6241

R E P O R T

ON

PERCUSSION DRILLING PROGRAM

1976 - 1977

ON

SHEBA COPPER MINES LTD.

BY

WESTERN MINES LTD.

R.H. Seraphim, Ph.D., P.Eng.

February 14, 1977

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INTRODUCTION

The drilling was completed in two stages. The first stage was the subject of a report dated November 1, 1976. The second stage was begun because two holes, W-21 and E-5, showed marginal mineralization, and because the depth of 'casing' in these holes was less than 100 feet. Subsequent conversation with other drillers disclosed that our drillers did not always case to bedrock. Hence the material in some of the uppermost intercepts of some of the holes logged and reported on herein may be boulder or gravel. In fact, some of the logs do show an abrupt change in grade near the top of the recovered intercept.

However, all holes were drilled with the object of recovering and assaying at least 150 feet of bedrock, and this object was obtained in almost all attempts. Thus the test of the pertinent ground is, in the opinion of the author, successful though it did not produce favorable results.

The logs of the 61 holes completed are included with a short description of the rock, as well as assays for copper. The rock description is obtained merely by inspecting cuttings glued to a peg-board, and thus is subject to revision. Copper assays were obtained from Chemex Laboratory in North Vancouver, for holes drilled prior to November 1, 1976, and from Bethlehem's Laboratory for holes drilled subsequent to November 1, 1976.

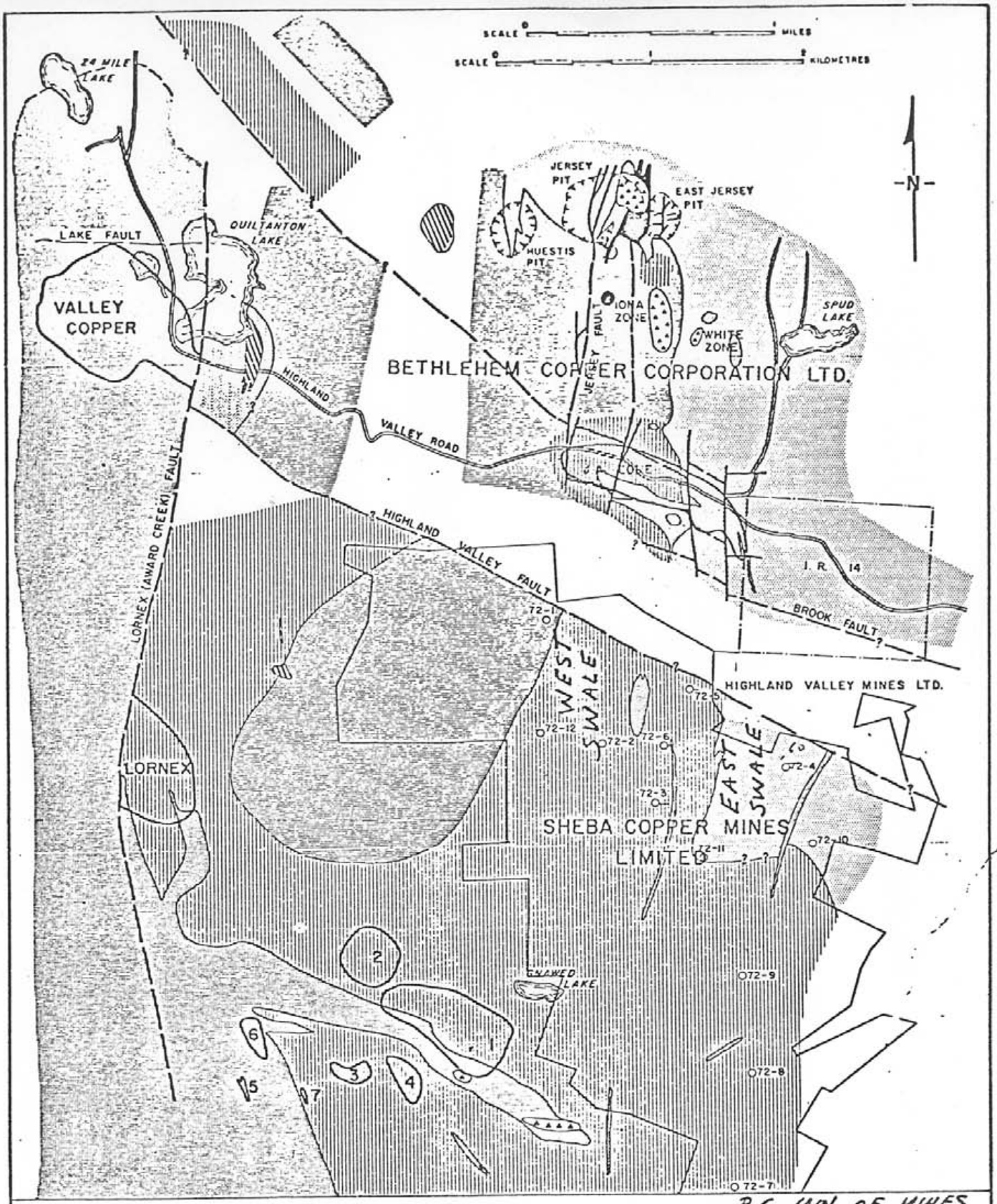


Figure 12
GENERALIZED GEOLOGY
OF
HIGHLAND VALLEY

B.C. MIN. OF MINES 1972 p. 163

LEGEND

TERTIARY
- VOLCANIC FLOW ROCKS
- CLASTIC SEDIMENTARY ROCKS

GUICHON CREEK BATHOLITH
- BETHSAIDA PHASE AND OFFSHOOT DYKES AND BODIES
- SKEENA VARIETY
- BETHLEHEM PHASE WITH QUARTZ EYES
- BETHLEHEM PHASE
- GUICHON VARIETY
- PORPHYRY DYKES
- BRECCIA BODIES
- OUTLINE OF OREBODY
- FAULT - PROVEN, INFERRED

SUMMARY AND CONCLUSIONS

Western Mines percussion drilling on selected parts of the Sheba Copper Mines property has comprised a total of 61 holes totalling 11,725 feet. These holes tested two north-south trending depressions called the West Swale (W series of holes) and East Swale (E series of holes). Several intercepts were obtained that approached ore grade, but follow-up drilling in the vicinity did not disclose continuity to the mineralization. Consequently, the program was terminated and the control of the property was returned to the vendors.

RECOMMENDATION

Sheba's claims do contain widespread but low grade copper mineralization. One showing, known as the J 101, probably contains a small tonnage of milling grade. The claims should be maintained in the hope that other small copper deposits might be found, and also for their 'real estate' value in this important mining camp.

OPERATIONS

Western Mines Ltd. decided to drill two areas, known as the East and West Swales, after data concerning these areas was presented and reported on by R.H. Seraphim, February 6, 1976. Seraphim reconnoitred the areas initially on May 25 and again on July 7 and 8 with A. Soregaroli, B. Spencer and P. Mason. W. McMillan of the B.C. Department of Mines kindly provided guidance and a better appreciation of lithology on July 7.

Detailed mapping of rock alteration and mineralization in outcrop and examination of percussion drill cuttings were completed July 26 to 31, September 28, October 3, and February 11, 12 (1977). Memoranda dated May 27, 1976, August 31, 1976 and a short preliminary report dated October 5, 1976 add to the data in the report of February 6, 1976.

Peter Mason gave excellent field management to the drill program. The drilling itself was begun by L. & L. (Larry Reaugh) on July 21 and the initial program was completed on September 22. (The second drill program extended from December 14, 1976 to January 12, 1977.) The layout of the percussion drill holes E1 to E36 (east grid in PHI swale) and W1 to W27 (west grid in Jay swale) as well as holes previously drilled in the two swales, are shown on an accompanying plan at a scale of 4800 : 1 (400 ft. = 1 in.). Assay logs and brief descriptions of the nature of the cuttings are appended hereto.

COSTS

The costs of the overall program that are directly attributable to assessment work application are:

Drilling - direct to contractor	$35,239.00
Access and site preparation	4,946.00
Assays	3,815.00
On site supervision	7,625.00
Total	$51,625.00

The onsite supervisor was Peter Mason, geological technician, who was on site July 6 to 10 and July 13 to 31; August 1 to 5 and 9 to 31; Sept. 1 to 30, Oct. 1, Dec. 13 to 23, and Jan. 3 to 13, a total of 105 days at cost of $72.62 per day.

The cost per foot of drilling is calculated at $51,625 divided by 11,725 feet = $4.403 per foot. The amount applicable to the claim groups is:

Group	Feet Drilled	Total Applicable
Middle	6,455	$28,421
South	690	3,038
*New North	4,580	20,165
	11,725	$51,624

* In process of being grouped - data to follow

Hole No.	Footage Sampled	ppm Cu.	Sample No.
E-1	50-60	131	48601A
	70	161	2
	80	102	3
	90	124	4
	100	106	5
	110	131	6
	120	124	7
	130	141	8
	140	222	9
	150	228	48610
	160	215	1
	170	197	2
	180	228	3
	190	323	4
	200	255	48615
	50-200 = 0.018%		

Bethlehem -
mafics half chloritized -
moderate epidote
5% ? pink alteration
slight clay alteration
no oxide

E-2	50-60	270	48616A
	70	156	7
	80	392	8
	90	379	9
	100	1920	48620
	110	1640	1
	120	1000	2
	130	800	3
	140	760	4
	150	640	5
	160	760	6
	170	1000	7
	180	800	8
	190	840	9
	200	920	48630
	50- 90 = 0.03%		
	90-200 = 0.10%		

As above
oxide down
to 120 ft.

Hole No.	Footage Sampled	ppm Cu.	Sample No.
E-3	50-60	270	48631A
	70	482	2
	80	960	3
	90	720	4
	100	1240	5
	110	1240	6
	120	1000	7
	130	1120	8
	140	1360	9
	150	1080	48640
	160	720	1
	170	960	2
	180	1240	3
	190	840	4
	200	800	5
	210	720	6
	220	1920	7
	230	1240	48648
	50-230 = 0.10%		

Bethlehem ?

mafics 90% chloritized

but biotite partly fresh

5% pink alteration and

10% clay ? alteration

scattered malachite

(Note) Hole has darker

green alteration

from E-1 & E-2

Oxide to 110'

E-4	20-30	344	48649A
	40	613	50
	50	379	1
	60	840	2
	70	960	3
	80	186	4
	90	367	5
	100	960	6
	110	255	7
	120	165	8
	130	129	9
	140	344	48660
	150	203	1
	160	255	2
	170	720	48663
	20-170 = 0.045%		

Bethlehem

mafics half chloritized

slight epidote alteration

2 or 3% pink alteration

no ? clay alteration

(feldspars are bright)

Oxide to 70 ft.

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
E-5	20-30	1200	48664A	Bethlehem
	40	323	5	
	50	1840	6	mafics chloritized
	60	3070	7	
	70	2080	8	(90%) except for
	80	>4000	9	
	90	>4000	48670	fresh biotite
	100	3280	1	
	110	1840	2	5 to 10% pink alteration
	120	2300	3	
	130	1600	4	and moderate argillic
	140	1280	5	
	150	1000	6	traces malachite and bornite
	160	1760	7	
	170	1280	48678A	no oxidation
	20-170 =	0.21% +		

E-6	10-20	165	48679A	Bethlehem
	30	138	48680	
	40	84	1	mafics 90%
	50	142	2	
	60	720	3	chloritized except for
	70	262	4	fresh biotite
	80	228	5	
	90	175	6	5 to 10% pink alteration
	100	203	7	little or no oxidation
	110	142	8	
	120	120	9	(alteration in this
	130	241	48690	hole is strong though
	140	295	1	
	150	170	2	mineralization is weak)
	160	248	3	
	10-160 =	0.02% +		

Hole No.	Footage Sampled	ppm Cu.	Sample Number	
E-7	30-40	1320	48694A	Bethlehem
	50	720	5	mafics 90% chloritized
	60	480	6	except for fresh
	70	1080	7	biotite
	80	720	8	5% to 10% pink alteration
	90	840	9	5% epidote
	100	521	48600	no oxidation
	110	482	1	
	120	465	2	
	130	405	3	
	140	434	4	
	150	465	5	
	160	304	6	
	170	405	7	
	180	379	48708	
	30- 70	= 0.09%		
	70-180	= 0.05%		
E-8	40-50	0.07	48709A	Bethlehem
	60	0.20	10	mafics 90% chloritized
	70	0.05	1	except for fresh
	80	0.04	2	biotite
	90	0.15	3	5% to 10% pink alteration
	100	0.14	4	5% epidote
	110	0.08	5	no oxidation
	120	0.09	6	abundant malachite
	130	0.23	7	
	140	0.12	8	
	150	0.05	9	
	160	0.05	48720	
	170	0.07	1	
	180	0.12	2	
	190	0.06	3	
	200	0.06	4	
	210	0.08	5	
	220	0.06	6	
	230	0.07	7	
	240	0.07	48728	
	250	0.06	9	
	260	0.08	48730	
	270	0.07	1	
	280	0.05	2	
	290	0.04	48733A	
	40-140	= 0.12%		
	140-290	= 0.066%		

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
E-9	no bedrock at 120'			
E-10	30-40	44	48734A	Bethlehem
	50	536	5	mafics 90% chloritized
	60	295	6	except for fresh biotite
	70	344	7	5% to 10% pink alteration
	80	562	8	5% epidote
	90	>4000	9	no oxidation
	100	1400	48740	bornite at 90 - 180
	110	2710	1	and more intense
	120	1640	2	chlorite alteration 150 to 180
	130	1040	3	
	140	1320	4	
	150	920	5	
	160	800	6	
	170	1240	7	
	180	1280	48748A	

30- 80 = 0.036%
80-180 = 0.163%

E-11	20-30	159	48749A	Bethlehem
	40	114	50	mafics 90% chloritized
	50	191	1	except for fresh biotite
	60	110	2	5% to 10% pink alteration
	70	222	3	5% epidote
	80	114	4	no oxidation
	90	131	5	intense chlorite alteration
	100	138	6	50 ft. to 70 ft.
	110	186	7	
	120	165	8	
	130	587	9	
	140	405	48760	
	150	274	1	
	160	255	2	
	170	175	48763A	

20-170 = 0.02%

Hole No.	Footage Sampled	ppm Cu.	Sample Number	
E-12	30-40	2160	48764A	Bethlehem at 30 - 70 and 130 - 180 with 90% chloritized mafics except for fresh biotite - 5% to 10% pink alteration minor argillic alteration
	50	270	5	
	60	670	6	
	70	313	7	
	80	141	8	
	90	98	9	
	100	122	48770	
	110	161	1	
	120	136	2	
	130	235	3	
	140	203	4	
	150	170	5	aphanitic pink - grey (aplite?) dyke 70 to 130
	160	120	6	
	170	148	7	
	180	248	48778A	
	30-180 = 0.03%			
E-13	20-30	209	48779A	Bethlehem mafics 90% chloritized except for fresh biotite 5% to 10% pink alteration 5% epidote no oxidation
	40	131	80	
	50	203	1	
	60	52	2	
	70	278	3	
	80	252	4	
	90	175	5	
	100	191	6	
	110	3170	7	
	120	3280	48788A	
	130	2360	9	
	140	1720	90	
	150	1160	1	
	160	1000	2	
	170	1000	48793A	
	20-100 = 0.02%			
	100-170 = 0.2%			

Hole No.	Footage Sampled	ppm Cu.	Sample No.	Mo
E-14	20-30	2.75	48794A	0.280
	40	0.72	5	0.090
	50	0.34	6	0.053
	60	0.52	7	0.039
	70	0.32	8	0.051
	80	0.21	9	0.039
	90	0.27	48800	0.026
	100	0.28	1	0.024
	110	0.26	2	0.028
	120	0.14	3	0.019
	130	0.14	4	0.024
	140	0.16	5	0.016
	150	0.18	6	0.015
	160	0.16	7	0.018
	170	0.15	8	0.025
	180	0.11	9	0.018
	190	0.09	48810	0.014
	200	0.11	1	0.030
	210	0.09	2	0.024
	220	0.12	3	0.030
	230	0.11	48814A	0.026

20 to 30 has abundant bornite

20 to 110 has intense chloritic alteration
(a few fresh biotite flakes)

110 to 160 has abundant (20%) pink alteration

and moderate to strong chloritic alteration

160 - 230 mafics 90% chloritized except for fresh biotite

5% to 10% pink alteration
5% epidote

no oxidation

	20- 60	= 1.08% Cu.	0.11% Mo.
or	20-110	= 0.63% Cu.	0.08% Mo.
	110-230	= 0.13% Cu.	0.02% Mo.

E-15	30-40	0.01	48815A
	50	0.01	6
	60	0.02	7
	70	0.01	8
	80	0.26	9
	90	0.13	20
	100	0.10	1
	110	0.17	2
	120	0.19	3
	130	0.09	4
	140	0.11	48825A
	150	0.12	6
	160	0.16	7
	170	0.72	8
	180	0.25	9
	190	0.21	30
	200	0.20	1
	210	0.22	2
	220	0.22	3
	230	0.15	4
	240	0.12	5
	250	0.17	48836A

90% chlorite alteration

except for fresh biotite

5% epidote

10% to 15% pink alteration

minor argillic alteration

oxidized 30' to 70'

50- 70 =	0.02%
70-250 =	0.20%

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
E-16	20-30	235	48837A	Bethlehem
	40	248	8	
	50	323	9	mafics 90% chloritized
	60	367	40	except for fresh biotite
	70	270	1	
	80	255	2	5% to 10% pink alteration
	90	323	3	
	100	400	4	5% epidote
	110	270	5	
	120	203	6	no oxidation
	130	670	7	
	140	720	8	
	150	760	48849	
	160	482	50	
	170	960	1	
	180	1040	48852A	
	20-160 = 0.04%			
	160-180 = 0.10%			
E-17	30-40	333	48853A	90% chlorite alteration
	50	500	4	
	60	920	5	mafics
	70	419	6	
	80	355	7	30% pink alteration 30' to 70'
	90	540	8	
	100	540	9	moderate argillic alteration
	110	1100	48860	
	120	2520	1	5% epidote
	130	1560	2	
	140	1720	3	scattered malachite and
	150	2080	4	bornite 100' to 160'
	160	2800	48865A	
	30-100 = 0.05%			no oxidation
	100-160 = 0.20%			

Hole No.	Footage Sampled	ppm Cu.	Sample No.
E-18	70-80	161	48866A
	90	337	7
	100	1360	8
	110	1520	9
	120	680	48870
	130	720	1
	140	920	2
	150	1560	3
	160	1000	4
	170	800	48875A
	180	720	6
	190	670	7
	200	840	8
	210	587	9
	220	720	48880A
	70-220	= 0.084%	

Bethlehem

mafics 90% chloritzied

except for fresh biotite

5% to 10% pink alteration

5% epidote

no oxidation

E-19	20-30	110	48881A
	40	286	2
	50	191	3
	60	141	4
	70	74	5
	80	235	6
	90	112	7
	100	112	8
	110	110	9
	120	82	90
	130	2000	1
	140	640	2
	150	613	3
	160	323	4
	170	278	48895A
	20-170	= 0.035%	

Bethlehem

mafics 90% chloritized

except for fresh biotite

5% to 10% pink alteration

5% epidote

no oxidation

(Note - 20% pink alteration

20' to 30')

Hole No.	Footage Sampled	ppm Cu.	Sample No.
E-20	10-20	0.03	48896A
	30	0.03	7
	40	0.05	8
	50	0.06	9
	60	0.08	48900
	70	0.08	1
	80	0.05	2
	90	0.06	3
	100	0.01	4
	110	0.02	5
	120	0.03	6
	130	0.03	7
	140	0.08	8
	150	0.12	9
	160	0.08	48910
	170	0.06	1
	180	0.06	2
	190	0.07	3
	200	0.08	48914A
	210	0.05	5
	220	0.07	6
	230	0.05	7
	240	0.08	8
	250	0.09	48919A
	10-250 =	0.06%	

Bethlehem

mafics 90% chloritzed

except for fresh biotite

5% to 10% pink alteration

5% epidote

no oxidation

(Note - some grains of

grey-black material

molybdenite in part

with black chlorite?

E-21	20-30	209	48920A
	40	58	1
	50	38	2
	60	51	3
	70	24	4
	80	24	5
	90	30	6
	100	31	7
	110	63	8
	120	70	9
	130	96	48930
	140	760	1
	150	379	2
	160	367	3
	170	450	48934A
	20-170 =	0.02%	

Bethlehem

mafics 90% chloritized

except for fresh biotite

5% to 10% pink alteration

5% epidote

no oxidation

Hole No.	Sampled	Cu.	No.
E-22	20-30	146	48935A
	40	120	6
	50	161	7
	60	3370	8
	70	1400	9
	80	1840	48940
	90	1400	1
	100	1080	2
	110	1120	3
	120	800	4
	130	960	5
	140	920	6
	150	880	7
	160	1080	8
	170	640	9
	180	640	48950
	190	613	1
	200	465	2
	210	392	3
	220	482	4
	230	405	48955A

Bethlehem

20 to 40 -
mafics 90% chloritized except
for fresh biotite
5% to 10% pink alteration
5% epidote
no oxidation

40 to 150 has 20% pink alteration

150 - 230
mafics 90% chloritized except
for fresh biotite
5% to 10% pink alteration
5% epidote
no oxidation

20- 50 = 0.014%
50-160 = 0.135%
160-230 = 0.036%

E-23	10-20	12	48956A
	30	12	7
	40	7	8
	50	4	9
	60	38	48960
	70	22	1
	80	22	2
	90	12	3
	100	7	4
	110	7	5
	120	6	6
	130	6	7
	140	13	8
	150	7	9
	160	6	48970
	170	12	1
	180	12	2
	190	6	3
	200	24	4
	210	114	5
	220	760	6
	230	419	7
	240	228	8
	250	175	9
	260	116	48980
	270	116	1
	280	148	2
	290	228	48983A

As E-7 but
has less chlorite
(less mafic minerals)
i.e. approaches Bethsaida

10-200 = 0.001%
200-290 = 0.025%

Hole No.	Sampled	Cu.	No.	
E-24	10-20	28	48984A	Bethsaida
	30	14	5	with moderate
	40	18	6	chlorite and
	50	26	7	clay alteration
	60	20	8	
	70	20	9	
	80	18	48990	
	90	20	1	
	100	14	2	
	110	16	3	
	120	13	4	
	130	18	5	
	140	41	6	
	150	14	7	
	160	48	8	
	170	40	48999A	
	10-170 = Trace			
E-25	10-20	41	49000A	Bethsaida
	30	20	49601A	with moderate
	40	16	2	chlorite and
	50	26	3	clay alteration
	60	16	4	
	70	58	5	
	80	13	6	
	90	13	7	
	100	14	49608A	
	110	12	9	
	120	13	49610	
	130	248	1	
	140	270	2	
	150	51	3	
	160	63	4	
	170	34	49615A	
	10-170 = 0.005%			
E-26	20-30	7	49616A	Rock type unusual
	40	4	7	Some large quartz grains
	50	6	8	Much less chlorite but more
	60	7	9	biodite than Bethlehem
	70	8	49620	(i.e. seems to be a type
	80	12	1	between Bethlehem and
	90	8	2	Bethsaida)
	100	14	3	- moderate to slight
	110	8	4	chlorite alteration
	120	175	5	
	130	521	6	
	140	434	7	
	150	82	8	
	160	42	49629A	
	20-160 = 0.01%			

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
E-27	20-30	450	49630A	Similar to E-26
	40	304	1	i.e. less chlorite and a
	50	333	2	more "acid" rock with
	60	222	3	moderate alteration
	70	180	4	(cloudy feldspar and
	80	175	5	the sparse mafics are
	90	141	6	chloritized)
	100	76	7	Oxide to 110'
	110	175	8	
	120	720	49639A	
	130	405	40	
	140	222	1	
	150	1160	2	
	160	521	3	
	170	278	49644A	
	20-170 = 0.03%			
E-28	10-20	118	49645A	
	30	144	6	
	40	66	7	
	50	52	8	
	60	38	9	
	70	96	49650	
	80	44	1	
	90	1440	2	As E-27
	100	500	3	
	110	170	4	Oxide to 110'
	120	122	5	
	130	114	6	
	140	122	7	
	150	92	8	
	160	128	49659A	
	10-160 = 0.02%			

Hole No.	Sampled	Cu	No.
E-29	30-40	20	49660A
	50	16	1
	60	14	2
	70	13	3
	80	16	4
	90	13	5
	100	10	6
	110	8	7
	120	21	8
	130	24	9
	140	30	49670
	150	31	1
	160	21	2
	170	16	3
	180	20	4
	190	18	49675
	200	421	6
	210	392	7
	220	500	8
	230	191	9
	240	215	49680
	250	1720	1
	260	2440	2
	270	1560	49683A

Alteration similar to E-7

30-190 = Trace
190-270 = 0.09%

Hole No.	Footage Sampled	ppm Cu.	Sample No.
E-30	20-30	156	49815A
	40	262	6
	50	248	7
	60	392	8
	70	286	9
	80	490	49820
	90	540	1
	100	540	2
	110	367	3
	120	270	4
	130	248	5
	140	278	6
	150	215	7
	160	175	8
	170	180	9
	180	161	49830
	190	157	1
	200	110	49832A
	210	152	3
	220	131	4
	230	161	5
	240	161	6
	250	180	49837A

20-250 = 0.025%

Bethlehem ?

mafic and biotite 90% chloritized

20% pink alteration

feldspar cloudy

little or no

epidote

E-31	20-30	278	49838A
	40	760	9
	50	880	49840
	60	700	1
	70	670	2
	80	800	3
	90	670	4
	100	1140	5
	110	2040	6
	120	1040	7
	130	1070	8
	140	613	9
	150	840	49850
	160	960	1
	170	720	2
	180	1560	3
	190	2000	4
	195	3850	49855A

20- 90 = 0.07%
90-195 = 0.14%

Bethlehem ?

mafics and biotite 90% chloritized

5% pink alteration

feldspar cloudy

little or no epidote

(chlorite more abundant 130 - 195)

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
E-32	20-30	170	49856A	
	40	156	7	
	50	191	8	
	60	114	9	As E-31
	70	104	49860	
	80	248	1	
	90	235	2	
	100	186	3	
	110	235	4	
	120	270	5	
	130	215	6	
	140	720	7	
	150	1760	8	
	160	840	9	
	170	640	49870A	
	20-170 = 0.05%			
E-33	10-20	209	49871A	
	30	333	2	As E-32
	40	215	3	but paler color
	50	215	4	(less mafic
	60	186	5	and chlorite)
	70	235	6	
	80	144	7	
	90	278	8	
	100	670	9	
	110	540	49880	
	120	313	1	
	130	228	2	
	140	344	3	
	150	920	4	
	160	920	5	
	170	1240	6	
	180	840	7	
	190	760	8	
	200	1280	49889A	
	10-200 = 0.05%			

Hole No.	Footage Sampled	ppm Cu.	Sample No.
E-34	10-20	22	49890A
	30	10	1
	40	14	2
	50	16	3
	60	34	4
	70	20	5
	80	12	6
	90	12	7
	100	12	8
	110	18	9
	120	8	49900
	130	7	1
	140	8	2
	150	7	3
	160	7	4
	170	12	5
	180	10	6
	190	10	7
	200	22	49908A

Bethsaida

Sparse mafics are chloritized and feldspars are cloudy

BETHLEHEM COPPER CORPORATION LTD.

Att'n: Mr. R. H. Seraphim
Sheba Copper Property

ASHCROFT, B.C.

Western Mines - Percussion, E-35

January 13, 1977

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	PPM MO.	PPM SULPHUR	XXXXXXXX
E-35	0 - 50 overburden						
	50 - 60			200			
	60 - 70			180			Feldspar partly cloudy
	70 - 80			260			Mafics chloritized,
	80 - 90			320			some fresh biotite
	90 - 100			500			
	100 - 110			1,080			R.H. Seraphim
	110 - 120			1,250			
	120 - 130			670			
	130 - 140			670			
	140 - 150			600			
	150 - 160			1,140			
	160 - 170			1,070			
	170 - 180			740			
	180 - 190			460			
	190 - 200			500			
	50 - 100 =			1460			
				0.03%			
	100 - 200 =			8180			
				0.08%			

Note: This is the final of six holes; all other assays previously reported.

ASSAYER

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Geology - Percussion, E-36 (by Western Mines) (Bethlehem) January 14, 19 77

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	PPM MO.	PPM SULPHUR	
	0 - 30	overburden					
E-36	30 - 40			120			
	40 - 50			150			Feldspars cloudy and
	50 - 60			800			sericitized, mafics
	60 - 70			390			completely chloritized
	70 - 80			440			
	80 - 90			530			R.H. Seraphim
	90 - 100			3100			
	100 - 110			2720			
	110 - 120			810			
	120 - 130			510			
	130 - 140			1130			
	140 - 150			1270			
	150 - 160			1050			
	160 - 170			460			
	170 - 180			560			
	30 - 90 =			2430			
				0.04%			
	90 - 180 =			11610			
				0.13%			

ASSAYER

Hole No.	Footage Sampled	ppm Cu	Sample No.	
W-1	20-30	102	49684A	Skeena
	40	270	5	
	50	203	6	
	60	191	7	less mafic than Bethlehem
	70	152	8	
	80	203	9	
	90	74	49690	biotite slightly chloritized
	100	92	1	
	110	323	2	feldspar slightly cloudy
	120	228	3	
	130	228	4	
	140	270	5	little or no pink alteration or epidote
	150	304	6	
	160	323	7	no oxidation
	170	94	49698A	
	20-170 = 0.02%			
W-2	10-20	34	49699A	Skeena
	30	56	49700	
	40	170	1	As W-1 but
	50	116	2	
	60	60	3	traces of epidote
	70	36	4	
	80	30	5	and pink alteration
	90	24	6	
	100	66	7	
	110	106	8	
	120	50	9	
	130	58	49710	
	140	70	1	
	150	230	2	
	160	102	49713A	
	10-160 = 0.01%.			
W-3	10-20	12	49714A	Skeena
	30	8	5	
	40	7	6	As W-2 but
	50	10	7	
	60	8	8	oxidized slightly
	70	8	9	
	80	28	49720	all the way to 160'
	90	33	1	
	100	14	2	
	110	8	3	
	120	21	4	
	130	56	5	
	140	14	6	
	150	18	7	
	160	21	49728A	
	10-160 = Trace			
W-4	80-100 (hole lost at 100')			Skeena
				As W-2 but rusty (very little chlorite)

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
W-5	100-110	50	49729A	Skeena
	120	52	49730	
	130	40	1	only traces pink alteration and epidote
	140	40	2	
	150	34	3	
	160	33	4	oxidized to 250'
	170	34	5	
	180	30	6	with minor
	190	28	7	
	200	48	8	malachite
	210	106	9	
	220	260	49740	220-250'
	230	470	1	
	240	408	2	
	250	300	49743A	
	100-250 = 0.01%			
W-6	30-40	14	49744A	Skeena
	50	22	5	
	60	34	6	As W-2
	70	28	7	
	80	51	8	fairly fresh
	90	28	9	
	100	30	49750	biotite
	110	68	1	
	120	96	2	and
	130	96	3	
	140	320	4	feldspars
	150	275	5	
	160	190	6	
	170	180	7	
	180	84	8	
	190	74	9	
	200	68	49760A	
	30-200 = 0.01%			
W-7	40-50	408	49761A	Skeena
	60	283	2	
	70	385	3	moderate alteration with chlorite
	80	780	4	
	90	570	5	
	100	540	6	pink alteration and cloudy feldspars
	110	430	7	
	120	2000	8	traces bornite
	130	1400	9	and malachite
	140	800	49770	
	150	690	1	no oxidation
	160	690	2	
	170	750	3	
	180	710	4	
	190	460	49775A	
	40-190 = 0.07%			

Hole No.	Footage Sampled	ppm Cu.	Sample No.	
W-8	30-40	24	49776A	Skeena
	50	28	7	As W-7 with chlorite and
	60	14	8	hematite - also is
	70	12	9	completely oxidized
	80	31	49780A	
	30-80 = Trace			
W-9	120-130	66	49781A	Skeena
	140	51	2	As W-8 but
	150	68	3	has some fresh
	160	118	4	biotite
	170	112	49785A	
	120-170 = Trace			
W-10	30-40	134	49786A	Skeena
	50	136	7	
	60	72	8	moderately fresh
	70	116	9	minor pink alteration
	80	66	49790	and epidote,
	90	66	1	
	100	100	2	
	110	108	3	fresh biotite
	120	70	4	
	130	116	5	
	140	122	6	
	150	116	7	
	160	122	8	
	170	295	49799A	
	30-170 = 0.01%			
W-11	60-70	74	49800A	Skeena
	80	52	1	
	90	78	2	abundant (10% ?)
	100	203	3	red hematite alteration
	110	96	4	and chloritization of
	120	191	5	hornblende but
	130	82	6	biotite is fresh
	140	94	7	
	150	175	8	
	160	248	9	
	170	186	49810	
	180	228	1	
	190	160	2	
	200	138	3	
	210	333	49814A	
	60-210 = 0.015%			

Hole No.	Footage Sampled	ppm Cu.	Sample No.
W-12	20-30		49909A
	40	60	49910
	50	82	1
	60	80	2
	70	92	3
	80	126	4
	90	92	5
	100	44	6
	110	40	7
	120	82	8
	130	146	9
	140	100	49920
	150	562	1
	160	323	2
	170	215	3
	40-170 = 0.015%		

SKEENA

Chloritized hornblende

fresh biotite and only

slightly cloudy feldspars

traces epidote and

pink alteration

oxidized 20-30 ft.

W-13	40-50	200	49924A
	60	156	5
	70	1080	6
	80	126	7
	90	141	8
	100	60	9
	110	56	49930
	120	186	1
	130	392	2
	140	521	3
	150	215	4
	160	102	5
	170	64	6
	180	42	7
	190	84	8
	200	90	9
	210	70	49940
	220	100	1
	230	70	2
	240	112	3
	250	108	4
	40-250 = 0.02%		

SKEENA

altered as W-12

also traces hematite

oxidation strong

40 - 70 ft.

Hole No.	Footage Sampled	ppm Cu.	Sample No.
W-14	40-50	26	49945A
	60	28	6
	70	18	7
	80	20	8
	90	16	9
	100	13	49950
	110	13	1
	120	10	2
	130	13	3
	140	10	4
	150	12	5
	160	13	6
	170	12	7
	180	12	8
	190	12	9
	200	18	49960A
	40-200 =	Trace	

SKEENA

strong chlorite alteration

partly cloudy feldspars

traces hematite

oxidation strong 40 - 70 ft.

W-15	20-30	116	49961A
	40		2
	50		3
	60		4
	70		5
	80		6
	90		7
	100		8
	110		9
	120		49970
	130		1
	140		2
	150		3
	160		4
	170		49975A
	20-170	0.01%	

SKEENA

As W-14

oxidized to 170 ft.

Hole No.	Footage Sampled	ppm Cu.	Sample Number	
W-16	20-30		49976A	SKEENA
	40		7	
	50		8	As W-14 but included
	60		9	
	70		49980	fresh biotite
	80	102	1	only slight oxidation to
	90		2	170 ft.
	100	41	3	
	110	40	4	
	120	128	5	
	130	50	6	
	140	154	7	
	150	56	8	
	160	56	9	
	170	52	49990A	
	20-170	= 0.01%		
W-17	10-20	434	49991A	SKEENA
	30	194	2	
	40	419	3	As W-16
	50	134	4	
	60	126	5	but has malachite
	70	118	6	
	80	180	7	and traces chalcopyrite
	90	191	8	
	100	685	9	fresh biotite
	110	670	50000A	
	120	800	51001A	
	130	613	2	
	140	562	3	
	150	304	4	
	160	562	5	
	170	720	51006A	
	10-170	= 0.04%		
W-18	40- 50	241	51007A	SKEENA
	60	157	8	
	70	152	9	moderate to strong
	80	128	51010	alteration
	90	161	1	
	100	124	2	pink cloudy feldspar, chlorite
	110	2080	3	
	120	1760	4	some malachite and black oxides
	130	1640	5	
	140	960	6	biotite is partly chloritized
	150	800	7	
	160	700	8	oxidized to 190'
	170	670	9	
	180	613	51020	
	190	613	51021A	
	40-190	= 0.07%		
	or 100-190	= 0.11%		

Hole No.	Footage Sampled	ppm Cu.	Sample Number	
W-19	20- 30	165	51022A	Skeena
	40	1280	3	
	50	228	4	as W-17
	60	241	5	malachite,
	70	222	6	
	80	248	7	black oxides and very rusty to 120'
	90	228	8	
	100	191	9	
	110	131	51030	oxidation moderate
	120	134	1	120-180'
	130	197	2	
	140	197	3	
	150	146	4	
	160	102	5	
	170	186	6	
	180	96	51037A	
	20-180 =	0.025%		
W-20	20- 30	102	51038A	Skeena
	40	58	9	
	50	136	51040	slight to moderate alteration
	60	152	1	
	70	186	2	chlorite
	80	108	3	
	90	120	4	minor clouding of feldspars
	100	118	5	
	110	72	6	moderate oxidation
	120	124	7	
	130	112	8	to 170'
	140	126	9	
	150	104	51050	no sign of copper mineralization
	160	344	1	
	170	203	51052A	
	20-170 =	0.01%		
		% Cu.		
W-21	70- 80	0.02	51053A	Skeena
	90	1.12	4	looks like close to ore grade ?
	100	0.18	5	
	110	0.26	6	malachite, bornite
	120	0.22	7	
	130	0.22	8	chalcopyrite
	140	0.30	9	
	150	0.21	51060	moderate alteration
	160	0.15	1	chloritized biotite
	170	0.11	2	
	180	0.09	3	moderately cloudy feldspars
	190	0.11	4	
	200	0.11	5	
	210	0.18	6	
	220	0.14	51067A	
	80-150 =	0.36%		
	150-220 =	0.13%		

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Western Mines - Percussions, W-22

December 22, 1976

SAMPLE NO.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	PPM MO.	PPM SULPHUR	
W-22	0 - 70	Overburden					
	70 - 80			90			Skeena?
	80 - 90			160			10% mafics chloritized
	90 - 100			280			feldspars white and
	100 - 110			190			cloudy - slight to
	110 - 120			140			moderate alteration -
	120 - 130			150			a little sulfide
	130 - 140			190			(pyrite?) near 220 ft.
	140 - 150			230			- very little oxida-
	150 - 160			300			tion.
	160 - 170			660			
	170 - 180			490			R.H. Seraphim
	180 - 190			430			
	190 - 200			490			
	200 - 210			430			
	210 - 220			1140			
	220 - 230			540			
				5910			
	70-230			0.04%			

E A Lodge

ASSAYER

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Western Mines - Percussions, W-23 — December 22, 1976

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	PPM MO.	PERCENT SULPHUR	
W-23	0 - 80	overburden		140			Skeena?
	80 - 90			140			80 - Oxidized strongl
	90 - 100			130			(rusty tan color)
	100 - 110			120			mafics all chloritized
	110 - 120			150			(black) - feldspars
	120 - 130			140			cloudy - a relatively
	130 - 140			180			light colored rock but
	140 - 150			160			not Bethsaida.
	150 - 160			200			
	160 - 170			140			R.H. Seraphim
	170 - 180			120			
	180 - 190			150			
	190 - 200			1770			
	80 - 200			0.015%			

E A Joyce ASSAYER

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Western Mines, Percussions, W-24 — December 22, 19 76

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	MO.	SULPHUR	
	0 - 110	overburden					
W-24	110 - 120			300			Skeena?
	120 - 130			200			5 to 10%? mafics
	130 - 140			180			chloritized except for
	140 - 150			130			some fairly fresh
	150 - 160			130			biotite - feldspars
	160 - 170			190			cloudy and brown -
	170 - 180			260			entire sequence is
	180 - 190			230			tan colored (oxidized)
	190 - 200			240			- no sulfides noted.
	200 - 210			190			
	210 - 220			210			R.H. Seraphim
	220 - 230			210			
				2470			
	110 - 230			0.02%			

E A Lowe ASSAYER

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Western Mines - Percussions, W-25 — December 30, 1976

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	MO.	SULPHUR	
	0 - 90	overburden					
W-25	90 - 100			250			Skeena?
	100 - 110			480			10% mafics chloritized
	110 - 120			330			- feldspars white and
	120 - 130			400			cloudy - slight to
	130 - 140			300			moderate alteration
	140 - 150			280			traces of chalcopyrite
	150 - 160			250			in the mafics - very
	160 - 170			290			little oxidation.
	170 - 180			300			
	180 - 190			250			
	190 - 200			240			R.H. Seraphim
	200 - 210			330			
	210 - 220			370			
	220 - 230			340			
	230 - 240			330			
				4740			
	90 - 240			0.03%			

E A Lowe ASSAYER

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Western Mines - Percussions, W-26 — January 6, 1977

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	PPM MO.	PPM SULPHUR	
W-26	0 - 40	overburden					
	40 - 50			100			
	50 - 60			60			Fairly pale colored,
	60 - 70			170			feldspars partly
	70 - 80			180			cloudy, mafics
	80 - 90			210			chloritized completely
	90 - 100			160			
	100 - 110			100			R.H. Seraphim
	110 - 120			140			
	120 - 130			100			
	130 - 140			110			
	140 - 150			220			
	150 - 160			200			
	160 - 170			340			
	170 - 180			360			
	180 - 190			580			
				3030			
	40- 190			0.02%			

E A Lowe
ASSAYER

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B.C.

Geology - Percussion, W-27 (by Western Mines) (Bethlehem) January 11, 19 77

SAMPLE No.	DESCRIPTION	OZS. PER TON GOLD	OZS. PER TON SILVER	PPM COPPER	XXXXXXX MO.	XXXXXXX SULPHUR	
W-27	0 - 80	overburden		250			
	80 - 90			320			Feldspars cloudy,
	90 - 100			350			mafics chloritized,
	100 - 110			380			a few grains of
	120 - 120			560			malachite
	120 - 130			540			
	130 - 140			480			R.H. Seraphim
	140 - 150			430			
	150 - 160			440			
	160 - 170			460			
	170 - 180			640			
	180 - 190			570			
	190 - 200			390			
	200 - 210			370			
	210 - 220			360			
	220 - 230			400			
	230 - 240			470			
	240 - 250			660			
	250 - 260			630			
	260 - 270			8700			
				0.046%			
	80 - 270						

ASSAYER

SHEBA

PERCUSSION DRILLING — 1976 - 1977

E = East Grid 20 - 170 = 0.21 : Depth of Casing — Bottom of Hole — % Cu.

W = West Grid

Scale: 1" = 400'

NOTE: Drillers do not always case to bedrock, thus depth to bedrock may be deeper than depth of casing.

R.H. Seraphim

N

Approximate Boundary

BETHLEHEM

I. R 14 Approx.

ANN 14 Frac.

POWER TRANSMISSION LINE

NORTH GROUP

MIDDLE GROUP

SOUTH GROUP

W-24 110 - 230 = 0.02

W-23 2da 80 - 180 = 0.015

W-22 70 - 230 = 0.04

W 18 40 - 190 = 0.07 or 100 - 190 = 0.11

W-27 90 - 270 = 0.046

W-25 90 - 240 = 0.03

W-19 20 - 180 = 0.025

W-26 40 - 190 = 0.02

A69-6

W 21 80 - 150 = 0.36 150 - 220 = 0.13

W-20 20 - 170 = 0.01

36 + 85 N

56 + 85 N

A69-1

A69-2

W 7 40 - 190 = 0.07

A69-3

52 N

W-8 30 - 80 = Tr

W-15 20 - 170 = 0.01

W-16 20 - 170 = 0.01

48 N

W-17 10 - 170 = 0.04

W-11 60 - 210 = 0.01

44 N

W-14 40 - 200 = Tr

W-13 40 - 250 = 0.02

W-10 30 - 170 = 0.01

72-1

72-12

40 N

W-12 40 - 170 = 0.015

72-2

79-1

W-2 10 - 160 = Tr

32 N

W-1 20 - 170 = 0.02

28 N

W-6 48 + 70 W 24 + 90 N 30 - 200 = 0.01

40 W

W-9 120 - 170 = Tr

24 N

74-2

71-11

19 + 15 N

W-5 100 - 210 = Tr 210 - 250 = 0.035

74-3

15 + 15 N

W-4 lost in ovbdn at 100'

11 + 15 N

71-12

7 + 15 N

W-3 10 - 160 = Tr

3 + 15 N

J101 Showing

0 + 85 S

DDH 72-5

SPD 5

BETHLEHEM DDH ?

E-36 30 - 90 = 0.04 90 - 180 = 0.13

E-35 50 - 100 = 0.03 100 - 200 = 0.08

E-6 10 - 160 = 0.02

E-5 50 - 100 = 0.35 or 20 - 170 = 0.21

E-2 50 - 90 = 0.03 90 - 200 = 0.10

40 N

36 N

E-4 20 - 170 = 0.045

E-3 50 - 230 = 0.10

E-1 50 - 200 = 0.018

32 N

72-4

28 N

E-7 30 - 70 = 0.09 70 - 180 = 0.05

E-9 0 - 120 Ovbdn SPD ↓ 180 - 0.11

E-10 30 - 80 = 0.036 80 - 180 = 0.163

E-11 20 - 170 = 0.02

24 N

E-8 40 - 140 = 0.11 140 - 290 = 0.066

E-12 30 - 80 = 0.03

20 N

E-19 20 - 170 = 0.035

E-18 70 - 220 = 0.084

E-13 20 - 100 = 0.02 100 - 170 = 0.20

16 N

E-17 30 - 100 = 0.05 100 - 160 = 0.2

E-16 20 - 160 = 0.04 160 - 180 = 0.10

E-21 20 - 170 = 0.02

12 N

E-20 10 - 250 = 0.06

E-31 20 - 195 = 0.11

E-32 20 - 170 = 0.05

72-10

8 N

E-15 30 - 70 = 0.01 70 - 250 = 0.20

E-30 20 - 200 = 0.025

E-14 20 - 60 = 1.08 - 0.11 Mo 20 - 110 = 0.63 - 0.09 110 - 230 = 0.43 - 0.02

E-33 10 - 200 = 0.05

E-22 20 - 50 = 0.014 50 - 160 = 0.149 160 - 230 = 0.036

4 N

E-34 10 - 200 = Tr

Chataway outcrop fresh

0

Road 18 + 80 E

4 S

E-24 10 - 170 = Tr

E-23 10 - 200 = Tr 200 - 290 = 0.025

8 S

12 S

E-26 30 - 120 = Tr 120 - 140 = 0.05 140 - 160 = Tr

E-25 10 - 170 = Tr

16 S

E-27 20 - 170 = 0.03

20 S

24 S

E-28 10 - 160 = 0.02

72-9

28 S

73-7

73-6

32 S

36 S

40 S

E-29 30 - 190 = Tr 190 - 240 = 0.03 240 - 270 = 0.19

44 S

Gnawed Lake

Lake

6241-1

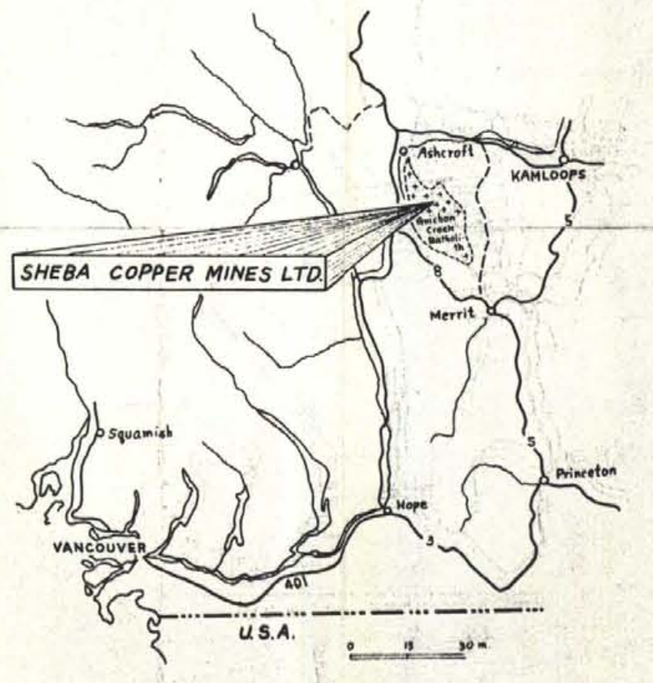
R.H. Seraphim
April 9, 1977
DRAWN BY: S. L.C.

New North Group

Middle Group

South Group

DAWN 2
DAWN 1
LYNN 1
LYNN 2
DAWN 4
DAWN 3
LYNN 4
ANN 1 FR
LYNN 3
CS 1
J 41
J 42
DAWN 6
DAWN 5
LYNN 6
LYNN 5
CS 3
DAWN 8
DAWN 7
LYNN 8
CS 1 FR
ANN 15 FR
J 40 FR
J 31
SHEBA 22
SHEBA 21
LYNN 7 FR
J 2
J 1
J 32
JAY 19
JAY 20
DEE 1 FR
S-74-1
S-74-2
J 40
J 3
J 33 FR
JAY 17
JAY 18
J 34 FR
SHEBA 24
SHEBA 23
SHEBA 26
SHEBA 25
DEE 3 FR
LYNN 10 FR
S-74-3
J 6
J 5
J 37 FR
JAY 15
JAY 16
J 35 FR
JAY 101
JAY 104 FR
J 38 FR
JAY 13
JAY 14
J 8
J 7
VI 1 FR
J 36 FR
ANN 2 FR
DO 1 FR
J 11
JAY 12
JAY 10
JAY 9
ANN 5 FR
JJ 1 FR
DO 1
DO 3
JJ 2 FR
GNAWED LAKE
CU 1
CU 3
DO 2
DO 2 FR
CU 5
DO 7 FR
ANN 6 FR
CU2
CU 4
DO 4
DO 3 FR
CU 6
DO 8 FR
DO 5 FR
DO 5
ANN 16 FR
DO 4 FR
DO 6
ANN 17 FR
DO 6 FR
CU 17
CU 19
CU 18
CU 20



6241
M-2

DOWA MINING COMPANY LTD.

SHEBA PROJECT

HIGHLAND VALLEY KAMLOOPS M.D., B.C.

MINERL CLAIM MAP

SCALE

FEET 1000 0 1000 2000

April 4/1977

~~Jan. 1976~~