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# TOURNIGAN MINING EXPLORATIONS LTD.

## INFORMATION BULLETIN

COMMON STOCK LISTED

VANCOUVER STOCK EXCHANGE

NASDAQ

(TGN)

(TGNXF)

## **Introduction**

Tournigan Mining Explorations Ltd. is a precious and base metals exploration company managed by geologists and professional engineers. Since its inception in 1966, Tournigan has located, through geological research, a number of high-potential properties in Western Canada, and subsequent data has confirmed concentrations of precious and associated base metal mineralization. At the time of this writing, Tournigan either owns outright, has options on, or has issued options on, some 544 mining claims.

Tournigan's special talent lies in locating and in acquiring packages of property in a prospective area, following up with extensive geological and analytical work indicating the potential size and grade of the ore body, consolidating the fractured claims into massive, economically practicable sites suitable for open pit mining, and then joining forces with a major mine-operating company for the costly final stages leading to and including production.

In December, 1978, Tournigan's efforts culminated in its first major joint venture. Western Mines Limited, a 51%-owned subsidiary of Brascan, took an option to earn a 70% interest in one of Tournigan's large gold-silver properties, the Big Missouri. The agreement also gives Western an option on 700,000 shares of common stock in Tournigan. (Details follow below.) The terms of this agreement and the size and reputation of Tournigan's partner in this venture validate Tournigan's method of operation and exemplify its access to prospective partners in future ventures.

After these properties are acquired and consolidated, the Company carries out a program of sophisticated evaluation including geophysical and geochemical surveys, and geological mapping. Then, extensive exploration and appraisals are conducted by staff geologists and engineers, and further evaluation is done through surface and underground sampling and diamond core drilling. Finally, the results are tabulated, the potential grade and tonnage are assessed, and a continuing program is developed with the financial aid of the major partner.

Since dozens of small claim owners are sometimes involved in such an operation, the physical dynamics of location, acquisition and appraisal of properties are time-consuming and costly, although they are essential for economic development of a new mine by a larger company. However, Tournigan has, over the years, originated a procedure quite remarkable in its industry. In the case of the Big Missouri Mine, Tournigan packaged a site consisting of 142 claims covering some 6.5 miles in length and 1.5 miles in width. A typical mineral claim in British Columbia measures 500 × 500 meters (61.78 acres) or 25 hectares (1 acre = 0.4 hectares). Because of the size and cohesiveness of this property, the amount of gold, silver, and base metal at this location, it then made economic sense for a large company such as Western to commit its capital and personnel to the continuing development of this mine.

Tournigan has completed the acquisition and consolidation of several other projects of size, and is simultaneously working on new areas of development. This means that Tournigan, while negotiating with potential partners on accumulated properties, is also expanding its inventory of other prospects for future development.

Most of Tournigan's major properties are located near Stewart, in west-central British Columbia. The Stewart area is considered a major gold-silver "camp" in Canada, and was first prospected in the early 1900's. The area has yielded some of the richest profits in Canadian history. Tournigan's personnel have spent many years conducting geological appraisals and development work throughout the area, and has compiled an impressive portfolio of geological information and reports dating back to the early 1920's. As an example, Tournigan's Big Missouri property is adjacent to the Silbak-Premier mine, one of the richest producers of gold and silver on the North American continent. Silbak-Premier produced 4.7-million tons of gold, silver, lead and zinc ore between 1918 and 1953, and paid over \$23-million in dividends at the old metal prices. At current world metal prices the Premier would have yielded more than a billion dollars worth of ore from the same 4.7-million tons mined. Tournigan's Big Missouri property, although several times larger than the neighboring Silbak-Premier, is virtually identical, since it occurs within the same geological formation. The Big Missouri Mine operated and produced 57,000 ounces of gold and 60,000 ounces of silver and unknown amounts of lead, zinc and copper between 1938 and 1942, before it was closed down along with other "non-strategic metal" mines after Canada became involved in World War II.

Although other mines in the area have produced important profits in the past, the key to the successful redevelopment of these mines lies in the consolidation of fractured ownership to encourage large open pit mining operations. As noted earlier in this report, that is Tournigan's specialty.

### **Big Missouri Option Agreement**

In December, 1978, Western Mines Limited entered into an agreement with Tournigan that gives Western the right to earn a 70% ownership in the Big Missouri mining property, and to become a shareholder in Tournigan. Initially, the terms of the agreement call for the purchase by Western of 100,000 shares of Tournigan common stock per year under the following schedule:

<u>Execution Date</u>	<u>Number of Shares</u>	<u>Purchase Price to be paid*</u>
December 31, 1978**	100,000	\$100,000
December 31, 1979	100,000	\$100,000
December 31, 1980	100,000	\$150,000
December 31, 1981	100,000	\$150,000
December 31, 1982	100,000	\$175,000
December 31, 1983	100,000	\$200,000
December 31, 1984	100,000	\$225,000

\*All financial data in Canadian dollars.

\*\*On December 31, 1978, Tournigan issued 100,000 of its common shares to Western @\$1.00 per share.

Western will own a 70% interest in the Big Missouri Mine and Tournigan will have carried a 30% interest. However, since Western will have purchased 700,000 shares (about 15% of Tournigan), they will also participate in Tournigan's 30% along with the other shareholders. Western will pay 30% of the profit from the mine to Tournigan after Western has recovered its investment but, in the meantime, Tournigan will receive the greater amount of either \$100,000 or 5% of net operating profit annually.

In addition, Tournigan has given Western 90 days from the first day of commercial production to purchase an additional 7½% for \$1-million, in which case Tournigan would retain a fixed 22½% carried interest for the life of the mine. Further, Western is committed to spend minimum amounts on the Big Missouri property under the following schedule:

	<u>Cumulative Exploration Expenses to be Incurred</u>
December 31, 1979	\$ 200,000
December 31, 1980	500,000
December 31, 1981	800,000
December 31, 1982	1,100,000
December 31, 1983	1,400,000
December 31, 1984	1,700,000

(1) **BIG MISSOURI PROPERTY** (Gold-Silver, Copper, Lead, Zinc)

Tournigan owns a 100% interest in 142 claims on this cohesive property covering some 6.5 miles in length and 1.5 miles in width.

The Big Missouri was discovered and has been explored since 1904. Records show that, from 1938 through 1942, the mine produced some 847,000 tons of gold-silver ore. Over the years, many other claims in this area produced small tonnages of high-grade ore, but overall development was retarded by the divided ownership of the important claims. During the early 1940's the Canadian Government ordered the closure of this mine and others in the area because of its requirement for machinery and manpower to contribute to the country's efforts during the Second World War. Subsequent to the conflict, it was economically impractical to reopen the mines because of the low prices of metals and high labor costs.

Because of the changes that have taken place during the past several years affecting the world market price for gold, silver and other metals, mining companies again turned their attention to properties like the Big Missouri. However, along with the price change, the economics of mining changed as well. It was no longer practical for companies to work small claims, and they therefore devoted their attention to areas in North America where more economical open-pit mining methods could be employed. These new methods make it economical to mine ores of a lower grade than was feasible with the old fashioned small claims method.

In 1973, Tournigan embarked upon an aggressive program to package a large number of claims extensive in size and scope and, more importantly, containing a mineralized body of sufficiently large tonnage to make the site economically attractive for major mining companies to develop into a massive open-pit operation.

In this endeavor, they have been successful. After seriously studying Tournigan's findings in relation to the potential value of the Big Missouri property, confirming them in a great number of geological and engineering studies published virtually since the property was discovered, and impressed with the sheer magnitude of the consolidated property, Western Mines Limited decided to take the option mentioned earlier in this report.

The capital commitments for this type of operation are enormous. Therefore, it is essential that reams of data on mineralization, extent, quality, etc. are scrutinized, evaluated, tested and retested before a company performs its feasibility studies and then goes into actual production.

Western Mines is in the process of doing just that. The company has assigned a crew of geologists and technicians to conduct a comprehensive evaluation of the property and has even accelerated its proposed work schedule. Initially, Western had anticipated concluding its underground and surface sampling this summer and, after taking the samples to Vancouver for further evaluation, contemplated a diamond drilling program to take effect during 1980. In September of this year, Western moved a drill rig on site and will work this equipment through the late fall of 1979. On the basis of the quality of the mineralization assayed thus far, Western has been encouraged to step up its program. Therefore, if the diamond drill assays are as encouraging as the surface and underground sampling, it seems reasonable that Western will even further accelerate its development schedules on the Big Missouri.

The Big Missouri Mine, in the past, generated its own electric power. This was accomplished by a 40" penstock running from the dam on Long Lake to the power house 650 feet vertically below the dam. This unique feature is a tremendous asset to any mining company that intends to operate in the area.

## **(2) OUTLAND SILVER BAR** (Gold, Silver, Lead, Zinc)

This property contains 31 claims and adjoins the Big Missouri property on the west side. It was acquired in February, 1979 as reverted Crown grants from the British Columbia government and was acquired as a result of geological information obtained during the 1978 program on the Big Missouri.

Work on the Outland Silver Bar dates back to the 1920's when 15 tunnels were driven on the mineralized zones by the early developers and high-grade silver was reported from numerous trenches and tunnels.

During the 1979 field season, Tournigan geologists sampled many of these old workings

and obtained several ounces of silver per ton with good lead and zinc over large widths on the property.

Here is another example of an old property being reassessed as a possible open pit. A comprehensive program is being planned for the 1980 season which will include extensive diamond core drilling.

**(3) DALHOUSIE-PREMIER EXTENSION** (Gold, Silver, Copper)

Acquired in early 1979, and now consisting of 87 claims, this property butts up against the southeast side of the Silbak-Premier mine and contains a very promising massive sulphide-iron horizon which is high in gold-copper values. A geophysical instrument called a magnetometer was used to trace the continuation of this zone with a resulting anomalous area being discovered. Gold values ranging from 0.15- to 0.72 ounces per ton and copper over 1% have been found within areas of this formation, and a core-drilling program is under consideration for the coming year.

**(4) PRINCE JOHN** (Gold-Copper)

Eighteen claims. Field work negative — claims will lapse in 1980.

**(5) BEAR PASS** (Gold, Silver, Copper)

Since 1976 when Tournigan's management became interested in this location, the company, through a series of negotiations, has accumulated and consolidated 116 mineral claims. The area encompassed by this consolidation is just over nine kilometers long (5.4 miles) and six kilometers (3.6 miles) wide.

Having utilized the services of staff and outside mining professionals and expended some \$1/3-million in a variety of activities including geological appraisals, surveying, mapping, diamond core drilling etc., the company's management has ascertained that the Bear Pass property is volcanogenic and consists of massive sulphides containing gold, silver, copper, lead and zinc.

This property contains dozens of old tunnels and has received extensive exploration attention by early developers including Cominco. On the George Gold-Copper claims which form a part of the Bear Pass consolidation, the beginnings of an ore body have been indicated by drilling conducted in the 1920's and by Tournigan in 1976. Estimates vary from engineer to engineer, but somewhere between 100,000- and 500,000 tons of 2.2% copper with 0.06 ounces gold and 0.6 ounces silver per ton is indicated by drilling and surface work.

This property has the potential to become a major copper-gold producer, and joint venture negotiations are under way at the time of this writing with an interested and qualified major mining company.

**(6) BEN ALI (Gold-Silver)**

Encompassing five claims, a very small piece of property relative to other Tournigan holdings, the Ben Ali property is a "key-claim" group located strategically adjacent to and within the Dunwall Gold Mine property which was operated in the mid-1930's.

These claims contain a relatively narrow vein system 8-12 feet in width, the central portion of which contains 0.5- to 1.9 ounces gold per ton and 20-30 ounces silver per ton.

Because of the significant down dip access to the Dunwell Mine and the high values in this structure, and because the Dunwell Mine is currently undergoing a complete renovation by another company, these claims will be held indefinitely by Tournigan at minimal annual cost.

**(7) MOBILE (Gold-Silver)**

This property consists of a single claim which contains a very high-grade gold-silver vein which was explored in the 1920's by early developers. Like the Ben Ali claims described above, the Company has no immediate plans for developing this small situation.

**(8) MOONLIGHT (Gold-Silver)**

Situated at the head of American Creek northeast of the Big Missouri property, this 50-claim group contains an impressive gold-silver prospect in its early stages.

A zone of mineralization eight meters (26 feet) wide and of unknown length carries silver of 10.5 ounces per ton with appreciable lead and zinc. Another area, which has only been grab-sampled so far, carries high-grade copper ore and over two ounces gold per ton. More work will be conducted in the coming season.

**(9) WINDSOR (Gold-Silver)**

In August of 1978, Tournigan entered into an option agreement with the Lorado Mining Corporation whereby Lorado would be allowed to acquire Tournigan's 100% interest in 10 Crown-granted mineral claims on this property under the following schedule:

50,000 shares of Lorado common stock (already issued)

75,000 shares of Lorado common stock to be issued December 1, 1979

75,000 shares of Lorado common stock to be issued December 1, 1980

100,000 shares of Lorado common stock to be issued December 1, 1981.

Additionally, Tournigan will maintain a 12½% royalty interest on any profits derived from this property.

**(10) ATAN LAKE** (Barite, Zinc)

Tournigan owns a 100% interest in 44 mineral claims on the Dease River in the Liard Mining Division of British Columbia. This property contains large tonnages of barite and zinc ore.

Barite is used extensively in the oil drilling industry and is in short supply at present. Barite is sold at \$180 per ton currently in northern Canada.

The Atan Lake property is currently being negotiated for development with a major oil company.

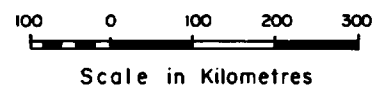
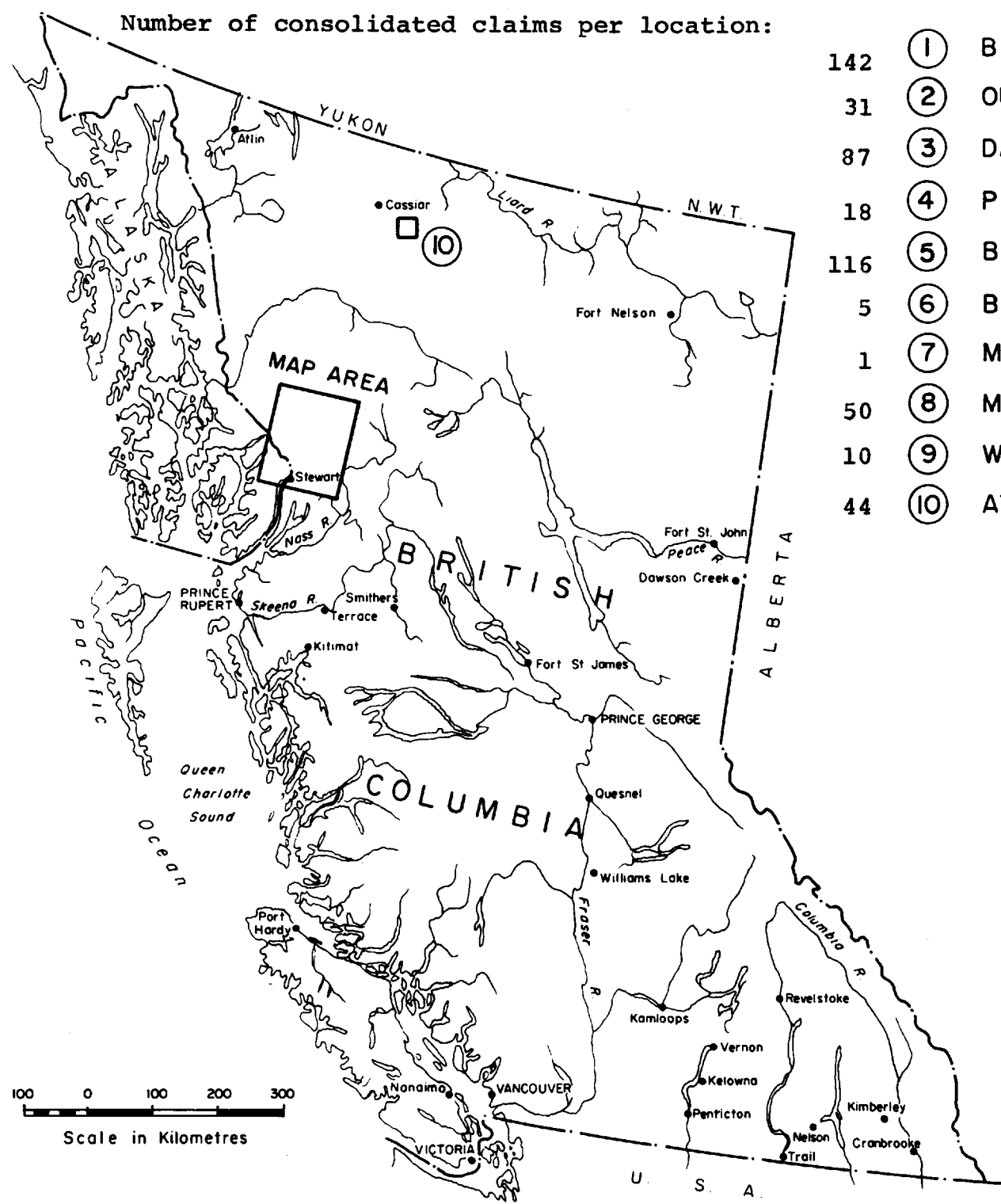
**RECENT DEVELOPMENT**

On September 6, 1979, Tournigan staked 40 claims on a new gold prospect 70 miles east of Wrangell, Alaska. Negotiations with a major mining company have already started.

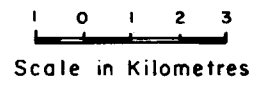
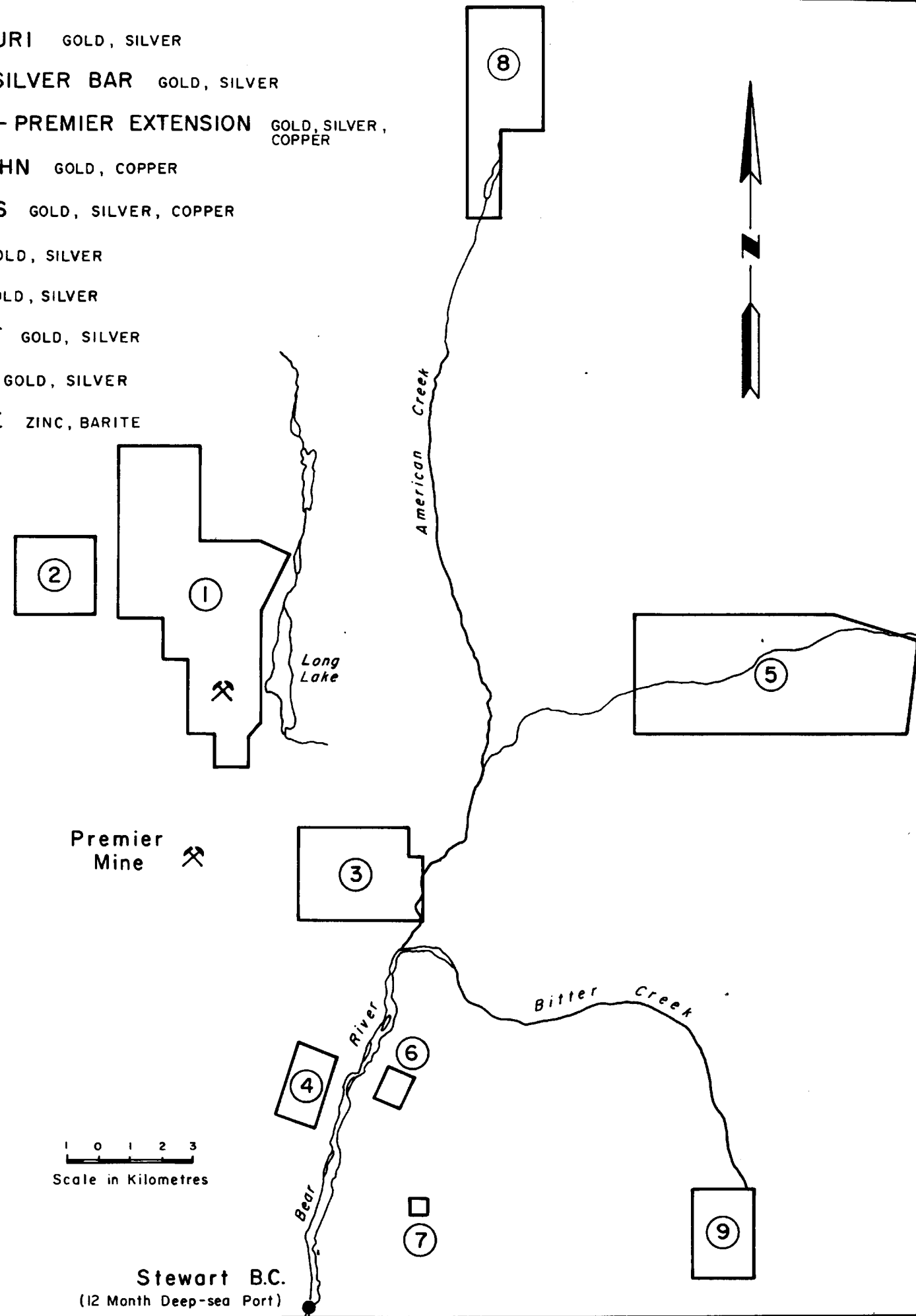


Number of consolidated claims per location:

- 142 ① BIG MISSOURI GOLD, SILVER
- 31 ② OUTLAND SILVER BAR GOLD, SILVER
- 87 ③ DALHOUSIE - PREMIER EXTENSION GOLD, SILVER, COPPER
- 18 ④ PRINCE JOHN GOLD, COPPER
- 116 ⑤ BEAR PASS GOLD, SILVER, COPPER
- 5 ⑥ BEN ALI GOLD, SILVER
- 1 ⑦ MOBILE GOLD, SILVER
- 50 ⑧ MOONLIGHT GOLD, SILVER
- 10 ⑨ WINDSOR GOLD, SILVER
- 44 ⑩ ATAN LAKE ZINC, BARITE



**HOLDINGS  
OF  
TOURNIGAN MINING EXPLORATIONS LTD.  
IN THE  
STEWART AREA  
OF  
BRITISH COLUMBIA**



### Capitalization\*

NUMBER OF COMMON SHARES AUTHORIZED	10,000,000 — No Par
NUMBER OF COMMON SHARES ISSUED AND OUTSTANDING	4,111,452
APPROXIMATE NUMBER OF COMMON SHARES PUBLICLY HELD	2,500,000
WARRANTS	400,000**

\*At October, 1979

\*\*See Recent Financing

### Price Range of Common Stock (A)

	1979		1978	
	High	Low	High	Low
1st Quarter	\$1.06	\$.61	\$ .88	\$.56
2nd Quarter	\$1.10	\$.87	\$1.20	\$.63
3rd Quarter	\$1.95	\$.78	\$1.26	\$.70
4th Quarter	-----	-----	\$ .87	\$.55

(A) Calendar Quarters, in Canadian dollars

### Recent Financing

On July 12, 1979, Tournigan, through Canarim Investment Corporation Ltd. of Vancouver, B.C., sold 200,000 shares of common stock with detachable warrants at \$1.00 per share. The Series "A" warrants will trade on the Vancouver Stock Exchange under the symbol TGNWT and will be exercisable into Tournigan common shares on the basis of two warrants plus \$1.03 per one common share. Additionally, the company had issued 100,000 Series "B" warrants to the Vancouver agent, also with a \$1.03 conversion price. (The Series "B" warrants were exercised in September, 1979.) The Series "A" warrants expire on December 31, 1979.

The total dollar value to Tournigan from the sale of the stock, and if all warrants are exercised, would be \$509,000 less commissions of \$15,000. The proceeds from this sale and the amounts received from the ultimate exercising of the Series "A" warrants will be utilized in the further exploration and development work on other mining properties owned by Tournigan and for general corporate purposes.

### Conclusion

Tournigan is a company with demonstrated experience in consolidating and packaging mining properties with known mineralization. These properties are then programmed to be exploited on a joint-venture basis, with well financed international mining companies.

The potential benefits accruing to each of the partners are (a) Tournigan is relieved of any investment in the further development of a prospect; (b) assuming that future negotiations are similar to that entered into with Western, Tournigan's capital position is enhanced by options payments it receives; (c) Tournigan's partner is presented with mineralized properties in size large enough to be economically viable.

OFFICERS AND DIRECTORS

SINCE

JOHN N. HEMBLING	Founded Company — President & Exploration Manager	1966
WM. BRAIDWOOD	Secretary. Mechanical Engineer, P. Eng. — Engaged in construction industry — Estimation/marketing — J.R. Bezanson Ltd.	1977
NORMAN S. ADAIR	Sales executive — Brooke Bond Foods Ltd.	1973
EGIL H. LORNTZSEN	Mining executive — President of Lorado Mining Corp. — Founder and Former President of Lornex Mining Corp.	1979
DR. WM. V. SMITHERINGALE	Semi-retired Consulting Geological Engineer and senior consultant to Tournigan	1979

REGISTRAR AND TRANSFER AGENT

Canada Permanent Trust Company  
Vancouver, B.C.

AUDITORS

Coopers & Lybrand  
Chartered Accountants  
Vancouver, B.C.

SOLICITORS

Barbeau, McKercher,  
Collingwood & Hanna  
Vancouver, B.C.

Milgrim, Thomagan, Jacobs & Lee  
New York, New York

This booklet has been prepared by Silverman, Heller Associates, Investment Analysts Serving Industry for Tournigan Mining Explorations, Ltd. in order to assist members of the financial community in broadening their knowledge of Tournigan and its industry.

It should be read in conjunction with, and as a supplement to, the company's Annual Report. Much of the data were gathered from registration statements, proxies and other material not always readily available.

OCTOBER, 1979

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