



# FORMATION EVALUATION LOG



WELL : TREFOIL-2

FROM (m): 2510

TO (m): 3040

SCALE: 1/ 500

Country : AUSTRALIA  
 Region : TASMANIA  
 Field : TREFOIL  
 Permit : T/18P  
 Well Type : APPRAISAL  
 Rig Name : KAN TAN 4

**POSITION**  
 Latitude : 39 53' 07.93" S  
 Longitude : 145 22' 14.62" E  
 X (m) : 360690.389  
 Y (m) : 5583676.588  
 RT-Sealevel (m MSL) : 26  
 RT-Seabed (m) : 95

**CASING SHOE SIZE / DEPTH**  
 762mm (30") at (m MDRT) : 153.00  
 340mm (13 3/8") at (m MDRT) : 930.00  
 245mm (9 5/8") at (m MDRT) : 2520.00

Spud Date : 06-10-2009  
 Total Depth Date :  
 Total Depth (m MDRT) :  
 Total Depth (m TVSS) :  
 Status :

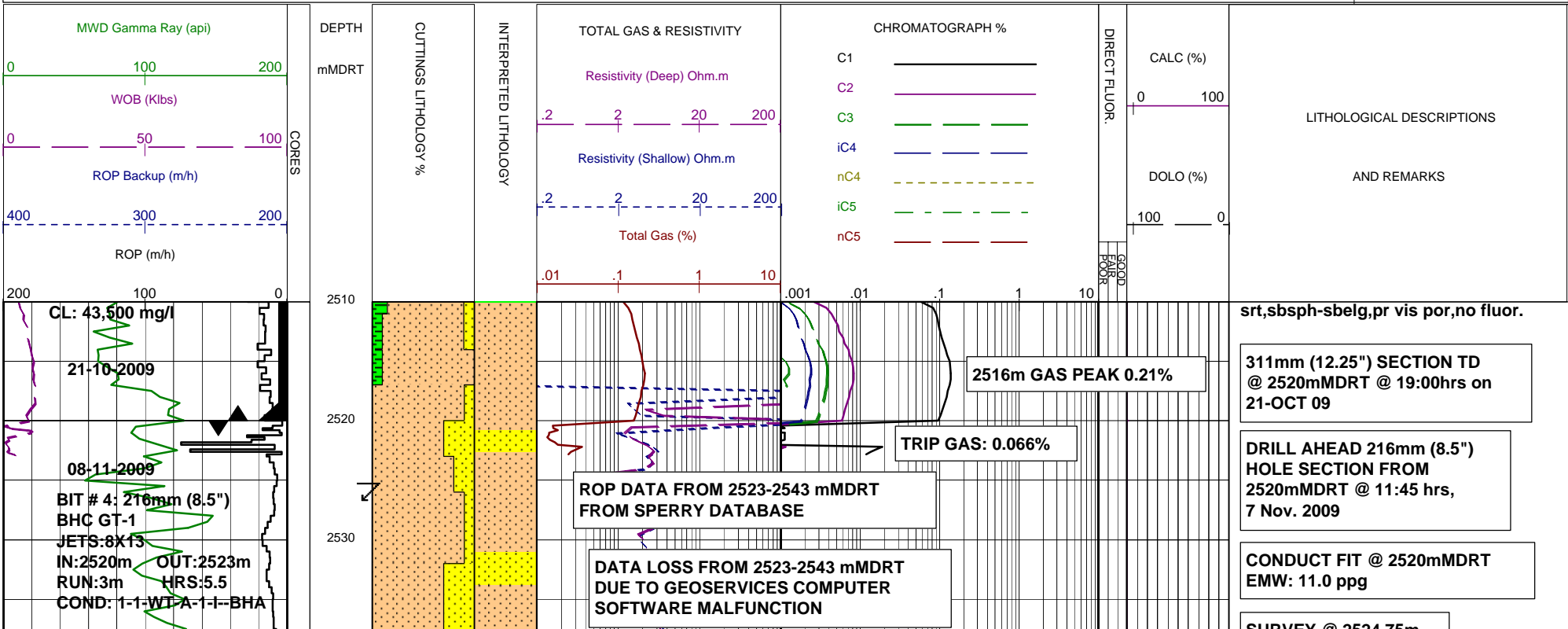
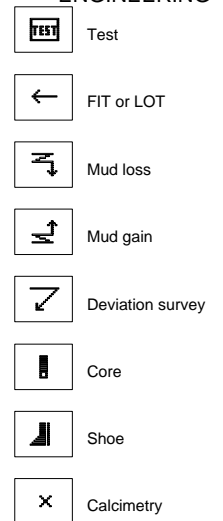
## ABBREVIATIONS

MW MUD WEIGHT	NB NEW BIT
FV FUNNEL VISCOSITY	RR RERUN BIT
PV PLASTIC VISCOSITY	CB CORE BIT
YP YIELD POINT	WOB WEIGHT ON BIT
FC FILTER CAKE	RPM REVS PER MINUTE
SOL SOLIDS	FLC FLOW CHECK
CR CIRCULATE RETURNS	WL FILTRATE
SD SAND - %	PR POOR RETURNS
S SALINITY - PPM	NR NO RETURNS
RM MUD RESISTIVITY	BG BACKGROUND GAS
RMF MUD FILTRATE	TG TRIP GAS
C CARBIDE TEST	STG SHORT TRIP GAS
LAT LOGGED AFTER TRIP	CG CONNECTION GAS
DS DEVIATION SURVEY	SG SWAB GAS
	SVG SURVEY GAS

## LITHOLOGY LEGEND



## ENGINEERING



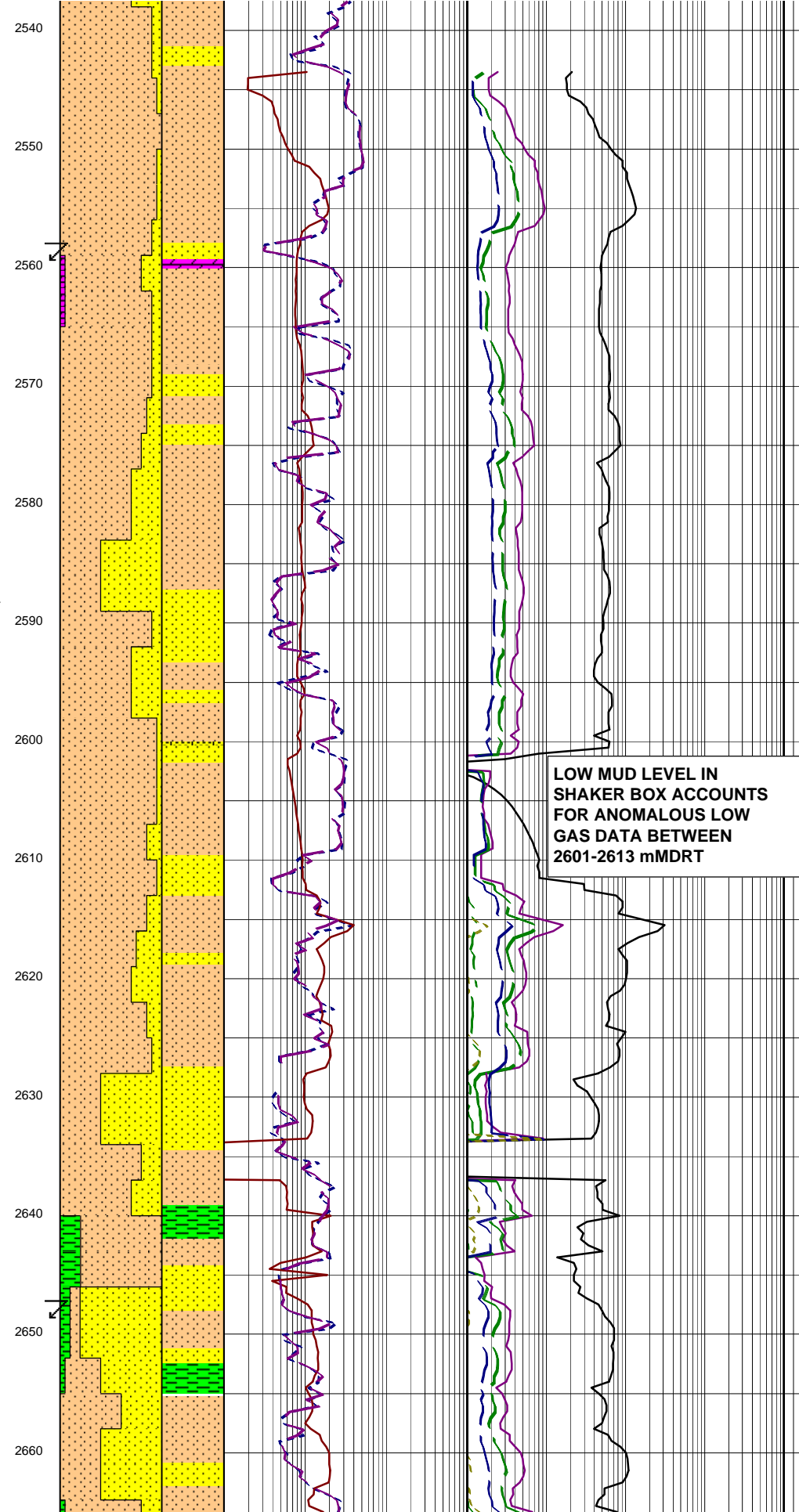
WOB: 1-10klbs  
RPM: 70-72  
GPM: 714-729  
SPP: 1523-1617psi

MW:9.35 FV:47  
PV/YP : 12/30  
FC : 1/2  
SOL:3.2 SAND:0.25  
CL: 43,000 mg/l

BIT # 5: 216mm (8.5")  
SMITH PDC M1616VPBX  
JETS:6X14  
IN:2523m OUT:2633m  
RUN:110m HRS:5.5  
COND:0-1-WT-G-X-I-N5-DTF

BIT # 5RR: 216mm (8.5")  
SMITH M1616VPBX  
JETS:6x14  
IN:2633m OUT:2983m  
RUN:349m HRS:22.1  
COND:1-2-CT-S-X-I-WT-Q

WOB: 1-16klbs  
RPM: 46-156  
GPM: 684-712  
SPP: 2328-2554psi



SURVEY @ 2524.75m  
Incl 1.00° AZI:97.22°  
TVD:2524.47m

SANDSTONE:yelsh gry,v lt gry,  
olv gry,20% vf,50% f,30% med  
grs,tr crs grs,clr qtz grs,pr-  
mod srt,sbang-sbrnd,sbsph-sbelg,  
10% sil cmt,10% wh cly mtx,tr  
lithic frags,tr carb mat,pr inf  
vis por,no fluor.

SURVEY @ 2557.55m  
Incl 1.13° AZI:91.00°  
TVD:2557.30m

DOLOMITE:brnsh gry,frm-mod hd,  
sbbkly w/- conch frac i/p.

SILTSTONE:pred brnsh blk,tr  
olv gry & brnsh gry,sft-frm,blky-  
sbbkly,tr carb spks & lam,tr  
micmic & lam mica flks.

SANDSTONE:v lt gry,olv gry,  
tr yelsh gry,tr lt olv gry,20%  
vf,50% f,30% med grs,clr qtz  
grs,lse-frm,pr-mod srt,sbrnd-  
ang,sbsph-sbelg,10% wh cly mat,  
tr lithic frags,tr carb mat,tr  
pyr,pr inf vis por,no fluor.

SURVEY @ 2588.22m  
Incl 1.30° AZI:90.35°  
TVD:2587.90m

SANDSTONE:v lt gry-lt gry-  
clr-opq,olv gry,5% vf,30% f,  
40% med,20% crs,5% v crs grs,  
lse-frm,pr-mod srt,sbrnd-ang,  
sbsph-sbelg,tr sil cmt,tr pyr  
cmt,tr calcite cmt,incr in lse,  
clr v crs qtz grs,tr lithic  
frags,tr carb mat,tr glauc,tr nod  
pyr,gd inf por,no fluor.

SILTSTONE:brnsh gry,brnsh blk,  
olv blk,olv gry,sft-frm,blky-  
sbfiss,tr carb mat,tr lithic frags,  
tr coal,micr.

CARBIDE LAG CHECK @ 2630m  
THEOR STKS:4148  
ACTUAL STKS:4299  
INGAUGE HOLE.

SANDSTONE:v lt gry-lt gry-  
clr-opq,tr yelsh gry,5% vf,35% f,30%  
med,30% crs grs,lse-frm,por-mod  
srt,sbrnd-sbang,sbsph-sph,tr sil  
cmt,tr calcite cmt,tr lithic frags,  
tr carb mat,tr nod pyr,tr glauc,  
pr inf vis por,no fluor.

POOH @ 2633 mMDRT DUE TO  
LWD 'PULSER' FAILURE. P/U  
COMPLETE LWD TOOL STRING

SURVEY @ 2646.63m  
Incl 1.43° AZI:86.39°  
TVD:2646.32m

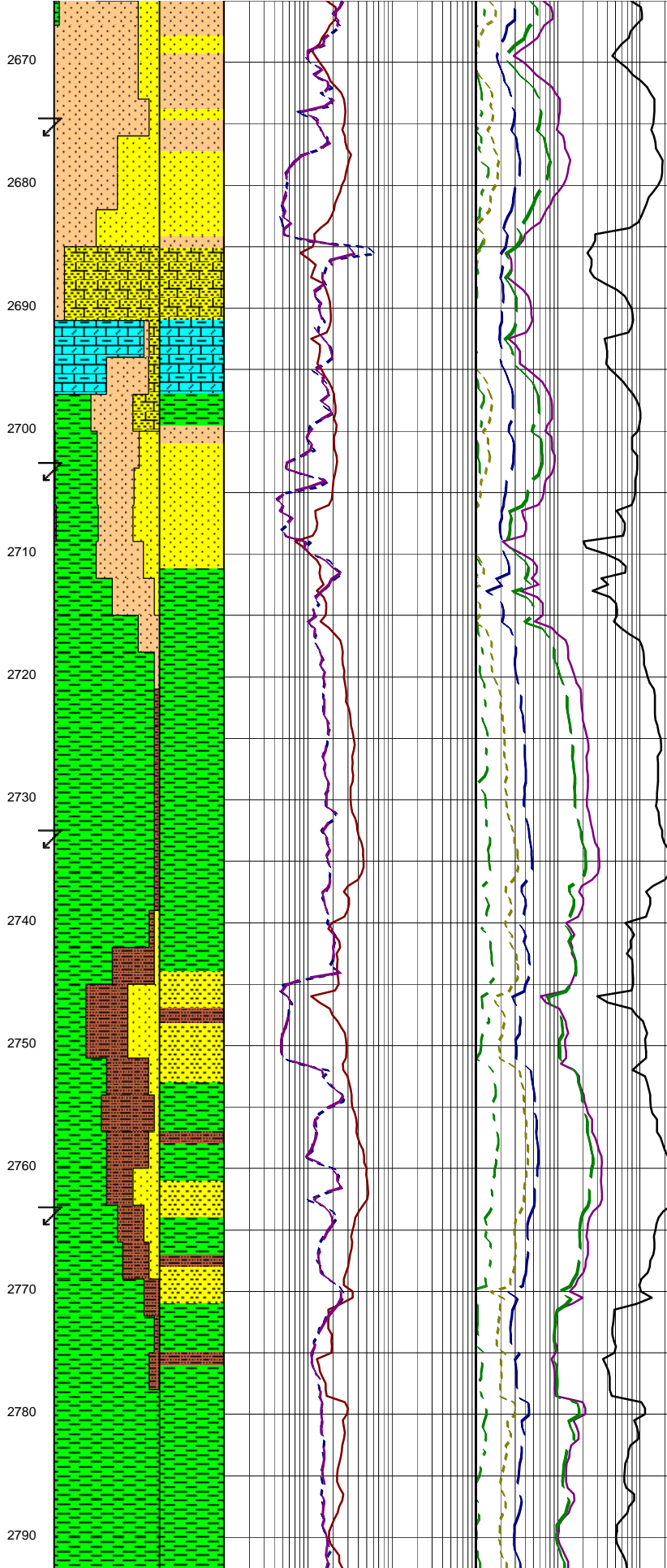
LOW MUD LEVEL IN  
SHAKER BOX ACCOUNTS  
FOR ANOMALOUS LOW  
GAS DATA BETWEEN  
2601-2613 mMDRT

MW: 9.4 FV: 68  
PV/YP: 11/26  
FC: 1/2  
SOL: 3.3% SAND: 0.25%  
CL: 41,500 mg/l

MW: 9.4 FV: 46  
PV/YP: 10/28  
FC: 1/2

SOL: 3.5% SAND: 0.25%  
CL: 40,000 mg/l

WOB: 5-15klbs  
RPM: 115-120  
GPM: 699-704  
SPP: 2400-2550psi



CLAYSTONE: olv blk, frm, sbbiky, tr micmic, tr carb spks.

**SURVEY @ 2674.00m**  
Incl 1.43° AZI: 86.39°  
TVD: 2673.70m

SANDSTONE: v lt gry, clr & opq, pred lse-fri, qtz, f grs, 10% vf grs, 40% med, sbang-sbrnd, sbsph-sbelg, pr sil cmt when aggs, tr pyr cmt, 5% cl mtx, tr brn mica flks, fr vis por infr, no fluor.

CALCILUTITE: lt gry-med lt gry, tr yelsh gry, v sft-frm, sbbiky-blky, grd to CLYST i/p, tr carb mat.

**SURVEY @ 2702.98m**  
Incl 1.62° AZI: 88.34°  
TVD: 2702.65m

ARGILLACEOUS SILTSTONE: brnsh blk, olv blk, olv gry, sft-frm, sbbiky-blky, tr carb mat, tr lithic frags.

CLAYSTONE: med gry-med dk gry, sft-frm, sbbiky-blky, tr carb mat, tr micmic.

**SURVEY @ 2732.91m**  
Incl 1.69° AZI: 88.47°  
TVD: 2732.57m

SANDSTONE: wh-v lt gry, clr-opq, tr yelsh gry, 10% vf, 70% f, 20% med, lse-mod hd, mod wl-wl srt, sbrnd-rnd, sbsph-sph, tr sil cmt, gd inf vis por, no fluor.

CLAYSTONE: med gry-med dk gry, olv gry-lt olv gry, sft-frm, sbbiky-blky, tr carb mat, tr micmic.

**SURVEY @ 2762.56m**  
Incl 1.85° AZI: 89.89°  
TVD: 2762.20m

ARGILLACEOUS SILTSTONE: brnsh blk, olv blk, olv gry-brnsh gry, sft-frm, sbbiky-blky, tr carb mat, tr lithic frags, tr pyr.

CLAYSTONE: med gry-med dk gry, olv gry-lt olv gry, v sft-frm, sbbiky-blky, tr carb mat, tr micmic.

**SURVEY @ 2791.49m**  
Incl 1.82° AZI: 85.20°

Incl: 1.62° AZI: 85.23°  
TVD: 2791.12m

CLAYSTONE: med gry-med dk gry,  
olv gry-lt olv gry, sft frm, sbblky-  
blky, tr carb mat, tr micmic

CLAYSTONE: med gry-med dk gry,  
olv gry-lt olv gry, sft-mod hd,  
sbblky-blky, tr carb mat.

ARGILLACEOUS SILTSTONE:  
brnsh blk, olv blk, olv gry-brnsh  
gry, sft frm, sbblky-blky, tr carb  
mat, tr lith frags,

SURVEY @ 2819.89m  
Incl 1.94° AZI: 85.21°  
TVD: 2819.50m

SANDSTONE: wh-v lt gry, clr-opq,  
10% f, 30% med, 50% crs, 10% v crs,  
lse-mod hd, pr-mod wl srt, rnd-ang,  
sbsp-sph, tr sil cmt, gd inf vis  
por, no fluor.

SURVEY @ 2847.72m  
Incl 2.06° AZI: 83.71°  
TVD: 2847.31m

SILTSTONE: brnsh blk, olv blk,  
olv gry-brnsh gry, sft frm, sbblky-  
blky, tr carb mat, tr lithic  
frags, tr grd to ARG SLTST.

COAL: brn blk-blk, olv gry,  
sft frm, sbblky-blky, dull-  
sbvit.

CLAYSTONE: med gry-med  
dk gry, olv gry-lt olv gry,  
sft-mod hd, sbblky-blky,  
com carb mat.

SURVEY @ 2876.19m  
Incl 2.24° AZI: 81.90°  
TVD: 2875.76m

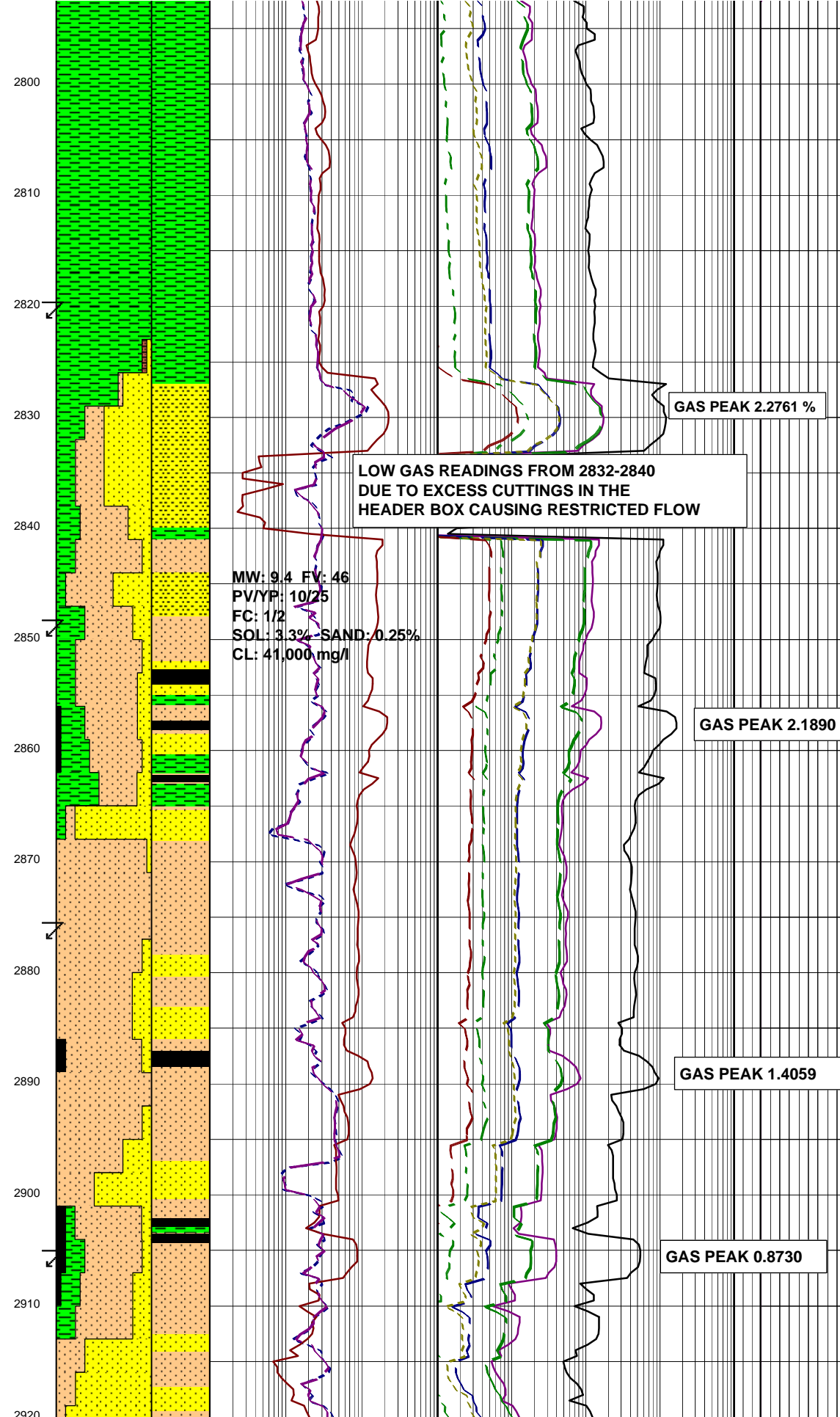
SANDSTONE: wh-v lt gry, 40%  
v f, 60% f, frm, mod-wl srt, sbrnd-  
sbang, sbsp, tr sil cmt, tr carb  
mat, fr inf vis por, no fluor.

COAL: brn blk-blk, olv gry,  
sft frm, sbblky-blky, dull-  
sbvit.

SURVEY @ 2905.64m  
Incl 2.46° AZI: 85.79°  
TVD: 2905.19m

SANDSTONE, wh-v lt gry, 40%  
vf, 60% f, frm, sbrnd-sbang, mod  
-wl srt, sbsp, tr sil cmt, tr  
carb mat, tr disp coal pieces,  
fr infr vis por, no fluor.

CLAYSTONE: olv gry, olv blk,  
sft frm, sbblky-blky, increase  
in carb mat.



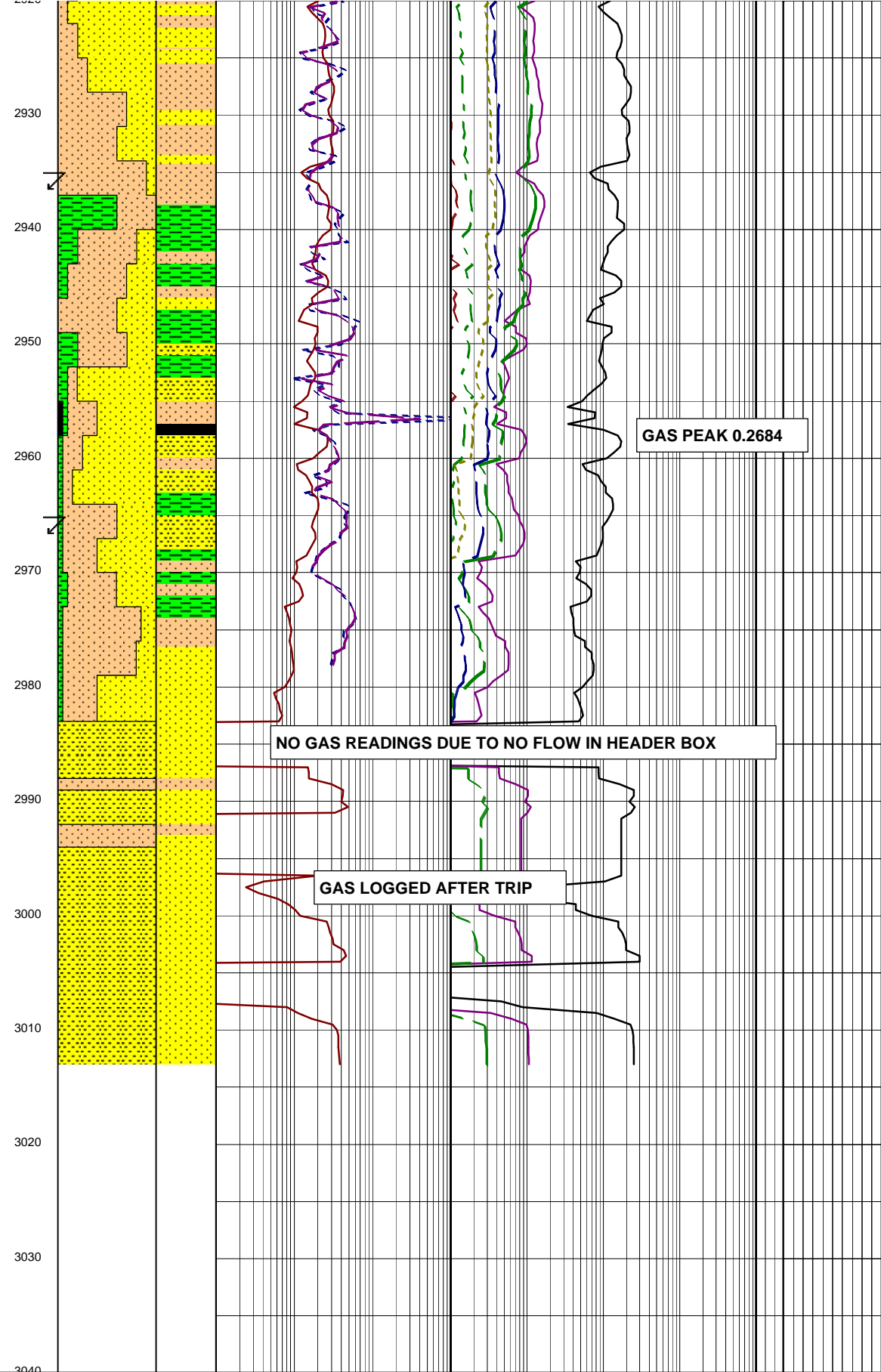
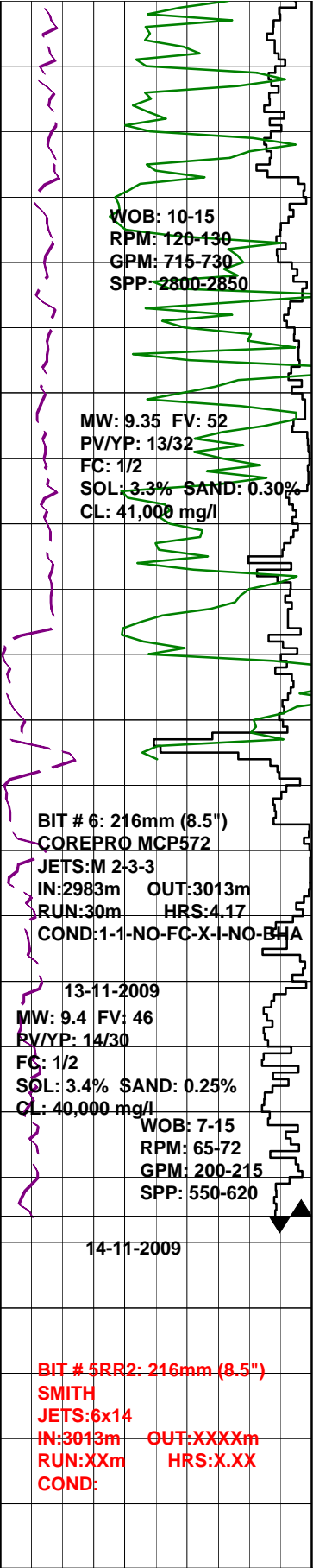
2800  
2810  
2820  
2830  
2840  
2850  
2860  
2870  
2880  
2890  
2900  
2910  
2920

MW: 9.4 FV: 46  
PV/YP: 10/25  
FC: 1/2  
SOL: 3.3% SAND: 0.25%  
CL: 41,000 mg/l

MW: 9.4 FV: 46  
PV/YP: 10/25  
FC: 1/2  
SOL: 3.3% SAND: 0.25%  
CL: 41,000 mg/l

WOB: 10-15  
RPM: 120-130  
GPM: 700-715  
SPP 2550-2620





**SILTSTONE:** olv gry, brn blk, sft frm, sbblky-blky, tr carb mat as thn lam spks, tr lithic frags, tr micmic, tr blk, bright coal pieces.

**SANDSTONE:** olv gry, mott, fri, lithofelds, vf grs, 30% f grs, mod srt, sbsph, 10% cly mtx, 2% carb mat, 1% alt felds, tr lithic frags, fr vis por, no fluor.

**CLAYSTONE:** olv blk, sft frm, blk, sbblky, tr dk mica flks.

**SURVEY @ 2935.67m**  
 Incl 2.58° AZI: 82.74°  
 TVD: 2935.19m

**COAL:** blk, grysh blk, sft, sp.

**CLAYSTONE:** brnsh gry-brnsh blk, olv blk, sft frm, sbblky, tr carb strks.

**SURVEY @ 2963.22m**  
 Incl 2.93° AZI: 85.15°  
 TVD: 2962.71m

**SANDSTONE:** wh-v lt gry, olv gry, mott, lt gry, clr, opq, tr yelsh, gry, 5% vf, 5% f, 20 med, 40% crs, 30% v crs, tr gran grs, lse-mod hd, pr-mod srt, sbrnd-sbang, sbsph-sph, tr carb mat, tr micmic flks, gd inf vis por, no fluor.

**CORE RUN # 1**  
 2983 - 3013 mMDRT  
 CUT 30m, REC 31.2m  
 104%

**SANDSTONE:** wh-v lt gry, yelsh gry, clr, vf-v crs grs, frm-hd, pr srt, sbrnd-ang, sbsph-sph, 7-10% sil cmt, 1% mic flks, fr inf vis por, tr-1% amber, no fluor.

**SILTSTONE:** med gry-med dk gry, dk gry, mod hd-hd, blk, sbfiss, 15-25% mic flks.