R. V. KIRKHAM

APPENDIX VI

CARMI MOLYBDENUM PROPERTY

Memo: Results of Whole Rock and
Trace Element Analysis

by

G.M. Leary
July 8, 1980

Table 1: Plot of Whole Rock and Fl Analyses Versus Rock Type

Table 2: Whole Rock and Trace Element Analysis Data

Letter: To X-Ray Labs re/ Carmi, British Columbia Samples Submitted for Whole Rock and Trace Element Analysis

APPENDIX VI

Memo:

To: R.M. Falls and 1979 Report on the Carmi Molybdenum Property.

From: G.M. Leary

SUBJECT: Results of Whole Rock and Trace Element Analyses.

Eightly samples were collected from the drill area of exposed bedrock and drill core in order to 1) signature fresh rock types, 2) identify lateral zonation characteristics of shallow breccia bodies and 3) to evaluate the possibility of vertical zonation. Representative samples were collected by random chip sampling of outcrops over an area of 10 to 100 square feet and from drill core by sampling small chips approximately every ½ to 1 foot interval along core sections of 10 to 25 feet. Except where fresh material was purposely collected, samples were generally collected from both fracture and vein filled material and massive rock. Analytical techniques and detection limits are specified in Table 2 and in an attached letter. In order to select analytical techniques a comparative evaluation of ICP (Indue Coupled Argon Plasma) Emission, XRF and wet chemical methods was briefly undertaken. Detection limits, comparisons with standards and standard deviations were examined in detail for whole rock XRF analysis. For the elements analyzed maximum possible variances from true values anticipated are of concern for CaO (ie. up to 10%) and NaO (ie. up to 10%). Longer count times for these radicals were requested to ensure optimum accuracy.

All sample sites are plotted on Figures 4a and 5a in the main body of the 1979 Report and on drill hole logs illustrated in Appendix IVa. Table 1 illustrates a plot of whole rock and fluorine analyses versus rock type.

Results of analytical work can be summarized as follows:

1. Several of the geochemical pathfinder and associated elements that occur in classical Mo porphyry deposits (ie. Sn, W, Nb, Rb) are not present in anomalous amounts except that Sn is weakly anomalous in some of the breccia and greisen samples. Fluorine occurs in anomalous contents particularly within the speckled granodiorite pseudo breccia unit (ie. 2900 to 4000 ppm) and in breccia bodies and greisen zones (ie. 1300 to 15,000 ppm). Also, the leucocratic quartz monzonite stock, fine grained speckled granodiorite-diorite and feldspar porphyry dykes are slightly enriched in fluorine (ie. average 1100 - 1350 ppm) above the average content in normal granite (ie. 800 ppm).

2. Vertical zonation of alkalies, MnO, Zn or Cu was not detected in the deeper drill holes. However, these elements locally occur in weakly anomalous concentrations within the breccias (ie. Zn and Cu) and peripheral altered zones (ie. Mn).

3. Change in Na_2O, K_2O, CaO, SiO_2 and Mo contents of samples from various alteration assemblages etc. in the shallow breccia zone and greisen type environments were generally as anticipated and confirmed the patterns as presently understood.

4. Change in Na_2O, K_2O, CaO and SiO_2 content in fresh rock types strongly confirmed the distinction of the various phases mapped and supports the close genetic association between certain phases (ie. speckled granodiorite pseudo breccia and biotite quartz monzonite). Also, late porphyry and dacite dykes are chemically similar which suggests a cogmatic affiliation as has been indicated by age dates in the area.

5. One sample from the Boss Mountain stock indicates a similar composition to the quartz porphyry dyke in the Lake Zone. The Boss Stock appears generally slightly higher in K_2O and lower in Na_2O than the Carmi stock.

TABLE 1: PLOT OF WHOLE ROCK AND FLUORINE ANALYSES VERSUS ROCK TYPE

* Boss Mountain Stock (E-4)

Rock Type		$\%SiO_2$	$\%Al_2O_3$	$\%Na_2O$	$\%K_2O$	%CaO	ppmFl	Other
LAMPROPHYRE DYKES								
DACITE DYKES								
E-7	Fresh	68.2	14.4	4.13	3.16	1.11	350	
E-20	Fresh	70.2	14.9	3.48	3.43	2.33	430	
E-23	Fresh to weakly altered	69.8	14.0	2.77	3.28	2.14	570	
	Avg:	69.4	14.4	3.46	3.29	1.86	450	
FELD. PORPHYRY DYKES								
E-3	Fresh	70.3	14.4	4.10	4.52	1.51	1300	
E-16	Fresh	70.5	14.3	3.38	5.37	1.11	840	
E-52	Fresh	69.8	14.2	3.30	5.06	1.55	1300	
	Avg:	70.2	14.3	3.59	4.98	1.39	1147	
PEGMATITE								
E-26	Pink Peg with Ser	77.1	12.4	2.94	4.94	0.70	270	
E-64	Pink Ap-Peg	75.7	12.8	3.69	4.23	1.14	400	
QTZ PORPHYRY DYKES								
E-15	Fresh (Lake Zone Area)	70.4	14.4	2.88	6.32	0.98	620	
E-82	Fresh with moly rosettes (E Zone)	74.4	13.7	3.18	4.70	1.21	840	
INTENSE GREISEN ZONES IN QTZ. MON. STOCK								
E-65	Int. Ser Zone	75.3	11.1	2.12	3.60	0.74	2500	
E-81	Int. ser-qtz-py-amethyst-moly- Zone	55.0	18.7	0.23	6.01	0.64	7500	20 ppm Sn

	Rock Type		$\%SiO_2$	$\%Al_2O_3$	$\%Na_2O$	$\%K_2O$	%CaO	ppmFl	Other
LEUCOCRATIC QTZ MON. STOCK									
	E-1	Weakly Altered M.Gr'd	70.3	14.5	3.98	3.48	1.94	370	260 ppm Cu
*	E-4	Fresh Por.Qtz Mn.Stock (Boss Mtn)	72.3	12.3	2.46	5.55	1.40	340	
	E-5	Weakly Altered M.Gr'd	72.1	13.7	3.63	4.33	0.91	870	
	E-6	Weakly Altered F.Gr'd	73.1	13.8	3.53	5.26	0.71	370	
+	E-8	Fresh, Fine Gr'd	70.0	14.6	4.55	3.68	1.40	1300	
	E-9	Weakly Altered,F.Gr'd	72.7	14.0	3.23	5.25	0.59	510	
+	E-10	Fresh, Fine Gr'd	70.1	14.6	4.11	4.18	1.13	740	
	E-24	Weakly Altered,Fine Gr'd	71.2	14.7	4.34	4.02	1.39	1000	
	E-25	Weakly Altered,M. Gr'd	71.8	14.6	4.20	4.03	1.30	760	
+	E-27	Fresh, Med. Gr'd	73.0	14.4	3.91	4.62	1.27	620	
ǂ	E-28	Weak-Mod K.Feld Qtz Vn'd Zone in Fine Gr.Phase	74.6	13.5	3.53	4.72	0.89	1600	
	E-31	Weak K.Feld-Ep-Ser in Grey Fine Gr'd Phase	71.5	13.6	3.45	4.07	1.95	4700	230 ppm Cu
	E-32	Weak Ser,Mod Clay in Fine Gr'd Phase	73.5	13.8	3.10	5.03	1.04	1500	
	E-33	Weak Ser,k-feld and clay in Fine Gr'd Phase	73.6	14.0	3.53	5.02	1.13	1100	
ǂ	E-38	Narrow Int greisen zones in weak ser,Fine Gr'd Phase	73.9	12.3	3.65	1.97	1.43	2100	270 ppm Cu
ǂ	E-39	Wk ser,Fine Gr'd Phase,local greisen zones	73.5	13.8	3.94	3.81	1.37	490	
ǂ	E-40	Wk-Mod Ser,Fine Gr'd Phase	77.2	13.1	3.97	4.12	0.75	360	
ǂ	E-41	Mod ser,Fine Gr'd Phase	72.0	14.3	3.93	4.38	1.35	2300	
	E-42	Wk K-Feld and ser in Fine Gr'd Phase	73.1	14.4	4.16	4.30	1.27	1100	
+	E-45	Chilled Qtz Porphyry contact; Fresh	71.9	14.4	3.92	3.71	1.72	1200	240 ppm Zn
+	E-49	Chilled Qtz Porphyry contact; wk ser	72.0	14.1	3.85	3.91	1.50	1700	
	E-55	Wk ser-K-feld in Fine Gr'd Phase	70.3	14.1	3.73	4.20	1.48	1800	

	Rock Type	%SiO_2	%Al_2O_3	%Na_2O	%K_2O	%CaO	ppmFl	Other
	E-56 Wk K-feld-Ser Fine Gr'd Phase	70.3	14.5	4.03	4.22	1.30	1800	
	E-57 Wk K-feld-ser in Fine Gr'd Phase	69.6	14.3	3.62	4.31	1.68	1500	
	E-60 Mod Ser-K-feld in Fine Gr'd Phase	72.0	13.3	3.35	4.05	1.45	1500	
	E-66 Wk ser-K-feld in Fine Gr'd Phase	71.8	14.2	3.76	4.31	1.38	1500	
ǂ	E-67 Wk-Mod K-feld,wk ser in Fine Gr'd Phase	73.4	13.8	3.48	4.78	1.15	1200	
ǂ	E-68 Mod ser,local greisen in Fine Gr'd Phase	73.8	13.3	3.10	4.97	0.87	1600	
	E-69 Wk ser-K-feld in Fine Gr'd Phase	73.1	14.0	3.92	4.41	1.11	1300	
	E-70 Wk ser in Fine Gr'd Phase	70.7	14.6	4.43	3.85	1.48	1400	
ǂ	E-71 Mod ser in Fine Gr'd Phase	73.0	13.6	3.43	4.74	1.11	1000	
ǂ	E-72 Mod ser,Wk K-feld in Fine Gr'd Phase	73.7	13.7	3.41	4.96	1.08	1200	
	E-73 Mod K-feld,Mod ser in Fine Phase	72.3	13.7	2.90	5.01	1.20	2300	
	E-74 Grey feldspathized Fine Ph.	70.3	14.9	4.31	3.76	1.55	1700	
ǂ	E-75 Int K-feld,wk ser in Fine Phase	72.3	14.0	3.27	4.87	1.13	2000	
	E-76 Mod sur-K-feld in Fine Ph.	71.0	14.5	3.94	4.52	1.28	1300	
+	E-77 Very weakly altered Fine Phase (grey)	72.2	14.4	4.27	4.08	1.32	1200	
ǂ	E-78 Mod K-feld,weak ser in Med Phase	72.8	14.1	3.86	4.50	1.17	1300	
ǂ	E-79 As above	73.3	14.3	4.09	4.38	1.27	1200	
ǂ	E-80 Int K-feld,weak ser in Med Phase	72.2	13.9	3.94	4.58	1.11	760	
	All Samples(Except *)	72.3	14.2	3.84	4.32	1.26		
	+ Fresh	71.5	14.4	4.10	4.03	1.39	1127	
Avg's	ǂ Sericitized	73.9	13.4	3.63	4.14	1.14	1293	
	ǂ K-feldspathized	73.1	13.9	3.70	4.64	1.12	1343	

Rock Type		$\%SiO_2$	$\%Al_2O_3$	$\%Na_2O$	$\%K_2O$	%CaO	ppmFl	Other
FINE GR'D SP.GD-D								
E-2	Fresh Sp. Gd	69.5	15.4	4.44	1.59	3.39	520	350 ppm Cu
E-29	Fresh Sp D	64.2	16.8	4.34	2.14	3.71	1100	1500 ppm Mn
E-30	Fresh Sp Gd	61.8	18.2	4.47	2.12	4.56	1600	
E-58	Fresh to wk Ep-chl-K in Sp Gd	63.8	16.7	4.49	1.90	3.76	1300	
	Avg.	64.8	16.8	4.44	1.94	3.86	1130	
ALTERED BRECCIA								
+ E-47	Pk-orange int alt (Alk Feld - ser-bt-fl-py-moly-mag) Zone in E Zone Breccia							
E-51	Grey int alt (Alk Feld-ser-bt-py-mag-py)Zone in E Zone Breccia	55.7	18.1	2.04	4.85	2.47	15,000	10 ppm Sn 220 ppm Cu 1100 ppm Mn
E-61	Qtz-ser-py-rock from Lake Zone	68.5	13.2	0.22	5.15	1.21	8,500	20 ppm Sn
E-62	As Above	54.9	14.8	0.30	5.30	4.09	15,000	10 ppm Sn 1200 ppm Mn
+ Not Analyzed								
BRECCIA MATRIX								
E-13	Qtz Mon-Qtz-Ser in Lk Zone	69.2	13.4	2.42	5.81	0.47	1,300	
E-53	Qtz-ser-bt-amethyst matrix and ser alt.frags.in E Zone (good moly)	68.5	11.7	0.33	3.87	2.56	17,000	15 ppm Sn
E-54	Qtz-peg-ap matrix and K-feld -Ep alt frags in E Zone (barren)	71.5	11.4	2.75	2.50	2.26	5,200	290 ppm Cu
E-59	Ap-peg-qtz-py matrix and ser-bt alt frags in E-Zone	68.9	13.3	2.38	4.05	1.93	4,200	280 ppm Zn
SPECKLED GD PSEUDO BRECCIA								
E-43	Fresh with segregations	68.9	15.2	4.32	1.74	2.73	2,900	
E-44	Fresh with segregations	71.3	12.3	2.91	1.90	2.14	4,000	210 ppm Zn 650 ppm Cu
E-46	Fresh with segregations	71.0	13.5	3.44	1.81	2.32	3,300	200 ppm Zn

Rock Type		%SiO_2	%Al_2O_3	%Na_2O	%K_2O	%CaO	ppmFl	Other
E-50	Fresh without segregations	66.3	16.4	4.54	1.87	3.44	2,400	
	Avg:	69.4	14.4	3.80	1.83	2.66	3,150	
BT. QTZ MONZONITE								
+ E-11	Fresh	67.8	15.2	4.23	2.53	2.85	520	
+ E-12	Fresh with quartz-ser veins	66.1	15.6	3.49	3.06	2.50	1,200	
+ E-14	Fresh	67.9	15.6	4.23	2.90	2.64	900	
+ E-19	Fresh	65.8	16.4	4.37	2.50	3.51	760	
ǂ E-35	Mod K-feld,wk Ep,local greisen zones	66.7	15.5	4.30	2.56	3.11	980	1100 ppm Mn
ǂ E-36	Int K-feld,Mod Ep,common greisen zones	67.1	15.4	3.91	3.17	2.53	800	1000 ppm Mn
ǂ E-37	Wk-mod K-feld,Mod-Int Ep, and local greisen zones	66.4	15.8	4.39	2.47	3.66	590	
Avg's	+ Fresh	66.9	15.7	4.08	2.75	2.86	845	
	ǂ K-feld-Ep Altered	66.7	15.6	4.20	2.73	3.10	790	
NELSON QD-D								
ǂ E-17	Intense Ep-Chl-K-feld in Fol.Bt.QD	61.4	16.5	3.30	2.78	5.14	1000	1300 ppm Mn
ǂ E-18	Intense Ep-K-feld in Fol. Hb.QD	63.8	16.2	3.41	3.20	3.19	530	270 ppm Zn 1300 ppm Mn
ǂ E-21	Mod.Ep-K-feld in Fol.Hb.D	61.0	17.0	3.46	1.90	6.57	960	1600 ppm Mn
+ E-22	Fresh Fol. Hb D	59.3	16.7	3.20	2.72	5.61	560	1500 ppm Mn
ǂ E-48	Int.Ep,Mod K-feld in Fol. Hb Bt QD	58.3	16.7	2.86	2.55	6.29	1,700	1700 ppm Mn
ǂ E-63	Int. K-Ep in Fol.Hb QD	63.7	15.3	2.98	3.38	4.13	940	1500 ppm Mn
Avg's	+ Fresh	59.3	16.7	3.20	2.72	5.61	560	
	ǂ K-feld-Ep-Chl Altered	61.6	16.3	3.20	2.76	5.06	1,026	

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

CERTIFICATE OF ANALYSIS

REPORT 6951 REF. FILE 3045-E2

TO: UNION OIL COMPANY OF CANADA LIMITED,
ATTN: GEORGE M. LEARY,
335 - 8TH AVENUE S.W.,
P.O. BOX 999,
CALGARY, ALBERTA T2P 2K6

80 ROCKS SUBMITTED ON 20-MAR-80

WERE ANALYSED AS FOLLOWS:

	UNITS	METHOD	DETECTION LIMIT
F	PPM	WET	100.000
NA2O	%	XRF	0.010
AL2O3	%	XRF	0.010
SIO2	%	XRF	0.010
K2O	%	XRF	0.010
CAO	%	XRF	0.010
CR	PPM	XRF	20.000
MNO	%	XRF	0.010
CU	PPM	AA	1.000
ZN	PPM	AA	1.000
MO	PPM	AA	2.000
AG	PPM	AA	1.000
SN	PPM	EMS	3.000
W	PPM	NA	1.000
NB	PPM	XRF	10.000

X-RAY ASSAY LABORATORIES LIMITED

DATE 25-APR-80

CERTIFIED BY ...

J. H. OPDEBEECK

TABLE 2 : WHOLE ROCK AND TRACE ELEMENT ANALYTICAL DATA

SAMPLE	F PPM	NA2O %	AL2O3 %	SIO2 %	K2O %	CAO %	CR PPM	MNO %
79CLE-1	370	3.98	14.5	70.3	3.48	1.94	80	0.05
79CLE-2	520	4.44	15.4	69.5	1.59	3.39	80	0.06
79CLE-3	1300	4.10	14.4	70.3	4.52	1.51	60	0.05
79CLE-4	340	2.46	12.3	72.3	5.55	1.40	100	0.06
79CLE-5	870	3.63	13.7	72.1	4.33	0.91	80	0.03
79CLE-6	370	3.53	13.8	73.1	5.26	0.71	60	0.03
79CLE-7	350	4.13	14.4	68.2	3.16	1.11	20	0.05
79CLE-8	1300	4.55	14.6	70.0	3.68	1.40	60	0.05
79CLE-9	510	3.23	14.0	72.7	5.25	0.59	60	0.03
79CLE-10	740	4.11	14.6	70.1	4.18	1.13	60	0.04
79CLE-11	520	4.23	15.2	67.8	2.53	2.65	60	0.07
79CLE-12	1200	3.49	15.6	66.1	3.06	2.50	60	0.08
79CLE-13	1300	2.42	13.4	69.2	5.81	0.47	60	0.04
79CLE-14	900	4.23	15.6	67.9	2.90	2.64	60	0.07
79CLE-15	620	2.98	14.4	70.4	6.32	0.98	40	0.03
79CLE-16	840	3.38	14.3	70.5	5.37	1.11	20	0.04
79CLE-17	1900	3.30	16.5	61.4	2.78	5.14	40	0.13
79CLE-18	530	3.41	16.2	63.8	3.20	3.19	60	0.13
79CLE-19	760	4.37	16.4	65.8	2.50	3.51	60	0.09
79CLE-20	430	3.48	14.9	70.2	3.43	2.33	<20	0.02
79CLE-21	960	3.46	17.0	61.0	1.90	6.57	40	0.16
79CLE-22	560	3.20	16.7	59.3	2.72	5.61	60	0.15
79CLE-23	570	2.77	14.0	69.8	3.28	2.14	<20	0.04
79CLE-24	1000	4.34	14.7	71.2	4.02	1.39	60	0.03
79CLE-25	760	4.20	14.6	71.8	4.03	1.30	60	0.05
79CLE-26	270	2.94	12.4	77.1	4.94	0.70	80	0.02
79CLE-27	620	3.91	14.4	73.0	4.62	1.27	80	0.04
79CLE-28	1600	3.53	13.5	74.6	4.72	0.89	80	0.02
79CLE-29	1100	4.34	16.8	64.2	2.14	3.71	60	0.15
79CLE-30	1600	4.47	18.2	61.8	2.12	4.56	80	0.08
79CLE-31	4700	3.45	13.6	71.5	4.07	1.95	60	0.06
79CLE-32	1500	3.10	13.8	73.5	5.03	1.04	60	0.03
79CLE-33	1100	3.53	14.0	73.6	5.02	1.13	60	0.03
79CLE-35	980	4.30	15.5	66.7	2.56	3.11	40	0.11
79CLE-36	800	3.91	15.4	67.1	3.17	2.53	60	0.10
79CLE-37	590	4.39	15.8	66.4	2.47	3.66	40	0.09
79CLE-38	2100	3.65	12.3	73.9	1.97	1.43	60	0.03
79CLE-39	490	3.94	13.8	73.5	3.81	1.37	60	0.05
79CLE-40	360	3.97	13.1	77.2	4.12	0.75	80	0.02
79CLE-41	2300	3.93	14.3	72.0	4.38	1.35	60	0.05
79CLE-42	1100	4.16	14.4	73.1	4.30	1.27	60	0.04
79CLE-43	2900	4.32	15.2	68.9	1.74	2.73	80	0.08
79CLE-44	4000	2.91	12.3	71.3	1.90	2.14	100	0.06
79CLE-45	1200	3.92	14.4	71.9	3.71	1.72	60	0.05
79CLE-46	3300	3.44	13.5	71.0	1.81	2.32	80	0.08
79CLE-48	1700	2.86	16.7	58.3	2.55	6.29	60	0.17
79CLE-49	1700	3.85	14.1	72.0	3.91	1.50	60	0.05
79CLE-50	2400	4.54	16.4	66.3	1.87	3.44	80	0.09
79CLE-51	15000	2.04	18.1	55.7	4.85	2.47	60	0.11
79CLE-52	1300	3.30	14.2	69.8	5.06	1.55	60	0.05
79CLE-53	17000	0.33	11.7	68.5	3.87	2.56	100	0.06
79CLE-54	5200	2.75	11.4	71.5	2.50	2.26	80	0.07
79CLE-55	1800	3.73	14.1	70.3	4.20	1.48	60	0.03
79CLE-56	1800	4.03	14.5	70.3	4.22	1.30	40	0.05
79CLE-57	1500	3.62	14.3	69.6	4.31	1.68	70	0.05

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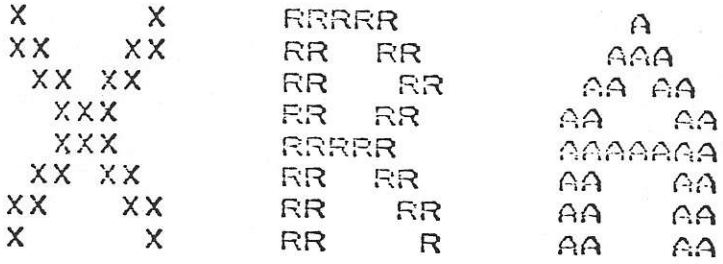
SAMPLE	F PPM	NA2O %	AL2O3 %	SIO2 %	K2O %	CAO %	CR PPM	MNO %
79CLE-58	1300	4.49	16.7	63.8	1.90	3.76	60	0.09
79CLE-59	4200	2.38	13.3	68.9	4.05	1.93	100	0.09
79CLE-60	1500	3.35	13.3	72.0	4.05	1.45	100	0.04
79CLE-61	8500	0.22	13.2	68.5	5.15	1.21	60	0.04
79CLE-62	15000	0.30	14.8	54.9	5.30	4.09	60	0.12
79CLE-63	940	2.98	15.3	63.7	3.38	4.13	60	0.15
79CLE-64	400	3.69	12.8	75.7	4.23	1.14	60	0.03
79CLE-65	2500	2.12	11.1	75.3	3.60	0.74	100	0.03
79CLE-66	1500	3.76	14.2	71.8	4.31	1.38	40	0.04
79CLE-67	1200	3.48	13.8	73.4	4.78	1.15	80	0.03
79CLE-68	1600	3.10	13.3	73.8	4.97	0.87	60	0.03
79CLE-69	1300	3.92	14.0	73.1	4.41	1.11	60	0.04
79CLE-70	1400	4.43	14.6	70.7	3.85	1.48	60	0.04
79CLE-71	1000	3.43	13.6	73.0	4.74	1.11	60	0.03
79CLE-72	1200	3.41	13.7	73.7	4.96	1.08	60	0.03
79CLE-73	2300	2.90	13.7	72.3	5.01	1.20	60	0.03
79CLE-74	1700	4.31	14.9	70.3	3.76	1.55	60	0.04
79CLE-75	2000	3.27	14.0	72.3	4.87	1.13	60	0.03
79CLE-76	1300	3.94	14.5	71.0	4.52	1.28	40	0.03
79CLE-77	1200	4.27	14.4	72.2	4.08	1.32	80	0.03
79CLE-78	1300	3.86	14.1	72.8	4.50	1.17	60	0.03
79CLE-79	1200	4.09	14.3	73.3	4.38	1.27	60	0.03
79CLE-80	760	3.94	13.9	72.2	4.58	1.11	60	0.05
79CLE-81	7500	0.23	18.7	55.0	6.01	0.64	80	0.04
79CLE-82	840	3.18	13.7	74.4	4.70	1.21	60	0.05

X-RAY ASSAY LABORATORIES 25-APR-90 INVOICE 6951 REF. FILE 3065-EZ PAGE 3

SAMPLE	CU PPM	ZN PPM	MO PPM	AG PPM	SN PPM	W PPM	MB PPM
79CLE-1	260	69	4	<1	<3	2	<10
79CLE-2	350	53	4	<1	<3	1	<10
79CLE-3	120	40	4	<1	<3	1	20
79CLE-4	93	22	4	<1	<3	1	20
79CLE-5	95	15	24	<1	<3	6	<10
79CLE-6	41	15	4	<1	<3	1	<10
79CLE-7	100	42	<2	<1	<3	1	<10
79CLE-8	100	33	4	<1	<3	<1	<10
79CLE-9	46	17	12	<1	<3	2	<10
79CLE-10	31	26	12	<1	<3	1	<10
79CLE-11	28	56	4	<1	<3	<1	10
79CLE-12	40	61	40	<1	<3	<1	<10
79CLE-13	47	35	68	<1	<3	2	<10
79CLE-14	20	78	8	<1	<3	1	10
79CLE-15	43	42	20	<1	<3	3	<10
79CLE-16	15	50	8	<1	<3	2	20
79CLE-17	67	140	<2	<1	<3	2	<10
79CLE-18	21	270	4	<1	<3	2	<10
79CLE-19	16	78	4	<1	<3	2	<10
79CLE-20	32	31	12	<1	<3	1	<10
79CLE-21	83	160	8	<1	<3	2	<10
79CLE-22	63	70	<2	<1	<3	1	<10
79CLE-23	22	31	4	<1	<3	1	<10
79CLE-24	10	31	4	<1	<3	1	<10
79CLE-25	14	78	8	<1	<3	3	<10
79CLE-26	33	9	104	<1	<3	<1	10
79CLE-27	10	23	<2	<1	<3	1	<10
79CLE-28	10	17	<2	<1	<3	5	10
79CLE-29	10	93	<2	<1	<3	3	20
79CLE-30	63	85	<2	<1	<3	2	<10
79CLE-31	230	140	400	<1	<3	2	<10
79CLE-32	11	16	20	<1	<3	2	10
79CLE-33	10	18	16	<1	<3	1	<10
79CLE-35	36	90	8	<1	<3	1	10
79CLE-36	70	110	<2	<1	<3	3	<10
79CLE-37	27	100	<2	<1	<3	2	10
79CLE-38	270	30	88	<1	<3	2	10
79CLE-39	16	31	<2	<1	<3	1	<10
79CLE-40	22	13	40	<1	<3	2	<10
79CLE-41	26	27	20	<1	<3	<1	<10
79CLE-42	10	27	<2	<1	<3	<1	<10
79CLE-43	50	120	160	<1	<3	2	20
79CLE-44	650	210	640	<1	3	<1	20
79CLE-45	93	240	8	<1	<3	2	<10
79CLE-46	170	200	680	<1	<3	<1	20
79CLE-48	19	160	8	<1	<3	<1	<10
79CLE-49	90	72	140	<1	<3	3	10
79CLE-50	30	98	12	<1	<3	<1	10
79CLE-51	220	150	1640	<1	10	2	30
79CLE-52	17	82	24	<1	<3	3	20
79CLE-53	76	79	1800	<1	15	5	10
79CLE-54	290	170	560	<1	<3	1	<10
79CLE-55	31	24	180	<1	<3	3	<10
79CLE-56	11	25	20	<1	<3	5	<10
79CLE-57	85	36	64	<1	<3	4	10

X-RAY ASSAY LABORATORIES 25-APR-80 INVOICE 6951 REF FILE 3065-EZ PAGE 4

SAMPLE	CU PPM	ZN PPM	MO PPM	AG PPM	SN PPM	W PPM	PB PPM
79CLE-58	34	90	8	<1	<3	1	<10
79CLE-59	240	280	1560	<1	<3	1	10
79CLE-60	110	150	56	<1	<3	1	<10
79CLE-61	14	130	1520	<1	20	6	20
79CLE-62	33	130	4800	<1	10	8	10
79CLE-63	31	140	52	<1	<3	4	<10
79CLE-64	45	80	20	<1	<3	5	<10
79CLE-65	31	8	140	<1	<3	3	<10
79CLE-66	7	21	<2	<1	<3	4	<10
79CLE-67	5	18	8	<1	<3	<1	<10
79CLE-68	64	20	68	<1	<3	1	10
79CLE-69	29	26	4	<1	<3	<1	<10
79CLE-70	13	39	<2	<1	<3	2	<10
79CLE-71	19	13	520	<1	<3	1	10
79CLE-72	6	12	100	<1	<3	<1	<10
79CLE-73	59	14	170	<1	3	1	10
79CLE-74	8	41	8	<1	<3	3	<10
79CLE-75	6	11	250	<1	<3	1	10
79CLE-76	5	25	4	<1	<3	1	<10
79CLE-77	7	44	<2	<1	<3	2	<10
79CLE-78	11	26	<2	<1	<3	1	10
79CLE-79	10	25	12	<1	<3	<1	<10
79CLE-80	6	58	12	<1	<3	2	10
79CLE-81	8	7	4000	<1	20	4	30
79CLE-82	44	51	190	<1	<3	9	30



MINOR ELEMENTS

UNION OIL

REPORT NO. 6951 08-APR-80

SAMPLES RECEIVED FROM G. M. LEARY REF FILE 3065-E2

SAMPLE	RB	SR
79CLE-1	130	350
79CLE-2	50	320
79CLE-4	200	90
79CLE-5	190	310
79CLE-6	140	340
79CLE-7	150	610
79CLE-8	130	740
79CLE-9	260	270
79CLE-10	230	550
79CLE-11	130	390
79CLE-12	310	390
79CLE-13	190	250
79CLE-14	100	420
79CLE-15	180	570
79CLE-16	190	650
79CLE-17	110	440
79CLE-18	100	380
79CLE-19	80	490
79CLE-20	90	280
79CLE-21	50	520
79CLE-22	100	430
79CLE-23	80	240
79CLE-24	90	710
79CLE-25	100	590
79CLE-26	140	120
79CLE-27	120	410
79CLE-28	110	280
79CLE-29	110	450
79CLE-30	110	600

SAMPLE	PB	ZR
79CLE-31	100	410
79CLE-32	140	270
79CLE-33	110	290
79CLE-35	90	450
79CLE-36	120	310
79CLE-37	70	480
79CLE-38	130	190
79CLE-39	120	600
79CLE-40	100	130
79CLE-41	120	450
79CLE-42	100	500
79CLE-43	100	350
79CLE-44	170	230
79CLE-45	90	440
79CLE-46	120	320
79CLE-48	120	450
79CLE-49	100	370
79CLE-50	90	450
79CLE-51	280	130
79CLE-52	150	650
79CLE-53	200	20
79CLE-54	140	210
79CLE-55	120	430
79CLE-56	120	490
79CLE-57	130	440
79CLE-58	50	530
79CLE-59	160	210
79CLE-60	120	380
79CLE-61	190	20

SAMPLE	RB	SR
79CLE-62	230	10
79CLE-63	150	330
79CLE-64	130	160
79CLE-65	120	120
79CLE-66	120	320
79CLE-67	130	290
79CLE-68	140	270
79CLE-69	110	450
79CLE-70	90	690
79CLE-71	120	250
79CLE-72	120	280
79CLE-73	160	240
79CLE-74	120	690
79CLE-75	130	280
79CLE-76	150	440
79CLE-77	90	540
79CLE-78	140	350
79CLE-79	90	350
79CLE-80	140	380
79CLE-81	280	10
79CLE-82	110	410
79CLE-3	140	850

Carmi
Tech.

339 8th Avenue S.W.
Post Office Box 939
Calgary, Alberta T2P 2K6
Telephone 268-0176

UNION 70

Minerals Department

1980 February 29

X-Ray Assay Laboratories Limited
1885 Leslie Street
Don Mills, Ontario
M3B 3J4

Attention: Mr. John Opdbeck

Dear John:

RE: Carmi, British Columbia Samples Submitted for Whole Rock and Trace Element Analysis

Under separate cover and with a copy of this letter, 82 samples have been shipped to your lab re the above. As requested over the telephone, I have listed the elements to be analysed for with special instructions where noted, the analytical technique and prices as quoted to me as of February 29, 1980 on Table 1 attached. At this time only a listing of data is requested, however, various plots are anticipated once the data has been reviewed. It is my understanding that the total cost of analytical work requested will be $2,902.80 (ie. 82 samples X $35.40/ sample).

I trust that the foregoing and attached table are satisfactory. Many thanks for your assistance in this matter.

Yours truly,

George M. Leary
Senior Geologist
Base Metals Exploration

GML/dmh
cc: Bob Falls
With Samples / Letter dated 1980 February 29

Table 1

Element to be Analyzed	Analytical Technique	Price Quoted
SiO_2	Sequential X-Ray Spectrometer	Inclusive
Al_2O_3	Sequential X-Ray Spectrometer	$14.50
* CaO	Sequential X-Ray Spectrometer	
* Na_2O	Sequential X-Ray Spectrometer	
K_2O	Sequential X-Ray Spectrometer	
MnO	Sequential X-Ray Spectrometer	
Sr	Sequential X-Ray Spectrometer	
Rb	Sequential X-Ray Spectrometer	
Cr	XRF (W excitation)	$ 1.50
Nb	XRF (W excitation)	$ 3.50
Sn	Emission Spectrometer	$ 3.00
W.	Neutron Activation	$ 5.00
Fl	Ion Specific Electrode	$ 3.00
Cu	Atomic Absorption	$ 1.60
Zn	Atomic Absorption	$ .60
Mo	Atomic Absorption	$ .60
Ag	Atomic Absorption	$ .60
Preparation	(All samples are approximately 1 pound)	$ 1.50
	TOTAL	$35.40

*Note: Samples will have relatively low CaO and Na_2O contents. Therefore, special care should be taken to ensure accuracy by utilizing a longer count time.