.85	0.87	44.8	<0.2	<10	10	<0.05	63.5	2.87	22.2	0.96	21.8	<1	<0.05
3 E		1.00	10.85	0.76	52.9	<0.2	<10	20	<0.05	28.8	3.38	9.45	0.97	35.8	<1	<0.05
4 E		1.14	0.41	0.63	55.1	0.2	<10	20	<0.05	3.00	0.05	0.09	1.53	161.0	<1	0.13
5 E		1.12	1.05	1.13	21.9	<0.2	<10	10	<0.05	9.79	4.12	0.56	2.44	72.6	<1	<0.05
6 E		0.92	7.08	0.80	11.2	0.2	<10	40	<0.05	2.89	0.99	7.53	3.43	20.5	4	0.07
7 E		1.20	1.15	0.13	11.8	<0.2	<10	10	<0.05	2.86	0.32	0.20	0.52	41.1	7	<0.05
7 E		1.32	2.88	0.32	67.2	0.2	<10	10	<0.05	5.03	0.40	1.07	1.15	104.0	5	0.05





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CERTIFICATE OF ANALYSIS VA11001995

Sample Description	Method Analyte Units LOR	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	
		Cu ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm
		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
1 E		>10000	25.5	1.75	0.38	<0.02	0.17	2.59	0.01	0.6	0.9	0.68	1400	5.62	0.01	0.28
2 E		>10000	26.9	1.50	0.39	<0.02	0.14	0.899	0.03	0.6	0.8	0.56	1380	18.70	0.01	0.29
3 E		977	23.7	1.21	0.44	0.02	2.75	0.012	0.20	0.6	0.4	0.28	81	18.45	0.01	0.41
4 E		1705	24.8	2.14	0.45	<0.02	0.05	0.071	0.01	1.5	2.0	0.85	1830	7.14	0.01	0.33
5 E		>10000	8.80	1.94	0.13	0.02	0.08	0.384	0.07	2.0	2.2	0.53	492	8.07	0.01	0.10
6 E		406	10.25	0.43	0.20	<0.02	0.03	0.010	0.01	0.3	0.3	0.10	137	6.11	<0.01	0.14
7 E		3980	17.80	1.04	0.37	<0.02	0.72	0.098	0.05	0.7	0.3	0.11	176	11.75	<0.01	0.29



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**CERTIFICATE OF ANALYSIS VA11001995**

Sample Description	Method Analyte Units LOR	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
		Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
		ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		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
1 E		3.0	20	6.3	0.2	0.002	>10.0	1.22	1.1	38.4	0.6	32.3	<0.01	53.7	<0.2	<0.005
2 E		3.1	90	8.1	0.6	0.005	>10.0	1.32	1.1	42.7	0.2	42.5	<0.01	28.7	<0.2	<0.005
3 E		1.9	30	3.9	3.4	0.027	>10.0	0.13	0.4	60.5	<0.2	2.3	<0.01	6.63	0.2	<0.005
4 E		1.2	50	11.3	0.2	0.005	>10.0	0.27	0.9	45.1	<0.2	60.8	<0.01	13.20	0.4	<0.005
5 E		1.3	110	4.1	1.3	0.007	7.65	0.20	1.0	17.5	0.4	7.3	<0.01	3.77	0.5	<0.005
6 E		1.2	20	4.0	0.1	0.008	>10.0	0.15	0.4	24.8	<0.2	2.7	<0.01	4.33	<0.2	<0.005
7 E		2.8	20	6.5	0.9	0.016	>10.0	0.85	0.4	53.7	<0.2	4.4	<0.01	7.11	<0.2	<0.005



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CERTIFICATE OF ANALYSIS VA11001995

Sample Description	Method Analyte Units LOR	ME- MS41 TI ppm 0.02	ME- MS41 U ppm 0.05	ME- MS41 V ppm 1	ME- MS41 W ppm 0.05	ME- MS41 Y ppm 0.05	ME- MS41 Zn ppm 2	ME- MS41 Zr ppm 0.5	Cu- OG46 Cu % 0.001
1 E		<0.02	<0.05	29	<0.05	1.53	310	<0.5	5.61
2 E		<0.02	<0.05	24	<0.05	2.07	125	<0.5	3.42
3 E		0.02	0.05	6	<0.05	0.75	14	0.6	
4 E		<0.02	<0.05	13	<0.05	4.12	46	<0.5	
5 E		<0.02	<0.05	5	0.17	2.22	134	0.7	1.550
6 E		<0.02	<0.05	1	0.08	0.50	8	<0.5	
7 E		0.03	<0.05	4	<0.05	1.28	14	<0.5	



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CERTIFICATE OF ANALYSIS VA11001995

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



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**CERTIFICATE VA10137282**

Project:  
 P.O. No.:  
 This report is for 6 Rock samples submitted to our lab in Vancouver, BC, Canada on 24-SEP-2010.

The following have access to data associated with this certificate:

KNAPPETT INDUSTRIES

CONNIE MCCOMBS

**SAMPLE PREPARATION**

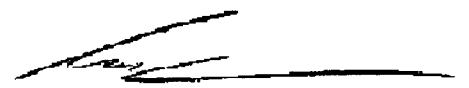
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	
ME-MS41	51 anal. aqua regia ICPMS	
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Cu-OG46	Ore Grade Cu - Aqua Regia	VARIABLE
Au-AA23	Au 30g FA-AA finish	AAS

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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.

Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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 Plus Appendix Pages  
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**CERTIFICATE OF ANALYSIS VA10137282**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-AA23 Au ppm	ME-MS41 Ag ppm	ME-MS41 Al %	ME-MS41 As ppm	ME-MS41 Au ppm	ME-MS41 B ppm	ME-MS41 Ba ppm	ME-MS41 Be ppm	ME-MS41 Bi ppm	ME-MS41 Ca %	ME-MS41 Cd ppm	ME-MS41 Ce ppm	ME-MS41 Co ppm	ME-MS41 Cr ppm
		0.02	0.005	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
1		0.80	2.34	1.73	1.12	5.0	<0.2	<10	20	0.09	0.07	0.28	0.03	3.46	14.7	11
2		0.84	0.006	0.07	5.12	8.1	<0.2	<10	40	0.13	0.33	0.55	0.10	10.20	34.5	5
3		1.02	0.014	0.07	2.32	8.6	<0.2	<10	60	0.09	0.45	0.21	0.10	10.55	43.1	3
4		0.72	0.040	1.15	0.16	14.4	<0.2	<10	50	0.21	0.05	2.76	0.13	2.85	16.9	16
5		0.64	0.008	2.50	3.39	7.3	<0.2	<10	340	0.26	0.01	2.61	0.18	10.35	66.6	11
6		0.76	<0.005	0.05	2.14	6.2	<0.2	<10	80	0.32	0.16	2.55	0.30	5.30	36.8	4

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





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**CERTIFICATE OF ANALYSIS VA10137282**

Sample Description	Method Analyte Units LOR	ME-MS41 Cs ppm 0.05	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01
1		0.09	2600	2.11	2.32	0.06	0.04	1.62	<0.005	0.06	1.7	9.3	0.90	512	1.80	<0.01
2		0.40	53.4	9.56	10.80	0.18	0.05	0.04	0.026	0.15	4.8	26.7	3.72	958	1.02	0.06
3		0.64	71.4	9.44	4.40	0.26	0.04	0.01	0.018	0.22	4.5	8.4	1.27	342	3.85	0.08
4		<0.05	5930	11.85	1.34	0.17	<0.02	0.01	<0.005	0.01	2.9	1.6	0.09	8450	2.49	<0.01
5		0.10	>10000	6.80	6.68	0.09	0.11	0.57	0.007	0.11	5.3	72.8	3.61	2020	0.88	0.02
6		0.22	93.1	5.15	4.03	0.09	0.14	0.25	0.011	0.20	2.4	10.0	0.97	1250	0.49	0.03



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**CERTIFICATE OF ANALYSIS VA10137282**

Sample Description	Method Analyte Units LOR	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	
		Nb ppm 0.05	Ni ppm 0.2	P ppm 10	Pb ppm 0.2	Rb ppm 0.1	Re ppm 0.001	S % 0.01	Sb ppm 0.05	Sc ppm 0.1	Se ppm 0.2	Sn ppm 0.2	Sr ppm 0.2	Ta ppm 0.01	Te ppm 0.01	Th ppm 0.2
1		0.17	6.8	430	0.9	1.4	<0.001	0.07	0.10	1.7	7.5	0.2	20.9	<0.01	0.89	0.3
2		0.18	10.1	2260	5.0	2.8	0.001	4.96	0.25	4.8	23.6	0.3	21.0	<0.01	0.90	1.9
3		0.13	11.9	880	5.3	3.9	0.001	9.79	0.30	3.1	47.5	0.3	23.7	<0.01	0.94	2.1
4		0.34	45.8	550	6.3	0.2	<0.001	0.27	1.05	0.7	0.4	<0.2	50.7	<0.01	0.10	<0.2
5		0.20	45.0	1940	2.5	1.8	<0.001	0.49	0.27	3.3	0.3	0.2	136.0	<0.01	0.02	1.0
6		0.45	17.1	1560	6.1	4.5	0.002	2.31	0.34	4.8	0.9	0.4	98.9	0.01	0.43	0.5



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 Total # Pages: 2 (A - D)  
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**CERTIFICATE OF ANALYSIS VA10137282**

Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	Cu-OG46 Cu %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.001
1		0.067	<0.02	0.08	30	0.21	1.92	38	0.8	
2		0.104	0.06	0.11	97	<0.05	6.96	166	1.5	
3		0.053	0.09	0.13	47	0.07	6.02	58	1.2	
4		0.005	<0.02	0.24	151	1.43	3.94	31	1.2	
5		0.147	0.02	0.27	92	0.29	6.44	145	3.2	1.845
6		0.234	0.06	0.27	49	0.22	5.64	181	2.6	



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**CERTIFICATE OF ANALYSIS VA10137282**

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



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**CERTIFICATE VA10150596**

Project:  
 P.O. No.:  
 This report is for 6 Rock samples submitted to our lab in Vancouver, BC, Canada on 18-OCT-2010.

The following have access to data associated with this certificate:

KNAPPETT INDUSTRIES

CONNIE MCCOMBS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Cu-OG46	Ore Grade Cu - Aqua Regia	VARIABLE
ME-MS41	51 anal. aqua regia ICPMS	

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**Signature:**   
 Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS VA10150596**

Sample Description	Method Analyte Units LOR	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
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm
B-1	Sagv... M... 130	0.78	2.74	1.87	6.8	<0.2	<10	100	0.35	0.04	2.93	0.19	11.15	32.1	12	0.08
B-2		0.64	1.87	2.01	681	1.4	<10	10	0.49	0.53	0.22	0.11	9.65	58.2	28	<0.05
B-3		0.64	0.56	0.38	29.0	<0.2	<10	10	0.06	0.37	0.61	0.10	4.83	17.6	16	<0.05
B-4		0.64	0.23	0.07	3.6	<0.2	<10	10	0.17	0.19	1.35	0.09	1.46	13.6	18	<0.05
B-5		0.72	10.25	0.22	31.7	<0.2	<10	<10	<0.05	26.2	0.46	3.00	0.92	127.0	11	<0.05
B-6		0.64	19.90	0.29	12.3	0.4	<10	30	<0.05	19.45	3.67	16.20	4.68	3.6	3	0.06





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**CERTIFICATE OF ANALYSIS VA10150596**

Sample Description	Method Analyte Units LOR	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	
		Cu ppm 0.2	Fe % 0.01	Ga ppm 0.05	Ge ppm 0.05	Hf ppm 0.02	Hg ppm 0.01	In ppm 0.005	K % 0.01	La ppm 0.2	Li ppm 0.1	Mg % 0.01	Mn ppm 5	Mo ppm 0.05	Na % 0.01	Nb ppm 0.05
B-1		>10000	5.35	3.47	0.21	0.16	0.84	0.006	0.07	5.6	36.6	1.71	1350	0.56	0.03	0.53
B-2		342	27.1	15.95	1.41	0.04	0.14	0.058	<0.01	2.6	15.1	0.78	2180	53.7	0.01	1.11
B-3		313	9.83	1.46	0.28	0.02	0.12	0.008	<0.01	2.5	1.4	0.12	1430	11.20	0.01	0.40
B-4		136.0	15.05	1.66	0.75	<0.02	0.03	0.006	<0.01	0.8	0.2	0.26	3990	30.2	0.01	0.76
B-5		>10000	24.8	0.73	0.98	<0.02	0.54	0.043	<0.01	0.5	0.7	0.15	228	9.63	0.01	1.08
B-6		>10000	11.25	0.87	0.24	0.02	0.32	0.812	0.04	2.5	0.6	0.16	1940	25.3	0.01	0.25



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**CERTIFICATE OF ANALYSIS VA10150596**

Sample Description	Method Analyte Units LOR	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	
		Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %
B-1		27.0	1880	2.9	1.5	0.001	0.38	0.30	4.1	0.7	0.2	177.5	0.01	0.02	1.3	0.172
B-2		149.0	1250	86.6	0.1	0.019	>10.0	7.58	7.7	7.3	<0.2	6.7	<0.01	2.26	0.2	0.012
B-3		51.1	360	24.6	0.1	0.003	7.51	2.75	2.0	8.0	<0.2	8.4	<0.01	0.53	<0.2	0.005
B-4		35.4	550	2.4	0.1	0.001	0.92	0.25	1.2	2.2	<0.2	15.5	<0.01	0.09	<0.2	<0.005
B-5		1.7	<10	6.9	0.1	0.007	>10.0	0.69	0.7	97.2	<0.2	2.2	<0.01	41.6	<0.2	<0.005
B-6		0.6	40	8.4	0.9	0.001	9.29	1.01	0.7	19.2	1.4	17.7	<0.01	18.05	0.2	<0.005



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**CERTIFICATE OF ANALYSIS VA10150596**

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Cu-OG46
		Tl ppm 0.02	U ppm 0.05	v ppm 1	W ppm 0.05	Y ppm 0.05	Zn ppm 2	Zr ppm 0.5	Cu % 0.001
B-1		0.02	0.35	83	0.36	6.11	73	3.1	2.00
B-2		0.03	0.20	249	0.42	2.90	72	1.8	
B-3		0.07	0.12	107	0.10	3.21	15	0.9	
B-4		<0.02	0.60	344	0.33	1.42	14	1.0	
B-5		0.02	<0.05	10	<0.05	0.62	63	<0.5	1.900
B-6		0.02	<0.05	3	0.05	6.08	362	<0.5	7.63



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**CERTIFICATE OF ANALYSIS VA10150596**

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



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**CERTIFICATE VA10170845**

Project:  
P.O. No.:  
This report is for 8 Rock samples submitted to our lab in Vancouver, BC, Canada on 17- NOV- 2010.  
The following have access to data associated with this certificate:  
KNAPPETT INDUSTRIES      CONNIE MCCOMBS

**SAMPLE PREPARATION**

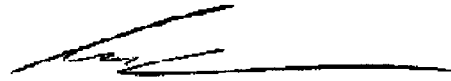
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% < 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% < 75 um

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME- OG46	Ore Grade Elements - AquaRegia	ICP- AES
Cu- OG46	Ore Grade Cu - Aqua Regia	VARIABLE
Pb- OG46	Ore Grade Pb - Aqua Regia	VARIABLE
Zn- OG46	Ore Grade Zn - Aqua Regia	VARIABLE
ME- MS41	51 anal. aqua regia ICPMS	

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**Signature:**   
Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS VA10170845**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- MS41 Ag ppm	ME- MS41 Al %	ME- MS41 As ppm	ME- MS41 Au ppm	ME- MS41 B ppm	ME- MS41 Ba ppm	ME- MS41 Be ppm	ME- MS41 Bi ppm	ME- MS41 Ca %	ME- MS41 Cd ppm	ME- MS41 Ce ppm	ME- MS41 Co ppm	ME- MS41 Cr ppm	ME- MS41 Cs ppm
		0.02	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
1 C		1.02	34.1	0.03	37.6	2.0	<10	20	<0.05	25.7	0.46	310	0.09	0.8	<1	0.08
2 C		0.80	65.2	0.13	57	1.2	<10	120	<0.05	11.70	17.15	>1000	10.55	2.4	<1	0.05
3 C		0.74	30.5	0.05	253	0.2	<10	10	<0.05	7.79	1.91	8.37	2.23	3.3	<1	0.05
4 C		0.86	23.6	0.07	342	0.2	<10	10	<0.05	6.19	2.21	1.67	3.80	8.5	<1	0.08
5 C		1.06	57.9	0.12	80.7	3.3	<10	10	<0.05	4.29	0.02	114.5	4.38	10.1	<1	0.10
6 C		0.74	13.65	0.06	167.0	0.3	<10	10	<0.05	2.40	1.09	2.77	2.20	10.4	<1	0.08
7 C		0.74	0.23	0.76	6.3	<0.2	<10	2640	0.09	0.04	4.29	9.33	11.90	1.4	<1	0.20
8 C		0.60	32.5	2.42	38.5	0.6	<10	50	0.12	3.62	2.51	48.4	2.46	0.8	2	0.07



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**CERTIFICATE OF ANALYSIS VA10170845**

Sample Description	Method Analyte Units LOR	ME- MS41 Cu ppm	ME- MS41 Fe %	ME- MS41 Ga ppm	ME- MS41 Ge ppm	ME- MS41 Hf ppm	ME- MS41 Hg ppm	ME- MS41 In ppm	ME- MS41 K %	ME- MS41 La ppm	ME- MS41 Li ppm	ME- MS41 Mg %	ME- MS41 Mn ppm	ME- MS41 Mo ppm	ME- MS41 Na %	ME- MS41 Nb ppm
		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
1 C		2510	22.4	1.58	0.48	<0.02	7.82	1.845	0.02	<0.2	0.1	0.01	23	107.5	0.02	0.19
2 C		>10000	3.51	14.90	0.27	0.03	31.9	0.249	0.03	9.3	0.6	0.11	874	345	0.02	0.06
3 C		>10000	14.80	1.16	0.25	<0.02	0.45	0.215	0.02	1.1	0.4	0.07	123	54.2	0.02	0.14
4 C		>10000	17.15	0.64	0.31	0.02	0.27	0.252	0.02	1.6	0.4	0.05	144	59.6	0.03	0.16
5 C		>10000	13.90	1.28	0.29	0.06	5.97	0.342	0.05	2.3	1.3	0.01	14	161.0	0.01	0.13
6 C		>10000	14.15	0.51	0.26	0.02	0.23	0.124	0.03	1.2	0.1	0.02	75	89.9	0.03	0.14
7 C		809	1.17	1.63	<0.05	0.04	0.02	<0.005	0.09	7.0	2.9	0.64	687	1.46	0.01	<0.05
8 C		>10000	4.35	6.56	0.10	0.07	0.87	0.149	0.22	0.6	0.5	0.92	465	14.90	0.07	<0.05





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**CERTIFICATE OF ANALYSIS VA10170845**

Sample Description	Method	MS41	MS41	MS41	MS41	MS41	MS41	MS41	MS41	MS41	MS41	MS41	MS41	MS41	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	%
	LOR	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
1 C		36.6	10	1795	0.4	0.003	>10.0	5.99	0.3	65.4	0.3	23.7	<0.01	20.8	<0.2	<0.005
2 C		19.2	20	>10000	0.7	0.015	>10.0	44.8	1.4	76.7	<0.2	177.0	<0.01	19.15	0.3	<0.005
3 C		1.5	30	280	0.3	0.001	>10.0	71.9	1.3	19.9	0.5	90.0	<0.01	4.04	0.3	<0.005
4 C		3.2	50	230	0.4	0.001	>10.0	36.2	0.9	26.2	0.5	43.2	<0.01	4.66	0.3	<0.005
5 C		21.7	10	88.4	0.8	0.013	>10.0	5.00	0.3	39.1	1.2	1.6	<0.01	8.05	0.2	<0.005
6 C		5.6	10	129.5	0.4	0.002	>10.0	9.96	0.4	25.2	0.4	29.7	<0.01	2.27	<0.2	<0.005
7 C		0.6	100	38.8	1.8	<0.001	0.13	0.13	0.5	0.5	<0.2	151.0	<0.01	0.02	1.3	<0.005
8 C		1.2	330	859	2.9	0.004	2.11	34.6	3.8	6.9	0.9	215	<0.01	3.40	0.5	<0.005



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**CERTIFICATE OF ANALYSIS VA10170845**

Sample Description	Method Analyte Units LOR	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	Cu- OG46	Pb- OG46	Zn- OG46
		Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Cu %	Pb %	Zn %
		0.02	0.05	1	0.05	0.05	2	0.5	0.001	0.001	0.001
1 C		0.03	0.39	<1	0.09	0.40	>10000	<0.5			6.08
2 C		0.03	1.14	9	0.46	5.05	>10000	0.9	1.260	1.720	20.6
3 C		0.02	0.10	2	<0.05	2.45	2020	0.5	10.90		
4 C		0.03	0.05	2	<0.05	4.26	380	0.7	2.96		
5 C		0.04	0.15	2	0.08	0.59	>10000	2.3	3.15		2.23
6 C		0.03	0.06	1	<0.05	1.45	522	0.7	2.20		
7 C		0.02	0.15	2	<0.05	12.85	1710	1.1			
8 C		0.28	0.44	10	<0.05	6.36	9560	2.8	3.45		



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CERTIFICATE OF ANALYSIS VA10170845

Method	CERTIFICATE COMMENTS
ME- MS41 ME- MS41	Interference: Ca> 10% on ICP- MS As,ICP- AES results shown. Gold determinations by this method are semi- quantitative due to the small sample weight used (0.5g).



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**CERTIFICATE VA10185687**

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SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% < 75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Ag- OG46	Ore Grade Ag - Aqua Regia	VARIABLE
ME- OG46	Ore Grade Elements - AquaRegia	ICP- AES
Cu- OG46	Ore Grade Cu - Aqua Regia	VARIABLE
Pb- OG46	Ore Grade Pb - Aqua Regia	VARIABLE
Zn- OG46	Ore Grade Zn - Aqua Regia	VARIABLE
ME- MS41	51 anal. aqua regia ICPMS	

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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.

Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS VA10185687**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- MS41 Ag ppm	ME- MS41 Al %	ME- MS41 As ppm	ME- MS41 Au ppm	ME- MS41 B ppm	ME- MS41 Ba ppm	ME- MS41 Be ppm	ME- MS41 Bi ppm	ME- MS41 Ca %	ME- MS41 Cd ppm	ME- MS41 Ce ppm	ME- MS41 Co ppm	ME- MS41 Cr ppm	ME- MS41 Cs ppm
Sample 1D		0.74	0.23	1.81	26	<0.2	<10	80	0.12	0.35	10.85	46.0	18.30	15.8	1	0.13
Sample 2D		0.74	16.70	0.42	20.1	0.3	<10	30	<0.05	3.10	0.04	0.50	1.26	6.6	<1	0.09
Sample 3D		0.86	34.6	0.27	90.9	1.8	<10	20	<0.05	2.36	1.38	6.60	3.87	2.9	3	0.12
Sample 4D		0.94	65.5	0.11	236	1.7	<10	20	<0.05	17.30	0.99	>1000	1.40	27.5	<1	<0.05
Sample 5D		0.88	>100	0.21	87.9	16.9	<10	80	<0.05	47.3	0.60	504	0.07	1.8	<1	0.13
Sample 6D		0.60	11.10	0.34	41.8	0.6	<10	30	0.06	1.14	0.08	11.65	2.81	56.2	3	0.11
Sample 7D		1.00	>100	0.05	208	4.8	<10	10	<0.05	3.78	0.27	658	0.12	0.7	<1	0.06
Sample 8D		0.60	9.12	0.17	27.8	0.2	<10	10	<0.05	13.60	0.38	10.65	0.44	99.9	<1	<0.05
Sample 9D		0.66	12.25	0.26	36.2	0.2	<10	30	<0.05	45.0	0.84	11.05	0.64	111.0	<1	<0.05



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**CERTIFICATE OF ANALYSIS VA10185687**

Sample Description	Method Analyte Units LOR	ME- MS41 Cu ppm	ME- MS41 Fe %	ME- MS41 Ga ppm	ME- MS41 Ge ppm	ME- MS41 Hf ppm	ME- MS41 Hg ppm	ME- MS41 In ppm	ME- MS41 K %	ME- MS41 La ppm	ME- MS41 Li ppm	ME- MS41 Mg %	ME- MS41 Mn ppm	ME- MS41 Mo ppm	ME- MS41 Na %	ME- MS41 Nb ppm
		0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	S	0.05	0.01	0.05
Sample 1D		5150	6.23	3.20	0.10	0.08	0.07	0.070	0.22	10.3	7.3	4.69	2520	1.14	0.02	0.10
Sample 2D		398	23.7	1.18	0.29	0.02	0.06	0.017	0.20	0.4	0.4	0.05	37	478	0.02	0.19
Sample 3D		>10000	9.48	0.78	0.11	0.11	0.53	0.049	0.09	2.0	0.3	0.05	205	178.0	0.04	0.13
Sample 4D		7390	8.01	1.33	0.26	<0.02	59.0	3.19	0.02	0.7	0.5	0.11	337	2.52	0.01	0.12
Sample 5D		>10000	20.9	6.09	0.31	<0.02	16.00	2.14	0.07	<0.2	0.5	0.10	107	110.5	0.01	0.17
Sample 6D		1590	11.55	0.90	0.11	0.02	1.13	0.067	0.16	1.5	0.1	0.01	59	173.5	0.01	0.09
Sample 7D		>10000	2.02	7.91	0.08	<0.02	18.10	0.148	0.03	<0.2	0.1	0.01	53	95.1	<0.01	<0.05
Sample 8D		>10000	23.8	0.52	0.57	<0.02	1.32	0.033	0.05	0.2	0.2	0.05	149	14.85	0.01	0.18
Sample 9D		>10000	25.9	0.74	0.69	<0.02	0.99	0.102	0.01	0.2	0.5	0.21	328	9.80	0.01	0.16



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**CERTIFICATE OF ANALYSIS VA10185687**

Sample Description	Method Analyte Units LOR	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	
		Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %
		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
Sample 1D		4.3	270	21.2	3.1	<0.001	6.26	0.20	2.9	4.8	1.8	495	0.01	0.57	1.1	<0.005
Sample 2D		3.3	<10	271	3.0	0.011	>10.0	2.81	0.4	44.5	0.2	2.3	<0.01	4.15	<0.2	<0.005
Sample 3D		4.0	10	113.0	1.4	0.004	>10.0	16.70	0.7	16.2	1.6	42.7	<0.01	4.21	0.5	<0.005
Sample 4D		17.2	10	2320	0.3	<0.001	>10.0	20.1	0.3	37.0	0.2	15.1	<0.01	13.30	<0.2	<0.005
Sample 5D		28.2	10	2080	1.1	0.003	>10.0	11.80	0.3	46.8	0.7	16.1	<0.01	68.4	<0.2	<0.005
Sample 6D		30.4	10	20.5	2.9	0.017	>10.0	5.33	0.4	16.0	0.3	3.3	<0.01	1.25	<0.2	<0.005
Sample 7D		2.8	10	>10000	0.6	0.006	>10.0	740	0.2	21.8	<0.2	52.1	<0.01	22.3	0.3	<0.005
Sample 8D		20.4	<10	375	0.9	0.004	>10.0	13.95	0.3	95.2	<0.2	6.3	<0.01	21.8	0.3	<0.005
Sample 9D		0.7	10	409	0.1	0.006	>10.0	10.75	0.4	115.0	<0.2	10.3	<0.01	55.6	0.3	<0.005





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CERTIFICATE OF ANALYSIS VA10185687

Sample Description	Method Analyte Units LOR	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	Ag- OG46	Cu- OG46	Pb- OG46	Zn- OG46
		Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Ag ppm	Cu %	Pb %	Zn %
		0.02	0.05	1	0.05	0.05	2	0.5	1	0.001	0.001	0.001
Sample 1D		0.06	0.36	7	0.05	25.6	3440	2.0				
Sample 2D		0.10	<0.05	6	0.09	0.37	76	0.8				
Sample 3D		0.06	0.34	2	0.07	2.45	1020	3.4		2.72		
Sample 4D		0.05	<0.05	1	<0.05	2.23	>10000	<0.5				>30.0
Sample 5D		0.06	0.43	8	0.14	0.64	>10000	<0.5	113	3.23		10.45
Sample 6D		0.11	0.05	2	0.48	0.31	1240	0.6				
Sample 7D		0.05	0.37	3	0.11	0.11	>10000	<0.5	176	1.190	2.78	13.85
Sample 8D		0.07	<0.05	4	0.06	0.41	2140	<0.5		1.005		
Sample 9D		0.02	<0.05	9	<0.05	0.89	1480	<0.5		3.11		



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CERTIFICATE OF ANALYSIS VA10185687

Method	CERTIFICATE COMMENTS
ME- MS41	Interference: Ca> 10% on ICP- MS As,ICP- AES results shown.
ME- MS41	Gold determinations by this method are semi- quantitative due to the small sample weight used (0.5g).
ME- MS41	Interference: Mo> 400ppm on ICP- MS Cd,ICP- AES results shown.



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**CERTIFICATE VA10200240**

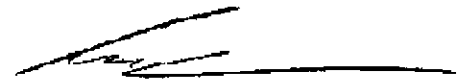
Project:  
 P.O. No.:  
 This report is for 1 Rock sample submitted to our lab in Vancouver, BC, Canada on 28- DEC- 2010.  
 The following have access to data associated with this certificate:  
 KNAPPETT INDUSTRIES      CONNIE MCCOMBS

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS

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Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS VA10200240

Sample Description	Method Analyte Units LOR	Au-AA24 Au ppm 0.005
B-2		1.300



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**CERTIFICATE VA10200241**

Project:  
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 This report is for 3 Rock samples submitted to our lab in Vancouver, BC, Canada on 28-DEC-2010.

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KNAPPETT INDUSTRIES

CONNIE MCCOMBS

**SAMPLE PREPARATION**


ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA24	Au 50g FA AA finish	AAS

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Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS VA10200241

Sample Description	Method Analyte Units LOR	Au- AA24 Au ppm 0.005
1 C 2 C 5 C		1.740 1.175 2.74



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**CERTIFICATE VA10200243**

Project:  
P.O. No.:  
This report is for 4 Rock samples submitted to our lab in Vancouver, BC, Canada on 28- DEC- 2010.

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KNAPPETT INDUSTRIES

CONNIE MCCOMBS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
Au- GRA22	Au 50 g FA- GRAV finish	WST- SIM

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CERTIFICATE OF ANALYSIS VA10200243

Sample Description	Method Analyte Units LOR	Au- AA24 Au ppm	Au- GRA22 Au ppm
Sample 3D		2.57	
Sample 4D		1.585	
Sample 5D		>10.0	21.1
Sample 7D		4.28	



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**CERTIFICATE VA11021571**

Project:  
 P.O. No.:  
 This report is for 8 Rock samples submitted to our lab in Vancouver, BC, Canada on 11- FEB- 2011.

The following have access to data associated with this certificate:

KNAPPETT INDUSTRIES

CONNIE MCCOMBS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% <75 um

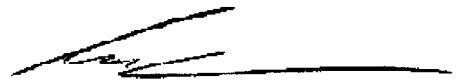
**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION
ME- MS41	51 anal. aqua regia ICPMS

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**CERTIFICATE OF ANALYSIS VA11021571**

Sample Description	Method Analyte Units LOR	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
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm
		0.02	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
1.6		0.68	0.50	1.44	122.5	<0.2	<10	20	0.11	0.11	0.52	0.03	4.25	98.5	2	0.20
2.6		0.70	0.17	1.09	57.2	<0.2	<10	80	0.46	0.07	4.47	0.64	6.14	35.6	<1	0.40
3.6		0.58	0.18	1.37	97.3	<0.2	<10	40	0.11	0.04	0.72	0.02	6.55	33.9	2	0.19
4.6		0.74	0.24	3.53	16.3	<0.2	<10	30	0.13	0.92	0.62	0.03	1.59	49.4	1	0.10
5.6		0.72	0.18	5.06	56.1	<0.2	<10	20	0.39	0.04	3.77	0.08	7.21	24.2	<1	0.28
6.6		0.78	0.62	3.86	88.6	<0.2	<10	30	0.27	0.39	0.75	0.13	7.64	386	<1	0.32
7.6		0.70	0.62	4.18	78.3	<0.2	<10	30	0.25	0.54	0.53	0.10	9.41	543	<1	0.34
8.6		0.70	0.92	4.74	129.0	<0.2	<10	40	0.30	0.52	1.08	0.21	11.15	393	<1	0.26



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**CERTIFICATE OF ANALYSIS VA11021571**

Sample Description	Method Analyte Units LOR	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	
		Cu ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm
		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
1.6		277	11.95	3.10	0.22	0.23	0.04	0.017	0.28	1.6	6.9	0.40	466	1.47	0.02	0.48
2.6		127.5	11.25	2.20	0.16	0.05	0.55	0.031	0.25	2.1	20.1	0.85	1360	2.07	0.01	0.24
3.6		126.5	6.18	2.62	0.07	0.33	0.03	0.014	0.33	2.4	4.2	0.43	346	0.76	0.03	0.37
4.6		10.6	15.25	6.32	0.23	0.09	0.41	<0.005	0.09	0.5	13.5	1.22	1030	3.82	0.02	0.44
5.6		11.3	23.0	10.95	0.52	0.05	0.17	0.011	0.03	2.6	30.3	1.54	1660	3.61	<0.01	0.54
6.6		1455	18.35	7.98	0.43	0.25	0.11	0.124	0.21	2.7	22.7	1.27	795	5.17	0.01	0.50
7.6		1380	22.6	10.60	0.59	0.16	0.18	0.473	0.11	3.4	31.8	1.18	783	5.98	0.01	0.59
8.6		2620	22.8	12.55	0.57	0.16	0.19	0.636	0.13	4.3	41.4	1.20	931	9.50	0.01	0.59



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**CERTIFICATE OF ANALYSIS VA11021571**

Sample Description	Method Analyte Units LOR	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	
		Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %
		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
1.6		32.1	1080	11.7	5.9	0.047	>10.0	1.98	4.9	14.2	<0.2	17.6	0.01	0.87	0.3	0.174
2.6		7.5	180	2.1	5.1	0.005	0.64	11.70	12.0	1.2	<0.2	79.7	0.01	0.07	0.3	<0.005
3.6		13.4	1720	4.6	6.9	0.013	4.99	1.00	7.7	6.6	0.2	12.1	0.01	0.60	0.6	0.286
4.6		20.8	150	5.8	1.8	0.003	>10.0	0.26	6.0	4.5	0.4	40.6	0.01	1.28	<0.2	0.204
5.6		17.2	500	2.6	0.9	0.004	1.85	0.46	19.3	0.7	<0.2	61.0	0.01	0.02	0.3	0.018
6.6		11.5	1480	6.7	3.8	0.001	>10.0	0.83	14.6	35.8	3.6	12.6	0.01	0.39	0.4	0.152
7.6		13.6	1560	8.1	2.1	0.002	>10.0	2.77	17.3	42.7	8.1	9.8	0.01	0.52	0.3	0.067
8.6		13.2	1180	8.4	2.6	0.002	>10.0	4.22	20.2	38.9	10.2	10.3	0.01	0.45	0.4	0.054



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CERTIFICATE OF ANALYSIS VA11021571

Sample Description	Method Analyte Units LOR	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41
		TI	U	V	W	Y	Zn	Zr
		ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.05	1	0.05	0.05	2	0.5
1.6		0.04	1.11	68	0.05	7.00	26	6.7
2.6		0.04	0.16	121	0.05	13.60	123	<0.5
3.6		0.05	1.74	85	0.08	10.95	28	9.6
4.6		0.02	0.38	94	0.14	3.97	54	2.3
5.6		<0.02	0.25	193	<0.05	11.30	78	0.6
6.6		0.07	1.39	115	0.07	12.05	69	6.4
7.6		0.09	1.31	128	0.06	11.40	59	3.9
8.6		0.08	1.52	156	0.05	14.75	77	3.6



**Minerals**

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**CERTIFICATE OF ANALYSIS VA11021571**

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





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Page: 1  
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 Account: KNAIND

**CERTIFICATE VA11053516**

Project:

P.O. No.:

This report is for 19 Rock samples submitted to our lab in Vancouver, BC, Canada on 5- APR- 2011.

The following have access to data associated with this certificate:

KNAPPETT INDUSTRIES

CONNIE MCCOMBS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
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

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME- OG46	Ore Grade Elements - AquaRegia	ICP- AES
Pb- OG46	Ore Grade Pb - Aqua Regia	VARIABLE
Cu- OG46	Ore Grade Cu - Aqua Regia	VARIABLE
Zn- OG46	Ore Grade Zn - Aqua Regia	VARIABLE
Au- AA24	Au 50g FA AA finish	AAS
Au- GRA22	Au 50 g FA- GRAV finish	WST- SIM
ME- MS41	51 anal. aqua regia ICPMS	
Ag- OG46	Ore Grade Ag - Aqua Regia	VARIABLE

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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.

Signature:

  
 Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS VA11053516**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- MS41 Ag ppm	ME- MS41 Al %	ME- MS41 As ppm	ME- MS41 Au ppm	ME- MS41 B ppm	ME- MS41 Ba ppm	ME- MS41 Be ppm	ME- MS41 Bi ppm	ME- MS41 Ca %	ME- MS41 Cd ppm	ME- MS41 Ce ppm	ME- MS41 Co ppm	ME- MS41 Cr ppm	ME- MS41 Cs ppm
1.7		0.74	0.25	2.07	12.8	<0.2	<10	20	0.07	5.27	0.02	0.02	1.71	22.9	1	0.45
2.7		0.76	0.06	2.52	2.1	<0.2	<10	130	0.09	0.52	0.30	0.01	4.00	12.3	3	0.05
3.7		0.70	0.37	2.93	4.6	<0.2	<10	40	0.06	0.14	0.48	0.97	2.39	254	7	0.05
4.7		0.76	0.03	2.62	1.3	<0.2	<10	40	0.09	0.48	0.34	0.15	2.12	17.8	5	0.08
5.7		0.78	0.03	3.00	4.9	<0.2	<10	50	0.05	0.08	0.49	0.02	2.98	15.6	4	<0.05
6.7		0.76	0.07	2.64	1.2	<0.2	<10	30	0.05	0.54	0.72	0.03	2.85	25.9	4	<0.05
7.7		0.78	0.06	3.01	1.6	<0.2	<10	50	0.12	0.18	0.07	<0.01	2.48	15.7	28	<0.05
1.8		0.72	80.0	0.16	57.2	0.7	<10	30	<0.05	0.44	0.85	17.55	3.79	9.7	1	<0.05
2.8		0.68	>100	0.25	54.2	2.8	<10	60	<0.05	37.2	8.05	>1000	6.64	2.7	<1	0.10
3.8		0.88	48.2	0.33	253	1.6	<10	10	<0.05	20.9	6.20	562	5.64	32.3	1	0.05
4.8		0.82	>100	0.15	124.0	2.5	<10	30	<0.05	6.60	0.04	11.20	2.09	6.0	<1	0.08
5.8		0.82	94.4	0.14	114.5	1.2	<10	20	<0.05	28.9	0.09	>1000	0.70	14.0	3	0.06
6.8		0.80	79.5	0.12	185.0	1.2	<10	20	<0.05	13.60	0.76	>1000	1.14	22.5	1	<0.05
7.8		0.82	48.9	0.05	126.5	2.6	<10	20	<0.05	17.95	0.41	433	0.21	2.0	<1	0.06
8.8		0.88	6.92	0.11	75.8	1.1	<10	20	<0.05	0.35	0.54	22.8	1.27	8.7	7	0.09
1.9		0.70	>100	0.13	2260	12.4	<10	40	<0.05	67.5	2.10	220	3.06	1.2	<1	0.18
2.9		0.70	>100	0.04	1735	2.3	<10	110	<0.05	1.60	4.07	44.1	3.04	17.8	<1	<0.05
3.9		0.74	>100	0.38	1065	5.4	<10	40	<0.05	74.4	1.60	455	0.36	2.3	1	0.15
4.9		0.72	>100	0.54	488	1.9	<10	40	<0.05	29.2	3.52	741	1.40	2.8	2	0.12

\*\*\*\* See Appendix Page for comments regarding this report \*\*\*\*



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CERTIFICATE OF ANALYSIS VA11053516

Sample Description	Method Analyte Units LOR	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
		Cu ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm
		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
1.7		216	16.60	10.15	0.22	0.06	1.73	0.020	0.11	0.9	6.8	0.93	326	17.85	<0.01	0.08
2.7		61.3	6.23	5.73	0.10	0.07	0.31	0.006	0.17	1.9	10.9	1.75	435	1.99	0.06	0.22
3.7		1080	9.23	5.06	0.16	0.09	0.01	0.014	0.07	1.1	6.4	1.94	508	0.62	0.01	0.20
4.7		8.8	7.19	5.33	0.10	0.09	0.04	0.016	0.12	0.8	6.8	1.96	1180	0.40	0.04	0.26
5.7		20.8	6.38	4.30	0.10	0.05	<0.01	<0.005	0.10	1.2	5.7	1.95	624	0.17	0.03	0.12
6.7		6.3	7.27	4.64	0.13	0.15	0.01	0.009	0.07	1.2	6.1	2.38	538	0.16	0.04	0.31
7.7		67.5	5.56	9.07	0.09	0.02	0.04	0.007	0.08	1.1	12.2	3.26	431	0.45	0.05	0.06
1.8		>10000	9.93	0.35	0.14	0.11	1.39	0.363	0.02	2.0	0.3	0.14	113	85.5	0.07	0.10
2.8		>10000	6.41	9.81	0.33	0.03	38.9	0.895	0.03	5.5	1.3	0.14	490	399	0.02	0.08
3.8		>10000	23.3	7.36	0.67	<0.02	14.20	1.385	0.02	4.8	1.8	0.20	428	99.0	0.01	0.24
4.8		>10000	20.0	0.61	0.33	0.06	1.67	0.224	0.07	1.0	0.2	0.01	15	132.5	0.01	0.17
5.8		>10000	4.26	1.59	0.20	<0.02	28.8	2.08	0.03	0.4	0.5	0.06	72	2.40	0.01	0.07
6.8		6990	7.31	1.54	0.31	<0.02	50.9	3.02	0.02	0.6	0.5	0.09	222	5.57	0.01	0.09
7.8		>10000	5.07	3.71	0.17	<0.02	13.15	0.318	0.03	<0.2	0.2	0.01	26	163.5	0.01	0.05
8.8		8620	2.71	0.43	0.06	<0.02	0.49	0.347	0.07	0.7	0.1	0.02	118	102.5	0.01	0.07
1.9		>10000	24.3	2.99	0.80	<0.02	19.30	2.11	0.07	1.6	0.2	0.33	501	219	0.02	0.18
2.9		>10000	28.4	1.02	0.46	<0.02	1.46	0.716	<0.01	2.1	0.2	0.28	626	12.50	0.02	0.20
3.9		>10000	15.95	5.34	0.57	0.03	6.02	2.28	0.02	<0.2	2.0	0.41	253	253	0.02	0.15
4.9		>10000	6.36	16.00	0.33	0.03	7.99	1.675	0.03	0.4	1.1	0.23	361	158.5	0.03	0.07



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**CERTIFICATE OF ANALYSIS VA11053516**

Sample Description	Method Analyte Units LOR	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	
		Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %
		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
1.7		0.9	220	8.4	2.9	0.005	7.79	0.21	1.4	20.7	0.3	8.0	<0.01	4.70	1.6	0.005
2.7		3.9	820	1.2	2.7	<0.001	2.67	0.06	5.6	2.7	0.4	7.5	<0.01	0.60	0.5	0.211
3.7		19.0	510	9.3	1.5	0.001	5.43	0.16	3.6	10.8	0.4	23.8	<0.01	0.24	0.2	0.127
4.7		4.6	690	3.9	2.5	<0.001	2.10	0.10	6.2	1.8	0.3	17.9	<0.01	0.79	0.2	0.168
5.7		7.8	1210	1.4	2.0	0.001	1.76	0.08	3.6	1.2	<0.2	13.0	<0.01	0.37	0.2	0.137
6.7		5.5	880	4.0	1.3	0.001	4.14	0.07	3.5	1.9	0.3	14.0	<0.01	2.06	0.2	0.200
7.7		10.8	490	1.6	1.6	<0.001	2.47	0.05	10.0	3.3	<0.2	3.2	<0.01	0.18	0.5	0.009
1.8		2.6	50	16.5	0.4	0.004	7.19	3.99	1.1	9.5	1.4	26.7	<0.01	1.82	1.1	<0.005
2.8		12.0	40	>10000	0.5	0.020	>10.0	29.8	0.7	93.4	0.8	102.0	<0.01	42.3	<0.2	<0.005
3.8		6.6	20	8920	0.4	0.004	>10.0	29.0	0.3	79.6	0.5	79.0	<0.01	30.8	<0.2	<0.005
4.8		9.9	<10	186.5	1.0	0.006	>10.0	9.62	0.2	36.4	0.8	1.1	<0.01	9.52	<0.2	<0.005
5.8		5.4	60	3870	0.6	0.001	7.66	24.8	0.3	48.0	0.3	4.2	<0.01	20.7	0.3	<0.005
6.8		9.5	20	2300	0.3	<0.001	>10.0	23.9	0.3	45.1	0.3	7.7	<0.01	10.15	<0.2	<0.005
7.8		7.4	10	7030	0.6	0.013	>10.0	17.15	0.1	37.2	0.2	59.8	<0.01	20.1	<0.2	<0.005
8.8		7.3	100	34.7	1.3	0.007	2.89	4.28	0.3	6.6	0.2	14.8	<0.01	0.68	<0.2	<0.005
1.9		18.3	10	3170	1.2	0.007	>10.0	68.2	0.2	41.2	0.6	20.5	<0.01	88.7	<0.2	<0.005
2.9		2.4	<10	182.0	<0.1	0.002	>10.0	97.3	<0.1	21.2	0.9	50.7	<0.01	6.12	<0.2	<0.005
3.9		13.0	340	7070	0.4	0.009	>10.0	64.3	0.6	60.5	1.6	38.0	<0.01	46.4	<0.2	<0.005
4.9		7.8	430	>10000	0.5	0.005	>10.0	113.5	1.4	44.4	1.9	40.5	<0.01	24.7	<0.2	<0.005



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**CERTIFICATE OF ANALYSIS VA11053516**

Sample Description	Method Analyte Units LOR	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	ME- MS41	Ag- OG46	Pb- OG46	Cu- OG46	Zn- OG46	Au- AA24	Au- GRA22
		Tl ppm	U ppm	v ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Ag ppm	Pb %	Cu %	Zn %	Au ppm	Au ppm
		0.02	0.05	1	0.05	0.05	2	0.5	1	0.001	0.001	0.001	0.005	0.05
1.7		<0.02	0.36	25	0.06	0.80	40	2.2						
2.7		<0.02	0.27	69	0.40	3.89	31	1.5						
3.7		<0.02	0.11	68	0.13	4.17	37	2.3						
4.7		<0.02	0.07	94	0.13	4.24	37	2.2						
5.7		<0.02	0.06	75	0.14	4.82	78	1.3						
6.7		<0.02	0.09	89	0.11	4.11	60	3.3						
7.7		<0.02	<0.05	101	<0.05	1.64	61	0.7						
1.8		0.03	0.41	2	0.10	2.08	1650	3.8			8.16			
2.8		0.03	1.37	7	0.45	4.72	>10000	1.0	126	1.870	1.615	28.2	2.87	
3.8		0.17	0.50	14	0.10	2.53	>10000	<0.5			0.943	9.27	1.590	
4.8		0.05	0.09	1	0.09	0.40	2830	2.1	155		10.40		2.74	
5.8		0.06	<0.05	1	<0.05	0.27	>10000	<0.5			1.400	26.0	1.385	
6.8		0.06	<0.05	1	<0.05	1.60	>10000	<0.5				>30.0	1.250	
7.8		0.15	0.68	2	0.05	0.16	>10000	<0.5			2.29	8.38	2.87	
8.8		0.07	<0.05	1	0.11	0.98	2760	<0.5					1.235	
1.9		0.22	0.07	4	0.44	5.05	>10000	<0.5	337		13.70	5.47	>10.0	13.40
2.9		0.06	0.12	6	<0.05	1.94	6850	<0.5	128		17.95		3.09	
3.9		0.05	1.82	9	0.13	2.51	>10000	0.9	212		9.55	9.22	6.09	
4.9		0.06	0.38	6	0.10	4.18	>10000	1.0	131	2.04	2.29	15.15	2.21	



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CERTIFICATE OF ANALYSIS VA11053516

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

## **Appendix 5**

### **2010 & 2011 Cost Reports for Assessment Work**

**2010&2011 Assessment Cost Report - Mt. Sicker**

<b>Exploration Work type</b>	<b>Comment</b>	<b>Days</b>			<b>Totals</b>
<b>Personnel (Name)* / Position</b>	<b>Field Days (list actual days)</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	
Brant Protasiewich / Prospector	Oct.10, Nov.14, Dec.5,11, Feb.5, Mar.21,24	6.833	\$316.00	\$2,159.23	
Harry Young / Prospector	Oct.10, Nov.14, Dec.5,11, Feb.5, Mar.21,24	6.833	\$316.00	\$2,159.23	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
				\$4,318.46	<b>\$4,318.46</b>
<b>Office Studies</b>	<b>List Personnel (note - Office only, do not include field days)</b>				
Database compilation	Brant Protasiewich	1.25	\$316.00	\$395.00	
Database compilation	Harry Young	1.25	\$316.00	\$395.00	
Database compilation	Connie McCombs	1.25	\$316.00	\$395.00	
Report preparation	Jacques Houle, P.Eng.	8.60	\$794.68	\$6,834.24	
				\$8,019.24	<b>\$8,019.24</b>
<b>Geochemical Surveying</b>	<b>Number of Samples</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Rock	<i>laboratory costs</i>	46	\$51.59	\$2,373.13	
				\$2,373.13	<b>\$2,373.13</b>
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
truck rental		6.83	\$148.00	\$1,011.28	
truck rental - Houle		0.20	\$403.20	\$80.64	
fuel		166.67	\$1.15	\$190.93	
				\$1,282.85	<b>\$1,282.85</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>				
Meals	day rate or actual costs-specify	12.67	\$25.00	\$316.68	
				\$316.68	<b>\$316.68</b>
<b>Equipment Rentals</b>					
Field Gear (Specify)			\$0.00	\$0.00	
Other (Specify)	office - Houle	7.65	\$79.85	\$610.85	
				\$610.85	<b>\$610.85</b>
<b>Freight, rock samples</b>					
		46	\$2.95	\$135.71	
			\$0.00	\$0.00	
				\$135.71	<b>\$135.71</b>
<b>TOTAL Expenditures</b>					<b>\$17,056.92</b>



### 2010&2011 Assessment Cost Report - Sognidoro

Exploration Work type	Comment	Days			Totals
<b>Personnel (Name)* / Position</b>	<b>Field Days (list actual days)</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	
Brant Protasiewich / Prospector	Sept.18 & Oct. 10, 2010	1.667	\$316.00	\$526.77	
Harry Young / Prospector	Sept.18 & Oct. 10, 2010	1.667	\$316.00	\$526.77	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
				\$1,053.54	<b>\$1,053.54</b>
<b>Office Studies</b>	<b>List Personnel (note - Office only, do not include field days)</b>				
Database compilation	Brant Protasiewich	0.250	\$316.00	\$79.00	
Database compilation	Harry Young	0.250	\$316.00	\$79.00	
Database compilation	Connie McCombs	0.250	\$316.00	\$79.00	
Report preparation	Jacques Houle, P.Eng.	2.600	\$806.40	\$2,096.64	
				\$2,333.64	<b>\$2,333.64</b>
<b>Geochemical Surveying</b>	<b>Number of Samples</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Rock	<i>laboratory costs</i>	10	\$53.93	\$539.32	
				\$539.32	<b>\$539.32</b>
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
truck rental - Knappett		1.67	\$148.00	\$246.72	
truck rental - Houle		0.10	\$403.20	\$40.32	
fuel		33.33	\$1.07	\$35.67	
				\$322.71	<b>\$322.71</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>				
Meals	day rate or actual costs-specify	3.33	\$25.00	\$83.33	
				\$83.33	<b>\$83.33</b>
<b>Equipment Rentals</b>					
Field Gear (Specify)			\$0.00	\$0.00	
Other (Specify)	Houle - office	2.10	\$80.64	\$169.34	
				\$169.34	<b>\$169.34</b>
<b>Freight, rock samples</b>					
		10	\$3.52	\$35.23	
			\$0.00	\$0.00	
				\$35.23	<b>\$35.23</b>
<b>TOTAL Expenditures</b>					<b>\$4,537.11</b>

## 2011 Assessment Cost Report - Volcanics

Exploration Work type	Comment	Days			Totals
<b>Personnel (Name)* / Position</b>	<b>Field Days (list actual days)</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	
Brant Protasiewich / Prospector	17-Mar-11	1.25	\$316.00	\$395.00	
Harry Young / Prospector	17-Mar-11	1.25	\$316.00	\$395.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
				\$790.00	<b>\$790.00</b>
<b>Office Studies</b>	<b>List Personnel (note - Office only, do not include field days)</b>				
Database compilation	Brant Protasiewich	0.25	\$316.00	\$79.00	
Database compilation	Harry Young	0.25	\$316.00	\$79.00	
Database compilation	Connie McCombs	0.25	\$316.00	\$79.00	
Report preparation	Jacques Houle, P.Eng.	0.75	\$806.40	\$604.80	
				\$841.80	<b>\$841.80</b>
<b>Geochemical Surveying</b>	<b>Number of Samples</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Rock	<i>laboratory costs</i>	7.0	\$49.30	\$345.12	
				\$345.12	<b>\$345.12</b>
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
truck rental - Knappett		1.25	\$148.00	\$185.00	
truck rental - Houle				\$0.00	
fuel		25.00	\$1.25	\$31.25	
				\$216.25	<b>\$216.25</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>				
Meals	day rate or actual costs-specify	2.00	\$25.00	\$50.00	
				\$50.00	<b>\$50.00</b>
<b>Equipment Rentals</b>					
Field Gear (Specify)			\$0.00	\$0.00	
Other (Specify)	Office - Houle	0.65	\$80.64	\$52.42	
				\$52.42	<b>\$52.42</b>
<b>Freight, rock samples</b>					
		10.0	\$1.36	\$13.62	
			\$0.00	\$0.00	
				\$13.62	<b>\$13.62</b>
<b>TOTAL Expenditures</b>					<b>\$2,309.21</b>

## **Appendix 8**

### **BC Mineral Deposit Profiles**

**G06 – Noranda-Kuroko Massive Sulphide Cu-Pb-Zn**

**I05 – Polymetallic Veins – Ag-Pb-Zn+/-Au**

# NORANDA/KUROKO MASSIVE SULPHIDE Cu-Pb-Zn

## G06

by Trygve Høy  
British Columbia Geological Survey

Høy, Trygve (1995): Noranda/Kuroko Massive Sulphide Cu-Pb-Zn, in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebvre, D.V. and Høy, T, Editors, British Columbia Ministry of Energy of Employment and Investment, Open File 1995-20, pages 53-54.

### IDENTIFICATION

**SYNONYM:** Polymetallic volcanogenic massive sulphide.

**COMMODITIES (BYPRODUCTS):** Cu, Pb, Zn, Ag, Au (Cd, S, Se, Sn, barite, gypsum).

**EXAMPLES (British Columbia - Canada/International):** Homestake ([082M 025](#)), Lara ([092B 001](#)), Lynx ([092B 129](#)), Myra ([092F 072](#)), Price ([092F 073](#)), H-W ([092F 330](#)), Ecstall ([103H 011](#)), Tulsequah Chief ([104K 011](#)), Big Bull ([104K 008](#)), Kutcho Creek ([104J 060](#)), Britannia ([092G 003](#)); Kidd Creek (Ontario, Canada), Buchans (Newfoundland, Canada), Bathurst-Newcastle district (New Brunswick, Canada), Horne-Queumont (Québec, Canada), Kuroko district (Japan), Mount Lyell (Australia), Rio Tinto (Spain), Shasta King (California, USA), Lockwood (Washington, USA).

### GEOLOGICAL CHARACTERISTICS

**CAPSULE DESCRIPTION:** One or more lenses of massive pyrite, sphalerite, galena and chalcopyrite commonly within felsic volcanic rocks in a calcalkaline bimodal arc succession. The lenses may be zoned, with a Cu-rich base and a Pb-Zn-rich top; low-grade stockwork zones commonly underlie lenses and barite or chert layers may overlie them.

**TECTONIC SETTING:** Island arc; typically in a local extensional setting or rift environment within, or perhaps behind, an oceanic or continental margin arc.

**DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING:** Marine volcanism; commonly during a period of more felsic volcanism in an andesite (or basalt) dominated succession; locally associated with fine-grained marine sediments; also associated with faults or prominent fractures.

**AGE OF MINERALIZATION:** Any age. In British Columbia typically Devonian; less commonly Permian-Mississippian, Late Triassic, Early (and Middle) Jurassic, and Cretaceous.

**HOST/ASSOCIATED ROCK TYPES:** Submarine volcanic arc rocks: rhyolite, dacite associated with andesite or basalt; less commonly, in mafic alkaline arc successions; associated epiclastic deposits and minor shale or sandstone; commonly in close proximity to felsic intrusive rocks. Ore horizon grades laterally and vertically into thin chert or sediment layers called informally "exhalites".

**DEPOSIT FORM:** Concordant massive to banded sulphide lens which is typically metres to tens of metres thick and tens to hundreds of metres in horizontal dimension; sometimes there is a peripheral apron of "clastic" massive sulphides; underlying crosscutting "stringer" zone of intense alteration and stockwork veining.

**TEXTURE/STRUCTURE:** Massive to well layered sulphides, typically zoned vertically and laterally; sulphides with a quartz, chert or barite gangue (more common near top of deposit); disseminated, stockwork and vein sulphides (footwall).

**ORE MINERALOGY (Principal and subordinate):** Upper massive zone: pyrite, sphalerite, galena, chalcopyrite, pyrrhotite, tetrahedrite-tennantite, bornite, arsenopyrite. Lower massive zone: pyrite, chalcopyrite, sphalerite, pyrrhotite, magnetite.

**GANGUE MINERALOGY:** Barite, chert, gypsum, anhydrite and carbonate near top of lens, carbonate quartz, chlorite and sericite near the base.

**ALTERATION MINERALOGY:** Footwall alteration pipes are commonly zoned from the core with quartz, sericite or chlorite to an outer zone of clay minerals, albite and carbonate (siderite or ankerite).

**ORE CONTROLS:** More felsic component of mafic to intermediate volcanic arc succession; near centre of felsic volcanism (marked by coarse pyroclastic breccias or felsic dome); extensional faults.

**ASSOCIATED DEPOSIT TYPES:** Stockwork Cu deposits; vein Cu, Pb, Zn, Ag, Au.

### EXPLORATION GUIDES

**GEOCHEMICAL SIGNATURE:** Zn, Hg and Mg halos, K addition and Na and Ca depletion of footwall rocks; closer proximity to deposit - Cu, Ag, As, Pb; within deposit - Cu, Zn, Pb, Ba, As, Ag, Au, Se, Sn, Bi, As.

**GEOPHYSICAL SIGNATURE:** Sulphide lenses usually show either an electromagnetic or induced polarization signature depending on the style of mineralization and presence of conductive sulphides. In recent years borehole electromagnetic methods have proven successful.

**OTHER EXPLORATION GUIDES:** Explosive felsic volcanics, volcanic centres, extensional faults, exhalite (chert) horizons, pyritic horizons.

#### **ECONOMIC FACTORS**

**GRADE AND TONNAGE:** Average deposit size is 1.5 Mt containing 1.3% Cu, 1.9 % Pb, 2.0 % Zn, 0.16 g/t Au and 13 g/T Ag (Cox and Singer, 1986). British Columbia deposits range from less than 1 to 2 Mt to more than 10 Mt. The largest are the H-W (10.1 Mt with 2.0 % Cu, 3.5 % Zn, 0.3 % Pb, 30.4 g/t Ag and 2.1 g/t Au) and Kutcho (combined tonnage of 17 Mt, 1.6 % Cu, 2.3 % Zn, 0.06 % Pb, 29 g/t Ag and 0.3 g/t Au).

**IMPORTANCE:** Noranda/Kuroko massive sulphide deposits are major producers of Cu, Zn, Ag, Au and Pb in Canada. Their high grade and commonly high precious metal content continue to make them attractive exploration targets.

#### **REFERENCES**

- Cox, D.P. and Singer, D.A., Editors (1986):** Mineral Deposit Models; U.S. Geological Survey, Bulletin 1693, 379 pages.
- Höy, T. (1991):** Volcanogenic Massive Sulphide Deposits in British Columbia: in Ore Deposits, Tectonics and Metallogeny in the Canadian Cordillera, W.J. McMillan, Coordinator, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1991-4, pages 89-123.
- Franklin, J.M., Lydon, J.W. and Sangster, D.M. (1981):** Volcanic-associated Massive Sulphide Deposits; Economic Geology, 75th Anniversary Volume, pages 485-627.
- Hutchinson, R.W. (1980):** Massive Base Metal Sulphide Deposits as Guides to Tectonic Evolution; in The Continental Crust and its Mineral Deposits, D.W. Strangway, Editor, Geological Association of Canada, Special Paper 20, pages 659-684.
- Lydon, J.W. (1984):** Volcanogenic Massive Sulphide Deposits, Part 1: A Descriptive Model, Geoscience Canada, Volume 11, No. 4, pages 195-202.
- Ohmoto, H. and Skinner, B.J., Editors (1983):** The Kuroko and Related Volcanogenic Massive Sulfide Deposits; Economic Geology, Monograph 5, 604 pages.
- Scott, S.D. (1985):** Seafloor Polymetallic Sulfide Deposits: Modern and Ancient; Marine Geology, Volume 5, pages 191-212.
- Sangster, D.F. (1972):** Precambrian Volcanogenic Massive Sulphide Deposits in Canada: a Review; Geological Survey of Canada; Paper 72-22, 44 pages.

# POLYMETALLIC VEINS Ag-Pb-Zn+/-Au

## 105

by David V. Lefebure and B. Neil Church  
British Columbia Geological Survey

Lefebure, D.V. and Church, B.N. (1996): Polymetallic Veins Ag-Pb-Zn+/-Au, in Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, Lefebure, D.V. and Höy, T., Editors, British Columbia Ministry of Energy of Employment and Investment, Open File 1996-13, pages 67-70.

### IDENTIFICATION

**SYNONYMS:** Clastic metasediment-hosted silver-lead-zinc veins, silver/base metal epithermal deposits.

**COMMODITIES (BYPRODUCTS):** Ag, Pb, Zn (Cu, Au, Mn).

**EXAMPLES (British Columbia (MINFILE # - Canada/International):**

Metasediment host: Silvana ([082FNW050](#)) and Lucky Jim ([082KSW023](#)), Slocan-New Denver-Ainsworth district, St. Eugene ([082GSW025](#)), Silver Cup ([082KNW027](#)), Trout Lake camp; *Hector-Calumet and Elsa, Mayo district (Yukon, Canada), Coeur d'Alene district (Idaho, USA), Harz Mountains and Freiberg district (Germany), Příbram district (Czechoslovakia).*

Igneous host: Wellington ([082ESE072](#)) and Highland Lass - Bell ([082ESW030](#), [133](#)), Beaverdell camp; Silver Queen ([093L002](#)), Duthie ([093L088](#)), Cronin ([093L127](#)), Porter-Idaho ([103P089](#)), Indian ([104B031](#)); *Sunnyside and Idorado, Silverton district and Creede (Colorado, USA), Pachuca (Mexico).*

### GEOLOGICAL CHARACTERISTICS

**CAPSULE DESCRIPTION:** Sulphide-rich veins containing sphalerite, galena, silver and sulphosalt minerals in a carbonate and quartz gangue. These veins can be subdivided into those hosted by metasediments and another group hosted by volcanic or intrusive rocks. The latter type of mineralization is typically contemporaneous with emplacement of a nearby intrusion.

**TECTONIC SETTINGS:** These veins occur in virtually all tectonic settings except oceanic, including continental margins, island arcs, continental volcanics and cratonic sequences.

Metasediment host: Veins are emplaced along faults and fractures in sedimentary basins dominated by clastic rocks that have been deformed, metamorphosed and intruded by igneous rocks. Veins postdate deformation and metamorphism.

Igneous host: Veins typically occur in country rock marginal to an intrusive stock. Typically veins crosscut volcanic sequences and follow volcano- tectonic structures, such as caldera ring-faults or radial faults. In some cases the veins cut older intrusions.

### DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING:

**AGE OF MINERALIZATION:** Proterozoic or younger; mainly Cretaceous to Tertiary in British Columbia.

**HOST/ASSOCIATED ROCK TYPES:** These veins can occur in virtually any host. Most commonly the veins are hosted by thick sequences of clastic metasediments or by intermediate to felsic volcanic rocks. In many districts there are felsic to intermediate intrusive bodies and mafic igneous rocks are less common. Many veins are associated with dikes following the same structures.

**DEPOSIT FORM:** Typically steeply dipping, narrow, tabular or splayed veins. Commonly occur as sets of parallel and offset veins. Individual veins vary from centimetres up to more than 3 m wide and can be followed from a few hundred to more than 1000 m in length and depth. Veins may widen to tens of metres in stockwork zones.

**TEXTURE/STRUCTURE:** Compound veins with a complex paragenetic sequence are common. A wide variety of textures, including cockade texture, colloform banding and crustifications and locally drusy. Veins may grade into broad zones of stockwork or breccia. Coarse-grained sulphides as patches and pods, and fine- grained disseminations are confined to veins.

**ORE MINERALOGY (Principal and subordinate):** Galena, sphalerite, tetrahedrite- tennantite, other sulphosalts including pyrargyrite, stephanite, bournonite and acanthite, native silver, chalcocopyrite, pyrite, arsenopyrite, stibnite. Silver minerals often occur as inclusions in galena. Native gold and electrum in some deposits. Rhythmic compositional banding sometimes present in sphalerite. Some veins contain more chalcocopyrite and gold at depth and Au grades are normally low for the amount of sulphides present.

Metasediment host: Carbonates (most commonly siderite with minor dolomite, ankerite and calcite), quartz, barite, fluorite, magnetite, bitumen.

Igneous host: Quartz, carbonate (rhodochrosite, siderite, calcite, dolomite), sometimes specular hematite, hematite, barite, fluorite. Carbonate species may correlate with distance from source of hydrothermal fluids with proximal calcium and magnesium-rich carbonates and distal iron and manganese-rich species.

**GANGUE MINERALOGY (Principal and subordinate):**

**ALTERATION MINERALOGY:** Macroscopic wall rock alteration is typically limited in extent (measured in metres or less). The metasediments typically display sericitization, silicification and pyritization. Thin veining of siderite or ankerite may be locally developed adjacent to veins. In the Coeur d'Alene camp a broader zone of bleached sediments is common. In volcanic and intrusive hostrocks the alteration is argillic, sericitic or chloritic and may be quite extensive.

**WEATHERING:** Black manganese oxide stains, sometimes with whitish melanterite, are common weathering products of some veins. The supergene weathering zone associated with these veins has produced major quantities of manganese. Galena and sphalerite weather to secondary Pb and Zn carbonates and Pb sulphate. In some deposits supergene enrichment has produced native and horn silver.

**ORE CONTROLS:** Regional faults, fault sets and fractures are an important ore control; however, veins are typically associated with second order structures. In igneous rocks the faults may relate to volcanic centers. Significant deposits restricted to competent lithologies. Dikes are often emplaced along the same faults and in some camps are believed to be roughly contemporaneous with mineralization. Some polymetallic veins are found surrounding intrusions with porphyry deposits or prospects.

**GENETIC MODELS:** Historically these veins have been considered to result from differentiation of magma with the development of a volatile fluid phase that escaped along faults to form the veins. More recently researchers have preferred to invoke mixing of cooler, upper crustal hydrothermal or meteoric waters with rising fluids that could be metamorphic, groundwater heated by an intrusion or expelled directly from a differentiating magma. Any development of genetic models is complicated by the presence of other types of veins in many districts. For example, the Freiberg district has veins carrying F-Ba, Ni-As- Co-Bi-Ag and U.

**COMMENTS:** Ag-tetrahedrite veins, such as the Sunshine and Galena mines in Idaho, contain very little sphalerite or galena. These may belong to this class of deposits or possibly the five-element veins. The styles of alteration, mineralogy, grades and different geometries can usually be used to distinguish the polymetallic veins from stringer zones found below syngenetic massive sulphide deposits.

**ASSOCIATED DEPOSIT TYPES:**

- Metasediment host: Polymetallic mantos (M01).
- Igneous host: May occur peripheral to virtually all types of porphyry mineralization ([L01](#), [L03](#), [L04](#), [L05](#), [L06](#), [L07](#), [L08](#)) and some skarns ([K02](#), [K03](#)).

**EXPLORATION GUIDES**

**GEOCHEMICAL SIGNATURE:** Elevated values of Zn, Pb, Ag, Mn, Cu, Ba and As. Veins may be within arsenic, copper, silver, mercury aureoles caused by the primary dispersion of elements into wallrocks or broader alteration zones associated with porphyry deposit or prospects.

**GEOPHYSICAL SIGNATURE:** May have elongate zones of low magnetic response and/or electromagnetic, self potential or induced polarization anomalies related to ore zones.

**OTHER EXPLORATION GUIDES:** Strong structural control on veins and common occurrence of deposits in clusters can be used to locate new veins.

**ECONOMIC FACTORS**

**TYPICAL GRADE AND TONNAGE :** Individual vein systems range from several hundred to several million tonnes grading from 5 to 1500 g/t Ag, 0.5 to 20% Pb and 0.5 to 8% Zn. Average grades are strongly influenced by the minimum size of deposit included in the population. For B.C. deposits larger than 20 000 t the average size is 161 000 t with grades of 304 g/t Ag, 3.47 % Pb and 2.66 % Zn. Copper and gold are reported in less than half the occurrences, with average grades of 0.09 % Cu and 4 g/t Au.

**ECONOMIC LIMITATIONS:** These veins usually support small to medium-size underground mines. The mineralization may contain arsenic which typically reduces smelting credits.

**IMPORTANCE:** The most common deposit type in British Columbia with over 2 000 occurrences; these veins were a significant source of Ag, Pb and Zn until the 1960s. They have declined in importance as industry focused more on syngenetic massive sulphide deposits. Larger polymetallic vein deposits are still attractive because of their high grades and relatively easy beneficiation. They are potential sources of cadmium and germanium.

## REFERENCES

**ACKNOWLEDGEMENTS:** Georges Beaudoin and Don Sangster are thanked for their suggestions to improve the profile.

- Barton, P., Bethke, P., Wetlaufer, P.H., Foley, N., Hayba, D. and Goss, J. (1982):** Silver/Base Metal Epithermal Deposits; in Characteristics of Mineral Deposit Occurrences, Erickson, R.L., Compiler, U.S. Geological Survey, pages 127-130.
- Beaudoin, G. and Sangster, D.F. (1992):** A Descriptive Model for Silver-Lead-Zinc Veins in Clastic Metasedimentary Terranes; *Economic Geology*, Volume 87, pages 1005-1021.
- Beaudoin, G. and Sangster, D.F. (in press):** Clastic Metasediment-hosted Vein Silver- Lead-Zinc; in *Geology of Canadian Mineral Deposit Types*, Eckstrand, O.R., Sinclair, W.D. and Thorpe, R.I., Editors, Geological Survey of Canada, *Geology of Canada*, No. 8, pages 393-398.
- Boyle, R.W. (1965):** *Geology, Geochemistry and Origin of the Lead-Zinc-Silver Deposits of the Keno Hill - Galena Hill Area, Yukon Territory*; Geological Survey of Canada, Bulletin 111, 302 pages.
- Boyle, R.W. (1968):** *The Geochemistry of Silver and its Deposits*; Geological Survey of Canada, Bulletin 160, 264 pages.
- Corbett, G.J. and Leach, T.M. (1995):** *S.W. Pacific Rim Au/Cu Systems: Structure, Alteration and Mineralization*; Mineral Deposit Research Unit, The University of British Columbia, Short Course No. 17 notes, 150 pages.
- Cox, D.P. (1986):** *Descriptive Model of Polymetallic Veins*; in *Mineral Deposit Models*, Cox, D.P. and Singer, D.A., Editors, U.S. Geological Survey, Bulletin 1693, pages 125-129.
- Godwin, C.I., Watson, P.H. and Shen, K. (1986):** *Genesis of the Lass Vein System, Beaverdell Silver Camp, South-central British Columbia*; *Canadian Journal of Earth Sciences*, Volume 23, pages 1615-1626.
- Fyles, J.T. (1967):** *Geology of the Ainsworth-Kaslo Area, British Columbia*; B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 53, 125 pages.
- Little, H.W. (1960):** *Nelson Map Area, West Half, British Columbia*; Geological Survey of Canada, Memoir 308, pages 305.
- Steven, T.A. and Eaton, G.P. (1975):** *Environment of Ore Deposition in the Creede Mining District, San Juan Mountains, Colorado: I. Geologic, Hydrologic, and Geophysical Setting*; *Economic Geology*, Volume 70, pages 1023-1037.