

91 #187-# 9063

DIAMOND DRILLING

REPORT ON

TRUMAN GROUP

SALMO AREA

NELSON MINING DIVISION

82F3 E & W 49° 05' 117° 15'

for

MENTOR EXPLORATION & DEVELOPMENT COMPANY LTD.

by

J.W. MacLeod, P. Eng.

VANCOUVER, B.C.

MARCH 23, 1981

MINERAL RESOURCES
ASSESSMENT REPORT
9063
NO. _____

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DIAMOND DRILLING REPORT

on

TRUMAN GROUP

SALMO, B.C.

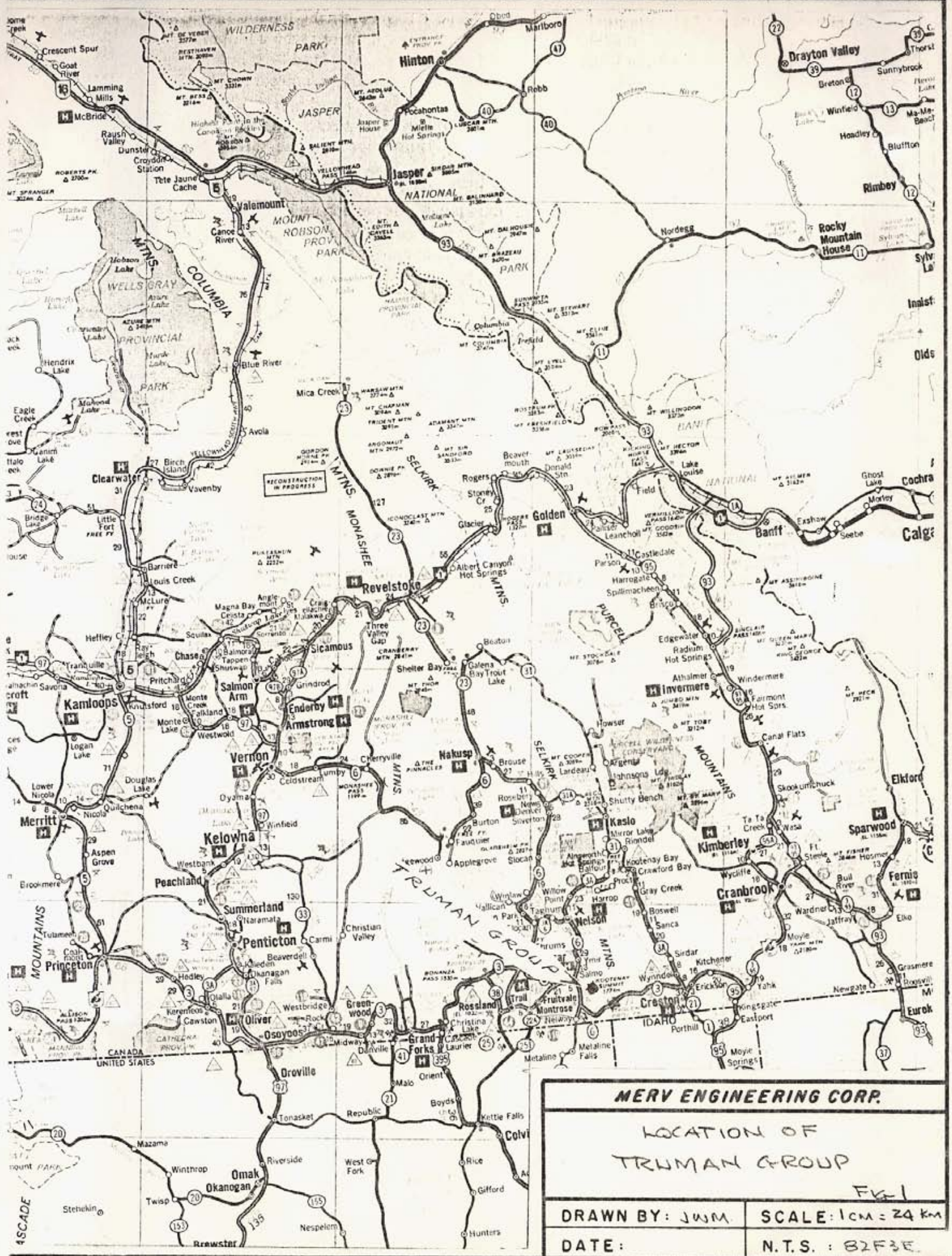
INTRODUCTION

The following report has been compiled to fulfil the requirements of the Dept. of Mines, Energy and Petroleum Resources for filing diamond drill expenses for assessment purposes.

SUMMARY

Mentor Exploration and Development Co. Ltd. has under option a large block of ground in the vicinity of and including the old Emerald Tungsten property on which a diamond drill program is being carried out to explore for the down plunge extension of the previously mined Emerald orebodies.

The Truman Group is a portion of the Mentor option and three holes, M3, M4 and M1D have been completed on this group. A drilling report covering holes 3 and 4 was filed in May. Hole 1D is a followup of the indications obtained in holes 3 and 4.



MERY ENGINEERING CORP.

LOCATION OF
TRUMAN GROUP

Fig. 1

DRAWN BY: JWM	SCALE: 1cm = 24 km
DATE:	N.T.S. : 82F3E

PROPERTY

The Truman Group consists of the following Crown Grants
and reverted Crown Grants:

<u>CLAIM NAME</u>	<u>RECORD #</u>	<u>CROWN GRANT LOT #</u>
Truman No. 1	629	15468
Truman No. 3	630	15469
Truman No. 8	922	15429
Truman No. 9	923	15432
Truman No. 10	924	15433
Truman No. 11 Fr.	925	15434
Truman No. 5	926	15435
Truman No. 7	927	15436
Truman No. 12 Fr.	928	15437
Truman No. 13 Fr.	930	15438
Truman No. 6	931	15439
Truman No. 14 Fr.	932	15466
Truman No. 2	933	15467
Truman No. 4	934	15470
Contact		14762
Comet		14761
Den No. 1 Fr.		15041
Tungsten King No. 1 Fr.		14766
Stan Fraction		14764
Big Dick		14882
Royal Canadian		12115
Last Chance		12116
Victor Fraction		14888
Mark Tapley		12117
Pickwick		12087

<u>CLAIM NAME</u>	<u>RECORD #</u>	<u>CROWN GRANT LOT #</u>
WO #2	440	
WO 3	2046	
WO 5	2048	
WO 7	2050	
WOW	536	
Victory	354	15842
Victory Fr.	355	15843
Udiville No. 1		15853
Last Chance	356	15844
Lucky Jim Fr.	357	15845
Lucky Jim	358	15846
Ed No. 1 Fr.	359	15847
Ed No. 2	360	15848
RMM No. 4	361	15849
Ed No. 2 Fr.	362	15850
Udiville	320	15851
Udiville No. 2	363	15852
RMM No. 2	364	15854
RMM No. 3	365	15855
Big Duluth	425	5626
Alice	426	5627
Hattie B	427	5628
Amco 1	524	15395
Amco 2 Fr.	525	15396
Amco 3 Fr.	526	15397
Amco 4	527	15398
Amco 5	528	15399
Amco 6	530	15400
Amco No. 8	428	15402
Amco No. 10	429	15404
Amco No. 13	430	15640
Amco No. 18 Fr.	431	15644
Amco 42 Fr.	435	15655

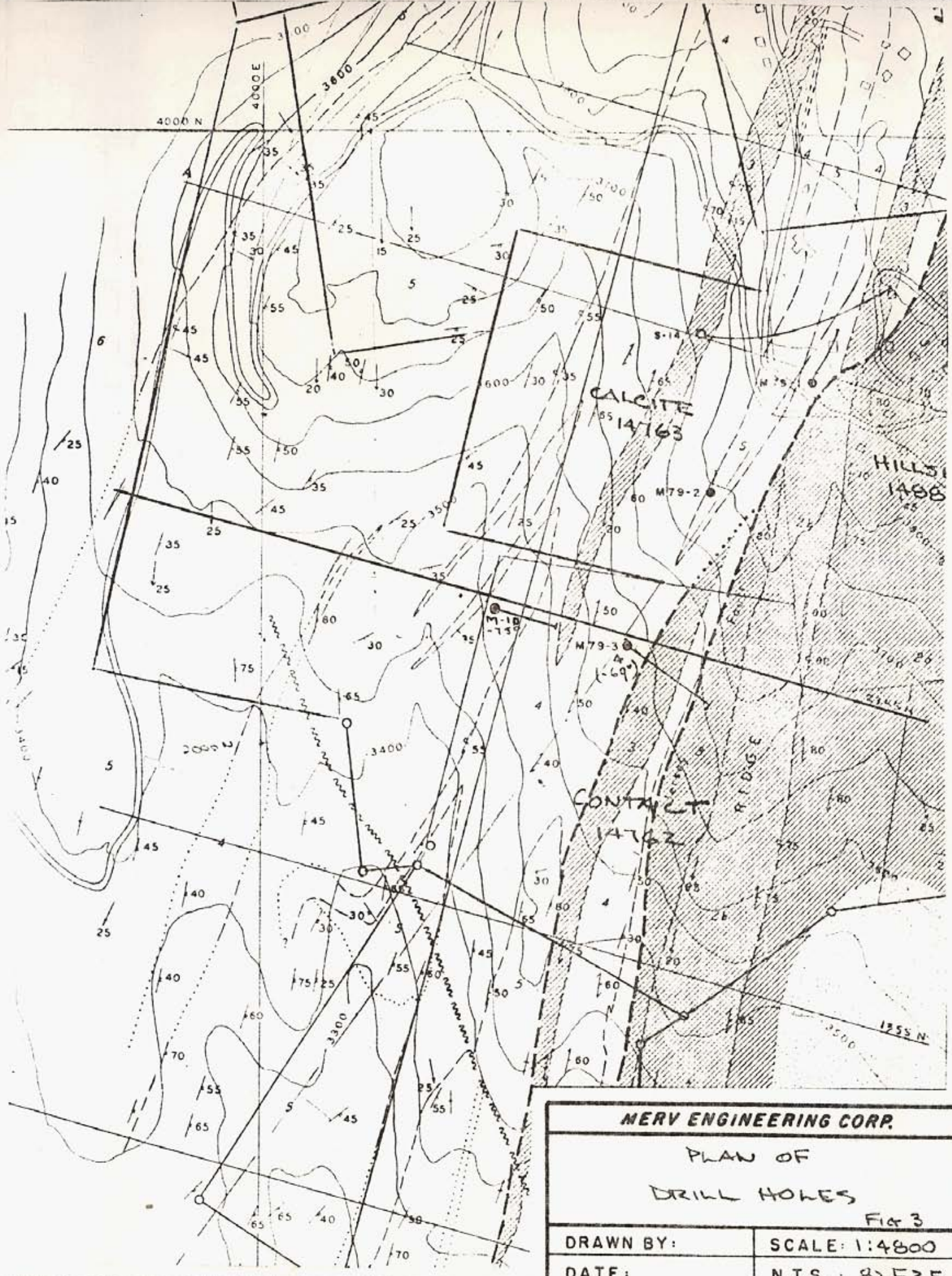
<u>CLAIM NAME</u>	<u>RECORD #</u>	<u>CROWN GRANT LOT #</u>
Amco No. 23 Fr.	432	15646
Gold Crown	433	10014
Gold Crown Fr.	434	10047

LOCATION & ACCESS

The Emerald Tungsten property is located 11 km south of Salmo and is accessible via 6 km on highway 3, then 7 km of good gravel road up the hill to the tungsten occurrences at elevation 1150 metres.

HISTORY

The Truman Group consists of 96 units made up of crown grants, reverted crown grants, grid staking and two post staking. There are a number of old showings of lead-zinc, tungsten and molybdenum on what is now the Truman Group and these occurrences have had considerable attention in the form of drilling and old adits over the past 60 years.



MERY ENGINEERING CORP.	
PLAN OF DRILL HOLES	
Fig 3	
DRAWN BY:	SCALE: 1:4800
DATE:	N.T.S. : 82F3E

GEOLOGY

The geology of the Salmo area is covered by B.C. Dept. of Mines Bulletin No. 41 by Fyles and Hewlett. Figure 3, taken from Bulletin 41, shows the geology in the vicinity of the Truman Group.

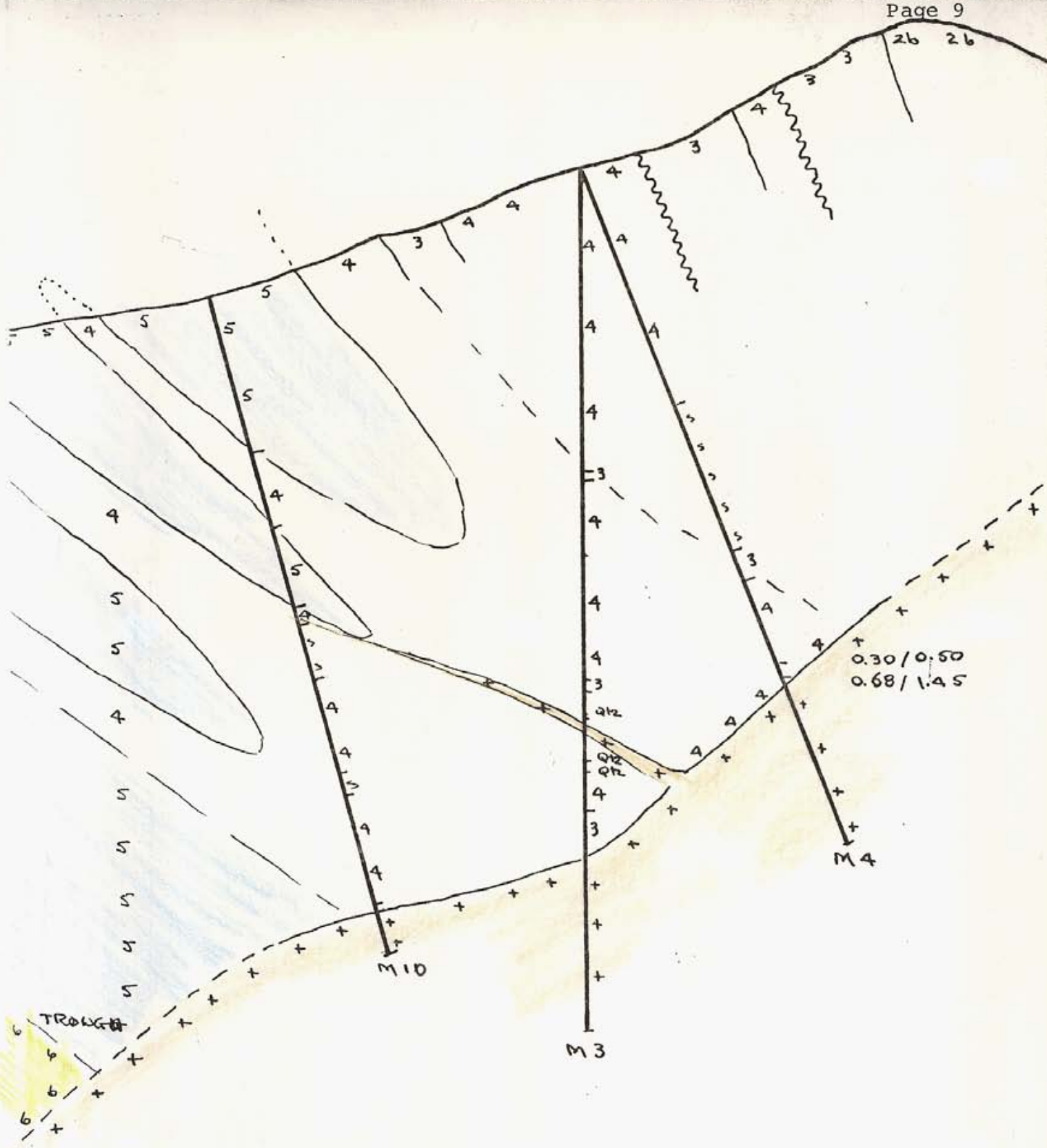
Here, as in all of the Kootenay Arc, the Reeves Limestone is the significant unit since it hosts the lead-zinc and tungsten orebodies. Through the property, the limestone is found as an overturned anticline.

The main tungsten orebodies occur as replacements in the limestone close to the upper contact with the Emerald Argillite where these rocks are intruded by granite. At the Emerald zone, this contact plunges to the south at 25° and is referred to as a "trough."













DIAMOND DRILLING




















AQ size core stored at the H.B. Mine

Mentor Exploration and Development Co. Ltd. instigated a program to explore for the extension of the Emerald ore zone down plunge to the south. This program anticipated a hole depth of 500 to 550 metres and holes 1 and 2 confirmed this interpretation but holes 3 and 4, drilled on the Truman Group, intersected granite much higher than expected. If this is the main granite mass and not a dike, the favorable "trough" will be located 150 metres to the west as shown on Figure No. 4. Hole 1D was



MERV ENGINEERING CORP.	
CROSS SECTION	
HOLES 3.4 + 10 FG. 4	
DRAWN BY: JWH	SCALE: 1:2000
DATE:	N.T.S. : 82F3E

-  Areas of little or no outcrop
-  Granite
- ACTIVE FORMATION**
-  Block argillite
- LAIB FORMATION**
-  Upper Laib: green, grey, and brown phyllite
-  Emerald member: black argillite
-  Reeves member: limestone
-  dolomite
-  Truman member: brown argillite, skarny argillite, siliceous argillite, minor skarn, and limestone
- RENO FORMATION**
-  Mainly skarn
- QUARTZITE RANGE FORMATION**
-  Brown micaceous and grey blocky quartzite
- Navada Member**
-  Upper - white quartzite
-  Lower - brown micaceous quartzite, minor white beds

- Geological contact**
-  defined
-  approximate
-  inferred
- Bedding fault**
-  approximate
-  inferred
- Transverse fault**
-  approximate
-  inferred
- Attitude of bedding and banding**
-  right side up
-  overturned
-  top not known
-  vertical
- Attitude of foliation**
-  inclined
-  vertical
- Axes of directions**
-  plunging
-  horizontal
-  Underground workings
-  Open pit
-  Road
-  Building

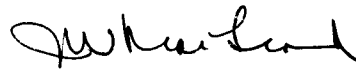
MERV ENGINEERING CORP.	
LEGEND FOR PLANS AND SECTIONS FIG. 5	
DRAWN BY:	SCALE:
DATE:	N.T.S.:

drilled to test the indications provided by 3 and 4 and again intersected granite higher than anticipated.

RECOMMENDATIONS

A drill hole is recommended to test the position of the favorable "trough" as indicated by the results of holes 3, 4 and 1D.

Respectfully submitted,



J.W. MacLeod, P. Eng.

Vancouver, B.C.
March 23, 1981

APPENDIX I

DRILL LOG

HOLE 1D

DIAMOND DRILL RECORD

PROPERTY SOUTH EMERALD TUNGSTEN HOLE No. 10
 SHEET NUMBER 1 SECTION FROM 2275 o. STARTED Jan. 21, 1981
 LATITUDE 2486 DATUM _____ COMPLETED Feb. 1, 1981
 DEPARTURE 4792 BEARING 105° ULTIMATE DEPTH 258.1
 ELEVATION _____ DIP -75° PROPOSED DEPTH _____
See Tropari Summary

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	Truman								
0-7.0	White mg sugary ls with faint banding @ 45°								
7.0-10.0	Grey mg ls with fine brown banding @ 40°								
10.0-14.0	Grey mg sugary ls with faint banding @ 30°								
14.0-22.0	Red brown garnetiferous grey ls faint banding @ 25°								
22.0-23.7	Greyish fg argillite with dk specs biotite Bdg @ 25° Contact tight. Several irregular 0.5 cm pyrite bands								
23.7-56.15	Grey mg ls with vague brown bands @ 30m=20°, 40m=11° Occas. section with garnet, occas. brown argillite. Bdg @ 50m = 25°								

NORTHERN MINER FORM 505 REV./54

DRILLED BY _____

SIGNED _____

Logged by E. Lawrence, P. Eng.

DIAMOND DRILL RECORD

PROPERTY South Emerald Tungsten HOLE No. 10
 SHEET NUMBER 2 SECTION FROM TO STARTED.....
 LATITUDE..... DATUM..... COMPLETED.....
 DEPARTURE..... BEARING..... ULTIMATE DEPTH.....
 ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
56.15-91.3	Greyish-black fg. argillite								
	with dark specs biotite (as 22.0-23.7)								
	Numerous 0.5 cm qtz veinlets, not parallel with banding								
	Occas. vein has altered argillite								
	to leucocratic siliceous								
	mat'l up to 2 cm in width.								
	Bdg 15° @ 70m								
	Sections of pistachio green								
	alteration (fine grained epidote?)								
	from 74.2 to 75.0. Feathery								
	appearance. Bdg 25° @ 75m								
	Banded pale green diopside								
	80.1 to 80.35 Garnetiferous grey								
	mg limestone to 80.8 Bdg 10°								
	@ 86m								
	Varied assemblage of green,								
	brown, pink and white silicates at								

NORTHERN MINER FORM 505 REV./84

DRILLED BY _____

SIGNED _____

DIAMOND DRILL RECORD

PROPERTY..... HOLE No. 10
 SHEET NUMBER 3 SECTION FROM..... TO..... STARTED.....
 LATITUDE..... DATUM..... COMPLETED.....
 DEPARTURE..... BEARING..... ULTIMATE DEPTH.....
 ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	83.6, 87.8, 90.4, 90.6.								
	Appears to be altered out from central vein. Bdg 20° @ 91m								
	Pink mineral may be rhodonite								
	White mineral probably quartz								
	Green mineral is in elongate crystals @ 90.4, (similar in shape to hornblends) but pale green color.								
91.3-123.5	Grey f.g. limestone	001Q	118.0	119.0					
	fairly banded	002Q	119.0	119.9					
	numerous fine 0.1 cm veinlets of white calcite at 90° to CA	003Q	119.9	121.25					
	Bdg 15° @ 123m	004Q	121.25	122.25					
		005Q	122.25	123.8					
123.5-126.0	Watery quartz vein with occas. fracture with pale green mineral.								
126.0-129.9	Brown banded argillite with								

DIAMOND DRILL RECORD

PROPERTY..... HOLE No. 10
 SHEET NUMBER 4 SECTION FROM..... TO..... STARTED.....
 LATITUDE..... DATUM..... COMPLETED.....
 DEPARTURE..... BEARING..... ULTIMATE DEPTH.....
 ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	occas. altered section.								
	Alteration appears to follow								
	fine fractures 90° to CA								
129.9-130.	F.g white aplite dyke with fine								
	mgnt, pyr, MoS2 129.75-129.95								
	True width with 7cm. Oriented								
	with 20° CA, 180 out of phase								
	with banding.								
129.9-151.5	Garnetiferous limestone								
	Only 5-10% unaltered limestone								
	135 to 138 brown banded argillite								
	Bdg 15° @ 136								
	3cm disseminated blue grey fine								
	grained mineral (probably MoS2)								
	in garnetiferous area								
	Bdg 0 @ 145m, 25° @ 148m,								
	0 @ 149m.								
151.5-155.45	Leuco f.g. granite dyke								

DIAMOND DRILL RECORD

PROPERTY..... HOLE No. 10
 SHEET NUMBER 5 SECTION FROM..... TO..... STARTED.....
 LATITUDE..... DATUM..... COMPLETED.....
 DEPARTURE..... BEARING..... ULTIMATE DEPTH.....
 ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	Slight calcitic alteration								
155.45-161.5	Altered argillite								
	155.45-158.5 Highly garnetiferous								
	Bdg 5° @ 159m								
	158.5-161.5 Brown banded argillite								
	with diopside interbands								
	Bdg 10° @ 160, 5° @ 162m								
161.5-184.95	Dark brown finely banded micaceous argillite								
	occas. feathery epid? alter'n								
	assoc. with cross fract or								
	qtz vein.								
	Qtz veins range from 0.1cm to								
	2cm Bdg 25°								
	Lt. colored silicfd zone 179 to								
	184. Fine pyrrh. Bdg 20° assoc.								
	with qtz veining 182 to 184.								
	Conformable tight contact								

NORTHERN MINER FORM 505 REV./84

DRILLED BY..... SIGNED.....

DIAMOND DRILL RECORD

PROPERTY..... HOLE No. 10
 SHEET NUMBER 6 SECTION FROM..... TO..... STARTED.....
 LATITUDE..... DATUM..... COMPLETED.....
 DEPARTURE..... BEARING..... ULTIMATE DEPTH.....
 ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	at 184.95 @ 60° Bdg 30° 178m								
	10° 181m								
	50° 184m								
184.95 to									
187.5	Reddish brown mottled garnetiferous limey skarn.								
187.5-190.5	Grey mg ls with thin brown banding @ 25°								
190.5-197.0	Light green banded diopside skarn. Bdg with 30°								
197.0	Many small qtz cross cutting veinlets, evidence of considerable fracturing, healed by silicfn.	006Q	193.7	194.15					
	Bdg @ 30° CA. Rusty, broken qtz vein @ 195m	007Q	195.0	195.1					
197.0-203.0	Grey mg. ls with thin brown banding @ 35°								

DIAMOND DRILL RECORD

PROPERTY..... HOLE No. 10
 SHEET NUMBER 7 SECTION FROM..... TO..... STARTED.....
 LATITUDE..... DATUM..... COMPLETED.....
 DEPARTURE..... BEARING..... ULTIMATE DEPTH.....
 ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	Silic zone @ 199m shows evidence of late movement along qtz veinlet.								
203-0-241.75	Brown banded argillite with occas. sections of silicn and and yellow green epid? altern.	0080	211.9	212.4					
	Very fine scat. MoS2	from sample)							
	10cm qtz vein @ 212m Bdg @ 30 CA								
	Garnetiferous 212.5 to 214.0								
	Fractured @ granite contact for 0.25m. Muddy at contact.								
241.75-258.1	Granite								
	Healed breccia for 0.2m into granite								
	Leuco-qtz poor to 244. Few mafics.								
END OF HOLE	More mafics. 244-247.8 as biotite, hornblende.								
	Zone of qtz vein with pink feldsp.								
	247.8 to 248.5								

DIAMOND DRILL RECORD

PROPERTY..... HOLE No. 10

SHEET NUMBER 8 SECTION FROM..... TO..... STARTED.....

LATITUDE..... DATUM..... COMPLETED.....

DEPARTURE..... BEARING..... ULTIMATE DEPTH.....

ELEVATION..... DIP..... PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAY VALUES			
	occas. narrow rusty vugs, Dendritic fine grey metallic on some fractures (Manganire?) Uniform f to mg with vague crystal outlines, minor mafics to end								
	of hole. Occas. coarse muscovite?								
	0.1m mylonitic zone @ 50° CA @ 0								
	254.2m								
	Note: comparison with granitic in M3, M5, M9 shows the following								
	M9 - nearly identical in grain size and composition.								
	M3, M4- finer, less mafics than M3, M4.								
	END OF HOLE								

APPENDIX II

EXPENDITURE

Hole 10 \$17,299.55

Kootenay Exploration Drilling Contracting Co. Ltd.

Rosland, B. C.

Feb. 5, 1981.

Mentor Exploration and Development Ltd.

Ste. 300, 365 Bay St.

Toronto, Ont.

M5H 2V1

*CKA DHB
Feb 26/81*

Invoice

To diamond drilling Salmo, B.C. properties.

DDH M-10, 0 to 600 ft. @ \$15.00/ft. -----	\$9000.00
600 to 847, 247 ft. @ \$18.00/ft. -----	4446.00
Core-boxes used, 36 @ \$5.00 ea. -----	180.00
Tro-Parl tests, 5 taken, 4 hrs. @ \$29.00/hr. -----	<u>116.00</u>
total	\$13,742.00
Less diamonds charged to Mentor by mistake-	
J.K. Smit inv. 193-7-80 -----	111 670.00

total invoice \$13,072.00 *KL*

[Signature]
17 Feb 81

W.P. Galbraith

RECEIVED JAN 20 1981

STATEMENT

To: Mentor Exploration and Development Limited, in account with E. A. Lawrence for Geological Services for the period January 18th to the 22nd, 1981.

Balance owing @ December 20, 1980	\$1663.34
Less: Payment received as of January 22, 1980	1663.34

Current Period

Geological Services - 4 days @ \$225.00 per day	\$900.00
4 X 4 Rental - 4 days @ \$25.00 per day	100.00
4 X 4 Mileage - 528 miles @ \$0.25 per mile	132.00
Groceries	29.18
Supplies	6.97
Phone Bill (Salmo - Nov., Dec., Jan.)	203.40
Company calls on personal phone	48.95
Personal calls on Salmo phone (Credit)	(5.66)
Water License application fee	<u>604.00</u>
Total for current period as at January 23, 1981	\$2018.84

604.00

\$1414.84 - For Assessment Purposes

Please send payment to this address:

E. A. Lawrence
R.R.#1, S13, C17
Green Bay Road
Westbank, B. C.

VOH 2A0

Handwritten: 10.34
Jan 30/81

Handwritten signature and scribbles

STATEMENT

To: Mentor Exploration and Development Limited, in account with E. A. Lawrence for Geological Services for the periods January 27 - 31, 1981; February 3 - 6, 1981 and February 11 - 13, 1981.

Balance owing @ January 23, 1981	\$2018.34
Less: payment received as of February 4, 1981	2018.34

Salmo Visits

Geological Services - 7 days @ \$225 per day	\$1575.00
4 X 4 Renatal - 6½ days @ \$25 per day	162.50
4 X 4 Mileage - 1046 miles @ \$0.25 per mile	261.50
Groceries	75.80
Supplies	6.04
Wages (for survey helper, core splitting, labelling etc.)	80.00
Notary fee, Registered mail, Sample freight	10.45
Company calls on personal phone	<u>34.32</u>
Total	\$2205.61 ✓

Vancouver Trip (February 11 - 13, 1981)

Geological Services - 2 days @ \$225 per day	\$450.00
Travel - 302 miles @ \$0.25 per mile	75.50
Lodging - 2 nights	50.70
Meals	20.90
Parking	<u>10.00</u>
Total	\$607.10 ✓

Grand Total as at February 17, 1981

\$2812.71 ✓

Please send payment to this address:

E. A. Lawrence
R.R.#1, S13, C17
Green Bay Road
Westbank, B. C.

VOH 2AO

*OKA 1049
February 25-81*

APPENDIX III


ENGINEERS CERTIFICATE

CERTIFICATE

I, James W. MacLeod, of 1220 Arbutus Street, in the City of Vancouver, in the Province of British Columbia,

DO HEREBY CERTIFY:

1. That I am a Consulting Engineer, with a business address at #1450-625 Howe Street, in the City of Vancouver, in the Province of British Columbia.
2. That I am a graduate of the University of Alberta with the degree of B. Sc. in Mining Engineering.
3. That I have actively practiced my profession in mineral exploration since graduation in 1946.
4. That I am a registered Professional Engineer in the Province of British Columbia.
5. That I have been associated with the Mentor Exploration and Development Co. Ltd. program in the Salmo area for the past three years and that hole 1D was logged by E. Lawrence, P. Eng.



J.W. MacLeod, B. Sc., P. Eng.

Dated at the City of Vancouver,
Province of British Columbia,
This 23rd day of March, 1981.