

**BC Geological Survey
Assessment Report
33673**

GEOCHEMICAL SAMPLING REPORT

ON THE

ALDER MOLYBDENUM PROPERTY

**Alder Creek – Lava Lake Area
Skeena Mining Division
British Columbia**

EVENT NUMBER 5417369

**NTS: 103P/03E
Latitude 55° 03' North, Longitude 129° 02' West
UTM (NAD 83) 496667 – 500300E, 609900 – 6102667N**

OWNER: BCM RESOURCES CORPORATION

AUTHOR: N.C. CARTER, Ph.D. P.Eng.

DATE: February 22, 2013

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INTRODUCTION

Location and Access

The ALDER mineral property is situated 60 kilometres north-northwest of the community of Terrace in west-central British Columbia (Figure 1). The four mineral claims comprising the property are between 0.5 and 4 kilometres west of Lava Lake and cover a south facing slope above Alder Creek which flows easterly into Lava Lake. The geographic centre of the property is approximately at latitude $55^{\circ} 03'$ North and longitude $129^{\circ} 02'$ West in NTS map-area 103P/03E. The claims are located between UTM coordinates 496667 – 499450E and 6099000 – 6101700N.

Access to the property is either by helicopter from Terrace or by road by way of the Nass highway. Logging roads which branch off this highway 3 kilometres south of Lava Lake extend up the south side of Alder Creek and provide access to the southern property area. This route was used to access the property for the 2012 sampling program. Access to the northern and central property areas is afforded by logging roads which leave the Nass highway some 15 kilometres northwest of the north end of Lava Lake and extend southerly between 15 and 20 kilometres into the eastern property area (Figures 2 and 3).



FIGURE 1 – LOCATION – ALDER PROPERTY

Mineral Property

The ALDER property consists of four contiguous cell claims which cover an area of 685.5 hectares in the Skeena Mining Division (Figure 2). Details of the mineral claims, all of which are recorded in the name of BCM Resources Corporation, are as follows:

<u>Claim Name</u>	<u>Area (ha)</u>	<u>Record Number</u>	<u>Date of Record</u>
ALDER	74.1	501281	January 12, 2005
ALDER 2	463.2	514216	June 9, 2005
ALDER 3	74.1	525424	January 14, 2006
ALDER EXTENSION	74.1	636543	September 18, 2009

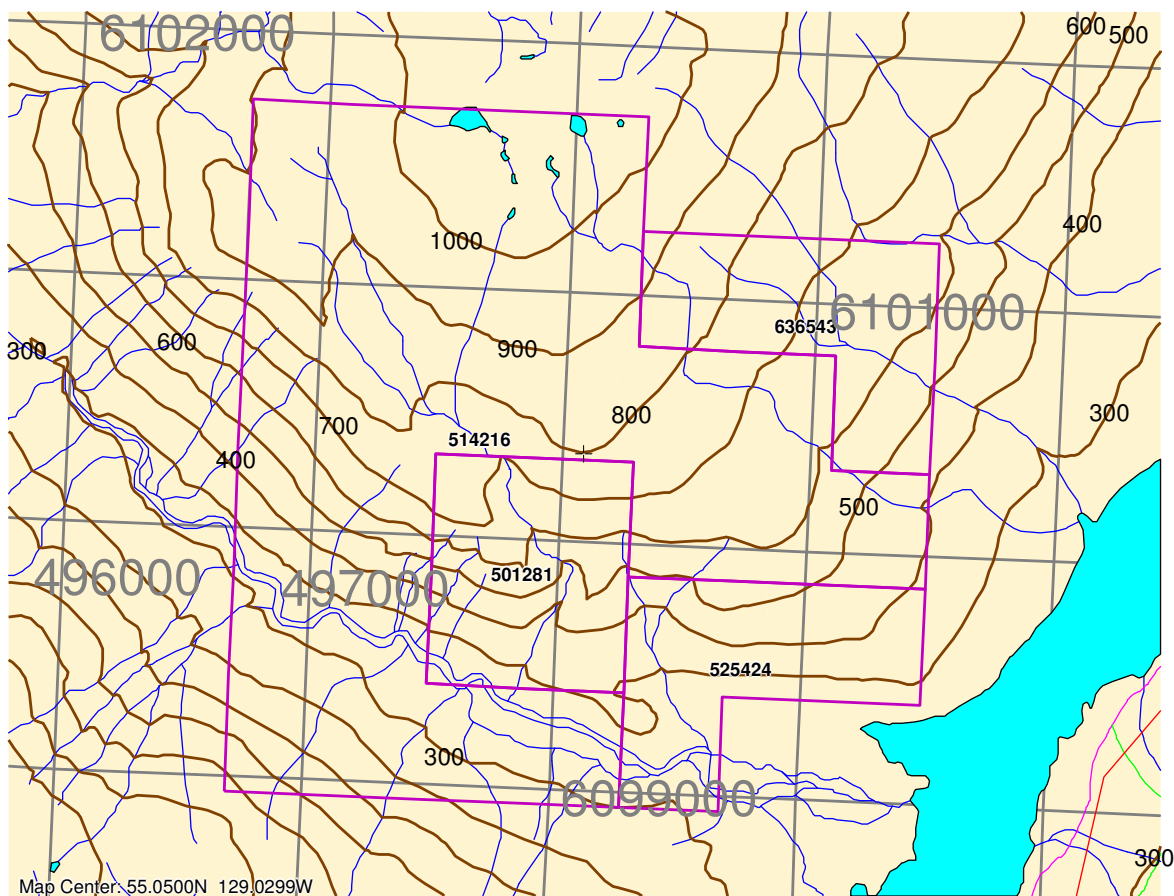


FIGURE 2 – ALDER PROPERTY MINERAL CLAIMS

Previous Work

The earliest mining-related activity in the northern part of the Terrace area consisted of placer mining for gold on several creeks in the late 1800s. Two of these creeks, Lorne and Douglas, had recorded production of 142250 grams and 10947 grams of gold respectively. The headwaters of both

these drainages lie between 30 and 35 kilometres southwest of the current Alder property.

Polymetallic quartz veins containing gold and silver values at Sand Lake and east of Kitsumkalum Lake, between 15 and 35 kilometres southwest of the Alder property respectively, were initially investigated prior to 1920. Several molybdenum prospects south of Nass River (between 15 and 20 kilometres northwest of Alder Creek) were investigated in the 1960s and early 1970s.

Molybdenum showings (BC Minfile number 103P 238), in the central part of tenure 501281 on the current Alder property were, originally staked as the Lucky property by local prospectors prior to 1971 when the writer first visited the property (Carter, 1972, 1978). Exploratory work during this time included hand trenching and sampling near a southerly flowing tributary of Alder Creek between elevations of 490 and 520 metres above sea level. The property was re-staked in the late 1970s when a limited prospecting and sampling program was carried out (R. Dunn, 1978).

The Alder and Alder 2 mineral claims were located in January and July of 2005 following the introduction of the Mineral Titles Online service. The two claims were acquired by BCM Resources Corporation in mid-2005 and exploratory work was undertaken by this company in 2006 and 2007. Work included geological reconnaissance and the collection of one stream sediment and a number of rock samples for geochemical analysis (Venable, 2007, 2008).

A sampling program, undertaken in the fall of 2009 (Carter, 2010), included the collection and analyses 46 rocks and 17 stream sediment samples from the central and northern parts of the property.

Present Status

BCM Resources Corporation has maintained the original two claims in good standing since their acquisition in 2005. The company acquired the Alder 3 claim in January of 2006 and the Alder Extension claim, covering an area of 426 hectares, was located during in September of 2009 prior to the inception of the 2009 field program. This claim was reduced to 74.1 hectares in November of 2010 (Figure 2).

GEOLOGY AND MINERALIZATION

Physical Setting

The ALDER property, situated in the Kitimat Ranges of the Coast Mountains, covers moderate to steep, densely forested terrain. Elevations within the property area range from about 250 metres in the lower reaches of Alder Creek in the southern property area to more than 1000 metres near the northern boundary. The central property area features a moderate to steep, southerly facing slope above Alder Creek (Figure 2).

Forest cover, with locally dense underbrush, extends throughout the property area and active logging was underway in the eastern property area in 2010. Bedrock is best exposed along drainages and in rock cuts adjacent to the newly constructed logging roads which access the northeastern and central parts of the property (Figure 3 – note that this diagram shows the pre-late 2010 configuration of the Alder Extension claim.)

Regional Geological Setting

The ALDER property is situated on the boundary between the Coast and Intermontane tectonic belts. Granitic rocks of the Coast Plutonic Complex underlie the area immediately south of Alder Creek in the extreme southern property area and intrude layered rocks of Stikine terrane of the Intermontane belt. These rocks, in the area between Kitsumkalum Lake and the Nass River – Alice Arm areas and including Alder Creek area, are comprised of clastic sedimentary rocks of the Middle to Upper Jurassic Bowser Lake Group. These sedimentary rocks are intruded by a number of early Tertiary granitic stocks

throughout the general area.

Of particular note regarding the potential of the ALDER property is the great number of molybdenum deposits identified to date along the eastern flank of the Coast belt between Alice Arm and Terrace (Carter, 1978). Three styles of molybdenum mineralization are known, including those associated with granitic rocks of the Coast Plutonic Complex, and those related to clearly younger granitic intrusions which cut Coast granitic rocks.

The most significant style of molybdenum mineralization in this part of British Columbia is that associated with Early Tertiary (Eocene) age intrusions associated with the Alice Arm Intrusive Suite. These occur in the form of small (less than 1 kilometre in diameter) plugs, stocks and dyke swarms of quartz monzonite porphyry which intrude Bowser Assemblage sedimentary rocks marginal to the Coast Plutonic Complex. Most of these feature several inter- and post-mineral intrusive phases. Sedimentary rocks marginal to Alice Arm intrusions are metamorphosed to distinctive brown, biotite hornfels. Molybdenite mineralization occurs in closely spaced quartz veinlets, as coatings on dry fractures and as disseminations in some later intrusive phases. Typical alteration patterns include an inner potassic zone consisting of secondary K-feldspar rimming quartz veinlets and an outer quartz-sericite pyrite zone in which biotite hornfels marginal to porphyry intrusions is bleached to a cream or light green colour.

The best documented example of a molybdenite-bearing Alice Arm intrusion is the Kitsault deposit where past mining operations between 1967-1972 and 1981-1982 processed 13.4 million tonnes yielding 13.6 million kilograms of molybdenum for a recovered grade of 0.101% Mo. Recent work by the current property owner, Avanti Mining Corp., has identified proven and probable reserves of 228 million tonnes grading 0.083% Mo and 5.0 g/t Ag.

Property Geology and Mineralization

The ALDER claims are underlain mainly by Bowser Lake Group argillaceous siltstones, sandstones, greywackes and lesser conglomerates. Granitic rocks of the Coast belt, which intrude the sedimentary rocks, are immediately south of, and parallel to Alder Creek. Other intrusions known on the property include northwest-striking, dyke- and sill-like bodies of granodiorite porphyry which intrude hornfelsed Bowser Lake Group siltstones 1 kilometre north of the aforementioned Coast contact. These are exposed in several open cuts immediately east of a deeply incised, southwesterly flowing tributary of Alder Creek just below the point where the drainage abruptly takes on a northwest-southeast trend (Figure 2).

The intrusions are described as being typical of the Alice Arm type (Carter, 1972) being a crowded porphyry with 1 to 2 millimetre euhedral phenocrysts of plagioclase making up 40% of the rock by volume and set in a fine-grained matrix of quartz and minor K-feldspar. Original biotite and hornblende are altered to chlorite.

Molybdenite and lesser chalcopyrite and bornite occur in drusy quartz veinlets and hairline fractures best developed near the contacts between the intrusive rocks and hornfelsed siltstones. Pyrite is widely disseminated in both the intrusion and hornfelsed sediments and a prominent gossan, visible from the Nass highway, is exposed in rocky bluffs extending westerly from the showings area for several hundred metres.

Four rock samples collected from the main showings area in the late 1970s (Dunn, 1978) returned values ranging from trace to 0.02% Mo. More detailed sampling in the same area in 2006 (Venable, 2007) included nine rock samples which returned values of between 6 ppm and 418 ppm Mo, 10 to 1068 ppm copper and elevated arsenic and zinc values.

An attempt to sample material from the gossanous bluffs west of the showings area in 2007 was unsuccessful while one stream sediment sample from the tributary stream draining the main showings area returned 22 ppm Mo and 157 ppm Cu (Venable, 2008).

The fall 2009 field program included the collection of bedrock samples from the area of the original mineral showings, from an area upstream from the showings and from exposures in rock cuts along the logging road within the original area of the Alder Extension claim (Carter, 2010). Stream sediment samples were collected upstream from the original showings area and from small drainages within the Alder Extension claim.

Best overall results were obtained from ten rock samples collected within a 100 m² area encompassing the original showings. Eight of these samples contained Mo values in excess of 100 ppm and elevated Cu averaging 326 ppm.

Rock samples collected between 600 and 1200 meters upstream from the original showings did not contain significant values other than some elevated lead values. Stream sediments mainly returned only slightly elevated zinc with the exception of one sample collected from a southeast-flowing drainage (within the current, reduced Alder Extension claim) which returned 12 ppm Mo plus enhanced Zn and Ag values.

2012 WORK PROGRAM

A work program on the ALDER property, completed between October 21 and 25, 2012, was undertaken on behalf of BCM Resources Corporation by Douglas McRae of Terrace with the help of one assistant. Part of the program included revisions to a base map of the claims area prepared in 2009. Twelve rock samples were collected from the southern property area, specifically within tenures 501281 and 525424 (Figure 3). Sample locations are shown on Figure 3 and sample descriptions and locations are listed in Appendix I.

Samples collected were transported to Acme Analytical Laboratories sample preparation facility in Smithers where they were crushed, split and pulverized to produce 250 gram sample pulps passing 200 mesh. Sample pulps were sent to Acme's main laboratory facility in Vancouver where they were subjected to four acid digestion prior to the determination of 36 major and trace elements by ICP emission spectrometer (ICP-ES). Gold contents of 15 gram splits of eight of the sample pulps were subsequently determined by ICP-MS (ICP mass spectrometer analysis) following aqua regia digestion.

Full sample results are contained in Appendix II. Best overall results were obtained from eight rock samples collected between 100 and 300 metres of the original showings (Figure 3). As shown on the following table and on Figure 4, several of these samples contain elevated to anomalous values for lead, zinc, silver, arsenic and antimony, characteristic of mineralization peripheral to a porphyry system. With the exception of the first two samples in the table, molybdenum and copper values are generally low. The best gold values (672 and 362 ppb) were found in the same two samples.

<u>Sample No.</u>	<u>Mo(ppm)</u>	<u>Cu(ppm)</u>	<u>Pb(ppm)</u>	<u>Zn(ppm)</u>	<u>Ag(ppm)</u>	<u>As(ppm)</u>	<u>Sb(ppm)</u>	<u>Au(ppb)</u>
E539814	671	1183	22	103	136.3	5437	651	672
E539815	170	556	11	45	74.1	3474	352	362
E538816	<2	7	11	58	<0.5	41	<5	6.5
E539817	45	301	<5	41	1.1	32	12	1.8
E539818	<2	2	8	35	<0.5	139	<5	4.8
E539819	4	223	8	1005	1.9	1253	53	15.6
E539820	8	253	2106	1992	8.7	3298	568	55.3
E539821	9	501	8	45	0.7	38	<5	<0.5

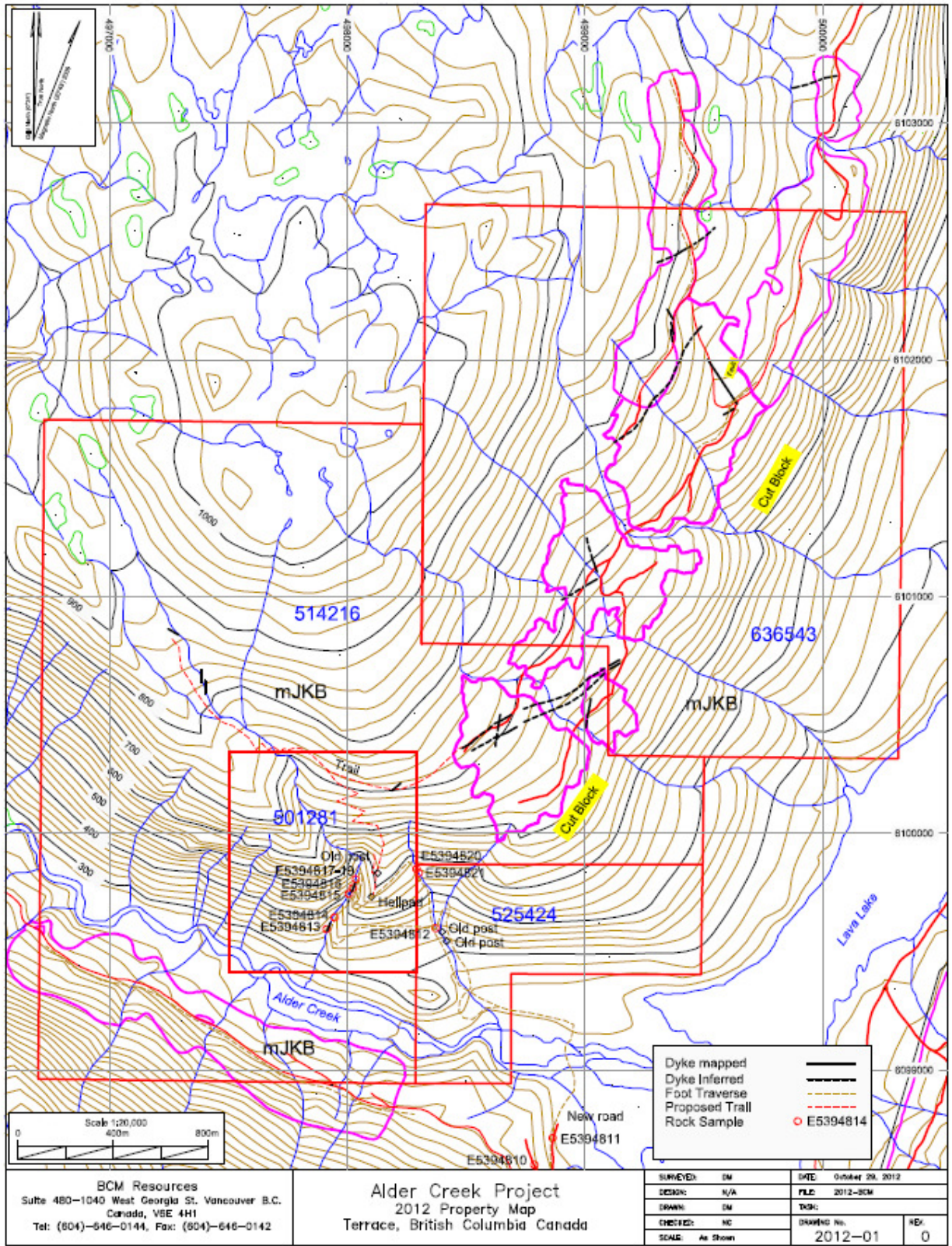


FIGURE 3 – ALDER PROPERTY – SAMPLE LOCATIONS

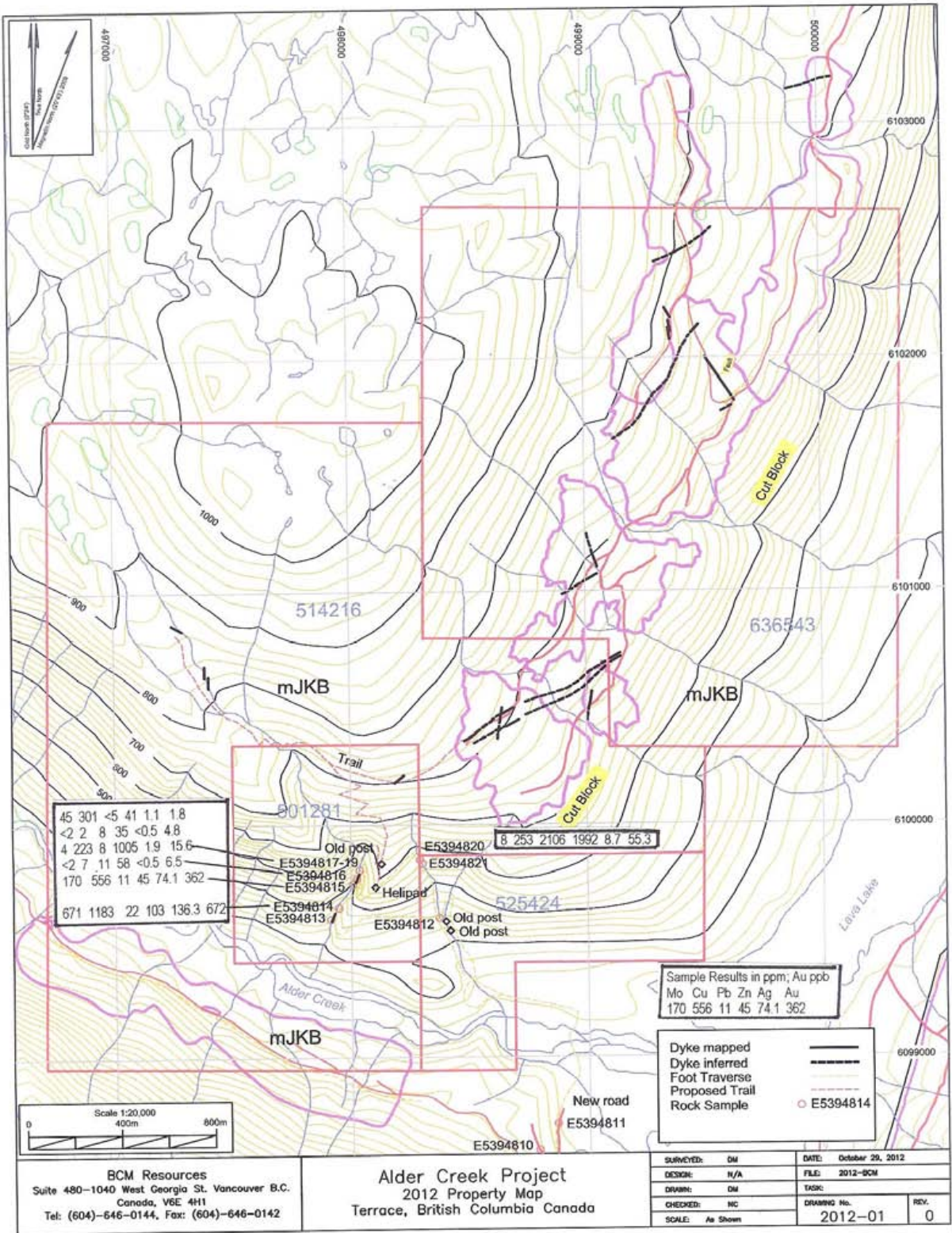


FIGURE 4 - ALDER PROPERTY – SIGNIFICANT ROCK SAMPLE RESULTS

CONCLUSIONS AND RECOMMENDATIONS

The 2012 rock sampling program carried out on the ALDER property provided additional information regarding the original showings area. Additional sampling is warranted for areas both north and south of these showings and the gossanous bluffs to the west remain to be investigated

The ALDER property remains an attractive prospect which has been only partially explored. Active logging in the immediate area facilitates conventional access to this property which allows for much more efficient future programs.

COST STATEMENT

Work Period – October 21 – October 25, 2012

Supervision		
Douglas McRae – 2 field days @ \$560/day		\$1,120.00
- pre-field planning, map preparation,		
sample management – 2 hours @		
\$61.60/hour		\$123.20
Labour		
Martin Sterner – 2 days @ \$400/day		\$800.00
Analytical Costs – 12 rock samples @		
@ \$40.77/sample		\$489.24
Transportation		
Vehicle + fuel		\$189.00
Report Preparation		
N.C. Carter – 1.5 days @ \$785/day		\$1,177.50
	TOTAL EXPENDITURES	\$3,898.94

REFERENCES

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- Carter, N.C. (2010): Geochemical Sampling Report on the Alder Molybdenum Property, Alder Creek – Lava Lake Area, Skeena Mining Division, British Columbia, BC Ministry of Energy Mines and Natural Gas Assessment Report 31372
- Carter, N.C. and Grove, E.W.(1972): Geological Compilation of the Stewart, Anyox, Alice Arm and Terrace Areas, B.C. Ministry of Energy Mines and Petroleum Resources Preliminary Map No.8
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STATEMENT OF QUALIFICATIONS

Douglas McRae

Registered Forestry Technician (RFT)

Owner/operator of a technical service based small business specializing in initial conceptual planning of various field projects to implementation of programs and operations as project coordinator

Computer based mapping, AutoCad, Arc, Microstation, RoadEng and online applications

Topographic and hydrographic survey

Prospecting and reconnaissance mapping

Work experience included Bell Pole Company from 1993 to 2005 as an Assistant Forestry Supervisor which entailed all aspects of forest licence management.

Martin Sterner

Fish and wildlife Diploma from BCIT;

25 years in the Forest industry with; engineering, mesuration (log scaling and timber cruising), purchasing and quality control experience;

5 years experience in exploration including work as a prospector, core technician and wildlife/bear guard

Avid outdoorsman and primitive survivalist

Past work with Jet Gold, Trade Winds Ventures and Argonaut Exploration.

AUTHOR'S QUALIFICATIONS

I, NICHOLAS C. CARTER, of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S.(1962) and the University of British Columbia with Ph.D.(1974).
3. I have practiced my profession in eastern and western Canada, parts of the United States and abroad for more than 40 years.
4. The foregoing geochemical sampling report on the Alder Molybdenum Property, Skeena Mining Division, British Columbia is based on the writer's previous knowledge of the property and as a participant in the planning of the 2012 program.

"Signed"

N.C. Carter, Ph.D. P.Eng.
Victoria, B.C.
February 22, 2013

APPENDIX I

Rock and Stream Sediment Sample Locations and Descriptions

Project Sample Number	Alder Creek 2012		Elev.	Year	Sampler	Concession	Type	Photo
	Easting	Northing						
N/A	498749	6098703	281	2012	DM	Alder	N/A	End new road
E5394810	498787	6098600	263	2012	DM	Alder	Grab	4,5 Fe stained 1.5m shear
E5394811	498864	6098714	245	2012	DM	Alder	Grab	6,7,8,9 Fe stained 3m shear
N/A	498883	6098770	237	2012	DM	Alder	N/A	End new road
N/A	498417	6099545	350	2012	DM	Alder	N/A	15,16 Old post 8445540, 4
N/A	498399	6099585	355	2012	DM	Alder	N/A	17,18 Old post 510426,27
E5394812	498371	6099599	350	2012	DM	Alder	Float	19 Quartz float in creek
N/A	498221	6099637	350	2012	DM	Alder	N/A	20,21 Talus slope, Bowser
E5394813	497912	6099595	350	2012	DM	Alder	Grab	22 Fine grained siliceous
E5394814	497947	6099645	390	2012	DM	Alder	Float	23 Qtz float in porphyry
E5394815	498006	6099744	400	2012	DM	Alder	Float	25,26,27 Qtz float in porphyry
E5394816	498023	6099770	410	2012	DM	Alder	Grab	29 Shear with rusty porp
E5394817	498035	6099806	420	2012	DM	Alder	Float	36 Siliceous rusty float
E5394818	498035	6099806	420	2012	DM	Alder	Float	40 Same, pyrite/sulphid
E5394819	498035	6099806	420	2012	DM	Alder	Float	41,42,43 Same, pyrite/sulphid
E5394820	498291	6099852	430	2012	DM	Alder	Float	45 Quartz float with sulph
E5394821	498301	6099833	415	2012	DM	Alder	Float	46 Siliceous intrusive w

APPENDIX II

Analytical Results – Rock Samples

Multi-Element ICP-ES and Au by ICP-MS Analyses

**Performed by
Acme Analytical Laboratories**

ACME ANALYTICAL LABORATORIES LTD. Final Report
 Client: BCM Resources Corporation
 File Create 20-Feb-13
 Job Number SMI12000563
 Number of 12
 Project: Alder
 Shipment ID:
 P.O. Number:
 Received: 16-Nov-12

Method	WGHT	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	KG	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
MDL	0.01	2	2	2	5	2	0.5	2	2	5	0.01	5	20	4	2	2	0.4	5	5	2	
Sample Type																					
E5394810 Rock	1.75	<2		44	13	87	0.7	27	10	626	5.07	36	<20	<4	<2	350	<0.4	<5	<5	146	
E5394811 Rock	2		3	30	11	106	<0.5	39	10	2062	3.56	96	<20	<4	<2	975	<0.4	<5	<5	98	
E5394812 Rock	1.84		2	29	<5	32	<0.5	30	6	190	1.58	30	<20	<4	<2	126	<0.4	<5	<5	43	
E5394813 Rock	1.18	<2		12	15	91	<0.5	4	14	833	4.32	12	<20	<4	<2	607	<0.4	<5	<5	111	
E5394814 Rock	0.84		671	1183	22	106	136.3	3	20	154	7.3	5437	<20	<4	<2	209	0.6	651	<5	50	
E5394815 Rock	1.16		170	556	11	45	74.1	<2	10	192	4.51	3474	<20	<4	<2	228	<0.4	322	<5	53	
E5394816 Rock	1.37	<2		7	11	58	<0.5	11	8	797	2.38	41	<20	<4	<2	359	<0.4	<5	<5	84	
E5394817 Rock	0.92		45	301	<5	41	1.1	2	14	122	4.61	32	<20	<4	<2	471	<0.4	12	<5	72	
E5394818 Rock	1.42	<2		2	8	35	<0.5	27	6	255	3.79	139	<20	<4	<2	294	<0.4	<5	<5	51	
E5394819 Rock	1.17		4	223	8	1005	1.9	<2	7	301	2.78	1253	<20	<4	<2	267	7.9	53	<5	51	
E5394820 Rock	1.06		8	253	2106	1992	8.7	8	<2	511	3.09	3298	<20	<4	<2	486	8.7	568	<5	17	
E5394821 Rock	1.07		9	501	8	45	0.7	4	12	245	3.56	38	<20	<4	<2	902	<0.4	<5	<5	98	
Pulp Duplicates																					
E5394811 Rock	2		3	30	11	106	<0.5	39	10	2062	3.56	96	<20	<4	<2	975	<0.4	<5	<5	98	
E5394811 REP			3	29	10	105	<0.5	39	11	1993	3.41	95	<20	<4	<2	958	<0.4	<5	<5	94	
E5394821 Rock	1.07		9	501	8	45	0.7	4	12	245	3.56	38	<20	<4	<2	902	<0.4	<5	<5	98	
E5394821 REP																					
Reference Materials																					
STD ORE/STD		<2		47	10	113	<0.5	152	46	1085	7.35	<5	<20	<4	<2	394	<0.4	<5	<5	164	
STD ORE/STD			3	779	33	49	<0.5	458	59	556	25.78	19	<20	<4		15	<0.4	<5	<5	322	
STD ORE/STD																					
BLK BLK		<2	<2	<5	<2	<0.5	<2	<2	<5	<0.01	<5	<20	<4	<2	<2	<0.4	<5	<5	<2	<0.01	
BLK BLK																					
Prep Wash																					
G1-SMI Prep Blank	<0.01	<2	<2		16	49	<0.5	4	4	725	2.12	<5	<20	<4		4	674	<0.4	<5	<5	48
G1-SMI Prep Blank	<0.01	<2		5	17	50	<0.5	4	4	751	2.15	<5	<20	<4		4	682	<0.4	<5	<5	48

