






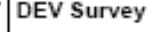
































<b>LOG INTERVAL</b>			<b>CASING DATA</b>			<b>MUDLOG</b>		
DEPTH	:96.04 mMDRT	TO 1385.00 mMDRT	346 mm (13.375")	TO	96.04 mMDRT	COMPANY	: Pangaea Resources	
DATE	:26 July 2015	TO 23 August 2015	244 mm (9.625")	TO	496.80 mMDRT	WELL	: Wyworrie 1	
SCALE	: 1:500					BLOCK LICENSE	: EP-167	
						REGION	: McArthur/Beetaloo, NT	
						COUNTRY	: AUSTRALIA	
<b>MUD TYPES</b>			<b>HOLE DATA</b>					
KCL Polymer Mud	TO	1385 mMDRT	311 mm (12.25")	TO	500.0 mMDRT	COORDINATES	: Lat 15° 22' 10.5395" S	
			216 mm (8.50")	TO	1385.0 mMDRT		Long 132° 44' 46.1429" E	
							Easting 258061.59 m	
							Northing 8,299,532.86 m	
						ELEVATION	: RT: 5.34 m GL:178.5 m AMSL	
<b>ABBREVIATION</b>			<b>SYMBOLS</b>					
NB	New Bit	CL	ppm Chloride Ion	 Casing				
RRB	Rerun Bit	RM	Mud Resistivity	 Sidewall Core Recovered				
CB	Core Bit	RMF	Filtrate Resistivity	 Sidewall Core Unrecovered				
TG	Trip Gas	LAT	Lagged After Trip	 Wireline				
FG	Formation Gas	LAS	Lagged After Svy					
POG	Pumps off Gas	NR	No Returns					
WTG	Wiper Trip Gas	PR	Poor Returns					
SWG	Swab Gas	LC	Lost Circulate Out					
WOB	Weight On Bit	CO	Circulate Out					
RPM	Rotary Rev/Min	SVY	Survey	 Core Rec.				
PP	Pump Pressure	AZI	Azimuth	 Core Unrec.				
SPM	Strokes/Min	CSG	Casing	 No Show				
MW	Mud Weight	SOL	Solids %	 DEV Survey				
VIS	Funnel Viscosity	SD	Sand %					
PV	Plastic Viscosit	MB	Methylene Blue	 Weak Show				
YP	Yield Point	CA	ppm Calcium					
FL	Fluid Loss	FC	Filter Cake Thick	 Fair Show				
			 Good show					
			 Bit Trip					
			 Wiper Trip					
						DATE ON SITE	: 24 July 2015	
						SPUD DATE	: 26 July 2015 @ 15:30 hrs	
						TD DATE	: 23 Aug 2015 @ 05:00 hrs	
						DATE RELEASED	: 23 Aug 2014	
						TOTAL DEPTH	: 1385.0 mMDRT / 1385.0 mTVDRT	
						STATUS	: NA	
						CONTRACTOR	: Saxon	
						RIG/TYPE	: Saxon Rig #187	
						LOGGING UNIT	: Modex1	
						COMPANY Rep.	: Mark Gregory	
						GEOLOGIST	: Peter Hawke	
							: Daniel Levy/Randy Laney	
						DATA Eng.	: Sachin Jagtap / Agus Iswahyudi	
						MUDLOGGERS	: Aurelius Rayan	

## GEOLOGICAL SYMBOLS

Figure 1: Lithological column of the study area. The column is divided into six vertical sections, each representing a different geological unit. From left to right, the units are: Sandstone (yellow with black dots), Dolomitic Siltstone (orange with black dots), Massive Calcite (pink with black dots), Shale (green with black dots), Antrim Basalt (dark red with black dots), Siltstone (orange with black dots), Intbd Ss/Siltst & Sh (green with black dots), Mudstone (brown with black dots), shale w/intbd Ss/Siltst (green with black dots), Carb Shale w/intbd clastics (dark green with black dots), Carb Shale (dark green with black dots), Dolomitic Shale & Ss/Siltst (green with black dots), Barrite (blue with black dots), Limestone (light blue with black dots), Dolostone (red with black dots), Tuff (purple with black dots), Dolerite Sill (dark red with black dots), and Dolomitic SSt (yellow with black dots).

## QUALIFIERS, ACCESSORIES AND FOSSILS

	Argillaceous		Gravelly/Pebbly		Anhydritic		Ferruginous		Cherty		Foram		Echinoid
	Silty		Calcareous		Gypsiferous		Carbonaceous		Tuffaceous		Shell Fragments		Oolitic
	Sandy		Dolomitic		Micaceous		Bituminous		Feldspar		Nummulites		
	Coarsely Sandy		Limestone Bed		Pyritic		Glaucinitic		Siliceous				

## WEATHERFORD - SURFACE LOGGING SYSTEMS

**Company: Pangaea Resources Well: Wyworrie 1 Location: McArthur/Beetaloo Spud Date: 26 July 2015 Scale: 1:500**

			Symbol	Interpreted Lithology	Depth	Percentage Lithology				C1 Out			Oil Show	Core	Interpreted Lithology			
ROP Average							Total Gas			1						ppm 100000		
50 m/hr 0							1 units 10000			1 ppm 100000								
ROP Average							CO2 Out			1 ppm 100000								
250 m/hr 50							10 ppm 100000			1 ppm 100000								
WOB										1 ppm 100000								
50 Klb 0										1 ppm 100000								
										1 ppm 100000								
										1 ppm 100000								
										1 ppm 100000								

13 3/8" Casing shoe at  
96.04m MDRT

Bit no#1  
12.25" Smith  
SN: PY5053  
In @ 96.04m  
Out @ 500.00m  
Bit Hrs:54.4  
3-4-WT-A-E-5/16-NO-  
D

Midnight Depth 117m MDRT

Survey @ 141m  
Inc: 3.5 deg Az: S45E

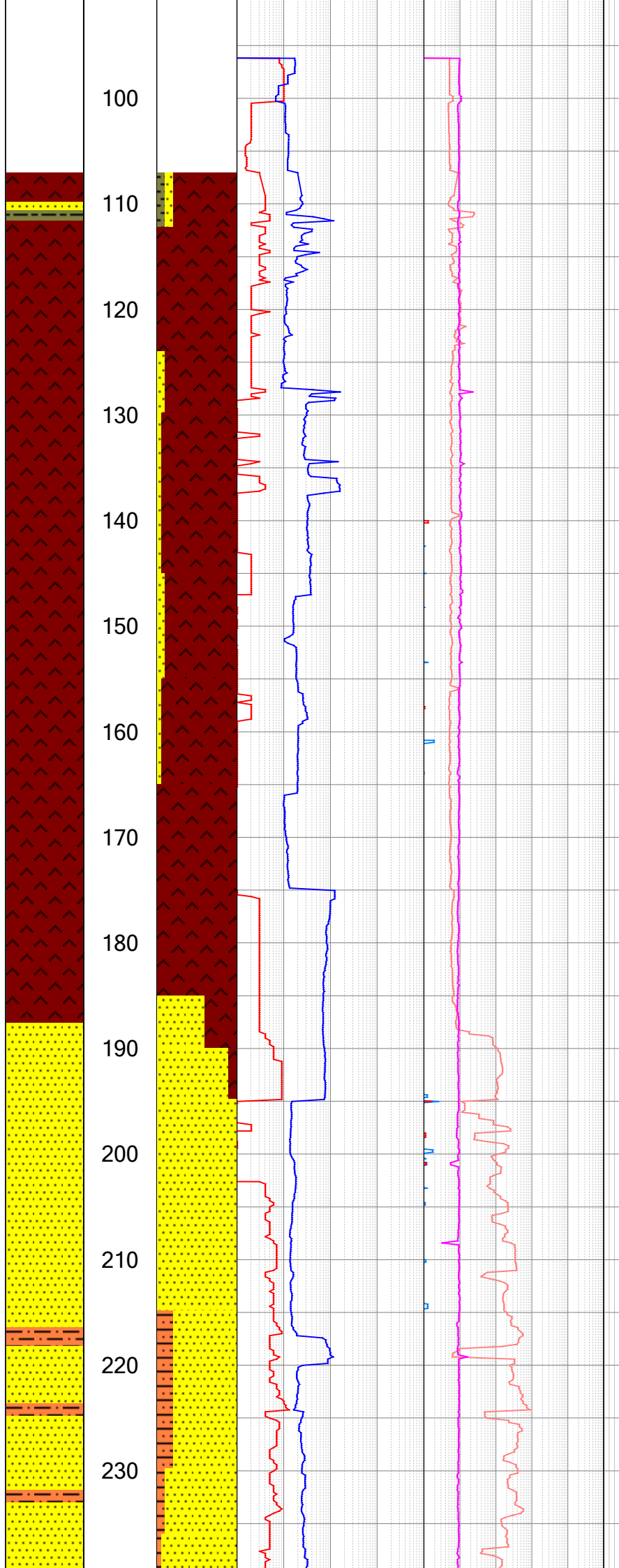
WOB: 27-40kibs  
SPP: 820-1355psi  
Flow In: 600-807gpm  
Trq: 5.2-5.5kftlbs

MW 8.5ppg

Survey @ 194m  
Inc: 3.6 deg Az: S45E

WOB: 25-41kibs  
SPP: 1018-1526psi  
Flow In: 615-807gpm  
Trq: 3.9-6.0kftlbs

Midnight Depth 208m MDRT



Wyworrie1 spudded @  
1540hrs on 26 July 2015

Cement and Caving cuttings.

Basalt: Med - dk brn, dk gnsh gy, dk  
gy, hd, compt, m to crs ls qtz grains.

Basalt: Med - dk brn, dk rnsh gy, dk  
gy, hd, compt, m to crs ls qtz grains.

Basalt: dk olv gn, gy, com mottled  
ochre groundmass, com to abnt qtz  
rich, v hd, cmpt, med txt, olvine  
pyroxene phenocrysts, com  
plagioclase, com loose fi - med qtz  
grains - lt gy frosted, sb ang - ang, pr  
srt.

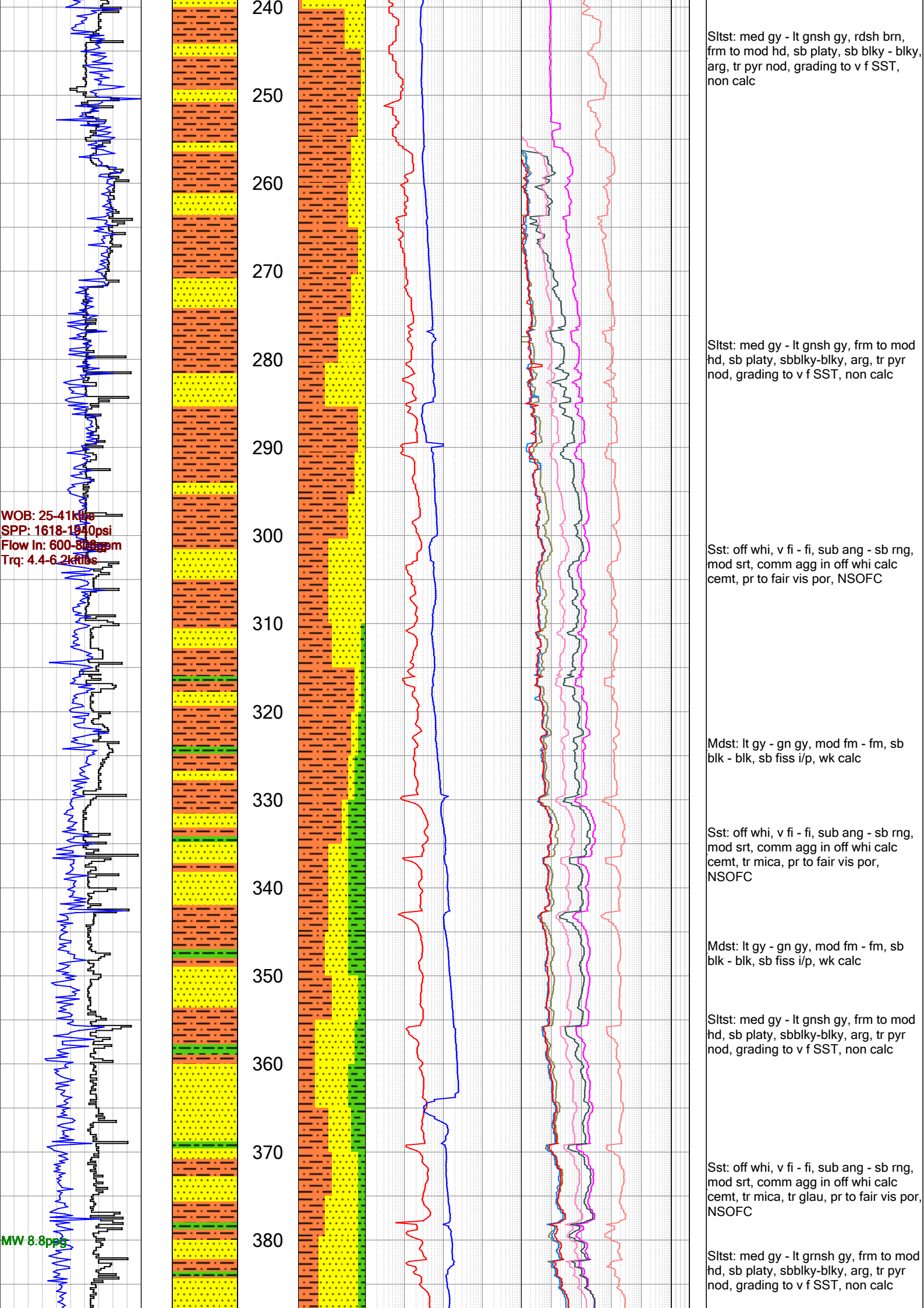
Basalt: dk olv gn, gy, com mottled  
ochre groundmass, com to abnt qtz  
rich, v hd, cmpt, med txt, olvine  
pyroxene phenocrysts, com  
plagioclase, com loose fi - med qtz  
grains - lt gy frosted, sb ang - ang, pr  
srt.

Basalt: dk olv gn, gy, com mottled  
ochre groundmass, com to abnt qtz  
rich, v hd, cmpt, med txt, olvine  
pyroxene phenocrysts, com  
plagioclase, com loose fi - med qtz  
grains - lt gy frosted, sb ang - ang, pr  
srt.

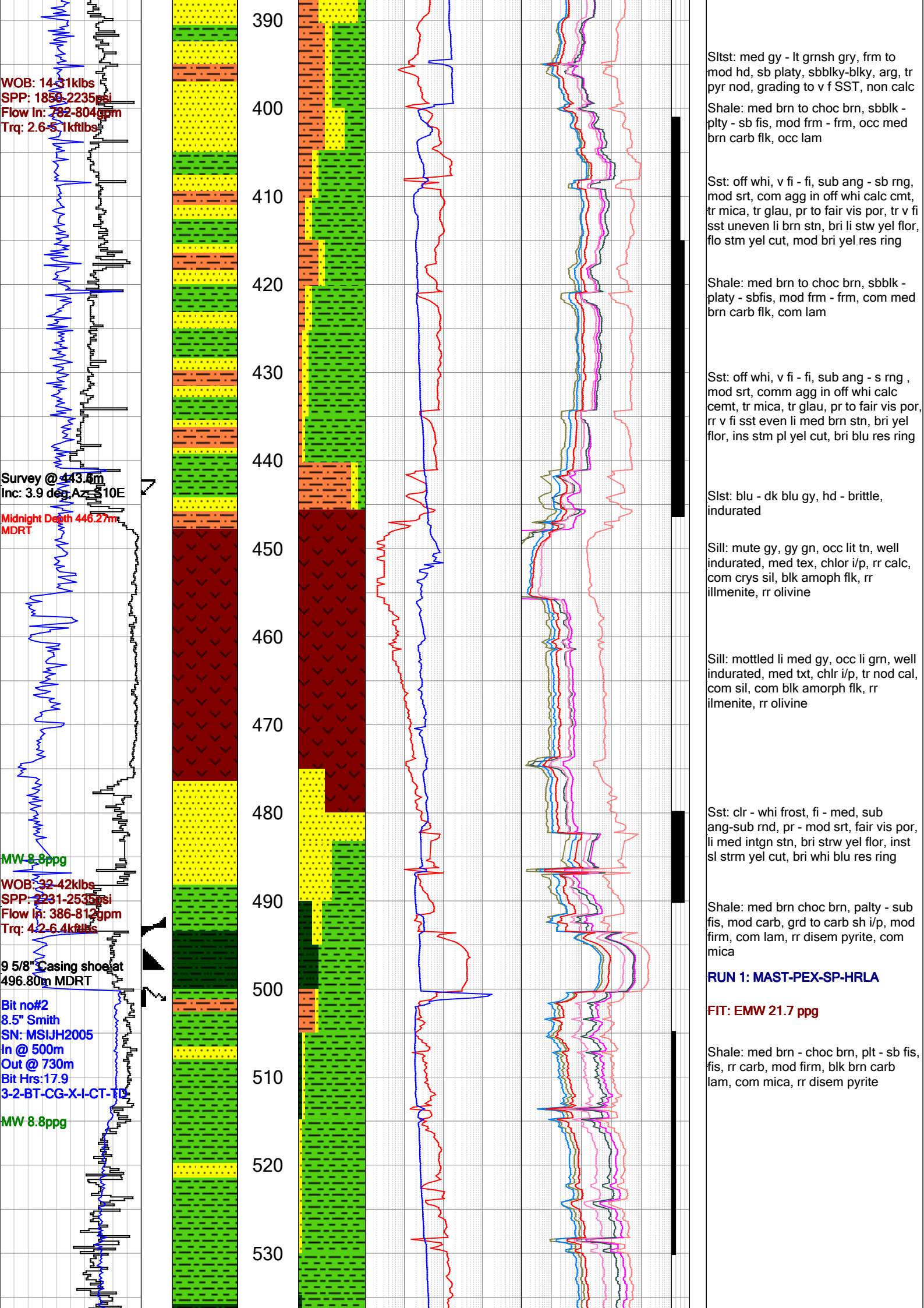
Sst: lt gy - med gy, lt brn, off wh, trnsp  
- trnsl, crs - f, fri, sb rnd - rnd, mod srt,  
com qtz mtrx, sil cmt, pr vis por,  
NSOFC.

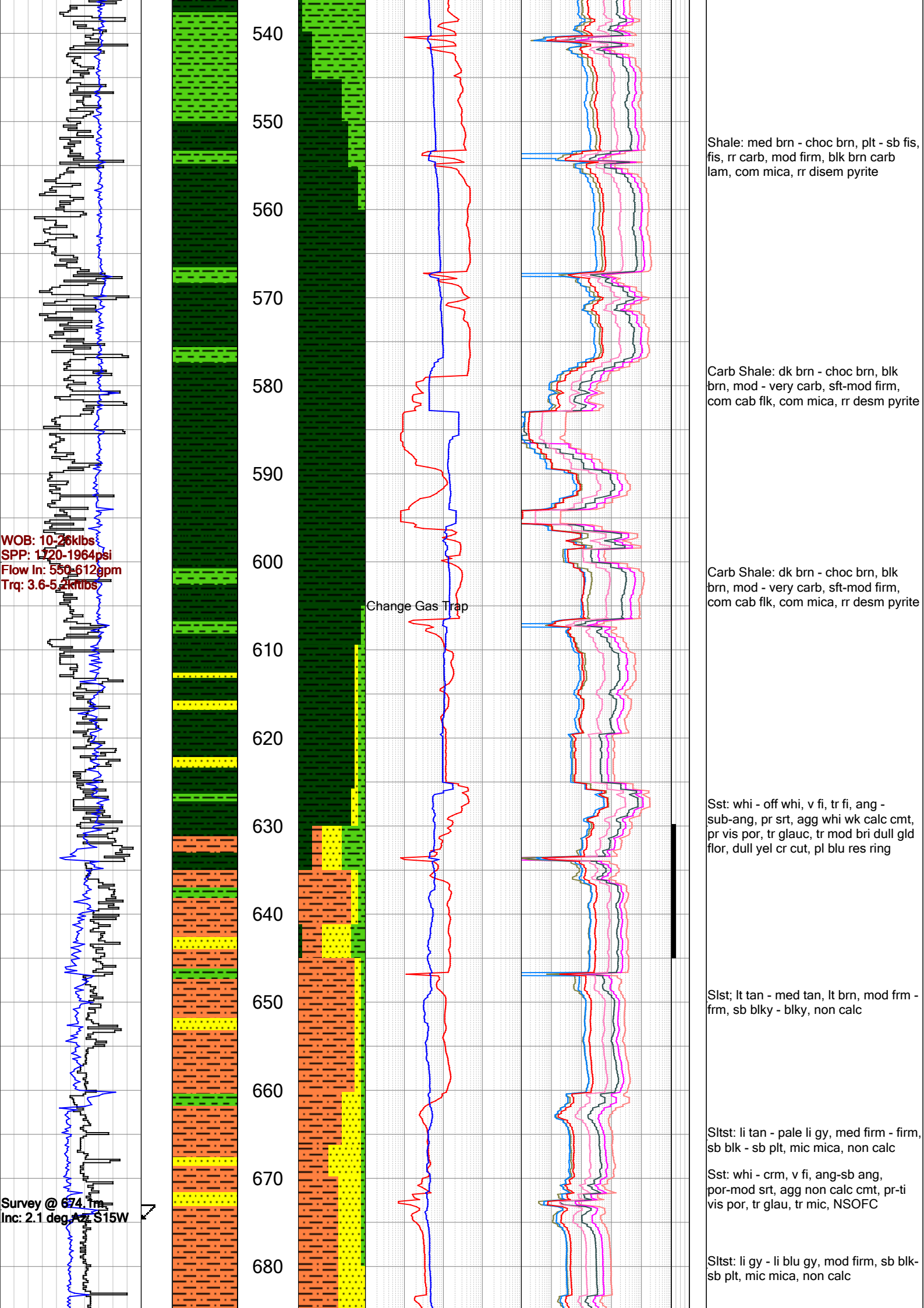
Sltst: med gy - lt grnsh gry, rdsh brn,  
off wh, mod frm to frm, sb platy,  
grading to v f SST, non calc

Sst: off wh , lt brn, clr, vf - f grn, qtz  
grn, well srted, sbnd-rnd, com qtz  
mtrx, sil cmt, pr vis por, NSOFC

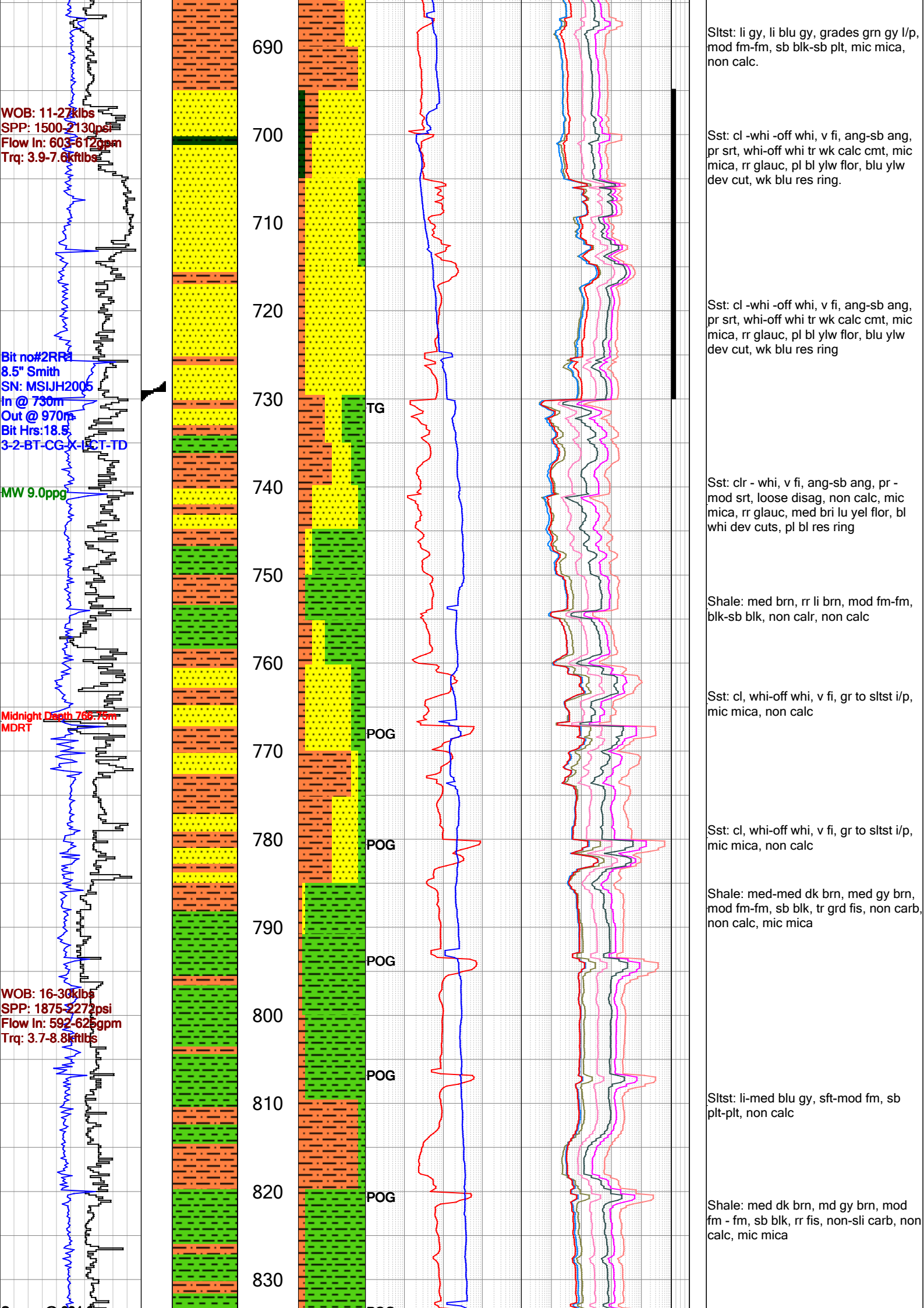












Survey @ 834.6m  
Inc: 1.5 deg Az: S40E

WOB: 22-29klbs  
SPP: 2157-2420psi  
Flow In: 581-596gpm  
Trq: 4.5-8.1kftlbs

MW 8.95ppg

Midnight Depth 970.50m  
MDRT

Core Bit#3  
8.5" Corpro  
SN: UD224001  
In @ 970m  
Out @ 1002.53m  
Bit Hrs:3.1  
1-1-NO-A-X-IN-NO-CP

840

850

860

870

880

890

900

910

920

930

940

950

960

970

980

POG

POG

POG

POG

POG

POG

POG

POG

POG

Change Shaker screen

Shale: med brn, gy brn, mod fm-fm,  
sb blk, rr plt, non carb, non calc, mic  
mica

Shale: med gy -med dk gy, mod fm,  
sb blk-rr sb fis, tr dk brn sli carb flk,  
non calc, mic mica

Shale: med gy -med dk gy, mod fm,  
sb blk-rr sb fis, tr dk brn sli carb flk,  
non calc, mic mica

Siltst: li-med brn, sft - mod firm, blk -  
sb blk, nono calc, mic mica

Sh: med gy -med dk gy, mod fm, sb  
blk-rr sb fis, tr dk brn sli carb flk, non  
calc, mic mica

Siltst: li-med brn, sft - mod firm, blk -  
sb blk, nono calc, mic mica

Mdst: li gy, li bl gy, com aren, tr arg,  
gr to siltst i/p, sb blk-sb plt, wk calc,  
dol i/p, non carb

Mdst: li gy, li bl gy, com aren, tr arg,  
gr to siltst i/p, sb blk-sb plt, wk-mod  
calc, dol i/p, non carb

Shale: med gy -med dk gy, mod fm,  
sb blk-rr sb fis, tr dk brn sli carb flk,  
non calc, mic mica

Shale: med dk gy, dlk gy, mod firm,  
plt-sb fis, grd to fis, rr blk lam, rr carb,  
non calc, occ mic mica.

Siltst: med brn, sb blk, mod fm, non  
carb, non calc

**Core #1 (970m to 1002.53m)**

Shale: med dk gy, dlk gy, mod firm,  
plt-sb fis, grd to fis, rr blk lam, rr carb,  
non calc, occ mic mica



