LAKES OIL N.L.

WOMBAT - 4
COMPOSITE WELL LOG

ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Blank

ACCESSORIES

MINERAL
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

POROSITY TYPE
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

OTHER SYMBOLS

SORTING
- Well
- Moderate
- Poor

ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

OIL SHOWS
- Even
- Spotted
- Ques
- Dead

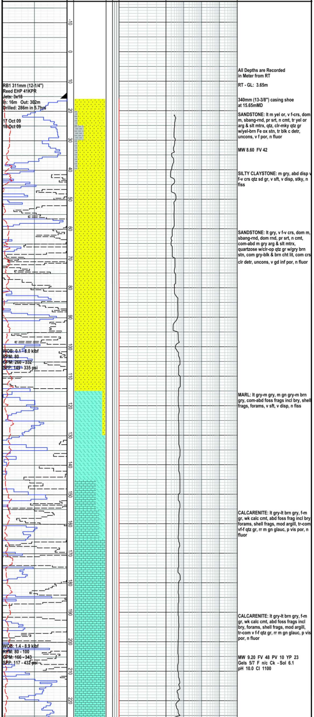
INTERVALS
- None
- Core
- Dst

EVENTS
- Rft
- Sidewall
- Csg
- Dst-top
- Dst-bot

COMPANY :	Petro Tech Pty Ltd. (100%)	**ELEV:**	G.L. 26.75m AHD
OPERATOR:	Lakes Oil N.L.	**SPUD DATE :**	17/10/2009
RIG :	Hunt Rig 2	**TD DATE :**	11/11/2009
PERMIT :	PRL2, Onshore Gippsland Basin, Victoria	**RIG RELEASED:**	1/12/2009
		TD DRILLER :	2500m
COUNTRY :	Australia	**STATUS:**	Suspended pending a future fracture stimulation treatment
LOCATION:	AMG 511 070.00 E 5 753 167.03 N LAT -38°22'10.60 S LONG 147°7'36.21E		

FORMATION EVALUATION LOG

RATE OF PENETRATION	MD meters 1:500	LITHOLOGY	CORE	OIL SHOWS	TOTAL GAS	CHROMATOGRAPH	REMARKS
ROP (0-100m/hr) 100 90 80 70 60 50 40 30 20 10 Backup ROP (100-200m/hr) 200 190 180 170 160 150 140 130 120 110 WOB (klb) 5 10 15 20 25 30 35 40 45 50					TOTAL GAS 20 40 60 80 100 unit BACKUP TOTAL GAS 280 460 640 820 1000 unit	1 Methane ppm 10000 1 Ethane ppm 10000 1 Propane ppm 10000 1 iso-Butane ppm 10000 1 n-Butane ppm 10000 1 iso-Pentane ppm 10000 n-Pentane ppm 10 100 1000 10000	



RB1 311mm (12-1/4")
Reed EHP 41KPR
Jets: 3x18
In: 16m Out: 302m
Drilled: 286m in 5.7hrs

17 Oct 09
18 Oct 09

WOB: 0.1 - 8.0 klbf
RPM: 80
GPM: 260 - 332
SPP: 149 - 335 psi

WOB: 1.4 - 8.9 klbf
RPM: 80 - 100
GPM: 166 - 343
SPP: 117 - 432 psi

All Depths are Recorded in Meter from RT

RT - GL: 3.65m

340mm (13-3/8") casing shoe at 15.65mMD

SANDSTONE: lt m yel or, v f-crs, dom m, sbang-rnd, pr srt, n cmt, tr yel or arg & slt mtrx, qtz, clr-mky qtz gr w/yel-brn Fe ox stn, tr blk c detr, uncons, v f por, n fluor

MW 8.60 FV 42

SILTY CLAYSTONE: m gry, abd disp v f-v crs qtz sd gr, v sft, v disp, stky, n fiss

SANDSTONE: lt gry, v f-v crs, dom m, sbang-rnd, dom rnd, pr srt, n cmt, com-abd m gry arg & slt mtrx, quartzose w/clr-op qtz gr w/gry brn stn, com gry-blk & brn cht lit, com crs clr detr, uncons, v gd inf por, n fluor

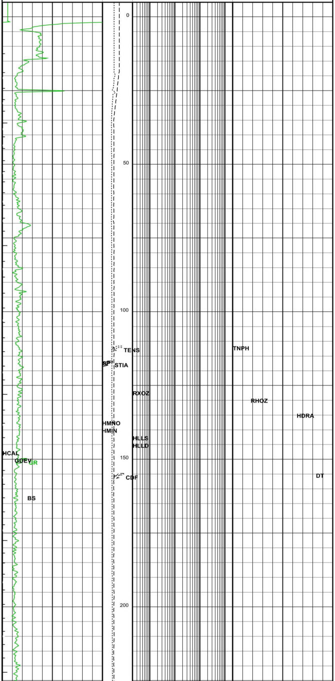
MARL: lt gry-m gry, m gn gry-m brn gry, com-abd foss frags incl bry, shell frags, forams, v sft, v disp, n fiss

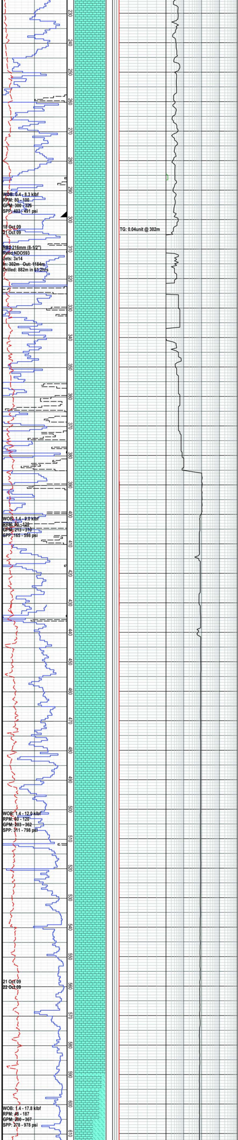
CALCARENITE: lt gry-lt brn gry, f-m gr, wk calc cmt, abd foss frag incl bry, forams, shell frags, mod argill, tr-com vf-f qtz gr, rr m gn glauc, p vis por, n fluor

CALCARENITE: lt gry-lt brn gry, f-m gr, wk calc cmt, abd foss frags incl bry, forams, shell frags, mod argill, tr-com v f-f qtz gr, rr m gn glauc, p vis por, n fluor

MW 9.20 FV 48 PV 10 YP 23
Gels 5/7 F n/c Ck - Sol 6.1
pH 10.0 Cl 1100

Washout From BS to HCAL Mudcake From HCAL to BS SP (SP) -50 (MV) 50 HILT Caliper (HCAL) 6 (IN) 16 HGNS Deviation (GDEV) -10 (DEG) 90 Gamma Ray (GR) 0 (GAPI) 200 Bit Size (BS) 6 (IN) 16		Std. Res. Invaded Zone Resistivity (RXOZ) 0.2 (OHMM) 2000	Env.Corr.Thermal Neutron Porosity (TNPH) 0.45 (V/V) -0.15 Density/Porosity Cross Over From RHOZ to TNPH Std. Res. Formation Density (RHOZ) 1.95 (G/C3) 2.95 Std. Res. Formation Pe (PEFZ) 0 (----) 10
Computed Micro Normal (HMNO) 20 (OHMM) 0	Calibrated Downhole Force (CDF) (LBF) 0 2000	Laterolog Shallow Resistivity (HLLS) 0.2 (OHMM) 2000	Density Correction (HDRA) -0.25 (G/C3) 0.25
Computed Micro Inverse (HMIN) 20 (OHMM) 0	Tension (TENS) (LBF) 0 4000	Laterolog Deep Resistivity (HLLD) 0.2 (OHMM) 2000	Delta-T (DT) 140 (US/F) 40





CALCARENITE: lt gry-lt brn gry, f-m gr, wk calc cmt, abd foss frags incl bry, forams, shell frags, mod argill, tr-com v f-f qtz gr, rr m gn glauc, p vis por, n fluor

CALCARENITE: lt gry-lt brn gry, rr lt gn gry, f-m gr, wk calc cmt, abd foss frags incl bry, forams, shell frags, sli argill, rr v f-f qtz gr, rr m gn glauc, p vis por, n fluor

244mm (9-5/8") casing shoe
at 299mMD

Formation L.O.T. @ 305m
MW: 8.4ppg EMW: 12.8ppg

CALCARENITE: lt gry-lt brn gry, rr lt gn gry, f-m gr, wk calc cmt, abd bry, forams, shell frags, mod argill, rr-com v f-f qtz gr, tr gn glauc gn glauc, p vis por, n fluor

MW 9.50 FV 54 PV 16 YP 21
Gels 7/9 F n/c Ck - Sol 8.2
pH 10.0 Cl 1100

CALCARENITE: lt gry-lt brn gry, rr lt gn gry, f-m gr, wk calc cmt, abd bry forams, shell frags, mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

MW 8.70 FV 43 PV 9 YP 18
Gels 2/4 F 11.9 Ck 1.0 Sol 1.5
pH 10.0 Cl 15.0k

CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, n-mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

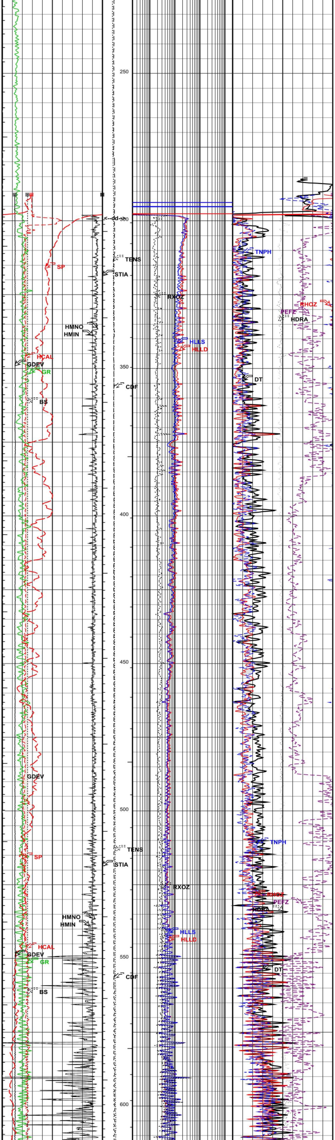
Survey at 472m
N25degsE
2 degs

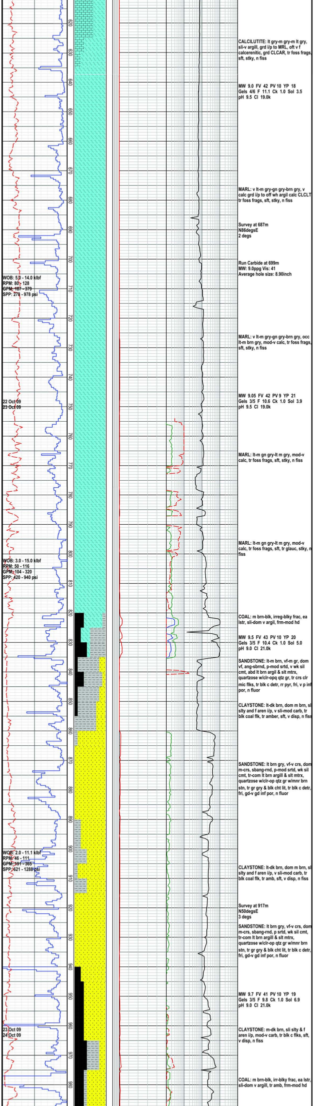
CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

MW 8.90 FV 43 PV 11 YP 19
Gels 4/6 F 11.1 Ck 1.0 Sol 3.0
pH 9.5 Cl 17.0k

CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-strong calc cmt, com bry, tr echinoid spines, forams & shell frags, n-mod argill, rr v f-f qtz gr, tr-com gn glauc, fri, v p vis

MARL: m gry-m brn, v calc grd to CLCLT, tr foss frags, sft, stky, n fiss





CALCILUTITE: lt gry-m gry-m lt gry, sli-v argill, grd i/p to MRL, oft v f calcerenitic, grd CLCAR, tr foss frags, sft, stky, n fiss

MW 9.0 FV 42 PV 10 YP 18
Gels 4/6 F 11.1 Ck 1.0 Sol 3.5
pH 9.5 Cl 19.0k

MARL: v lt-m gry-gn gry-brn gry, v calc grd i/p to off wh argil calc CLCLT tr foss frags, sft, stky, n fiss

Survey at 687m
N86degsE
2 degs

Run Carbide at 699m
MW: 9.0ppg Vis: 41
Average hole size: 8.90inch

WOB: 5.0 - 14.0 klbf
RPM: 80 - 128
GPM: 187 - 379
SPP: 278 - 978 psi

MARL: v lt-m gry-gn gry-brn gry, occ lt-m brn gry, mod-v calc, tr foss frags, sft, stky, n fiss

22 Oct 09
23 Oct 09

MW 9.05 FV 42 PV 9 YP 21
Gels 3/5 F 10.6 Ck 1.0 Sol 3.9
pH 9.5 Cl 19.0k

MARL: lt-m gn gry-lt m gry, mod-v calc, tr foss frags, sft, stky, n fiss

MARL: lt-m gn gry-lt m gry, mod-v calc, tr foss frags, sft, tr glauc, stky, n fiss

WOB: 3.0 - 15.0 klbf
RPM: 50 - 116
GPM: 104 - 320
SPP: 420 - 940 psi

COAL: m brn-blk, irreg-blky frac, ea lstr, sli-dom v argil, frm-mod hd

MW 9.5 FV 43 PV 10 YP 20
Gels 3/5 F 10.4 Ck 1.0 Sol 5.0
pH 9.0 Cl 21.0k

SANDSTONE: lt-m brn, vf-m gr, dom vf, ang-sbrnd, p-mod srtd, v wk sil cmt, abd lt brn argil & slt mtrx, quartzose w/clr-opq qtz gr, tr crs clr mic flks, tr blk c detr, rr pyr, fri, v p inf por, n fluor

CLAYSTONE: lt-dk brn, dom m brn, sl slty and f aren i/p, v sli-mod carb, tr blk coal flk, tr amber, sft, v disp, n fiss

SANDSTONE: lt brn gry, vf-v crs, dom m-crs, sbang-rnd, p-mod srtd, wk sil cmt, tr-com lt brn argill & slt mtrx, quartzose w/clr-op qtz gr w/mnr brn stn, tr gr gry & blk cht lit, tr blk c detr, fri, gd-v gd inf por, n fluor

WOB: 2.0 - 11.1 klbf
RPM: 46 - 111
GPM: 191 - 365
SPP: 621 - 1288 psi

CLAYSTONE: lt-dk brn, dom m brn, sl slty and f aren i/p, v sli-mod carb, tr blk coal flk, tr amb, sft, v disp, n fiss

Survey at 917m
N50degsE
3 degs

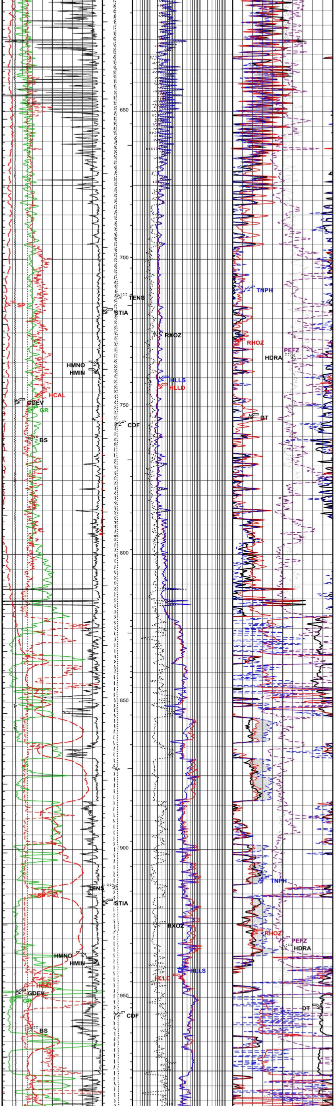
SANDSTONE: lt brn gry, vf-v crs, dom m-crs, sbang-rnd, p srtd, wk sil cmt, tr-com lt brn argill & slt mtrx, quartzose w/clr-op qtz gr w/mnr brn stn, tr gr gry & blk cht lit, tr blk c detr, fri, gd-v gd inf por, n fluor

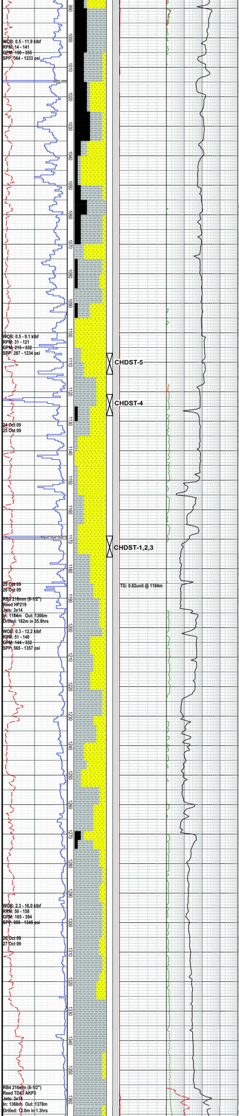
MW 9.7 FV 41 PV 10 YP 19
Gels 3/5 F 9.8 Ck 1.0 Sol 6.9
pH 9.0 Cl 21.0k

23 Oct 09
24 Oct 09

CLAYSTONE: m-dk brn, sli slty & f aren i/p, mod-v carb, tr blk c flks, sft, v disp, n fiss

COAL: m brn-blk, irr-blky frac, ea lstr, sli-dom v argill, tr amb, frm-mod hd





WOB: 0.5 - 11.9 klbf
RPM: 14 - 141
GPM: 150 - 355
SPP: 364 - 1233 psi

WOB: 0.5 - 9.1 klbf
RPM: 31 - 121
GPM: 215 - 332
SPP: 287 - 1234 psi

24 Oct 09
25 Oct 09

25 Oct 09
26 Oct 09

RB3 216mm (8-1/2")
Reed HP219
Jets: 3x14
In: 1184m Out: 1366m
Drilled: 182m in 35.9hrs

WOB: 0.3 - 12.2 klbf
RPM: 51 - 140
GPM: 144 - 332
SPP: 565 - 1357 psi

WOB: 2.3 - 16.0 klbf
RPM: 50 - 158
GPM: 165 - 394
SPP: 950 - 1345 psi

26 Oct 09
27 Oct 09

RB4 216mm (8-1/2")
Reed TD43 AKP3
Jets: 3x14
In: 1366m Out: 1378m
Drilled: 12.0m in 1.3hrs

CLAYSTONE: m-dk brn, sli slty & f aren, mod-v carb, tr blk c flks, sft, v disp, n fiss

COAL: m brn-blk, irr-blky frac, ea lstr, sli-dom v argill, tr amb, frm-mod hd

COAL: m brn-blk, irr-blky frac, ea lstr sli-dom v argill, tr amb, frm-mod hd

Survey at 1079m
N88degsE
3 degs

SANDSTONE: lt brn gry, vf-pbl, dom m-crs, sbang-rnd, v p srtd, wk sil cmt, com lt brn argill & slt mtrx, qtz w/clr-op quartzose gr w/mnr or brn stn, tr gn gry & blk cht lith, tr-com blk c detr, fri, g inf por, n fluor

COAL: m brn-dom blk, irr-blky frac, ea-sbvit lstr, sli-v argill, tr amb, mod hd. The Coal has no natural fluor but gives a wk dull lt yel rn crsh cut fluor The amb has mod bri sol lt-m yel natural fluor and gives a wk v slo strmg lt yell cut fluor

MW 9.75 FV 42 PV 9 YP 20
Gels 3/6 F 9.4 Ck 1.0 Sol 5.9
pH 8.5 Cl 18.0k

MW 10.1 FV 47 PV 16 YP 23
Gels 4/6 F 8.0 Ck 1.0 Sol 8.8
pH 8.5 Cl 20.0k

SANDSTONE: v lt gry-lt brn gy, v f-gt, dom m-crs, ang-sbrnd, v p srtd, wk sil cmt, com wh-lt brn argill & slt mtrx, quartzose w/clr-op qtz gr, tr gn gry & blk cht lith, tr-com blk c detr, fri, gd inf por, no fluor

CLAYSTONE: wh-m brn, v slt & v aren i/p, kao i/p, sli-mod carb, tr blk c flks, tr micrmic, frm, v disp & washing f/spl, n fiss

MW 10.1 FV 48 PV 16 YP 24
Gels 4/6 F 8.0 Ck 1.0 Sol 8.3
pH 8.5 Cl 20.0k

SANDSTONE: v lt gry-lt brn gy, v f-v crs, dom m-crs, ang-sbrnd, v p srtd, mod sil cmt, com-abd wh-lt brn argill & slt mtrx, quartzose w/clr-op qtz gr, rr gn & blk cht lith, tr blk c detr, fri-mod hd, fr-gd inf por, no fluor

CLAYSTONE: off wh-m brn, v slt & v aren, v kao i/p, sli carb, tr blk c flks, tr micrmic, frm-mod hd, v disp, n fiss

MW 10.3 FV 47 PV 15 YP 29
Gels 7/9 F 7.8 Ck 2.0 Sol 9.2
pH 8.5 Cl 17.0k

COAL: v dk brn-dom blk, blky-sbconch frac, ea-sli sbvit lstr, sli-m argill, mod hd

CLAYSTONE: off wh-m brn, v slt & v f aren, v kao i/p, sli carb, tr blk c flks, tr micrmic, rr pyr, frm-mod hd, v disp, n fiss

MW 10.35 FV 54 PV 20 YP 34
Gels 7/10 F 7.0 Ck 2.0 Sol 10.0
pH 8.5 Cl 18.0k

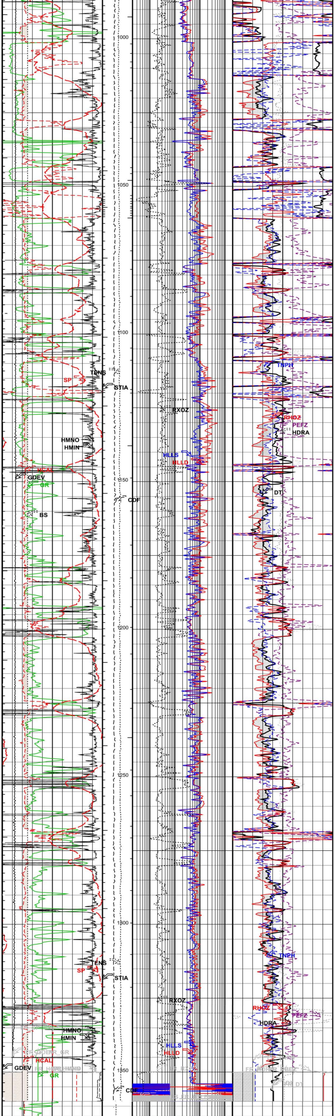
SANDSTONE: v lt gry-lt brn gy, v f-gt, dom m, ang-sbrnd, v p srtd, mod sil cmt, abd off wh-lt brn argill & slt mtrx, quartzose w/clr-op qtz gr, rr gn & blk cht lith, tr blk c detr, tr pyr, mod hd, fr inf por, no fluor

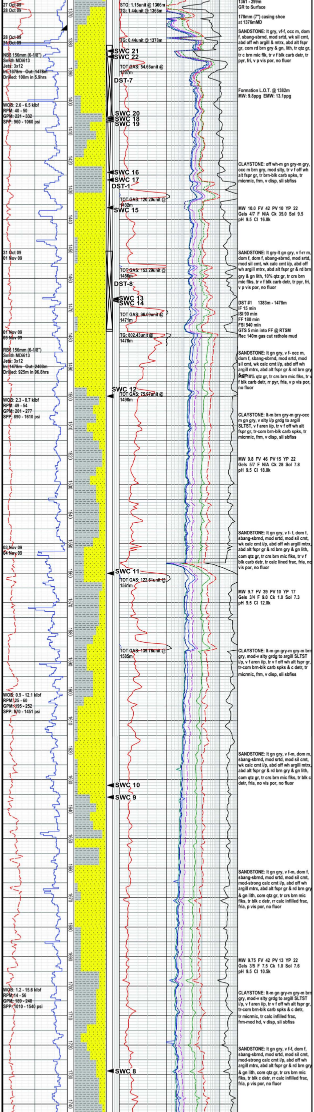
CLAYSTONE: off wh-m brn, dom l brn, v slt & v f aren, v kao i/p, sli carb, tr blk c flks, tr micrmic, tr pyr, mod hd, v disp, sli sbfiss

Survey at 1354m
N60degsE
1.5 degs

CLAYSTONE: off wh-m gn gry-m brn gry, mod slty, tr vf off wh alt fspr gr, tr brn-blk carb spks, tr micrmic, sft, v disp, sli sbfiss

Run#1 HALS - BHC - PEX





27 Oct 09
28 Oct 09

28 Oct 09
31 Oct 09

NB5 156mm (6-1/8")
Smith MDi613
Jets: 3x12
In: 1378m Out: 1478m
Drilled: 100m in 5.9hrs

WOB: 2.6 - 6.5 klbf
RPM: 40 - 50
GPM: 221 - 332
SPP: 960 - 1060 psi

31 Oct 09
01 Nov 09

01 Nov 09
03 Nov 09

RB6 156mm (6-1/8")
Smith MDi613
Jets: 3x12
In: 1478m Out: 2403m
Drilled: 925m in 96.8hrs

WOB: 2.3 - 8.7 klbf
RPM: 49 - 54
GPM: 201 - 277
SPP: 890 - 1610 psi

03 Nov 09
04 Nov 09

WOB: 0.9 - 12.1 klbf
RPM: 25 - 60
GPM: 195 - 252
SPP: 870 - 1451 psi

WOB: 1.2 - 15.6 klbf
RPM: 14 - 56
GPM: 189 - 248
SPP: 1010 - 1540 psi

1361 - 299m
GR to Surface

178mm (7") casing shoe
at 1376mMD

SANDSTONE: lt gry, vf-f, occ m, dom f, sbang-sbrnd, mod srtd, wk sil cmt, abd off wh argill & mtrx, abd alt fspr gr, com rd brn gry & gn, lith, tr qtz gr, tr c brn mic flk, tr v f blk carb detr, tr pyr, fri, v p vis por, no fluor

Formation L.O.T. @ 1382m
MW: 9.8ppg EMW: 13.1ppg

CLAYSTONE: off wh-m gn gry-m gry, occ m brn gry, mod slty, tr v f off wh alt fspr gr, tr brn-blk carb spks, tr micrmic, frm, v disp, sli sbfiss

MW 10.0 FV 42 PV 10 YP 22
Gels 4/7 F N/A Ck 35.0 Sol 9.5
pH 9.5 Cl 16.8k

SANDSTONE: lt gry-lt gn gry, v f-rr m, dom f, dom f, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, 10% qtz gr, tr crs brn mic flks, tr v f blk carb detr, tr pyr, fri, v p vis por, no fluor

DST #1 1383m - 1478m
IF 15 min
ISI 90 min
FF 180 min
FSI 540 min
GTS 5 min into FF @ RTSM
Rec 140m gas cut rathole mud

SANDSTONE: lt gn gry, v f- occ m, dom f, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, 10% qtz gr, tr crs brn mic flks, tr v f blk carb detr, rr pyr, fria, v p vis por, no fluor

CLAYSTONE: lt-m brn gry-m gry-occ m gn gry, v slty i/p grdg to argill SLTST, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks, tr micrmic, frm, v disp, sli sbfiss

MW 9.8 FV 46 PV 15 YP 22
Gels 5/7 F N/A Ck 28 Sol 7.8
pH 9.5 Cl 18.0k

SANDSTONE: lt gn gry, v f- f, dom f, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr v f blk carb detr, tr calc lined frac, fria, no vis por, no fluor

MW 9.7 FV 39 PV 10 YP 17
Gels 3/4 F 9.0 Ck 1.0 Sol 7.3
pH 9.5 Cl 12.0k

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, frm, v disp, sli sbfiss

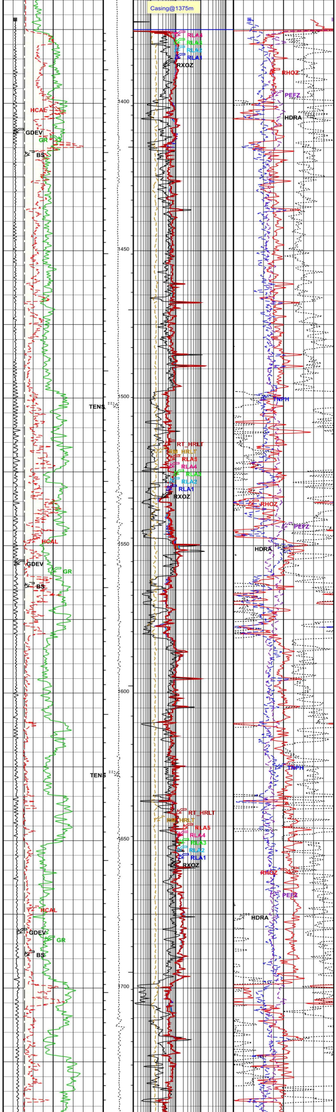
SANDSTONE: lt gn gry, v f-m, dom m, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, fria, no vis por, no fluor

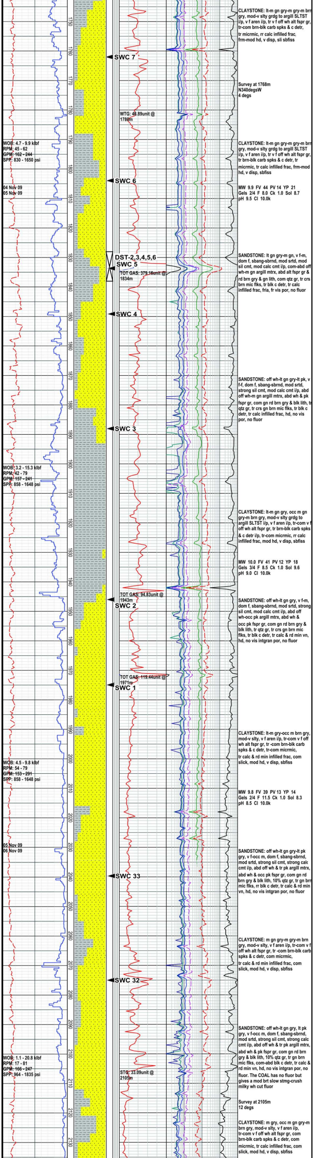
SANDSTONE: lt gn gry, v f-m, dom f, sbang-sbrnd, mod srtd, mod sil cmt, mod-strong calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, rr calc infilled frac, fria, p vis por, no fluor

MW 9.75 FV 42 PV 13 YP 22
Gels 3/5 F 7.5 Ck 1.0 Sol 7.6
pH 9.5 Cl 10.5k

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, tr calc infilled frac, frm-mod hd, v disp, sli sbfiss

SANDSTONE: lt gn gry, v f-f, dom f, sbang-sbrnd, mod srtd, mod sil cmt, mod-strong calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, rr calc infilled frac, fria, p vis por, no fluor





CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, rr calc infilled frac, frm-mod hd, v disp, sli sbfiss

Survey at 1768m
N340degsW
4 degs

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr brn-blk carb spks & c detr, tr micrmic, tr calc infilled frac, frm-mod hd, v disp, sbfiss

MW 9.9 FV 44 PV 14 YP 21
Gels 2/4 F 8.0 Ck 1.0 Sol 8.7
pH 9.5 Cl 10.0k

SANDSTONE: lt gn gry-m gn, v f-m, dom f, sbang-sbrnd, mod srtd, mod sil cmt, mod calc cmt i/p, com-abd off wh-m gn argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, tr calc infilled frac, fria, fr vis por, no fluor

SANDSTONE: off wh-lt gn gry-lt pk, v f-f, dom f, sbang-sbrnd, mod srtd, strong sil cmt, mod calc cmt i/p, abd off wh-m gn argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, tr qtz gr, tr crs gn brn mic flks, tr blk c detr, tr calc infilled frac, hd, no vis por, no fluor

CLAYSTONE: lt-m gn gry, occ m gn gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr-com v f off wh alt fspr gr, tr brn-blk carb spks & c detr i/p, tr-com micrmic, rr calc infilled frac, mod hd, v disp, sbfiss

MW 10.0 FV 41 PV 12 YP 18
Gels 3/4 F 8.5 Ck 1.0 Sol 9.6
pH 9.0 Cl 10.0k

SANDSTONE: off wh-lt gn gry, v f-m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, mod calc cmt i/p, abd off wh-occ pk argill mtrx, abd wh & occ pk fspr gr, com gn rd brn gry & blk lith, tr qtz gr, tr crs gn brn mic flks, tr blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

CLAYSTONE: lt-m gry-occ m brn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, tr -com brn-blk carb spks & c detr, tr-com micrmic, tr calc & rd min infilled frac, com slick, mod hd, v disp, sbfiss

MW 9.8 FV 39 PV 13 YP 14
Gels 2/4 F 11.5 Ck 1.0 Sol 8.3
pH 8.5 Cl 10.0k

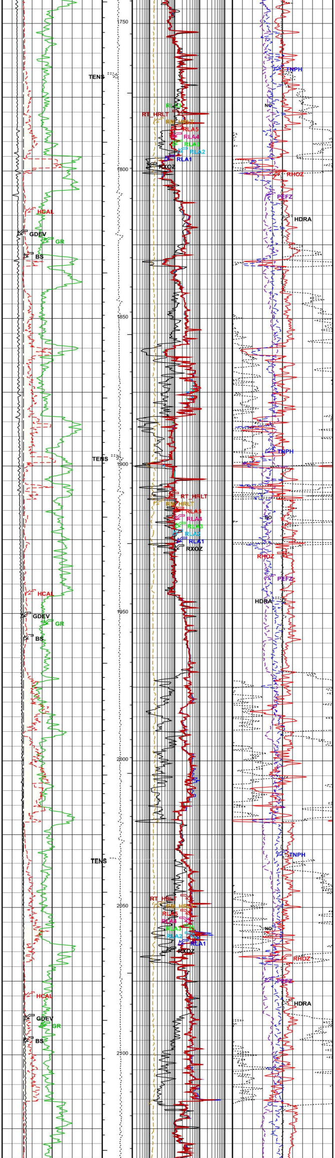
SANDSTONE: off wh-lt gn gry-lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & occ pk fspr gr, com gn rd brn gry & blk lith, 10% qtz gr, tr gn brn mic flks, rr blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

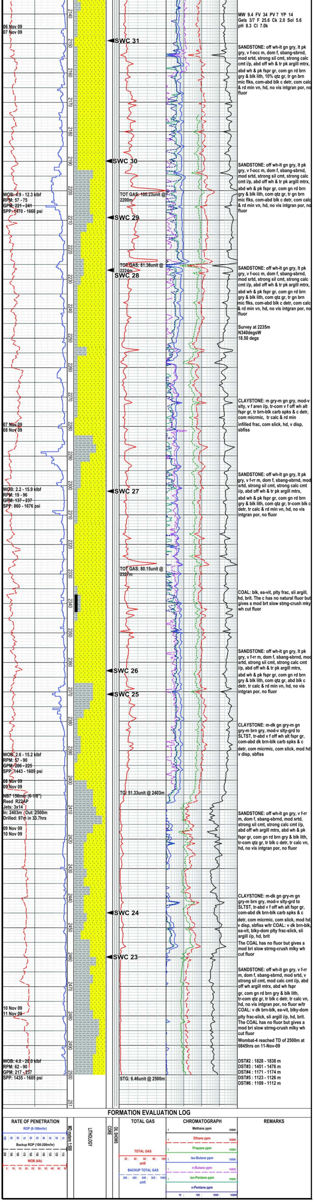
CLAYSTONE: m gn gry-m gry-m brn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, tr -com brn-blk carb spks & c detr, com micrmic, tr calc & rd min infilled frac, com slick, mod hd, v disp, sbfiss

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, 10% qtz gr, tr gn brn mic flks, com-abd blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor. The COAL has no fluor but gives a mod brt slow stmg-crush milky wh cut fluor

Survey at 2105m
12 degs

CLAYSTONE: m gry, occ m gn gry-m brn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, com brn-blk carb spks & c detr, com micrmic, tr calc infilled frac, com slick, mod hd, v disp, sbfiss





06 Nov 09
07 Nov 09

WOB: 4.9 - 12.3 klbf
RPM: 57 - 75
GPM: 221 - 241
SPP: 1470 - 1668 psi

07 Nov 09
08 Nov 09

WOB: 2.2 - 15.9 klbf
RPM: 19 - 96
GPM: 137 - 237
SPP: 860 - 1676 psi

WOB: 2.6 - 15.2 klbf
RPM: 57 - 90
GPM: 206 - 225
SPP: 1443 - 1609 psi

08 Nov 09
09 Nov 09

NB7 156mm (6-1/8")
Reed R22AP
Jets: 3x14
In: 2403m Out: 2500m
Drilled: 97m in 33.7hrs

09 Nov 09
10 Nov 09

10 Nov 09
11 Nov 09

WOB: 4.0 - 20.0 klbf
RPM: 62 - 90
GPM: 217 - 237
SPP: 1435 - 1605 psi

MW 9.4 FV 34 PV 7 YP 14
Gels 3/7 F 25.6 Ck 2.0 Sol 5.6
pH 8.3 Cl 7.0k

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, 10% qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no fluor

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no fluor

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no fluor

Survey at 2235m
N340degsW
18.50 degs

CLAYSTONE: m gry-m gn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, tr brn-blk carb spks & c detr, com micrmic, tr calc & rd min infilled frac, com slick, hd, v disp, sbfiss

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr-com blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

COAL: blk, ea-vit, plty frac, sli argill, hd, brit. The c has no natural fluor but gives a mod brt slow stmg-crush mky wh cut fluor

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, abd blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

CLAYSTONE: m-dk gn gry-m gn gry-m brn gry, mod-v slty-grd to SLTST, tr-abd v f off wh alt fspr gr, com-abd dk brn-blk carb spks & c detr, com micrmic, com slick, mod hd v disp, sbfiss

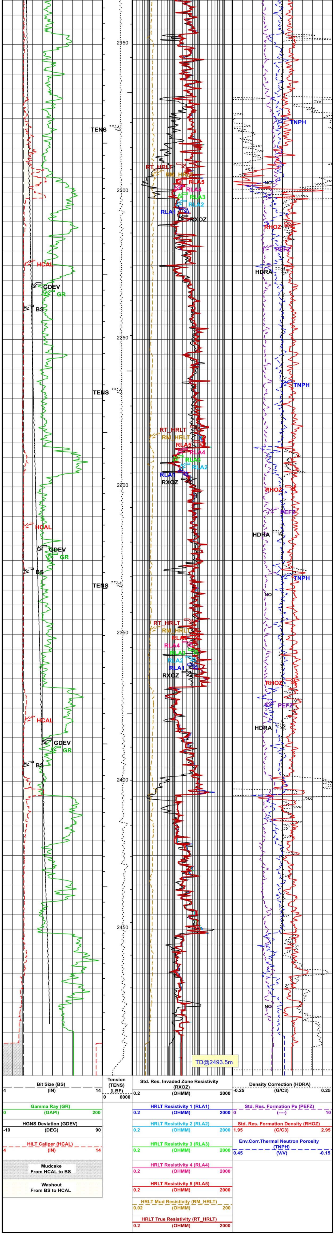
SANDSTONE: off wh-lt gn gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, tr-com qtz gr, tr blk c detr, tr calc vn, hd, no vis intgran por, no fluor

CLAYSTONE: m-dk gn gry-m gn gry-m brn gry, mod-v slty-grd to SLTST, tr-abd v f off wh alt fspr gr, com-abd dk brn-blk carb spks & c detr, com micrmic, com slick, mod hd v disp, sbfiss w/tr COAL: v dk brn-blk, ea-vit, blky-dom plty frac-slick, sli argill i/p, hd, brit

The COAL has no fluor but gives a mod bri slow strmg-crush mlky wh cut fluor

SANDSTONE: off wh-lt gn gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, v strong sil cmt, mod calc cmt i/p, abd off wh argill mtrx, abd wh fspr gr, com gn rd brn gry & blk lith, tr-com qtz gr, tr blk c detr, tr calc vn, hd, no vis intgran por, no fluor w/tr COAL: v dk brn-blk, ea-vit, blky-dom plty frac-slick, sli argill i/p, hd, brit. The COAL has no fluor but gives a mod bri slow strmg-crush mlky wh cut fluor

Wombat-4 reached TD of 2500m at 0845hrs on 11-Nov-09

DST#2 : 1828 - 1838 m
DST#3 : 1451 - 1476 m
DST#4 : 1171 - 1174 m
DST#5 : 1123 - 1126 m
DST#6 : 1109 - 1112 m