ALBERT RIVER TUNGSTEN

840833

REPORT ON

ALBERT RIVER TUNGSTEN PROPERTY

ALBERT RIVER 82J/12E

GOLDEN MINING DIVISION

LAT 50°38'N - LONG 115°35'W

FOR

DIA MET MINERALS LTD. KELOWNA B.C.

BY

K.E.NORTHCOTE AND ASSOCIATES LTD.

AGASSIZ B.C.

&

GOWER, THOMPSON & ASSOCIATES NEW WESTMINSTER B.C.

June 1983

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SUMMARY

The Albert River property consists of 5 claims totalling 98 units. The claims are located approximately 75 kilometres east of Radium B.C. Latitude 50°38'N Longitude 115°35'W; NTS 82J/12E in the Golden Mining District.

S.L.Blusson mapped the claims area scale 1:22,000 and provided an interpretive cross section. Blusson's mapping shows development of a spotted hornfels in Cambrian Chancellor pelitic phyllites. Across a conformable contact to the northeast are isoclinally folded Chancellor calcareous phyllite, argillaceous limestones and calcareous argillites. A large number of calcite-quartz veins occur within axial plane cleavage in this calcareous unit. This assemblage is thrust over Chancellor massive limestone and dolomite by a northeasterly directed, southwesterly dipping thrust fault.

The presence of spotted hornfels and carbonate-quartz veins is consistent with Blusson's hypothesized buried intrusive and would provide a mineralizing mechanism and ultimate source of scheelite,

Heavy media stream sediment samples anomalous in scheelite show some correlation to the area of highest concentration of carbonate-quartz veining in axial plane cleavage. However, a widespread or localized calculated metasomatism within the calcareous argillite-phyllite-argillaceous limestone unit might be an alternate suggested source of scheelite in this area.

A one stage program of detailed geologic mapping, prospecting

and heavy media stream sediment and talus geochemistry is recommended. Panned concentrates should be lamped for scheelite and analyzed for W, Mo, Pb, and (Sn). Helicopter support will be required.

The estimated cost of this proposed program is \$70,000.00

WE. NORTHCOTE

BRITISH

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ALBERT RIVER PROJECT ESTIMATED COSTS

Two teams consisting of a geologist and a prospector-sampler for a one month period with helicopter support.

Geochemical sampling, prospecting 2 men @ \$300.00/day for 30 days	\$ 9,000.00
Geologists, geological mapping, sampling 2 men @ \$500.00/day for 30 days (one supervisor)	15,000.00
Assays Heavy Media	·
(a) Panned concentrates 200 X \$12.00 W Pb Mo (Sn)	2,400.00
(b) C.F.Minerals process 50 X \$100.00	5,000.00
(c) Rock geochemistry 200 X \$12.00 W Mo Pb (Sn) Few I.C.P.	2,400.00
Helicopter support 20 hrs @ \$550/hr including fuel	11,000.00
Transportation- 2 trucks	5,000.00
Camp food and lodging 4 men 30 days @ \$50.00/day	6,000.00
Report and Engineering	5,000.00
Contingencies	9,200.00
Total stage 1	\$70,000.00

REPORT ON

GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL SURVEYS ALBERT RIVER TUNGSTEN PROPERTY

INTRODUCTION

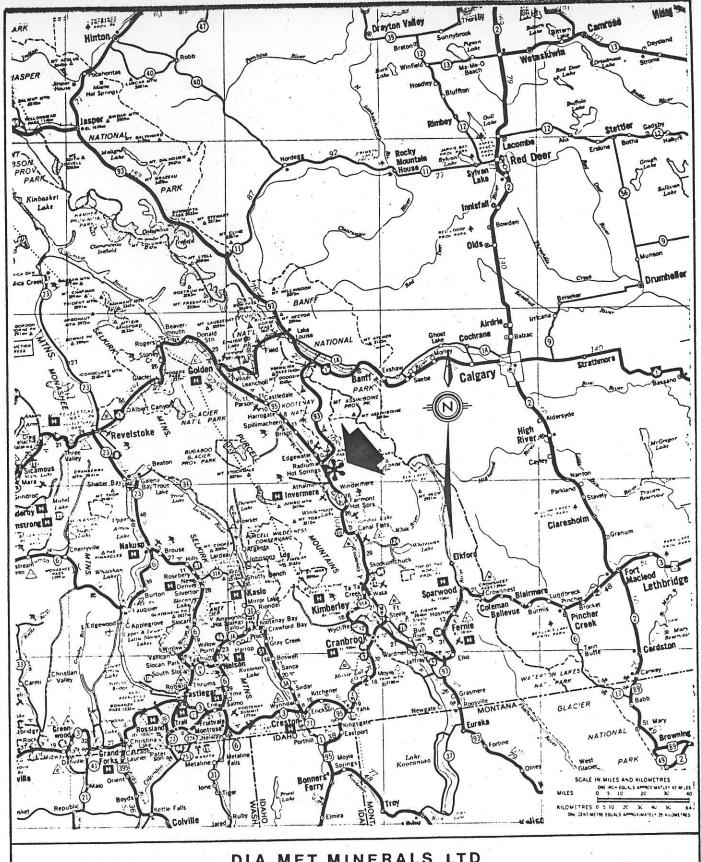
TERMS OF REFERENCE

Gower, Thompson and Associates and K.E.Northcote and Associates Ltd. were contracted by Dia Met Minerals Ltd. to examine the DINGBAT, DURB, BARBI, ASH and CHESTER claims, review and substantiate available data and prepare a geological-geochemical-geophysical report assessing these data. This work was done during the period January 15th to April 30, 1983. Gower, Thompson and Northcote spent part of one day in an attempt to examine the claims on April 3, 1983 but snow conditions prevented access. However, one stream that produced an anomalous number of scheelite grains during the initial survey by C.F.Minerals Research Ltd. was resampled in order to test this anomaly.

LOCATION, ACCESS, TOPOGRAPHY

The DINGBAT, DURB, BARBI, ASH and CHESTER claims are located Latitude 50°38'N, Longitude 115°35'W; NTS 82J/12E in the Golden Mining Division, approximately 75 kilometres east of Radium B.C. The claims lie near the west headwaters of Albert River between Tangle Peak and Albert River.

The claims are accessible by car on 40 kilometres of good logging access road leaving the east side of Sinclair Canyon Highway #93 at a point 4 kilometres north of Swede Creek. The logging road system leads southeasterly, crossing the Kootenay



DIA MET MINERALS LTD INDEX MAP ALBERT RIVER TUNGSTEN

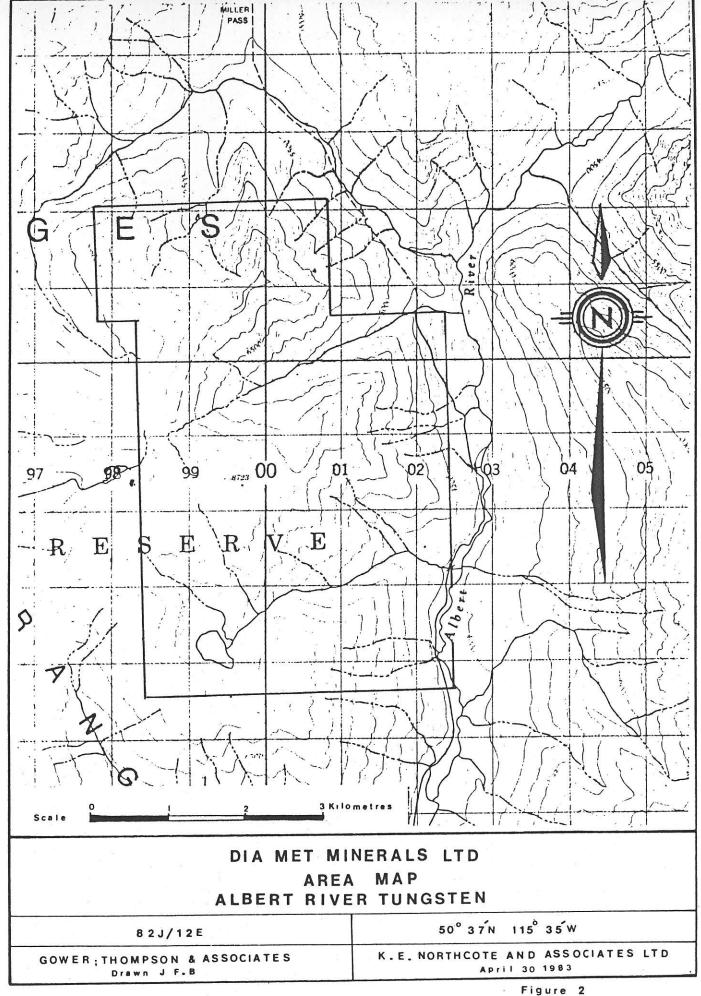
GOWER, THOMPSON & ASSOCIATES

Drawn J.F.B.

50° 37'N 115° 35'W

K.E.NORTHCOTE AND ASSOCIATES LTD

April 30 1983



River at Yearling Creek, to Palliser River, a distance of about 20 kilometres. The road leads easterly about 8 kilometres to the Albert River and then northerly along the river 12 kilometres to the Albert River tungsten property.

The east side of the claim block is on the west side of Albert River at an elevation of 1300 metres and rises steeply to the west to over 2600 metres. The central and western portions of the property are difficult to traverse because of steep topography and dense bush.

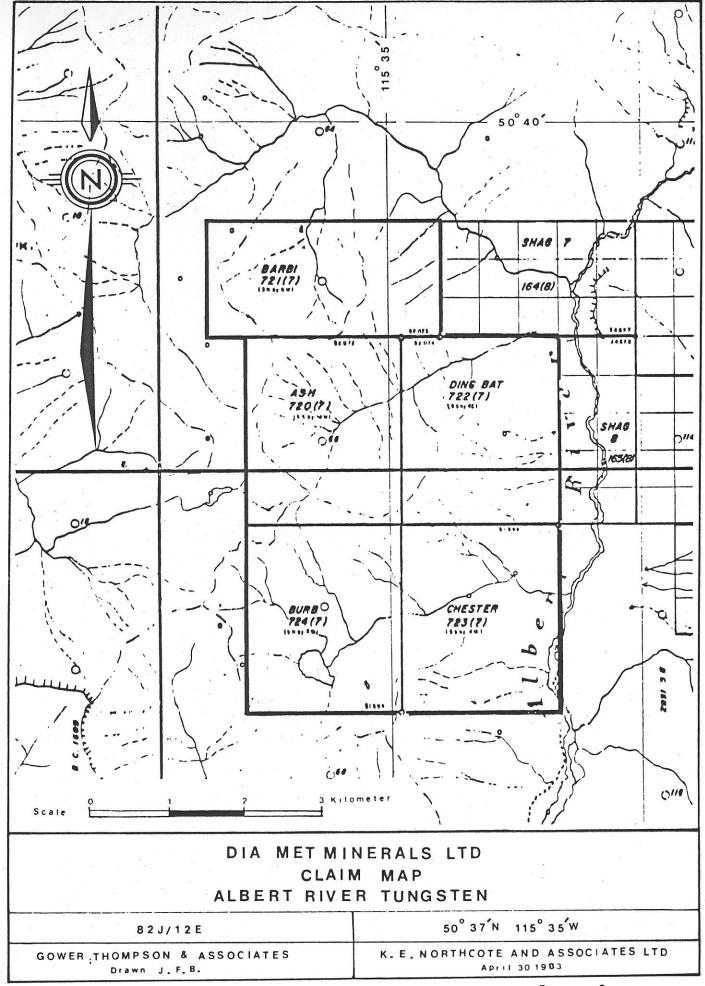
CLAIM STATUS

The Albert River tungsten property is comprised of the DINGBAT. DURB, BARBI, ASH, and CHESTER contiguous four-post mineral claims totalling 98 units. Because of snow conditions the claim posts were not examined in order to confirm accordance with the Mineral Act.

TABLE I

ALBERT RIVER TUNGSTEN PROPERTY CLAIM DATA

RECORD	EXPIRY	
DATE	DATE	
July 11/80	• 1984	
July 11/80	1984	
July 11/80	1984	
July 11/80	1984	
July 11/80	1984	
	July 11/80	



It is noted that the 6 month contestation period has lapsed for all claims. Legality of the claims is the responsibility of Dia Met Minerals Ltd.

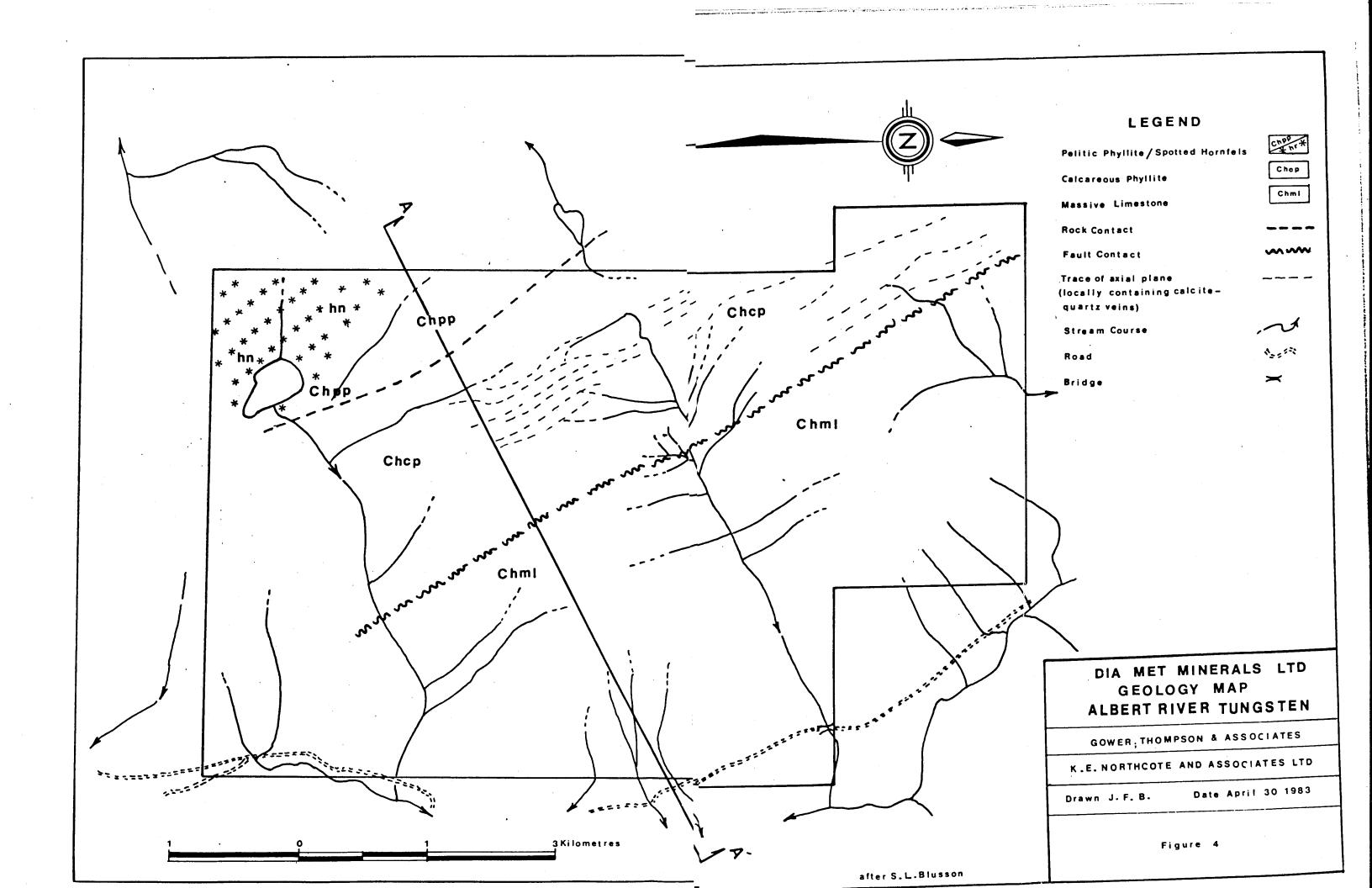
GEOLOGY

REGIONAL GEOLOGY

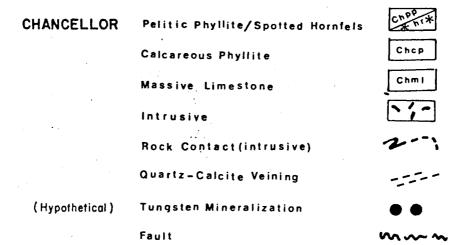
The compilation geologic map, Geological Survey of Canada Open File No 634, Kananaskis Lakes indicates the general Albert River area is underlain by Cambrian Chancellor Division "d" slate and limestone on the west in conformable contact with Division "c" isoclinally folded slate, limestone, dolomite and silty members. These rocks are shown in southwest dipping fault contact on the east with undivided Middle Cambrian carbonate within a zone of facies change.

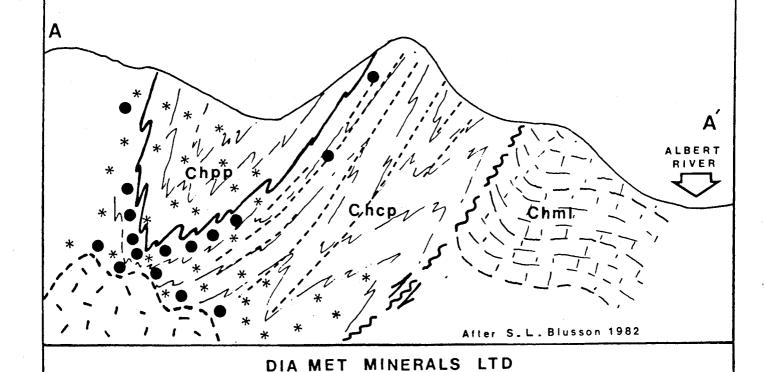
PROPERTY GEOLOGY

S.L.Blusson mapped the claims area for C.F.Minerals Research Ltd. in 1982, scale 1:22,000 and provided an interpretive section. His map and section forms Figures 4 and 5 of this report. Blusson's mapping shows development of a spotted hornfels in the southwest corner of the claim block in Chancellor pelitic phyllites. Across the conformable contact to the northeast are isoclinally folded Chancellor calcareous phyllite, argillaceous limestones and calcareous argillites in which a large number of calcite-quartz veins occur within axial plane cleavage. This assemblage is shown thrust over Chancellor massive limestone and dolomite by a northeasterly directed southwesterly dipping thrust fault. See Figures 4 and 5.



LEGEND





INTERPRETIVE SECTION A-A'
ALBERT RIVER TUNGSTEN

GOWER ; THOMPSON & ASSOCIATES

Drawn J.F.B.

K.E. NORTHCOTE AND ASSOCIATES LTD

April 30 1983

The presence of the spotted hornfels and carbonate-quartz veins are consistent with Blusson's hypothesized buried intrusive indicated in his cross section, Figure 5. The presence of the intrusive would provide a mineralizing mechanism and ultimate source of the scheelite which to the present time has been found in stream sediment concentrates and in talus.

HISTORY OF WORK

C.F.Minerals Research Ltd. has recently carried out extensive heavy mineral stream sediment and geological reconnaissance surveys in the Rocky Mountains. This has led to the discovery of a number of prospects including the Albert River tungsten property which was staked in 1980. Routine ultraviolet lamping of stream sediment concentrates showed sample E117 contained more than 300 grains of scheelite. The discovery samples were analyzed by N.A.S. Laboratory (Report 4077-B7) Sample E117 gave the highest W value of 34,000 ppm. Ninety eight claim units were staked in order to cover the area of interest.

Follow-up exploration consisted of sieving, hand panning and making scheelite grain counts with an ultraviolet lamp, of the stream sediment concentrates from drainages in the general vicinity. Anomalous concentrations of scheelite were found in concentrates from sediments of streams draining an intensely to isoclinally folded calcareous phyllite and limestone unit. The scheelite in heavy mineral stream sediment concentrates was traced to the base of ridges where outcrops of quartz carbonate veins occur infilling axial plane cleavage of isoclinal folds. However, no scheelite was discovered during intensive prospecting and "lamping" of the veins and wall rock of this area. Snowfall caused work to be terminated and no additional exploration has been carried out since that time.

GEOCHEMISTRY

The procedures for collecting, preparing concentrates and analyzing stream sediment samples is oulined in Appendix A. Consideration of these procedures and the physical factors which affect the number of grains of heavy minerals in a given sample preclude precise quantitative comparison among samples. However qualitative comparisons among samples, particularly presence or absence of specific heavy minerals is an extremely effective exploration tool and is a refinement of the procedure used by prospectors to locate gold lode by following placer gold by panning upstream until the source is located.

Standardization among samples is achieved to some degree by sieving and collecting a similar amount of sample (16 lbs ±) from each sample site. This material is treated by a patented procedure by C.F. Minerals Research Ltd. and includes panning or mechanical concentration, wet screening, heavy liquid and magnetic separations. This is followed by analysis by lamping with ultraviolet light to obtain a scheelite grain count, identification and a count of other significant minerals under binocular microscope, and/or chemical analyses of the concentrate. Some additional standardization can be achieved by examining or analyzing constant weights of concentrate.

The most significant factor of heavy mineral surveys is presence or absence of the sought for minerals in a number of samples collected from the area. Because of differences in placer effect among sample sites the relative numbers of grains among samples is of secondary importance. However gross differences in amounts, that is the presence of traces, small, moderate or large numbers of grains, is significant.

HEAVY MEDIA SURVEY

Under supervision of C.Fipke, thirty five ± 9 kg bulk samples of -20 mesh stream sediments were collected from streams draining the Albert River property.

The samples were concentrated by the method outlined in Appendix A. Counts of the number of scheelite grains were made for most of the samples under ultraviolet light. Four of the samples were sent to X-ray Assay Laboratories for chemical analyses for tungsten (W).

RESULTS

The results of the scheelite grain counts for the heavy media stream samples are listed in Table II and are illustrated on Figure 6, These results indicate anomalous tungsten values (scheelite grain counts) for the following samples:

M2, M3, M11, M12, M24, J100, J188, R388, R389. R390 and anomalous tungsten assays for

E115, E117, E118

In all, thirteen of thirty five samples are anomalous.

The "M" series of concentrates were available to Northcote for check counts and gave good agreement with dounts by C.F. Minerals Research Ltd. S.C,Gower and C. Fipke collected a check sample S.G.#6 at site Ell8. This sample was panned by Northcote and confirmed the anomalous scheelite count obtained by C.F.Minerals Research Ltd. for Ell8. S.G.#6 was then sent to C.F.Minerals for full processing.

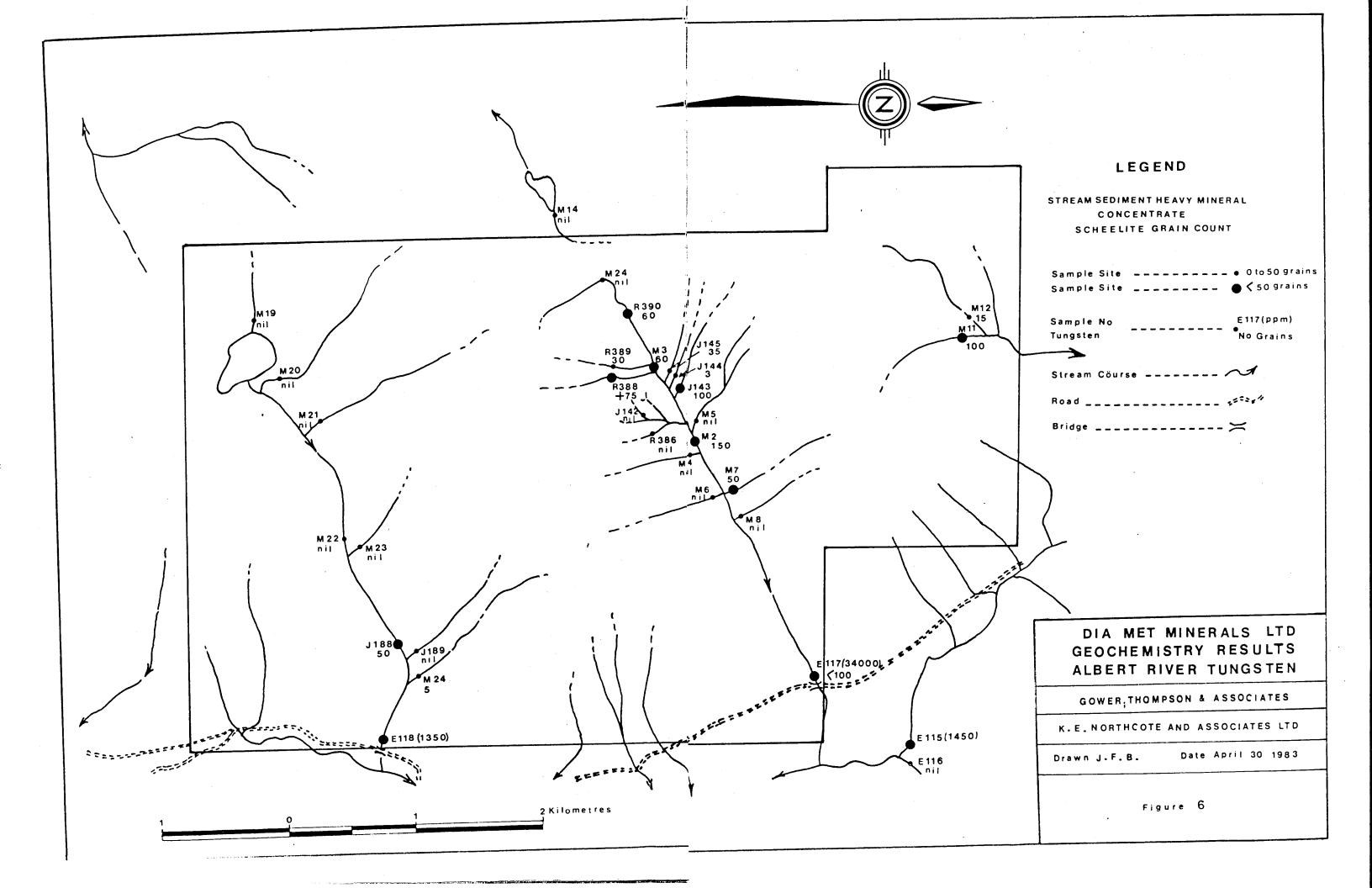


TABLE II

ALBERT RIVER TUNGSTEN PROPERTY

HEAVY MINERAL SAMPLES

SAMPLE NO	SCHEELITE	GRAIN	COUNT	X-RAY ASSAY LABORATORIES
	CFM	KEN*	KEN**	W(ppm) Mo(ppm) Ag(ppm) Pb(ppm)
M2-IHN	150	800	300	
M3-IHN	60	300	93	
M4-IHN	Ø	Ø	Ø	
M5-IHN	Ø	ø	Ø	
M6-IHN	ø	. ø	ø	
M7-IHN	50		ø	
M8-IHN	Ø	· Ø	ø	
M11-IHN	100	1400	245	
M12-IHN	15	100	102	
M14-IHN	miss			
M19-IHN	Ø	Ø	4?	
M20-IHN	Ø	Ø	Ø	
M21-IHN	·	Ø	Ø	
M22-IHN	Ø	Ø	Ø	
M23-IHN	Ø	Ø	Ø	
M24-20HN	5	70	24	
M24-20HP	5	Ø	Ø	Would not expect scheelite in magnet
M24-20HM	5	Ø	Ø	and paramagnetic fractions.
M24-B-20HN	5	Ø	Ø	
M24-B-20HP	5	ø	ø	Would not expect scheelite in magnet
M24-B-20HM	5	Ø	Ø	and paramagnetic fractions
E 115H-60HN	Digested :	for assay		1450 12 1 360
E 116H-60HN	11	11 11		1 22 NSS 1790
E 117H-60HN	11	11 11		34000 8 1 4320
E 118	**	11 11		1350
J 142	?			
J 143	100			
J 144	3			
J 145	?			
J 188	50			
J 189	ø			
R 386	Ø			
R 388	+75			
R 389	+30			
R 390	+60			
SG6(=E118)	+300	200		

Note--Sample SG6 was collected by Gower at sample site Ell8 in attempt to duplicate anomalous scheelite grain count

^{*} Total amount of concentrate available

^{**} Standard weight among samples

Lead values are anomalous for samples El16 and El17. Only three samples appear to have been analyzed for lead.

GEOPHYSICAL SURVEYS

Aerodat flew a total field magnetic survey of the Albert River property in August 1981. A Sonotek proton precession magnetometer with a Varian toroidal sensor was used to measure the magnetic field. The instrument was operated at a 1 second sample rate with a sensitivity of 0.1 gamma. A base station with 1.0 gamma sensitivity was operated in analog mode to monitor diurnal activity. A Sonotek D S 1200 digital data system was used to record the aeromagnetic data. The sensor was maintained as closely as possible to 200 feet above terrain by use of a Hoffman radar altimeter

RESULTS

The anticipated contour interval for the magnetic map was 10 gammas. However as compilation progressed the subtlety of variation required higher resolution.

No marked anomalous area were evident as a result of this survey.

CONCLUSIONS

Anomalous scheelite (tungsten) values were obtained from heavy media samples from a number of streams and tributaries within the Albert River property. There is some correlation between anomalous tungsten values and the area of highest concentration of axial plane cleavage locally containing calcite-quartz veins. However, it is also noted that sampling density of streams is insufficient to eliminate other possible sources of scheelite mineralization. Follow-up investigation by lamping and sampling the quartz-calcite veins to date has not produced positive results which is additional reason to consider other possible sources. Widespread or localized calculated metasomatism within calcareous phyllite or massive carbonate might be an alternate source of tungsten mineralization. Glacial drift seems less likely to be a source of scheelite in this area because if that were the case distribution of anomalous heavy media stream samples would be expected to be more uniform.

RECOMMENDATIONS

Fill-in heavy media stream sediment and talus sampling with concentration of samples by panning should be carried out to give full coverage of claims and adjacent area. Scheelite and calculate minerals and sulphides in concentrates should be noted. Anomalous results should be followed-up by additional panning, prospecting-lamping and detailed geological mapping. Concentrates from all samples should be assayed for W, Mo, Pb and (Sn) including a few I.C.P. analyses.

Geological mapping on a detailed scale, say 1:5000, is required to accurately locate scheelite-bearing quartz-carbonate veins and widespread or localized calculate horizons resulting from metasomatism of calcareous argillite-phyllite and massive carbonate. These features would require sampling and testing by ultraviolet lamp and assay. There should be close liason between prospector-samplers and geologists, possibly working as teams.

A one month program is recommended with helicopter support

E. NORTHCOTI

BRITISH

CERTIFICATE

- I, STEPHEN C. GOWER, of 985 Gatensbury Street, Coquitlam,
- B. C. V3J 5J6, do hereby certify that:
- I have been practising as a professional geologist for a period of approximately 14 years for mining and consulting companies.
- 2. I obtained a Bachelor of Science Degree in Geology from the University of British Columbia in 1970 and am a member of various professional associations.
- 3. Part of one day, April 3, 1983, was spent examining the Albert River property in company with C. Fipke and K. E. Northcote. Snow conditions prevented satisfactory access, although a heavy media stream sediment sample was collected to confirm earlier anomalous results. This report is based on data provided by Dia Met Minerals Ltd.
- 4. I have no interest either directly or indirectly in the properties or securities of Dia Met Minerals Ltd., nor do I expect to receive any.
- 5. I consent to use of this report in or in connection with a prospectus relating to the raising of funds.

Stephen C. Gower

July 28 1983

CERTIFICATE

- I, Kenneth E. Northcote of 2346 Ashton Road, R.R.#1, Agassiz B.C. do hereby certify that:
- 1] I have been practising as a professional geologist for a period of approximately 25 years for petroleum exploration companies, mining exploration and consulting companies, federal and provincial agencies.
- 2] I obtained a Ph.D in geology from U.B.C. in 1968 and qualified for registration with the Association of Professional Engineers of B.C. in 1967.
- 3] Part of one day, April 3, 1983, was spent examing the Albert River property in company with S.C.Gower and C.Fipke. Snow conditions prevented satisfactory access although a heavy media stream sediment sample was collected to confirm earlier anomalous results. Some insight was gained for regional geology and logistics. This report is based on data provided by Dia Met Minerals Ltd. and from government reports and publications.
- 4] I have no interest either directly or indirectly in the properties or securities of Dia Met Minerals Ltd. nor do I expect to receive any.
- 5] I consent to use of this report in, or in connection with, a prospectus relating to the raising of funds.

Dated at Agassiz B.C. this /b day of June 1983.

K.E. NORTHCOTE

BRITISH

VGINEE

REFERENCES

GSC O.F. # 634 Kananaskis Lakes

Data suppied by Dia Met Minerals Ltd.

APPENDIX A

PROCEDURE FOR COLLECTING

AND ANALYZING STREAM SEDIMENT CONCENTRATES

FOR HEAVY MINERALS

HEAVY MEDIA STREAM SEDIMENT METHODOLOGY

About 9 kg of -20 mesh stream sediment samples are collected from placer favourable sites from streams draining the claim group. The bulk samples are transported to C.F.Minerals Research Laboratory in Kelowna B.C. where they are wet sieved, washed and jigged into -20 +35, -35 +80 and -80 mesh rough concentrates. Up to 1000 grams of -20 +35, 1200 gms of -35 +80 and all of -80 mesh rough concentrates are then treated by tetrabromoethane and dilute methyline iodide heavy liquids to produce specific gravity fractions intermediate to tetrabromoethane (S.G. 2.96) and methyline iodide (S.G. 3.3)

The intermediate specific gravity fraction (2.96 to 3.3) is subjected to three electromagnetic separations so that concentrates can be produced which contain light jarositic limonites which are limonitic supergene products after ore minerals intermixed with the sediments.

The heavy fraction from methyline iodide is similarly treated by magnetic separation to produce heavy magnetic, paramagnetic and nonmagnetic fractions of primary ore minerals.

APPENDIX B

DOCUMENTATION

	MINERAL AC	T - PROVINCE		COLUMBIA	
		Record of Mine			
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