

MAP NO. ASSESSMENT REPORT X DOCUMENT NO.: 092665  
PROSPECTUS MINING DISTRICT: WATSON LAKE  
95 D 6 CONFIDENTIAL X TYPE OF WORK: ROAD, AIRSTRIP, CONSTRUCTION  
OPEN FILE

REPORT FILED UNDER: Sulpetro Minerals Limited

DATE PERFORMED: August 10 - December 13, 1984 DATE FILED: March 21, 1985

LOCATION: LAT.: 60°21'N AREA: Otter Creek, Coal River  
LONG.: 127°24'W VALUE \$:

CLAIM NAME & NO.: MEL 11-16 Y22230-35; JEAN 1-21 Y72731-734, 961-966, Y74418-428; WET 1-16, 25-32 Y83309-323; SOV 1-6 YA28600-605; JOE 1-2Fr. Y45269-270; KELI 1-8 YA66842-845, 927-930; JONI 1-8 YA66846-853; HOSE 1-8 YA66919-926; JERI 1-8 YA66931-938; RALFO 1-7 YA66939-945; CHUNGO 1-8 YA66946-953; OTT 1-8 YA66954-61; EDY 1-7 YA66962-68; TOMI 1-8 YA66969-76; MUMBO 1-8 YA66977-84; BOZ 1-4 YA66985-88; SIN 1-8 YA66989-96; YANG 1-6 YA66997-YA67002; DAVE 1-8 Y72501-08; ANDY 1-8 YA72509-16

WORK DONE BY: D.C. Miller

WORK DONE FOR: Sulpetro Minerals Limited

DATE TO GOOD STANDING	REMARKS:
	#2 MEL-HOSER A 51 km road was constructed to the property from the Alaska Highway which was used to construct a 640 m x 80 m airstrip (on a N 37°E bearing).



092665

REPORT ON AIRSTRIP AND ACCESS ROAD CONSTRUCTION

MEL PROPERTY, YUKON

CLAIM SHEET 95 D/6

LATITUDE  $60^{\circ}21'$

LONGITUDE  $127^{\circ}24'$

Covering Work During August 10 to December 13, 1984

By Sulpetro Minerals Limited

Author: D.C. Miller

Submitted: December 13, 1984

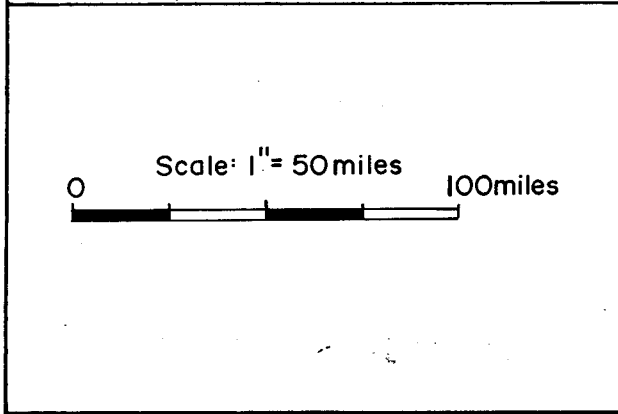
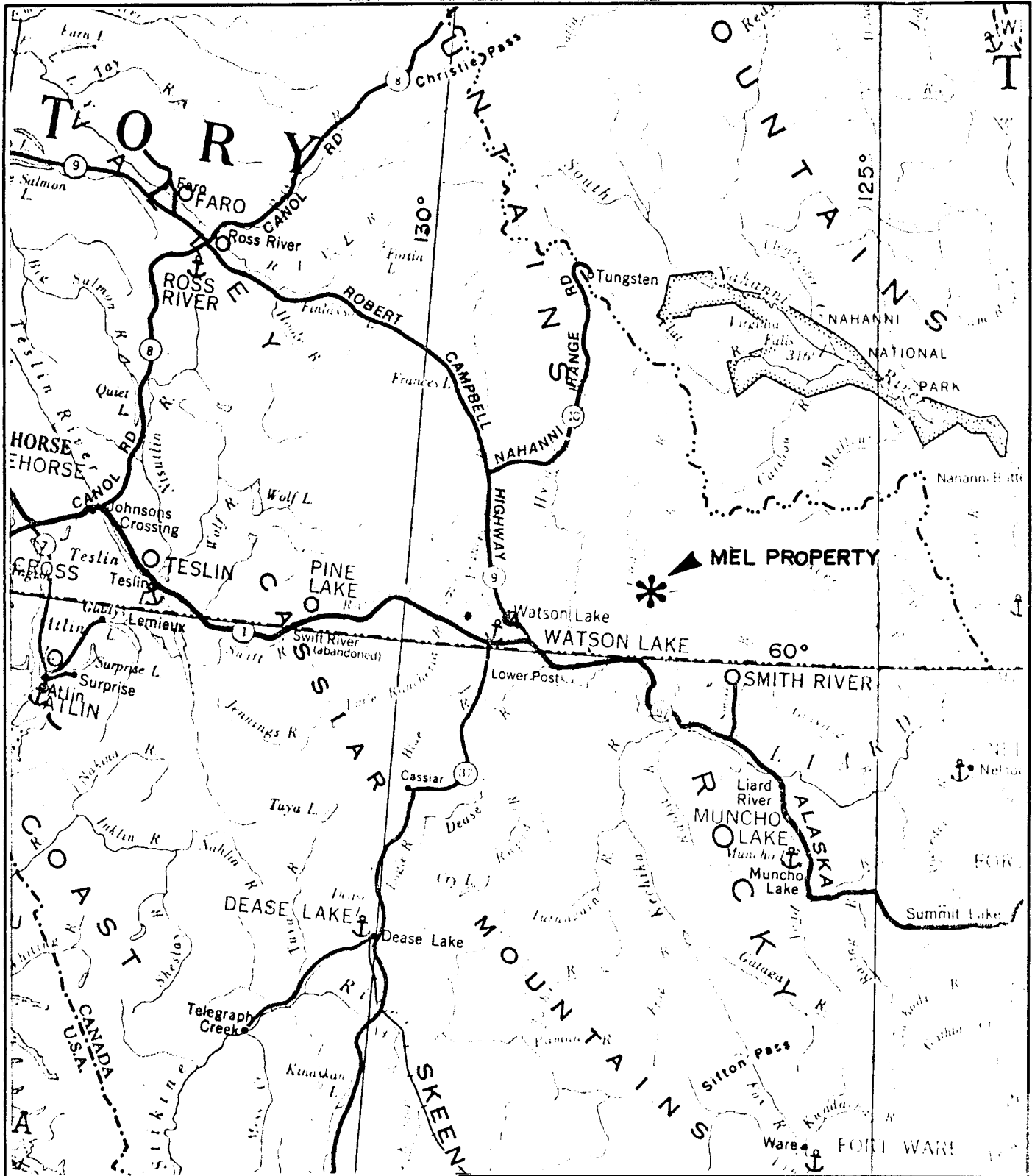
092665

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Sheet 1	Claim Map	In Pocket
Sheet 2	Road and Airstrip Location Map	In Pocket



**SULPETRO MINERALS LIMITED**  
KAMLOOPS, BRITISH COLUMBIA

**LOCATION MAP**  
**MEL PROPERTY**

Drawn by: <b>D. C. MILLER</b>	N.T.S.: <b>95 D/6</b>
Date: <b>DEC. 13, 1984</b>	Figure No.: <b>1</b>

### Location and Access

The Mel property is located 80 km eastward of Watson Lake, Yukon. Previous access was by helicopter or some 55 km of winter road leading from the Alaska Highway at Contact Creek. Also, in winter months, ski equipped aircraft have landed on small lakes on or near the property.

In October and November, 1984, a new access road suitable for either summer or winter use was constructed from the Alaska Highway to the property. The new road starts at a point 7.6 km eastward of Contact Creek. The new access road was used to construct a 640 m airstrip at the Mel barite-zinc-lead property.

### Physiography

The new access route to the Mel property crosses three areas of differing physiography. The initial section of the route between the Alaska Highway and km 28 (Sheet 2) is underlain by glacio-fluvial sediments, mainly various eskers with small areas of till and bedrock. Overall topographic relief is slight in this initial section and is in the order of 100 m.

From 28 to 38 km the route follows the Coal River valley and is underlain by terraced glacio-glacial deposits of silt, sand and gravel. Topographic relief is less than 50 m.

From 38 to 51 km (at the Mel property) the route is underlain by till and topographic relief is in the order of 220 m.

The distances shown on the accompanying plan (Sheet 2) were derived from the odometer of a truck and are subject to correction.

The area traversed by the route is drained by the Coal River, flowing southeasterly, and its tributaries. The locations of the main streams are shown on the accompanying plan (Sheet 2).

In 1982, much of the route from km 18 northwards was subjected to a large forest fire and about 95% of forests were destroyed by this fire.

Property

The Mel property includes the following adjoining claims:

<u>Claim Name</u>	<u>Grant No.</u>	<u>Anniversary Date</u>
Mel 11 - 16	Y 22230-35	April 3
Jean 1 - 4	Y 72731-34	April 3
Jean 5 - 10	Y 72961-66	April 5
Jean 11 - 21	Y 74418-28	October 15
Wet 1 - 16	Y 83309-24	April 3
Wet 25 - 32	Y 83325-32	April 3
Sov 1 - 6	YA 28600-05	April 26
Joe 1 Fraction	YA 45269	August 13
Joe 2 Fraction	YA 45270	August 13
Keli 1 - 4	YA 66842-45	August 10
Joni 1 - 8	YA 66846-53	August 10
Hose 1 - 8	YA 66919-26	August 24
Keli 5 - 8	YA 66927-30	August 24
Jeri 1 - 8	YA 66931-38	August 24
Ralfo 1 - 7	YA 66939-45	August 24
Chungo 1 - 8	YA 66946-53	August 24
Ott 1 - 8	YA 66954-61	August 24
Edy 1 - 7	YA 66962-68	August 24
Tomi 1 - 8	YA 66969-76	August 24
Mumbo 1 - 8	YA 66977-84	August 24
Boz 1 - 4	YA 66985-88	August 24
Sin 1 - 8	YA 66989-96	August 24
Yang 1 - 6	YA 66997-YA 67002	August 24
Dave 1 - 8	YA 72501-08	November 5
Andy 1 - 8	YA 72509-16	November 5

Total 171 Claims

## History

The Mel property was first staked in 1967 by J. Melnychuk and T. Flint. Successive exploration programs including geological and topographic mapping, geochemical surveys, geophysical surveys, diamond drilling and trenching have been carried out since 1967. Companies involved included Newmont Mining Corp., Sovereign Metals Corp., Granby Mining Corp., St. Joseph Explorations and its successor company, Sulpetro Minerals Limited.

To date, diamond drilling has indicated 4.8 million tonnes grading 52.1% barite, 5.61% zinc and 2.05% lead in the Mel deposit. A number of other zinc showings and geochemical targets have been found elsewhere on the property since 1981 which require diamond drill testing.

With respect to access, the existing winter road was built in 1967. Since optioning the property in 1977 from Sovereign Metals, Sulpetro Minerals Limited has considered a number of plans for improving access to the property. Previous work included:

- (1) 1979 - Field examination of the winter road and alternative routes.
- (2) 1980 - Route survey for a proposed all weather road by Al Wright and Associates.
- (3) 1980-1981 - Environmental Report for the Mel property access road by Gartner Lee Associates Limited.
- (4) 1983 - Field route and airstrip investigations and sounding and measurement of the Coal River at the crossing point.

## Summary of Current Work

In August 1984, three possible airstrip locations were examined in the field. Of these, a site 1.6 km south of the Mel showings was selected for development. An airstrip 640 m long at a bearing of N37<sup>o</sup>E was flagged out.

Additionally, 2 alternative access routes from the airstrip to the Coal River were flagged as well as a route from the airstrip to the Mel showings. Southwest of the Coal River, some 22 km of road access were flagged between the Alaska Highway and Coal River.

In late September, after receiving a Land Use Permit and a commitment from the Yukon Government for financial assistance, a decision was made to proceed with access road and airstrip construction.

Dease Lake Contractors of Dease Lake, B.C. were selected to do the work on the basis of availability and proximity to the work location. Two Watson Lake based contractors submitted bids to do the work at a later date (1985) as they were both fully employed elsewhere during October 1984.

Equipment employed included one D8-H caterpillar, one Ardco rubber tired Nodwell vehicle with a 10,000 lb. payload, one 3/4 ton 4 wheel drive suburban, three power saws, camp equipment, one 1,000 gallon and one 500 gallon fuel tank plus miscellaneous tools and equipment. Five contractor and two Sulpetro personnel were employed.

Cat work started on October 10 and by October 21, a new access road, suitable for 4 wheel drive vehicles advanced 23.2 km (as measured by odometer) to connect with the former winter road (Sheet 2). During this period 3 complete days of cat work were lost because of camp moves and hydraulic hose problems.

The Coal River was forded on October 23 and a new road was started at a point 1.7 km northeast of the river. The river has a hard gravel bottom and the deepest (northeast) channel was 1.07 m deep and was easily forded by both the D-8 and Nodwell. The airstrip site was reached on October 26, after building some 10.5 km of new access road. October 27 and much of October 28 were lost to hydraulic repairs.

October 29-30 were spent clearing the airstrip and building a nearby access road. On October 31, about mid-morning, a fire started in the belly pan of the D-8. The fire could not be controlled and burned the upper part of the cat beyond repair.

Dease Lake Contractors were unable to carry on with the contract and after some delay, a new contractor, K. Peters of Watson Lake agreed to finish the project using Dease Lake Contractors as subcontractors to maintain a camp and transport fuel and personnel to the work site.

On November 11, Peters brought his Komatsu 155A caterpillar (equipped with a ripper) from the Alaska Highway to the Coal River. On November 12 and 13 he completed work on the access road near the airstrip and started work on the airstrip on November 14. Work was completed at airstrip at mid-day November 24. A day was lost due to mechanical repairs on November 19. November 24 and 25 were spent completing a 1.6 km access road from the airstrip to the Mel property and walking equipment from the Mel to the Coal River. On November 26 all equipment was brought out to the Alaska Highway.

The airstrip completion work proceeded rather slowly because of heavy frost which developed during October 26 to November 5 when exceptionally cold weather was experienced. During this period, temperatures averaged about  $-25^{\circ}\text{C}$  with lows to  $-40^{\circ}\text{C}$ .

#### Description of Access Road

The access road was constructed some 3.7 m wide to a minimum standard for access of the caterpillar and the Nodwell fuel carrier. It follows a proposed permanent route as closely as possible except where major side-hill cuts for better grades are required. Because of good road bed material (sand and gravel) the road also proved suitable for 4 wheel drive vehicle access.

The following descriptions are based on odometer readings and correlated with distances shown on the accompanying plan (Sheet 2).

0 - 4 km: The route is underlain by glacial deposits of silt, sand and gravel. Relief is slight and road grades are low. No water is present. Forest cover consists of thick, immature lodgepole pine and spruce with occasional pockets of mature timber.

4 - 6.8 km: The route follows eskers (glacial deposits of sand and gravel). Relief is moderate (50 m) and road grades are locally steep over short distances. These grades can be modified later if desired. One short grade requires a 4 wheel drive. No water is present. Forest cover includes small aspen, birch, spruce and lodgepole pine.

6.8 - 13.7 km: The route follows a plateau with minor relief. It is underlain by glacial deposits of silt, sand and gravel. A small wet area was crossed at 8.6 km. Forest cover comprises mainly immature spruce and lodgepole pine from 6.8 - 8.0 km; semi-mature open lodgepole pine forest from 9.0 - 10.5 km; mature spruce - aspen forest from 10.5 - 12.0 km and thick immature spruce - pine forest from 12.0 - 13.7 km.

13.7 - 14.5 km: The route crosses a dry valley between two lakes. It is underlain by silt, sand and gravel with some bedrock at 14.0 - 14.5 km. No water is present. Forest cover is mature spruce. Road grades are fairly low and suitable for 2 wheel drive except near 14.5 km where a steep grade is present.

14.5 - 16.4 km: The route follows a plateau underlain by silt, sand and gravel with some bedrock. Forest cover is mainly thick immature lodgepole pine. The route descends a moderate grade to a creek at 16.4 km. At the crossing point, the creek has been dammed by beavers and is about 1.5 m wide and 30 cm deep. Just below the crossing where the creek is free flowing, it is about  $\frac{1}{2}$  m wide and 5 cm deep and it is underlain by bedrock with fairly steep banks. The caterpillar crossed at this point.

A temporary bridge was built of spruce logs at the crossing point suitable for loads up to 10 tons.

16.4 - 18.0 km: The route follows nearly flat benches composed of silt, sand and gravel. Forest cover is mainly mature spruce and jackpine. A small, wet area was encountered at 17.7 km. The route is partially burned from 17.7 to 18.0 km. From 18.0 km to beyond the Mel property, the forests were burned in 1982 by a forest fire.

18.0 - 23.0 km: The route is underlain by nearly flat lying deposits of silt, sand and gravel from 18.0 to 21.0 km. From 21.0 to 23.0 km the route turns westerly and follows a divide between westerly and easterly drainages. It is underlain by silt, sand and gravel and local bedrock. The route descends gradually and crosses a small creek at 23.0 km about 1 m wide by 10 cm deep. A temporary bridge was built of spruce logs to allow the 4 wheel drive truck to cross this creek. The caterpillar and Nodwell forded this stream just above the bridge where banks are about 20 cm high. Organic deposits associated with this creek are about 1 m deep and are underlain by hard gravel.

23.0 - 27.9 km: The route is underlain by mainly sand and gravel (esker) deposits. The previous winter road was intersected at 23.2 km and the new route follows the old route except for a diversion around a creek at 24.7 km and a diversion around a swamp from 26.5 to 27.8 km. The creek at 24.7 km is 1.5 m wide by 15 cm deep with shallow gravelly banks. The crossing was forded by all vehicles. At 27.9 km, a creek 2 m wide by 15 cm deep with a hard gravel bottom was forded by all vehicles. Because of local sharp grades near creeks, a 4 wheel drive vehicle was necessary.

27.9 - 37.0 km: The route follows nearly flat, terraced deposits of silt, sand and gravel along the southwest bank of the Coal River. The old winter road was followed except for a diversion around soft ground from 28.1 - 28.4 km.

A creek some 3 m wide by 30 cm deep with a hard silty to gravelly bottom and banks was forded at 31.4 km by all vehicles. Road grades are gentle except near creek crossings and some sharp hills near the Coal River. A very small, dry creek bed was crossed at 33.3 km. This creek is likely flowing in spring and summer months.

The Coal River was crossed at km 37, some 300 m downstream of the winter crossing. At this lower crossing, the river is 121 m wide and divided into two channels with a sandbar between the channels. The deepest (northeast) channel is 1.07 m deep. The river bottom is hard gravel and cobbles.

37.0 - 49.2 km: Beyond the Coal River, the winter route was followed for 1.6 km across a valley bottom flat underlain by silt and up onto higher river terraces. At this point a new route was taken above the winter route to avoid soft wet ground (sheet 2). From this point onwards, the route is underlain by silty till. Topographic relief is greater through this section than previous sections and is in the order of 250 m. Small drainages in the order of 1 m wide by 10 cm deep were crossed at 45.7, 45.9 and 49.2 km (sheet 2).

A pocket of unburned forest comprising semi-mature spruce was traversed from 46.5 - 47.5 km.

#### Description of Airstrip Site

The airstrip site is a nearly flat, northeast trending area with a slight crown near its north end. From the high point, it slopes about 2° southward for 460 m and about 3° northward for 180 m.

The site is underlain by silty till with mainly small angular (platy) rock fragments generally less than 10 cm in size. Occasional larger boulders are present.

The area was formerly forested with immature lodgepole pine and spruce which were burned in 1982 but are still standing.

Springs originate at the break in slope just west of the site and small water courses fed by these springs drain radially around the site. Also, some water from these springs has seeped across the south end of the airstrip site and created a thin (0 - 0.5 m) layer of organic material some 90 m across, resting on hard underlying till.

During airstrip construction, the crowned area was cut down about 1 m and material from the crown was used to fill over the organic deposit. Also, a ditch was cut along the western boundary of the airstrip to prevent further seepage.

The airstrip was cleared 640 m long by 80 m wide along a bearing of N37°E. Additional clearing of standing, burned trees was done for about 100 m at each end of the strip. A smoothed runway was constructed 525 m long by 40 m wide. Because of frost, the runway will require further smoothing in the summer before use.

A road was constructed from the north end of the airstrip to the main Mel showings some 1.6 km to the north. The road is underlain by silty till similar to the airstrip. An intermittent water course was crossed just north of the airstrip. Forest cover is standing, burned lodgepole pine and spruce.

Respectfully submitted,



D.C. Miller, P. Eng.

December 13, 1984

List of Personnel, Addresses and Dates Employed

- (1) D.C. Miller, c/o 11-1278 Dalhousie Drive, Kamloops, B.C.  
V2C 6G3  
August 10, August 13 - 31, September 5, October 3 - 31,  
November 1 - 30, December 5 - 7, December 11 - 13, 1984
- (2) M. Hudyma, c/o 136 Thor Drive, Kamloops, B.C. V2C 1P4  
August 13 - 31, 1984
- (3) A. Horne, R.R. 1, Chase, B.C.  
October 4 - November 8, 1984
- (4) Dease Lake Contractors Ltd., Dease Lake, B.C. V0C 1L0  
October 10 - November 26, 1984
- (5) K. Peters Contracting Ltd., P.O. Box 287, Watson Lake, Y.T.  
Y0A 1C0  
November 11 - 26, 1984

Cost Statement - Mel Access Road and Airstrip Construction

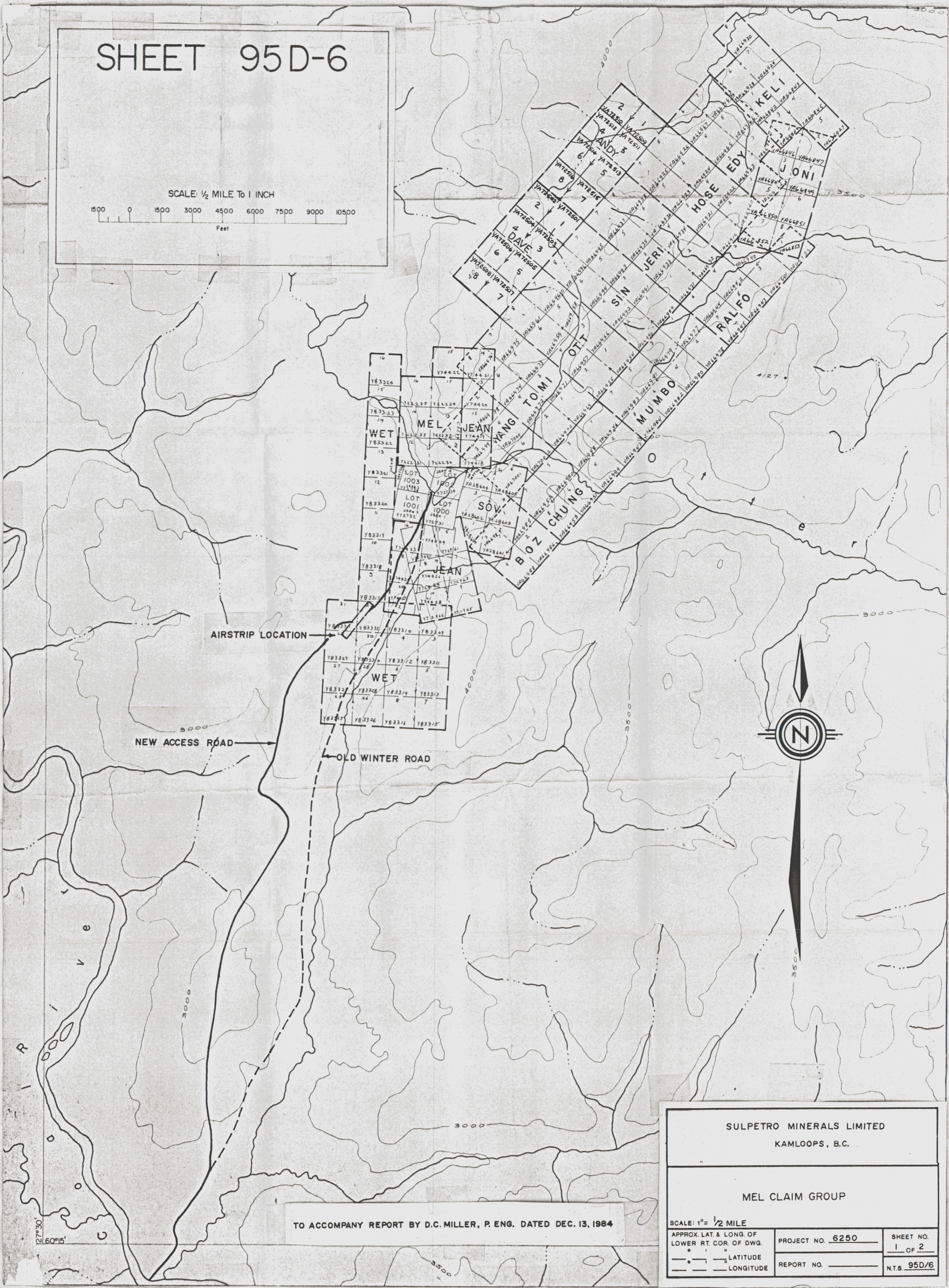
(A)	August 10 - September 5, 1984 - Flagging Road and Airstrip	
(1)	Wages and Salaries	
	40 man-days	\$ 6,350.00
(2)	Transportation	
(a)	Frontier Helicopters	
	6.1 hours	\$ 3,275.00
(b)	B.C. Yukon Air Service	\$ 718.64
(c)	1981 GMC Suburban	
	19 days at \$30/day plus fuel	\$ 1,008.24
(3)	Food and Accommodation	
	38 man-days	\$ 923.66
(4)	Flagging Consumed	\$ 82.80
(5)	Telephone	\$ 137.71
	Subtotal	<u>\$12,496.05</u>
(B)	October 3 - December 12, 1984 - Access Road and Airstrip Construction	
(1)	Wages and Salaries	
	101 man-days	\$18,550.00
(2)	Transportation	
(a)	1981 GMC 4 wheel drive Suburban	
	57 days @ \$30/day and fuel	\$ 2,956.08
(b)	Frontier Helicopters	
	2.4 hours	\$ 1,284.00
(c)	CP Air, A. Horne	\$ 335.00
(3)	Food and Accommodation	
	107 man-days	\$ 3,459.90
(4)	Contractor Charges (less room and board charges)	\$67,564.00
(5)	Fuel Charges	\$ 4,767.16

(6)	Mob and Demob Charges	\$ 2,248.60
(7)	Miscellaneous Costs - estimated (Northern Metallic Sales, Watson Lake Hardware & other)	\$ 522.56
(8)	Telephone - estimated	\$ 100.00
(9)	Land Use Permit	\$ 314.00
(10)	Typing and Reproduction - estimated	\$ 150.00
	Subtotal	<u>\$102,251.30</u>

TOTAL (A and B) \$114,747.35

# SHEET 95D-6

SCALE: 1/2 MILE TO 1 INCH



AIRSTRIIP LOCATION

NEW ACCESS ROAD

OLD WINTER ROAD



092665

127°30'  
60°15'

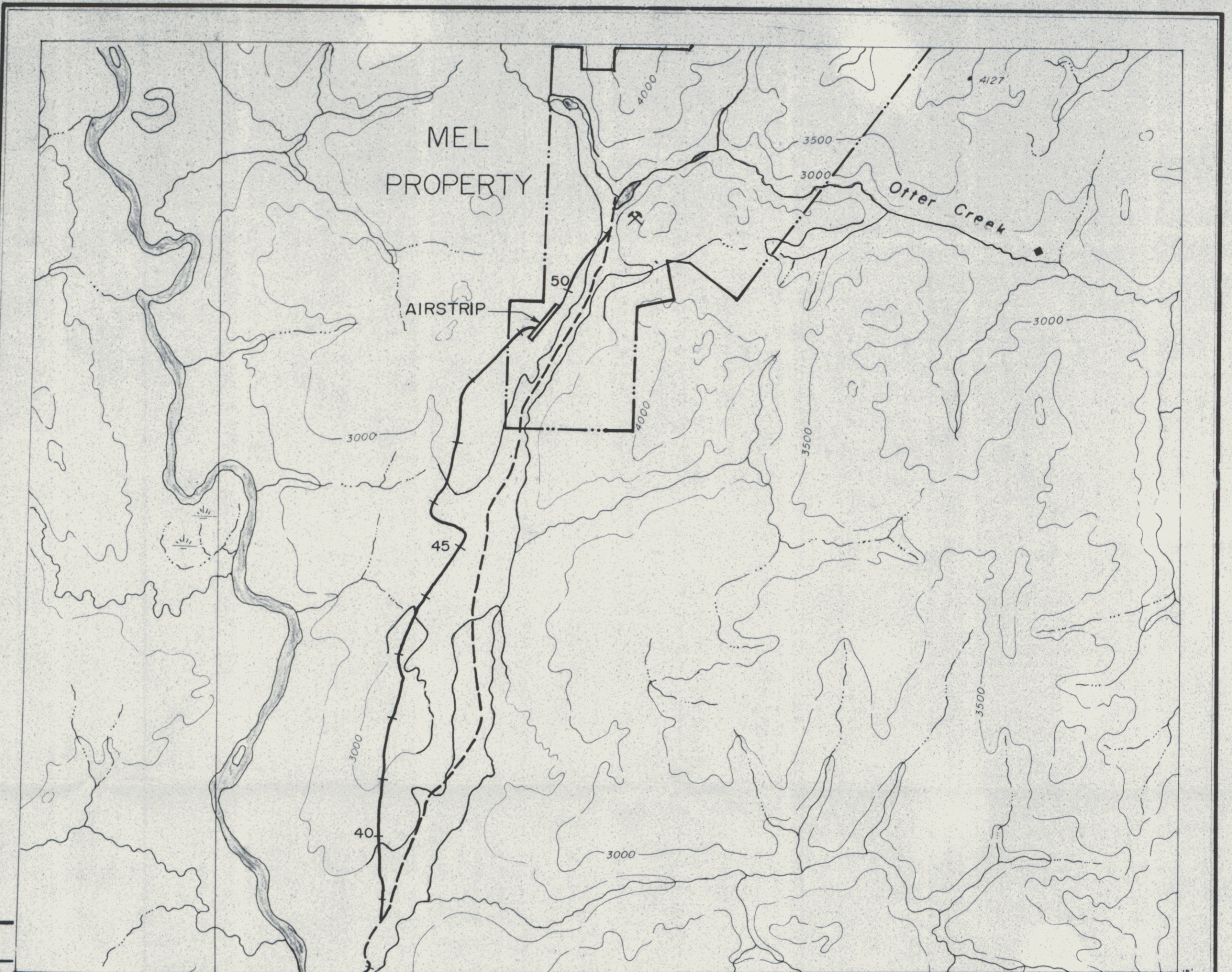
TO ACCOMPANY REPORT BY D.C. MILLER, P. ENG. DATED DEC. 13, 1964

SULPETRO MINERALS LIMITED KAMLOOPS, B.C.		
MEL CLAIM GROUP		
SCALE: 1" = 1/2 MILE	PROJECT NO. <u>6250</u>	SHEET NO. <u>1 OF 2</u>
APPROX. LAT. & LONG. OF LOWER RT. COR. OF DWG.	REPORT NO. _____	N.T.S. <u>95D/6</u>
—•—•— LATITUDE		
—•—•— LONGITUDE		

(19)

NATIONAL TOPOGRAPHIC SERIES

CANADA  
MINES AND TECHNICAL SURVEYS  
SURVEYS AND MAPPING BRANCH



IRONS CREEK  
YUKON TERRITORY

Scale 1:50,000

1:25 inches to 1 Mile approximately

SHOWED GREEN, YELLOW, AND BROWN AT LANTERN IN 1954  
Mines and Minerals Branch  
Geological Department, Dept.  
of Mines and Technical Surveys  
Ottawa, Ontario, Canada

Existing winter road  
New access road, distance in km  
30

092665  
TO ACCOMPANY A REPORT BY D.C. MILLER, P. ENG. DATED  
DEC. 13, 1984

**SULPETRO MINERALS LIMITED**  
TORONTO, CANADA

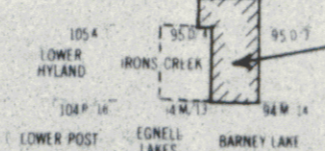
ROAD AND AIRSTRIP LOCATION  
MEL PROPERTY, YUKON

SCALE 1:50,000  
APPROX LAT & LONG OF LOWER RT. COR. OF DWG  
60° 00' 00" LATITUDE  
127° 15' 00" LONGITUDE  
PROJECT NO. 6250  
SHEET NO. 2 OF 2  
REPORT NO. NTS 950/3-6

REFERENCE

REFERENCE

INDEX TO ADJOINING SHEETS



ENLARGED FROM NTS SHEET 95 D  
NOTE CONTOURS AT 500' INTERVAL

IRONS CREEK  
95 D 1/4 EAST HALF