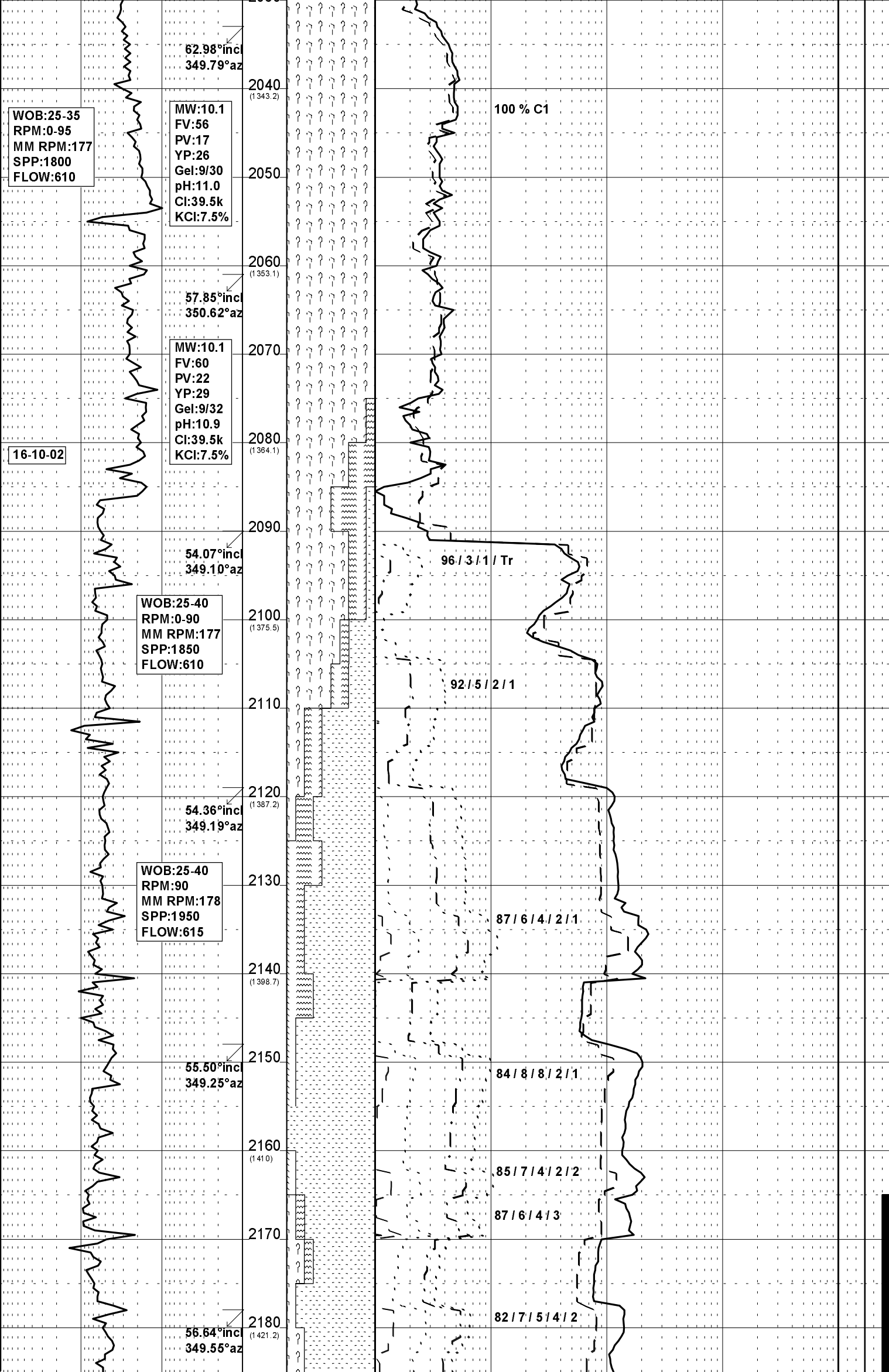




| GENERAL | | | POSITION | | | HOLE / CASING INFO | | | DATE / DEPTH | | | ENGINEERS | | | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------|--|---------------------------------------|--|-----------------------------|--|----------------------------------------------------------------------------|--|
| Country : AUSTRALIA Permit : VIC L9 Field : Tuna Basin : Gippsland Well Type : Development Rig Name : NABORS 453 | | | Local Co-ord X : 0.11 mE Local Co-ord Y : 3.05 mS AMG Co-ord X : 624224.99 mE AMG Co-ord Y : 5774222.49 mN RT to MSL : 31.32 m RT to Sea Bed : 90.72 m | | | 12-1/4" Hole to 661.2 m 8-1/2" Hole to 2243 m 20" Conductor Shoe @ 167.4 m 13-3/8" Surface Casing @ 647.0 m 9-5/8" Intermediate Casing @ 661.2 m 7" Production Casing @ 2237.4 m | | | Spud Date : 15-10-2002 Total Depth Date : 16-10-2002 Total Depth : 2243 m True Vertical Depth : 1455.44 m Log Scale : 1/ 500 Depth From (m): 1980 To: 2260 | | | Matthew Boyd Greg Fawns | | | | | | | | | | | |
| ABBREVIATIONS | | | | | | LITHOLOGY LEGEND | | | | | | ENGINEERING LEGEND | | | | | | | | | | | |
| MW Mud Weight FV Funnel Viscosity PV Plastic Viscosity YP Yield Point Gel Gel Strength WL Water Loss KCl Potassium Chloride Cl Chlorides Incl Inclination Az Azimuth | | WOB Weight on Bit (klbs) RPM Rotations Per Min FLW Flow Rate (gpm) SPP Pump Pressure (psi) RR Re-Run Bit TG Trip Gas CG Connection Gas BG Background Gas DGP Drilled Gas Peak MM Mud Motor | | <div><div></div>CLAYSTONE</div> <div><div></div>SILTSTONE</div> <div><div></div>SST: F - V FINE</div> <div><div></div>SST: MEDIUM</div> <div><div></div>SST: COARSE</div> <div><div></div>SHALE</div> | | <div><div></div>MARL</div> <div><div></div>LIMESTONE</div> <div><div></div>DOLOMITE</div> <div><div></div>CHERT</div> <div><div></div>CONGLOMERATE</div> <div><div></div>COAL</div> | | <div><div></div>BRYOZOA</div> <div><div></div>RADIOLARITES</div> <div><div></div>ECHINOIDS</div> <div><div></div>CORALS</div> <div><div></div>FORAMINIFERA</div> <div><div></div>LITHIC FRAGMENT</div> | | <div><div></div>CARB FRAGMENT</div> <div><div></div>QUARTZITE</div> <div><div></div>INTRUSIVES</div> <div><div></div>GLAUCONITE</div> <div><div></div>PYRITE</div> <div><div></div>CEMENT</div> | | <div><div></div>CASING SHOE</div> <div><div></div>LINER HANGER</div> <div><div></div>BIT CHANGE</div> <div><div></div>DEVIA. SURVEY</div> <div><div></div>SWC UNRECOV</div> <div><div></div>SIDEWALL CORE</div> <div><div></div>CORE</div> | | <div><div></div>WIRELINE LOGS</div> <div>MDT POINTS:</div> <div><div></div>PRESSURE ONLY</div> <div><div></div>SAMPLE</div> <div><div></div>SEAL FAILURE</div> <div><div></div>TIGHT</div> | | | | | | | | | |
| RATE OF PENETRATION | | DEPTH (m) (TVD) | | CUTTINGS LITHOLOGY | | TOTAL GAS & CHROMATOGRAPH DATA | | | | | | CUT FLUOR | | DIRECT FLUOR | | CALCIMETRY | | LITHOLOGICAL DESCRIPTIONS and REMARKS | | | | | |
| metres/hour | | | | % | | C1 — — C2 - - - - C3 — - - iC4 — — nC4 - - - - iC5 — - - nC5 — — TG — — Total Gas in Units Chromatograph in Percent | | | | | | 500 5K 10 100 | | poor fair good | | poor fair good | | 0 100 | | | | | |
| 500 50 5 .5 | | 1980 | | 0 100 | | .5 5 50 500 5K .01 .1 1 10 100 | | | | | | | | | | | | | | | | | |
| <div>Bit #3: 8.5" Security XS30D Jets:3x22 In:1997m Out:2243m Run:246m Hrs:15.0 Cond:4.4-WT-A-E/E/E-IN-TD</div> | | <div>MW:10.3 FV:60 PV:16 YP:26 Gel:7/13 pH:10.3 Cl:39k KCl:7.5%</div> | | <div>67.07°Incl 349.15°az</div> | | <div>TUNA A-10a ST KICKED OFF @ 12:20 HRS ON 15-10-2002 FROM 1997 mMDRT</div> <div>Drill w/- KCl/PHPA/Glycol Mud System</div> | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE:med gy-med dk gy,tr carb spk,rr ooid,frm,sbbiky-blky. | |
| <div>WOB:25-35 RPM:0-90 MM RPM:175 SPP:1865 FLOW:602</div> | | <div>MW:10.2 FV:58 PV:17 YP:28 Gel:10/21 pH:11.0 Cl:38k KCl:7.0%</div> | | <div>2000 (1325.9)</div> | | | | | | | | | | | | | | | | | | | |
| | | | | 2010 | | | | | | | | | | | | | | | | | | | |
| | | | | 2020 (1334.5) | | | | | | | | | | | | | | | | | | | |
| | | | | 2030 | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE:lt olv | | | |



gy-med gy,mnr sity i/p,mnr
dissem pyr,tr foss,tr carb spk,
sft-frm,sbbiky.

CLAYSTONE:lt olv gy-olv gy,off
wh,lt gy i/p,calc,v sity i/p,tr
foss,tr carb spk,rr glauc & pyr,
sft-frm,disp i/p,sbfiss-blky,
amor i/p.

Add Baracarb @ 2073 m

SILTSTONE:lt gy-gn gy,med gy,vf
aren,arg,mnr glauc,frm,sbbiky.

CLAYSTONE:1) as above
2) pl yel org-gy org,tr carb,occ
glauc,v sft,amor.

SANDSTONE:yel bn-bn,dk yel org,
bn gy,vf-f,occ med,wl srt,sa-sr,
tr wk sid cmt,mod bn arg mtx,mnr
pyr & glauc,mod hd agg,pr vis
por,no fluor.

CLAYSTONE:1) pl yel org-gy org,
tr carb,occ glauc,v sft,amor.
2)pl bn-pl yel bn,tr glauc,mnr f
aren,v sft-disp,sbbiky-amor.

SILTSTONE:lt gy-gn gy,med gy,arg
tr glauc,tr dissem pyr,frm,
sbbiky-sbfiss.

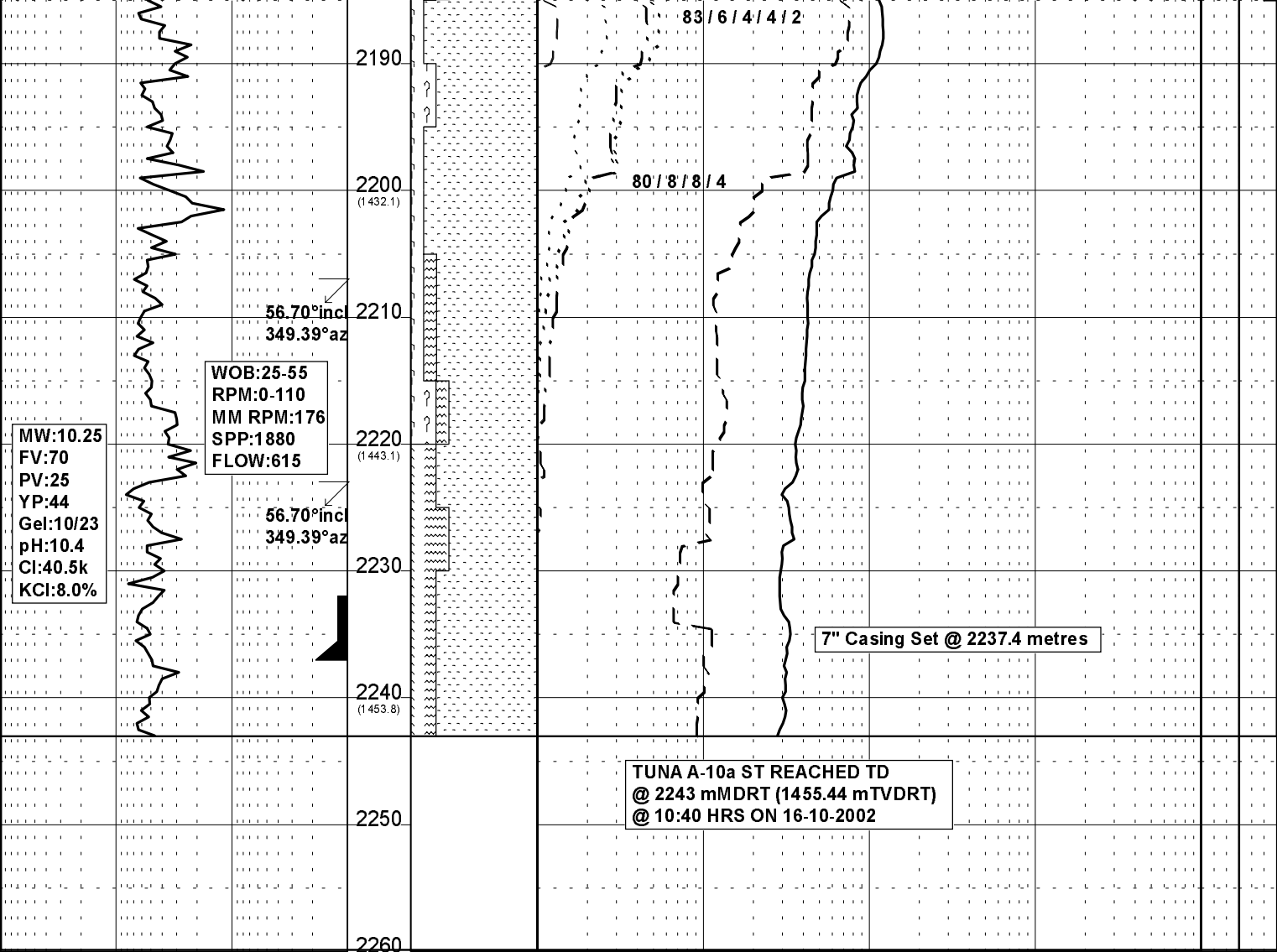
SANDSTONE:quartzose,frst-clr,bn,
f-med,mod srt,ang-sr,tr sil cmt,
rr vf xln pyr cmt & porosity
infill,com microxln pyr,poss oil
stn,tr glauc,occ dk bn lith,pred
lse & disagg,gd inf por,no fluor

SILTSTONE:bn gy,arg,sli aren,g/t
CLST i/p,tr glauc,sft,amor-
sbbiky.

CLAYSTONE:med dk gy-med gy,pl
bn i/p,g/t SLTST i/p,occ dissem
pyr,sft,sbbiky.

SANDSTONE:trsnl,occ clr,f-crs,
com v crs,pr srt,sa-sr,tr pyr
cmt,com qtz o/g,tr-loc mnr wh
kaol mtx,tr nod pyr,lse,fr-gd
inf por.

FLUOR:2165m-2185m;Tr-10%,
dll pl gn sptd fluor,wk



strmng cut,mod thk flm res,
only in wh kaol mtx.

SANDSTONE:trnsI,occ clr,mnr
mlky,f-crs,pred f-med,occ v crs,
pr srt,sa-sr,tr loc pyr cmt,mnr
wh kaol mtx,occ qtz o/g,gd inf
por,no fluor.

SILTSTONE:med gy-med dk gy,wk
calc,g/t vf SST i/p,tr dissem
pyr,frm-mod hd,sbfiss.

SANDSTONE:trnsI-clr,occ mlky,
med-crs,vf-f,pr srt,sa-sr,rr
wk pyr cmt,g/t aren SLTST i/p,
tr loc wh-v lt gy kaol mtx i/p,
rr nod pyr,lse,occ vf agg,fr inf
por,no fluor.

LWD-ANADRILL
RUN #1: PowerPulse
ADN6-GR-GVR