This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $ 8436.00

Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

~~Commissioner of Yukon Territory~~
ADMINISTRATOR OF THE YUKON TERRITORY

A

GEOLOGICAL REPORT

ON

MOD 7, 9-14 (inclusive), 25-32 (inclusive), BON 15

MINERAL CLAIMS

SHEET 116-J-5

16 MILES SOUTHWEST OF BEAR CAVE MOUNTAIN

N66°20', W139°45'

DAWSON MINING DIVISION, Y.T.

by

H.R. BULLIS

May 15-August 31, 1974

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Introduction and Summary

The Mod 7, 9-14 (inclusive), 25-32 (inclusive), Bon 15 mineral claims were staked in September, 1973 under the supervision of L.W. Saleken of Brascan Resources Limited. The decision to stake was made after the discovery by Mr. Saleken and others of strata-bound zinc mineralization in the area.

During the following winter plans were made to further explore the claims and the setting up of a geological reconnaissance programme was begun. Brascan personnel carried out prospecting, geological mapping and a claim survey of the above claims during May, June, July and August of 1974.

Through prospecting and geological mapping it was discovered that the rock formations hosting zinc mineralization dip beneath the claim group. Therefore, it is recommended that Brascan retain title to the mineral claims and that application for assessment credits be made accordingly.

An application to group the above claim block will be filed in September with the Mining Recorder in Dawson City, Y.T.

Cont/d.

Ownership

The Mod 7, 9-14 (inclusive), 25-32 (inclusive), Bon 15 mineral claims were staked in September, 1973 as full-size mineral claims as described by the Yukon Quartz Mining Act and were recorded in Dawson City, Yukon Territory on September 18 and October 2, 1973 with the following record numbers.

Claim	Record Number	Date Recorded
Mod 7	Y81930	September 18, 1973
Mod 9	32	September 18, 1973
Mod 10	33	September 18, 1973
Mod 11	34	September 18, 1973
Mod 12	35	September 18, 1973
Mod 13	36	September 18, 1973
Mod 14	37	September 18, 1973
Mod 25	48	September 18, 1973
Mod 26	49	September 18, 1973
Mod 27	50	September 18, 1973
Mod 28	51	September 18, 1973
Mod 29	52	September 18, 1973
Mod 30	53	September 18, 1973
Mod 31	54	September 18, 1973
Mod 32	55	September 18, 1973
Bon 15	Y82200	October 2, 1973

Brascan Resources Limited has one hundred percent ownership of the above mineral claims.

Application to group the above mineral claims will be filed in September with the Mining Recorder in Dawson City, Y.T.

Cont/d.

Location and Access

The Mod 7, 9-14 (inclusive), 25-32 (inclusive), Bon 15 mineral claims lie approximately sixteen miles southwest of Bear Cave Mountain and are located on the N.T.S. sheet 116-J-5.

Approximately 170 air-miles north of Dawson, the claims are accessible during the summer months only by helicopter. Winter roads provide access when rivers are frozen and the ground becomes solid enough to support wheeled or tracked vehicles. The Dempster Highway, an all-weather gravel road, provides year-round access for vehicles to within seventy miles of the claims. A number of airstrips are located along the Dempster and provide staging points for material being air-lifted into the property.

An all-weather airstrip, the Mallard, lies about 50 miles to the south of the claims and provides access for light aircraft. From there it is necessary to use a helicopter to reach the claim group.

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Geography

Relief in the claims area is moderate. Valley floors are generally 1,500 feet A.S.L. and the mountain ridges seldom are higher than 4,000 feet A.S.L. The mountains have low, gentle profiles and are seldom peaked. Absence of glaciation and severe frost-heaving resulting from active perma-frost have combined to produce mountains resembling piles of rubble.

The claims lie within ten miles of the Arctic Circle and the vegetation varies from sub-Arctic to cold-temperate. The ridges above 3,000 feet have very little growth other than moss, lichen and alpine flowers. The valleys, on the other hand, are filled with spruce, tamarack, alder and a wide variety of small broad-leaf plants. The growing season is short - from the first of June through to mid-August - and the growth-rate is very slow.

Cont/d.

Geology

Regional

A series of sedimentary rocks ranging in age from Silurian to Devonian are exposed in sections on three over-thrust plates the major and western-most of which is the North Dewdney Thrust. The thrust-faults strike approximately north-west. The strike of the bedding planes of the sediments corresponds to that of the thrusts and the dip of the beds is generally to the east.

The local thrust-faults appear to terminate in a broad anticline to the south of the claim block. Further to the east the sediments form a shallow syncline the eastern edge of which is terminated by the Fishing Branch River Valley. This valley seems to be controlled by older faulting and thrusting striking toward the south-east.

The rocks from the Silurian to Devonian are a series of limestones, cherty limestones, shaley limestones and dolomites. The boundary between the Silurian and Devonian is difficult to determine because dolomitization has taken place in most rocks and has destroyed minor distinguishing characteristics. However, it is felt that a series of dolomites containing masses of black, nodular chert belong in the Silurian age and, for the purposes of this report, shall be considered the boundary between Silurian and Devonian.

The upper-most rocks that are seen in the Devonian are massive limestones composed of up to sixty per cent crinoidal debris. These rocks are resistant, dark-gray cliff-formers. Below the crinoidal limestones

are a recessive series of bedded shaley to sandy limestones with the occasional bed containing reefal debris and ostracode fossils. Next in the sequence come massive light-to dark-gray aphanitic limestones containing gastropod and coral fossils. These limestones are also cliff-formers. Below these cliffs are a series of undifferentiated light-to dark-gray, fine-to coarsely-crystalline dolomites that carry on down-section to the Silurian cherty dolomites.

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Local Geology

The claims are underlain by a northwesterly striking, easterly dipping series of limestones and dolomites. A thrust fault, striking nearly parallel to the bedding, is noted in the eastern edge of the claim group.

At the top of the carbonate section is the crinoidal limestone unit which is underlain by the shaley limestone unit and the aphanitic gray limestone unit. Beneath the gray limestone unit are a series of undifferentiated dolomites which are the host rocks for mineralization in the area. At the bottom of the section are dolomites containing massive black chert nodules. These rocks, probably of Silurian age, can be found to the west of the claim group.

The thrust separates two fault blocks both of which show relative movement from east to west. The eastern block has been pushed over the western block although the bedding in both blocks have similar strikes and dips. The thrust fault forms a topographical low that can be traced out for several miles.

Outcrop on the claim group is minimal and restricted to ridges and deep gulleys. Outcrop is also restricted to rock that is resistant to weathering i.e. primarily the crinoidal limestone unit and the aphanitic gray limestone unit. The dolomites which, in places, contain sulphide mineralization, are recessive and outcrops of this unit are rarely found. Zinc and iron

Cont/d.

sulphides are found in talus in two places on the claims. While not significant in itself, this mineralization is on-strike from the more important showings further to the south. The showings on the Mod group are in the same dolomite unit that hosts replacement-type sulphide mineralization to the south.

Cont/d.

Mineralization

The sphalerite-smithsonite-pyrite showings occur along the strike length of the limestone-dolomite contact for over two miles but appear to be "poddy" and discontinuous.

Four distinct modes of mineralization are found in the area: breccia, fracture-filling, vug-filling and replacement. The description of each mode is as follows:

1. Breccia - sulphide mineralization is found along shear planes and within the matrix of fault (?) breccias containing angular fragments of various sizes. In most cases these breccias have within them coarse crystals of remobilized calcite.

   Generally the mineralization associated with breccias is very low grade (0.5%) and has about a 1:1 ratio of sphalerite:pyrite.

2. Fracture-filling - in dolomites that are not intensely sheared (as in faults) but rather are "crackled" the sulphides occur along the fracture planes. As in the breccia-type fracture-filling produces mineralization of a low grade.

3. Vug-filling - sulphides have filled interstitial cavities in the dolomites. Mineralization is intimately associated with the development of sparry white dolomite.

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4. Replacement - sulphides, as well as filling interstitial cavities, have replaced the host dolomite. Where this type of mineralization has taken place the host rock may be replaced by up to 50% sulphides.

It should be noted that although iron pyrite is present in the rock no gossans form. Iron oxides are not mobile in basic environments and, as a result, limonite and goethite form from the pyrite in situ. As an example, specimens were found of goethite in crystals pseudomorphous after pyrite cubes and pyritohedrons.

Cont/d.

Conclusions and Recommendations

Although the mineralization in this claim group appears to be uneconomic, the showings constitute an extension along strike of more promising mineralization to the south. Until the commercial viability of the mineralization on Brascan's claims to the south has been proven or disproven the group should be retained by Brascan Resources.

It is therefore recommended that assessment work on Mod 7, 9-14 (inclusive), 25-32 (inclusive), Bon 15 mineral claims be filed with the Mining Recorder in Dawson City and that Brascan Resources retain these claims.

Respectfully submitted,

H.R. BULLIS

CERTIFICATION OF REPORT

I hereby certify that the work described in this report was carried out under my supervision.

F.B. WHITING

Member: Assoc. of Prof. Engineers (Yukon)

Member: Assoc. of Prof. Engineers (B.C.)

Work done on the claim group

A survey of the claims using the chain and compass method was carried out and the map produced from this survey was used as a base map for the geological mapping.

During the time work was being done on the claim group a camp established on a seismic road near Fishing Branch Creek served as a work base. From this camp, a Bell 47GB2 helicopter was used to place personnel on traverse.

Personnel involved in work on the claim group are as follows:

R. Bullis
G. McArthur
M. McArthur
A. Cook
T. Hubl

C/O Brascan Resources Limited
502 - 1155 West Pender Street
Vancouver, B.C. V6E 2P4

The helicopter was chartered from Trans North Turbo Air out of Whitehorse, Y.T.

The expenses on assessment of the claim group are as follows:

Consulting fees	$ 368.00
Charter flying	4,722.00
Salaries	1,824.00
Fuel	592.00
Truck rental and gasoline	160.00
Incidental expenses	320.00
Report and drafting	400.00
Total expended	$8,436.00

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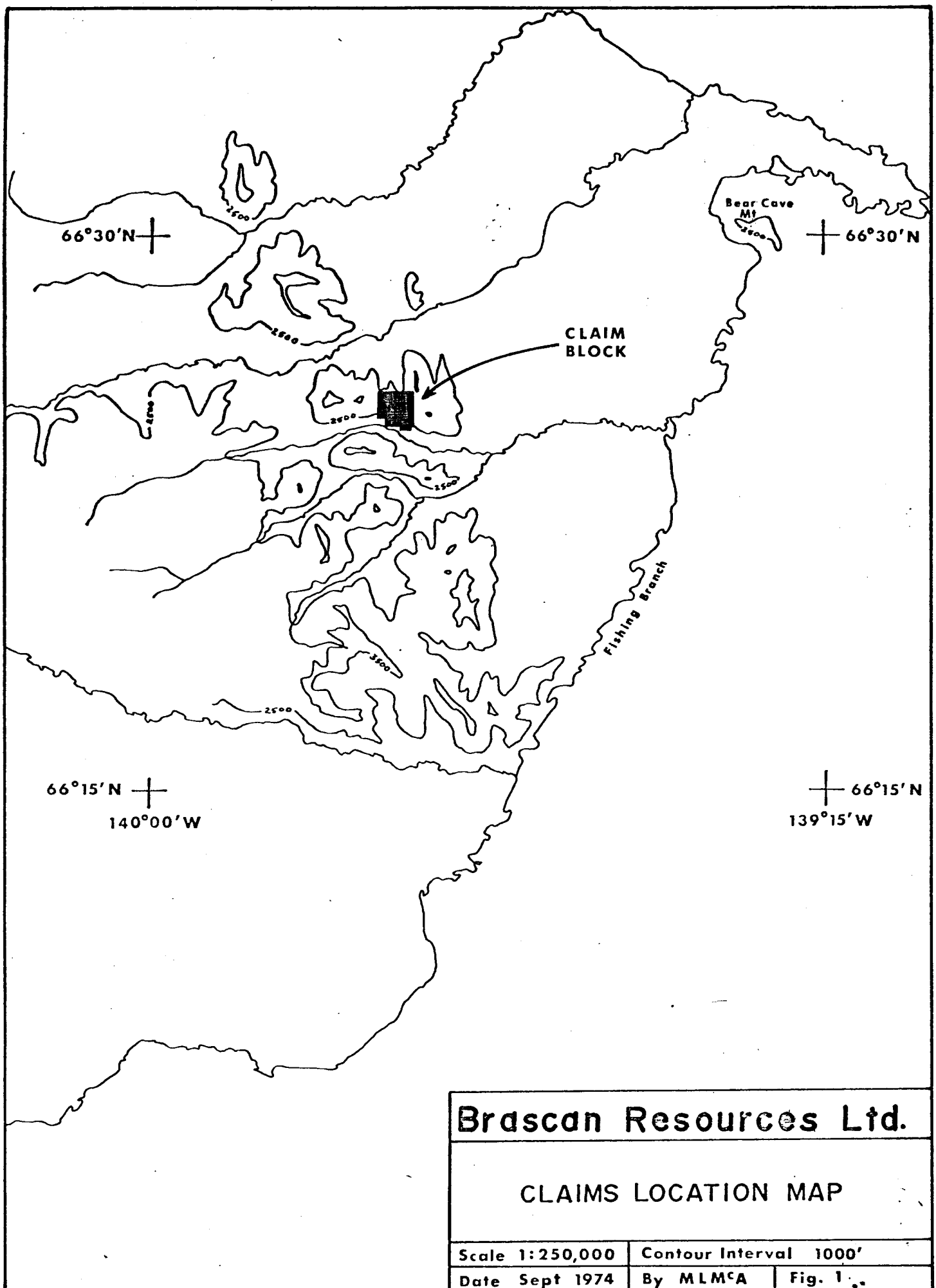
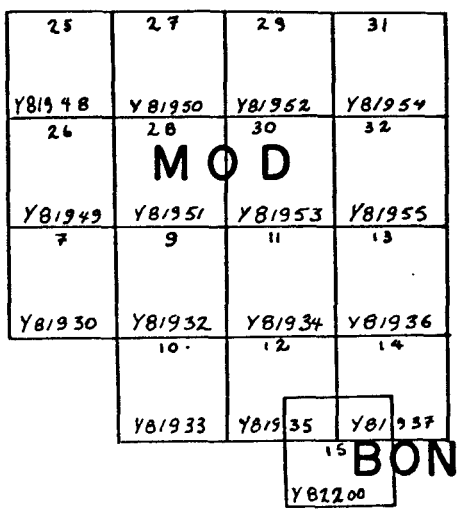


Brascan Resources Ltd.

CLAIMS LOCATION MAP

Scale 1:250,000	Contour Interval 1000'	
Date Sept 1974	By MLMcA	Fig. 1



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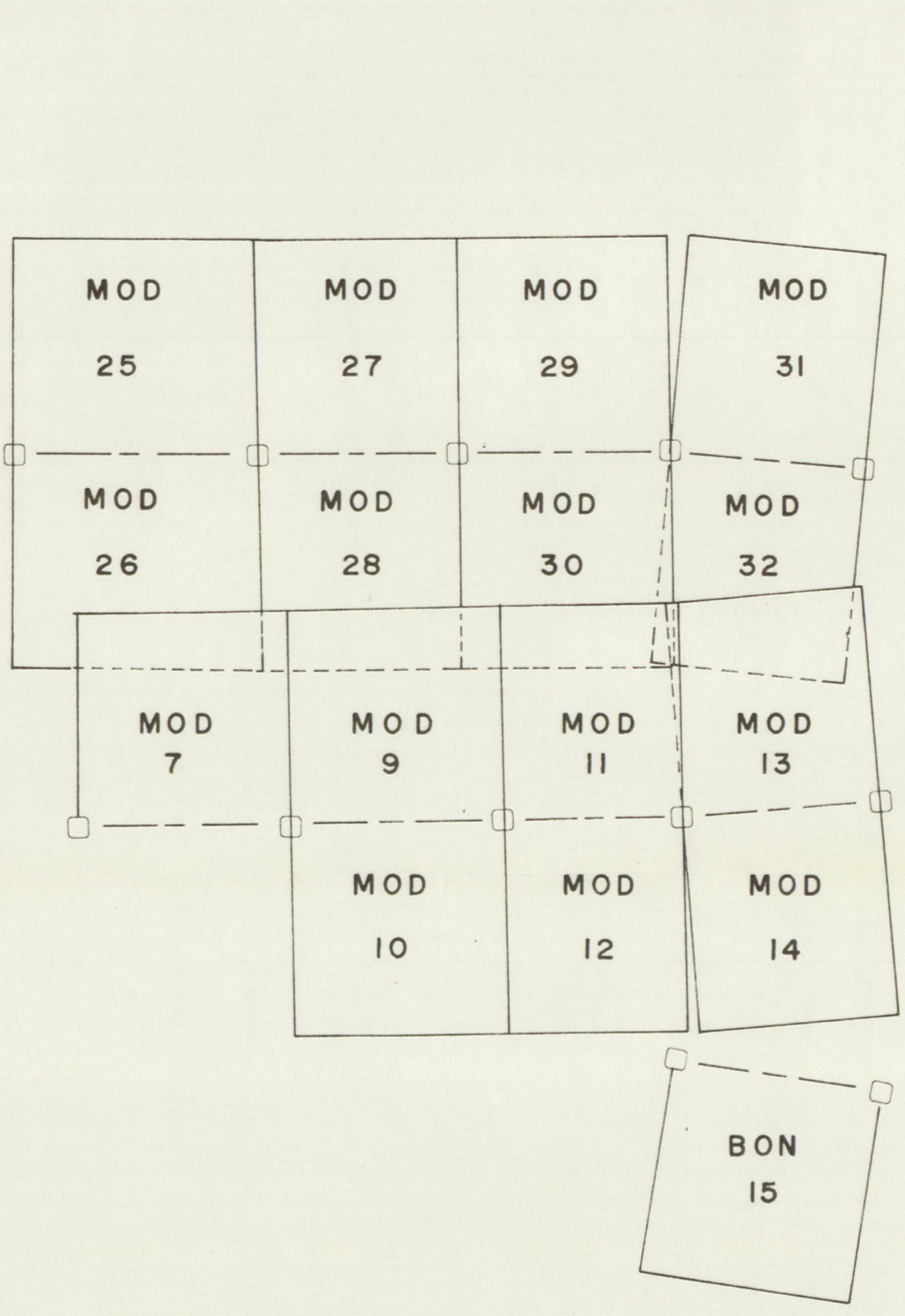
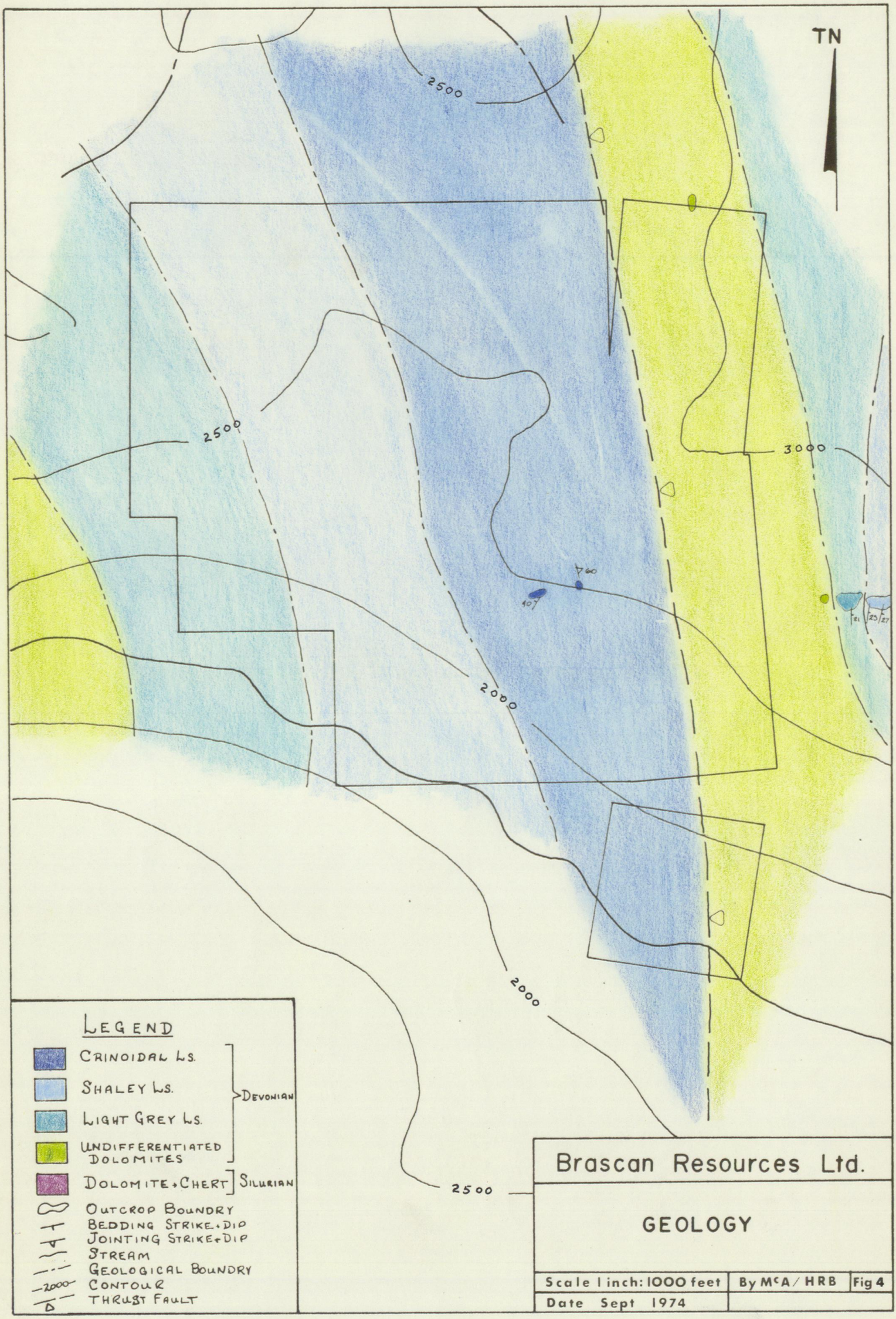
Brascan Resources Ltd.	
CLAIM GROUP (from Dept. of Mines Sheet 116J-5)	
Scale 1 inch: ½ mile	By McA
Date Sept 1974	Fig. 2



Brascan Resources Ltd.

CLAIM SURVEY

Scale 1 inch: 1000 feet	By AGC	Fig3
Date Sept 1974		


TN
2500
2500
3000
2000
2000
2500
760
407
LEGEND
CRINOIDAL LS.
SHALEY LS.
LIGHT GREY LS.
UNDIFFERENTIATED DOLOMITES
DEVONIAN
DOLOMITE + CHERT
SILURIAN
OUTCROP BOUNDRY
BEDDING STRIKE + DIP
JOINTING STRIKE + DIP
STREAM
GEOLOGICAL BOUNDRY
2000
CONTOUR
THRUST FAULT
D
Brascan Resources Ltd.
GEOLOGY
Scale 1 inch: 1000 feet
By McA / HRB
Fig 4
Date Sept 1974