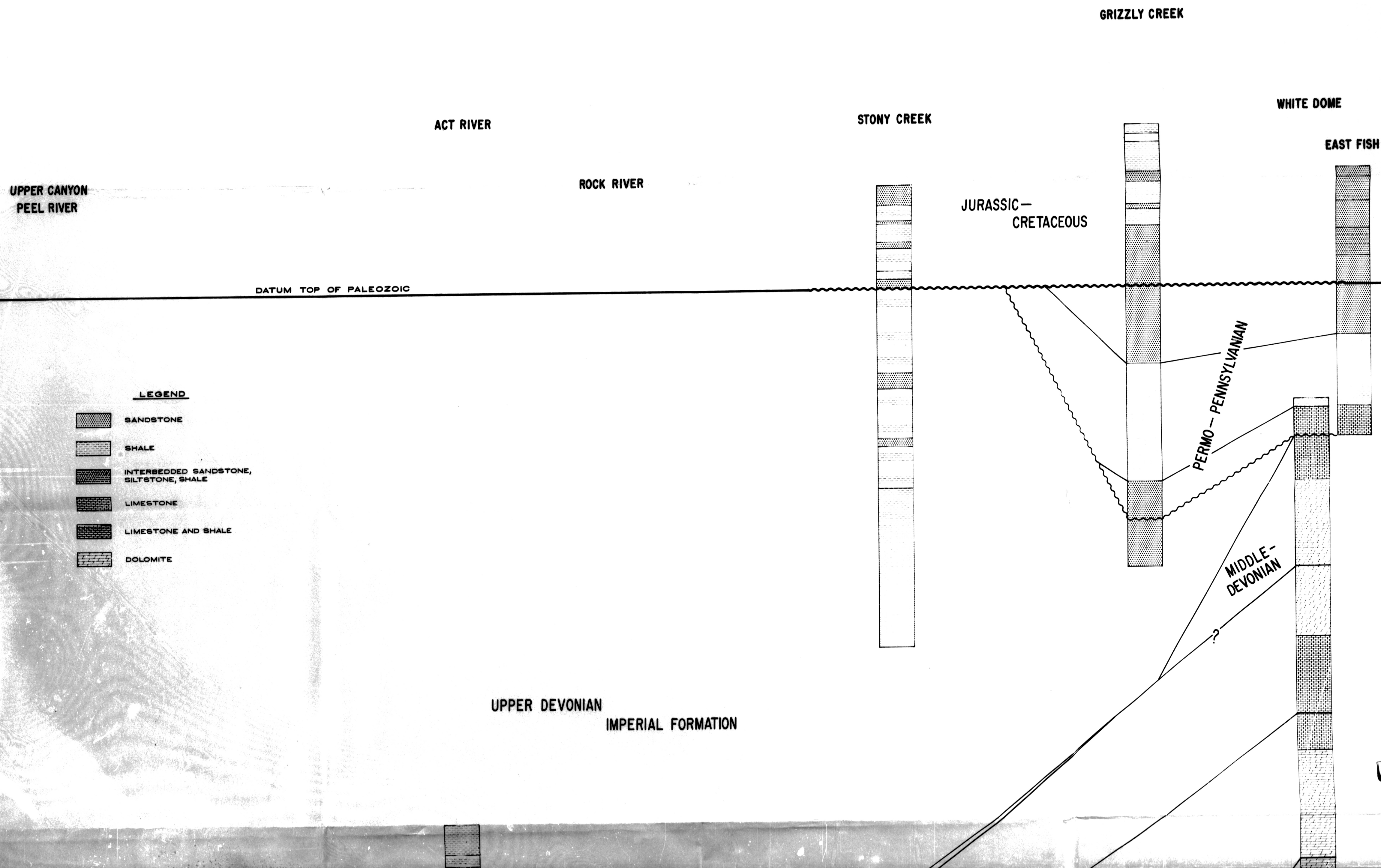


SOUTH
B

NORTH
B₁

CORRELATION SECTION



LIMESTONE AND SHALE
DOLOMITE

UPPER DEVONIAN
IMPERIAL FORMATION

MIDDLE-
DEVONIAN

DEVONIAN

FORT CREEK

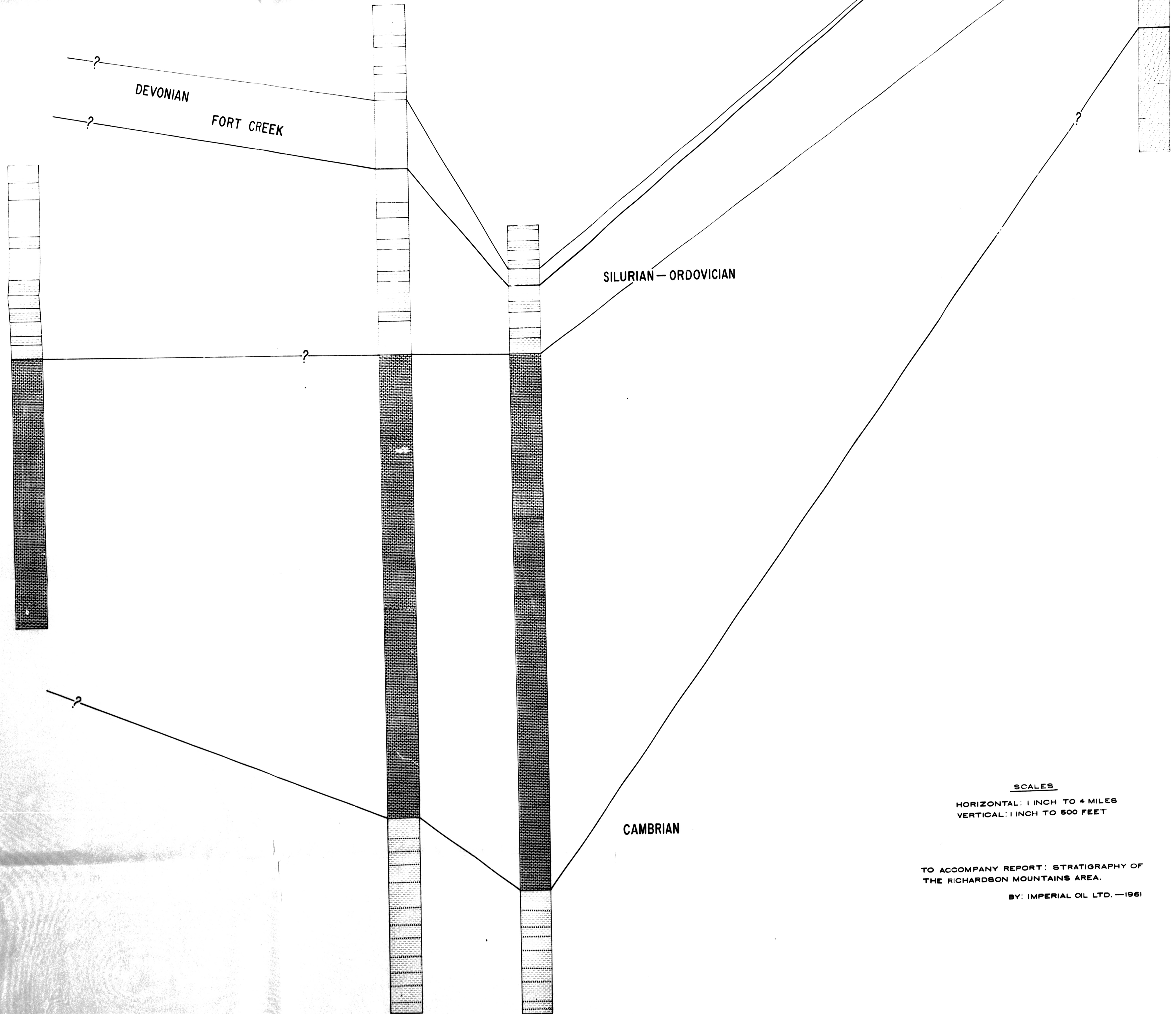
SILURIAN — ORDOVICIAN

CAMBRIAN

SCALES

HORIZONTAL: 1 INCH TO 4 MILES
VERTICAL: 1 INCH TO 500 FEET

2



SCALES

HORIZONTAL: 1 INCH TO 4 MILES
VERTICAL: 1 INCH TO 500 FEET

TO ACCOMPANY REPORT: STRATIGRAPHY OF
THE RICHARDSON MOUNTAINS AREA.

BY: IMPERIAL OIL LTD. — 1961

WEST
A

CORRELATION SECTION PRE-CRETACEOUS

EAST
A₁

BARN MTNS.

RICHARDSON MTNS.

WEST FLANK
BARN MTNS.

JOHNSON CREEK

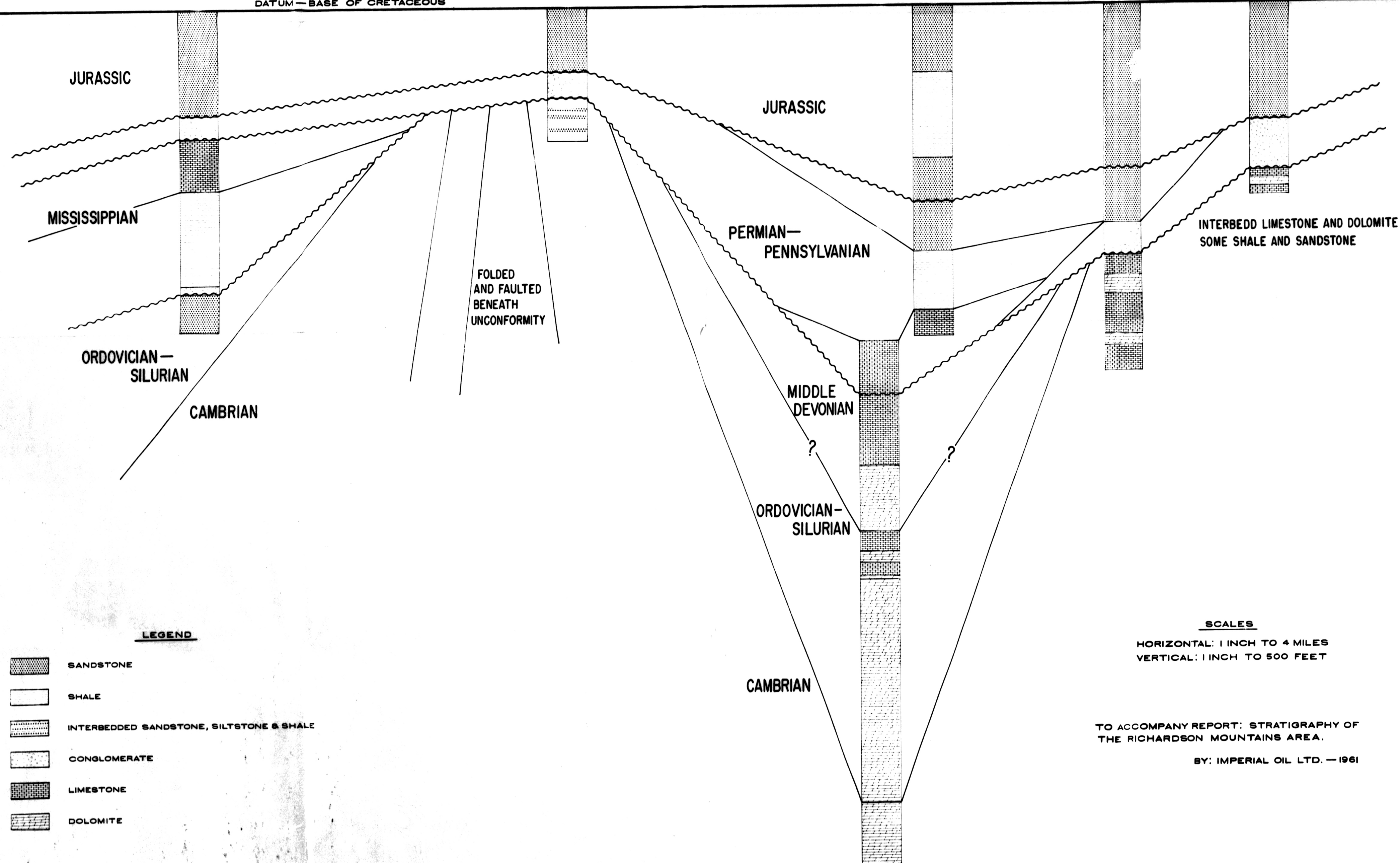
WHITE DOME

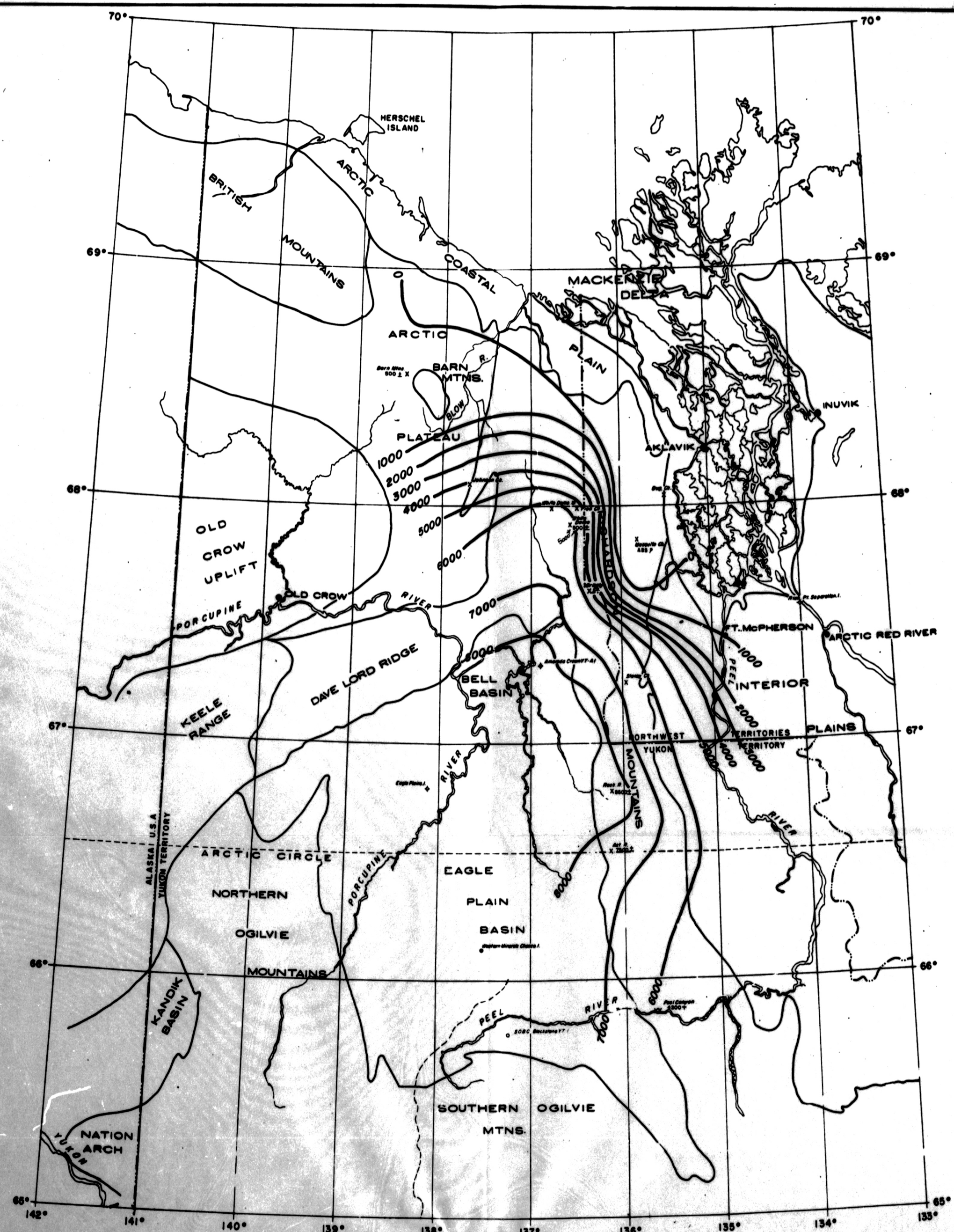
EAST FISH
CREEK

MOSQUITO CREEK

BUG CREEK

DATUM — BASE OF CRETACEOUS

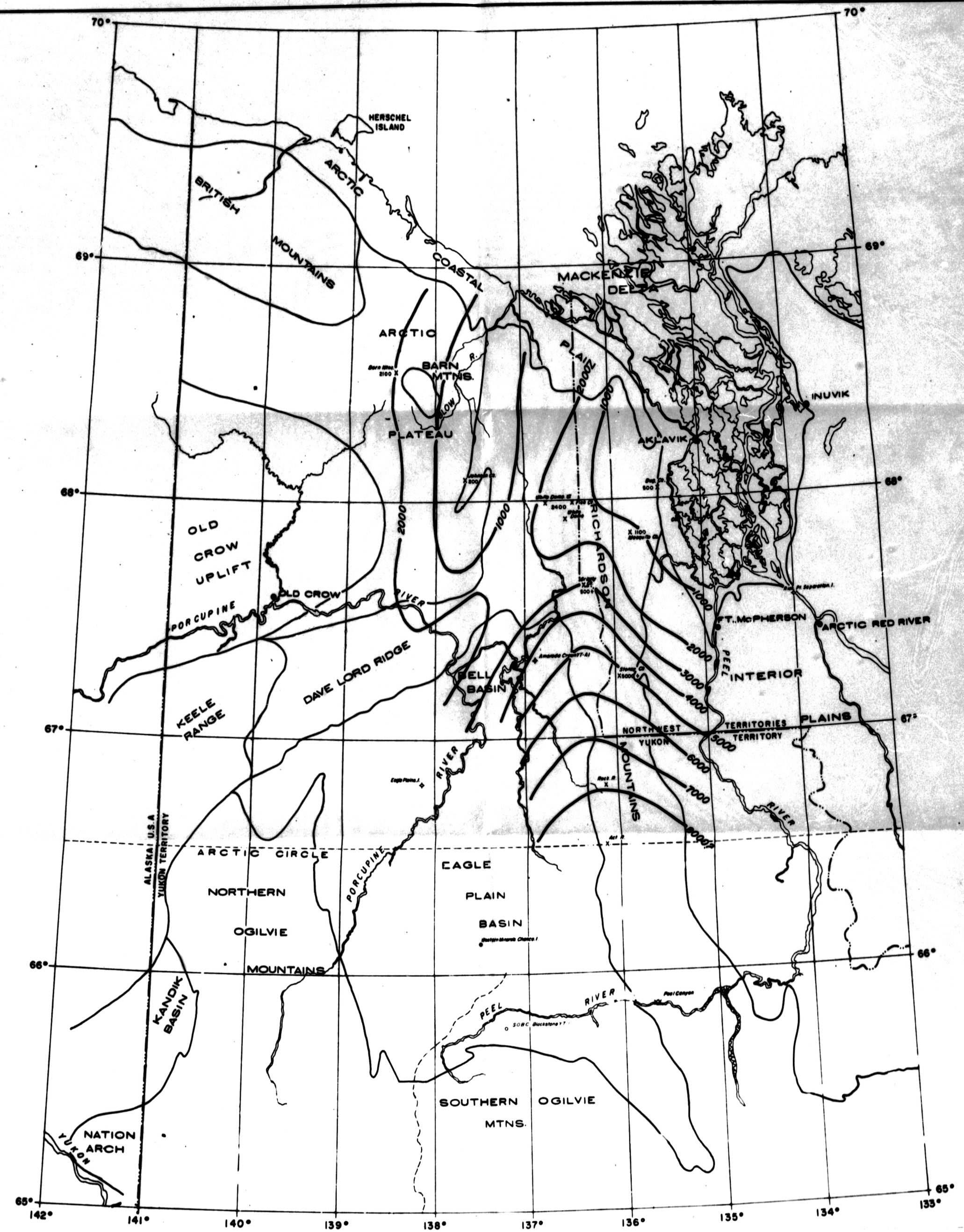




**GEOLOGICAL MAP
ISOPACH
TOP OF MIDDLE DEVONIAN OR
EQUIVALENT TO TOP OF CAMBRIAN**
ISOPACH INTERVAL - 1000 FEET

SCALE
0 10 20

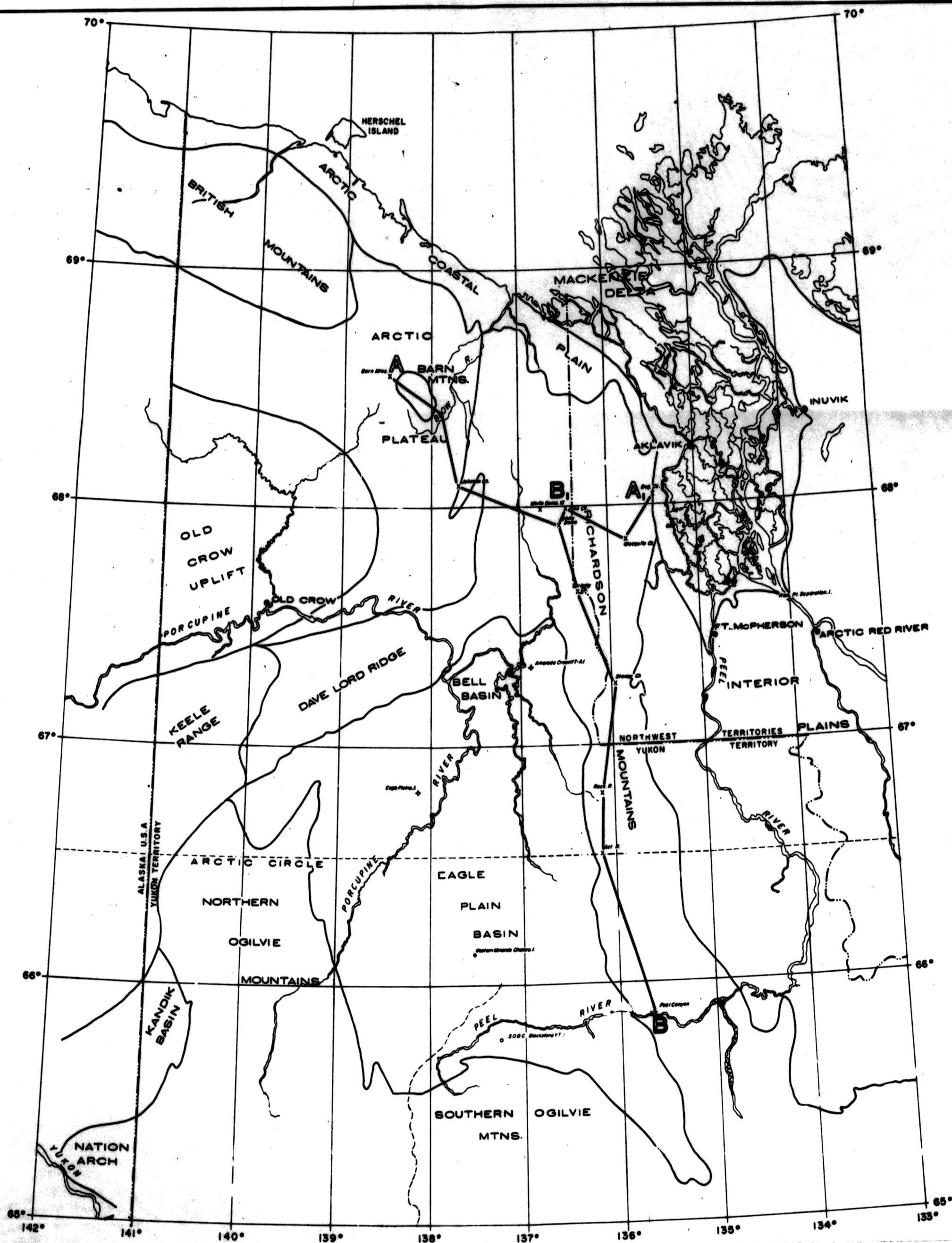
To accompany report: Stratigraphy of the Richardson
Mountains Area.
By Imperial Oil Ltd. 1961



**GEOLOGICAL MAP
ISOPACH
TOP OF PALEOZOIC TO TOP OF MIDDLE DEVONIAN
OR FIRST CARBONATE OF LOWER PALEOZOIC**
ISOPACH INTERVAL - 1000 FEET

SCALE
0 10 20

To accompany report: Stratigraphy of the Richardson
Mountains Area.
By Imperial Oil Ltd. 1961



**LOCATION MAP OF
OUTCROP SECTIONS AND
LINES OF CORRELATION SECTIONS**



To accompany report: Stratigraphy of the Richardson
Mountains Area.

By Imperial Oil Ltd. 1961

7-1-2-26

STRATIGRAPHY

of the

RICHARDSON MOUNTAINS AREA

Imperial Oil Ltd.
1961

STRATIGRAPHY

OF THE

RICHARDSON MOUNTAINS AREA

JUL 6

Imperial Oil Limited
1961.

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North-south Correlation Section B-B ₁	In pocket

STRATIGRAPHY OF THE RICHARDSON MOUNTAINS AREA

INTRODUCTION

Area Covered

The Richardson Mountain Area is located between Latitudes $68^{\circ}30'$ N. and $65^{\circ}30'$ N. It extends along the length of the Richardson Mountains for 190 miles and is bounded by the Peel River to the south and the Blw River to the north. It includes the whole of the Richardson Mountains and the area of the Barn Mountains in the northwest part. The area covered in the 1961 field season comprises some 13,000 square miles.

Accessibility

Access into this remote region is difficult except by float-equipped aircraft operating from Norman Wells, Inuvik and Fort McPherson in the Northwest Territories and Dawson City in the Yukon.

Norman Wells and Inuvik are served by scheduled Pacific Western Airlines aircraft the year round, and during the summer months by river navigation. The Mackenzie River is the main artery into this remote region. Equipment can be sent from Edmonton by rail to Grinshaw or to Waterways in Alberta. From Grinshaw, the supplies are then trucked 380 miles north to Hay River on Great Slave Lake. Large barges travel the Mackenzie River as far north as the Arctic Coast.

LOCATION MAP
RICHARDSON MOUNTAIN AREA
1961

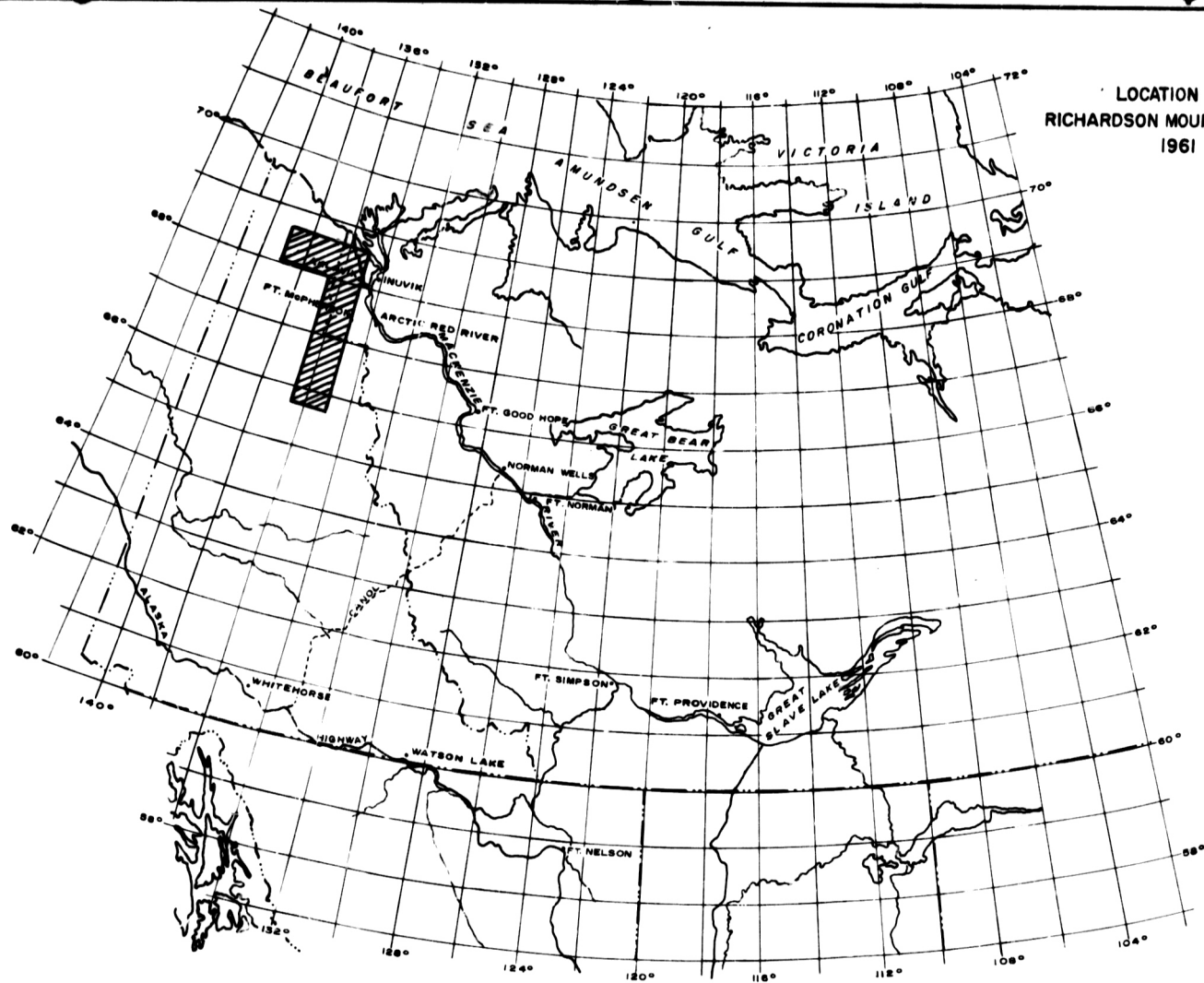


FIG. 1

Supplies can also be transported by truck along the Alaska Highway to Dawson City in the Yukon, and from Dawson City by float-equipped aircraft. Heavy equipment for surveys and/or drilling could be transported in the winter months by cat train from Dawson City. On the Mackenzie River, barges could transport heavy drilling equipment which could be stored until freeze-up. Cat trains could complete the haul to the desired location.

Purpose of Study

The purpose of the 1961 field work was to do stratigraphic detail in the Richardson Mountains. The Paleozoic rocks were studied most extensively by means of measured stratigraphic sections. The better Mesozoic exposures were measured at widely scattered locations.

Method of Study

Crew.—A seven-man geological party spent 99 days in the field between May 22nd and August 27th, 1961. Support aircraft included a Hiller 12B helicopter, a float-equipped Beaver and, on occasion, the Company's Otter and DC-3.

Base Camps.—The project area was worked from the following four base camps: Inuvik, Fort MacPherson, Bonny and Caribou Lakes. The crew, equipment and a few supplies were flown to Inuvik airport from Dawson Creek in one DC-3 flight. The bulk of the equipment and non-perishable supplies for the balance of the season were barged from Fort Nelson to Fort McPherson by Mr. Dick Turner of South

Nahanni. From Fort McPherson, equipment and supplies were transported by Otter and Beaver to Caribou and Bonny Lakes. Perishable foodstuffs were flown to Norman Wells by DC-3 and stored under refrigeration. Weekly supply trips by Beaver were then made between the base camps and Norman Wells.

Communications.—Communications between the base camps and Norman Wells were maintained by a Spilsbury and Tindall TRI-300 transistorised radio powered by a heavy duty, 12-volt wet battery.

From Norman Wells, contact with our Dawson Creek District office was maintained through the Department of Transport telegraph service. Radio black-outs can occur for periods of up to 5 days.

Ground-to-air communications were maintained with all aircraft involved in the operations. The high quality of ground-to-air communications added much to the safety of the operation, and greatly facilitated the use of the helicopter and the fixed wing aircraft as a team.

Base camp to fly camp communication schedules were maintained twice daily. The fly camp radios were Spilsbury and Tindall PRI-20 transistorised radios powered by 90-volt 'B' batteries and six 'D' size flashlight batteries. These light, small, compact radios proved more than satisfactory as many hours of helicopter time were saved in not having to check fly camps daily.

Weather.—Generally good weather prevailed during June, July and early August. The long daylight hours allowed some time to be made up for any lost due to rain showers or low cloud. Most

'weather days' occurred in the later part of August. Of the 99 field days, 15 days were lost due to unfavorable weather.

Operations.—The field party was subdivided into three sub-crews of two men each, consisting of a senior geologist and a student assistant. These sub-crews were engaged solely with measuring stratigraphic sections. They operated mainly from fly camps and returned to base camp after each section was completed to write-up the field notes and plot a log of the outcrop section. The fly camps varied from five to fifteen days each.

A consistent sample interval of 10 feet was maintained, by acquiring two or three rock chips over the 10 feet. The quality of exposures in the Richardsons are poor, with the best occurring in the creek beds. Due to the generally low dip terrain most sections had to be plane-tabled. Stratigraphic reconnaissance was done by the Party Chief using the helicopter. Some reconnaissance was also accomplished with the Beaver.

The helicopter was unserviceable for a total of 18 days. Flying hours for the helicopter totalled 300 hours, and approximately 100 hours for the Beaver and Otter.

Previous Investigations

The recent drilling to the east and west of the Richardson Mountains has renewed interest in the possibilities that additional large petroleum reserves will be found in the Northwest Territories and Yukon. The indicated oil discovery announced by Western Minerals

at the Chance #1 well in the Eagle Plains, further substantiates the potential of the area for oil and gas.

The report, "Stratigraphy and Depositional Tectonics of the North Yukon - Lower Mackenzie Area" by L. J. Martin (1959) is an excellent compilation and summary of the literature dealing with the geology of the area. In recent years, many oil companies have undertaken geological studies along the length of the Richardson Mountains and adjacent areas.

STRATIGRAPHY

General Remarks

Sediments ranging in age from Cambrian to Quaternary were examined and estimated to comprise a sedimentary section approaching 50,000 feet. With the exception of the Triassic, all major geological divisions are represented. Because of non-deposition and erosion, the above total thickness will not be encountered at any one locality.

Table I gives a summary of the stratigraphic section as interpreted for the Richardson Mountains area.

The thicknesses and brief lithologies are illustrated by the means of two stratigraphic cross sections. Locations of measured sections and lines of cross sections are indicated on the accompanying location map.

Proterozoic

Precambrian rocks were not definitely identified. The lowest rocks exposed are in the core of the southern Richardson Mountains in the vicinity of Caribou River. Here a highly indurated section of schists and argillites are tentatively assigned to the Precambrian (?). No fossils were obtained from this locality and a correlation is made with similar Precambrian lithologies mapped to the west in Alaska.

TABLE I

AGE	SOUTHERN RICHARDSONS		NORTHERN RICHARDSONS	
	THICKNESS	LITHOLOGY	THICKNESS	LITHOLOGY
LOWER CRETACEOUS	1500 [±]	Shale, siltstone, sandstone	4000 [±]	Shale, siltstone, sandstone
JURASSIC	ABSENT		3000 [±]	Shale, siltstone
TRIASSIC	ABSENT		ABSENT	
PERMO-PENNSYLVANIAN			2000 [±]	Sandstone, shale limestone, conglomerate.
MISSISSIPPIAN	Not identified		Not identified	
UPPER DEVONIAN	8000 [±]	Sandstone, siltstone shale, conglomerate	ABSENT	
MIDDLE DEVONIAN	ABSENT		2000 [±]	Limestone
SILURIAN ORDOVICIAN	5000 [±]	Shale, chert, limestone.	3000 [±]	Limestone and dolomite.
CAMBRIAN	3000 [±]	Shale, siltstone, sandstone.	?	Carbonate
PRE-CAMBRIAN	NOT IDENTIFIED			

Cambrian

Cambrian rocks are well-exposed in the lower canyons of the Peel River, the core of the southern Richardsons, White Dome and Mosquite Creek in the northern Richardsons, and the Barn Mountains.

Cambrian strata are estimated to be in excess of 3,000 feet. Lithologically, the sequence in the southern Richardsons and Barn Mountains is composed of interbedded silty shales, dark grey siltstones and fine grained sandstones. The contact with the Ordovician is gradational. In the White Dome section, basal fine grained dolomites may be of Cambrian age. The only fossils collected were a few sponge spicules.

Ordovician and Silurian

No reliable paleontologic or lithologic break occurs between the Ordovician and Silurian systems, and it therefore becomes necessary that they be discussed together.

In the southern Richardsons, Silurian-Ordovician rocks were examined; in the northern Richardsons, the basal beds of the White Dome section were examined.

Ordovician-Silurian strata range from 5000 - 10,000 feet in thickness and consist of fine-grained limestones and graptolite-bearing shales. Deposition appears to be continuous to Lower Devonian time.

(Imperial Formation
Devonian (Fort Creek Formation
(Middle Devonian carbonates

Middle Devonian.—Middle Devonian carbonates were sampled in the northern Richardsons and are absent in the southern Richardsons. Perry (1960) suggests that the absence is due to faulting along the Richardson Mountain front and to being covered in all other areas. Martin (1999) suggests early Upper Devonian uplift and erosion as the cause of the absence.

Fort Creek Formation.—The Fort Creek averages about 1000 feet of black, cherty shale and is exposed throughout the southern Richardsons. The top of the carbonate at White Dome shows erosion indicating as to why the Fort Creek and Imperial formations are absent at this locality.

Imperial Formation.—The contact between the Fort Creek and Imperial formations is apparently conformable. The Imperial is entirely clastic and consists of shaly silts and sands, with many interbeds of shale. The Imperial is generally considered to be of Upper Devonian age, however, it may include some Mississippian beds near the top.

Mississippian

Mississippian beds were not definitely identified; however, as previously stated, the Imperial Formation probably includes some Mississippian strata in local areas. Also, several authors have reported Mississippian clastics and carbonates in the Ogilvie Foothills.

Permian-Pennsylvanian

Permian-Pennsylvanian strata in excess of 2000 feet in thickness were examined at several localities in the northern Richardsons. The section can be broadly subdivided into a lower sand and carbonate, a middle shale, and an upper sand with conglomerates at the margins.

Mesozoic

No Triassic beds were observed.

Jurassic-Cretaceous

The Jurassic-Cretaceous rocks have a wide distribution and comprise a thick clastic section approaching 10,000 feet at the northern limits of the mapped area. The section is predominantly marine and the best exposures are to be found in the northern Richardsons.

Late Cretaceous and Tertiary rocks were not sampled, however, they are reported from the Bonnet Plume and Old Crow areas.

Quaternary

Quaternary deposits are restricted to the large river valleys and the low areas to the east and west of the Richardsons south of Latitude 67°30' N.

Intrusive Rocks

Granitoid rocks are present at Mount Fitton on the east flank of the Barn Mountains and are seen to intrude early Paleozoic rocks.

In the Aklavik Range in the northeast Richardsons, intrusive gypsum was observed intruding Cretaceous shales and sandstones.

STRUCTURAL GEOLOGY

The project area includes two main physiographic divisions: The Richardson Mountains and Barn Mountains as defined by Bestock (1948). It also includes small portions of the Eagle Plain, Peel Plateau, Interior Plain, Bell Basin, Dave Lord Ridge and Arctic Plateau.

Richardson Mountains

The northerly trend of the Richardson Mountains is the dominant, structural grain of the project area. The southern Richardsons are essentially a large anticlinorium plunging northward and bounded by steep reverse faults. The northern Richardsons are wider and break up into several large north-plunging anticlines and synclines, with associated bedding plane faults.

Barn Mountains

The Barn Mountains in the northwest corner of the project area are a rejuvenated late Paleozoic orogenic belt, consisting of a faulted and intruded Lower Paleozoic section.

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- MARTIN, L. J. (1959); Stratigraphy and Depositional Tectonics of north Yukon - Lower Mackenzie Area, Canada. A.A.P.G. Bulletin, Vol. 43, pp. 2399 - 2455.
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LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

ROCK RIVER

LOCATION: LSD. SEC. TWP. RGE. W. M.
UNIT ZONE N.T.S.
11b1 N.E. SEC 1-48 LAT 68°50' LONG 136°00'

Description of location:

ELEVATION MEASURED
METHOD

FORMATIONS

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY: Imperial Oil Limited

DATE: 1961

DESCRIBED

BY:

DATE: August, 1961

LEGEND

Coal Salt Anhydrite Dolomite Limestone Massive Chert Conglomerate Sandstone Siltstone Shale

IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Measured with Brunton and chain, also 5 foot stick in parts.
			Section is overlain by very gently dipping beds which seem to consist of fine clastics and shale. These were not visited.
		0'	UPPER DEVONIAN (630'+) Imperial Formation (630'+) Shale, soft, rubbly, green grey to medium grey, weathering grey and minor buff.
		110'	Fault Shale, contorted, soft, grey.
		210'	Fault Shale, fissile, dark grey.
		390'	Fort Creek Formation (240') Shale, fissile, dark grey, weathering dark grey and light cream.

Shale, fissile, dark grey.

390' Fort Creek Formation (240')
Shale, fissile, dark grey, weathering dark grey and light cream.

520'
Shale, fissile and platy and blocky, dark grey, weathering dark grey.

630' SILURIAN-ORDOVICIAN (8740')
650'
Silurian contact assumed to be closer to resistant shales than to less resistant shales below.
Shale, dark grey, weathering dark grey with minor grey buff.

1050'
Shale, fissile, chippy, platy and blocky; dark grey color and weathering.

1380'
Shale, fissile, dark grey colour and weathering.

2 of

Probably cut by a minor fault.

1700'

Shale, dark grey.

1740'

1810'

Shale, platy, green grey, weathering green grey, light grey and tan.

2180'

Shale, fissile to blocky, dark grey colour, interbedded with:
Limestone, dark grey.

2360'

Chert, dark grey.

2400'

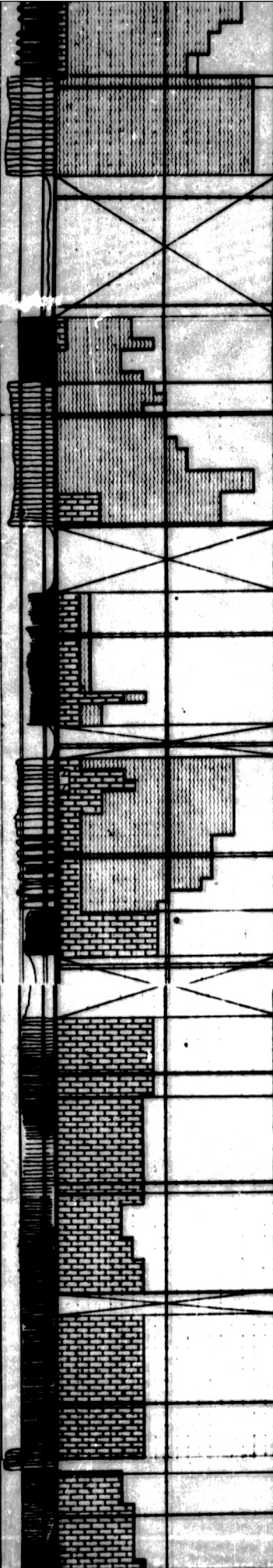
Limestone, medium grey, weathering medium grey and light brown grey, very argillaceous.
Shale, blocky, dark grey.

2520'

Shale, dark grey, siliceous, with infrequent Graptolites.

2690'

139



2690'

2910'

Shale, dark grey,

2970'

Chert, medium and dark grey.

3160'

Shale, dark grey colour and weathering, graptolites.

3310'

Chert, banded, dark and medium grey with some grey buff, medium and thick bedded.

3450'

3620'

Shale, dark grey colour and weathering, very calcareous, medium bedded.

3710'

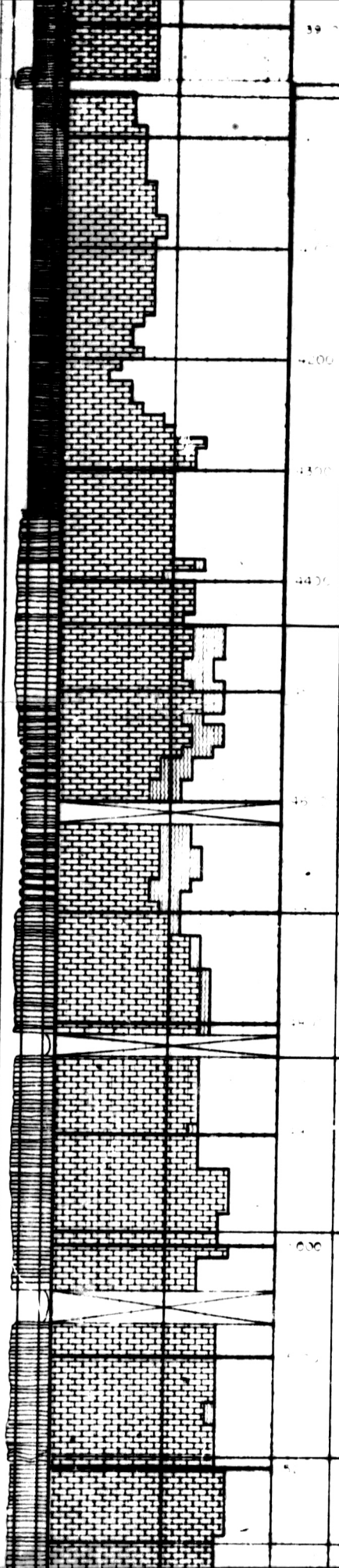
Banded, limestone, dark grey, very argillaceous, medium bedded and
Shale, graptolitic.

3950'

3960'

Shale, graptolitic, dark grey color and weathering, very calcareous, interbeds of:
Limestone, dark grey, weathering dark grey.

4 of



3950'
3960'

Shale, graptolitic, dark grey color and weathering, very calcareous, interbeds of:
Limestone, dark grey, weathering dark grey.

4440'

Interbedded limestone, dark grey, and
Shale, fissile, dark grey color.

4700'

Limestone, dark grey, varying mostly very argillaceous,
very slightly siliceous.

4830'

Limestone, dark grey color and weathering with minor grey
buff slightly bituminous.

4990'

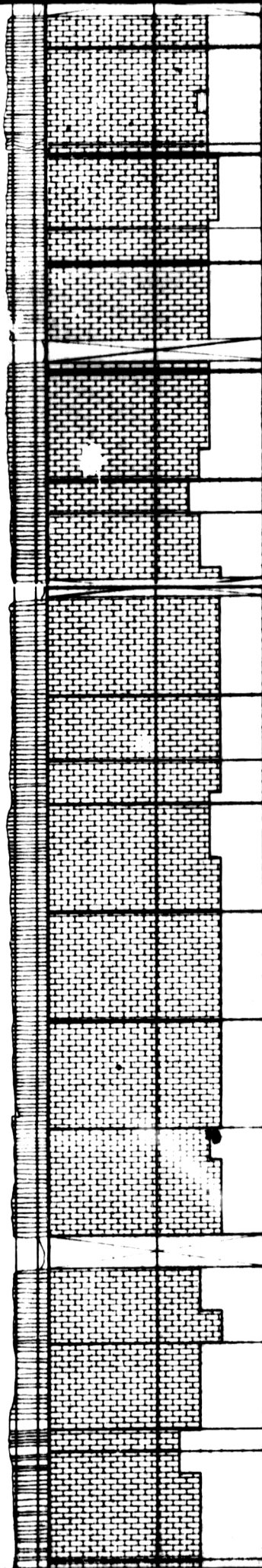
Thick white calcite veining.

5190'

Contorted bedding due to slumping.

5270'

Shear fractures and calcite veining.



5190' Contorted bedding due to slumping.

5270' Shear fractures and calcite veining.

5400'

5500'

5530'

5600'

5700'

5760' Calcite veining perpendicular to bedding.

5800'

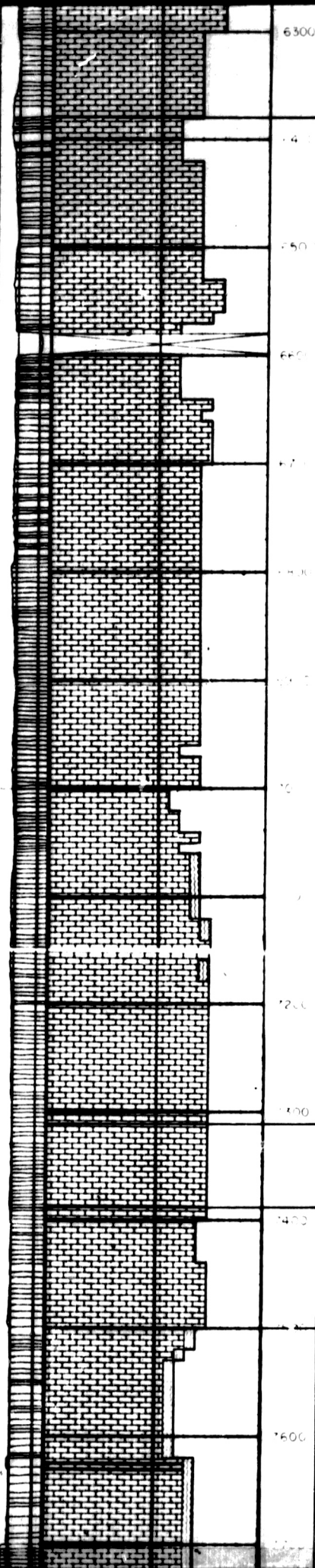
5900' Calcite veining and slickensides.

6000'

6200'

6380'

69



6380'

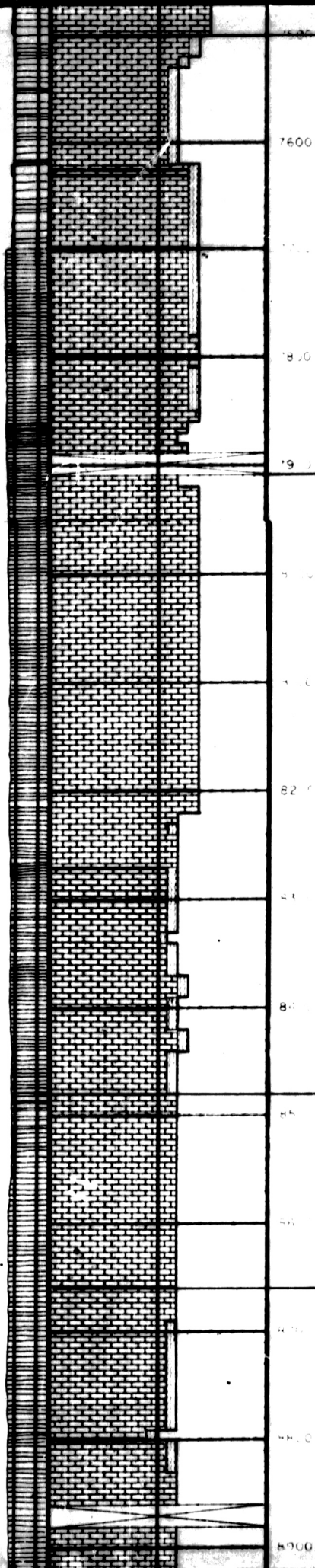
7310'

Some calcite veining.

7390'

7500'

7600'



7500'

7600

7800

7910'

7910'

Limestone, dark grey colour and weathering, very argillaceous, some thin calcareous shale intercalations.

8200

8480'

8480'

Limestone, dark grey colour and weathering, very argillaceous, slightly bituminous.

8660'

8660'

Limestone, dark grey, weathering dark grey with minor grey buff beds, in part becoming very calcareous thin bedded shale; occasional cherty beds.

8700

8700

8 of

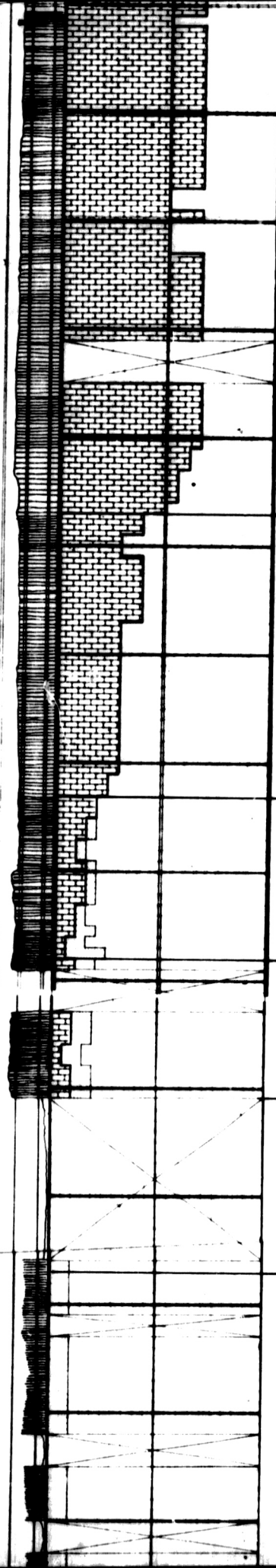
8660'

Limestone, dark grey, weathering dark grey with minor grey buff beds, in part becoming very calcareous thin bedded shale; occasional cherty beds.

8990'

Limestone, dark grey, weathering dark grey with minor grey buff, occasional Graptolites.

9 of



10370' ? ————— CAMBRIAN ? (1330'+) —————

Shale, dark grey, weathering dark grey with minor grey buff, evenly stratified, medium bedded, flaggy with some thin platy interbeds.

10630' —————

10780' —————

Interbedded shale, dark grey, thin bedded, platy, very slightly calcareous, and
Shale, dark grey, medium bedded, dense to laminated, blocky, more resistant, calcareous.

10910' —————

11060' —————

Shale, dark grey, thin platy to fissile, slightly silty, laminated in part, occasional grey calcareous concretions up to one foot across.

10 of

10780'

Interbedded shale, dark grey, thin bedded, platy, very slightly calcareous, and Shale, dark grey, medium bedded, dense to laminated, blocky, more resistant, calcareous.

10910'

11060'

Shale, dark grey, thin platy to fissile, slightly silty, laminated in part, occasional grey calcareous concretions up to one foot across.

11470'

Sandstone, weathering grey brown, very slightly calcareous, silty, becoming a siltstone in part, interbeds of dark grey shale, subfissile, slightly silty, mostly in lower part; sponge spicules.

11700'

End of Measurement

11 of 11

LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

MOSQUITO CREEK

LOCATION: LSD. SEC. TWP. RGE. W. M.
UNIT ZONE N.T.S.
106M/NW SEC. F-12 LAT 68°00' LONG. 135°45'
Description of location:

ELEVATION **MEASURED**
METHOD

FORMATIONS

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY : Imperial Oil Limited

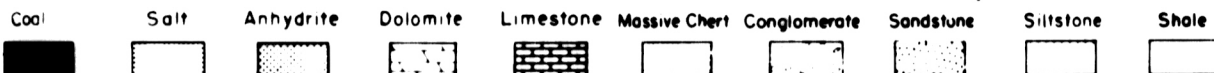
DATE : 1961

DESCRIBED

BY :

DATE : June, 1961

LEGEND



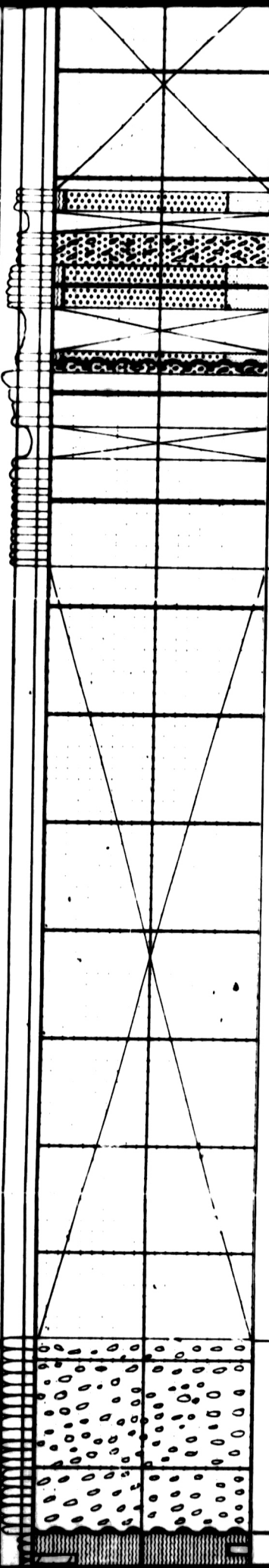
IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Section measured by plane-table.
			Section is overlain by approximately 70' of similar appearing sandstone farther along the ridge.
		0'	JURASSIC (570'+) Sandstone, grey buff to dark yellow brown, weathering buff and green grey due to lichen covering.
		150'	Sandstone, mostly medium grey and grey brown, weathering buff and green grey, thin to thick bedded, platy to irregular flaggy to blocky fracture.

1 of



410' Sandstone, as above.

450' Conglomerate, buff, fine pebble with grit and coarse sand matrix.

480' Sandstone, as above.

570' PERMIAN-PENNSYLVANIAN (1090') Conglomerate, as above.

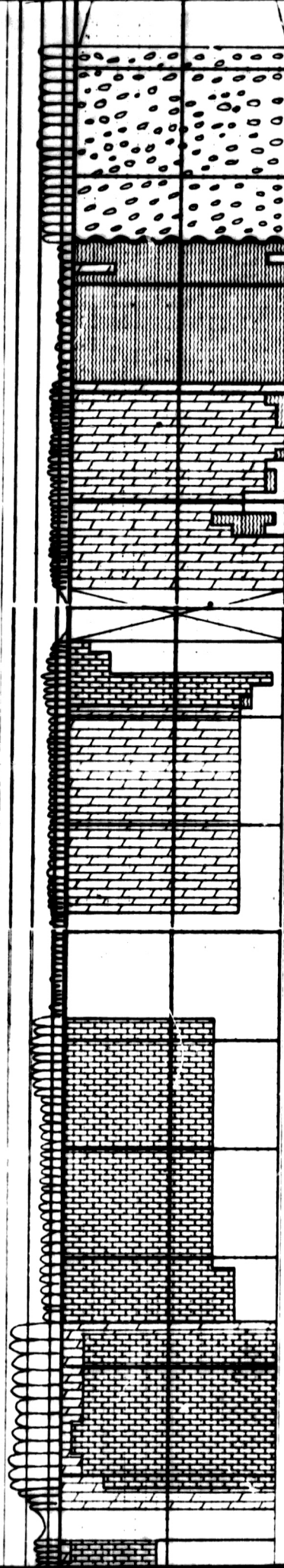
580' Sandstone, light buff, silica and in part ferruginous cement.

760'

1480' Top of Red Beds
Conglomerate, chert pebbles, fine to medium, red-brown color, maroon weathering.

1610' CAMBRIAN (1480'+)
Chert, dark grey color.

2 of



1480'

Top of Red Beds
Conglomerate, chert pebbles, fine to medium, red-brown color,
maroon weathering.

1660'

CAMBRIAN (1480'+)

Chert, dark gray color.

Dolomite, light to medium gray color, light to medium gray
weathering. Slightly cherty.

Concealed.

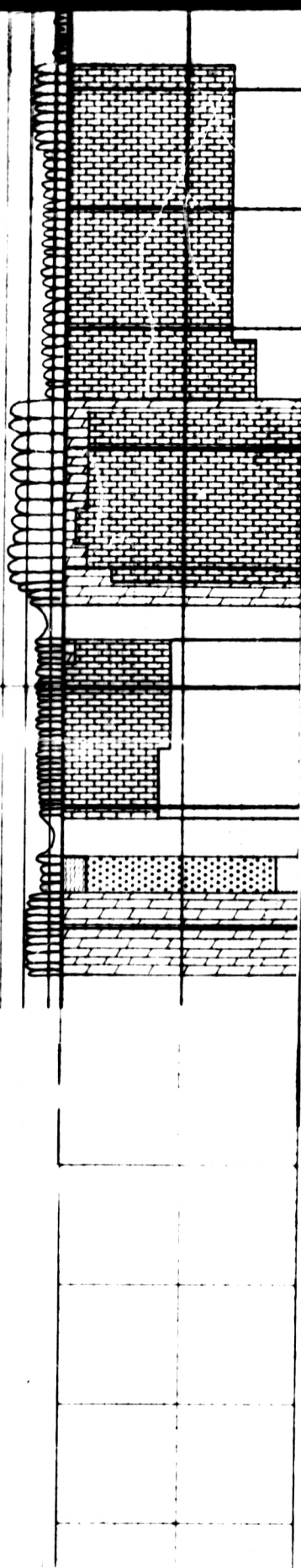
Shale, dark gray color, medium gray weathering.
Limestone, light gray color, light to medium gray weathering,
argillaceous, very thin to thin bedded.
Dolomite, argillaceous as indicated by scattered outcrops.

Limestone, dark gray color, medium gray weathering, argillaceous,
thin to medium bedded, poorly exposed.

Limestone, light to medium gray color, medium gray weathering.

Concealed.

139



Limestone, dark gray color, medium gray weathering, argillaceous, thin to medium bedded, poorly exposed.

Limestone, light to medium gray color, medium gray weathering.

Concealed.

Shale, subfissile to blocky.

Concealed.

Sandstone, dark gray color, medium gray weathering, slightly siliceous, slightly silty.

Dolomite, light brown color, medium gray and buff weathering,

494

WHITE DOME

Description of location:

ELEVATION :

MEASURED :
METHOD

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY : Imperial Oil Limited

DATE: 1961

DESCRIBED

BY :

DATE :

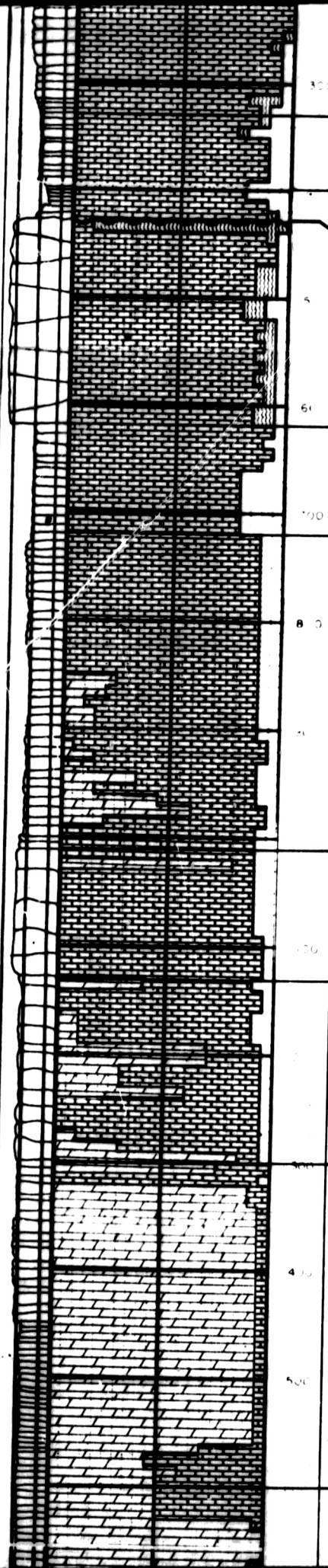
Coal Salt Anhydrite Dolomite Limestone Massive Chert Conglomerate Sandstone Siltstone Shale

IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Litho percentage	Footage	Description
		0'	<u>PERMO-PENNSYLVANIAN (430'+)</u>
			Sandstone, light grey, weathering green grey due to lichen covering.
		20'	
			Limestone, mostly light grey, weathering light grey and grey buff, medium to very coarse grained.
		330'	
			Limestone, medium to dark grey, weathering brown grey and buff, coarse to very fine grained.
		400'	
			Limestone, medium and dark grey, argillaceous, coarse to fine grained.



330'

Limestone, medium to dark grey, weathering brown grey and buff, coarse to very fine grained.

400'

Limestone, medium and dark grey, argillaceous, coarse to fine grained.

430'

MIDDLE DEVONIAN (2030')

Limestone, dark grey, weathering light grey with minor grey buff, slightly argillaceous, very massive, bedding often indistinct irregularly fractured.

620'

Limestone, dark grey, weathering medium grey and yellow brown.

720'

Limestone, medium to dark grey, weathering light grey and grey buff.

1010'

Limestone, medium and dark grey, light grey and grey buff weathering.

1130'

Limestone, light to medium to dark grey, light brown grey weathering.

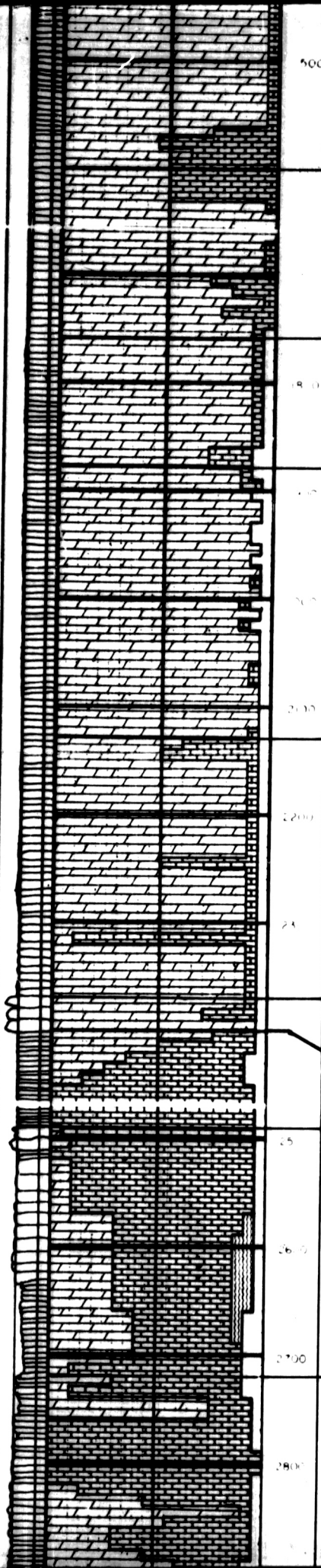
1300'

Dolomite, light to dark grey, grey buff to light buff weathering microcrystalline.

1600'

Dolomite, mostly light grey, grey buff to light buff weathering, micro and cryptocrystalline.

2 of



500

1600'

Dolomite, mostly light grey, grey buff to light buff weathering, micro and cryptocrystalline.

1750'

Dolomite, light and medium grey, light grey and buff weathering, cryptocrystalline.

1880'

Dolomite, light to medium grey, also some dark grey, light brown grey weathering, cryptocrystalline, hard, thick bedded, rubbly fracture.

2130'

Dolomite, light and medium grey, mostly buff weathering, microcrystalline.

2370'

Dolomite, medium grey, medium grey and light buff weathering, microcrystalline.

2400'

SILURIAN-ORDOVICIAN? (4100'+)

Limestone, medium grey, light brown grey and light buff weathering medium bedded, flaggy, increasing amounts of irregular patchy dolomite towards the top.

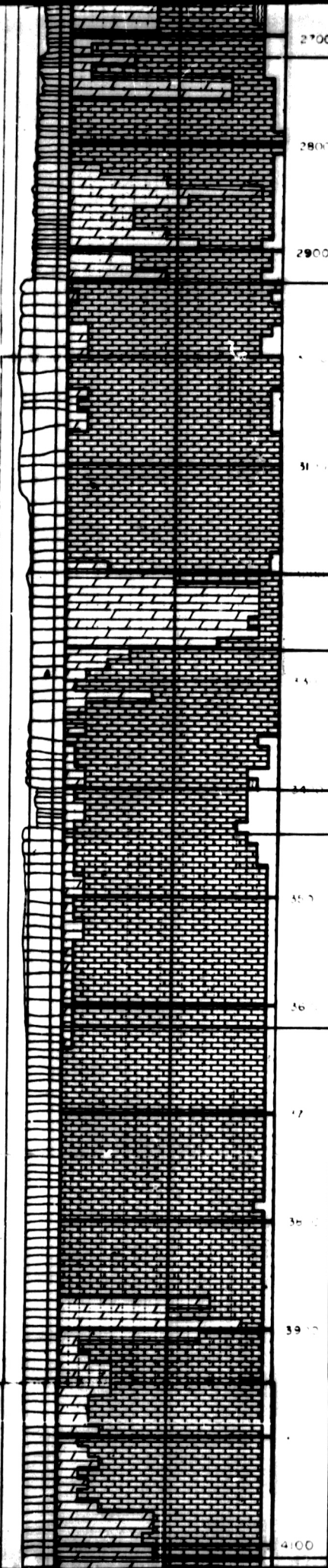
2490'

Limestone, medium and dark grey, weathering medium grey and grey buff, dolomitic and argillaceous; massive to thin irregular nodular bedded, very rubbly.

2720'

Limestone, medium and dark grey, medium grey and buff weathering, sparry calcite, patchy dolomitization, in part grading to and becoming a dolomite, medium grey, buff weathering microcrystalline, calcareous in part.

3 of



2720'

Limestone, medium and dark grey, medium gray and buff weathering, sparry calcite, patchy dolomitization, in part grading to and becoming a dolomite, medium grey, buff weathering microcrystalline, calcareous in part.

2930'

Limestone, medium and dark grey, weathering light grey, and minor grey buff, slightly dolomitic and argillaceous in part; very massive often with indistinct bedding; rubbly fracture.

3200'

Dolomite, medium grey, weathering medium grey and buff, medium to very fine crystalline,

3270'

Limestone, light and medium grey, weathering light grey and minor light buff, dolomitic in part.

3400'

Limestone, dark grey, grey buff weathering.

3440'

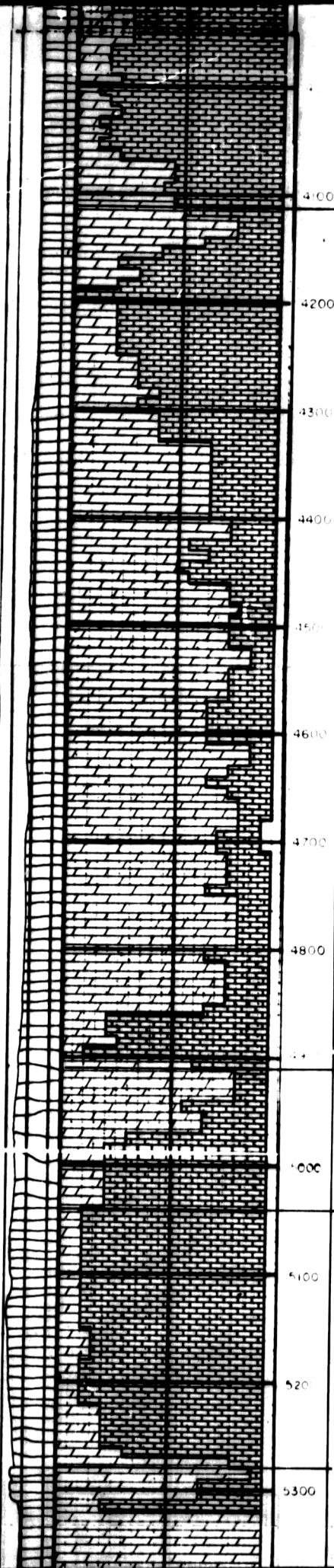
Limestone, medium and dark grey, light grey weathering.

3620'

Limestone, light and medium grey, weathering light grey.

4110'

4 of 1



4110'

Dolomite, light and medium grey, weathering light grey and minor grey buff, microcrystalline.

4200

4300

4400

4500

4600

4700

4800

4910'

Dolomite, light grey, weathering light grey and grey buff, microcrystalline, calcareous, much fracturing.

5000

5040'

Limestone, light grey, weathering light grey and minor very light buff, mostly fine.

5100

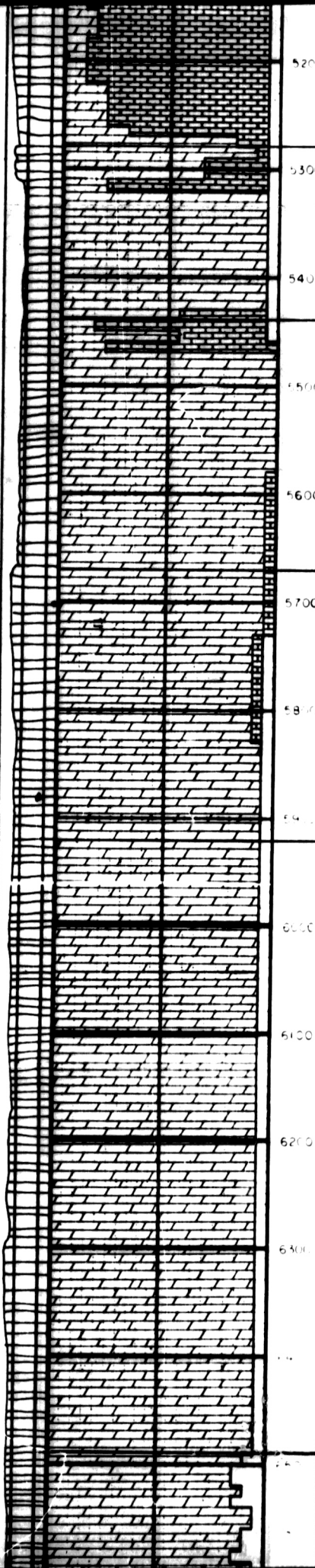
5200

5280'

Dolomite, light grey, weathering buff, coarse crystalline, subhedral, with microcrystalline matrix.

5300

15 of



5280' Dolomite, light grey, weathering buff, coarse crystalline, subhedral, with microcrystalline matrix.

5440' Limestone, light grey.

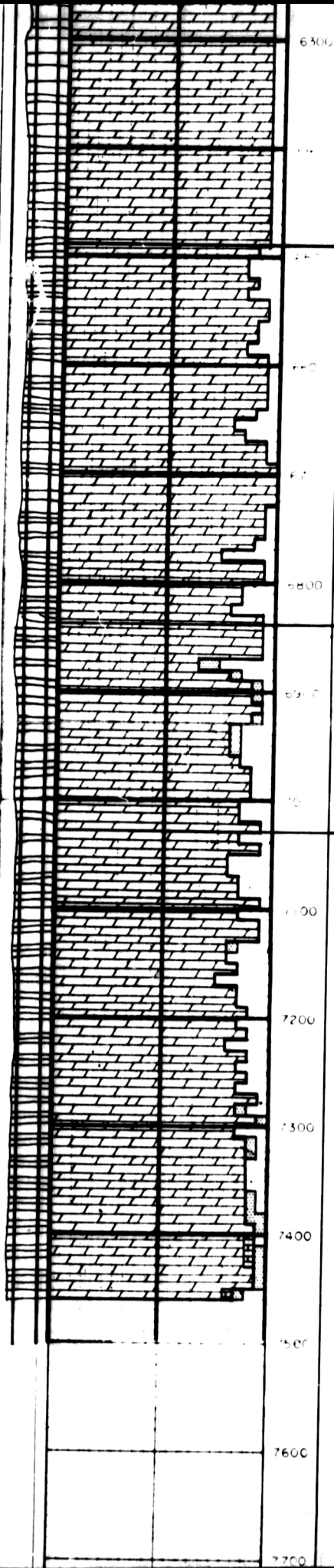
5470' Dolomite, coarse crystalline as above.

5670' Dolomite, medium grey, weathering grey and buff, coarse and medium crystalline.

5920' Dolomite, light, medium and dark grey, thick intervals of each, weathering brown grey with some buff.

6490' CAMBRIAN ? Dolomite, banded light to dark grey, weathering medium grey and brown grey, medium crystalline to microcrystalline.

69



6490'

CAMBRIAN ?

Dolomite, banded light to dark grey, weathering medium grey and brown grey, medium crystalline to microcrystalline.

6840'

Dolomite, mostly medium grey, weathering banded medium grey and brown grey, microcrystalline.

7030'

Dolomite, medium and dark grey, banded weathering in various greys and brown grey, beds of coarse crystalline to microcrystalline and cryptocrystalline dolomite.

7 of 7

LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.
EAST FISH CREEK

LOCATION: LSD. SEC. TWP. RGE. W. M.
UNIT ZONE N.T.S.
116P/N.E. SEC. 1-80 LAT 68°00' LONG. 136°15'
Description of location:

ELEVATION: **MEASURED METHOD**

FORMATIONS

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY: Imperial Oil Limited

DATE: 1961

DESCRIBED

BY:

DATE: June, 1961

LEGEND

Coal Salt Anhydrite Dolomite Limestone Massive Chert Conglomerate Sandstone Siltstone Shale

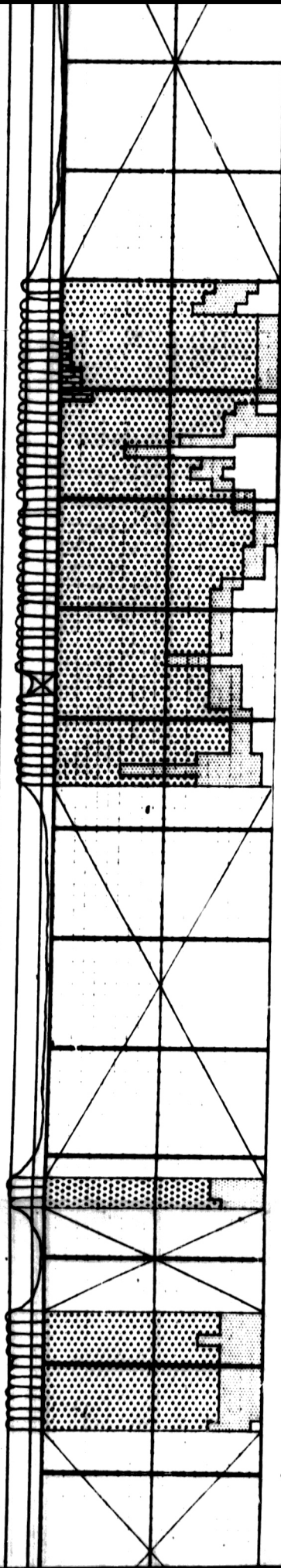
IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Measured with 5 foot stick.
			Section begins at top of mountain. Overlying beds eroded.
			<u>CRETACEOUS - JURASSIC (1700'+)</u>
			Sandstone, light brown gray color, buff to light gray weathering slightly silty, trace argillaceous.
			Concealed.

1 of



Sandstone, light gray to light brown color, medium gray to buff weathering, slightly calcareous in part, silty, slightly argillaceous, fractured, medium bedded.

2 of

Concealed.

Sandstone, as above.

Concealed.

Sandstone, as above.

Concealed.

Sandstone, as above.

Concealed.

1700'±?

PERMO - PENN (1710'±)

Siltstone, medium to dark gray color, dark yellow buff weathering, sandy, slightly argillaceous, stained with iron oxides along bedding planes and fractures, medium bedded.

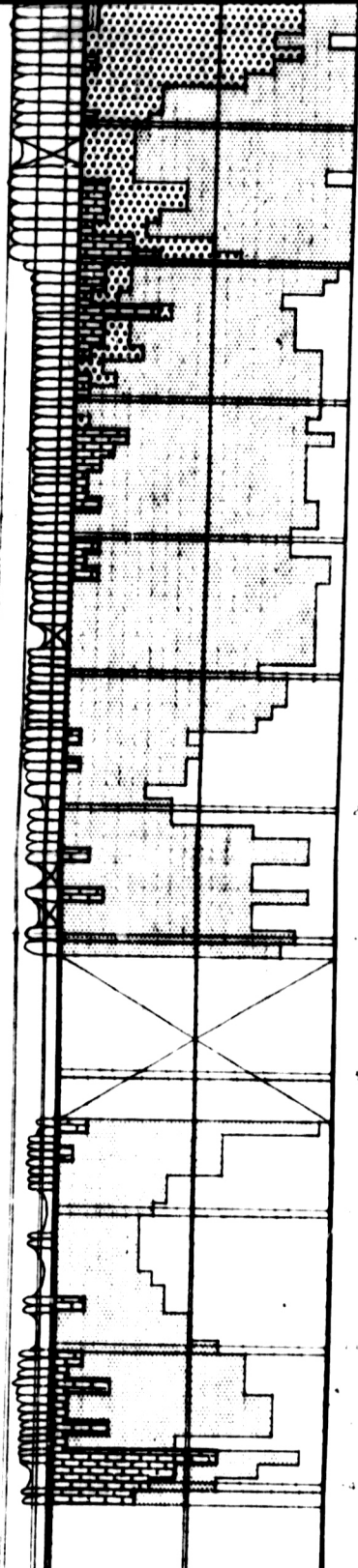
Concealed, but probably similar to above.
Sandstone, subrounded, medium gray color, medium gray to yellow buff weathering, silty.

Concealed.

Sandstone, as above.

Siltstone, dark gray color, medium gray and dark yellow buff weathering, slightly calcareous, sandy towards top, slightly argillaceous getting argillaceous towards base, medium bedded.

39



Siltstone, dark gray color, medium gray and dark yellow buff weathering, slightly calcareous, sandy towards top, slightly argillaceous getting argillaceous towards base, medium bedded.

Concealed.

Siltstone, as above, and Shale, subfissile to blocky, dark gray to dark brown color, medium brown weathering, slightly calcareous, very silty, generally not well exposed, thin bedded.

4 of 4

LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

UPPER CANYON PEEL RIVER

LOCATION: L.S.D. SEC. TWP. RGE. W. M.
106 E/N.W. UNIT ZONE N.T.S.
K-43 & 53 SEC. LAT 66°00' LONG. 135°30'

Description of location:

ELEVATION

MEASURED
METHOD

FORMATIONS

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY: Imperial Oil Limited

DATE: 1961

DESCRIBED

BY:

DATE: August, 1961

LEGEND

Coal Salt Anhydrite Dolomite Limestone Massive Chert Conglomerate Sandstone Siltstone Shale

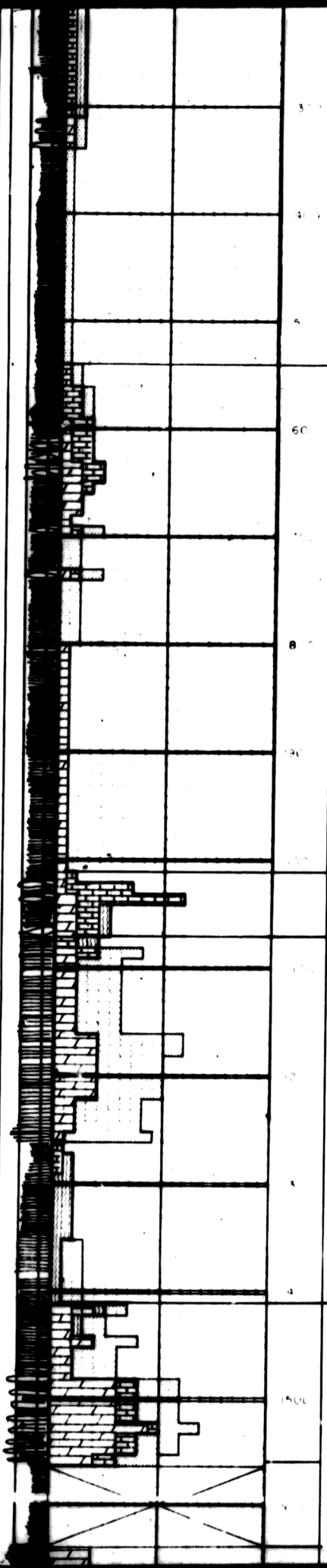
IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Measured with 5 foot stick also with chain and Brunton.
			Section is overlain by a long covered interval.
		0'	SILURIAN - ORDOVICIAN (7040'+) Shale, platy, dark grey to dark grey brown, weathering dark grey and grey buff.
		180'	Shale, platy to fissile, blocky in part, dark grey color and weathering.

1 of 4



540'

Shale, fissile and platy to subnodular in part, dark grey colour and weathering, varying carbonate content.

1010'

Shale, as above, with large argillaceous limestone nodules and giant calcareous and dolomitic shale nodules, all weathering grey buff.

1070'

Shale, platy to blocky, medium to dark grey, weathering grey buff to buff, silty, slightly dolomitic, some very fine disseminated pyrite, thin to thick bedded.

1410'

Interbedded shale and dolomite.

Shale, blocky, medium to dark grey, weathering brown grey, dolomitic, silty, slightly calcareous in part, thin and medium bedded.

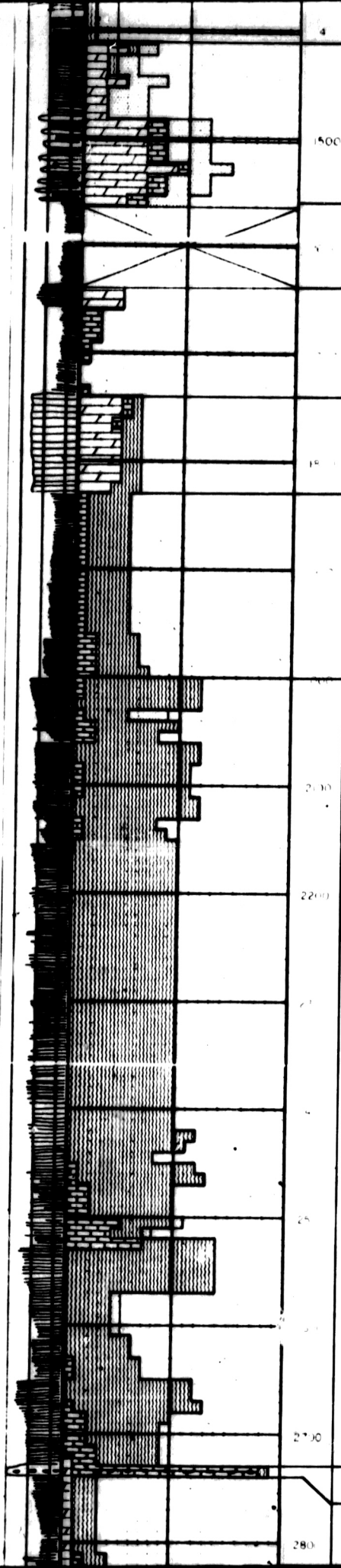
Dolomite, light gray to green gray, with streaks of dark grey shale, weathering tan, very argillaceous, silty, very slightly calcareous.

1560'

Dark grey low weathering mostly covered shale interval.

1640'

2 of



1410'

Interbedded shale and dolomite.

Shale, blocky, medium to dark grey, weathering brown grey, dolomitic, silty, slightly calcareous in part, thin and medium bedded.

Dolomite, light gray to green gray, with streaks of dark grey shale, weathering tan, very argillaceous, silty, very slightly calcareous.

1500

1560'

Dark grey low weathering mostly covered shale interval.

1640'

Shale, thin platy, medium to dark grey, faintly laminated in part, weathering dark grey to brown, grey, varying mostly slightly calcareous, thin bedded; topped by a more resistant blocky dolomitic shale.

1740'

1830'

Shale, platy to fissile becoming blocky at base, dark grey colour and weathering, siliceous, very slightly calcareous bituminous, thin bedded; some Graptolites, at 1990'.

2000'

2100

2200

2300

2400

2500

2600

2700

2740'

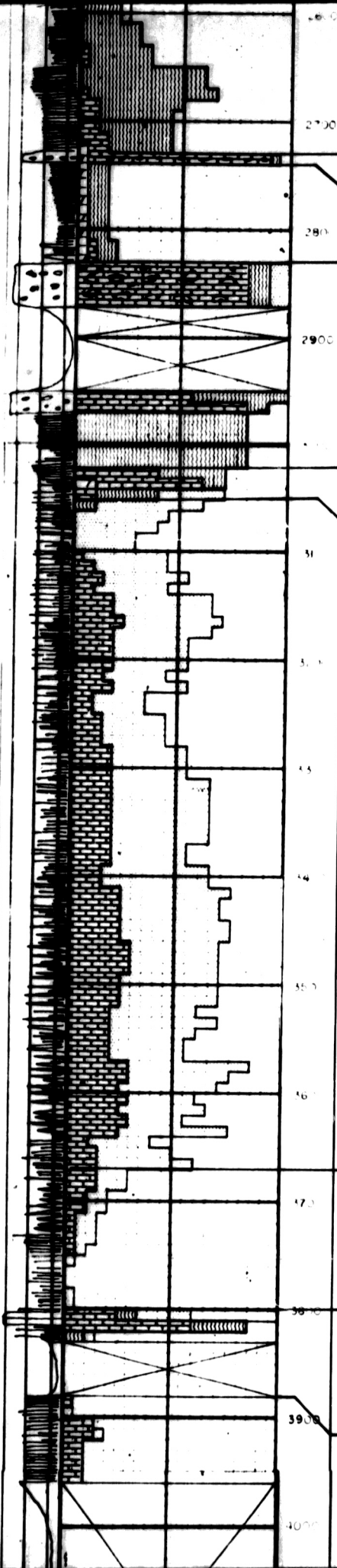
Limestone Breccia.

2740'

Shale, platy and blocky, dark grey color and weathering, slightly siliceous, slightly bituminous, very slightly dolomitic pyritic.

2800

39



Limestone Breccia.

Shale, platy and blocky, dark grey color and weathering, slightly siliceous, slightly bituminous, very slightly dolomitic pyritic.

Limestone conglomerate, light grey colour and weathering, coarse boulders to fine pebbles.

Limestone, nodular in part dark grey, weathering buff to dark grey, thinly bedded.

Interbedded siltstone, dark grey, weathering buff to dark grey, argillaceous, thinly bedded shale, dark grey weathering dark grey, thinly bedded.

Shale, dark grey color, weathering dark grey, silty, calcareous thin to medium bedded, resistant and somewhat blocky weathering and:

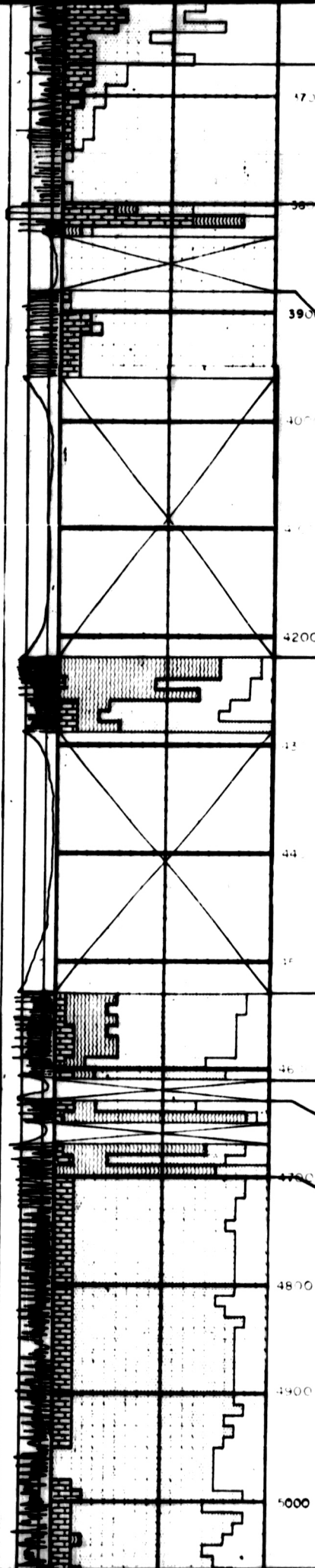
Shale, dark grey weathering dark grey, trace silty, laminated, soft and platy.

Siltstone, dark grey weathering buff to dark grey calcareous, Breccia, medium grey color, weathering buff to medium grey, massive, limestone and some chert fragments, Chert, black bedded and interbedded shale, and silty shale as above.

COVERED

Interbedded shale, dark grey, weathering dark grey, silty and calcareous, laminated to thinly bedded and Shale, dark grey, weathering dark grey, slightly calcareous and trace silty, laminated to thinly bedded, and soft.

4 of 1



3670'

Shale, dark grey color, weathering dark grey, silty, calcareous thin to medium bedded, resistant and somewhat blocky weathering and:

Shale, dark grey weathering dark grey, trace silty, laminated, soft and platy.

3800'

Siltstone, dark grey weathering buff to dark grey calcareous, Breccia, medium grey color, weathering buff to medium grey, massive, limestone and some chert fragments, Chert, black bedded and interbedded shale, and silty shale as above.

COVERED

3880'

Interbedded shale, dark grey, weathering dark grey, silty and calcareous, laminated to thinly bedded and Shale, dark grey, weathering dark grey, slightly calcareous and trace silty, laminated to thinly bedded, and soft.

COVERED

4220'

Interbedded siltstone, dark grey, and Shale, dark grey color, weathering dark grey, slightly calcareous and Chert.

COVERED

4530'

Interbedded siltstone, shale, and chert as above.

4610'

COVERED

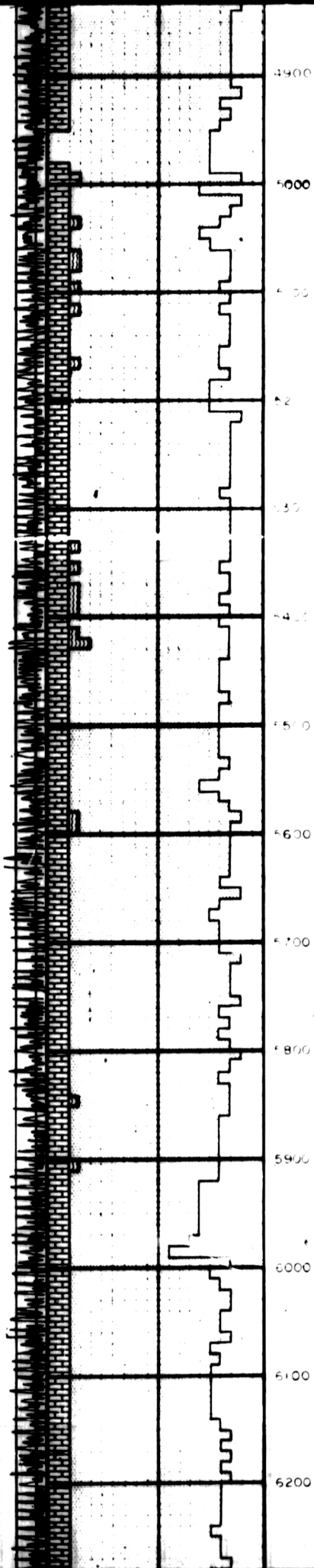
4630'

Siltstone, dark grey in colour, weathering buff to dark grey, argillaceous and slightly calcareous, thin to medium bedded, graptolite fragments.

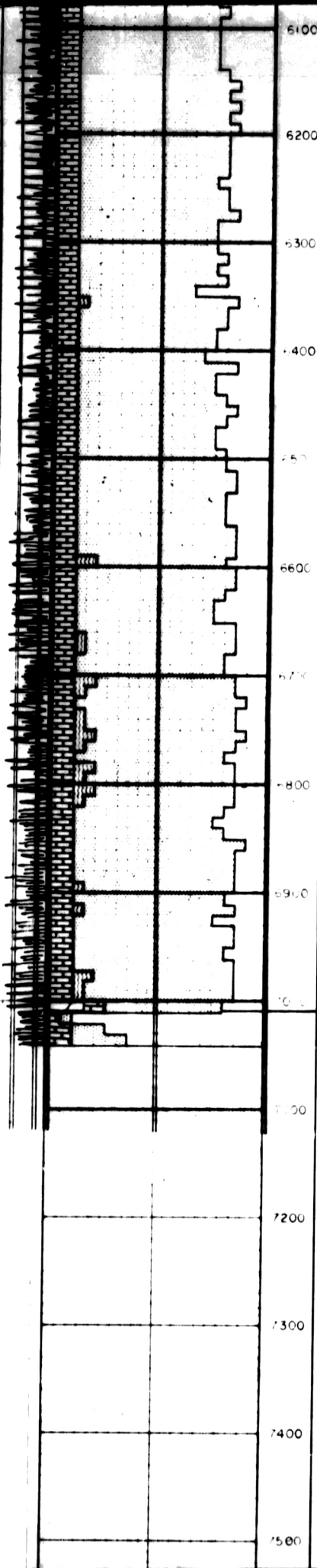
4700'

Interbedded siltstone, dark grey color, weathering buff to dark grey, slightly argillaceous and calcareous, medium bedded and shale, dark grey, weathering dark grey, slightly calcareous.

5 of



69



7010'

Interbedded shale, blocky, dark grey, weathering buff to dark grey, silty, thinly bedded.
Shale, platy, dark grey, weathering buff to dark grey, slightly calcareous and silty, soft, occasional marcasite nodules.

7 of 7

LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

ACT RIVER

LOCATION: LSD. SEC. TWP. RGE. W. M.
116 I/NE. UNIT ZONE N.T.S.
SEC. D-43 LAT 66°40' LONG 136°00'

Description of location:

ELEVATION:

MEASURED:
METHOD

FORMATIONS

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY: Imperial Oil Limited

DATE: 1961

DESCRIBED

BY:

DATE: August, 1961

LEGEND

Coal Salt Anhydrite Dolomite Limestone Massive Chert Conglomerate Sandstone Siltstone Shale

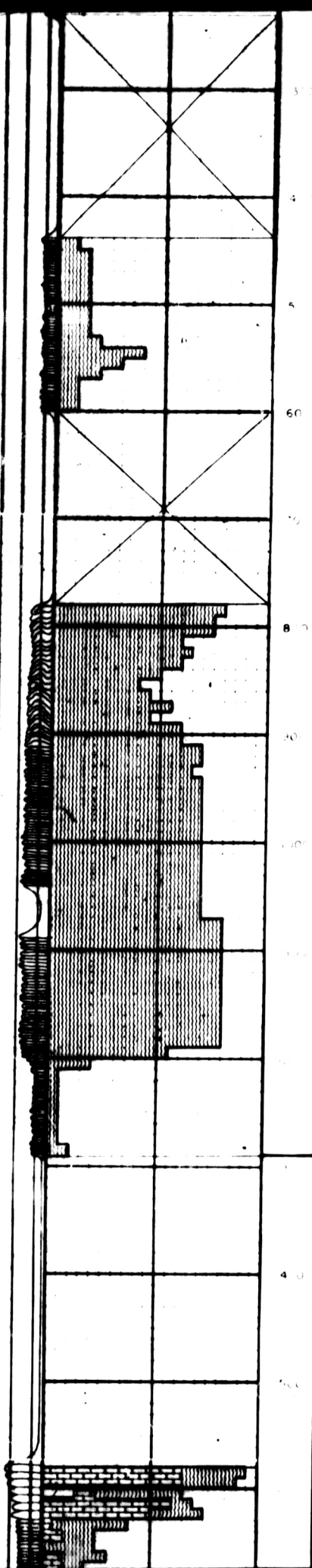
IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Measured with 5 foot stick and tape and compass.
		0'	UPPER DEVONIAN (1290'+) Imperial Formation (1290'+) Shale, subfissile, splintery medium grey and tan weathering, medium grey color.
		170'	Fort Creek Formation (1120') Shale, subfissile, dark grey weathering, dark grey color, slightly siliceous.

1 of



Concealed, probably underlain by siliceous shale.

Chert, dark grey weathering, dark grey color, argillaceous, some iron staining, thin bedded; with partings of:
Shale, fissile to subfissile, dark grey weathering, medium and dark grey color, slightly siliceous.

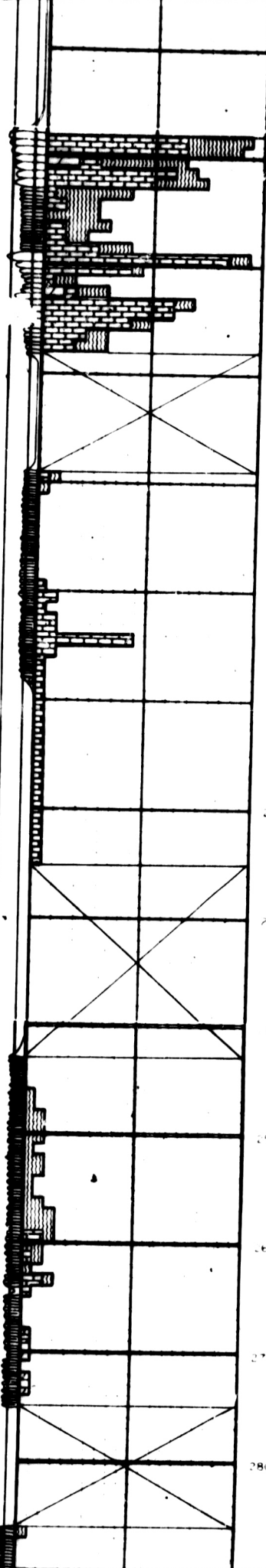
2 of

1290'

SILURIAN-ORDOVICIAN (9520'±)

Concealed.

Interbedded. Limestone, grey buff weathering, medium and dark grey color, trace dolomitic.
Shale, subfissile, medium and dark grey weathering and color, slightly calcareous, slightly siliceous.

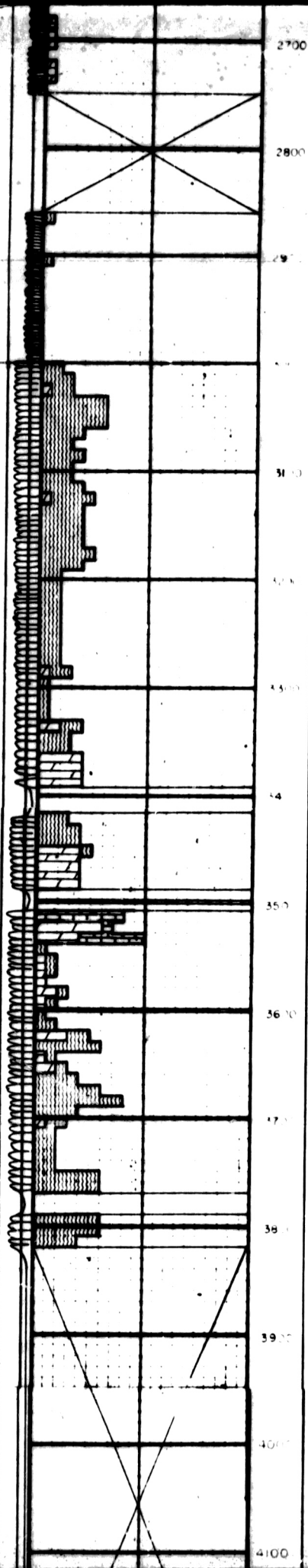


Interbedded. Limestone, grey buff weathering, medium and dark grey color, trace dolomitic.
Shale, subfissile, medium and dark grey weathering and color, slightly calcareous, slightly siliceous.

Shale, fissile to subfissile, dark yellow buff and dark grey weathering, medium and dark grey color, slightly calcareous, graptolites in part.

39

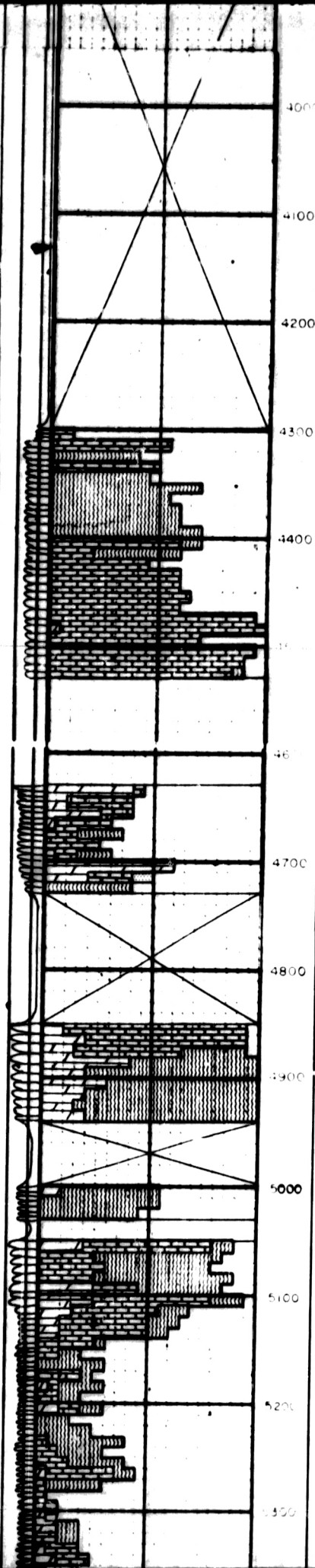
Shale, subfissile to blocky, grey buff and medium grey.



Shale, blocky, dark grey to buff weathering medium to dark grey color, slightly siliceous.

Concealed.

4 of



Concealed.

Interbeds of:

Limestone, grey buff to medium grey weathering, medium to dark grey color, slightly argillaceous, medium bedded.

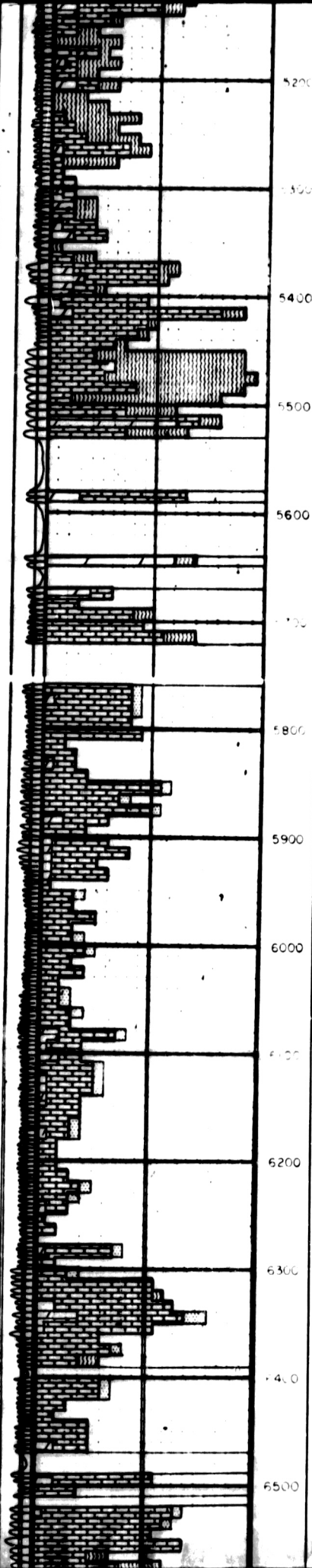
Chert, medium to dark grey weathering, dark grey color, argillaceous, thin to medium bedded; and

Shale, subfissile, medium to dark grey weathering, dark grey color, siliceous in part, very thin bedded.

Shale, fissile to subfissile, medium to dark grey weathering, dark grey color, slightly calcareous, very thin bedded; with interbeds of:

Chert, dark grey weathering and fresh color, thin bedded; and/or Limestone, medium grey weathering and fresh color, dolomitic, argillaceous, thin to medium bedded.

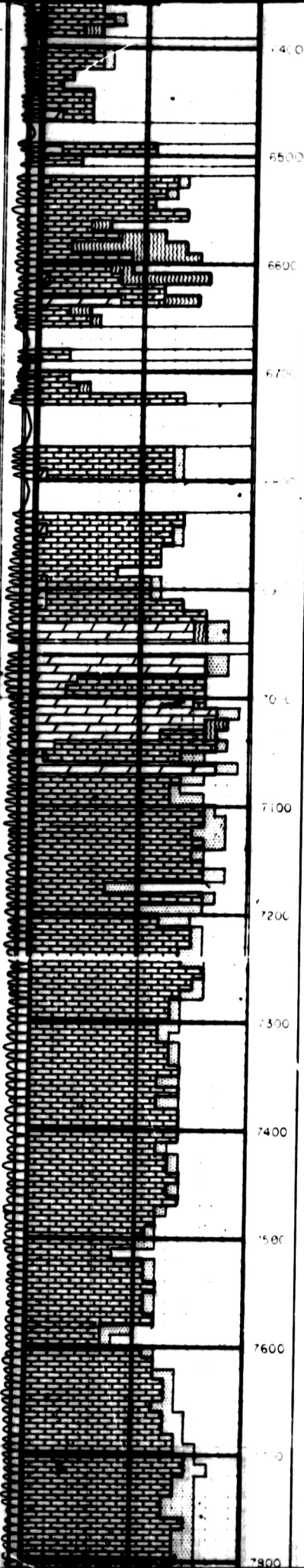
15 of



Shale, subfissile, medium to dark grey weathering and fresh color, trace dolomitic in part, slightly calcareous, pyrite, very thin to thin bedded, graptolites in part.

Limestone, grey buff weathering, medium grey weathering, rounded.

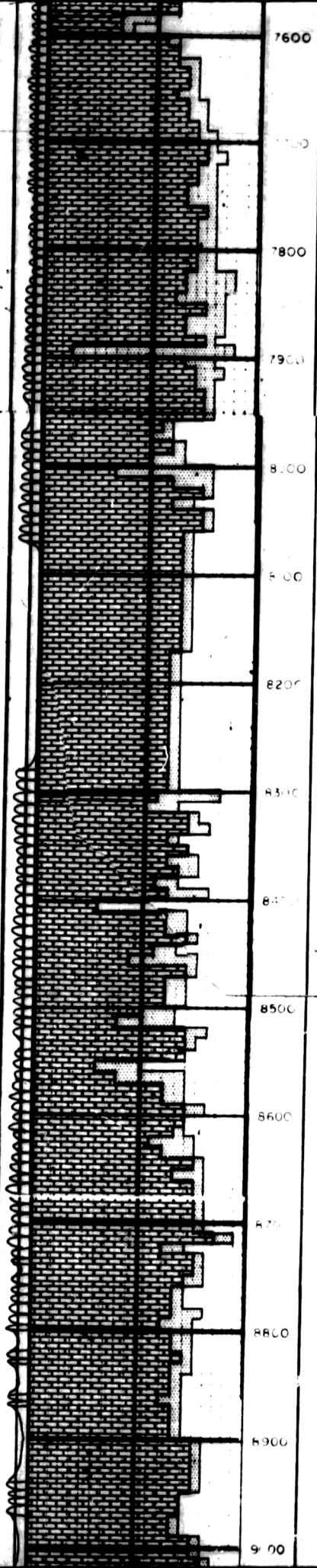
69



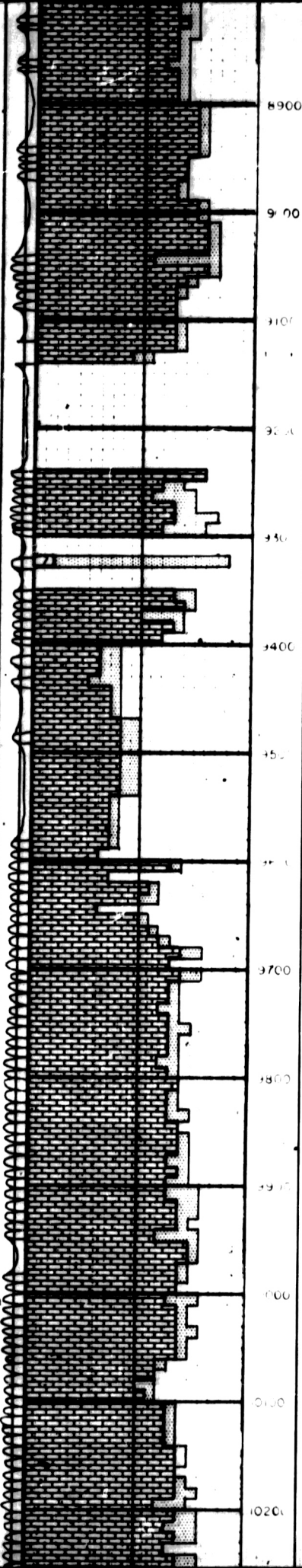
Dolomite, fine to coarse microcrystalline, medium grey weathering and fresh color.

Limestone, grey buff to medium grey weathering, medium grey color, slightly silty, argillaceous, disseminated pyrite, predominantly thin bedded; in part slightly calcareous fissile to subfissile, shale.

70f



8 of



8900

9000

9100

9200

9300

9400

9500

9600

9700

9800

9900

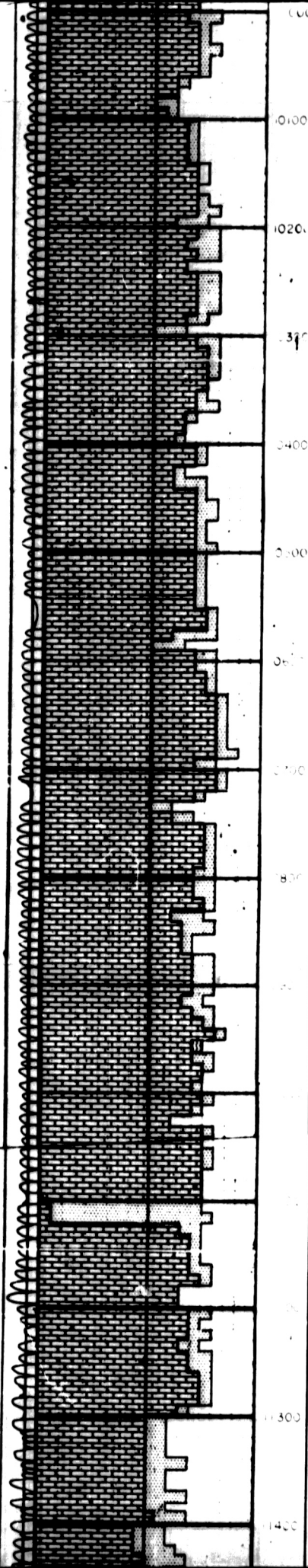
10000

10100

10200

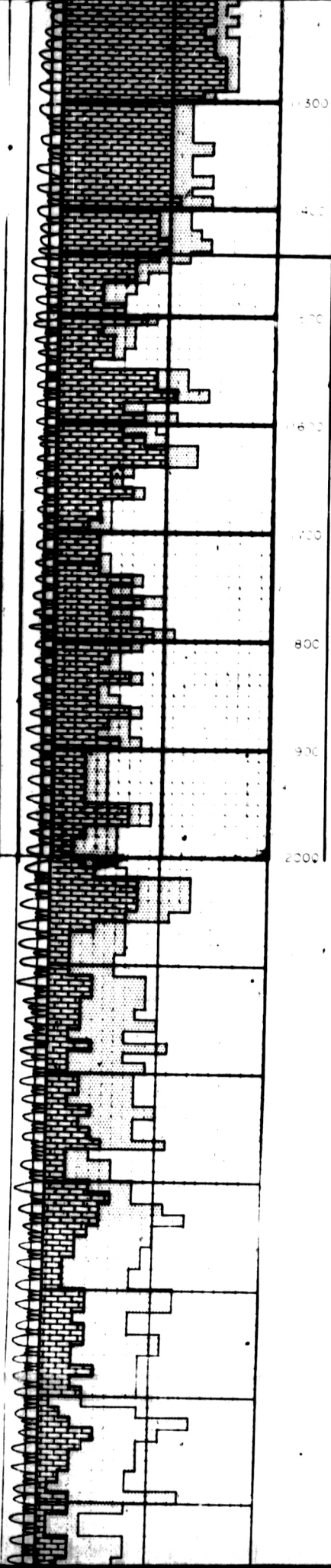
Concealed.

9 of



Limestone, medium to dark grey weathering and fresh color, slightly silty, argillaceous, thin to medium bedded; with occasional partings of:
Shale, subfissile dark grey weathering and fresh color, slightly calcareous, graptolites in part.

110 of 1



11,440

CAMBRIAN (2960'+)

Interbedded:

Siltstone, grey buff to medium grey weathering, medium grey color, calcareous, slightly argillaceous, medium bedded; and Shale, subfissile, medium to dark grey weathering, dark grey color, trace calcareous, trace silty, disseminated pyrite in part.

11 of

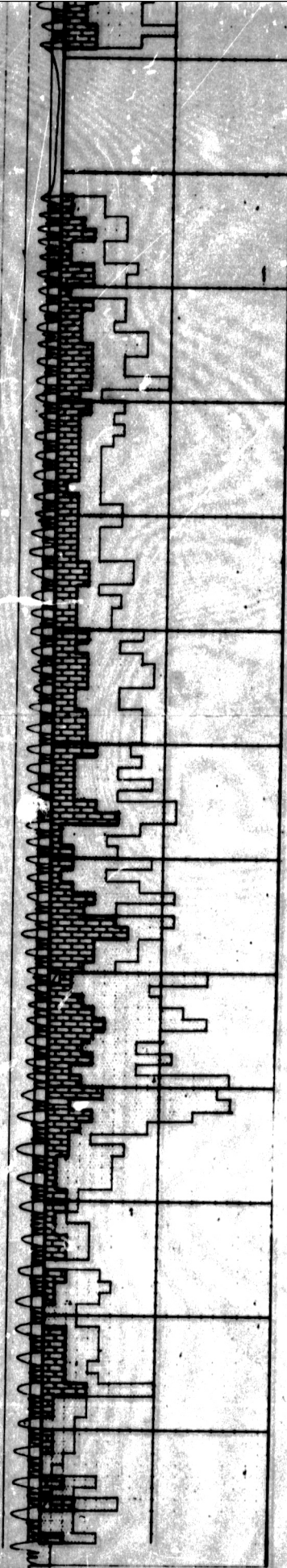
Interbedded:

Siltstone, grey buff to medium grey weathering, medium grey color, calcareous, slightly argillaceous, medium bedded; and Shale, subfissile, medium to dark grey weathering, dark grey color, trace calcareous, trace silty, disseminated pyrite in part.

Concealed, probably as above.

12 of

Concealed, probably as above.



13 of 13

GRIZZLY CREEK

Description of location:

ELEVATION :

MEASURED :
METHOD :

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY : Imperial Oil Limited

DATE: 1961

DESCRIBED

BY :

DATE : July, 1961

LEGEND

Coal

Salt†

Anhydrite

Dolomite

Limestone

Massive Chem

Conglomerate

Sandstone

Siltstone

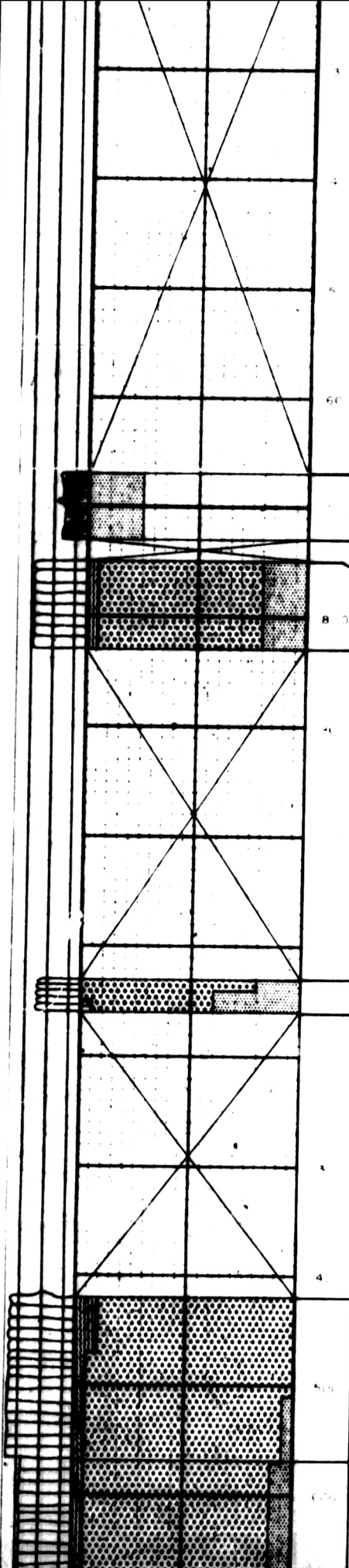
Shale

IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Measured with 5 foot staff and tape and brunton.
		0'	<u>CRETACEOUS - JURASSIC (2350'+)</u>
			Shale, dark grey, very silty, blocky.
			Shale, as above.
		100'	
			Siltstone, grey brown, weathering grey buff, argillaceous ferruginous, massive, jointed.
		140'	
			Scree in covered interval indicates mostly silty shale.



670'

Shale, dark grey, silty, blocky, subconchoidal in part, two medium bedded argillaceous ironstone bands.

730'

Covered, shale as above.

750'

Sandstone, light grey, weathering grey buff.

830'

Scree indicates argillaceous siltstones and silty shales, minor very fine sandstone.

1130'

Sandstone, grey buff, very silty.

1160'

Scree indicates argillaceous siltstones and silty shales.

Contact concealed.

1420'

Sandstone, medium grey to light grey near top, weathering green grey, very fine to fine grained.

1570'

Sandstone, light to medium grey, weathering green grey with minor buff, very fine grained, thick bedded.

2 of.

green grey, very fine to fine grained.

1570'

Sandstone, light to medium grey, weathering green grey with minor buff, very fine grained, thick bedded.

1830'

Sandstone, grey buff color and weathering.

1960'

Sandstone, medium grey, weathering dark grey, massive, resistant.

2150'

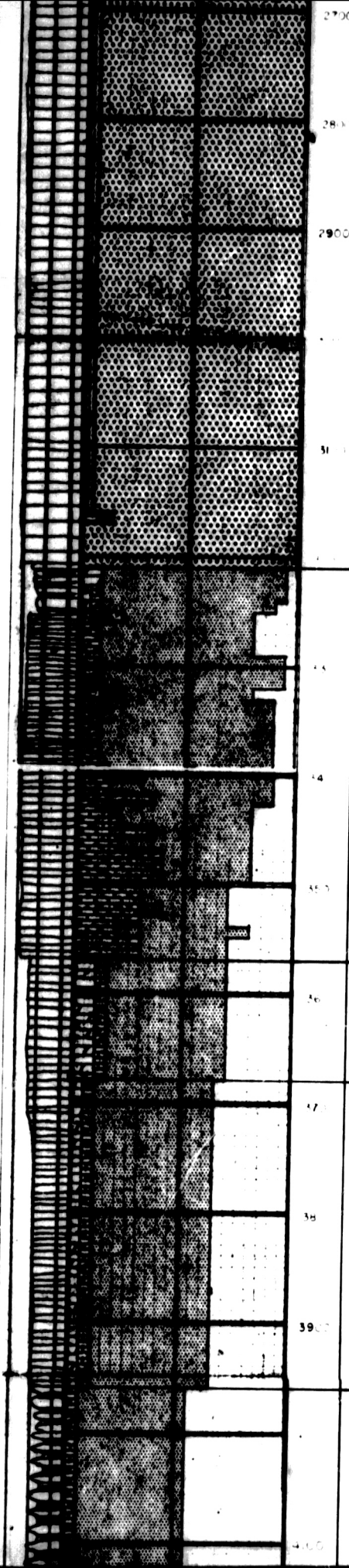
Sandstone, light to medium grey, weathering green grey, very fine grained.

2350'

PERMIAN-PENNSYLVANIAN (3610')

Sandstone, light grey, occasional buff bands, weathering green grey due to lichen cover.

39



3210'

Siltstone, medium grey, weathering light grey and buff.

3570'

Siltstone, as below, more resistant.

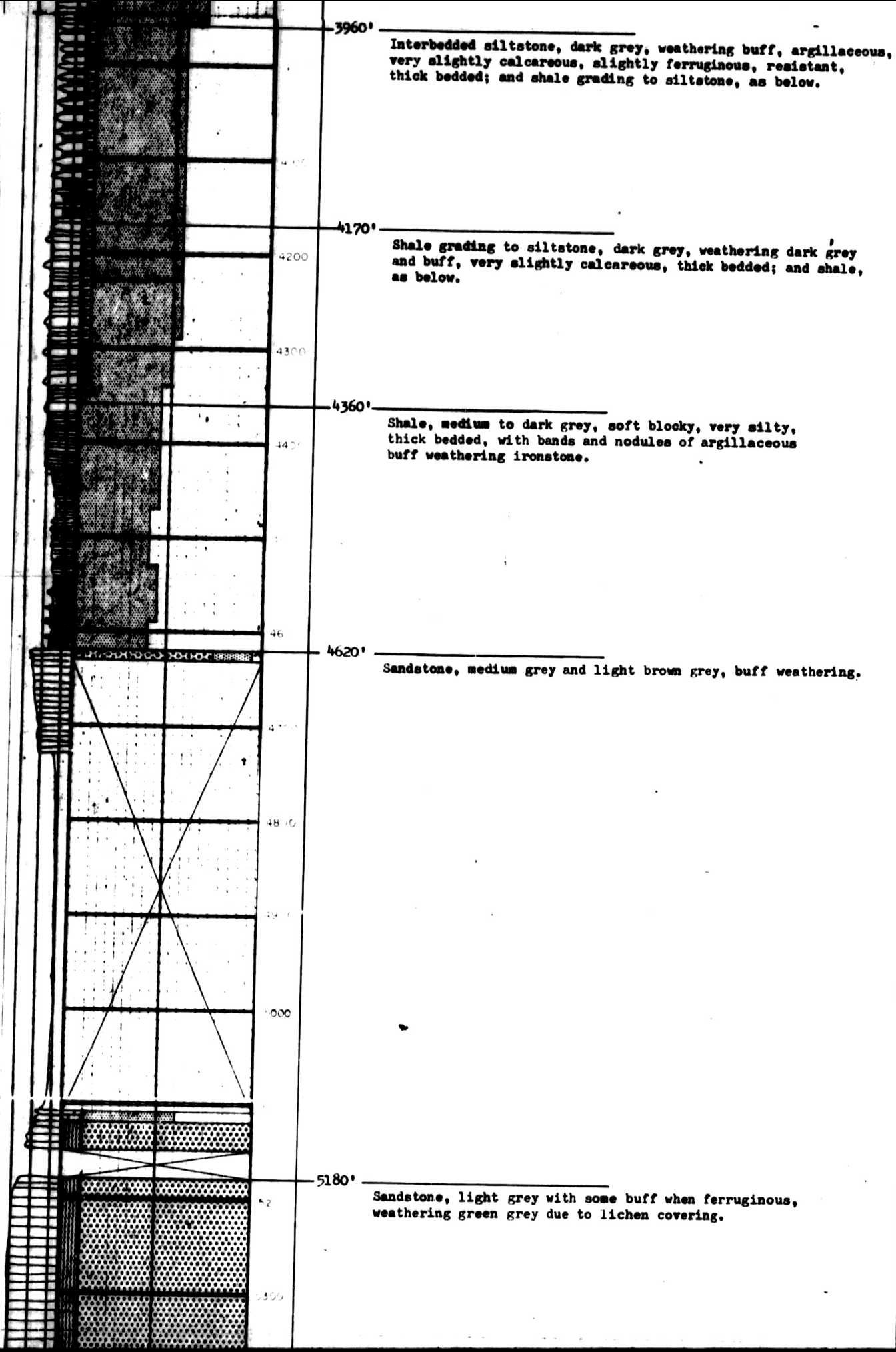
3680'

Siltstone, medium to dark grey, weathering buff, argillaceous, very slightly calcareous, very slightly dolomitic.

3960'

Interbedded siltstone, dark grey, weathering buff, argillaceous, very slightly calcareous, slightly ferruginous, resistant, thick bedded; and shale grading to siltstone, as below.

4 of



5180'

Sandstone, light grey with some buff when ferruginous, weathering green grey due to lichen covering.

The lowermost few inches consist of a very angular grit in a predominantly siliceous matrix.

5650'

UPPER DEVONIAN (750'+)
Imperial Formation (750'+)

Thick intervals of resistant sandstone and low weathering shale. Sandstone, medium grey, weathering medium grey and grey buff.

Shale, dark grey, clean to very silty; blocky, thin platy and subfissile depending on silt content; minor interbeds of: Siltstone, dark grey, buff weathering, more resistant medium interbeds, slightly ferruginous in part, often laminated, argillaceous, tough.

6170'—End of Measurement

Section is underlain by another 400 to 500 feet of exposure which from a distance resembles the section above, consisting of dark grey, recessive weathering shale intervals with buff siltstone interbeds and thick zones of resistant, massive, grey buff sandstone or siltstone.

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HEADWATERS STONY CREEK

Description of location:

ELEVATION :

MEASURED :
METHOD :

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains.

BY : Imperial Oil Limited

DATE: 1961

DESCRIBED

BY :

DATE : July, 1961

Coal

Salt

Anhydrite

Dolomite

Limestone

Massive Chert

Conglomerate

Sandstone

Siltstone

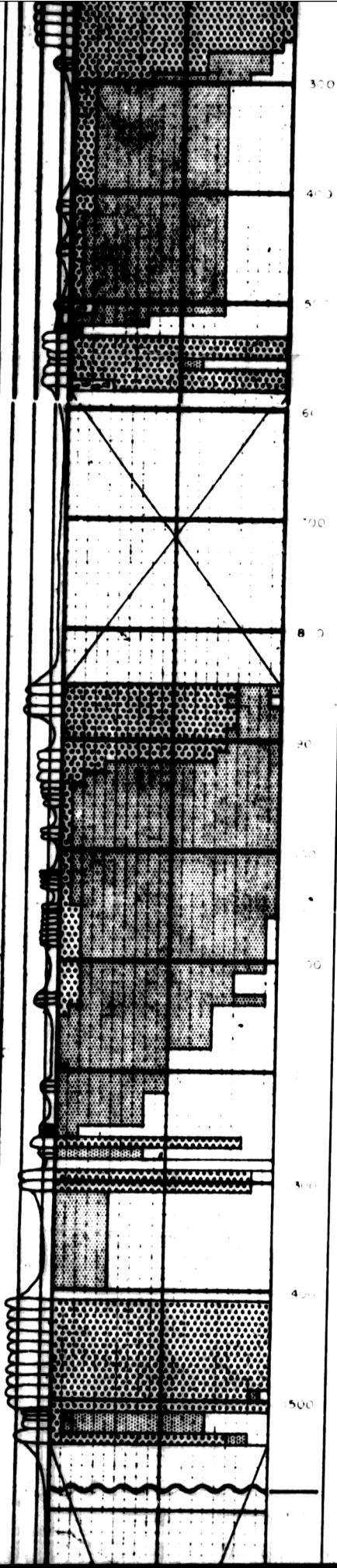
Shale

IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Litho percentage	Footage	Description
			Measured with Plane table, tape and compass and 5 foot stick.
			<u>JURASSIC - CRETACEOUS</u> (1580'±)
			Shale, dark gray color, medium gray weathering, limonite stained.
			Sandstone, buff to light gray color, yellow buff weathering, iron oxide stained.
			Concealed.
			Sandstone, light gray color, buff to light gray weathering, resistant.
			Poorly exposed, probably mostly siltstone, medium to dark gray color, slightly sandy, very argillaceous, thin bedded.



resistant.

Poorly exposed, probably mostly siltstone, medium to dark gray color, slightly sandy, very argillaceous, thin bedded.

Sandstone, medium gray color, light to medium gray weathering, medium to thick bedded.

Concealed.

Sandstone, light gray brown color, gray buff weathering, silty, medium bedded.

Siltstone, light brown gray color, brown gray weathering, slightly sandy, slightly argillaceous towards base, irregular thin bedding.

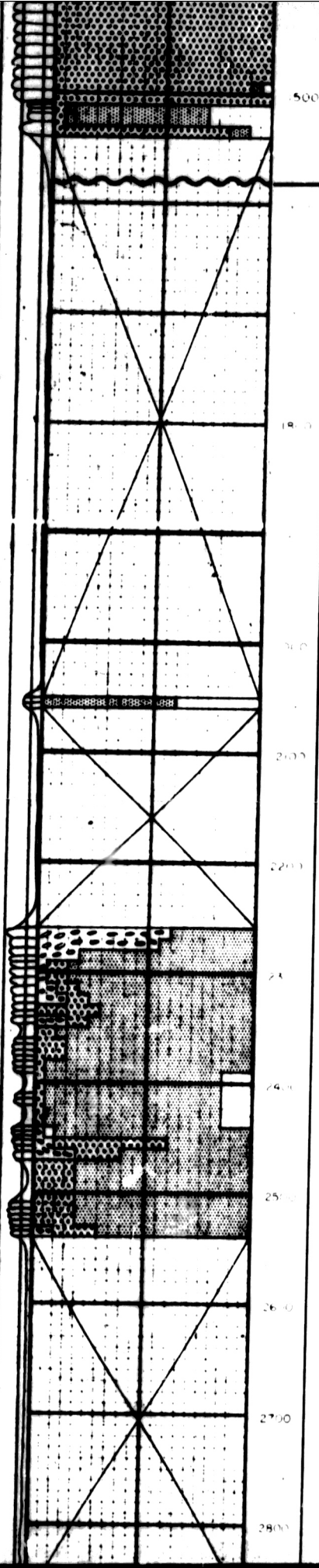
Very poorly exposed, probably predominantly Shale, subfissile, dark gray color, silty, very thin bedded, with basal Sandstone, buff color and weathering, slightly argillaceous, medium bedded.

Concealed, highly argillaceous lithology.

Sandstone, buff to medium gray color, gray buff weathering, Siltstone in part, argillaceous in part medium to thick bedded, resistant.

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Siltstone in part, argillaceous in part medium to thick bedded, resistant.



?

UPPER DEVONIAN (5560'+)
Imperial Formation (5560'+)

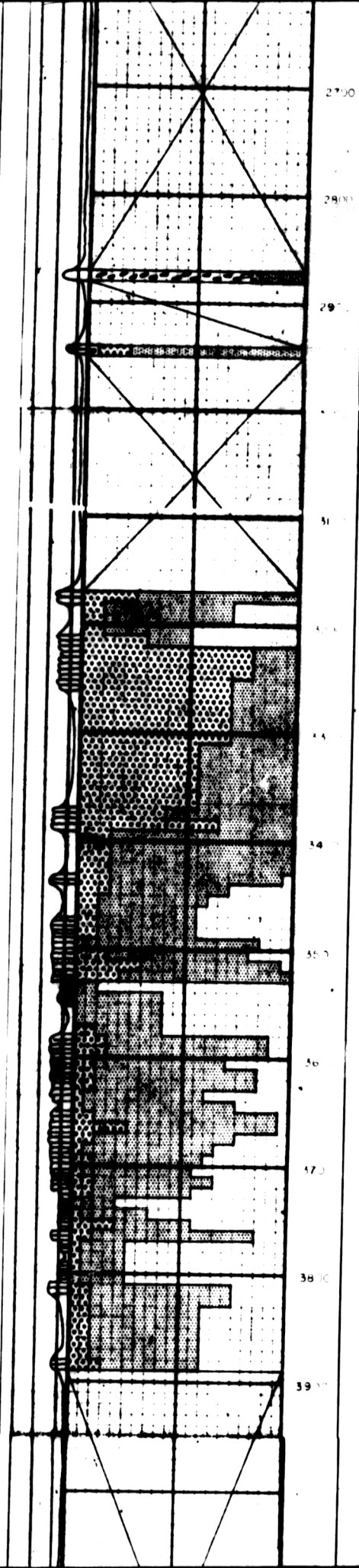
Concealed, probably predominantly siltstone.

Siltstone, medium gray color, buff weathering, slightly conglomeratic, slightly sandy, thin to medium bedded.

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Concealed, probably siltstone and/or Shale.

Concealed, probably siltstone and/or Shale.



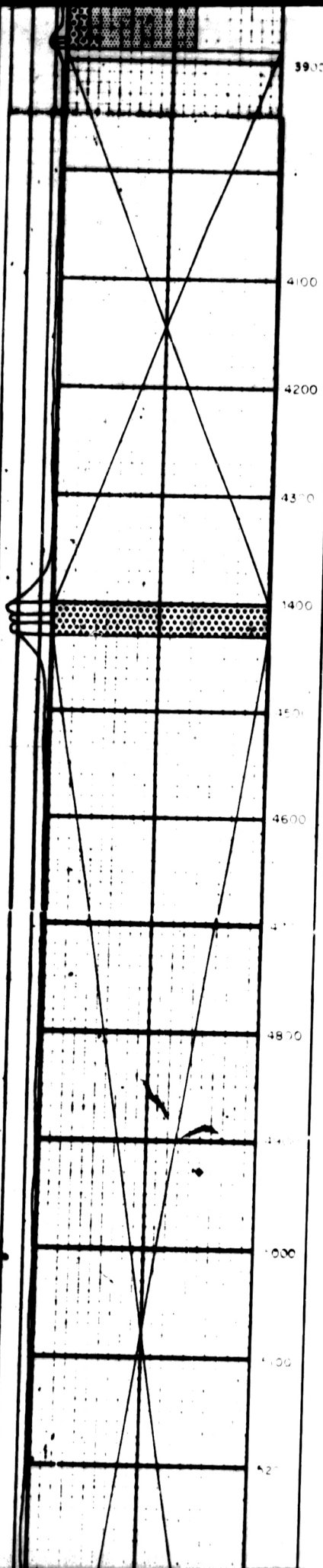
Sandstone, medium gray color, dark yellow buff weathering, silty, medium to thick bedded.

Siltstone, medium gray color, medium to dark gray weathering, slightly sandy, slightly argillaceous, medium bedded, interbedded with:

Shale, fissile to subfissile, dark gray color, medium gray weathering, slightly silty, laminated to very thin bedded.

Concealed, probably high argillaceous.

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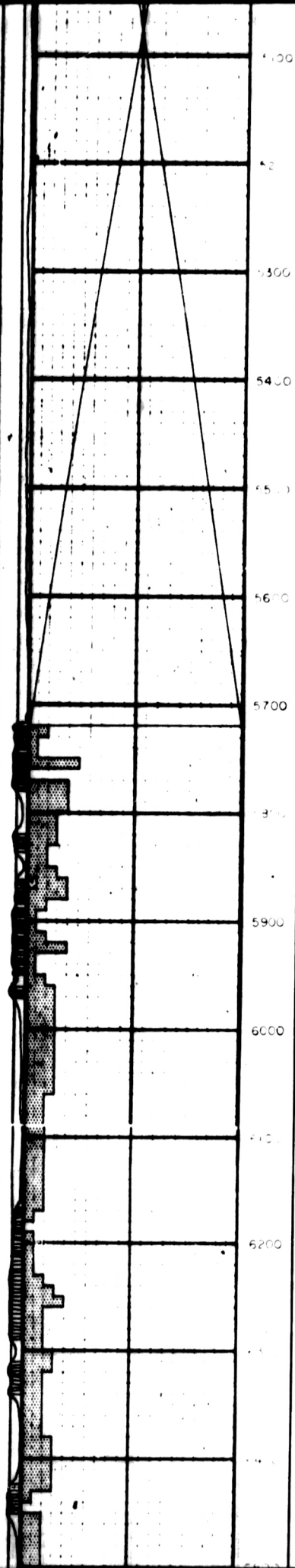


Concealed, probably high argillaceous.

Probably sandstone, medium to thick bedded, resistant.

1504

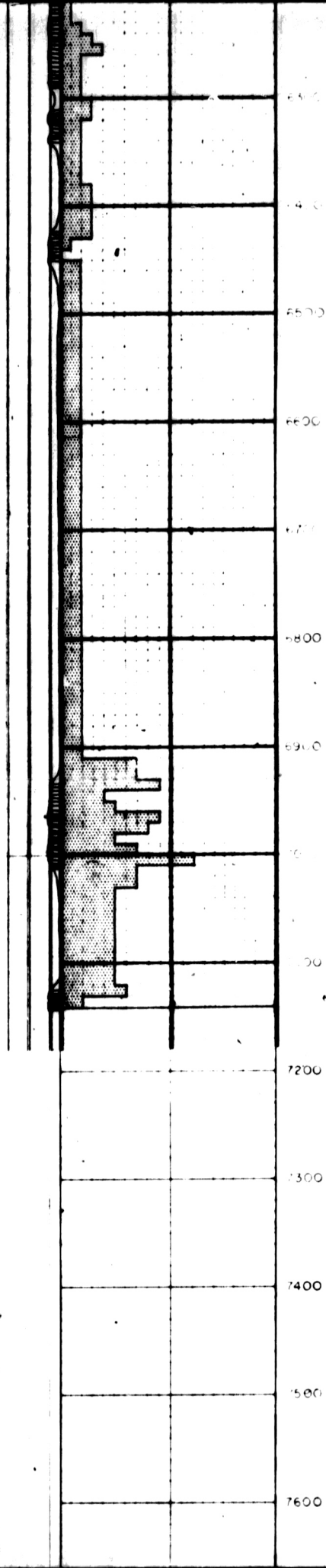
Concealed, probably high argillaceous as below.



Shale, fissile to subfissile, dark gray color, medium gray weathering, trace silty, laminated, with minor interbeds of:
Siltstone, medium to dark gray color, dark yellow buff weathering, slightly argillaceous, medium bedded.

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Shale, fissile to subfissile, dark gray color, medium gray weathering, trace silty, laminated, with minor interbeds of:
Siltstone, medium to dark gray color, dark yellow buff weathering, slightly argillaceous, medium bedded.



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LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

BIG CREEK SECTION

LOCATION: LSD. SEC. TWP. RGE. W. M.
UNIT ZONE N.T.S.
107B West/SW SEC. F-53 LAT 68°10' LONG. 135°15'
Description of location:

ELEVATION: MEASURED:
METHOD:

FORMATIONS

TO ACCOMPANY REPORT

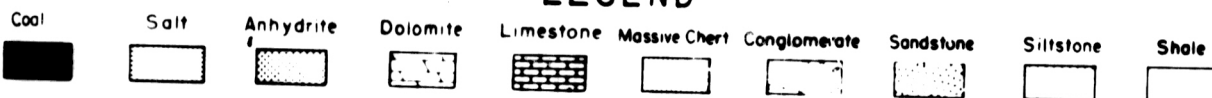
Stratigraphy of the Richardson Mountains area.

BY: Imperial Oil Limited
DATE: 1961

DESCRIBED

BY: DATE: June, 1961

LEGEND



IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			Measured with 5 foot stick.
			Overlying beds concealed.
			<u>JURASSIC (350'+)</u>
			Sandstone, light brown grey, buff weathering, trace calcareous, slightly silty, very argillaceous in thin bands, laminated to thin bedded.
			<u>PERMO-PENN (500')</u>

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Overlying beds concealed.

JURASSIC (350'+)

Sandstone, light brown grey, buff weathering, trace calcareous, slightly silty, very argillaceous in thin bands, laminated to thin bedded.

PERMO-PENN (500')

Conglomerate, chert pebble, argillaceous matrix, red color, maroon weathering.

Shale, subfissile, red brown color, maroon weathering, occasional chert pebble, trace sandy, slightly silty, very thin bedded. Poorly exposed.

CAMBRIAN (170'+)

70L

Prominent angular unconformity noted between conglomerate and chert. Chert beds are gently undulating and are truncated at unconformity.

Chert, light gray, grey-buff weathering, thin to medium bedded, fractured.

80L

Shale, black, dark gray weathering, slightly siliceous, laminated to very thin bedded, earthy, carbonaceous.

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LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

HEADWATERS JOHNSON CREEK

LOCATION: LSD. SEC. TWP. RGE. W. M.
UNIT ZONE N.T.S.
117A East/SW SEC. P-46 LAT 68°10' LONG. 137°30'

Description of location:

ELEVATION

**MEASURED
METHOD**

FORMATIONS

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

BY: Imperial Oil Limited

DATE: 1961

DESCRIBED

BY:

DATE: July, 1961

LEGEND

Coal	Salt	Anhydrite	Dolomite	Limestone	Massive Chert	Conglomerate	Sandstone	Siltstone	Shale

IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

PEACE RIVER DISTRICT

Resistance	Lithopercantage	Footage	Description
			All thicknesses estimated.
		0'	<u>PERMO-PENN (100'+)</u>
			Chert, light gray to gray buff weathering, thin bedded.
		100'	<u>SILURIAN - CAMBRIAN (480'+)</u>
			Limestone, buff weathering, slightly argillaceous, ver. thin bedded.
			Sandstone, slightly siliceous; with interbeds of: Shale, medium gray to buff weathering.
		300	
		400	

LITHOPERCENTAGE LOG OF OUTCROP SECTION

STATION NO.

WEST FLANK BARN MOUNTAINS

FORMATIONS

LOCATION: LSD. SEC. TWP. RGE. W. M.
UNIT ZONE N.T.S.
117A West/NE SEC9-54 LAT 68°40' LONG. 138°15'
Description of location:

ELEVATION: MEASURED:
METHOD:

TO ACCOMPANY REPORT

Stratigraphy of the Richardson Mountains area.

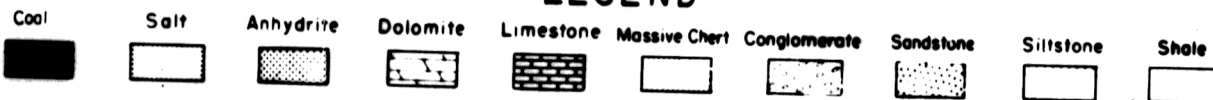
BY: Imperial Oil Limited

DATE: 1961

DESCRIBED

BY: DATE: July, 1961

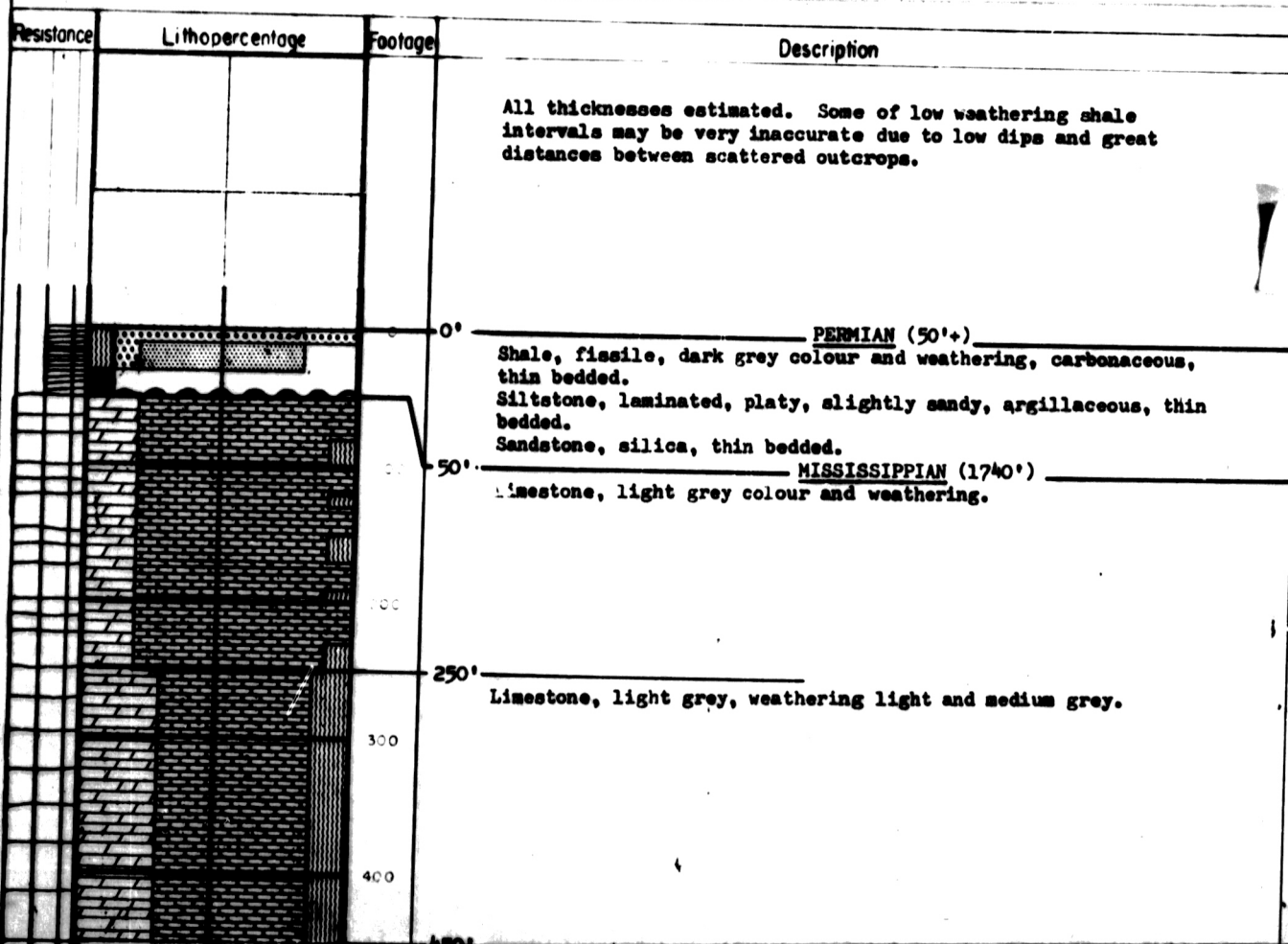
LEGEND



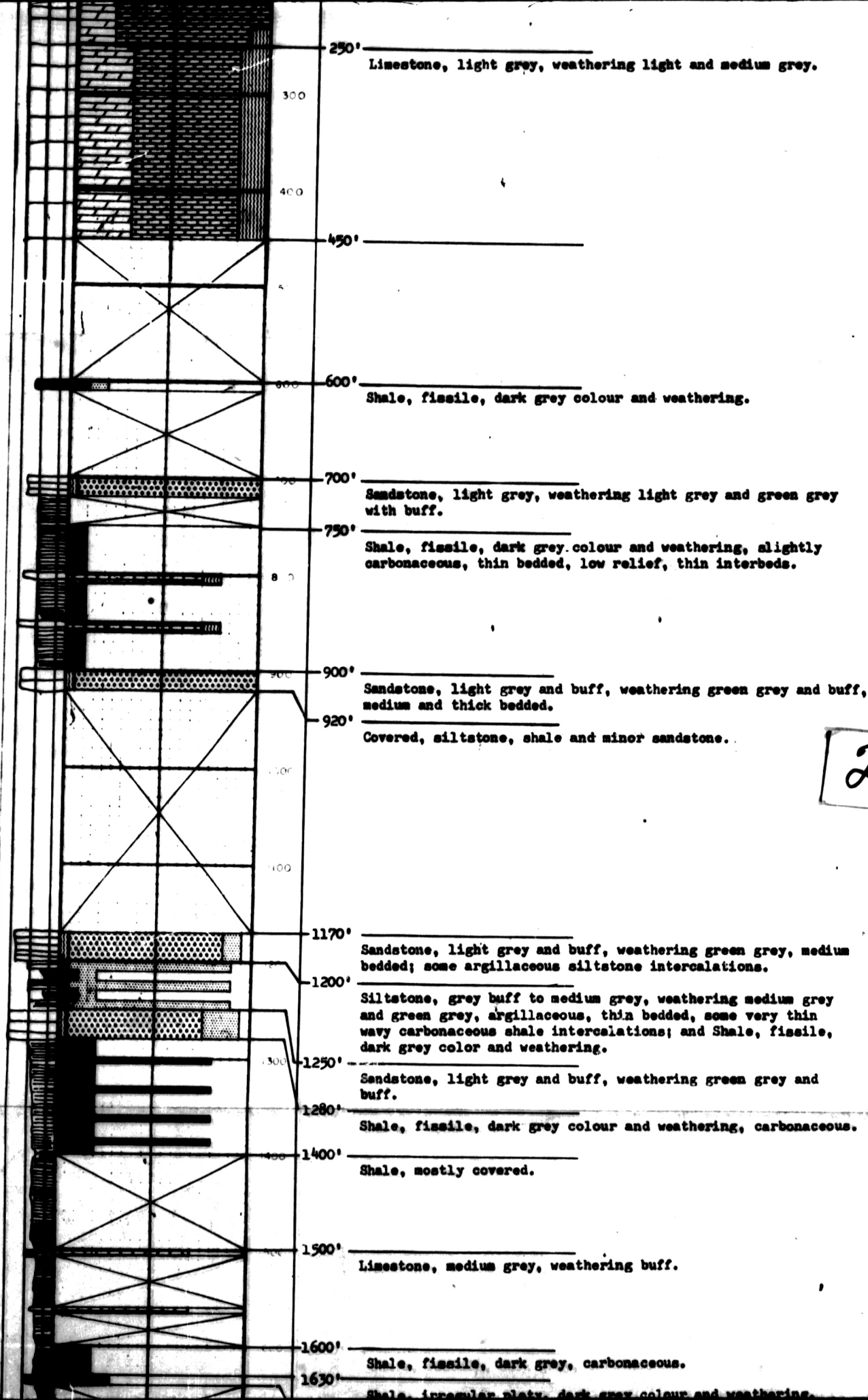
IMPERIAL OIL LIMITED

EXPLORATION DEPARTMENT

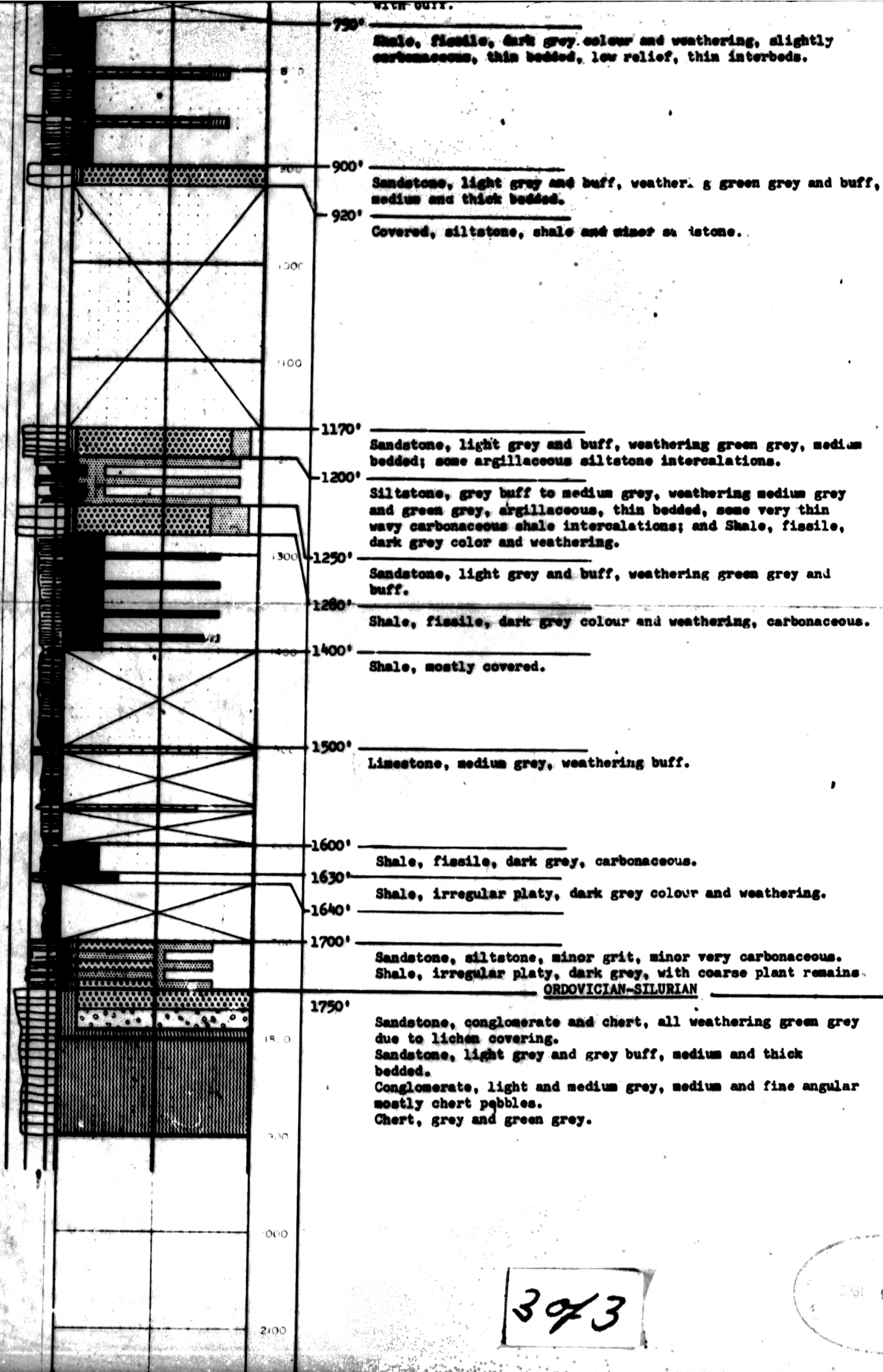
PEACE RIVER DISTRICT



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