# NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 248

Summary of the Stewart Petroleum Company - Olaf Olson #1
Well No. 2071 - Permit No. 2083
Burke County, North Dakota

by William P. Eastwood
March 1961

Stewart Petroleum Company - Olson #1 is located in the SW 1/4, NE 1/4 Section 3, Township 160N., Range 94W., Burke County, North Dakota. Elevation: K.B. 2468, G.L. 2457.4. Contractor: Cactus Drilling Company, Calgary, Alberta.

The drilling permit was issued October 17, 1958. The well was classed as a wildcat The well was drilled to a total depth of 7919 feet and completed as a producer from the Rival subinterval of the Madison on December 25, 1958, and from the Midale subinterval of the Madison on February 4, 1959. This well was the discovery well of the Viking field. Development wells one-half mile north and one mile south were both non-commercial.

Drill Stem Tests:

1. 7608-7655 (Ratcliffe interval) 12-2-58. No fluid cushion. Shut in 70 minutes, open 2 hours, shut in 60 minutes. Very weak blow immediately, intermittent blow in 10 minutes, died in 15 minutes, intermittent again in 20 minutes, steady, very weak blow in 25 minutes, died in 1 hour, dead remainder of test. Recovered 90 feet of slightly gas cut, slightly oil and mud cut salt water, 60 feet of slightly mud cut salt water, and 30 feet of salt water cut mud.

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|---|---|
| I. Hyd. | 4265.8 |
| ISIP | 3589.1 |
| IFP | 40.4 |
| FFP | 111.3 |
| FSIP | 3265.6 |
| F. Hyd. | 4159.4 |
| Temp. | 222° |

2. 7720-7759 (Midale subinterval) 12-5-58. No fluid cushion. No initial shut in pressure due to sliding packers to bottom. Open 2 hours 45 minutes, shut in 2 hours 30 minutes. Final hydrostatic pressure undetermined due to pulling packers loose and waiting 4 hours before coming off bottom. Strong blow immediately. Gas to surface in 1 minute. 3 to 5 foot flare through 3 inch flowline. Recovered 360 feet of mud cut oil estimated 80-95% oil, 90 feet of heavily gas cut salt water cut oil estimated 15% water, 90 feet of oil cut salt water, 270 feet of oil and gas cut salt water. Bottom choke 1/2 inch, surface choke 3/4 inch.

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|---|---|
| I. Hyd. | 4380.2 |
| ISIP | none |
| IFP | 118.9 |
| FFP | 242.8 |
| FSIP | 3092.0 |
| F. Hyd. | Undet. |
| Temp. | 225° |

3. 7756-7777 (Rival subinterval) 12-9-58. No fluid cushion. Shut in 1 hour 35 minutes, open 2 hours, shut in 1 hour. Very strong blow. Gas to surface in 20 minutes. 7 to 10 foot flare from 3 inch flowline. Recovered 460 feet of mud cut oil, 30 feet of oil, water, and mud emulsion, 30 feet of heavily gas cut salt water. Bottom choke 1/2 inch, surface choke 3/4 inch.

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|---|---|
| I. Hyd. | 4406.8 |
| ISIP | 3310.3 |
| IFP | 253.0 |
| FFP | 298.5 |
| FSIP | 3305.0 |
| F. Hyd. | 4289.7 |
| Temp. | 225° |

4. 7782-7800 (Rival subinterval). No fluid cushion. Did not rotate. Double shut-in tool completely closed, missed initial shut-in pressure. Shut in 1 hour, open 4 hours, shut in 1 hour. Weak blow increasing slightly for 4 hours. Recovered 1700 feet of slightly gas cut black salt water.

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| I. Hyd. | 4505.2 |
| ISIP | - |
| IFP | 318.7 |
| FFP | 906.7 |
| FSIP | 3286.6 |
| F. Hyd. | 4236.5 |
| Temp. | 252° |

Casing and Tubing Record:

600 feet of 10-3/4 inch surface casing cemented with 300 sacks.
587 feet of 8-5/8 inch casing cemented with 115 sacks.
7917 feet of 5-1/2 inch production casing cemented with 400 sacks.
7770 of 2 inch tubing.

Core Record:

1. 7731-7759 (Midale subinterval)
2. 7759-7777 (Rival subinterval)
3. 7777-7800 (Rival subinterval)

Completion Data:

1. Total depth 7919, plugged back to 7869.
2. Perforated 7763-7778 (Rival) with 4 shots per foot. Acidized with 500 gallons.
3. 12-25-58. Tested 105 barrels, net oil in 24 hours, GOR estimated at 1050, 63% water, gravity 41.3° API.

Casing pressure 800 pounds, tubing pressure 200 pounds, shut-in pressure 700 pounds. Used 20/64 inch choke. Well flowed throughout test.

4. 2-4-59. Set bridge plug at 7757. Perforated 7728-7736 (Midale) with 4 shots per foot. Acidized with 350 gallons M.C.A. Swabbed 21 barrels oil and 72 barrels water in 3 hours. Installed pump.

5. 6-9-59. Potential test. 32.55 barrels oil in 24 hours, 77% water, total fluid 142 barrels.

6. 7-8-59. Potential test. 30.85 barrels oil in 24 hours, 77% water, total fluid 134.13 barrels.

7. 9-5-59. Potential test. 21.63 barrels oil in 24 hours, 72% water, total fluid 77 barrels.

8. 1-5-60. Pulled rods and tubing, drilled out bridge plug at 7757. Reran rods and tubing and resumed pumping. No increase in production noted.

Mechanical Logs:
Electrical (663-5882)
Laterolog-Gamma Ray (5682-7917)
Microlaterolog-microcaliper (6917-7917)

The formation tops were determined from samples and mechanical logs. Color names are those used in the Rock Color Chart of the National Research Council. Limestone petrography terms are those proposed by Folk, (1959), Bulletin American Association of Petroleum Geologists, vol. 43, no. 1, pp. 1-38.

FORMATION TOPS

| | |
|---|---|
| Cretaceous | |
| Pierre formation | 1928 |
| Niobrara formation | 3720 (?) |
| Greenhorn formation | 4304 |
| Belle Fourche formation | 4406 |
| Mowry formation | 4673 (?) |
| Newcastle formation | 4690 |
| Basal Cretaceous sands | 4947 |
| Jurassic | |
| Piper limestone | 6010 |
| Triassic | |
| Spearfish formation | 6250 |
| Pennsylvanian | |
| Tyler formation | 6579 |
| Mississippian | |
| Otter formation | 6678 |
| Kibbey formation | 6833 |
| Kibbey limestone | 6968 |
| Madison group | |
| Poplar interval | 7163 |
| Ratcliffe interval | 7505 |
| Midale subinterval | 7710 |
| Frobisher-Alida interval | 7763 |
| Total depth | 7919 |

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| 30-320 | Medium to coarse subrounded quartz sand grains with common coarse igneous and metamorphic rock fragments. Abundant pale yellowish brown silt.<br>90-110 missing; 260-290 missing. |
| 320-440 | Abundant medium light gray, calcareous, silty shale, and very common medium to coarse sand as above. |
| 440-560 | Shale and sand as above, with rare lignite fragments.<br>500-530 missing. |
| 560-600 | Shale and rare lignite as above. Rare sand as above. |

600-630 Very abundant sand as above. Rare shale as above.
630-810 Missing.
810-1080 Abundant light gray, slightly calcareous, silty shale. Rare lignite fragments. Rare to common cavings (?) of quartz sand.
1080-1200 Abundant medium light gray, non-calcareous shale, common light gray slightly calcareous shale as above, rare lignite fragments. Very rare white calcareous quartz sandstone.
1200-1710 Very abundant medium light gray shale as above, rare light gray shale as above. Rare lignite fragments. Very rare calcareous sandstone fragments as above. Rare mollusk fragments.
1710-1770 Shale as above, rare brownish gray (5YR4/1).

1928 Top of Pierre formation
1770-2290 Missing.
2290-2380 Shale and lignite fragments as above. Rare round pyrite (?) concretions at 2350-2380.
2380-2560 Abundant light gray, silty, limy soft shale, common medium light gray, non-calcareous hard shale. Rare cavings of lignite fragments.
2560-2710 Abundant medium light gray shale as above, common moderate yellowish brown, dolomitic (?) siltstone,
2710-3460 Shale and rare lignite cavings as above. Common light gray, limy shale. Rare pale yellowish brown microsparite limestone at 3170-3200.
3460-4000 Shale, medium light gray, non-calcareous, subfissile. Lignite cavings. Rare moderate yellowish brown, very fine crystalline dolomite (?) and limestone.

3720 Top of Niobrara formation
4000-4030 As above, with rare black shale containing white calcareous specks.
4030-4060 Very abundant black shale, no specks. Rare mollusk fragments.
4060-4090 Missing.
4090-4120 Abundant medium light gray shale, common black shale with white specks, rare mollusk fragments, rare white sandstone.
4120-4240 Missing.
4240-4270 Gray and black shale as above, no white specks.
4270-4630 Missing.

4304 Top of Greenhorn formation

4406 Top of Belle Fourche formation
4630-4720 Shale as above. Very rare white specks. Rare white bentonite.

4690 Top of Newcastle formation
4720-4840 Abundant black shale, common medium light gray shale, rare mollusk fragments. Very rare white, fine to medium grained quartz sandstone.

4947 Basal Cretaceous sands
4840-5080 Shale as above, rare very fine grained light gray, silty sandstone. Rare mollusk fragments.
5080-5230 Abundant black fissile shale, rare red shale, and pale yellowish brown waxy shale.

5230-5290 As above, with common to rare small reddish siderite concretions.
5290-5410 Abundant black shale, rare variegated shale.
5410-5470 Black shale as above, rare variegated shale as above, rare white, very fine grained, glauconitic, calcareous quartz sandstone.
5470-5500 As above, with common calcareous sandstone as above, and white sandy limestone.
5500-5620 Common medium light gray, waxy shale, common black shale, rare sandstone and variegated shale as above. Rare to common greenish gray (5GY6/1) shale.
5620-5710 Abundant medium light gray to greenish gray, calcareous, fissile shale. Very rare black shale.
5710-5760 Abundant gray to greenish gray shale as above, common black shale cavings (?) as above.
5760-5820 Abundant medium light gray calcareous shale, common black shale. 5780-5790 missing.
5820-5900 Shale as above, with rare, moderate red, fissile shale. Rare to common, white, very fine grained, slightly limy sandstone at 5840-5900. Section apparently badly caved. Rare fragments of white sandy limestone.
5900-5910 Common white, fine to very fine grained, calcareous sandstone, and very sandy limestone. Common shale as above.
5910-5950 Abundant pale yellowish brown, dense, pelmicrite limestone. Rare limy sandstone as above, common shale as above. The limestone contains very small pellets loosely scattered in a sublithographic matrix.
5950-5960 Limestone as above, with rare sandstone as above, and rare intramicrite limestone. Shale cavings as above.
5960-6000 Abundant white, fine grained sandstone. Limestone and shale cavings as above.
6000-6010 Shale and pale yellowish brown micrite limestone as above. No sandstone seen.

6010 Top of Piper limestone
6010-6050 Shale and limestone as above. Rare pale yellowish brown, subsucrosic, dolomitic limestone and dolomite.
6030-6040 missing.
6050-6080 Common very pale orange to white micrite limestone. Common to abundant black and greenish gray shale.
6080-6090 Abundant limestone as above, rare shale as above. Very rare dark yellowish brown micrite limestone.
6090-6100 Abundant micrite limestone, about evenly divided into very pale orange to white and moderate to pale yellowish brown. The darker colored limestone contains scattered ostracode (?) fossils. Shale cavings.
6100-6120 Abundant moderate to pale yellowish brown limestone as above, common light colored limestone as above, rare moderate yellowish brown, pelmicrosparite consisting of closely packed, medium-sized pellets in a fine crystalline matrix. Shale cavings. The pellets may be small oolites or intraclasts.
6120-6150 Abundant light colored limestone as above, common dark limestone as above, rare white subsucrosic dolomitic limestone. Shale cavings.
6150-6180 Abundant black and greenish gray shale as above, common to rare white limestone as above.

6180-6200 Shale and rare limestone as above. Very rare moderate yellowish brown, very fine crystalline dolomite.
6200-6240 As above, with rare white with greenish tinge, very fine grained sandstone. Rare white gypsum.
6240-6250 Black and greenish gray shale as above. Common moderate red shale and silty, fine grained sandstone.

6250 Top of Spearfish formation
6250-6290 As above, with common, white, very fine crystalline gypsum and clear, medium to coarsely crystalline gypsum.
6290-6480 Abundant moderate red sandy shale. The fine sand sized grains in the shale may be small gypsum crystals, rather than quartz grains. The shale does contain a few large rounded quartz grains. Becomes more sandy toward base until the rock could be called a silty sandstone. Black shale cavings.
6480-6500 Sandstone, moderate red, very silty. Fine grained with a few lenses of medium to coarse, rounded quartz grains. Cavings.
6500-6520 Very abundant black fissile shale, common silty sandstone as above. The black shale is probably cavings.
6520-6550 Abundant red silty sandstone as above, common black shale.
6550-6570 Sandstone as above, common black shale and greenish gray waxy shale.
6570-6580 Sandstone and shale as above, with common moderate red, waxy, fissile shale.

6579 Top of Tyler formation
6580-6600 Very abundant black to medium gray, fissile shale. Very rare moderate red shale and sandstone as above.
6600-6650 Abundant moderate red, waxy, fissile shale as above, common black fissile shale, rare to very rare sandstone as above.
6650-6660 As above, rare pale red (5R6/2) shale, no sandstone.
6660-6680 Abundant black fissile shale, common red shale as above, rare greenish gray, waxy, fissile shale.

6678 Top of Otter formation
6680-6700 As above, with common, very pale orange to white, micrite limestone cavings (?). Very rare brilliant green (5G6/6) fissile shale.
6700-6710 Common pale red shale and rare pale red, silty limestone. Very rare brilliant green and moderate red shale as above. Common black shale.
6710-6730 Common pale red, silty limestone. Moderate red shale and black shale as above.
6730-6770 Probably as above. Badly caved.
6770-6810 Abundant pale red, limy shale, common black shale cavings. Rare to common pale red, shaly limestone.
6810-6820 As above, with common, white, fine grained, calcareous quartz sandstone.

6833 Top of Kibbey formation
6820-6860 Abundant white to pale red, calcareous, fine grained quartz sandstone. Rare pale red shale. Black shale cavings.
6860-6890 Abundant black to medium gray fissile shale, rare to common sandstone as above. Black shale may be cavings.

6890-6940 Abundant moderate red, fine to medium grained, silty quartz sandstone, only slightly calcareous. Common black shale cavings.
6940-6960 Abundant black to gray shale cavings, common sandstone as above.
6960-6970 As above, rare pale yellowish brown to white, microsucrosic limestone.

6968 Top of Kibbey limestone
6970-6980 Abundant pale yellowish brown, micrite limestone, shale and sandstone cavings as above.
6980-6990 Very abundant limestone as above, rare cavings. Rare pelmicrite limestone.
6990-7010 Abundant pale red, fine grained quartz sandstone, common limestone as above.
7010-7020 Common pale red sandstone as above, very common moderate red, fine grained sandstone. Limestone and shale cavings.
7020-7060 Abundant moderate red sandstone as above, rare pale red sandstone. Limestone and black shale cavings.
7060-7150 Abundant moderate red, silty sandstone and sandy shale. Rare moderate red sandstone as above. 7120-7150 badly caved.

7163 Top of Poplar interval
7150-7210 As above, common black shale cavings. Rare white anhydrite fragments. 7180-7200 missing. Microcaliper log shows a washed out zone at 7188-7193 which may be salt.
7210-7220 Rare white anhydrite fragments. Abundant black shale cavings. Common medium light gray, very fine grained, calcareous sandstone. Microcallper log indicates an impure salt bed at 7202-7225.
7220-7240 Missing.
7240-7300 Common medium light gray, calcareous shale. White anhydrite. Black shale cavings. Common medium light gray, dolomitic, sub-sucrosic limestone. Abundant fragments of red shale. Microcaliper log shows a washed out section (probably impure salt) at 7268-7297.
7300-7330 Common pale yellowish brown to very pale orange, micrite limestone. Black and red shale cavings.
7330-7360 As above, with rare pale yellowish brown micrite limestone with scattered pinpoint porosity. Rare white anhydrite fragments.
7360-7390 Common to abundant white anhydrite fragments. Rare limestone and dolomitic limestone, as above. Abundant black shale cavings.
7390-7400 Black and medium gray shale cavings (?); rare limestone and anhydrite as above.
7400-7460 Missing. Microcaliper shows thin washed out sections at 7403-7406, 7412-7415, and 7425-7428.
7460-7490 Limestone, moderate to pale yellowish brown, micrite. Rare moderate yellowish brown pelmicrite limestone consisting of medium and coarse pellets or rounded intraclasts closely packed in a sub-lithographic matrix. Very rare, very pale blue (5B8/2) anhydrite. Black and red shale cavings.
7490-7510 Limestone, pale yellowish brown, slightly dolomitic, fair pinpoint porosity. Rare white anhydrite. Black and red shale cavings.

7505 Top of Ratcliffe interval
7510-7520 Very abundant black shale; rare limestone as above.

7520-7560 Common limestone, micrite, pale yellowish brown, scattered pinpoint porosity in dolomitized (?) areas. Rare white anhydrite. Black shale cavings. Microcaliper shows washed out interval of impure salt at 7533-7565.

7560-7620 Missing.
DST #1 (7608-7655). Recovered 90 feet of slightly gas cut, oil cut, and mud cut salt water; 60 feet of mud cut salt water; and 30 feet of salt water cut mud.

7620-7630 Abundant pale yellowish brown micrite limestone, and very pale orange to very light gray, microsucrosic, dolomitic limestone which appears to have been formed by alteration of the micrite limestone. (Both lithologies can be seen in one chip.) Very rare, pelmicrosparite limestone consisting of small pellets loosely cemented and very porous. Common white and very pale blue anhydrite.

7630-7655 Limestone and anhydrite as above, with rare pale yellowish brown pelmicrite limestone with patches of sparite and slightly dolomitic. Some of the chip of pale yellowish brown, slightly dolomitic, micrite limestone contain small patches of white anhydrite. Circulated at 7647 for 3/4 hour.

7655-7665 Limestone, dolomitic limestone, and anhydrite as above. Black and red shale cavings.

7665-7685 Badly caved. Abundant black shale.

7685-7710 Missing.

7710 Top of Midale subinterval

7710-7731 Dolomite, slightly limy, very pale yellowish brown, microsucrosic, common moderate to pale yellowish brown, micrite and pelmicrite limestone, common white and pale blue anhydrite. Black and red shale cavings. Circulated at 7731 for 2 hours.
DST #2 (7720-7759). Recovered 360 feet of mud cut oil; 90 feet of heavily gas and salt water cut oil; 90 feet of oil cut salt water; and 270 feet of heavily gas cut salt water.

7728-7736 Perforated interval.

Description of core chips

7731-7734 Dolomitic limestone, pale yellowish brown, microsucrosic, good intercrystalline porosity and permeability. No stain. Dark gray to black shaly laminae.

7734-7735 Limestone, moderate to dark yellowish brown, pelintramicrite, with small patches of sparite consisting of small pellets and small rounded intraclasts in a sublithographic matrix and with very small inclusions of clear calcite. Large patches of medium light gray, microsucrosic, dolomitic limestone. Tight and dense. Slight oil stain on fracture surfaces. There may have been a mistake in labeling this sample because this lithology is not typical of this part of the Midale.

7735-7736 Limestone, dolomitic, microsucrosic, pale to moderate yellowish brown. Fair intercrystalline porosity and permeability. Slight oil stain, weak cut. Contains scattered small brown anhydrite crystals.

7736-7741 Dolomitic, microsucrosic limestone as above, no stain. Scattered small clear anhydrite crystals.

7741-7744 Dolomitic limestone as above, no anhydrite seen, rare small black organic fragments.

7744-7746 As above, with dark gray shaly (?) laminae. No stain.
7746-7747 Limestone, medium light gray, microsparite, low intercrystalline porosity and permeability, common small straight algal (?) fragments.
7747-7749 Limestone, pale yellowish brown, microsucrosic, slightly dolomitic, fair intercrystalline porosity and permeability, rare small shell fragments, no stain. Thin dark gray shaly laminae.
7749-7750 Missing.
DST #3 (7756-7777). Recovered 460 feet of mud cut oil; 30 feet of oil, water, and mud emulsion; and 30 feet of heavily gas cut salt water.
7759-7760 Limestone, pale yellowish brown, pelintramicrite. Very small pellets and rare small rounded intraclasts in a very pale yellowish brown sublithographic matrix. Scattered small patches of milky calcite. Abundant microspheres and good pinpoint porosity, but very low permeability. Red oil stain on fracture surfaces. Rare small shell fragments.

7763 Top of Frobisher-Alida interval
7760-7765 As above, but slightly darker in color, and the pellets and intraclasts are a little larger. Rare small patches of the rock have some of the matrix removed, and these patches have a poor to fair oil stain. Most of the rare shell fragments are probably ostracodes. Rare stylolites.
7763-7778 Perforated interval.
7765-7767 As above, but moderate yellowish brown intraclasts are more common and slightly larger. Common linear algal (?) fragments.
7767-7770 Limestone, pale yellowish brown, pelmicrite. Very small pellets closely packed in a sublithographic matrix. Rare small intraclasts. Common microspheres, rare to common ostracode valves. Fair pinpoint porosity, very low permeability. Rare linear algal (?) fragments. Rare small patches of sparry calcite.
7770-7772 Limestone, as above, but more matrix and pellets not as abundant. Very tight. Rare to common ostracode valves, common microspheres, rare linear algal fragments.
7772-7774 Limestone, pelintramicrite. Abundant, very small pellets and common small rounded moderate brown intraclasts closely packed in pale yellowish brown sublithographic matrix. Common microspheres and ostracodes.
7774-7778 Limestone, pelmicrite, as above, but intraclasts are rare.
7778-7781 Limestone, moderate to dark yellowish brown pelmicrite. Small pellets scattered in a dense, tight, sublithographic matrix. Rare ostracode valves and microspheres. Rare small patches of sparry calcite.
DST #4 (7782-7800). Recovered 1700 feet of slightly gas cut black salt water.
7781-7782 Limestone, dark yellowish brown, micrite with common medium sized patches of clear sparry calcite. Very low porosity and permeability.
7782-7785 Limestone, pale yellowish brown, pelmicrite. Common small pellets loosely scattered in a sublithographic matrix, common ostracode fragments, rare microspheres and small intraclasts. Common small patches of white sparry calcite. Dense and tight. Stylolitic at 7784-7785.

7785-7786 Limestone, pale yellowish brown, pelintramicrite. Abundant, very small pellets, common small rounded intraclasts, and rare surficial oolites tightly packed in a sublithographic matrix. Common small irregular pores, rare ones of which are partially filled with calcite. Rare to common ostracode valves. Rare microspheres. Fair porosity, very low permeability.

7786-7787 As above, but with abundant small irregular pores, the wall of which are slightly oil stained. Excellent porosity, fair permeability. Weak cut in carbon tetrachloride.

7787-7788 Limestone, pale yellowish brown, micrite with scattered small pellets and very rare microspheres and common patches of sparite. Common irregular oil stained pores. Stylolitic.

7788-7791 Limestone, pale yellowish brown, pelmicrite. Small pellets and rare intraclasts closely packed in a micrite or microsparite matrix. Rare small pores and small patches of milky calcite. No oil stain. Common to rare ostracode valves and linear algal (?) fragments. Matrix is very pale in color and is almost microsucrosic and absorbs water readily.

7791-7793 As above, but with common, small, cylindrical pores and sparry calcite masses.

7793-7794 Limestone, moderate to pale yellowish brown, intrapelmicrite with abundant linear algal fragments. Most of the small intraclasts are probably algal fragments. Common to rare microspheres, no ostracode valves seen. Common small, irregular pores and patches of clear calcite. No stain. Good porosity, low permeability.

7794-7795 Limestone, pale yellowish brown, pelmicrite. Abundant small pellets and common microspheres in a sublithographic matrix with common, very small patches of sparry calcite. Common, medium to large algal fragments. Good pinpoint porosity, low permeability. No oil stain.

7795-7797 As above, but with less pinpoint pores and algal fragments. Matrix has fair intercrystalline porosity and permeability.

7797-7798 Limestone, pale yellowish brown. Micrite with rare small pellets and very common small, irregular pores and masses of clear calcite.

7798-7799 Limestone, pale yellowish brown. Oointramicrite with very common sparite. Medium to large oolites and pelmicrite intraclasts in a sublithographic matrix with common sparry calcite in interstices. Some of the intergranular pores are open. Fair porosity, low permeability.

7799-7800 Limestone, pale yellowish brown. Intrapelmicrite with common small patches of sparite. Not as much sparry calcite as above. No oolites seen. Fair pinpoint porosity. Low permeability.
End of core.

7800-7830 Common, pale yellowish brown, microsucrosic, dolomitic limestone. Rare, moderate yellowish brown, micrite limestone. Very badly caved.

7830-7835 Limestone as above, with common, pale yellowish brown micrite and pelmicrite limestone.

7835-7840 Badly caved. Limestone as above. Rare pieces of limestone consisting of dark gray small oolites in a soft white to pale yellowish brown matrix.

7840-7860 Missing.

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| 7860-7880 | Lag time 78 minutes. Common, pale yellowish brown, microsucrosic, dolomitic limestone and moderate yellowish brown micrite limestone. Common cavings. |
| 7880-7890 | Limestone as above, with rare to common dark yellowish brown micrite and microsparite limestone. |
| 7890-7905 | Abundant pale yellowish brown, microsucrosic limestone. Rare moderate yellowish brown micrite and pelmicrite limestone. |
| 7919 | Total depth. |