



ASSESSMENT REPORT
on the
GEOLOGY AND GEOCHEMISTRY
of the
WOLF, DAVID, BLACKIE AND PAT CLAIMS

KALZAS TWINS MOUNTAIN
Mayo Mining District NTS 105 M7

FOR UNION CARBIDE CANADA LIMITED

BY: C. N. FORSTER
District Geologist

090878

OCTOBER, 1981

This report has been examined by
the Council of Evaluation
under Section 53(4) of the Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 10,200.00.

for *Ruth Debricki*
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.



UNION CARBIDE EXPLORATION CORPORATION

Suite 930 - 800 West Pender Street
Vancouver, British Columbia V6C 2V6
Telephone (604) 689-4433 Telex 04-507814

Oct. 16, 1981

Mr. R. Ronaghan
Mayo Mining Recorder
P.O. Box 10
Mayo, Yukon



Dear Sir;

Re: Wolf 1 - 48, NTS 105 M 7

Enclosed are two copies of assessment reports for the above claims.

Should you require any further information, please contact myself or C. Forster at the above address.

Yours sincerely,

H.B. Solanki



UNION CARBIDE EXPLORATION CORPORATION

Suite 930 - 800 West Pender Street
Vancouver, British Columbia V6C 2V6
Telephone (604) 689-4433 Telex 04-507814

Nov. 3, 1981

Mr. R. Ronaghan
Mayo Mining Recorder
P.O. Box 10
Mayo, Yukon



Dear Sir;

Re: Wolf 1 - 48, NTS 105 M7

Enclosed are two corrected pages to the assessment report which was sent to you on October 16, 1981. Kindly replace these sheets with the ones in the assessment report.

With our apologies,

Yours sincerely,


Heidi B. Solanki



FROM
DE

MAJO MINING DISTRICT

File No. (originator) - Dossier n° (source)
 NOV 12 1981
 WHITEHORSE
 File No. (addressee) - Dossier n° (destinataire)
 SHIRLEY

TO
À

S.M.R.

Subject - Objet

ASSESS. RPT. "WOLF" 1-48 105-M-7

PLEASE REPLACE IN YOUR COPY OF THE REPORT. THANK

Reply - Réponse

Signature

Date

10/11/81

Signature

Date

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MAPS (IN FOLDER POCKET)

1. Geochemical Compilation
2. Assay results for Cu/Mo/Ag
3. Assay results for W/Sn

SUMMARY

The Wolf 1-48, Pat, David and Blackie claims are located on Kalzas Twins Mountain 43 miles east southwest from Mayo. Wolframite and cassiterite occur as large euhedral crystals in quartz vein float and as stockworks and fracture fillings in quartzites and grits of the Yukon group. Essentially all mineralization is found in talus float distributed across an area equal to eight mineral claims. The presence of intense tourmaline, sericite alteration; stockwork quartz veining, pervasive silica flooding and diatreme and crackel breccias indicate the presence of a mineralizing pluton at depth. No igneous rocks have been found on or adjacent to the claim block.

Rock, soil and talus sampling was done to define the extent and grade of the mineralized zones. The rock and soil geochemistry have roughly delineated a 1500 metre x 400 metre zone of greater than 1000 ppm W with peripheral silver and tin anomalies.

Bulk sampling of the talus from 2 lines spaced 300 metres apart, within the tungsten zone returned assay grades of 0.92% WO_3 /200 metres for quartz float and 0.21% WO_3 /150 metres for country rock on one line and 0.32% WO_3 /175 metres for country rock on the second line.

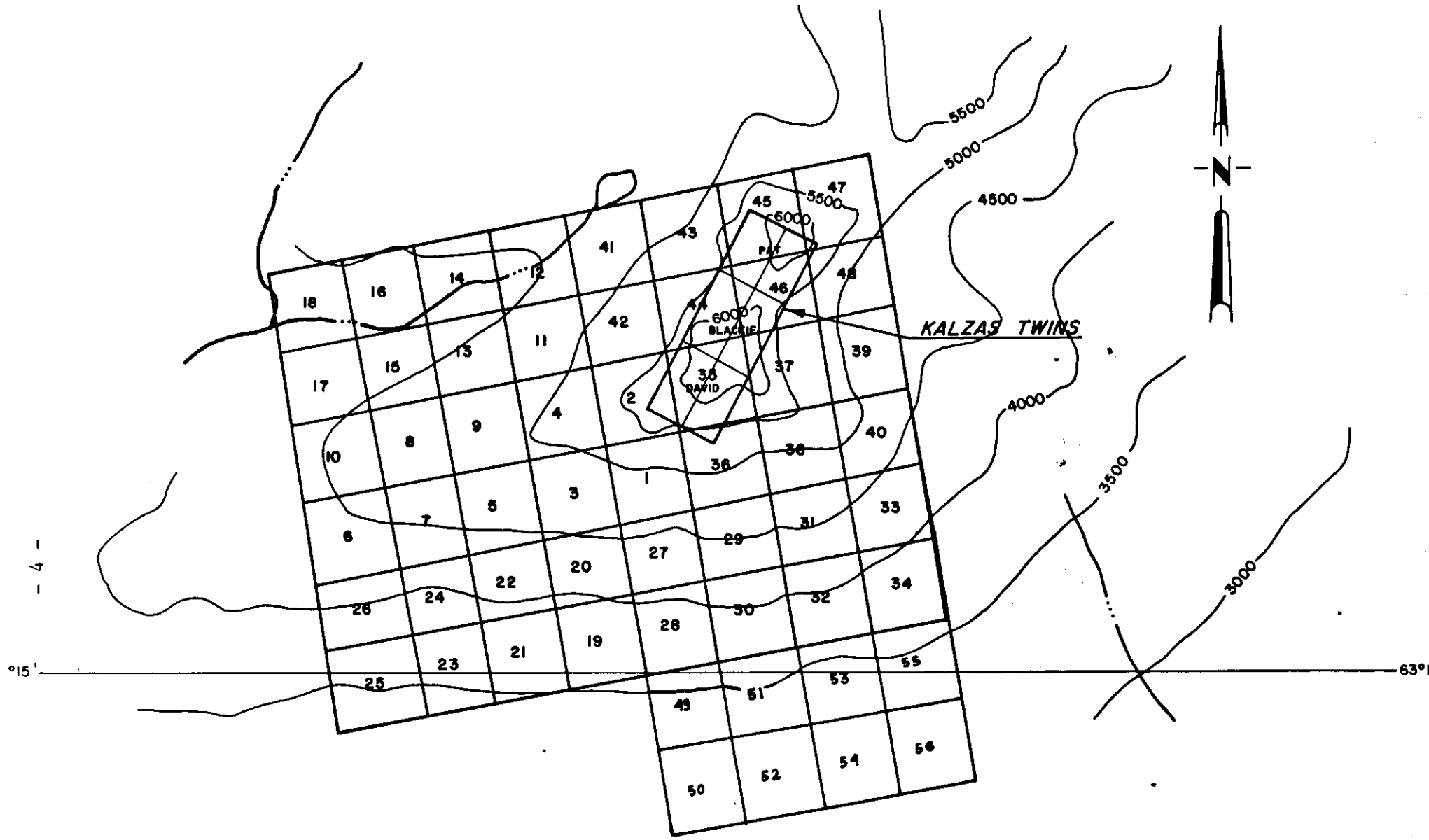
CONCLUSIONS

- 1) The nature of the mineralization and alteration on the Kalzas Twins strongly suggests the presence of a large porphyry type, stockwork tungsten, tin deposit.
- 2) The assay sections show that grades of greater than 0.2% WO_3 across

several hundred metres could be expected.

RECOMMENDATIONS

- 1) Detailed geological mapping and rock sampling of the felsenmeer/
talus to properly delineate the most favourable zones.
- 2) Regional and detailed magnetometer and VLF surveys to help define
the geology and mineralization.
- 3) Hand trenching to expose bedrock and provide geological and assay
information.
- 4) Diamond drilling to test the potential of the areas of mineralized
float.



WOLF CLAIMS 1-56

SCALE: 1 in. = 1/2 mi

N.T.S. 105-M-7

I. INTRODUCTION

I.i Location and Access

The property consists of 51 claims located on Kalzas Twins Mountain, 43 miles east of Mayo. Access is by helicopter or float plane from Mayo. The latter requires a four thousand foot climb from Big Kalzas lake to the area of interest.

I.ii Topography and Vegetation

The claims are centred on the top of the 6,350 foot south peak of the Kalzas Twins. Big Kalzas lake, two and one half miles south has an elevation of 2,585 feet a.s.l. The twin peaks form a very prominent landmark above the 5,000 foot Kalzas plateau lying immediately to the north.

The claim block is covered mainly by talus with some grass and moss on the more stable slopes and sparse bush and Black Spruce below 4,500 feet a.s.l. Outcrop is very limited, and present only along the ridge crests and near the base of the talus slopes.

I.iii Claim Data

NTS 105 M 7 - Mayo Mining District

Wolf 1 - 4 : YA42732 - YA42735

Wolf 5 - 48: YA62802 - YA67845

Pat : YA38160

Blackie : YA38161

David : YA38162

1.iv Work Done, 1981:

From June 29th to July 12th, 1981 the exploration crew established a picket grid totalling 24 line kilometres; took approximately 57 rock samples and 141 soil samples for geochemical analysis and 41 bulk rock samples of talus for assay.

The grid consists of 2" x 2" x 4' "pickets" at 50 metre intervals along 100 metre spaced lines. The base line trends 135° - 315° and is labelled from 35+00 North to 50+00 North. The grid lines are perpendicular and labelled 0+00 to 8+00 East and to 8+00 West.

II. GEOLOGY:

The Kalzas Twins area is underlain by a very thick section of quartzites, schists, slates and grits that underlie at least one third of the Mayo map sheet (Bostock '38 - '41). Templemen-Kluit (P.C. 1981) confirms these rocks to be part of the Proterozoic grit package (Yukon Group) that outcrop in an arcuate pattern along the northern and eastern margin of the Selwyn Basin.

The geology of the claim block is not well understood due to a lack of outcrop below the ridge crests. The talus is comprised of blocky, massive quartzites, arkosic grits, quartz and chert pebble conglomerates, shale and phyllite. A stratigraphic column for the property cannot be presented as the stratigraphic interrelationships of these units is unknown. The limited outcrop and intermixing of the talus suggests the units are all intercalated and tens of metres thick.

Structurally the beds trend 135° dipping steeply north-easterly on the west side of the South Kalzas Peak. East of the peak the beds dip steeply southwesterly suggesting a broad, open synform is centred under the South Kalzas Peak. Several bedding cleavage observations confirm this fold exists and that the beds are generally right side up.

Faulting, although certainly present on a local scale, has not been recognized on the property scale. One linear breccia zone has been mapped but there has been no apparent off-setting of the lithologies.

Metamorphism of the rocks is weak and regional in nature with no evidence of contact metamorphism observed. Alteration, however, is significant and will be discussed in the Economic Geology section.

III. ECONOMIC GEOLOGY

Quartz veins with varying amounts of wolframite are found in talus over an area equal to sixty percent of the claim block. Quartz float blocks range in size from millimetres to 60 centimetres containing wolframite as small blebs to large bladed crystals 10 centimetres in length. Wolframite also occurs as black, amorphous veins and fracture filled stockworks in the blocky quartzites and the grits.

To evaluate the size and grade potential of the mineralization an estimation of the percentage of quartz float in the talus and a percentage of mineralized quartz to barren quartz was made along each of the grid lines. On figure 3 a contour has been drawn

around those areas with greater than 15% quartz blocks in the talus. In most instances the percentage of mineralized float is directly proportional to the abundance of quartz. Three distinct zones of wolframite/quartz mineralization have been defined in this manner and will be discussed as Zone A, B and C respectively.

111.i Zone A:

The smaller of the three, Zone A lies at the top of the South Kalzas Twin and extends for 100 metres down the south talus slope from the summit. One vertical dipping quartz vein, 45cm thick and containing 10% wolframite, outcrops near the top of the ridge.

The blocks of quartz vein float are up to 30cm in diameter, with the quartz forming large, milky to clear, terminated crystals. Wolframite is very abundant in the quartz float and forms large, bladed crystals growing perpendicular from the vein walls. Tourmaline and chlorite develop dense felted mats along the vein wall contacts and are commonly in the quartz crystals and open spaces between the crystals. Weathered, goethitic appearing wolframite often fills the void between quartz crystals and in the felted tourmaline mats.

111.ii Zone B:

The largest of the three zones, B is defined by the greater than 15% quartz "float in talus" contour from line 42N to line 50N. The zone has an amoeboid shape but is approximately 300

Average: 0.79% WO_3 ; 40 metres of quartz vein float

- b) 1+50W - 1+75W; 25m; 0.65% WO_3 - quartz
0.03% WO_3 - country rock
- 1+75W - 2+00W; 25m; 0.53% WO_3 - quartz
0.05% WO_3 - country rock
- 2+00W - 2+25W; 25m; 1.64% WO_3 - quartz
0.15% WO_3 - country rock
- 2+25W - 2+50W; 25m; 1.77% WO_3 - quartz
0.28% WO_3 - country rock
- 2+50W - 2+75W; 25m; 0.69% WO_3 - quartz
0.38% WO_3 - country rock
- 2+75W - 3+00W; 25m; 1.33% WO_3 - quartz
0.14% WO_3 - country rock (0.34% Sn)
- 3+00W - 3+25W; 25m; 0.31% WO_3 - quartz
0.18% WO_3 - country rock
- 3+25W - 3+50W; 25m; 0.51% WO_3 - quartz
0.17% WO_3 - country rock

Averages: 1+50W - 3+50W; 200m; 0.92% WO_3 - quartz vein float
2+00W - 3+50W; 150m; 0.21% WO_3 - country rock

- c) 5+00W - 5+25W; 25m; 0.04% WO_3 - mixed talus
5+25W - 5+50W; 25m; 0.24% WO_3 , 0.07% Sn - mixed talus
5+50W - 5+75W; 25m; 0.38% WO_3 , 0.04% Sn - mixed talus
5+75W - 6+00W; 25m; 0.04% WO_3 , 0.06% Sn - mixed talus

Averages: 5+25W - 5+75W; 50m; 0.31% WO_3

This section from 5+00W to 6+00W appears to be peripheral to the main tungsten zone. Cassiterite crystals were more common with the result that tin assays were slightly higher; 0.06% as opposed to 0.01% Sn.

Alteration in Zone B is intense considering the very unreactive host rocks. Mapping has not defined specific zones but the various forms were noted.

Tourmaline, the most widespread of the "alteration" minerals, occurs as accicular needles in quartz crystals and cavities; as hairline veinlets in the quartzites; and as black matted zones along vein walls in the quartzites. Chlorite and goethite are commonly associated with the tourmaline in the quartzites. Silicification is also common but associated with stockwork quartz veining rather than the more massive quartz veins. The silica is pervasive forming white, sugary quartz zones with sericite. Orthoclase feldspar is occasionally noted as primary, euhedral phenocrysts in quartz veins.

111.iii Zone C:

Poorly defined as it was recognized at the end of the field program, "C" zone is bounded by lines 36+00N to 41+00N between stations 2+00W and 5+50W. The significant feature of the zone is a linear 400 metre long breccia that assays 0.84% WO_3 , 0.23 oz/ton Ag and 0.017% Sn. The clasts are angular to sub-rounded quartzite, grit and quartz vein fragments that are rotated and poorly sorted in a goethite matrix. Peripheral to the breccia is a broad zone of talus heavily coated with a similar goethite material. The surface coatings are probably irregular fractures filled with the goethite.

A bulk sample across the zone on Line 40N returned the following assay values:

Line 40N:

1+75W - 2+00W - 25m; 0.08% WO_3 , < 0.01% Sn, 3 g/tonne Ag
2+00W - 2+25W - 25m; 0.44% WO_3 , 0.03% Sn, 0.5 g/tonne Ag
2+25W - 2+50W - 25m; 0.34% WO_3 , 0.01% Sn, 1.3 g/tonne Ag
2+50W - 2+75W - 25m, 0.22% WO_3 , 0.02% Sn, 1.7 g/tonne Ag
2+75W - 3+00W - 25m, 0.16% WO_3 , < 0.01% Sn, 1.0 g/tonne Ag
3+00W - 3+25W - 25m, 0.24% WO_3 , < 0.01% Sn, 4.1 g/tonne Ag
3+25W - 3+50W - 25m, 0.73% WO_3 , < 0.01% Sn, 10.0 g/tonne Ag
3+50W - 3+75W - 25m, 0.01% WO_3 , < 0.01% Sn, 1.0 g/tonne Ag

Average of 1+75W to 3+50W - 175m/0.32% WO_3

The section from 3+25W to 3+50W on line 40N coincides with the breccia zone. The remaining sections represent quartzites that have been coated with goethite. Wolframite bearing quartz veins contribute less than 5% to the assayed section.

The goethite coating contains a significant concentration of WO_3 . It often has a very shiny, vitreous lustre; a conchoidal fracture; and forms botryoidal, amorphous masses along the irregular surfaces of talus float. This material also occurs as fracture fillings and stockwork within fine grained, lamminated siltstones, grits and quartzites.

The source of the tungsten rich goethite is probably the weathering of wolframite filled fractures. This is well illustrated in zones A and B where large wolframite blades are observed in various stages of "decay" forming large, brown, gossanous masses. The weathering intensity is due to the fact that the last "Ice

Advance" did not reach the top one thousand feet of the mountain thereby allowing for an extended weathering period without a recent glacial scouring of the surface material.

IV. GEOCHEMISTRY

Geochemical studies of the claim block includes rock geochemistry; soil sampling in two areas in which a soil cover has developed and stream/talus sampling of the mountain sides to locate new areas of mineralization. Samples collected and analysed total 60 rock, 30 silt, 30 concentrate and 141 soils.

IV.i Rock Geochemistry

Rock samples were randomly collected by the geologists mapping the grid and analysed for W, Sn, Ag and Zn. The object of this was to identify the mineral/elemental composition of the nonidentifiable goethetic material contained in and/or coating quartz and country rock float. Obvious crystals of wolframite and cassiterite were not routinely analysed but were mapped as such. It was also hoped that zonation patterns would emerge.

Unfortunately 60 random samples did not provide sufficient data for a definitive zonal pattern. However, an oblong tungsten rich zone trends NW-SE with rough dimensions of 1300 metres x 450 metres and encompasses all three of the previously described zones - A, B, and C. Around the perimeter of the tungsten high are five silver anomalies (>1.0ppm - 18ppm Ag) and eight tin anomalies of 100 to >20,000ppm. Galena, arsenopyrite and molybdenite were noted in quartz veins on the North Kalzas Twin and two

anomalous silver analysis of 8.6ppm and > 50ppm Ag were obtained from this mineralization in the North Kalzas Twin side of the grid.

IV.ii Soil Geochemistry

One hundred and forty-one samples were taken from two areas of the grid in which a substantial soil cover is developed. These areas include lines 51N and 52N; 0+00 to 8+00 east and west at the break in slope from the north side of the Kalzas peaks and a square block defined by lines 42N to 46N and 4+00 West to 8+00 West on the western shoulder of the South Kalzas Twin. The samples were analysed for Cu, Zn, Pb, Mo, Ag, Sn, W and Au have been plotted on the accompanying figures.

The results from lines 51N and 52N indicate that mineralization does not occur past the North end of the grid. However the overburden is a very thick glacial terrace that would probably mask bedrock mineralization.

The results from lines 42N to 46N have erratic anomalous values in tin and tungsten. Unfortunately a specific zone is not defineable. As the soil is covering talus that has definite slump structures indicating substantial movement it is very possible the anomalous values represent erratic mineralization in the talus.

IV.iii Talus Geochemistry

Twenty-four soil samples were collected from talus cones and dry stream/avalanche shoots along the southern side of Kalzas Mountain. These were taken to provide broad coverage along the perimeter

of the claim block.

Several anomalous tungsten and tin values up to 900ppm W and 214ppm Sn were obtained from samples taken below known mineralized zones on the grid. This technique will work very well for detailed prospecting of mountain sides where no active drainages exist.

V. DISCUSSION

The short program undertaken this past season on the claim block delineated a significant concentration of wolframite and quartz veining. The mineralization occurs as well formed, bladed crystals in massive quartz veins similar to the Panesqueria deposit in Portugal; as tiny crystals and blebs in stockwork quartz veins and as fracture fillings and veinlets in quartzites. Cassiterite, molybdenite, arsenopyrite, pyrrhotite, galena and silver (assay values) are also present, peripheral to the Wolframite zones. Scheelite is fairly common replacing wolframite and as pods in both the quartz veins and silicified grits and quartzites.

Alteration irrespective of the very unreactive host rocks is intense and zoned from a quartz (pervasive silicification), tourmaline core coincident with the tungsten zone outward through a quartz, sericite zone into a poorly developed pyrite, pyrrhotite halo.

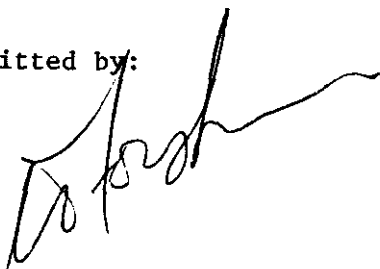
The mineralizing process was multistaged with evidence for up to four events clearly visible in numerous specimens. One such boulder on line 45N at 1+50 West showed 1/4" clear quartz stockwork veins cut by milky, randomly spaced quartz veins in turn cut by

large, open quartz veins with tourmaline selvages and pods, and subsequently cut by one inch quartz veins carrying wolframite and tourmaline.

The system was also very dynamic, developing several types of brecciation. This is most prevalent in Zone C where a long, linear breccia with poorly sorted, rotated clasts is located within a broader zone of fractured quartzites and grits. The brecciation was probably contemporaneous with a late mineralizing event as the fracture and breccia filling is a very tungsten rich goethite (or weathered wolframite). This suggests a diatreme with a peripheral crackle breccia zone developed along a linear fracture zone.

The model that best explains the mineralization, alteration and brecciation features is that of a "porphyry system". Although granitic rocks have not been found on surface it is suggested that a small, probably phallic or cupola stock must exist within the Kalzas Twins. The intrusive would be multistaged (including a late, gaseous phase), hypabyssal and dynamically emplaced. As a pluton could not have provided the quantities of quartz that is found on the mountain a large convection cell of silica rich cognate and meteoric water must have existed above the stock. It is very probable that the Kalzas Twin forms a prominent landmark because of the intense silicification derived from this system.

Submitted by:



C. N. Forster

Statement of Qualification of Author

Charles N. Forster

Graduated from the University of British Columbia, Vancouver with a B.Sc. Degree in Honors Geology in 1974.

From January 1975
to
Present

Geologist with Union Carbide Exploration Corporation. Present position of District Geologist.

A handwritten signature in cursive script, appearing to read 'C. Forster', written in black ink on a white background.

APPENDIX I



BONDAR-CLEGG & COMPANY LTD.

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: (604) 985-0681 TELEX: 04-352667

Geochemical Lab Report

CLIENT: UNION SHIPYARD CORP.

SUBMITTED BY: C.N. FORSTER, J. TOOHAY

DATE: 04-AUG-81 PROJECT: 101

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Zn	1 PPM	HNO ₃ -HCL HOT EXTR	Atomic Absorption	-100	ROCKS	CRUSH, PULVERIZE -100
As	.1 PPM	HNO ₃ -HCL HOT EXTR	Atomic Absorption	-100		RETENTION OF REJECTS
Au	5 PPB	AQUA REGIA	Fire Assay AA	-100		
Sn	5 PPM		X-RAY Fluorescence	-100		
Sb	2 PPM		X-RAY Fluorescence	-100		

REPORT COPIES TO: J. J. ROYALL
C. FORSTER
D. GORDON

INVOICE TO: D. GORDON

REMARKS: LAB. REPT. # 101-2

THE NUMBER ONE IN THE TEST NOTES COLUMN DENOTES
"INTERFERENCE NOTED" FOR SN.

DETECTION LIMITS FOR GOLD

20 gram sample: 5 ppb.
10 gram sample: 10 ppb.
1 gram sample: 100 ppb.

Sample Wt. 20 g. unless otherwise stated.

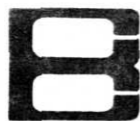
NOTE:

Check concentration/sample weight ratio
for effective detection level.



Geochemical Lab Report

SAMPLE NUMBER	ELEMENT UNITS	Zn PPM	As PPM	Au PPB	Sn PPM	Sb PPM	NOTES	SAMPLE NUMBER	ELEMENT UNITS	Zn PPM	As PPM	Au PPB	Sn PPM	Sb PPM	NOTES
0+00E/42N		21	0.2		21			40+30N		87	0.2		12		1*
47+30N		67	0.2		6		1*	1+80W/49N		23	0.2		10		
0+10E/41+00N		11	1.5		16			1+90W/39+90N		19	0.2		54		
0+15E/41+00N		24	0.5		96			2+00W/42N		31	0.3		270		
0+25E/38+30N		56	0.2		23			2+50W/48N		204	1.3		47		
41+00N		3	0.2		ND			50N(A)		9	0.2		ND		
0+35E/46+00N		22	0.2		15			50N(B)		15	0.8		ND		
0+60E/41+00N		6	0.7		6			2+75W/42N		32	0.2		24		
0+80E/41+00N		9	0.6		31			2+80W/41+00N		11	0.2		ND		
0+90E/46+00N		14	0.4		7			3+00W/43N		25	24.0		1400		
1+20E/47N		30	3.2		580			50N		12	0.8		ND		
1+30E/46+00N		10	1.5		31			3+50W/42N		5	2.3		ND		
1+50E/41+00N		44	0.2		ND			50N		41	0.7		12		
1+60E/41+00N		14	0.4		15			3+75W/43N		31	18.0		220		1*
2+10E/46+00N		65	10.0		16			4+00W/48N		5	5.8		260		
2+30E/44+00N		257	0.6		84			49+00N		80	2.2		42		
2+70E/41+00N		57	0.2		8950			4+10W/38+50N		48	18.0		2230		
2+90E/46+00N		9	1.2		6			4+50W/49+00N		12	0.6		50		
3+00E/46+00N		3	1.0		26			4+70W/45N		3	0.3		60		
3+50E/50N		5	0.2		ND			4+80W/48N		10	0.2		14		
4+80E/50N		21	1.7		48			5+00W/42N		21	3.6		210		
5+70E/40+00N		49	8.6		125			45N		106	2.2		350		
7+20E/50N		25	0.8		7			46N		12	0.6		19		
7+75E/48+00N		55	0.5		12			5+30W/42N		15	0.2		>20000		
7+90E/50+00N		10	> 50.0		ND			5+40W/43N		4	11.0		3950		
0+50W/46N		12	0.8		17			5+50W/49N		3	1.5		115		
48N		10	0.9		33			5+60W/42+90N			5.3	280			3
1+20W/42+00N		7	0.5		68			6+00W/42N		18	0.2		55		
1+30W/48N		151	0.4		415			6+50W/42+50N		32	0.2		410		
1+60W/39 5N		371	8.6		22		1*	43+65N		1	1.5		47		



BONDAR-CLEGG & COMPANY LTD.

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: (604) 985-0681 TELEX: 04-352667

Geochemical Lab Report

REPORT: 121-1928

FROM: UNION CARBIDE CORP.

SUBMITTED BY: J. TOOHEY

DATE: 12-AUG-81 PROJECT: 101

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Cu	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-80	SOILS	SEIVE -80
Pb	2 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-80		RETENTION OF REJECTS
Zn	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-80		PULVERIZING
Mo	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-80		
As	.1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-80		
W	2 PPM	CARBONATE SINTER	Colourimetric	-80		
Sn	5 PPM		X-RAY Fluorescence	-80		

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C. FORSTER

INVOICE TO: D. GORDON

REMARKS: LAB REPT. 101-4



Geochemical Lab Report

REPORT: 121-1928

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	W PPM	Sn PPM	NOTES
42+00N/4+00W		146	12	60	5	0.3	135	69	
4+50W		102	24	67	10	0.2	270	84	
5+00W		38	17	50	5	0.3	180	30	
5+50W		80	10	39	10	0.2	50	16	
6+00W		140	10	64	5	0.2	90	36	
6+50W		102	10	47	13	0.2	95	44	
7+00W		114	15	50	11	0.2	180	195	
7+50W		128	15	62	13	0.2	50	45	
8+00W		54	12	65	5	0.2	6	14	
43+00N/4+00W		260	18	45	7	0.8	360	57	
4+50W		154	17	48	6	0.5	360	78	
5+00W		34	10	49	10	0.2	60	24	
5+50W		48	10	68	7	0.4	190	42	
6+00W		93	23	60	5	0.4	65	29	
6+50W		60	11	50	7	0.3	90	10	
7+00W		28	12	53	9	0.2	18	10	
7+50W		53	13	60	7	0.2	16	19	
8+00W		58	13	66	4	0.2	13	19	
44+00N/4+00W		94	14	46	9	0.2	145	33	
4+50W		76	15	45	11	0.2	180	92	
5+00W		78	21	41	10	0.4	145	31	
5+50W		18	10	42	13	0.2	30	17	
6+00W		38	12	52	10	0.5	30	15	
6+50W		45	8	44	5	0.2	110	41	
7+00W		52	10	50	11	0.3	48	48	
7+50W		20	12	60	6	0.2	15	11	
8+00W		36	12	62	4	0.2	9	ND	
45+00N/4+00W		24	11	52	8	0.2	19	15	
4+50W		62	10	44	4	0.3	75	26	
5+00W		72	10	47		0.2	60	26	



Geochemical Lab Report

REPORT: 121-1928

PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	As PPM	W PPM	Sn PPM	NOTES
5+50W		84	12	47	3	0.2	30	6	
6+00W		52	8	47	5	0.2	50	7	
6+50W		25	12	45	5	0.2	14	7	
7+00W		45	13	58	5	0.3	63	35	
7+50W		27	10	55	5	0.2	3	8	
8+00W		22	10	69	5	0.2	4	6	
46+00N/4+00W		124	15	52	5	0.4	225	34	
4+50W		63	15	37	8	0.8	110	28	
5+00W		73	13	42	5	0.5	110	22	
5+50W		90	14	45	5	0.8	60	19	
6+00W		60	14	49	9	0.2	135	32	
6+50W		67	10	51	6	0.2	140	38	
7+00W		60	15	68	5	0.6	25	8	
7+50W		84	15	65	9	0.3	30	17	
8+00W		46	8	56	4	0.2	9	ND	
51+00N/0+50E		27	18	58	10	0.2	8	11	
1+00E		45	22	46	9	0.3	75	10	
1+50E		42	25	52	13	0.4	135	19	
2+00E		17	250	610	10	0.2	3	6	
2+50E		12	65	82	8	0.2	5	11	
3+00E		50	61	128	6	0.4	4	15	
3+50E		38	40	82	6	0.4	5	11	
4+00E		50	50	75	7	1.0	14	17	
4+50E		42	70	100	10	0.7	15	17	
5+00E		33	45	70	7	1.1	16	ND	
5+50E		16	25	54	6	0.4	4	ND	
6+00E		53	35	62	4	0.7	18	9	
6+50E		42	22	66	5	0.2	6	6	
7+00E		20	15	56	4	0.2	4	ND	
7+50E		14	17	48	4	0.2	6	8	



Geochemical Lab Report

REPORT: 121-1828

PAGE 3

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	As PPM	W PPM	Sn PPM	NOTES
8+00E		18	20	67	6	0.2	4	ND	
51+00N/0+00W		37	16	51	5	0.2	100	8	
0+50W		24	14	47	5	0.2	21	ND	
1+00W		18	14	50	4	0.2	10	10	
1+50W		27	15	55	8	0.2	38	7	
2+00W		42	13	44	6	0.6	80	12	
2+50W		38	17	47	9	0.4	75	17	
3+00W		48	13	48	4	0.2	55	16	
3+50W		24	13	49	5	0.2	16	9	
4+00W		44	15	51	4	0.5	63	7	
4+50W		50	10	50	4	0.3	38	19	
5+00W		18	21	52	8	0.2	5	11	
5+50W		9	10	26	6	0.2	5	ND	
6+00W		21	14	31	7	0.4	12	ND	
6+50W		60	23	55	8	0.6	24	ND	
7+00W		28	20	43	7	0.4	14	6	
7+50W		48	25	45	6	0.5	9	13	
8+00W		56	21	45	5	0.5	8	ND	
52+00N/0+50E		34	17	60	4	0.2	16	10	
1+00E		32	27	43	7	0.4	45	13	
1+50E		38	22	45	7	0.3	19	ND	
2+00E		43	17	45	5	0.2	24	ND	
2+50E		63	25	45	11	0.2	330	22	
3+00E		32	18	66	8	0.2	3	13	
3+50E		16	9	35	14	0.2	5	7	
4+00E		10	13	15	7	0.2	5	9	
4+50E		28	33	31	7	0.7	8	ND	
5+00E		16	20	50	5	0.2	4	ND	
5+50E		9	22	35	5	0.2	3	ND	
6+00E		18	13	40	7	0.2	3	ND	



Geochemical Lab Report

REPORT: 121-1928

PAGE 4

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	As PPM	W PPM	Sn PPM	NOTES
6+50E		23	17	59	8	0.5	3	6	
7+00E		22	12	53	11	0.2	2	11	
7+50E		14	16	37	8	0.2	2	9	
8+00E		19	15	49	7	0.2	3	ND	
52+00N/0+00W		19	9	42	6	0.2	15	ND	
0+50W		27	12	50	5	0.2	21	7	
1+00W		28	10	50	4	0.2	19	ND	
1+50W		30	8	41	9	0.4	5	10	
2+00W		34	10	45	4	0.2	63	13	
2+50W		44	8	48	6	0.2	60	8	
3+00W		20	9	45	4	0.2	5	ND	
3+50W		18	7	41	6	0.2	6	8	
4+00W		28	10	44	4	0.4	35	16	
4+50W		38	10	50	6	0.4	28	12	
5+00W		18	9	50	5	0.2	8	ND	
5+50W		20	20	50	7	0.2	20	11	
6+00W		54	15	60	5	0.5	14	15	
6+50W		14	10	22	9	0.3	3	17	
7+00W		17	10	45	4	0.2	3	ND	
7+50W		24	16	55	5	0.2	3	9	
8+00W		14	12	41	4	0.2	3	6	
81R-0001		42	40	93	2	0.3	2	23	
81R-0002		48	22	86	2	0.2	2	14	
81R-0003		68	53	79	3	0.5	5	14	
81R-0004		54	47	76	3	0.4	3	13	
81R-0005		63	70	95	4	1.1	2	24	
81R-0006		53	48	88	4	0.6	2	28	
81R-0007		74	48	50	4	0.6	32	30	
81R-000P		68	18	65	4	0.3	30	19	
81R-000'		104	46	65	7	1.1	23	29	



Geochemical Lab Report

REPORT: 121-1828

PAGE 5

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	As PPM	W PPM	Sn PPM	NOTES
81R-0010		116	97	59	7	1.2	29	25	
81R-0011		70	13	29	4	0.4	30	18	
81R-0012		130	15	45	4	0.3	130	41	
81R-0013		104	16	35	4	0.3	270	74	
81R-0014		80	14	30	4	0.3	8	48	
81R-0015		72	18	25	6	0.2	33	195	
81R-0016		106	16	80	3	0.2	10	38	
81R-0017	1	58	22	78	5	0.2	5	27	
81R-0018	2	92	14	56	4	0.2	20	69	
81R-0019	3	73	17	85	4	0.2	11	26	
81R-0020	4	100	17	75	4	0.2	50	215	
81R-0021	5	72	11	18	4	0.2	295	81	
81R-0022	3	84	19	25	9	0.4	900	81	
81R-0023	4	158	14	49	5	0.2	63	89	



BONDAR-CLEGG & COMPANY LTD.

Kalzas

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: 985-0681 TELEX: 04-352667

CERTIFICATE OF ASSAY

TO Balton Carbide Corp
930 - 800 West Pender Street
Vancouver, B. C. V6C 2V6


A21 - 1119
August 14, 1981
PROJECT: NONE GIVEN

I hereby certify that the following are the results of assays made by us upon the herein described pulp samples.

MARKED	Percent W ₃	MARKED	Percent	MARKED	Percent
SEE OUR GEOCHEM REPORT 121-1871					
81T - 0020	0.30				
0030	0.56				
0032	0.29				
0040	2.02				

AUG 16 1981

NOTE:
 R rejects retained two weeks
 P retained three months
 u otherwise arranged.


 Registered Assayer, Province of British Columbia

To: Union Carbide Corp

REPORT NO. _____

PAGE No. 1

BONDAR-CLEGG & COMPANY LTD.

DATE: August 7,

930 - 500 West Pender Street
Vancouver, B. C. V6C 2V6

CERTIFICATE OF ASSAY

Samples submitted: July 30, 1961
Results completed: August 7, 1961

PROJECT: 101

I hereby certify that the following are the results of assays made by us upon the herein described pulps samples.

MARKED	GOLD		SILVER		CO ₂						
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent
47+30M			-		0.78						
0+10E/41+00M			-		9.30						
0+15E/41+00M			-		37.90						
0+60E/41+00M			-		2.85						
2+36E/44+00M			-		0.88						
1+30M/46M			-		0.58						
1+60M/39+65M			-		1.31						
40+30M			-		1.23						
2+00M/42M			-		0.47						
2+50M/48M			-		0.53						
50M(B)			-		1.94						
2+75M/42M			-		0.24						
3+00M/43M			-		0.98						
3+50M/50M			-		0.49						
3+75M/43M			-		0.37						
4+00M/46M			-		2.22						
5+00M/42M			-		2.15						
5+40M/43M			-		8.10						
6+00M/42M			-		18.80						
7+90E/50+00M			9.12		-						

cc C.H. Forster/J. Tooley

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.


Registered Assayer, Province of British Columbia



CHEMEX LABS LTD.

212 BROADBANK AVE
NORTH VANCOUVER B.C.
CANADA V7J 2C1
TELEPHONE (604) 984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

*** INVOICE ***

TO : UNION CARBIDE EXPLORATION CORP.
#930 - 800 W. Pender Street
Vancouver, B.C.
V6C 2V6

Invoice # : 18112627

Date : 10-AUG-81

P.O. # : NONE

Project

Invoice for analytical work reported on certificate(s) A8112627-001 to -002

quantity	Analysed for code description	unit price	amount
41	339 - W03 percent		
	343 - Sn percent		
	386 - Ag (AA) g/tonne	21.00	861.00

Sample preparation and other charges :

41 208 - Assay - RING

3.00

123.00

TOTAL \$ 984.00

Please pay this amount ----> \$ 984.00
=====

TERMS -- NET 30 DAYS

1.0 % per month (24 % per annum) charged on overdue accounts

AUG 11 1981



MEMBER
CANADIAN TESTING



CHEMEX LABS LTD.

212 BROOKSBANK AVE
 NORTH VANCOUVER, B.C
 CANADA V7J 2C1
 TELEPHONE: (604)984-0221
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : UNION CARBIDE EXPLORATION CORP.
 #930 - 800 W. Pender Street
 Vancouver, B.C.
 V6C 2V6

CERT. # : A5112527-001-A
 INVOICE # : I8112527
 DATE : 10-AUG-31
 P.C. # : NONE

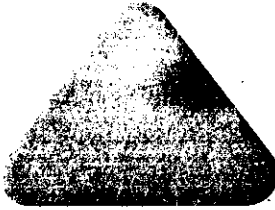
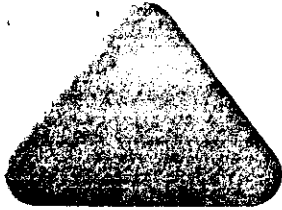
Sample description	Prep code	WO3 percent	Sn percent	Ag (AA) g/tonne			
41951	208	0.40	0.01	<0.3	--	--	--
41952	208	0.26	0.01	1.0	--	--	--
41952 A	208	0.16	0.01	0.3	--	--	--
41952 B	208	0.04	0.01	<0.3	--	--	--
41952 C	208	0.16	0.01	0.3	--	--	--
41952 D	208	0.10	0.01	<0.3	--	--	--
41953	208	1.18	0.02	0.5	--	--	--
41953 A	208	0.42	0.03	<0.3	--	--	--
41954	208	0.65	0.02	<0.3	--	--	--
41955	208	0.03	0.02	0.3	--	--	--
41956	208	0.53	0.01	<0.3	--	--	--
41957	208	0.05	0.02	<0.3	--	--	--
41958	208	1.64	0.02	<0.3	--	--	--
41959	208	0.15	0.02	0.5	--	--	--
41960	208	1.77	0.02	0.5	--	--	--
41961	208	0.28	0.02	1.0	--	--	--
41962	208	0.69	0.01	<0.3	--	--	--
41963	208	0.38	0.02	<0.3	--	--	--
41964	208	1.33	0.02	0.5	--	--	--
41965	208	0.14	0.38	0.3	--	--	--
41966	208	0.31	0.03	2.3	--	--	--
41967	208	0.18	0.02	0.5	--	--	--
41968	208	0.51	<0.01	0.5	--	--	--
41969	208	0.17	0.01	0.5	--	--	--
41970	208	0.04	<0.01	0.5	--	--	--
41972 A	208	0.24	0.07	1.0	--	--	--
41972 B	208	0.38	0.04	0.5	--	--	--
41973	208	0.04	0.06	0.5	--	--	--
41974	208	0.25	<0.01	<0.3	--	--	--
41975	208	0.08	<0.01	<0.3	--	--	--
41976	208	0.08	<0.01	<0.3	--	--	--
41977	208	0.44	0.03	0.5	--	--	--
41978	208	0.34	0.01	1.3	--	--	--
41979	208	0.22	0.02	1.7	--	--	--
41980	208	0.16	0.01	1.0	--	--	--
41981	208	0.24	<0.01	4.1	--	--	--
41982	208	0.73	<0.01	10.0	--	--	--
41983	208	<0.01	0.01	1.0	--	--	--
41984	208	0.45	<0.01	0.5	--	--	--
41985	208	0.07	<0.01	0.5	--	--	--

B. Stewart

Registered Assayer, Province of British Columbia



APPENDIX II



BEMA INDUSTRIES LTD.

5780-203 STREET LANGLEY B.C. V3A 1W3 (604)530-9731

203, 19945 - 56 Ave., Langley, B.C. V3A 3Y2

Union Carbide Exploration Co.
930 - 800 West Pender St.
Vancouver, B. C.
V6C 1J9

INVOICE N^o 1147

DATE June 30, 1981

FILE NO.

PROJECT 81-54

RE: LINECUTTING, MAYO, Y.T.
June 1 - 30, 1981
PROGRESS BILLING

Labour	\$2,341.08
Disbursements	873.24
	<u>\$3,214.32</u>

THIS IS OUR ACCOUNT: \$3,214.32

BEMA INDUSTRIES LTD.

PER: _____

DATE OF ISSUE: July 27, 1981

/mh

BEMA INDUSTRIES LTD. ~~5780-203 STREET, LANGLEY, B.C. V3A 1W3 (604)530-9731~~
203, 19945 - 56 Ave., Langley, B.C. V3A 3Y2

Union Carbide Exploration Co.
930 - 800 West Pender St.
Vancouver, B. C.
V6C 1J9

INVOICE No 1148

DATE July 31, 1981

FILE NO.

PROJECT 81-54

RE: LINECUTTING, MAYO, Y.T.
July 1 - 31, 1981
PROGRESS BILLING

Labour	\$6,207.50
Disbursements	1,691.73
	<hr/>
	\$7,899.23
	<hr/> <hr/>

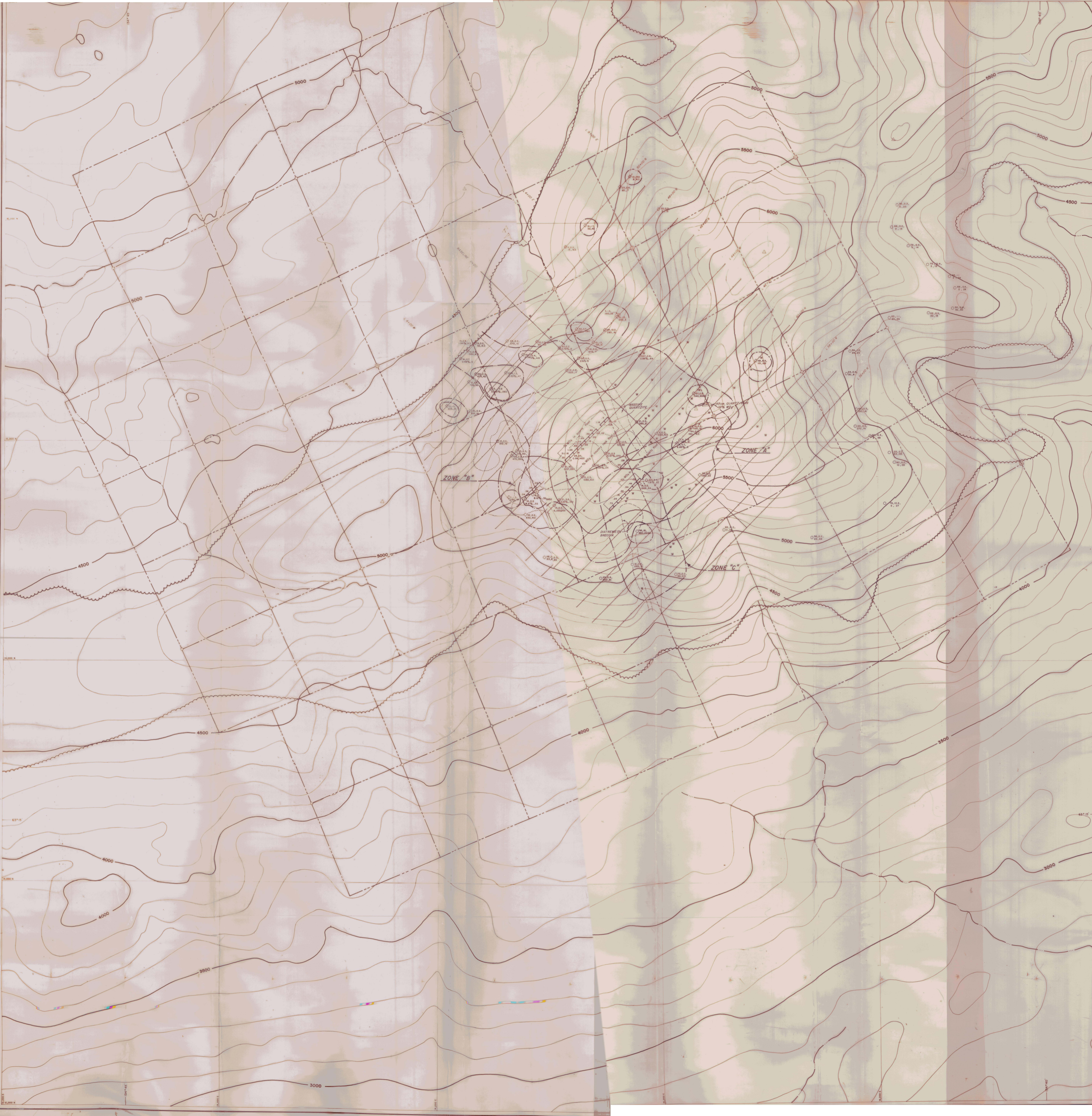
THIS IS OUR ACCOUNT: \$7,899.23

BEMA INDUSTRIES LTD.

PER: _____

DATE OF ISSUE: September 9, 1981

/mh



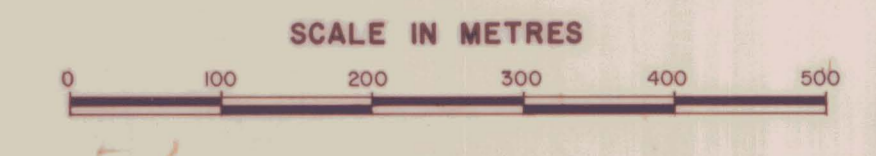
LEGEND - GEOCHEMISTRY

- ROCK SAMPLE
- SOIL FROM TALUS
- AREA OUTLINED 1000 ppm W
- AREA OUTLINED 10 ppm Ag
- AREA OUTLINED 100 ppm Sn

ILLUSTRATION

- SAMPLE LOCATION
- Zn, Ag, W, Sn
- % APPEARS, VALUE IS FOR Wt%
- OUTLINE OF AREA WITH 15% QUARTZ FLOAT IN TALUS
- GEOLOGICAL CONTACT
- W WOLFRAMITE
- CLAIM POST SURVEYED
- CLAIM POST UNSURVEYED
- CLAIM LINE
- △ SURVEY MONUMENT
- ~ CREEK

NOTE: CONTOURS IN 100 FOOT INTERVALS



UNION CARBIDE		UNION CARBIDE EXPLORATION CORPORATION	
KALZAS TWINS 000678			
GEOCHEMISTRY COMPILATION			
YUKON TERRITORY			
COMPILED BY: C.N. Forster	DATE: Oct., 1981	MAP NO:	SCALE: 1:5000
DRAFTED BY: K. Gibson	DISPOSITION:	NTS:	FIGURE NO. 3
PROJECT NO:	REPORT NO:		