


Rig: **Century 11** State: **Victoria**

|   |   |                       |                                 |   |                           |                      |          |         |
|---|---|-----------------------|---------------------------------|---|---------------------------|----------------------|----------|---------|
| Rig: Century 11<br>Field: Exploration (Otway Basin)<br>Location: Otway Basin<br>Well: Seamer-1<br>Company: SANTOS Ltd |  |                       | SlimPulse* GR                   |   |                           |                      |          |         |
|   |   |                       | True Vertical Depth 1:500 scale |   |                           |                      |          |         |
|   | Recorded Mode Memory  |                       |                                 |   |                           |                      |          |         |
|   | Location  | Total depth:          |                                 | 1360.0 m  |                           | Elevation            | K.B.     | 64.01 m |
|   |   | Spud date:            |                                 | 18-Dec-02                                       |                           |                      | G.L.     | 58.51 m |
|   |   | Runs:                 |                                 | 1 To 2  |                           |                      | D.F.     | 63.71 m |
|   |   | Permanent datum:      |                                 | AHD   |                           | Elev.: 58.51 m       |          |         |
|   | Log measured from:  |                       | Rotary Table                    |   | 63.71 m above Perm. datum |                      |          |         |
|   | Depth reference:  |                       | Driller's Pipe Tally            |   |                           |                      |          |         |
|   | API serial no.  |                       | X = 676099.13 m                 |   | Longitude                 |                      | Latitude |         |
|   |   | Y = 5730473.86 m      |                                 | E143°1'15.70                                    |                           | S38°33'24.28         |          |         |
| Depth logged:   |   | 426.58 m To 1344.70 m |                                 | Mag decl: 10.95                                 |                           | Other services:      |          |         |
| Date logged:  |   | 23-Dec-02To 25-Dec-02 |                                 | Mag dip: -69.75                                 |                           | Directional Drilling |          |         |
| Bore hole record  |   |                       |                                 | Casing record                                   |                           |                      |          |         |
| Hole size   |   | from to               |                                 | Size  | Density                   | from                 | to       |         |
| 26 in   |   | 0.0 m 16.0 m          |                                 | 20 in   | 106.2 lb/ft               | 0.0 m                | 16.0 m   |         |
| 9 7/8 in  |   | 16.0 m 432.0 m        |                                 | 7 5/8 in  | 26.4 lb/ft                | 0.0 m                | 432.0 m  |         |
| 6 3/4 in  |   | 442.0 m 1360.0 m      |                                 |   |                           |                      |          |         |
|   |   |                       |                                 |   |                           |                      |          |         |
|   |   |                       |                                 |   |                           |                      |          |         |
|   |   |                       |                                 |   |                           |                      |          |         |
|   |   |                       |                                 |   |                           |                      |          |         |
|   |   |                       |                                 |   |                           |                      |          |         |
| Mud record  |   |                       |                                 | Borehole deviation record                       |                           |                      |          |         |
| Type  |   | from to               |                                 | Min   | Max                       | from                 | to       |         |
| KCl/PHPA/Polymer  |   | 442.0 m 884.0 m       |                                 | 0.2 deg   | 4.5 deg                   | 452.3 m              | 606.2 m  |         |
| KCl/Polymer   |   | 884.0 m 1360.0 m      |                                 | 4.4 deg   | 20.2 deg                  | 635.8 m              | 810.7 m  |         |
|   |   |                       |                                 | 20.1 deg  | 20.2 deg                  | 810.7 m              | 927.7 m  |         |
|   |   |                       |                                 | 18.0 deg  | 20.7 deg                  | 927.7 m              | 1360.0 m |         |
| Surface equipment   |   | Software record       |                                 | <div>IDEAL<br/>services from<br/>Anadrill</div> |                           |                      |          |         |
| Unit  | SANTOS Unit   | IDEAL Wis             | 6.1c10r                         |   |                           |                      |          |         |
| Depth system  | PDA-BB028730  | SPM                   | 6.1c10r                         |   |                           |                      |          |         |
|   |   | LWD                   |                                 |   |                           |                      |          |         |
|   |   | MWD                   | 6.0b55                          |   |                           |                      |          |         |

# Bit Run Summary

|                           |       |             |             |           |           |            |  |  |  |  |
|---------------------------|-------|-------------|-------------|-----------|-----------|------------|--|--|--|--|
| Type                      |       | KCl/Polymer | KCl/Polymer |           |           |            |  |  |  |  |
| Mud weight                | ppg   | 9.1         | 9.15        |           |           |            |  |  |  |  |
| Solids                    | %     | 3.9         | 4.1         |           |           |            |  |  |  |  |
| Chlorides                 | mg/L  | 29500       | 31500       |           |           |            |  |  |  |  |
| Rm                        | ohm-m | N/A         | N/A         |           |           |            |  |  |  |  |
| Rmf                       | ohm-m | N/A         | N/A         |           |           |            |  |  |  |  |
| Rmc                       | ohm-m | N/A         | N/A         |           |           |            |  |  |  |  |
| Potassium                 | mg/L  |             |             |           |           |            |  |  |  |  |
| <b>Environmental data</b> |       |             |             |           |           |            |  |  |  |  |
| <b>GR</b>                 |       |             |             |           |           |            |  |  |  |  |
| Mud weight                | ppg   | 9.1         | 9.15        |           |           |            |  |  |  |  |
| Bit size                  | in    | 6.75        | 6.75        |           |           |            |  |  |  |  |
| <b>Resistivity</b>        |       |             |             |           |           |            |  |  |  |  |
| <b>Neutron porosity</b>   |       |             |             |           |           |            |  |  |  |  |
| Hole Size                 |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Mud weight                |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Temperature               |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Mud salinity              |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Formation salinity        |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Recording rate 1          | SEC   | 10          | 10          |           |           |            |  |  |  |  |
| Recording rate 2          | SEC   | N/A         | N/A         |           |           |            |  |  |  |  |
| Filtering GR              |       | 3pt         | 3pt         |           |           |            |  |  |  |  |
| Filtering density         |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Filtering Neutron         |       | N/A         | N/A         |           |           |            |  |  |  |  |
| Company representative    |       | S. Porter   |             |           |           |            |  |  |  |  |
| Anadrill personnel        |       | J. Dolan    | K. Handley  | D. Borges | T. Harvey | G. Watkins |  |  |  |  |

#### DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

|  |  |                        |
|--|--|------------------------|
| OTHER SERVICES FOR RUN1<br>Directional Drilling<br>Directional Surveys<br>Gamma Ray  | OTHER SERVICES FOR RUN2<br>Directional Drilling<br>Directional Surveys<br>Gamma Ray  | OTHER SERVICES FOR RUN |
| REMARKS: RUN NUMBER 1<br>Depth Offsets:<br>Bit to D&I: 14.50 m<br>Bit to GR: 15.42 m<br><br>SlimPulse* seated in a 4 3/4" SlimPulse* Rigid Mount Collar.<br><br>All data are presented from memory.<br><br>SlimPulse* Gamma Ray is corrected for mud weight and bit size.<br><br>There was KCl present in the mud system.<br><br>Gamma Ray logged in 7 5/8" casing to 434 m resulting in attenuation.<br><br>At 788.46 m, the Kelly Length was changed from 13.3 m to 12.0 m, resulting in a Pipe Tally correction<br><br>POOH at 1169 m due for a Bit trip. | REMARKS: RUN NUMBER 2<br>Depth Offsets:<br>Bit to D&I: 14.38 m<br>Bit to GR: 15.30 m<br><br>SlimPulse* seated in a 4 3/4" SlimPulse* Rigid Mount Collar.<br><br>All data are presented from memory.<br><br>SlimPulse* Gamma Ray is corrected for mud weight and bit size.<br><br>There was KCl present in the mud system.<br><br>POOH at 1360 m due to TD of Seamer-1. | REMARKS: RUN NUMBER    |

POOH at 1169 m due for a Bit trip.

EQUIPMENT DESCRIPTION

RUN1

RUN2

RUN

DOWNHOLE EQ

DOWNHOLE E

SlimPul  
SPMA #  
SPEC #  
SPBA #4  
DH Software:

GR — 15.4  
D&I — 14.5

Float S  
S/N: CMP

6 5/8" IB St  
4 3/4" S/N: DO

A475XP Steera  
4 3/4" S/N  
7:8 Lob

SlimPul  
SPMA #  
SPEC #  
SPBA #2  
DH Software:

GR — 15.3  
D&I — 14.3

Float S  
S/N: CMP

6 5/8" IB St  
4 3/4" S/N: DO

A475XP Steera  
4 3/4" S/N  
7:8 Lob

19.7

9.38

8.70

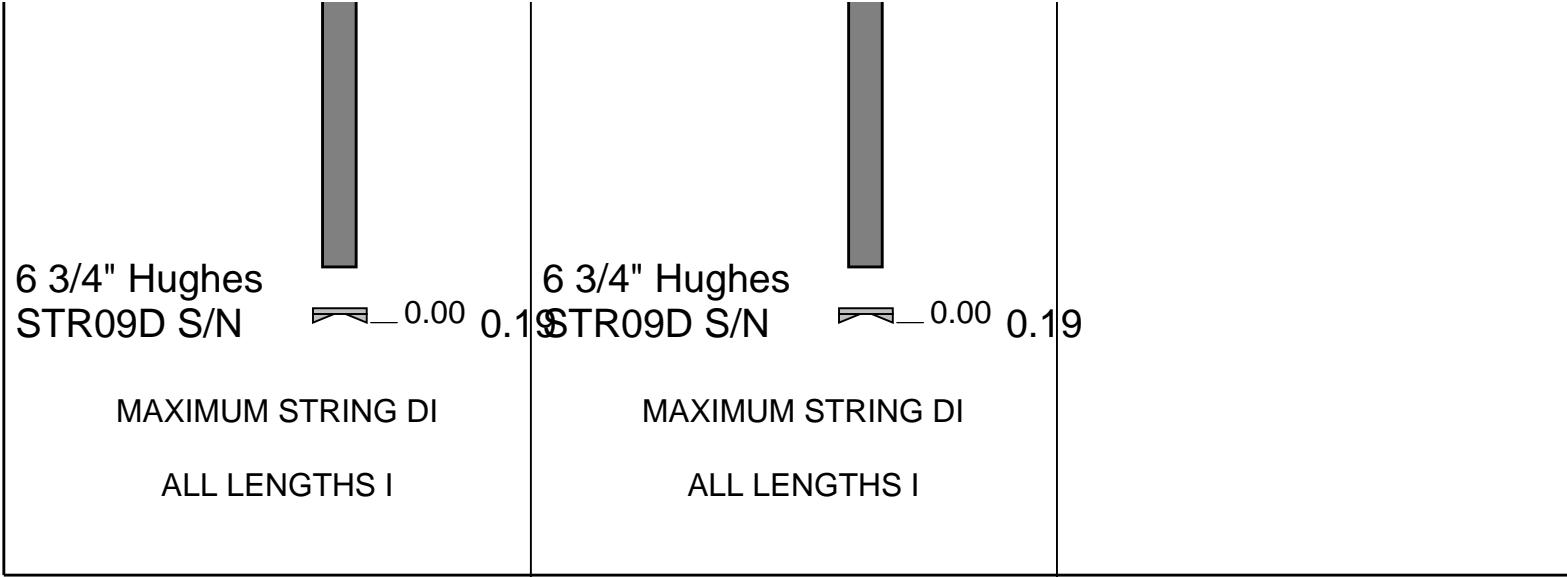
6.98

19.5

9.38

8.70

6.98



True Vertical Depth Log

IDEAL Version: ID6\_1C\_10  
IDF

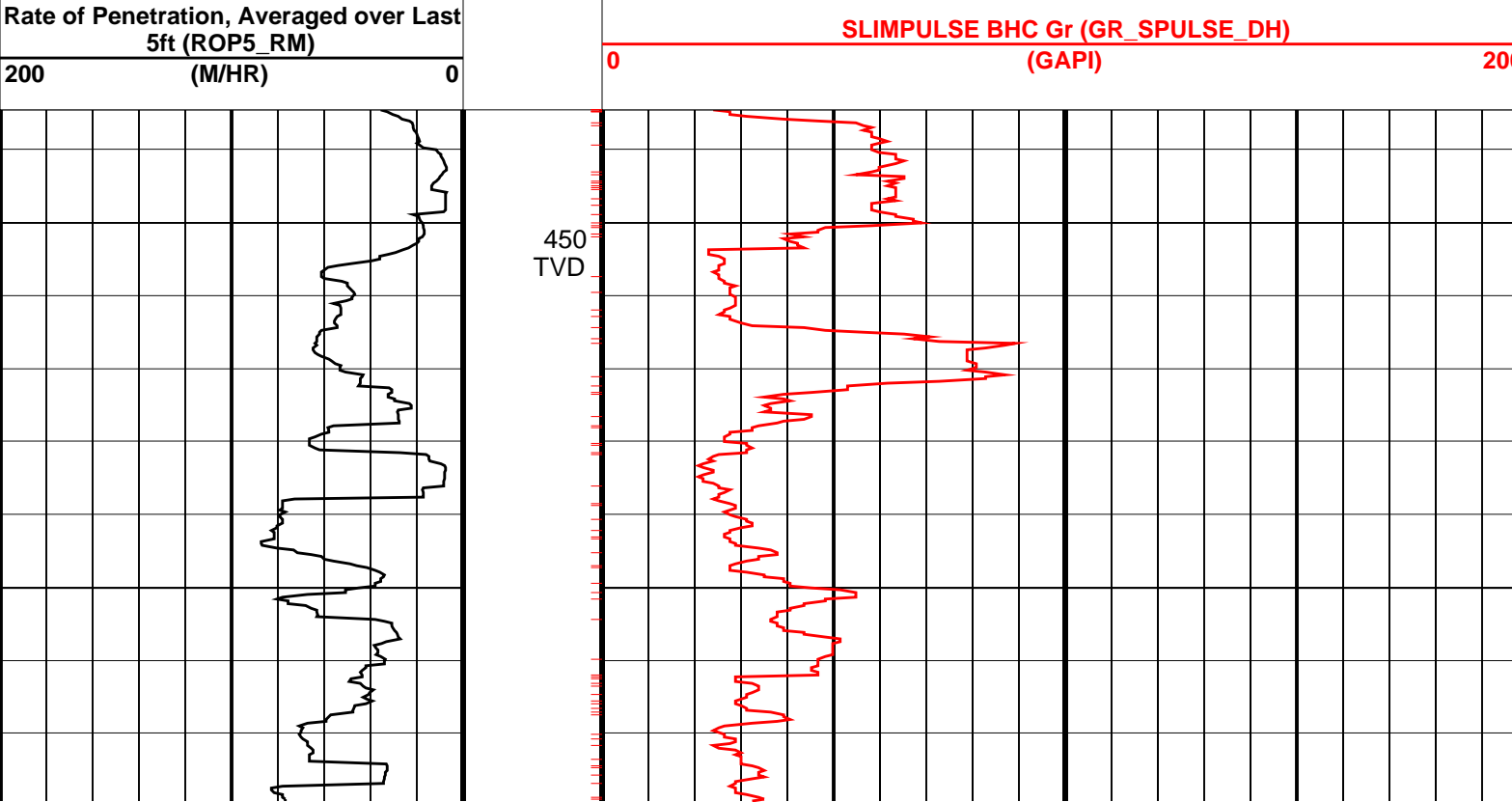
Format: Seamer-1 RM 1:500 scale      Vertical Scale: 1:500      Graphics File Created: 26-Dec-2002 09:39

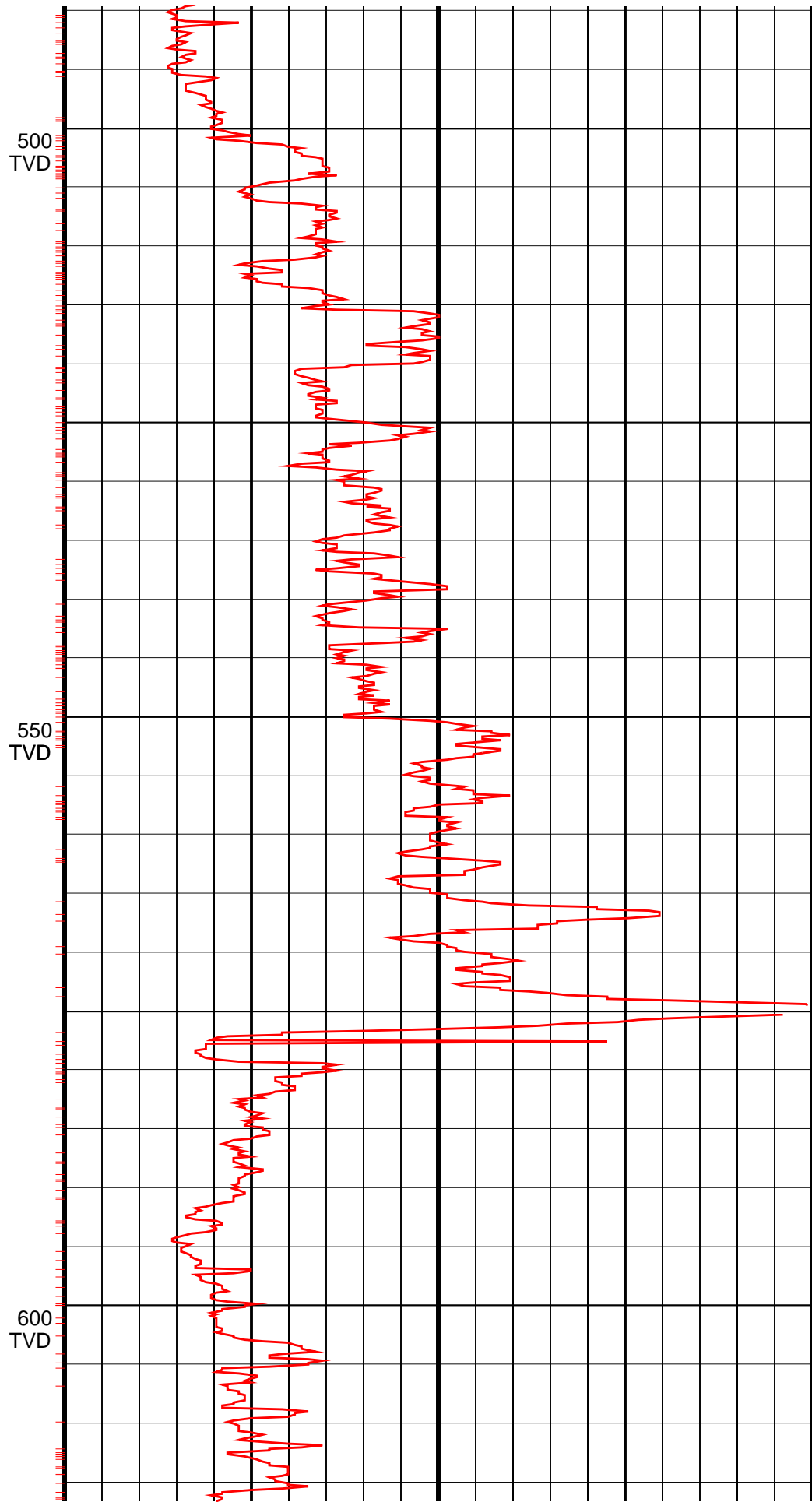
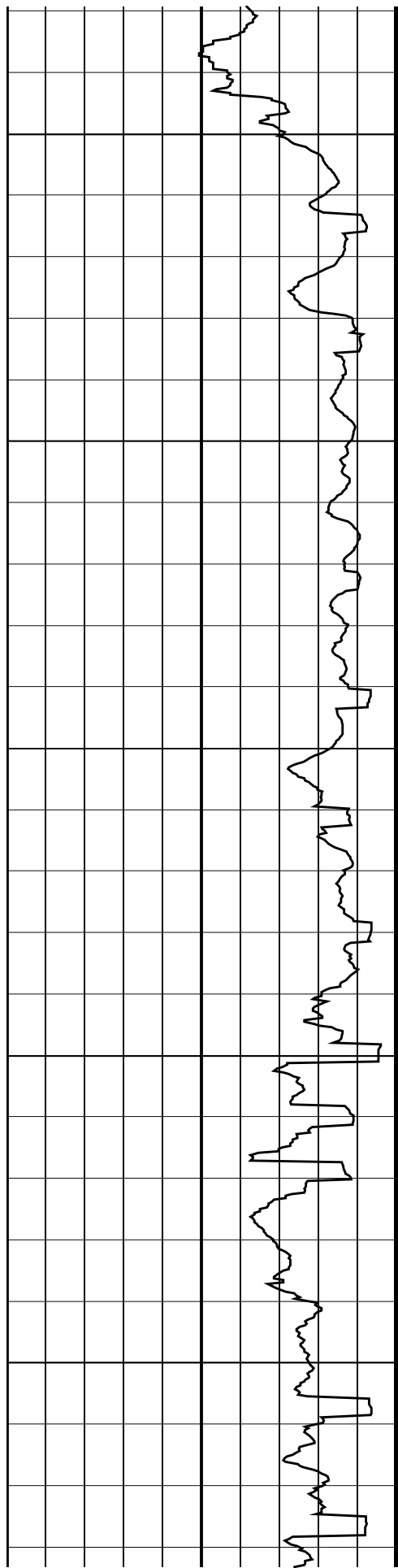
Parameters

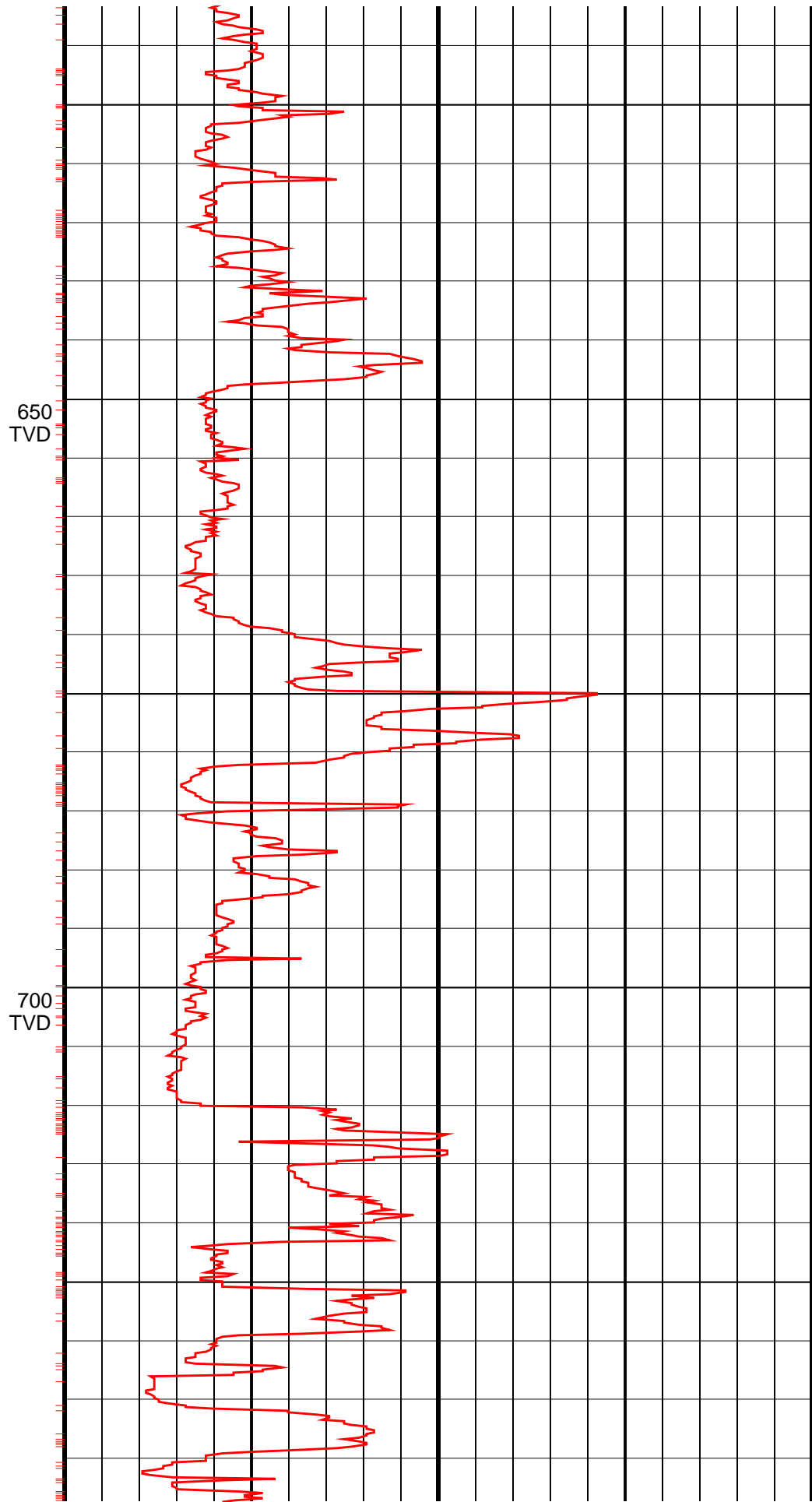
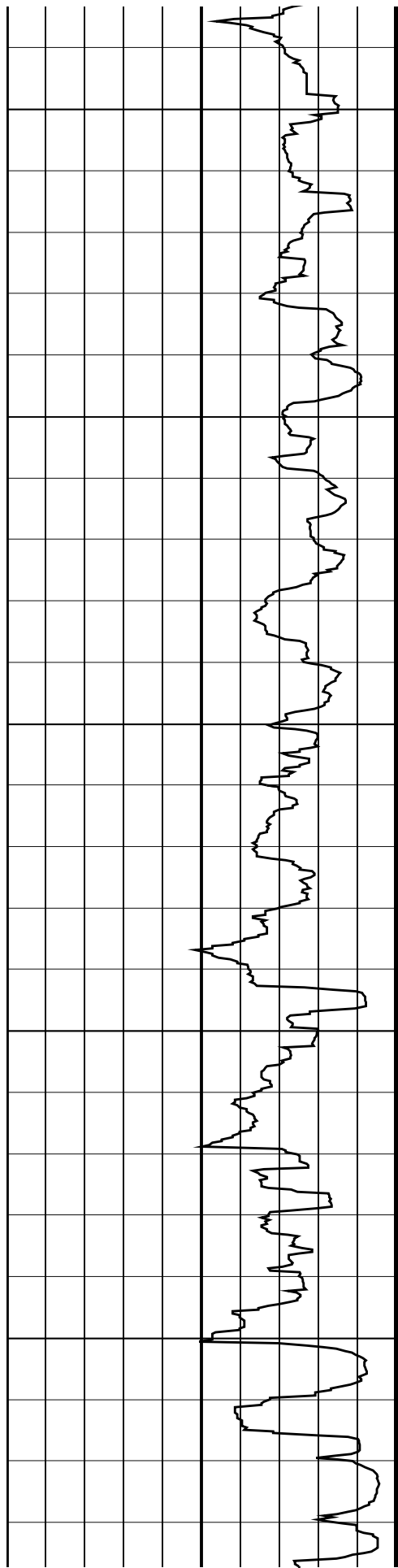
| DLIS Name | Description  | Value |
|-----------|--------------|-------|
| DO        | Depth Offset | 0.0 m |

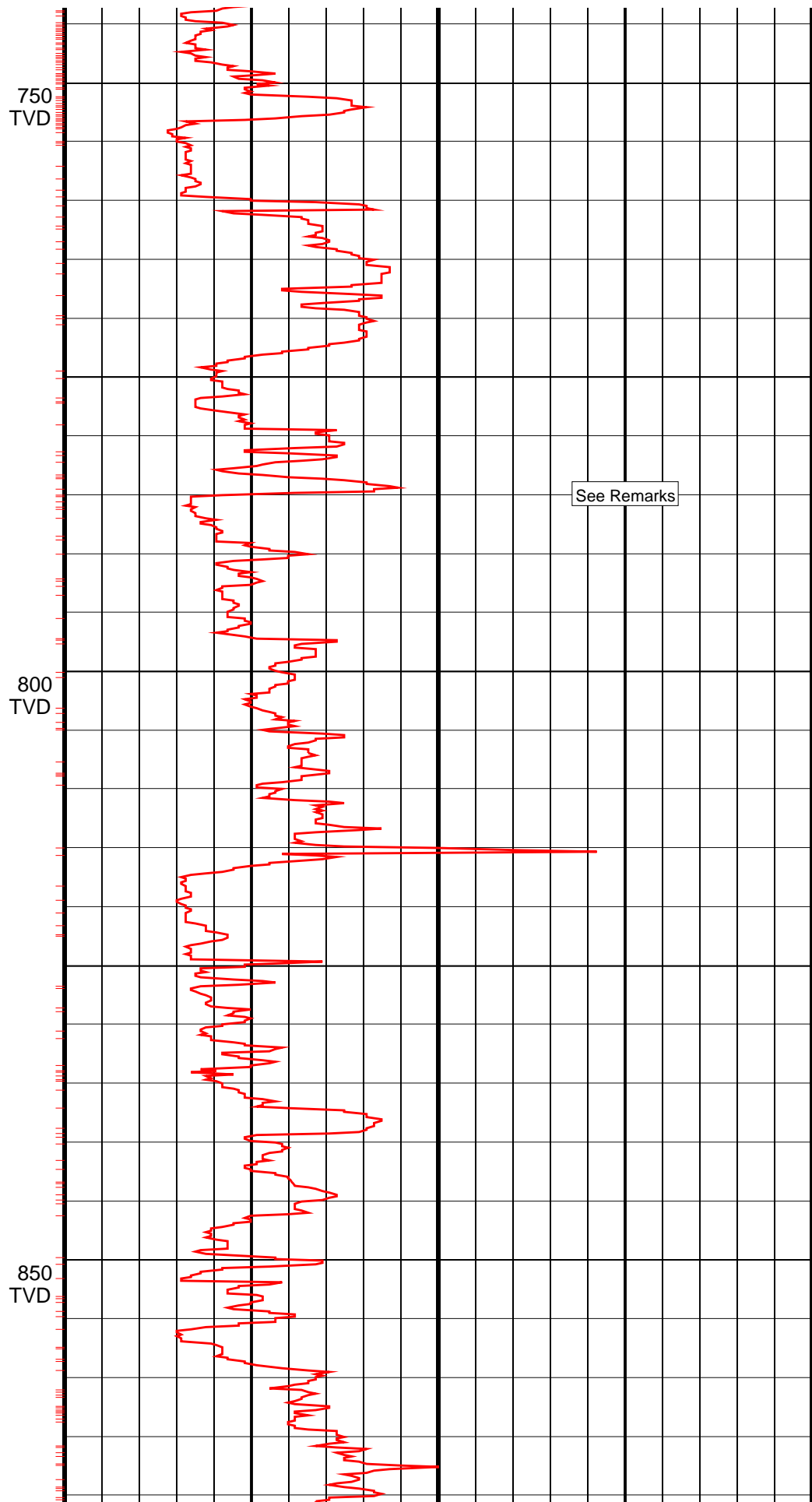
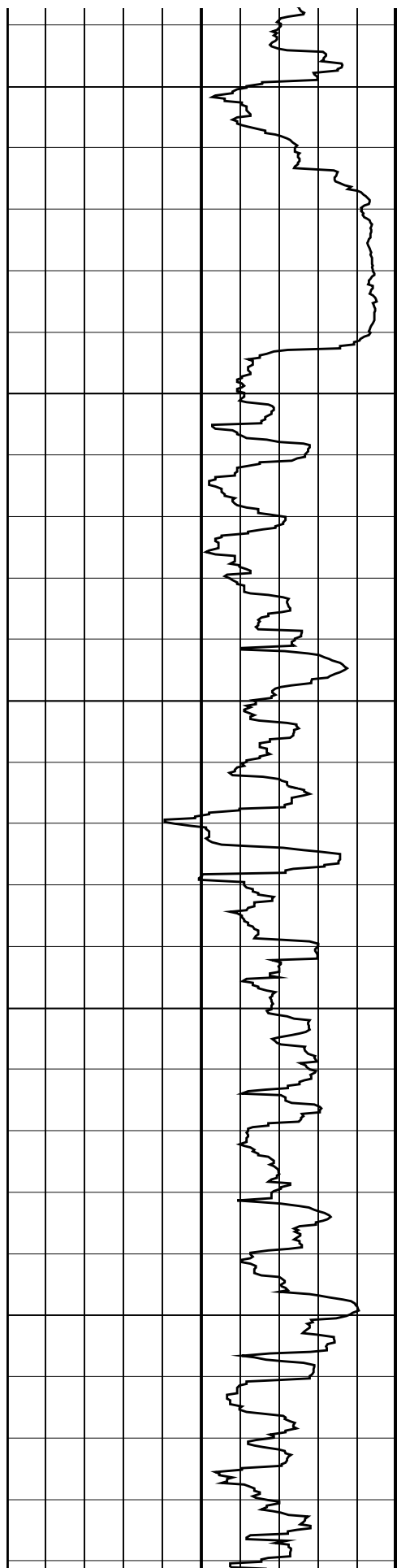
PIP SUMMARY

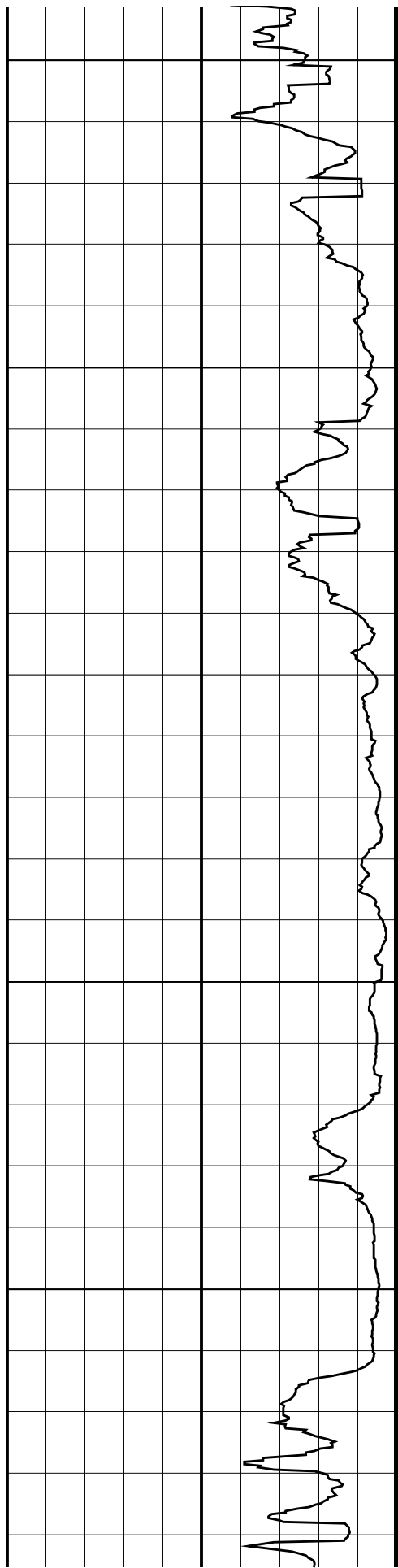
Gamma-Ray Samples





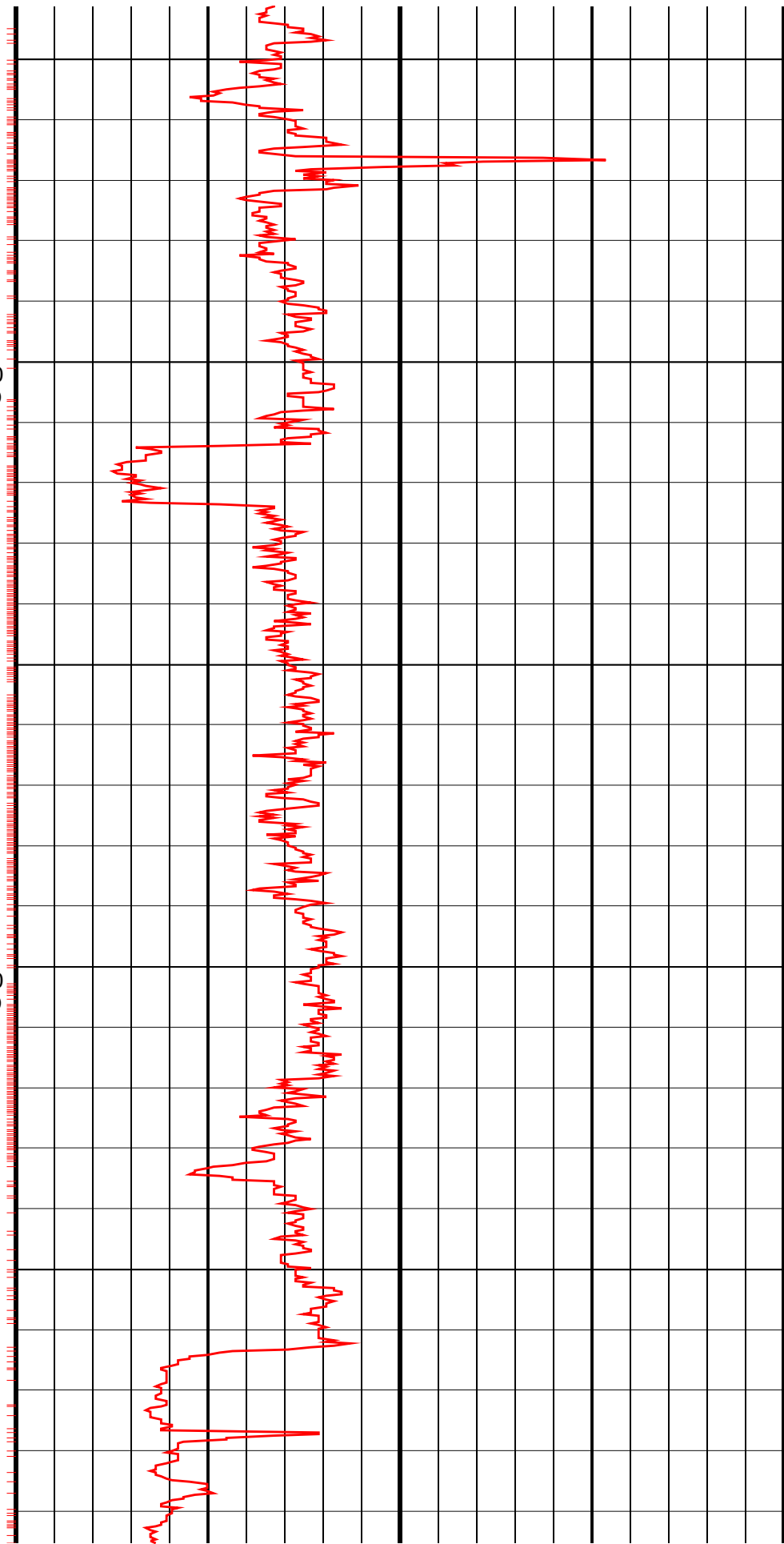






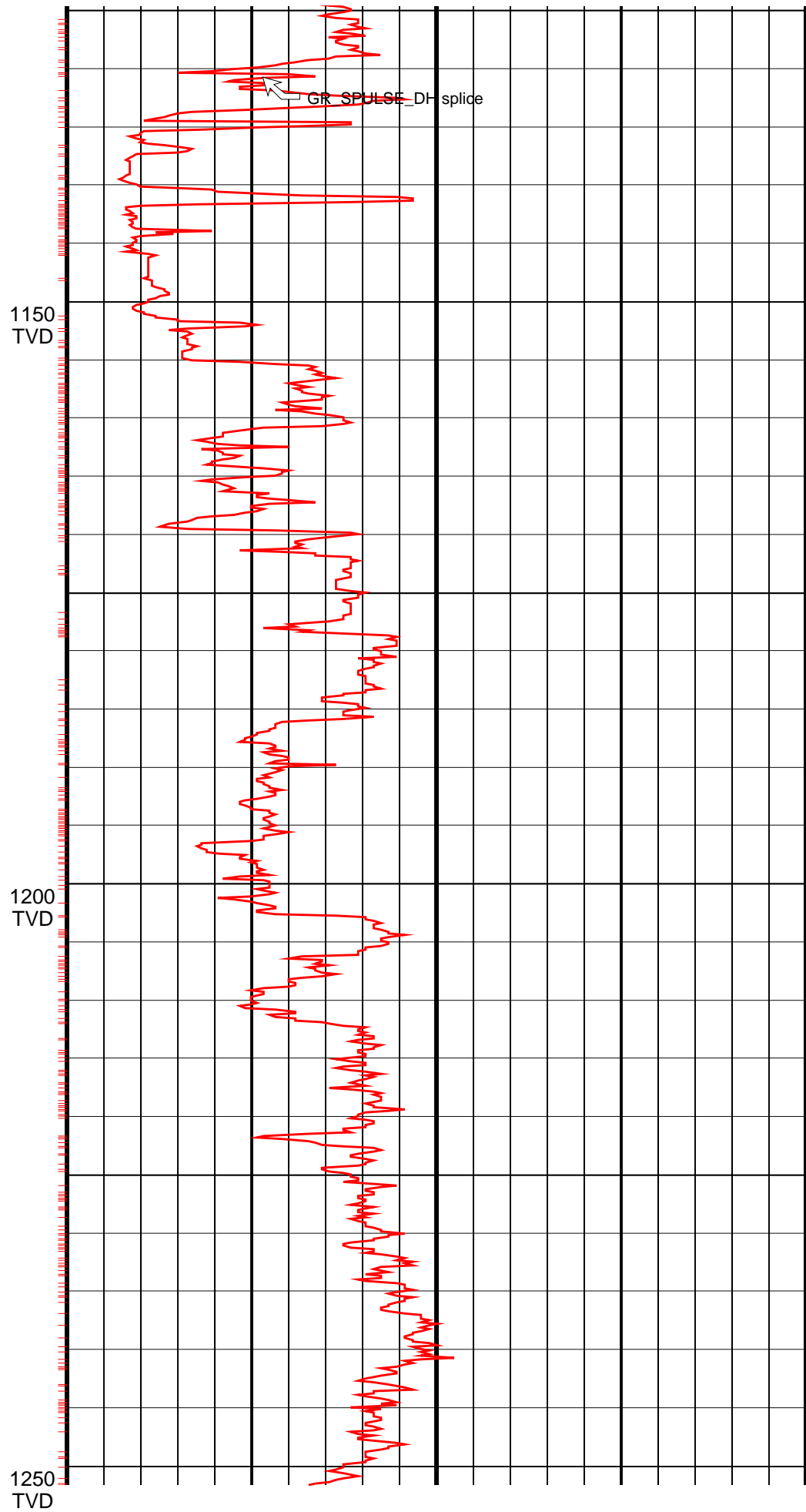
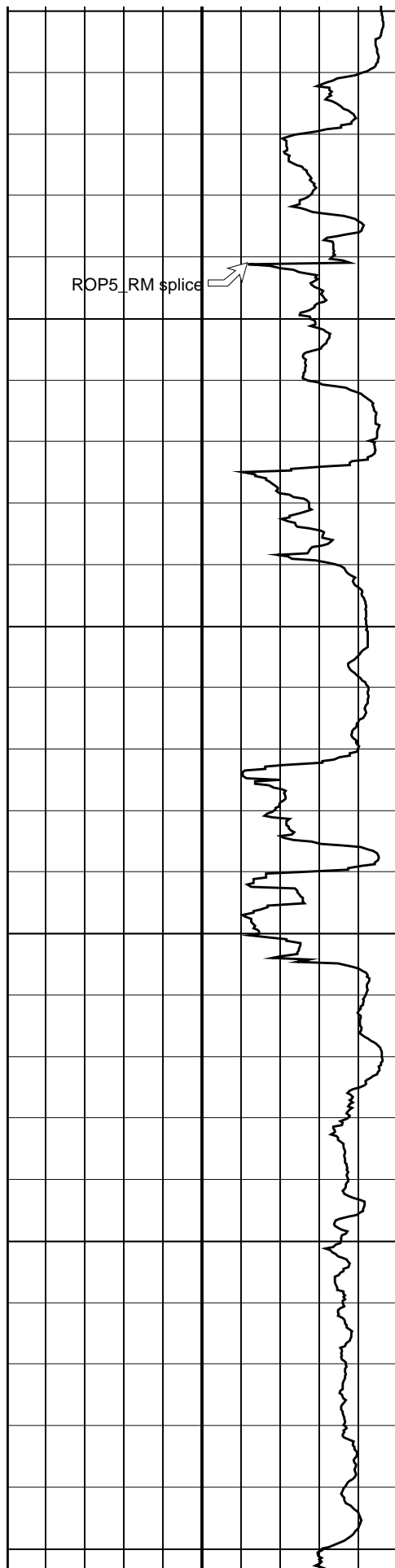
900  
TVD

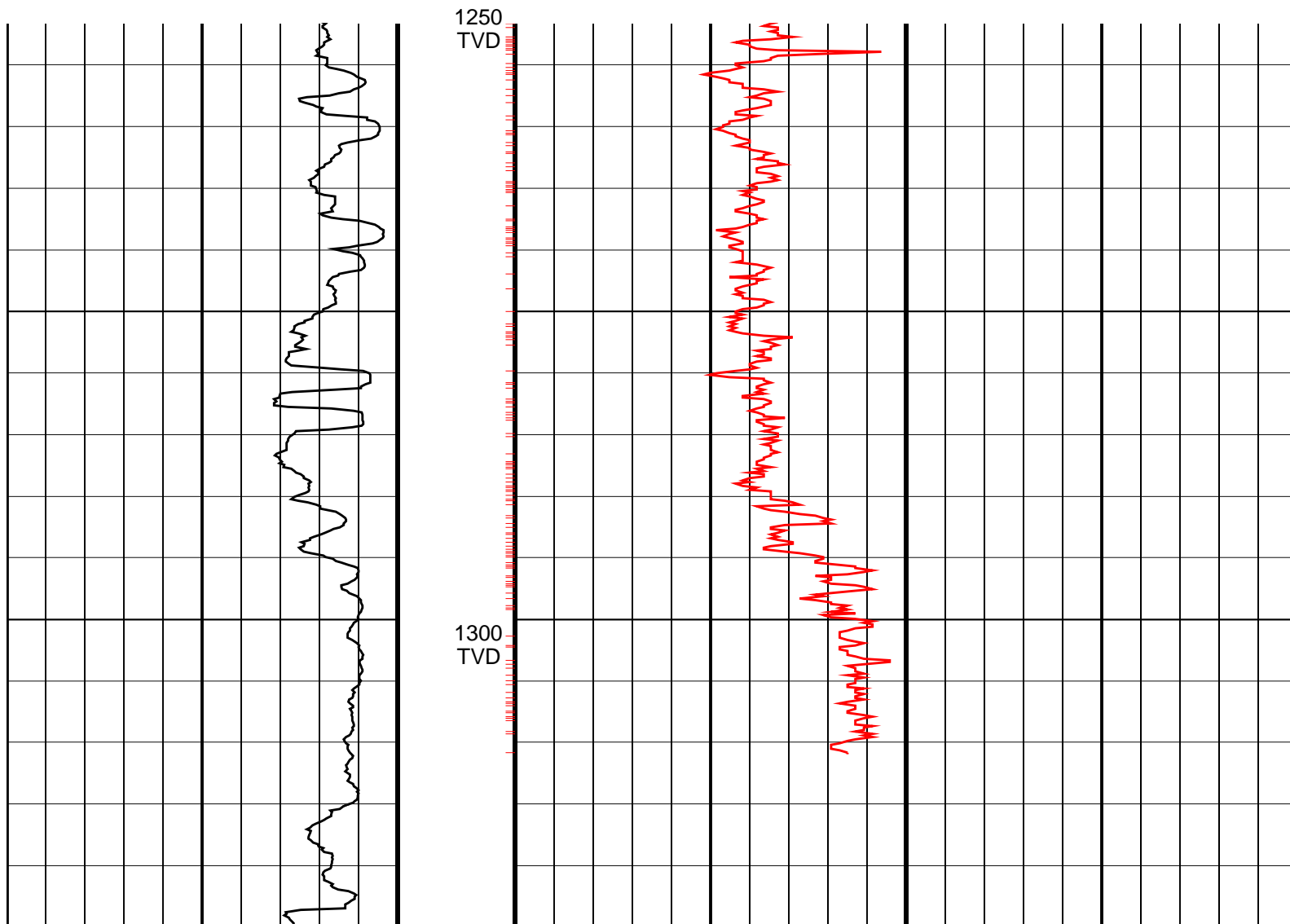
950  
TVD











Rate of Penetration, Averaged over Last  
5ft (ROP5\_RM)

|     |        |   |
|-----|--------|---|
| 200 | (M/HR) | 0 |
|-----|--------|---|

SLIMPULSE BHC Gr (GR\_SPULSE\_DH)

|   |        |     |
|---|--------|-----|
| 0 | (GAPI) | 200 |
|---|--------|-----|

PIP SUMMARY

+ Gamma-Ray Samples

IDEAL Version: ID6\_1C\_10  
IDF

True Vertical Depth Log

ANADRILL

SCHLUMBERGER

Survey report

26-Dec-2002 04:31:57

Page 1 of 3

Client.....: SANTOS Ltd.  
Field.....: Otway Basin

Well.....: Seamer-1  
API number.....:  
Engineer.....: J.Dolan, K.Handley, D.Borges

COUNTY.....: Century 11  
STATE.....: VICTORIA

Spud date.....: 18-Dec-02  
Last survey date.....: 26-Dec-02  
Total accepted surveys...: 33  
MD of first survey.....: 431.00 m  
MD of last survey.....: 1360.00 m

----- Survey calculation methods-----  
Method for positions.....: Minimum curvature  
Method for DLS.....: Mason & Taylor

----- Geomagnetic data -----  
Magnetic model.....: BGGM version 2002  
Magnetic date.....: 21-Dec-2002

Method for positions.....: Minimum curvature  
 Method for DLS.....: Mason & Taylor

----- Depth reference -----  
 Permanent datum.....: GROUND LEVEL  
 Depth reference.....:  
 GL above permanent.....: 58.51 m  
 KB above permanent.....: 64.01 m  
 DF above permanent.....: 63.71 m

----- Vertical section origin-----  
 Latitude (+N/S-).....: 0.00 m  
 Departure (+E/W-).....: 0.00 m

----- Platform reference point-----  
 Latitude (+N/S-).....: -304.57 m  
 Departure (+E/W-).....: -304.57 m

Azimuth from rotary table to target: 180.02 degrees

Magnetic model.....: BGGM version 2002  
 Magnetic date.....: 21-Dec-2002  
 Magnetic field strength...: 1216.99 HCONT  
 Magnetic dec (+E/W-).....: 10.95 degrees  
 Magnetic dip.....: -69.75 degrees

----- MWD survey Reference Criteria -----  
 Reference G.....: 1000.06 mGal  
 Reference H.....: 1216.99 HCONT  
 Reference Dip.....: -69.75 degrees  
 Tolerance of G.....: (+/-) 2.50 mGal  
 Tolerance of H.....: (+/-) 6.00 HCONT  
 Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----  
 Magnetic dec (+E/W-).....: 10.95 degrees  
 Grid convergence (+E/W-)..: -1.26 degrees  
 Total az corr (+E/W-).....: 12.21 degrees  
 (Total az corr = magnetic dec - grid conv)  
 Sag applied (Y/N).....: No degree: 0.00

[(c)2002 Anadrill IDEAL ID6\_1C\_10]  
 ANADRILL SCHLUMBERGER Survey Report

26-Dec-2002 04:31:57

Page 2 of 3

| Seq<br># | Measured<br>depth<br>(m) | Incl<br>angle<br>(deg) | Azimuth<br>angle<br>(deg) | Course<br>length<br>(m) | TVD<br>depth<br>(m) | Vertical<br>section<br>(m) | Displ<br>+N/S-<br>(m) | Displ<br>+E/W-<br>(m) | Total<br>displ<br>(m) | At<br>Azim<br>(deg) | DLS<br>(deg/<br>10m) | Srvy<br>tool<br>type | Tool<br>qual<br>type |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|----------------------|----------------------|----------------------|
| 1        | 431.00                   | 0.50                   | 167.00                    | 0.00                    | 430.99              | 1.41                       | -1.41                 | 2.46                  | 2.83                  | 119.87              | 0.00                 | TIP                  | -                    |
| 2        | 452.36                   | 0.20                   | 31.69                     | 21.36                   | 452.35              | 1.47                       | -1.47                 | 2.50                  | 2.90                  | 120.48              | 0.92                 | SP                   | 6-axis               |
| 3        | 481.66                   | 0.14                   | 39.77                     | 29.30                   | 481.65              | 1.40                       | -1.40                 | 2.55                  | 2.91                  | 118.78              | 0.07                 | SP                   | 6-axis               |
| 4        | 510.70                   | 0.18                   | 271.49                    | 29.04                   | 510.69              | 1.37                       | -1.37                 | 2.53                  | 2.87                  | 118.50              | 0.30                 | SP                   | 6-axis               |
| 5        | 528.02                   | 0.14                   | 236.07                    | 17.32                   | 528.01              | 1.38                       | -1.38                 | 2.48                  | 2.84                  | 119.13              | 0.18                 | SP                   | 6-axis               |
| 6        | 559.15                   | 0.18                   | 280.02                    | 31.13                   | 559.14              | 1.39                       | -1.39                 | 2.40                  | 2.78                  | 120.16              | 0.12                 | SP                   | 6-axis               |
| 7        | 606.26                   | 4.50                   | 178.12                    | 47.11                   | 606.20              | 3.23                       | -3.23                 | 2.39                  | 4.02                  | 143.52              | 2.89                 | SP                   | 6-axis               |
| 8        | 635.88                   | 4.41                   | 177.58                    | 29.62                   | 635.73              | 5.53                       | -5.53                 | 2.47                  | 6.06                  | 155.89              | 0.10                 | SP                   | 6-axis               |
| 9        | 665.22                   | 6.06                   | 179.96                    | 29.34                   | 664.94              | 8.20                       | -8.21                 | 2.52                  | 8.58                  | 162.91              | 1.70                 | SP                   | 6-axis               |
| 10       | 694.69                   | 8.48                   | 183.87                    | 29.47                   | 694.18              | 11.93                      | -11.93                | 2.38                  | 12.16                 | 168.73              | 2.51                 | SP                   | 6-axis               |
| 11       | 723.61                   | 11.02                  | 187.79                    | 28.92                   | 722.68              | 16.80                      | -16.80                | 1.86                  | 16.90                 | 173.68              | 2.72                 | SP                   | 6-axis               |
| 12       | 752.98                   | 14.82                  | 187.88                    | 29.37                   | 751.30              | 23.30                      | -23.30                | 0.96                  | 23.32                 | 177.63              | 3.88                 | SP                   | 6-axis               |
| 13       | 782.44                   | 17.23                  | 187.39                    | 29.46                   | 779.61              | 31.36                      | -31.36                | -0.11                 | 31.36                 | 180.21              | 2.46                 | SP                   | 6-axis               |
| 14       | 810.75                   | 20.27                  | 188.27                    | 28.31                   | 806.41              | 40.37                      | -40.37                | -1.36                 | 40.40                 | 181.93              | 3.24                 | SP                   | 6-axis               |
| 15       | 839.97                   | 20.70                  | 180.97                    | 29.22                   | 833.79              | 50.55                      | -50.55                | -2.18                 | 50.59                 | 182.46              | 2.66                 | SP                   | 6-axis               |
| 16       | 869.13                   | 20.56                  | 181.56                    | 29.16                   | 861.08              | 60.82                      | -60.82                | -2.40                 | 60.87                 | 182.26              | 0.26                 | SP                   | 6-axis               |
| 17       | 898.76                   | 20.19                  | 181.06                    | 29.63                   | 888.86              | 71.13                      | -71.13                | -2.64                 | 71.18                 | 182.12              | 0.41                 | SP                   | 6-axis               |
| 18       | 927.77                   | 20.17                  | 181.17                    | 29.01                   | 916.09              | 81.14                      | -81.14                | -2.83                 | 81.19                 | 182.00              | 0.01                 | SP                   | 6-axis               |
| 19       | 956.71                   | 19.30                  | 177.87                    | 28.94                   | 943.33              | 90.91                      | -90.90                | -2.76                 | 90.95                 | 181.74              | 1.47                 | SP                   | 6-axis               |
| 20       | 983.47                   | 19.14                  | 176.82                    | 26.76                   | 968.60              | 99.71                      | -99.71                | -2.35                 | 99.73                 | 181.35              | 0.43                 | SP                   | 6-axis               |
| 21       | 1002.89                  | 19.00                  | 176.75                    | 19.42                   | 986.95              | 106.04                     | -106.04               | -1.99                 | 106.06                | 181.08              | 0.22                 | SP                   | 6-axis               |
| 22       | 1033.63                  | 19.44                  | 176.51                    | 30.74                   | 1015.98             | 116.14                     | -116.14               | -1.40                 | 116.15                | 180.69              | 0.44                 | SP                   | 6-axis               |
| 23       | 1062.66                  | 18.67                  | 175.18                    | 29.03                   | 1043.42             | 125.60                     | -125.60               | -0.71                 | 125.60                | 180.33              | 0.91                 | SP                   | 6-axis               |
| 24       | 1091.58                  | 18.19                  | 175.22                    | 28.92                   | 1070.85             | 134.70                     | -134.70               | 0.05                  | 134.71                | 179.98              | 0.50                 | SP                   | 6-axis               |
| 25       | 1120.49                  | 18.32                  | 174.69                    | 28.91                   | 1098.31             | 143.73                     | -143.73               | 0.85                  | 143.73                | 179.66              | 0.22                 | SP                   | 6-axis               |
| 26       | 1149.65                  | 18.05                  | 174.71                    | 29.16                   | 1126.01             | 152.79                     | -152.79               | 1.69                  | 152.80                | 179.37              | 0.28                 | SP                   | 6-axis               |
| 27       | 1178.33                  | 18.61                  | 175.35                    | 28.68                   | 1153.24             | 161.77                     | -161.77               | 2.47                  | 161.79                | 179.13              | 0.62                 | SP                   | 6-axis               |
| 28       | 1207.32                  | 18.25                  | 175.48                    | 28.99                   | 1180.74             | 170.91                     | -170.91               | 3.20                  | 170.94                | 178.93              | 0.37                 | SP                   | 6-axis               |
| 29       | 1236.55                  | 18.47                  | 174.85                    | 29.23                   | 1208.48             | 180.08                     | -180.08               | 3.98                  | 180.13                | 178.73              | 0.30                 | SP                   | 6-axis               |
| 30       | 1265.29                  | 18.99                  | 175.78                    | 28.74                   | 1235.70             | 189.28                     | -189.28               | 4.73                  | 189.34                | 178.57              | 0.63                 | SP                   | 6-axis               |

[(c)2002 Anadrill IDEAL ID6\_1C\_10]  
 ANADRILL SCHLUMBERGER Survey Report

26-Dec-2002 04:31:57

Page 3 of 3

| Seq<br># | Measured<br>depth<br>(m) | Incl<br>angle<br>(deg) | Azimuth<br>angle<br>(deg) | Course<br>length<br>(m) | TVD<br>depth<br>(m) | Vertical<br>section<br>(m) | Displ<br>+N/S-<br>(m) | Displ<br>+E/W-<br>(m) | Total<br>displ<br>(m) | At<br>Azim<br>(deg) | DLS<br>(deg/<br>10m) | Srvy<br>tool<br>type | Tool<br>qual<br>type |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|----------------------|----------------------|----------------------|
| 31       | 1294.56                  | 19.08                  | 176.12                    | 29.27                   | 1263.37             | 198.80                     | -198.80               | 5.40                  | 198.88                | 178.44              | 0.15                 | SP                   | 6-axis               |
| 32       | 1323.38                  | 19.56                  | 175.58                    | 28.82                   | 1290.57             | 208.31                     | -208.31               | 6.10                  | 208.40                | 178.32              | 0.53                 | SP                   | 6-axis               |
| 33       | 1360.00                  | 19.76                  | 175.70                    | 36.62                   | 1325.05             | 220.60                     | -220.60               | 7.03                  | 220.71                | 178.17              | 0.17                 | Projection to TD     |                      |

[(c)2002 Anadrill IDEAL ID6\_1C\_10]

Company:

SANTOS Ltd

Well:

Seamer-1

Field:

Exploration (Otway Basin)

Rig:

Century 11

Rig: Century 11  
State: Victoria

**IDEAL** services from **Anadrill**

**SlimPulse\* GR**  
**True Vertical Depth 1:500 scale**  
**Recorded Mode Memory**

**Schlumberger**