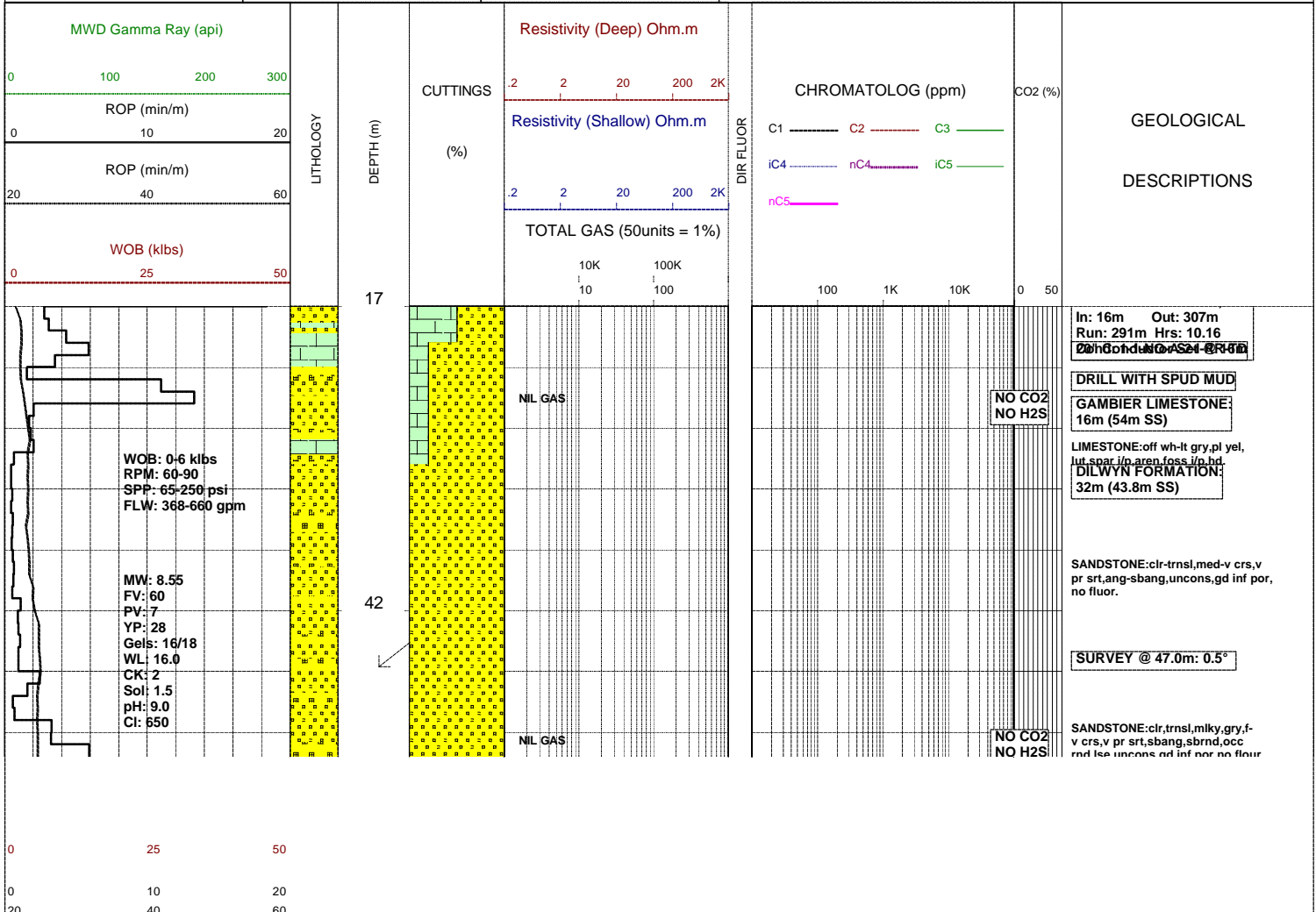
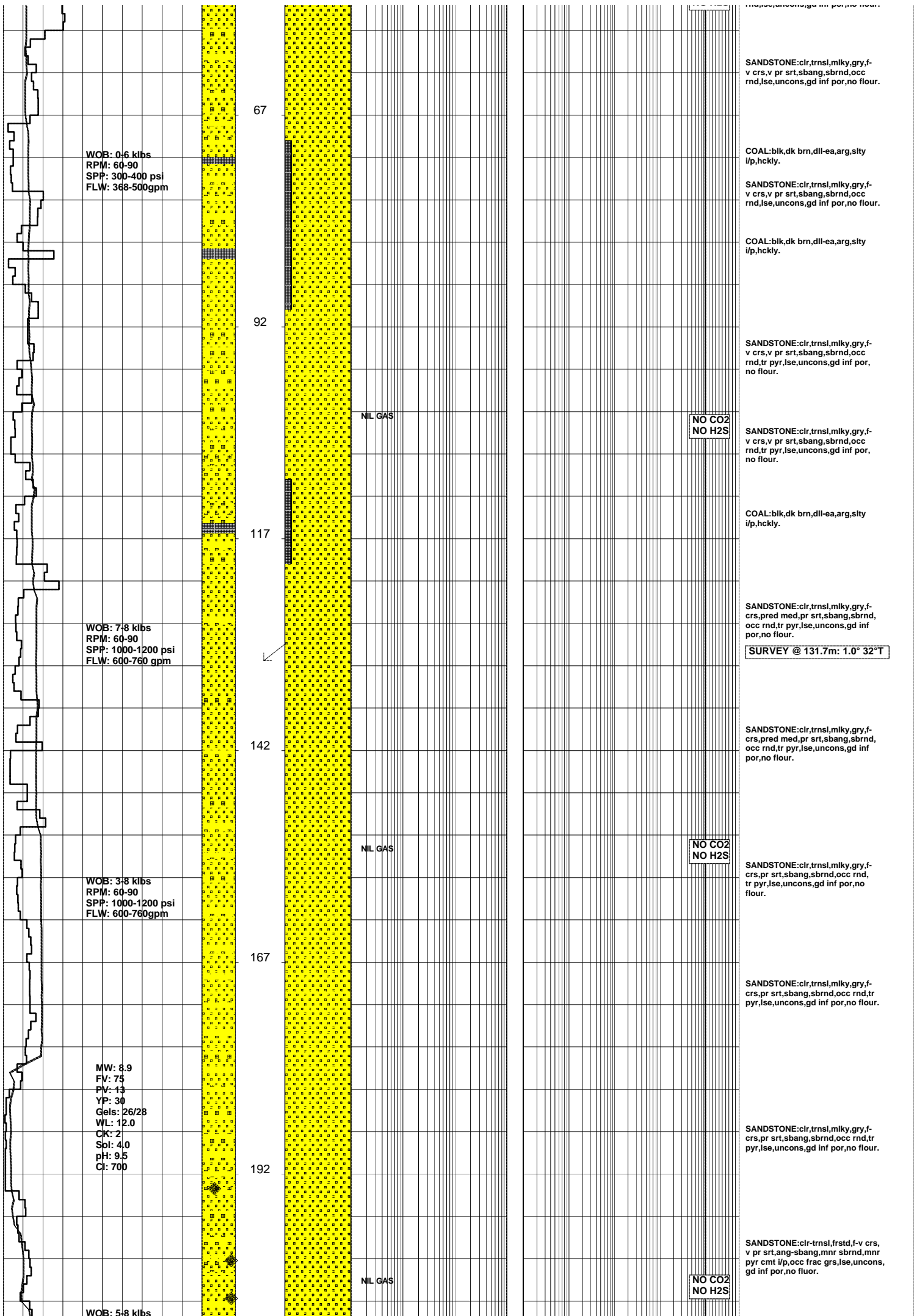


# GLENAIRE 1

Field :	Kelly Bushing : PEP 160	Rig : ENSIGN 32	Open Hole:	Cased Hole:	Loggers : J.SUTTON
Block:	Ground Level : STATUS	Spud Date : 08/09/2006	17.5" (12.25") 307m	13.375" (9.625") 303.5m	N.LUIS
State : VICTORIA	GRS80 Ellipsoid MGA94 Zone54 :	TD Date : XX/XX/2006	12.25" (8.5") 1255m	9.625" (7.0") 1252m	J.TRETHEWEY
Country : AUSTRALIA	Lat. : 37°34'47.03S	Total Depth : VVV	8.5" XXXXm		
Scale : 1/ 500	Long. : 140°59'52.25E	Final Status : WWW		RRRR SSSS AAA	

LITHOLOGY	ACCESSORIES	DRILLING DATA	ABBREVIATIONS
<ul style="list-style-type: none"> <li> Conglomerate</li> <li> Coarse Sandstone</li> <li> Med Sandstone</li> <li> Calcareous Sst</li> <li> Silty Sandstone</li> <li> Siltstone</li> <li> Carb. Siltstone</li> <li> Calc. Siltstone</li> <li> Clay</li> <li> Limestone</li> <li> Dolomite</li> <li> Coal</li> <li> Anhydrite</li> <li> Gypsum</li> <li> Igneous</li> <li> Volcanic</li> <li> Metamorphic</li> <li> Cement</li> </ul>	<ul style="list-style-type: none"> <li> Pyrite</li> <li> Siderite</li> <li> Glauconite</li> <li> Feldspar</li> <li> Mica</li> <li> Ferrous</li> <li> Chert</li> <li> Calcareous</li> <li> Dolomitic</li> <li> Carbonaceous</li> <li> Lithoclast</li> <li> Breccia</li> <li> Foraminifera</li> <li> Corals</li> <li> Inoceramus</li> <li> Bryozoa</li> <li> Plant remains</li> <li> Fossils</li> </ul>	<ul style="list-style-type: none"> <li> Casing Shoe</li> <li> Bit Trip</li> <li> Wiper Trip</li> <li> Core</li> <li> DST</li> <li> Deviation Survey</li> </ul>	<ul style="list-style-type: none"> <li>BOPD - Barrels of Oil Per Day</li> <li>BWPD - Barrels of Water Per Day</li> <li>CG - Connection Gas</li> <li>CO - Circulate Out</li> <li>COND - Condensate</li> <li>c/c - Crush Cut</li> <li>DST - Drill Stem Test</li> <li>FLOW - Flow Rate (gal/min)</li> <li>GCM - Gas Cut Mud</li> <li>GCW - Gas Cut Water</li> <li>GTS - Gas To Surface</li> <li>INJ - Injection of Mist (bbls/hr)</li> <li>LCM - Lost Circulation Material</li> <li>MMCFD - Million Cubic Feet / Day</li> <li>NGTS - No Gas To Surface</li> <li>NOTS - No Oil To Surface</li> <li>NFTS - No Flow To Surface</li> <li>OCM - Oil Cut Mud</li> <li>OG - Over Gauge</li> <li>OH - Open Hole</li> <li>OTS - Oil To Surface</li> <li>Q - Flow Rate</li> <li>REC - Recovery</li> <li>FLUOR - Fluorescence</li> <li>ROP - Rate Of Penetration</li> <li>RPM - Revolutions Per Minute</li> <li>RTSTM - Rate Too Small To Measure</li> <li>Rw - Resistivity water</li> <li>r/r - Ring Residue</li> <li>SCFM - Standard Cubic Ft/Min (air)</li> <li>SGCM - Slightly Gas Cut Mud</li> <li>SPM - Strokes Per Minute</li> <li>SPP - Stand Pipe Pressure</li> <li>SWC - Side-Wall Core</li> <li>TG - Trip Gas</li> <li>WOB - Weight On Bit</li> </ul>
		MUD DATA	
		<ul style="list-style-type: none"> <li>MW - Mud Weight (lb/gal)</li> <li>FV - Funnel Viscosity (s/qt)</li> <li>PV - Plastic Viscosity (cps)</li> <li>YP - Yield Point (lb/100ftsq)</li> <li>Gel - Gel Strength (10sec)</li> <li>WL - Water Loss (cc/30min)</li> <li>pH - Acidity / Alkalinity</li> <li>Ck - Cake (32nd/inch)</li> <li>O/W/S - Oil / Water / Solids</li> <li>Cl - Chlorides (mg/L)</li> <li>K+ - Potassium (mg/L)</li> <li>Rmf - Res. Mud Filtrate (ohmm)</li> </ul>	





WOB: 0-6 klbs  
 RPM: 60-90  
 SPP: 300-400 psi  
 FLW: 368-500gpm

WOB: 7-8 klbs  
 RPM: 60-90  
 SPP: 1000-1200 psi  
 FLW: 600-760 gpm

WOB: 3-8 klbs  
 RPM: 60-90  
 SPP: 1000-1200 psi  
 FLW: 600-760gpm

MW: 8.9  
 FV: 75  
 PV: 13  
 YP: 30  
 Gels: 26/28  
 WL: 12.0  
 CK: 2  
 Sol: 4.0  
 pH: 9.5  
 Cl: 700

WOB: 5-8 klbs

67

92

117

142

167

192

NIL GAS

NIL GAS

NIL GAS

NO CO2  
 NO H2S

NO CO2  
 NO H2S

NO CO2  
 NO H2S

SANDSTONE:clr,trnsl,mky,gry,f-  
 v crs,v pr srt,sbang,sbrnd,occ  
 rnd,lse,uncons,gd inf por,no flour.

COAL:blk,dk brn,dll-ea,arg,slty  
 i/p,hckly.

SANDSTONE:clr,trnsl,mky,gry,f-  
 v crs,v pr srt,sbang,sbrnd,occ  
 rnd,lse,uncons,gd inf por,no flour.

COAL:blk,dk brn,dll-ea,arg,slty  
 i/p,hckly.

SANDSTONE:clr,trnsl,mky,gry,f-  
 v crs,v pr srt,sbang,sbrnd,occ  
 rnd,tr pyr,lse,uncons,gd inf por,  
 no flour.

SANDSTONE:clr,trnsl,mky,gry,f-  
 v crs,v pr srt,sbang,sbrnd,occ  
 rnd,tr pyr,lse,uncons,gd inf por,  
 no flour.

COAL:blk,dk brn,dll-ea,arg,slty  
 i/p,hckly.

SANDSTONE:clr,trnsl,mky,gry,f-  
 crs,pred med,pr srt,sbang,sbrnd,  
 occ rnd,tr pyr,lse,uncons,gd inf  
 por,no flour.

SURVEY @ 131.7m: 1.0° 32°T

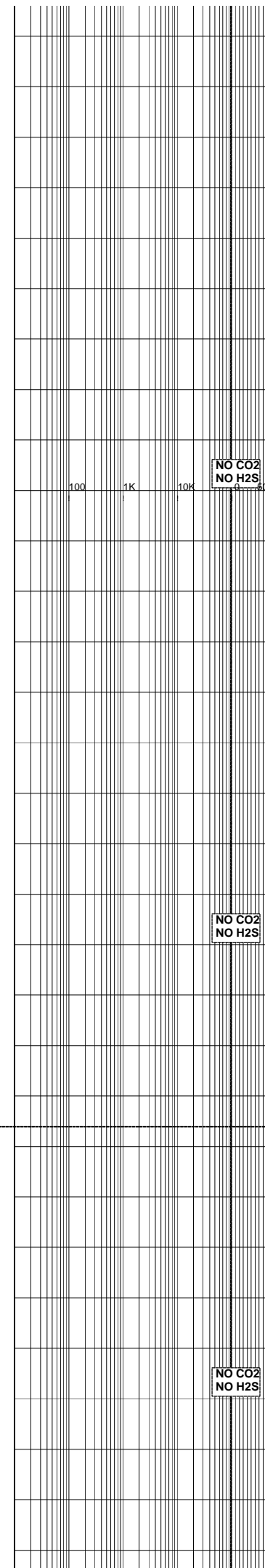
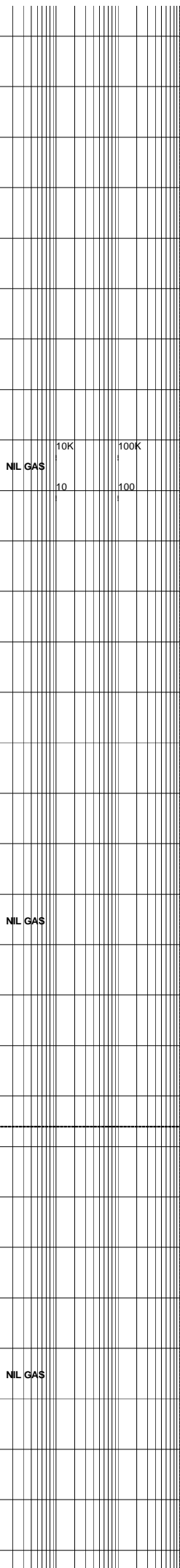
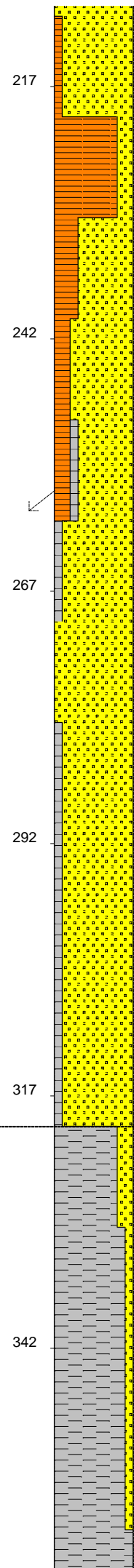
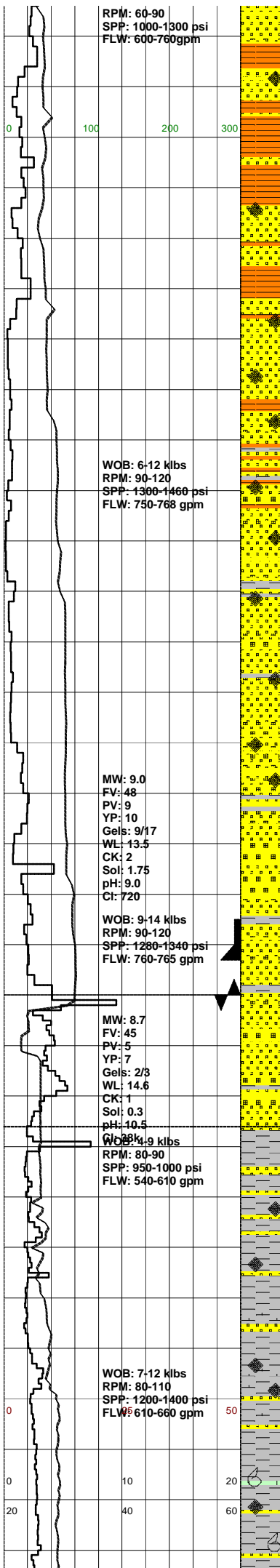
SANDSTONE:clr,trnsl,mky,gry,f-  
 crs,pred med,pr srt,sbang,sbrnd,  
 occ rnd,tr pyr,lse,uncons,gd inf  
 por,no flour.

SANDSTONE:clr,trnsl,mky,gry,f-  
 crs,pr srt,sbang,sbrnd,occ rnd,  
 tr pyr,lse,uncons,gd inf por,no  
 flour.

SANDSTONE:clr,trnsl,mky,gry,f-  
 crs,pr srt,sbang,sbrnd,occ rnd,  
 tr pyr,lse,uncons,gd inf por,no flour.

SANDSTONE:clr,trnsl,mky,gry,f-  
 crs,pr srt,sbang,sbrnd,occ rnd,  
 tr pyr,lse,uncons,gd inf por,no flour.

SANDSTONE:clr-trnsl,frstd,f-v crs,  
 v pr srt,ang-sbang,mnr sbrnd,mnr  
 pyr cmt i/p,occ frac grs,lse,uncons,  
 gd inf por,no flour.



CLAYSTONE: v dk gry-blk, carb, grd to COAL i/p, disp, amorph, mnr sbbkly.

SANDSTONE: clr-trnsl, frstd, f-v crs, v pr srt, ang-sbang, mnr sbrnd, tr pyr i/p, occ frac grs, lse, unconcs, gd inf por, no fluor.

CLAYSTONE: dk brn, v dk brn-blk, carb i/p, tr calc mat, stky, disp, sft, amorph.

SANDSTONE: clr-trnsl, lt gry, frstd, f-crs, occ v crs, pr srt, ang-sbang, occ pyr, lse, unconcs, gd inf por, no fluor.

SURVEY @ 259m: 1.0° 267° T

SILTSTONE: tn, lt brn, arg, wk calc, occ liths, sft, sbbkly.

SANDSTONE: clr-trnsl, frstd, lt gry, f-crs, com v crs, v pr srt, ang-sbang, mnr nod pyr, lse, unconcs, gd inf por, no fluor.

SANDSTONE: clr-trnsl, frstd, med gry, trnsl/orng, med-v crs, pr srt, ang-sbang, occ pyr cmt i/p, occ Fe stng, mnr frac grs, lse, rr mod hd aggs, pr vis por, gd inf por, no fluor.

SILTSTONE: med brn, med gry, arg, aren, com pyr, occ liths, hd, sbbkly.

13.375" CASING SHOE SET @ 303.5m

Bit 2: SMITH XR+CPS  
 Size: 12.25" Jets: 4x14  
 In: 307m Out: 1255m  
 Run: 948m Hrs: 34.04  
 Cond: x-x-xx-x-x-xx-xx  
 FIT @ 310m: EMW = 12.0 ppg

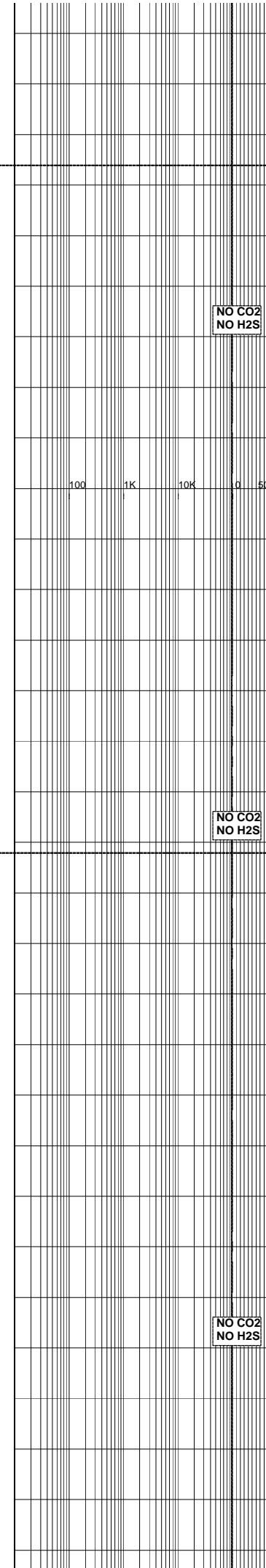
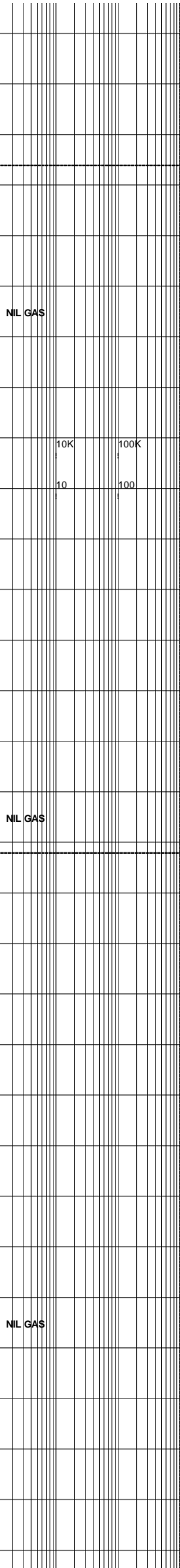
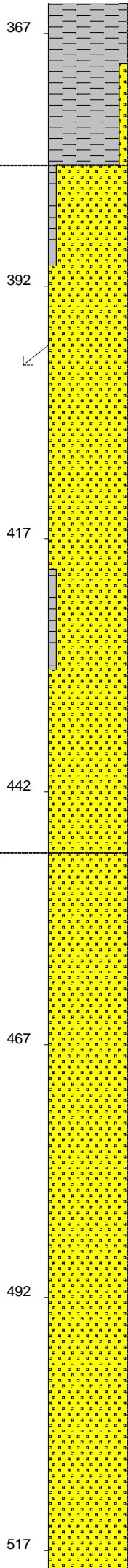
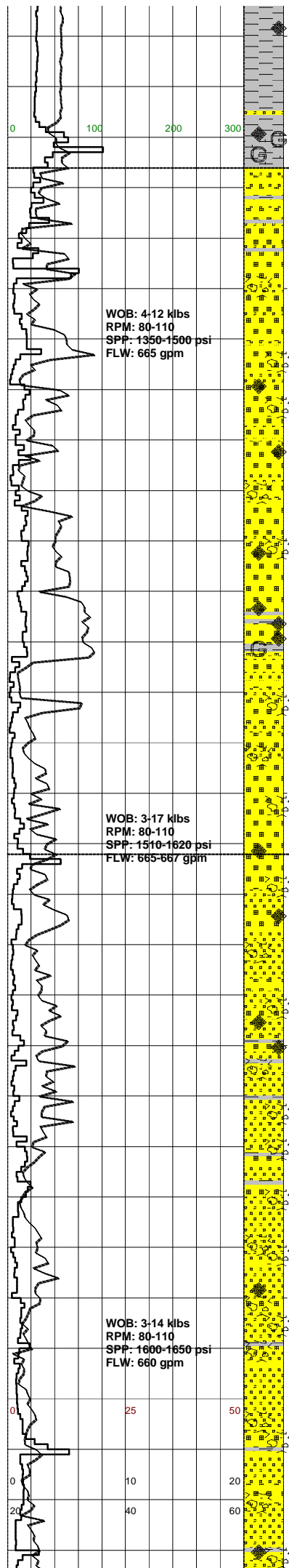
PEMBER FORMATION: 320m (-244.2mSS)

SILTSTONE: dk brn, brn/gry, arg, com carb spks, occ off wh liths, sft, amorph-sbbkly.

SANDSTONE: clr-trnsl, frstd, med-crs, occ f, pr srt, ang, occ sbang, com pyr cmt i/p, pred lse grs, mnr hd-v hd aggs, pr-v pr vis por, gd inf por, no fluor.

SILTSTONE: dk brn, mnr dk brn/gry, arg, tr vf aren i/p, calc i/p, occ carb spks, mnr nod pyr, tr glauc, sft-disp, amorph-sbbkly i/p.

LIMESTONE: (Tr) lt brn, off wh-lt brn, lut, arg, foss, shell frags, hd.



SILTSTONE: dk brn, arg, tr vf aren i/p, occ carb spks, mnr nod pyr, tr stky i/p, sft-disp, amorph-sbbiky i/p.

SILTSTONE: (1) dk brn, arg, tr vf aren i/p, occ carb spks, mnr nod pyr, tr glauc, stky i/p, sft-disp, amorph-sbbiky i/p. (2) mott dk brn/med gry, arg, aren, calc, com glauc, occ carb spks, mod pebble point formation; 380m (-304.2mSS)

SANDSTONE: clr-trnsl, frstd, lt gry-trnsl, f-v crs, pred crs-v crs, v pr srt, ang-sbang, occ frac grs, occ qtz pebbles, lse, gd inf por, no fluor.

**NO CO2  
NO H2S**

**SURVEY @ 400m: 1.25° 346°T**

SANDSTONE: clr-trnsl, frstd, lt brn/trnsl, crs-v crs, occ med, mod pr srt, ang-sbang, occ frac grs, tr Fe stng i/p, lse, tr mod hd-hd aggs, pr vis por, gd inf por, no fluor.

SANDSTONE: clr-trnsl, frstd, lt brn/trnsl, crs-v crs, occ med, mod pr srt, ang-sbang, occ mod strg sil cmt i/p, occ frac grs, mnr Fe stng i/p, lse, tr mod hd-hd aggs, pr vis por, gd inf por, no fluor.

SANDSTONE: clr-trnsl, frstd, crs-v crs, mod pr srt, ang-sbang, occ rnd, occ frac grs, occ SLTST pebbles, tr Fe stng, mnr nod pyr, lse, gd inf por, no fluor.

SANDSTONE: clr-trnsl, frstd, crs-v crs, occ med, mod pr srt, ang-sbang, occ pyr cmt i/p, com SLTST pebbles, mnr Fe stng, occ frac grs, pred lse, tr hd aggs, pr-v pr vis por, gd inf por, no fluor.

**NO CO2  
NO H2S**

**SHERBROOK GROUP:  
448m (-372mSS)**

SANDSTONE: clr-trnsl, frstd, f-crs, occ v crs, pr srt, ang-sbang, occ rnd, tr pyr cmt i/p, com SLTST pebbles, tr Fe stng, occ frac grs, pred lse, tr hd aggs, pr vis por, gd inf por, no fluor.

SANDSTONE: clr-trnsl, mnr frstd, f-crs, occ v crs, pr srt, sbang-ang, occ pebble incl, occ v crs qtz pebbles, lse, gd inf por, no fluor.

SANDSTONE: clr-trnsl, mnr frstd, med-crs, occ v crs, mod wl srt, sbang-ang, occ sbrnd, mnr pebble incl, lse, gd inf por, no fluor.

**NO CO2  
NO H2S**

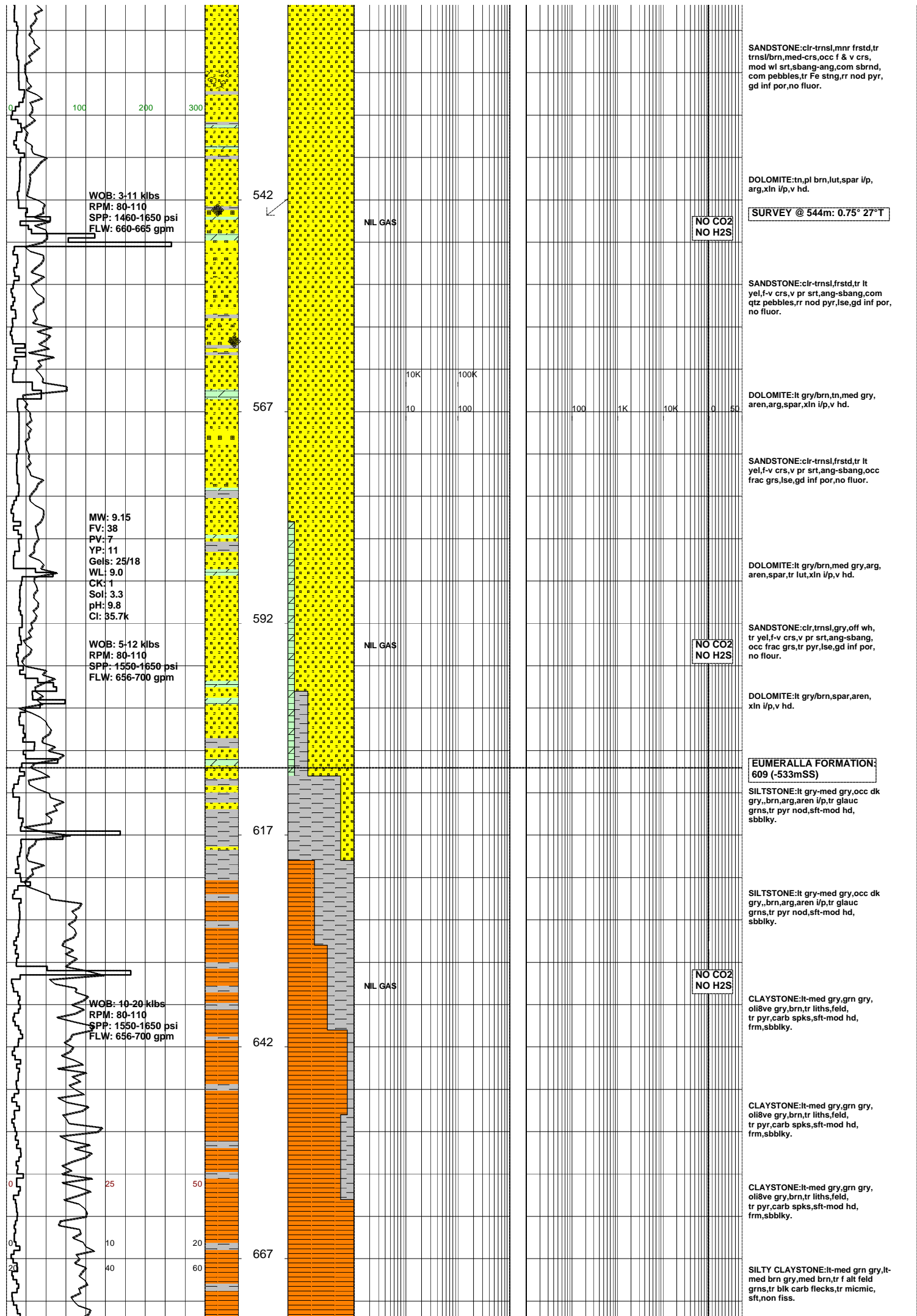
SANDSTONE: clr-trnsl, frstd, trnsl/brn, f-crs, occ v crs, v pr srt, sbang-ang, com pebbles & rock frags, tr nod & dissemin pyr, lse, gd inf por, no fluor.

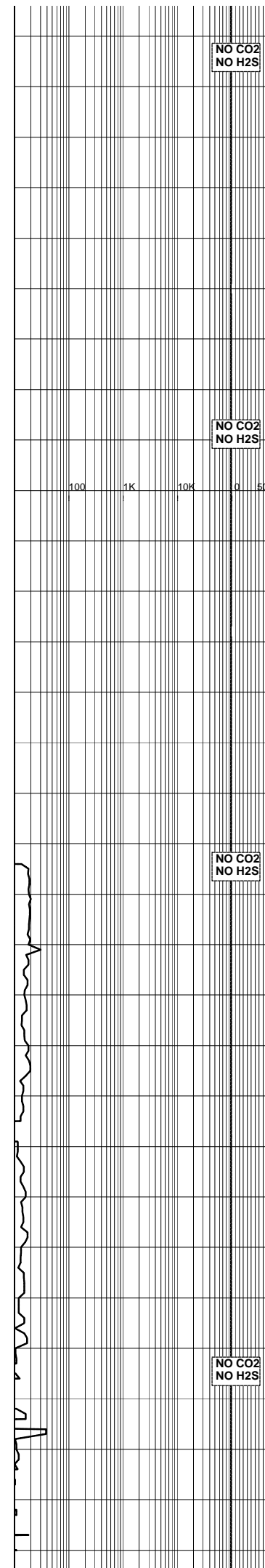
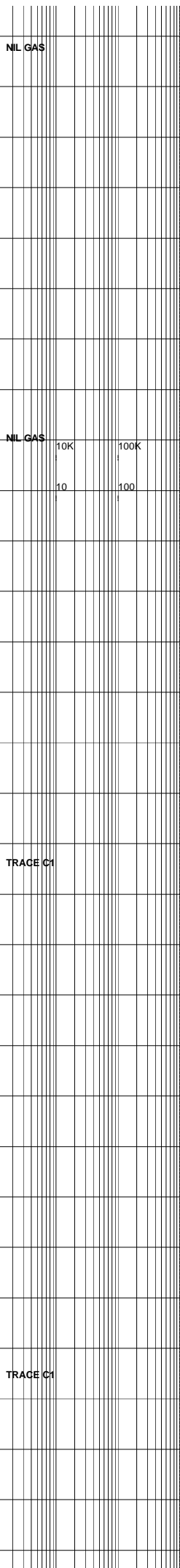
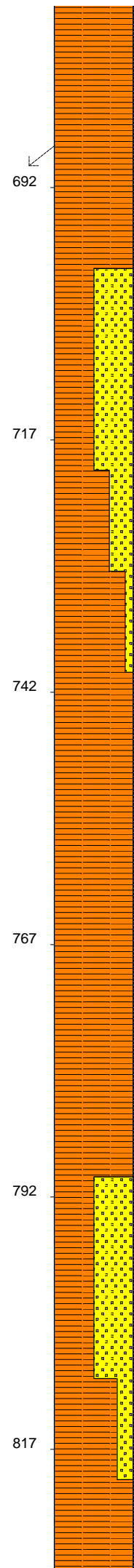
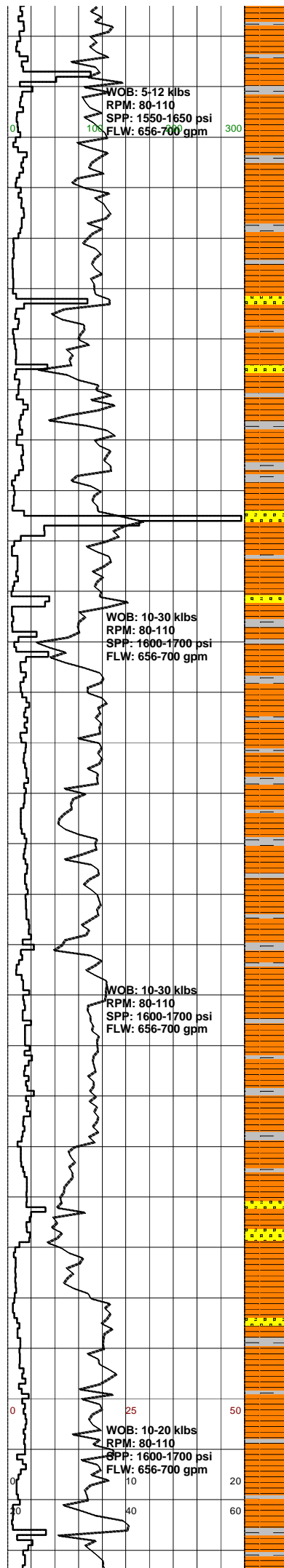
SANDSTONE: clr-trnsl, frstd, trnsl/brn, med-v crs, occ f v pr srt, ang-sbang, com pebbles, tr dol frags, occ Fe stng, tr nod pyr, lse, gd inf por, no fluor.

WOB: 4-12 klbs  
RPM: 80-110  
SPP: 1350-1500 psi  
FLW: 665 gpm

WOB: 3-17 klbs  
RPM: 80-110  
SPP: 1510-1620 psi  
FLW: 665-667 gpm

WOB: 3-14 klbs  
RPM: 80-110  
SPP: 1600-1650 psi  
FLW: 660 gpm





**SURVEY @ 690m: 0.5° 247°T**

**SANDSTONE:**lt-med grn gry,vf-f,dom f, mod srt,wk sil cmt,abdt off wh arg mtx,mtx supported,abdt fels grns,comm-abdt grn gry brn red blk volcanogenic lths,tr qtz,pyr, tr blk carb detritus,fri,no vis por,no flour.

**SILTY CLAYSTONE:**lt-med grn gry,lt-med brn gry,med brn,tr f alt feld grns,tr blk carb flecks,tr micmic, sft,non fiss.

**SILTY CLAYSTONE:**lt-med grn gry,lt-med brn gry,med brn,tr f alt feld grns,tr blk carb flecks,tr micmic, sft,non fiss.

**SILTY CLAYSTONE:**lt-med grn gry,lt-med brn gry,med brn,tr f alt feld grns,tr blk carb flecks,tr micmic, sft,non fiss.

**SILTY CLAYSTONE:**lt-med gry,grn gry,brn,arg,aren i/p,silty,tr liths, pyr,carb spks,sft-mod hd,frm,sbbiky.

**SILTY CLAYSTONE:**lt-med gry,grn gry,brn,arg,aren i/p,silty,tr liths, pyr,carb spks,sft-mod hd,frm,sbbiky.

**SILTY CLAYSTONE:**lt-med gry,grn gry,brn,arg,aren i/p,silty,tr liths, pyr,carb spks,sft-mod hd,frm,sbbiky.

**SANDSTONE:**clr,wh,grn,off wh,vf-f, dom f,mod srt,sbang-sbrnd,arg mtx, abdt feld,abdt grn,gry,brn,red,blk liths,tr pyr,carb spks,no vis por, no flour.

**SILTY CLAYSTONE:**lt-med gry,grn gry,brn,arg,aren i/p,silty,tr liths, pyr,carb spks,sft-mod hd,frm,sbbiky.

**SILTY CLAYSTONE:**lt-med gry,grn gry,brn,arg,aren i/p,silty,tr liths

gry,brn,grn,aren i/p,slty,fr liths,  
pyr,carb spks,sft-mod hd,frm,sbbkly.

**SURVEY @ 834m: 0.25° 307°T**

SILTY CLAYSTONE:lt-med gry,grn  
gry,brn,arg,aren i/p,slty,fr liths,  
pyr,carb spks,sft-mod hd,frm,sbbkly.

SILTY CLAYSTONE:lt-med gry,grn  
gry,brn,arg,aren i/p,slty,fr liths,  
pyr,carb spks,sft-mod hd,frm,sbbkly.

**NO CO2  
NO H2S**

SILTY CLAYSTONE:lt-med gry,grn  
gry,brn,arg,aren i/p,slty,fr liths,  
pyr,carb spks,sft-mod hd,frm,sbbkly.

**20 STD WIPER TRIPE @  
883m TO SHOE @ 303.5m**

SILTY CLAYSTONE:grn/gry,lt-med  
gry,med brn/gry,arg,glauc i/p,com  
off wh liths & carb spks,micmic  
i/p,occfeld,rr nod pyr,sft-frm,occ  
mod hd,sbbkly.

SANDSTONE:lt gry,lt gry,brn,f-vf,  
mod wl srt,sbrnd-rnd,abdt lt gry  
sity mtx,grd to aren SLTST,com  
glauc,occ feld,occ carb spks,fr,  
v pr-nil vis por,no fluor.

**NO CO2  
NO H2S**

SILTY CLAYSTONE:grn/gry,lt-med  
gry,med brn/gry,arg,aren i/p,glauc  
i/p,com off wh liths & carb spks,occ  
feld,rr nod pyr,mnr micmic i/p,sft-  
frm,occmhd,sbbkly.

SILTY CLAYSTONE:lt-med gry,med  
gry/brn,med grn/gry,arg,glauc i/p,  
com carb spks,occ brn mica flks,  
mnr feld,rr nod pyr,sft-mod frm,  
sbbkly.

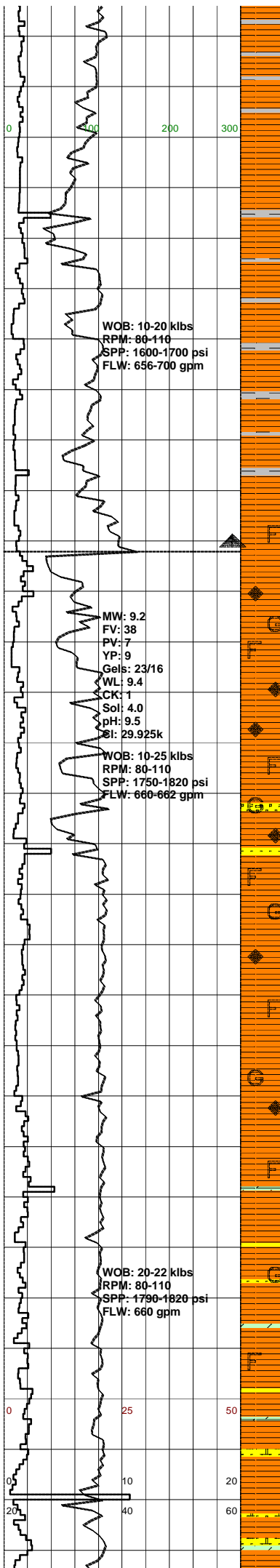
SANDSTONE:(Tr)lt-med gry,f-vf,  
mod wl srt,sbrnd-sbang,com mod  
strg calc cmt,occ-com lt gry sity  
mtx,com glauc,occ feld,mod hd,v pr  
vis por,no fluor.

**NO CO2  
NO H2S**

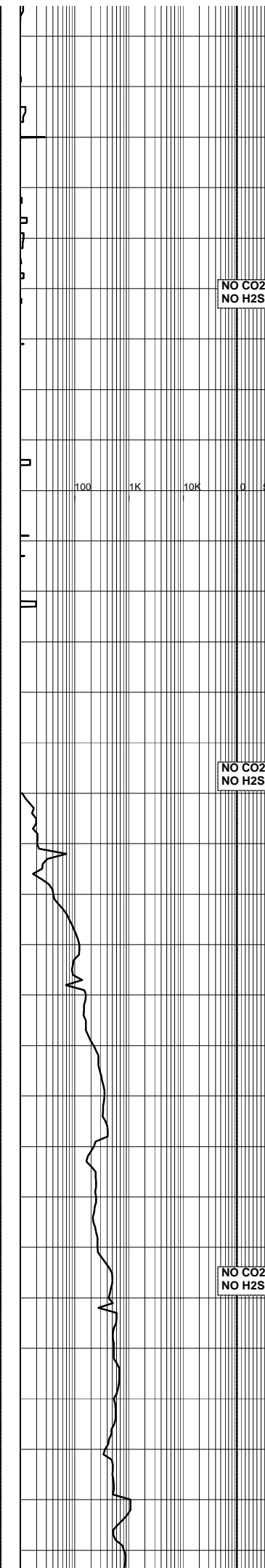
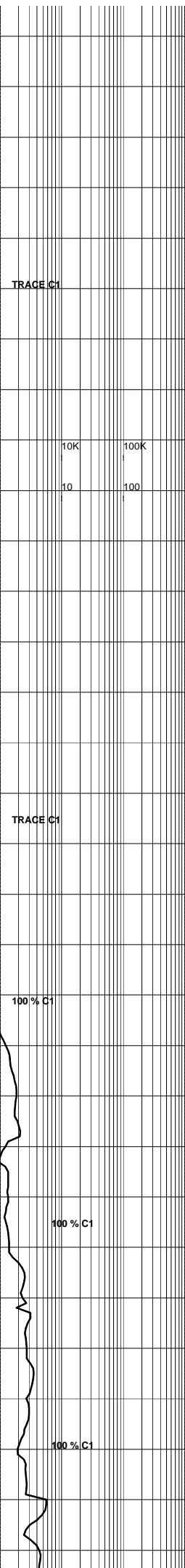
DOLOMITE:(Tr)grn/gry,lt gry,lt  
brn/gry,lut,spar i/p,arg,hd-v hd i/p.

**SURVEY @ 978m: 1.00° 67°T**

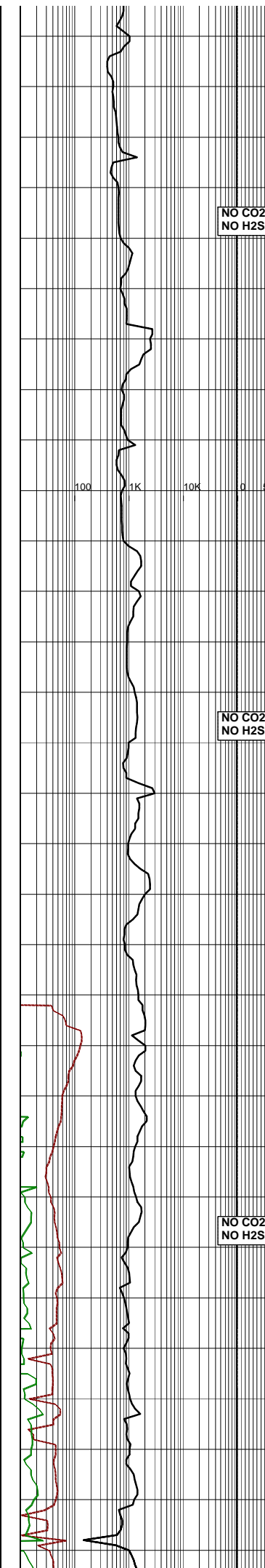
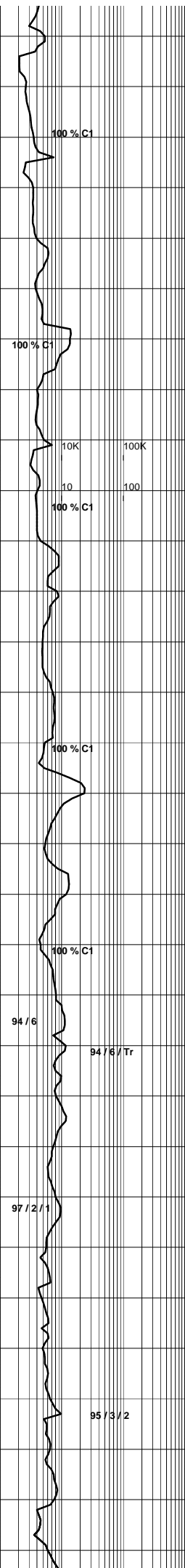
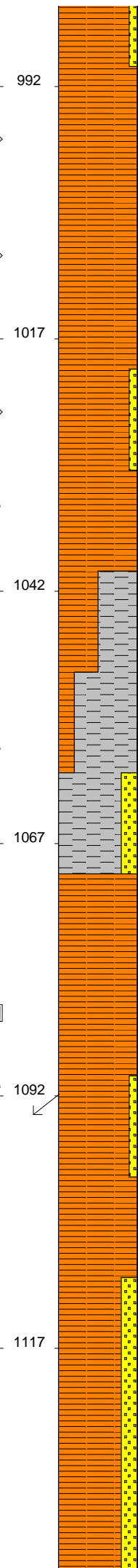
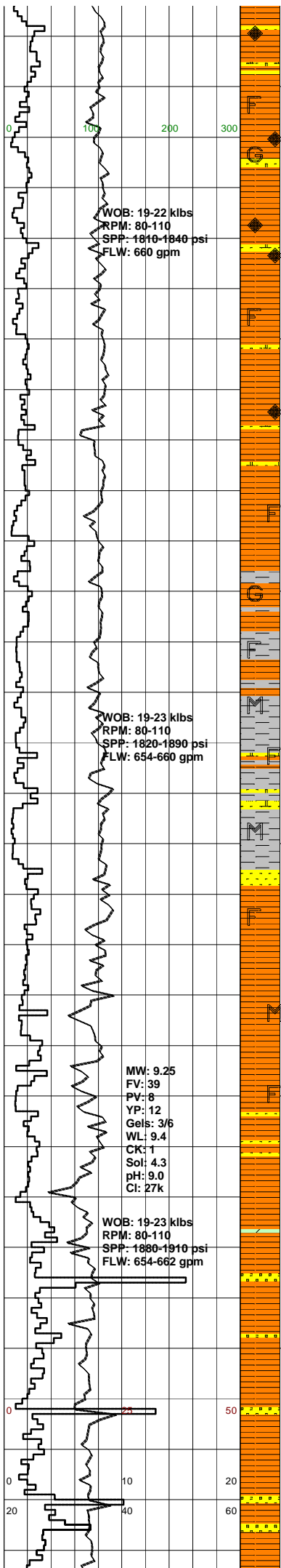
SILTY CLAYSTONE:lt-med gry,med  
brn,lt grn/gry,arg,glauc i/p,com  
carb spks & micrlams,mnr feld,fr  
glauc,rr nod pyr,mnr brn mica flks,  
sft-mod frm,sbbkly.



842  
867  
892  
917  
942  
967



TRACE C1  
10K 100K  
10 100  
100 1K 10K 0 50  
NO CO2  
NO H2S  
100% C1  
100% C1  
100% C1  
NO CO2  
NO H2S



**SANDSTONE:**lt-med gry,vf-f,mod wl srt,sbrnd-sbang,occ mod strg calc cmt,occ-com off wh arg mtx,grd to aren SLTST i/p,occ-com glauc,occ feld,occ pyr,fri-mod hd,v pr-nil vis por,no fluor.

**SILTY CLAYSTONE:**lt-med gry,med brn,lt grn/gry,arg,glauc i/p,com carb spks & micrlams,occ feld,occ nod pyr,mnr brn mica flks,sft-mod frm,sbbkly.

**SANDSTONE:**lt-med gry,vf-f,mod wl srt,sbrnd-sbang,mnr mod strg calc cmt,com-abdt off wh arg mtx,grd to aren SLTST,occ glauc,occ feld,mnr pyr,fri-mod hd,v pr-nil vis por,no fluor.

**SILTY CLAYSTONE:**lt-med gry,med brn,lt grn/gry,arg,glauc i/p,com feld,occ carb spks & micrlams,mnr nod pyr,tr brn mica flks,sft-mod frm,sbbkly.

**CARBIDE LAG CHECK @ 1056m**  
THEOR. STKS.: 6001  
ACTUAL STKS.: 6885  
OPEN HOLE O.G.: 14.7 %

**SILTSTONE:**lt brn/gry,lt-med gry, arg,vf aren i/p,com brn mica flks, mnr feld,mnr carb spks,rr glauc, sft,sbbkly.

**SANDSTONE:**lt-med gry,clr-trnsl, tr frstd,f,occ vf,wl srt,sbrnd,abdt lt gry slty mtx,grd to aren SLTST i/p,com feld,occ carb spks,mnr glauc,fri-lse,nil vis por,no fluor.

**SILTY CLAYSTONE:**lt-med gry,med brn,rr lt grn/gry,arg,rr aren i/p,com feld,occ carb spks,occ nod pyr,tr brn mica flks,sft-mod frm,sbbkly.

**SURVEY @ 1094m: 1.75° 25°T**

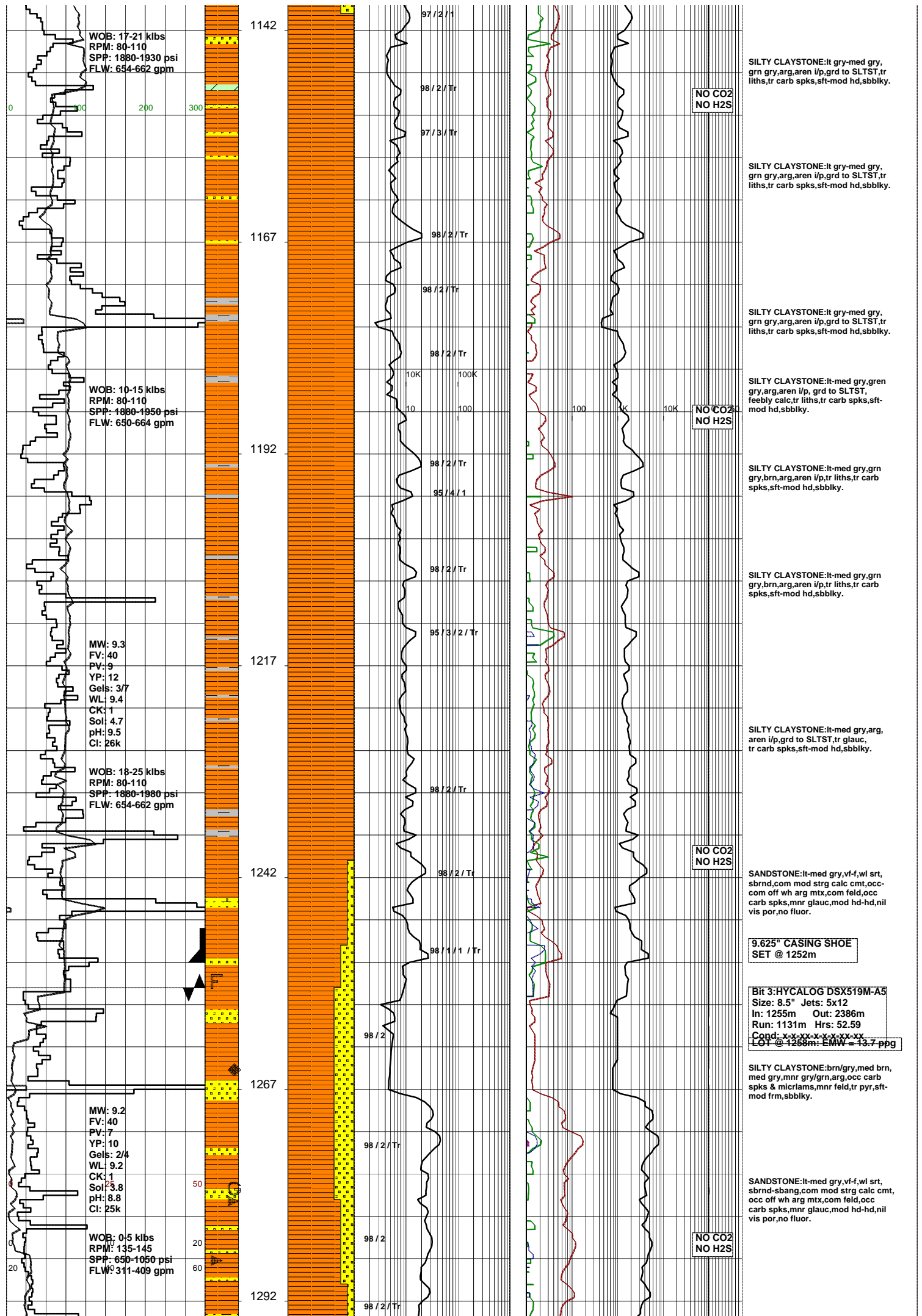
**SANDSTONE:**lt-med gry,clr-trnsl, f,com vf,wl srt,abdt lt gry slty mtx, grd to aren SLTST i/p,occ feld,occ carb spks,mnr brn mica flks,fri-lse, nil vis por,pr inf por,no fluor.

**SANDSTONE:**lt-med gry,clr-trnsl, f,com vf,wl srt,abdt lt gry slty mtx, grd to aren SLTST i/p,occ feld,occ carb spks,mnr brn mica flks,fri-lse, nil vis por,pr inf por,no fluor.

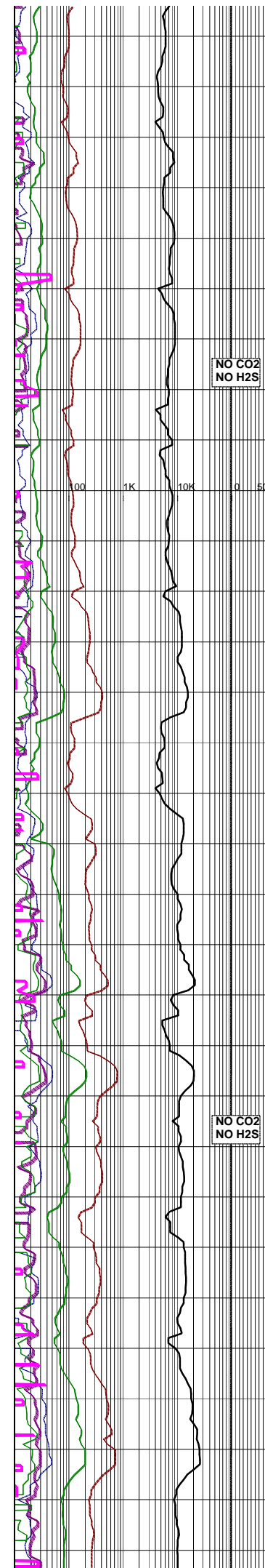
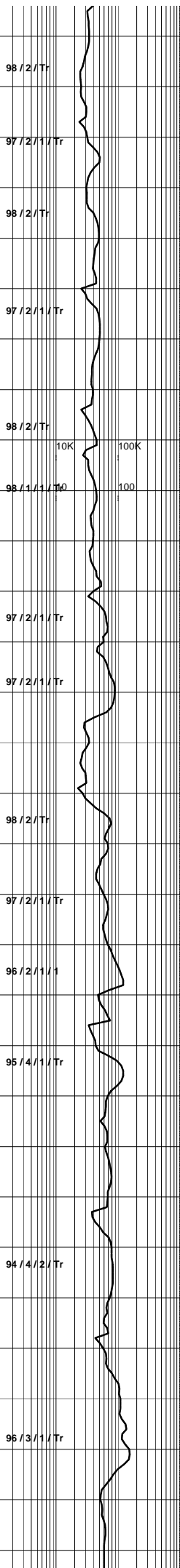
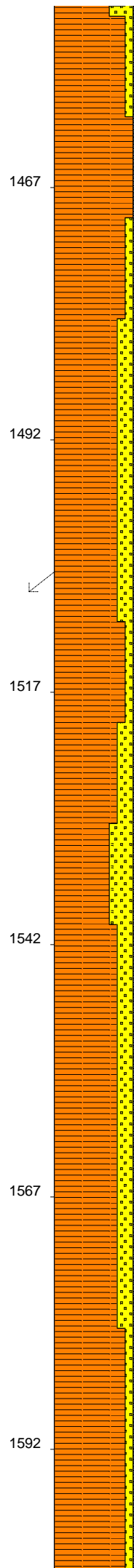
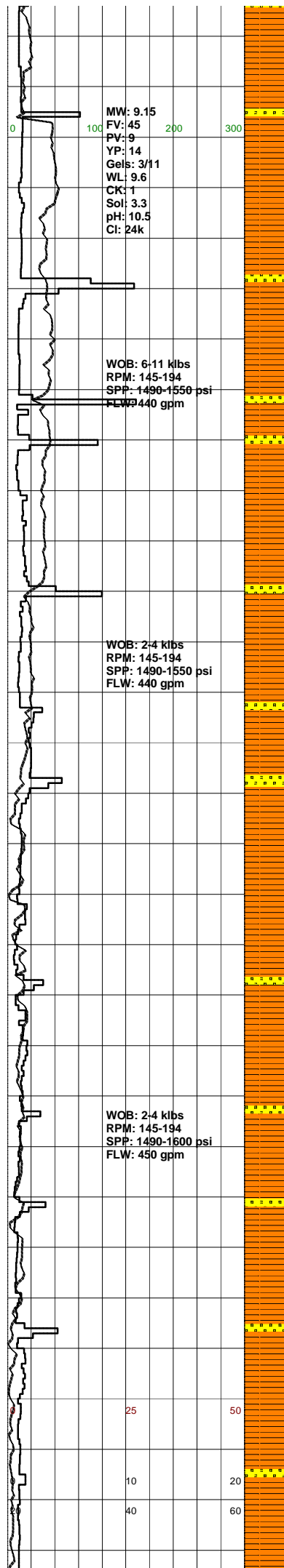
**SILTY CLAYSTONE:**lt-med gry,med brn,rr lt grn/gry,arg,rr aren i/p,com feld,occ carb spks,occ nod pyr,tr brn mica flks,sft-mod frm,sbbkly.

**SANDSTONE:**lt gry/gry,vf-f,dom f, sbang-sbrnd,mod srt,mod sil cmt, abdt off wh arg mtx,abdt alt feld grs,com brn,red,blk liths,tr qtz grs, tr mica flks,tr pyr,tr carb spks, fri-mod hd,nil vis por,no fluor.









SANDSTONE:clr,gry,off wh,vf-f, dom f,pr srt,sbang-sbrnd,calc cmt,occ,tr pyr,glauc,feld, com red,brn,gry liths, mod hd,no flour.

SILTY CLAYSTONE:lt-med gry,brn, med brn gry,tr gry/grn,arg,vi aren i/p,occ carb spks,occ feld,stf-mod frm,sbbkly.

NO CO2  
NO H2S

SANDSTONE:clr,gry,off wh,vf-f, dom f,pr srt,sbang-sbrnd,calc cmt,occ,tr pyr,glauc,feld, com red,brn,gry liths, mod hd,no flour.

SANDSTONE:clr,gry,off wh,vf-f, dom f,pr srt,sbang-sbrnd,calc cmt,tr pyr,glauc,feld,com red, brn,gry liths,mod hd,no flour.

SURVEY @ 1507m: 0.75° 72°T

SILTY CLAYSTONE:lt-med gry,brn, med brn gry,tr gry/grn,arg,vi aren i/p,occ carb spks,occ feld,stf-mod frm,sbbkly.

SILTY CLAYSTONE:lt-med gry,brn, med brn gry,tr gry/grn,arg,vi aren i/p,occ carb spks,occ feld,stf-mod frm,sbbkly.

NO CO2  
NO H2S

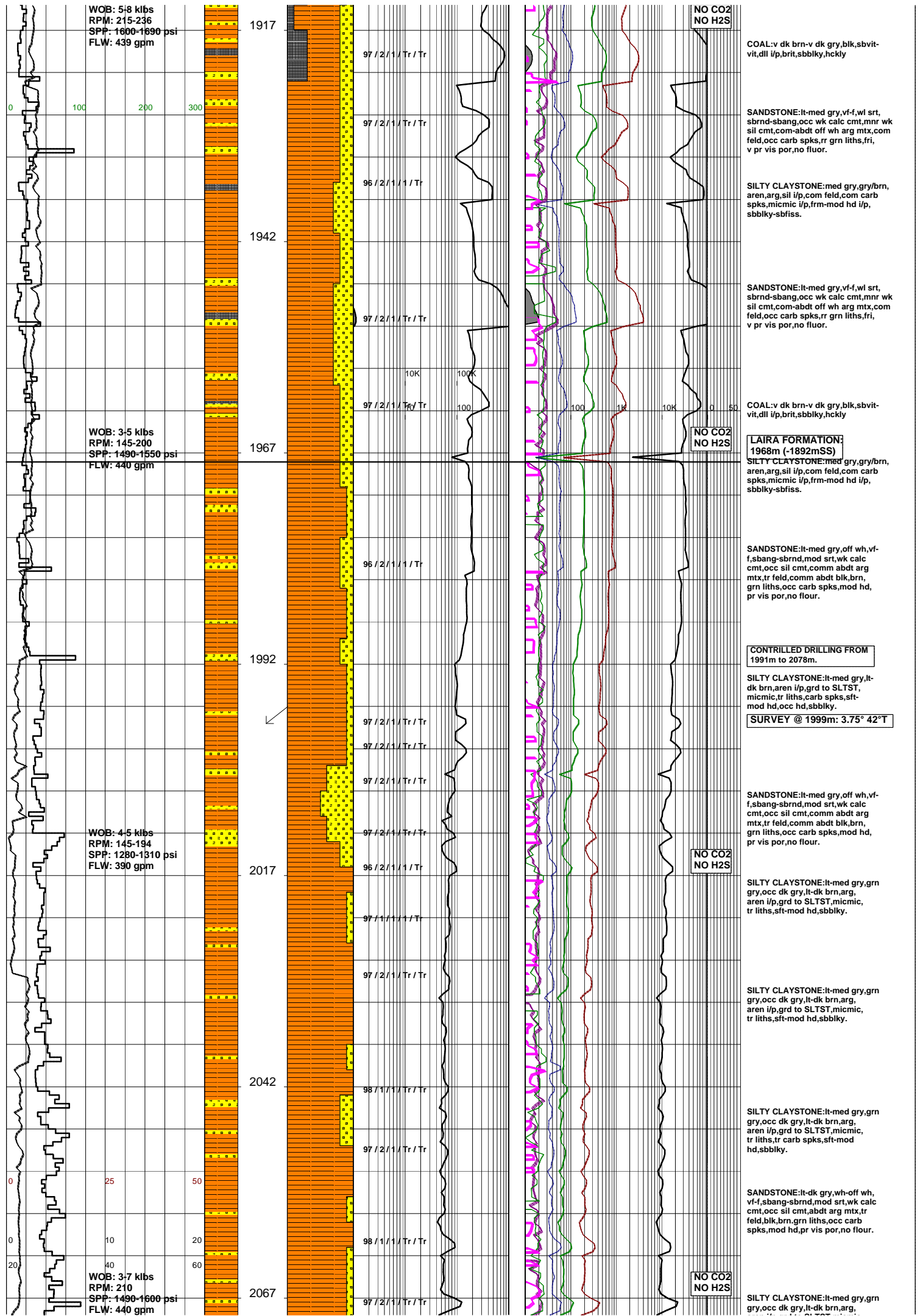
SILTY CLAYSTONE:lt-med gry,brn, med brn gry,tr gry/grn,arg,vi aren i/p,occ carb spks,occ feld,stf-mod frm,sbbkly.

SANDSTONE:clr,gry,off wh,vf-f, dom f,pr srt,sbang-sbrnd,calc cmt,com qtz grns,tr pyr,glauc, feld,com red,brn,gry liths, mod hd,no flour.

SILTY CLAYSTONE:lt-med gry,brn, med brn gry,tr gry/grn,arg,vi aren i/p,occ carb spks,occ feld,stf-mod frm,sbbkly.







WOB: 5-8 klbs  
RPM: 215-236  
SPP: 1600-1690 psi  
FLW: 439 gpm

WOB: 3-5 klbs  
RPM: 145-200  
SPP: 1490-1550 psi  
FLW: 440 gpm

WOB: 4-5 klbs  
RPM: 145-194  
SPP: 1280-1310 psi  
FLW: 390 gpm

WOB: 3-7 klbs  
RPM: 210  
SPP: 1490-1600 psi  
FLW: 440 gpm

NO CO2  
NO H2S

COAL: v dk brn-v dk gry, blk, sbvit- vit, dll i/p, brit, sbbiky, hckly

SANDSTONE: lt-med gry, vf-f, wl srt, sbrnd-sbang, occ wk calc cmt, mnr wk sil cmt, com-abdt off wh arg mtx, com feld, occ carb spks, rr grn liths, fri, v pr vis por, no flour.

SILTY CLAYSTONE: med gry, gry/brn, aren, arg, sil i/p, com feld, com carb spks, micmic i/p, frm-mod hd i/p, sbbiky-sbfiss.

SANDSTONE: lt-med gry, vf-f, wl srt, sbrnd-sbang, occ wk calc cmt, mnr wk sil cmt, com-abdt off wh arg mtx, com feld, occ carb spks, rr grn liths, fri, v pr vis por, no flour.

COAL: v dk brn-v dk gry, blk, sbvit- vit, dll i/p, brit, sbbiky, hckly

NO CO2  
NO H2S

**LAIRA FORMATION:**  
1968m (-1892mSS)

SILTY CLAYSTONE: med gry, gry/brn, aren, arg, sil i/p, com feld, com carb spks, micmic i/p, frm-mod hd i/p, sbbiky-sbfiss.

SANDSTONE: lt-med gry, off wh, vf-f, sbang-sbrnd, mod srt, wk calc cmt, occ sil cmt, comm abdt arg mtx, tr feld, comm abdt blk, brn, grn liths, occ carb spks, mod hd, pr vis por, no flour.

CONTROLLED DRILLING FROM 1991m to 2078m.

SILTY CLAYSTONE: lt-med gry, lt-dk brn, aren i/p, grd to SLTST, micmic, tr liths, carb spks, sft-mod hd, occ hd, sbbiky.

**SURVEY @ 1999m: 3.75° 42°T**

SANDSTONE: lt-med gry, off wh, vf-f, sbang-sbrnd, mod srt, wk calc cmt, occ sil cmt, comm abdt arg mtx, tr feld, comm abdt blk, brn, grn liths, occ carb spks, mod hd, pr vis por, no flour.

NO CO2  
NO H2S

SILTY CLAYSTONE: lt-med gry, grn gry, occ dk gry, lt-dk brn, arg, aren i/p, grd to SLTST, micmic, tr liths, sft-mod hd, sbbiky.

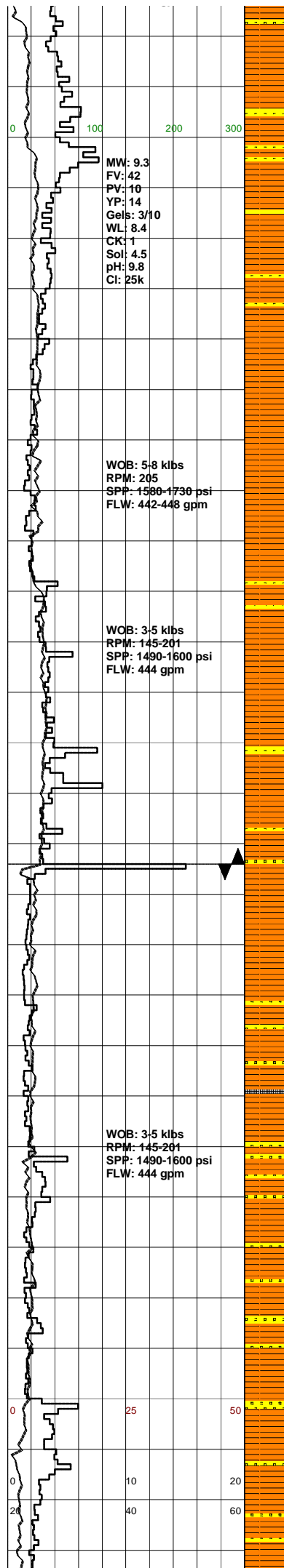
SILTY CLAYSTONE: lt-med gry, grn gry, occ dk gry, lt-dk brn, arg, aren i/p, grd to SLTST, micmic, tr liths, tr carb spks, sft-mod hd, sbbiky.

SANDSTONE: lt-med gry, grn gry, occ dk gry, lt-dk brn, arg, aren i/p, grd to SLTST, micmic, tr liths, tr carb spks, sft-mod hd, sbbiky.

SANDSTONE: lt-dk gry, wh-off wh, vf-f, sbang-sbrnd, mod srt, wk calc cmt, occ sil cmt, abdt arg mtx, tr feld, blk, brn, grn liths, occ carb spks, mod hd, pr vis por, no flour.

NO CO2  
NO H2S

SILTY CLAYSTONE: lt-med gry, grn gry, occ dk gry, lt-dk brn, arg,



2092

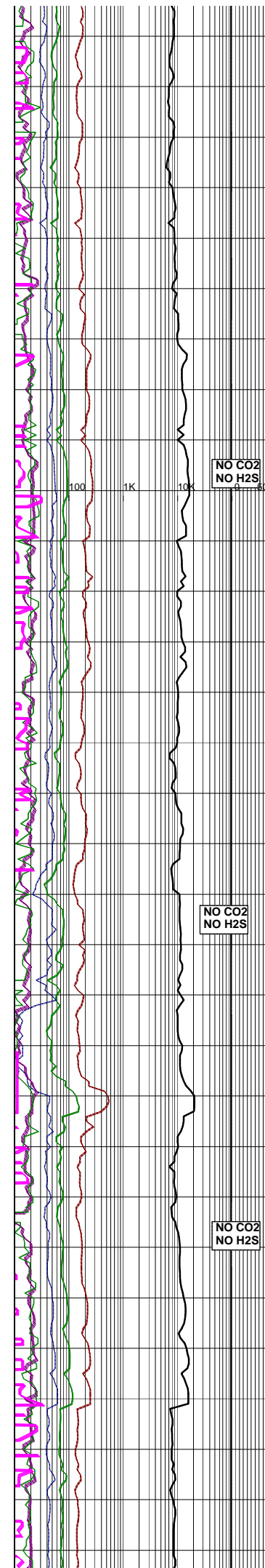
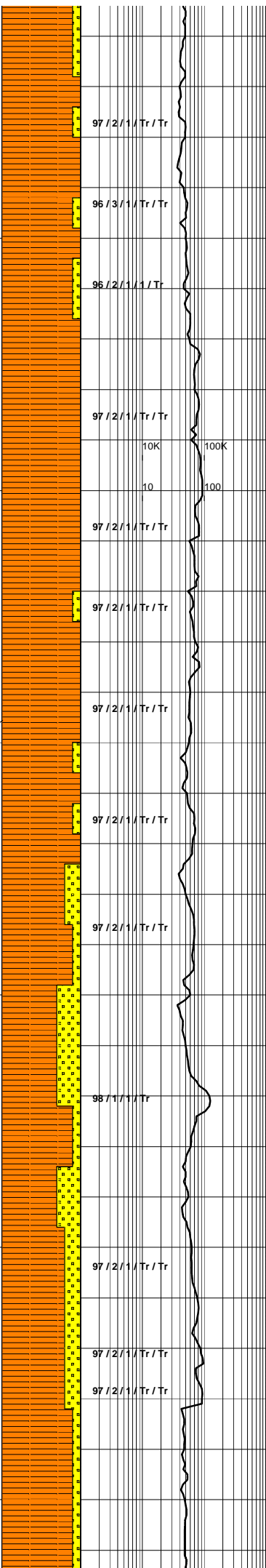
2117

2142

2167

2192

2217



aren i/p,grd to SL I S I ,micmic,  
tr liths,tr carb spks,sft-mod  
hd,sbbiky.

SANDSTONE:lt-dk gry,wh-off wh,  
vf-f,sbang-sbrnd,mod srt,wk calc  
cmt,occ sil cmt,abd arg mtx,tr  
feld,blk,brn,grn liths,occ carb  
spks,mod hd,pr vis por,no flour.

SILTY CLAYSTONE:brn/gry,med gry,  
aren,arg,mnr sil i/p,grd to SLTST,  
com feld,occ carb spks,tr dissem  
pyr,frm-mod hd,sbfiss-sbbiky.

SANDSTONE:lt-med gry,med gry/brn,  
f-vf,wl srt,sbrnd-sbang,occ v wk calc  
cmt,occ mod wk sil cmt,com lt gry  
sily & off wh arg mtx,grd to aren  
SLTST,com feld,com carb spks,frm-  
mod hd,v pr-ti vis por,no flour.

2103-2109:COM CALCITE VEIN  
INFILL

SILTY CLAYSTONE:brn/gry,med gry,  
aren,arg,mnr sil i/p,grd to SLTST,  
com feld,occ carb spks,tr dissem  
pyr,frm-mod hd,sbfiss-sbbiky.

SANDSTONE:med gry,vf,v wl srt,  
sbrnd,mnr wk calc cmt,mnr mod wk  
sil cmt,com lt gry sily mtx,grd to  
aren SLTST,com feld,occ carb spks,  
fri-mod hd,v pr-ti vis por,no flour.

SILTY CLAYSTONE:med brn,med gry  
/brn,med gry,aren,arg i/p,grd to vf  
SST i/p,grd to CLYST i/p,com feld,  
com carb spks,micmic i/p,frm-mod  
hd,sbfiss-sbbiky

SURVEY @ 2142m: 3.25° 32° T

SILTY CLAYSTONE:med brn,med  
gry,brn/gry,arg,occ sil i/p,com feld,  
occ carb spks,tr micmic,mod hd-frm,  
sbfiss-sbbiky.

30 STD WIPER TRIP @  
2154m TO SHOE @ 1252m

NO CO2  
NO H2S

SILTY CLAYSTONE:lt-med gry,occ  
dkgry,arg,aren i/p,micmic,tr  
liths,carb spks,sft-mod hd,  
occ hd,sbbiky.

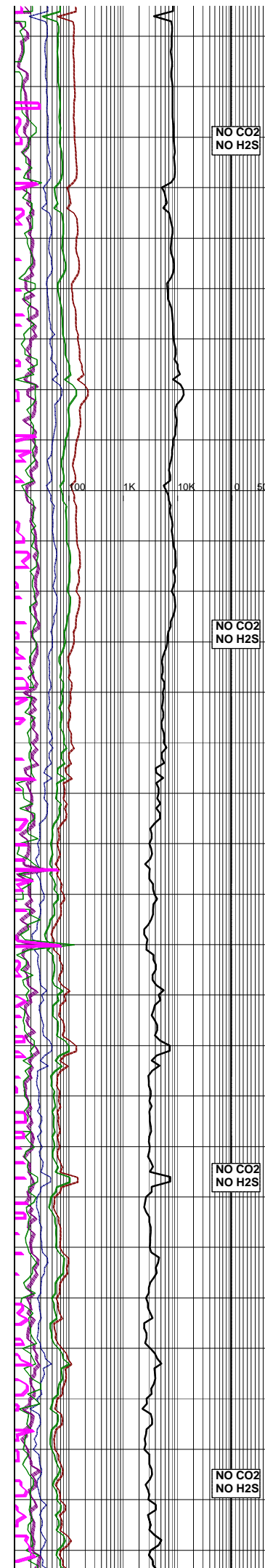
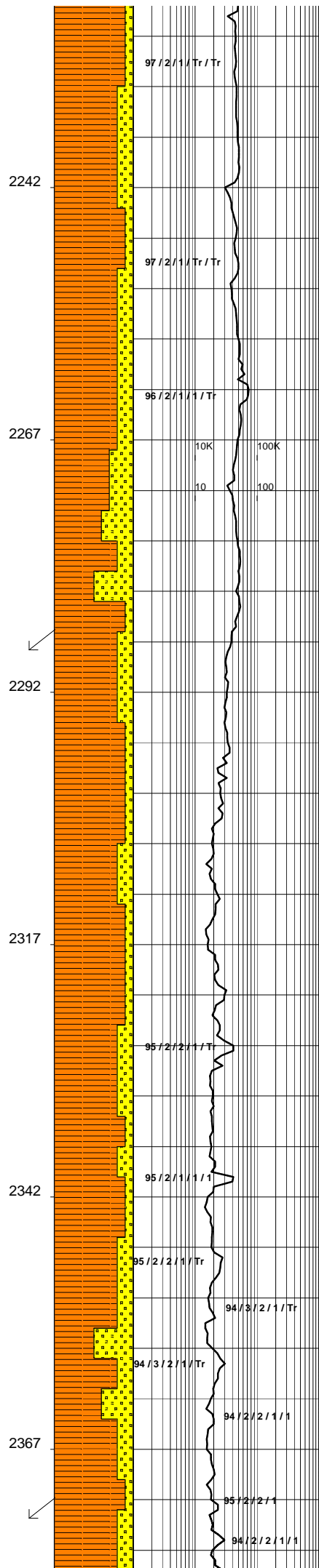
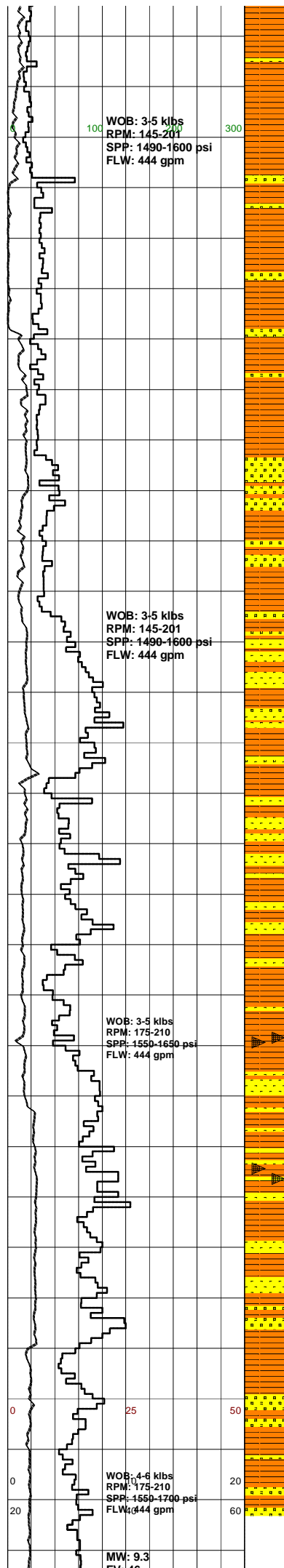
SILTY CLAYSTONE:lt-med gry,occ  
dkgry,arg,aren i/p,micmic,tr  
liths,carb spks,sft-mod hd,  
occ hd,sbbiky.

SANDSTONE:lt-med gry,wh,off wh,  
vf-f,occ med,pr-mod srt,sbang-  
sbrnd,wk calc cmt,occ sil cmt,  
arg mtx,tr feld,blk,brn liths,  
tr carb spks,mod hd,pr vis por,  
no flour.

NO CO2  
NO H2S

SILTY CLAYSTONE:lt-med gry,occ  
dkgry,arg,aren i/p,micmic,tr  
liths,carb spks,sft-mod hd,  
occ hd,sbbiky.

SILTY CLAYSTONE:lt-med gry,occ  
dkgry,arg,aren i/p,micmic,tr  
liths,carb spks,sft-mod hd,  
occ hd,sbbiky.



SILTY CLAYSTONE:lt-med gry,occ dk gry,arg,aren i/p,grd to SLTST,micmic,tr liths,carb spks,sft-mod hd,occ hd,sbbkly.

NO CO2  
NO H2S

SANDSTONE:lt-med gry,wh,off wh,vf-f,occ med,pr-mod srt,sbang-sbrnd,wk calc cmt,occ sil cmt,arg mtx,tr feld,blk,brn liths,tr carb spks,mod hd,pr vis por,no fluor.

SILTY CLAYSTONE:lt-med gry,occ dk gry/brn,arg,aren i/p,grd to SLTST i/p,mnr micmic,tr brn liths & carb spks,mod hd,sbbkly.

SANDSTONE:lt gry/brn,occ off wh & med gry,vf-f,sbang-sbrnd,mnr calc & sil cmt,tr arg mtx,tr brn liths,frimod hd,pr vis por no fluor.

NO CO2  
NO H2S

SILTY CLAYSTONE:lt-med gry,med-dk gry i/p,tr grn/gry,arg,mnr aren,grd to SLTST,micmic,tr brn liths & carb spks,mod hd-hd,sbbkly-sbfiss.

SANDSTONE:off wh,pl gry,lt-med grn i/p,vf-f,grd to SLTST i/p,mod srt,sbrnd-sbang,mnr calc & sil cmt,tr arg mtx,tr brn liths & carb spks,  
**SURVEY @ 2288m: 5.0° 17T**

SILTY CLAYSTONE:med gry/brn,lt-med gry,micmic,tr brn liths,frm-mod hd, sbbkly-sbfiss.

SANDSTONE:off wh,pl gry,vf-f,wl srt,sbrnd-sbang,tr calc cmt,mnr sil cmt,tr arg mtx,tr liths,frm-mod hd, pr vis por,no fluor.

SILTY CLAYSTONE:lt-med gry,lt brn/gry,plgrn/gry i/p,arg,aren i/p,grd to SLTST,mnr micmic,sil i/p,pred mod hd,hd i/p,sbbkly.

NO CO2  
NO H2S

COAL:(Tr)blk,dk brn,ea,vit i/p,sity,brit-frm,sbbkly,hckly-unevn.

SANDSTONE:off wh,pl gry,lt brn i/p,vf-f,wl srt,sbrnd-sbang,mnr sil cmt & off wh arg mtx,tr brn liths,fr, pr vis por,no fluor.

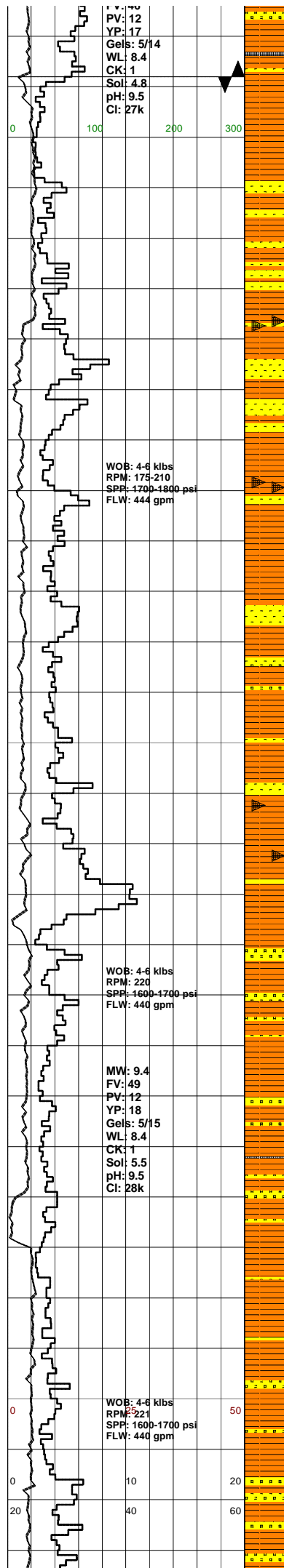
NO CO2  
NO H2S

SANDSTONE:wh,off wh,lt-med gry,f-vf,occ med,mod srt,sbang-sbrnd,occ sil cmt,wk calc cmt,abdt arg mtx,tr feld,abdt blk,brn,grn liths,mod hd,pr vis por,no fluor.

**SURVEY @ 2374m: 6.0° 9T**

COAL:(Tr)blk,dk brn,ea,vit i/p.





2392

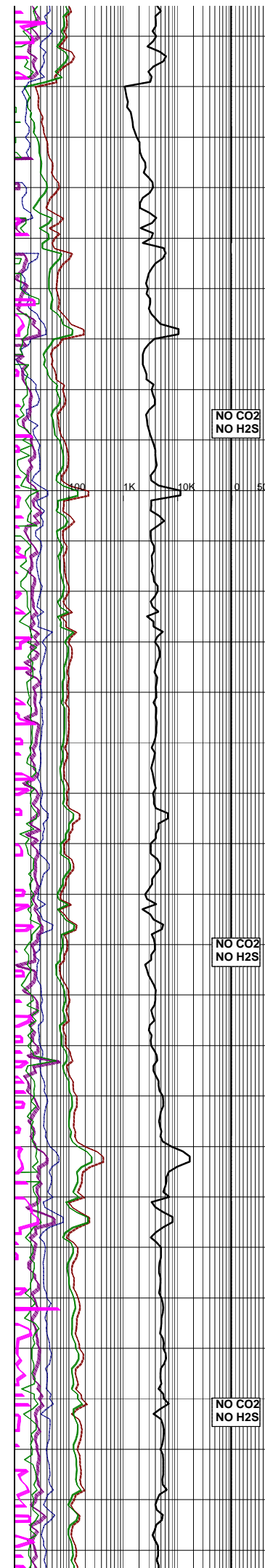
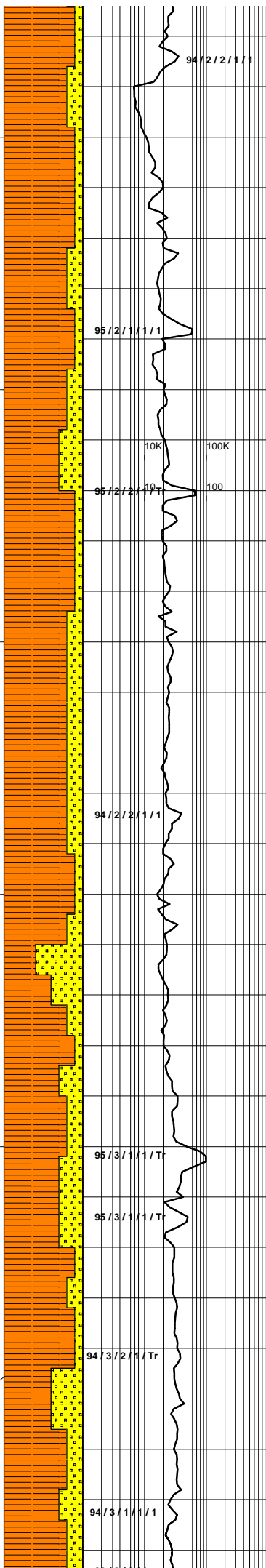
2417

2442

2467

2492

2517



silty,brt-frm,sbbkly,hckly-unevn.

**PULL OUT OF HOLE TO CHANGE BHA @ 2386m.**

Bit 3 RR:HYCLOG DSX519M-A5  
 Size: 8.5" Jets: 5x12  
 In: 2386m Out: 3002m  
 Run: 616m Hrs: 54.83  
 Cond: x-x-xx-x-x-x-xx-xx  
 SILTY CLAYSTONE:lt-med gry,occ dk gry,grn/gry,occ brn,com aren grd to SLTST,occ-com micmic,tr feld liths,tr carb spks,sft-mod hd, sbbkly.

SANDSTONE:pl gry,off wh,lt brn i/p,vf-f,wi srt,sbrnd-sbang,mod calc & sil cmt,abdt loc off wh arg mtx, tr dk brn liths,pred mod hd,mnr fri, v pr vis por,no fluor.

COAL:(Tr)pred dk brn,blk i/p,ea, occ sbvit,sily i/p,sft,tr brit,sbbkly, unevn.

**NO CO2 NO H2S**

SILTY CLAYSTONE:lt-med gry,lt brn/gry,aren i/p,grd to SLTST,tr micmic,pred mod hd,frm i/p sbbkly.

SANDSTONE:off wh,pl gry i/p,vf-f,mod wl srt,sbang-sbrnd,mod strg sil cmt,com off wh arg mtx,tr dk brn liths, mod hd,pr vis por,no fluor.

SILTY CLAYSTONE:lt-med gry,lt brn/gry,pl grn/gry i/p,aren i/p,mnr rd liths,occ micmic,tr carb spks & fiks, frm-mod hd,sbbkly-sbfiss.

SANDSTONE: off wh,pl gry/brn,vf-f,mod wl srt,sbrnd,com mod strg sil cmt & pl gry/off wh arg mtx,com dk brn liths & carb spks,mod hd,occ hd,no vis por,no fluor.

COAL:(Tr)blk,dk brn,ea,sily,frm,sft i/p,sbfiss-sbbkly,unevn.

**NO CO2 NO H2S**

SANDSTONE:wh,off wh,lt gry,vf-f, occ med,pr-md srt,wk calc cmt, occ sil cmt,abdt off wh arg mtx, abdt blk, brn feld,mod hd,pr vis por,no flour.

SILTY CLAYSTONE:lt-med gry,occ dk gry,lt-med brn,arg,aren i/p,grd to SLTST,micmic,tr liths,tr carb spks,sft-mod hd,sbbkly.

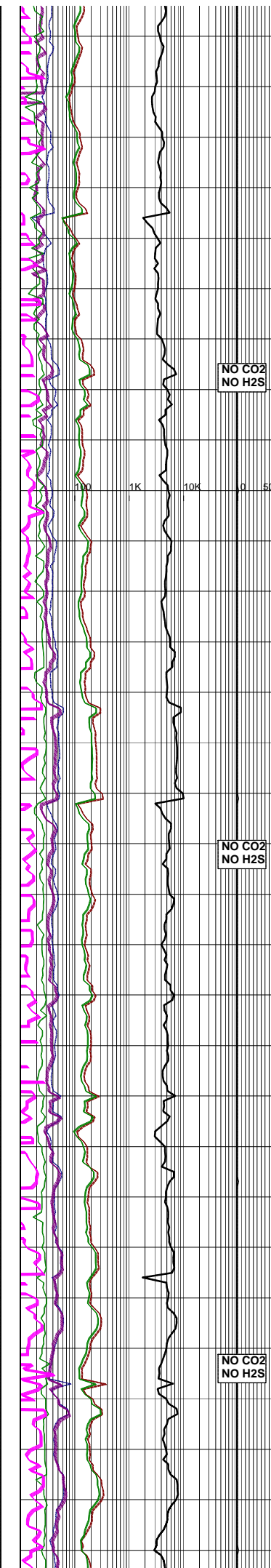
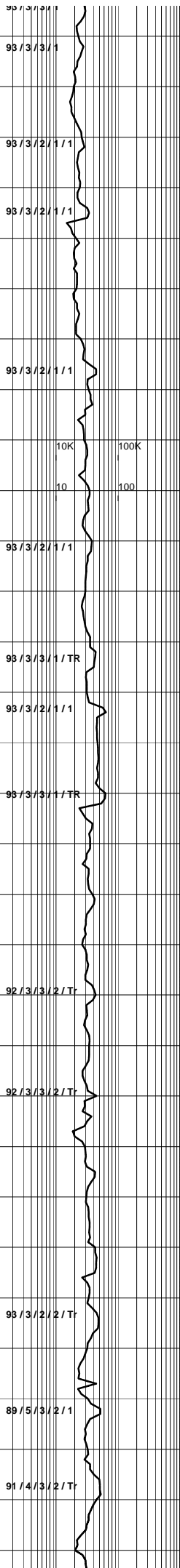
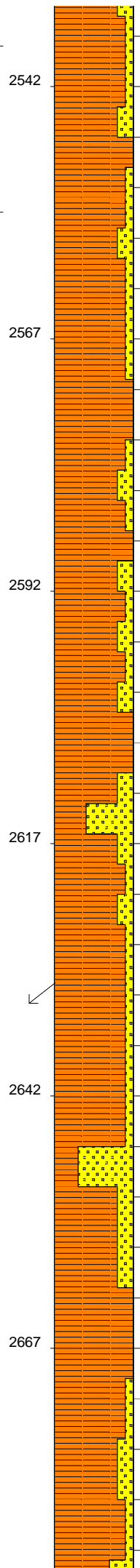
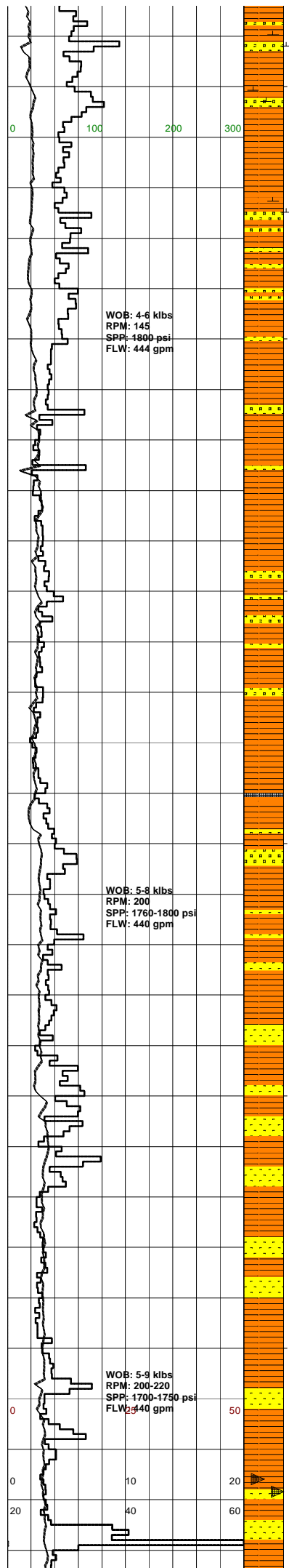
COAL:(Tr)blk,dk brn,ea,sily,frm,sft i/p,sbfiss-sbbkly,unevn.

SILTY CLAYSTONE:lt-med gry,occ dk gry,lt-med brn,arg,aren i/p, grd to SLTST,micmic,tr liths,tr carb spks,sft-mod hd,sbbkly.

**SURVEY @ 2517m: 5.25° 171**

**NO CO2 NO H2S**

SANDSTONE:wh,off wh,lt gry,vf-f, occ med,pr-md srt,wk calc cmt, occ sil cmt,abdt off wh arg mtx, abdt blk, brn feld,mod hd,pr vis por,no fluor.



SILT CLAYSTONE:lt-med gry,dk gry, grn/gry,lt brn,arg,aren i/p,grd to SLST,micmic,tr liths,tr carb spks,sbbiky.

SANDSTONE:wh,off wh,lt-med gry, f-med,mod srt,sbang-sbrnd,wk calc cmt,occ sil cmt,abdt arg mtx,com feld,com blk,brn,gry liths,mod hd,occ hd,pr vis por, no fluor.

SILTY CLAYSTONE:lt-med gry,grn/gry, lt-dk brn,occ dk gry,arg,aren i/p, micmic,tr liths,tr carb spks,sft-mod hd,occ hd,sbbiky.

NO CO2  
NO H2S

SANDSTONE:wh,off wh,lt gry,f-med, mod srt,sbang-sbrnd,calc cmt,occ sil cmt,abdt arg mtx,occ mtx supp com feld,com blk,brn,gry,grn lith tr carb spks,mod-occ hd,pr vis por no fluor.

SILTY CLAYSTONE:lt-med gry, occ dk,gry,grn-gry,lt brn,aren i/p,grd to SLST,micmic,tr liths tr carb spks,sft-mod hd,occ hd, sbbiky.

COAL:blk,dk brn,dll,sbvit,occ arg,sft-brit,sbbiky,unev.

NO CO2  
NO H2S

SANDSTONE:pl gry,off wh,vf-f,wl srt,sbrnd-sbang,mnr mod strg sil cmt,com off wh arg mtx,tr dk brn liths,mod hd-hd,pr vis por,no fluor.

SURVEY @ 2633m: 6.5° 332°T

SILTY CLAYSTONE:med gry,med-dk gry,brn,tr dk gry,mnr aren,occ grd to SLST,tr micmic & off wh liths, mod hd,sbbiky,occ blk.

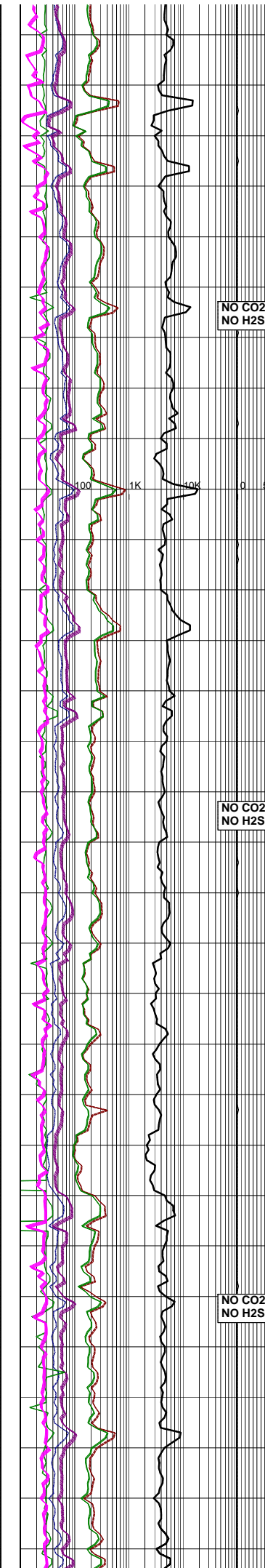
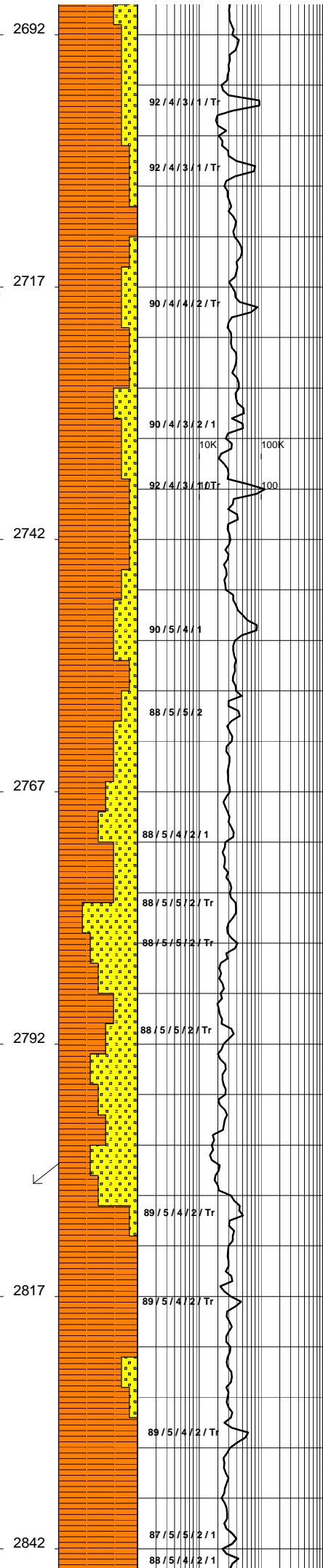
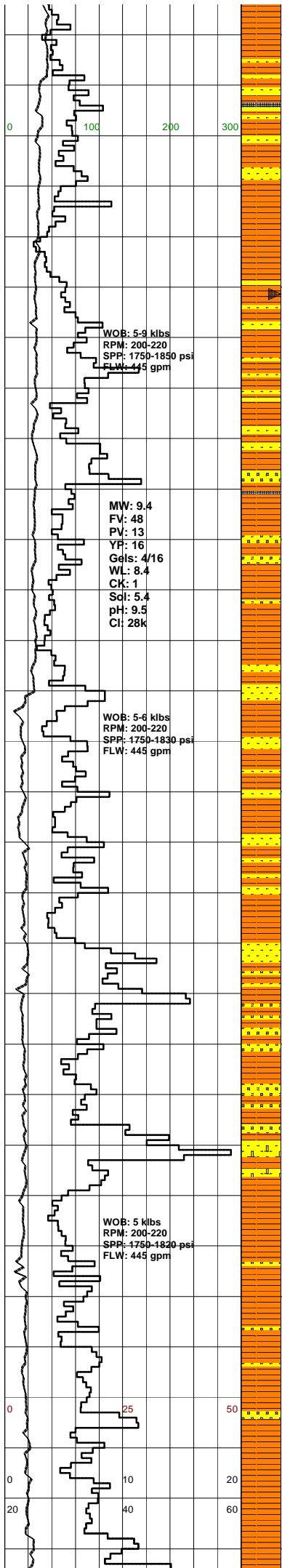
SANDSTONE:pl gry,off wh,vf-f,mod wl srt,sbrnd,com mod strg calc cmt & off wh arg mtx,tr lt brn liths,mod hd,occ fri,pr vis por,no fluor.

SANDSTONE:pl gry,off wh,vf-f, mod wl srt,sbrnd-sbang,mnr mod strg sil cmt,com off wh arg mtx,tr lt brn liths & carb spks,frm-mod hd, sbbiky.

NO CO2  
NO H2S

SILTY CLAYSTONE:lt-med gry, mnr brn/gry,pl grn/gry i/p,aren,occ grd to SLST,mnr micmic,tr lt brn liths & carb spks,frm-mod hd, sbbiky.

SANDSTONE:off wh,mnr pl gry,vf-f,wl srt,sbrnd-sbang,mnr mod strg calc & sil cmt,com off wh arg mtx, tr lt brn liths,fr-mod hd,pr vis por,no fluor.



COAL:(Tr)blk,dk brn,ea,sbvit i/p,  
stly,st,occ brit,sbfiss,hckly.

SILTY CLAYSTONE:lt-med gry,  
med gry/brn,mnr dk gry,aren i/p,occ-  
com lt brn liths,mnr micmic,mod hd,  
sbbkly.

SANDSTONE:off wh,lt gry/brn,vf-  
f,mod srt,sbang,occ sbrnd,mod strg,  
sil cmt,off calc cmt,abdrt arg mtz,  
tr carb spks & liths,mod hd,no vis  
por,pr inf por,no flour.

SILTY CLAYSTONE:dk gry occ lt  
gry,arg,micmic,mnr carb spks,mnr lt  
brn liths,frm occ mod hd,sbbkly  
occ sbfiss.

SANDSTONE:off wh,lt gry,vf-f,  
mod srt,sbang,occ sbrnd,mod strg  
sil cmt,off wh occ wh arg mtz,  
hd occ mod hd,no vis por,pr inf por,  
no flour.

SILTY CLAYSTONE:med gry/brn,lt-  
med gry,occ dk gry,aren i/p,com grd  
to SLTST,mnr micmic,tr lt brn & off  
wh liths & carb spks,mod hd-frm,  
sbbkly-sbfiss.

SANDSTONE:off wh,lt gry,vf-f,  
mod srt,sbang,mod strg sil  
cmt,wh arg mtz,occ carb spks,  
tr brn lith,hd mod hd i/p, no vis  
por,pr inf por,no flour.

SILTY CLAYSTONE:lt gry occ dk  
gry,arg,aren grd SLTST i/p,  
occ micmic,mnr carb spks,tr lt  
brn liths,mod hd,hd i/p,sbbkly.

SANDSTONE:wh,occ off wh,lt gry  
i/p,vf-f,mod srt,sbang,occ sbrnd,  
mod strg sil cmt,wk calc cmt, off  
wh arg mtz,lt gry arg mtz i/p,  
tr carb spks,occ lt brn liths,  
pr inf por,no flour.

SILTY CLAYSTONE:dk gry,pl gry/grn  
i/p,arg,com micmic,mnr grn liths,  
mnr carb spks,mnr brn liths,mod  
hd,sbbkly.

SANDSTONE:wh,occ off wh,lt gry  
i/p,vf-f,mod srt,sbang,occ sbrnd,  
mod strg sil cmt,wk calc cmt, off  
wh arg mtz,lt gry arg mtz i/p,  
tr carb spks,occ lt brn liths,  
tr grn liths,mod hd,no vis por,  
pr inf por,no flour.

CALCAREOUS SANDSTONE:wh,milky,  
off wh,vf-f,occ med,pr-mod srt,  
sbang-sbrnd,strg calc cmt,occ  
arg mtz,comm feld,abdrt blk,brn,  
gry,grn liths,mod-occ hd,pr vis  
**SURVEY @ 2806m: 5.25° 70°T**

SILTY CLAYSTONE:lt-med gry,occ  
dk gry,grn/gry,lt-dk brn,arg,  
aren i/p,grd to SLTST,micmic,  
tr carb spks,tr liths,mod-occ  
hd,sbbkly.

SILTY CLAYSTONE:lt-med gry,occ  
dk gry,grn/gry,lt-dk brn,arg,  
aren i/p,grd to SLTST,micmic,  
tr carb spks,tr liths,mod-occ  
hd,sbbkly.

SILTY CLAYSTONE:lt-med gry,med  
brn/gry,tr lt brn,aren i/p,occ grd to  
SLTST,com micmic,occ off wh liths



