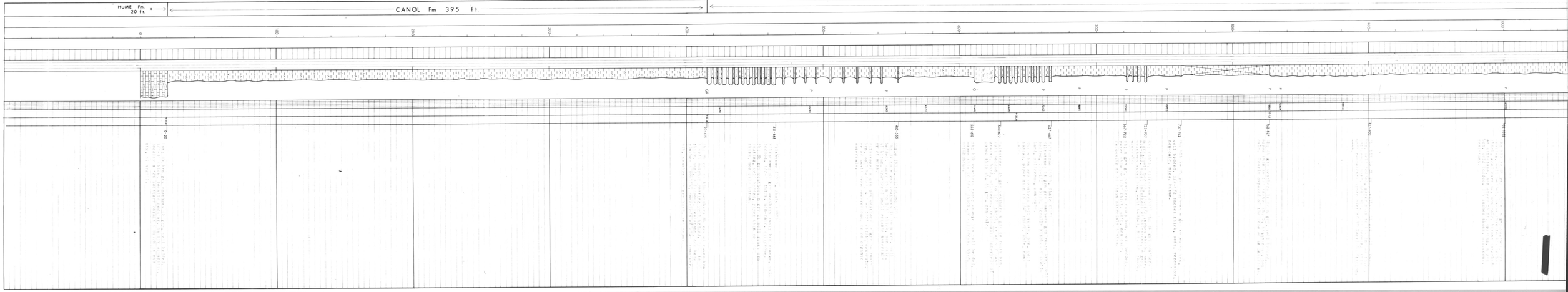

HUME Fm.
20 ft.
CANOL Fm 395 ft.
0
100
200
300
400
500
600
700
800
900
1000

FIGURE 19

039 01 06 041

BP Exploration Canada Limited

(1)

SECTION: FLYAWAY CREEK SECTION "FCS"

LOCATION: LATITUDE - LONGITUDE - | MAP REFERENCE AIR PHOTO NO. Hale River 106F A 27951 - 152

DATE: July 27, 1976. | VERTICAL SCALE: 1" = 20 FEET

AUTHOR:

REMARKS: Section was measured along Flyaway Creek from falls in the Hume formation immediately north of the Mackenzie Mountain front.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

P Palynological sample
G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3 - 6 %
3 symbols = 6 - 10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
K - CRETACEOUS 15ft										

I M P E R I A L F m 2 2 3 0 f t.

FIGURE 20

039 01 06 041

BP Exploration Canada Limited

(2)

SECTION: FLYAWAY CREEK WEST SECTION. "FCW"

LOCATION: LATITUDE [illegible] MAP REFERENCE [illegible]
LONGITUDE [illegible] AIR PHOTO NO [illegible]

DATE: August 3, 4 1976 VERTICAL SCALE: 1" = 20 FEET

AUTHOR: [illegible]

REMARKS: [illegible]

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- I INTERFOSSIL less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F = < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

GOSSAGE Fm. 1863 ft.

HUME Fm. 280 ft. +

SNAKE RIVER Fm. 75 ft.

2100 2200 2300 2400 2500 1900 1800 1700 1600 1500 2000 2700 2800 2900 3000 3100 3200 3300

2550-2560 [illegible]

2310-2550 [illegible]

2474-2499 [illegible]

2464-2474 [illegible]

2444-2464 [illegible]

2419-2444 [illegible]

2394-2419 [illegible]

2392-2394 [illegible]

2387-2390 [illegible]

2381-2381 [illegible]

2360-2381 [illegible]

2326-2360 [illegible]

2312-2326 [illegible]

2307-2312 [illegible]

2294-2307 [illegible]

2288-2294 [illegible]

2263-2288 [illegible]

2236-2263 [illegible]

2227-2236 [illegible]

2215-2227 [illegible]

NCS-2215

Amphipora packstone in zone of frost shattered rocks approx. 1' wide. Sample E1 and is collected.

Limestone: Pkgy-buff, v. pl.gy. - white, wx, microgrd, occ. sparry calcite, occ. good algal lamination, occ. pelletal. Inbdd with lstt gy. brn., brn ws, occ. brachs. occ. fnt. algal lamination; inbds approx. 1' thick is repeated alternations.

1721-1905 [illegible] less resistant.

1686-1721 [illegible]

Knoll forming on ridge.

1595-1686 [illegible]

1490-1595 [illegible]

1380-1490 [illegible]

3285' base of scree exposure at base of hill.

3005-3285 [illegible]

Photo 2: View E at section FCW

Photos 3,4,5, - Overlapping panorama - (view E) of ridge along which section FCW was measured.

Photo 6 and 7 - Overlapping view E at section to E of section FCW.

2930-3005 [illegible]

2880-2930 Limestone: lt gy., micro x, thinbdd bcm, lstt brn/gy, occ. [illegible]

2815-2880 [illegible]

2656-2815 [illegible]

2560-2656 [illegible]

2550-2560 [illegible]

2310-2550 Limestone: brn-gry, brnish, gry ws, crypto-micro gnd thick bd.

2499-2506 [illegible]

2474-2499 [illegible]

GOSSAGE Fm 2002 ft.

GOSSAGE

FIGURE 21

059 01 08 041

BP Exploration Canada Limited

3

SECTION: SNAKE RIVER EAST - A SECTION SRE "A"

LOCATION: LATITUDE - xx° xx' xx"
LONGITUDE - 132° xx' xx"

MAP REFERENCE AIR PHOTO NO. Snake River Inlet A 20473 - 84

DATE: July 28, 30 1976

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: [illegible]

REMARKS: This section is exposed along the bank on north side of the river at the mountain front about 1½ miles east of the Snake River. Numbers enclosed in brackets refer to photographs taken from helicopter, and all bearings are approximate as this interval was in mountainous country.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- 10 to 20%
- 20 to 50%
- > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

CANOL Fm. 45 ft. +

HUME Fm. 700 ft.

ROAD RIVER Fm. 299 ft.

SNAKE RIVER Fm. 100 ft.

FIGURE 23

059 01 08 041

BP Exploration Canada Limited

(5)

SECTION: 76-A CAMBRIAN TO BASAL GOSSAGE FM.

LOCATION: LATITUDE . LONGITUDE . | MAP REFERENCE AIR PHOTO NO.

DATE: August 13, 18, 19 1976 | VERTICAL SCALE: 1" = 20 FEET

AUTHOR: .

REMARKS: [illegible] DeLorme

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT Pore space less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F = < 10 %
- O 10 to 20 %
- OO 20 to 50 %
- OOO > 50 %

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
DELORME Fm. 200 ft. +	LOWER ORANGE UNIT	3900								3875-3910
										3870-3875
										3859-3870
										3855-3859
										3777-3855
		3800								
										3755-3777
										3730-3755
										3710-3730
		3700								3660-3710
										3625-3660
										3595-3625
		3600								3578-3595
										3570-3578
										3480-3570
		3500								3449-3485
										3443-3449
										3410-3445
										3398-3410
		3400								3380-3398
										3375-3380
										3333-3375
										3345-3353
										3340-3345
										3302-3340
		3300								3288-3302
										3250-3269
										3233-3235 3248-3233
										3186-3248
		3200								3183-3186
										3170-3183

DELORME Fm 1137 ft +

										915-975
										955-970
										875-955
										665-875
		800								580-665
										490-580
		600								480-490
										440-470
										380-440
		400								372-380
										327-372
										307-327
										303-307
										286-303
										261-286
		200								250-261
										215-250
										192-215
										162-192
										117-162
										111-117
										37-111
										26.5-57
										26-26.5
										0-26

RONNING GP 1960 ft.

ROAD RIVER 272 ft.

581 ft.

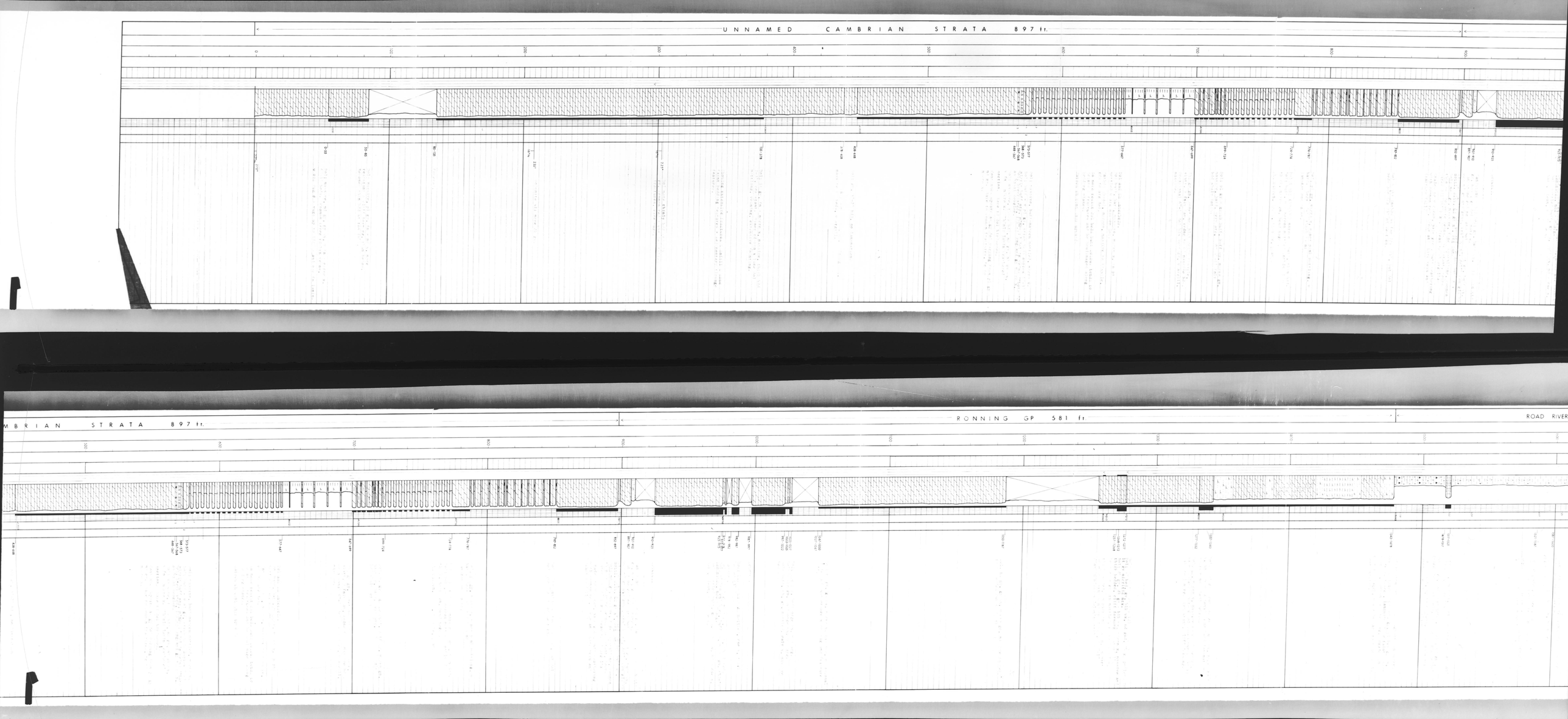

UNNAMED CAMBRIAN STRATA 897 ft.
MBRIAN STRATA 897 ft.
RONNING GP 581 ft
ROAD RIVER

FIGURE 25

039 01 06 041

BP Exploration Canada Limited

7

SECTION: CRANSWICK "B" SECTION "CRB"

LOCATION: LATITUDE - 68°
LONGITUDE - 117°

MAP REFERENCE Snake River
AIR PHOTO NO. A20733 - 116

DATE: July 19, 1976

VERTICAL SCALE: 1"= 20 FEET

AUTHOR: R. CH and D. DOWTICK

REMARKS: ...ion was measured on the south side of a tributary stream approximately ... miles west of the Snake River just north of the Mackenzie Mountain ...

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- ○ 10 to 20 %
- ○○ 20 to 50 %
- ○○○ > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE Ch. TEXGRANULAR
- V VUGGY Pore space greater than 1/16 mm.
- P PINPOINT " " less than 1/16 mm.
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3 - 6 %
3 symbols = 6 - 10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
CRANSWICK Fm. 204 ft.		200							189-209	lst: m to lt grv, weathers lt grv, vell-orange, massive, ab ma...sive strom (...ol, bulb strom (f-), ...onites in v.f. calc. mtx. in Keel Rim
									144-189	facies toward fore reef facies, ab argill mat, sl ab ... le crinoids, th n shelled brach; toward interior reef facies, increase bulb strom wl sct. 2 hole ... notids, also hem bitum, sl. argill
										lst: lt grv weathers lt grv, well bedded, 3-4" th ck, ... too hole crinoids, tr of brach, phillipsastria (... 5" in mud mtx, sl. bitum, locally patches of wh... calc. infilling.
									124-144	lst: ame as below wl slight increase in fossil content.
									115-124	lst: m grv weathers lt grv, bedded, 1/2-2 feet thick, a few two hole crinoids, tr of amph, corals in mud mtx., sec white calc. along hairline fract... ures
									100-115	lst: lt gry weathers m gry, bedded, 2-3 feet thick, tr of two hole crinoids, amph, thin shelled brach in mud mtx.
		100							80-100	lst: lt to m gry, weathers lt m gry, bedded, 1/2 - 2 feet thick, tr to a few single & double hole crinoid, thin shelled brach, amph (f- 5") mud mtx.
									73-80	lst: m gry, weathers lt gr, bedded, 1-2 feet thick, v ab amph & tr of bulb strom (f .20') in mud mtx., sl bitum.
									68-73	lst: m gry, weathers lt gr, bedded, 2-3 feet thick, mass ve, sct. strom, thamnopora, phillipsastria (f .5") in mud mtx, the contact wl underlying bed marked by 1 foot amplitude stylolite.
									63-68	
									57-63	
									54-57	lst: dk gry, weathers lt gry, well bedded, 1/2-1' thick, anhantitic, mudstone, bitum.
									45.5-54	lst: framework lt gry, mtx. dk gry, weathers lt to m gry, bedded, 1/2-2" th ck, scattered bulb strom, thamnopora and amph in mud mtx, sl. bitum.
									33.5-45.5	
									23.5-33.5	lst: dk grv, weathers lt to m gry, anhantitic, mudstone, argill, a few algal mat layers at top 1 foot.
									22-23.5	lst: lt to m gry, weathers lt. gry, well bedded, 1/2-1" thick, anhantite, mudstone.
									3 - 22	lst: dk gry, weathers m to dk gry, bedded, 1-2' th ck, archan tex, tr of ostracods, thin shelled bio-clastic grains in mud mtx, sl. argill.
										lst: m gry, weathers lt gr, well bedded, 4-6" thick, ab horizontal bitum stringers.
		0							0-5	lst: m gry weathers lt gry, bedded, 1- 1 1/2' thick, tr of phillipastria, thamnopora in mud mtx, sl bitum
										lst: lt gry, weathers lt gry, bedded, 1/2-2" thick, archan tex, more argill at bottom 5 feet, no fossils.
										lst: m gry, weathers lt gr, bedded, 2-4" thick, scattered bite lol patches shaped like amphipora(?) in m gry fol mtx, sl. calc.
Gossage Fm 5 ft +										

FIGURE 27

039 01 06 041

BP Exploration Canada Limited

8

SECTION: CRANSWICK TYPE SECTION "CR"

LOCATION: LATITUDE - [illegible] MAP REFERENCE Snake River 106F
LONGITUDE - [illegible] AIR PHOTO NO. A 20671 — 110

DATE: July 13, 18, 1976. VERTICAL SCALE: 1" = 20 FEET

AUTHOR: K. Hill & W. Lane

REMARKS: Section was measured on the south and north sides of unnamed tributary stream approximately 5 miles west of the Snake River, 1 km north of the Mackenzie Mountain Trench. The Petitot, Passage and Redknife Formations were measured on the east side of a narrow ridge approximately 2 miles south of the tributary stream. The remaining upper part of the section was measured on the north side of the stream.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm.
- P PINPOINT Pore space less than 1/16 mm.
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- 10 to 20%
- 20 to 50%
- > 50%

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Geon or crystal size	Sample No.	Photo No.	DESCRIPTIONS
ROAD RIVER Fm.		1500								
		100								contacts(?).
										20-43 Lst: blk, evenly thin bed, shale partgs.
										13-40 Lst: blk, vy fossl, micrxl, v. calc fitting, irreg recessive base, fibre veins, fenestrae.
										20-33 Lst: blk, massive, resistant.
										10-20 As blk, calc, massive, fairly resist.
		1400								0-10 Lst: blk, v. argill, evenly bdd up to 1.5' thick, recessive.
		0								1381-1395 Lst:
										1356.1-1380.1 Lst:
										1349.6-1356.1 Lst:
										1346.4-1349.6 Lst:
										1337.4-1346.4 Lst:
										1322.4-1337.4 Lst:
										1299.7-1322.4 Lst:
										SEE A.L. SOKOLS (1964, p. 125).
										BETWEEN UNITS 17 AND 18: THE DISCONTINUITY OF OBATA
		1300								1282.2-1299.7 Lst:
										BETWEEN 1290 - 1295 ft.
										1272.8-1282.2 Lst:
										1260.2-1272.8 Lst:
										1252-1260.2 Lst:
										1247-1252 Lst:
										1250-1257 Lst:
										1200-1250 Covered.
CRANSWICK Fm. 202 ft.		1200								1180-1200 Lst: covered wi talus, lt gry, fr of solitary coral, brachiopods, gastropods in mud mtx, argill brtgs.
										1115-1180 Lst: lt to dk gry weathers, m gry, aphanitic, bedded, 1"-3" thick, argill, tr of crinoids, a few boundstone like textures.
										1095-1115 Lst: lt to dk gry weathers m gry, resistant, bedded, 2-3" thick, tr to locally up to 5% of crinoids in mud mtx, bitum, argill(?).
		1100								1065-1095 Lst, lt to dk gry weathers m gry, scattered two crinoid beds/ft, 4 mud mtx, possible ferne bedding, tr of amphipora, sl bituminous.
										1058-1065 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1052-1058 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1044.5-1052 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1039.5-1044.5 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1034.5-1039.5 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1024.5-1034.5 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1009.5-1024.5 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1009-1009.5 Lst: m gry weathers v. v. sl buh stron (oil), tr wvy laminations, ostracods, sl bituminous, mud mtx, massive, poss ill-defined bedding.
										1005-1009 Lst: lt to dk gry weathers lt gry, aphanitic, well bedded, 6"-1' thick, tr of scattered argill stringers near to top.
										1000-1005 Lst: lt to dk gry weathers lt gry, aphanitic, well bedded, 6"-1' thick, tr of scattered argill stringers near to top.
										998-1000 Lst: lt to med gry weathers orange brn textur, sl bituminous, tr of amphipora(?) and burrows.
		1000								798-998 stron A scattered Amph (20%) in mud mtx, ton 1/2" interbeds of thin algal mats. Sh: dk gry weather, m gry, v calc, well bedded, 1"-3" thick, bituminous. Lst: m gry weathers lt gry, scattered amphipora (20%) in mud mtx, bedded, 1" thick, alt amphipora replaced by white sparry cement. Covered wi talus, no outcrop. Sh: dk gry weathers m gry, ex, bedded, recessive, locally sl argill.
										795-798 Dol: lt gry weathers rel ex, bedded, conchoidal fracture tr of thin shell brech.
										750-795 Covered.
										743-750 Sh: lt grn gry, well bedded, 1/2-1 inches thick, good parting, sl dolomitic.
										722-743 Dol: lt gry, ex, bedded, 2-3' th. thick, conchoidal fracture, sl argill.
										707-722 Dol: lt gry weathers orange brn, ex, bedded, 1-2 ft. thick, conchoidal fracture, interbeds of shale grn gry, well bedded, 1" thick, good parting.
										662-707 Dol: lt grn gry weathers orange yel ex, bedded, 1-2 ft. thick, interbeds of dol, argill, locally fr thick, sl bituminous, shale ton interbeds of 1-2" thick grn shale.
		700								567-662 Covered w talus. Dol: lt gry weathers chocolate or purple grn, ex scattered halftime argill. stringers.
										552-567 Dol: lt gry, well bedded, 1-2" thick, uniform texture.
										547-552 Dol: lt gry to brn, vesicular, 1-2" thick, sl argill. Sediments vesicular to calcarenite.
										517-547 Dol: lt gry, ex, well bedded, 1-2 ft. thick, uniform texture.
										507-517 Dol: lt gry weathers tan gry, ex, at bottom 2 ft. solution breccia, locally thin bedded, algal laminations at top, chiefly of bit oolitic(?) argill.
		500								417-507 Dol: lt gry weathers m to lt gry, ex, bedded, 2-3 ft. thick, locally algal layers, sl bioclastic texture.
										367-417 Covered.
		400								

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Geon or crystal size	Sample No.	Photo No.	DESCRIPTIONS
		3100								Top of Hill.
										Lst: massive to thick bdd, rhanogrex, brachiopods, gr lobifera, fenest cavities in blk-dk gry micro gn stx.
		1700								1700-1715
										1670-1700 Lst: lt gry mott vy, stress and red bdd (1-2" thick), calc, occ thin irreg lenses of v argill lst, common stromat at base, fossils, some with pentagonal symmetry, occasional brachiopods, at silty corals at top.
		3000								1660-1670 Covered. Screc. Alt Hume limestone.
										Colluviated scree samples below Hume outcrop (sample 10).
		1600								1525-1560 Covered. Badlands topography. Presume lithology same as below.
										1505-1525 Sh: as before, but slightly more resistant.
		2900								1295-1505 Covered. Badlands topography. Presumably lithology is as below.
		1500								1165-1295 Lst/dolostone: pl gry-gn, buff vx, v thinly bdd, calc, varies from v. v. irreg to massive. Badlands topography.
		2800								1105-1165 Mainly covered badlands topography. Occ outcrop of sh, as in 1075-1105 interval.
		1400								1095-1100 Lst: dk gry, gy, gn bdd vx, massive, resistant, going to thinly bdd micro resistant. Alt.
										935-1093 Lst: gn-brn, buff vx, calc, mod hard to sl soft, irreg thinly bdd, fairly fissl. Recessive. Forms bad talus topography.
		2700								
		1300								
		2600								
		1200								
		2500								
		1100								
		2400								
		1000								
										905-935 Sh: gy, dk gy, calc, m [redacted] laminated, resistant.

FIGURE 27

039 01 06 041

BP Exploration Canada Limited

9

SECTION: CRANSWICK "C" SECTION "CRC"

LOCATION: LATITUDE -
LONGITUDE -

MAP REFERENCE
AIR PHOTO NO.

DATE: July 22, 1976

VERTICAL SCALE: 1"= 20 FEET

AUTHOR:

REMARKS:

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- ∩ 10 to 20 %
- ∩∩ 20 to 50 %
- ∩∩∩ > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3 - 6 %
3 symbols = 6 - 10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

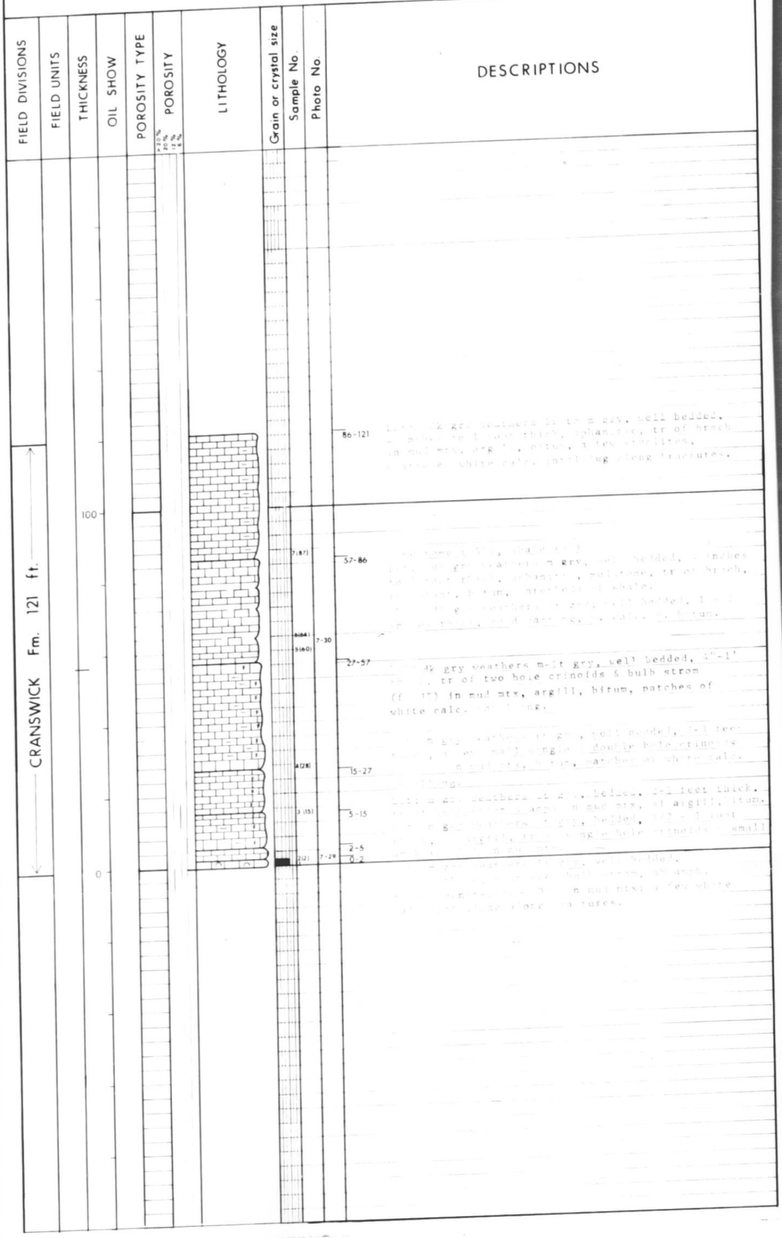


FIGURE 28

BP Exploration Canada Limited

(10)

SECTION: CRANSWICK EAST SECTION "CRE"

LOCATION: LATITUDE - 60°00'
LONGITUDE - 131°35'

MAP REFERENCE: Snake River 106 F, I
AIR PHOTO NO. A20671-74, 116

DATE: July 23, 1976.

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: B. Chi and D. Sorrick

REMARKS: Section was measured along a major tributary stream approximately 5 miles west of the Snake River immediately north of the Cranswick Mountain front.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- ⊙ FENESTRAL

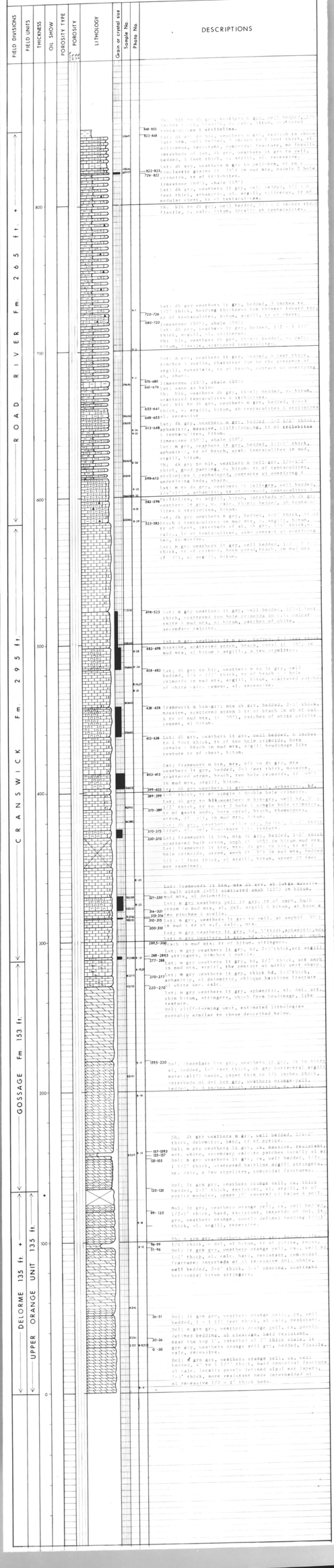
FRAMEWORKS in limestone

- f = < 10 %
- ⊃⊃ 10 to 20%
- ⊃⊃ 20 to 50%
- ⊃⊃⊃ > 50 %

ACCESSORIES

- 1 symbol = up to 3%
- 2 symbols = 3-6 %
- 3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED



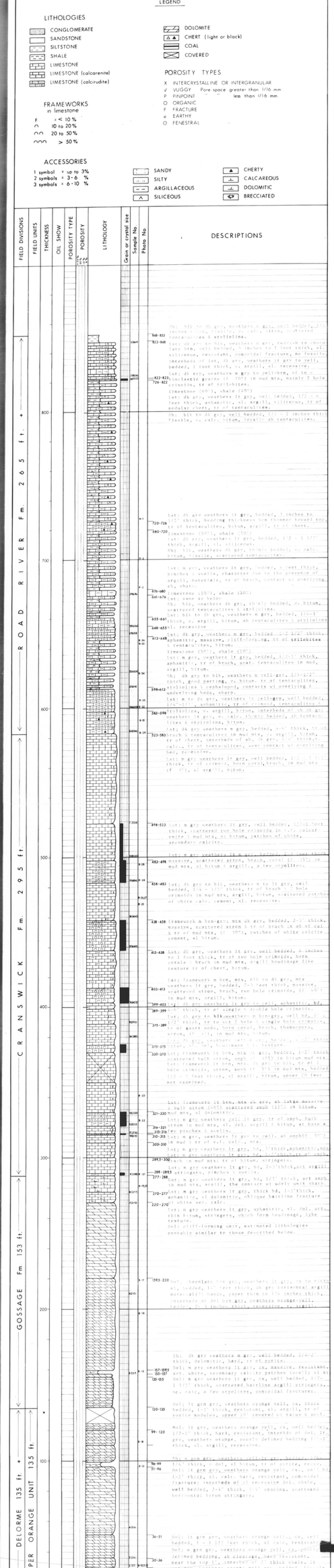


FIGURE 29

039 01 06 041

BP Exploration Canada Limited

(11)

SECTION: CRANSWICK "F" SECTION "CRF"

LOCATION: LATITUDE - 65° [illegible]
LONGITUDE - [illegible]

MAP REFERENCE Snake River 106F
AIR PHOTO NO. A 2967 - 89

DATE: July 24, 1976.

VERTICAL SCALE: 1"= 20 FEET

AUTHOR: [illegible]

REMARKS: [illegible]

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- ○ 10 to 20 %
- ○○ 20 to 50 %
- ○○○ > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm.
- P PINPOINT " " less than 1/16 mm.
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
	HUME Fm. 140 ft.	100							109-140	[illegible]
									98-109	[illegible]
									63-98	[illegible]
									43-63	[illegible]
									8-43	[illegible]
		0							0-8	[illegible]

FIGURE 32

039 01 06 041

BP Exploration Canada Limited

14

SECTION: BLACK CREEK SW SECTION "BCSW"

LOCATION: LATITUDE - LONGITUDE -

MAP REFERENCE AIR PHOTO NO. Kakwa River sheet A 27665 - 111

DATE: July 21 1967

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: MARCEL TODD & D. ANDRUSIW

REMARKS: Section starts on south side of creek, at base of valley forming brown dipslope in flaggy shales and limestones.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3 - 6 %
3 symbols = 6 - 10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

SNAKE RIVER Fm. 248 ft. +

ROAD RIVER Fm. 207 ft. +

400

300

200

100

0

445 Top of Bluff.

430-445 Shale, dk gry, sft, fis, no reaction on iron indicator, current in shaly limestone scree. (see Photo #3)

320-430 Limestone, gry to dk gry, vy arg shly in pl to shaly laminations, some massive, contorted slump, nodular, irreg, wisps of shale. (See Photo #4)

Talus

370-320 Shale, grey to , very resistant, fissile, splintery, outcrop pencil shale.

207-270 Shale, dk gry, hard bed dk vy, calc, cohesive, fractured, bedding not apparent

187-207 Sac outed zone - similar to sample taken as mentioned above - collected one sample ch, as shown on attached photo.

Limestone, vfg, dk gry, v. arg.

167-187 Covered - Creek crossing

117-147 Limestone, dk gry, sdy, v rex, brecciated by small fenestrae.

102-117 Shale, dk gry, sdy, fissile, soft.

92-102 Limestone, dk gry, v. arg, v. hard, v. bdd, v. [illegible]

73-92 Shale, blk, v. sft, fissile, soft, ice inside cracks.

Limestone, blk, v fg gry, v. arg, hard.

67-73 Limestone, blk, micro x, well bdd, v hard.

57-67 Shale, blk, [illegible] ge [illegible] contains calc. nodules. Photo 1 shows nodules & impressions on bedding plane.

50-52 Limestone, as above.

Shale, blk, v. sft, soft, fissile, v. brittle.

35-50 Limestone, blk, vf gr vy, v hard to gry vy, micro x, well bdd fissile.

8-35 Limestone, dk gry, fn bn blk vy, cryptox, v. arg, silty, scattered crystal ms, minor che lenses, inside not so calcic, rex mt bdd fr.

3-8 Shale, blk, v. fissile, no reaction.

0-3 Limestone, silty, lm vy, v. arg, resistant.

11-13 Shale, blk, v. fissile, soft, rusty grey brn, to fissile, platy, concoidal fracturing, blocky.

0-11 Limestone, silty, lm vy, v. arg, hard, resistant.

Bottom of Creek.

FIGURE 33

BP Exploration Canada Limited

15

SECTION: KNORR RANGE EAST SECTION "KRE"

LOCATION: LATITUDE - 54° 23' 30" LONGITUDE - 126° 57' 00"

MAP REFERENCE AIR PHOTO NO. Sifad River 1968 A 20673 - 110

DATE: August 1, 2 1976

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: MARCEL LOOS & N. ADAMONIS

REMARKS: Section starts on W. side of N. Flowing Creek in outcrop of Snake River Formation. (Just S. of dark grey chert outcrop of Sifad River)

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- f : < 10 %
- : 10 to 20 %
- : 20 to 50 %
- : > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

P Palynological sample
G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

SNAKE RIVER Fm. 977 ft.

?? HUME EQUIV

CANOL Fm. 145 ft.

IMPERIAL Fm. 1053 ft.

CANOL Fm. 145 ft.

This unit goes all the way north to the end of the outcrop of 2010 ft. as measured.

Start Traverse on KRE-B (Polaroid Photo)

See Polaroid Photo KRE-C for traverse loc.

See Polaroid Photo KRE-A

Top of KRE-C equals base of KRE-D traverse -see Polaroid photos KRE-C and D.

See Polaroid Photos KRE-D and E.

See Polaroid photo KRE-H

See Polaroid photo KRE-G

FIGURE 36

039 01 08 041

BP Exploration Canada Limited

18

SECTION: SOUTH ILLTYD RANGE SECTION - "SIR"

LOCATION: LATITUDE - 65° 32'
LONGITUDE - 135° 15' - 135° 13'

MAP REFERENCE
AIR PHOTO NO. Wind River 106 E
A 27647 - 161

DATE: July 14, 15 1976

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: MARCEL GOSS & S. ADAMOVICH

REMARKS:

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
		2100								
										2080-2150 Covered by vegetation to top of hill.
		2000								
										2057-2080 Lst; pl gy, aphanitic, tr f fossil debris, small stringers wt clean sparry calc.
										2040-2057 Covered.
										2010-2040 Lst; brnish gy, microcrypto gnd mtx, tr pellets, orc matrocks.
										1980-2010 Covered in lst, well bdd, similar to above brg. Scree and rubble but looked to be close to in-situ.
		1900								(Scree sample) - close to in-situ.
										1875-1880 Lst; lt gy, pelletal & ostracod rich.
										1840-1875 Break in slope at 1840' from cliff to more gentle slope, going to top of hill.
										1825-1840 Lst; gy, aphanitic, non-pelletal, common ostrac.
										1810-1825 Lst; v pl gy, crypto gnd & common clear calc filled fine (1mm) fractures. Not pelletal. Recessive.
		1800								1765-1810 Lst; v pl gy, pelletal & clear calcite filled (1/8"-1/4") voids. Pellets are 1-3 mm, 5-10% grains in sparro cem.
										1700-1765 Lst; pl-md gy, algal mat, v thick bdd, massive. Good fenestral & minor disturbed zones. (? fault zone - massive calcite).
		1700								
										1665-1700 Covered.
										1535-1665 Lst; gy, aphanitic, v thick bdd, massive, common 5%-clear calc filled veins and vugs.
		1600								
										1503-1535 Lst; gy, micro gnd, less massive. Tends to be recessive.
		1500								1424-1503 Lst; brnish gy, micro gnd, tendency to rubbly, cleaning upward to massive.
										Photo 4 shows 1419-1424' recessive shaley LST and algal mat lst.
										1420-1424 Lst; red-brn gy, algal mat.
										1419-1420 Lst; pl-brn gy, recessive, as in sample 28.
										1417-1419 Lst; m-lt brn algal mat similar to 1424-1420 ft.
										1414-1417 Lst; pl-brn gy, sparsely, one end, almost intraformational conglomeratic, one end, almost intraformational conglomeratic, mtx, rubbly, recessive lst. thick bdd.
										1354-1414 Lst; pl gy, aphanitic, as before occ ted lst as before intrbds.
		1400								
										1348-1354 Lst; beige brn, nodular, massive, sandy bdd.
										1320-1348 Aphanitic, common micro fractures, ? fenestral, ? brecc. Lst; greenish brn, aphanitic, birdseyes & clear s [illegible] as below.
										Lst; pl gy, mottled v pl gy, as below.

FIGURE 35

039 01 08 041

BP Exploration Canada Limited

17

SECTION: KNORR RANGE SOUTH EAST SECTION "KSE"

LOCATION: LATITUDE - 62° 24'
LONGITUDE - 134° 12'

MAP REFERENCE
AIR PHOTO NO. Wind River 106 E
A 20[illegible] - 110

DATE: July 18, 1976

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: S. Chi and D. Moratick

REMARKS: Section was measured in the southeast flank of Knorr Range.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
										673-730 Lst; dk gry weathers lt gry to yell brn, well bedded, 3" - 1' thick, argill, siliceous, tr of pyrite.
		700								
										670-673 Sh; m gry weathers lt gry to brn, thinly bedded, 1/4" thick, siliceous.
										654-670 Limestone (30%), shale (70%) recessive, lithologies similar to those described below.
										649-654 Lst; dk gry weathers dk m gry, bedded, 3" - 1' thick, siliceous, tr of nodular chert, vf bioclastic grains (crinoid & brach) in mud mtx.
										554-649 Limestone (50%), shale (50%) Lst; dk gry weathers m gry, bedded, 1/2" - 1' thick, occasionally coarse to pebble size bioclastic grains (stron, Alveolitea, Thamnopora), fining upward to v.f. to f. bioclastic grains wi shale fragments and chert, very argill, bitum.
		600								Sh; dk gry, well bedded, fissile, bitum, calc.
										529-554 Limestone (90%), shale (10%) Lst; dk gry weathers m gry, bedded, 1/2- 1 1/2ft thick, f to pebble size grains (two hole crinoids, stron, brach, Alveolites) shale fragment in mud mtx, patches of white calc.
										Sh; dk gry, well bedded, calc, bitum.
										514-529 shale (80%), limestone (20%) recessive interval, lithologies similar to those described below.
										502-514 Lst; dk gry weathers m gry, tr of pin point vuggy p, bedded, vf to pebble size bioclastic grains ferinoid, brach, stron), shale fragment in mud mtx, v argill, patches of white calc. infilling, bitum.
		500								477-502 shale (30%), limestone (30%) Sh; dk gy weathers m gry, well bedded, fissile, v. calc.
										475-477 Lst; dk gry weathers m gry, bedded, 1-2 ft. thick scattered vf to f bioclastic grains, shale fragment in mud mtx, v. argill.
										440-475 Lst; dk gy weathers m gry, f to c grained, occasional shale pebble fragments in mud mtx, fining upward, lower contact sharp wi concave shap. shale (50%), limestone (50%)
										441-445 Sh; dk gry weathers lt gry, well bedded, fissile sl. calc.
										421-441 Lst; dk gry, bedded, 1-2' thick, v. argill wf to f grained bioclastic at base, sharp contact wi underlying unit, upper contact gradational
		400								Lst; dk gry weathers lt gry to well-brn, vf bioclastic grains (crinoid, brach & Thamnopora) in mud mtx, argill.
										429-421 Sh; dk gry weathers lt gry, well bedded, fissile bituminous interbeds of 1/2" thick, vf bioclastic lst wi fs fragments, Lst; dk to m gry vf bioclastic lst with fs (crin), brach) sh fragment in mud mtx, argill, sl. fining upward. Sh; covered, dk gry, thinly bedded, fissile, recessive.
										414-429 Lst; dk gry weathers lt gry to well-brn, scattered wf to m bioclastic grains (crinoid, brach & unidentified fossil fragments), sh and chert fragments in mud mix, v. argill, bituminous
										400-414 Sh; dk gry, well bedded, 1/2 - 1' thick, sl calc, tr of pyrite, interbed of lst, dk gry, bedded, 3"-6" thick, vf to coarse bioclastics wi shale fragments, sl fining upward.
										386-400 Lst; dk gry, bedded, v. argill, v. coarse to pebble sized grains (single & double hole crinoid, brach, shale fragment and chert) at base, fining upward to v.f. sized grains at top, bituminous.
										350-386 Sh; dk gry sl. calc, thinly bedded, bitum.
										340-350 Lst; dk gry weathers m gry, coarse to v coarse, bioclastic grains (brach, two hole crinoid,
										339-344 Stylolitna), shale fragment and chert in mud mtx, mainly covered wi talus very argill pyritic
										179-339 Sh; dk gry weathers lt gry, well bedded, 1/4" - 1" thick, siliceous, sl. calc.
		300								
										175-179 Lst; dk gry, bedded, 1- 1 1/2ft thick, v. argill, pebble sized grains (broken lst fragments, coral, stron, brach, crinoid and shale fragments) at base, fining upward to vf sized grains at top, bituminous mainly covered
										153-175 Sh; dk gry, well bedded, 1/4" - 1" thick, calc. tr of pyrite, at 123 ft. 1' thick lst, similar to those described below.
		200								
										83-83 Lst; blk to dk gry vf bioclastic and shale fragments in mud mtx, small scale cross beds, v argill.
										83-83 Sh; m gry, well bedded, 1/4-1/2 ft thick ea. calc. tr of pyrite.
										3-83 covered
		100								
										0-3 Lst; dk gry weathers m gry, scattered vf bioclastic grains (brachiopods, crinoids, and stylolina), wf to c shale fragments in mud mtx, bedded, 3' thick, tr of pyrite.
		0								

ROAD RIVER Fm. 735 ft + SOLO CREEK Mbr. 335 ft

UNNAMED CARBONATE 2150 ft.

UNNAMED

Lst: massive, cse gn, in pl cse x, poorly preserved crinoids & brachs, favosites.

880-900

Lst: buff-lt grish brn, micro gnd, algal mat? birdseyes.

710-860

Lst: lt brnish gy-buf, micro to v f pelletoidal gn, hard, massive scattered favosites

690-710 Covered.

605-690

Lst: lt brnish gy micro-cse gnd, fossilif. Fossils coralsh tufa dist gradatnly upwards to sparse distribution in a micro gn mtx at about 665'.

LST: lt. brnish gy - buff, massive bedded, microgn, hard, no fossils seen

LST: massive, hard, microgrnd. More Favosites.

Lst: lt gy, corals in micro x mtx. Fragg 1"-6" bets. Zone about 2' thick.

603-605
520-603

Lst: pl gy, cse x gdg to cse gn, massive w thick bdd, many solitary corals, colonies 4-60'. Can't see any Favosites.

30-520

Lst: crm-gy, pl gy, white, gr vx, cse lr x, clean, massive & v thick bdd, fossilif. Favosites most common, with occ solitary corals, 4 stroms, brachiopods, crinoids (1 hotel).

Foggy d, vugs up to 2" across - 2 vx features. Sample 19: lst: buff brnish gy, cse x, favosites rich, some 1 hole crinoids & brachiopods (poor preservation). Photo 5 shows large favosite colonies, small not in growing position. Some solitary, rugose corals & 4 stroms.

Sample 12 is lst wh crm, gr vx, cse gn, cse x, clean, corals (favosites, solitary) & hole (star) crinoids.

Lst: crm-gy, gr vx, calc x, fossilif, favosites common, very massive, hard.

240-315

Favosites.
Lst: lt gy - mottled yellow brnsh gdg upwards to pl gy, m-cse x, faintly 4 stromat, fossiliferous, locally common favosites & solitary corals (sample 315, occas crinoids.

Fossil sample. (Solitary corals, ?Favosites, Alveolites? Phillipsastrea seen but couldn't collect it.

225-240

Sample taken at 240-315.
Lst: pl brnish gy, m-cse gnl x, fossilif, brachiopod- or pelecy-, hole crinoid.
Sample taken at 225-240.

191-225

Lst: md brn-brnish g, micro-cse gn, occ sparry calc in fractures and scatt individually through mtx.
Thick bdd, massive.
Becomes mixed x & commonly fract w sh calc infill towards top.

128-191

Lst: pl brn-gy, as below, massive.

157-158
76-157

Lst: mod-dk brnish gy nodules in softer pl brnish gy mtx, pl parting, locally 1" thick.
Lst: pl brnish gy, micritic, common sparry calcite birdseyes, v fractured, massive bedded.

74-76
20-74

Lst: pl brnish gy-buff, micritic, occ lithic x, occ algal? structures, some v cse x & birdseye coatings on fract, numerous 4 recessive.

0-20

Lst: lt gy, micritic, occ skeletal frags some clear calcite birdseyes.

Photo shows view at section.
Sample taken of favosites & coral in scree.

Base of outcrop at base of hill

Photo 4 shows 1419-1424' recessive shaley LST and algal mat lst.
Lst: shly gy, algal mat.

1420-1424
1417-1420
1407-1417
1384-1403

Lst: pl brn, micritic, recessive, as in sample 28.
Lst: gy, lm algal mat mtrx w cse gy & pk lt brn gn peloidal grains, cse gnd, almost intraclastic cse conglom rudite, more fenestral cannot see; brn-wx, arg, rubbly, recessive 1ft.
Lst: lt gy, aphanitic, as below red lst as before (white).

1348-1384

Lst: greyw brn, nodular, massive, vuggy to rich brcia, aphanitic, common micro fractures, 4 birdseyes.

1320-1348

Lst: pinkish brn, aphanitic, birdseyes w clear x calcite.
Imthdd w pl gy aphanitic lst as below.

1225-1320

Lst: w pl gy, aphanitic, massive.

1205-1225

Lst: dk brnish gy, crypto to micro x.

1195-1205

Lst: pl brn-buff micrite w clear calc x birdseyes fills & microfractures, 3 hard & dense, massive 2'-3' thick.

1160-1185

Lst: pl brn to brnish gy, gy wx, v f to f (1mm) pelletoidal grains in pl brn sparry calc cem, massive bdd.

1010-1160

Lst: pl brnish gy, micro gn, occ common white calc in fractures, hard, massive to thick bedded.
Can't see any macro fossils.

1000-1010

Lst: pl brn gy, gy wx, micro gn, in pl re x-ed to micro x, extensively fract, fractures lined w brn lst?

900-1000

Sample 20 - solitary coral found in scree about 5' below top of a knoll. Must be near to in place.

Lst: massive, cse gn, in pl cse x, poorly preserved crinoids & brachs, favosites.

880-900

Lst: buff-lt grish brn, micro gnd, algal mat? birdseyes.

710-860

Lst: lt brnish gy-buf, micro to v f pelletoidal gn, hard, massive scattered favosites

690-710 Covered.

605-690

Lst: lt brnish gy micro-cse gnd, fossilif. Fossils coralsh tufa dist gradatnly upwards to sparse distribution in a micro gn mtx at about 665'.

LST: lt. brnish gy - buff, massive bedded, microgn, hard, no fossils seen

LST: massive, hard, microgrnd. More Favosites.

Lst: lt gy, corals in micro x mtx. Fragg 1"-6" bets. Zone about 2' thick.

603-605
520-603

Lst: pl gy, cse x gdg to cse gn, massive w thick bdd, many solitary corals, colonies 4-60'. Can't see any Favosites.

30-520

Lst: crm-gy, pl gy, white, gr vx, cse lr x, clean, massive & v thick bdd, fossilif. Favosites most common, with occ solitary corals, 4 stroms, brachiopods, crinoids (1 hotel).

Foggy d, vugs up to 2" across - 2 vx features. Sample 19: lst: buff brnish gy, cse x, favosites rich, some 1 hole crinoids & brachiopods (poor preservation). Photo 5 shows large favosite colonies, small not in growing position. Some solitary, rugose corals & 4 stroms.

Sample 12 is lst wh crm, gr vx, cse gn, cse x, clean, corals (favosites, solitary) & hole (star) crinoids.

Lst: crm-gy, gr vx, calc x, fossilif, favosites common, very massive, hard.

240-315

Favosites.
Lst: lt gy - mottled yellow brnsh gdg upwards to pl gy, m-cse x, faintly 4 stromat, fossiliferous, locally common favosites & solitary corals (sample 315, occas crinoids.

FIGURE 38

039 01 06 041
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(20)

SECTION: SOLO CREEK SECTION "SC"

LOCATION: LATITUDE: 68° 55' - 57"N.
LONGITUDE: 133° 35' - 51"W.

MAP REFERENCE AIR PHOTO NO. West Lower Inlet 105H/5 e-w, A 18426 n-41

DATE: July 11, 26 1976.

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: B. CHI & M. LOOS

REMARKS: Section was measured along Solo Creek and on an unnamed mountain which forms the core of Margery Dome on northwest flank of Trevor Range.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- = 10 to 20 %
- = 20 to 50 %
- = > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm
- P FINTUNI less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

P Palynological sample
G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

CANOL Fm.

SNAKE RIVER Fm. 829 ft

UNIT C 489 ft

UNNAMED CARBONATE 1200 ft +

1362-1397 lst lt gry, arg, weathers pale gry-grn bedded, massive, 1/2 - 1 inches thick, good parting, v slty, v sparry

1342 - 1362 Covered - lst rubble

1274-1342 lst and dol weathers lt gry to white mineral coated, fine to medium crystalline, thick to massive, lots of vugs

1249-1272 Covered - lst rubble

1209-1249 lst lt gry-grn weathers grn gry, poorly bedded, nodular texture, v sparry

1184-1209 Covered - lst rubble

1134-1184 lst m gry-grn weathers lt grn gry bedded, brachi fractured, v slty, v sparry

1109-1134 Covered - lst rubble

1106-1109 Sh: lt gry weathers m gry, bedded, 1-1½ inches thick, v bitum w/ calc, interbeds of lst, v slty, v sparry

1084-1106 lst m gry weathers lt grn gry, bedded, massive, 10-20 ft thick, v sparry

1034-1084 Covered - lst rubble

1033-1034 Sh: m gry-grn weathers m gry, bedded, 1 - 1½ inches thick, v bitum w/ calc, interbeds of lst, v slty, v sparry

1028-1033 lst: m gry-lt gry weathers, lt gry fractured, massive, 10-20 ft thick, v sparry

1008-1028 lst: m gry weathers lt gry, bedded, 1 - 1½ inches thick, v sparry

828-908 lst: m gry weathers lt gry, well bedded, 1 - 1½ inches, good parting, v slty, v sparry, v bitum w/ calc, interbeds of lst, v slty, v sparry, v bitum w/ calc, 1 - 2 feet thick, lithology similar to upper calcirudite unit at 10 feet

753-828 lst: lt gry-grn weathers lt rusty rust well bedded, massive, 1 - 2 inches thick, v sparry, v bitum w/ calc, interbeds of lst, v slty, v sparry, v bitum w/ calc, 1 - 2 feet thick, lithology similar to upper calcirudite unit at 10 feet

728-733 Covered - lst rubble

718-728 lst: lt gry-grn weathers lt rusty gry bedded, massive, 1 - 2 inches thick, v sparry, v bitum w/ calc, interbeds of lst, v slty, v sparry, v bitum w/ calc, 1 - 2 feet thick, lithology similar to upper calcirudite unit at 10 feet

568-718 lst: m gry-grn weathers lt rusty gry well bedded, massive, 1 - 2 inches thick, v sparry, v bitum w/ calc, interbeds of lst, v slty, v sparry, v bitum w/ calc, 1 - 2 feet thick, lithology similar to upper calcirudite unit at 10 feet

Sh: blk weathers dk gry, well bedded, paper thin to 1/4 inches thick, v bituminous, v calc, v arenaceous

787-2042 Sh: blk to dk gry weathers lt gry to lt brn, well bedded, 1/4-1 inch thick, good parting, v bituminous, w/ calc, poor part recessive, at 1781 v ab tentaculites between 1911-1951, lst interbedded with sh: lst: dk gry weathers lt orange brn, bedded 1-2 feet thick, v argill, v abundance of tentaculites; sh: similar to those described above, however 5cm thicker (3-4 feet) at 1911 weathered monograptus sp., at 1931 bicrenoma sp., conulara, tentaculites and Stylolina; at 1967 bicrenoma sp; at 1981 tentaculites and monograptus sp.

1638-1787 Sh: blk to dk gry weathers lt to m gry, well bedded, 1/4 - 1 inches thick, good parting, very bituminous, w/ calc., at 1687 interbed of lst, dk gry, well bedded, 1/4 inches thick, argill bitum, abundant, overlying sh w/ scattered brachiopods at 1706', 1717 and 1757' scattered stylolina and tentaculites, at 1737 sp of Monograptus sp. & Stylolina.

1524-1544 Sp: blk to dk gry weathers dk brn-gry, well bedded, paper thin to 1/4 inches thick, good parting, very bituminous, v calc, v super x feet brn at resistant, interbeds of lst, bedded, 6 inches thick, v argill bitum mudstone

2041 lst to m brn-gry weathers lt gry, lt gr/ m/l mgy, bedded, 1 - 3 feet thick, vf to m xln, silliceous, resistant.

FIGURE 37

039 01 03 041

BP Exploration Canada Limited

(19)

SECTION: ROYAL CREEK SECTION "RC"

LOCATION: LATITUDE - LONGITUDE - | MAP REFERENCE AIR PHOTO NO. Wind River 106 F A 27637 - 31

DATE: July 14, 15, 1976 | VERTICAL SCALE: 1" = 20 FEET

AUTHOR: S. CHI and N. DUBOIS

REMARKS: Section was measured along Royal Creek in the northwest flank of Royal Mountain.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calciruditе)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm
- P PINPOINT less than 1/16 mm.
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

P Palynological sample
G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

NORFORD'S UNIT 6 — ROAD RIVER Fm. 2462 ft — NORFORD'S UNIT 7 880 ft.

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Geochem or cored size | Sample No. | Photo No. | DESCRIPTIONS

2900
2800
2700
2600
2500
2400
2300
2200
2100
2000
1900
3700
3600
3500
3400
3300
3200
3100
3000
2900

2787-3032 — limestone (.70), shale (.30)
Lst: dk grey, weathers m brn-grey, bedded, 1 feet thick, weathers m brn-grey, bedded, 1st: dk grey, weathers m brn-grey, bedded, 1/4 inches to 1 1/2 feet, some bed nodular 1/4 inches to 1 1/2 feet, some bed nodular 1/4 inches to 1 1/2 feet, some bed nodular & lenticular, most beds aphanitic mudstone, & lenticular, most beds aphanitic mudstone, & lenticular, most beds aphanitic mudstone, a few beds graded, m to a pebble size a few beds, graded, m to a pebble size a few beds, graded, m to a pebble size grains (crinoids, brach & shale fragmental grains (crinoids, brach & shale fragmental grains (crinoids, brach & shale fragmental fining upward to vf to aphanitic limestone, fining upward to vf to aphanitic limestone, fining upward to vf to aphanitic limestone, upper most beds commonly parallel laminated upper most beds commonly parallel laminated upper most beds commonly parallel laminated and rarely cross-laminated, the contact and rarely cross-laminated, the contact and rarely cross-laminated, the contact wi overlying shale commonly sharp. wi overlying shale commonly sharp. wi overlying shale commonly sharp.

Sh: black weathers dk grey, well bedded, paper thin to 1/4 inches thick, v calc, bitum & rr of tentaculites, stylolitha & coiled cephalopods.

2787-2792 — Lst: dk to m grey weathers m grey, bedded, 1 feet thick, m to v pebble size grains, bioclastic including crinoids, brach, shale fragments at base fining upward to vf grains & lime mud at top, near top 1 inch thick bedded, blk chert.

Sh: dk grey weathers m grey, well bedded, 1/4-1/2 inches thick, v calc, bituminous, rr of coiled cephalopods

Chert: near 2787 core sample blk, bedded 1-1/2 inches thick, hard, resistant, rr calc, rr of coiled cephalopods.

2792-2842 — Lst: dk grey weathers m grey, bedded, 1 foot thick, m to v pebble grains (mainly single & double hole crinoids) rr fossil debris, rr of shale frag ments in mud mtx, fining upward to lime mud, sharp contact wi overlying shale.

Sh: blk weathers dk grey wi white mineral coating, thinly bedded, paper thin to 1/2 inches thick, good parting, v. bituminous, calc, sl. resistant.

Sh: blk weathers dk to m grey, bedded, paper thin to 1/4 inches thick, calc siliceous, sl resistant rr of straight cephalopods.

2842-2882 — Sh: blk to dk grey weathers m grey with white mineral coating, thinly bedded, paper thin to 1 inch thick, good parting, very calc, bituminous, rr recessive interbeds of lst (see 33), dk to m grey weathers yell-lt grey, bedded, 1-4 inches thick. Argill lst of cephalopods & tentaculites no graptolites.

Lst: dk gry weathers lt grey, bedded, pinch and swell, nodular character (1-4 inches in diameter), nodular character (1-4 inches in diameter), nodular character (1-4 inches in diameter), graded, f to m bioclastics (fish bone crinoid, graded, f to m bioclastics (fish bone crinoid, graded, f to m bioclastics (fish bone crinoid, bryozoans, brach), shale fragment (f 10%) fining bryozoans, brach), shale fragment (f 10%) fining bryozoans, brach), shale fragment (f 10%) fining upward to vf grains in mud mtx, sharp contacts wi upward to vf grains in mud mtx, sharp contacts wi upward to vf grains in mud mtx, sharp contacts wi overlying and underlying paper shales. overlying and underlying paper shales. overlying and underlying paper shales.

2882-2942 — Lst: dk grey weathers m dk grey, aphanitic, v argill bitum., resistant.

Lst: dk gry weathers m grey brn, graded, fine grained bioclastics (brach, crinoid) at base grained bioclastics (brach, crinoid) at base grained bioclastics (brach, crinoid) at base are fining upward to vf at top, (f 50%) are fining upward to vf at top, (f 50%) are fining upward to vf at top, (f 50%) sl argill. sl argill. sl argill.

2942-3032 — 14-BC-13 Lst: dk to m grey weathers lt brn, well bedded, graded, bottom 3 inches, fine to 14-BC-13 Lst: dk to m grey weathers lt brn, well bedded, graded, bottom 3 inches, fine to 14-BC-13 Lst: dk to m grey weathers lt brn, well bedded, graded, bottom 3 inches, fine to vault pebble size, shale fragments & bio- vault pebble size, shale fragments & bio- vault pebble size, shale fragments & bio- clastics (brach, crinoids) (f 50%) in mud 14-BC-14 clastics (brach, crinoids) (f 50%) in mud 14-BC-14 clastics (brach, crinoids) (f 50%) in mud mtx, argill bitum, fining upward, top of 14-BC-12 mtx, argill bitum, fining upward, top of 14-BC-12 mtx, argill bitum, fining upward, top of bed, grains (f 60%) in mud mtx, the bed, grains (f 60%) in mud mtx, the bed, grains (f 60%) in mud mtx, the contacts wi overlying and underlying paper contacts wi overlying and underlying paper contacts wi overlying and underlying paper black shale are sharp and abrupt. black shale are sharp and abrupt. black shale are sharp and abrupt.

Sh: dk grey weathers m grey, well bedded, paper thin to 1/4 inches thick sl calc, recessive, bitum, rr fossils.

Sh: blk weathers dk grey, well bedded, paper thin to 1/4 inches thick, v bituminous, sl calc, rr of tentaculites.

3042-3082 — Sh: blk to dk grey weathers lt gry to lt brn, well bedded, 1/4-1 inch thick, good parting, v bituminous, v calc, paper part recessive, rr lst interbeds with (f 10%) thin, sl calc, at 181 v ab tentaculites.

Lst recessive beds with lam 35 gry weather- ing orange brn, bedded 1-2 feet thick, v argill, sl calc, at 197 v ab tentaculites, sh similar aphanitic, rr of tentaculites, sh similar aphanitic, rr of tentaculites, sh similar aphanitic, rr of tentaculites, sh similar to those described above, lower bcm thicker to those described above, lower bcm thicker to those described above, lower bcm thicker 1-2 feet, at 237 weathered nonogranius sp., 1-2 feet, at 237 weathered nonogranius sp., 1-2 feet, at 237 weathered nonogranius sp., at 247 micronema sp., conularia, tentaculites at 247 micronema sp., conularia, tentaculites at 247 micronema sp., conularia, tentaculites at 253 Scyphocrinus sp. at 248 and Stylolinites, at 253 Scyphocrinus sp. at 248 and Stylolinites, at 253 Scyphocrinus sp. at 248 and Stylolinites, and Nonogratus spp. and Nonogratus spp. and Nonogratus spp.

3032-3082 — Limestone (.95), shale (.05), chert (.05)
Lst: dk grey, weathers lt to m grey well bedded, 1ft inchest foot thick, aphanitic, argill, tuff, mainly micritic limestone.

Sh: same as below.

Chert: blk, weathers grey blk, well bedded, 1foot inches thick, interbeds of lst layers, calc, hard, resistant.

2787-3032 — Limestone (.70), shale (.30)
Lst: dk grey, weathers m brn-grey, bedded, 1st: dk grey, weathers m brn-grey, bedded, 1/4 inches to 1 1/2 feet, some bed nodular 1/4 inches to 1 1/2 feet, some bed nodular & lenticular, most beds aphanitic mudstone, & lenticular, most beds aphanitic mudstone, a few beds, graded, m to a pebble size a few beds, graded, m to a pebble size grains (crinoids, brach & shale fragmental) grains (crinoids, brach & shale fragmental) fining upward to vf to aphanitic limestone, fining upward to vf to aphanitic limestone, upper most beds commonly parallel laminated upper most beds commonly parallel laminated and rarely cross-laminated, the contact and rarely cross-laminated, the contact wi overlying shale commonly sharp. wi overlying shale commonly sharp.

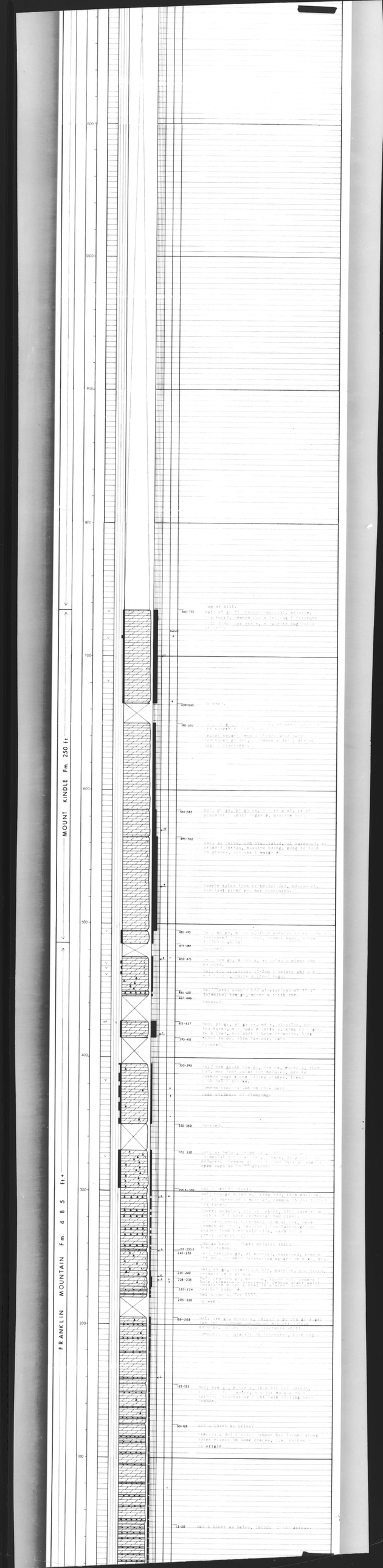
Sh: black weathers dk grey, well bedded, paper thin to 1/4 inches thick, v calc, bitum & rr of tentaculites, stylolitha & coiled cephalopods.

3552-3602 — Sh: blk weathers yell-grn-grey, well bedded, paper thin to 1/4 inches thick, good parting, non calc, siliceous, bitum.

3782-3842 — Excellent outcrops of slightly recessive bevonian strata are exposed along the right side of the River bank. However, no attempt has been made to measure the outcrop due to the steep nature of the outcrop. It is believed that the Devonian strata to be similar to those described below.

FRANKLIN MOUNTAIN Fm. 485 ft.+

MOUNT KINDLE Fm. 250 ft.



MOUNT KINDLE Fm. 250 ft.

FRANKLIN MOUNTAIN Fm. 485 ft.+

665-735 top of hill.
Dol: pl gy, ss, crinoidal-oncolitic, massive, fractured, common lge x dol vug & fracture filling ox, occ qtz xls, & calcite vug fills

630-665 Covered.

383-630 Dol: lt gy, [illegible] on together [illegible] fractures upward into [illegible] fractured gy dol, common x dol & qtz in vugs & fractures.

565-585 Dol: pl gy, pl gy vx, [illegible] to m xl, tr of pinpoint [illegible] gry-gy, massive bdg.

495-565 Dol: as below, non precipitated, pl burrowed, occ crinoid inthds, massive bdding, ging to vuggy in places, occ sma l vuggy p.

Sample taken from crinoidal dol, micro vl, bioclast pl-md gy, not fractured.

485-495 Dol: md gy, micro x, thin nodular to occ thin fractured, occ [illegible], common vugs, often filled w/ dol.

475-485 Covered.

450-475 Dol: brn gy, m to x, as below w minor cht nodules.
Dol: occ crinoidal (1-2mm) holers wh w occ w fine x, white x lined vugs.

440-450 Dol/chert: events had alterations of 1" to 3" dolomite, brn gy, micro x & blk cht.

427-440 Covered.

415-427 Dol: pl gy, pl gy vx, md x, sl silic, occ fractures, occ vugs & intra x, ging to l gst, m x to vl, occ abit of hole crinoids, bdng thick to occ thin laminae, cave.

395-415 Covered.

350-395 Dol: brn gy-dk brn gy, brn vx, micro x, thin bdd, occ particular cht nodules, occ to common vugs along bdding planes, lined w/sh dol & qtz xls.
Common brecciation in this unit.
Some evidence of slumping.

330-350 Covered.

302-330 Dol: as below, crinoidal, mottled non crinoidal micro xl do, common, dk gy-blk cht nodules. Common vugs filled/lined w/ xl vugs & open vugs up to ¼" across.

255-255.5 Pyrobitumen.

240-255 Dol: brn-ora gy, sl mottled, burrowed, common cht nod, cr nod increasing upward in m xl, stx.

235-240 Dol: br gy, thin-thick bdd, massive, occ brach, crinoid in m xl stx.

228-235 Dol: brn-ora gy, massive, thick bdd, common l hole crinoids & bioclastic debris scatt w/lt cht nods in micro x stx. Sh dol seen bunched up leaches, vugs, p.

220-226 Dol & cht as for 155'.

205-220 Covered.

155-205 Dol: brn gy, micro x, intbdd w pl brn gy argl lam dol, common intrds of blk cht, often nodular, sh dol filled fractures scatt common, occ qtz xls in fracture, rare vugs.

125-155 Dol: brn g, micro x, thn blk chc intbds, 1/2"-1" apart, occ cht nodule nods intbds, fracturing & cht vein filling less common.

50-125 Dol & Chert as below.
Brecc'd w dol & silic cement has formed along joint planes in some places, i.e. tectonic in origin.

15-50 Dol & Chert as below, intbdd [illegible] across.

0-15 Dol: lt brn gy, brn gy vx, micro x, v irreg nod bid, common [illegible] blk chc nodules.
Common thin sh dol veins & fractures.

ROAD RIVER FM. 2,137 ft. +
1000
900
800
700
600
500
400
300
200
100
0
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
shale (50%), limestone (50%)
Sh: same as below.
Lst: dk grv, weathers lt grv, well bedded, 3 to 7 inches thick, subcrystalline, very argil, siliceous concoidal fracture.
shale (70%), limestone (30%)
Lst: dk grv, weathers lt grv to yellow, well bedded, 2"-12" thick, aphanitic, resistant, siliceous very hard, concoidal fracture, bitum.
Sh: dk grv, weathers m grv, well bedded, 1/4-1.2 inches thick, very calc, locally hard, siliceous, resistant, upper ten 20 feet brns more calc. 1st at 1420 and 1204 feet brns more calc. 1st at 1420 and 1204 feet brns more calc. 1st at 1420 and 1204

FIGURE 41

039 01 06 041

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23

SECTION: PEEL RIVER WEST SECTION "PW" A

LOCATION: LATITUDE - LONGITUDE - | MAP REFERENCE AIR PHOTO NO.

DATE: July 16, 1976 | VERTICAL SCALE: 1"= 20 FEET

AUTHOR:

REMARKS:

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- ∩ 10 to 20 %
- ∩∩ 20 to 50 %
- ∩∩∩ > 50 %

P Palynological sample

G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

IMPERIAL Fm 500 ft. +

CANOL Fm.

600

500

400

300

200

100

0

Photo 2 and 31

Canol top.

Photo3: note ratio in outcrop cover.

horizontal

90°

60°±

332-350

shale

211-332

shale

210-211
180-210

155-180

135-155

121-135

75-121

70-75

5-20

3-5

0-3

FIGURE 40

039 01 06 041

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22

SECTION: PEEL RIVER WEST SECTION "PW"

LOCATION: LATITUDE - LONGITUDE - | MAP REFERENCE AIR PHOTO NO.

DATE: July 16, 1976 | VERTICAL SCALE: 1"= 20 FEET

AUTHOR:

REMARKS:

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm
- P PINPOINT " " less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- ∩ 10 to 20 %
- ∩∩ 20 to 50 %
- ∩∩∩ > 50 %

P Palynological sample

G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS | FIELD UNITS | THICKNESS | OIL SHOW | POROSITY TYPE | POROSITY | LITHOLOGY | Grain or crystal size | Sample No. | Photo No. | DESCRIPTIONS

IMPERIAL Fm. 100 ft.*

CANOL Fm 190 ft.

ROAD RIVER Fm 333 ft. +

SOLO CREEK 42 ft.

700

600

500

400

300

200

100

0

343-443

480-543

EXD-480

430-440

410-420

365-410

360-365

332-350

332-333

328-332

328-329

138-328

168-188

92-148

93-92
763-813

75-76.5
55-75

30-55

9-30

0-9

Sh: grn grey weathers lt grey-grn, bedded, paper thin to 1/2 inch thick, nonmarine, rare silty lenses with laurel.

Sh: med grey, fissile, hornfelsed by faulting, to 1/2 inch thick, nonmarine.

Sh: blk to dk grey weathers lt grey-grn, well bedded, paper thin to 1/2 inch thick, silty, nonmarine.

Sh: blk to dk grey weathers lt grey-grn, well bedded, paper thin to 1/2 inch thick, nonmarine.

Shale (clay), chalky, blk.

Shale (clay), dk grey weathers rusty orange, well bedded, paper thin to 1/2 inch thick, very fissile, nonmarine, minor limestone beds, bentonitic, minor fractures & few ephemeroptera at base (very common).

Sh: lt grey weathers med grey, well bedded, paper thin to 1/2 inch thick, nonmarine.

Shale (clay), dk grey weathers rusty orange, well bedded, paper thin to 1/2 inch thick, very fissile, nonmarine.

Shale (clay), limestone (silty), chert (?), dk grey weathers orange very brown, nonmarine, paper thin.

Shale: same as below.

Sh: blk to dk grey weathers lt grey, orange vein, bedded, paper thin to 1/2 inch thick, nonmarine.

Shale: blk to dk grey weathers rusty orange, well bedded, paper thin to 1/2 inch thick, nonmarine.

Shale: blk to dk grey weathers rusty brn, well indurated, no apparent bedding, scattered iron concretions.

Sh: dk grey weathers lt grey, orange vein, bedded, paper thin to 1/2 inch thick, nonmarine.

Shale: blk to dk grey weathers rusty orange, well bedded, paper thin to 1/2 inch thick, very fissile, nonmarine.

Sh: dk grey weathers lt grey, orange vein,

FIGURE 42

039 01 06 041
BP Exploration Canada Limited

(24)

SECTION: TRAIL RIVER SECTION "TR"

LOCATION: LATITUDE - 65° 35' - 65° 27' 30"
LONGITUDE - 135°, 21' - 135° 10'

MAP REFERENCE AIR PHOTO NO. Trail River 106L A 22928 - 14

DATE: July 17, Aug 6 & 10, 1976

VERTICAL SCALE: 1" = 20 FEET

AUTHOR: M LOOS & R. ADAMOVICZ

REMARKS: Section was measured along the Trail River just east of the Richardson Mountains Front.

This section was compiled by using the GSC Section (road) as a base to check lithology and sedimentary features, and to collect samples and photographs.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm
- P PINPOINT less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F < 10 %
- O 10 to 20 %
- OO 20 to 50 %
- OOO > 50 %

P Palynological sample

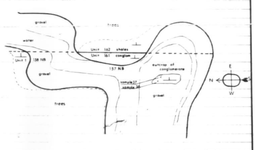
G Geochemical sample

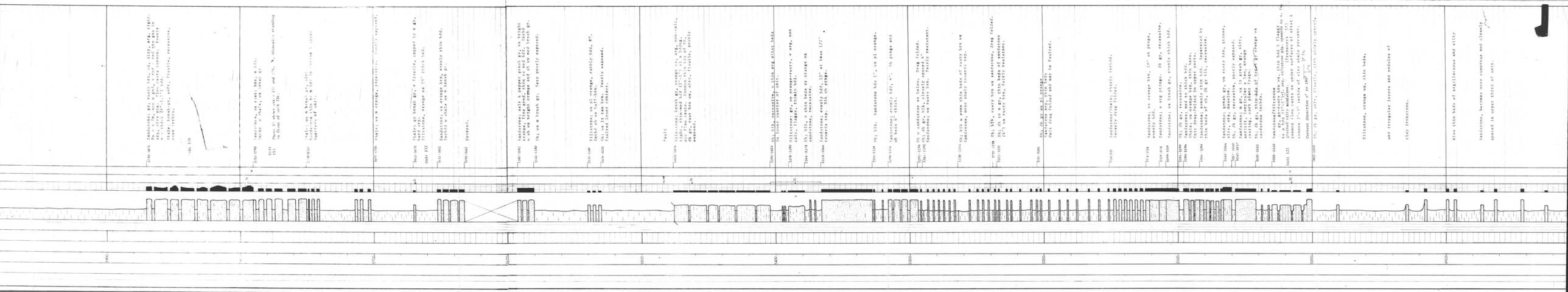
ACCESSORIES

1 symbol = up to 3%
2 symbols = 3 - 6 %
3 symbols = 6 - 10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
										7960-7974 Sh; dk brnsh gy blk, vx gy occ sulf, soft, fissile, occ inthds of siltstone rust wx, thin.
										Unit 25
										7555-7560 Sandstone; wx rusty orange, med to thick bdd.
										7500-7555 Sandstone; wx rusty orange, evenly thin bdd, fn-m gnd, kaolin'c, tight, sl arg, m-well std.
										7490-7500 Sh; dk gy w widely spaced thin beds of sandstone, orange wx, beds highly contorted, upper part faulted.
										7468-7490 Sh; dk gy blk, blk & sulf wx, v fissile, soft, thin beds of siltstone dk gy, rust wx, 1"-1½" beds also 1/2" beds gy wx siltstone, v arg.
										7238-7468 Siltstone; gy, rust wx, hard, non-calc wavy, contacts thin bdd. Flow casts 1"-3" thick beds. Inthdd sh dk gy, rust brn gy wx, v fissile, soft, occ sulph wx.
										Unit 20
										7226-7238 Covered. Interval presumably consists of shale, similar to unit below.
										7214-7226 Sh; blk, wx dk gy fissile, v occ 1" clay ironstone nodules, wx rusty brn.
										7080-7214 Covered.
										7069-7080 Sandstone; wx orange, granule gr stnr, v bdd, 1" even bed; shale inthds, dk grnsh gy, poorly exposed.
										7049-7069 Sandstone; dk grnsh gy, wx orange, inthdd w shale, dk grnsh gy, poorly exp, sh conglom & slty & argill, upper 3' plant fragm.
										7040-7049 Sh; dk gy, wx m brnsh gy; thin bds of sandstone, blk gy f gnd, one layer of ironstone nodules.
										7021-7040 Sandstone; conglomeratic, bds up to 4', inthdd w shale dk gy, up to 3' thick bds.
										7004.8-7021 Sandstone; m grnsh-gy, wx bright orange, conglom'c, pebbles up to 1/8" thick, massive.
										7000-7004.8 Sh; dk gy, recessive, poorly exp.
										6990-7000 Sandstone, m gy, wx orange, conglom'c, cse gnd, v bd, up to 6" thick, separated by thin bds of shale, dk gy 6" th.
										6980-6990 Conglomerate; wx orange, pebble size 1/4", v bdd.
										6952-6980 Sandstone, conglomeratic, fn to cse gnd mix, base 4' thin bdd & recessive. Above evenly thick bdd to massive. Dk gy shale inthds up to 2' thick in upper 14' of unit.
										6908-6952 Minor thin shale inthds, brn wx, micac, soft, fissile to crumbly.
										Photo 26: Flow casts in outcrop about 35' above base of Unit 7.
										Unit 7: Sandstone; gy pl gy, orange wx, v ang-srnd, gritty, slty, in places lenticular conglom'c, poorly std, tight, silic & kaol mtx. Thick bdd (up to 4') massive. Flow casts, wavy contact w finer grn.
										Photo 25 shows flow casts in Unit 7.
										6704-6908 Cov 200 upper feet of unit mainly covered.
										6693-6704 Sh; dk gy, wx, poorly exposed. Some thin beds of orange wx sandstone.
										6493-6503 Sh; dk gy, thin closely spaced, beds of orange wx sandstone.
										6466-6493 Sandstone; dk gy, vx rusty brn, arg, slty, sericitic, fissile.
										Sandstone; m-grnsh gy, wx grnsh gy, stained bright orange.
										Conglomeratic, mtx med-cse gnd 3' thick, even. Inthdd w conglomerate beds, wh qtz, blk cht, wh feldspar, ang to partly rnd 1/4". Beds up 1'. Unit highly resistant.
										6442-6466 Sandstone; S & P pepper gy, fn pt arg, fn gnd thin bdd, 3" wx rusty orange.
										6402-6442 Sandstone and Conglomerate Sample No. 37: a) Pebble Conglomerate; wx buff to rusty orange. Wh & blk cht & qtz pebbles & ang-s rnd in tight, poorly std slty to cse, gnd, Kaolinitic mtx, v lenticular beds. Interbedded w b) Sandstone buff, gy brn, rusty brn wx, sl arg, slty Kaolic mtx, s rnd-s ang, gritty, tight. Beds 3"-6" thick. Tight.
										6360-6402 Covered.
										6020-6360 Sh; black, rusty brn wx.
										Photo 16 shows outcrop of unit 158. Photo 15 shows unit 158 detail of low angle x beds and shale interbeds.
										5990-6020 Sandstone; md gy, bright orange wx, rnd-s rnd gnd in v arg, slty mtx, Hard, resistant, md thick bdd. Tight. Small sc low angle x bddng. Common flow casts. Common fossils of sh, gy & wxy. Sands are turbidites w v low to nil f.
										Unit 158
										5870-5990 Shale black, wx rusty, brn.
										5790-5870 Sandstone; gy, rusty brn, wx, slty, arg, tight. Fn - v fn, occ m gnd, s rnd-sr rnd qtz grs in arg, slty mtx. Flow casts common. Evenly m - thick (4"-1.5') bdd. Shale; brnsh-gy, soft, fissile, recessive, even inthds.
										Unit 154
										5750-5790 Sandstone, wx rusty brn, m bdd. Inthdd w shale, wx brnsh gy.
										Unit 153 Photo 13 shows unit 153 and 154. N. Mamowich standing in front of unit 154.
										5700-5750 Shale; wx m brnsh gy, sft; Sandstone thin to m bd; to quarters of unit.




Sandstone: gry, rusty brn, vw, silty, argl, thin
to m bdd, ev ripple lam, some cross lam,
abd, clay clts, plant debris common, brashy
to even bdd, ev fract.
Shale: brash gry, soft, fissile, recessive,
even bdds.
Sandstone: vw m brash gry, v fine gr, mdly
hd, ev fract, ev wkr.
Thin ls shows rels 15" and 154, 74 Allonella crinoidea
in floss of unit 154.
Shale: vw m brash gry, silty, recessive.
Sandstone: thin, m hd to lenticular & upper
quarters of unit.
Shale: vw m orange, precedent-ic, poorly exposed.
Shale: gr brash gry, v fissile, capped by a gr,
hard, dense, orange vw 1cr thick bds.
Sandstone: vw orange brn, evenly thin bdd,
behind w shale vw m brash gr.
Covered.
Sandstone: pale & copper brash gry, vw bright
orange, fine grnd, thin to med bdd. Includes
v thin bright orange and vw dk red brash gr.
Sh; vw m brash gry. Very poorly exposed.
Siltstone: vw pl orange, robbly bdd, gr.
Sandstone: vw orange, v fine gr.
Sh; ok it rab brn. Poorly exposed.
Faulted lower contact.
Fault
Siltstone: brash gry, orange vw, argl, non-calc.
Sandstone: vw orange brn, v fine gr, mdly hd,
occ flow grain. Common thin bdd of ls,
calc, finegry, thinly bdd. Poorly exposed.
Sandstone: vw orange brn, evenly thin bdd.
Sandstone: evenly bdd, 15" at base 1/2".
Sandstone: vw orange brn, evenly thin bdd,
towards top, thk ls prsnt.
Sandstone; v fine gr, thk bdd, 1" - vw pl orange.
Sandstone; evenly bdd, m". Sh prsnt and
at base 4" thick.
Sandstone: vw m brash gry, v fine gr, non calc,
to lower quarter of unit.
Sandstone; pale & copper brash gry, vw bright
orange, fine grnd, thin to med bdd. Includes
v thin bright orange and vw dk red brash gr.
Siltstone: gry, vw orange-rusty, v arg, non
calc, finegry, thinly bdd.
Sandstone, recessive.
Sh; thk, v thin bds or orange vw
sandstone, recessive.
Sandstone: v arg pelmas. Sh gry, evenly thick bds.
Sandstone: vw brash gry, evenly thick bds.
Sh; dk gry, recessive.
Sandstone: m gry, vw rusty brn, v fine gr,
silty, argl, massive, poorly exposed.
Sandstone: gmsh gry, vw rusty brn, v fine gr,
silty, argl, massive, poorly exposed.
Sandstone: m gry, vw lt gmsh gry, silty,
micaceous, v fine gr, orange
coatings, rare plant fragm.
Sh; dk gry, thin bds of brown gy-orange vw
sandstone interbeds.
Sandstone/Siltstone
Sandstone: gmsh gry, vw, thin bdd & flaggy
to m bdd, v fine gr, silty, micaceous, calc to v. ls
common flow casts on under surfaces of silst &
common 3"-5" inchs of olv shale present.
Current direction of ro 240° ± 7°.
Sh; dk gry, soft, fissile, with scarce concretes.
Siltstone, orange vw, thin beds,
and irregular lavers and nodules of
clay ironstone.
Also thin beds of argillaceous and silty
sandstone, becomes more numerous and closely
spaced in upper third of unit.
Sandstone: dk gry, vw rusty orange,
v fine gr, silty, v
argl, massive.
Shale, dk gry/blk.
Resistant, scars formline.
Photo 11 "Strgon-1134" feature at 15388 from the str.
1900
1950
2000
2050
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700
3750
3800
3850

Sandstone; dk gr+, vk rusty orange,
thin inclsds of
Shale; dk gr/blk,
Resistant, ncsvy forming.

Photo 11 "Virgonella" feature at Sta. 15388 from the str.

Sandstone, ve m orange, vrsg, thin to m
inclsds of
Shale gr/blk, red ww

Sample No. 28: siltstone gy, finely
plant fragments.

Sandstone; dk gr+, vk rusty orange,
Thin inclsds of
Shale; dk gr/blk,
Resistant, ncsvy forming.

Photo 11: Virgonella feature at Sta. 15388 from the str.

Shale; dk gr/blk, vlitic; spaced even bds of
Sandstone vk o orange+, f thicks.

Sandstone; vk pl orange brn, mdly. 0.5-1' thick common flow casts; shale; dk gr/blk,
Sandstone; pl gy/grv, v fn-fn gnd, arg, sl
calc, slty, v thick bd of shale, dk gy.
Partly covered.
Sandstone; dk grnsh gry, vn pl orange brn, v fn
gnd, vrsy slty, mottled, sl calc, ve resistant,
2-3", very resistant, ncfos forming unit.

Shale; dk gr/blk, vlitic.
Sandstone; vn orange/brn, slty & arg.
Thinly inclsd; shale; dk gr/blk.
Resistant, ncsvy forming unit.

Sandstone; vn pl orange, 0.5+', inclsd v
thin bds of shale, dk gr/blk.
Sandstone; dk gr, slty, v thin bd of shale, dk gr.
Sandstone; vn pl orange brn, arg & slty, even
inclsds of shale dk gy 0.5+', resistant unit.

Shale; dk gr/blk, slty.
Sandstone; vn pl orange, 0.5+', inclsd v
thin bds of shale, dk gr/blk.
Sandstone; vn orange brn, arg & slty, even
inclsds of shale dk gy 0.5+', resistant unit.

Shale; dk gr/blk, slty.
Sandstone; vn pl orange, 0.5+', inclsd v
thin bds of shale, dk gr/blk.
Sandstone; vn orange brn, arg & slty, even
inclsds of shale dk gy 0.5+', resistant unit.

ROAD RIVER Fm. 840 ft. + | CANOL Fm. 348 ft.

1000
900
800
700
600
500
400
300
200
100
0

991-1067 Sh; blk, hard fissile, beds up to 4" thick, more resist.

973-991 Sh; blk, silic, v hard, v evenly & highly fissile, bds up to 1" thick, yell/gr & orange patina.

949-973 Covered

932-949 Sh & mudstone; blk, non-calc, lower half irreg bdd, upper half evenly, platy & fissile.

895-932 Sh; blk, hard, silic, even beds up to 6" thick, separated by blk, soft carbonaceous sh partings, strong yell/gr coating.

877-895 Sh; blk, hard, fissile, beds up to 4" thick, unit capped by bed of silic sh, 1.2' thick, wx rusty brn, unit covered w yell/gr coating.

870-875 Sh; blk, fissile, non-calc, recessive.

859.8-870 Sh; blk, probably silic, non calc, hard, fissile, strong coating of yell, orange/brn patina.

858-859.8 Ss; gy, f gr, calc, non calc, recessive, yell
840-858 orange/brn patina.

Sh; blk, non calc, silic, hard, beds up to 4" thick, coated w yellowish green stain.

Sample No. 7 is taken at base of Canol Fm in faulted yellow wx unit - sh blk, siliceous.

840-? Cca 310' of sh blk, soft, fissile, occasional widely spaced thin beds of lst; blk, sl arg & slty, widely spaced thin beds up to 1" thick, unit recessive, weathers w lt brnsh gy.

488-498 lst; blk, aphanitic, sl arg, wx pl brn, highly fissile.

Fault at 490'.

482-488 Sh; blk, wx blk, soft fissile w lst bed pinch & swelling 2/3 up unit cse gnd.

469-482 Lst; blk, aphanitic, beds up to 2', cse gnd, recrystallized to cx sh, blk, dk gy, fissile, lamin, v thin to m bdd, calc.

465-469 Sh; blk, in pt ocherous, wx blk, fissile soft.

453-465 lst; blk, wx pl brn m-vse gnd, evenly bedded lenticular beds pinching out, recrystallized to c m, intbdd w sh; blk, soft, fissile, up to 1/2' thick.

448-453 Sh; blk, non calc, fissile, occ 4" lst bed, blk, f gnd.

442-448 Sh; pl brnsh gy-buff wx pl gy, slty, fissile to thinly bdd, occ fn ripple lam contains monogrst occ thin gry. arg lst beds.

Sample #1 Sh; blk-dk gy calc, hard, load casting on base of bed, fissile, lamin, to massive 6" thick beds.

352-352 Sh; grnsh gy, blk, dk gy, recessive, some limy-some non limy.

lst; dk gy, blk wx grnsh gy, orange brn, mostly nodular, some arg, thinly bdd, clams, gastroonds, echinoderm fragm.

206-252 Sh; blk, wx gy.

lst; blk, wx orange brn aphanitic.

142-206 Sh; blk, grnsh gy-dk gy, wx blk, dk gy, rusty orange. Pyrites in some beds. Crapolites.

99-142 lst; blk, dk gy-orange brn wx, some bed argill, some nodular, thin bdd, some laminated.

Sh; inthds, blk, limy, fossil fragm.

97-99 lst; dk grnsh gy, wx lt grnsh gy, v arg, massive.

97-87 Sh; blk, intbdd w dk grnsh gy sh, recessive.

87-77 Sh; dk gy grnsh-blk, wx dk & lt gy, orange/brn, limy.

lst; blk, dk gy/grnsh, wx gy, orange/brn, lt brnsh gy, mostly arg, thin to m bdd.

Nodular lst at 72'

Covered between 38-46'.

Small lst concretions at 13'.

8-0 Dol; wx lt orange/brn, slty & arg, fissile, resistant.

Sh; wx lt & dk gy, limy w slty laminae, recessive.

Fault present approx 40' below starting point.

1914-1962 Sh; dk gy, non calc, w soft, breaks into small irreg fragments w clay Fe nodules, microfossils collected from near base of unit are probably Frasnian.

Covered, internal presumably consists of soft shale similar to unit above.

1709-1713 Sh; gy, platy, high fissile, non-calc, recessive, silic, Monlatite (GSC)
1642-1709 Sh; blk, evenly thin bdd, up to 4" thick, intbdd w softer fissile shale, same coating as below.

1623-1642 Sh; blk, hard, beds up to 3' thick, intbdd w soft, fissile shale beds, up to 1" thick, coated w yell/green & orange.

1613-1623 Sh; blk, silic, evenly thin bdd, intbdd w sh, blk, fissile, platy, both stained yellowish green, carcasite nodule & gonolite impression.

1560-1613 Cherr; blk, evenly thin bdd, up to 4" thick, seperated by partings of blk, fissile sh and very thin beds.

Sh; blk, silic, blotchy staining of rusty orange, reddish orange & yellowsh orange.

1560
1500-1509.5 Sh; blk, fissile, non-calc, soft.
Cherr; blk, evenly thin bdd w blk sh partings, yell/orange stain.

1318-1330 Cherr; blk, evenly thin bdd, up to 4" thick, interbd w sh, platy, fissile, non calc, beds between 1-3" thick, very strong yell/orange stain, arbitrary cut off.

1493-1518 Sh; blk, silic, evenly thin bdd, up to 3" thick, intbdd w softer blk, fissile, platy sh, transitional contacts; beds gently drag-folded.

1478-1493 Sh; blk, platy, hard, wx blk, coated w patchy yellow/sh gr staining.

1464-1478 Sh; blk, evenly bdd, highly silic, bdd up to 2", evenly intbdd w softer, more fissile, platy sh.

1460 Covered

1408-1460 Sh; blk, silic, evenly bdd up to 6" thick, intbdd w sh, blk, fissile, up to 6" thick, strong yell/orange coating.

1392-1408 Sh; blk, platy, fissile, non-calc, recessive, poorly exposed.

1366-1392 Covered

1330-1366 Sh; blk, silic, v evenly thin bdd, intbdd w sh, highly fissile, platy, hard, both coated w bright orange stain.

1295-1330 Covered

1260-1295 Sh; blk, hard silic, v evenly thin bdd, thick orange/brn patina.

1193-1260 Sh; blk, hard, silic, non-calc, evenly thin bdd (1.5") minor orange staining, beds sl drag-folded.

1188 Covered

1130-1188 Cherr; blk, evenly thin bdd, up to 3" thick, yellowish orange staining.

1098-1135 Sh; blk, silic, hard evenly bdd, up to 2' thick, with some even thin beds of blk sht.

1035-1098 Sh; blk, silic, non-calc, bds up to 4" thick w v thin inthds of blk, fissile sh, top of unit faulted, displacement small.

1017-1035 Sh; blk, hard, silic, bds up to 2" thick, intbdd w sh, blk, fissile, yell/orange staining, faulted upper contact dipping steeply east.

991-1017 Sh; blk, hard fissile, beds up to 4" thick, more resist.

973-991 Sh; blk, silic, v hard, v evenly & highly fissile, bds up to 1" thick, yell/gr & orange patina.

949-973 Covered

932-949 Sh & mudstone; blk, non-calc, lower half irreg bdd, upper half evenly, platy & fissile.

895-932 Sh; blk, hard, silic, even beds up to 6" thick, separated by blk, soft carbonaceous sh partings, strong yell/gr coating.

877-895 Sh; blk, hard, fissile, beds up to 4" thick, unit capped by bed of silic sh, 1.2' thick, wx rusty brn, unit covered w yell/gr coating.

870-875 Sh; blk, fissile, non-calc, recessive.

859.8-870 Sh; blk, probably silic, non calc, hard, fissile, strong coating of yell, orange/brn patina.

858-859.8 Ss; gy, f gr, calc, non calc, recessive, yell
840-858 orange/brn patina.

Sh; blk, non calc, silic, hard, beds up to 4" thick, coated w yellowish green stain.

Sample No. 7 is taken at base of Canol Fm in faulted yellow wx unit - sh blk, siliceous.

840-? Cca 310' of sh blk, soft, fissile, occasional widely spaced thin beds of lst; blk, sl arg & slty, widely spaced thin beds up to 1" thick, unit recessive, weathers w lt brnsh gy.

FIGURE 44

039 01 06 041

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(26)

SECTION: TETLIT CREEK SECTION "TC"

LOCATION: LATITUDE - LONGITUDE -

MAP REFERENCE AIR PHOTO NO. Trail River 106 I A

DATE: Aug 10, 1976. VERTICAL SCALE: 1" = 20 FEET

AUTHOR: D. Chi and D. Morwick

REMARKS: [illegible] was measured along a tributary stream of Road [illegible] creek, [illegible] Road River [illegible]

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm.
- P PINPOINT " " less than 1/16 mm.
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F = < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
CANOL Fm. 331 ft. +		1700							1411-1691	[illegible]
		1600							1400-1411	[illegible]
		1500							1400-1402 1360-1855	[illegible]
		1400							1210-1360	[illegible]
		1300							1165-1210	[illegible]
		1200								
		1100								
		1000								

FIGURE 43

039 01 06 041

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(25)

SECTION: ROAD RIVER SECTION "RR"

LOCATION: LATITUDE - 66° 33' LONGITUDE - 135° 35'

MAP REFERENCE AIR PHOTO NO. Trail River 106 I A 22928 - 91

DATE: July 17, 1976. VERTICAL SCALE: 1" = 20 FEET

AUTHOR: B. Chi and D. Morwick

REMARKS: Section was measured along Road River, east flank of Richardson Mountains.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- √ VUGGY Pore space greater than 1/16 mm.
- P PINPOINT " " less than 1/16 mm.
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

FRAMEWORKS in limestone

- F = < 10 %
- 10 to 20 %
- 20 to 50 %
- > 50 %

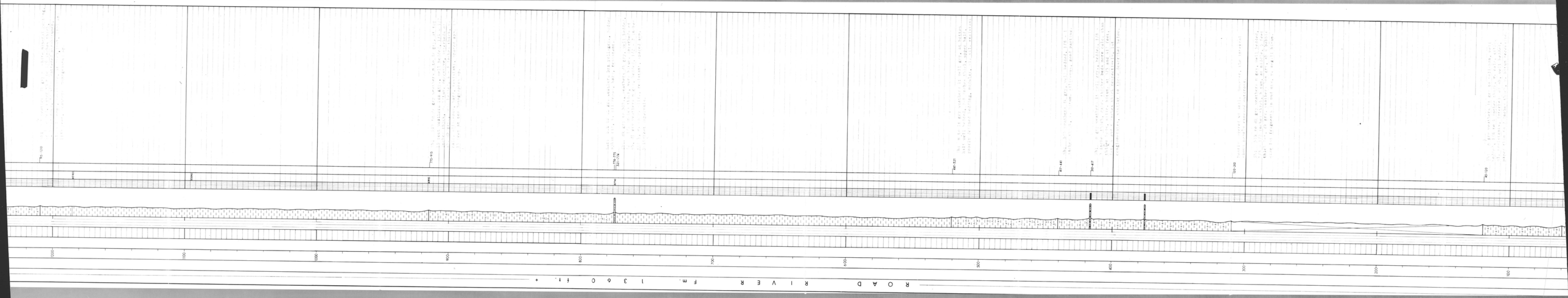
- P Palynological sample
- G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3-6 %
3 symbols = 6-10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS
CANOL Fm. 10 ft. +										
ROAD RIVER Fm. 395 ft. +	SOLO CREEK Mbr. 80 ft. +	400							395-405+	Sh: dk gry weathers m gry, soft recessive, v. bitum, micaceous.
									360-395	Sh: blk to dk gry, bedded, 1/4 - 1 inches thick, v. bitum, sl siliceous, poorly exposed along the River Bank.
		300							300-360	shale (60%), chert (30%), limestone (10%). Sh: dk gry, thinly bedded, papery, fissile, bitum. Chert: black, bedded, 1 - 2 inches thick, hard, resistant. Lst: m to dk gry, weathers m gry, bedded, 2"-1' thick, fining upward, at base of to f calcarenite, at top gradational to overlying shale.
		200							290-300	Lst: dk gry weathers lt to m gry, well bedded, 2"-1' thick, v ab. single & double hole crinoids, tr of coenites, coral, tr of shale fragments in vf calc mtx, bedded, 2"-1' thick, tr of pyrobitum at top 1/2" shale, dk gry, v calc., well bedded, 1/2"-2" thick, fissile, bitum.
									265-290	
									255-265	Lst: dk gry weathers m gry, bedded, 1/2-1 ft thick, ab single & double hole crinoids, scat. m to pebble size, sh. fragment, m to c bioclastics in vf calcarenite mtx.
									230-255	
									230-250	Lst: m to dk gry, bedded, 2"-1/2" thick, scat. sh fragments, rr of brinoids, bioclastics, grains in mud mtx, v argill, bitum, fining upward.
									220-230	Lst: m gry weathers lt gry, bedded, 1"-1/2" thick, sl fining upward, ab crinoids, coarse bioclastic grains & reworked sh frag (vf to vc) in vf calc. mtx // laminated by sec. white cement.
									170-220	Lst: m gry weathers lt gry, bedded, 2"-1' thick, ab single & double hole crinoids, vf sh frags in vf calc. mtx, sl bitum.
										Lst: m gry weathers m to lt gry, bedded, 1' thick, ab single & double hole crinoids, rounded dk grey & m gry lst ranging in size from f to pebble, in vf calc. & mud mtx, scat pyrobitumen.
									145-170	Sh: blk to dk gry weathers lt gry, rell, rarely bro, well bedded, paper thin to 1' thick, v. bitum. thicker hole more calc, sl, resistant, concared wi thin papery beds, at 395' abv base, lse m gry, subantitic, 3' thick, argill; at 395' above base
									125-140	1st m to dk gry, bedded, cyclic, 4'-6" thick, each cycle show Bouma's complete turbidite seq. which consists of 5 intervals (a-e), at base of each cycle 1-2 inches thick, f to c calcarenite, grd, scard crinoids, brach, stylolina, siliceous, the contacts of cycle, sharp.
									120-125	Limestone (80%), shale (20%), lst: m gry, bedded, 6" - 1' thick, scard single & double & cross hole crinoid & vf calcarenite in mud mtx, sl argill; sh: blk, bdd 1/4-1/2 inches thick, v. bitum.
									85-120	limestone (70%), shale (30%), lst, m grc weathers lt grz, sl bedded, 1-6" thick, fr of crinoids, vf calc arenite grains in mud mtx, sl argill bitum. Sh: blk to dk gry, wl bedded, 1/2-1" thick, sl sil bitum.
									40-43	lst: dk to m gry weathers lt gry, well bedded, 1-6 inches thick, graded, f grains at base to sh at top, scattered single & double crinoids, broken brach & sh fragment in mud mtx, v siliceous.
									30-40	Sh: blk weathers m to dk gry, well bedded, 1/4-3/7 thick, fissile, sl calc, v sil, bituminous v ab Zonograptus yukonensis.
									25-30	sh: blk weathers dk to m grey, well bedded, 1/2-3" thick, fissile, sl calc, v bitum, scat Monograptus spp including yukonensis.
									0-25	Sh: lithologies same as below except less fissile & wi tentaculites & Styliolina.
										Sh: black dk gry, well bedded, 1/4-1/2" thick, good parting, sl calc & siliceous, hard, v bitum; scattered pyrobitumen along bedding planes, ab Monograptus spp including yukonensis.
		100								
		0								


ROAD RIVER FM 1360 ft. +

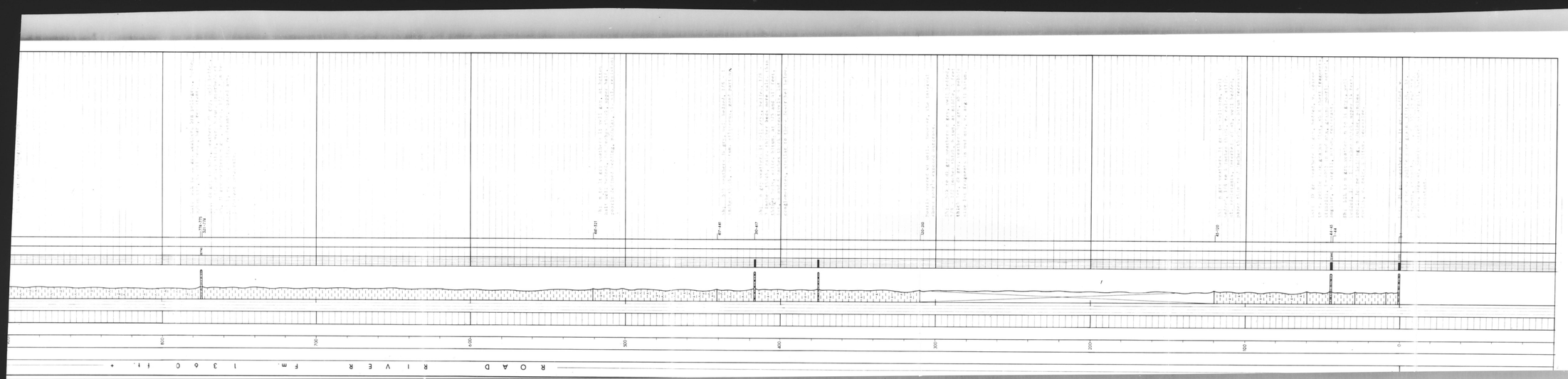

ROAD RIVER FM 1360 ft. +

FIGURE 45

039 01 06 041

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SECTION: ROAD RIVER NORTH SECTION "RRN"

LOCATION: LATITUDE - [illegible] LONGITUDE - [illegible] MAP REFERENCE AIR PHOTO NO. [illegible] Trail River, Unit A 25070-71

DATE: Aug. 11, 1976 VERTICAL SCALE: 1" = 20 FEET

AUTHOR: S. CRIT & M. [illegible]

REMARKS: Section was measured along unnamed tributary stream approximately 3 miles west of the Road River on east flank of the Richardson Mountains.

LEGEND

LITHOLOGIES

- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- SHALE
- LIMESTONE
- LIMESTONE (calcarenite)
- LIMESTONE (calcirudite)
- DOLOMITE
- CHERT (light or black)
- COAL
- COVERED

FRAMEWORKS in limestone

- F = < 10 %
- ○ 10 to 20 %
- ○○ 20 to 50 %
- ○○○ > 50 %

POROSITY TYPES

- X INTERCRYSTALLINE OR INTERGRANULAR
- V VUGGY Pore space greater than 1/16 mm
- P PINPOINT less than 1/16 mm
- O ORGANIC
- F FRACTURE
- e EARTHY
- O FENESTRAL

P Palynological sample

G Geochemical sample

ACCESSORIES

1 symbol = up to 3%
2 symbols = 3 - 6 %
3 symbols = 6 - 10 %

- SANDY
- SILTY
- ARGILLACEOUS
- SILICEOUS
- CHERTY
- CALCAREOUS
- DOLOMITIC
- BRECCIATED

IMPERIAL Fm. 2510 ft. +

CRETACEOUS STRATA 158 ft. +

FIELD DIVISIONS	FIELD UNITS	THICKNESS	OIL SHOW	POROSITY TYPE	POROSITY	LITHOLOGY	Grain or crystal size	Sample No.	Photo No.	DESCRIPTIONS