



GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT

ON THE

WEST RIDGE CLAIMS

C.C. (1) 782-847, 850-859, 862-871, 873-881, 883-919

C.C. (2) 852-857

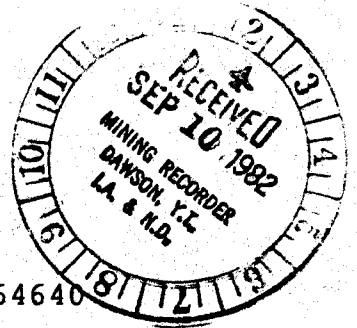
091368

091368

This report has been examined by
the Geological Survey of Canada
under Section 50 of the Quartz
Mining Act and the Government's
representation would be the amount
of \$ 13,800—

R. Watson
Regional Manager, Experimental
Geological Services for Commissioner
of Yukon Territory.

ASSESSMENT COST BREAKDOWN



GROUP 1	C.C. 852 - 857	YA 64635 - 64640
GROUP 2	C.C. 782 - 847	YA 64641 - 64706
	C.C. 850 - 859	YA 64709 - 64718
	C.C. 862 - 871	YA 64721 - 64730
	C.C. 873 - 881	YA 64732 - 64740
	C.C. 883 - 919	YA 64742 - 64778

DISBURSEMENTS

Expediting	\$ 685.00
Equipment rental hand held and SSB radios	800.00
Helicopter	1,086.00
Survey equipment and supplies	89.54
Groceries	432.00
Accommodation - room & board at Queenstake camp	720.00
Freight	427.21
Drafting	224.06
Camp Supplies	871.70
Cat rental	240.00
Truck rental & repairs	1,625.00
Geochemistry analysis & equipment	2,220.49

TOTAL DISBURSEMENTS

\$9,421.00

LABOUR

Purchasing 1 day @ \$135/day	135.00
Geological -	
G. Nordin - geological supervisor 1 day @ \$350/day	350.00
R. Rainbird - geologist 25 days @ \$225/day	5,625.00
M. Zurowski - geological asst. 11 days @ \$125/day	1,375.00
Drafting - 32 hours @ \$16/hr.	512.00

TOTAL LABOUR

7,997.00

TOTAL

\$17,418.00

NOTE: \$1,200.00 (2 years assessment) to be applied to claim C.C. 852 - 857 (YA 64635 - 64640).

The remaining \$16,218 (1 years assessment) to be applied to the remaining claims.

091368

GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT

ON THE

WEST RIDGE CLAIMS

C.C. (1) 782-847, 850-859, 862-871, 873-881, 883-919
C.C. (2) 852-857

Dawson Mining Division

N.T.S.: 115 P/14, 15

64°00'N Latitude; 137°40'W Longitude

Owned by:

CANADA TUNGSTEN MINING CORPORATION LIMITED
Executive Office
Box 12525, Oceanic Plaza
Ste. 1600-1066 W. Hastings Street
Vancouver, B.C. V6E 3X1

Work by:

BEMA INDUSTRIES LTD.
19945 - 56th Avenue
Langley, B.C. V3A 3Y2

R. H. Rainbird, B.Sc.

1.0 INTRODUCTION

This report covers assessment work on two groups of claims: Group 1; C.C. 782-847, 850-859, 862-871, 873-881, 883-919 and Group 2; C.C. 852-857. The claims were staked between September 1 and September 5, 1981 for the Canada Tungsten Mining Corporation Ltd. by Bema Industries Ltd. Geological mapping, rock, soil and stream sediment sampling was completed by two Bema geologists from July 5 to July 17, 1982. A total of one year's assessment credit has been applied to Group 1 and two years' assessment credit to Group 2.

1.1 LOCATION AND ACCESS

Both claim groups are situated near West Ridge in the Central Yukon approximately 70 kilometres west of Mayo and are centered at about 64°N and 137°40'W (reference NTS 115P/15) (Figure 1). Group 1 claims occupy the valley at the headwaters of Clear Creek while the Group 2 claims are located about 6 kilometres northeast at the head of Josephine Creek (Figure 2). Access may be gained by four-wheel drive vehicle from the Klondike Highway via the Clear Creek road which turns off the main highway near Barlow Lake. A helicopter was used to gain access to the eastern end of the Group 1 claim block.

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1. Please note that in the staking of these claims last year the claims' names were duplicated for C.C. 752 to 860. These claims are therefore distinguished by their respective grant numbers.

1.2 PHYSIOGRAPHY

The West Ridge properties are situated among the high plateaus and rolling mountains of the southern Ogilvie range. Elevations range from 1,330 meters on West Ridge down to 650 meters in the Clear Creek Valley. The topography is dominated by frost-heaved boulder fields and talus slopes. A dendritic pattern of streams and small creeks flow east and westward from West Ridge. Vegetation consists of open moss covered tundra above 1,200 meters giving way to stunted spruce and poplar forest at lower elevations. Rock exposure is limited, particularly in the Clear Creek Valley.

1.3 PROPERTY

The West Ridge properties comprise a group of adjoining blocks totalling approximately 1,050 claims. The group includes the SLUGGO, RAIN, BEE and several blocks of C.C. claims. All claims are in good standing until September 1984 except for the Group 1 C.C. claims which expire September 16, 1983 (see Figure 2). All claims are presently owned by the Canada Tungsten Mining Corporation Ltd. The following is a synopsis of the claims dealt with in this report.

<u>NAME</u>	<u>GRANT NUMBER</u>	<u>EXPIRY DATE</u>
GROUP 1		
C.C. 782-847	YA64641 to YA64706	September 16, 1983
C.C. 850-859	YA64709 to YA64718	September 16, 1983
C.C. 862-871	YA64721 to YA64730	September 16, 1983
C.C. 873-881	YA64732 to YA64740	September 16, 1983
C.C. 883-919	YA64742 to YA64778	September 16, 1983
GROUP 2		
C.C. 852-857	YA64635 to YA64640	September 16, 1984

The West Ridge area has been actively explored for placer gold and gold-silver-lead-zinc veins since the early 1900's. Reference to placer gold mining was made by H. W. Bostock (1979) during his mapping of the area from 1946 to 1949. Bostock states that a gold placer dredge, owned by Clear Creek Mining, worked the lower portion of Left Clear Creek between 1942 and 1949. (The same dredge was purchased in 1979 by Queenstake Resources Ltd. and has been relocated and restored for dredging on the upper reaches of Clear Creek.)

More recently, exploration emphasis has focused on W, Sn and Au mineralization associated with small hypabyssal stocks in the area. A 1969 stream sediment survey by Archer, Cathro and Associates Ltd. and the release of G.S.C. Open File 51 (Garrett, 1971, "Mo, W and U in Acid Plutonic Rocks as a Guide to Regional Exploration, Southeast Yukon") prompted the staking of several groups of claims in the West Ridge area. Follow up work by Archer, Cathro (for the Chevron Standard - Canada Tungsten, North Stewart River Joint Venture) resulted in the staking of the PUKELMAN, RHOSGOBEL, LUGDUSH and NOP claim groups in 1971. Soil geochemistry and geologic mapping on the PUKELMAN and RHOSGOBEL groups indicated significant potential for stockwork scheelite and associated gold bearing arsenopyrite vein mineralization.

Four groups of claims, the RAIN - BEE, JUB JUB, JABBERWOCK and NEL, were staked along the West Ridge in 1978. The RAIN and BEE, both thirty (30) unit blocks, are optioned from Mr. Albert Thom to Canada Tungsten Mining Corporation Ltd. The JUB JUB and JABBERWOCK groups, presently held by Campbell Resources Ltd. and the NEL group, held by Cominco Ltd., were staked to cover high Sn values from stream sediments at the head of Forty Mile Creek. The NEL property was drilled and sampled during the 1980 field season, although results are not yet available.

The C.C. claim block was staked in August, 1980 by Bema Industries Ltd. as agents for Canada Tungsten Mining Corporation Ltd. A regional geological reconnaissance and heavy mineral sampling program later that year outlined target areas in the vicinity of Upper Josephine Creek (W, Au), Upper Left Clear Creek (W, Au) and Barney Creek (Sn).

The SLUGGO claim block, which adjoins the C.C. block on its western border, was staked for Canada Tungsten in September, 1980 to cover a suspected tin occurrence. This property of twenty (20) claims was previously held by Welcome North Mines Ltd. and allowed to lapse in April of 1980.

Assessment work on the C.C. SLUGGO, RAIN and BEE claims was completed during the summer of 1981. Extensive soil geochemistry has outlined several zones anomalous in Au and particularly W. The reader is referred to the 1981 assessment report for any details (Rainbird and Kelly, 1981).

1.5 PRESENT WORK

The 1982 exploration program on the C.C. claims was carried out between July 5 and July 17, 1982 and involved 1:10,000 scale geological mapping and geochemical soil, rock and heavy mineral sampling. A total of 170 contour soil samples and 1 heavy mineral sample were collected and analysed for W, Sn and Au. Work was completed from two base camps, one at the Queenstake Resources camp on Clear Creek and another at the Canada Tungsten trailer camp on Josephine Creek. Field work was performed by two geologists from Bema Industries Ltd. as consultants for Canada Tungsten.

- Bostock H.S.
1979; Pack Horse Tracks - Recollections
of a Geologist's Life in British
Columbia and the Yukon 1924-1954.
G.S.C. Open File 650, p. 188.
- Cathro, R.J.
1971; North Stewart River Joint Venture:
Private Report for Canada Tungsten
Mining Corporation Ltd. and Chevron
Standard Ltd.
- Garrett, R.G.
1971; Molybdenum and Tungsten in some
Plutonic Rocks of the Southeast
Yukon Territory. G.S.C. Open
File, Report 51.
- Green, L.H.
1972; Geology of Nash Creek, Larsen Creek,
and Dawson Map Areas, Yukon
Territory. Geological Survey of
Canada, Memoir 364.
- Rainbird, R.H.
and
Kelly, D.A.
1981; Geological and Geochemical Assess-
ment Report on the C.C. 1 - 860,
SLUGGO 1 - 20, RAIN 1 - 30 and
BEE Claim Groups, Dawson Mining
Division, Yukon Territory.

The project area is located at the southern margin of the Selwyn Basin and is underlain by a thick sequence of deformed metasediments referred to as the "Grit Unit" (of Lower Cambrian, Upper Pre-Cambrian age) (Green 1972). The Grit Unit consists of an interbedded package of phyllite, argillite, gritty quartzite, micaceous quartzite and minor marble. Where these rocks have been intruded by acid intrusions they are altered to quartz and biotite-rich hornfels. Calcareous units are altered to calc-silicate hornfels which includes tungsten-bearing skarns.

Intrusive rocks include porphyritic quartz monzonite, quartz diorite, quartz-feldspar porphyry and andesite. The latter two types are least abundant and occur as dikes and small sills. Of the granitic rocks quartz monzonite is most common and forms the larger plutons (e.g. Vancouver Creek Stock). The intrusive rocks in this area are believed to be part of the Middle Cretaceous 100 million year suite (Tempelman-Kluit, D.J., personal communication, 1981). Stratigraphic relationships are illustrated in Table 1.

TABLE 1
TABLE OF FORMATIONS

AGE OF MINERALIZATION
Sinclair, et.al., 1980

ERA	PERIOD	MILLIONS OF YEARS	BOYLE, R.W. (1965)	GREEN, L.H. (1971) TEMPELMAN-KLUIT (1970)	BLUSSON, S.L. (1978)	BEMA INDUSTRIES LTD. (1980)
CENOZOIC	TERTIARY	65		Quartz-feldspar porphyry		
MESOZOIC	CRETACEOUS	136	Quartz-feldspar porphyry biotite lamprophyre Greenstone	Greenstone Keno Hill quartzite fm		Quartz-feldspar porphyry biotite lamprophyre
	JURASSIC	190		Lower Schist fm		Greenstone Keno Hill Quartzite Lower Schist fm
	TRIASSIC	225				
PALEOZOIC	PERMIAN	280				
	CARBONIFEROUS	345			Central Quartzite	
	DEVONIAN	395			Lower Schist	
	SILURIAN	430				
	ORDOVICIAN	500				
	CAMBRIAN	570				
PRECAMBRIAN		4600	Upper Schist fm Central Quartzite fm Lower Schist fm	Upper Schist fm		Upper Schist fm ? Grit Unit

The Group 1 claims area is underlain by a sequence of interbedded micaceous quartzite, gritty quartzite and phyllite. Rocks in the eastern portion of the block appear both structurally and lithologically distinct from those in the west and are separated by a possible north trending fault (Figure 3a and 3b). Outcrops along the Clear Creek Valley in the west indicate a predominant northwesterly structural trend dipping to the northeast while east of the assumed fault the trend is north to northeast dipping east - southeast. Rocks in the west are distinctly quartz rich and mica poor with numerous quartz augens varying in size from a few millimeters up to 2 centimeters. This feature was referred to as grit during mapping of the property. Gritty beds are typically absent in the east giving way to thinly interlayered muscovite-sericite and chlorite phyllite with muscovite-sericite schist.

Intrusive rocks are scarce and confined only to several creek bank exposures at the east end of the property. Rock types include aplite and fine grained quartz-feldspar porphyry. Fine-grained textures and lack of hornfelsing suggest that these represent small dikes or sills which are related to the larger stocks to the north.

The Group 2 claims area is also underlain by Grit Unit rocks. Intrusion of the nearby Josephine Creek quartz diorite stock has altered mica schists and phyllites to inter-layered biotite-andalusite and quartz-biotite hornfels primarily on C.C. 855 - 857. Mapping to the north indicated a sharp transition from pelitic metasediments into dark grey calcareous shales possibly of the Road River Formation. The assumed contact is parallel to the approximately 110° regional trend. No intrusive rocks were noted on these claims.

Ore mineralization was not observed on either of the claim groups but bearing in mind that the Group 1 block contains less than 1% rock outcrop a more adequate assessment of mineral potential could be gained through soil and stream sediment geochemistry.

Heavy mineral sampling along Clear Creek in 1980 and 1981 indicated considerable potential for the discovery of tin in the area drained by its upper reaches. The Queenstake Resources dredge presently operating on the creek has also reported substantial amounts of cassiterite in its concentrates.

As a follow up to this, 170 B horizon soil samples were collected at 100 meter intervals along the 950 meter elevation contour. Samples were collected from both sides of the Clear Creek valley and analysed for Au, W and Sn. Analytical procedures are listed in Appendix 1. Results indicate only background concentrations in all areas sampled (see Figures 4a, 4b). The only heavy mineral sample collected during 1982 also yielded low values for Au, W and Sn. The low concentrations, particularly in soils, would indicate that any bedrock source of these elements, and particularly tin, must occur further to the east or in the creek bed itself. It is quite possible that tin is being transported from a dilute source area upstream and then concentrated chemically within the creek sediments. This alone would explain the low concentrations in soils versus high concentrations in nearby creek sediments.

CONCLUSIONS

1. High tin values from heavy mineral stream samples collected in previous years' work may be the result of secondary chemical enrichment of tin in creek bed sediments.
2. Low concentrations of tin from soil samples collected in 1982 suggest that a dilute bedrock source is not present in the area tested but is more likely to occur to the east and upstream from this area.
3. The conclusion stated in (2) is also supported by the fact that high tin values occur only in samples taken from Clear Creek or from the extreme lower reaches of its tributaries (i.e. where samples may be mixed with Clear Creek sediments).
4. Anomalous gold and tungsten values are associated with acid intrusion-related mineralization along the West Ridge.

RECOMMENDATIONS

1. It is advisable that the majority of the Group 1 C.C. claims be allowed to lapse and that future exploration efforts be concentrated in target areas adjacent to the West Ridge quartz monzonite stocks.
2. It is also suggested that further heavy mineral sampling be conducted along the upper forks of Clear Creek and Forty Mile Creek before acquisition of any new ground.

APPENDIX I

ANALYTICAL METHODS

1. Geochemical Analytical Procedure

PPM Tungsten:

1.00 gm sample is fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten is complexed with toluene 3,4 dithiol and extracted into an organic phase. The resulting color is visually compared to similarly prepared standards. Detection limit - 4 ppm.

PPM Tin:

1.00 gm of sample is sintered with ammonium iodide. The resulting tin iodide is leached with a dilute HCl - ascorbic acid solution. The TOPO complex is then extracted into MIBK and analysed via A.A. Detection limit - 1 ppm.


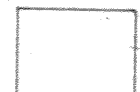





PPB Gold:

5 gm samples ashed at 800°C for one hour, digested with aqua regia - twice to dryness - taken up in 25% HCL, the gold then extracted as the bromide complex into MIBK and analysed via A.A. Detection limit - 10 ppb.



GROUP 2

GROUP 1

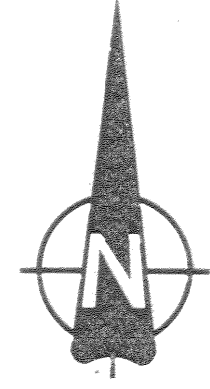
-  C.C. CLAIMS-STAKED AUGUST 1980
-  SLUGGO CLAIMS-STAKED SEPT. 1980
-  C.C. CLAIMS-STAKED MAY 1981
-  C.C. CLAIMS-STAKED AUGUST 1981
-  C.C. CLAIMS-STAKED SEPT. 1981
-  RAIN CLAIMS
-  BEE CLAIMS

CANADA TUNGSTEN MINING CORPORATION
WEST RIDGE
 1982 GEOLOGICAL RECONNAISSANCE PROGRAMME

CLAIM STATUS

OCTOBER 1981 091568

NOVEMBER 1982 091368
 S-H-Mc 82-05 2
 RHR 1/2 in : 1 mile



Scale 0 10000 20000 30000 Feet

 BEMA INDUSTRIES LTD.



LEGEND

SYMBOLS

— defined	— approximate	— assumed	— limit of geological mapping
— defined	— approximate	— assumed	— limit of geological mapping
— defined	— approximate	— assumed	— limit of geological mapping

OUTCROP

FELSENMEER

TALUS

FAULTS

VEIN STRUCTURE

BEDDING

FOLIATION

ANTICLINE

SYNCLINE

JOINTING

MINOR FOLDS

GLACIAL STRIAE

SHAFT

RAISE

WINZE

ADIT or TUNNEL

QUARRY or MINE

TRENCH

PIT

GRAVEL PIT

DUMP or TAILINGS

DDH & NUMBER

OVERBURDEN DRILL HOLE

CHIP SAMPLE

ROCK SAMPLE

FLOAT

TRIANGULATION POINT

CLAIM POST

CLAIM BOUNDARY

ROAD

CAT TRAIL

CABIN

SPRING

LITHOLOGY

JURASSIC AND OR CRETACEOUS
intrusive and subvolcanic (hypabyssal) rocks

2a	Aplite
2b	Granodiorite
2c	Porphyritic quartz monzonite
2d	Quartz diorite and diorite
2e	Rhyolite (quartz porphyry)
2f	Lamprophyre and other associated biotite rich intrusive rocks
2g	Basalt and amygdaloidal basalt
2h	Felsic volcanic rocks and tuff
2i	Quartz-arsenopyrite vein rock

LATE PRECAMBRIAN OR EARLY PALEOZOIC
Upper schist & gneiss unit

1a	Massive, gritty and thin bedded quartzite
1b	Micaceous quartzite
1c	Phyllitic, Muscovite-sericite phyllite
1d	Homfelsic rocks
1e	Interlayered quartzite and biotite schist
1f	Massive and interlayered biotite and chloritic schist
1g	Massive quartzitic hornfels
1h	Gresen
1i	Calc-silicate skarn
1j	Breccia
1k	Marble

CANADA TUNGSTEN MINING CORPORATION
WEST RIDGE Y.T.
1982 GEOLOGICAL EXPLORATION PROGRAMME

091008

REGIONAL GEOLOGY
INDEX No 4

DATE NOVEMBER, 1981
DRAWN BY T. D.
REVISED BY RRA/C.G. 82

JOB NO 82-05
SCALE 1:10,000 METRES

FIG NO 3a

BEMA INDUSTRIES LTD.

INDEX No 4



LEGEND

SYMBOLS

GEOLOGICAL BOUNDARY	defined	SHAFT	⊠
	approximate	RAISE	⊞
	assumed	WINZE	⊞
LIMIT OF GEOLOGICAL MAPPING		ADIT or TUNNEL	⊞
OUTCROP		ADIT or TUNNEL	⊞
FELSENMEER		QUARRY or MINE	⊞
TALUS		active	⊞
		abandoned	⊞
FAULTS	defined	TRENCH	⊞
	approximate	closed end	⊞
	assumed	PIT	⊞
VEIN STRUCTURE	defined	GRAVEL PIT	⊞
	approximate	active	⊞
	assumed	dormant	⊞
BEDDING		DUMP or TAILINGS	⊞
horizontal	+	DDH & NUMBER	⊞
vertical	+	location	⊞
inclined	+	location	⊞
overturned	+	OVERBURDEN DRILL HOLE	⊞
		location	⊞
		CHIP SAMPLE	⊞
FOLIATION		ROCK SAMPLE	⊞
horizontal	+	with rock type	⊞
vertical	+		⊞
inclined	+		⊞
unknown	+		⊞
ANTICLINE	defined	FLGAT	⊞
	approximate	location	⊞
	overturned		⊞
SYNCLINE	defined	SURVEY STATION	⊞
	approximate		⊞
	overturned	TRIANGULATION POINT	⊞
JOINTING		CLAIM POST	⊞
weak	+	CLAIM BOUNDARY	⊞
moderate	+	ROAD	⊞
strong	+	CAT TRAIL	⊞
weak	+	CABIN	⊞
moderate	+	SPRING	⊞
strong	+		⊞
MINOR FOLDS			
style & direction	+		
GLACIAL STRIAE			
movement known	+		
movement known	+		

LITHOLOGY

JURASSIC AND OR CRETACEOUS
intrusive and subvolcanic (hypabyssal) rocks

2	2a	Apilite
	2b	Granodiorite
	2c	Porphyritic quartz monzonite
	2d	Quartz diorite and diorite
	2e	Rhyolite (quartz porphyry)
	2f	Lamprophyre and other associated biotite rich intrusive rocks
	2g	Basalt and amygdaloidal basalt
	2h	Felsic volcanic rocks and tuff
	2i	Quartz-arsenopyrite vein rock

LATE PRECAMBRIAN OR EARLY PALEOZOIC
Upper schist / Grit unit

1	1a	Massive, gritty and thin bedded quartzite
	1b	Micaceous quartzite
	1c	Phyllite: c. Muscovite-sericite phyllite
		c ₂ Chloritic phyllite
		c ₃ Graphitic phyllite
	1d	Hornfelsic rocks d. interlayered quartzite and biotite schist
		d ₁ Massive and inter-layered biotite and chloritic schist
		d ₂ Massive quartzitic hornfels
		d ₃ Gneiss
	1e	Calc-silicate skarn e. Pyroxene-(dark)
		e ₂ Wollastonite-quartz (light)
	1f	Breccia
	1g	Marble

CANADA TUNGSTEN MINING CORPORATION
WEST RIDGE Y.T.
1982 GEOLOGICAL EXPLORATION PROGRAMME

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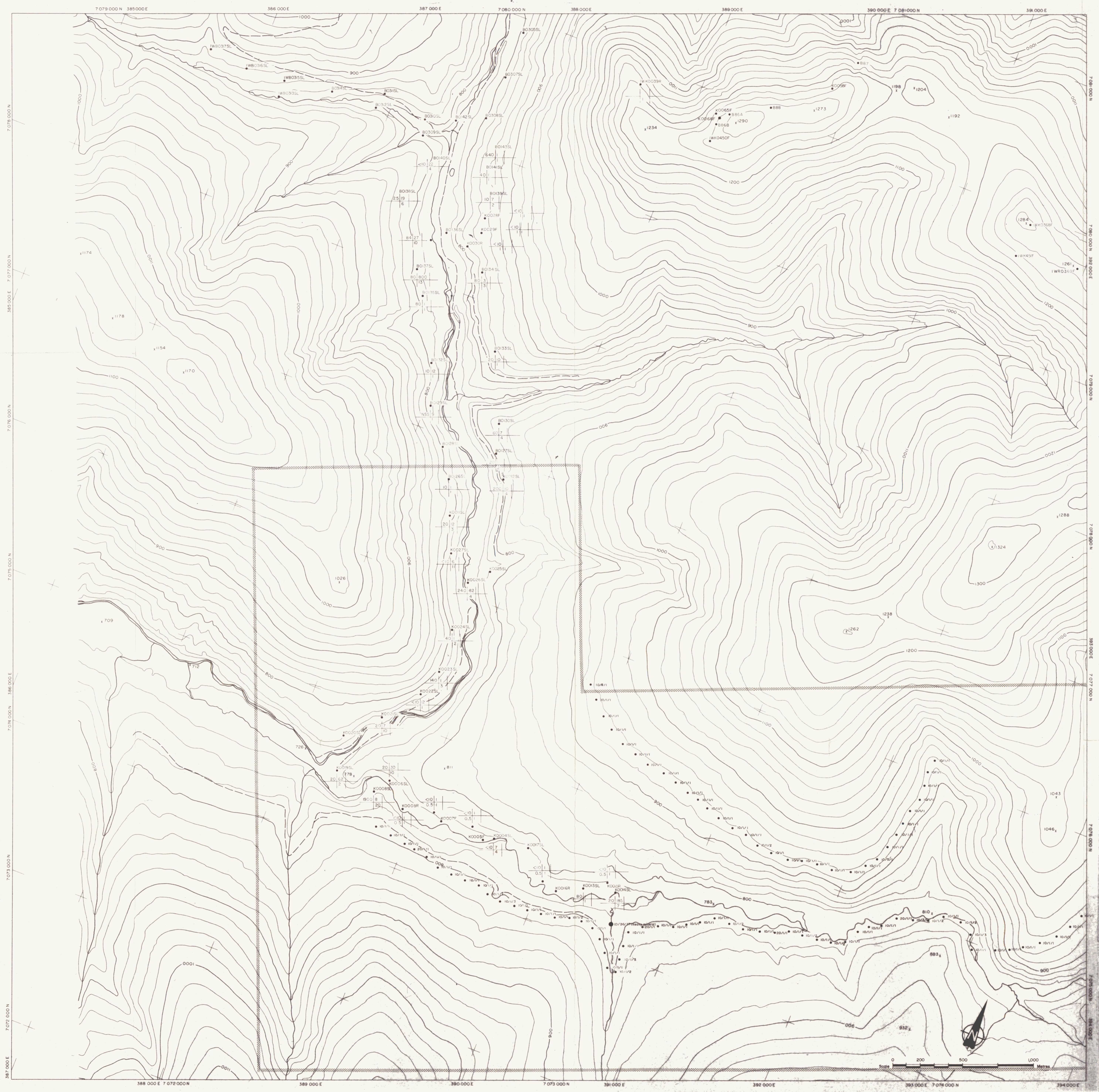
REGIONAL GEOLOGY

INDEX 3

DATE NOVEMBER, 1981 JOB NO. 82-05 FIG. NO. 3c

DRAWN BY K.K. SCALE 1:10,000 METRES

APPROVED BY BEMA INDUSTRIES LTD.



LEGEND

- | | | |
|----------|----------|----------|
| Au (ppb) | W (ppm) | Ag (ppm) |
| U (ppm) | Sn (ppm) | Pb (ppm) |
- (K0005SL) SAMPLE LOCATION
 - 1982 SOIL SAMPLE Au(ppb)/W(ppm)/Sn(ppm)

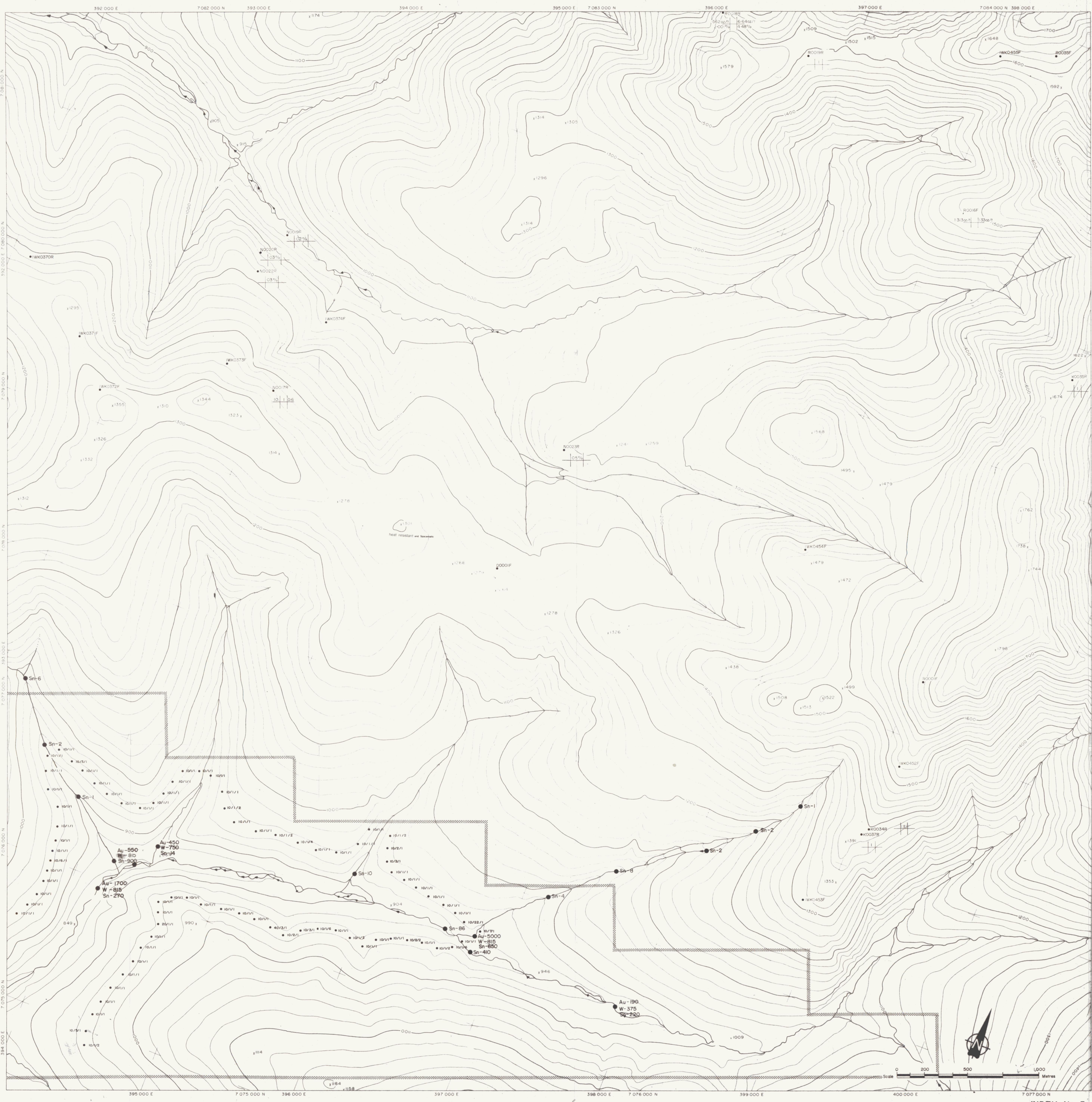
CANADA TUNGSTEN MINING CORPORATION
 WEST RIDGE Y-T
 1982 GEOLOGICAL EXPLORATION PROGRAMME

091368
 SAMPLE LOCATION

DATE NOVEMBER, 1981	JOB NO 82-05	FIG NO 4a
DRAWN BY MJU	SCALE 1:10,000	METRES
REVISED BY RR August 82		

INDEX No 4

BEMA INDUSTRIES LTD.



LEGEND

- | | | |
|----------|----------|----------|
| Au (ppb) | W (ppm) | Ag (ppm) |
| U (ppm) | Sn (ppm) | Pb (ppm) |
- (K0035R) SAMPLE LOCATION
 - (B82) SOIL SAMPLE Au(ppb)/W(ppm)/Sn(ppm)
 - (B81) HEAVY MINERAL SAMPLE Au(ppb)/W(ppm)/Sn(ppm)

CANADA TUNGSTEN MINING CORPORATION
WEST RIDGE Y.T.
 1982 GEOLOGICAL EXPLORATION PROGRAMME
 091368
SAMPLE LOCATION

DATE: NOVEMBER, 1981	JOB NO: 82-05	FIG NO: 4b
DRAWN BY: K/V	SCALE: 1/10,000	METRES
REVISED BY: RR '82		

BEMA INDUSTRIES LTD.