

= PR- HANINGTON 79 (1)A. =

REPORT OF THE 1979 HANINGTON

EXPLORATION PROGRAMME

OPEN FILE

536

382-9107 PR-HANINGTON 79(1)A

DENISON MINES LIMITED

COAL DIVISION



P.O. BOX 11575
650 WEST GEORGIA STREET
VANCOUVER, B.C. CANADA V6B 4N7
TEL. (604) 669-2228
TELEX 04-51547

*Hanington
Cl. 4659 to 4673*

January 3, 1980

Mr. P. Hagen, Acting Administrator for Coal
Department of Mines and Petroleum Resources
Government of British Columbia
Parliament Buildings
Victoria, B.C.

MINISTRY OF MINES AND
PETROLEUM RESOURCES

JAN 7 1980

146 COPY MINERAL TITLES FILE ROOM

Dear Paul:

I have attached a short geological report on the Hanington licences for filing in Victoria.

Our exploration on the licences took place during 1979. At the present time we do not expect to renew the licences beyond their present anniversary date of April 17, 1980 and thus no cost assessments will be applied.

REFERRED TO	DATE	INITIALS
C.G.C.		
D.C.G.C.	✓ 8/1	L
G.C.		
F.M.C.		
M.T.D.R.		
P.L.C.R.	✓	
CO.A.L.	✓	
FILE NO.		
FILING CLERK		

Best regards,

DENISON MINES LIMITED

G. P. Gormley
Manager of Exploration
Coal Division

GPG:dif

Encl.

*Alex, This report is for your files; I don't need it back.
Paul*

NTS. : 931-1 931-8

DEMISON MINES LTD.

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54°17

120°07

T A B L E S

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

- 1. Analysis of Head Samples

NOV. 15, 1979

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- arrived Jan. 9th. to be filed.

OPEN FILE

REPORT OF THE 1979 HANINGTON EXPLORATION PROGRAMME

Introduction

The Hanington property is located along the inner Rocky Mountain Foothills immediately to the west of Denison's Saxon property. Most of the property lies south of the Narraway River and is bisected by Hanington Creek. No roads or trails are present in the area although two seismic lines cut some of the northern licenses. Access to the property was gained through the use of a Hughes 500C helicopter.

The 1979 exploration programme consisted of geological mapping at a scale of 1:10,000. The objectives of the programme were to determine the stratigraphy and structure of the area and locate, log and sample any coal seams that might be present. Geological map and cross-sections have been placed at the back of this text.

Stratigraphy

The rocks which underlie the property comprise three main units the predominant lithologies of which are limestones, black shales and sandstones. These units are described below:

a) Limestone Unit

This map-unit is restricted to the western half of the property. The lithologies are characterized by cream to light-grey weathering limestones with occasional claystone and siltstone laminations. The limestones are generally massive and often form small escarpments such as those seen along the south banks of the Narraway River. Recrystallization textures can be seen locally, particularly in proximity to zones of Tectonic disturbance. Creeks, ponds and swampy areas which are underlain by the limestone contain considerable amounts of white lime-mud. The lithologies present within this map-unit are considered to correlate with the Triassic Pardonet Formation.

b) Black Shale Unit

This map-unit underlies most of the southern parts of the property and is particularly well exposed in Hanington Creek. In outcrop the black shales may be interbedded with occasional, thin siltstones or thinly interbedded with sandstones and siltstones. In the former case the shales and siltstones form an almost "rythmic" sequence of about 2.5 - 3.0 metres shale and 0.3 - 1.0 metres siltstone. In the latter case the shales are interbedded with medium grained sandstones and siltstones on a scale of a few centimetres to a metre or so. The sandy units commonly show sharp bases and become finer grained upwards. Ironstone nodules are common and several fossils have been found in the shales namely, gastropods, belemnites and goniatites (?). Their species, however, have not been determined. The lithologies represented by the "black shale" map-unit are correlatable to the shales and Passage Beds of the Jurassic Fernie Formation.

c) Sandstone Unit

Rocks of the sandstone map-unit underlie most of the northern and eastern portions of the Hanington property. This is the only map-unit which contains any coal seams. The sandstones which form the predominant lithology of this unit vary from fine grained and well laminated to coarse grained, massive and quartzitic. They also vary substantially in thickness from less than a metre to several tens of metres. Interbedded with these rocks are conglomerates, shales, siltstones and coal seams. The conglomerates are normally characterized by the presence of abundant black chert. This gives the rock a dark gray appearance although lighter shades also occur due to either the weathering of the sandstone matrix or, less frequently, predominance of lighter shades of pebbles. The size of the pebbles varies from granular to large, while the matrix is commonly a medium to coarse grained sandstone. Conglomerate beds vary from 0.5 metres in thickness to zones, with interbedded sandstone and pebbly sandstone layers or lenses, up to 10 metres thick. Black shales and yellow-orange weathering siltstones up to a few metres in thickness are also present. Plant fossils are present in most of the shales and in the siltstones which are found in proximity to coal seams. Some of the sandstones and conglomerates also contain large, carbonized "stems" and/or coaly inclusions. The lithologies of this map-unit are considered to correlate with the Minnes Group (Jurassic to Lower Cretaceous).

The coal seams range up to 1 metre in thickness but are usually between 0.10 and 0.30 metres thick. The coal is hard and sometimes argillaceous; it often has a high vitrain content. No coal seams or zones of economic potential have been found. Some chip samples taken from two thin seams in Hanington Creek have undergone proximate analysis and testing for B.T.U.'s. The results of these analyses are presented following the text.

Coal seams 1.5 to 3.0 metres thick, have been recorded within the Minnes Group on Mt. Minnes (Zeigler & Pocock 1960) and on Mount Gorman (R. Day, pers. comm 1979). The seam described on Mt. Minnes is 858 metres below the base of the Cadomin Formation while several thick seams occur within 30 metres of the Cadomin on Mt. Gorman. Drill holes and trenches on the Belcourt property have intersected several seams up to 1.85 metres thick within 18 metres of the base of the Cadomin. Coal seams of thicknesses similar to those quoted above, were not found on the Hanington property nor on the eastern slopes of Mt. Nekik, where the geology can be traced into unexposed portions of the property. As the lateral extent of these thicker seams is not known, it must not be assumed that they occur with the same thickness in the Hanington Creek area.

No conglomerates belonging to the Cadomin Formation have been identified within the Hanington licenses. The nearest outcrops are north of the Narraway River where the Cadomin forms a broad syncline on the western flank of Mt. Nekik.

Structure

The structural geology of the Hanington property is depicted on the geological map and cross-sections which accompany this report.

The main structure feature which affects rocks of the Minnes Group is a broad syncline outlined by the Cadomin Formation north of the Narraway River. This open structure accounts for the shallow dips observed along the northern portions of Hanington Creek. The western limb of this syncline is cut by a fault which places Triassic limestones against Lower Cretaceous lithologies. Near this fault, immediately south of the Narraway, rocks of the Minnes Group exhibit very tight folding.

This fault (interpreted to be a westerly dipping thrust) has been extended south along the west bank of Hanington Creek on the basis of the geological mapping. It has then been taken across the creek onto the eastern side of the valley to following a topographic depression in the mountainside. This interpretation is based on the occurrence of abundant travertine deposits on this side of the creek. Even though black shales are found in outcrop here, the travertine is considered to reflect the presence of limestone of shallow depths.

The black shales of the Fernie Formation characteristically show very complex, tight folding and generally steep bedding. No time was spent trying to unravel the structures exhibited in this unit.

Reference

Ziegler, W. H. & Pocock, S.A.J. 1960, The Minnes Formation, Edmonton Geological Society, 2nd Annual Field Conference Guide Book, pp. 43 - 71.

November 1, 1979

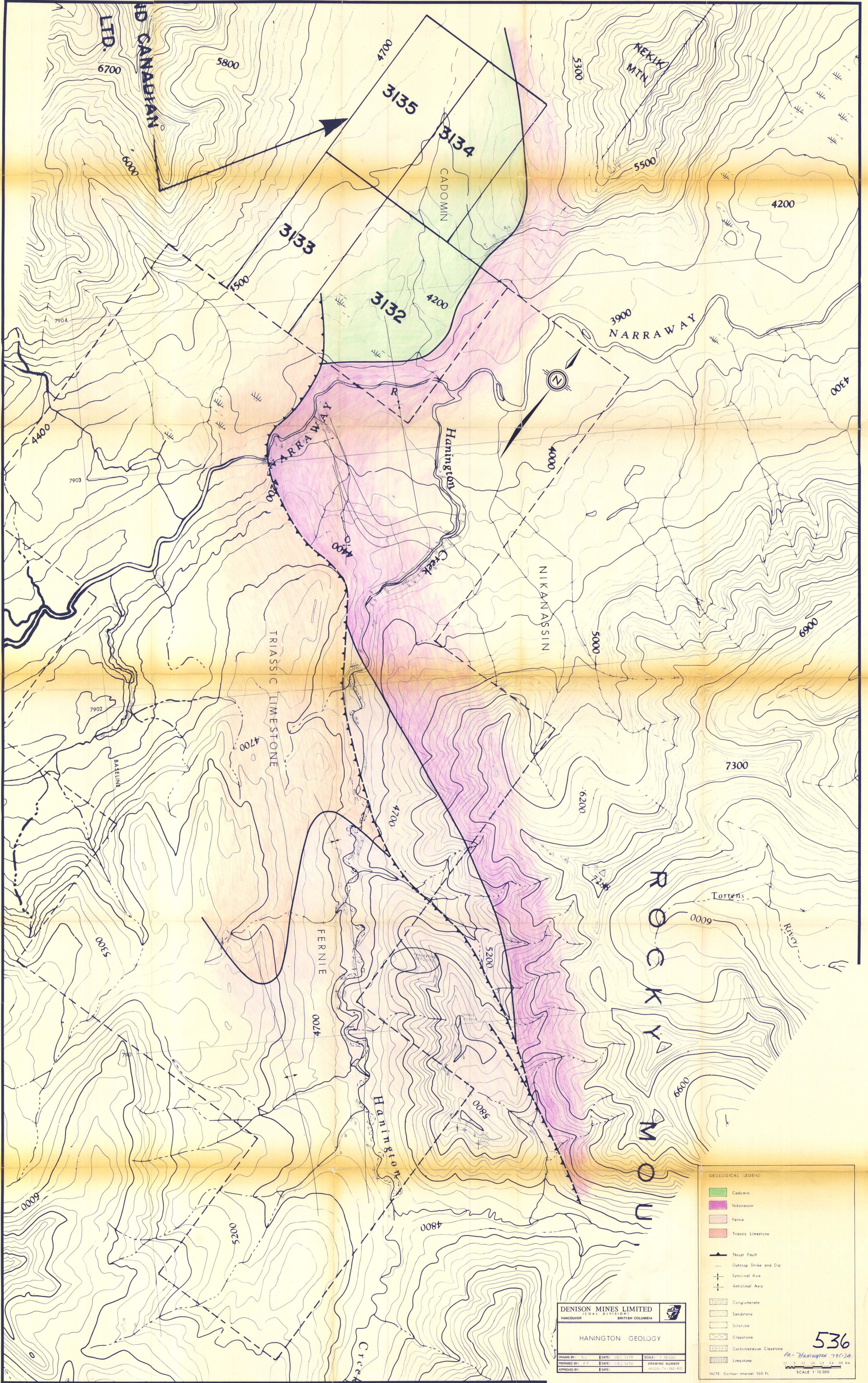
HANNINGTON

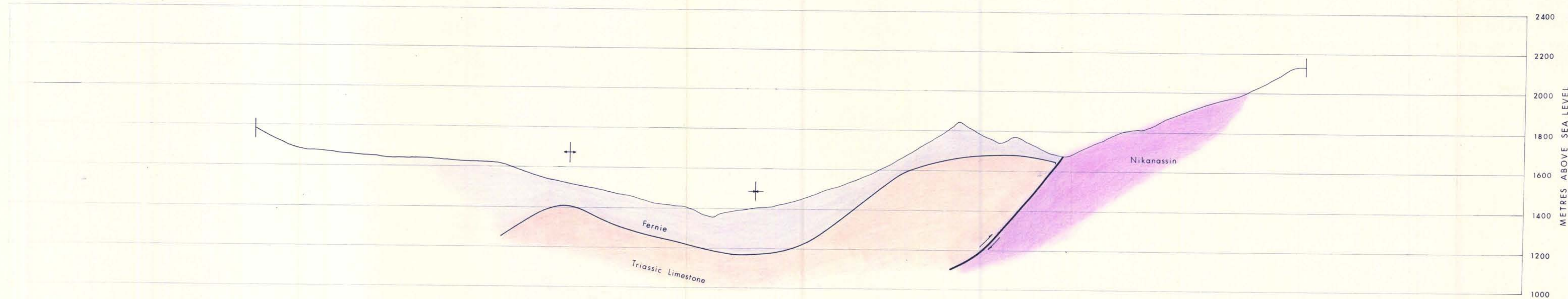
ANALYSIS OF HEAD SAMPLES

<u>Hole No.</u>	<u>Ash %</u>	<u>R.M.%</u>	<u>V.M.%</u>	<u>F.C.%</u>	<u>S %</u>	<u>F.S.I.</u>	<u>Calorific Value</u>	
							<u>Cal/gm.</u>	<u>BTU/lb.</u>
4427	44.09	1.21	26.12	28.58	0.54	2	4,300	7,740
4428	9.52	1.54	35.96	52.98	0.70	6 1/2	7,450	13,410




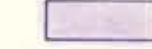

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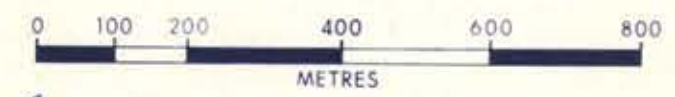
1. Geology Map ~~1:25,000~~ 1:10,000
2. Geology Cross-Section: 7901
7902
7903
7904





LEGEND

-  Base line location
-  Cadomin
-  Nikanassin
-  Fernie
-  Triassic Limestone



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HANINGTON
CROSS SECTION
7901

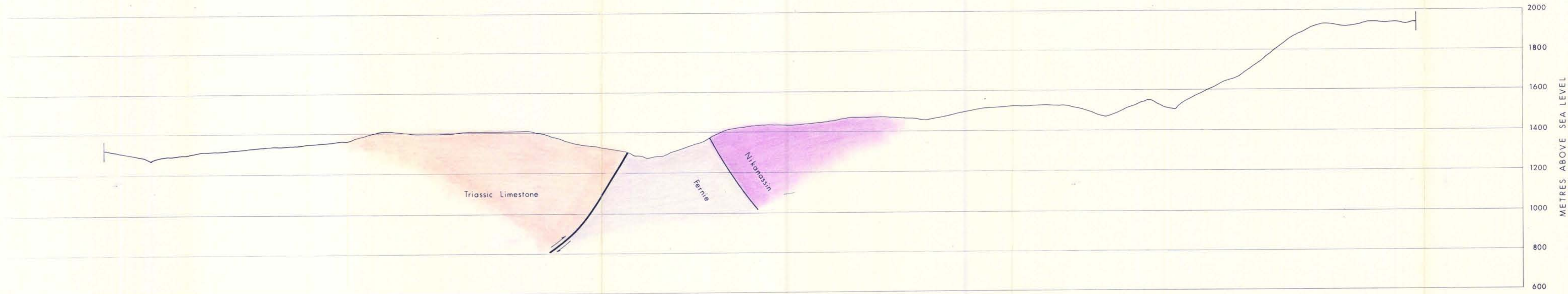
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PREPARED BY: F.T.	DATE:	DRAWING NUMBER
APPROVED BY:	DATE:	HNGN 79-833-R01

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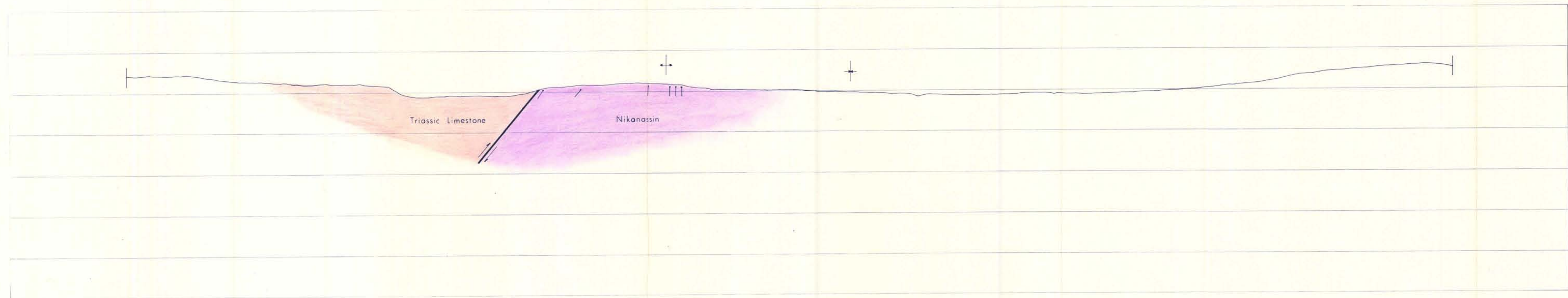
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 VANCOUVER BRITISH COLUMBIA






HANINGTON
CROSS SECTION
7902

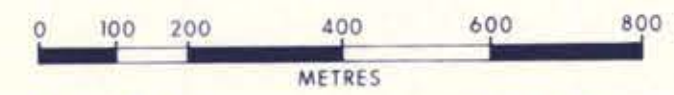
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PREPARED BY: F.T.	DATE:	DRAWING NUMBER
APPROVED BY:	DATE:	HNGN 79-833-R01

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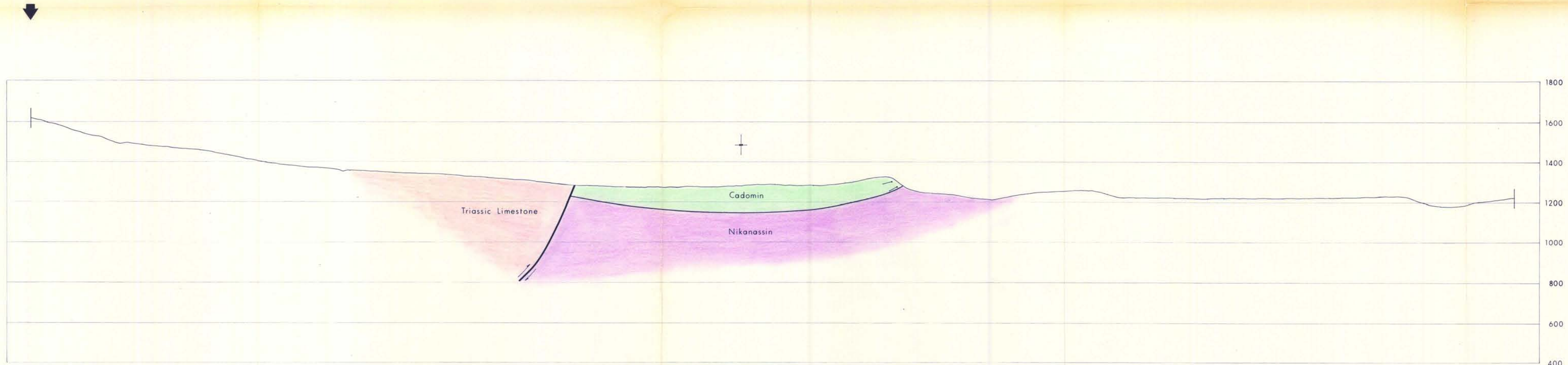
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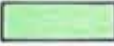
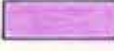

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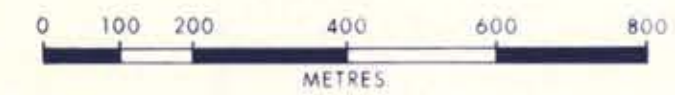
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PREPARED BY: F.T.	DATE:	DRAWING NUMBER
APPROVED BY:	DATE:	HNGN 79-833-R01

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LEGEND

-  Base line location
-  Cadomin
-  Nikanassin
-  Triassic Limestone



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**HANINGTON
 CROSS SECTION
 7904**

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APPROVED BY:	DATE:	HNGN 79-833-R01

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