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ASSESSMENT REPORT

GEOPHYSICAL REPORT ON THE FIRESTEEL CLAIMS (18 UNITS)

TOODOGGONE RIVER AREA

OMINECA MINING DIVISION

by

PETER TEGART

LOCATION N.T.S. 94E/2W
57° 03' TO 57 05' N. LATITUDE
126° 44' TO 126 46' W. LONGITUDE

OWNER: SEREM INC.

OPERATOR: SEREM INC.

DATES WORK PERFORMED: FEBRUARY 17,18,19,20,21,22, 1985

DATE: MARCH 1985

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ABSTRACT

A V.L.F. - E.M. survey test was conducted over a portion of the northern part of the Firesteel Claim.The work was carried out in mid-February in order that the frozen conditions over lakes and swamps would allow completion of all stations on the cross-lines. The claims are located in the Toodoggone River area (N.T.S. 94 E/2W), 280 kilometers north of Smithers, B.C. A total of 180 stations were recorded on cross-lines 60 meters apart and an interval separation of 15 meters.

The claims are underlain by limestone with coral reef characteristics and mafic volcanics. Previous work had acquired very little relevant data over the numerous lakes and swamps of the area and this test conclusively indicated a conductor situated over a swamp which had previously not been recognized.

A continuation of this survey is recommended.

1. INTRODUCTION AND HISTORY

The Firesteel claims, consisting of 18 units, are located between 57°03' N and 57°05'N latitude and 126°44' W and 126°46'W longitude in the Toodoggone River area, N.T.S. 94E/2W , Omineca Mining Division (see Figures 1 and 2). Elevation is approximately 1220 metres (4000') above sea level. Topography is undulating and forested. Outcrop ranges from 0 to 30%; most of the property is covered by glacial till.

Access to the property is by plane from Smithers to Sturdee Airstrip, a distance of 280 kilometres, and from Sturdee Airstrip to the property by helicopter, a distance of 15 kilometres.

The claims are owned and operated by Serem Inc.

Interest in the property goes back to 1931, when Emil Bronlund staked the area for Cominco. During 1931-33 and 1944-46, trenching, prospecting and mapping were carried out to locate the source of lead-zinc float on the Calcine claims (north end of the Firesteel claims) and determine the extent of silver-bearing quartz veins on the Bren claims (south end). Granby optioned the property in 1957 and drilled eleven X-ray holes totalling 1955 feet (596m) on the Bren quartz veins. In 1961, Newconex carried out a spontaneous polarization survey on the Calcine claims. The following year, Norpex Ltd. ran a vertical loop electromagnetic survey and drilled three X-ray holes on these claims. The EM response was attributed to graphite: no economic mineralization was intersected in the holes. Granby again optioned the property in 1968. After digging 14 trenches and drilling 261 feet (80 metres), they

dropped the option in 1969. El Paso Mining and Milling Co. optioned the claims in 1972 and staked the ground between the Calcine and Bren claims. Soil sampling, VLF and gravity surveys and mapping were carried out on a surveyed grid (Assessment Report No. 4200).

During the 1980 field season, a geochemical soil survey was carried out by Serem Ltd. to test and further delineate anomalies reported by El Paso. Samples were taken at 50 metre intervals on lines 50 metres apart on a 1200 x 600 metre grid, and at 50 metre intervals on lines 100 metres apart on extensions of 450 metres to the east and 650 metres to the north. A total of 544 samples were analysed for silver, lead and zinc; 257 were also analysed for gold and 202 for copper. Preliminary geological mapping and prospecting were carried out over most of the grid area.

2. GEOLOGY

The claims are underlain by limestone and mafic volcanics.

The limestone is generally pale grey, massive and recrystallized. Narrow bioclastic horizons contain broken, but well preserved crioids and branching corals. In places, the limestone is brownish-grey and fetid and contains minor amounts of pyrite. Solution breccia, consisting of angular limestone fragments chaotically dispersed in a calcite matrix, occurs discontinously along a zone parallel to the limestone-volcanic contact. Pinkish-brown dolomite is interbedded with the limestone in places. There are also narrow interbeds of mafic tuff, and lapilli have been observed in bioclastic beds near the contact.

The volcanics consist of dark green mafic tuff, lapilli tuff, and plagioclase-porphyritic lava. Greywacke, chert and volcaniclastic conglomerate with rare limestone clasts are associated with the volcanics.

In general, beds dip moderately to steeply westwards. Major faults trend 140° to 170° Azm; a second set trends 060 .

Low grade skarn is developed at the volcanic-limestone contact. Blue-grey massive quartz veins in the limestone to the south are probably related to silver-bearing quartz veins of the Bren showings.

Primary characteristics of the limestone indicate reef development. Volcanic activity began while the carbonate was still being deposited. Evidence suggests that a major episode produced a volcanic arc which may have restricted the basin.

The Geological Survey of Canada has assigned the limestone to the Permian Asitka Group and the volcanics to the Upper Triassic Takla Group (Gabielse et al, 1975). However, since at least some of the volcanic rocks are contemporaneous with the limestone, the ages should be re-determined.

3. MINERALIZATION

A spectacular conglomerate of massive, sphalerite-chalcopyrite-galena clasts in a zinc-rich carbonate matrix occurs at the north end of the soil grid. It fills a roughly circular depression in relatively barren limestone. Average grade was deteremined to be 1.0 ounce per ton silver, 0.3% copper and 10% zinc. Limestone in the vicinity carries minor amounts of galena, sphalerite, chalcopyrite and pyrite, but no high-grade source for the conglomerate has yet been found.

Freibergite-bearing quartz veins occur to the south of the grid. Values up to 325.60 oz/ton silver over 1.5 feet (11,160 grams per tonne over 0.46 metres) and 33.10 oz/ton silver over 4 feet (1134 grams per tonne over 1.2 metres) have been reported, but mineralization was considered too erratic to be economic.

The reader is referred to reports on the property listed on the last page.

4. V.L.F. - EM TEST PROCEDURE (Phoenix VLF-2 Instrument)

4.1 TRANSMITTER SELECTION:

The transmitter selected for the test was Seattle, Washington (transmitting at 24.8 khz) which lies due south of Firesteel claim area. From an inspection of the geological mapping referenced in earlier assessment reports it was felt that a possible strike direction to the source of mineralization was 170 Azm. The base-line was established north-south with test cross-lines running perpendicular at 90 Azm. This test geometry would give rise to the highest magnitude anomalies from a transmitter source at Seattle, Washington.

The instrument was tested for battery strength at regular 1 hour intervals while conducting the survey under cold conditions of -10 C.

The tuning coil was adjusted to a maximum meter reading after the gain was set at mid-scale on the 300% F.S. meter scale while the instrument was horizontal and pointing directly at the transmitter station.The tuning coil was locked and the instrument was set for the remainder of the survey.

4.2 FIELD MEASUREMENTS:

All measurements were made with the operator facing the direction of the station.

4.3 DIP ANGLE:

The minimum field strength was located by holding the instrument in a horizontal position and slowly turning to locate the direction of the transmitter. This position was always due south. Next the instrument was held in a vertical position with

the operator facing the clinometer. The instrument was tilted from right to left to find a minimum or null, while depressing the centre clinometer button to free the clinometer pointer. When the null position was determined, the button was released and the dip angle recorded. The instrument tilted east was recorded as a positive angle and tilted west it was recorded as a negative angle.

4.2.2 HORIZONTAL STRENGH:

This measurement was taken with the insturment held horizontal and facing at right angles to the station direction. The field strength meter was calibrated to 100% on the 0 - 300% scale position using the 10 - turn potentiometer at a point on the grid away from known conductors. A base station was established and check readings were made every hour at regular intervals to record variance field strength over time.

The field strength and dip angles were plotted on 10 millimeter grid paper as profiles utilizing 1:200 scale for the plan and 10% field strengh equal to 1 m.m. for the field strength. Dip angles were plotted as profiles utilizing a vertical scale of 1 degree equal to 1.0 m.m.

5. INTERPRETATION

The dip angles as plotted on figure 3 indicate a moderately strong conductor (CONDUCTOR A) striking roughly northerly on/or near the base line between cross-lines 0+60S and 1+80 N. This conductor is 240 metres long and has a remarkably similar signature from one line to the other. On lines 0+00 and 0+60S the conductor pass 60 meters west of known conglomeratic sulphide rubble. The sulphide rubble has been the focus of intense pitting and trenching in past exploration programs. The anomally passing through a swamp-lake between lines 0+60N and 1+20S and has never been recognized in the past as a possible source to the conglomerate rubble lying 60 m to east.

Two lessor anomalies (CONDUCTORS B + C) lie between lines 0+60N and 1+80N.

The field strengths as shown on figure 3 appear to reflect stronger conductivities as the limestone - volcanic contact is approach to the east.

6. CONCLUSIONS AND RECOMMENDATIONS

1. Conductor-A appears to reflect a hidden anomally, previously undetected because of swamp and overburden which ultimately may be the source of the sulphide rubble found 60 meters to the east.

2. Conductor-A may continue to the north and it is recommended that the V.L.F. survey be extended in this direction.

3. Conductors B and C must also be followed northward by extending the survey.

4. It appears that in general the V.L.F. system appears to respond to conductors over limestone hosted areas and it is recommended to continue this survey over a greater portion of the property.

5. As the Conductor-A is located over swamp and overburden diamond drilling appears to be the most logical technique in testing the source of this conductor.

Peter Tegart

STATEMENT OF EXPENDITURES

WAGES

Grid Layout, Geophysical Operator, Mobilization and Demobilization - Smithers to Sturdee River. February 17,18,19,20,21,22 - 1985.

Kevin Bolen Box 2044 Smithers,B.C.	5 days at $150	$750	
Dave Anderson Box 2141 Smithers, B.C.	5 days at $150	$750	
Peter Tegart 3969 Sunnycrest Dr. North Vancouver	4 days at $200	$800	
			$2,300

BOARD,LODGING and FIELD EXPENSES

Food 10.00/man-day x 14 days		$140	
Equipment (hardware camp)			
Glacier Hardware	$ 63.88		
Smithers Hardware	155.95		
Deakin Eq.(503.57/2)	251.78		
		$471.61	
Store Oil, Propane		$200	
			$ 811.61

TRANSPORTATION

Fixed - Wing (Central Mtn. Air #2578, #2581) =	$2,360.70	
Helicopter (Okanagan #554987, #554989, #554991, #554993, #554996) Total 6.7 hrs. at $490.39/hr	$3,285.63	
		$5,646.33

TOTAL $8,757.94

Peter Tegart

CERTIFICATE OF QUALIFICATIONS

I, Peter F. Tegart, certify that:

1. I am a geologist, employed by SEREM INC.

2. I have a Bachelor of Science Degree in Geology from the University of British Columbia.

3. I have worked in mineral exploration or geological mapping since 1966 and have acted in responsible positions since 1971.

4. I personally examined the property and directed the geophysical survey.

5. I have no financial interest, either direct or indirect, in the property.

Peter Tegart

Vancouver, British Columbia

PETER F. TEGART

REFERENCES

Gabrielse, H.; Dodds, C.J.; Mansy, J.L.; and Eisbacher, G.H. 1975: Geology of the Toodoggone River (94E) and Ware West-half, G.S.C. Open File 483, Geological Survey of Canada.

Assessment Report 4200; British Columbia Ministry of Energy, Mines and Petroleum Resources.

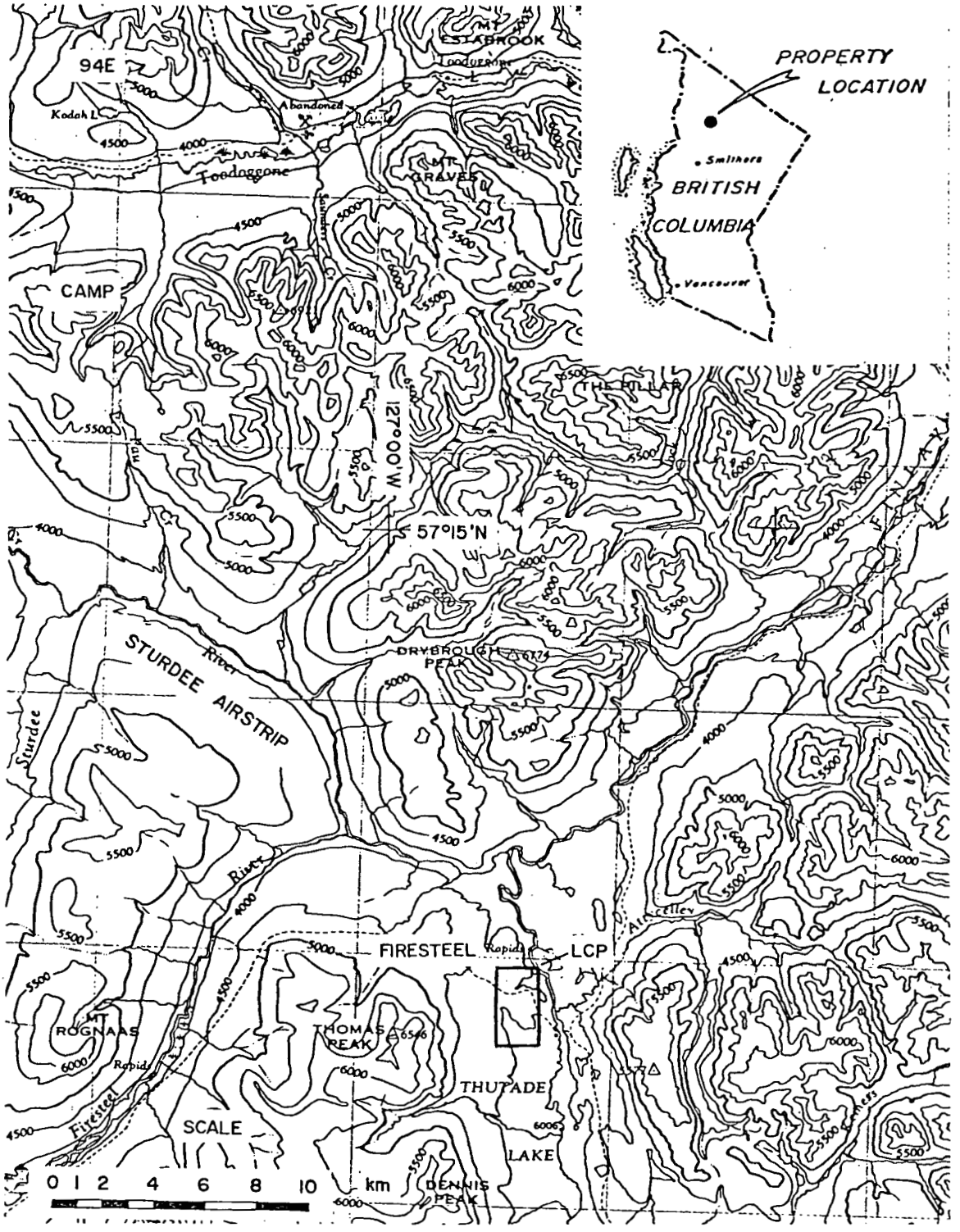

Fig. 1. Location of the Firesteel Claims.

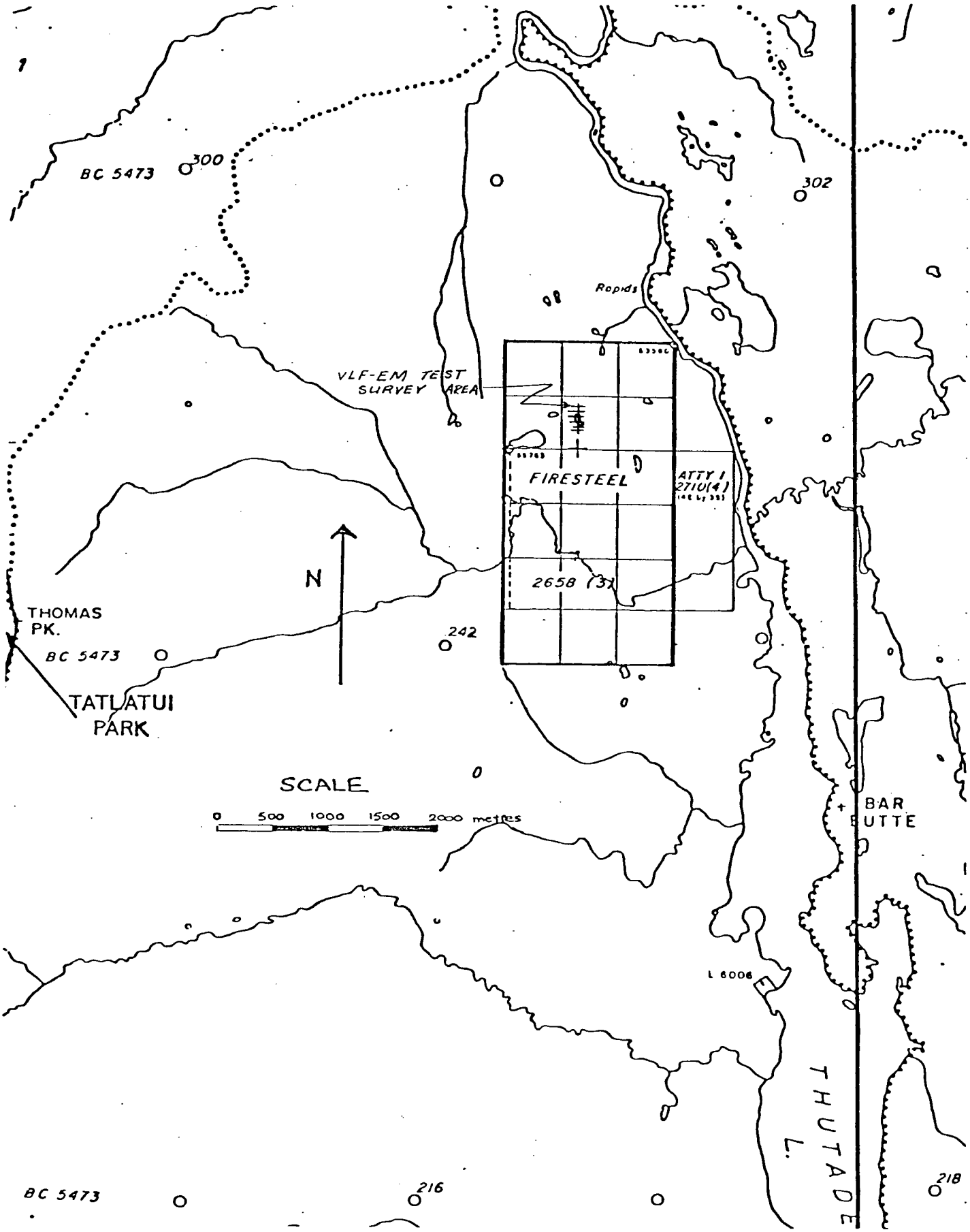

Fig. 2. Claims Map: Firesteel Claims.

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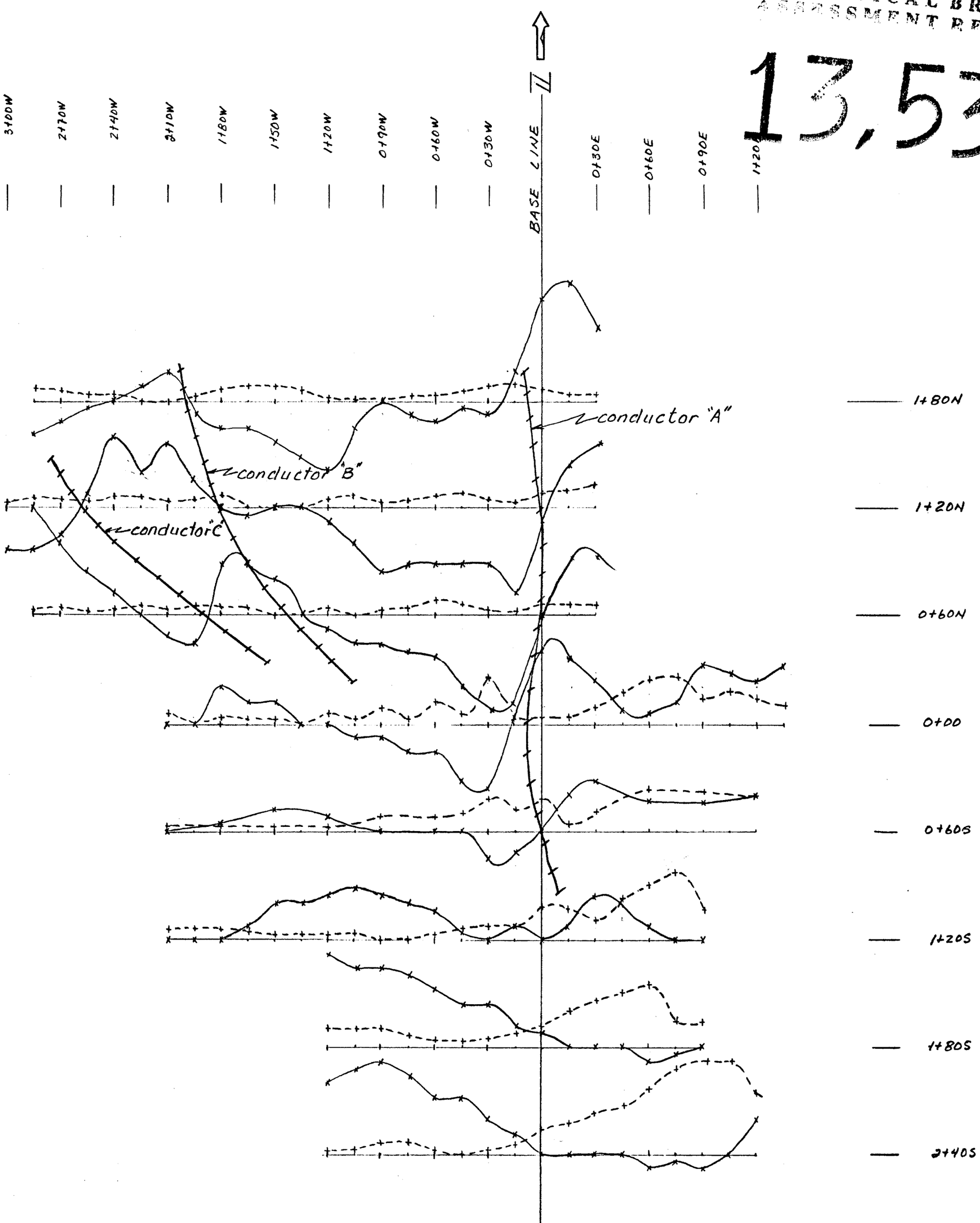
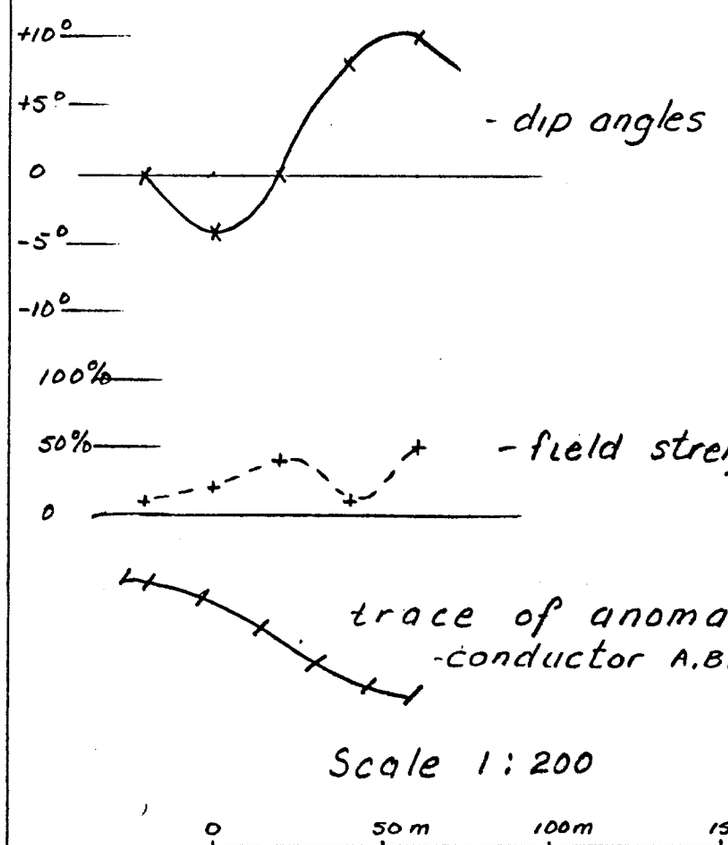


SEREM INC.

FIRE STEEL CLAIMS

V.L.M-EM GEOPHYSICAL SURVEY

LEGEND.



Scale 1:200

0 50m 100m 150m

figure #3