

T.R. #3
STRATIGRAPHIC RECONNAISSANCE
of the
NORTHERN MACKENZIE and WERNECKE
MOUNTAINS, Y.T. & N.W.T.

December, 1968 C. R. Swanson

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MARATHON OIL COMPANY

T.R. #3

STRATIGRAPHIC RECONNAISSANCE

of the

NORTHERN MACKENZIE

and

WERNECKE MOUNTAINS

YUKON TERRITORY & NORTHWEST TERRITORIES

Field Report #68-1

by

C. R. Swanson



December, 1968.

Calgary, Alberta.

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INTRODUCTION:

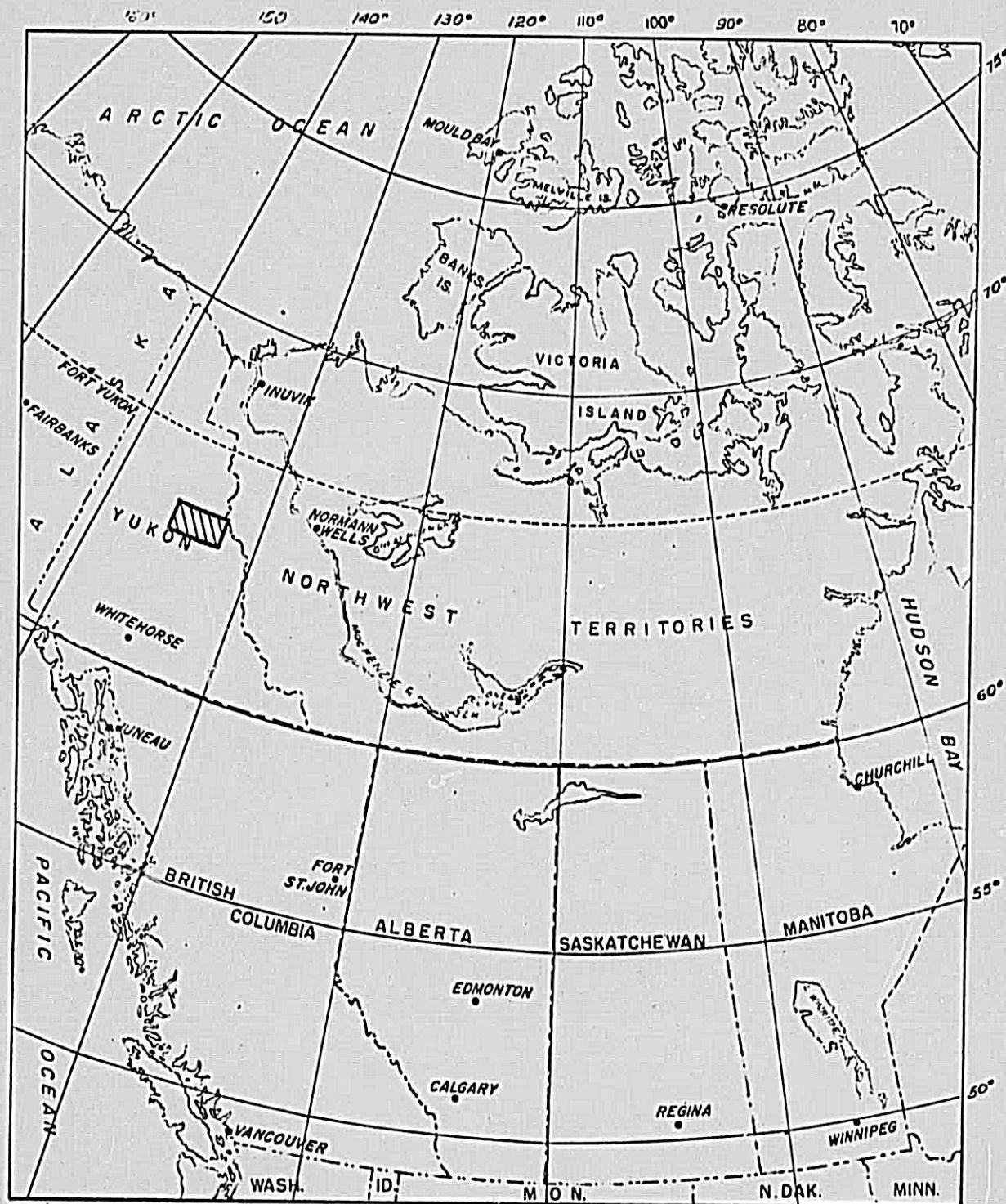
Purpose:

A Marathon Oil Company geological party conducted a stratigraphic reconnaissance of Lower Paleozoic rocks in the area of the northern Mackenzie and Wernecke Mountains, Yukon Territory, during a period of four-and-one-half weeks in the summer of 1968.

The primary objective was to investigate stratigraphic changes which occur in the Lower Paleozoic rocks and to gain information to evaluate Permits 5709 through 5712 located on and near the Trevor and Knorr Ranges. The measured and described stratigraphic and reconnaissance sections have been plotted on columnar sections and together with two stratigraphic cross-sections, are included in this report. The location of these sections and cross-sections is shown on Plate I.


Logistics and Personnel:

Base camp for the entire field period was located on the northern side of a small peninsula projecting from the south shore of Margaret Lake (65°20' - 134°30') Y.T. The localities visited range from 10 to 75 miles from base camp, and most were within 40 minutes flying time from base camp



 - AREA OF REPORT

WESTERN CANADA

Scale  1" to 300 Miles

using a Bell Super G-2 helicopter under charter from Associated Helicopters Ltd. A DeHavilland Beaver chartered from Great Northern Airways on an exclusive basis provided the fuel, food, personnel changes and communication for the camp. Supplies and aircraft fuel were trucked to Dawson City and Mayo and flown into the campsite with the Beaver. The helicopter and Beaver flew a total of 138 and 113 hours, respectively, including ferry time.

Although confronted with rather complex stratigraphy over a large area, the primary project objectives were accomplished within the time limit, due to the exceptional efforts of the following geologists:

W. A. Hogg
H. E. Cook
P. W. Choquette
W. Wilson
W. J. Meyers
P. N. McDaniel

The cook, Rheinhold Kleibl, and the food were supplied by MSP Industrial Consultants, Calgary. Axel Porsild and Ed Szeliga, helicopter pilot and engineer, and Beaver pilots Tom Currie, Noel Langlais and Bruce Busby, provided good flying service and maintenance.

STRATIGRAPHY:

During the field period of four-and-one-half weeks about 22,293 feet of stratigraphic section was measured and approximately 3,530 feet of section was examined in reconnaissance.

Because of our unfamiliarity with the area, and time restrictions, several sections were measured in areas previously described by other workers.

PRE-CAMBRIAN AND CAMBRIAN:

Thick sequences of Pre-Cambrian and Cambrian sediments are present in the Wernecke and Mackenzie Mountains, but were not measured. Cambrian rocks were briefly examined at only two localities.

Dark reddish-brown conglomerates were noted in the northern part of the Illtyd Range where they are unconformably overlain by Siluro-Ordovician carbonates. A few feet of dolomite reported to be Cambrian by Norford (1964) were examined in the interior of the Canyon Range immediately below Ordovician limestone.

SILURO-ORDOVICIAN:

Outcrops of Silurian and Ordovician carbonates and shales make up the greater portion of the Lower Paleozoic stratigraphic section exposed in the area of the Wernecke Mountains and northern Mackenzie.

Mountains. Detailed measurement and description of sections were made only in the Canyon, Illtyd and Knorr Ranges. An estimated 1500 feet of Siluro-Ordovician carbonate was examined in the Solo Creek area near the Trevor Range.

Ronning Group:

A composite section of 3300 feet of Lower Paleozoic was measured in the Canyon Range and 1938 feet of carbonate was assigned to this group. The Ronning at this locality is a dark to light gray, fine crystalline partly laminated to massive dolomite with silicified fossils and occasional dark chert zones. The basal 603 feet is a dark gray, thin bedded, limy mudstone with only rare fossils.

The base of the Ordovician is arbitrarily placed at the lithologic change from limestone to dolomite, as Norford (1964) has done. It is not known if Norford's boundary is based on fossil evidence.

The top of the Ronning is placed at the colour change from the predominantly dark gray to the light gray and yellowish-gray weathering dolomites of the Gossage Formation. The scarcity of fossils in the overlying Gossage generally coincides with the colour change at the Siluro-Devonian boundary pick.

In the Illtyd Range extensive exposures of limestone and minor dolomite have been reported by Norford (1964) and Norris (1968), as Silurian, Ordovician, and possible early Devonian. A detailed section of Ronning and Gossage (?) was measured at the southeast end of the Illtyd Range very near where Norford measured his section. Although the underlying Cambrian is not exposed at this locality, a nearly complete Ronning section of 2315 feet was measured, and was found to be predominantly limestone. The Ronning is a light gray or tan to medium dark gray limestone which weathers to a light gray to buff. Lithologies vary from thin evenly bedded to massive non-bedded, laminated mudstone, pellet wackestone to grainstone, and common algal mat-like beds.

The faunas in this carbonate sequence are scarce and difficult to detect in outcrop. Fossils include crinoid ossicles (single axial canals), Favosites sp. corals, horn corals, chain corals, stromatoporoids, strophomenids, Maclurites (?) sp., gastropods, ostracods, and pentamerids. Norford (1964) indicates faunas from this area completely span the Silurian and Ordovician.

Just west of the Trevor Range, Ronning

carbonates are brought to the surface in the core of a north-south anticlinal axis at the headwaters of Solo Creek. At this locality an estimated 1500' of dolomite was examined. The uppermost 300 - 400' is light coloured, coarse crystalline dolomite with some good to excellent vuggy and intercrystalline porosity. The remainder of the section, which may be Ordovician, is poorly exposed but appears to be predominantly dark, cherty, tight dolomite. Fossils observed at this locality are primarily poorly preserved corals, crinoid ossicles (single axial canals), brachiopods and questionable stromatoporoids at the top. The upper portion has been assigned a Silurian age based on lithology and fauna. The basal portion may be Ordovician but evidence is inconclusive. The contact with overlying Devonian shales was not seen and probably is not exposed in this vicinity.

Road River Formation:

The Road River Formation is the shale facies equivalent of the Ronning Group carbonates, and is present only in the western portion of this area. This unit was examined in detail in two localities - on Prongs Creek and in the Knorr Range. At both localities the Road River shale and argillaceous limestone are overlain by a similar Devonian sequence

- the Prongs Creek Formation. The Prongs Creek - Road River contact is within shale and presently drawn at the top of the highest occurrence of monograptids. Until detailed studies of the graptolites from these units have been reported, the top of the Road River Formation can be only arbitrarily positioned.

Lime mudstones, wackestones and packstones with crinoids, brachiopods, corals and stromatoporoids are interbedded with the graptolitic, calcareous shales in the Knorr Range section. Near the base of the section, many of the limestones are brecciated and conglomeratic with clasts composed of large fossils and a variety of rock types. Some fossils are silicified and chert stringers and nodules are not uncommon. At this locality a large covered interval separates the Road River and Prongs Creek exposures. There is a strong possibility that the Siluro-Devonian boundary lies somewhere within the covered interval which is expressed as a small east-west valley probably underlain by non-resistant shale.

A similar Road River section was measured along the banks of Prongs Creek, a tributary of the Wind River just west of the Illtyd Range where

560' of Road River thin interbedded dark calcareous shales and dark argillaceous limestones occur. Brachiopods, corals, and Thamnopora-like corals, with graptolites are common in the more argillaceous units. Monograptus spiralis and Scutellum sp. were identified in the basal 100' of the section just above Silurian, Ronning limestones. Here again the top of the Road River (Silurian) is placed just above the highest occurrence of graptolites. The overlying Prongs Creek Formation has a similar lithology but is less fossiliferous.

Other occurrences of Road River Formation are present to the southwest in the Royal Creek Area and are well exposed in the type area of the Richardson Mountains, however, time did not permit detailed studies in either of those areas.

DEVONIAN:

Devonian rocks crop out along the northern fronts and in scattered interior localities of both the Wernecke and Mackenzie Mountains. Poorly exposed outcrops are also present in the area immediately west of the Trevor Range. Field investigations were confined to the shales and carbonates of the Lower and Middle Devonian. The Upper Devonian Clastics are present in the area

but were not studied.

Lower and Middle Devonian carbonates are present along the northern front of the Mackenzie Mountains from Battleship Creek eastward, and also in isolated localities in the Wernecke Mountains and the Illtyd Range. Shale facies are exposed predominantly in the western portion of the area, particularly in the Knorr Range, Solo Creek, Battleship Creek, Prongs Creek and in some localities along Royal Creek in the Wernecke Mountains.

Recently published GSC and Devonian Symposium works by A. W. Norris have introduced names for some of the Devonian shale and carbonate units in this and adjacent areas. The formation names introduced by Norris have been used where possible in this report.

In the eastern portion of the area the Lower and Middle Devonian carbonate formations in ascending order are as follows: Gossage, Cranswick, Ogilvie and Hume. In the western portion Prongs Creek Formation is applied to the shale facies equivalent of the aforementioned carbonates with the exception of the Hume. In the Battleship Creek area the informal term "Battleship" shale is applied to a shale

sequence of uncertain affinities. Until the age and stratigraphic position of this sequence is clarified, the term "Battleship" shale (Ziegler 1967) is preferred to Norris' Hare Indian Formation.

Gossage Formation:

This unit overlies the Silurian Ronning within the eastern and southern portions of the area and in the southern Illtyd Range. Although diagnostic fossils are rare, the unit has been dated as Lower Devonian and early Middle Devonian by other workers.

The Gossage was studied in the interior of the Canyon Range, Battleship Creek, near the headwaters of Cranswick River, in the south Illtyd Range and in the Royal Creek South area. A complete section was not observed at any one locality, although relatively thick sections were measured at Battleship Creek and in the Canyon Range - 973' and 1362', respectively. It is predominantly dolomite with minor limestone and calcareous dolomite. The medium to light gray and buff weathering, thin bedded dolomites are usually laminated, pelletoid, birdseye mudstones with some silty zones. The calcareous beds are less resistant but similar to the dolomites. Porosity is generally poor and confined to thin intervals. The distinctive uniform gross lithology

contrasts with the underlying and overlying units.

The Gossage upper contact is drawn at the change from the thin bedded, usually buff weathering dolomites, to darker fossiliferous limestones of the Cranswick or Ogilvie. The lower contact is based on a change to slightly darker, more fossiliferous carbonates - usually siliceous. A regional unconformity at the base of the Gossage reported to be present in this area was not seen.

The fauna is sparse and consists of ostracods; some relatively large forms may be Moelleritia sp. (Copeland and Norris), brachiopods and occasionally Amphipora sp. The Gossage Formation in this area has been reported by Norris (1968) to be Lower Devonian and early Middle Devonian (Eifelian) based on the meagre fauna of ostracods, brachiopods and fish remains, and has been correlated with the Bear Rock Formation in the Norman Wells area.

Cranswick Formation:

This unit was named by Norris (1968) for a limestone sequence well exposed in the Battleship Creek area; selected as the type locality. This section and sections at Bioherm Creek and Phylis Creek, and R-4 and R-2 were examined. A partial section was also measured in the Cranswick River

headwaters area. The Cranswick Formation was not recognized in the Royal Creek South area where Ogilvie appears to directly overlie Gossage. The Cranswick is overlain by shales and argillaceous limestones of the Prongs Creek Formation in the Canyon Ranges and appears to grade eastward into the basal Ogilvie. The contact with the underlying Gossage is marked by an abrupt change to thin bedded, dolomite with rare ostracods. Westward from Battleship Creek the Cranswick is represented by shales and argillaceous limestones of the Prongs Creek Formation. The Cranswick is 438 feet thick at Battleship Creek although the upper and lower contacts have been lowered from those of Norris (1968). The unit thins eastward to approximately 200' at section R-2 in the Canyon Range front.

The limestones and minor shales of the Cranswick are very dark gray to dark brown and are composed mainly of mudstones and wackestones with a variety of fossils. Small carbonate buildups are present near the top, in the Bioherm Creek exposure immediately east of Snake River. The fauna consists of brachiopods, crinoid ossicles with single, double, and cross-shaped axial canals, branching and massive corals, massive and bulbous

stromatoporoids, gastropods: Amphipora sp. and Tentaculites sp. in the upper portion.

Ogilvie Formation:

Norris (1968) has proposed a new name - the Ogilvie Formation - for a succession of limestones which overlie either the Cranswick or the Gossage, and underlie the Hume in most localities. Norris selected a locality at Mt. Burgess in the northern Ogilvie Mountains for the type locality.

The Ogilvie Formation is relatively well exposed along the northern front of the Canyon Range between the Snake and Cranswick Rivers. Good outcrops are also present in the area of the Cranswick River headwaters to the southeast. In the Royal Creek South area near where Green and Roddick (1962) described a Lower Paleozoic sequence, over 1300' of limestone was measured and assigned to the Ogilvie on the basis of fauna, stratigraphic position and lithology.

In the Canyon Range front complete sections of Ogilvie were not measured although thick sections estimated at up to 2000' were examined. The upper contact was observed at R-3 section where Ogilvie limestones are in sharp contact with a thin tongue of Prongs Creek (?) shale. In sections R-4 and R-2

Ogilvie limestones grade downward into shale and argillaceous limestones tentatively assigned to Prongs Creek Formation. Reconnaissance in this area indicated an interfingering relationship between the Ogilvie carbonates and Prongs Creek calcareous shales and argillaceous limestones. Further field investigation should be undertaken in this area to better define these facies relationships.

The Ogilvie in the Royal Creek South section consists of limestone, medium to light-gray, thin to medium bedded, mudstone and packstone, partly pelletoid. Crinoids (one and two holed ossicles), Amphipora sp., corals (Hexagonaria sp., Alveolites sp., Thamnopora sp. and cup) nodular and massive stromatoporoids, brachiopods and rare gastropods make up the fauna.

In a section near the headwaters of the Cranswick River the Ogilvie is limestone with some thin dolomite beds in the lower 250' and are mostly wackestones and packstones containing some pellets and birdseye structures. In the upper half of the section crinoid ossicles, gastropods and ostracods are common. In the lower portion corals (Thamnopora - type and massive colonial), massive and tabular

stromatoporoids and brachiopods in addition to crinoid ossicles (single and double axial canals) are common. A little over 1000' was measured in this section with an additional 300' to 400' exposed above. Dark gray slightly argillaceous limestones (Cranswick) conformably underlie the Ogilvie here.

Between the Snake and Cranswick Rivers along the northern edge of the Canyon Range, three partial sections of Ogilvie were examined and were found to be limestone, medium to thick bedded, medium gray to grayish brown, light gray weathering crinoidal calcarenites and rare pelletoid mudstones. In the R-2 section the basal 150' is partly dolomite and dolomitic limestone with some good moldic porosity in the dolomite zones. The Ogilvie fauna in this area is dominantly crinoidal (single, double and cross-shaped axial canals) commonly with brachiopods, stromatoporoids, corals, favositids, rare gastropods and Amphipora sp. In the R-3 section limestones bear crinoid ossicles with only single axial canals. The Ogilvie spans a time interval of most of the early and late Middle Devonian (Norris 1968).

Hume Formation:

This unit is the uppermost Devonian carbonate present in this area and is best represented in the

extreme eastern part of the area in the front of the Mackenzie Mountains at Flyaway Creek. Further west partially exposed limestones have been tentatively assigned to the Hume on the basis of lithology, stratigraphic position and to some extent on fossils.

At localities just east and west of Snake River the Hume is underlain by shales of the "Battleship" or Prongs Creek. At Terminal Creek section an overlying poorly exposed sequence has been tentatively placed in the Hare Indian Formation. In the Battleship Creek and R-3 sections the upper Hume contact was not seen. At Flyaway Creek the base of the Hume could not be accurately placed because of structural complexities - but the Hume appears to grade into laminated fenestral carbonates of the Ogilvie. The upper contact is either very abrupt or erosional and even though our field evidence is inconclusive, this author supports a disconformity at the base of the overlying Canol shale.

The Hume at Flyaway Creek is composed of argillaceous dark gray and light to medium brown limestone with thin beds of nearly black barren shale. The limestones are irregularly thin to medium bedded. The darker argillaceous limestones usually contain corals of the branching and large

massive types. The lighter coloured units are often laminated mudstones, or pellet wackestones with rare Amphipora sp. and birdseye structures. Shaly intervals are more common in the lower portion of the unit.

The 60' of black non-calcareous, paper-thin shale present in the upper portion is either a tongue or possibly represents a section of Canol repeated by faulting. At the base of this shale unit is a 3 foot zone of laminated calcareous shale with Tentaculites sp. which appears transitional with the underlying limestone. If a fault is present it would lie above this zone in the poorly exposed section at or near the abrupt upper contact. A variety of corals are present (Hexagonaria sp., Thamnopora sp., fasciculates, favositids, and cup) and less commonly massive and tabular stromatoporoids, brachiopods, crinoid ossicles (single axial canals), gastropods, Amphipora sp., Stachyodes sp., and Tentaculites sp.

In the Canyon Range front at section R-3 about 200' of limestone is exposed above a Prongs Creek shale tongue. This limestone is medium bedded, medium to dark brownish-gray, wackestone to packstone with some pellets and abundant brachiopods in a dark muddy matrix. Other common fossils are

massive stromatoporoids, branching corals, crinoid ossicles (single axial canals) ostracods, gastropods and Amphipora sp. This unit is assigned to the Hume on the basis of stratigraphic position, lithology and general fauna.

Farther west along the Canyon Range front at Terminal Creek (about 5 miles east of Snake River) 432' of very fossiliferous limestone and shaly limestone is partly exposed and thought to be Hume on the basis of fauna. The upper contact is placed on the basis of a change to darker, thin, evenly laminated, partly pelletal limestones with crinoids (single axial canals) and rare corals. The basal contact is drawn at the top of a thick covered interval which may represent non-resistant Prongs Creek or "Battleship" shale.

At Battleship Creek 86' of limestone at the top of the section has been tentatively placed in the Hume on the basis of fauna and stratigraphic position. The upper contact was not observed and the lower contact is placed at the base of the resistant cliff. The very dark gray limestone weathers dark to medium gray, to buff, and is irregularly thin to medium bedded wackestone with a rich fauna. The fossils are favositids, Atrypa sp., Spinatrypa sp., Coenites sp.,

Heliophyllum sp., Crytospirifer sp., crinoid ossicles (single axial canals) and gastropods.

Shale Facies:

The Lower and Middle Devonian shale facies of this area is represented mostly by the Prongs Creek Formation named by Norris (1968) for a thick sequence at Royal Mountain. The term "Battleship" shale is applied to the thick tan shales in the upper portion of the Battleship Creek section. Norris (1968) has applied the name Hare Indian to this section, for reasons not entirely clear to the author,

The Prongs Creek is exposed in the western portion of the report area and sections were measured at Prongs Creek, Knorr Range, Solo Creek, Battleship Creek, Bioherm Creek and Phylis Creek. At localities R-4, R-3 and R-2 tongues of Prongs Creek were observed in reconnaissance.

The Prongs Creek shale is underlain by either Road River shale or the Cranswick. In the Canyon Range front between the Snake and Cranswick Rivers shaly units of the Prongs Creek are thought to interfinger with limestones of the Ogilvie Formation. Hume, Ogilvie, "Battleship" shale, and in some areas Upper Devonian rocks overlies the formation.

The Prongs Creek generally consists of very

dark gray to black shale with thin interbeds of dark argillaceous limestone and lime mudstone; thin to platy bedded, weathering gray to buff and usually poorly exposed. Brecciated beds with a variety of lithologies and thicknesses are common in the Knorr Range and Solo Creek localities. The shales and shaly limestones commonly contain a fauna consisting of Tentaculites sp., Styliolina sp., brachiopods, crinoid ossicles (single, double, cross and star-shaped axial canals) and gastropods. Corals and stromatoporoids are common within the brecciated units. Chert stringers and nodules are also common. The two-hole crinoid ossicles are abundant in the middle and lower portion and provide a rough guide to field correlations in this area. The Prongs Creek ranges from Lower Devonian to Middle Devonian and may even extend into the Upper Devonian (Norris 1968).

Hare Indian Formation:

This unit, which is best developed in the surface and subsurface to the east and northeast (Basset 1961), may be represented in this area by 104' of incompletely exposed argillaceous limestone which overlies the Hume (?) in the Terminal Creek section just east of the Snake River. The limestone is dark gray, thin bedded, well laminated lime mud-

stone containing rare corals, common crinoid ossicles (single axial canals) and occasional pellets. Where best developed outside this area the Hare Indian has been dated as late Middle Devonian (Givetian).

Royal Creek Headwaters Area:

This area is located in the southwestern corner of the report area where a Devonian and older, carbonate to shale facies transition is fairly well exposed in a cirque near the headwaters of Royal Creek, at approximately $64^{\circ}47'30''$ N, $135^{\circ}10'11''$ W. Time and low cloud cover did not permit a detailed lithofacies or biofacies examination nor a complete investigation of the stratigraphic relationships.

The facies relationships are characterized by a thick (1500'+) carbonate sequence of probable Lower and Middle Devonian, and possible Upper Silurian age, in abrupt transition with shales and thin limestones of the Prongs Creek Formation. At the transition thick carbonate debris tongues appear to extend out into the Prongs Creek facies.

Fossils are abundant in both facies and consist of corals (dendroid, massive, fasciculate, solitary) massive and tabular stromatoporoids, straight cephalopods, graptolites, crinoid ossicles, brachiopods, Tentaculites sp., algae, and trilobites. In

the cursory examination it was noted that crinoid ossicles with only single and star-shaped axial canals were present. Near this area the Prongs Creek and Road River shales have been definitely dated by graptolites, brachiopods and conodonts (Lenz 1966, Jackson & Lenz 1962, Klapper 1969). To date, nothing has been published on the carbonate faunas though it may be concluded that most of the carbonate would be of comparable age.

CONCLUSIONS:

From the field reconnaissance of the stratigraphy of the Wernecke and Mackenzie Mountains several conclusions may be drawn:

1. The Lower Paleozoic rocks display two primary facies consisting of marine shale primarily in the western portion and carbonate facies in the eastern portion of the area.
2. The Cranswick, Ogilvie and Hume formations (Middle Devonian) are almost entirely limestone and porosity is rare. The early Devonian Gossage Formation is dolomite and mostly non-porous.

The Ronning Group (Siluro-Ordovician) is composed primarily of dolomite which is often porous.

3. The facies relationships present in the area will assist in the understanding of the subsurface to the north and northeast.
4. Further field work is necessary for a more complete understanding of Silurian - Ordovician facies relationships.
5. Additional biofacies studies of the Lower and Middle Devonian are needed for a better definition of age relationships.

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APPENDIX

MEASURED SECTIONS:

The localities which were visited in the field are listed below from west to east in descending order. Many of the locality names are from well known geographic features and appear on topographic and geologic maps of the area. Other localities were named by the geologists who measured the sections. The numbers which follow the names were assigned by the field parties.

1. PRONGS CREEK	2813
2. SOUTH ILLTYD RANGE	2801
3. ROYAL CREEK SOUTH	2824, 2825
4. SOLO CREEK A	2830 A
5. SOLO CREEK B	(Reconn. 2830 B)
6. KNORR RANGE	2800, 2802
7. BATTLESHIP CREEK	2803, 2804, 2808, 2812
8. BIOHERM CREEK	2810
9. TERMINAL CREEK	2816, 2817
10. PHYLIS CREEK	2820
11. CANYON RANGE	2809, 2814, 2815, 2818
12. F-4 CANYON RANGE	(Reconn.)
13. R-2 " " "	
14. R-3 " " "	
15. FLYAWAY CREEK	2821
16. CRANSWICK RIVER HEADWATERS	2822, 2823

STRATIGRAPHIC SECTION: 2813 - PRONGS CREEK Y.T.

LOCATION: 65°17'30" 135°39'-41'

Along banks of Prongs Creek

DATE:

July 12, 1968

MEASUREMENT:

Upper portion - Up section

Lower portion - Down section.

AGE & INTERVALS:

DEVONIAN - L. & M.

Prongs Creek = 1490' (Inc)

SILURIAN

Road River = 560'

Total = 2050'

GEOLOGISTS:

W.A. Hogg

P.N. Mc Daniel

H.E. Cook

W.J. Meyers

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
			OVERLYING SECTION NOT EXPOSED	
	2050		18' SHALE: BLACK, SL PLATY TO 1" THK. RECESS PARTLY COVERED	
	2000		65' LIMESTONE, DK GY TO BLK, MUDSTONE, 1" - 1' THK, ARG.	
	1900		67' LIMESTONE & SHALE INTBDD: DK GY TO BLK, BEDS 1/2"-1" W/SOME TO 4". // STRATIF, LIME IS MUDST. SHALE, PLATY, BLACK	TENTACULITES SP. COMMON IN SHALE
	1800		25' LST, DK GY TO BLK, 1"-4", SOME CONTORTED BEDS, FEW SHALE STREAKS	
	1700		175' LIMESTONE: DK GY TO BLK, MUDSTONE, EVENLY BEDDED 1'-2', BASAL 17' LAMINATED	NONE OBSERVED
GS CREEK	1600		710' COVERED INTERVAL - PROBABLY SHALE	
	1500			
	1400			
	1300			
	1200			

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PRONGS CREEK

ROAD RIVER



42'	COVERED - TALUS SIMILAR TO BELOW	
138'	SCATTERED EXPOSURES; LIMEY SHALE & SHALY LST, DK GY - BLK POORLY BEDDED TO LAM. & WELL BEDDED. FEW SCATTERED FOSS IN MUD MTX	RARE BRACHS CRINOIDS
110'	SHALE, LIMEY & ARG LST, V DK GY-BLK 4"-6" BDG. POORLY EXPOSED NO GRAPTOLITES OBSERVED	RARE CRINOIDS & BRACHS TR, THAMN. TYPE CORALS
25'	LST, DK GY, ARG MUDST.	(R-C) CRINOIDS, BRACHS & THAMN. TYPE
92'	COVERED	
20'	LST, ARG, DK GY, THN BD, MUDST.	RARE-CRIN, BRACHS & THAMN. CORALS
67'	MOSTLY COVERED - TALUS CONSISTS OF LAM. LST & SH,	(R) GRAPTOLITES (TALUS)
13'	INT BDG LIME MUDST & SH - 1"-4" BDG	TR. GRAPTOLITES
73'	LIMEST. SLI ARG, W/INTBD LIMEY SH; BD 4"-11", AT BASE SOME BREC FRAGS LIME MUDST W/CRIN. CALCARENITE & OTHER FOSS. SOME GRADED BEDDING	ABUND. CRIN - SOME 2-HOLE (?) (R) BRACH. (R) FAVOSITIDS & THAMNOPORA TYPE STROMS
65'	COVERED - TALUS SIMILAR TO BELOW	
35'	LST: DK GY, ARG, BDG - 6"-4". SOME GRADED	(R)-BRACHS, HORN CORALS & (C-A) CRIN & FAVOSITIDS
45'	MOSTLY COVERED INTB. LS & SH AS BELOW. SOME GRADED BEDDING	(R) CRINOIDS
45'	LTS, V ARG, SOME BREC @ BASE; SH, CALC. & CHERTY, BLK TO V DK GY, LAM MUDST TO FOSS PACKST. SOME PINCH & SWELL, BREC CLASTS - LIME MUD TO FOSS FRAGS.	AT TOP: (A) BRACHS & CRIN. (R) CORALS BASAL: (R) CRIN.
80'	LIMESTONE, V ARG & LIMEY SHALE; V DK GY TO BLK, THN BEDDED TO LAM. MUDST.	RARE GRAPTOLITES UPPER PART LOWER PORTION SMALL BRACHS & CRINOIDS
40'	COVERED	
17'	SHALE, LIMEY, V DK GY, LAMINATED. MOSTLY TALUS	MONOGRAPTIDS SP 6 M. SPIRALIS

2 of

RONNING

ROAD RIVER

PR

1100			
1000			
	42'	COVERED - TALUS SIMILAR TO BELOW	
900	138'	SCATTERED EXPOSURES; LIMEY SHALE & SHALY LST, DK GY - BLK POORLY BEDDED TO LAM, & WELL BEDDED, FEW SCATTERED FOSS IN MUD MTX	RARE BRACHS CRINOIDS
800	110'	SHALE, LIMEY & ARG LST, V DK GY-BLK 4"-6" BDC. POORLY EXPOSED NO GRAPTOLITES OBSERVED	RARE CRINOIDS & BRACHS TR, THAMN. TYPE CORALS
700	25'	LST, DK GY, ARG MUDST.	(R-C) CRINOIDS, BRACHS & THAMN. TYPE
600	92'	COVERED	
500	20'	LST, ARG, DK GY, THIN BD, MUDST.	RARE-CRIN, BRACHS & THAMN. CORALS
	67'	MOSTLY COVERED - TALUS CONSISTS OF LAM, LST & SH,	(R) GRAPTOLITES (TALUS)
	13'	INT BDD LIME MUDST & SH - 1"-4" BDC	TR, GRAPTOLITES
	73'	LIMEST. SLI ARG, W/INTBD LIMEY SH; BD 4"-11", AT BASE SOME BREC FRAGS LIME MUDST W/CRIN. CALCARENITE & OTHER FOSS. SOME GRADED BEDDING	ABUND. CRIN - SOME 2-HOLE (?) (R) BRACH. (R) FACOSITIDS & THAMNOPORA TYPE STROMS
400	65'	COVERED - TALUS SIMILAR TO BELOW	
300	35'	LST; DK GY, ARG, BDC - 6"-4". SOME GRADED	(R)-BRACHS, HORN CORALS & (R)-CRIN & FAVOSITIDS
	45'	MOSTLY COVERED INTB. LS & SH AS BELOW. SOME GRADED BEDDING	(R) CRINOIDS
200	45'	LTS, V ARG; SOME BREC @ BASE; SH, CALC. & CHERTY, BLK TO V DK GY, LAM MUDST TO FOSS PACKST. SOME PINCH & SWELL, BREC CLASTS - LIME MUD TO FOSS FRAGS.	AT TOP: (A) BRACHS & CRIN. (R) CORALS BASAL: (R) CRIN.
100	80'	LIMESTONE, V ARG & LIMEY SHALE; V DK GY TO BLK, THIN BEDDED TO LAM, MUDST.	RARE GRAPTOLITES UPPER PART LOWER PORTION SMALL BRACHS & CRINOIDS
	40'	COVERED	
	17'	SHALE, LIMEY, V DK GY, LAMINATED. MOSTLY TALUS	MONOGRAPTIDS SP & M. SPIRALIS
	25'	COVERED	
0	18'	LST, V ARG, V DK GY, MUDSTONE	SMALL BRACHS - SCUTELLUM SP.
		LIMESTONES, STROM & CORAL RICH - TOP OF RONNING GROUP	

3 of 3

STRATIGRAPHIC SECTION: 2801 - SOUTH ILLTYD RANGE, Y. T.

LOCATION: 65° 14' 20" 135° 11'-13'

Southern Illtyd Range - East facing slope,
and part of west dip slope

DATE:

June 24, 25, 28, 29, 1968

AGE & INTERVALS:

DEVONIAN:

Gossage(?) = 885' (Inc)

SIL.- ORD.:

Ronning = 2315' (Inc)

Total = 3200'

MEASUREMENT:

Up section with 5' Jacob Staff

GEOLOGISTS:

P. Choquette

W. Wilson

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

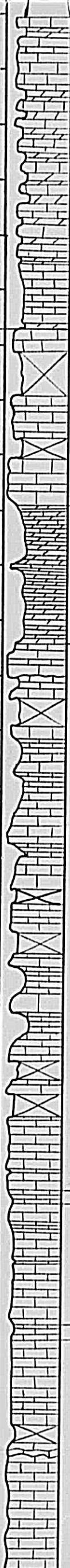
FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
			73' LIMESTONE, LT GY TO TAN, WRS LT GY, MASSIVE TO THK BEDDED, FORMS CLIFFS ON BACK (WEST) SIDE MTN. LIME MUDSTONE W/RARE PELLETS & CA FILLED BIRDSEYE. SECTION ABOVE MISSING BY EROSION. WRS LT GY.	NONE OBSERVED
	3100		612' LIMESTONE & DOLOMITE - INTERBEDDED, MOSTLY COVERED. INTERVAL FORMS TOP OF MTN & DIPSLOPE ON BACKSIDE. LIMESTONE GENERALLY FORMS RESISTANT LEDGES - DOLOMITE GENERALLY FORMS TALUS COVERED SLOPES W/SPORADIC SPALLED OUTCROPS. LIMESTONE: LAMINATED PELLETOID, PELLET-LUMP, COMMONLY BIRDSEYE W/ OCCAS. ALGAL-MAT LAM. NO VIS. POROSITY. COMPLETE INFILL OF GRAIN INTERSTICES, AND BIRDSEYES W/ CA. MUDSTONE W/PELLETS PREDOMINANT. DOLOMITE: GY-TAN TO OHOC. BRN. WRS DULL GRY-YEL TO GY-ORG. V. FINE TO MED SUCROSIC. NO VISIBLE POROSITY. BEDDED W/ LAMINAR STRUC. & "GHOSTS" OF GRAINS OR CALDITE-FILLED BIRDSEYE SUGGESTING DOLO. SECONDARY. DOLO. CONTENT CHANGES Laterally	STROM OR GORAL RARE HI-SPIRED CAST. & COMMON SMALL OST.
	3000			
	2900			
	2800			
	2700			
	2600			
	2500		LIMESTONE: LAMINATED, PELLETAL, BIRDSEYE, W/ THIN INTERBEDS LT GY-TAN DOLO.	
	2400			
	2300			

GOSSAGE (?)

104

ROUP

2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200



LIMESTONE; LAMINATED, PELLETAL, BIRDSEYE, W/ THIN INTERBEDS
LT GY-TAN DOLO.

159' LIMESTONE - LT GY-TAN, PELLETAL, WACKSTONE & 1'-4' BEDS PACKSTONE.
WRS MED GY. LOW CLIFF FORMERS

RARE-OSTRACODS

127' DOLOMITE; PTLY OALCAR UPPER HALF. GYSH-YEL, WRS GY TO GY-ORGE. THIN PLATY
BEDS TO FEW INCHES THICK. SUCROSIC - MAY HAVE SOME INTXLLN
POROSITY. DK GY STRKS & BLEBS MAY BE REPLACED GRAINS. RARE
OALCITE - FILLED BIRDSEYE.

NONE
OBSERVED

1018' LIMESTONE; MED-LT GY-TAN, INDISTINCT // BEDS 6"-4' THK.
PREDOM PELLETAL LIME MUDST, WACKST, PACKST,
GRAINST INTERBED; LAMINATED, PELLETAL OR
PELLET - LUMP, BIRDSEYE, ALGAL-MAT BEDS
OCCUR IN MANY PLACES THRU OUT SECTION.
FOSSILS UNCOMMON

OSTRACODS

LAMINAR, PELLETAL BIRDSEYE, PROB. ALGAL MAT

LAMINAR, PELLET-LUMP, BIRDSEYE, PROB. ALGAL MAT

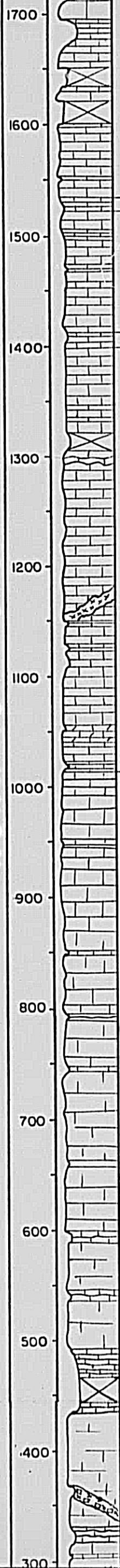
MED DK GY LIME MUDSTONES INTBD W/THIN TO MASS WEATHERING -
POORLY BD LT-TAN CRINOID - PELLET WACKST & PACKST

GRSE CALCITE XTLS UP TO 3"-5" LONG IN SHATTERED ZONE

OSTRACODS

2 of

RONNING GROUP



LAMINAR, PELLETAL BIRDSEYE, PROB. ALGAL MAT

LAMINAR, PELLET-LUMP, BIRDSEYE, PROB. ALGAL MAT

MED DK GY LIME MUDSTONES INTBD W/THK TO MASS WEATHERING - POORLY BD LT-TAN CRINOID - PELLET WACKEST & PACKST

CRGE CALCITE XTLS UP TO 3'-5" LONG IN SHATTERED ZONE

CONFORMABLE & GRADATIONAL CONTACT BETWEEN OVERLYING UNIT OF INCREASING PELLETS & MUD & DK COLOUR AND UNDERLYING GRADUAL DECREASE UPWARD OF CORALS AND CRINOIDS.

77' LIMESTONE; V. PALE TO LT GY-TAN TO WH, MASS & RARELY BD EXCEPT IN RECESS WEATH MUDDY GRN INTERVALS. CRINOIDAL W/ ABUND FAVOSITID CORALS
WRS IN UNSTRATIFIED CATHEDRAL-LIKE PINNACLES. ABOVE 745' MORE ZONES OF MUDST. MUCH OF EXPOSURES OBSCURED WITH SLOTCY VENEERS OF LICHEN

AT 860' - 70' - LENTICULAR MASSES OF DOLO 0-2' THK, SAND-SIZE RHOMBS.

- PLATY WEATH, FINE GR CRINOIDAL GRAINST

OSTRACODS

HIGH-SPIRED
TURRITELLID?GAST.

ABDT CRINOIDS,
SMALL FAVOSITIDS
& UNIDENT. HORN
CORALS

RARE OSTRACODS

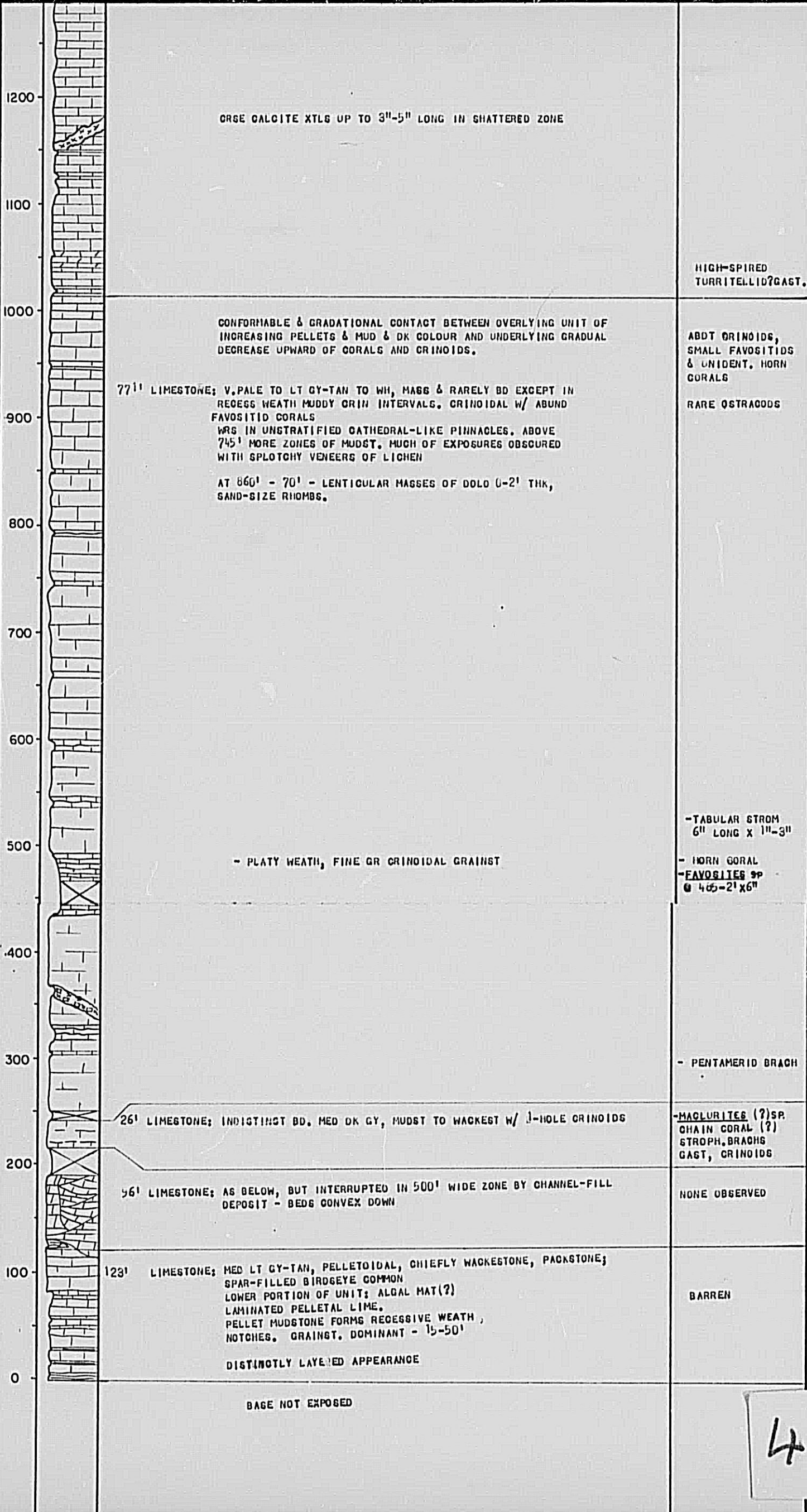
-TABULAR STROM
6' LONG X 1'-3"

- HORN CORAL
-FAVOSITES sp
4'-2' x 6"

- PENTAMERID BRACH

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RONNING GROUP



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STRATIGRAPHIC SECTION: 2824, 2825

ROYAL CREEK SOUTH, Y.T.

LOCATION: 64° 53' 30" - 54' 134° 57'

Along ridge between Royal Creek
and small tributary to south

DATE:

July 18, 1968

MEASUREMENT:

Upper half - up section.
Lower half - down section.
Both with 5' Jacob Staff.

AGE & INTERVALS:

DEVONIAN:

Ogilvie = 1,063' (Inc.)

Gossage = 282' (Inc.)

Total 1345'

GEOLOGISTS:

W. A. Hogg
P. N. McDaniel
H. E. Cook
W. J. Meyers

MARATHON OIL CO.
TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
OGILVIE			TOP OF EXPOSURES	
	1300		47' LST: MD-DK GY, 1"-6", FRED. MUST W/OCCASIONAL CRINOID WACKST. OR PACKST.	(R) CRINOIDS (R) ALVEOLITES(?) SP
	1200		240' LIMESTONE: MD-LT GY, 6"-2' BDS - THINNER TOWARDS TOP, MOSTLY CRINOIDS IN MUDST OR WACKST W/FEW BDS PACKST. CRINOIDS DECREASE UPWARDS	(R-V/A) CRINOIDS (R) MASS STROMS
	1100			
	1000		36' LST: MD-LT GY, 6"-2' THK. CRINOIDS IN DK MUD MATRIX. VERY ABDT BLK DHT IN UPPER 25'	(V/A) CRINOIDS (R) STROMS
	900		125' COVERED: FLOAT OF TIN BEDDED GY LST W/ CHERT, CRINOIDS, BRACHS.	(C) CRINOIDS (R) BRACH.
	800		165' LIMESTONE: MD-LT GY, MOD. BEDDED, 1"-2' MOSTLY WACKST. TO PACKSTONE, PELLETOID & W/ CRINOIDS - 1 & 2 HOLE & + SHAPED	(C-R) CRINOIDS (R-C) CORALS: CUP & HEXAGONARIA SP (R-C) MASS STROMS NEAR TOP (R) GASTROPOD
	700		102' LIMESTONE: DK-LT GY-TAN, BEDS 1-5' THICK, MOSTLY PELLET GRAINST & PACKST. SOME BIRDSEYE @ BASE, SOME BURROWED & BORED	(R-V/A) AMPHIPORE SP (R-C) THAMNOPORA(?) & CUP CORALS (R) NOD. STROMS
	600		328' LIMESTONE, LT GY TO MD-DK GY, EVEN PARALLEL STRATIFIED BEDS - 6"-12", MORE FOSSILS IN DARKER-MUDDIER ZONES. PELLETS COMMON TO ABDT.	AMPHIPORE - SP COMMON TO ABUNDANT & BCM RARE NEAR BASE TRACE CORALS & STROMS NEAR TOP

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GOSSAGE

OGILVIE

1100
1000
900
800
700
600
500
400
300
200
100
0



36' LST: MD-LT GY, 6"-2' THK. CRINOIDS IN DK MUD MATRIX. VERY -BDT BLK OHT IN UPPER 25'

(V/A) CRINOIDS
(R) STROMS

125' COVERED: FLOAT OF TIV BEDDED GY LST W/ CHERT, CRINOIDS, BRACHS.

(C) CRINOIDS
(R) BRACH.

185' LIMESTONE: MD-LT GY, MOD. BEDDED, 1"-3"
MOSTLY WASKEST. TO PACKSTONE, PELLETOID
& W/ CRINOIDS - 1 & 2 HOLE & + SHAPED

(C-R) CRINOIDS
(R-C) CORALS:
CUP &
HEXAPODARIA SP
(R-C) MASS STROMS
NEAR TOP
(R) GASTROPOD

102' LIMESTONE: DK-LT GY-TAN, BEDS 1-5' THICK, MOSTLY PELLET GRAINST & PACKST.
SOME BIRDSEYE @ BASE, SOME BURROWED & BORED

(R-V/A) AMPHIPODA SP
(R-C) THAMNOPORA(?)
& CUP CORALS
(R) NOD. STROMS

328' LIMESTONE, LT GY TO MD-DK GY, EVEN
PARALLEL STRATIFIED BEDS - 6"-14",
MORE FOSSILS IN DARKER-MUDDIER ZONES.
PELLETS COMMON TO ABDY.

AMPHIPODA - SP
COMMON TO ABUNDANT
& BCM RARE NEAR
BASE
TRACE CORALS &
STROMS NEAR TOP

282' DOLOMITE: LT GY - TAN, BEDS 0"-2' THK, EVEN BEDDING & 1" STRATIFIED.
RARE FOSSILS, FENESTRAL FABRIC ABUNDANT, SUPRATIDAL BRECCIA
& FLAT PEBBLE CONGL COMMON IN SOME ZONES. SOME POOR TO FAIR
INTXN POROSITY.

STRATIGRAPHIC SECTION: 2830A - SOLO CREEK Y.T.

LOCATION: 65° 51' 134° 16'

Along Solo Creek upstream from
resistant limestone cliff

DATE:

July 17, 1968

AGE & INTERVALS:

DEVONIAN:

Prongs Creek = 1500' (Inc)

Total = 1500'

MEASUREMENT:

Up section with 5' Jacob Staff

GEOLOGISTS:



H. E. Cook

W.J. Meyers

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
CREEK			SECTION ABOVE NOT OBSERVED	
	1500		75' - 150' LST: BRECCIA; DK-LT QY, WRS LT CY-BUFF, RESIST CLIFF. CLASTS OF PELLET GRNST, LARGE FOSS, BIOCALCARENITES IN BLK CALC MUD MATRIX. BASE IRREG & CHANNELED. OVERALL THICKNESS VARIABLE.	(C-A) STROMS CORALS CRINOIDS - 2 HOLE &+SHAPED
	1400		400' SHALE, LIMEY, THN, WRS BUFF, WITH CONTORTED ZONES CONTAINING CLASTS CONSISTING OF LARGE BULBOUS STROMS, CORALS AND CRINOIDS WHICH APPEAR AS "CONCRETIONS" WITHIN THE SHALE.	(R-C) CORALS, STROMS CRINOIDS
	1300			
	1200			
	1100			
	1000			
	900		380' SHALE, LIMEY, PAPERY THN, DK QY-BLK, WRS PALE YEL-BRN	NONE OBSERVED

10f

PRONGS CREEK

1200
1100
1000
900
800
700
600
500
400
300
200
100
0



360' SHALE, LIMEY, PAPERY THN, DK GY-BLK, WRS PALE YEL-DRN

NONE
OBSERVED

370' SHALE, LIMEY; BLK-V DK GY, THN BEDS, WRS DK GY.
OCCAS BRECCIA BEDS, SOME WITH CLASTS OF LT COLOURED MUD

SHALES
RARE CRIN. &
TENTACULITES SP

@ 605': BRECCIA BED = CONTAINS TAB STROMS,
COENITES, CUP CORALS, 1 & 2 HOLE
CRINOIDS, + SHAPED CRINOIDS &
FAVOSITIDS. ALSO DK MUD CLASTS
& BIRDSEYE CLASTS.

240' SHALE, DOLOMITIC; BLK TO V DK GY, THN 1/4" - 3", WRS PALE BUFF TO MD GY.
@ 80' TO 190': SERIES OF RESIST BRECCIA BEDS, 1'-2' THK,
IRREGULAR BASE, GRADED UPWARDS, BRECCIAS ARE PARTLY DOLOM,
CONTAIN NUMEROUS FOSS. WRS BUFF, BLK ON FRESH. BASAL PORTIONS
PACKST. IN BLK DOLO MUD MTX, MANY FOSS DOLO. FEW BEDS ALSO
SILICIFIED.

SHALES;
CRINOIDS & POSS.
TENTACULITES SP

BRECCIA BEDS;
(A) 1 & 2 HOLE
CRINOIDS
(C) THAMNOPORA (?) SP
(R) TAB. CORALS
& STROMS,
& SMALL BULBOUS
STROMS
(R) GASTROPODS

UNDERLYING SECTION NOT EXPOSED.

2 of 2

STRATIGRAPHIC SECTION: 2830 a - Solo Creek Anticline (Reconn.) Y. T.

LOCATION: 65° 51' 134° 13' 30"

N.W. flank of plateau which forms
the core of anticline at Solo Creek
headwaters just west of Trevor Range

DATE:

July 16, 1968

AGE & INTERVALS:

SILURIAN - ORDOVICIAN (?)

Ronning = 1500' ± (Inc.)

Total = 1500 ±

MEASUREMENT:

Down section -

* Footages estimated

GEOLOGISTS:

H. E. Cook

W. J. Meyers

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

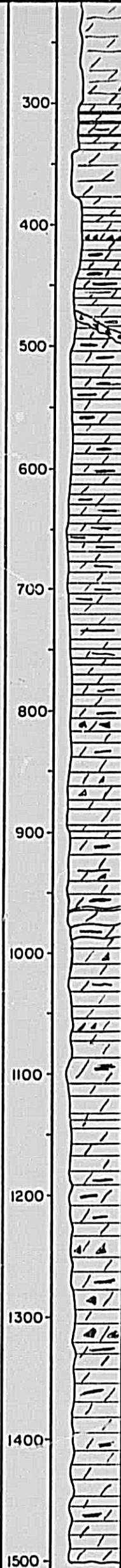
1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
	est. 0		TOP OF PLATEAU	
	0		200' ± DOLOMITE; MD-LT GY-TAN INDIST BEDS - 5'-20', CRSE-XLN, FOSS GHOSTS, INTXN & VUGGY Ø TO 2" DIAM. SOME LGE VUGS SPAR CA FILLED. EUHEDRAL QTZ XTLS, SOME BIOMOLDIC POROSITY EXCELLENT SMALL MINERALIZED ZONE INTQTZ VEIN FILLING	CORALS FAVOSITIDS CRINOIDS STROMS (?)
	100			
	200		100' ± DOLOMITE; MD-DK GY-BRN WITH PALE BRN TO BUFF IRREGULAR MOTTLING PRODUCED BY CRSE XLNE DOLO INFILL IN VUGS (?) IRREG MD BDD, SOME VUGS Ø - 1"-2" PTLY FILLED W/DOLO XTLS. HAS SOMEWHAT "ZEBRA" APPEARANCE	(R-A) CRINOIDS
	300		40' ± DOLOM; W/BLK CHRT BANDS; DK BRN-GY MD-THN BEDDED CHT 1"-2" THK. SOME BRECCIATED CHT. CUT W/WHCA & DOL VEINS	NO FOSS.
	400		40' ± DOLO; MD-GY-BRN; MD BDS, MD-XLN, POOR INTXN Ø	(A-C) CRINOIDS, CORALS
	500		1120' ± 1. DOLO; DK BRN-BLK=W/COMMON BLK CHRT STRGS & NODS & BREC. SOME WH DOL & CALC BANDS CUTTING ACROSS BEDS. WRS BRN-YEL	RARE BRACHS (?) & CRINOIDS (?)
	600			
	700			
	800			

RONNING

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RONNING



300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500

<p>IRREGULAR MOTTLED PRODUCED BY CRSE XLNE DOLO INFILL IN VUGS (?) IRREG MD BDD, SOME VUGS 1"-2" PTLY FILLED W/DOLO XTLS. HAS SOMEWHAT "ZEBRA" APPEARANCE</p>	<p>40'± DOLOM; W/BLK CRT BANDS; DK BRN-GY MD-THN BEDDED CRT 1"-2" THK. SOME BRECCIATED CRT. CUT W/WHCA & DOL VEINS</p>	<p>40'± DOLO; MD-GY-BRN; MD BGS, MD-XLN, POOR INTXN</p>	<p>1120'± 1. DOLO; DK BRN-BLK-W/COMMON BLK CRT STRGS & NODS & BREG. SOME WH DOL & CALO BANDS CUTTING ACROSS BEDS. WRS BRN-YEL</p>
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<p>(R-A) CRINOIDS</p>	<p>NO FOSS.</p>	<p>(A-C) CRINOIDS, CORALS</p>	<p>RARE BRACHS (?) & CRINOIDS (?)</p>
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BASE NOT EXPOSED

STRATIGRAPHIC SECTION: 2800-2802 KNORR RANGE, Y.T.

LOCATION: 65°23'-24' 134°10'30"

On north edge of southern
KNORR RANGE near headwaters
of Noisy Creek.

DATE:

June 24,25, 1968

AGE & INTERVALS:

DEVONIAN-M & L

Prongs Creek= 1906' (Inc)

MEASUREMENT:

Up section - 5' Jacob Staff
and tape for large covered
interval.

SILURIAN:

Road River = 608'

Total 2514'

GEOLOGISTS:

W. A. Hogg

H. E. Cook

MARATHON OIL CO.

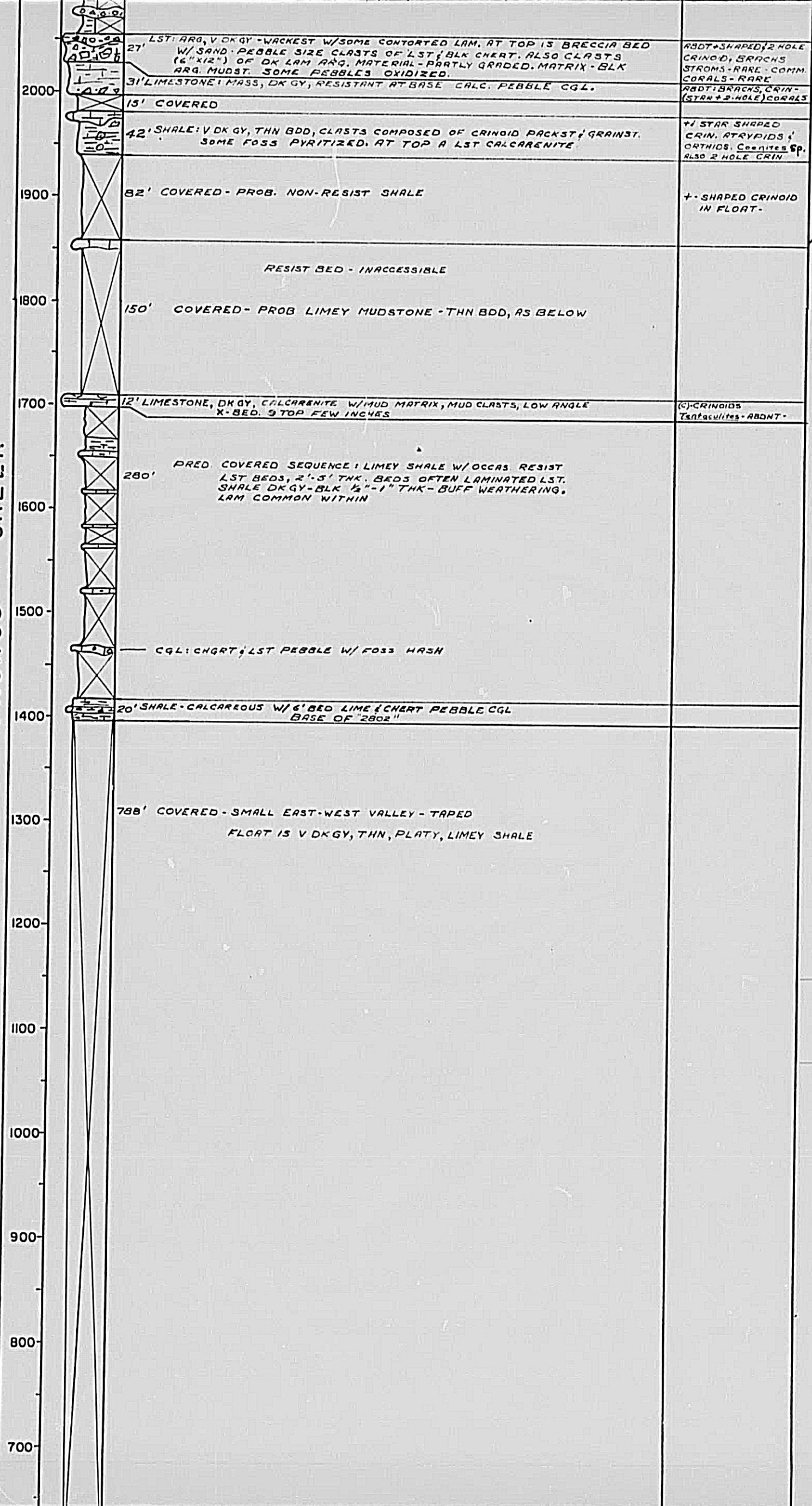
TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
			TOP OF SECTION MISSING - ERODED	
	2500		34' LIMESTONE: LT GY, 1"-6" BEDS, LIME MUDDSTONE, LOWER PORTION W/MINOR INTRAFORMATIONAL SLUMPING. 6'-8' BED OF MUDDSTONE W/1"-3" CHERT STRINGERS.	BRACH-CRINOID HASH
			40' LIMESTONE: LT GY, MOSTLY DEVOID OF BEDDING - MASSIVE, MUDDSTONE - POSSIBLY A BIOHERM	RARE COLONIAL CORALS (R) CRINOIDS
			20' LIMESTONE: CONTORTED; MD GY TO LT GY, MUDDSTONE	
	2400		22'(10-50) LIMESTONE, MEGABRECCIA, IREG THK, CLASTS OR BLOCKS (TO 5'X10') COMPOSED OF PELLET GRAINST. CLIFF FORMER	CRINOIDS & FAVOSITID CORALS
			94' SHALE, V CALC, W/THN PLATY ARG LS STRGS: SHALE DK GY, V. THIN BD (<1/4")	
	2300		11' LIMESTONE: DK GY, LAMINATED, ARG	SPINIFERS-ATRYPIDES RHYNGOCELLIDS
			76' SHALE: BLK, CALCAR, INTBEDDED W/THN. BEDS LIMEST. CGL COMPOSED LARGE INTERCLASTS & FOSS. SOME BEDS W/IRREG TOP & BOTTOM SUGGESTING CHANNEL FILL.	CRINOID - (2 HOLE) CORALS STROMS - BRACHS
	2200			
			162' SHALE: BLK, CALCAR, POORLY EXPOSED W/FEW RESIST LST CGL BEDS OF SAND TO PEBBLE SIZE CLASTS IN MUDDY MATRIX DK GY - WRS BUFF	BRACH-CRINOID (2-HOLE) - CORAL BRACH-CRINOID (2-HOLE & STAR) CORALS
	2100			
			27' LST: ARG, V DK GY - WACKEST W/SOME CONTORTED LAM. AT TOP IS BRECCIA BED W/SAND PEBBLE SIZE CLASTS OF LST & BLK CHERT. ALSO CLASTS (6"X12") OF DK LAM ARG. MATERIAL - PARTLY GRADED. MATRIX - BLK ARG. MUDDST. SOME PEBBLES OXIDIZED.	ABDT+SHAPED, 2 HOLE CRINOID, BRACHS STROMS - RARE COMM. CORALS - RARE
	2000		31' LIMESTONE: MASS, DK GY, RESISTANT AT BASE CALC. PEBBLE CGL.	ABDT+BRACHS, CRIN- (STAR+2-HOLE) CORALS
			15' COVERED	
			42' SHALE: V DK GY, THN BDD, CLASTS COMPOSED OF CRINOID PACKST & GRAINST. SOME FOSS PYRITIZED. AT TOP A LST CALCARENITE	+1 STAR SHAPED CRIN. ATRYPIDES & ORTHIDS. COENITES Sp. ALSO 2 HOLE CRIN
	1900		82' COVERED - PROB. NON-RESIST SHALE	+ SHAPED CRINOID IN FLOAT.
			RESIST BED - INACCESSIBLE	
	1800		150' COVERED - PROB LIMEY MUDDSTONE - THN BDD, AS BELOW	
	1700		12' LIMESTONE, DK GY, CALCARENITE, W/MUD MATRIX, MUD CLASTS, LOW ANGLE	(C) CRINOIDS

10f

PRONGS CREEK



ROAD RIVER

1200
1100
1000
900
800
700
600
500
400
300
200
100
0

45'	LIMESTONE, CALCARENITE, GRADED - A SERIES OF BEDS 1'-3' THK. CALCAR SAND TO PEBBLE SIZE. OCCAS. FOSS & CNT NODULES. A FEW THIN STRINGERS OF COARSE QUARTZ SAND - TO 30%	RARE FAVOSITIDS
50'	COVERED - PROB. SIMILAR TO UNDERLYING UNIT	
70'	SHALE: CALCAREOUS, PLATY, V DK GY, W/ TWO THN BEDS OF GRADED CALCARENITIC LIMESTONES - ALLOCANTHINOUS? POORLY EXPOSED SHALY INTERVALS. LOWER CALCARENITE IS EVEN BEDDED, LIME PACKST TO GRAINST, W/ WELL SORTED GRAINS, INTERGRAN DOLO. (P) CNT OR DOLOMITIZED MUD. ALSO RARE FLAT PEBBLE INTRACLASTS.	<i>Monograptus</i> sp. <i>Tentaculites</i> sp. SMALL RHYNCHONELLIDS CRINOIDS (R)
18'	LIMESTONE, DK GY, MASS. W/ INTBD THN ARG LST. CNT NOD. COM., IRREG THNS CHANGES	(R) CRIN, BRACHS FAVOSITIDS, MASS STROMS
157'	SHALE: LIMEY, V DK GY, THN BD (1/4") PLATY, OCCAS THN (1/8"-10") RESIST BEDS CRINOID-BRACH WACKEST W/ OCCAS CNT NODULES NEAR BASE: RESIST LST BEDS - DK GY, WRS LTGY. COMPOSED OF FOSSIL WACKEST W/ LIME MUDST MTX, IRREG BEDDING SURFACES. CRINOID-BRACH RICH ZONES GRADE UP INTO LAM. MUDST W/ ALOT TENTACULITES	<i>Tentaculites</i> (C-A) CRINOIDS (R-C) BRACHS (C-A) STROPHOMENIDS RHYNCHONELLIDS CORALS (R) FAVOSITID HORN
22'	LIMESTONE: PARTLY ARG, V DK GY TO BLK, WRS MD GY, EVENLY THN TO N. DSDO. MOSTLY PELLET PACKST W/ MUDST MATRIX	BRACHS-CRINOIDS (C) (R) FAVOSITIDS, <i>Tentaculites</i>
20'	SHALE: BLK, FISS. THIN, W/ FEW V THIN BEDS FOSS HASH - 6" THK	(R) <i>Teat</i> & <i>Styliolina</i> <i>Monograptus</i> CRIN/BRACHS
37'	LIMESTONE: MD GY, W/ INTBD DK GY ARG LST STRGS PRD. WACKEST TO PACKST OF BRACH HASH. FEW CNT STRGS.	(R) CRIN & FAVOSITIDS HORN CORALS, BRACHS (R) MASS STROMS
15'	SHALE: BLK, SLI-CALC	(R-C) TENTACULITIDS
78'	LIMESTONE: MD-LTGY, RESISTANT 1'-2' BDS, W/ SILICIFIED FOSSILS COMMON IN PACKST-WACKEST FOSS HASH MTX (BRACHS & CRIN), INTBD W/ THN (1"-3") LIMEY DOLO MUDST - RECESS; UPPER PORTION HAS RED WEATH RECESS ZONES ARG LST W/ CORALS. SOME TAB STROMS 6"-12" DIA	(C-A) MASS & TAB STROMS CORALS (SILIC) (R-C) CRINOIDS & BRACHS
15'	LST: LTGY, WELL BEDDED, PACKST W/ CRIN FRAGS - DOLO: MD GY, MUDST	CRINOIDS
21'	LST: M-LTGY, WELL BOD, CRIN HASH - ALOT, GRADED, LOWER HALF - CORALS IN CRIN-BRACH HASH, BD 1'-3', IRREG BASE, INTRACLASTS 2"-5", SOME DOLO MUDST CLASTS	(R-C) CORALS, (R) CRINOID FAVOSITIDS, BRACHS, (R) STROMS
10'	SHALE: M-DK GY, 1"-2" BEDS, RECESS, SLI-CALC	CRIN, <i>Tentaculites</i>
20'	LST, BRECCIA: RCK & FOSS FRAGS, CLASTS 1'-6" DIA IN BLK MUD MTX, COMP OF CRIN. GRNST, CORAL-CRIN-BRACH WACKEST, CLASTS SMALLER AT TOP	CRIN (STAR-BRANED), (R) BRACH CORALS, (R) STROMS
16'	LST: LTGY, CORAL RICH IN WACKEST MTX, FEW INTRACLASTS OF CORALS IN DOLO MTX.	(C-A) FAVOSITIDS CRIN, CRIN, BRACHS
14'	LST: CGL-BRECCIA, 12"-24" BDS, COMP 50% OR MORE FOSS & FOSS FRAGS - BRACHS, STROMS, CRIN, HORN CORALS & INTRACLASTS 5"-8" DIA.	FAVOSITIDS, CERIODS, BALMENELLIDS, STROPHOMENIDS, TAB STROM, STRAIGHT CEPHALOPOD, CRIN.

BASE OF SECTION AT CREEK BOTTOM
PROBABLY FAULTED

3 of 3

STRATIGRAPHIC SECTION: 2803, 2804, 2808, 2812

BATTLESHIP CREEK and TRIBUTARY Y. T.

LOCATION: 65° 27' 30" 133° 35' - 36' (Prongs Creek)

65° 24' 30" 133° 36' (Cranswick)

65° 25' 30" - 26' 133° 37' 30" (Gossage)

On N.W. side of Battleship Creek and small tributary to south.

DATE:

July 3, 4, 6, 7, 1968

AGE & INTERVALS:

DEVONIAN - L. and M.

Hume = 86' (Inc)

"Battleship" = 1470'

Prongs Creek = 408'

Cranswick = 438'

Gossage = 973' (Inc)

Total = 3375'

MEASUREMENT:

Up section - 5' Jacob Staff

GEOLOGIST'S:

W. A. Hogg

H. E. Cook





W. Wilson

P. W. Choquette

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
HUME ? ? HUME ?	3300		TOP OF SECTION AT 3365'; CLIFF-FORMING UNIT AT TOP OF HILL MAYBE HUME FM. 86' LIMESTONE, V DK GY, BLOCKY, IRREG BEDDED, DISTINCTIVE, 3"-12", WRS MD GY TO BUFF. RICH FAUNA IN LOWER 16' - DOMINANTLY CORALS & BRACHS. MTX IS WACKESTONE	COENITES SP. HELIOPHYLLUM SP. SPINATRYPA(?) SP. ATRYPA ? SP. CYRTOSPIRIFERUS SP. FAVOSITES - GRIN, GASTROPODS
	3200		141' COVERED - FLOAT OF BRN SH & BLOCKY LST	
	3100		290' SHALE; BRN, CALO, SOFT, INDISTINCTLY BEDDED WRS GYSH - YELSH BRN, PLATY TO FISSILE	BARREN
	2800		419' SHALE; SLT TO MODERATELY CALOAREOUS MD GY, SOFT, SLOPE FORMER, BEDS 1"-3" THK, MOSTLY INDISTINCT; WEATHERS GY, PLATY TO FISSILE, SOME PARTLY COVERED INTERVALS CONTACT W/ ABOVE UNIT BASED ON ESTIMATED COLOUR CHANGE	NONE OBSERVED
IP "	2700			
	2600			
	2500			

10f

"BATTLESHIP"

PRONGS CREEK

2900			
2800	419' SHALE; SLI TO MODERATELY CALCAREOUS MD GY, SOFT, SLOPE FORMER, BEDS 1/2"-3" THK, MOSTLY INDISTINCT; WEATHERS GY, PLATY TO FISSILE, SOME PARTLY COVERED INTERVALS CONTACT W/ ABOVE UNIT BASED ON ESTIMATED COLOUR CHANGE	NONE OBSERVED	
2700			
2600			
2500			
2400	69' SHALE; V CALC, MD-DK GY, EVEN THN BEDDED 1/2"-3/4", BRITTLE, WEATHERS TO THIN FLAGS, FORMS LOW CLIFFS	ABUNDANT TENTACULITES SP	
	22' SHALE; SLI CALCAR, DK GY, WRS GY, RECESSIVE		
	4' SHALE; V CALCAR, MD GY, EVEN THN LAM, WEATHERS GYSH-YEL & PLATY	V ABUNDANT TENTACULITES SP	
	38' SHALE; MOD CALC, V DK GY, SLOPE FORMER		
2300	285' SHALE; MD GY, MOD CALC, UPPER PART, NON-CALC LOWER PART, THN FISSILE, WEATHERS DULL GY TO GYSH-YEL SLOPE FORMER - MOSTLY COVERED	(R-O) ORINIDS (1-H) (R) BRACHS & TENTACULITES SP	
2200		RARE TENTACULITES SP	
2100		BARREN	
2000	7' SHALE; MOD CALC, SOFT, WRS DULL GY TO GYSH-ORG & ELLIPSOIDAL MASSES 38' COVERED - DRAB GY SHALE FLOAT	BARREN	
	5' LIMESTONE; SILIO(?), DOLO (?), DK GY, THN LAM, WRS TO BLOOMING - 3' & BRITTLE FLAGS & DISTING GY-YELSH-ORG & OLIVE DRAB	RARE BRACHS & TENTACULITES SP	
1900	138' LIMESTONE; ARG, DK GY, LAM, MUDST, WRS TO FLAGGY TALUS OF DULL YELSH-GY	NONE OBSERVED	
1800	20' LMST; DK GY, V F GR, VAGUE LAM, LOW CLIFF, WRS LT YELSH-GY	RARE ATRYPIDS (?)	
1700	290' SHALE; V DK GY, V CALCAR, FISSILE, RECESSIVE. SPORADIC V DK GY ARG LST LEDGES 6"-2' W/ PYR NODULES. TENTACULITES V ABDT LOWER 150'	(R-H) 1-5 MM STYLIOLOINA SP	
1600		VERY ABUND. TENTACULITES SP	
		RARE ATRYPIDS (?)	
1500	12' LST; DK GY, RESIST 4' BDD, MUDST-WACKST, WRS DK GYSH-YEL, RIM OF WATERFALL 18' INTBDD; SH, V CALC, BLK, FISS; LST ARG, 2'-1' FALLS IN BATTLESHIP CR. 6' LST; DK GY, MUDST, UNDUL BDD, RESIST LEDGE GYSH-YEL, LOWER LIP WATERFALL 29' COVERED	NONE OBSERVED NONE OBSERVED STYLIOLOINA(?) SP NONE OBSERVED	

2 of

?

PRONGS CREEK

CRANSWICK

GOSSAGE

1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500



20'	LMST: DK GY, V F GR, VAGUE LAM, LOW CLIFF, WRS LT YELSH-GY	RARE ATRYPOIDS(?)
290'	SHALE: V DK GY, V OALCAR, FISSILE, RECESSIVE. SPORADIC V DK GY ARG LST LEDGES 6"-2' w/ PYR NODULES. TENTACULITES V ABOV LOWER 150'	(R-A) 1-5 MM STYLIDOLINA SP VERY ABUND. TENTACULITES SP RARE ATRYPOIDS (?)
12'	LST: DK GY, REGIST 4' BDS, MUDST-WACKST, WRS DK GYSH-YEL, RIM OF WATERFALL	NONE OBSERVED
18'	INTBDD: SH, V OALO, BLK, FISS; LST ARG, 2'-4'; BATTLESHIP CK.	NONE OBSERVED
6'	LST: DK GY, MUDST, UNBDD, REGIST LEDGE GYSH-YEL, LOWER LIP WATERFALL	NONE OBSERVED
29'	COVERED	
17'	LST: ARG(?), V DK GY, EVEN THIN LAM (1/4") LM MUDST, PLATY WEATH	NONE OBSERVED
36'	LST: VARG, V DK GY, V THN BDD, MUDST; WRS 1/8"-2" PLATES YEL-GY-BRN	NONE OBSERVED
128'	LIMESTONE & SHALE INTERBEDDED; THN EVEN BEDS LIMESTONE, PARTLY ARG, V DK GY, FLAGGY TO BLOCKY 2"-12" SHALE: BLK, OALO, FISSILE - 1/2"-18"	TENTACULITES SP RARE GASTRO. RARE TENTACULITES SP
113'	LIMESTONE: DK GY-BRN, LIME MUDST & WACKSTONE, WAVY, NODULAR & RUBBLY WEATHERING. MORE REGIST. THAN UNIT ABOVE. SOME FOSS. SILICIFIED. CHERT NODULES, LENSES & BEDS, THN-MD BD.	RARE CRINOIDS 2-HOLE 1-HOLE & CROSS- SHAPED (R) ATRYPOIDS(?) (R) GASTRO. (R-C) MASS STROMS. (R) FAVOSITIDS (R) ATRYPOIDS (R-C) CRIN. 1,2,+ (R) MASS STROMS (R) HORN CORALS
48'	LIMESTONE: V DK GY-BLK, MUDST W/SILIC. MASS STROMS & CORALS INDISTINCT BDD - 2' - WRS MASS, REGIST, LT GY	CIATRYPOIDS, MASS BULBOUS STROMS, AMPH. BRACHS CORALS
28'	LIMESTONE: DK BRN-BLK, WRS DK GY, LIME MUDST, BED THN (6"-11") MOD. REGIST. V SLI DOLO.	ABNT AMPHIPORA SP (R) TINY BRACHS AMPHIPORA SP
21'	LIMESTONE: DK BRN-BLK, MUDST W/SOME ALGAL MAT & AMPHIPORA - THN (6") WELL BD, SLI REC. SOME POROSITY IN LEACHED LAM. ZONE. RARE PELLETS	
20'	LMST: MD BRN-BLK, WRS DK GY, LIME MUDST @ BASE GRADES UP TO AMPH. WACKST. - FEW PELLETS NEAR TOP, WELL BD - 6"-11"	
15'	GAP BETWEEN TOP OF 2803 & BASE OF 2804 - ESTIMATED	
29'	LIMESTONE: MD BRN-GY TO BLK; WRS DK GY; INT BDD LIME MUDST. & AMPHIPORA WKST. SOME LEACHED FOSS = MOLDIC POROSITY	(R-A) AMPHIPORA SP (R) BRANCHING CORALS
38'	LIMEST & DOLO: MD-DK GY, LAM MUDST, AMPHIPORA BDS & STROM BDS, 6"-11", REGIST, SOME FOSS. REPL BY DOL IN BLK MUDST MTX	(C) AMPHIPORA, STROMS (R) BRACHS
80'	DOLOMITE: LT-MD GY, WRS DK GY-BUFF, ARG, SILTY, OALO, LAMINATED SP OALO PATCHES, VUG & MOLD FILLINGS	RARE ostracods UPPER PORTION
85'	DOLOMITE: LT-MD GY, WRS LT TO DK GY, SILTY, LAM, MUDST, RARE PELLET BEDS NEAR BASE, FOSS. BIRDSEYE, RECESS BDS 2" - 11" THK, TOP 25' SLI LIME	NONE OBSERVED
220'	DOLO & SHALE: DOL - LT-DK GY TO BRN, WRS GYSH-YEL-ORG (UPPER UNIT OF MARKER HORIZON) V F XLN MUDST W/SOME LAM, SL ARG, SL OALO, EVENLY INTBDD W/SH, DOLO, DK GY, SL OALO, BDS 6"-2'. UPPER PART MORE SHALY & THKER	NONE OBSERVED
	WEATHERS BUFF-PALE YEL-BRN - MARKER HORIZON	
75'	DOLOMITE: LT-MD BRN TO LT GY, WRS BRN-GY OR YEL, WELL BEDDED - 2"-11", INTBDD ALGAL MAT BIRDSEYE & ALGAL LAM MUD, SOME MUDST & ARG DOL MUD W/ VAGUE LAM, SOME SILT. BASE OF DISTINCTIVE PALE YEL-ORG WEATH. ZONE IN GOSSAGE	
10'	DOL: LT BRN, WRS LT GY, V F XLN, INTBDD ALGAL MAT & ALGAL LAM MUD, 2"-6' BED	
	APPROX 180' OUTCUT BY FAULTING;	
75'	DOLOMITE: LT-DK GY, TO BRN GY, WRS DK GY, INTBDD MUDST, ALGAL MAT,	RARE BRACHS

3 of

CRANSWICK

GOSSAGE

1300

1200

1100

1000

900

800

700

600

500

300

200

100

0

113' LIMESTONE; DK GY-BRN, LIME MUDST & WACKSTONE, WAVY, NODULAR & RUBBLY WEATHERING. MORE RESIST. THAN UNIT ABOVE. SOME FOSS. SILICIFIED. CHERT NODULES, LENSES & BEDS, THN-MD BD.

RARE
TENTACULITES SP.

48' LIMESTONE; V DK GY-BLK, MUDST W/SILIC. MASS STROMS & CORALS INDISTINCT BDS - 2' - WRS MASS, RESIST, LT GY

RARE
CRINOIDS 2-HOLE
1-HOLE & CROSS-
SHAPED
(R) ATRYPIDS(?)
(R) GASTROP.
(R-O) MASS STROMS.
(R) FAVOSITIDS
(R) ATRYPIDS

28' LIMESTONE; DK BRN-BLK, WRS DK GY, LIME MUDST, BED THN (6"-11") MOD. RESIST. V SLI DOLO.

(R-O) CRIN. 1,2,+
(R) MASS STROMS
(R) HORN CORALS

21' LIMESTONE; DK BRN-BLK, MUDST W/SOME ALGAL MAT & AMPHIPORA - THN (6") WELL BD, SLI REC. SOME POROSITY IN LEACHED LAM. ZONE. RARE PELLETS

(R) ATRYPIDS, MASSE BULBOUS
STROMS, AMPH.
BRACHS CORALS

20' LMST; MD BRN-BLK, WRS DK GY, LIME MUDST @ BASE GRADES UP TO AMPH. WACKST. - FEW PELLETS NEAR TOP, WELL BD - 6"-11"

ABNT AMPHIPORA SP.
(R) TINY BRACHS
AMPHIPORA SP.

15' GAP BETWEEN TOP OF 2803 & BASE OF 2804 - ESTIMATED

29' LIMESTONE; MD BRN-GY TO BLK; WRS DK GY; INT BDS LIME MUDST. & AMPHIPORA WKST. SOME LEACHED FOSS = MOLDIC POROSITY

(R) TINY BRACHS
AMPHIPORA SP.

(R-A) AMPHIPORA SP.
(R) BRANCHING CORALS

38' LIMEST & DOLO; MD-DK GY, LAM MUDST, AMPHIPORA BDS & STROM BDS, 6"-11", RESIST, SOME FOSS. REPL BY DOL IN BLK MUDST MTX

(O) AMPHIPORA, STROMS
BRANCHING CORALS
(R) BRACH.

80' DOLOMITE; LT-MD GY, WRS DK GY-BUFF, ARG, SILTY, CALC, LAMINATED SP CALC PATCHES, VUG & MOLD FILLINGS

RARE OSTRACODES
UPPER PORTION

85' DOLOMITE; LT-MD GY, WRS LT TO DK GY, SILTY, LAM, MUDST, RARE PELLET BEDS NEAR BASE, FOSS. BIRDSEYE, RECESS BDS 2" - 1' THK, TOP 25' SLI LIMY

NONE
OBSERVED

220' DOLO & SHALE; DOL - LT-DK GY TO BRN, WRS GYSH-YEL-ORG (UPPER UNIT OF MARKER HORIZON) V F XLN MUDST W/SOME LAM, SL ARG, SL CALC, EVENLY INTBDD W/SH, DOLO, DK GY, SL CALC, BDS 6"-21". UPPER PART MORE SHALY & THKER

NONE
OBSERVED

WEATHERS
BUFF-PALE YEL-BRN -
MARKER HORIZON

75' DOLOMITE; LT-MD BRN TO LT GY, WRS BRN-GY OR YEL, WELL BEDDED - 2"-11", INTBD ALGAL MAT BIRDSEYE & ALGAL LAM MUD, SOME MUDST & ARG DOL MUD W/ VAGUE LAM. SOME SILT. BASE OF DISTINCTIVE PALE YEL-ORG WEATH. ZONE IN GOSSAGE

10' DOL: LT BRN, WRS LT GY, V F XLN, INTBD ALGAL MAT & ALGAL LAM MUD, 2"-6' BED

APPROX 180' OUTCUT BY FAULTING;

78' DOLOMITE; LT-DK GY, TO BRN GY, WRS DK GY, INTBDD MUDST, ALGAL MAT, LAM MUDST; RARE BRECCIA; BDS 6"-21"

RARE BRACHS

70' DOLOMITE; MD-DK BRN, WRS BRN-GY, INTBD ALGAL MAT, LAM MUDST, INTRA-FM CGL, BEDS 11"-21" MASS, RESIST. GOOD BIRDSEYE

RARE
OSTRACODES -
MOELLERITIA ? SP.

50' DOLO; SLI TO MD SLTY, LT BRN TO BLK, WRS BRN-GY TO DK GY, INTBDD ALGAL MAT BIRDSEYE & MUDST, BDS 11"-21" THK, MOD. RESIST.

NONE OBSERVED

35' DOLO; LT-MD BRN, WRS LT GY, V F XLN, INTBD MUDST, MICRO-BIRDSEYE, MUDST; RARE PELLETS, DOL BRECC. RECESS, THN BD. 2"-6", UPPER UNIT SLI SLTY.

26' DOLO; LT-MD BRN; WRS LT GY BRN, F XLN, MUD & ALGAL MAT W/BIRDSEYE. BASAL 5' - SLTY MUD

53' DOLO; GY-BRN TO RDGH-BRN, WRS YEL-BRNL V F-F XLN, SLTY, RESIST BDS 6"-11", RARE LAM UPPER UNIT - COMMON LOWER

15' DOLO; LT BRN-GY, WRS LT GY-TAN, V F XLN MUDST W/LAM INTBDS ALGAL MAT, BIRDSEYE FILLED W/SP CA, BDS 2"-6", SL SLTY

BASE NOT EXPOSED

4 of 4

STRATIGRAPHIC SECTION: 2810 - BIOHERM CREEK, Y.T.

LOCATION: 65° 29' 133° 23'

Small creek flowing north off Canyon Range
just east of Snake River

DATE:

July 12, 1968

MEASUREMENT:

Up section 5' Jacob Staff

AGE & INTERVALS:

DEVONIAN:

Prongs Creek = 406' (Inc)

Cranswick = 340'

Total = 746'

GEOLOGISTS:

H. E. Cook

W. A. Hogg

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
PRONGS CREEK ?	700		42' + LIMESTONE, V ARG TO LIMY SHALE, V DK GY, THN BDD. WRG BUFF, SEQUENCE ABOVE LIMIER THAN TO WEST	
			78' LIMESTONE, GY, MASS, WACKSTONE	ABUNDANT CRINOIDS & BRACHS LARGE FAVOSITIDS & TOP
	600		42' LIMESTONE: DK GY, MUDST-WACKST. MED. BEDDED	ABUND. BRACHS & CRINOIDS(L-HOLE)
	500		144' LIMESTONE, MOSTLY COVERED, MD-DK GY, WRG LT GY, MOD. THK, IRREGULAR BEDDING.	VERY ABUNDANT CRINOIDS, ATRYPID BRACHS; CORALS THRU OUT
	400		100' COVERED W/ FEW RESIST LST LEDGES AS ABOVE	QAST. & STRAIGHT CEPHALOPODS
CRANSWICK	300		112' LIMESTONE, LT GY, MASS, BIOHERMAL	ABUNDANT; MAGS STROMS CORALS CRINOIDS BRACHS
	200		30' LST: GY, SIMILAR TO BELOW - PARTLY COVERED	
			23' LST: MD GY, IRREG BDS - 1'-3', MUDST - WACKST	COMMON 2-HOLE CRINOIDS ADD. CORALS (R) AMPH. STROMS
			17' LST: MD GY, 6"-12" BDD, WACKST. BULBOUS STROMS @ BASE	
			30' LST: MD GY, LIME MUDST, THN BDD, 3"-6", BIRDSEYE W/RARE AMPHIPORA IN THN STRGR IN MIDDLE, LAMINATED	(R) AMPHIPORA SP.
	100		25' BRECCIA, LST: QRGE WH GA XTLS - BDD PLANE FAULT (?) REMAINDER SIMILAR TO ABOVE	
			23' LST: MD BRN - GY, RESIST MUDSTONE, 6"-2', WAVY LAM.	(R) CRINOIDS & AMPHIPORA SP.
			35' COVERED WITH TALUS - BIRDSEYE DOLO AT BASE	
	0		20' LST: LT BRN-GY, WRG LT GY-TAN, LIME MUDST, WAVY LAMINATIONS, SL DOLO LOWER UNIT THN LAM - 2"-6"	NONE OBSERVED
			25' MOSTLY COVERED - DK GY MUDST - PROB. NEAR CRANSWICK-GOSSAGE CONTACT	
			DOLOMITE - GOSSAGE	

STRATIGRAPHIC SECTION: 2816, 2817 - TERMINAL CREEK, Y.T.

LOCATION: 65°30'30" 133°17'

Along small north flowing creek off front of
Canyon Range east of Snake River

DATE:

June 29, 1968

AGE & INTERVALS:

DEVONIAN:

Hare Indian ? = 104' (Inc)

Hume ? = 432'

Prongs Creek = 689' (Inc)

Total = 1225'

GEOLOGISTS:

W. A. Hogg

H. E. Cook

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
HARE INDIAN ?	1200		104' LIMESTONE; DK GY, MUDST, THN BDD, WELL LAM. MOSTLY BARREN, LAM & EVEN BEDDING IN CONTRAST TO UNDERLYING SECTION. SOME PELLETS	RARE CORALS CRINOIDS (C)
	1100		35' LST; MD-LT BRN-GY, THN-THK BED, WACKEST-MUD & FOSS HASH MTX W/V LGE CORAL HDS- GROWTH POSITION.	(A) BRACHS (C) AMPHIPODA SP. (A) GASTROPODS
			50' COVERED - PROB SIMILAR TO UNDERLYING	
	1000		30' LG; MD-LT BRN-GY & BUFF MOTTLED, THN IRREG BD.	(A) CORALS, DENDROID BRACHS
			35' COVERED: ABUNDANT FOSSILS IN FLOAT	ADIGONOPHYLLUM RECTUM, BELLINGASTREA SP, COENITES SP, THAMNOPODA SP, BRACHS, CRIN, HEXAGONARIA SP
			25' UPPER THN BDD; LST; DK BY-BRN TO LT GY-BRN, MUDST & WACKEST, THN IRREG BDD. LOWER THK: MD BRN-GY, FOSS COMMON IN BIOCLASTIC MTX.	AMASS STROMS, TETRA CORALS & BRACHS, (R) CRIN.
	900		55' POORLY EXPOSED - RECESSIVE LST; ARG, MD BRN-GY, WRS YEL-ORG, MUDSTONE, 1/4-1/2", PLATY	(R-C) CRINOIDS
			17' LST, MD BRN-GY, WRS GY-BUFF, W/YEL-ORG MOTTLING, IRREG BD.	AITAB E. BULBOUS STROMS, BRACHS, CORALS, CRINOIDS
	800		83' COVERED - FLOAT - SHALY LST, BUFF WEATH.	BRACHS HEXAGONARIA SP.
			25' LST; DK BRN, WRS BUFF-GY, THN-MD BED, MTX PRED FOSS CALCAR. BCM DK & LESS FOSS UPWARDS, CRINOID WACKEST @ TOP	(R-C) CRIN, BRACHS CORALS
			17' COVERED	
	700		55' LIMESTONE; DK CHOC BRN, WRS MD BRN-GY TO BUFF W/YEL PATCHES THN-THK BDD (6"-5") ABUND. FOSS- DECREASE UPWARDS, IN MTX. OF ABO. FOSS HASH - WACKEST TO PACKST.	(C) ATRYPIDS, SPINATRYPIDS, COENITES SP E. LIMITARIS, CRINOIDS (R)
	600		669' COVERED - TAPED INTERVAL THICKNESS SEEMS TOO THIN - A POSSIBILITY OF FAULTING	
EEK ?	500		@ 460' FROM BASE: SMALL OUTCROP ALONG STREAM; LST, ARG, BLK, MUDST W/ FOSS STYLIOLINA	
	400			

104

HARE INDIAN

HUME ?

PRONGS CREEK ?

1200
1100
1000
900
800
700
600
500
400
300
200
100
0

104' LIMESTONE; DK CY, MUDST, THN BDD, WELL LAM.
MOSTLY BARREN, LAM & EVEN BEDDING
IN CONTRAST TO UNDERLYING SECTION.
SOME PELLETS

RARE CORALS
CRINOIDS (C)

35' LST; MD-LT BRN-CY, THN-THK BED, WACKEST-MUD & FOSS HASH MTX W/V LGE CORAL HDS-
GROWTH POSITION.

(A) BRACHS
(C) AMPHIPORA SP.
(A) GASTROPODS

50' COVERED - PROB SIMILAR TO UNDERLYING

30' LG; MD-LT BRN-CY & BUFF MOTTLED, THN IRREG BD.

(A) CORALS, DENDROID
BRACHS

35' COVERED: ABUNDANT FOSSILS IN FLOAT

ADIGONOPHYLLUM RECTUM,
BELLINGASTREA SP, COENITES
SP, THAMNOPORA SP, BRACHS,
CRIN, HEXAGONARIA SP

25' UPPER THN BDD; LST; DK BY-BRN TO LT CY-BRN, MUDST & WACKEST, THN IRREG BDD.
LOWER THK; MD BRN-CY, FOSS COMMON IN BIOCLASTIC MTX.

AIMASS STROMS, TETRA
CORALS & BRACHS, (R) CRIN.

55' POORLY EXPOSED - RECESSIVE
LST; ARC, MD BRN-CY, WRS YEL-ORG, MUDSTONE, $\frac{1}{4}$ - $\frac{1}{2}$ ", PLATY

(R-C) CRINOIDS

17' LST, MD BRN-CY, WRS CY-BUFF, W/YEL-ORG MOTTLING, IRREG BD.

(A) TAB & BULBOUS STROMS,
BRACHS, CORALS, CRINOIDS

83' COVERED - FLOAT - SHALY LST, BUFF WEATH.

BRACHS
HEXAGONARIA SP.

28' LST; DK BRN, WRS BUFF-CY, THN-MD BED, MTX PRED FOSS CALCAR.
BCM DK & LESS FOSS UPWARDS. CRINOID WACKEST @ TOP

(R-C) CRIN, BRACHS
CORALS

17' COVERED

55' LIMESTONE; DK CHOC BRN, WRS MD BRN-CY TO BUFF W/YEL PATCHES
THN-THK BDD (6"-5") ABUND. FOSS- DECREASE UPWARDS,
IN MTX OF ABO. FOSS HASH - WACKEST TO PACKST.

(C) ATRYPIDS,
SPINATRYPIDS, COENITES SP
& LIMITARIS, CRINOIDS (R)

669' COVERED - TAPED INTERVAL
THICKNESS SEEMS TOO THIN - A POSSIBILITY OF FAULTING

@ 466' FROM BASE: SMALL OUTCROP ALONG STREAM; LST, ARC, BLK, MUDST
W/ FOSS STYLIOLINA

LST; DK CY, WRS LT CY, RESIST CLIFF, BLK CHT NODS.

2 of 2

STRATIGRAPHIC SECTION: 2820 PHYLLIS CREEK, Y.T.

LOCATION: 65° 30' 30" 133° 11'

Small north flowing creek along front of Canyon Range

DATE:

July 14, 1968

MEASUREMENT:

Up section with 5' Jacob Staff and 50' tape

AGE & INTERVALS:

DEVONIAN:

Prongs Creek = 1098' (Inc)

Cranswick = 280'

Total = 1378'

GEOLOGISTS:

H.E. Cook
W.J. Meyers

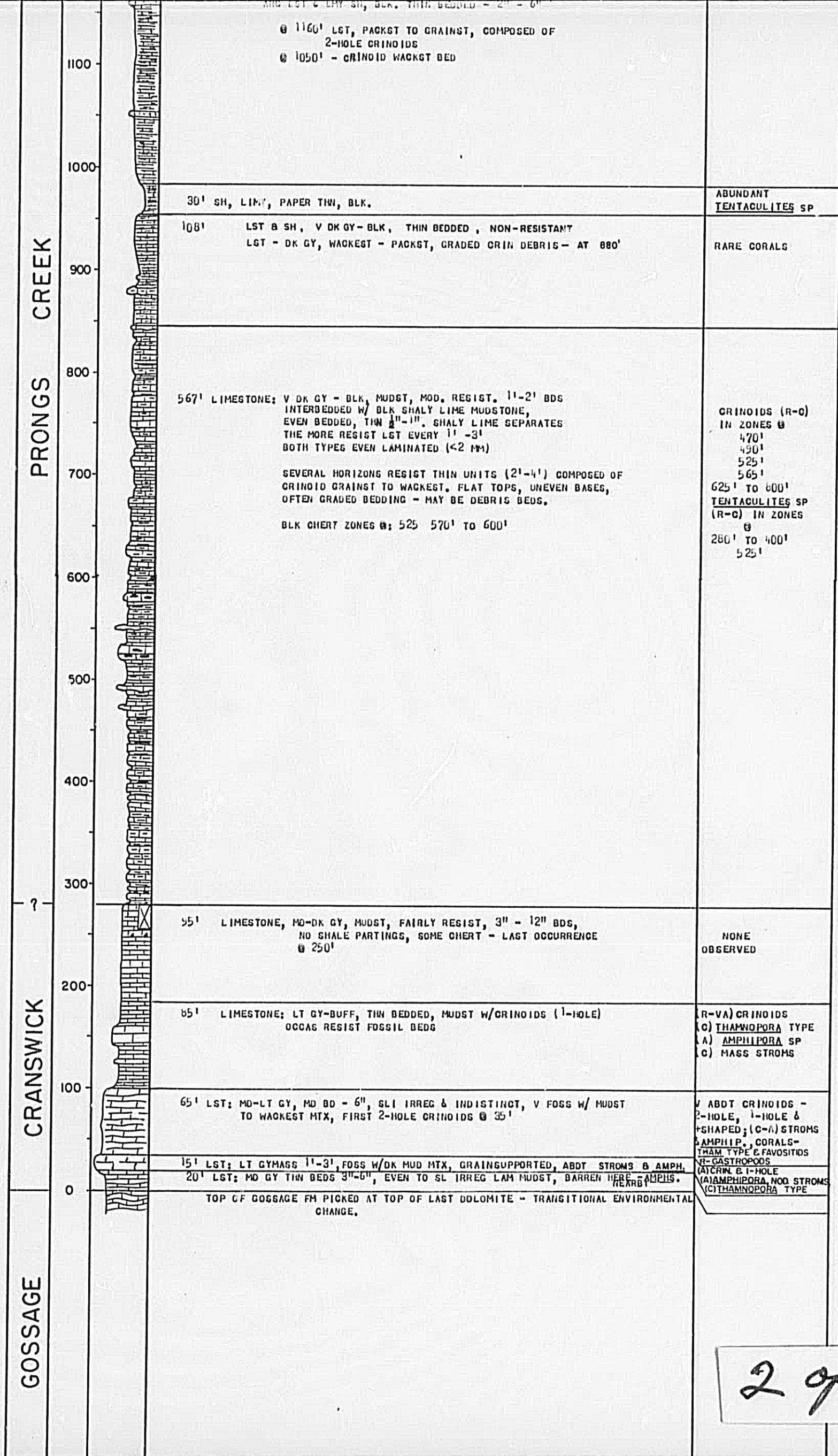
MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
PRONGS CREEK	1378		TOP OF PRONGS CREEK NOT EXPOSED	
	1300		ARG LST & LMY SH, BLK. THIN BEDDED - 2" - 6"	
	1200		@ 1160' LST, PACKST TO GRAINST, COMPOSED OF 2-HOLE CRINOIDS	
	1100		@ 1050' - CRINOID WACKST BED	
	1000		30' SH, LIMY, PAPER THN, BLK.	ABUNDANT TENTACULITES SP
	900		108' LST & SH, V DK GY - BLK, THIN BEDDED, NON-RESISTANT LST - DK GY, WACKST - PACKST, GRADED CRIN DEBRIS - AT 880'	RARE CORALS
	800		567' LIMESTONE: V DK GY - BLK, MUDST, MOD. RESIST. 1'-2' BDS INTERBEDDED W/ BLK SHALY LIME MUDSTONE, EVEN BEDDED, THIN 1/2"-1". SHALY LIME SEPARATES THE MORE RESIST LST EVERY 1'-3' BOTH TYPES EVEN LAMINATED (<2 M)	CRINOIDS (R-C) IN ZONES @ 470' 490' 525' 565'
	700		SEVERAL HORIZONS RESIST THIN UNITS (2'-4') COMPOSED OF CRINOID GRAINST TO WACKST. FLAT TOPS, UNEVEN BASES, OFTEN GRADED BEDDING - MAY BE DEBRIS BEDS.	625' TO 600' TENTACULITES SP (R-C) IN ZONES @
	600		BLK CHERT ZONES @: 525 570' TO 600'	280' TO 400' 525'
	500			

10/



STRATIGRAPHIC SECTION: 2809, 2814, 2815, 2818 (composite)
CANYON RANGE, Y.T.

LOCATION:

Basal portion: 65° 28' 15" 132° 57' - 58'
Upper : 65° 29' 132° 59' to 65° 30' 133° 01'
in mountains between Snake and Cranswick rivers.

DATE:

July 7, 9, 14, 1968

MEASUREMENT:

Up section 5' Jacob Staff
with taped intervals.

AGE & INTERVALS:

DEVONIAN:

Gossage = 1362' (Inc)

SIL - ORD :

Ronning = 1938'

Total = 3300'

GEOLOGISTS:

W. A. Hogg
H. E. Cook
P. N. Mc Daniel
W. Wilson
P. W. Choquette

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TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
	3300-		SECTION ENDS AT CONICAL PEAK ON HIGHEST PART OF RIDGE NEAR FRONT OF CANYON RANGE	
	3200-		381' DOLOMITE, W/ Limestone: MD-DK GY-BRN WRS GY TO BUFF, LAMIN MUDST & OCCAS ALGAL MAT BEDS W/ LEACHED BIRDSEYE & INTXLN POROSITY. RARE SILT & SP GA THRUOUT, MOD RESIST BEDS 1"-2' THK.	
	3100-			
	3000-			
	2900-		DOL.-GY BRN, CALO, LAM MUDST, RARE PELLETS & MICRO-BIRDSEYE	
	2800-		296' DOLO. MINOR LST, YEL-BUFF MARKER OF GOSSAGE, PRED. GY-BRN, WRS BUFF, ORG. OR YEL. MUDST, LAM, SOME BIRDSEYE & MICRO-BIRDSEYE, STROMATAOTIS, MOD. RESIST BEDS - 2"-2' THK. RARE PELLETS, RARE SILT	RARE OSTRAODUS
	2700-			
	2600-		30' DOLO: LT GY-BRN, WRS LT GY W/ORG PATCHES, MUDST, BLEBS & STRGRS CRSE ORG WEAT DOLO. BEDS 1"-2', MOD RESIST. SL SLTY.	
			62' DOLO: LT-DK GY, WRS LT-DK GY & ORG MOTTLED, LAM MUDST, SOME LST UPPER HALF, BDS MOD RESIST 2"-1' THK	
	2500-		45' LST: LT GY-BRN, WRS LT GY, MUDST, F-CRSE LAMINAE NETWORK OF FINE SP CALO VEINS & ALONG LAMIN. SOME OF SP GA IS DOLOMIT. RECESS, 1"-6"	
			61' DOLO: LT-DK GY, WRS LT GY, MOTTLED LT GY & LT ORG-GY, MUDST. SOME LAM BDS NEAR BASE - BCM THW & SL CALO NEAR TOP. MOD RECESS, 6" - 1' THK.	

AGE

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GOS SAGE

2600	30' DOLO: LT GY-BRN, WRS LT GY W/ORG PATCHES, MUDST, BLEDS & STRGRS CRSE ORG WEAT DOLO. BEDS 1'-2', MOD RESIST. SL SLTY.	
	62' DOLO: LT-DK GY, WRS LT-DK GY & ORG MOTTLED, LAM MUDST, SOME LST UPPER HALF, PDS MOD RESIST 2"-1" THK	
2500	45' LST: LT GY-BRN, WRS LT GY, MUDST, F-ORSE LAMINAE NETWORK OF FINE SP CALC VEINS & ALONG LAMIN. SOME OF SP CA IS DOLOMIT. RECESS, 1"-6"	
	61' DOLO: LT-DK GY, WRS LT GY, MOTTLED LT GY & LT ORG-GY, MUDST. SOME LAM BDC NEAR BASE - BCM TIW & SL CALC NEAR TOP. MOD RECESS, 6" - 1' THK.	
2400	202' COVERED - GRASSY SLOPE	
2300		
2200	5' DOL: MD GY, WRS LT GY, V F XLN MUDST W/CRSE DOL PATCHES - WRS ORG & WH, MAYBE STROMATOLITES, MOD RESIST. 1'-2' THK	
	25' DOL: MD-DK BRN-GY, WRS BUFF-GY, INTBD MASS & LAM, W/TIN ZONE TR ϕ , AMPHIPORA PACKSTONE, RARE BIRDSEYE, THN-THK BDC, RESIST TO RECESS	(C) AMPHIPORA SP
	30' COVERED - TALUS OF VARIOUS TYPES DOLO	
	32' DOLO: DK-LT GY ALT BANDS, SOME W/SILIC FOSS - OTHERS F XLN SUCROSE NON-FOSS. POOR INTXLN POROSITY	(R) BRACHS, CRIN. FOSS TAB. STROM. (C) HELIOPHYLLUM(?) SP GAST.
2100	28' COVERED - DOLO. FLOAT	
	40' DOLO: DK-BRN-GY, WRS DK GY, IRREG V. DISTINCT THN LAM. SILIC. TURRITELLIDS (?) W/ PREFERRED ORIENT	(C) GASTROPODS (R) BRACHS, CRIN. FOSS. COENITES SP
	15' TALUS COVERED	
2000	55' DOLO: LT GY, WRS LT YELGH-GY W/OCCAS GY MOTTLING POORLY BEDD. F XLN SUCROSE. WRS TO RHOMBOLD BLOCKS & IRREG PLATES	BARREN
	55' COVERED - FLOAT GY-BUFF WEATH DOLO	
1900	70' DOLO: DK GY, WRS DULL GY, POORLY BDD TO WELL LAMINATED SOME CA FILLED FOSS MOLDS POORLY EXPOSED	RARE GASTROP. & BRACH
	20' DOLO: LT GY, WRS DRAB TO LT GY, SUCROSE, IRREG & TIN LAM, TIN ZONE EDGEWISE COL. POOR VUGGY POROSITY	(R) BRACHS & SMALL COILED CEPHALOPOD
1800	75' DOLO: MOTTLED LT & MD GY, WELL BDD 3"-12" W/TIN FOSS BD	ABDT; CORAL & STROM
	10' DOL: MD GY, WACKEST-PACKST, W/ABDT FOSS, MOST NOT IN GROWTH POSITION	(A) MOD & TAB STROMS CUP(?) CORALS
1700	115' DOL: MD-LT GY, TIN IRREG LAM, FAIR INTXLN POROSITY	
1600	70' DOLO: MD GY, WACKEST, MD-MASS BDD, W/ABUNDANT FOSS.	(R-D) BRACHS (A) CRINOID (A-O) CUP & FINGER CORALS (C) STROMS
1500	71' DOLO: UPPER 20' = BRECCIA, FLAT COBBLE, CLASTS TO 12" DIA, COMP. OF BIRDSEYE - MOST ϕ CA FILLED, SOME LEACHED ϕ MIDDLE ZONE 5'-10' - MOLDIC BIRDSEYE ϕ TO 2 MM. LOWER ZONE: BANDED, IRREG LAM, MUDST. BDC 1"-3" MD GY, WRS LT GY NON ϕ	
	166' DOLO: MD-LT GY, WRS LT GY, F XLN UPPERPART - VAGUE 1'-3' BDC, LOWER PART WELL BDD THN 3" - 6" SILIC FOSS UPPER 2/3. RARE CHIT STOCR. IN LOWER 1/2 - POOR INTXLN ϕ	(R-O) CRINOID CORALS (?) STROMS
1400		
1300	77' DOLO: MD GY, F XLN, IRREG WELL BDD 6"-2' LAMIN, DK & LT ALT INTBD, LOWER PART WRS VUGGY	(R) CRIN & CORALS & BASE
	105' DOLO: MD-LT GY, F XLN, GOOD INTXLN ϕ , BDC TO 5' AND INDISTINCT, SILIC FOSSILS SOME ZONES, SOME VUGGY ϕ IN ZONES, FEW THN DLK CHIT STOCR. - FEW THN BDC ZONES	(C-A) BRACHS CRINOID FASCICULITE

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1600	70' DOLO: MD GY, WACKEST, MD-MASS BDD, W/ABUNDANT FOSS.	(R-b) BRACHS (A) CRINOIDS (A-c) CUP & FINGER CORALS (c) STROMS
1500	71' DOLO: UPPER 20' = BRECCIA, FLAT COBBLE, CLASTS TO 12" DIA, COMP. OF BIRDSEYE - MOST ϕ CA FILLED, SOME LEACHED ϕ MIDDLE ZONE 5-10' - MOLDIC BIRDSEYE ϕ TO 2 MM. LOWER ZONE: BANDED, IRREG LAM, MUDST. BGS 1"-3" MD GY, WRS LT GY NON ϕ	
1400	166' DOLO: MD-LT GY, WRS LT GY; F XLN UPPERPART - VAGUE 1"-3' BGS, LOWER PART WELL BDD THN 3" - 6" SILIC FOSS UPPER 2/3 RARE CHT STRCR. IN LOWER 1/2 - POOR INXLN ϕ	(R-c) CRINOIDS CORALS (?) STROMS
1300	77' DOLO: MD GY, F XLN, IRREG WELL BDD 6"-2' LAMIN, DK & LT ALT INTBD, LOWER PART WRS VUGGY	(R) CRIN & CORALS @ BASE
1200	105' DOLO: MD-LT GY, F XLN, GOOD INTXLN ϕ , BGS TO 5' AND INDISTINCT, SILIC FOSSILS SOME ZONES, SOME VUGGY ϕ IN ZONES, FEW THN DLK CHT STRCS, FEW THN BREC-CGL ZONES	(C-A) BRACHS CRINOIDS FASCICULATE CORALS
1100	60' COVERED	
1000	100' DOLO: LT GY, V CRSE XLN, THK BD - VAGUE 3'-10' GOOD INTXLN ϕ OVER MUCH OF INTERVAL CHERT SEAMS COMMON, ON WEATH SURFACE SOME FOSS HAVE DIOMOLDIC ϕ THIS UNIT MAY BE ABOUT SAME POSITION AS NORFORD'S BASAL SILURIAN	(c) BRACHS CRINOIDS STROMS (R) STRAIGHT CEPHALOPODS CUP CORAL
900	15' DOLO: MD GY LAM	CRINOIDS (?)
	40' COVERED	
	45' DOLO: LT-MD GY, 6"-15" BGS, SUGGESTION OF FOSSILS, LAM ABUND, SOME HIGH L BDDG	
	36' COVERED	
	56' TECTONIC BRECCIA: FRAGS FILLED W/CALCITE & DOLO, A FEW CLASTS LST MUDST.	
800	46' COVERED W/ DOLO BLOCKS - PROB FROM OVERLYING ZONE	
700	43' DOLO: MD GY, RUBBLY WEATH, CA VEINS COMMON	CRINOIDS(?)
	12' TECT.BRECCIA, V ABUND FRAGS, CHERT, CA & DOL FILLING	
	70' DOLO: MD GY-BUFF, NODULAR IN LOWER UNIT, WELL BDD, ALT. BANDS GY & BUFF-GY WEATH. ABUND. CRINOIDS IN UPPER & LOWER ZONES	
600	30' DOL: BUFF-GY CRSE XLN, 1"-3" BGS, NO LAM, F CR QTZ GRNS (5-10%), THN WISPY LAYERS SILIC. MATERIAL	
500	272' LIMESTONE: MD-DK GY, MUDST, THN BDD (1"-6") EVEN LAM. (1-2 MM) SOME RIPPLE MARKS LOWER PORTION, FAIRLY RESIST. @ 35' FROM TOP - YEL-BUFF WEATH LEDGE W/ V ABUND BRACH FRAGS	BARREN EXCEPT FOR 5' ZONE W/ ABDT BRACHS
400		
300	96' COVERED - WITH OCCAS. OUTCROP EXPOSED BY FROST HEAVE @ 300' = MD GY LIME MUDSTONE, 1/2" BGS, ABDT FOSS	(A) COENITES(?) SP

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CAMBRIAN

RONNING GROUP

	CHERT SEAMS COMMON ON WEATH SURFACE SOME FOSS HAVE BIOMOLDIC ϕ THIS UNIT MAY BE ABOUT SAME POSITION AS NORFORD'S BASAL SILURIAN	STROMS (R) STRAIGHT CEPHALOPODS CUP CORAL
1000	15' DOLO; MD GY LAM	CRINOIDS (?)
	40' COVERED	
	45' DOLO; LT-MD GY, 6"-15" BGS, SUGGESTION OF FOSSILS, LAM ABUND, SOME HIGH L BDC	
900	38' COVERED	
	58' TECTONIC BRECCIA; FRACS FILLED W/CALCITE & DOLO, A FEW CLASTS LGT MUDST.	
800	45' COVERED W/ DOLO BLOCKS - PROB FROM OVERLYING ZONE	
	43' DOLO; MD GY, RUBBLY WEATH, CA VEINS COMMON	CRINOIDS(?)
700	12' TECT.BRECCIA, V ABUND FRACS, CHERT, CA & DOL FILLING	
	70' DOLO; MD GY-BUFF, NODULAR IN LOWER UNIT, WELL BDD, ALT BANDS GY & BUFF-GY WEATH. ABUND. CRINOIDS IN UPPER & LOWER ZONES	
600	30' DOL; BUFF-GY CRSE XLN, 1"-3" BGS, NO LAM, F CR QTZ GRNS (5-10%), THN WISPY LAYERS SILIC. MATERIAL	
	272' LIMESTONE; MD-DK GY, MUDST, THN BDD (1"-6") EVEN LAM. (1-2 MM) SOME RIPPLE MARKS LOWER PORTION, FAIRLY RESIST. @ 35' FROM TOP - YEL-BUFF WEATH LEDGE W/ V ABUND BRACH FRACS	BARREN EXCEPT FOR 5' ZONE W/ ABDT BRACHS
500		
400		
300	98' COVERED - WITH OCCAS. OUTCROP EXPOSED BY FROST HEAVE @ 300' = MD GY LIME MUDSTONE, $\frac{1}{4}$ " BGS, ABDT FOSS	(A) COENITES(?) SP.
200	233' POORLY EXPOSED ALONG SADDLE. TAPED INTERVAL. LIMESTONE; V DK GY, MD-DK GY WEATH, PLATY, $\frac{1}{4}$ " BGS, MUDST. OCCAS THIN ZONES CHERT @ 102' - MOTTLED BUFF & GY, SMALL $\frac{1}{4}$ " VUGS SOME FILLED W/ PYRITIZED LIMONITE, WRG BUFF FROM 60' - 100'; THN BDD, DK GY LIME MUDSTONE	NONE OBSERVED
100		
0	DOLOMITE WITH SOME LGT; V DK GY, BLOCKY WEATH, 1"-2' BGS CAMBRIAN PICKED BY NORFORD ON BASIS OF LAST OCCUR DOLO. FOSS BASIS ?	

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STRATIGRAPHIC SECTION: R-4

CANYON RANGE FRONT Y.T.
Reconnaissance Section

LOCATION: 65° 30' 45" 132° 52'

At northern edge of Canyon Range
2 miles west of the R-2 section

DATE:

July 20, 1968

AGE & INTERVALS:

DEVONIAN:

Ogilvie = 350' + (Inc)

Prongs Creek = 480' ±

Cranswick = 200' ±

Total = 1030'

MEASUREMENT:

Estimated

GEOLOGISTS:

W.J. Meyers

H.E. Cook

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

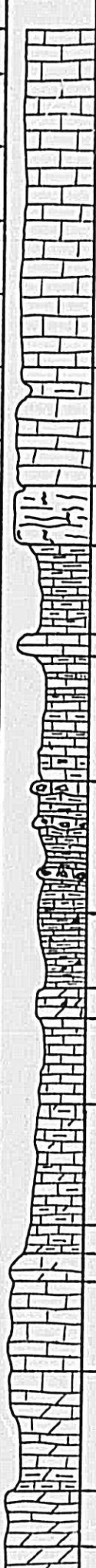
1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
OGILVIE	1030		TOP OF RIDGE	
	1000		230' ± LST: MD-LY BRN, WRG LT GY, BEDS 1'-3' PRED CRINOID WACKEST TO GRAINST. SOME MTX BEDS PELLETED. FEW BEDS OF BROWN MUDST OR PELLET CALCAR.	(c) CRINOIDS, (1 & 2 HOLE)
	900			
	800		80' ± LST: MD GY, WRG LT GY, 1'-3' BDS, CRINOID PACKSTONE TO GRAINSTONE	(A) (1 & 2 & +) - CRINOIDS - (R) FAVOSITIDS
	700		40' ± LST: MD TO LT GY, MASSIVE BEDDED, WACKESTONE TO PACKSTONE	(c) CRIN (1,2,+) (c) BRACHS (R) GASTROPODS
	600		60' ± LST: DK GY, MUDSTONE, THIN BEDDED, PLATY WEATHERING	(R) CRINOIDS (1,2,+)
	500		15' ± LST: MD GY, V FINE PELLET PACKST.	
	400		85' ± LST: MD-DK GY, INTBDD CRINOIDAL CALCARENITE & PLATY MUDSTONE WITH <u>TENTACULITES</u> SP.	(C-R) CRINOIDS - (2-II) (C-R) <u>TENTACULITES</u> SP
	300		90' ± LST: INTBDD BRECCIA BEDS & DK ARG PLATY MUDST. BRECCIAS: NUMEROUS FOSSILS W/CLASTS OF LIME MUDST & CRIN WACKEST. IN MTX OF CRIN WACKST TO PACKST. SOME FOSS SILICIFIED	(S-A) CRINOIDS (1 & 2-II & +) (c) STROMS FAVOSITIDS ALVEOLITES (?) SP
	200		50' ± LST, ARG: DK GY. SOME CHT, FEW CRIN. PACKST.	(R-C) CRINOIDS (1-2 HOLE) (c) <u>TENTACULITES</u> SP
PRONGS CREEK			20' ± LST, SL. DOLO: MED GY, WACKESTONE	CRINOIDS -
			60' ± LST: GY, WACKEST TO PACKST.	(A) CRINOIDS - 1, 2 & + SHAPED
			80' ± LST: SL. DOLO; DK BRN, MUDSTONE	(R) CRINOIDS & BRACHS (R) FAVOSITIDS
			20' ± LST, MD-GY-BRN, PACKST, WRG RUBBLY	(C) CRINOIDS 1 & 2 - HOLE (C) 1 & 2 - HOLE CRINOIDS, BRACHS & GASTROPODS

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MARATHON OIL CO.
TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
OGILVIE	1030		TOP OF RIDGE	
	1000		230' ± LST: MD-LT BRN, WRS LT GY, BEDS 1'-3' PRED CRINOID WACKEST TO GRAINST. SOME MTX BEDS PELLETTED. FEW BEDS OF BROWN MUDST OR PELLET CALCAR.	(C) CRINOIDS, (1 & 2 HOLE)
	900			
	800		80' ± LST: MD GY, WRS LT GY, 1'-3' BDS, CRINOID PACKSTONE TO GRAINSTONE	(A) (1 & 2 & +) - CRINOIDS - (R) FAVOSITIDS
	700		40' ± LST: MD TO LT GY, MASSIVE BEDDED, WACKESTONE TO PACKSTONE	(C) CRIN (1, 2, +) (C) BRACHS (R) GASTROPODS
	600		60' ± LST: DK GY, MUDSTONE, THIN BEDDED, PLATY WEATHERING	(R) CRINOIDS (1, 2, +)
	500		15' ± LST: MD GY, V FINE PELLET PACKST.	
	400		85' ± LST: MD-DK GY, INTBDD CRINOIDAL CALCARENITE & PLATY MUDSTONE WITH <u>TENTACULITES</u> SP.	(C-R) CRINOIDS - (2-II) (C-R) <u>TENTACULITES</u> SP
	300		90' ± LST: INTBDD BRECCIA BEDS & DK ARG PLATY MUDST. BRECCIAs: NUMEROUS FOSSILS W/OCLASTS OF LIME MUDST & CRIN WACKEST. IN MTX OF CRIN WACKST TO PACKST. SOME FOSS SILICIFIED	(S-A) CRINOIDS (1 & 2-H & +) (C) STROMS FAVOSITIDS ALVEOLITES (?) SP
	200		50' ± LST, ARG: DK GY, SOME CHIT, FEW CRIN. PACKST.	(R-C) CRINOIDS (1-2 HOLE) (C) <u>TENTACULITES</u> SP
PRONGS CREEK	100		20' ± LST, SL. DOLO: MED GY, WACKESTONE	CRINOIDS -
	0		60' ± LST: GY, WACKEST TO PACKST.	(A) CRINOIDS - 1, 2 & + SHAPED
			80' ± LST: SL. DOLO; DK BRN, MUDSTONE	(R) CRINOIDS & BRACHS (R) FAVOSITIDS
			20' ± LST: MD-GY-BRN, PACKST, WRS RUBBLY	(C) CRINOIDS 1 & 2-HOLE
			20' ± LST, SL. DOLO MOTTLING: DK GY-BRN	(C) 1 & 2-HOLE CRINOIDS, BRACHS, GASTRO
			60' ± LST: MDGY, WRS LT GY, LAMINATED BEDS & PELLET PACKST TO GRAINST.	
CRANSWICK	100		80' ± LST, DOLOMITIC: MD GY-BRN, FOSSILS IN MATRIX OF PREDOMINANTLY DOLOMITIC LIMESTONE. AMPHIPORA CONTENT INCREASES UPWARDS	(C-A) AMPHIPORA SP (R) STROMS & CORALS
	0		40' ± LST & DOL: LAMINATED, V LT - MD BRN, SOME CGL	
			TRANSITION WITH LT GY-TAN. LAMINATED DOLOMITES OF GOSSAGE.	

STRATIGRAPHIC SECTION: R-2 CANYON RANGE (Reconn.) Y.T.

LOCATION: 65° 30' 30" 132° 48'

Approximately 2 miles east of R-4

DATE: July 19, 1968

MEASUREMENT:

Footage estimated

AGE & INTERVALS:

MIDDLE DEVONIAN:

Ogilvie = 300'± (11c)

Prongs Creek = 200'±

Cranswick = 200'±

Total = 700'±

GEOLOGISTS:

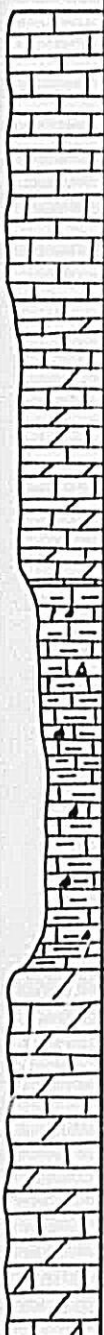
H.E. Cook

W.J. Meyers

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
			TOP NOT SEEN	
OGILVIE	700		150' ± LST: MD GY-BRN, WRS LT GY, CRINOIDAL CALCARENITE W/CORAL BEDS	(A) CRINOIDS (C) CORALS
	600			
	500		150' ± LST, W/DOLO LST & DOLO, MOTTLED; MD BRN-GY, ABUND. CRINOID BEDS AS PACKST - OR GRAINST. V LGE STROMS & CORALS NEAR BASE. GOOD CRINOIDAL MOLDIC POROSITY IN DOLOMITE ZONES	(R-C) STROMS CORALS (A) CRINOIDS - (1 & 2 HOLE & + SHAPED CANALS)
PRONGS CREEK?	400		200' ± LST, ARG: MD-DK BRN, WEATHERS DARK BROWN, CHERTY MUDSTONE	(R-C) CRINOIDS (2-HOLE) (R) DEIROID CORALS (R) STROMS
CRANSWICK	300			
	200		200' ± DOLO & LST: MD GY-BRN, GENERALLY LAMINATED, AMPHIPORA COMMON IN SOME BEDS. MORE DOLO & AMPHIPORA IN THIS SECTION THAN SEEN ELSEWHERE. SOME BIOMOLDIC POROSITY.	(C) AMPHIPORA SP.
	100			
	0			
			GOGGAGE UNDERLYING - DOLOMITE	

STRATIGRAPHIC SECTION: R-3 CANYON RANGE (Reconn.) Y. T.

LOCATION: 65° 30' 45" 132° 41'

About 3 miles east of R-2

DATE:

July 19, 1968

MEASUREMENT:

Footages estimated

AGE & INTERVALS:

MIDDLE DEVONIAN:

Hume (?) = 200 ± (Inc)

Prongs Creek (?) = 100 ±

Total = 300 ±

GEOLOGISTS:

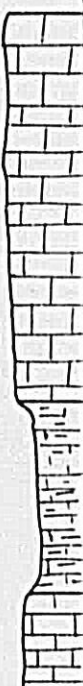
H.E. Cook

W.J. Meyers

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
HUME ? PRONGS CREEK ? TONGUE OGILVIE	0		TOP NOT EXPOSED	
	100		200'± LST: MD-DK BRN-GY, WACKEST TO PACKST, PELLETS RARE TO COMMON W/ ABDT BRACHS. FOSSILS IN DARK MUD MATRIX	(R-C) AMPHIPORA, SP (O) MASS STROMS, BRANCH CORALS, (C-A) CRINOIDS, OSTRACODS, GASTROPODS
	200		100'± SHALE: CALCAREOUS, THIN TO BLOCKY, MED TO DARK BROWNISH-GRAY	NONE OBSERVED
	300		LST: MD-LT GY-BRN, WACKEST, RARE PELLETS, SIMILAR SECTION BELOW FOR ABOUT 2000' - APPEARS TO BE OGILVIE	(R) AMPHIPORA SP. CRINOIDS, OSTRACODS
	400			

STRATIGRAPHIC SECTION: 2821 - FLYAWAY CREEK, N.W. T.

LOCATION: 65° 26' 45" 132° 02' 30"

Along west bank of creek above falls,
and along east bank below falls.

DATE:

July 13, 1968

MEASUREMENT:

Up section with 5' Jacob Staff

AGE & INTERVALS:

DEVONIAN:

Canol = 100' (Inc.)

Hume = 535' (Inc.)

Total = 635'

GEOLOGISTS:

W. J. Meyers

P. N. McDaniel

MARATHON OIL CO.

TO ACCOMP. REPORT 68-1

1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
CANOL	635		BLACK GH ABOVE - WRG YEL-BRN - NOT MEASURED	
	600		100' SHALE: BLK, NON-CALC, PAPERY THIN	BARREN
HUME	500		145' LST: DK GR, W/FEW INTBDD MD GR ZONES. THN-MD BD. NOT AS WELL EXPOSED AS GRD BELOW. DARKER BEDS WITH CORALS & GASTROPODS. LIGHTER COLOURED MOSTLY BARREN - SOME BIRDSEYE	SCATTERED - MOSTLY IN LOWER PORTION: (R) <u>HEXAGONARIA</u> SP. FASCICULATE & FAVOSITIDS TR. <u>THAMNOPORA</u> SP. (R) BRACHS & CRINOIDS @ TOP
	400		60' SHALE: NON-CALC, BLACK, PAPER-THIN, V. RECESSIVE, FORMS NARROW ABRUPT CANYON, BASAL 3' = SHY LAM LST. UPPER CONTACT: NOT EXPOSED - COULD BE FAULT. LOWER CONTACT: ABRUPTLY TRANSITIONAL - NOT EROSIONAL AND NOT A FAULT	BARREN (R) <u>TENTACULITES</u> SP IN BASAL 3'
	300		330' LST: LT-MD BRN TO DK GRAY, INTBDD, DARK BEDS MORE ARG, CORALS COM.; LT BGS ARE MUDST TO PELLET WACKST W/ (R) <u>AMPH.</u> , BIRDSEYE & LAM. IRREG. BEDDING OVERALL 6" - 2', WITH INTERBEDS OF BLK BARREN SHALE - MOST COMMON IN LOWER 150'. UPPER PORTION LT COLOURED - FEWER CORALS - SHALLOWER WATER. FOSSILS, ESP. CORALS, ABUNDANT - MANY LARGE HEADS - 6" - 2'	(R-C) BRACHS (V/R) CRINOIDS (C-R) FAVOSITIDS (C-R) <u>HEXAGONARIA</u> SP. (R) <u>THAMNOPORA</u> SP. (C-R) FASCICULATE (R) <u>AMPHIPORA</u> SP. (R) <u>STACHYODES</u> SP. (R) MASS & TAB STROMA (R) GASTROPODS (R) HORN CORALS
?			BASE OF HUME NOT MEASURED - STRUCTURALLY COMPLEX - BUT APPEARS TRANSITIONAL WITH BIRDSEYE & LT LAM LST OF OGILVIE BELOW.	
OGILVIE				

STRATIGRAPHIC SECTION: 2822, 2823 CRANSWICK RIVER HEADWATERS

LOCATION: 65° 07' 45" 132° 18' -19'

N.W.T.

Along sharp high ridge just east of headwaters
of Cranswick

DATE:

July 15, 1968

MEASUREMENT:

Up section with 5' Jacob Staff

AGE & INTERVALS:

DEVONIAN:

Ogilvie = 947' (Inc)

Cranswick = 78' (Inc)

Total = 1025'

GEOLOGISTS:

W.A. Hogg
P.N. Mc Daniel
H.E. Cook
W.J. Meyers

MARATHON OIL CO.
TO ACCOMP. REPORT 68-1

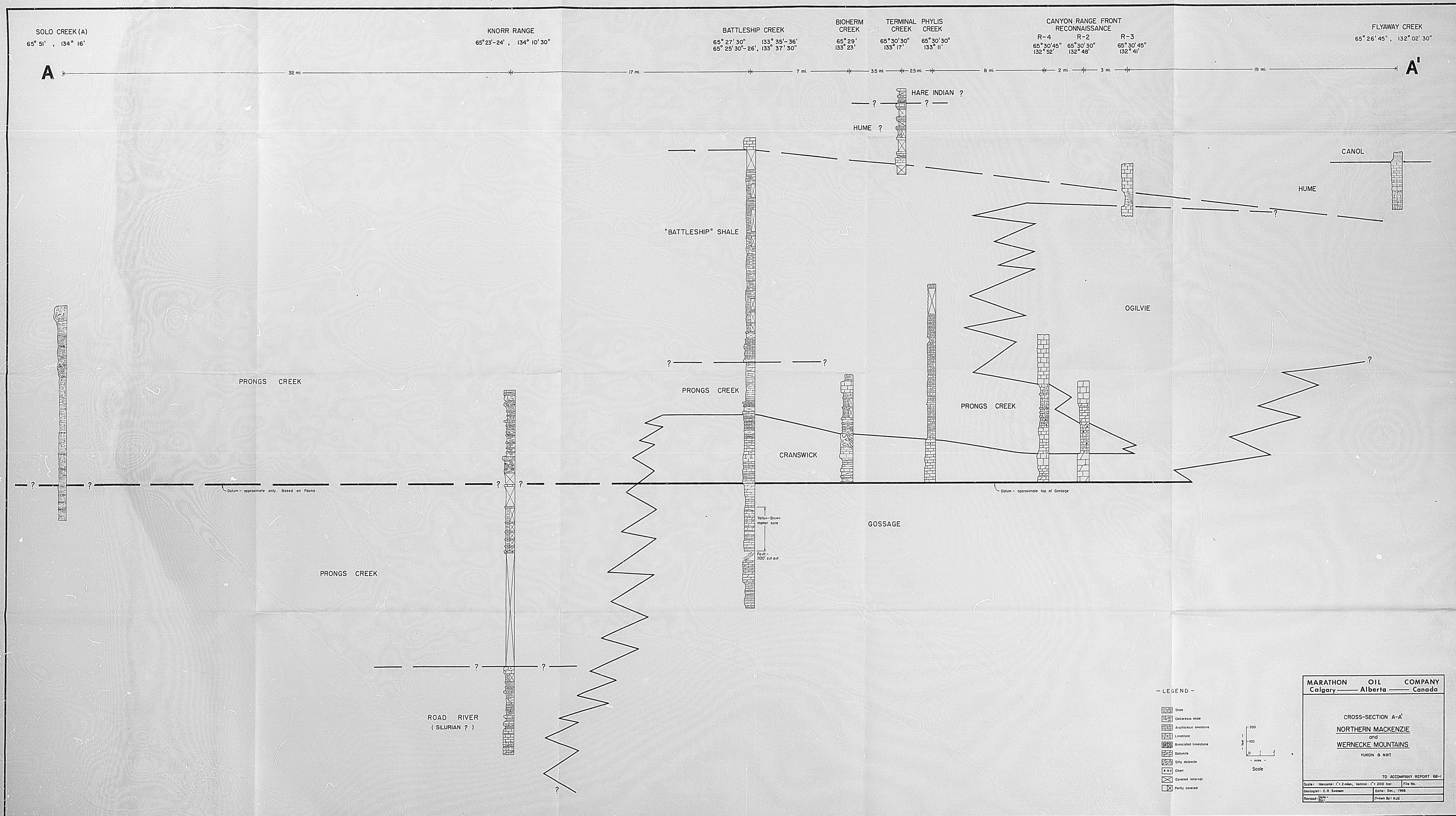
1" = 100'

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
			AN ESTIMATED 250'-300' OF OVERLYING SECTION WAS NOT MEASURED	
	1000		80' LIMESTONE: MD-LT GY, W/SOME DK GY. EVEN BEDDED, // STRATIF. ZONES OF ALGAL MAT DECREASING. WACKEST TO PACKST, W/SOME FENESTRAL FABRIC. ONE ZONE W/ABOT PELLETS.	(C-A) BRACHS (A) CRINOIDS (C-A) OSTRACODS (C) GASTROPODS
			20' LST: MD-DK GY, WACKEST, 6"-2' THK BDS., EVEN // STRAT.	(C-A) OSTRACODS (C) GASTROPODS
	900		90' LIMESTONE: MD-LT GY, 1'-5' EVEN, // BEDS. MOSTLY PELLET PACKST. W/FENESTRAL FABRIC, FEW STRKS DARK MUDIER ROCKS. THN ZONE <u>Amph.</u> WACKEST @ TOP	(C) GASTROPODS (C-A) OSTRACODS
			SECTION SHIFTS 1/2 MILE NW FROM UNDERLYING.	
	800		25' LST: MD-DK GY, EVEN 6"-2' BEDS, MOSTLY CRIN. WACKEST. W/SOME PACKST.	ABUNDANT CRINOIDS
			80' LIMESTONE: MD-LT GY, EVEN 1'-4' BDS, ABUNDANT FENESTRAL FABRIC = ALGAL MAT? INTBD. W/ PELLET GRNST TO WACKEST	(A) CRINOIDS IN THN ZONE OSTRACODS (A) NEAR BASE
	700		32' LST: MD-LT GY, 6"-2' EVEN BEDS, INTERBEDDING OF PELLET GRAINST & LAM FENESTRAL LS.	NONE OBSERVED
			48' LST: LT-MD GY, 1'-4' BEDS // STRATIF, FEW PELLETS & OBSCURE FOSS. IN WACKEST.	(R-C) CORAL (R) GASTROPOD (C-R) OSTRACOD
			35' LST: LT GY, 2'-5' BEDS // STRATIF, FENESTRAL FABRIC W/ VAGUE PELLET-LIKE GRNS COMMON - WACKEST-MUDST.	NONE OBSERVED
	600		25' LST: MD-LT GY, MOSTLY WACKEST, THN 6"-8", FEW PELLETS, BIRDSEYE, THN BED BRN DOL @ TOP UNDERLAIN BY RED-BRN "WEATH" ZONE	(R) GASTROPODS
			50' LST: LT GY, MASS 1'-5' THK, BIRDSEYE COMMON AND RARE PELLETS NEAR BASE	TRACE BRACH, CRINOID IN BASAL 5'
			15' LST, SHY, DK GY, WAVY THN BEDS. FEW BIRDSEYE	(C) <u>Thamnerops</u> type
	500		37' LIMESTONE, MD-LT GY, 2'-4' BEDS, WACKEST, TR DOLO, BURROWING IN UPPER 10', RARE PELLETS TOP, RARE BIRDSEYE	TRACE CRINOID (R) MASS STROM
			13' LST: MD-DK GY, THN-MD BED, MUDST W/ FEW FOSS	(A) 2-HOLE CRINOIDS (R) BRACHS (R) BRACHS
			75' LIMESTONE: DK-MD GY, THK-MASS BDS 2'-5', WACKEST, RARE BIRDSEYE, WITH FEW THIN RECESS COVERED ZONES	(R) 1-HOLE CRIN. (R-A) 2-HOLE CRIN. (R-A) MASS CORALS, STROM. (R-C) TAB STROMS 1-ZONE <u>Thamnerops</u> sp
	400		10' COVERED	
			10' LST: MD GY, 2' THK, WACKEST, W/BIRDSEYE / POSS. PELLETS, FOSS DEBRIS	(R) MASS STROM
			10' DOLO: MD BRN-GY, WACKEST, EX MOLDIC, INTRXLN POROSITY	(R) 2-HOLE CRIN
			35' COVERED	
			38' LST: MD-LT GY, 1' BEDS, WACKEST TO PACKST, SOME PELLETS	(R-C) BRACHS (C-A) CRIN-1/2 HOLES (R) MASS STROM
	300		47' DOLO: LT BRN-GY, SLI LIMY, 6"-8" BEDS, TR. POOR POROSITY	ABUNDANT - 2-HOLE CRINOIDS
			20' LST, PARTLY DOLO, 6"-8" POORLY BEDDED, TR GOOD MOLDIC, INTRXLN	ABOT 2-HOLE CRIN

OGILVIE

107

FM.	INTERVAL	LITH.	FIELD DESCRIPTION	FOSSILS
OGILVIE			AN ESTIMATED 250'-300' OF OVERLYING SECTION WAS NOT MEASURED	
	1000		80' LIMESTONE: MD-LT QY, W/SOME DK QY. EVEN BEDDED, // STRATIF. ZONES OF ALGAL MAT DECREASING. WACKEST TO PACK ST, W/SOME FENESTRAL FABRIC. ONE ZONE W/ABOT PELLETS.	(C-A) BRACHS (A) CRINOIDS (C-A) OSTRACODS (C) GASTROPODS
			20' LST: MD-DK QY, WACKEST, 6"-2' THK BDS., EVEN // STRAT.	(C-A) OSTRACODS (C) GASTROPODS
	900		90' LIMESTONE: MD-LT QY, 1'-5' EVEN, // BEDS. MOSTLY PELLET PACKST. W/FENESTRAL FABRIC, FEW STRKS DARK MUDIER ROCKS. THN ZONE <u>Amph.</u> WACKEST @ TOP	(C) GASTROPODS (C-A) OSTRACODS
			SECTION SHIFTS 1/2 MILE NW FROM UNDERLYING.	
	800		25' LST: MD-DK QY, EVEN 6"-2' BEDS, MOSTLY CRIN. WACKEST. W/SOME PACKST.	ABUNDANT CRINOIDS
			80' LIMESTONE: MD-LT QY, EVEN 1'-4' BDS, ABUNDANT FENESTRAL FABRIC = ALGAL MAT? INTBD. W/PELLET GRNST TO WACKEST	(A) CRINOIDS IN THN ZONE OSTRACODS (A) NEAR BASE
	700		32' LST: MD-LT QY, 6"-2' EVEN BEDS, INTERBEDDING OF PELLET GRAINST / LAM FENESTRAL LS.	NONE OBSERVED
			48' LST: LT-MD QY, 1'-4' BEDS // STRATIF, FEW PELLETS / OBSCURE FOSS. IN WACKEST.	(R-C) CORAL (R) GASTROPOD (C-R) OSTRACOD
			35' LST: LT QY, 2'-5' BEDS // STRATIF, FENESTRAL FABRIC W/ VAGUE PELLET-LIKE GRNS COMMON - WACKEST-MUDST.	NONE OBSERVED
	600		25' LST: MD-LT QY, MOSTLY WACKEST, THN 6"-8", FEW PELLETS / BIRDSEYE, THN BED BRN DOL @ TOP UNDERLAIN BY RED-BRN "WEATH" ZONE	(R) GASTROPODS
			50' LST: LT QY, MASS 1'-5' THK, BIRDSEYE COMMON AND RARE PELLETS NEAR BASE	TRACE BRACH / CRINOID IN BASAL 5'
	500		15' LST, SHY, DK QY, WAVY THN BEDS. FEW BIRDSEYE	(C) <u>Thamnerops</u> type
			37' LIMESTONE, MD-LT QY, 2'-4' BEDS, WACKEST, TR DOLO, BURROWING IN UPPER 10', RARE PELLETS TOP, RARE BIRDSEYE	TRACE CRINOID (R) MASS STROM
			13' LST: MD-DK QY, THN-MD BED, MUDST W/FEW FOSS	(A) 2-HOLE CRINOIDS (R) BRACHS (R) BRACHS
			75' LIMESTONE: DK-MD QY, THK-MASS BDS 2'-5', WACKEST, RARE BIRDSEYE, WITH FEW THIN RECESS COVERED ZONES	(R) 1-HOLE CRIN. (R-A) 2-HOLE CRIN. (R-A) MASS CORALS, STROMS (R-C) TAB STROMS 1-ZONE <u>Thamnerops</u> sp
	400		10' COVERED	
			10' LST: MD QY, 2' THK, WACKEST, W/BIRDSEYE / POSS. PELLETS, FOSS DEBRIS	(R) MASS STROM
			10' DOLO: MD BRN-QY, WACKEST, EX MOLDIC / INTRXLN POROSITY	(R) 2-HOLE CRIN
			35' COVERED	
	300		38' LST: MD-LT QY, 1' BEDS, WACKEST TO PACKST, SOME PELLETS	(R-C) BRACHS (C-A) CRIN-1 1/2 HOLES (R) MASS STROM
			47' DOLO: LT BRN-QY, SLI LIMY, 6"-8" BEDS, TR. POOR POROSITY	ABUNDANT - 2-HOLE CRINOIDS
			20' LST, PARTLY DOLO, 6"-8" POORLY BEDDED, TR GOOD MOLDIC / INTRXLN	ABDT 2-HOLE CRIN
	200		50' COVERED	
			55' LST + DOL (LITH FROM TALUS - IN PLACE ??) BLOCKS OF CRIN WACKEST - PACKST, STROMS, SOME ALGAL MAT LT-MD BRN-QY	ABDT-2-HOLE CRIN (C) MASS STROMS
	100		47' COVERED: TALUS ON DIP SLOPE	
CRANSWICK	0		78' LIMESTONE: DK-U DK QY, SL. ARG, BEDS 5"-1', WRS RUBBLY, WACKEST - MUDST	(R-C) BRACHS (R-C) 1 1/2 HOLE CRIN (R-C) <u>Tentaculites</u> sp (R) TRILOBITE PYGIDIUM
			CRANSWICK OUTCROP CONTINUES BELOW NOT MEASURED	



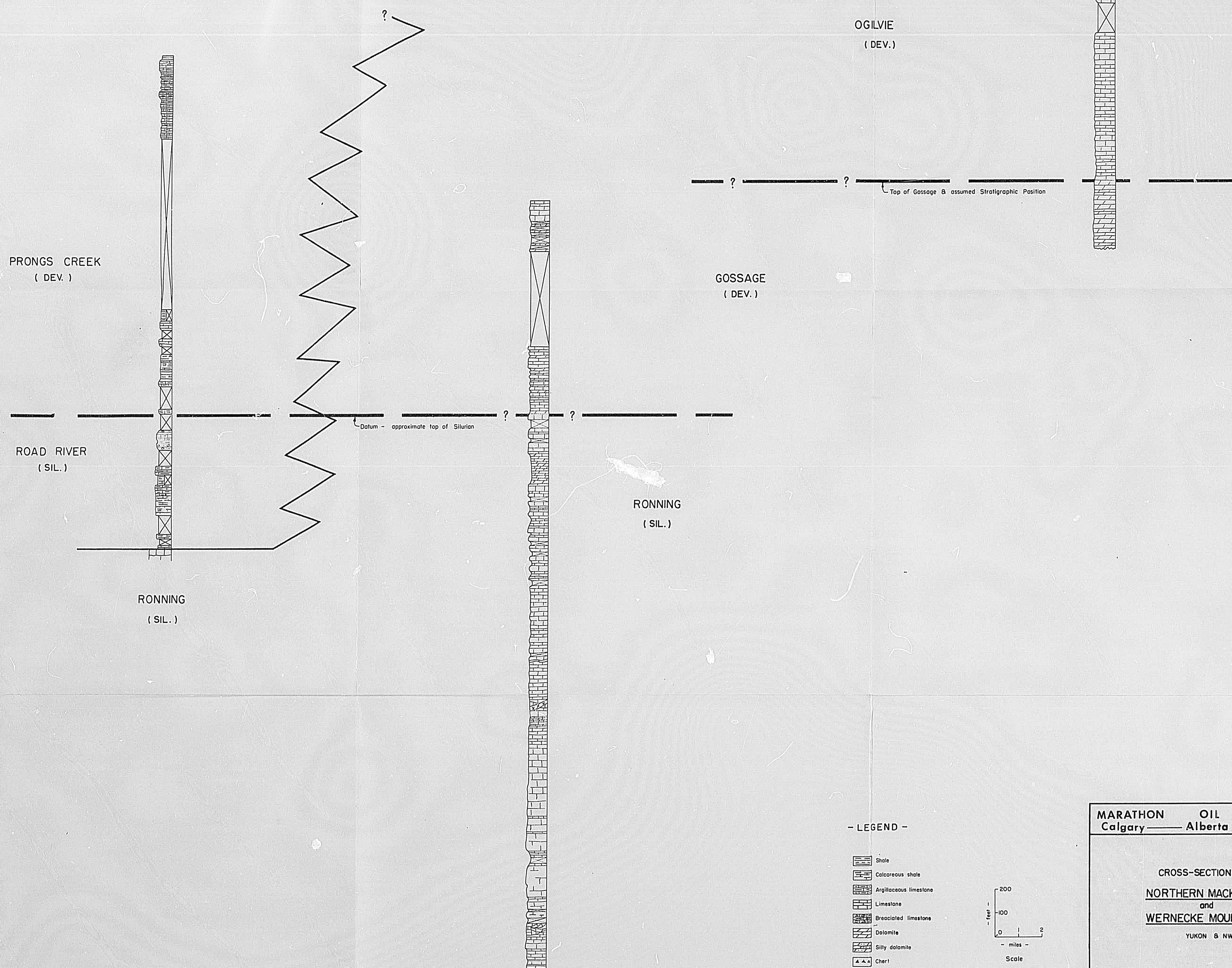
PRONGS CREEK
65° 17' 30", 135° 39'-41'

ILLTYD RANGE
65° 14' 20", 135° 11'-13'

ROYAL CREEK SOUTH
64° 53' 30"-54', 134° 57'

B

B'



MARATHON OIL COMPANY	
Calgary	Alberta Canada
CROSS-SECTION B-B'	
NORTHERN MACKENZIE	
and	
WERNECKE MOUNTAINS	
YUKON & NWT	
TO ACCOMPANY REPORT 68-1	
Scale: Horizontal: 1" = 2 miles, Vertical: 1" = 200 feet	File No.
Geologist: C.R. Swenson	Date: Dec., 1968
Revised: By:	Drawn By: RJG

PRONGS CREEK
65° 17' 30" , 135° 39' -41'

ILLTYD RANGE
65° 14' 20" , 135° 11' -13'

ROYAL CREEK SOUTH
64° 53' 30" -54' , 134° 57'

B

B'

PRONGS CREEK
(DEV.)

ROAD RIVER
(SIL.)

RONNING
(SIL.)

OGILVIE
(DEV.)

GOSSAGE
(DEV.)

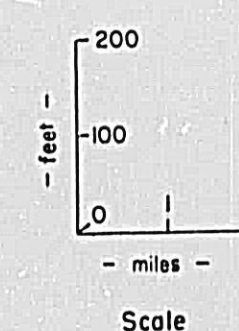
RONNING
(SIL.)

Top of Gossage B. assumed Stratigraphic Position

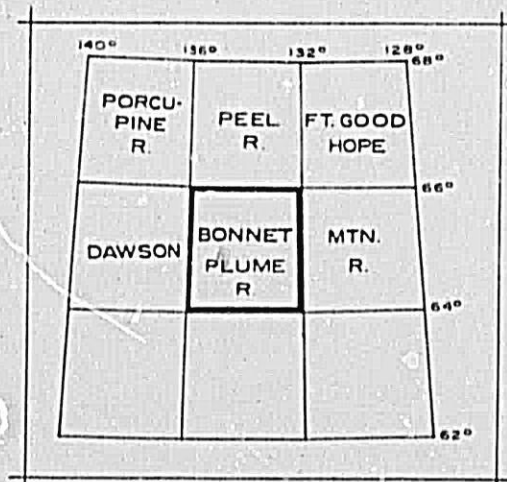
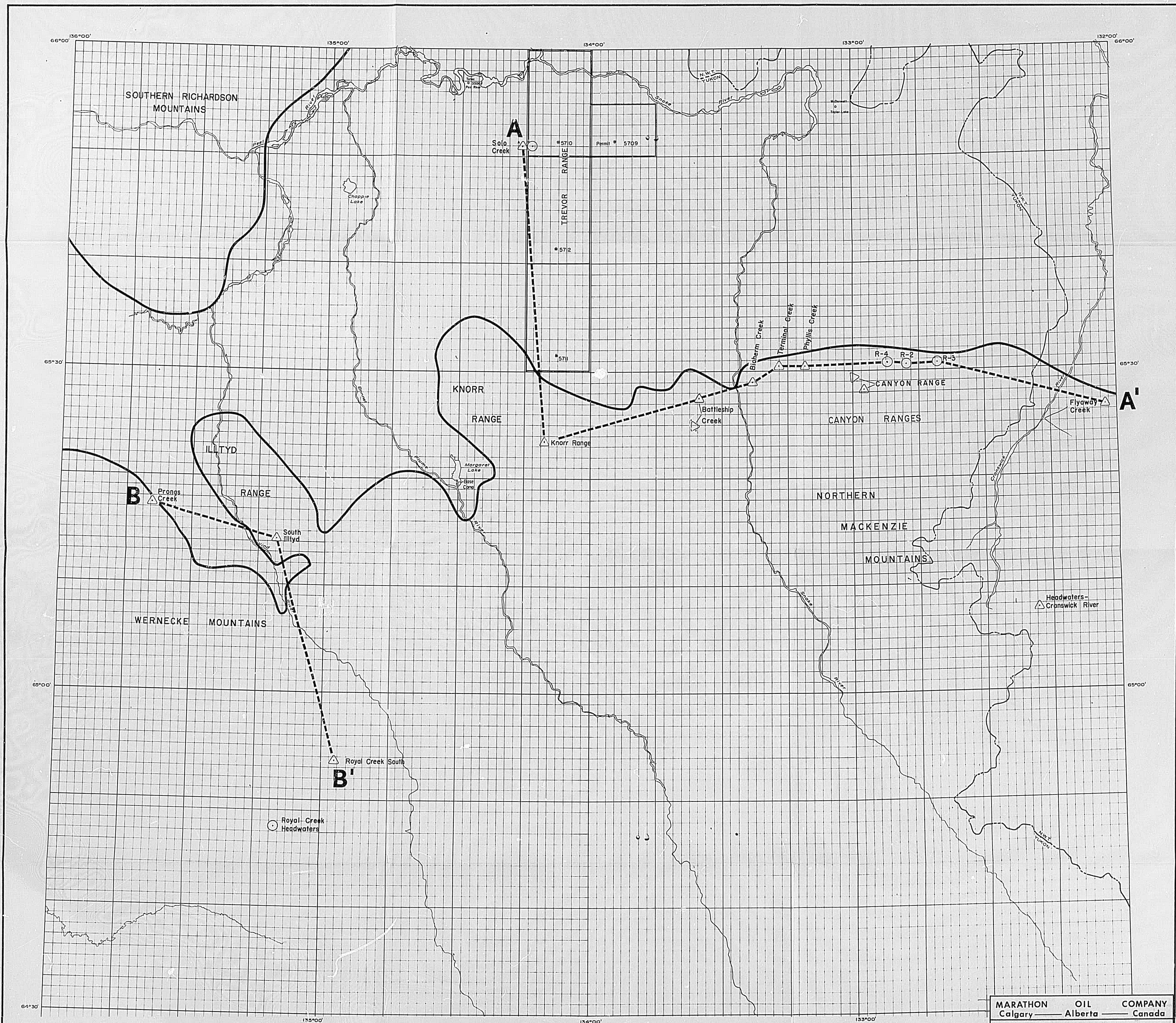
Datum - approximate top of Silurian

- LEGEND -

- Shale
- Calcareous shale
- Argillaceous limestone
- Limestone
- Brecciated limestone
- Dolomite
- Silty dolomite
- Chert
- Covered interval
- Partly covered

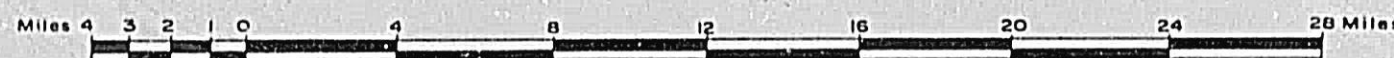


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CROSS-SECTION B-B'	
NORTHERN MACKENZIE	
and	
WERNECKE MOUNTAINS	
YUKON & NWT	
TO ACCOMPANY REPORT 68-1	
Scale: Horizontal: 1" = 2 miles, Vertical: 1" = 200 feet	File No.
Geologist: C. R. Swanson	Date: Dec., 1968
Revised: By:	Drawn By: RJG



REFERENCE

- Location
- Oil + Abd Oil
- Gas + Abd Gas
- Service Wells (water storage, observation, etc.)
- Suspended
- Abandoned
- Wells Revised



—LEGEND—

- Mountain front
- △ — Detailed sections
- — Exposures examined
- — Marathon acreage
- Line of Cross-section

MARATHON OIL COMPANY
Calgary Alberta Canada

NORTHERN MACKENZIE AND
WERNECKE MTNS.

— YUKON — N.W.T. —

INDEX MAP OF
STRATIGRAPHIC SECTIONS

TO ACCOMPANY FIELD REPORT 68-1

Scale: 1" = 4 Miles Contour Interval: File No.
Geologist: C.R. Swenson Date: Jan., 1969
Revised: Date: Drawn By: R.K.S.

PRONGS CREEK
65° 17' 30", 135° 39'-41'

ILLTYD RANGE
65° 14' 20", 135° 11'-13'

ROYAL CREEK SOUTH
64° 53' 30"-54', 134° 57'

B

B'

PRONGS CREEK
(DEV.)

ROAD RIVER
(SIL.)

RONNING
(SIL.)

OGILVIE
(DEV.)

GOSSAGE
(DEV.)

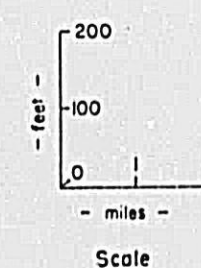
RONNING
(SIL.)

Datum - approximate top of Silurian

Top of Gossage B assumed Stratigraphic Position

- LEGEND -

- Shale
- Calcareous shale
- Argillaceous limestone
- Limestone
- Brecciated limestone
- Dolomite
- Silty dolomite
- Chert
- Covered interval
- Partly covered



MARATHON OIL COMPANY	
Calgary	Alberta Canada
CROSS-SECTION B-B'	
NORTHERN MACKENZIE	
and	
WERNECKE MOUNTAINS	
YUKON & NWT	
TO ACCOMPANY REPORT 68-1	
Scale: Horizontal: 1" = 2 miles, Vertical: 1" = 200 feet File No.	
Geologist: C. R. Swanson	
Date: Dec., 1968	
Revised By:	Drawn By: RJG