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PRELIMINARY GEOLOGICAL & GEOCHEMICAL REPORT

ON THE BLUE 1 TO 4 CLAIM GROUP

FOR

REGIONAL RESOURCES LTD.

Vancouver
British Columbia

BY

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CORDILLERAN ENGINEERING
1418-355 Burrard Street
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December 18, 1981



CLAIMS

Blue #1 to 4
Record Numbers 2013(8) to 2016(8) inclusive

EXPIRY DATE

August 18, 1982

LOCATION

39 km (24 miles) North of Cassiar, B.C.

WORK PERIOD

August 10 to September 30, 1981

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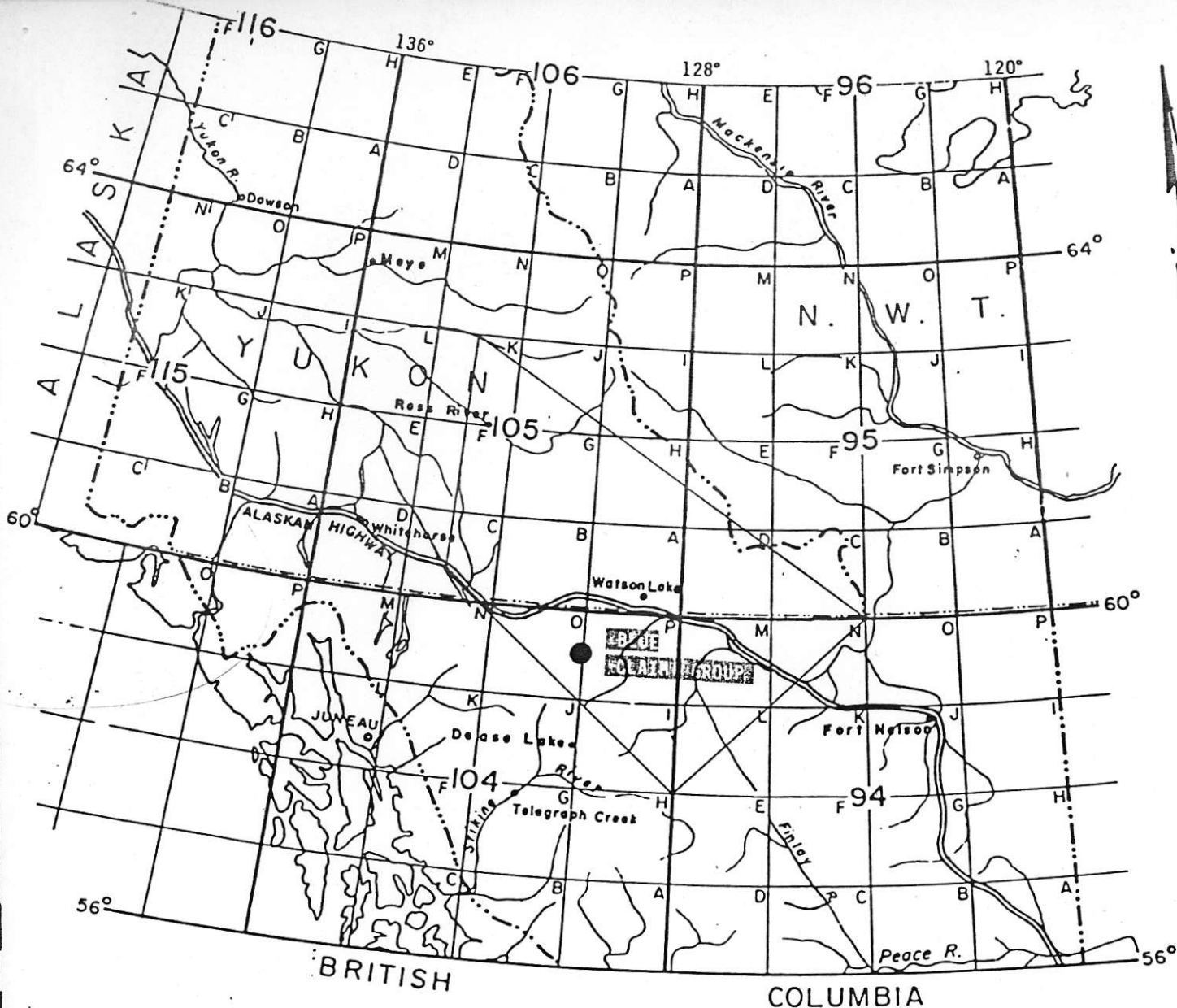
<u>PLATE 1</u>	Geology (1:10,000 scale)	in pocket
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1.

I N T R O D U C T I O N

The Blue property is situated 39 kilometres (24 miles) north of Cassiar, British Columbia in the Liard Mining Division (Figure 1). It represents a new lead-zinc-silver massive sulphide discovery. In August, 1981 Cordilleran Engineering acquired 4 claims (63 units, Figure 2) for Regional Resources Ltd. The property is situated at latitude 59°32'N and longitude 130°00'W. It lies 13 kilometres (8 miles) from a gravel road off the Stewart-Cassiar Highway.

The claims are underlain by a Devono-Mississippian sequence of sediments which host lead-zinc-silver massive sulphide mineralization. The similarity of mineralization, sedimentary environment and geological age to deposits located on the Midway property, the Macmillan Pass area to the north as well as the Gataga River area to the south suggests that there is excellent potential for locating economic lead-zinc-silver mineralization on the Blue. Further work is strongly recommended.



REGIONAL RESOURCES LTD.
 LOCATION MAP
 BLUE 1 TO 4 CLAIM GROUP

Liard Mining Division
 Cassiar Area, British Columbia

SCALE: 1" = 125 MILES

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CORDILLERAN ENGINEERING
 1418 - 355 BARRARD STREET
 VANCOUVER, B.C. V6C 2G8

December, 1981



FIGURE 1

2.

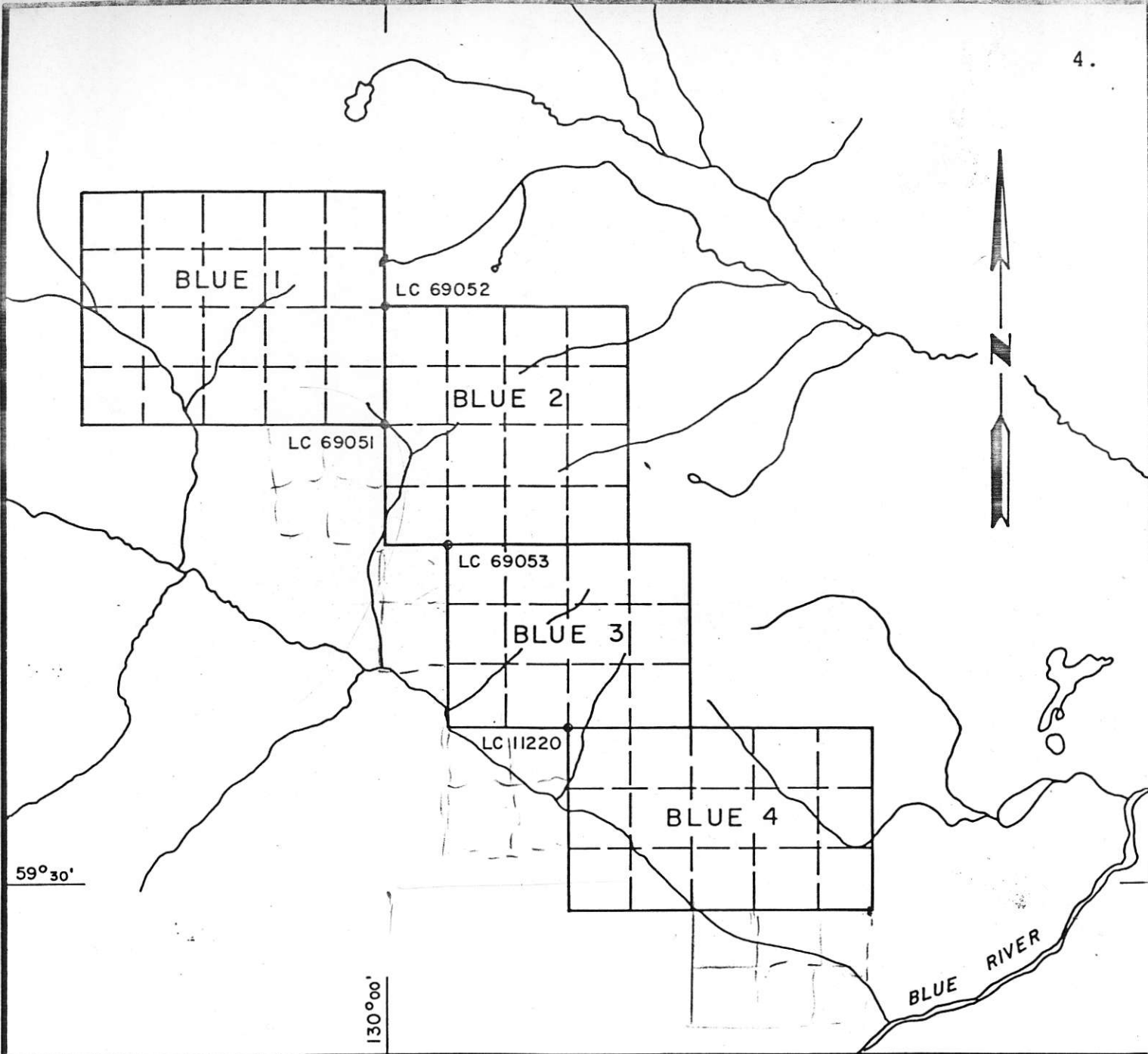
C L A I M S

The Blue property (Figure 2) consists of 63 units in four mineral claims in the Liard Mining Division as noted in Table I.

TABLE I
CLAIM DATA

<u>CLAIM</u>	<u>RECORD NO.</u>	<u>NO. OF UNITS</u>	<u>EXPIRY DATE</u>
Blue 1	2013 (8)	20	18 August, 1982
Blue 2	2014 (8)	16	18 August, 1982
Blue 3	2015 (8)	12	18 August, 1982
Blue 4	2016 (8)	<u>15</u>	18 August, 1982
		63 Units	

Title to the claims is held by J. W. Stollery. A program of mapping, soil sampling and prospecting was conducted after the property was staked. This work will be applied for assessment.



REGIONAL RESOURCES LTD.

CLAIM MAP

BLUE PROPERTY

LIARD MINING DIVISION, B.C.
N.T.S. 104 O/9, 104 P/5,12

SCALE : 1:50,000

BY

CORDILLERAN ENGINEERING
1418 - 355 BARRARD STREET
VANCOUVER, B.C. V6C 2G8



3.

G E O L O G Y

(Plate 1)

The Blue property is situated in the Stikine Ranges of the Cassiar Mountains. The claims lie on the belt of Middle Devonian to Upper Devonian sediments which occur between the Cassiar Batholith to the west and intermediate to basic volcanic rocks of the Upper Sylvester Group oceanic complex to the east.

The property covers predominantly alpine ground where there is generally poor exposure of the recessive shales which host mineralization.

GEOLOGY (cont'd)STRATIGRAPHY

Preliminary mapping indicates that the sedimentary succession can be subdivided into the following units (Figure 3):

MCDAME Middle Devonian**M^D_L** McDame Limestone

This unit consists of thin-bedded, medium to finely crystalline, fetid, medium to dark grey limestone. The limestone is locally fossiliferous (crinoidal). Quartzite and argillite members occur within (or below?) the limestone sequence and have not been differentiated by the present mapping. The contact between the McDame and overlying units is not well exposed, but is presumed to be conformable. Gossanous zones occur at several locations along this contact.

LOWER SYLVESTER Upper Devonian**U^D₁** Argillite

A sequence of relatively coarse sediments forms at least one coarsening upward cycle at the base of this unit. Coarse sandstones exhibiting graded bedding (to three feet thick) and debris flows occur in the upper part of the cycle. Overlying this are sand and silt laminated argillites. Sand laminations are typically calcareous (calcarenites? or calcite cement?). The estimated thickness of this sequence is 300 metres.

U^D₂ Exhalite

This unit hosts the lead-zinc-silver mineralization located on the Blue property. It consists of at least three interbedded exhalite horizons, which are very fine grained (cryptocrystalline), pyritic and baritic, light to medium grey, orange weathering chert. They contain fine-grained, pale yellowish to mauve sphalerite, disseminated in aggregates or in clusters (West Showing). Galena is less common except at the Discovery Showing where exhalite hosts massive lead-zinc mineralization. The individual exhalite beds range from about a metre in thickness to several tens of metres

GEOLOGY - Stratigraphy (cont'd)

at the West Showing, where it appears that several beds coalesce to form one thick interval. Exhalites are interbedded with black chert (silicified argillite?) and carbonaceous argillite with relatively few sand laminations. In some localities a distinct increase in quartz veining is noticeable below the exhalite horizons (feeder zones?). The lower and upper contacts of this unit are defined as the base of the lowest exhalite, and the top of the highest exhalite. These contacts are considered normal. Estimated thickness of U^D_2 is up to 300 metres although the sequence appears to thin to 20 metres west of the Discovery Showing.

U^D_3 Argillite

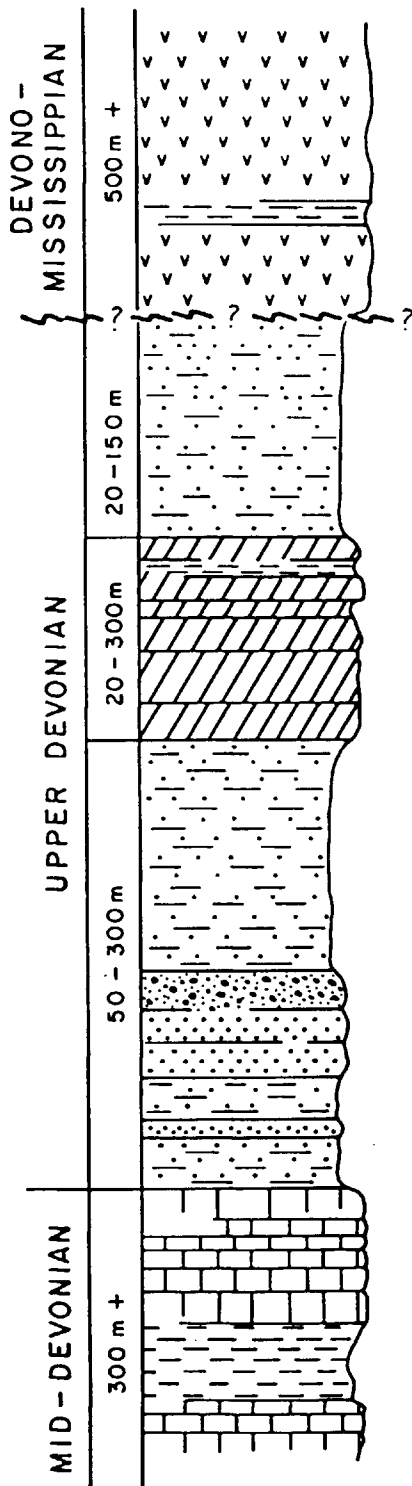
This unit consists of silt and sand laminated argillite. Sand bands are relatively abundant (>5%) and appear to consist of both parallel and ripple laminated types. The upper fifty feet of this sequence is typically sheared exhibiting a well developed flaser structure with sand bands as augen. In view of this shearing the upper contact is believed to be a thrust fault. The thickness of the unit appears to vary from 20 to 150 metres, probably due to fault displacement of the upper portion.

UPPER SYLVESTER Devonian-Mississippian

DM_V Devonian-Mississippian Volcanics

A sequence of intercalated intermediate to basic volcanic, pyroclastics and shale in excess of 500 metres thick forms the top of the stratigraphic succession on the Blue property. Lenses(?) of ultramafic rocks are common, but undifferentiated by mapping. This entire unit is thought to be an allochthonous oceanic volcanic complex.

PRELIMINARY STRATIGRAPHY BLUE CLAIM GROUP



UPPER SYLVESTER
 DM_V INTERCALATED BASIC VOLCANICS, PYROCLASTICS, SHALE AND ULTRAMAFICS.

LOWER SYLVESTER
 UD₃ ARGILLITE: SILT AND SAND LAMINATED ARGILLITE.

UD₂ EXHALITE: SILICEOUS, BARITIC EXHALITE WITH INTERBEDDED CHERT, SILICEOUS ARGILLITE AND/OR CARBONACEOUS ARGILLITE. HOSTS Zn-Pb-Ag MINERALIZATION ON THE BLUE.

UD₁ ARGILLITE: SILT AND SAND LAMINATED ARGILLITE WITH COARSENING-UPWARDS SEQUENCE IN LOWER PART.

Mc DAME
 MD_L LIMESTONE: THIN-BEDDED, MEDIUM TO FINELY CRYSTALLINE, FETID GREY CRINOIDAL LIMESTONE. CONTAINS SECTIONS OF CLASTICS

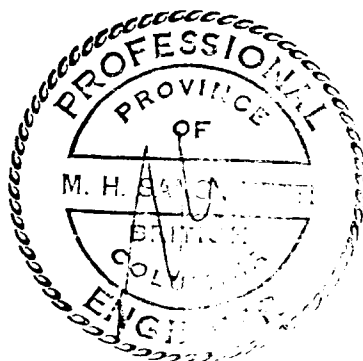


FIGURE 3

GEOLOGY (cont'd)INTRUSIVE ROCKSKQM CASSIAR BATHOLITH

The Cassiar Batholith lies immediately west of the property. This intrusive consists of medium-grained biotite quartz monzonite in the vicinity of the Blue. The effect of this intrusive is a local contact development of two to three percent pyrrhotite and pyrite in the argillites.

STRUCTURE

The sediments on the Blue property occur in a moderate to steep northeasterly dipping belt that extends for nine kilometres across the property. Numerous shear zones occur in the argillites but movement along these appears to be minimal. At the northwest end of the claims the sedimentary units bend northward where they abut the Cassiar Batholith.

4.

MINERALIZATION

Mineralization on the Blue property is hosted by a unit of baritic, siliceous exhalite which extends for a strike length of nine kilometres across the property. Pyrite is a ubiquitous component of the light grey, orange weathering exhalite. The persistence of this mineral throughout the exhalite indicates the extent of the sulphide depositional environment and indicates the limits of a basin which has potential for hosting massive sulphide bodies.

Two modes of occurrence for lead and zinc are found on the Blue. At the Discovery Showing subcrop of massive galena-sphalerite-barite (Table II) occurs in a creek bank adjacent to pyritic, baritic, siliceous exhalite. It is believed that this material represents a mineralized horizon weathered in place. A thick (2 metre+) ferricrete fan in the creek extends for approximately 60 metres upstream from this occurrence. The ferricrete fan is similar to and reminiscent of that found in

MINERALIZATION (cont'd)

the creek draining massive sulphide exposures on the Tom property, Macmillan Pass, Y.T. It indicates that mineralization may be located above the Discovery Showing but is not presently exposed.

The second mode of occurrence is noted at the West Showing where sphalerite and minor galena are disseminated in pyritic, baritic, siliceous exhalite. The occurrence may be fringing a higher grade potentially economic body of zinc-lead-silver mineralization.

Located on the southeastern extremity of the Blue property are two swamps, one containing ferricrete and one hydrozincite. These hydromorphic accumulations are indicative of local mineralization. The hydrozincite swamp may have developed from mineralization located at the McDame-Lower Sylvester contact. The ferricrete appears to be distinct and unrelated to the hydrozincite and may reflect mineralization in an upper exhalite.

TABLE II
ASSAY DATA - BLUE CLAIM GROUP

<u>Sample Number</u>	<u>Cu %</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Ba %</u>	<u>Ag oz/t</u>	<u>Au oz/t</u>	<u>Remarks</u>
7033	-	32.54	15.30	15.0	0.50	-	Discovery Showing: selected grab sample
7034	-	0.75	0.45	3.4	0.28	-	Siliceous exhalite
7035	-	0.67	0.79	6.3	1.16	-	Siliceous exhalite
7036	-	0.42	0.37	5.6	0.09	-	Siliceous, pyritic exhalite
7037	-	0.08	4.85	-	0.04	-	West Showing: siliceous, mineralized exhalite
7038	-	0.02	6.75	-	<0.02	-	West Showing: siliceous, mineralized exhalite
7039	-	0.08	0.40	-	0.04	-	West Showing: argillite below exhalite
7051	0.01	0.02	1.27	1.97	0.02	0.002	West Showing: siliceous, mineralized exhalite
7052	0.01	0.02	<0.01	3.99	0.05	0.002	West Showing: black chert
7053	<0.01	0.03	3.53	3.21	0.02	0.002	West Showing: siliceous, mineralized exhalite

5.

G E O C H E M I S T R Y

Preliminary geochemical sampling was conducted on the Blue group in order to locate and define the mineralized exhalite horizons. A total of 25 soil and 19 stream sediment samples in addition to 15 rock samples were collected for analysis. Six talus fines collected are noted as stream sediments. The results of this sampling are listed on Table III. The locations of stream sediment, soil, rock in addition to the assay samples are plotted on Plate 1.

Soil samples were collected from the B horizon where present, stream sediments were taken from the active part of the channel, talus fines were representative of the material present and the rock chips were from fresh material whenever possible. Each site was marked with flagging and notes were made describing location and material collected. All samples were placed in numbered kraft envelopes and shipped for analysis to the North Vancouver laboratory of Bondar Clegg and Company, Ltd. Analysis for copper, lead, zinc and silver were by HNO_3 -HCl hot extraction

GEOCHEMISTRY (cont'd)

atomic absorption method. Gold analysis was by aqua regia extraction and fire assay atomic absorption and barium analysis was by X-ray fluorescence.

These geochemical results indicate that the showings are outlined by moderate to strong stream sediment anomalies. Soils taken eastward from the Discovery Showing suggest, with increasing Pb, Zn and Ag values, that mineralization persists in the exhalite for at least 800 metres to the east. Rock Samples establish the baritic nature and high lead-zinc-silver background of the exhalite.

GEOCHEMISTRY (cont'd)

TABLE III (Refer to PLATE 1 for locations)
 SOIL, STREAM SEDIMENT & ROCK GEOCHEMISTRY - BLUE CLAIM GROUP

Sample No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm
SOILS						
1	-	29	205	0.4	-	2850
2	-	36	345	0.2	-	2670
3	-	15	155	0.2	-	2450
4	-	14	152	0.2	-	2140
5	-	19	137	0.2	-	2080
6	-	54	239	0.3	-	2840
7	-	63	157	0.2	-	3010
8	-	181	135	1.0	-	4040
9	-	82	157	0.2	-	3700
10	-	56	148	0.4	-	3520
11	-	12	171	0.3	-	1610
12	-	23	201	0.8	-	2140
13	-	41	169	1.0	-	2380
14	-	262	201	0.9	-	4740
15	-	37	269	0.3	-	3100
16	-	129	261	0.6	-	5160
17	-	266	156	1.2	-	6360
18	-	19	172	0.4	-	2160
19	-	27	188	2.5	-	2530
20	-	42	188	1.6	-	2080
21	-	130	156	1.0	-	6660
22	-	151	222	1.3	-	8430
23	-	193	155	1.2	-	7630
24	-	35	222	1.2	-	1930
25	-	38	112	1.8	-	2640
STREAMS						
Y783	49	23	445	0.2	-	2850
Y787	68	24	640	0.8	-	1660
Y788	220	50	785	0.2	-	1530
Y789	70	82	1060	0.4	-	4820
Y789W1*	-	28	164	0.7	-	4220
Y789W2*	-	14	129	0.5	-	6500
Y789W3*	-	193	905	0.3	-	4490
Y789W4*	-	450	91	1.7	-	17640
Y789W5*	-	93	257	0.2	-	4920
Y789W6*	-	39	255	0.2	-	2750
Y790	57	18	1935	0.2	-	3720
Y791	54	16	385	0.2	-	4770
Y792	77	32	725	0.8	-	2360
Y793	70	42	670	0.7	-	1410
Y794	100	88	1595	0.2	-	7000
Y795	12	28	154	0.2	-	700
Y796	50	20	305	0.2	-	2900
Y797	55	48	760	0.2	-	4070
BLU-2S	4	8	>20000 (2.49%)	0.2	15	740

*W series - talus fines

GEOCHEMISTRY (cont'd)

TABLE III (cont'd) (Refer to PLATE 1 for locations)

<u>Sample No.</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Ag ppm</u>	<u>Au ppb</u>	<u>Ba ppm</u>	<u>Remarks</u>
ROCKS							
Y789 RB-1	-	5	5	0.2	-	-	Float - pyritic, siliceous, carbonaceous argillite
Y789 RB-2	-	44	31	0.7	-	4.6%	Talus - barite-spotted, pyritic exhalite
Y796 RB-1	-	57	13	2.3	-	-	o/c - pyritic, carbonaceous argillite
BLU - 4R	63	1200	280	4.0	25	5590	Dark grey chert with gossanous quartz stringers
BLU - 5R	87	47	1220	1.0	5	2350	Carbonaceous argillite
BLU - 6R	270	41	1510	1.4	5	2050	Gossanous band below exhalite
BLU - 9R	39	51	45	6.3	15	8650	Clayey exhalite?
BLU -10R	5	16	12	2.0	15	9170	Gossanous argillite
BLU -11R	15	14	25	4.7	10	4430	Gossanous argillite
BLU -12R	92	13	40	2.4	5	1620	Gossanous cap on exhalite
BLU -13R	26	12	120	0.4	15	1130	Gossanous carbonaceous argillite
BLU -14R	44	16	80	0.3	ND	940	Gossanous carbonaceous argillite
BLU -15R	21	57	1220	0.3	ND	>20000	Siliceous exhalite
BLU -17R	27	88	107	1.5	5	1830	Siliceous black argillite
BLU -20R	39	2	71	0.9	10	>20000	Siliceous exhalite

6.

EVALUATION

Lead-zinc-silver mineralization on the Blue property is considered to be of the stratiform, shale-hosted type. The claims cover a sedimentary succession that is the same age and of a similar depositional environment to that on the Midway property as well as the Tom and Jason deposits, Macmillan Pass, Y.T. and the Cirque deposit at Gataga River, B.C.

The highly significant lead-zinc-silver mineralization found at the Discovery Showing (32.54% Pb, 15.30% Zn, 0.50 oz/ton Ag) indicates that potentially economic grades exist on the Blue. Mineralization at the West Showing and hydromorphic zinc on the southeast end of the property are favourable indications that additional lead-zinc mineralization may lie along strike. The strike length (8 km) of the exhalite horizon indicates the areal extent along which multiple lead-zinc-silver occurrences may lie. These features suggest that further exploration has a high probability of locating economic lead-zinc-silver mineralization on the Blue property.

7. SUMMARY AND CONCLUSIONS

The Blue property consists of four mineral claims (63 units) located in the Liard Mining Division, 39 kilometres north of Cassiar, British Columbia. The claims were acquired for Regional Resources Ltd. by Cordilleran Engineering and are registered in the name of J. W. Stollery.

Work conducted on the claims consisted of geological mapping, prospecting and soil sampling.

Stratiform lead-zinc-silver mineralization is located on the property in a pyritic, baritic, siliceous exhalite. The exhalite is within Upper Devonian Lower Sylvester Group sediments. The Lower Sylvester is bounded above by possibly allochthonous oceanic volcanics (Upper Sylvester) and below by carbonates of the McDame Formation.

Grab samples of lead-zinc-silver mineralization

SUMMARY AND CONCLUSIONS (cont'd)

from the Discovery Showing assay 32.54% Pb, 15.30% Zn and 0.50 oz/ton Ag. This mineralization has definite economic potential. Further work is strongly recommended.

Respectfully submitted

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