

GEOLOGICAL REPORT

on

TRUMAN PROPERTY

SALMO, B. C.

owned by J. W. MacLeod

in the

NELSON MINING DISTRICT

49° 04' 15" 117° 15' 00" 82 F/3

for

MENTOR EXPLORATION and DEVELOPMENT LTD.

by

E. A. LAWRENCE, P.ENG.

WESTBANK, B. C.

MARCH, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,152

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INTRODUCTION

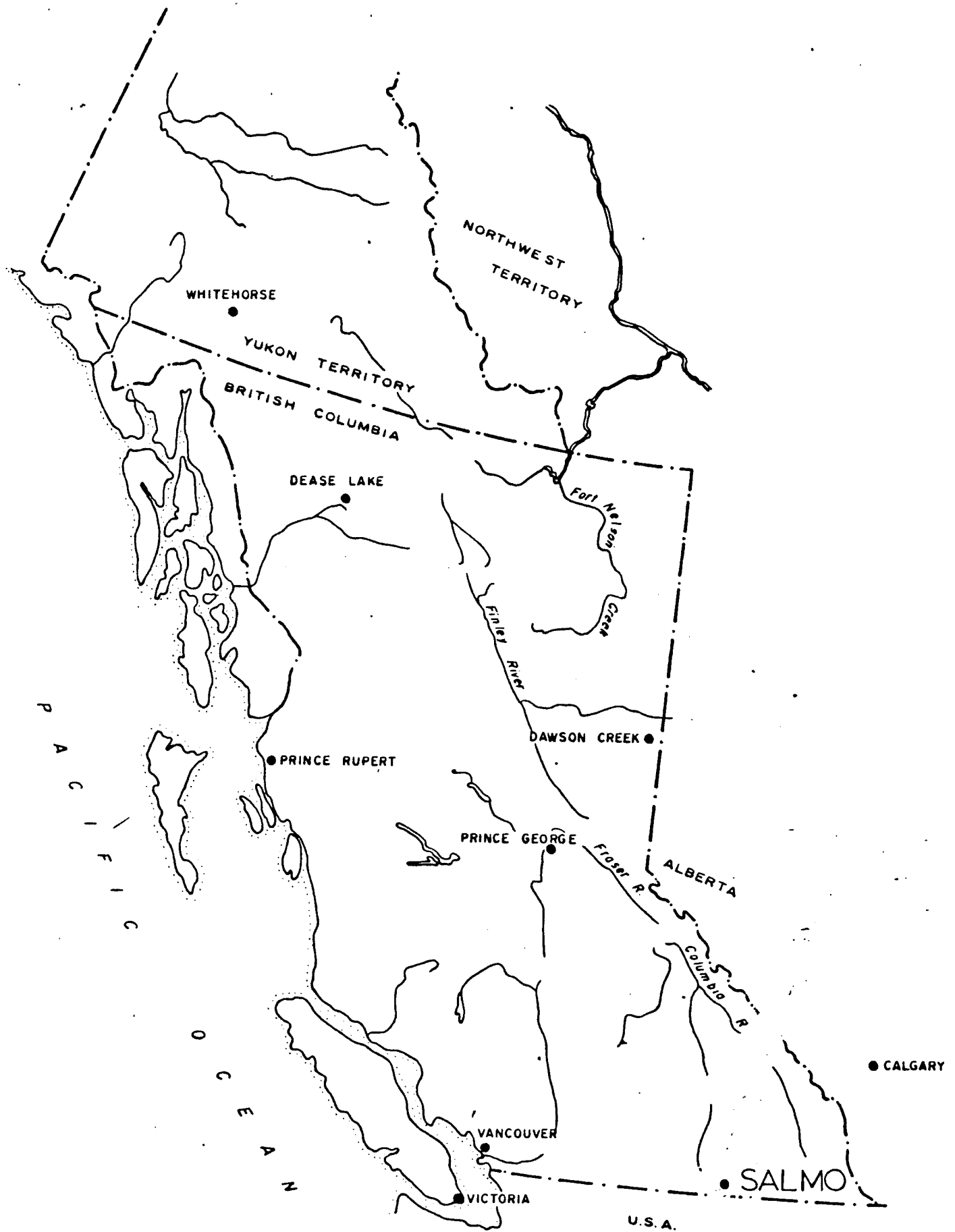
Location and Access

The Truman Group is located 13.5 kilometers south of Salmo, approximately 1.9 kilometers in an easterly direction up the south fork of the Salmo River from the junction of Highway 3 (Salmo-Creston Highway) with Highway 6 (Nelson-Nelway Highway). Access is by means of Highway 3 for about 1700 meters east from the junction with Highway 6 to the Lost Creek road. The Lost Creek gravel road provides access to that part of the Group north of Lost Creek. Access to those claims south of Lost Creek is by means of a road approximately 250 meters east of the Lost Creek bridge on Highway 3. This road leads to the top of Truman Hill.

Property Description

The Truman Group consists of 14 reverted crown grants, acquired in 1977 by J.W.MacLeod.

In July 1979, when an option with Placer Development was negotiated to permit exploration for tungsten on the Emerald property (part of Canadian Exploration Ltd. mining operation), the Truman Group was included in the package which included the Victory Group, the Emerald Group, the Black Rock Group, and the Tungsten King Group. Mentor Exploration and Development Ltd. of Toronto, Ontario was the principal operator behind the subsequent exploration carried out on the property.



LOCATION MAP

SCALE: 1" = 140 MILES APPROX.

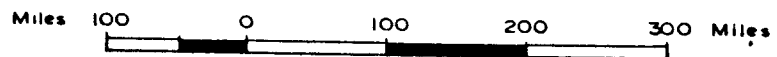
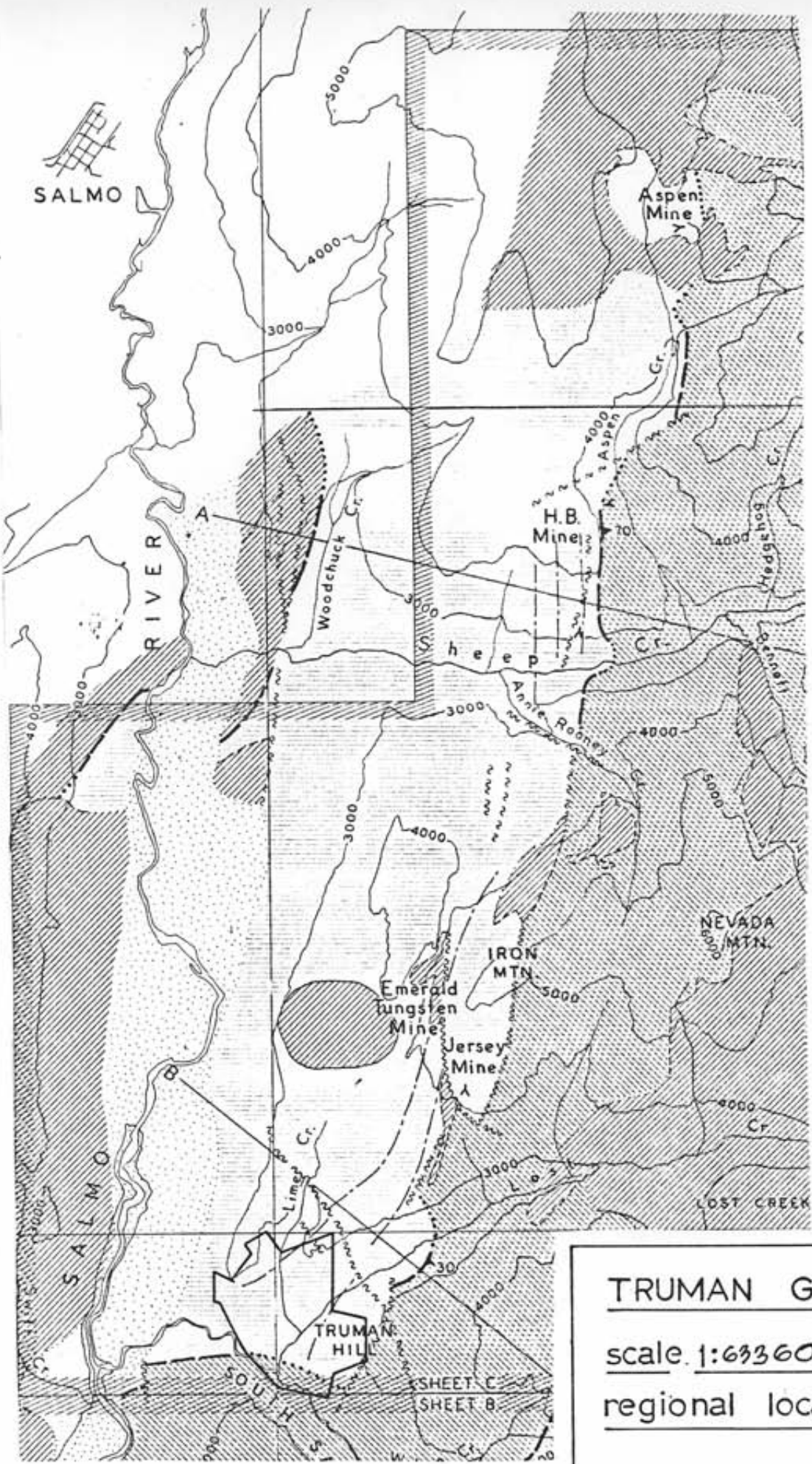


FIGURE 1

The following is a list of Claims in the Truman Group as at 1 February 1984:

| <u>Claim</u> | <u>Record No.</u> | <u>Record Date</u> | <u>Lapse Date</u> |
|------------------|-------------------|--------------------|-------------------|
| Truman No. 1 | 629(15468) | May 17 | 1985 |
| Truman No. 3 | 630(15469) | May 17 | 1985 |
| Truman No. 4 | 934(15470) | Feb. 2 | 1985 |
| Truman No. 2 | 933(15467) | Feb. 2 | 1985 |
| Truman No. 14 FR | 932(15466) | Feb. 2 | 1985 |
| Truman No. 6 | 931(15439) | Feb. 2 | 1985 |
| Truman No. 13 FR | 930(15438) | Feb. 2 | 1985 |
| Truman No. 12 FR | 928(15437) | Feb. 2 | 1985 |
| Truman No. 7 | 927(15436) | Feb. 2 | 1985 |
| Truman No. 5 | 926(15435) | Feb. 2 | 1985 |
| Truman No. 11 FR | 925(15434) | Feb. 2 | 1985 |
| Truman No. 10 | 924(15433) | Feb. 2 | 1985 |
| Truman No. 9 | 923(15432) | Feb. 2 | 1985 |
| Truman No. 8 | 922(15429) | Feb. 2 | 1985 |

Figure 3 shows the location of the Truman Group.



TRUMAN GROUP

scale 1:63360. drawn
regional location

figure2

History

The following is a resume of the property to about 1959, taken from Bulletin No. 41, "Stratigraphy and Structure of the Salmo Lead-Zinc Area" by J.T.Fyles and C.G.Hewlett, 1959; page 150:

"The original location of the Truman showings is not recorded, but the Trillion tunnel is reported to have been driven by L.R.Clubine about 1911. In 1927 the property was known as the Mona and was optioned by The Consolidated Mining and Smelting Company of Canada Limited, from W.H.Miller, of Salmo. This company drilled four diamond-drill holes totalling 2,073 feet, and dropped the option in 1928. The Truman group of seven claims was located in 1946 by L.R.Clubine, who subsequently added more claims to the group. Valley Mining Company, a subsidiary of New Jersey Zinc Company, held the claims under option in 1947 and carried out a programme of geological mapping and diamond drilling. Three holes totalling 624 feet were drilled about 500 feet south and 100 feet east of the top of Truman Hill. In 1949 the claims were optioned by Con-west Exploration Company Limited, and in 1950 they were optioned by American Zinc Company. The latter company subsequently purchased the claims from Mr. Clubine. Diamond drilling completed by American Zinc Company in January, 1954, comprised seventeen holes totalling 7,892 feet. Twelve of these holes were drilled on the south slope of Truman Hill, one hole was drilled about 200 feet southwest of the Trillion tunnel, and two holes were drilled north of Lost Creek. No work has been done on the property since 1954."

No reliable information is available to the author from 1959 to the present. It is believed that some additional work was carried out on the lead-zinc showing near the top of Truman Hill.

Economic Assessment

Lead Zinc

The occurrence of lead and zinc mineralization on the Truman property has been the principal reason for the exploration work carried out to date. The claims are located approximately 2700 meters southwesterly of Placer Development Ltd.'s Jersey-Emerald lead zinc mine, which ceased operation in 1970. This operation produced approximately 8 million tons grading 1.95% Pb and 3.83% Zn. The Truman Group is underlain mainly by the Reeves member of the Laib formation. The southeast slope of the Truman Hill area reportedly has two showings of lead-zinc with a thickness of 2 feet and 3 feet. The author has not examined these showings. Twenty-four holes have been drilled in the area, unfortunately the results are not presently available. It is believed that they can be located in Vancouver. The major lead-zinc deposits such as the Reeves-MacDonald, Jersey-Emerald, and HB mines are all within dolomite zones in the Reeves member.

Tungsten

The Emerald and Invincible tungsten mines produced from a zone where Reeves limestone and granite of the Nelson batholith are in contact. It is believed that the south extension of this contact passes through the Truman claims. This

would be a buried contact, the depth of which is not known at this time. Diamond drilling was carried out by Mentor in 1979 - 81 to test this contact zone. Figure 3 shows the location of the most southerly sections drilled by Mentor. This favourable limestone-granite contact appears to project into the Truman group, east of Truman drift as shown on Figure 4.

Silver

Silver mineralization is known to occur in the Reeves member as disseminated tetrahedrite in dolomite breccia. The type location for this occurrence is the Aspen showing, approximately 4 kilometers north of the HB mine, or approximately 13 kilometers north of the Truman Group. The Aspen property is reported to have a small tonnage of mineralization ranging from 4 to 8 ozs. silver per ton.

The Meadow View group is reported to be a similar type of deposit. It adjoins the Truman Group on the west. The possibility of silver occurring in the Reeves member on the Truman Group should not be overlooked in any future program. Three samples taken from apparently barren typical Reeves limestone in the Truman drift assay 3.4 ppm or 0.08 oz. per ton silver.

Geological Work Summary

The results obtained by the 1979 - 81 Mentor drilling program were correlated with the available geology on the Truman Group. The Truman drift was surveyed by compass and chain, mapped and sampled. See Figure 5. Three muck samples were collected from barren-looking typical Reeves limestone muck stockpiled underground. Assays showed an anomalously high 0.08 oz. silver per ton. Geological work by Canadian

Exploration Ltd. geologists was correlated with B.C. government geological mapping and more recent work by Mentor Exploration. Additional information on diamond drilling carried out in the 1950's may be available and should be located and examined prior to carrying out any further field work.

GEOLOGY

Objective

The objective of this report is to re-evaluate the data available from previous work, and to evaluate recent work in order that exploration goals can be established.

Tungsten Potential

Based on the coordination of the previously mentioned data, it appears that the tungsten potential is the highest priority of the three mineralization possibilities that exist. Figure 4 shows the location of the limestone-granite contact as determined by the Mentor diamond drilling program (north side of plan) and the projected location of this contact to the south.

This re-evaluation confirms the general structural and stratigraphic concepts that were developed in the 1950's as they related to the Jersey lead-zinc and the Emerald tungsten mines. The recent Mentor drilling program (1979 - 81) confirmed the general geological concepts, and also provided additional detail on the Emerald granite stock. This work contributed significantly to the data available for interpreting the granite stock surface, its general shape and depth. Mapping of the Truman drift revealed Reeves limestone

(medium to coarse grained white with vague grey banding), striking northerly with a 40 - 45 degree westerly dip. This suggests that the Truman drift is located slightly west of the crest of the overturned anticline, the axis of which trends slightly east of north. The contact of the overturned western limb of the anticline with the Emerald granite stock is the potentially favourable zone for tungsten mineralization of the Emerald type. Figure 6 is a theoretical section based on the compilation of presently available data. The granite surface elevation in this area is the biggest uncertainty, because drill data is sparse. The elevation used in this section is an extrapolation using data from recent drilling by Mentor Exploration on Mineral Claims L14762, 14763 and 14765. With this data available it has been possible to project the favourable Reeves limestone-Emerald granite contact area south to the Truman Group with improved confidence. It is reported that additional diamond drill data from programs carried out in the 1950's may be available. It is recommended that a diligent search for this material be undertaken in order to confirm the interpretation presented in this report prior to undertaking a drilling program.

Silver Potential

With respect to the possibility of silver-bearing tetrahedrite within the Reeves limestone, or dolomite, there is no data available from previous work. This is a new concept, based on the identification of the source of anomalous silver values in the Aspen showing as noted

earlier. The report of a similar occurrence of silver on the Meadow View property, suggests that the west area of the Truman Group in particular should be thoroughly prospected for this type of mineralization.

Lead Zinc Potential

The lead zinc potential on the Truman Group is located south of Lost Creek, and primarily near the summit of Truman Hill. Approximately 24 holes were drilled in the 1950's, the data from which is not presently available to the author. The showings should be re-examined and if possible the old diamond drill data re-evaluated. The Trillion drift located near the valley bottom by Lost Creek should also be examined, sampled and mapped.

Recommendations

As an initial phase it is recommended that additional geological field work, and analyses and evaluation of old diamond drill data be carried out in order to further evaluate the potential of the Truman Group for a) tungsten, b) lead-zinc and c) silver. Based on the results of this work, a decision could be made with respect to any follow-up work.

The following work is recommended:

a) Tungsten potential

- obtain old diamond drill data
- determine elevation of granite surface for the areas drilled
- determine and plot possible location of favourable Reeves limestone-Emerald granite contact
- determine cost of testing by diamond drilling
- recommend follow-up program of exploration

b) Lead-zinc potential

- obtain old diamond drill data and geological mapping
- evaluate data
- examine test pits and showings
- examine Trillion drift
- determine potential of lead-zinc
- recommend next phase of exploration if warranted

c) Silver potential

- examine type deposit if possible (Aspen showing)
- examine Meadow View if possible
- prospect west area of claims for similar environment
- carry out geochem sampling program if warranted
- evaluate results and submit future recommendations

Estimated Cost

| | <u>Tungsten</u> | <u>Lead</u> | <u>Zinc</u> | <u>Silver</u> | <u>Total</u> |
|---|-----------------|-------------|-------------|---------------|---------------|
| Geological research of old data | 750 | 750 | - | | \$1500 |
| Geological field work (including assistant) | 600 | 1500 | | 1500 | 3600 |
| Report preparation | 500 | 500 | | 500 | 1500 |
| Accommodation and meals | 400 | 300 | | 300 | 1000 |
| Transportation | 200 | 300 | | 300 | 800 |
| Assays | - | 300 | | 500 | 800 |
| Communications | 50 | 30 | | 20 | <u>100</u> |
| Total | | | | | <u>\$9300</u> |

COST SUMMARY

TRUMAN GROUP EVALUATION

| | | |
|-----------------------------------|-------------------------|------------------|
| Geological services - field work | 2 days @\$250/day | 500.00 |
| - office, travelling | 6 days @250/day | 1500.00 |
| - drafting | 3 days @\$150/day | 450.00 |
| Truck mileage | 1220 miles @\$0.25/mile | 305.00 |
| Accommodation | 5 days @\$29.96 | 149.80 |
| Assays | | 25.20 |
| Honda ATC rental | | 15.00 |
| Typing, map preparation | | 50.00 |
| Printing, photocopying | | 68.31 |
| Maps | | 3.21 |
| Telephone, postage, miscellaneous | | <u>22.08</u> |
| Total | | <u>\$3088.60</u> |

AUTHORS QUALIFICATIONS

I, Edward A. Lawrence of R.R.#1, S13, C17, Green Bay Road, Westbank, in the Province of British Columbia

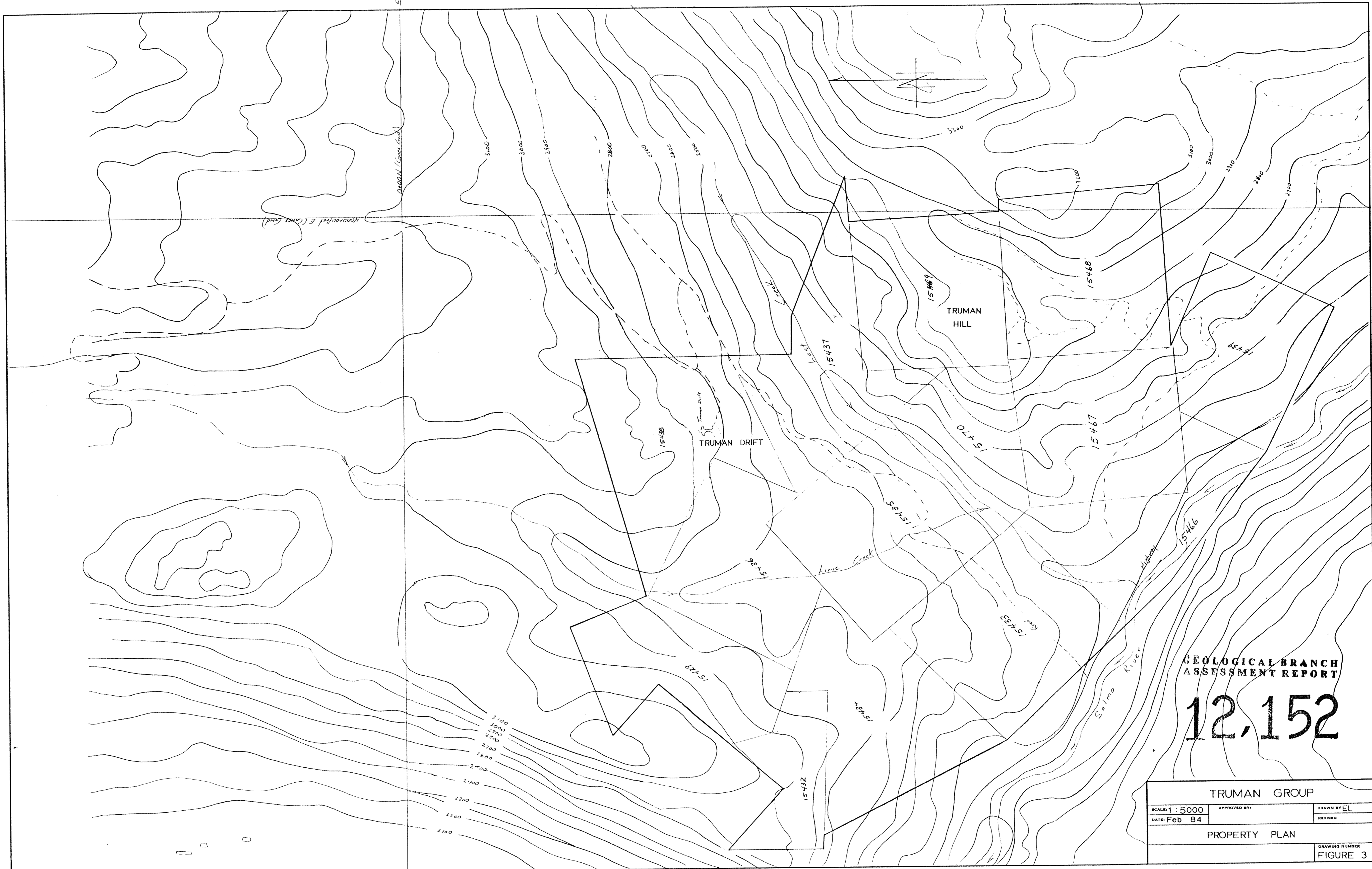
DO HEREBY CERTIFY:

1. That I am a Consulting Engineer, with a business address at R.R.#1, S13, C17, Green Bay Road, in the town of Westbank, in the Province of British Columbia.
2. That I am a graduate of the University of British Columbia with the degree of B.A.Sc. in Geological Engineering.
3. That I have actively practiced my profession in mineral production or mineral exploration since graduation in 1959.
4. That I am a registered Professional Engineer in the Province of British Columbia.
5. That I hold no interest, directly or indirectly in Mentor Exploration and Development Company Limited.



E. A. Lawrence, B.A.Sc.
Professional Engineer

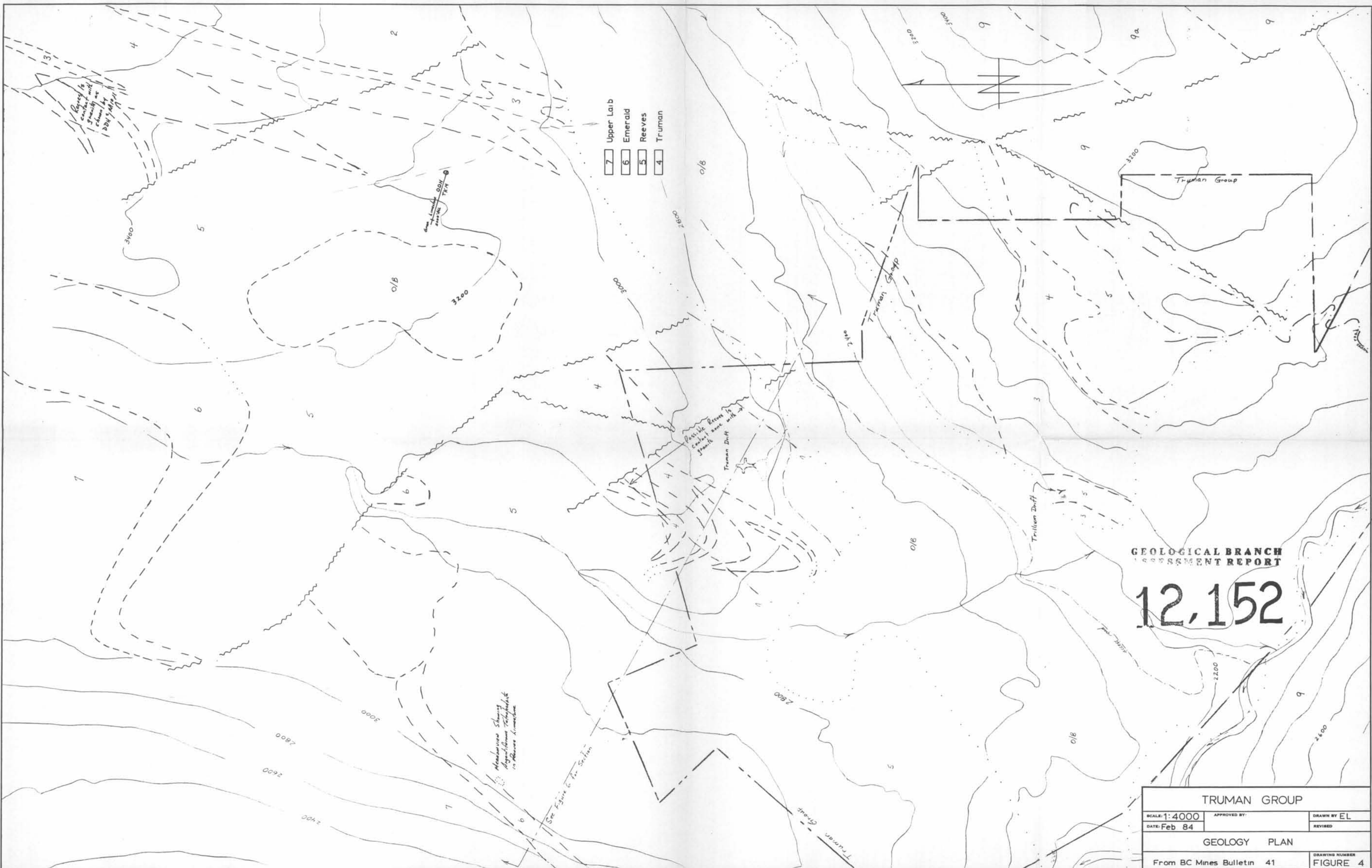
Dated at Westbank
Province of British Columbia
This 5th day of March, 1984



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| TRUMAN GROUP | | |
| SCALE: 1 : 5000 | APPROVED BY: | DRAWN BY: EL |
| DATE: Feb 84 | | REVISED: |
| PROPERTY PLAN | | |
| | | DRAWING NUMBER |
| | | FIGURE 3 |

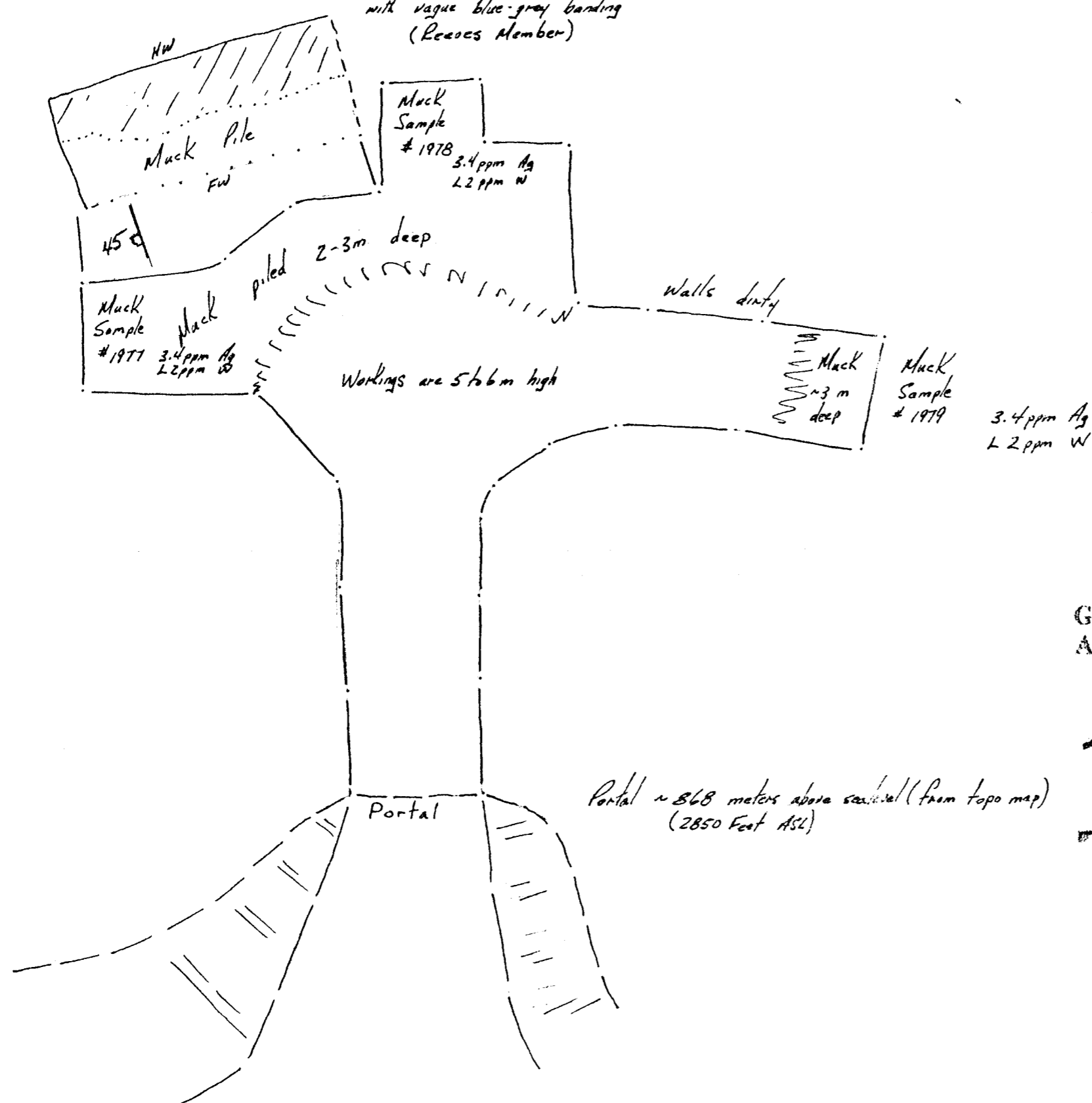


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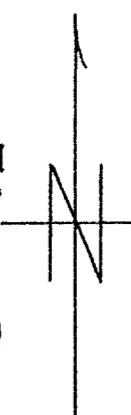
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|---------------------------|----------------------------|--------------|
| TRUMAN GROUP | | |
| SCALE: 1:4000 | APPROVED BY: | DRAWN BY: EL |
| DATE: Feb 84 | | REVISED: |
| GEOLOGY PLAN | | |
| From BC Mines Bulletin 41 | DRAWING NUMBER FIGURE 4 | |

Mainly med to coarse white limestone
with vague blue-gray banding
(Reeves Member)



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Portal ~ 868 meters above sea level (from topo map)
(2850 Feet ASL)

| | | |
|----------------------|--------------|----------------------------|
| TRUMAN GROUP | | |
| SCALE: 1 : 250 | APPROVED BY: | DRAWN BY EL |
| DATE: 18/2/84 | | REVISED |
| TRUMAN DRIFT GEOLOGY | | |
| | | DRAWING NUMBER FIGURE 5 |