



# FORMATION EVALUATION LOG

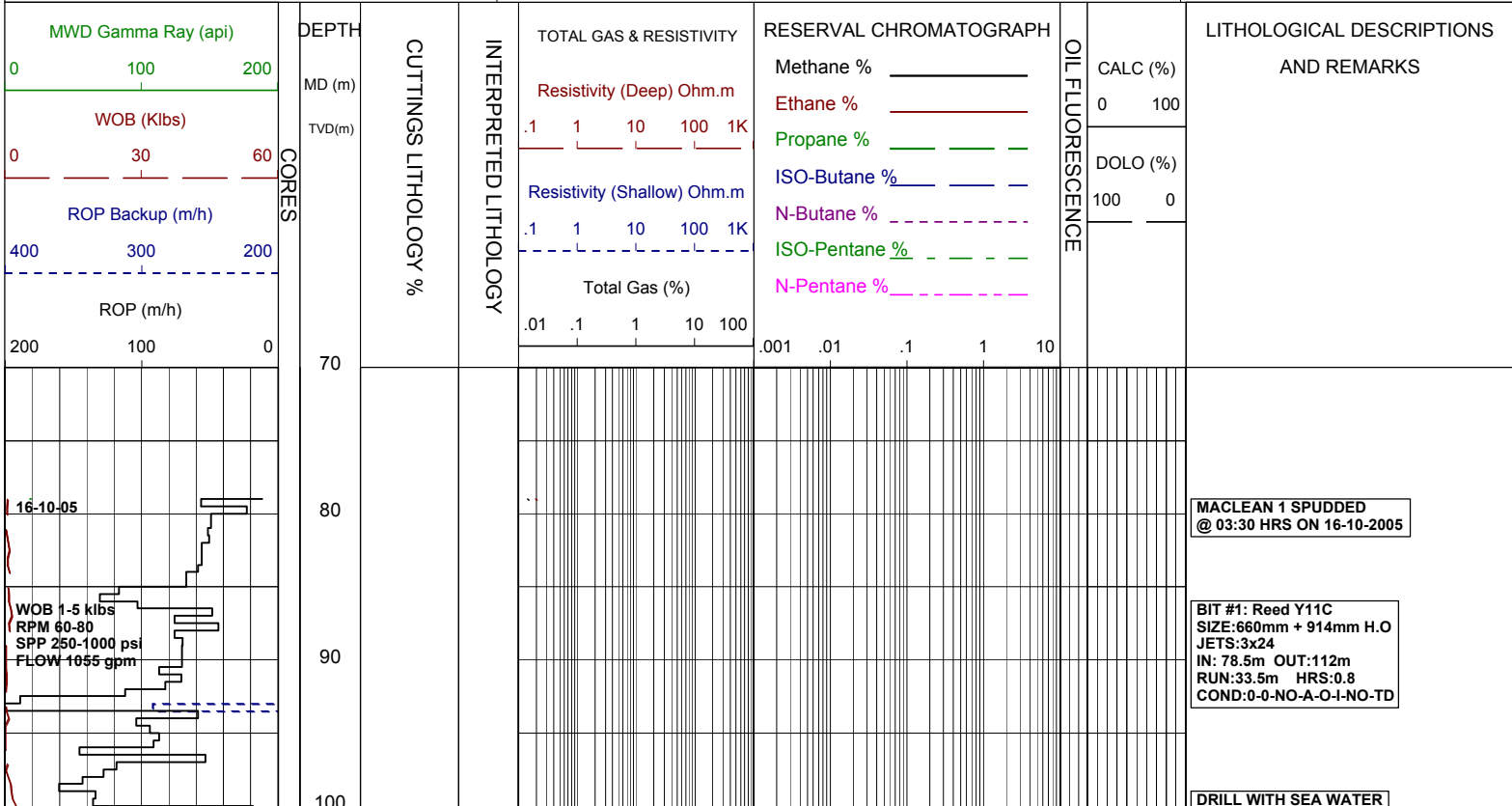
## WELL : MACLEAN 1

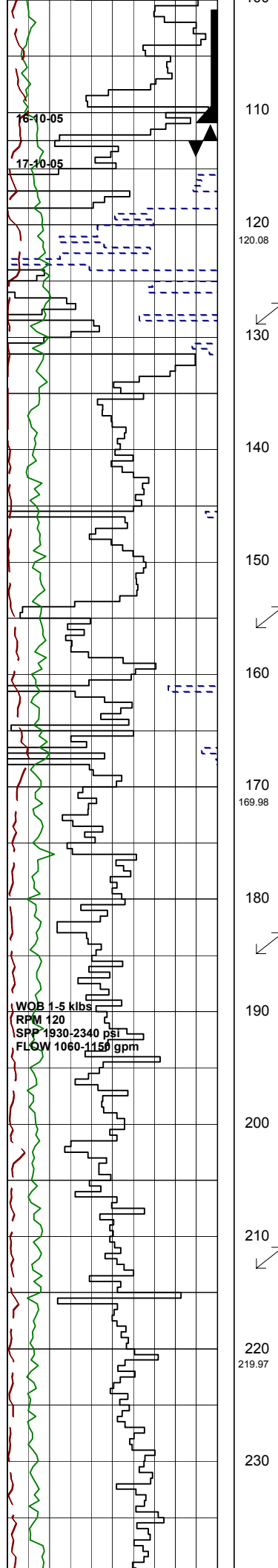


FROM (m): 70 TO (m): 780 SCALE: 1/ 500

Country : AUSTRALIA Region : VICTORIA Field : GIPPSLAND BASIN Permit : VIC/P-47 Well Type : VERTICAL EXPLORATION Rig Name : OCEAN PATRIOT	<b>POSITION</b> Latitude : 38°02'46.32"S Longitude : 148°32'52.92"E X (m) : 635,831.9 mE Y (m) : 5,787,927.9 mN RT-MSL (m) : 21.5 RT-Seabed (m) : 78.5	<b>CASING</b> 508mm Shoe at (mMDRT) : 110.9m 340mm Shoe at (mMDRT) : 350.0m	Spud Date : 16-10-2005 Total Depth Date : 20-10-2005 Total Depth (mRT) 766.0m T.V.D. (mSS MSL) 744.50m Status : P&A
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<b>ABBREVIATIONS</b> MW MUD WEIGHT FV FUNNEL VISCOSITY PV PLASTIC VISCOSITY YP YIELD POINT FC FILTER CAKE SOL SOLIDS WL FILTRATE SD SAND - % S SALINITY - PPM RM MUD RESISTIVITY RMF MUD FILTRATE C CARBIDE TEST LAT LOGGED AFTER TRIP DS DEVIATION SURVEY NB NEW BIT RR RERUN BIT CB CORE BIT WOB WEIGHT ON BIT RPM REVS PER MINUTE FLC FLOW CHECK CR CIRCULATE RETURNS PR POOR RETURNS NR NO RETURNS BG BACKGROUND GAS TG TRIP GAS STG SHORT TRIP GAS CG CONNECTION GAS SG SWAB GAS SVG SURVEY GAS	<b>LITHOLOGY LEGEND</b> 	<b>ENGINEERING LEGEND</b> 
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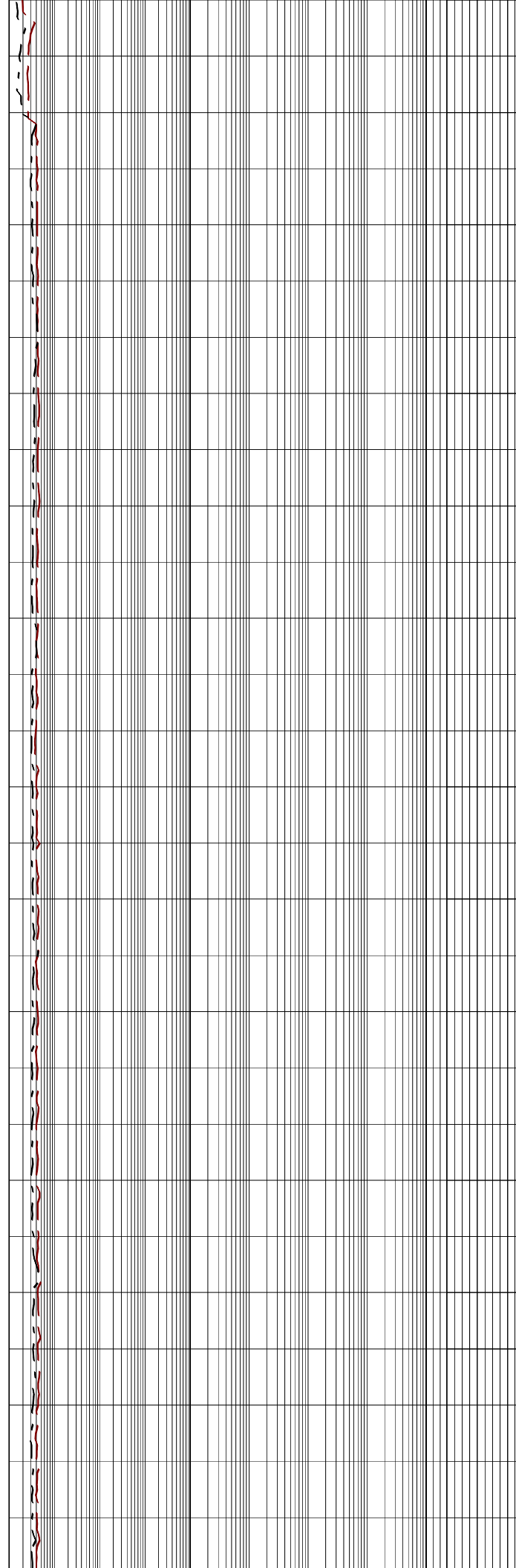


16-10-05

17-10-05

WOB 1-5 klbs  
 RPM 120  
 SPP 1930-2340 psi  
 FLOW 1060-1150 gpm

100  
 110  
 120  
 120.08  
 130  
 140  
 150  
 160  
 170  
 169.98  
 180  
 190  
 200  
 210  
 220  
 219.97  
 230



RETURNS TO SEABED

508mm (20") Casing Shoe  
 set @ 110.9 mMDRT

BIT #2: Reed T11  
 SIZE:444mm  
 JETS:3x22.1x16  
 IN:112m OUT:355m  
 RUN:243m HRS:4.2  
 COND:0-0-NO-A-O-I-NO-TD

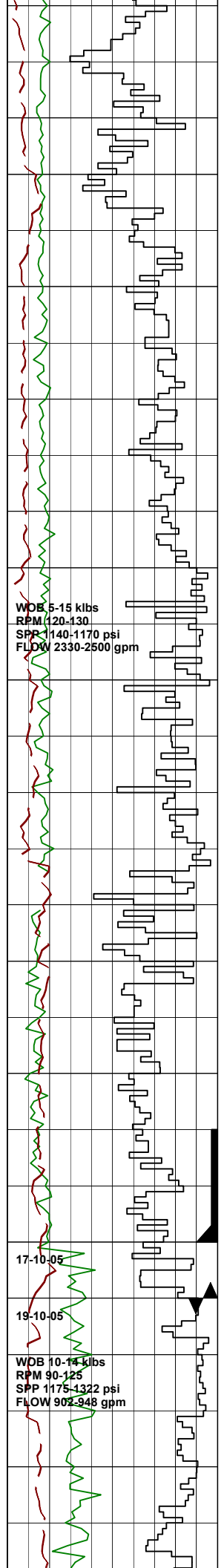
Survey @ 129.21m: 1.28°,306.65Az

Survey @ 156.69m: 1.22°,294.94Az

Survey @ 185.04m: 1.06°,302.99Az

DRILL WITH SEA WATER  
 RETURNS TO SEABED

Survey @ 213.59m: 1.11°,298.82Az



240  
250  
260  
270  
269.97  
280  
290  
300  
310  
320  
319.96  
330  
340  
350  
17-10-05  
19-10-05  
360  
370  
369.96

WOB 5-15 klbs  
RPM 120-130  
SPP 1140-1170 psi  
FLOW 2330-2500 gpm

17-10-05

19-10-05

WOB 10-14 klbs  
RPM 90-125  
SPP 1175-1322 psi  
FLOW 902-948 gpm

Survey @ 242.12m: 0.77°,292.08Az

Survey @ 299.14m: 0.74°,296.01Az

Survey @ 310.49m: 0.70°,293.91Az

DRILL WITH SEA WATER  
RETURNS TO SEABED

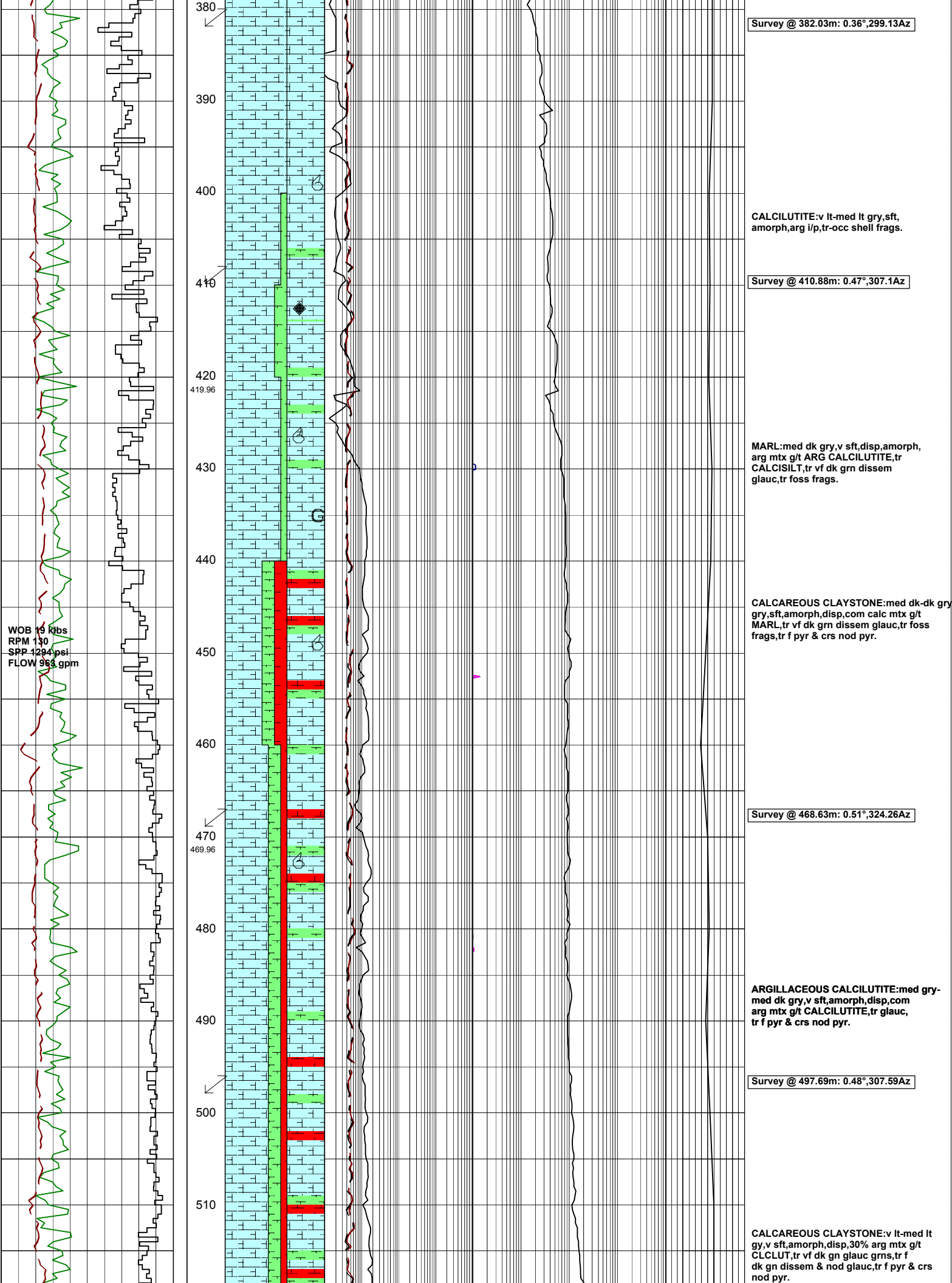
340mm (13.375") Casing Shoe  
set @ 350 mMDRT

Survey @ 353.42m: 0.56°,292.19Az

BIT #3:Reed EHP41HKPR  
SIZE:311mm  
JETS:1x28,2x24  
IN:355m OUT:766m  
RUN:411m HRS:17  
COND:2-3-WT-S-E-IN-NO-TD.

FIT @ 358 m: EMW= 1.66sg (13.8ppg).

CALCULITE:v lt-med lt gry.sft,  
amorph,arg i/p,tr shell frags.



Survey @ 382.03m: 0.36°,299.13Az

CALCILUTITE:v lt-med lt gry,sft, amorph,arg i/p,tr-occ shell frags.

Survey @ 410.88m: 0.47°,307.1Az

MARL:med dk gry,v sft,disp,amorph, arg mtx g/t ARG CALCILUTITE,tr CALCISILT,tr vf dk grn dissem glauc,tr foss frags.

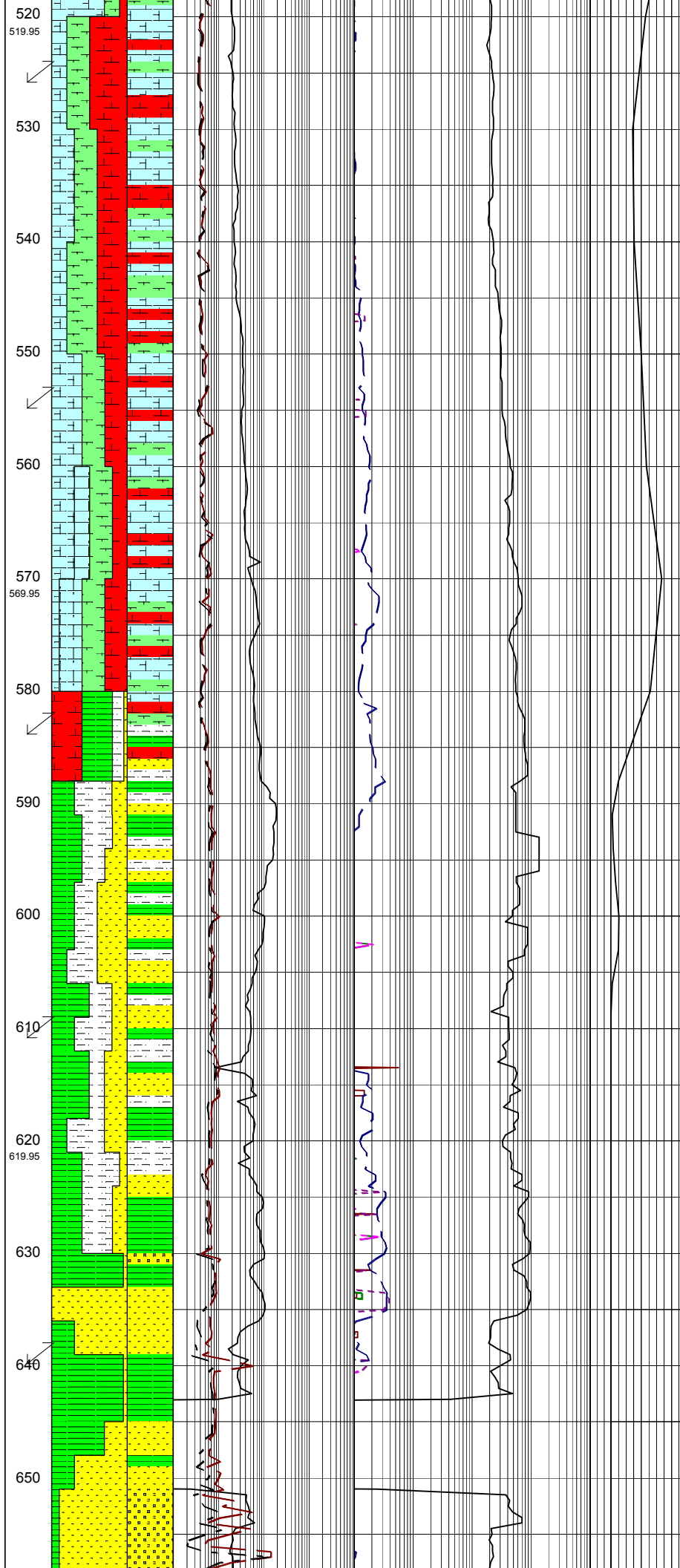
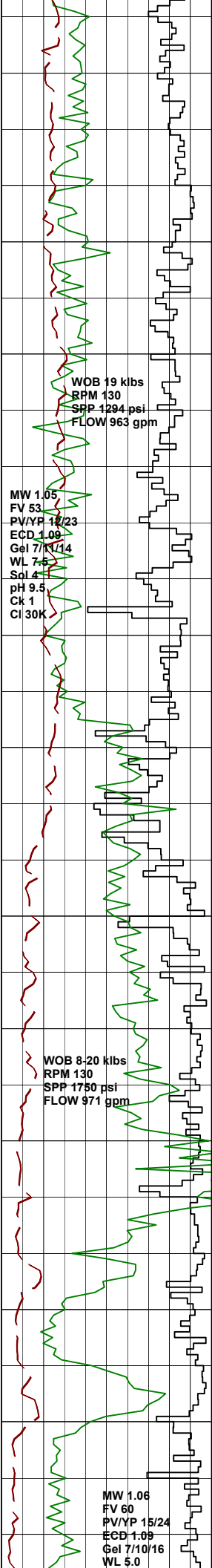
CALCAREOUS CLAYSTONE:med dk-dk gry, gry,sft,amorph,disp,com calc mtx g/t MARL,tr vf dk grn dissem glauc,tr foss frags,tr f pyr & crs nod pyr.

Survey @ 468.63m: 0.51°,324.26Az

ARGILLACEOUS CALCILUTITE:med gry-med dk gry,v sft,amorph,disp,com arg mtx g/t CALCILUTITE,tr glauc, tr f pyr & crs nod pyr.

Survey @ 497.69m: 0.48°,307.59Az

CALCAREOUS CLAYSTONE:v lt-med lt gy,v sft,amorph,disp,30% arg mtx g/t CLCLUT,tr vf dk gn glauc grns,tr f dk gn dissem & nod glauc,tr f pyr & crs nod pyr.



Survey @ 526.41m: 0.52°,316.12Az

MARL:lt med gy,v sft,disp,amorph, cly mtx g/t CALC CLYST,tr vf dk gn dissem & crs nod pyr,tr f pyr.

Survey @ 555.05m: 0.28°,329.55Az

CALCAREOUS CLAYSTONE:med gy-med dk gy,mnr dk grn/gy & brn/gy,sft,amorph disp-sli frm,blky,calc mtx g/t MARL, tr CLCSILT,tr f dk gn dissem & crs nod glauc,tr foss frags & forams,tr f pyr & crs nod pyr.

CARBIDE LAG CHECK @ 566m:  
HOLE IS IN GAUGE

Survey @ 583.55m: 0.27°,340.51Az

588m-655m: Gas data obtained using auxiliary degasser & Reserval

SANDSTONE:med yel/bn,dk bn/gy,lt gy-bn/blk i/p,frm,frt-sft,lse,v hd i/p,vf-f, sbang-sbrnd,lith grns,mod wl srt, cly mtx,tr f and crs nod pyr i/p,pr inf por,no fluor.

CLAYSTONE:med-dk yel brn & gry brn, dk brn gry-brn blk i/p,sft-sli frm, amorph-blky,hd i/p.

Survey @ 611.79m: 0.20°,330.07Az

CLAYSTONE:med-dk yl/bn & gy/bn,mod red.bn & dsky yel/org,gn/gy i/p, sft-sli frm,amorph-blky,hd i/p,wl md f-crs glauc,g/t GLAUC CLYST i/p,pr nod pyr.

SANDSTONE:med yel/bn,dk bn/gy,lt gy-bn/blk i/p,frm-v hd,frt-sft,lse i/p,vf-f, sbang-sbrnd,lith grns,mod wl srt, cly mtx,tr f & crs mod pyr i/p,pr inf por,no fluor.

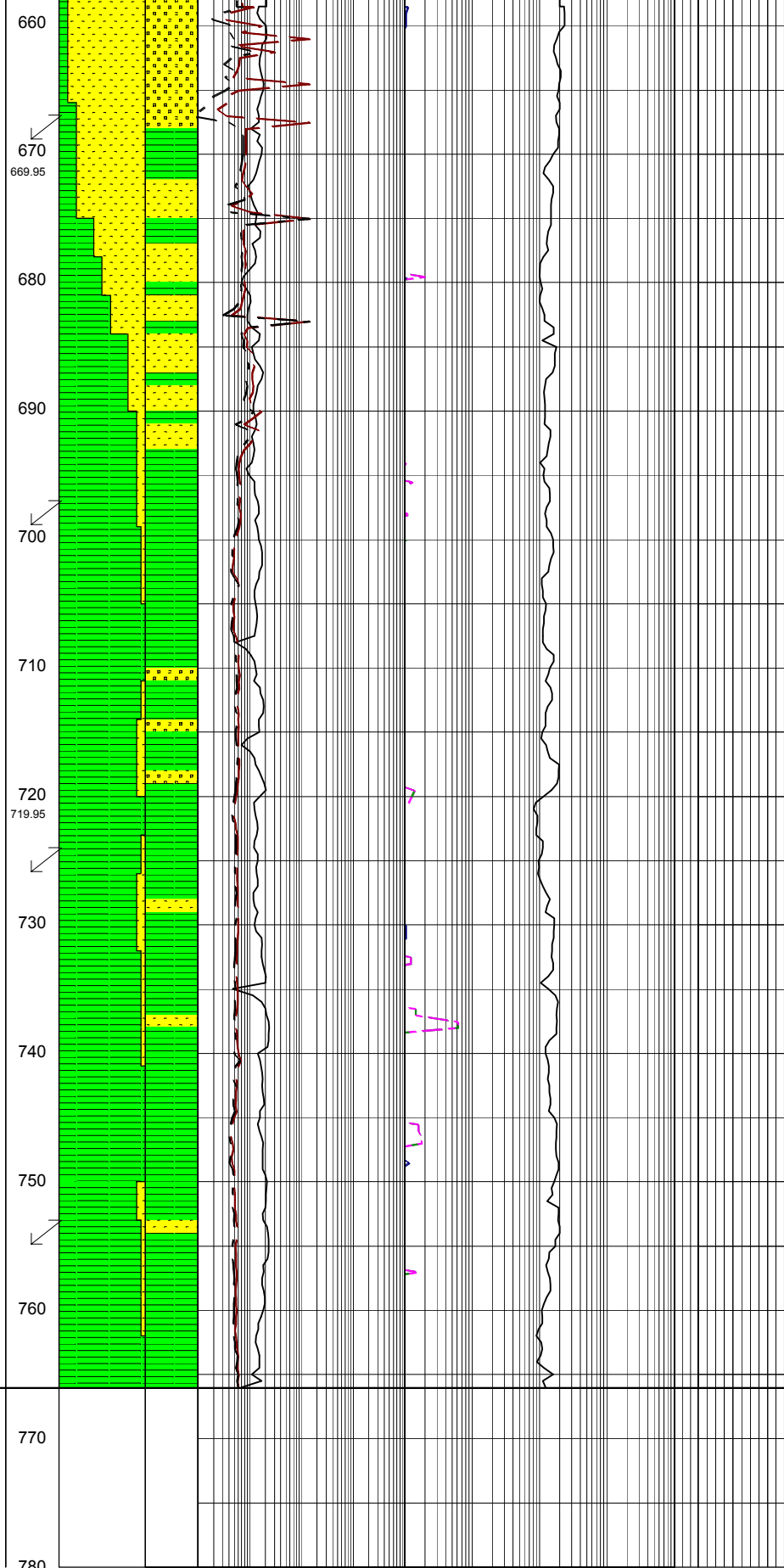
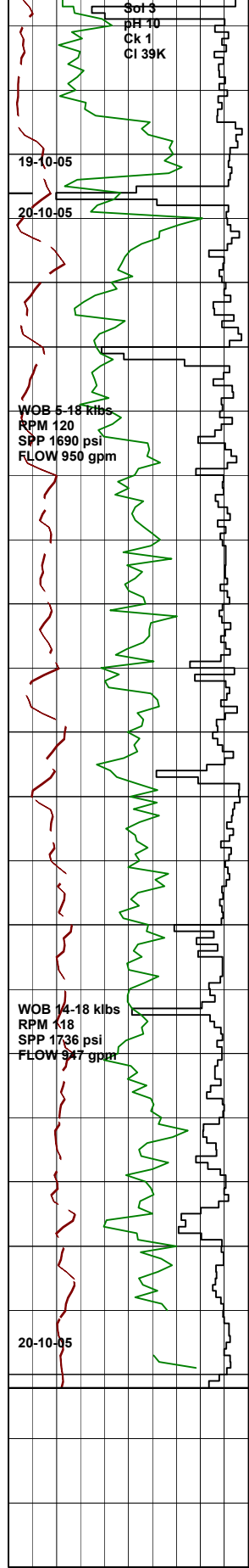
SANDSTONE:clr-frstd,trnsi,tr wh-lt gry,lse,crs-v crs,pr srt,tr arg mtx, tr nod pyr & pyr cmt,tr liths,tr rnd carb frags,v gd inf por,no fluor.

Survey @ 640.29m: 0.06°,295.87Az

643m-651m: No gas data obtained due to blocked gas line on Aux.

COAL:(Tr) bn/blk,blk,sft-frm,brit fibr,vf-lg frags.

SANDSTONE:clr,frstd,trnsi,wh-lt gy, med dk gy,lse,crs-v crs,conglom,ang-wl,md nr srt,fr arg mtx,fr nod pyr &



wh-no,pr srt,lr arg mtz,lr nod pyr, v pyr cmt,lr lith,lr rnd carb frags,v gd inf por,no fluor.

Reserval gas pump online from 655m

Survey @ 669.26m: 0.22°,352.26Az

CLAYSTONE:wh-v lt gy,sft-disp,wash out,5-10% silt to vf snd in mtx,tr vf carb grns.

SANDSTONE:clr,frstd,trnsi,wh-lt gy, med dk gy,lse,crs-v crs,gran,conglom ang-wl rnd,pr srt,lr arg mtz,lr nod pyr & pyr cmt,lr lith,lr rnd carb frags,v gd inf por,no fluor.

Survey @ 698.11m: 0.31°,59.85Az

CLAYSTONE:wh-v lt gy,sft-disp,wash out,5-10% silt to vf snd in mtx,tr vf carb grns.

SANDSTONE:clr,frstd,trnsi,wh-lt gy, med dk gy,lse,crs-v crs,gran,conglom ang-wl rnd,pr srt,lr arg mtz,lr nod pyr & pyr cmt,lr lith,lr rnd carb frags,v gd inf por,no fluor.

CLAYSTONE:v lt gy,sft,disp,mnr silt-vf sand disp in mtx,tr vf carb grns.

Survey @ 726.82m: 0.44°,78.01Az

SANDSTONE:clr,frstd,trnsi,wh-lt gy, med dk gy,lse,crs-v crs,gran,conglom ang-wl rnd,pr srt,lr arg mtz,lr nod pyr & pyr cmt,lr lith,gd inf por,no fluor.

CLAYSTONE:lt gy-bn.gy,sft,disp,mnr silt-vf sand disp in mtx,tr vf carb grns.

SANDSTONE:clr,frstd,trnsi,wh-lt gy, med dk gy,lse,rr cmtd frag,f-med,pr srt,lr lith frags,lr arg mtz,lr nod & pyr cmt,no fluor.

Survey @ 755.28m: 0.72°,88.50Az

CLAYSTONE:lt gy-bn gy,sft,disp,mnr silt-vf sand disp in mtx,tr vf carb grns.

COAL:(Tr)bn/blk,blk,sft-frn,brit fibr,vf-sml frags.

TD 766 m at 06:00 hrs on the 20-10-05

Plug & Abandon, no wireline logs run