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**GEOLOGICAL REPORT
TAM 1-8 MINERAL CLAIMS
GOLDEN MINING DIVISION
82K/15E**

FILMED

51° 25' LATITUDE, 116° 32' LONGITUDE

**FOR: CANADIAN OCCIDENTAL PETROLEUM LTD.,
1500, 635 - 8th Ave. S.W.
CALGARY, ALBERTA T2P 3Z1
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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

19,416

November 30, 1989

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1.0 INTRODUCTION

1.1 Location and Access

The Tam 1-8 mineral claims are located approximately 13 kilometres west of the village of Spillimacheen, East Kootenay district, British Columbia. The claims cover a prominent ridge of magnesite located between the Spillimacheen River to the north and Driftwood Creek to the south. The Tam 1-6 claims cover crown land, whereas the Tam 7-8 claims cover crown land and partially cover land with privately held timber rights.

Access to the claim group is via excellent gravel road which leaves highway #95 at Brisco as the Brisco Road and then continues west after 4.9 kilometres as the Bugaboo Creek Logging Road. At 23.3 kilometres on the Bugaboo Road heads northwest to the west end of the Tam 1-2 claims and the west end of the baseline (see Figures 1a & 1b).

1.2 Physiography

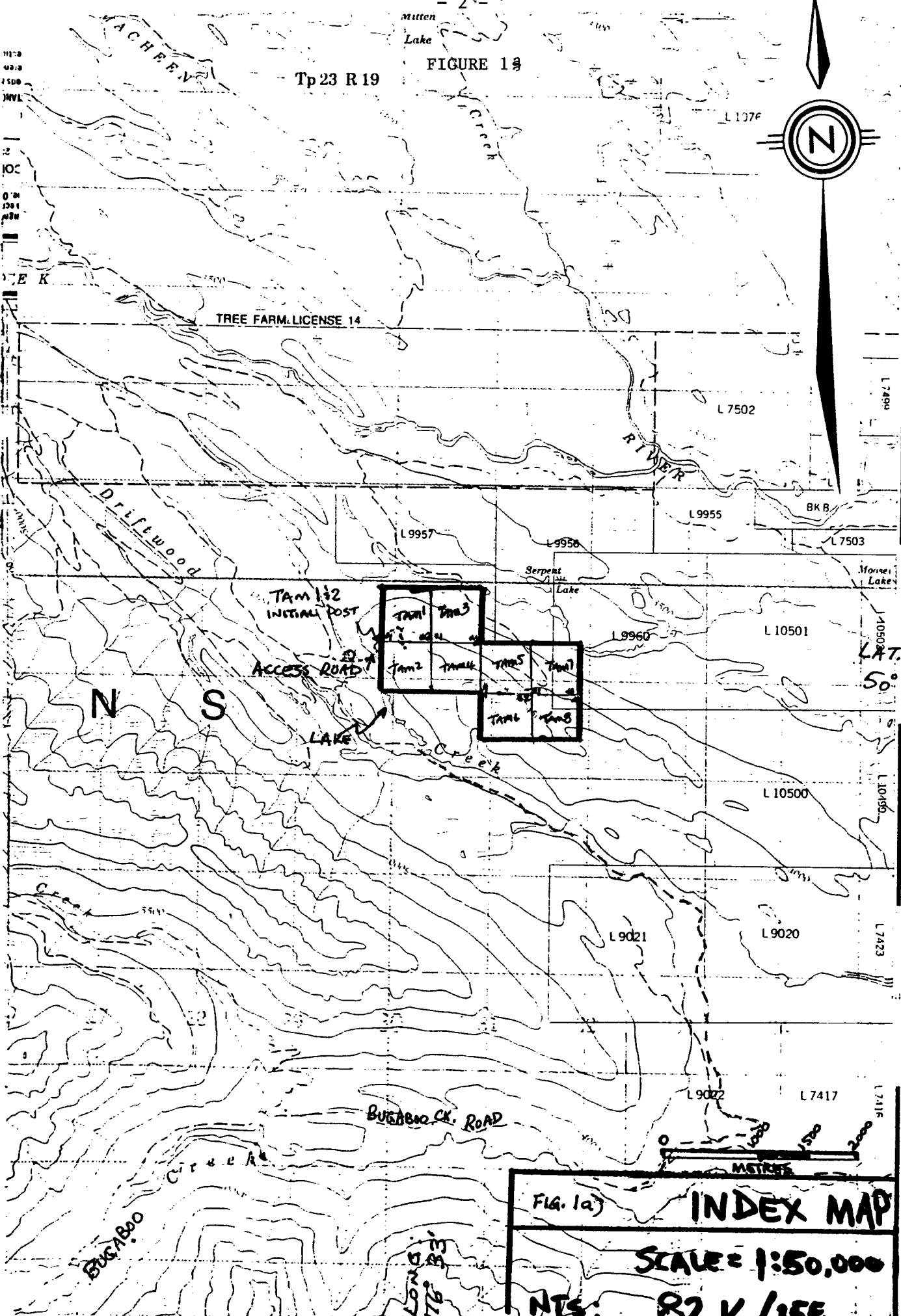
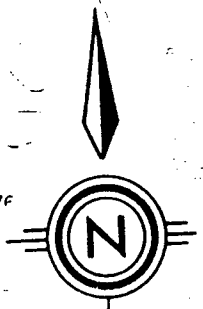
The magnesite is found as a prominent ridge striking approximately 115° between Serpent Lake and Driftwood Creek. The cliff forming nature of the magnesite is due to its differential chemical weathering as compared to the surrounding dolomite and argillaceous quartzite. To the north of the magnesite ridge spruce, pine, fir and alder are the dominant species with slopes averaging 30° - 40°. To the south, a large area has been burned and the resultant vegetation is alder and thick first growth pine with abundant deadfall (approximately 15 years old). South slopes average 20° - 30°. Areas not burned here host mature pine and fir.

Mitten Lake

FIGURE 1a

Tp 23 R 19

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LAT.: 50° 45'

Fig. 1a) **INDEX MAP**
 SCALE = 1:50,000
 NTS: 82 K / 15E



FIGURE 1b

BRITISH COLUMBIA

FIRST :

To Golden—37 miles
30'

PAGE 3

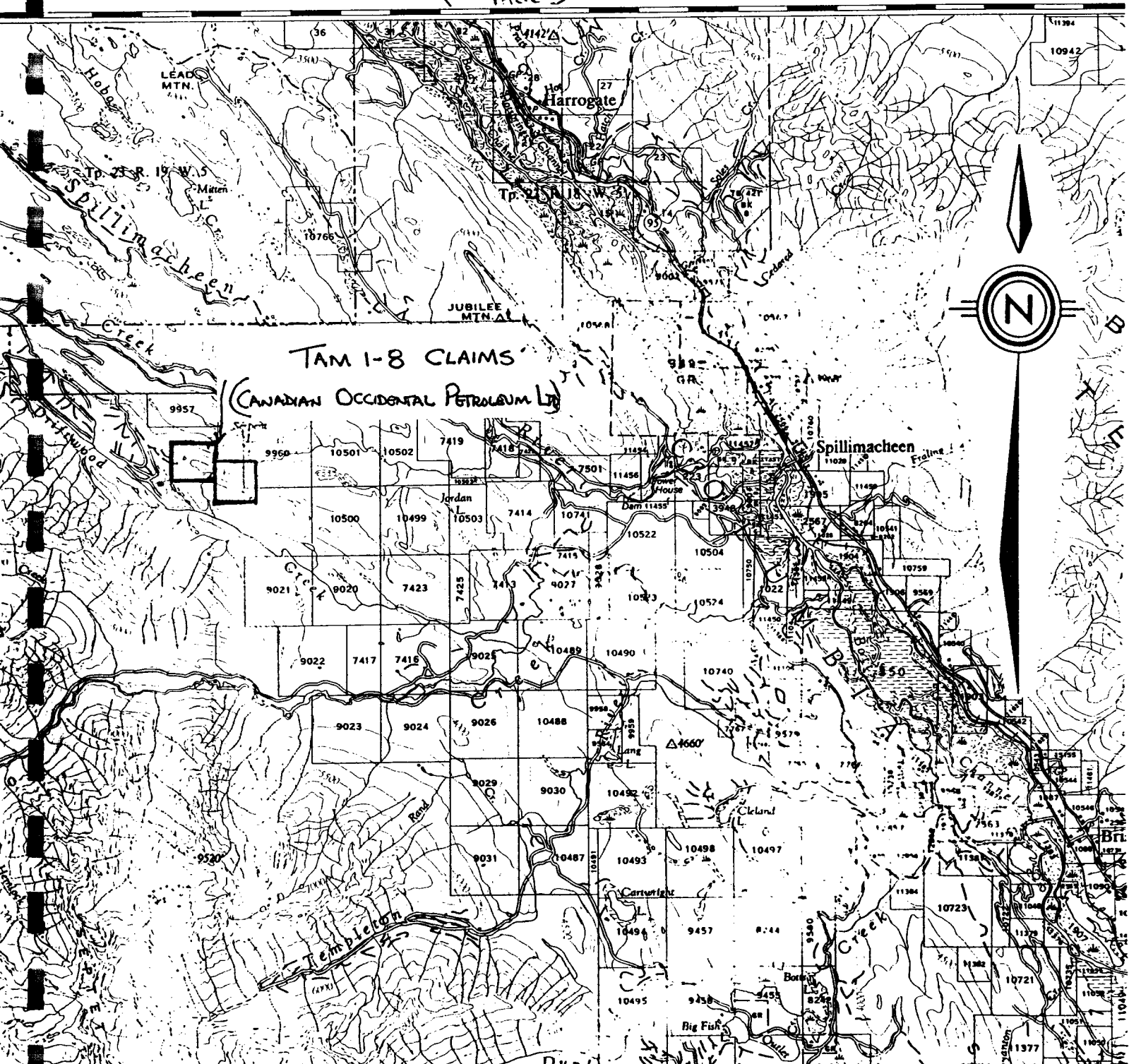
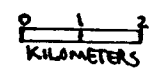


FIG. 1b) LOCATION MAP
 SCALE = 1:125,000
 NTS: 82K



1.3 Property

The earliest description of the Brisco magnesite is written within the British Columbia Minister of Mines annual report for 1964 as a geological description by J.W. McCammon. The magnesite ridge north of Driftwood Creek was staked in 1968 by H. Bearham of Invermere B.C., as the Fish claims. Kaiser Resources (P.O. Box 2000, Sparwood, B.C.) optioned the Fish claims in 1978 and carried out minor trenching, mapping and sampling work which is summarized in the British Columbia Minister of Energy, Mines and Petroleum Resources assessment report #8760 by R.J. Morris. Kaiser Resources declined to renew its option and the Fish claims were allowed to expire. In August 1987, the Driftwood magnesite area was staked as the Tam one and Tam two claims by Canadian Occidental Petroleum Ltd. On September 4, 1988, the area was restaked as Tam 1-8 mineral claims (record numbers 1937-1944). In July, 1989, the Tam 1-8 claims were grouped under the conditions of the British Columbia Mineral Tenure Act (Section 28). Magnesite is the only mineral present on the property of economic significance.

1.4 Work Done

Linecutting totalling 2.5 kilometres was done in order to establish a baseline at 115° azimuth which parallels the entire magnesite area. Cross-lines were compassed and flagged every 50 metres and range in length from 50 - 500 metres. The grid was used for geological mapping of the eight mineral claims at 1:1000 scale.

Sixty-eight 5 kilogram rock chip samples were taken from magnesite outcrops within the Tam claim group. These surface rock chips comprise a character sample of a 2 metre diameter area around the

sample site. Samples were analyzed by Chemex Labs Ltd. (212 Brooksbank Ave., North Vancouver, B.C.) Analyses were done for SiO_2 , Al_2O_3 , Fe_2O_3 , MgO , CaO , Na_2O , K_2O , TiO_2 , P_2O_5 , MnO , BaO and L.O.I. As well, a "dead-burned" assay was done for each sample. This involves analysis for %MgO after roasting at 1000°C for an hour.

Geological mapping of approximately 130 hectares was done at 1:1000 scale and geological sections made.

1.5 Objectives

The objectives of the 1989 exploration program were to gain an overall estimate of surface magnesite quality and to establish an approximation of mineable ore reserves.

2.0 LITHOLOGY

Five different rock units were recognized on the property and they are described here in order from oldest to youngest (see Table 1). All five units were placed within the Mount Nelson formation of Proterozoic (Helikian) age by J.E. Reesor in 1957 (see Figure 1c). Note that in a brief description of the Driftwood Creek magnesite deposit by B. Grant, the area is placed in lower Cambrian time as the Cranbrook formation. In the author's opinion, this is wrong.

2.1 Unit 1 (Hmn1)

- (a) Dolomite; buff-light grey-grey coloured, very fine grained, locally thin bedded, contains siliceous blebs and laminae to 1 cm thick, locally contains relic stromatolite fossils to 20cm in diameter, weather colour buff-brown.

(b) Magnesite; white-buff-cream coloured, very fine grained to very coarse grained (coarser grained near faults/conduits), contains irregular concentrations of siliceous veinlets/laminae/blebs to 2 cm. thickness.

2.2 Unit 2 (Hmn2)

Argillaceous Dolomite; dark red-rusty brown, very fine grained, occasional silty layers, locally spotted appearance with light red-brown blotches to 5 cm. in a red-brown matrix, weathered colour is light brown, rock is more siliceous than pure dolomite (H=4), locally strongly foliated.

2.3 Unit 3 (Hmn3)

Dolomite; grey-light grey-blue grey-buff, locally spotted appearance, but less pronounced than in Hmn2, siliceous (H=4), locally abundant quartz as veinlets and laminae (up to 20% overall) weathered colour light buff-grey.

2.4 Unit 4 (Hmn4)

Quartzite, grey-white-purple-green, weathered colour is red-brown-grey, white/grey quartzite is most abundant, occasional silty layers as laminated units to 3 metres in section.



Scale = 1:250,000

Kilometers

FIG. 10; REGIONAL GEOLOGY

(J.E. REESOR, & S.C. M3L)



30'

TABLE I

Table of Formations—Proterozoic

ERA	PERIOD OR EPOCH	GROUP OR FORMATION	LITHOLOGY	THICKNESS (feet)	
PROTEROZOIC	WINDERMERE (HADRYNIAN)	HORSETHIEF CREEK GROUP	Varicoloured slate, argillite, and phyllite; quartzite, grit, and quartz-pebble conglomerate; minor limestone	3,000 to 8,000	
		TOBY FORMATION	Polymictic conglomerate with pebbles, cobbles, and boulders of varied composition; matrix of impure limestone, shale, and quartzite	0-1,500	
	UNCONFORMITY				
	PURCELL (HELIKIAN)		MOYIE INTRUSIONS	Metadiorite and meta-quartz diorite sills	
			INTRUSIVE		
			MOUNT NELSON FORMATION	Buff and grey dolomite and dolomitic limestone, slate, argillite, quartzite	~4,000
			DUTCH CREEK FORMATION	Varicoloured argillite and slate, quartzite, and some carbonate rocks	± 4,000
			KITCHENER-SIYEH FORMATION	Very thinly bedded quartzite, black argillite, and some dolomite, sandy dolomite, and limy argillite	6,500
			CRESTON FORMATION	Green chloritic quartzite, grey quartzite with purple laminae, green and grey phyllite and argillite	8,000
			ALDRIDGE FORMATION	Upper division: Sericitic quartzite, argillite, thin-laminated argillite and quartzite	~9,500
				Lower division: Fine-grained quartzite	unknown
		Base not exposed			

3.0 STRUCTURE

The property lies 4 kilometres south of a major northwest striking fault mapped by J.E. Reesor. This fault projects northwest along the Spillimacheen River. This would be the earliest tectonic event responsible for the interlithic folding and traces of anticline/syncline development on the Tam claims (F1). The slab of Mount Nelson formation rock was thrust northeast over the younger Horsethief Creek formation. Two sets of crossfaults developed later, one striking north - south (F3). Figures 1 - 3 show these relations and though evidence of large folding is weak, a few antincline/syncline pairs (striking west-northwest) are indicated by the available bedding attitudes.

Bedding is seen in occasional outcrops as banded, varve-like layering with individual beds up to 1 cm. thick. Tops was not determined. Bedding and foliation parallel F1 whereas jointing parallels F2 & F3.

Figure 4 shows cross-sections through the magnesite area. The magnesite unit shows a maximum sectional thickness from mapping of over 200 metres.

4.0 MINERALIZATION/GEOCHEMISTRY

The only mineralization of economic interest on the property is magnesite. Magnesite is magnesium carbonate and has a theoretical magnesia (MgO) content of 47.6%. Magnesite products are obtained from the primary ore minerals by calcining magnesium carbonate or hydroxide at different temperatures. Caustic-calcined magnesia is a reactive oxide easily hydrated with water and is prepared by roasting the primary ores at temperatures up to 893°C. Dead burned magnesite (refractory magnesia) is prepared at temperatures above

1450°C and is unreactive with water. Sixty-eight 5 kilogram samples of magnesite were collected from the property. Sampling was conducted on surface only by chipping off a representative sample from a 2 meter diameter. Sample locations and results (deadburn only) are shown on Figure 5. Assay certificates and assays for silica, alumina, iron, magnesia, calcium, sodium, potassium, titanium, phosphorus, manganese and barium oxies are tabled in Appendix 1. All samples were analyzed by Chemex Labs Ltd. of North Vancouver.

The term "deadburned" as used by Chemex Labs Ltd. actually implies only a caustic-calcined level of calcination as the maximum temperature possible in the laboratory setting was 1000°C. Were it possible to achieve oven temperatures of 1450°C, then the "deadburn" assays would probably be somewhat higher.

The average "deadburn" assay over 61 samples was 79.63%. This includes some "bad" samples (from areas of visually abundant silica, 10 - 20% in places) as well as "good" samples (from areas of very coarse crystalline, pure looking magnesite). Samples were crushed and pulverized to -80 mesh, then a representative split was taken and this was pulverized to -150 mesh. The +150 sample material was saved. Samples were digested using a perchloric-nitric-hydrofluoric acid mixture.

SiO₂% ranges from 1.16 to 34.14 in the samples. Assays from 1989 samples are very close to the 14 assays taken by Kaiser Resources Ltd. in 1978. Iron oxide and calcium oxide are generally less than 2 percent.

- * (This is an approximation based on surface mapping only)
- ** (Mineable ore has been blocked out using a maximum bench height of 12.2m, safety berms 2.5m wide and a backslope of 70°).

6.0 RECOMMENDATIONS

In order to confirm the depth extent and subsurface continuity of quality, a diamond drill program must be conducted. The deposit has never been diamond drilled, only 12 short holes (0.6 - 2.0 metres deep) were drilled by Kaiser Resources Ltd. using a small plugger type drill in order to test near surface purity.

It should be found out what temperature the Baymag "deadburned" assays were done at. This is critical in order to have a meaningful comparison between the two deposits.

7.0 BIBLIOGRAPHY

Grant, B.; Magnesite, Brucite and Hydromagnesite Occurrences in British Columbia, open file 1987-13.

McCammon, J.W. 1964; The Brisco Magnesite Area, B.C. Ministry of Energy, Mines and Petroleum Resources Annual Report 1964, pp. 194-199.

Morris, R.J. & Murphy, J.B.; 1978 Fish Magnesite Deposit for Kaiser Resources, Ministry of Energy, Mines and Petroleum Resources Assessment Report #8760.

Reesor, J.E.; 1973, Geology of the Lardeau Map Area, East Half, British Columbia, GSC Memori #365, Map 1326A.

STATEMENT OF QUALIFICATIONS

I, Peter Klewchuk, certify that:

1. I am a Consulting Geologist with offices at 246 Moyie Street, Kimberley, British Columbia.
2. I am a graduate Geologist with a BSc degree (1969) from the University of British Columbia and a MSc degree (1972) from the University of Calgary.
3. I am a Fellow in good standing of the Geological Association of Canada.
4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 15 years.
5. I have been employed by major mining companies and provincial government geological departments.

Dated at Kimberley, British Columbia, this 29th day of August, 1989.

Peter Klewchuk

Peter Klewchuk
Geologist

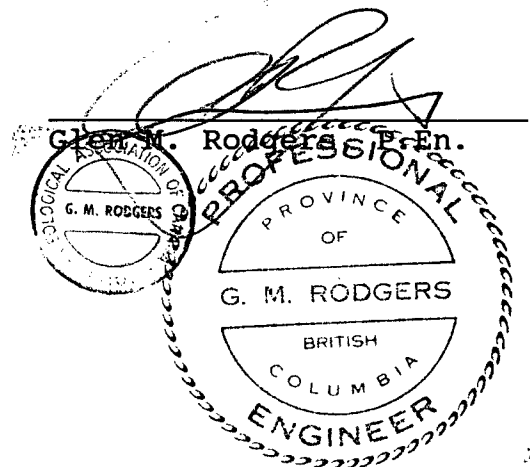
CERTIFICATE

I, Glen M. Rodgers of Skookumchuck, Province of British Columbia, hereby certify as follows:

- I am a Consulting Geologist presently registered with the Geological Association of Canada as a Fellow as well as with the Association of Professional Engineers of British Columbia.
- I graduated from the University of Manitoba in 1977 with a bachelors degree in Geological Engineering.
- I have practiced my profession continuously since graduation in British Columbia, Yukon Territory, Alaska and Mexico working primarily in the field of mineral exploration.
- I am a principal of Kootenay Geo-Services, a proprietorship registered in Victoria, British Columbia. The office and records of Kootenay Geo-Services are located at Sheep Creek Road, P.O. Box 63, Skookumchuck, B.C., V0B 2E0.
- I have based this report on personal observation and experience gained while working throughout the summer of 1989 on the Driftwood Creek Magnesite Property as Project Geologist for Canadian Occidental Petroleum Ltd.
- I have no interest directly or indirectly with Canadian Occidental Petroleum Ltd., or any of their affiliates, nor do I expect to receive any. I do not have any interest in any mineral claims within 50km of the Tam claims.
- I consent to the use of this report by Canadian Occidental Petroleum Ltd. for whatever purposes they deem necessary provided that the context is not changed to alter the intended meaning.

November 15, 1989

1-11-20.RS



COST STATEMENT

TAM CLAIMS

Linecutting (2.5km) & Flagging Cross-lines (8.5km)

Labour:

G. Rodgers (6 days @ \$250/day)	\$ 1,500.00
P. Klewchuk (4 days @ \$250/day)	1,000.00
J. Dixon (5 days @ 150/day)	<u>750.00</u>
Total Labour =	\$ 3,250.00

Expenses:

Food and camp cost (\$28/man/day) * 12 days	\$ 336.00
Chainsaw (5 days @ \$15./day)	75.00
4*4 truck (6 days @ \$40./day)	240.00
Field supplies (hip-chain thread, flagging, etc.)	160.00
Gas/oil	175.00
Phone calls/Fax	<u>26.00</u>
Total Expenses =	<u>\$ 1,012.00</u>
TOTAL PHYSICAL WORK =	\$ 4,262.00

GEOLOGICAL MAPPING & SAMPLING

Labour:

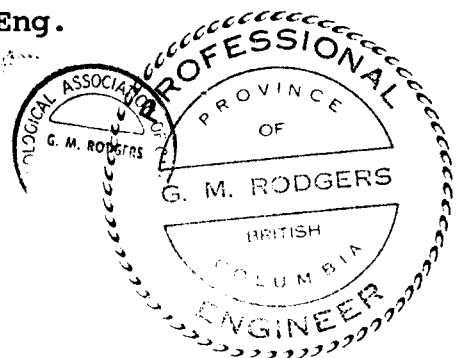
G. Rodgers (Geologist) 14 days @ \$250/day	\$ 3,500.00
P. Klewchuck (Geologist) 1 day @ \$250/day	250.00
J. Dixon (Geol. Ass't) 3 days @ \$150/day	<u>450.00</u>
Total Labour =	\$ 4,200.00

Expenses:

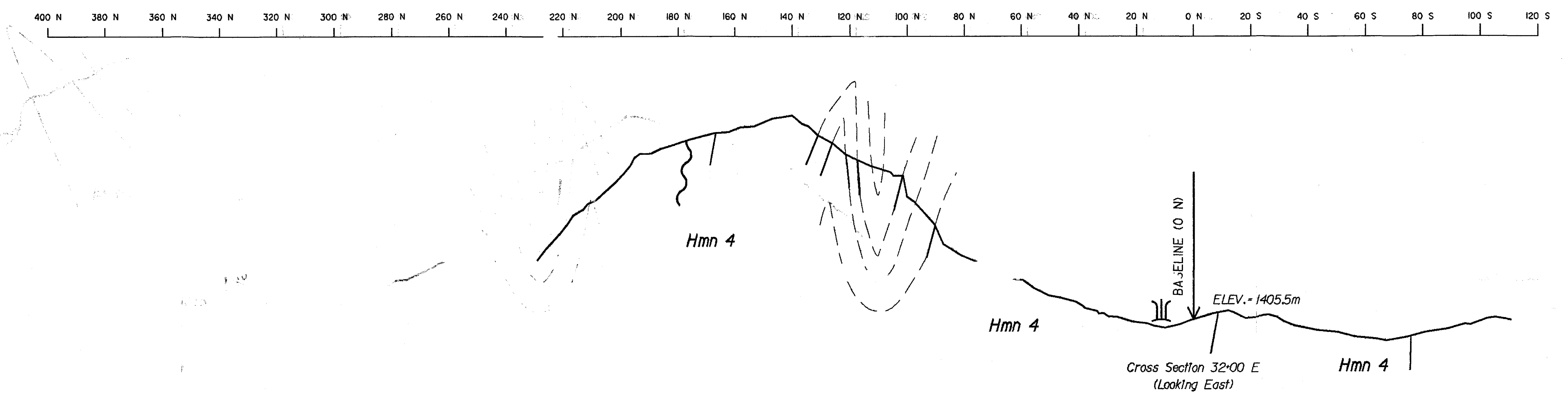
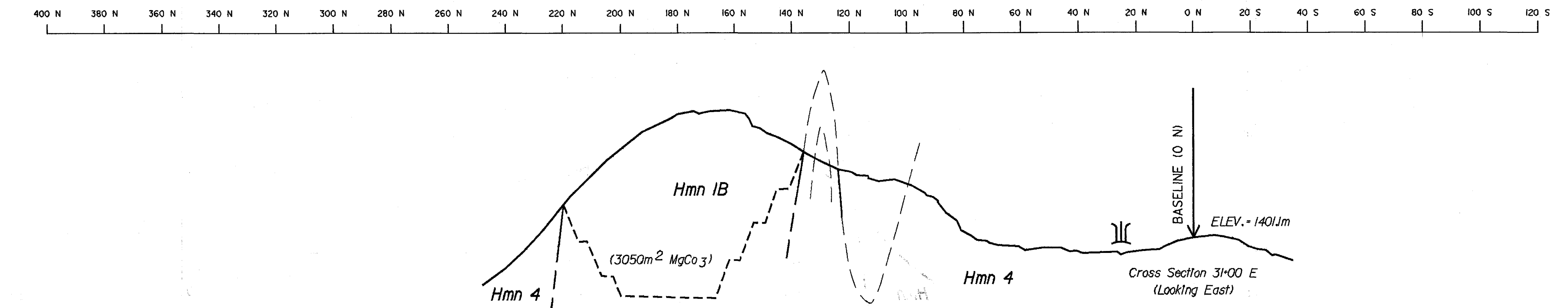
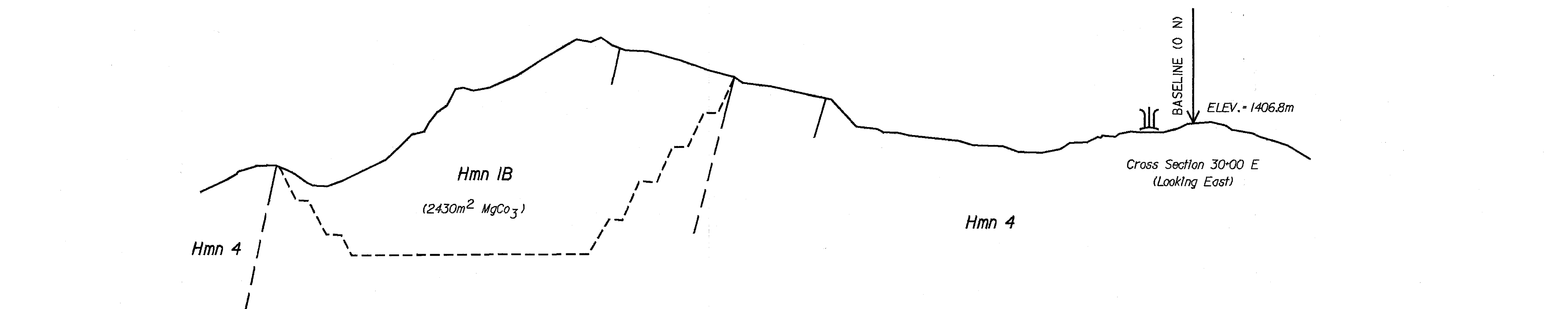
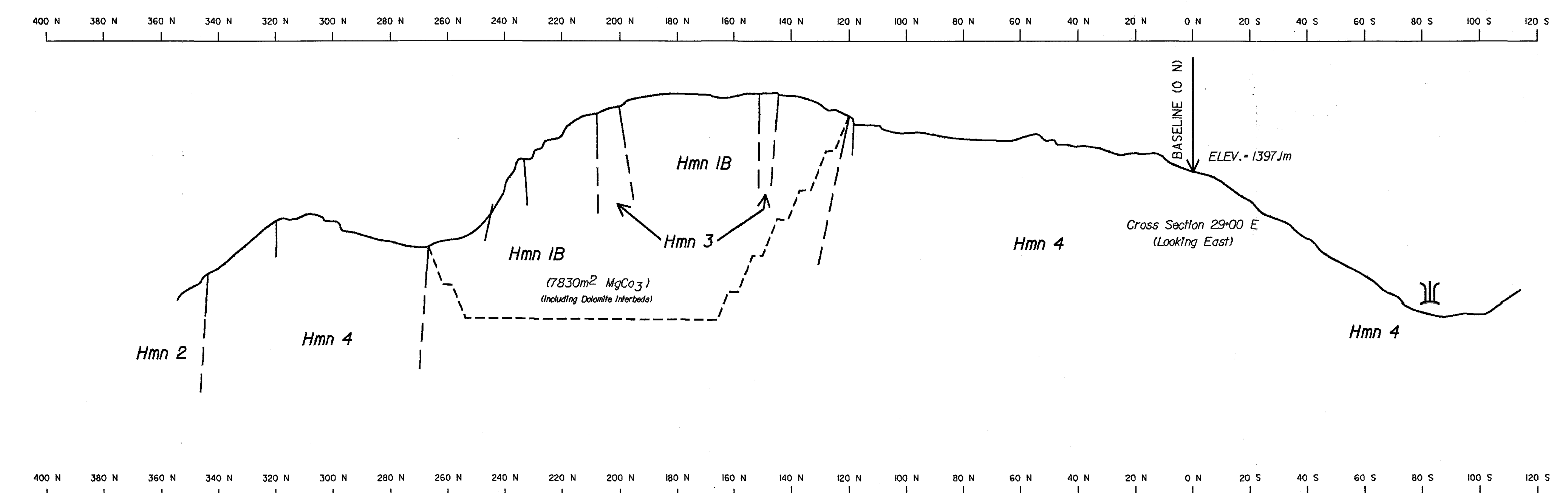
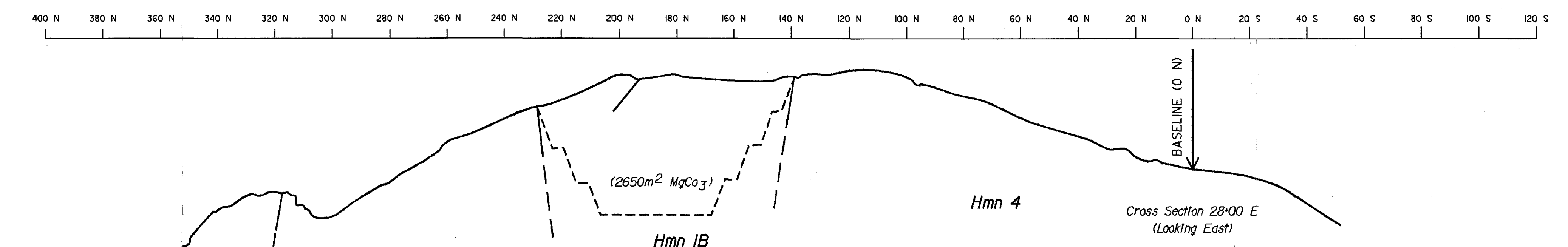
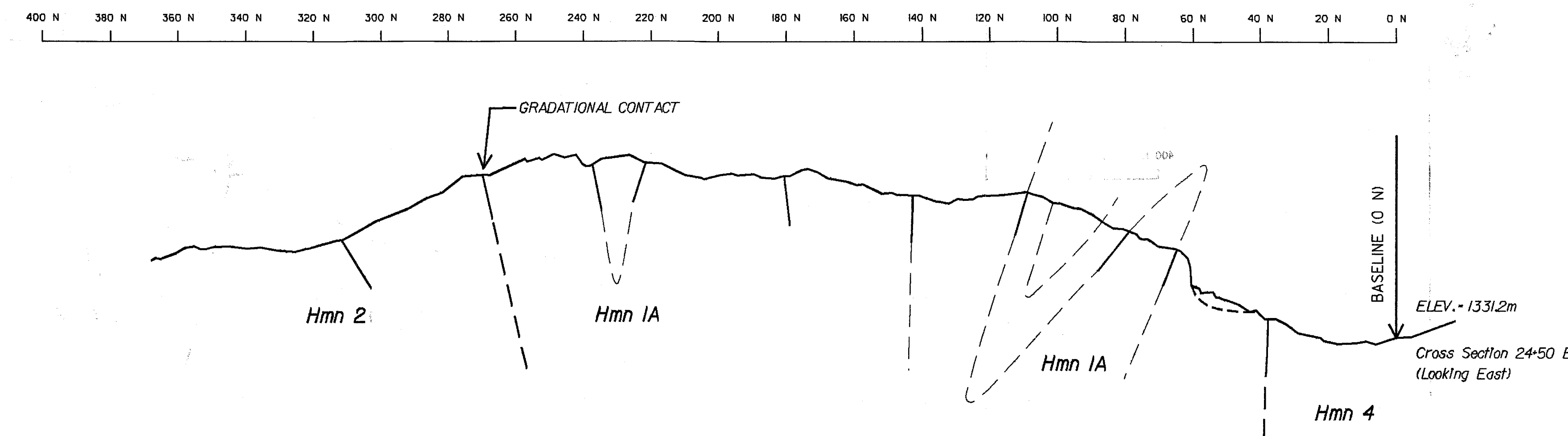
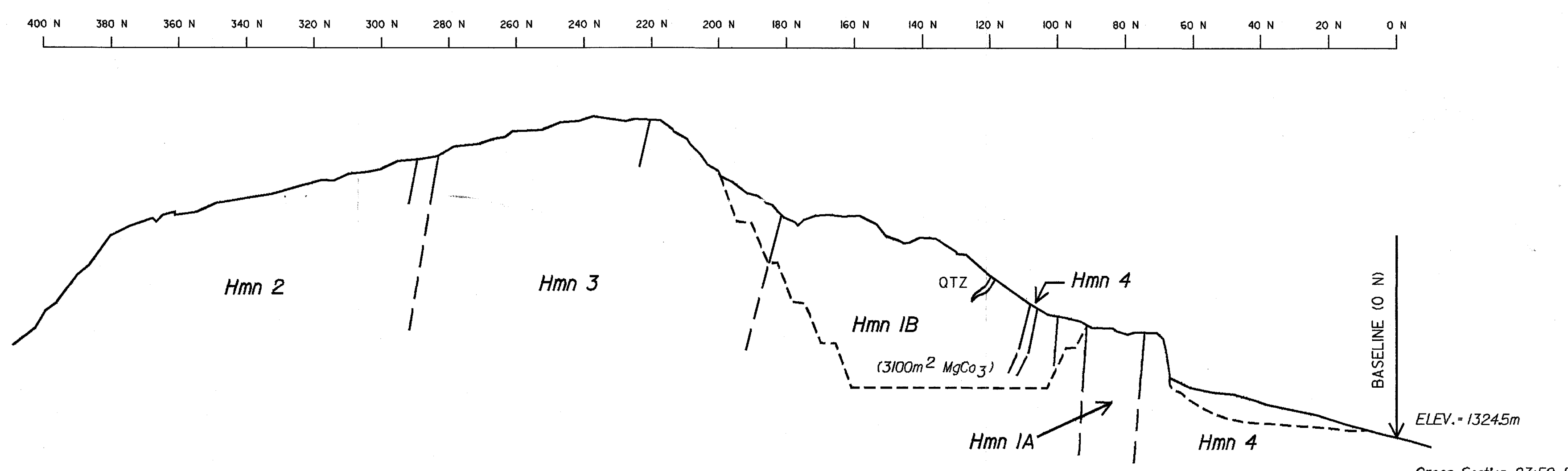
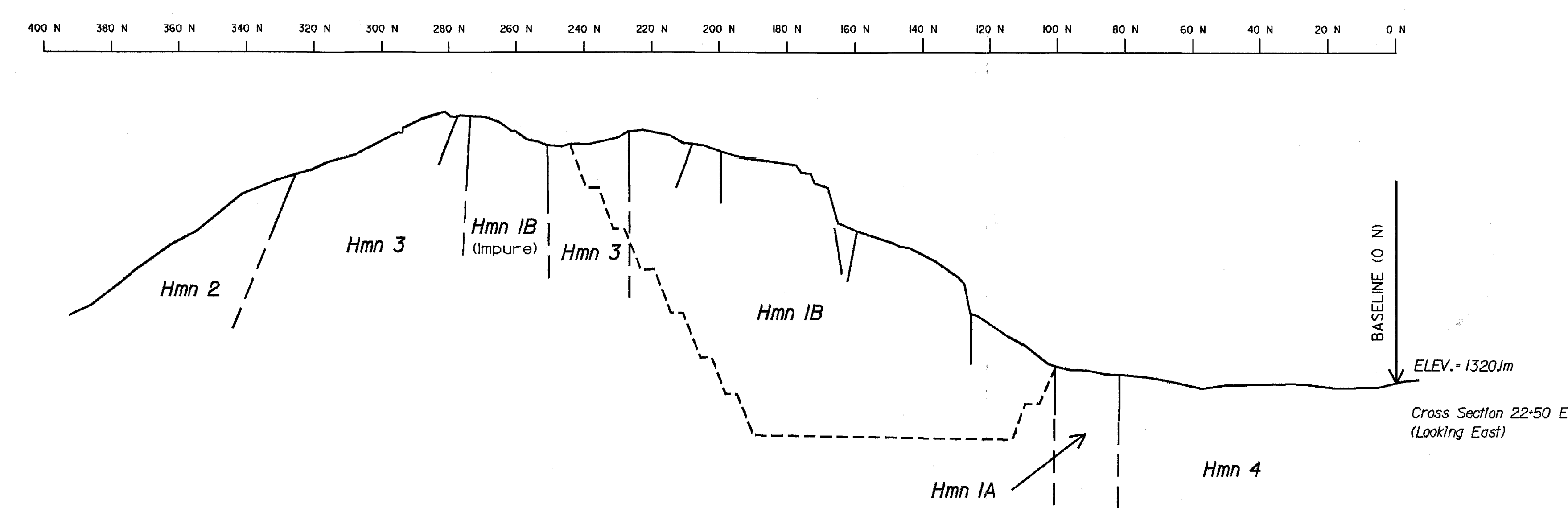
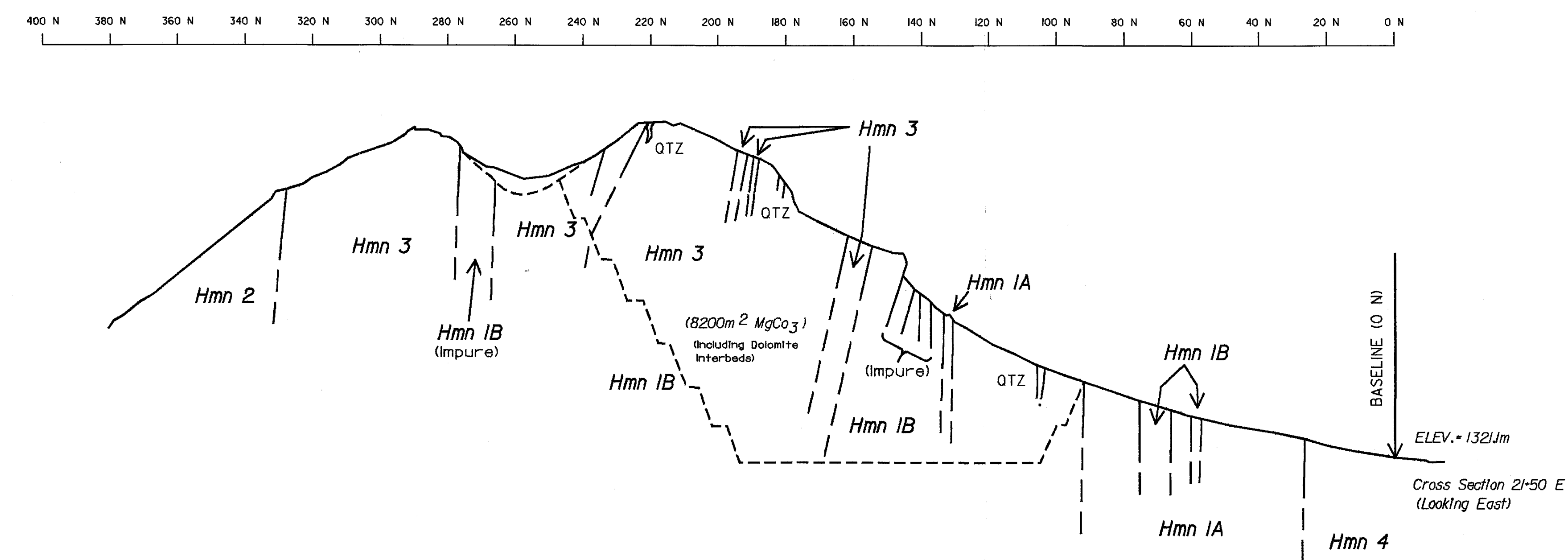
Camp costs & food (\$28/man/day) * 11 days	\$ 308.00
4*4 Truck (7 days @ \$40/day)	280.00
Phone/Fax	75.00
Office supplies & copying	135.00
Sample bags	10.00
Freight/Postage	89.00
Basemap blowups (McElhanney)	1,750.00
Draftsman (CanadianOxy in-house) (9 days @ \$175/day)	1,575.00
Drafting supplies/prints	150.00
Assays; (Chemex Labs Ltd.) 11 elemental oxide suite & deadburn assay of magnesite 61 @ \$30/ea.	<u>1,830.00</u>
Total Expenses =	\$ <u>6,202.00</u>
TOTAL GEOLOGY =	\$10,402.00

Certified accurate,


G.M. Rodgers, P.Eng.



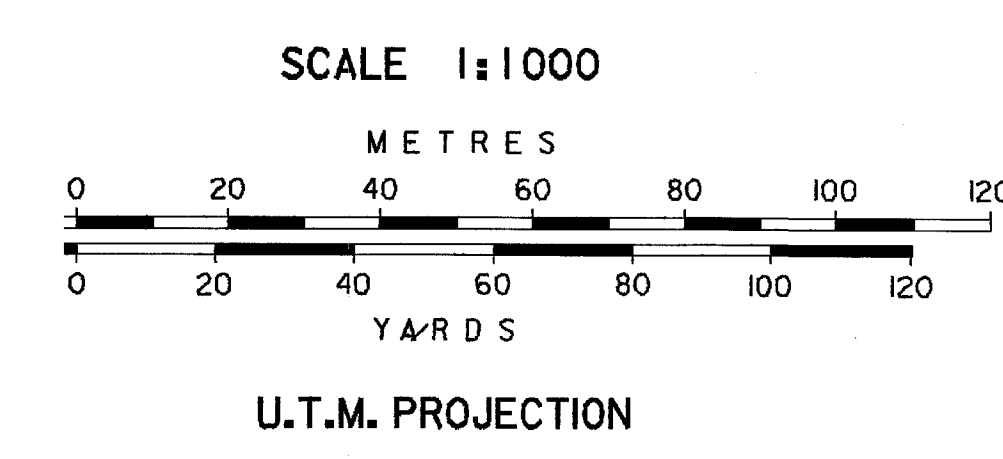
APPENDIX 'A'
(Figures 1-5)



EASTERN MAGNESITE

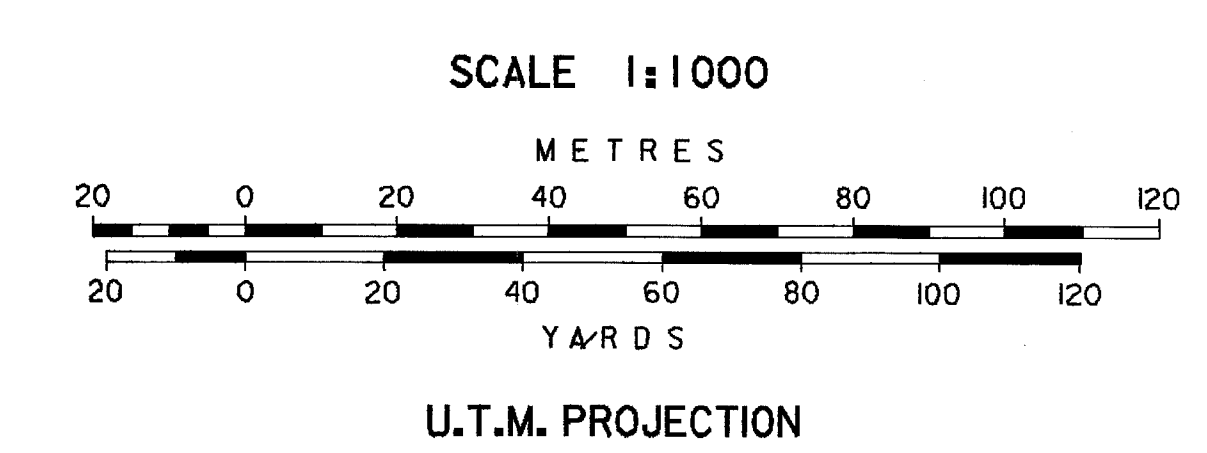
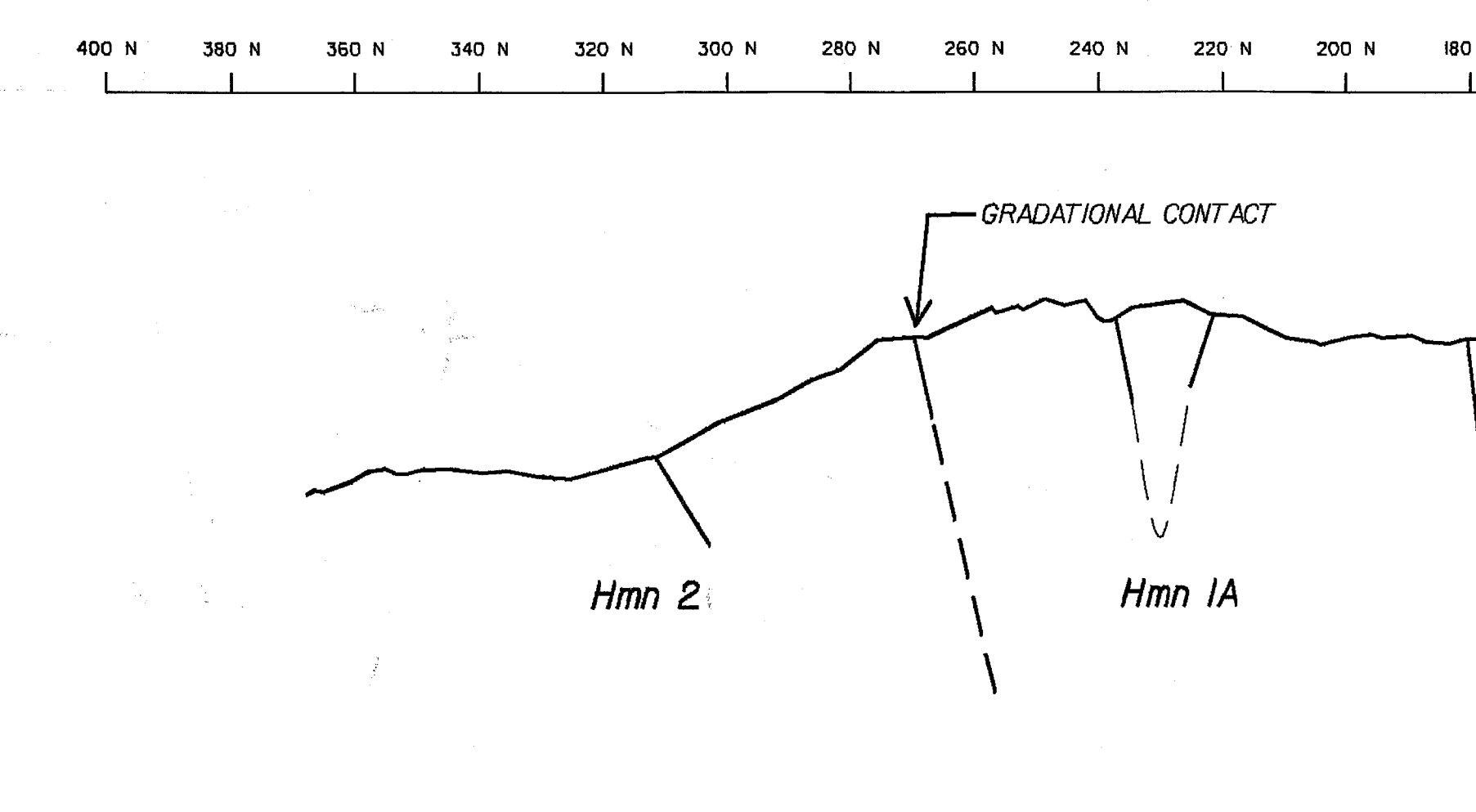
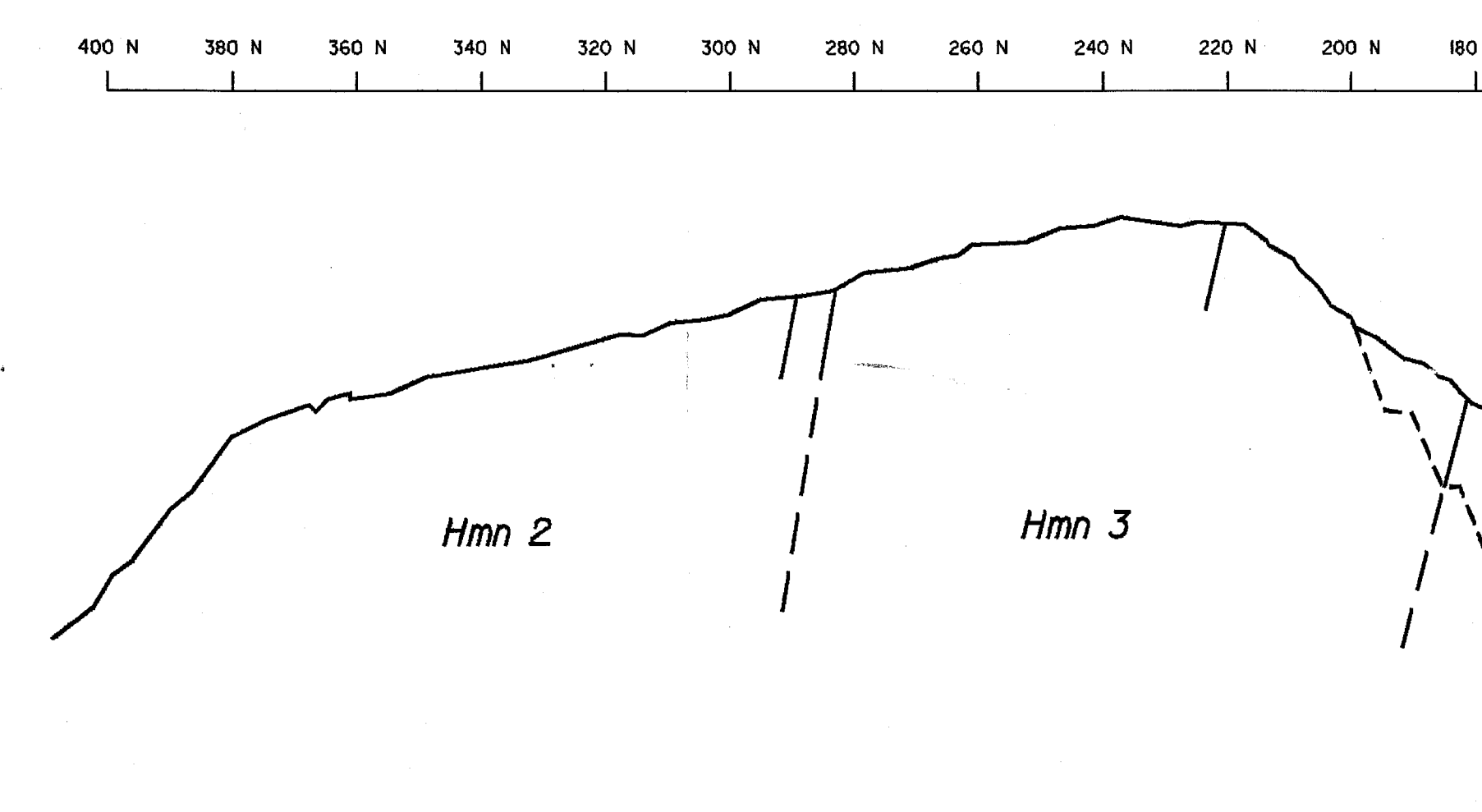
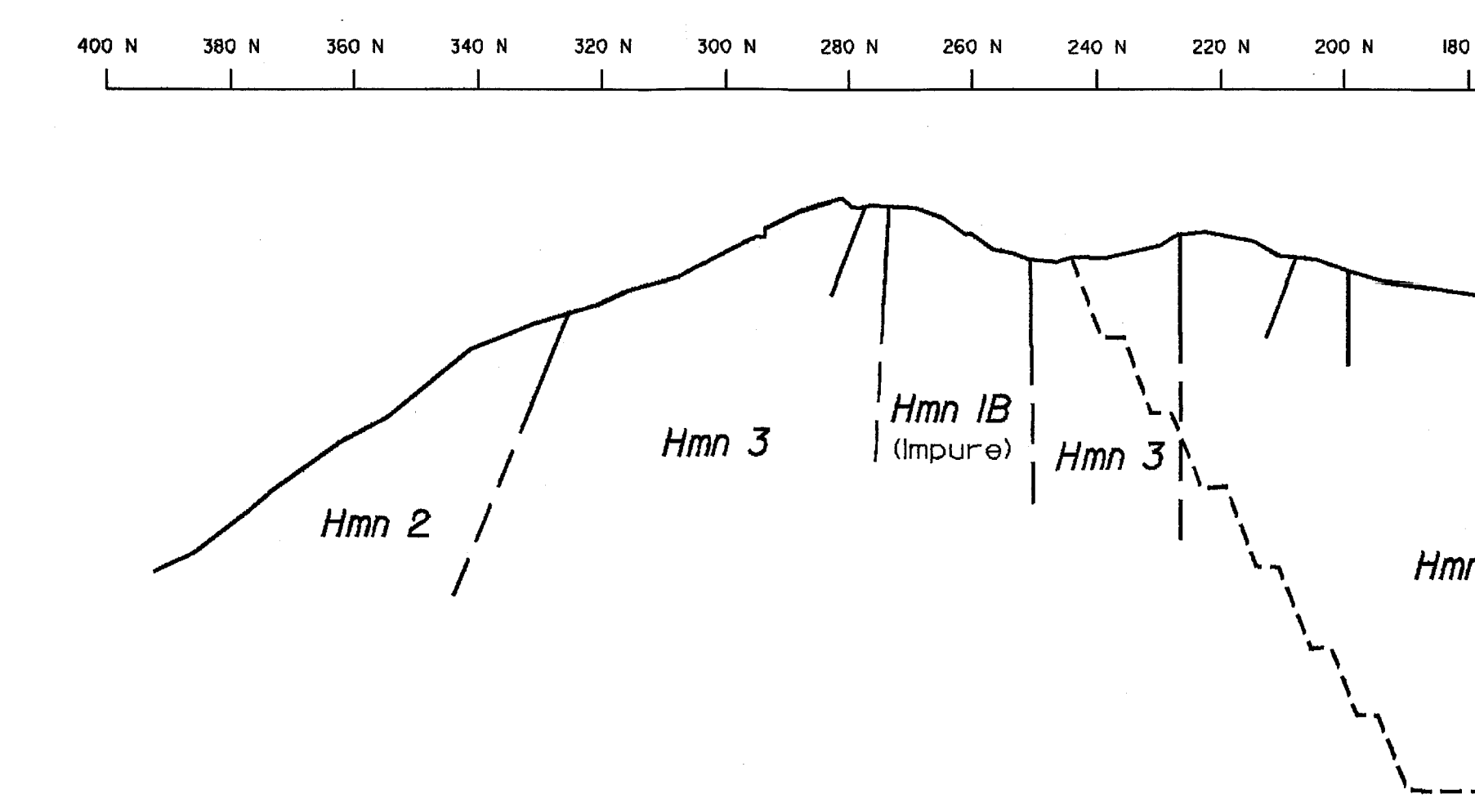
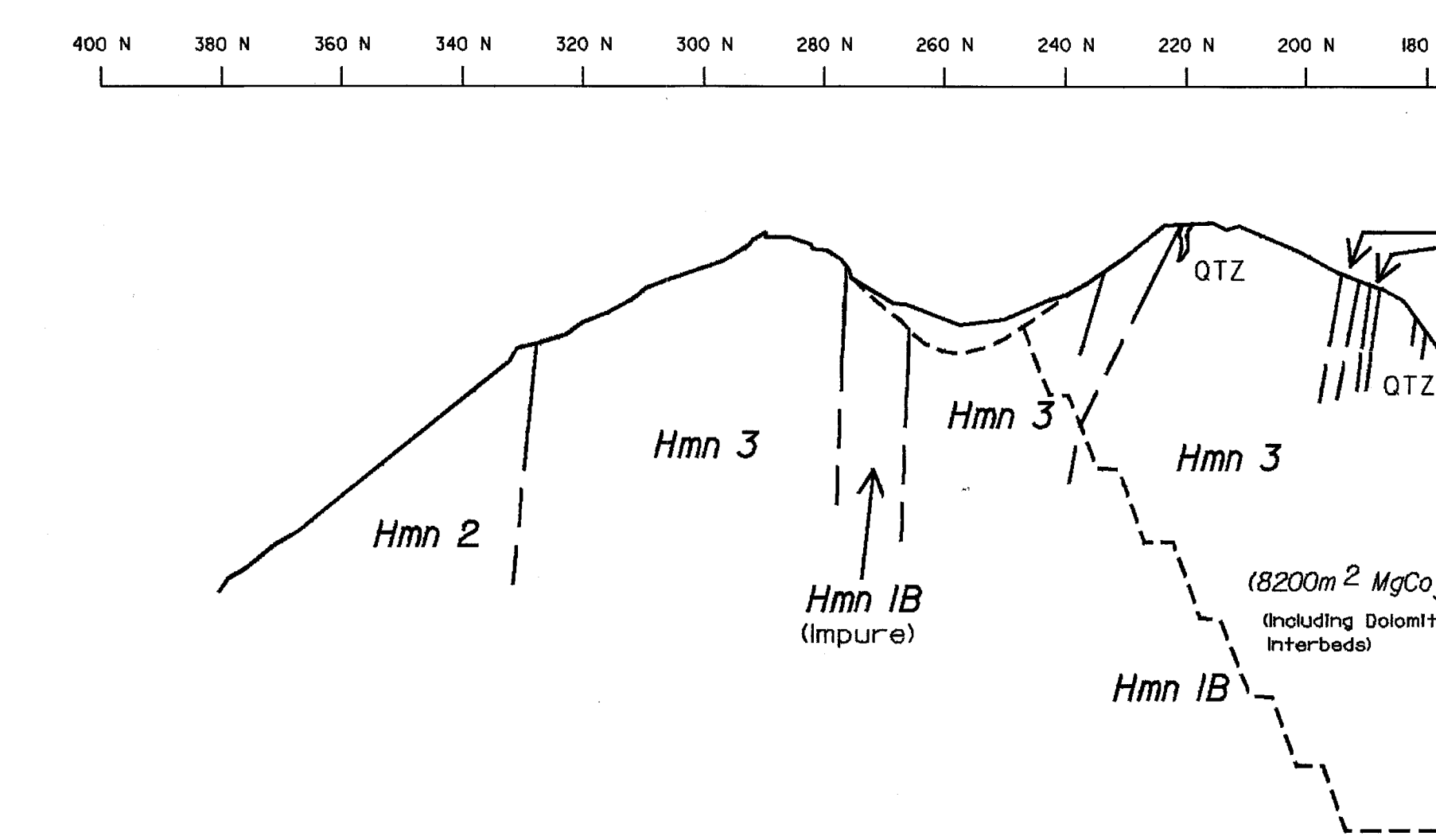
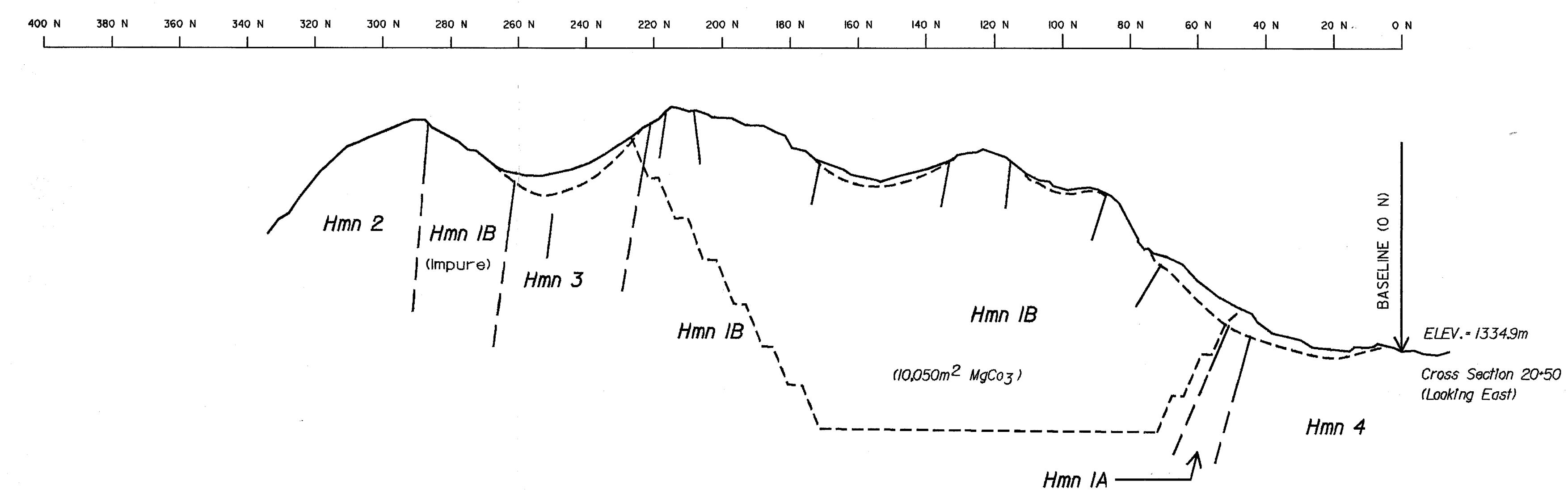
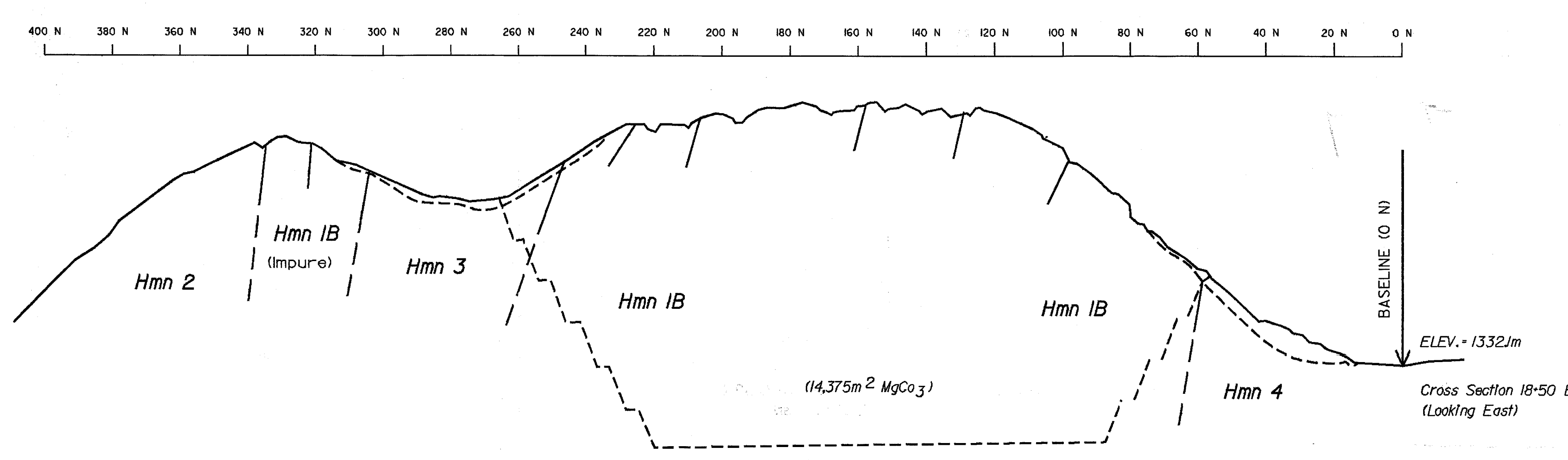
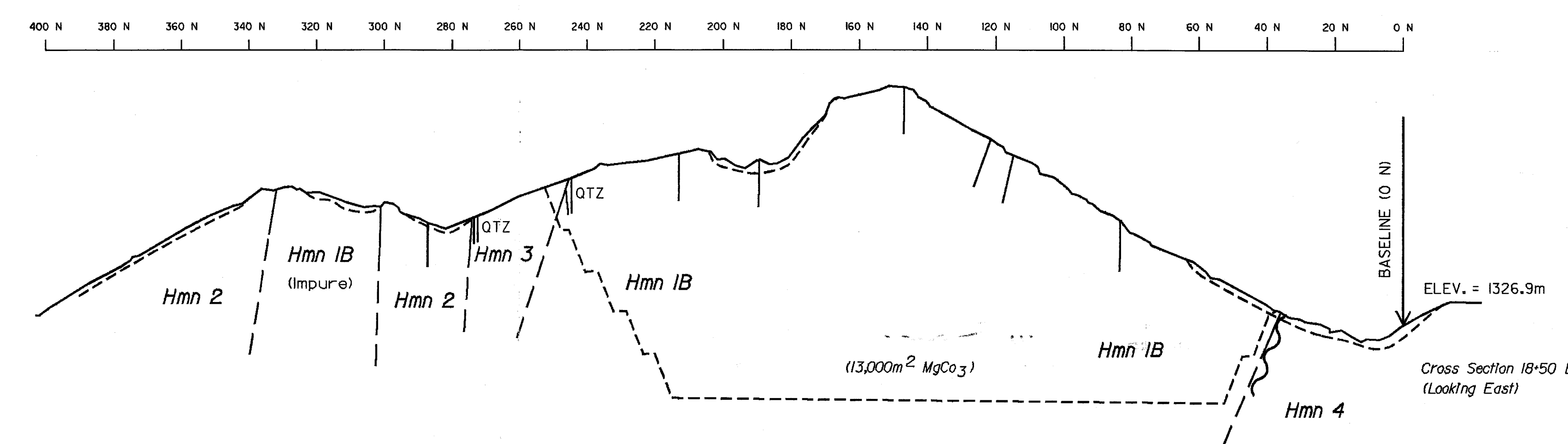
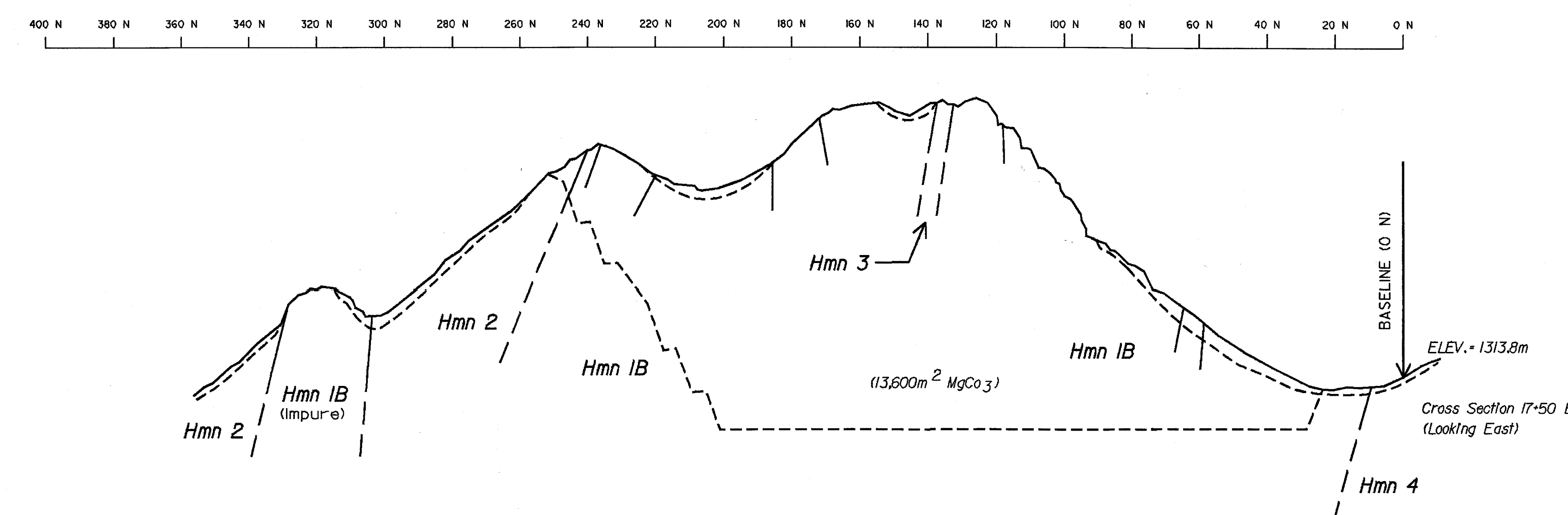
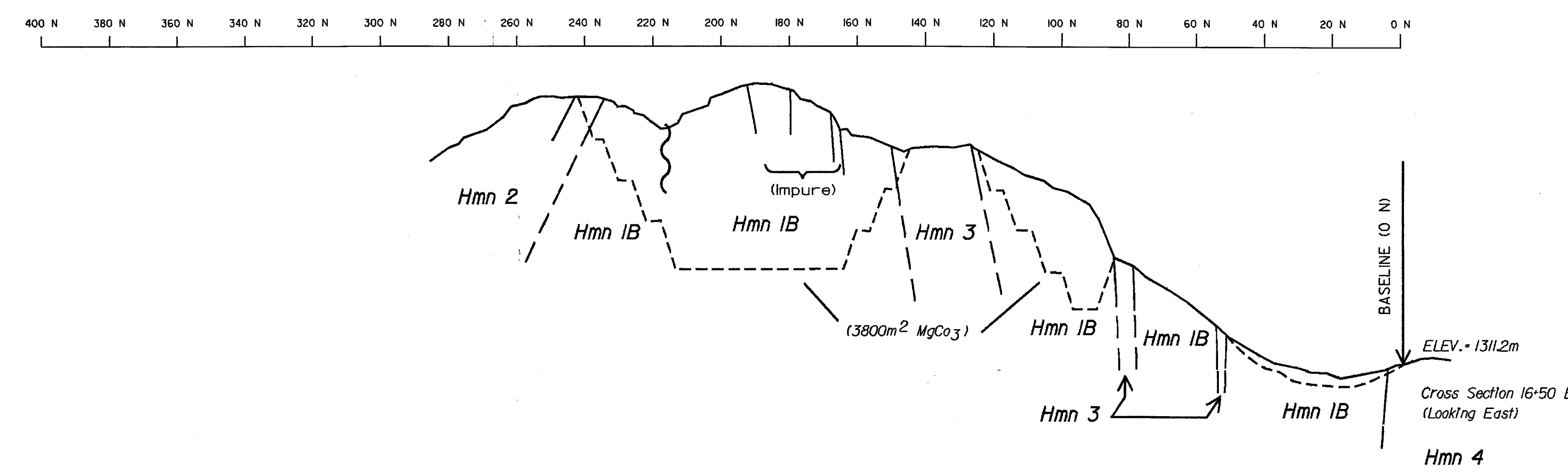
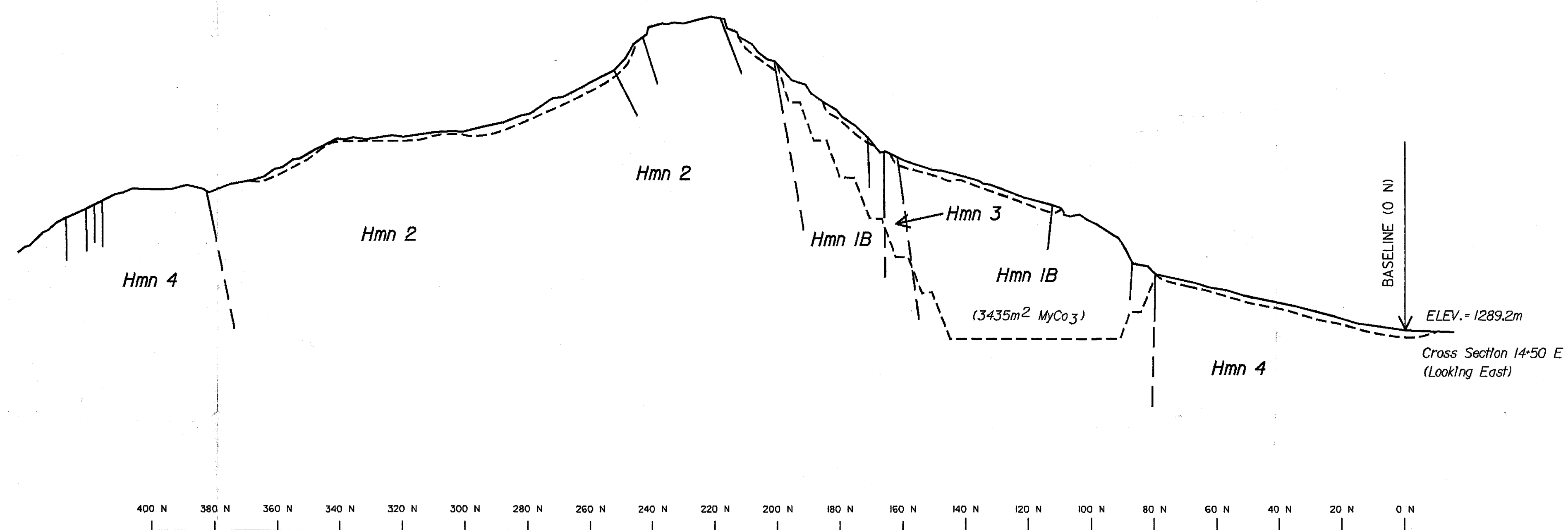
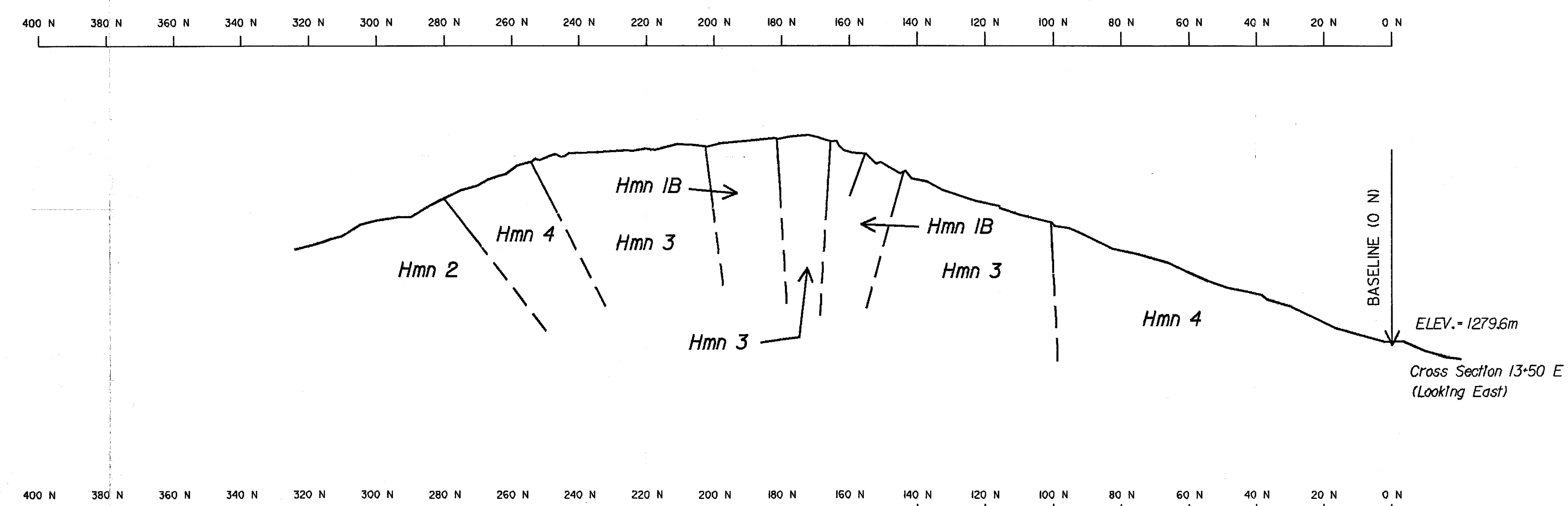
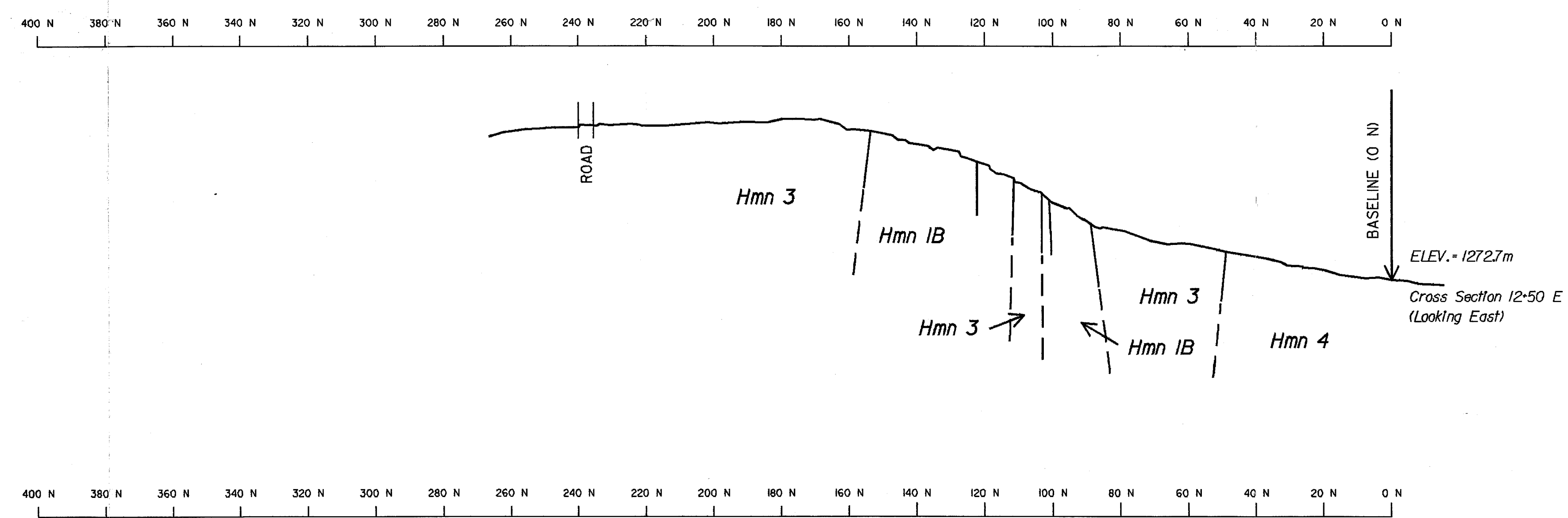
GEOLOGICAL BRANCH
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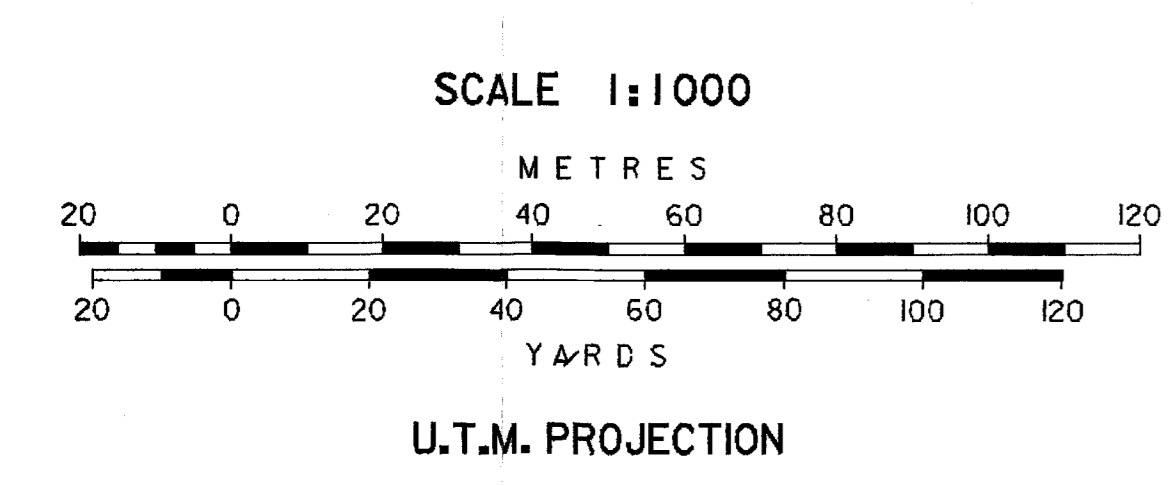
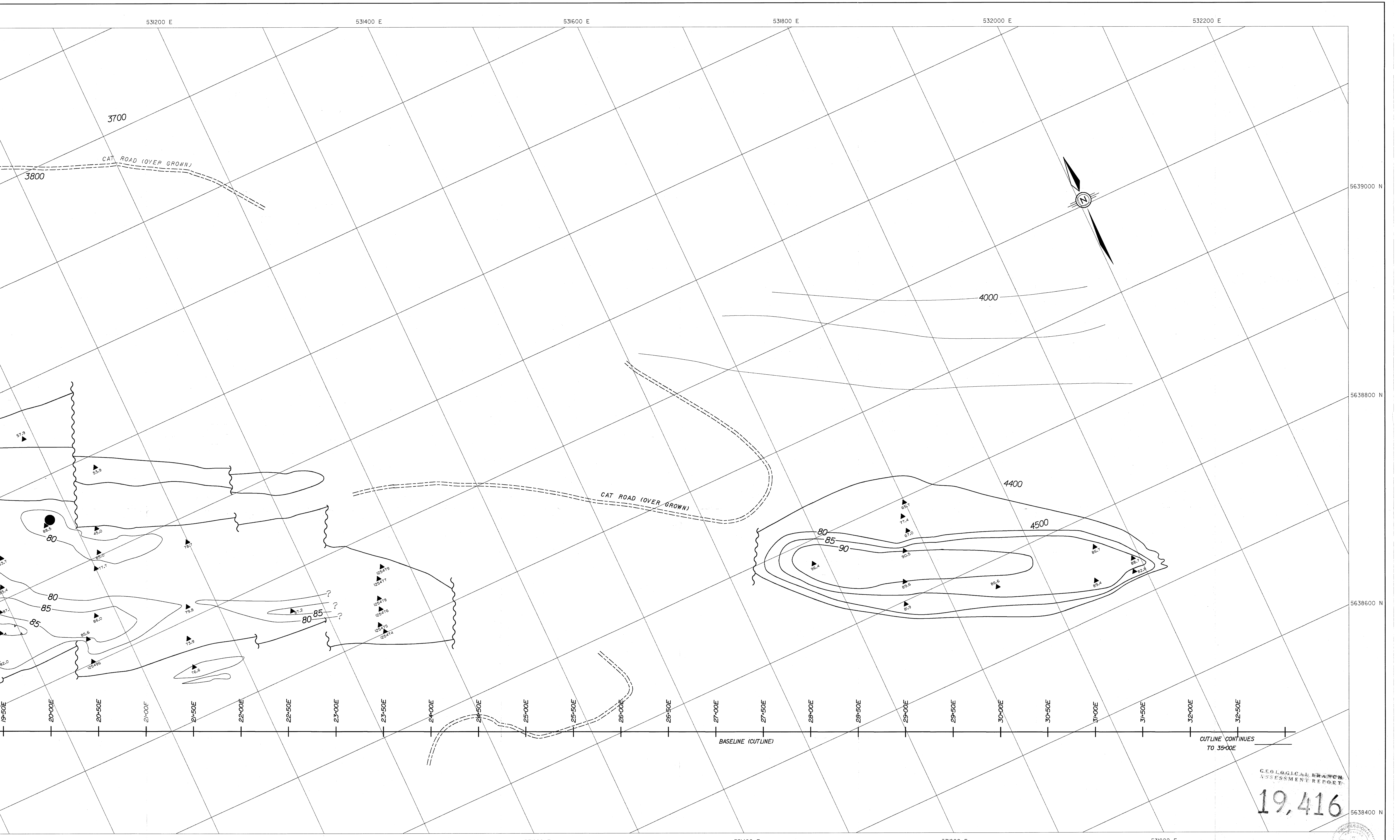
19,416



NOTE: All Elevations Relative to Benchmark 10+00 E / on
(250.0 meters Elevation A.S.L.)
* All Elevations Calculated from Tied Chain Survey
of Baseline (Estimated Accuracy = +/- 0.5m)

Canadian Occidental Petroleum Ltd.	
FIGURE No. 4	
TAM CLAIMS MAGNESITE DEPOSIT	
CROSS SECTIONS	
SCALE: 1:1000	AUTHOR: J.R. SWAHN
DATE: NOV. 7, 1989	DEPT.: 1
DRAWN BY: S. MONAGHAN	FILE No.: COAL-430R





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ASSESSMENT REPORT
19,416

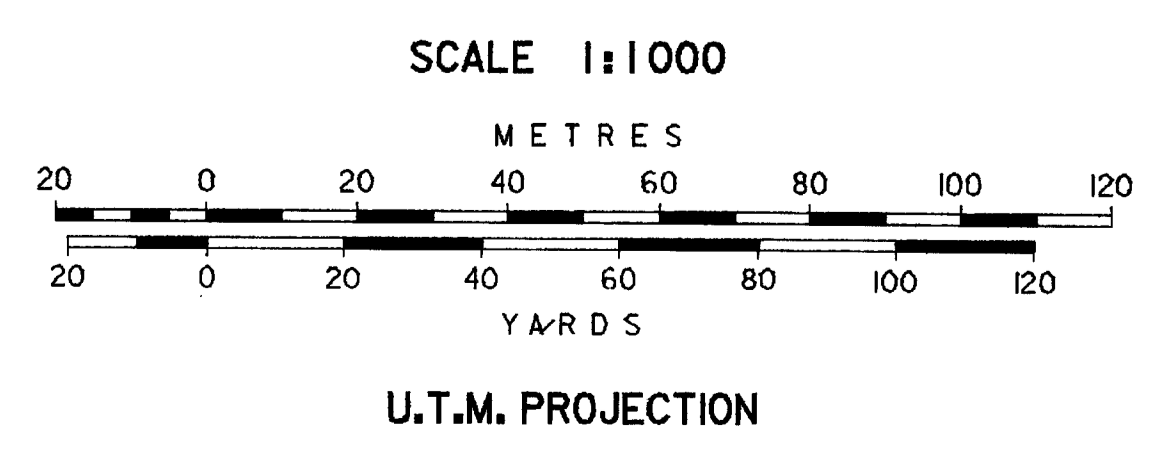
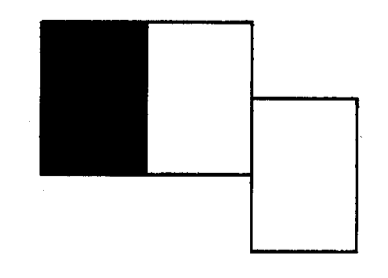
BASED ON DEADBURNED + ASSAYS OF SURFACE
ROCK CHIP SAMPLES

FIGURE No. 5 TAM CLAIMS MAGNESITE DEPOSIT MAGNESITE QUALITY CONTOUR INTERVAL ±5%.	
<small>SCALE 1:1000</small> <small>DATE - NOV. 3, 1989</small> <small>DRAWN BY - J.D. MONAGHAN</small>	<small>AUTHOR - V.D. SHARON</small> <small>GEOLOGIST - G. PRODEPS, P. LEWIS</small> <small>FILE NO. - COALS 508</small>



GEOLOGICAL BRANCH
ASSESSMENT REPORT
19,416

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> OUTCROP: Small, Large SAMPLE SITE: 4 KG Rock Chip Sample/ Character Sample/ Representative Chips from a One meter radius. ROADWAYS LIMITS OF TALUS CLAIM LINE GEOLOGICAL CONTACT: Assumed, Defined FAULTS: Known, Inferred AREA OF V. COARSE GRAINED MAGNESITE HELICOPTER PAD | <ul style="list-style-type: none"> BEDDING: Inclined, Vertical FOLIATION: Inclined, Vertical FAULT ATTITUDE JOINTS: Moderate, Strong FAULT QUARTZ VEN CLIFFS MICROFOLDING: 'S' MICROFOLDING: 'Z' SLICKENSIDES | <ul style="list-style-type: none"> ANTICLINE SYNCLINE Hmn 1A Grey/Light Grey/Green, Fine Fractured DOLOMITE. Stronatalitic to 25cm. Occasional Cherty Layers, Contains Magnesite Hmn 1B MAGNESITE Hmn 2 Dark, Red/Brown, V. Fine Grained ARGILLACEOUS DOLOMITE. Followed by Occasional Cherty/Light Coloured Wasp & Bees to 4cm Thick. Hmn 3 Light Grey/White/Green/Purple, Fine Grained DOLOMITE Hmn 4 Light Grey/White QUARTZITE, V. Fine Grained/ Aphanitic Locally Thin Bedded, Locally Stronatalitic |
|--|---|---|



Canadian Occidental Petroleum Ltd.

FIGURE No. 1
TAM CLAIMS MAGNESITE DEPOSIT
GEOLOGY
CONTOUR INTERVAL 100 FT.

SCALE: 1:1000	AUTHOR: J.R. SWAREN
DATE: 1 NOV. 7, 1989	GEOLOGIST: J. GROSVENOR, P. LEWIS
DRAWN BY: D. MONAGUE	FILE NO.: 1 COALBOR

530600 E

530800 E

531000 E

531200 E

5639600 N

5639600 N

5639400 N

5639400 N

5639200 N

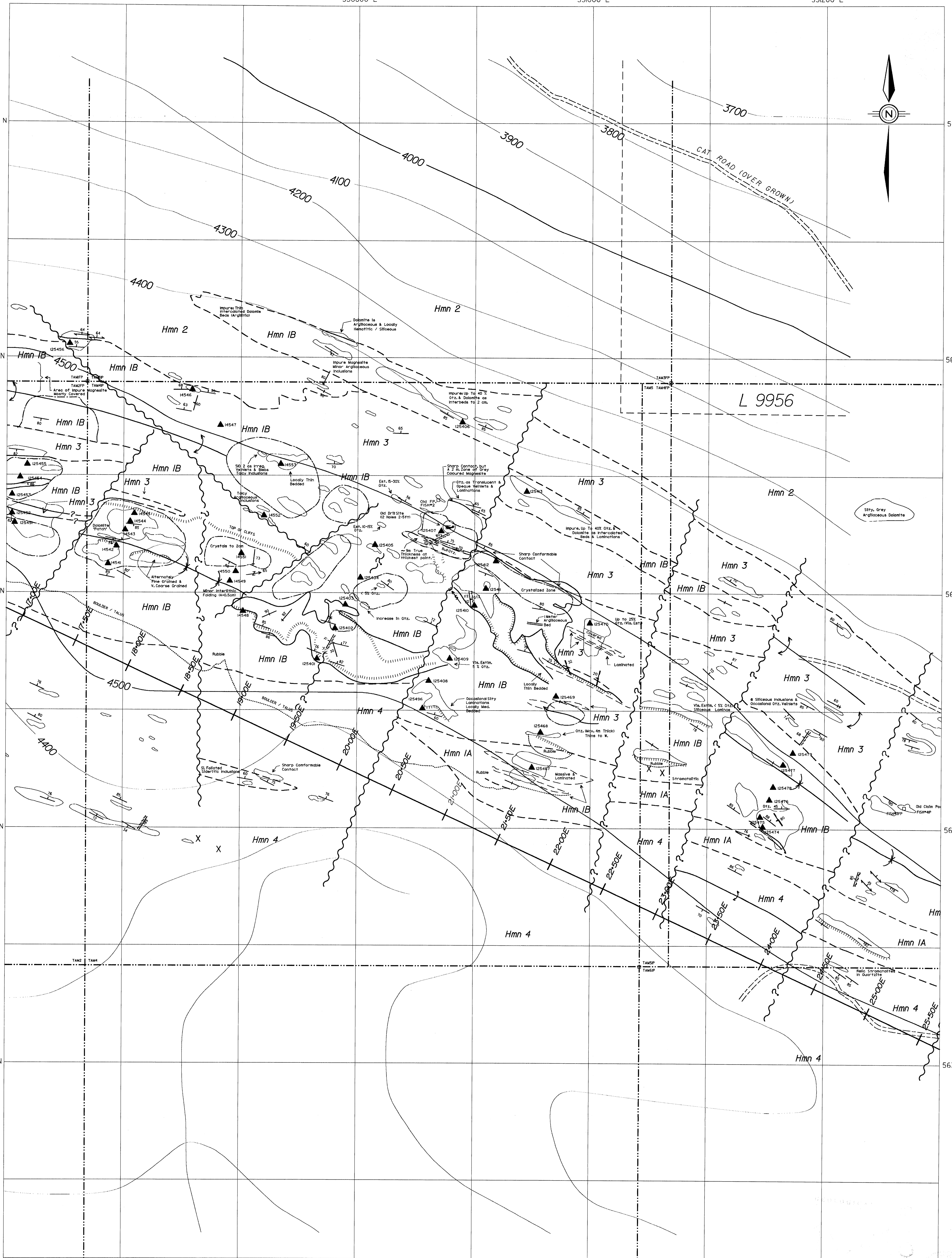
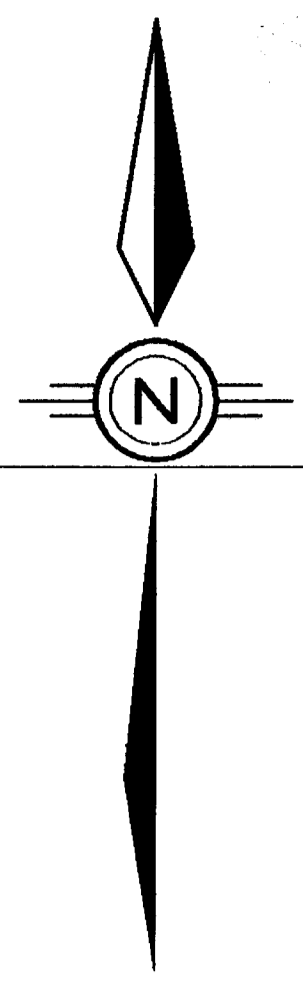
5639200 N

5639000 N

5639000 N

5638800 N

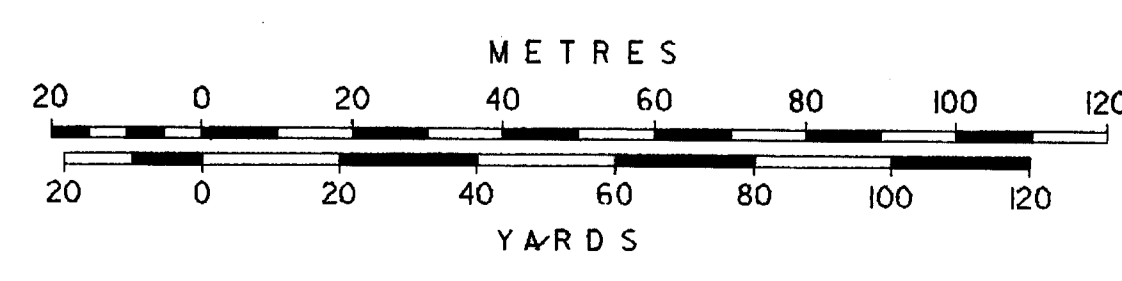
5638800 N



- X. OUTCROP: Small, Large
- ▲ 125422 SAMPLE SITE: 4 R.R. Road Chip Sample Character: Samples Representative Chips from a One Meter Radius.
- ROADWAYS
- LIMITS OF TALUS
- CLAM LINE
- GEOLOGICAL CONTACT: Assumed, Defined
- FAULT, VIEWED
- FAULT, INFERRED
- AREA OF V. COARSE GRAINED MAGNESITE
- HELICOPTER PAD
- BEDDING: Inclined
- BEDDING: Vertical
- FOLIATION: Inclined
- FOLIATION: Vertical
- FAULT ATTITUDE
- JOINTING: Moderate
- JOINTING: Strong
- FAULT
- QUARTZ VENE
- CLIFFS
- MICROFOLDING 'S'
- MICROFOLDING 'Z'
- SUCKERSIDES

- ANTICLINE
- SYNCLINE
- Hmn 1A Grey/Light Grey/Cream, Fine Grained DOLOMITE Stronometric to 25cm Ø, Occasional Cherry Layers, Contains Magnesite
- Hmn 1B MAGNESITE
- Hmn 2 Dark, Red/Brown, V. Fine Grained ARGILLACEOUS DOLOMITE Followed Occasional Cherry/Light Coloured Wisp & Babs to 4cm Thick.
- Hmn 3 Light Grey/Butt/Green/Purple, Fine Grained DOLOMITE
- Hmn 4 Light Grey/White QUARTZITE, V. Fine Grained, Aphanitic, Locally Thin Bedded, Locally Stronometric

SCALE 1:1000



U.T.M. PROJECTION

Canadian Occidental Petroleum Ltd.

FIGURE No. 2
TAM CLAIMS MAGNESITE DEPOSIT
GEOLOGY
CONTOUR INTERVAL: 100ft.

SCALE: 1:1000
DATE: NOV. 7, 1989
DRAWN BY: J.D. MONAGUE

AUTHOR: R. SWARN
GEOLOGY: G. RODGERS, P. KLEWCHAK
FILE NO.: COALZ.BOR

53200 E

53400 E

53600 E

53800 E

5439000 N

5439000 N

5638800 N

5638800 N

5638600 N

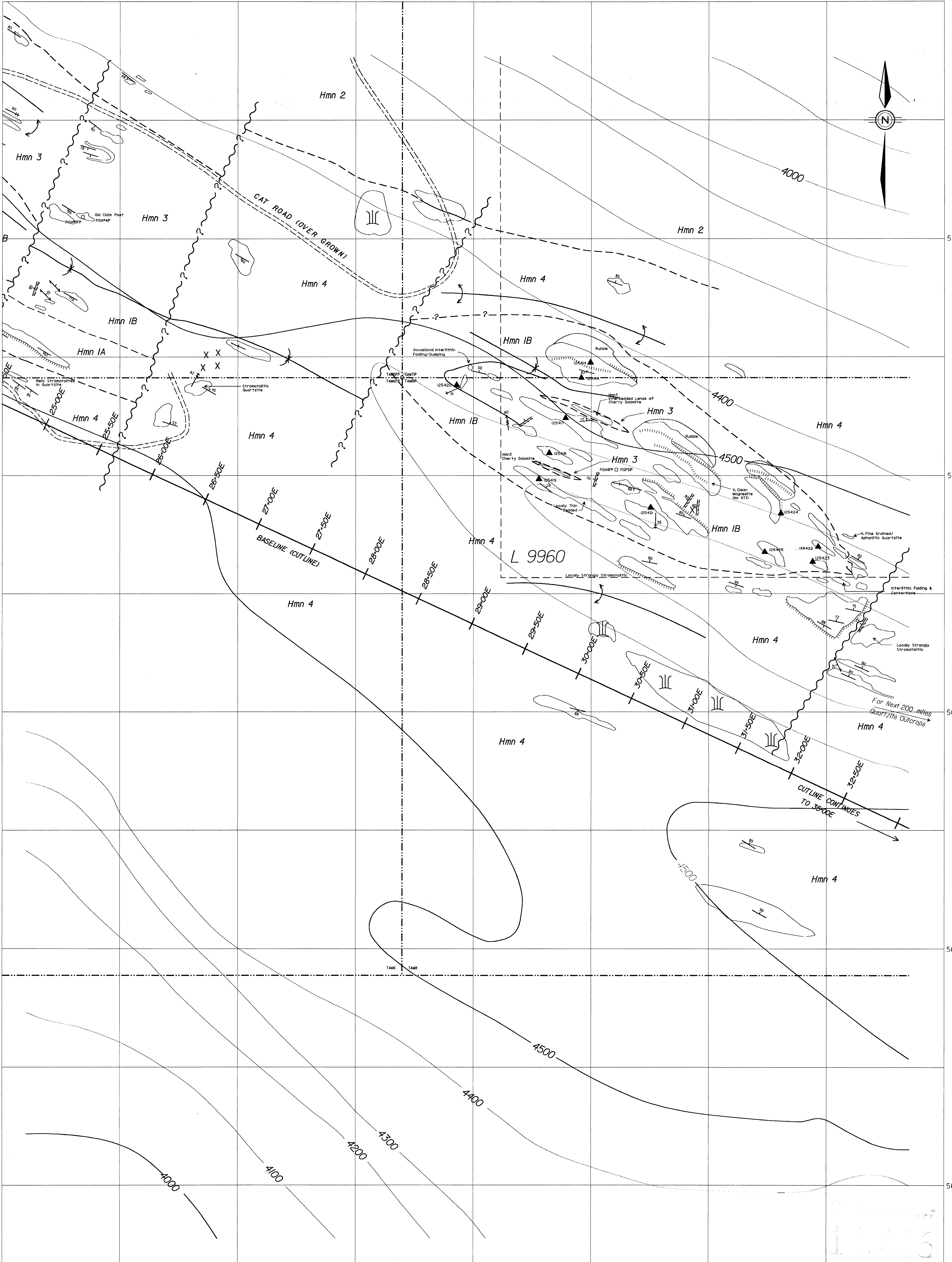
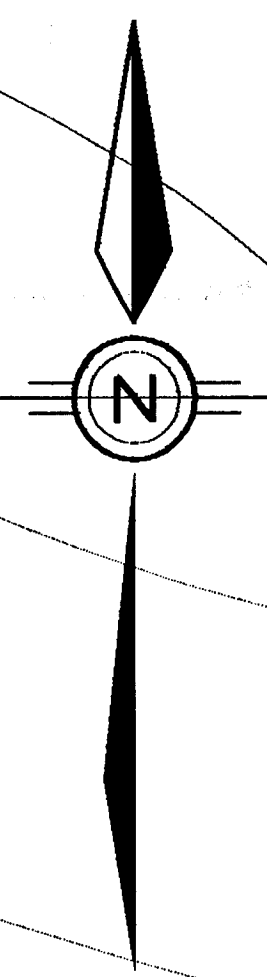
5638600 N

5638400 N

5638400 N

5638200 N

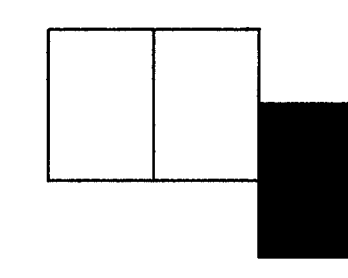
5638200 N



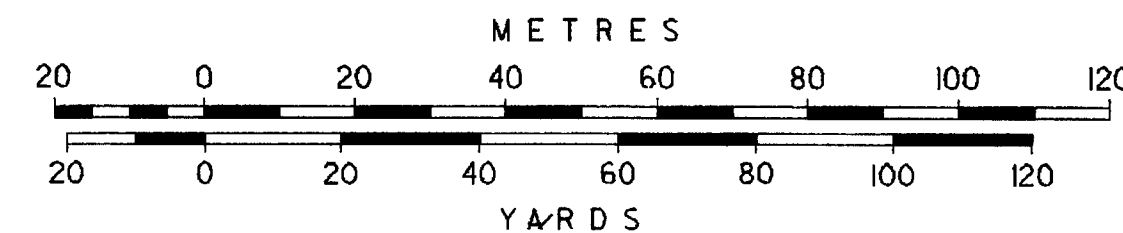
- X OUTCROP Small, Large
- ▲ 125422 SAMPLE SITE - 4 KG Rock Chip Sample / Character Samples Representative Chips from a one meter radius.
- ROADWAYS
- LIMITS OF TALUS
- CLEAN LINE
- GEOLOGICAL CONTACT: Assumed, Defined
- FAULTS Known
- FAULTS Inferred
- AREA OF V. COARSE GRAINED MAGNESITE
- HELICOPTER PAD

- BEDDING: Inclined
- BEDDING: Vertical
- FOLIATION: Inclined
- FOLIATION: Vertical
- FAULT ATTITUDE
- JOINTING: Moderate
- JOINTING: Strong
- FAULT
- QUARTZ VEIN
- CLEFS
- MICROFOLDING '5'
- MICROFOLDING '2'
- SLICKENSIDES

- ANTICLINE
- SYNCLINE
- Hmn 1A Gray/Light Grey/Green, Fine Grained DOLOMITE Stronatalitic to 25m & occasional Cherty Layers, Contains Magnesite
- Hmn 1B MAGNESITE Dark Red/Brown, V. Fine Grained ARGILLACEOUS DOLOMITE Foliated, Occasional Cherty/Light Coloured Waps & Babs to 4cm Thick.
- Hmn 3 Light Grey/Buf/Green/Purple, Fine Grained DOLOMITE
- Hmn 4 Light Grey/White QUARTZITE, V. Fine Grained/ Aphanitic, Locally Thin Bedded, Locally Stronatalitic



SCALE 1:1000



U.T.M. PROJECTION

Canadian Occidental Petroleum Ltd.

FIGURE No. 3
TAM CLAIMS MAGNESITE DEPOSIT
GEOLOGY

CONTOUR INTERVAL: 100ft.

SCALE: 1:1000	AUTHOR: J.R. SWANEN
DATE: NOV. 7, 1989	GEOLOGY: J.G. RODGERS, P.K. LEWIS
DRAWN BY: J.D. MONAGUE	FILE No.: COAL3.BOR

APPENDIX 'B'
ASSAY CERTIFICATES

1-11-20.RS



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 BROOKSBANK AVE., NORTH VANCOUVER,
BRITISH COLUMBIA, CANADA V7J-1C1

PHONE (604) 984-0221

To: CANADIAN OCCIDENTAL PETROLEUM LTD.

1500 - 635 8TH AVE., S.W.

CALGARY, AB

T2P 3Z1

Project

Comments: CO: KOOTENAY GEO - SERVICES

Page No. : 1

Tot. Pages: 2

Date : 19-JUL-89

Invoice #: I-8919192

P.O. #: 81CG9730

CERTIFICATE OF ANALYSIS A8919192

SAMPLE DESCRIPTION	PREP CODE	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	BaO %	LOI %	TOTAL %
125401	208 200	6.06	1.36	1.11	40.79	0.73	0.20	0.14	0.11	< 0.01	0.02	< 0.01	47.46	98.00
125402	208 200	7.05	1.50	1.16	43.32	0.83	0.29	0.13	0.07	< 0.01	0.02	< 0.01	46.84	101.20
125403	208 200	3.28	0.76	1.49	41.16	0.67	0.21	0.12	0.04	< 0.01	0.03	< 0.01	50.03	97.81
125404	208 200	5.66	0.71	1.41	43.26	0.56	0.24	0.14	0.03	< 0.01	0.02	< 0.01	48.56	100.60
125405	208 200	4.12	0.85	1.81	29.32	17.54	0.41	0.15	0.03	0.01	0.06	< 0.01	46.32	100.65
125406	208 200	21.88	0.53	0.81	35.79	0.84	0.20	0.24	< 0.02	< 0.01	0.01	< 0.01	39.91	100.25
125407	208 200	2.22	0.16	1.65	42.00	1.20	0.23	0.15	< 0.01	< 0.01	0.04	< 0.01	50.75	98.43
125408	208 200	4.13	0.93	0.98	41.32	0.61	0.20	0.14	0.05	< 0.01	0.02	< 0.01	49.16	97.55
125409	208 200	4.32	0.53	1.49	41.10	0.84	0.24	0.13	0.02	0.03	0.03	< 0.01	49.61	98.35
125410	208 200	8.01	1.21	1.60	41.64	0.53	0.24	0.18	0.05	0.01	0.03	< 0.01	46.88	100.35
125411	208 200	3.69	0.70	1.84	40.30	0.57	0.19	0.26	< 0.02	< 0.01	0.03	< 0.01	50.00	97.63
125412	208 200	34.14	0.19	1.31	30.27	0.53	0.23	0.15	< 0.01	0.04	0.03	< 0.01	33.97	100.90
125413	208 200	25.97	0.30	0.65	34.70	0.70	0.24	0.15	0.01	0.01	0.01	0.01	38.36	101.10
125451	208 200	1.67	0.61	1.10	41.22	0.92	0.21	0.24	0.03	0.04	0.02	0.01	51.30	97.37
125452	208 200	7.93	1.32	0.86	41.78	0.86	0.23	0.13	0.09	0.01	0.01	< 0.01	47.36	100.60
125453	208 200	2.20	0.83	1.59	42.00	0.82	0.24	0.18	< 0.04	< 0.01	0.03	0.01	50.43	98.39
125454	208 200	1.18	0.30	1.61	42.43	0.96	0.26	0.16	< 0.01	< 0.01	0.05	0.01	51.30	98.27
125455	208 200	3.42	0.13	1.64	41.11	0.54	0.26	0.11	< 0.01	< 0.01	0.04	< 0.01	50.34	97.62
125456	208 200	5.50	0.18	1.30	41.25	1.40	0.26	0.12	< 0.01	0.07	0.04	< 0.01	48.91	99.04
125457	208 200	2.53	0.54	1.44	42.66	0.43	0.21	0.10	0.02	0.01	0.03	< 0.01	50.09	98.07
125458	208 200	1.71	0.06	1.50	42.26	0.89	0.21	0.08	< 0.01	< 0.01	0.06	< 0.01	51.04	97.84
125459	208 200	7.87	0.98	1.02	41.68	0.84	0.74	0.08	< 0.01	< 0.01	0.03	< 0.01	47.30	100.55
125460	208 200	7.98	0.84	0.73	42.94	0.61	0.27	0.10	0.06	< 0.01	0.01	< 0.01	47.11	100.65
125461	208 200	5.45	0.66	0.78	43.24	0.71	0.27	0.18	0.02	< 0.01	0.01	< 0.01	48.98	100.35
125462	208 200	2.60	0.05	0.71	41.95	1.22	0.21	0.09	< 0.01	0.02	0.01	< 0.01	50.75	97.63
125463	208 200	14.98	0.30	0.68	38.80	0.64	0.25	0.11	< 0.01	< 0.01	0.01	< 0.01	43.93	99.72
125464	208 200	2.77	1.07	2.52	20.56	27.25	0.30	0.09	0.05	< 0.01	0.14	< 0.01	43.97	98.74
125465	208 200	3.91	0.88	1.28	38.68	7.71	0.28	0.09	0.05	< 0.01	0.03	< 0.01	48.30	101.20
125466	208 200	3.57	0.12	0.93	38.00	6.85	0.27	0.08	< 0.01	< 0.01	0.03	< 0.01	49.29	99.17
125467	208 200	9.22	0.82	1.46	42.06	0.64	0.25	0.09	0.05	< 0.01	0.03	< 0.01	46.41	101.05
125468	208 200	7.71	0.90	1.65	39.76	3.64	0.32	0.11	< 0.05	< 0.01	0.03	< 0.01	46.85	101.05
125469	208 200	7.43	0.21	1.52	40.40	1.60	0.27	0.10	< 0.01	< 0.01	0.03	< 0.01	47.93	99.52
125470	208 200	9.03	0.20	0.91	41.42	0.86	0.28	0.10	0.01	< 0.01	0.07	< 0.01	47.35	100.25
125471	208 200	3.61	0.69	0.86	42.30	0.76	0.28	0.14	0.04	< 0.01	0.02	0.01	50.00	98.72
125472	208 200	9.94	0.21	0.87	35.47	7.71	0.27	0.08	< 0.01	< 0.01	0.02	< 0.01	45.83	100.45
125473	208 200	6.00	0.35	0.85	38.92	3.55	0.22	0.11	< 0.01	< 0.01	0.02	< 0.01	48.19	98.25
14541	208 200	1.16	0.30	1.47	41.69	0.68	0.20	0.10	0.01	0.10	0.04	< 0.01	50.99	96.74
14542	208 200	2.42	0.74	0.98	41.48	0.53	0.20	0.10	0.02	0.02	0.02	< 0.01	50.16	96.67
14543	208 200	3.02	1.41	1.34	41.66	0.42	0.24	0.25	0.06	0.03	0.03	0.01	49.31	97.78
14544	208 200	4.70	0.75	1.38	41.07	0.50	0.46	0.17	0.04	< 0.01	0.03	0.01	49.22	98.35

CERTIFICATION :

B. Coughlin



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212 BROOKSBANK AVE., NORTH VANCOUVER,
BRITISH COLUMBIA, CANADA V7J-2C1

PHONE (604) 984-0221

CANADIAN OCCIDENTAL METRO LTD.

1500 - 635 8TH AVE., S.W.
CALGARY, AB
T2P 3Z1

Project :

Comments : KOOTENAY GEO-SERVICES

Page No.
Tot. Pages: 3
Date : 20-AUG-89
Invoice # : I-8920869
P.O. # : 81CG9730

CERTIFICATE OF ANALYSIS A8920869

SAMPLE DESCRIPTION	PREP CODE	MgO %										
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125402	214	---	41.2									
125403	214	---	41.4									
125404	214	---	42.4									
125405	214	---	27.6									
125406	214	---	33.4									
125407	214	---	43.3									
125408	214	---	42.2									
125409	214	---	43.3									
125410	214	---	42.8									
125411	214	---	43.8									
125412	214	---	29.7									
125413	214	---	32.9									
125451	214	---	43.9									
125452	214	---	39.6									
125453	214	---	43.9									
125454	214	---	43.8									
125455	214	---	43.0									
125456	214	---	41.7									
125457	214	---	43.8									
125458	214	---	43.8									
125459	214	---	42.9									
125460	214	---	43.4									
125461	214	---	44.5									
125462	214	---	44.8									
125463	214	---	39.4									
125464	214	---	19.90									
125465	214	---	38.4									
125466	214	---	39.3									
125467	214	---	41.8									
125468	214	---	38.9									
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125472	214	---	35.3									
125473	214	---	40.5									
14541	214	---	44.3									
14542	214	---	43.4									
14543	214	---	43.7									
14544	214	---	43.8									

CERTIFICATION : *[Signature]*



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 212 BROOKSBANK AVE., NORTH VANCOUVER,
 BRITISH COLUMBIA, CANADA V7J-2C1
 PHONE (604) 984-0221

CANADIAN OCCIDENTAL TROUBLE LTD.

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 CALGARY, AB
 T2P 3Z1

Project :
 Comments: CC: KOOTENAY GEO-SERVICES

Page No. :
 Tot. Pages: 3
 Date : 20-AUG-89
 Invoice # : I-8920869
 P.O. # : 81CG9730

CERTIFICATE OF ANALYSIS A8920869

SAMPLE DESCRIPTION	PREP CODE	MgO %									
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14550	214 ---	41.0									
14551	214 ---	43.6									
14552	214 ---	43.5									
14553	214 ---	42.7									
125401 BURNED	214 ---	82.0									
125402 BURNED	214 ---	79.4									
125403 BURNED	214 ---	87.1									
125404 BURNED	214 ---	83.4									
125405 BURNED	214 ---	53.7									
125406 BURNED	214 ---	57.9									
125407 BURNED	214 ---	88.5									
125408 BURNED	214 ---	85.6									
125409 BURNED	214 ---	86.0									
125410 BURNED	214 ---	77.7									
125411 BURNED	214 ---	85.6									
125412 BURNED	214 ---	45.0									
125413 BURNED	214 ---	53.9									
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125452 BURNED	214 ---	77.4									
125453 BURNED	214 ---	87.3									
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125459 BURNED	214 ---	77.7									
125460 BURNED	214 ---	80.0									
125461 BURNED	214 ---	84.2									
125462 BURNED	214 ---	89.6									
125463 BURNED	214 ---	69.2									
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125466 BURNED	214 ---	77.2									
125467 BURNED	214 ---	76.6									
125468 BURNED	214 ---	73.9									

CERTIFICATION : *E. J. ...*



Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers
 212 BROOKSBANK AVE., NORTH VANCOUVER,
 BRITISH COLUMBIA, CANADA V7J-1C1
 PHONE (604) 984-0221

CANADIAN OCCIDENTAL PETROLEUM LTD.

1500 - 635 8TH AVE., S.W.
 CALGARY, AB
 T2P 3Z1

Project :

Comments: ATTN: RON SWAREN CC: KOOTENAY GEO-SERVICES

Page No. : 1
 Tot. Pages: 1
 Date : 9-OCT-89
 Invoice # : I-8926073
 P.O. # : NONE

CERTIFICATE OF ANALYSIS A8926073

SAMPLE DESCRIPTION	PREP CODE	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	MgO %	CaO %	Na ₂ O %	K ₂ O %	TiO ₂ %	P ₂ O ₅ %	MnO %	BaO %	LOI %	TOTAL %	MgO %
125414	208 200	16.13	0.13	0.86	38.14	1.19	0.15	0.06	< 0.01	< 0.01	0.03	< 0.01	42.79	99.52	---
125415	208 200	8.71	0.38	0.99	40.12	1.06	0.16	0.14	< 0.01	< 0.01	0.03	< 0.01	46.76	98.38	---
125416	208 200	14.53	0.78	1.00	38.71	0.86	0.15	0.25	0.04	< 0.01	0.02	< 0.01	43.44	99.80	---
125417	208 200	2.13	0.50	0.71	43.24	0.95	0.16	0.06	0.02	< 0.01	0.02	< 0.01	50.61	98.43	---
125418	208 200	2.61	0.66	0.54	42.70	0.83	0.18	0.15	0.03	< 0.01	0.01	< 0.01	50.13	97.86	---
125419	208 200	6.12	1.04	0.68	41.86	0.84	0.17	0.20	0.06	< 0.01	0.01	< 0.01	47.64	98.64	---
125420	208 200	2.41	0.46	0.62	42.42	0.84	0.15	0.17	0.02	< 0.01	0.02	< 0.01	50.37	97.50	---
125421	208 200	2.83	0.94	0.47	43.22	1.53	0.16	0.21	0.06	< 0.01	0.01	< 0.01	49.71	99.16	---
125422	208 200	2.02	0.63	0.87	45.38	1.35	0.17	0.09	0.05	< 0.01	0.02	< 0.01	50.25	100.85	---
125423	208 200	5.71	0.61	0.88	43.57	0.87	0.14	0.17	0.05	< 0.01	0.02	< 0.01	48.28	100.30	---
125424	208 200	3.86	0.72	0.79	44.89	0.88	0.14	0.15	0.05	< 0.01	0.02	< 0.01	49.18	100.70	---
125425	208 200	2.61	0.60	0.79	44.98	0.98	0.15	0.16	0.02	< 0.01	0.02	< 0.01	50.14	100.45	---
125414 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	65.7
125415 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	77.4
125416 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	67.0
125417 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	90.5
125418 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	89.6
125419 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	81.9
125420 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	90.4
125421 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	86.6
125422 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	88.7
125423 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	82.8
125424 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	86.7
125425 BURNED	214 ---	---	---	---	---	---	---	---	---	---	---	---	---	---	89.4

CERTIFICATION :

B. Coughlin



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Project :

Comments: CC: KOOTENAY GEO-SERVICES

Page No. : 3
Tot. Pages: 3
Date : 20-AUG-89
Invoice # : I-8920869
P.O. # : 81CG9730

CERTIFICATE OF ANALYSIS A8920869

SAMPLE DESCRIPTION	PREP CODE	MgO %									
125469 BURNED	214 ---	79.8									
125470 BURNED	214 ---	78.7									
125471 BURNED	214 ---	87.2									
125472 BURNED	214 ---	64.2									
125473 BURNED	214 ---	77.0									
14541 BURNED	214 ---	91.2									
14542 BURNED	214 ---	88.4									
14543 BURNED	214 ---	86.7									
14544 BURNED	214 ---	84.6									
14545 BURNED	214 ---	71.8									
14546 BURNED	214 ---	78.6									
14547 BURNED	214 ---	85.8									
14548 BURNED	214 ---	77.8									
14549 BURNED	214 ---	81.1									
14550 BURNED	214 ---	76.3									
14551 BURNED	214 ---	88.2									
14552 BURNED	214 ---	84.2									
14553 BURNED	214 ---	83.3									

CERTIFICATION : *W. J. Amoretti*



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Project :

Comments: CC: KOOTENAY GEO - SERVICES

Page No. : 2
Tot. Pages: 2
Date : 19-JUL-89
Invoice #: I-8919192
P.O. #: 81CG9730

CERTIFICATE OF ANALYSIS A8919192

SAMPLE DESCRIPTION	PREP CODE	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	BaO %	LOI %	TOTAL %
14545	208 200	9.07	2.26	1.58	39.36	0.65	0.50	0.55	0.14	< 0.01	0.03	< 0.01	45.60	99.75
14546	208 200	7.44	0.51	1.71	40.95	1.48	0.28	0.15	0.02	< 0.01	0.04	< 0.01	47.57	100.15
14547	208 200	4.41	0.89	1.43	40.90	0.59	0.28	0.90	0.05	0.01	0.03	< 0.01	49.03	98.54
14548	208 200	5.59	2.52	1.60	40.51	0.62	0.21	0.10	0.16	0.09	0.02	< 0.01	46.22	97.65
14549	208 200	2.87	0.91	1.54	38.16	2.79	0.29	0.10	0.06	< 0.01	0.03	< 0.01	50.52	97.29
14550	208 200	8.33	1.79	1.74	41.43	0.93	0.55	0.09	0.10	0.03	0.03	0.01	45.68	100.70
14551	208 200	2.12	0.21	1.53	40.90	1.71	0.29	0.10	< 0.01	0.01	0.04	0.01	50.77	97.71
14552	208 200	4.96	0.14	1.52	40.60	0.37	0.21	0.09	< 0.01	0.03	0.04	< 0.01	49.39	97.36
14553	208 200	4.34	0.53	1.78	39.45	1.37	0.31	0.20	0.01	0.01	0.04	0.01	49.38	97.43

CERTIFICATION :

APPENDIX 'C'
PHOTOGRAPHS

1-11-20.RS

Panorama View
(looking north)
fr. 1900E, 950N



Magnesite Ridge
Looking East



(Hmnlb(Magnesite
(very coarse grained).



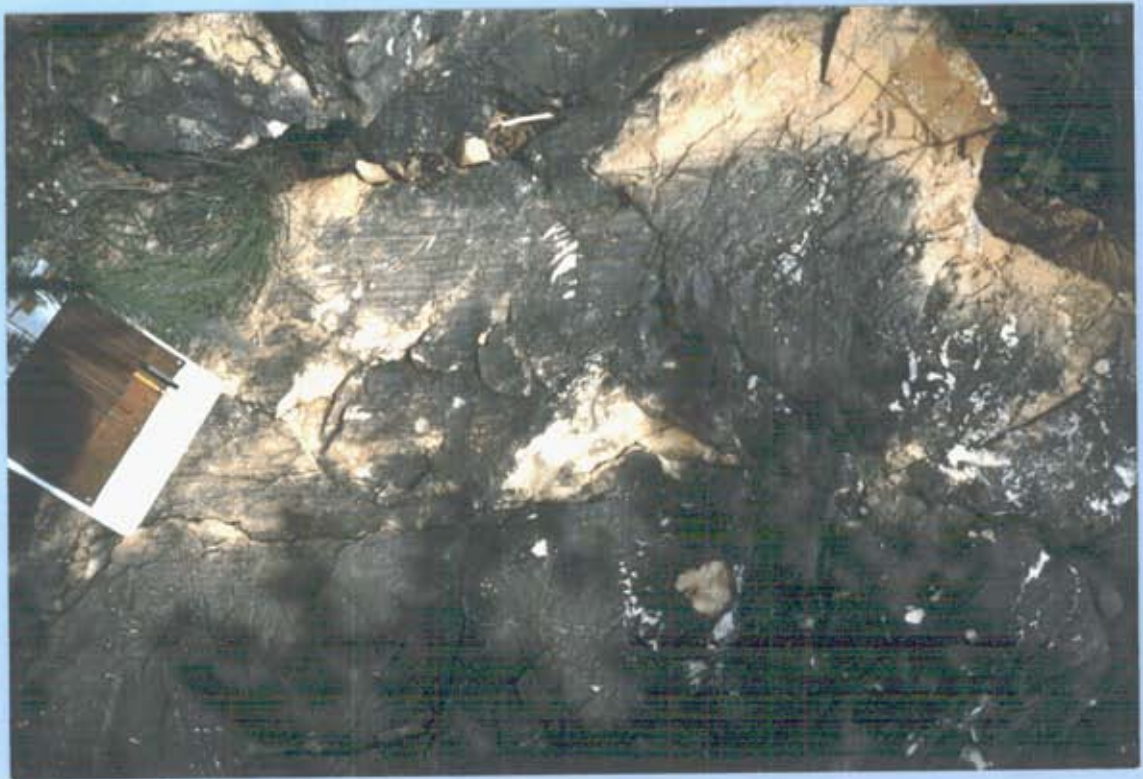
Access road to Tam claims
from Driftwood Creek Road
(looking southwest).



(Hmnl a) Dolomite with
siliceous inclusions.



(Hmnl b) Magnesite with
relic bedding.



(Hmlb) Impure Magnesite
thin-bedded with silty laminations.

