Company : 3D Oil Ltd
Well : Wardie-1
Interval : 67.00 - 1641.04 meters
Created : 18/May/2008 9:42:02 PM

FORMATION EVALUATION LOG

Drilling Rate
ROP (m/hr)
200 180 160 140 120 100 80 60 40 20
ROP (m/hr)
400 380 360 340 320 300 280 260 240 220

TVD meters 1:500
TVDRT meters
Cuttings Lithology
Visual Inferred Porosity
P F G
Oil Show
P F G

Gas Data
Gas Hydrocarbon Avg %
0.01 0.1 1 10

Chromatograph Data
Methane ppm 1 100000
Ethane ppm 1 100000
Propane ppm 1 100000
iso-Butane ppm 1 100000
n-Butane ppm 1 100000
iso-Pentane ppm 1 100000
n-Pentane ppm 1 100000

Calcimetry
CaCO3 %
20 40 60 80 100
MgCO3 %
100 80 60 40 20

Interpreted Lithology

Lithology Description

70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240

RB1: 660 mm (26") with 914 mm (36") H/Opener
Type: Rock / Reed Y11C
Jets: 3x22, 1x16
Depth In: 76.8 m
Depth Out : 136.0 m
Drilled 59.2 m in 2.3 hrs
Grade:1-1-WT-A-NB-I-RR-TD

Set 30" x 20" Csg @ 133.0 mMDRT

11/05/08

NB2: 444 mm (17.5")
Type: Rock / Hughes MXL T1V
Jets: 3x20
Depth In: 136.0 m
Depth Out : 751.0 m
Drilled 615 m in 6.7 hrs
Grade: 1-1-NO-A-0-I-NO-TD

13/05/08

WOB: 1 - 16 klbf
RPM: 47 - 120
GPM: 483 - 1001
SPP: 581 - 1654 psi

RT - AHD: 38.0 mMDRT
Water depth : 38.8 mMDRT
RT - Seabed: 76.8 mMDRT

Spud Wardie-1 at 1900hrs on 10/05/2008

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

914 mm (36") Section TD @ 136.0 mMDRT on 11/05/2008

Survey @ 174.15 mMDRT
Incl: 0.97° Azi: 331.19°
TVD: 174.1 m

Survey @ 202.30 mMDRT
Incl: 1.06° Azi: 330.50°
TVD: 202.3 m

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

250
260
270
280
290
300
310
320
330
340
350
360
370
380
390
400
410
420
430
440
450

WOB: 1 - 21 klbf
RPM: 0 - 63
GPM: 896 - 902
SPP: 1507 - 1666 psi

WOB: 13 - 33 klbf
RPM: 99 - 168
GPM: 900 - 1105
SPP: 1575 - 2445 psi

Survey @ 260.44 mMDRT
Incl: 2.12° Azi: 269.17°
TVD: 260.4 m

Survey @ 290.09 mMDRT
Incl: 5.23° Azi: 252.00°
TVD: 289.9 m

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

Survey @ 319.76 mMDRT
Incl: 8.62° Azi: 244.27°
TVD: 319.4 m

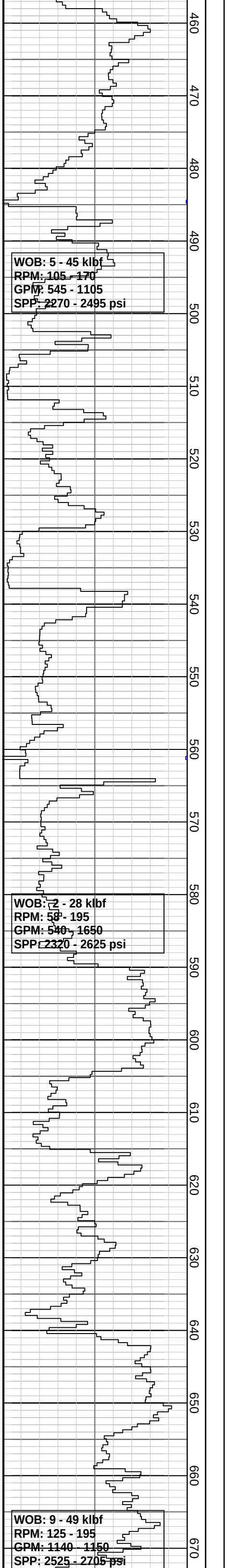
Survey @ 349.23 mMDRT
Incl: 11.69 Azi: 243.65
TVD: 348.4 m

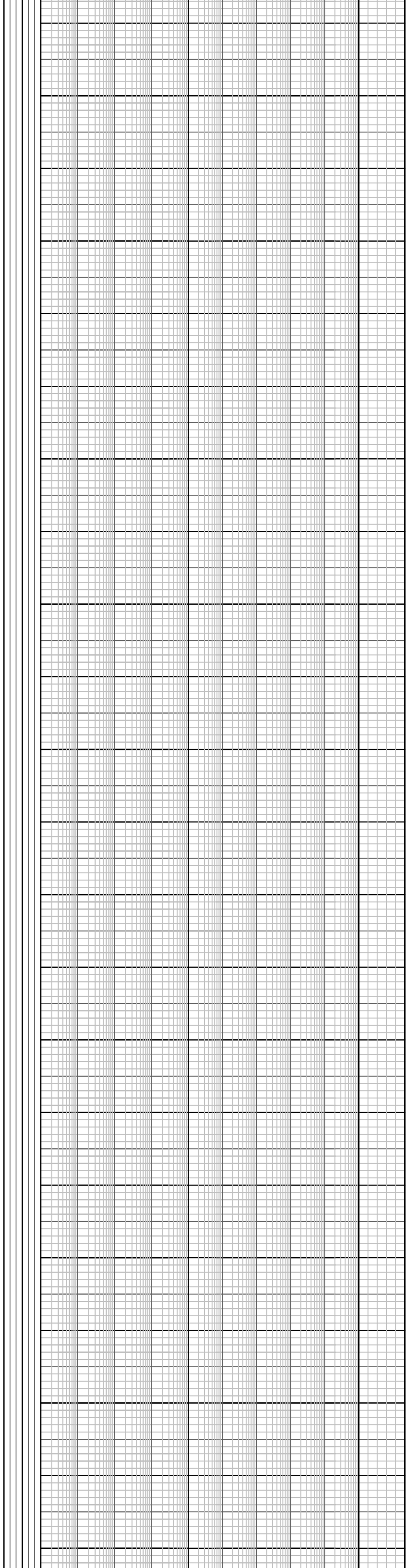
Survey @ 378.56 mMDRT
Inc: 14.54° Azi: 243.39°
TVD: 377.0 m

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

Survey @ 408.2 mMDRT
Incl: 16.62° Azi: 238.68°
TVD: 405.5 m

Survey @ 437.65 mMDRT
Incl: 18.41° Azi: 234.18°
TVD: 433.6 m





Survey @ 466.98 mMDRT
Incl: 21.11° Azi: 233.22°
TVD: 461.2 m

Survey @ 496.44 mMDRT
Incl: 24.52° Azi: 235.86°
TVD: 488.3 m

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

Survey @ 525.34 mMDRT
Incl: 27.44 Azi: 238.00
TVD: 514.3 m

Survey @ 555.68 mMDRT
Incl: 29.78° Azi: 239.10°
TVD: 541.0 m

Survey @ 585.40 mMDRT
Incl: 28.02° Azi: 239.82°
TVD: 567.0 m

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

Survey @ 614.88 mMDRT
Incl: 29.13° Azi: 240.0°
TVD: 582.8 m

Survey @ 644.23 mMDRT
Incl: 31.31° Azi: 240.28°
TVD: 618.2 m

Survey @ 674.32 mMDRT
Incl: 33.98° Azi: 240.54°
TVD: 643.6 m

Drill with sea water and hi-vis pills, returns to seabed from 76.8 m to 751.0 mMDRT

Survey @ 703.78 mMDRT
Incl: 34.90° Azi: 240.07°
TVD: 667.8 m

680
690
700
710
720
730
740
750
760
770
780
790
800
810
820
830
840
850
860
870
880

Set 13-3/8" Csg @ 747.2 mMDRT
F.I.T. 1.64 sgEMW

14/05/08

NB3: 311mm (12.25")
Type: PDC / Reed RSX 616M-A16
Jets: 3x15, 3x16
Depth In: 751.0 m
Depth Out : 1766.0 m
Drilled 1015.0 m in 19.4 hrs
Grade:

WOB: 1 - 37 klbf
RPM: 45 - 186
GPM: 910 - 1150
SPP: 1105 - 2680 psi

WOB: 2 - 16 klbf
RPM: 130 - 150
GPM: 980 - 1060
SPP: 1355 - 1600 psi

Survey @ 722.54 mMDRT
Incl: 34.35° Azi: 239.86°
TVD: 683.3 m

444 mm (17.5") Section TD @ 751.0 mMDRT on 13/05/2008

CALCARENITE: lt olv gy, olv gy i/p, mnr wh-pa yel, mod hd-hd, v f-crs, ang-sbang, trnsl-op sparry calc, min slt, mnr rndd f sd i/p, mnr blk lit, mnr glau, tr f shl frag, wl cmt, p vis por

CALCISILTITE: m gy-olv gy-occ blk, sft-hd, hi calc, mnr-com clas slt fraction, grd i/p to f sd

LOOSE SAND: f-m, mod srt, sbrndd-rndd, trnsl-trnsp qtz, mnr crs-v crs rndd clr-fros qtz

MW: 1.07 sg FV: 57
PV: 11 YP: 18
Gels: 7/8/10 PH: 9.5

Survey @ 802.80 mMDRT
Incl: 32.02° Azi: 241.09°
TVD: 750.5 m

CALCARENITE: lt olv gy-olv gy i/p, mnr wh-pa yel, mod hd-hd, v f-crs, ang-sbang, trnsl-op sparry calc, com clas slt, mnr rndd f sd i/p, mnr blk lit, mnr glau, tr f shl frag, wl cmt, p vis por

Survey @ 831.50 mMDRT
Incl: 30.76° Azi: 239.33°
TVD: 775.0 m

CALCISILTITE: m gy-olv gy-occ blk, sft-hd, hi calc, mnr-com clas slt fraction, grd i/p-f sd

Survey @ 861.51 mMDRT
Incl: 31.64° Azi: 238.19°
TVD: 800.6 m

CALCARENITE: lt olv gy-olv gy i/p, mnr wh-pa yel, hd, crushed i/p, v f-crs, ang-sbang, trnsl-op sparry calc, com clas slt, mnr rndd f sd i/p, mnr blk lit, mnr glau, tr f shl frag, wl cmt, p vis por

Survey @ 891.22 mMDRT
Incl: 31.39° Azi: 236.51°
TVD: 826.0 m

CALCILUTITE: wh, hd, amor

CALCISILTITE: m gy-olv gy-occ blk, sft-frm, mnr hd, hi calc, mnr-com clas fraction, grd i/p to f sd

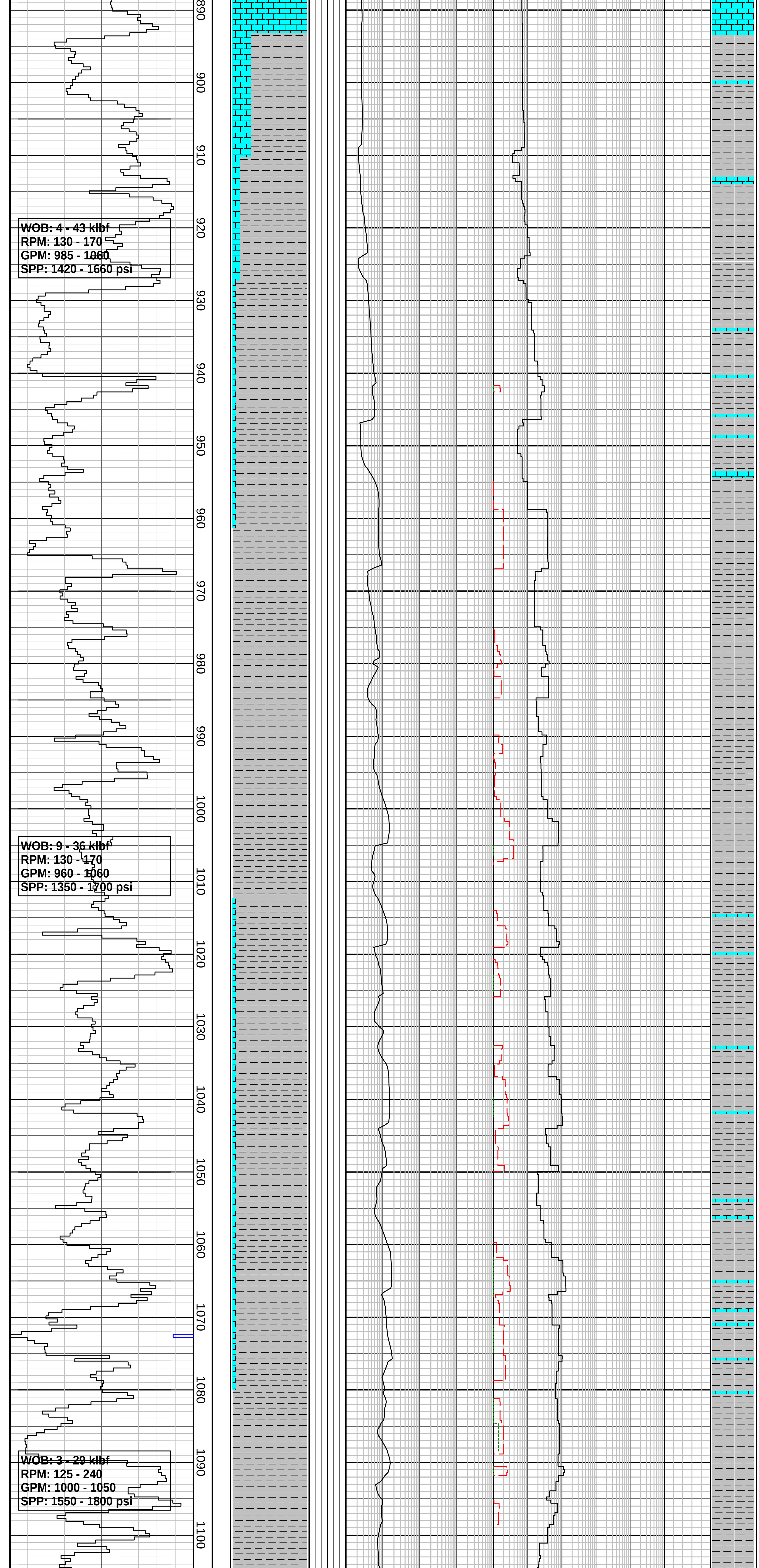
Survey @ 920.19 mMDRT
Incl: 31.58° Azi: 236°
TVD: 850.7 m

CALCILUTITE: wh-pa gy, hd, amor, sli slt

CALCARENITE: lt olv gy-olv gy i/p, mnr wh-pa yel, hd, crushed i/p, v f-crs, ang-sbang, trnsl-op sparry calc, com clas slt, mnr rndd f sd i/p, mnr blk lit, mnr glau, tr

Survey @ 949.76 mMDRT
Incl: 31.70° Azi: 236.73°
TVD: 875.8 m

CALCISILTITE: m gy-olv gy-occ blk, sft-frm, mnr hd, hi



calc, mnr-com clas fraction, grd i/p-f sd

Survey @ 979.78 mMDRT
Incl: 31.37° Azi: 237.60°
TVD: 901.4 m

CALCISILTITE: pa-m gy, olv gy, frm-hd, blky, mod-hi calc, mnr com clas slt fraction, grd i/p to f sd, poss Dol cmt idicated by slower HCl reaction, tr v f dk mafic grs, r pyr

Survey @ 1009.21 mMDRT
Incl: 31.56° Azi:240.47°
TVD: 926.5 m

CALCARENITE: lt olv gy-olv gy i/p, mnr wh-pa yel, mod hd-hd, v f-f, ang-sbang, trnsl to op sparry calcite, mnr slt, mnr blk lit, hi calc, wl cmt, pr vis por

Survey @ 1039.28 mMDRT
Incl: 31.64° Azi: 239.79°
TVD: 951.9 m

CALCILUTITE: wh-pa gy, hd, amor, sli slt

CALCISILTITE: pa-m gy, olv gy, frm-hd, blky, mod-hi calc, mnr com clastic slt fraction, grd i/p to f sd, poss Dol cmt idicated by slower HCl reaction, tr v f dk mafic grs, r pyr

Survey @ 1066.59 mMDRT
Incl: 31.64° Azi: 241.83°
TVD: 975.4 m

CALCARENITE: lt olv gy-olv gy i/p, mnr wh-pa yel, mod hd-hd, v f-f, ang-sbang, trnsl to op sparry calcite, mnr slt, mnr blk liths, hi calc, wl cmt, pr vis por, tr bry frag

Survey @ 1096.55 mMDRT
Incl: 32.01° Azi: 242.11°
TVD: 1000.8 m

CALCISILTITE: pa-m gy, olv gy, frm-hd, blky, mod-hi calc, mnr com clastic slt fraction, grd i/p to f sd, poss Dol cmt idicated by slower HCl reaction, tr v f dk mafic grs, r pyr

Survey @ 1125.94 mMDRT
Incl: 32.34° Azi: 242.75°
TVD: 1025.70 m

CALCARENITE: lt olv gy-olv gy i/p, mnr wh-pa yel, mod hd-hd, v f-f, ang-sbang, trnsl to op sparry calcite, mnr slt, mnr blk liths, hi calc, wl cmt, pr vis por, tr bry frag, tr ech

Survey @ 1155.71 mMDRT
Incl: 32.17° Azi: 242.53°
TVD: 1050.9 m

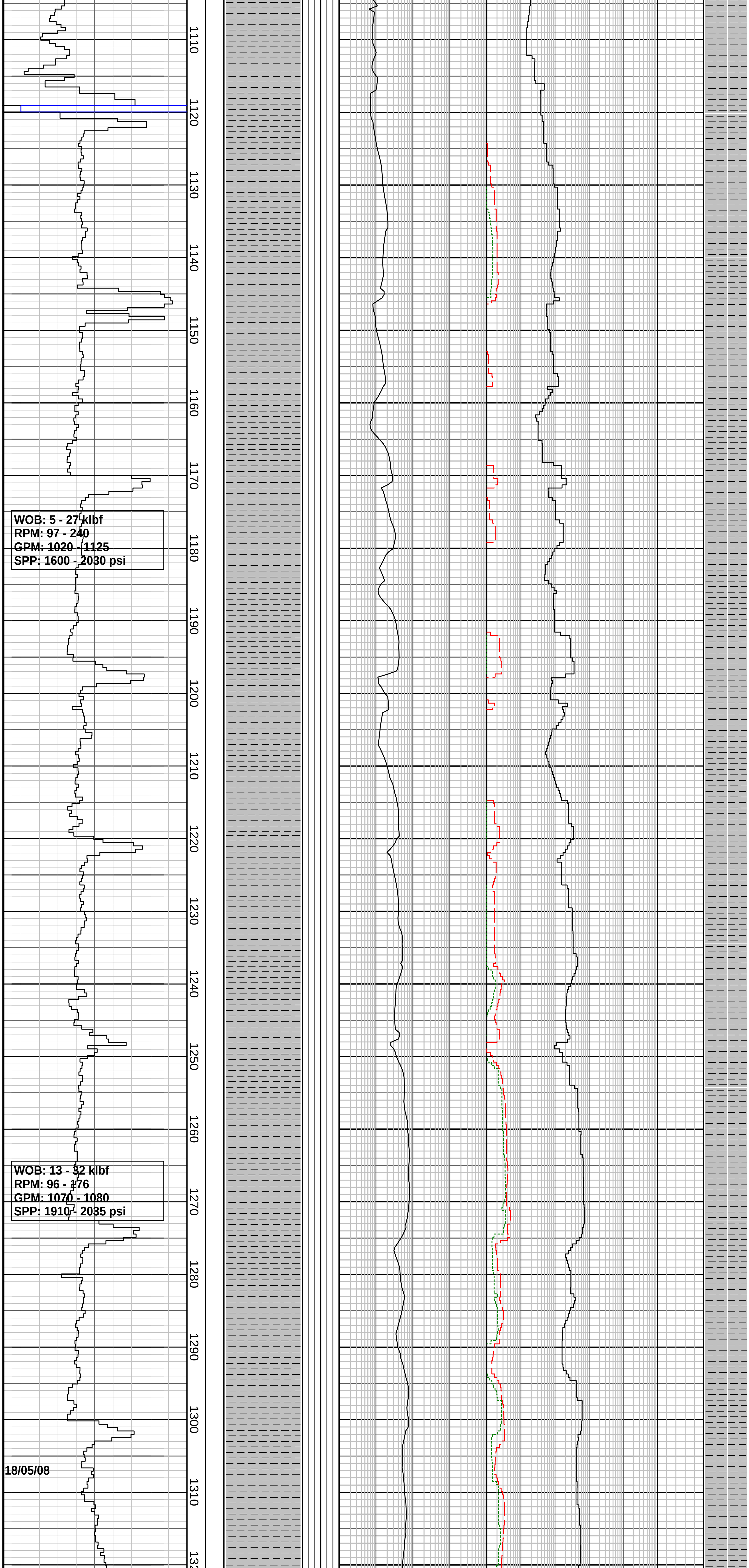
CALCILUTITE: wh, pa-m olv gy, sft-frm, occ hd, amor, sli slt

MW: 1.10 sg	FV: 55
PV: 13	YP: 28
Gels: 11/17/21	PH: 9.5

Survey @ 1184.60 mMDRT
Incl: 32.35° Azi: 243.98°
TVD: 1075.3 m

CALCISILTITE: olv gy, mnr gysh olv, frm-mod hd, blky, com dk spks of carb mat, r dissem pyr, r blky calc sparry crystals, tr m gy, hd, sbfiss, tr pyt masses w/ pyr micr lam, acicular form replacing probable echinoid spines

Survey @ 1214.81 mMDRT
Incl: 32.18° Azi: 244.06°
TVD: 1100.9 m



TVD: 1100.9 m

CALCILUTITE: v lt-m olv gy, frm, softening in wtr, sbblky-sbbfis, w-/ r dk strk, tr pyr, tr glau, tr l forams, tr ech

Survey @ 1244.86 mMDRT
Incl: 30.73° Azi: 243.07°
TVD: 1126.5 m

CALCISILTITE: olv gy, mnr gysh olv, frm-mod hd, blky, com dk spks of carb mat, r dissem pyr, r blky calc sparry crystals, tr m gy, hd, sbfiss, w-/ abd micr xln pyr micr lam, tr pyr masses w-/ pyr in acicular form replacing probable echinoid spines

Survey @ 1274.25 mMDRT
Incl: 29.50° Azi: 243.74°
TVD: 1151.9 m

CALCILUTITE: v lt-m olv gy, frm, softening in wtr, sbblky-sbbfis, w-/ r dk strk, tr pyr, v r f glau, tr l glau nod, tr l bry, benthic forams

Survey @ 1303.82 mMDRT
Incl: 28.32° Azi: 243.43°
TVD: 1177.8 m

CALCISILTITE: olv gy, gnsh gy, frm-mod hd, blky, sli more arg, r l forams, tr l bry frag

Survey @ 1333.24 mMDRT
Incl: 26.97° Azi: 243.84°
TVD: 1203.9 m

CALCILUTITE: v lt-m olv gy, frm, softening in wtr, sbblky-sbbfis, w-/ r dk strk, tr pyr, v r f glau, tr l glau nod, tr l bry, l benthic forams, diverse range of taxa, r planktics

Survey @ 1363.33 mMDRT
Incl: 25.76° Azi: 244.51°
TVD: 1230.8 m

CALCISILTITE: olv gy, frm-hd, blky, abd micrxln calcite

MW: 1.12 sg FV: 58
PV: 13 YP: 30
Gels: 13/18/22 PH: 9.5

Survey @ 1392.32 mMDRT
Incl: 24.64° Azi: 245.94°
TVD: 1257.1 m

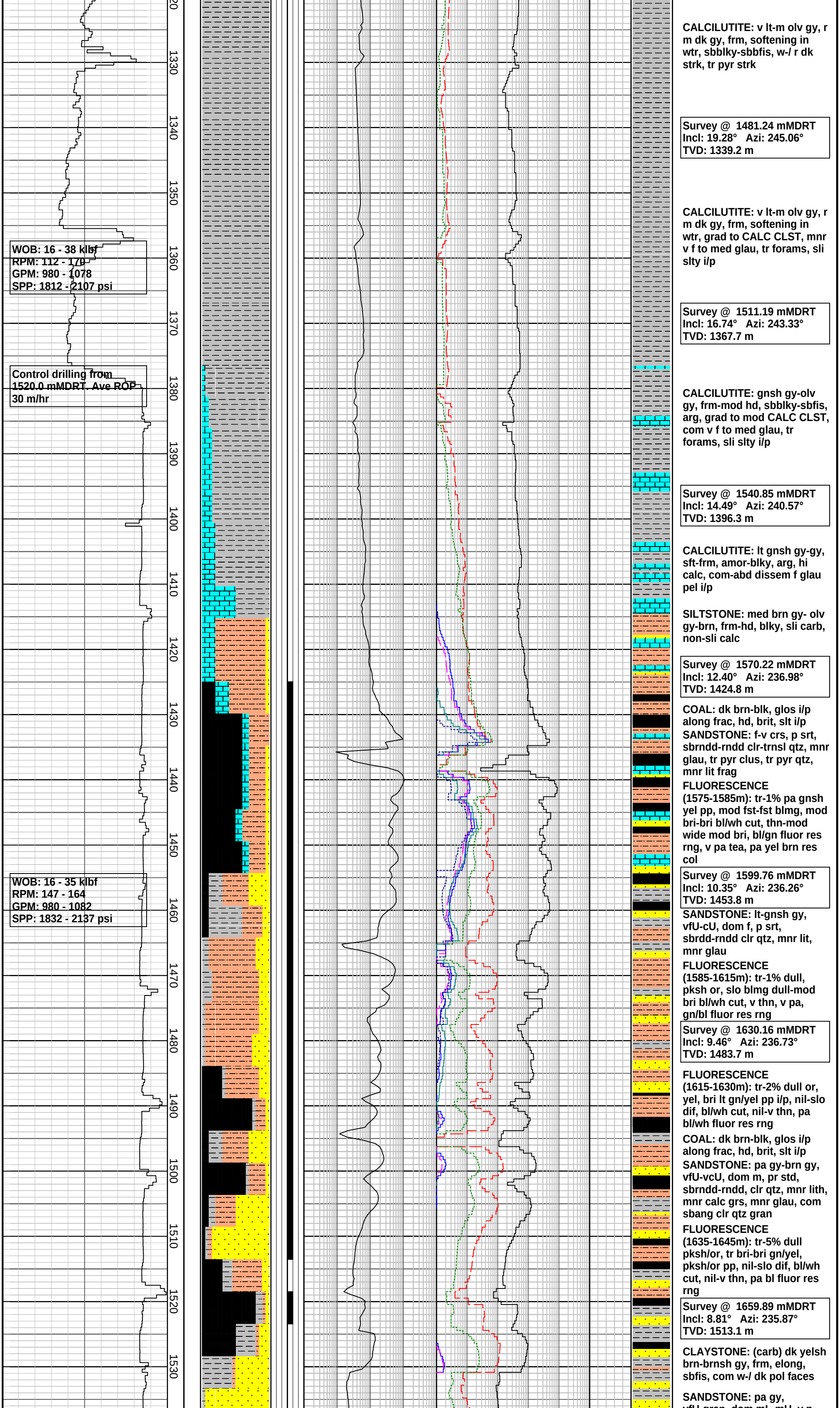
CALCILUTITE: v lt-m olv gy, frm, softening in wtr, sbblky-sbbfis, w-/ r dk strk, tr pyr, v r f glau, tr l glau nod, tr l bry, l benthic forams, diverse range of taxa, tr pyr stks, r m dk gy, fis, hd calcilutite

Survey @ 1421.66 mMDRT
Incl: 23.41° Azi: 245.94°
TVD: 1283.9 m

Add CaCO3 to mud system at 1425.0 mMDRT on 17/05/08 at 2315hrs

CALCILUTITE: v lt-m olv gy, r m dk gy, frm, softening in wtr, sbblky-sbbfis, w-/ r dk strk, tr pyr strk, v r f glau, tr l glau nod, tr l bry, l benthic forams, diverse range of tax

Survey @ 1451.54 mMDRT
Incl: 21.93° Azi: 245.34°
TVD: 1311.4 m



CALCILUTITE: v lt-m olv gy, r m dk gy, frm, softening in wtr, sbblky-sbbfis, w-/ r dk strk, tr pyr strk

Survey @ 1481.24 mMDRT
Incl: 19.28° Azi: 245.06°
TVD: 1339.2 m

CALCILUTITE: v lt-m olv gy, r m dk gy, frm, softening in wtr, grad to CALC CLST, mnr v f to med glau, tr forams, sli slty i/p

Survey @ 1511.19 mMDRT
Incl: 16.74° Azi: 243.33°
TVD: 1367.7 m

CALCILUTITE: gnsh gy-olv gy, frm-mod hd, sbblky-sbfis, arg, grad to mod CALC CLST, com v f to med glau, tr forams, sli slty i/p

Survey @ 1540.85 mMDRT
Incl: 14.49° Azi: 240.57°
TVD: 1396.3 m

CALCILUTITE: lt gnsh gy-gy, sft-frm, amor-blky, arg, hi calc, com-abd dissem f glau pel i/p

SILTSTONE: med brn gy- olv gy-brn, frm-hd, blky, sli carb, non-sli calc

Survey @ 1570.22 mMDRT
Incl: 12.40° Azi: 236.98°
TVD: 1424.8 m

COAL: dk brn-blk, glos i/p along frac, hd, brit, slt i/p

SANDSTONE: f-v crs, p srt, sbrndd-rndd clr-trnsl qtz, mnr glau, tr pyr clus, tr pyr qtz, mnr lit frag

FLUORESCENCE (1575-1585m): tr-1% pa gnsh yel pp, mod fst-fst blmg, mod bri-bri bl/wh cut, thn-mod wide mod bri, bl/gn fluor res rng, v pa tea, pa yel brn res col

Survey @ 1599.76 mMDRT
Incl: 10.35° Azi: 236.26°
TVD: 1453.8 m

SANDSTONE: lt-gnsh gy, vfU-cU, dom f, p srt, sbrdd-rndd clr qtz, mnr lit, mnr glau

FLUORESCENCE (1585-1615m): tr-1% dull, pksh or, slo blmg dull-mod bri bl/wh cut, v thn, v pa, gn/bl fluor res rng

Survey @ 1630.16 mMDRT
Incl: 9.46° Azi: 236.73°
TVD: 1483.7 m

FLUORESCENCE (1615-1630m): tr-2% dull or, yel, bri lt gn/yel pp i/p, nil-slo dif, bl/wh cut, nil-v thn, pa bl/wh fluor res rng

COAL: dk brn-blk, glos i/p along frac, hd, brit, slt i/p

SANDSTONE: pa gy-brn gy, vfU-vcU, dom m, pr std, sbrndd-rndd, clr qtz, mnr lith, mnr calc grs, mnr glau, com sbang clr qtz gran

FLUORESCENCE (1635-1645m): tr-5% dull pksh/or, tr bri-bri gn/yel, pksh/or pp, nil-slo dif, bl/wh cut, nil-v thn, pa bl fluor res rng

Survey @ 1659.89 mMDRT
Incl: 8.81° Azi: 235.87°
TVD: 1513.1 m

CLAYSTONE: (carb) dk yelsh brn-brnsh gy, frm, elong, sbfis, com w-/ dk pol faces

SANDSTONE: pa gy,

WOB: 1 - 24 klbf
RPM: 121 - 161
GPM: 1025 - 1115
SPP: 1865 - 2170 psi

1540 1550 1560 1570 1580 1590 1600 1610 1620 1630 164

VfU-gran, dom mL-mU, v p srt, sbang, sbspheroidal, trans-trnsl qtz, tr aggs, hd, ti sil cmt w-/ dk brn stn

Survey @ 1689.37 mMDRT
Incl: 8.19° Azi: 235.45°
TVD: 1542.3 m

SILTSTONE: pa yelsh brn, spkld dk brn-blk w-/ carb mat & lam, blky-sbfis, non calc, loc w-/ com musc

Survey @ 1718.81 mMDRT
Incl: 7.67° Azi: 235.27°
TVD: 1571.4 m

CLAYSTONE: (calc) lt gy-gnsh gy, tr pa yelsh brn, frm-hd, mod-hi calc, slty

Survey @ 1745.67 mMDRT
Incl: 7.36° Azi: 234.18°
TVD: 1598.04 m

SANDSTONE: v lt gy, fL-gran, dom m-crs, v p srt, ang-sbrndd, trnsp-trnsl qtz

Survey @ 1766.00 mMDRT
Incl: 7.36° Azi: 234.18°
TVD: 1618.21 m

Wardie-1 reached TD depth of 1766.0 mMDRT at 1515hrs on 18/05/2008

Wireline logging:
Run #1. xxxx
Run #2. xxxx
Run #3. xxxx

FORMATION EVALUATION LOG

Drilling Rate
ROP (m/hr)
200 180 160 140 120 100 80 60 40 20
ROP (m/hr)
400 380 360 340 320 300 280 260 240 220

TVD meters 1:500

TVDRT meters

Cuttings Lithology

Visual Inferred Porosity
P F G

Oil Show
P F G

Gas Data
Gas Hydrocarbon Avg %
0.01 0.1 1 10

Chromatograph Data
Methane ppm 1 100000
Ethane ppm 1 100000
Propane ppm 1 100000
iso-Butane ppm 1 100000
n-Butane ppm 1 100000
iso-Pentane ppm 1 100000
n-Pentane ppm 1 100000

Calcimetry
CaCO3 %
20 40 60 80 100
MgCO3 %
100 80 60 40 20

Interpreted Lithology

Lithology Description