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VANCOUVER, B.C.

1991

**ASSESSMENT REPORT  
FOR THE  
BELL 5 AND 6 CLAIMS,  
SIMILKAMEEN MINING DIVISION,  
EASTGATE, BRITISH COLUMBIA**

**REPORT BY**

**MURRAY I. JONES AND ROBERT L. WRIGHT  
WESTMIN RESOURCES LIMITED  
P.O. BOX 49066, THE BENTALL CENTRE  
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**NOVEMBER 6, 1992**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**22,606**

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## 1.0 SUMMARY

Mapping and rock geochemical sampling on the Bell 5 and 6 claims, near Eastgate, British Columbia, has shown that mafic to felsic volcanic rocks of the Upper Triassic Nicola Group underly most of the property. The Eagle Plutonic Complex outcrops on the extreme western edge of the claims (Bell 5), marking the western extent of the Nicola Group rocks. The volcanic rocks are strongly foliated throughout the area and they are amphibolitized close to the Eagle Complex contact.

A section of apparently more felsic volcanic rocks, and associated sedimentary rocks, outcrop near the Pasayten River on the east side of the Bell 6 claim. These rocks possess anomalous concentrations of Ba, Cu and Zn. This geochemical signature suggests the possibility of mineralization within the local sequence.

It is recommended that the potential for massive sulphide mineralization be examined within the rocks close to the Pasayten River, on the Bell 6 claim. Due to the extensive drift cover in the area, a relatively deep penetrating induced polarization (IP) survey is recommended. This survey should easily see through the glacial cover and detect disseminated mineralization, especially pyrite, which may be associated with a massive sulphide body. The location and nature of any anomalies discovered by the IP survey will dictate the appropriate followup physical work.

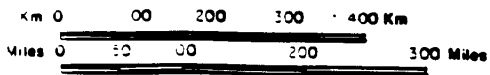
## 2.0 INTRODUCTION


### 2.1 Location, Access and Topography

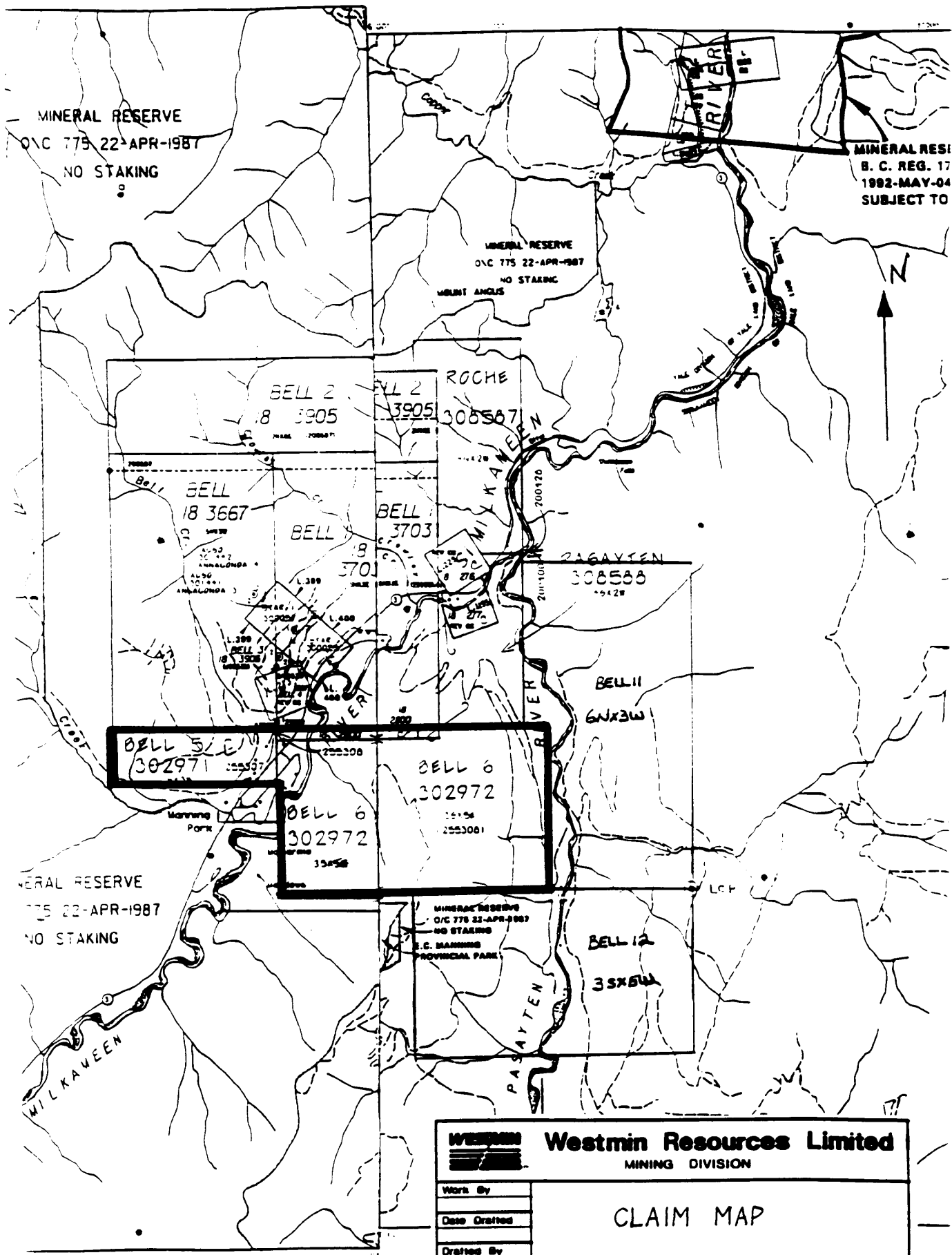
The Bell 5 and 6 claims are located in the Similkameen Mining District, approximately 50 km south of Princeton, British Columbia, immediately east of the eastern boundary of Manning Park, along Highway 3. The claims are located on NTS sheet 92H/2, at 49°08'N and 120°38'W. The claims straddle the Similkameen River and the Pasayten River flows close to the eastern boundary. The Copper Mountain/Ingerbell porphyry Cu-Au deposits lie approximately 30 km north of the property along the Similkameen River.


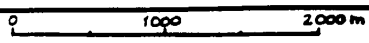
The claims may be accessed directly from Highway 3, or via an extensive network of all-weather gravel logging roads.

The Bell 6 claim lies on the divide between the Similkameen and Pasayten rivers, just south of their confluence, in moderately hilly terrain. Thick glacial overburden occurs in most areas of the claim, especially in the higher ground. As a result,



 <b>Westmin Resources Limited</b> MINING DIVISION	
Work By	<b>BELL 5 AND 6 CLAIMS</b>  <b>LOCATION MAP</b>
Date Drafted	
Drafted By	
Date Revised	
Revised By	
NTS. Number	<b>SCALE : 1 : 10,000,000</b>
	<b>Figure</b> <b>1</b>



 <b>Westmin Resources Limited</b> MINING DIVISION	
Work By	<b>CLAIM MAP</b>  <b>BELL 5 AND 6 CLAIMS</b>
Date Drafted	
Drafted By	
Date Revised	
Revised By	
N.T.S. Number	 SCALE 1 : 50,000
92 H/2	Figure <b>2</b>

outcrop is predominantly seen in road-cuts. The Bell 5 claim lies to the west of the Similkameen River, extending upslope from the river, almost to Manning Park in the west. The area has a dry climate, typical of the south-central interior of British Columbia, resulting in pine forest covering south and west facing slopes, with more mixed spruce, fir and pine elsewhere on the property.

## 2.2 History

For the most part, the Bell 5 claim and, in particular, the Bell 6 claim have not been well covered by exploration in the past. Assessment records covering the two areas were not found. Recent mapping on the Bell 6 claim revealed several trenches of unknown age. This seems to indicate that the work which may have been done on these claims has not been entered in the public domain.

There is evidence of extensive exploration work having been carried out on the Red Star and Anaconda reverted Crown grants, immediately adjacent to the Bell 5 claim on the west side of the Similkameen River.

## 2.3 Tenure

The Bell 5 and 6 claims consist of two claim groups for a total of 18 units. They form part of a larger group of claims, with common ownership in the area. The two claims are as follows:

Claim Name	Mineral Tenure No.	No. of Units	Date Staked	New Expiry Date (This Report)
Bell 5	302971	3	August 9, 1991	August 9, 1994
Bell 6	302972	15	August 9, 1991	August 9, 1994

## 2.4 Work Done

The work was completed between June 13 and 20, 1992. Work done on the Bell 5 and 6 claims consisted of geological mapping by pace and compass traverse and along existing roads. In the course of mapping, lithochemical samples were taken to represent the rock units found and test the potential for economic mineralization within the local stratigraphy.

## 3.0 GEOLOGY

### 3.1 Regional Geology

The Bell 5 and 6 claims are situated within the Quesnel Trough Structural Province, an extensive, generally north-south trending terrane consisting largely of alkalic intrusive and volcanic rocks and their sedimentary equivalents. The claims are located at the south end, and near the western margin, of this structural province. The western margin of the Quesnel Trough is defined in this area by the north-northwest/south-southeast trending contact with granodioritic and gneissic rocks of the Late Jurassic to Early Cretaceous Eagle Plutonic Complex.

Mapping by Monger (1989) has shown that the area is underlain by metamorphosed sedimentary and volcanic rocks of the Upper Triassic Nicola Group. The volcanic rocks include mafic to intermediate alkalic volcanic rocks, tuffs and flows, which are commonly characterized by the presence of pyroxene, or pyroxene-plagioclase, phenocrysts. Also, included in the local stratigraphy are intermediate to felsic rocks, typical of the Western Facies of the Nicola Group (Preto, 1979). Greenschist to lower amphibolite grade metamorphism is reflected in most of the Nicola Group rocks, with strong amphibolitization near the contact with the Eagle Plutonic Complex. Nicola Group rocks are generally well foliated in the western section of the group.

Unconformably overlying the Nicola Group and Eagle Plutonic Complex rocks are rocks of the Eocene-aged Princeton Group. These include alkalic volcanic (primarily hornblende-plagioclase-pyroxene porphyritic) rocks and sedimentary rocks ranging from argillites to conglomerates. Common hematite staining in these rocks indicates that the volcanic sequence was largely extruded sub-aerially. These rocks are not strongly deformed and in general have been metamorphosed at very low grades.

Mineralization has been identified in the Bell 5 and 6 claims area at the Red Star and Anaconda reverted Crown grants. Here, intermediate to felsic Nicola Group volcanics host a small massive sulphide lense consisting largely of sphalerite, with associated copper mineralization and barite. Massive pyrite, with strong copper and zinc values has been identified in several shears in the area, in particular, at the Knob Hill showing which is adjacent to the Bell 5 claim.

### 3.2 Property Geology

Mapping on the claims has confirmed the presence of Nicola Group volcanic rocks underlying most of the Bell 5 and 6 claims (Figure 3). Rocks of the Eagle Plutonic



Complex (Map Unit 7) outcrop in the extreme western margin of the Bell 5 claim. These rocks are in contact with amphibolitized chlorite schists (Map Unit 5) which apparently underly most of the rest of that claim. The area of the boundary of the Bell 5 and 6 claims is covered by the floodplain of the Similkameen River.

There is further outcrop on the Bell 6 claim, on the ridge between the Similkameen and Pasayten rivers. Most of this ridge is underlain by amphibole ( $\pm$  biotite)-chlorite schists (Map Unit 5). A petrographic examination of one sample (BC92-71, Appendix C) indicated that the schist was possibly originally an andesite lapilli tuff, containing plagioclase phenocrysts and felsic volcanic fragments. The strike of the foliation in these rocks dominantly parallels the contact with the Eagle Plutonic Complex (approximately  $160^\circ$ ).

On the east side of the ridge, toward the Pasayten River, a more heterogeneous package of rock outcrops. This area includes interbedded argillites and volcanic-derived sandstones (Map Unit 1) along with chlorite and chlorite-sericite schists (Map Unit 3). The presence of sericite may indicate that some of these units had relatively felsic precursor rocks. Fe-carbonate alteration is apparently common in these rocks, resulting in gossanous weathering of the outcrops. Bedding and foliation attitudes indicate a more north-south orientation for structural elements in this part of the property.

A narrow section of competent (less schistose, possibly rhyolitic) tuffs, argillites and cherts (Map Unit 4) outcrops near the southern boundary of the Bell 6 claim, along the Pasayten Forest Service Road.

The amount and distribution of outcrop on the Bell 5 and 6 claims is too limited to indicate whether or not large scale folding or faulting has played an important part in the geological history of the area. The emplacement of the Eagle Plutonic Complex and subsequent compression due to accretionary processes in the Cordillera have created strongly schistose rocks which masks previous deformation.

Mineralization has not been noted on either claim to date. There is some minor disseminated pyrite locally in the schists on the east side of the Bell 6 claim but the significance of this is not yet determined. Gossanous outcrops are common; however, this may be due to the presence of Fe-carbonate minerals as noted above.

#### 4.0 ROCK GEOCHEMISTRY

The following rocks have been analyzed for either 32 element ICP + Au, whole rock, or both (Appendices A and B), from the Bell 5 and 6 claims:

- BC92-35 - chert
- BC92-36 - chert
- BC92-37 - chlorite schist
- BC92-38 - chloritic fault gouge
- BC92-41 - altered plagioclase chlorite-sericite schist
- BC92-42 - rusty ochre in sericite schist
- BC92-43 - argillite
- BC92-44 - grey, fine grained, volcanic sandstone

Assay results indicate that there is a section of chlorite-sericite schists and sediments, near the south margin of the Bell 6 claim, which contains anomalous Ba and minor elevated Cu. This signature also characterizes Map Unit 4. The anomalous results may be significant in light of the Ba and Cu association at the Red Star/Anaconda showing, north of the Bell 5 claim. Sample BC92-43, an argillite, has elevated values of Zn, Cd, Mo and Ni. This somewhat unusual assemblage of anomalous elements could be indicating the presence of mineralization along strike.

The whole rock data from the chlorite-sericite schist near the Pasayten River (Sample BC92-41) contains fairly high MgO, TiO<sub>2</sub>, total Fe and loss on ignition (LOI). These chemical features seem to indicate an intermediate original composition rather than more felsic as interpreted from field observations. The analysis of the volcanic sandstone (Sample BC92-44) shows a strong volcanic component in the rock reflected by a fairly mafic composition overall.

#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

Geological mapping has indicated the presence of some intermediate, and possibly felsic, volcanics on the east side of the Bell 6 claim. The more felsic parts of the stratigraphy, and the associated sediments, have anomalous values in Ba, Zn and Cu, possibly reflecting mineralization along strike within the section. The chemical signature of the anomaly is similar to that of the main mineralized horizon in the area, the Red Star/Anaconda showing, situated just north of the Bell 5 claim.

It is recommended that the anomalous results on the Bell 6 claim be followed up by more detailed mapping and sampling to further define the anomalous

stratigraphy. Owing to the extensive glacial cover in the area, geophysical surveying may be the only way to identify targets in some parts of the claim. A detailed induced polarization (IP) survey should detect the presence of disseminated to semi-massive mineralization, with significant pyrite content, which can be expected to occur around a massive sulphide deposit. As depth penetration will be important, several electrode spacings should be used in the survey. The size and positioning of any anomalies generated by the IP survey will dictate the need for trenching or diamond drilling to test for mineralization.

## 6.0 REFERENCES

Monger, J.W.H, 1989. *Geology of Hope and Ashcroft Map Areas, British Columbia*. Geological Survey of Canada, Map 41-1989 and 42-1989.

Preto, V.A., 1979. *Geology of the Nicola Group between Merritt and Princeton*. B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 69, 90 p.

## 7.0 EXPENDITURES

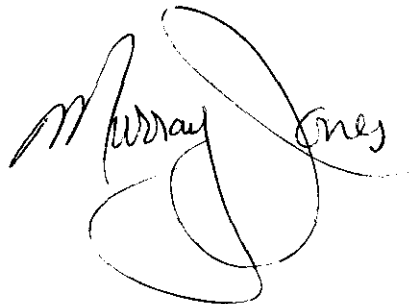
	<b>Cost</b>
<b>Rock samples</b>	
6 Whole rocks at \$20 per rock plus GST	\$ 128.40
7 Assays (32 element ICP + Au FA-AA)	148.68
1 Thin section/petrographic report	90.95
<b>Salaries</b>	
Bob Wright at \$300 per day	
Compilation, 1 day	300.00
Travel, 2 days	600.00
Mapping/sampling, 2 days	600.00
Peter van Wesenbeeck at \$125 per day	
Field assistant, 5 days	625.00
Murray Jones at \$200 per day	
Preparation, 1 day	200.00
Report, 1 day	200.00
<b>Lodging</b>	
Accommodation, 4 days at \$89.70 per day	358.80
Food	178.87
Gas	137.12
<b>Maps</b>	
Claim maps	21.20
Topographic maps, reports	172.89
Base maps	197.00
<b>Total</b>	<b>(Rounded) \$3,959.00</b>

## 8.0 STATEMENT OF QUALIFICATIONS

I, Murray I. Jones, of the District of North Vancouver, in the Province of British Columbia, hereby certify that:

1. I am a geologist residing at 1240 Shavington Street, North Vancouver, British Columbia with a business address at #904 - 1055 Dunsmuir Street, P.O. Box 49066, The Bentall Centre, Vancouver, British Columbia, V7X 1C4.
2. I graduated with a B.Sc. (Honours) in Geology from the University of British Columbia, Vancouver, B.C. in 1982 and with a M.Sc. in Geology from the University of Ottawa in 1992.
3. I am an associate member of the Geological Association of Canada.
4. I have practised geology in Canada from 1979 to 1992.

DATED this 6 day of November, 1992 at Vancouver, British Columbia.

A handwritten signature in black ink that reads "Murray Jones". The signature is written in a cursive style with large, sweeping loops.

Murray I. Jones, M.Sc.

**APPENDIX A**

**ROCK GEOCHEMISTRY, ASSAYS**



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: WESTMIN MINES LTD.

P.O. Box 49066, The Bentall Centre  
 VANCOUVER, BC  
 V7X 1C4

A9216669

Comments: CC: R.L. WRIGHT

**CERTIFICATE**

**A9216669**

WESTMIN MINES LTD.

Project: BILL CREEK  
 P.O. #:

Samples submitted to our lab in Vancouver, BC.  
 This report was printed on 1-JUL-92.

### SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	34	Geochem ring to approx 150 mesh
274	34	0-15 lb crush and split
229	34	ICP - AQ Digestion charge

\* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

### ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	34	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	34	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	200
2119	34	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	34	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2121	34	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	34	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	34	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	34	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	34	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2126	34	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	34	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	34	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	34	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	34	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	34	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	34	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	34	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	34	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	34	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	34	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	34	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
2138	34	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	34	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	34	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	34	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	34	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	34	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	34	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
2145	34	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	34	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	34	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	34	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	34	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000



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 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: WESTMIN MINES LTD.

P.O. Box 49066, The Bentall Centre  
 VANCOUVER, BC  
 V7X 1C4

Project: BILL CREEK  
 Comments: CC: R.L. WRIGHT

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 01-JUL-92  
 Invoice No. : 19216669  
 P.O. Number :  
 Account : GP

## CERTIFICATE OF ANALYSIS

### A9216669

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
BC-92-35	205 274	< 5	< 0.2	0.71	< 2	240	< 0.5	< 2	0.21	< 0.5	3	181	10	0.71	< 10	< 1	0.29	< 10	0.32	195
BC-92-36	205 274	< 5	< 0.2	0.96	< 2	150	< 0.5	< 2	0.36	< 0.5	4	270	20	1.39	< 10	< 1	0.06	< 10	0.59	225
BC-92-37	205 274	< 5	< 0.2	3.41	< 2	620	< 0.5	< 2	0.89	< 0.5	10	81	22	3.60	< 10	< 1	0.40	< 10	2.42	670
BC-92-38	205 274	< 5	< 0.2	4.06	< 2	320	< 0.5	< 2	0.87	< 0.5	13	93	78	4.57	10	< 1	0.27	< 10	2.71	860
BC-92-41	205 274	< 5	< 0.2	2.80	2	50	< 0.5	2	10.20	< 0.5	17	31	72	4.35	< 10	1	0.03	< 10	2.47	1080
BC-92-42	205 274	< 5	< 0.2	2.11	58	120	< 0.5	< 2	0.69	< 0.5	20	41	145	>15.00	30	< 1	0.08	< 10	1.70	960
BC-92-43	205 274	< 5	< 0.2	0.64	< 2	120	< 0.5	< 2	6.99	8.0	7	114	65	2.46	< 10	< 1	0.22	< 10	0.17	890
BC-92-44	205 274	< 5	< 0.2	2.83	2	50	< 0.5	< 2	1.18	< 0.5	19	101	91	3.72	< 10	< 1	0.09	< 10	1.92	565

CERTIFICATION:

*Yhai D Ma*





# Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221

J: WESTMIN MINES LTD.

P.O. Box 49066, The Bentall Centre  
VANCOUVER, BC  
V7X 1C4

Project : BILL CREEK  
Comments: CC: R.L. WRIGHT

Page Number : 1-B  
Total Pages : 1  
Certificate Date: 01-JUL-92  
Invoice No. : I9216669  
P.O. Number :  
Account : GP

## CERTIFICATE OF ANALYSIS

A9216669

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
BC-92-35	205 274	< 1	0.09	10	150	2	< 2	1	17	0.04	< 10	< 10	12	< 10	26
BC-92-36	205 274	< 1	< 0.01	24	660	2	< 2	1	12	0.01	< 10	< 10	12	< 10	34
BC-92-37	205 274	< 1	0.04	4	530	8	6	7	31	0.08	< 10	< 10	60	10	84
BC-92-38	205 274	1	0.03	9	360	< 2	2	10	35	0.04	< 10	< 10	82	10	82
BC-92-41	205 274	< 1	0.02	6	110	4	6	13	133	0.23	< 10	< 10	140	20	52
BC-92-42	205 274	10	0.01	10	220	8	14	15	34	0.11	< 10	< 10	145	< 50	46
BC-92-43	205 274	19	0.03	43	560	2	< 2	2	76	< 0.01	< 10	< 10	41	10	408
BC-92-44	205 274	< 1	0.03	31	450	< 2	< 2	6	64	0.29	< 10	< 10	75	10	54

CERTIFICATION:

*Yhai D Ma*

**APPENDIX B**  
**ROCK GEOCHEMISTRY, WHOLE ROCK**



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221

To: WESTMIN MINES LTD.

P.O. Box 49066, The Bentall Centre  
VANCOUVER, BC  
V7X 1C4

A9216670

Comments: CC: R.L. WRIGHT

**CERTIFICATE**

**A9216670**

WESTMIN MINES LTD.

Project: BILL CREEK  
P.O. #:

Samples submitted to our lab in Vancouver, BC.  
This report was printed on 9-JUL-92.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	29	Pulp; prepped on other workorder
200	29	Whole rock fusion

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	29	Al2O3 %: Whole rock	ICP-AES	0.01	99.99
588	29	CaO %: Whole rock	ICP-AES	0.01	99.99
590	29	Cr2O3 %: Whole Rock	ICP-AES	0.01	100.00
586	29	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.99
821	29	K2O %: Whole rock	ICP-AES	0.01	99.99
593	29	MgO %: Whole rock	ICP-AES	0.01	99.99
596	29	MnO %: Whole rock	ICP-AES	0.01	99.99
599	29	Na2O %: Whole rock	ICP-AES	0.01	99.99
597	29	P2O5 %: Whole rock	ICP-AES	0.01	99.99
592	29	SiO2 %: Whole rock	ICP-AES	0.01	99.99
595	29	TiO2 %: Whole rock	ICP-AES	0.01	99.99
475	29	L.O.I. %: Loss on ignition	FURNACE	0.01	99.99
540	29	Total %	CALCULATION	0.01	105.00



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to: WESTMIN MINES LTD.

P.O. Box 49066, The Bentall Centre  
 VANCOUVER, BC  
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Project: BILL CREEK  
 Comments: CC: R.L. WRIGHT

Page per : 1  
 Total Pages : 1  
 Certificate Date: 09-JUL-92  
 Invoice No. : 19216670  
 P.O. Number :  
 Account : GP

## CERTIFICATE OF ANALYSIS A9216670

SAMPLE	PREP CODE	Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
BC-92-35	299 200	9.38	1.37	0.03	1.34	0.89	0.63	0.03	3.12	0.10	83.00	0.19	0.94	101.00
BC-92-36	299 200	3.98	1.40	0.04	2.58	0.42	1.02	0.05	0.18	0.23	89.00	0.17	1.17	100.25
BC-92-37	299 200	16.61	5.46	< 0.01	7.08	1.06	3.78	0.16	2.10	0.12	59.56	0.65	2.95	99.52
BC-92-38	299 200	16.17	4.79	< 0.01	8.05	0.96	4.30	0.18	1.50	0.08	57.36	0.63	4.96	98.99
BC-92-41	299 200	13.79	19.04	< 0.01	8.35	0.20	4.23	0.19	3.04	< 0.01	32.88	0.60	16.07	98.41
BC-92-44	299 200	15.21	9.60	< 0.01	9.36	0.45	5.59	0.15	1.37	0.09	52.68	0.80	3.27	98.59

CERTIFICATION:

*Phai D Ma*

**APPENDIX C**  
**PETROGRAPHIC DESCRIPTION**

**Sample BC92-71****Metamorphosed Andesite; Fragment of Altered Felsite; Quartz Vein**

The main rock contains phenocrysts of plagioclase in a groundmass dominated by plagioclase and chlorite, with less porphyroblastic hornblende and epidote. The fragment consist of coarse grains of recrystallized plagioclase altered strongly to epidote, with interstitial plagioclase, quartz and chlorite and minor biotite and hornblende. The sample contains a vein up to 2 mm wide (in hand sample) dominated by quartz.

	host rock	fragment
phenocrysts		
plagioclase	4- 5%	4- 5
groundmass		
plagioclase	35-40	2- 3
chlorite	17-20	1- 2
hornblende	12-15	0.3
epidote	5- 7	2- 3
quartz	1- 2	1- 2
biotite	1	0.2
opaque	0.5	
apatite	minor	
veinlet		
quartz-(plagioclase-epidote)	1	(larger in hand sample)

Plagioclase forms subhedral phenocrysts averaging 0.7-1.2 mm in size. Alteration is slight to moderate to disseminated, equant grains of pale green chlorite averaging 0.01-0.03 mm in size.

In the groundmass, plagioclase forms aggregates of equant grains averaging 0.01-0.02 mm in size, with a few from 0.03-0.05 mm across.

Chlorite and much less biotite form ragged flakes averaging 0.05-0.15 mm in size intergrown with groundmass plagioclase. Chlorite is pleochroic from light yellowish green to medium green. Biotite is pleochroic from light to dark brown.

Hornblende forms porphyroblastic prismatic grains averaging 0.7-1.7 mm long. Pleochroism is from light yellowish green to medium to dark green.

Epidote forms subhedral grains averaging 0.05-0.15 mm in size and anhedral grains up to 0.4 mm across.

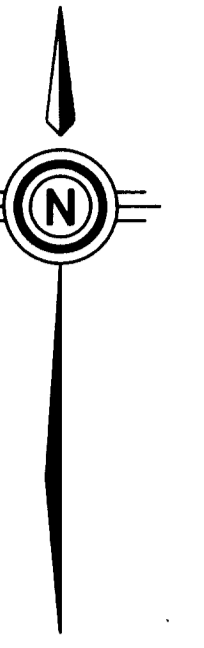
Quartz and chlorite occur in interstitial patches, commonly adjacent to plagioclase phenocrysts, as grains averaging 0.07-0.1 mm in size. Opaque (pyrite and ilmenite?) forms disseminated anhedral to euhedral grains averaging 0.05-0.5 mm in size, and a few up to 1 mm across. Apatite forms equant grains averaging 0.1-0.15 mm in size.

In the fragment, plagioclase forms anhedral phenocrysts averaging 1.5-2 mm in size. These are recrystallized strongly to extremely fine grained, granular aggregates. Some grains are altered moderately to strongly to aggregates of epidote grains averaging 0.05-0.1 mm in size and disseminated flakes of chlorite as in the phenocrysts in the main rock. Bordering many of the plagioclase phenocrysts are interstitial aggregates of submosaic quartz and ragged flakes of chlorite-biotite, with minor to moderately abundant patches of epidote.

Elsewhere, the fragment contains aggregates of quartz grains averaging 0.05-0.2 mm in size and porphyroblasts of hornblende averaging 0.2-0.5 mm long in a groundmass of extremely fine grained plagioclase as in the host rock groundmass.

Along one end of the thin section is a veinlet 0.5 mm wide dominated by fine grained quartz with minor plagioclase and epidote. This may be part of the larger vein in the hand sample.

UTM NORTH



LEGEND

- 1a Argillite/sst/as    1m Marble
- 2 Competent Felsic - Intermediate Volcanics
  - 2.1 Rhyolite-rhyodacite lapilli tuffs with blue quartz eyes, weakly magnetic
  - 2.2 Well-laminated siliceous seds-cherts?
- 3 Sericite Schists - Felsic/Intermediate Tuffs
  - 3.1 Quartz sericite schist, pyritic
  - 3.2 Chlorite-sericite schist (biotite)
- 4 4.1 Competent tuffs/argillite/chert/rhyolite tuff (?)
- 5 5.1 Chlorite schist (biotite)  
5.2 Amphibole-bearing schists (biotite)  
5.3 Amphibolite (biotite)
- 6 Tertiary Volcanics
- 7 Intrusive Rocks

- Outcrop
- Geological Contact
- Fault
- Rock Sample Location
- Stream Silt Location
- Station Number
- Kilometre Marker On Road (from highway)
- Trench
- Adit
- Drill Hole

GEOLOGICAL BRANCH ASSESSMENT REPORT

22,606

Westmin Resources Limited

BELL CREEK PROPERTY

GEOLOGY

Work By	R.L. Wright
Date Drafted	05/17/92
Drafted By	R.A. Ivory
Date Revised	
Revised By	
N.T.S. Number	200
File Name	92 H/2
BL TOP01	

