#### GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

Val 1 & 3 Claims

Atlin Mining Division

Located about 5 Kilometres Northeast

Tatsamenie Lake and 35 Kilometres Northwest

of the Sheslay Airstrip

NTS 104K/8W Lat. 58<sup>°</sup>27'N Long. 132<sup>°</sup>17'W

Owned and Operated By

Utah Mines Ltd.

P. A. Christopher, Ph.D., P.Eng. Senior Geologist Utah Mines Ltd.

Vancouver, B.C. November, 1980





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#### SUMMARY

A regional prospecting program in the Stikine Arch area has led to the restaking of the 'Cu showing', a structurally controlled zone with chalcocite, bornite, molybdenite and precious metal mineralization. Surface rock sampling of a sheared zone about 50 metres wide provided a 30 foot chip sample grading 1.18% copper, 1/3 oz/ton silver and .03 oz/ton gold. Surface rock sampling provides some indication of grade but leaching is considered to have reduced the overall grade of the sheared zone.

The 'Mo showing', a new molybdenum occurrences has also been located on the same property. A 300 metre long copper-molybdenum soil anomaly is associated with this prospect but rock geo-; chemical values from the 'Mo showing' are generally low.

Further work is required to test the potential of both the 'Cu showing' and 'Mo showing'.

#### INTRODUCTION

The Val 1 (20 units) and Val 3 (20 units) claims were staked to cover the Cu (copper-molybdenum) and the Mo (molybdenumcopper) showings (Figure 1). Prospecting of creeks in the area of a copper-molybdenum mineral occurrence shown on G.S.C. map 1262A (Souther, 1971) located the Cu and Mo showings. The Mo appears to be a new mineral occurrence location but the Cu was previously staked as the AL 1-4 claims by D. Tait in 1972.

Assessment work was done on August 7, 10, 11 and 13-15, 1980. The 1980 program consisted of geological mapping at 1:5,000 scale and rock (36), silt (1) and soil (83) sampling of the Cu and Mo showing areas. The total area mapped is 50 hectares and represents about 5% of the claim area. About 6 kilometres of grid was established for mapping and sampling purposes.

The field work was supervised by Peter Christopher and Gary Wesa, geologists with M. Ball, G. Fulton, M. Cathro, G. Mathews, R. Blaskovitch, and S. Palmer providing field assistance. Val Loreen was camp cook and first aid person. Helicopter support was provided by a Hughes 500c flown by C. Burke and D. Cassidy and chartered from Quasar Aviation Ltd.

The Val claims occupy an elevated plateau area with all the property above timberline and elevations ranging from about 5000 feet (1524 metres) to about 6700 feet (2042 metres). A north facing cirque south of the Cu showing contains a small permanent glacier. Stream valleys are steep walled.



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#### LOCATION AND ACCESS

The property is located approximately 5 kilometres northeast of Tatsamenie Lake and 35 kilometres northwest of the Sheslay airstrip at latitude 58<sup>0</sup>27'N and longitude 132<sup>0</sup>17'W in NTS 104K/8W. Access was by helicopter from an existing base camp situated about 15 kilometres southeast of Sheslay. The camp was supplied by Telegraph Creek Expediting Service from Dease Lake, B.C.

A base camp for extensive work on the Val claims could be established at Tatsamenie Lake or one of several other nearby lakes. Continuous helicopter support will be necessary if a camp is located below about 5000 feet.

#### CLAIMS

Name	Units	Staked by	Date Recorded	Owner
Val l	20	G. Wesa	Sept. 2, 1980	Utah Mines Ltd.
Val 3	20	Matt Ball	Aug. 29, 1980	Utah Mines Ltd.

#### GENERAL GEOLOGY

The Val claims are situated in the Tulsequah map-area at the boundary between the Coast Mountains and Stikine Plateau physiographic provinces in the Tahltan Highland subdivision. The area can be considered part of the Coast Crystalline Belt or Stikine Arch tectonic elements with Paleozoic or Mesozoic volcanic and sedimentary rocks intruded and metamorphosed by Coast Crystalline Belt intrusive rocks. Granitic rocks vary from generally older pyroxene bearing dioritic phases to generally younger leucogranitic phases. The Val claim area is mainly underlain by unit 16 (Souther, 1971) quartz monzonite of Cretaceous or Early Tertiary age.

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#### PROPERTY GEOLOGY

Figures <u>2</u> and <u>3</u> show the general geology of the Mo and Cu showing areas. Quartz monzonite and quartz monzonite porphyry underlies most of the claim area with quartz eye porphyry and monzonite porphyry dykes cutting the Mo area and latite, andesite and aplite dykes cutting the Cu area. Alteration, mineralization and quartz veining are controlled by 125°-130° structures but restricted areas of stockwork veining and disseminated mineralization have been observed.

The quartz monzonite is generally a fresh hornblende-biotite, two feldspar rock but shearing has produced zones of sericite-claychlorite-iron oxide alteration at both the Cu and Mo showings. A pyritic halo is suggested by 1% pyrite estimates in the centre of the Mo showing and 2-4% pyrite marginal to the stronger veined and altered 'core'. Monzonite porphyry and quartz eye porphyry dykes appear to be restricted to the 'core' area of the Mo show. An area of potassium feldspar-quartz <u>+</u> bornite, chalcocite, biotite and magnetite veining occurs at the Cu showing. Aplite dykes are often parallel to or occupy the same structure as WNW veins while andesite and latite dykes are generally younger than copper bearing quartz veins but are cut by quartz-carbonate veins and copper carbonate coated fractures.

Mineralization consists mainly of quartz and pyrite with minor molybdenite and copper carbonate and rare chalcopyrite at the Mo showing. One strong molybdenum bearing quartz vein had up to 3 inches of strong molybdenite in a 6 inch quartz vein but quartz veins as stockwork and parallel sets generally contain only minor molybdenite. The Cu showing consists of sheeted quartz veins in a strongly sheared, altered and leached zone about 50 metres wide has been traced about 600 metres along a 125° strike (dipping 55° SW) before being lost in talus. Bornite, chalcocite and copper carbonate occurs in quartz veins and along dry fractures. An area of apparently disseminated bornite, chalcocite and copper carbonate occurs south of the shear zone at samples <u>808MT52</u> and <u>808MT53</u>. Molybdenite has been found in the sheeted quartz veined area away from the steep valley wall. Pyrite appears to be rare at the Cu showing.

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#### GEOCHEMISTRY

Geochemical sample locations and values are shown on Figures <u>4</u> and <u>5</u>. The Mo showing area was tested with 50 soil, 1 silt and 17 rock samples (16 were 20ft chip samples); and the Cu showing area was tested with 33 soil and 19 rock samples (1 select and 18 chip). Silt and soil samples were analyzed for copper, molybdenum and silver and rock samples were analyzed for copper, molybdenum, silver and gold.

The silt sample collected from the Mo showing area was anomalous in copper (280 ppm) and molybdenum (30 ppm) while soil samples have ranges of 10-885 ppm copper, 1-250 molybdenum, and 0.1-0.7 ppm silver. Rock samples have values of 26-320 ppm copper, 2-210 ppm molybdenum, 0.1 ppm silver and <10-10 ppb gold. Soil samples 80 SFS 85 to 93 provide a continuous length of over 300 metres of anomalous molybdenum and copper in soils and samples 80 SPS 15 to 24 provide a subparallel length of over 300 metres of anomalous molybdenum and copper in soils.

Soil values at the Cu showing vary from 36-1100 ppm copper, 1-2 ppm molybdenum and 0.1 ppm silver. A select rock sample 80 SWT 40 assayed 35% copper, 0.003% Mo, 7.32 oz/ton silver and 0.016 oz/ton gold and represents a concentration of bornite and chalcocite in a 20cm wide quartz vein. The best chip sample (80 SWT 44) is 30 feet of 1.18% copper, 3 ppm molybdenum, 11 ppm silver and 960 ppb gold. Adjacent samples 80 SWT 43 and 45 ran 0.16% and 0.04% copper respectively, but highly sheared and leached sections are included in these samples.

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A zone about 300 metres to the south has successive samples with 2000 ppm and **3**350 ppm copper with one 5 metre sample per 50 metre interval. Weathering is indicated by brown iron oxide rich zones and secondary copper carbonate minerals with at least part of the strong sheared zone leached. Downward migration of copper within the shear zone is a possibility and could have produced a higher grade deposit at depth.

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#### RECOMMENDATION

Further work is required to test the potential of the Val Claims, and this work is warranted because of the potential for a high grade copper deposit with significant precious metal values. An I.P. survey over the shear zone should indicate if sufficient metallic mineralization exists to produce a copper-silver-gold deposit. The size of the mineralized system at the 'Mo showing' appears to be small but should also be checked with I.P. The strong pyrite halo should define the size of the alteration zone.

If initial geophysical surveys are permissive to viable mineral deposits, then an initial minimum drilling program of about 700m will be required to test for increases with depth of the grade of mineralization.

### REFERENCES

Souther, J. G. 1971. Geology and mineral deposits of **T**ulsequah Map-Area, British Columbia. Geological Survey of Canada, Mem. 362 (Map 1262A).

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APPENDIX A STATEMENT OF QUALIFICATIONS ł

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#### STATEMENT OF QUALIFICATIONS

The fieldwork for this report was supervised by Peter A. Christopher and Gary Wesa whose qualifications are outlined below.

Peter A. Christopher, P.Eng., Ph.D., Senior Geologist for Utah Mines Ltd., Vancouver, British Columbia.

Completed his B.Sc. at the State University of New York at Fredonia in 1966, M.A. at Dartmouth College in 1968, and Ph.D. at the University of British Columbia in 1973. He has worked for several mining companies on porphyry, massive sulphide, uranium and gold deposits in the western United States and Canada. In 1973 and 1974 he served as exploration geologist for Newmont Mining Corporation and from 1974 to 1980 as project geologist with the British Columbia Ministry of Energy, Mines and Petroleum Resources. He assumed his present position as senior geologist for Utah Mines in June, 1980.

Peter a Christyster

Gary L. Wesa, Prospector/Geologist, received his B.Sc. degree in geology in 1974 from the University of Saskatchewan at Regina.

During the 1970 field season he prospected for porphyry, copper and molybdenum in SE B.C. for Versatile Mining Services. The 1971 and 1972 field seasons were spent in Northern Saskatchewan on base metal and uranium exploration programs with D. L. Suriik and Assoc. (1971) and Amok Ltd. (1972). Exploration activities during the 1973-74 seasons involved prospecting for lead-zinc, mapping, geochemical and geophysical surveys on Cornwallis Is., N.W.T. for Canadian Superior Exploration. He was employed by Cordilleran Engineering, as a prospector/geologist and project manager, between 1975-79 and worked on various base metal regional reconnaissance programs and property assessment projects in Yukon and N.W.T. He joined Utah Mines Ltd. in May, 1980 as a prospector/geologist, becoming a member of a regional reconnaissance crew prospecting for base metals and massive sulphides in NE B.C. and Stikine region of NW B.C.

APPENDIX B STATEMENT OF COSTS

## STATEMENT OF COSTS

For: Geological Mapping; Grid Work; and Geochemical Sampling.

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## Personnel and Wages:

Ρ.	A. Chris	topher			
	5 days @	\$115/day	\$	575.00	
G.	L. Wesa				
	5 days @	\$77/day	\$	385.00	
G.	Matthews				
	5 days @	\$50/day	\$	250.00	
м.	Ball				
	5 days @	\$62/day	\$	372.00	
G.	Fulton				
	6 days @	\$35/day	\$	210.00	
s.	Palmer				
	5 days @	\$33/day	\$	165.00	
R.	Blaskovi	ch			
	5 days @	\$42/day	\$	210.00	
Μ.	Cathro				
	5 days @	\$35/day	\$	175.00	
		Total Wages	\$ 2	2342.00	
		+ 10% Company Benefits	Ś	234.20	
		Personnel and Wages Total	<u>-</u>	2576.20	
			<u> </u>		
Sup	port Cost	ts:			
Acc	omodation	n and Board			
	42 man da	ays @ \$30/day	\$]	L260.00	
Com	municatio	ons			
	Telephone	e	\$	100.00	

## Transportation:

Helicopter Support			
22.8 hours @ \$280/hour	\$	6384,00	
Fuel (Helicopter) Utah Supplied			
524 gal @ \$2.50/gal	<b>Ş</b>	1310.00	
Total Helicopter Support	\$	7694.00	
Assaying:			
Soil and Silt			
84 samples @ \$3.24 each	\$	272.16	
Assay			
3 samples @ \$16.80	\$	50.40	i
Rock Geochem			,
33 samples @ \$5.44	<u>\$</u>	179.52	
Total Assaying	<u>\$</u>	502.08	
Report Preparation	\$	500.00	
TOTAL COSTS	\$ ]	12,632.28	



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Item VANC 7600 S RICH (604) Customer Name and Ad UTELA K CAPP CAMP	Extra Charge or Adjustment Amount Fuel & Oil Supplied By Charterer A Charterer A	Total Revenue H Non-Revenue H IGHT REPO A IGHT REPO Reg. 7 C Reg. 7 C Time Off 8;C6 10:00 10:30 13:00	International Contraction of the second seco	4.1 2.1/ Adod Namousono Flying Hours 1.7 7.00

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APPENDIX C ANALYTICAL RESULTS .

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## CHEMEX LABS LTD.

212 BROCKSBANN ALE NORTH VANCOULER B. CANADA VIJ ..... TELEPHONE 1604 444 TELEX 041-0-1

. ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

tan	Mines	Lta.,	

TO : U 1600 - 1050 W. Pender St., Vancouver, B.C. V6E 357

3525 35 3525 32

2525 35

USPS 35

250 34

251 12 25FL 13

DSEL 14

05FL 18

DSFL 15

JSEL 12

DSEL 17

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CERT. # : A3010072-001-4 INVCICE # : 38379 DATE : .29-AUG-80

ATTN: GL WESA

Sample	Cu	Чо	Ac	$\Delta u = (\Delta \Delta)$
description	ppm	PDT	DDM	000
BOSWT-63	245	210	0.1	10
805-T-64	158	19	0.1	<10
305-T-65	58	9	0.1	(1)
305×T-66	64	2	0.1	10
805MT-55	28	3	2.1	<10
805MT-56	162	12	0.1	<10
8CS4T-57	175	35	0.1	<10
805HT-58	54	2	2.1	(12
805MT-59	26	3	0.1	10
7 : Utah Mines Ltd., 1600 - 1050 W. Pendar Vancouver, 3.C.	St.,	กรังธางรับ	CEPT. INVOIC CATE	# : 18010073-001-1 E # : 38513 : 04-352-30
CV5= 357		SEP 5 - 1980	4*T'4:	SL NESA
· ·		UTAH 1		
sanole	Cu	EXPLORASION DEPT.	4.2	
description	p c n	ρom	nca	
10252 13	132	35	2.1	
10525 17	146	31	2.1	
105PS 17	170	÷ 5	0.1	
1052 4	120	19	• 1	
10523 23-	33	11	2.1	
3575 21	174	9	2.1	······································
0525 22	150	17	2.1	
CS25 23.	120	15	2.1	
USPS 24	55	9	2.1	
2525 2F	32	4	0.1	
0525 70	40	4	0.1	
13-3 20				
3525 22	35	3	C . 1	
35-35 27 35-25 27	35	3	0.1	

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305+5 Hr

303=5 72

10385 35

103=3 74 33363 94

1)3F3 95

505F3 77

# CHEMEX LABS LTD.

212 BROCKSBANK A.-NORTH VANCOUVER B.C. CANADA VIJ.C. TELEPHONE (604)984- .... TELEX 043-5254\*

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. ANALYTICAL CHEMISTS GEOCHEMISTS REGISTERED ASSAYERS CERTIFICATE OF A LARVEST TO : Utan Pinos Lti.. DECENTER 1617. H : NGC10194-011-4 1500 - 10f0 %. Hender St., INV2125 # : 32575 Vincouver. 8.C. DATE : 10-552-10 Vee 357 SEP 12 1930 ATT: 3. 2514 UTA: JLID. VON DEPT. Samola Cu EV. 4 :: DDT description C 0 T TOC 36585 72 37 4 2.2 - -1:5=5 71 20 2 3.3 - -20575 72 2 30 3.2 - -303F5 "> 34 2 0.2 - -· . : . 20375 74 33 3 - -30373 75 24 :.3 1 ---30355 75 70 4 1.4 - -303=2 77 27 ... 3 ---20520 1/ 26 7 . ? 3 - -938=3 72 10 2 :.: ..... 30585 12 2 -4 ..: - -1.5 105=5 51 4 2.1 - -. 7 100 3 15 2 ... . 73.19 3.1 36 2 1. 1 - -41 62 62 11 2 ... 1.1 27 7.7 - -30335 15 2.2.2 34 1.3

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TC	CHE	MEX LABS	S LTD.	DID BRITINGANN ALT NORTH LANGULER H CANADA VIJUTT
· ANALYTICA	L CHEMISTS	GEOCHEMISTS	REGISTERED ASSAYERS	TELEPHONE 604 344 (UM TELEX 043-00-41
1	CEP	TIFICATE CF 4%AL	Y313	
C : Utih Mines Lt: 1500 - 1050 %. Pe Vancouver, 3.C.	ender St.,		CERT. * INVOICE DATE	: 49010075-001-1 # : 38513 : 04-382-50
100 000			ATTN: SL	VESA
Sample	cu	.40	43	1, -(11)
description	pon	007	-rcq	100
BO SAT 4Y	142	31	2.1	1)
EC SAT 42/	26	2	2.1	13
	L	11562110	++	
C: Utan Mines Lt1.,	odar Ct	11/50-11	GERT. 4	: 48010073-001-4
1600 - 1050 A. Pe	uder 2:		1 1 1 1 1 2 2	* : 33513
Vancouver, 5.c.		SEP 5 - 1980	)A: c	: 04-5=2-30
V52 357		511	ATT	
		UTAH t.	ATTN: 5L	4-20
		EXPLORATION		
Samla	Cu.	Ma	4.5	
tescriction	007	0.UM	0.0m	12
105. 37	122	1	C.1	
10 5 3×	320		2.1	
05 32	130	î	2.1	
CSES 42	118	i	0.1	
OSES 41	58	i	0.1	
105=5 42	190	1	2.1	
05=5 43	132	i	C.1	
25F5 4+	112	1	0.1	
DSES 45	42	2	0.1	
USFS 45	38	1	2.1	
DSFS 4T		1	2.1	
35F5 43	320	1	<b>^.1</b>	
DSFS 44	130	1	2.1	
35=3 52	200	1	0.1	
SSES ST	1100	1	0.1	
35=5 52	166	2	0.1	
OSFS 55 .	128	1	7.1	
OSFS SE	50	1	C • 1	
05=5 55	50	1	0.1	
05FS 58	59	1	· · · ·	
5575 57	40	1	0.1	
USFS 53	50	1	C • 1	
05=5 59	72	1	0.1	
0575.50	56	1	0.1	3 <b>- -</b>
03+5 61	52	······································	J.1	
62	55	1	2.1	
05/ 65	45	1	2.1	
USFS 64	78	1	2.1	
CSFS 65	78	1	0.1	
5-5 56	420		J•1	
15+5 64	110	1	0.1	
ises of	90	1	0.1	
DSF3 69-	36	1	7.1	

S			CHEN	IEX LAB	S LT	D.	CANADA VIJ 201 TELEPHONE 604/984 201
	- ANA	LYTICAL CHEM	ISTS .	GEOCHEMISTS	REGISTER	D ASSAYERS	TELEX 043-50-41
): Utah M 1600 - Vancou V62 33	lines L1 1050 / ver, 3. 7	tj., √. Penjer ,C.	st.,	FIGANE JE ANAL		CERT. # Inveice Date	: 43010074-001-4 # : 38454 : 03-SEP-30
						ATTN: GL	#ESA
samole			мо	ΑJ	4u -(	44)	
escriptio	n		m			202	
JSWT-43			16	1.3		10	
)SAT-44			3	11.5		460	
15 NT-43			2	5.2		40	
SAMPLE	NO. 1	%	Tag No.			Also	on A810074.
80-SLT	r-43.	0.16	83069				
00-341	44	1.18	83070	1/1			1
80-507	r-45	0.04	83071	V.			
00-341	1-45	0.04	05071				1
1 '2				/			Cablatta
: Utan M 1520 -	ines Lt 1050 A	d., Pendar	St.,	DFCEIV	5 <u>7</u> ]	SERT. 4 197315E	: 13010073-000-0 H : 75513
Vancou VoE 35	ver. 3. 7	<b>C</b> •		17 J. 27 4 4	~	2475	: 04-352-30
				6 E D E 100/			
				SEP 5 - 1980	0	ATTN: SL	NECA
				SEP 5 - 1980	J.	ATTN: SL	N527
1701#			50	SEP 5 - 198	и сет.	4774: SL	425¥
unole scription	n		رت مع	SEP 5 - 1980	и 	1774: SL 1; 257	4254 
scription	n		5J pon 132	SEP 5 - 1980	и 	477%: SL 4; 007 7.1	425×
scription scription spi 13 spi 17	n		5J ppn 132 146	SEP 5 - 1980	и 	4 T T '.: SL 4 J 0 C T 7 • 1 3 • 1 3 • 1	425× 
1701# scription 525 17 525 17 525 17 525 17	n		5J pen 152 146 190	SEP 5 - 1980	י בפד.	177.: 3L 207 2.1 3.1 3.1	425× 
17013 scription 525 13 525 17 525 17 525 17	n		50 pen 152 146 190 120	SEP 5 - 1980	י בפד.	177.: SL 1, 207 2.1 3.1 3.1 3.1 3.1	425×
17012 scription 525 17 525 17 525 17 525 17 525 17 525 17 525 25	n		5J pcn 152 146 190 120 53	SEP 5 - 1980 UIAH : EXPLORASION D 207 35 31 46 13 11	у 2, ЕРТ.	177.: SL 2. 2. 2.1 3.1 3.1 3.1 3.1 3.1 3.1	4254 
1701# scription 575 13: 575 17 575 17 575 17 575 17 575 25 575 25	n		5J ppn 152 146 190 125 53 104	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 21 45 13 11 9	у 	AUTINE SL AU SCT 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	425×
1701# scription 525 17 525 17 525 17 525 17 525 27 525 27	n		5J pcm 152 146 190 120 53 104 150	SEP 5 - 1980	у ЕРТ.	177:: 3L 1; 207 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	425×
17013 scription 525 17 525 17 525 17 525 17 525 27 525 27 525 27 525 27	n		5J pen 152 146 190 120 53 104 150 120	SEP 5 - 1980	у ЕРТ.	177:: SL 1; 207 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	4254 
1701 # scription 525 17 525 17 525 17 525 17 525 27 525 27 525 27 525 27 525 27	n		50 pcn 152 146 190 120 53 104 150 120 55 32	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 21 46 13 11 9 17 15 2	у ЕРТ.	1TT:: SL 1, 207 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	425×
17012 scription 575 15 575 17 575 17 575 17 575 27 575 27 575 27 575 27 575 27	n		50 pcn 132 146 190 125 53 104 150 120 55 32	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 21 46 13 11 9 17 15 4 4	у 2. Е. е. Т.	1TT:: SL 1, 007 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	4254 
1701± scription 575 13: 575 17 575 17 575 17 575 27 575 27 575 27 575 27 575 27 575 27 575 27 575 27	n		5J pcn 152 146 190 120 53 104 150 120 55 32 40 35	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 31 45 13 11 9 17 15 4 4	у 2, Е.Р.Т.	1TT:: 3L 1, 05m 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	4254 
1701 ± scription 525 17 525 17 525 17 525 17 525 27 525 27 525 27 525 27 525 27 525 27 525 27 527 27	n		5J ppn 132 146 190 120 53 104 150 120 55 32 40 35 70	SEP 5 - 1980 UIAH 2 EXPLOPASION D 207 35 21 45 13 11 9 17 15 4 4 3	у 2, ЕРТ.	1TT:: 3L 1, 2.1 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	425×
1701 ± scription 575 17 575 17 575 17 575 17 575 27 575 27 575 27 575 27 575 27 575 27 575 27 575 27 575 27 575 27	n		SJ pen 152 146 190 120 53 104 150 120 55 32 40 35 70 20	SEP 5 - 1980 UTAH 2 EXPLOPASION D 207 35 21 46 13 11 9 17 15 4 4 3 3 3	у ЕРТ.	1TT:: SL 1; 2:1 3:1 3:1 3:1 3:1 3:1 3:1 3:1 3	4254 
1701 ± scription 505 17 505 17 505 17 505 17 505 27 505	n		SJ pen 152 146 190 120 53 104 150 120 55 32 40 35 70 25	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 31 46 13 11 9 17 15 8 4 3 3 3 3	у 2. Е. Р. Т.	1TT:: SL 1, 207 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	4254 
1701 + scription 525 17 525 17 525 17 525 17 525 27 525 27 57 57 57 57 57 57 57 57 57 57 57 57 57	n		SU pen 152 146 190 120 53 104 150 120 55 32 40 35 70 75 34	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 21 46 13 11 9 17 15 4 4 3 3 2 1	у 2. Е	1TT:: SL 1, 207 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	
1701 + scription 575 17 575 17 575 17 575 27 575 275 275 275 27 575 275 275 275 275 275 275 275 275 275	n		SJ pcn 132 146 190 125 53 104 150 120 55 32 40 35 70 23 24 24	SEP 5 - 1980 UIAH : EXPLOPASION D 207 35 21 46 13 11 9 17 15 4 4 3 3 1 1 2 1 2	у 2. Е	1TT:: SL 1, 207 2.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3	4254 
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C S	HEN	IEX LAE	BS LTD.	212 BROOKSBANK AVE NORTH VANCOUVER B.C. CANADA V7J.201
	i ee	GEOCHEMISTS	REGISTERED ASSAYERS	TELEPHONE (604)984-0221 TELEX 043-52597
	CERTI		12213	
/ : Utah Mines Lt:		1)2031		: 48010073-001-4
1600 - 1050 W. Pendar St			ESTCANT	* : 36513
Vancouver, 3.C. V52 357		SEP 5 - 19	80 DATE	: 04-SEP-30
		UTAH 1.	ATTN: GL	.d ⊂ S &
Sanole	Cu	Mo	4.9	
description :	nco	mqc	maa	
BOSES 3T	100	1	0.1	
PUSES 35	320	1	0.1	
805F5 32	130	1	0.1	
ECSES 40	118	1	9.1	
205-5 41	120			
8 1 5 5 5 4 2	132	;	0.1	22
87555 44	110	· · · ·	2.1	22
82555 44	42	2	2.1	<u></u>
EUSES 45	3.8	1	2.1	
BOSES 4T	94	1	0.1	
805-5 43	320	1	2.1	
853=5 47	130	1	2.1	
BJ3=5 52	200	1	2.1	
B S 5 7 1	100	1	0.1	
B 3 5 - 3 5 2	166	2	0.1	
BOSES 55	128	1	0.1	
BOSES 54	50	1	C•1	
	20	1	0.1	
	29	1		
	40	1	5.1	7.7
	72	1	0.1	
ICSES 50	66	î	0.1	22
OSFS 61	52	ī	2.1	
105=5 52	58	1	2.1	
IDSES 52	46	1	2.1	
USFS 64	78	1	0.1	
ICSFS 65	78	1	0.1	5.5
DSFS 56	420	1	0.1	
ISFS 6₽	110	1	0.1	
IDSES 57	90	1	0.1	
OSF3 69	36	1	0.1	
10525 10-	18	1	0.1	
10505 14	20	1	<b>C</b> •1	
10525 17	3.8	5	0.1	22
1000 17	34	4	0.1	22
101 14	40	0	0-1	22
05-5 154	130	51	c.1	
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NEMBER CANADIAN TESTING ASSOCIATION certifica by ... Istra in tille.

	CHEM	лех І	LABS	LTD.	UDEL CODEL CREA CREA TELE	на надуж нарада (1976 рас V акрад сора х - 94.	нал 1918 г. (7) 201 <b>2004 г.</b> 604 252597	- 4 <sup>-</sup>
ANALYTICAL CHE	MISTS 'GI	EOCHEMISTS	REGISTER	ED ASSAYERS				
	್ತಾರ್ ಎಲ್ಲಿ	AFE DE	4 4		CERT	FICATE NO.	69835	
Mash Mi	ae Itd				INVO	ICE NO.	38222	
	Tep Trd.				RECE	IVED	Aug. 20	180
1600 - 2 Vancouvi	1050 W. Pend ar, B.C. V aa	ler St. 76E 3S7			ANAL	YSED	Aug. 20 Aug. 25	/90
SAMPLE NO. : 80 SWT-40	<b>X</b> Cu 35.0	<b>х</b> Мо 0.003	oz/ton Ag 7.32	oz/ton Au 0.016	Tag No. 83117			
TA					212 B NORTH CANAE	ROOKSBANK 1 VANCOUVE )A	<pre>K AVE. ER. B.C. V7J 2C1</pre>	
	CHE	MEX	LABS	LTD.	TELEPI AREA ( TELEX	HONE 9 CODE 04	604 604 I-352597	
ANALYTICAL CHEM	CHEI	MEX OCHEMISTS	LABS REGISTERE	LTD.	TELEPI AREA ( TELEX CERTIF	HONE 9 CODE 04	604 ; 604 ; I-352597 A8010075	-001-A
ANALYTICAL CHEM	CHEI	MEX OCHEMISTS TEOFAN	LABS REGISTERE	LTD.	TELEPI AREA ( TELEX CERTIF	HONE 9 CODE 04 TICATE NO. E NO.	604 ; 604 ; 1-352597 A8010075 38341	-001-A
ANALYTICAL CHEM C: O: Utah Mine 1600 - 10 Vancouver	CHEI	MEX OCHEMISTS TEOFAN Er St.,	LABS REGISTERE	LTD.	TELEPI AREA ( TELEX CERTIF INVOIC RECEIV	HONE 9 CODE 04 TICATE NO. E NO. YED	604 ; 604 ; 1-352597 A8010075 38341 August 2	-001-A 1, 198
ANALYTICAL CHEM C O: Utah Mine 1600 - 10 Vancouver V6E 3S7	CHEI INSTS GEO ERTIFICAT es Ltd., 50 W. Pende , B.C.	MEX OCHEMISTS TEOFAN PrSt.,	LABS REGISTERE	LTD.	TELEPI AREA ( TELEX CERTIF INVOIC RECEIV ANALY	HONE 9 CODE 04 HICATE NO. E NO. YED SED	604 ; 604 ; -352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM C O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. :	CHEI INSTS GEO ERTIFICAT es Ltd., 50 W. Pende , B.C. PPM	MEX OCHEMISTS TEOFAN er St., PPM	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM	HONE 9 CODE 04 FICATE NO. E NO. FED SED PPB	604 604 i-352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM ANALYTICAL CHEM C O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46	CHEI UISTS GEO ERTIFICAT es Ltd., 050 W. Pende c, B.C. PPM Cu 200	MEX OCHEMISTS TEOFAN er St., PPM Mo	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA ( TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0 - 1	HONE 9 CODE 04 TICATE NO. E NO. YED SED PPB Au 10	604 604 i-352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47	CHEI STS GEO ERTIFICAT es Ltd., 50 W. Pende , B.C. PPM Cu 200 54	MEX OCHEMISTS TEOFAN er St., PPM Mo 1 1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1	HONE 9 CODE 04 (ICATE NO. E NO. YED SED PPB Au 10 10	604 604 -352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48	CHEI IISTS GEO ERTIFICAT es Ltd., 050 W. Pende b, B.C. PPM Cu 200 54 220	MEX OCHEMISTS TEOFAN er St., PPM Mo 1 1 2	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1	HONE 9 CODE 04 TICATE NO. E NO. YED SED PPB Au 10 10 <10	604 604 -352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50	CHEI INSTS GEO ERTIFICAT es Ltd., 50 W. Pende b, B.C. PPM Cu 200 54 220 875 227	MEX OCHEMISTS TEOFAN er St., PPM Mo 1 1 2 1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1	HONE 9 CODE 04 ICATE NO. E NO. FED SED PPB Au 10 10 10 50 50	604 604 i-352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50 51	CHEI INSTS GEO ERTIFICAT es Ltd., 50 W. Pende , B.C. PPM Cu 200 54 220 875 325 108	MEX OCHEMISTS TEOFAN er St., PPM Mo 1 1 2 1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 FICATE NO. E NO. YED SED PPB Au 10 10 50 20 20	604 604 -352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50 51 52	CHEI INSTS GEO ERTIFICAT es Ltd., 050 W. Pende c, B.C. PPM Cu 200 54 220 875 325 108 52	NEX OCHEMISTS TEOFAN er St., PPM Mo 1 1 2 1 2 1	LABS REGISTERE	LTD. ED ASSAYERS PPM Zn	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 ICATE NO. E NO. YED SED 10 10 20 20 20 20 20	604 604 -352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM C. O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50 51 52 53	CHEI INSTS GEO ERTIFICAT es Ltd., 50 W. Pende c, B.C. PPM Cu 200 54 220 875 325 108 52 178	MEX OCHEMISTS TEOFAN er St., PPM Mo 1 1 2 1 2 1 1 1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 ICATE NO. E NO. FED SED PPB Au 10 10 10 50 20 20 20 20 410 <10	604 604 i-352597 A8010075 38341 August 2 August 2	-001-A
ANALYTICAL CHEM C O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50 51 52 53 54	CHEI ERTIFICAT es Ltd., 50 W. Pende , B.C. PPM Cu 200 54 220 875 325 108 52 178 225	MEX ochemists TEOFAN er St., PPM Mo 1 1 2 1 2 1 1 1 1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 (ICATE NO. E NO. YED SED PPB Au 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	604 604 -352597 A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198
ANALYTICAL CHEM C O: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO.: 80-SWT-46 47 48 49 50 51 52 53 54 55	CHEI INSTS GEO ERTIFICAT es Ltd., 050 W. Pende b, B.C. PPM Cu 200 54 220 875 325 108 52 178 225 40	MEX ochemists TEOFAN er St., PPM Mo 1 1 2 1 1 2 1 1 1 1 1	LABS REGISTERE	LTD. ED ASSAYERS PPM Zn	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 FICATE NO. E NO. YED SED PPB Au 10 10 <10 50 20 <10 <10 <10 <10 <10 <10 <10 <10 <10	604 604 -352597 A8010075 38341 August 2 August 2	-001-A
ANALYTICAL CHEM ANALYTICAL CHEM C TO: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO.: 80-SWT-46 47 48 49 50 51 52 53 54 55 56	CHEI INSTS GEO ERTIFICAT ESLtd., D50 W. Pende Cu 200 54 220 875 325 108 52 178 225 40 38	<b>MEX</b> ochemists         TEOFAN         r St.,         PPM         Mo         1         2         1         2         1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 ICATE NO. E NO. FED SED PPB Au 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	A8010075 38341 August 2 August 2	-001-A
ANALYTICAL CHEM C TO: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50 51 52 53 54 55 56 57	CHEI STS GEO SRTIFICAT SS Ltd., SO W. Pende , B.C. PPM Cu 200 54 220 875 325 108 52 178 225 40 38 106	MEX         ochemists         TEOFAN         erSt.,         PPM         Mo         1         2         1         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         12         44	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 ICATE NO. E NO. YED SED PPB Au 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	604 604 -352597 A8010075 38341 August 2 August 2 August 2	-001-A
ANALYTICAL CHEM C O: Utah Mine 1600 - 10 Vancouver V6E 3S7 NTN: SAMPLE NO.: 80-SWT-46 47 48 49 50 51 52 53 54 55 56 57 58	CHEI ERTIFICAT es Ltd., 50 W. Pende , B.C. PPM Cu 200 54 220 875 325 108 52 178 225 40 38 106 44	MEX         ochemists         TEOFAN         erSt.,         PPM         Mo         1         2         1         2         1     <	LABS REGISTERE	LTD. ED ASSAYERS PPM Zn	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 FICATE NO. E NO. YED SED PPB Au 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	A8010075 38341 August 2 August 2	001-A
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ANALYTICAL CHEM ANALYTICAL CHEM C TO: Utah Mine 1600 - 10 Vancouver V6E 3S7 TTN: SAMPLE NO. : 80-SWT-46 47 48 49 50 51 52 53 54 55 56 57 58 59 69 61	CHEI           INSTS         GEO           ERTIFICAT         DES           ERTIFICAT         DES           ESLtd.,         DES           D50 W. Pende         DES           y         B.C.           PPM         Cu           200         S4           220         875           325         108           52         178           225         40           38         106           44         86           82         220	MEX         OCHEMISTS         TEOFAN         PPM         Mo         1         2         1         2         1         1         2         1         2         1         2         1         2         1	LABS REGISTERE	LTD. ED ASSAYERS	TELEPI AREA O TELEX CERTIF INVOIC RECEIV ANALY PPM Ag 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	HONE 9 CODE 04 ICATE NO. E NO. FED SED PPB Au 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	A8010075 38341 August 2 August 2	-001-A 1, 198 8, 198



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#### rock geochemistry



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	0	SOIL SAMPLE (Results in ppm)	TOP OF CLIFF						
	1	CHIP SAMPLE (Ag—ppm, Au—ppb,Cu—ppm, Mo—ppm, unless otherwise stated)	BOTTOM OF CLIFF (OUTC	CROP)			SCALE	1:2,500	
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