

PRODUCT BARIITE  
PRODUIT

PROVINCE OR PROVINCE OU  
TERRITORY TERRITOIRE

British Columbia

N.T.S. AREA 104 P/3  
RÉGION DU S.N.R.C.

REF. BA 2  
RÉF.

NAME OF PROPERTY  
NOM DE LA PROPRIÉTÉ

ATAN

OBJECT LOCATED- Anomaly 3, on Ski 3 claim.  
OBJET LOCALISÉ

UNCERTAINTY 300 m  
FACTEUR D'INCERTITUDE

Lat. 59°12'00"  
Lat.

Long. 129°12'10"  
Long.

Mining Division Liard  
Division minière

District  
District

Cassiar

County  
Comté

Township or Parish  
Canton ou paroisse

Lot  
Lot

Concession or Range  
Concession ou rang

Sec  
Sect.

Tp.  
Ct.

R.  
R.

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

The claims are underlain by Lower Cambrian carbonates and interbedded siltstones of the Atan group. The mineralization is associated with a limestone-dolomite horizon about 400 feet wide that trends northwesterly through the claims for  $1\frac{3}{4}$  miles. The strike of the bedding varies from 300 to 315 degrees (azimuth) and dips vary between 45 and 60 degrees southwest. Faulting is common and predominantly southwesterly directed. It dissects the sedimentary sequence into a number of blocks, in some cases with considerable strike separation. Mineralization is exposed in 4 main areas along the limestone-dolomite horizon; three of these are on the Atan group and the other on the Bill group, which covers the westerly end of the horizon. Several lenses within the horizon contain abundant barite, and knots and clusters of medium to coarse-grained galena. Trace amounts of chalcopyrite, tetrahedrite, and chalcocite occur in shears and brecciated zones, and is sometimes associated with the barite and galena. The presence of stratiform sedimentary sphalerite was discovered during 1973 drilling.

Associated minerals or products - Silver, lead, zinc, copper.  
Minéraux ou produits associés

HISTORY OF EXPLORATION AND DEVELOPMENT  
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

The property is located at Atan Lake, just northeast of the junction of McDame Creek and the Dease River, some 24 miles east-southeast of Cassiar.

The first recorded observation of the Atan Lake occurrence was by G.M. Dawson in 1887. He reported an "argentiferous lead occurrence, situated a mile down river from McDame Post".

The Atan, Ski, Adair, August, and Wolf groups, comprising 46 full and fractional claims, adjoining the Bill group (104 P/3, BA 1) and surrounding Atan lake, were staked in 1967 for Tournigan Mining Explorations Ltd. An airborne electromagnetic survey was carried out. In 1968 geological mapping, induced polarization, gravity test, and geochemical soil surveys were carried out. The induced polarization survey outlined 3 strong chargeability anomalies. During 1969 the No. 1 anomaly, located south of Atan Lake, was tested by 3 diamond drill holes; minor barite, pyrite, and magnesite was encountered. The No. 3 anomaly, located between Atan Lake and the Bill group, was trenched by bulldozer. Lenses and pods of massive barite, knots of galena, scattered chalcopyrite and fine grained tetrahedrite were exposed by this work. Trenching on No. 2 anomaly, north of Atan Lake, failed to reach bedrock. Diamond drilling for the year totalled 1,375 feet in 4 holes.

New Jersey Zinc Exploration Company (Canada) Ltd. in 1970 optioned the Tournigan property and carried out a gravity survey over part of the claims. The results showed a residual gravity peak of 2.17 milligals coinciding with No. 3 anomaly. H.E. Swanson (Geophysicist with New Jersey Zinc) estimated 4.5 million tons of excess mass in anomaly No. 3 area, assuming there is no overburden correction (that is, the overburden is only a few feet thick throughout (Cochrane, D.R. 20/07/71 - in Tournigan Mining, Prospectus, 21/10/71). New Jersey Zinc subsequently dropped the option.

Work by Tournigan during 1971-72 included geological mapping and trenching, mainly on the No. 3 anomaly. British Newfoundland Exploration Limited optioned the property in 1973. Work during the year included 22 line-miles of gravity survey covering all claims, and about 2,000 feet of surface diamond drilling in 8 holes. Three of the drill holes cut several bands of 0.3% to 17.0% stratiform sedimentary sphalerite. The option expired in 1974.

see Card 2 ....  
Mineral Policy Sector, Department of Energy, Mines and Resources, Ottawa  
Secteur de la politique minière, ministère de l'Énergie, des Mines et des Ressources, Ottawa  
120125

Reports of Minister of Mines, British Columbia:  
1967, p. 26; 1968, p. 35.

Geology, Exploration, and Mining; British Columbia Dept.  
of Mines: 1969, p. 43; 1970, p. 37; 1971, p. 56;  
1972, p. 561; 1973, p. 540; 1976, p. E 196; 1977,  
p. E 244; 1978, p. E 276.

+Cochrane, D.R.; Intermediate Economic Geology Report on  
the Atan Lake Property, July 20, 1971 - in Tournigan  
Mining Expls, Prospectus, Oct. 21, 1971.

Minerals Sector; Corporation Files: "Tournigan Mining  
Explorations Ltd.".

## MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

Map 1110 A, McDame, (Geol.), Sc. 1":4 miles - accomp. Memoir  
319, Geol. Surv. of Canada, 1963.

#Atan Lake Property, (Geol.), Sc. 1": $\frac{1}{2}$  mile (approx.), Fig. 3,  
accomp. Report by Cochrane, 1971; also Fig. 2, (claim  
map).

\*Map 103 P/3, McDame, (Topo.), Sc. 1:50,000.

## REMARKS/REMARQUES

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|---------------------------------|-------|--|--|--|--|--|--|
| Comp./Rev. By<br>Comp./rév. par | DMacR |  |  |  |  |  |  |
| Date<br>Date                    | 09-80 |  |  |  |  |  |  |

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HISTORY OF EXPLORATION AND DEVELOPMENT (continued)  
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

Imperial Oil Limited held an option on the property during 1976. Diamond drilling was done in 2 holes totalling 295 metres on Atan 3 & 4. During 1977 Tournigan carried out 305 metres of drilling in 5 holes on anomaly No. 3. Amoco Canada Petroleum Company Ltd. during 1978 carried out a geochemical soil survey (about 350 samples), and 465 metres of diamond drilling in 5 holes on anomaly No. 1, on Atan 1 claim.