

Noble Petroleum, Inc.

GEOLOGICAL REPORT DRILLING TIME & SAMPLE LOG

API #: 15-115-21-190
REPORT PREPARED BY FRANK S. MIZE/GEOLOGIST



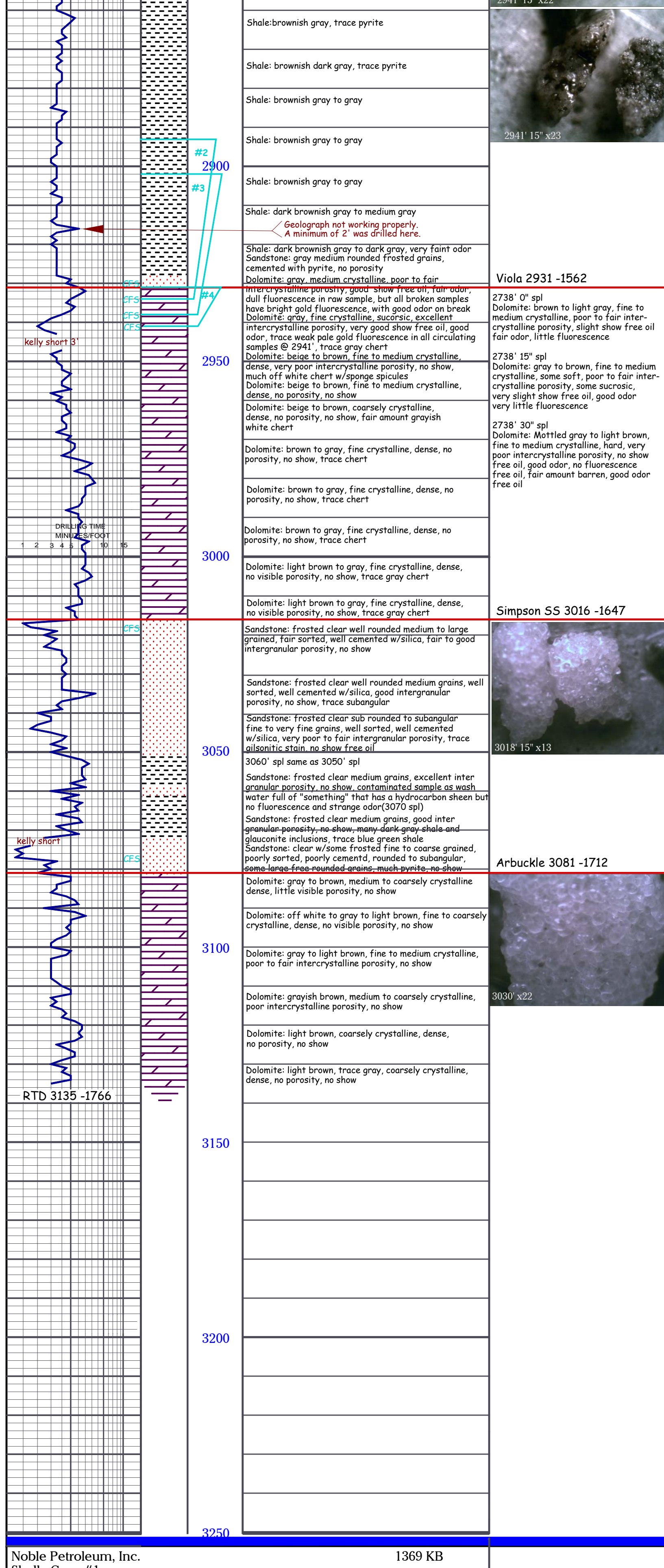
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|---|---|
| COMPANY: Noble Petroleum, Inc. | ELEVATION: K.B. 1369 |
| LEASE: Scully-Corp #1 | D.F.: |
| FIELD: W/Idcat | G.L.: 1360 |
| LOCATION: 5501 ENL & 20701 FEL | DEPTH MEASURED FROM KB: Drilling |
| SEC: 27 TWPSP 18S RGE 2E | Log: <input type="checkbox"/> Core <input checked="" type="checkbox"/> Drilling |
| COUNTY: Marion STATE: Kansas | Scale: 8.5/8 (60/253 KB W/150K) |
| CONTRACTOR: C & G Drilling | Production: <input type="checkbox"/> |
| SPUD: 1-3-15 COMP: 1-21-15 | Electric logs: <input type="checkbox"/> |
| SAMPLES SAIVED FROM: 1900' TO: RTD | GNI/MST/LDT/TTC/CST |
| REFERENCES: PREPARED BY FRANK S. MIZE/GEOLOGIST | FORMATION SAMPLE E LOGS DATUM |
| FORMATION SAMPLE E LOGS DATUM | A. B. C. |

| FORMATION SAMPLE E LOGS DATUM | A. B. C. | DESCRIPTION | DRILLING TIME MINUTES/FOOT |
|-------------------------------|----------|-------------|----------------------------|
| Lansing | 1926 | 1925 | -556 |
| Stark | 2212 | 2213 | -892 |
| BKC | 2287 | 2286 | -917 |
| Marmaton | 2286 | 2294 | -925 |
| Mississippi | 2510 | 2510 | -1141 |
| Miss Lime | 2592 | 2591 | -1222 |
| Kinderhook | 2681 | 2680 | -1338 |
| Hutton | 2831 | 2831 | -1688 |
| Viola | 3016 | 3012 | -1643 |
| Simpson SS | 3081 | 3078 | -1709 |
| Arduckle | 3185 | 3185 | -1784 |
| KDD/LTD | 3185 | 3185 | -1784 |

| | |
|--|------------------|
| | SHALE |
| | SANDSTONE |
| | LIMESTONE |
| | DOLOMITE |
| | HALITE |
| | ANHYDRITE/GYPSUM |

| | | |
|------|--|------------------------|
| 1700 | Shale: gray | |
| 1750 | Shale: gray | |
| 1800 | Shale: gray | |
| 1850 | Shale: gray | |
| 1900 | Shale: gray | |
| 1926 | Limestone: off white to gray, fine to medium crystalline, fair intercrystalline porosity, trace spotted black glauconitic stain, no live show, no fluorescence | Lansing 1926 -557 |
| 1950 | Limestone: off white to gray, fine to medium crystalline, poor intercrystalline porosity, fair amount oolitic, oolitic, no show <i>Straparolis? sp.</i> | |
| 1950 | Limestone: light gray to beige, coarsely crystalline, little visible porosity, no show | |
| 1950 | Limestone: light gray to beige, coarsely crystalline, little visible porosity, no show trace pyrite | |
| 1950 | Limestone: light gray to beige, medium to coarsely crystalline, very poor intercrystalline porosity, no show, much gray to black shale | |
| 1950 | Limestone: beige, oolitic, reef like, poor interoolitic and good intergranular porosity, no show | |
| 1950 | Limestone: beige, oolitic, some coarsely crystalline, reef like, poor interoolitic and intergranular porosity, no show | |
| 2000 | Limestone: off white to light gray, medium to coarsely crystalline, little visible porosity, no show, fair amount green to gray shale | |
| 2000 | Limestone: off white to light gray, medium to coarsely crystalline, little visible porosity, no show, fair amount green to gray shale | |
| 2000 | Limestone: light gray, fine to medium crystalline, fair intercrystalline porosity, no show, fair amount green to gray shale, fossiliferous with crinoids | |
| 2000 | Limestone: light gray, fine to medium crystalline, fair intercrystalline porosity, no show, fair amount green to gray shale | |
| 2050 | Limestone: light gray, medium to coarsely crystalline, little intercrystalline porosity, no show, fair amount dark gray shale, trace pyrite | |
| 2050 | Limestone: beige to gray, coarsely crystalline, dense, no visible porosity, no show | |
| 2050 | Limestone: beige to gray, coarsely crystalline, dense, no visible porosity, no show, much dark gray to green to red shale | |
| 2050 | Limestone: beige to gray, medium to coarsely crystalline, dense, no visible porosity, no show, much dark gray to green to red shale | |
| 2100 | Limestone: beige to gray, coarsely crystalline, dense, no visible porosity, no show, much dark gray to green shale | |
| 2100 | Limestone: beige to gray, coarsely crystalline, dense, no visible porosity, no show, much dark gray to green shale | |
| 2100 | Limestone: medium gray, coarsely crystalline, dense, no porosity, no show | Muncie Creek 2109 -740 |
| 2150 | Limestone: medium gray, coarsely crystalline, dense, no porosity, no show, gray to black shale | |
| 2150 | Limestone: off white to light gray, medium to coarsely crystalline, dense, no visible porosity, no show, trace gray to green shale | |
| 2150 | Limestone: off white to light gray, medium to coarsely crystalline, dense, no visible porosity, no show, trace dark gray to green shale | |
| 2150 | Limestone: gray to beige, medium to coarsely crystalline, poor intercrystalline porosity, no show, trace pyrite, fair amount red to gray to black shale | |
| 2150 | Limestone: gray to beige, medium to coarsely crystalline, poor intercrystalline porosity, slightly chalky, no show, trace pyrite, fair amount red to gray to black shale | |
| 2200 | Limestone: light gray, medium crystalline, poor intercrystalline porosity, no show | |
| 2200 | Limestone: off white to light gray, medium crystalline, poor intercrystalline porosity, no show, fair amount dark gray shale | |
| 2200 | Limestone: off white to light gray, medium crystalline, poor intercrystalline porosity, no show, fair amount dark gray shale | |
| 2200 | Limestone: off white to dirty gray, medium crystalline, poor intercrystalline porosity, slightly chalky, no show | Stark 2212 -843 |
| 2250 | Shale: dark gray, trace black, one piece coal | Hertha 2218 -849 |
| 2250 | Limestone: off white to light gray, fair intercrystalline porosity, no show, fossiliferous with small gastropods | |
| 2250 | Limestone: light to medium gray, coarsely crystalline, dense, little visible porosity, no show | |
| 2250 | Limestone: light to medium gray, coarsely crystalline, dense, little visible porosity, no show | Hushpuckney 2248 -879 |
| 2250 | Shale: black, carbonaceous | Hertha 2253 -884 |
| 2300 | Limestone: mottled gray to light brown, medium crystalline, some argillaceous, no visible porosity, no show | |
| 2300 | Limestone: off white to light brown, medium to coarsely crystalline, dense, no porosity, no show | BKC 2287 -918 |
| 2300 | Shale: gray to green | Marmaton 2296 -927 |
| 2350 | Limestone: off white to light brown, coarsely crystalline, dense, little visible porosity, no show | |
| 2350 | Shale: gray to green | Altamont 2325 -956 |
| 2400 | Limestone: mottled gray to light brown, medium to coarsely crystalline, poor intercrystalline porosity, no show, trace pyrite | |
| 2400 | Limestone: beige to light brown, coarsely crystalline, dense, no porosity, no show | |
| 2400 | Limestone: beige to light brown, coarsely crystalline, dense, no porosity, no show, much red to gray shale | Pawnee 2371 -1002 |
| 2450 | Limestone: off white to gray, medium to coarsely crystalline, poor intercrystalline porosity, no show | |
| 2450 | Limestone: off white to gray, medium to coarsely crystalline, poor intercrystalline porosity, no show, much gray to green shale | |
| 2450 | Limestone: off white to gray, medium to coarsely crystalline, poor intercrystalline porosity, no show, much gray to green and black shale | |
| 2450 | Limestone: light to medium gray to beige, fine to medium crystalline, fair intercrystalline porosity, no show | |
| 2450 | Limestone: gray to beige, coarsely crystalline, dense, no visible porosity, no show | Cherokee 2443 -1074 |
| 2450 | Shale: gray to black | |
| 2450 | Shale: gray to black | |
| 2500 | Limestone: gray, fine to medium crystalline, poor intercrystalline porosity, no show, fossiliferous with crinoids | |
| 2500 | Limestone: off white to beige to light brown, coarsely crystalline, no visible porosity, no show | |
| 2500 | Shale: red to gray to green | |
| 2500 | Limestone: off white to light brown, fine to coarsely crystalline, little visible porosity, no show | |
| 2500 | Shale: red to gray to green to dirty mustard yellow | |
| 2500 | Shale: gray to dirty mustard yellow to reddish brown, trace light purple | Miss Warsaw 2510 -1141 |
| 2550 | Chert: flat milky gray w/sponge spicules to grayish white, fresh, no visible porosity, spotted residual light stain, good odor, pale gold fluorescence in 5-10% of 15" sample | Miss Osage 2524 -1155 |
| 2550 | Chert: off white to light beige, tripolitic, fair to good intercrystalline porosity, less than 5% pale gold to bright blue fluorescence, fair odor, slight spotted light brown stain, no show free oil | |
| 2550 | Chert: white to off white, 50% fresh, 50% tripolitic, good tripolitic porosity, no show free oil, spotted light brown stain, fair to good odor, 10% pale gold fluorescence | |
| 2550 | Chert: mottled off white to light brown, 65% fresh, 35% tripolitic, good tripolitic porosity, spotted light brown stain, fair to good odor 10% pale gold fluorescence | |
| 2550 | Chert: mottled off white to light brown, 65% fresh, 35% tripolitic, good tripolitic porosity, spotted light brown stain, one piece w/slight show free oil, faint odor, no fluorescence | |
| 2550 | Chert: mottled off white to light brown, 65% fresh, 35% tripolitic, good tripolitic porosity, spotted light brown stain, faint odor, no fluorescence | |
| 2550 | Chert: off white to light gray to milky gray, most fresh, some tripolitic, fair tripolitic porosity, no show free oil, no odor, 30% pale off white fluorescence | |
| 2550 | Chert: off white to light gray to milky gray, most fresh, some tripolitic, fair tripolitic porosity, no show free oil, no odor, 30% pale off white fluorescence | Miss Lime 2592 -1223 |
| 2600 | Dolomite: light beige to gray, fine to medium crystalline, dense, no porosity, no show, much chert | |
| 2600 | Limestone: gray, coarsely crystalline dense, no porosity, no show, much gray chert | |
| 2600 | Limestone: gray, coarsely crystalline dense, no porosity, no show, much gray chert | |
| 2600 | Limestone: gray, coarsely crystalline dense, no porosity, no show, much gray chert | |
| 2650 | Limestone: light brown to gray, medium to coarsely crystalline, dense, very poor intercrystalline porosity, no show | |
| 2650 | Limestone: beige to light gray, medium to coarsely crystalline, very dense, no porosity, no show | Kinderhook 2681 -1312 |
| 2700 | Shale: dark gray to greenish gray | |
| 2700 | Shale: dark gray to greenish gray | |
| 2700 | Shale: gray to dark gray | |
| 2700 | Shale: gray to dark gray | |
| 2700 | Shale: gray | |
| 2700 | Shale: gray to medium gray, trace pyrite | |
| 2750 | Shale: gray to medium gray | |
| 2750 | Shale: gray to medium gray, trace pyrite | |
| 2750 | Shale: gray | |
| 2750 | Shale: gray, trace brown medium crystalline limestone | |
| 2750 | Shale: gray, trace brown medium crystalline limestone | |
| 2800 | Shale: gray | |
| 2800 | Shale: gray | |
| 2800 | Shale: gray | |
| 2800 | Shale: gray | |
| 2850 | Shale: gray to brownish gray w/trace brown coarsely crystalline limestone, trace pyrite | |

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| A. C.M.W. SEC. 28, 18S. 2E, Diamond Shamrock Shallow 182# -28 |
| B. |
| C. |



Noble Petroleum, Inc. 1369 KB
 Skully-Corp #1
 550' FNL & 2,070' FEL
 27-18S-2E
 Marion Co., KS

Comments:

01/09/15 Moving in C&G Rig 2.
 01/12/15 Rigging up. Plan to spud 1/13/15.
 01/13/15 Rigging up. Preparing to spud.
 01/14/15 Drilling @ 279' @ 6:00 AM. Spudded at @ 12:00 PM 01/13/15. Drilled 12.25' hole to 235'. Ran 225' of 8.625' 23# casing. Set @ 235'. KB. (6' off bottom.) Elite Cementing and Acid cemented with 150 sacks class A + 3% CaCl, 2% gel, 25# Flo-Seal. Cement did not circulate. Plug down @ 7:45 PM 01/13/15. Ran 1" in annulus. Pumped 35 sx of same blend and circulated to surface. Finished 1" job @ 11:25 PM 01/13/15. Elite ticket # 2113. Under surface @ 4:40 AM 1/14/2015.
 01/15/15 Drilling @ 1898' @ 7:45 AM. Changed out PDC @ 1892'. Mud wt. 9# Vis 33. Deviation surveys 1/4" @ 529', 1/2" @ 1030', 1/2" @ 1627', 1/2" @ 1892'.
 01/16/15 Drilling @ 2351' @ 7:25 AM Vis 38 Wt 9.0 LCM 1/2#.
 01/17/15 Drilling @ 2536' @ 8:00 AM. Vis 50 Wt. 9.3 LCM 1#. DST #1 2543'-2530' / 30-45-45-60. Blow off of bottom of bucket in 1.25 minutes. Gas to surface in 15 minutes. Immediate blow off of BOB on 2nd open. Max gas flow 43 MCF/D. Final gas flow 37 MCF/D. Recovered 2109' GIP + 302' VSOCGM, break down 2% Oil, 3% Gas, 95% Mud. IHP 1167 PSIG, IFP 62-102 PSIG, ISI 560 PSIG, FFP 94-121 PSIG, FSIP 560 PSIG, FHP 1153 PSIG. BHT 97°. Deviation 3/4" @ 2530'.
 01/18/15 Drilling @ 2860' @ 7:08 AM Vis 42 Wt 9.2 LCM 2#.
 01/19/15 Running DST @ 2932'-2938' @ 7:00 AM. Vis 50 Wt. 9.3 LCM 2#. DST #2 2893'-2934' / 30-30-30-45. Weak surface blow died in 20 minutes. No blow on 2nd open. Recovered 3' oil spotted mud + 1' free oil. IHP 1394 PSIG, IFP 10-14 PSIG, ISI 934 PSIG, FFP 15-17 PSIG, FSIP 999 PSIG, FHP 1376 PSIG. BHT 101°.
 01/20/14 Circulating @ 3018' @ 7:29 AM. Vis 50 Wt. 9.3 LCM 3#. DST #3 2902'-2938' / 30-45-30-45. Weak blow built to 1/2" on initial open. No blow on 2nd open. Recovered 12' VSOCMW 2% oil, 10% mud, 88% water + 1' free oil. IHP 1400 PSIG, IFP 9-19 PSIG, ISIP 1052 PSIG, FFP 16-19 PSIG, FSIP 1061 PSIG, FHP 1359 PSIG. BHT 99°. DST #4 2931'-2941' / 30-45-45-60. Weak blow to 1.5" on initial open. Weak blow to 1" on 2nd open. Recovered 63' VSOCMW 2% oil, 5% mud, 93% water + 2' free oil. IHP 1416 PSIG, IFP 9-24 PSIG, ISIP 1102 PSIG, FFP 25-45 PSIG, FSIP 1101 PSIG, FHP 1393 PSIG. BHT 102°. Chlorides 45,000. Rw .9 @ 58°.

DST #1: 2443-2530: 30-45-45-60

Formation Test No. 1 Interval Tested from 2443 ft. to 2530 ft. Total Depth 2530 ft.
 Packer Depth 2438 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Packer Depth 2443 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

Blow: 1st Open: STRONG BLOW BOB IN 1-1/4 MIN GAS TO SURFACE IN 15 MIN (HAMMER UNION ON HEAD UNSCREWED)
 2nd Open: BLEW IMMEDIATELY OF BOTTOM & FAS TO SURFACE (WEAK SURFACE BLOW BACK)

Time Set Packer(s) 11:41 P.M. A.M. P.M. Time Started Off Bottom 2:41 A.M. A.M. P.M. Maximum Temperature 97

Initial Hydrostatic Pressure..... (A) 1167 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 62 P.S.I. to (C) 102 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 560 P.S.I.
 Final Flow Period..... Minutes 45 (E) 94 P.S.I. to (F) 121 P.S.I.
 Final Closed In Period..... Minutes 60 (G) 560 P.S.I.
 Final Hydrostatic Pressure..... (H) 1153 P.S.I.

INITIAL FLOW

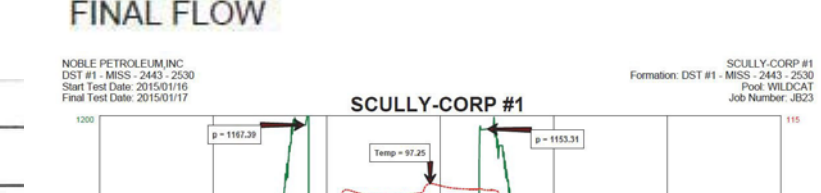
| Time O'Clock | Orifice Size | Gauge | CF/D |
|--------------|--------------|-----------|------|
| 30 | 1/4 in. | 4 PSI in. | 18.5 |
| | in. | in. | |
| | in. | in. | |
| | in. | in. | |
| | in. | in. | |
| | in. | in. | |
| | in. | in. | |
| | in. | in. | |

FINAL FLOW PSI

| Time O'Clock | Orifice Size | Gauge | CF/D |
|--------------|--------------|--------------|-------|
| 2 | 1/4 in. | 12 PSI in. | 12.7 |
| 5 | 1/4 in. | 17 PSI in. | 42.4 |
| 10 | 1/4 in. | 17.5 PSI in. | 43.15 |
| 15 | 1/4 in. | 17 PSI in. | 42.4 |
| 20 | 1/4 in. | 16 PSI in. | 40.9 |
| 25 | 1/4 in. | 15 PSI in. | 39.2 |
| 30 | 1/4 in. | 14.5 PSI in. | 38.4 |
| 35 | 1/4 in. | 14 PSI in. | 37.6 |
| 40 | 1/4 in. | 14 PSI in. | 37.6 |
| 45 | 1/4 in. | 13.5 PSI in. | 36.75 |

Recovered 302 ft. of MUD WITH OIL SPOTS
 Recovered ft. of 2109 - GIP
 Recovered ft. of _____
 Recovered ft. of _____
 Recovered ft. of _____
 Recovered ft. of _____
 Remarks: TOTAL FLUID; 320' OF TOTAL FLUID

TOOL SAMPLE: VSOCGM - 2%O 3%G 95%M



DST #2: 2893-2934: 30-45-30-60

Formation Test No. 2 Interval Tested from 2893 ft. to 2934 ft. Total Depth 2934 ft.
 Packer Depth 2888 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Packer Depth 2893 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

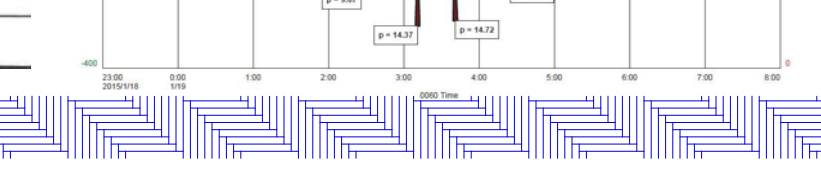
Time Set Packer(s) 6:31 A.M. A.M. P.M. Time Started Off Bottom 9:01 A.M. A.M. P.M. Maximum Temperature 99

Initial Hydrostatic Pressure..... (A) 1400 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 9 P.S.I. to (C) 19 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 1052 P.S.I.
 Final Flow Period..... Minutes 30 (E) 16 P.S.I. to (F) 19 P.S.I.
 Final Closed In Period..... Minutes 45 (G) 1061 P.S.I.
 Final Hydrostatic Pressure..... (H) 1359 P.S.I.

Blow: 1st Open: WEAK SURFACE BLOW DIED IN 20 MIN (NOBB)
 2nd Open: DEAD NO BLOW (NOBB)

Recovered 3 ft. of MUD WITH OIL SPOTS
 Recovered 1 ft. of FREE OIL
 Recovered ft. of _____
 Recovered ft. of _____
 Recovered ft. of _____
 Recovered ft. of _____
 Remarks: TOTAL FLUID; 4' OF TOTAL FLUID

TOOL SAMPLE: MUD WITH A SCUM OF OIL



DST #3: 2902-2938: 30-45-45-60

Formation Test No. 3 Interval Tested from 2902 ft. to 2938 ft. Total Depth 2938 ft.
 Packer Depth 2897 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Packer Depth 2902 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

Time Set Packer(s) 6:31 A.M. A.M. P.M. Time Started Off Bottom 9:01 A.M. A.M. P.M. Maximum Temperature 99

Initial Hydrostatic Pressure..... (A) 1400 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 9 P.S.I. to (C) 19 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 1052 P.S.I.
 Final Flow Period..... Minutes 30 (E) 16 P.S.I. to (F) 19 P.S.I.
 Final Closed In Period..... Minutes 45 (G) 1061 P.S.I.
 Final Hydrostatic Pressure..... (H) 1359 P.S.I.

Blow: 1st Open: WEAK BLOW BUILT TO 1/2 IN (NOBB)
 2nd Open: DEAD NO BLOW (NOBB)

Recovered 12 ft. of VSOCMW 2%O 10%M 88%W
 Recovered 1 ft. of FREE OIL
 Recovered ft. of _____
 Recovered ft. of _____
 Recovered ft. of _____
 Recovered ft. of _____
 Remarks: TOTAL FLUID; 13' OF TOTAL FLUID

TOOL SAMPLE: VSOCMW 2%O 10%M 88%W



DST #4: 2931-2941: 30-45-45-60

Formation Test No. 4 Interval Tested from 2931 ft. to 2941 ft. Total Depth 2941 ft.
 Packer Depth 2926 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Packer Depth 2931 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

Time Set Packer(s) 5:16 P.M. A.M. P.M. Time Started Off Bottom 8:16 P.M. A.M. P.M. Maximum Temperature 102

Initial Hydrostatic Pressure..... (A) 1416 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 9 P.S.I. to (C) 24 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 1102 P.S.I.
 Final Flow Period..... Minutes 45 (E) 25 P.S.I. to (F) 45 P.S.I.
 Final Closed In Period..... Minutes 60 (G) 1101 P.S.I.
 Final Hydrostatic Pressure..... (H) 1393 P.S.I.

Blow: 1st Open: WEAK BLOW BUILT TO 1-1/2 IN (NOBB)
 2nd Open: WEAK BLOW BUILT TO 1 IN (NOBB)

Recovered 63 ft. of VSOCMW 2%O 5%M 93%W
 Recovered 2 ft. of FREE OIL
 Recovered ft. of _____
 Recovered ft. of RW .9@58 DEG
 Recovered ft. of 45,000 PPM
 Recovered ft. of _____
 Remarks: TOTAL FLUID; 65' OF TOTAL FLUID

TOOL SAMPLE: VSOCMW 2%O 5%M 93%W

