

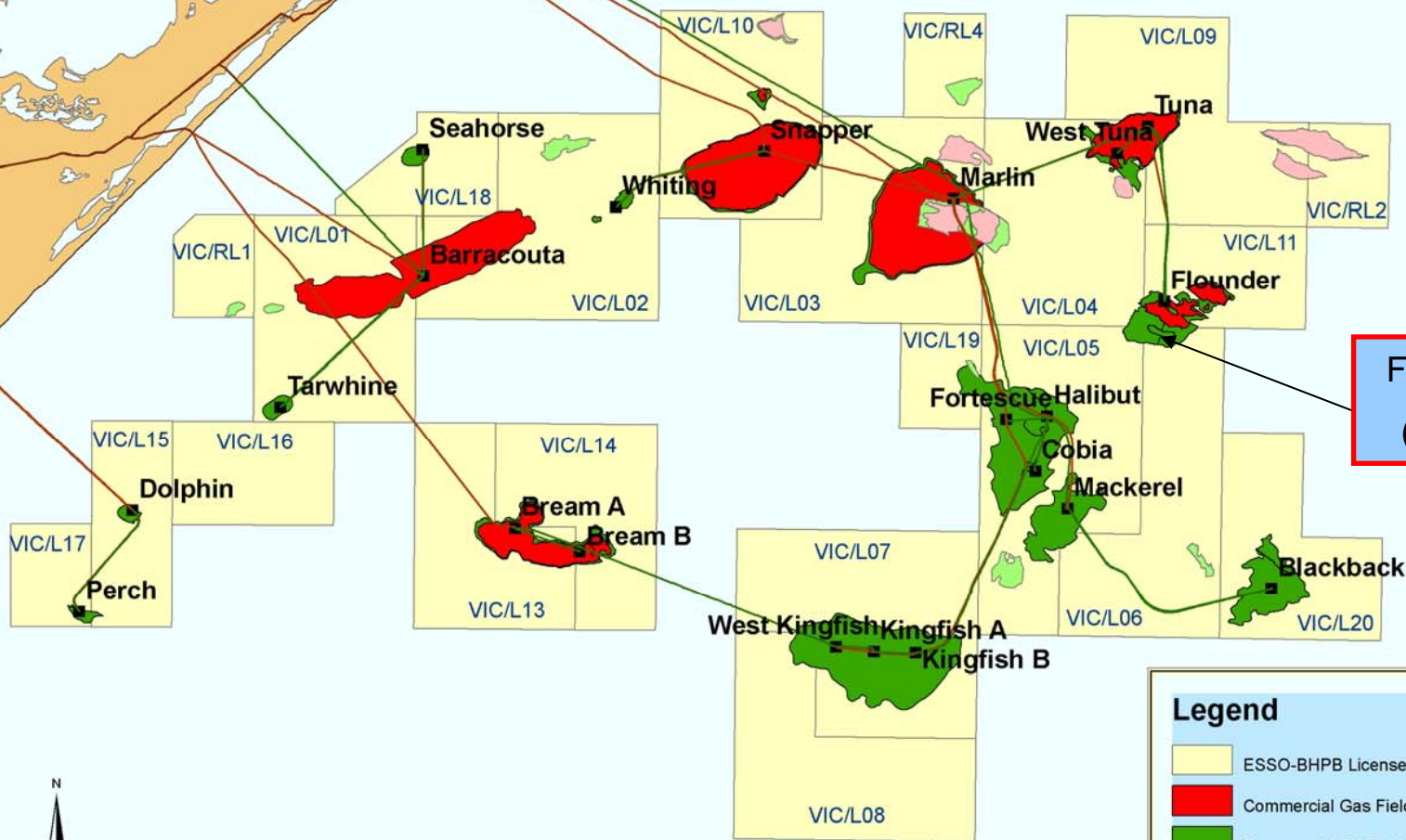
**WELL COMPLETION REPORT**  
**FLOUNDER A10A**  
**GIPPSLAND BASIN, VICTORIA**

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# I. FLOUNDER FIELD LOCATION MAP

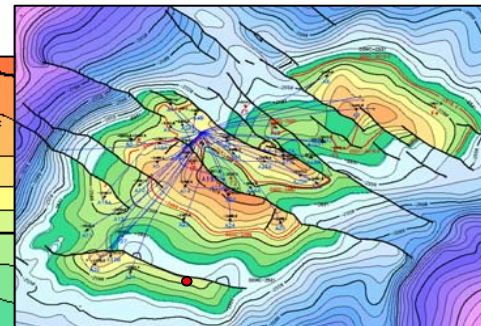
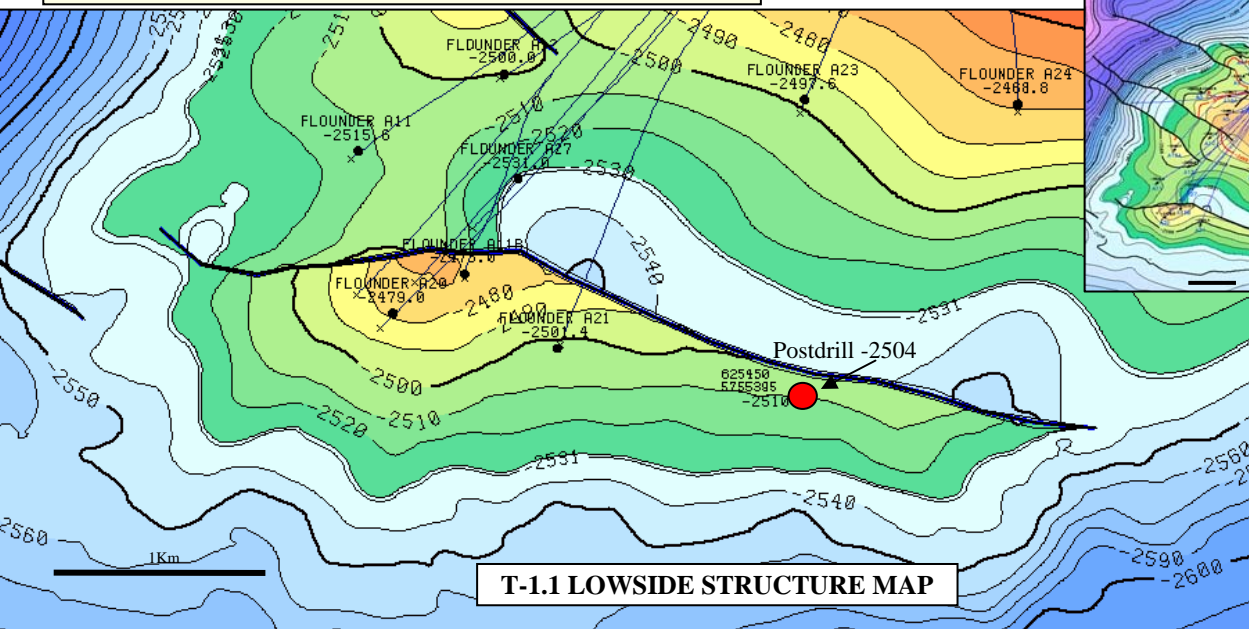


**FLA A10A  
(VIC/L6)**

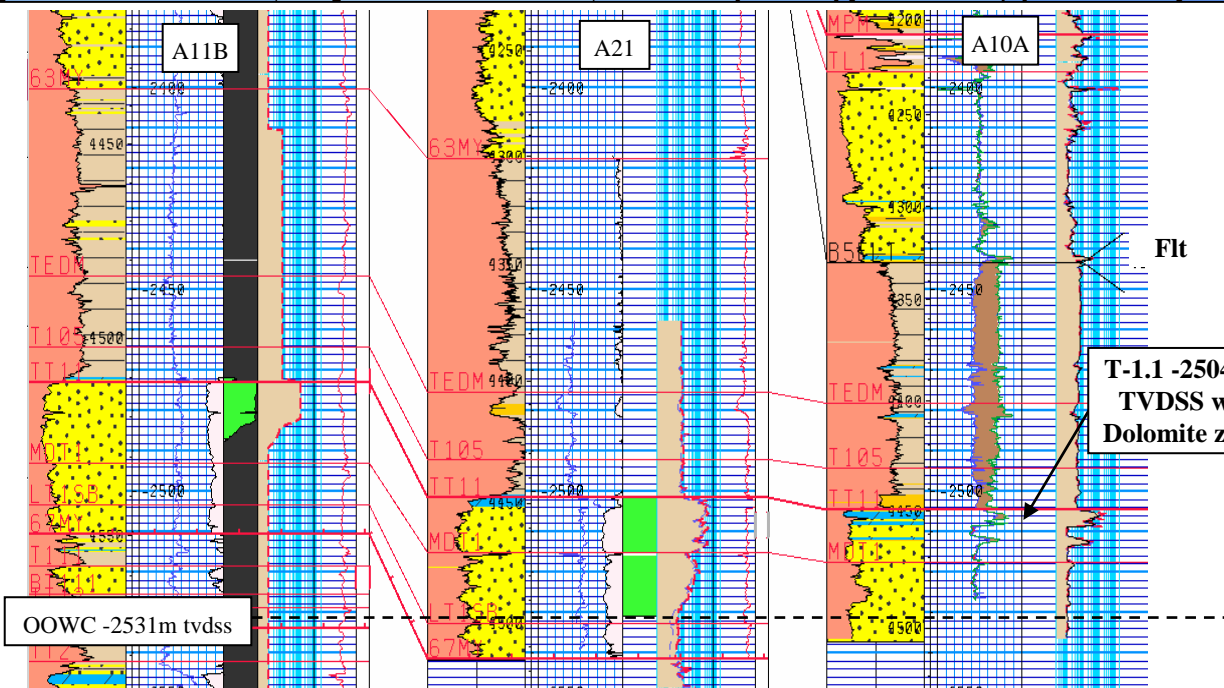
## Legend

- ESSO-BHPB License Blocks & Retention Release Areas
- Commercial Gas Fields
- Commercial Oil Fields
- Static Gas Fields
- Static Oil Fields
- Gas Pipeline
- Oil Pipeline

# Flounder A10A (Loc M) Summary

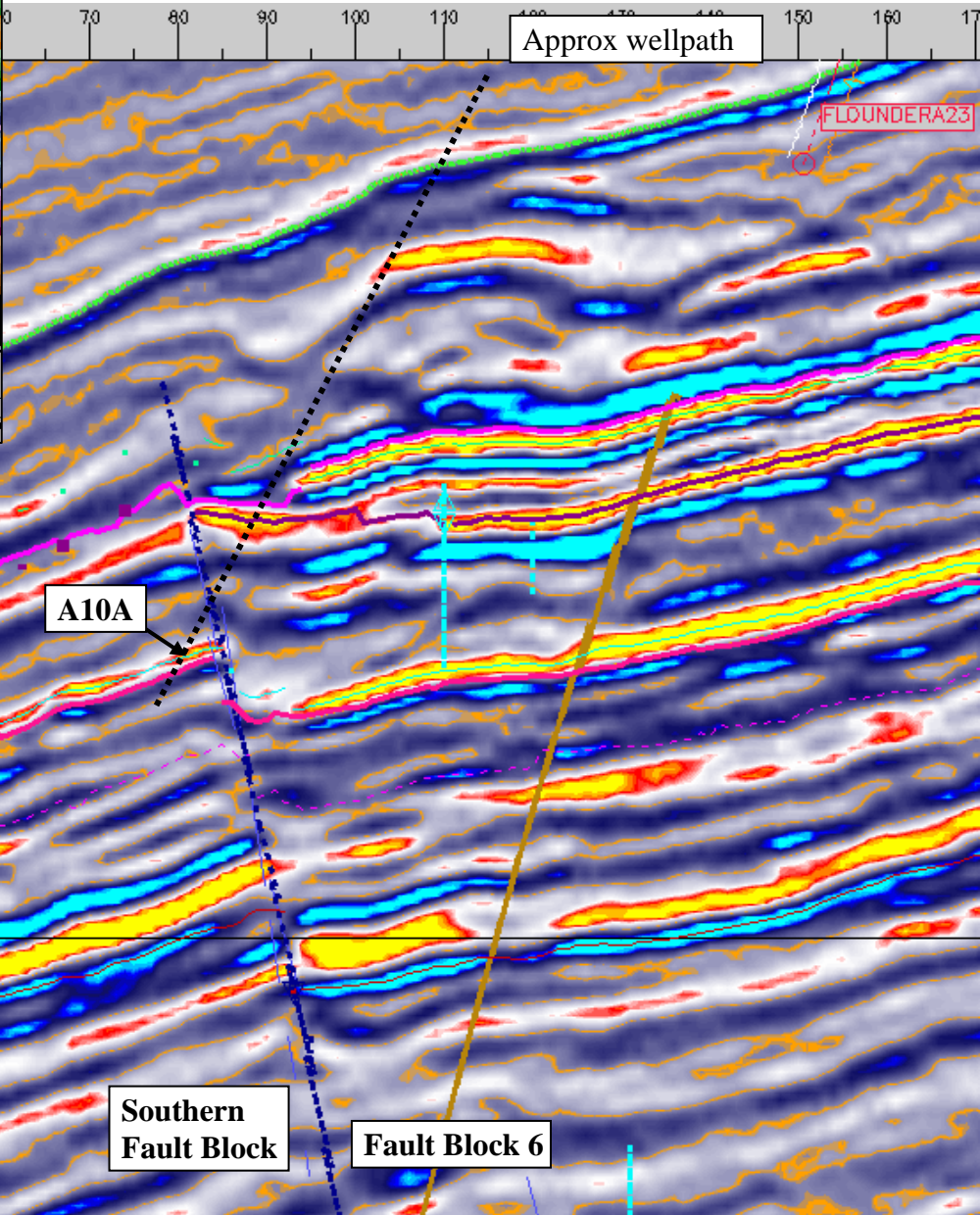
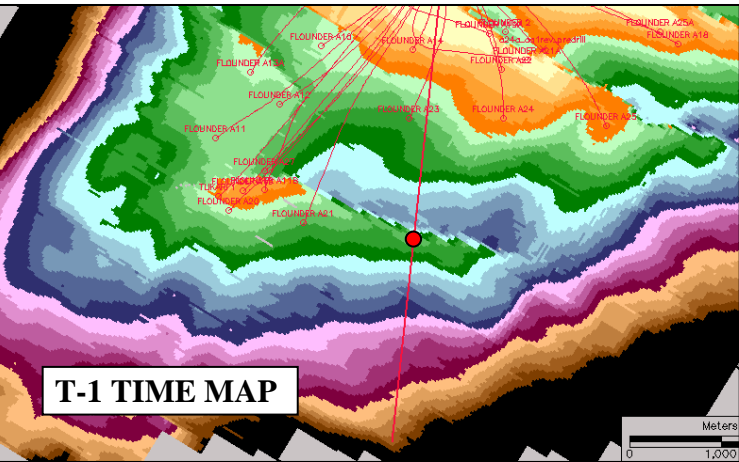


- Loc M targeted to appraise/develop T-1.1 in east end of South Block.
- T-1.1 sand swept, due to-
  - 7.5mTVD low to prediction (within LS-ML predrill structure range)
  - ~3mTVD dolomite at top further deepened the effective top porosity
  - very good sweep efficiency (very low resistivity in residual section)
- Structural uncertainty recognised predrill for the area:
  - 25% dry hole chance assigned to well, plus 22.5% LS
- Well crossed the fault as expected and intersected T-1.1 sand 26.5mTVD above field OOWC, confirming oil originally present in area (mud gas)
- Well confirms effective capture of oil from this distant part of block
- Strong aquifer may have contributed to high sweep efficiency.





# N-S Seismic Traverse along A10A wellpath



**BTFC**  
**SHCL coal**  
**MPM coal**

1,750  
**TOL**  
**BTFC**  
**T-1**  
2,000  
**T-8**

**A10A**

**Southern  
Fault Block**

**Fault Block 6**

## II. WELL DATA RECORD (cont'd)

### LOCATION

|                         |                     |  |                   |
|-------------------------|---------------------|--|-------------------|
| <b>Field</b>            | Flounder            | <b>Conductor #10 Surface Coordinates</b> |                   |
| <b>Well Name</b>        | <b>A10A</b> (Loc M) | (GDA94 ) X                               | 625,838.75mE      |
| <b>Conductor Number</b> | Slot 10             | (MGA94) Y                                | 5,758,710.96mN    |
| <b>State</b>            | Victoria            | Latitude                                 | 38° 18 39.179"S   |
| <b>Permit/Licence</b>   | Vic/L6              | Longitude                                | 148° 26' 21.656"E |
| <b>Geological Basin</b> | Gippsland           | <b>Perforations</b>                      |                   |
| <b>Top of Latrobe</b>   | 3512.1m MDRT        | None (Dry hole)                          |                   |
|                         | 2084.6m TVDRT       | <b>Datum</b>                             |                   |
|                         | 2034.1m TVDSS       | GDA94 (GRS80)                            |                   |
| AMG X                   | 625474.85mE         | <b>Projection</b>                        |                   |
| AMG Y                   | 5756184.60 mN       | MGA94/UTM Zone 55 (S)                    |                   |
| <b>Top of T-1.1</b>     | 4449.2m MDRT        |  |                   |
|                         | 2554.9m TVDRT       |  |                   |
|                         | 2504.4m TVDSS       |  |                   |
| AMG X                   | 625462.2mE          |  |                   |
| AMG Y                   | 5755374.9mN         |  |                   |

### ELEVATIONS & DEPTHS

|                             |                  |
|-----------------------------|------------------|
| <b>Water Depth</b>          | 94 m             |
| <b>Top Wellhead to MSL</b>  | 20.99 m          |
| <b>Main Deck Rel to MSL</b> | 25.5m            |
| <b>RT Relative to MSL</b>   | 50.52m           |
| <b>Average Well Angle</b>   | 60° (tang)       |
| <b>Total Depth</b>          | 4515.0 m MDRT    |
|                             | 2593.4 m TVDRT   |
| <b>Plug Back Depth</b>      | Not Plugged Back |

### DATES

|                             |            |
|-----------------------------|------------|
| <b>Skid Rig</b>             | 01/05/2005 |
| <b>Kicked Off</b>           | 02/05/2005 |
| <b>Development Rig Days</b> | 14.33      |
| <b>NPT Days</b>             | 0.2        |
| <b>Rig Released</b>         | 14/05/2005 |
| <b>I.P. Established</b>     | None       |

### MISCELLANEOUS

|                           |                        |                        |  |
|---------------------------|------------------------|------------------------|--|
| <b>Operator</b>           | Esso Australia Pty Ltd | <b>Contractor</b>      | ENSCO International                            |
| <b>Esso Interest</b>      | 50%                    | <b>Rig Name</b>        | ENSCO 102 (Keppel FELS Mod V "A" Class Jackup) |
| <b>Permittee/Licensee</b> | Esso/BHPP              | <b>Equipment Type</b>  | Platform                                       |
| <b>Other Interest</b>     | 50% J.V. Interest      | <b>Completion Type</b> | N/A  |
| <b>Overriding Royalty</b> | 2.5%                   | <b>Completion Size</b> | N/A  |
| <b>Drilling AFE No.</b>   | L0501F402              |                        |  |

### WELL CLASSIFICATION

|                        |                 |                       |                       |
|------------------------|-----------------|-----------------------|-----------------------|
| <b>Before Drilling</b> | Oil Development | <b>After Drilling</b> | Plugged and Abandoned |
|------------------------|-----------------|-----------------------|-----------------------|

## II. WELL DATA RECORD (cont.)

### CASING RECORD

| Type  | Size<br>(Inches) | Weight<br>(lb/ft) | Grade | Thread  | Depth<br>(mMDRT) |
|---|------------------|-------------------|-------|---------|------------------|
| Surface casing (pre-existing A10 casing shoe) | 10 ¾"            | 40.5              | K-55  | Vam Ace | 661.0            |

### CEMENTING RECORD

| Casing details | Cement Type | Dry Cement Volume<br>(sacks) | Cement Additives | Mix Water<br>(bbls) | Slurry Volume<br>(bbls) | Slurry Density<br>(ppg) | Cement to/from<br>(m MDRT) | Casing Pressure Test (psi) |
|----------------|-------------|------------------------------|------------------|---------------------|-------------------------|-------------------------|----------------------------|----------------------------|
| Plug 1         | HTB         | 210                          |                  | 30                  | 44                      | 15.8                    | 4285<br>to<br>4443         | 2000                       |
| Plug 2         | HTB         | 246                          |                  | 30                  | 49.6                    | 15.8                    | 4443<br>to<br>4515         | 2300                       |
| Plug 3         | G           | 288                          |                  | 30                  | 59.7                    | 15.8                    | 595<br>to<br>694           | 1000                       |

## II. WELL DATA RECORD (cont.)

### DRILLING PERFORMANCE

FLA A10A- Final well Report

#### GENERAL

|                           |          |                       |           |                    |           |
|---------------------------|----------|-----------------------|-----------|--------------------|-----------|
| Platform:                 | Flounder | Rig:                  | Ensco 102 | Reservoir:         | T-1.1 Oil |
| Well:                     | A10A     | Well Slot:            | #10       | RT-MSL (Ensco 102) | 50.52m    |
| Drilling Complexity Index | 5.6      | Completion Complexity | N/A       |                    |           |

| DEPTH                 |                                 | PERFORMANCE   |             | MUD                |  |
|-----------------------|---------------------------------|---|-------------|--------------------|--|
| m MDRT                | 4,515.00                        | 20" Cond. Hole                                      | N/A         | Max Wt (ppg)       | 10.1 (while drilling)<br>11.0 (prior to P&A)   |
| m TVDRT               | 2,593.36                        | 12-1/4" Surf. Hole                                  | N/A         | Type (Surf. Hole)  | N/A  |
| Vert. Section (m)     | 3,410.64                        | 8-1/2" Prod. Hole                                   | 664.7 m/day | Type (Inter. Hole) | N/A  |
| INCLINATION           | 63.3 (4265mMD) /<br>60.0 (Tang) | 6" Liner Hole                                       | N/A         | Type (Prod. Hole)  | Petrofree NAF (drlg) +<br>KCL mud prior to P&A |
| Max (deg) / Ave (deg) |                                 | * time to drill interval, incl's connections & NPT. |             | Type (Liner Hole)  | N/A  |

Comments: New hole drilled: 661m to 4,515mMDRT (3,854m drilled).

#### TIME ANALYSIS

|                         |                   |              |                    |                  |       |
|-------------------------|-------------------|--------------|--------------------|------------------|-------|
| Start Date:             | 1/5/2005, 0700hrs | Finish Date: | 14/5/2005, 1500hrs |                  |       |
| Target Days:            | 19.38             | Total Days:  | 14.33              | % Under Target:  | 26.1% |
| AFE Days:               | 23.26             | NPT Days:    | 0.19               | % of Total Days: | 1.3%  |
| Supplementary AFE Days: | N/A               |              |                    |                  |       |

#### COSTS *(based on projected)*

|             |             |   |             |          |   |
|-------------|-------------|---|-------------|----------|---|
| AFE No.:    | L0501F402   | Revisions:  | N/A         | \$ per m | A\$1.87k / metre<br>(new hole)                      |
| \$ per day: | A\$503k/day | \$ per day (excl. T + L)<br>* Equipment, LWD/RSS & Reeves | A\$408k/day |          | A\$1.60k / metre*<br><br>* based on TD not new hole |

|                | Equipment | Materials | Contracts | Allocations | Contingency | Total         |
|----------------|-----------|-----------|-----------|-------------|-------------|---------------|
| AFE (Original) | 375,000   | 2,246,200 | 7,823,800 | 555,000     | --          | A\$11,000,000 |
| AFE (Supp #1)  | N/A       | N/A       | N/A       | N/A         | --          | N/A           |
| Projected      | --        | 1,364,034 | 5,501,604 | 346,818     | --          | A\$7,212,456  |

#### CASING *(all depths herein are based on Ensco 102 elevations: RT-MSL=50.52m)*

|                    | Size / Weight / Grade / Thread | m MDRT | m TVDRT | PIT (ppg)  |
|--------------------|--------------------------------|--------|---------|------------|
| Conductor Casing * | N/A                            | 170    | 170     | N/A        |
| Surface Casing *   | 10-3/4", 40.5ppf, K55, VamAce  | 661    | 611     | 13.0 (Jug) |
| Prod Casing        | N/A - Hole Section Abandoned   | N/A    | N/A     | N/A        |
| Prod Liner         | N/A                            | N/A    | N/A     | N/A        |

Comments: \* Pre-existing casing string. 8-1/2" hole section abandoned due to reservoir being swept - no production casing run.

#### COMPLETION

|            | Size / Weight / Grade / Thread | m MDRT | m TVDRT | Type |
|------------|--------------------------------|--------|---------|------|
| Completion | N/A                            | N/A    | N/A     | N/A  |

|                       | Upper Interval [m MDRT] | Upper Interval [m TVDRT] | Lower Interval [mMDRT] | Lower Interval [mTVDRT] | Gun Type |
|-----------------------|-------------------------|--------------------------|------------------------|-------------------------|----------|
| Perforation Interval: | N/A                     | N/A                      | N/A                    | N/A                     | N/A      |

Comments: No completion run. Reservoir objective swept and 8-1/2" open hole abandoned.

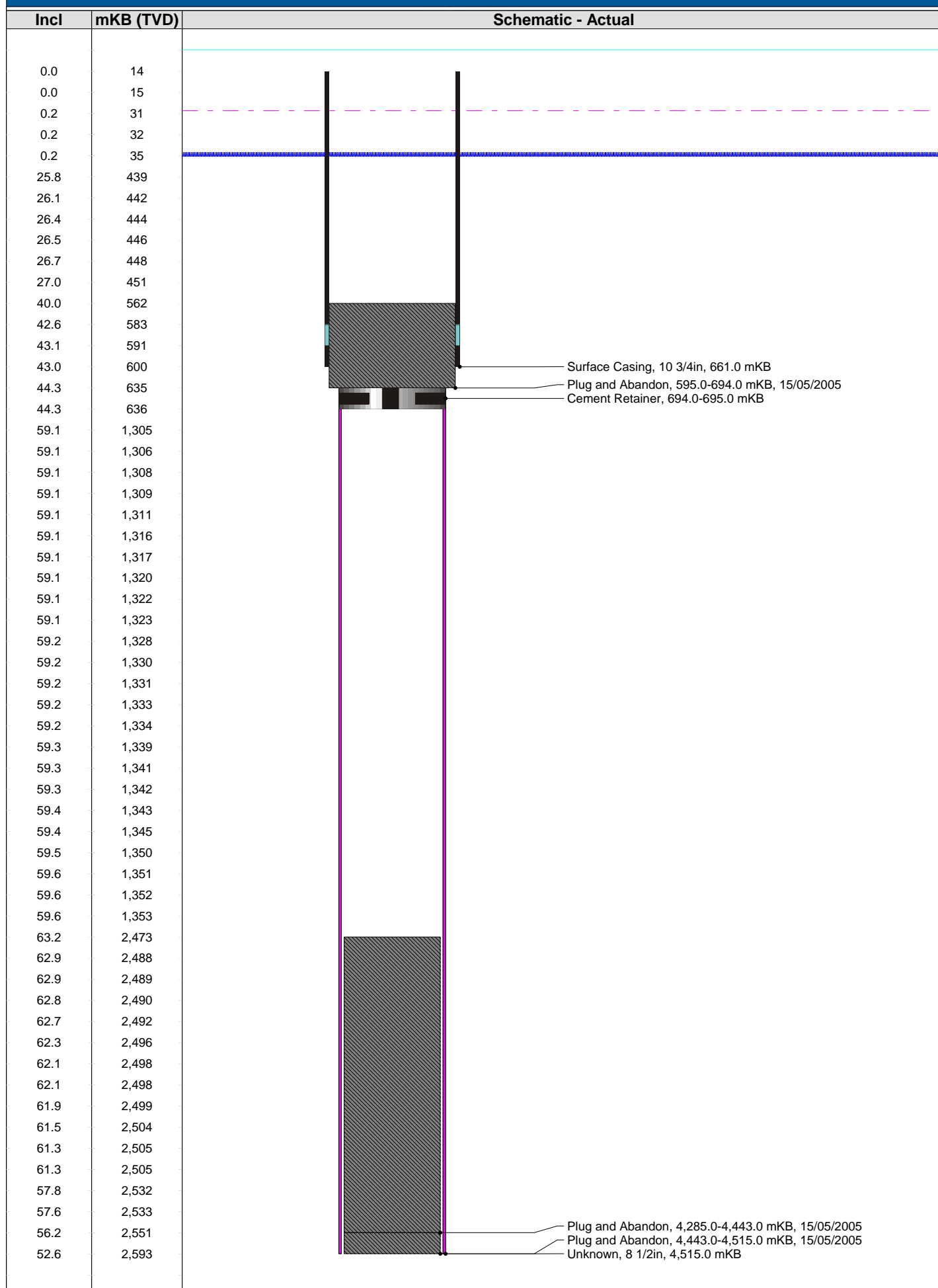
#### ADDITIONAL

|          |   | Upper Interval [m MDRT] | Lower Interval [m MDRT] |
|----------|---|-------------------------|-------------------------|
| Logs Run | Anadrill LWD (GR-Resistivity-Density-Neutron-Caliper) | 670                     | 4,505                   |

Comments: The 8-1/2" hole interval was logged via LWD from below the surface casing shoe to TD. No failures of the LWD suite occurred during the drilling of this well.



# Flounder A10A: Existing Schematic



### III. SAMPLES

#### CUTTINGS

The cuttings sampling programme for Flounder A10A was as follows:

| Interval (mMDRT)  | Formation  | Sampling Interval/Details  |
|---|--|--|
| Surface Casing to 150m above Top of Latrobe (TOL):<br>660 m - 3390 m MDRT | Gippsland Limestone  | 30 m interval<br>Spot samples only                                     |
| 150 m above TOL to Base of Tuna-Flounder Channel:<br>3390 m – 4110 m MDRT | Gippsland Limestone / Lakes Entrance Formation & Latrobe Tuna-Flounder Channel | 10 m interval<br>Three sets of washed and oven dried cuttings.         |
| 4110 m to Total Depth 4515m MDRT  | Latrobe Group below Tuna-Flounder Channel                                      | 5 m sampling interval<br>Three sets of washed and oven dried cuttings. |

Note: Due to high ROP it was not possible to collect 5m samples from the top Latrobe Group as designated in the Well Program, so 5m sampling started at Base of Tuna-Flounder Channel.

Detailed cuttings descriptions for the interval 2520 to 4515 mMDRT (TD) are contained in Appendix 3a.

#### CONVENTIONAL CORING

No conventional cores were cut in FLOUNDER A10A.

#### SIDEWALL CORING

No sidewall core samples were shot in FLOUNDER A10A.

#### IV. LOGS AND SURVEYS

| <b>Survey/Log</b>               | <b>Company</b>        | <b>Top<br/>(m MDRT)</b> | <b>Bottom<br/>(m MDRT)</b> |
|---------------------------------|-----------------------|-------------------------|----------------------------|
| MWD Powerpulse<br>(Directional) | Schlumberger/Anadrill | 702.73                  | 4494.63                    |
| MWD ARC (GR/Resistivity)        | Schlumberger/Anadrill | 670.0                   | 4505.0                     |
| MWD ADN6<br>(Density/Neutron)   | Schlumberger/Anadrill | 670.0                   | 4488.0                     |

## V. FORMATION RESERVOIR TOPS

| Zone                              | m TVDSS        |              |           | m MDRT       | m TVT Gross HC Column |        |
|-----------------------------------|----------------|--------------|-----------|--------------|-----------------------|--------|
|                                   | Predicted Tops | Actual       | Diff.     |              | Predicted             | Actual |
| Top of Lakes Entrance Formation   | 2030           | 2014.5       | 15.5 high | 3473.0       |                       |        |
| TOL (Top of Latrobe)              | 2052           | 2034.1       | 17.9 high | 3512.1       |                       |        |
| Top of P sands                    | 2160           | 2167.4       | 7.4 low   | 3774.5       |                       |        |
| BTFC (Base Tuna Flounder Channel) | 2329           | 2339.7       | 10.7 low  | 4110.5       |                       |        |
| SHCL (Shallow Coal)               | (eroded out)   | (eroded out) | -         | (eroded out) |                       |        |
| MPSB (Mid Paleoc SB)              | -              | 2358.5       | -         | 4148.7       |                       |        |
| MPM Coal (Mid Paleoc Marker)      | 2386           | 2386.8       | 0.8 low   | 4207.7       |                       |        |
| Fault                             | 2426           | 2443.2       | 17.2 low  | 4330.2       |                       |        |
| 63MY (Top of T shale)             | Faulted out    | Faulted out  | -         | Faulted out  |                       |        |
| TEDM (mid T shale marker)         | 2469           | 2478.1       | 9.1 low   | 4400.9       |                       |        |
| T1.05                             | -              | 2494.2       | -         | 4430.7       |                       |        |
| T-1.1 sand top                    | 2497           | 2504.4       | 7.4 low   | 4449.2       | 5m                    | 0m     |
| Estim current OWC                 | 2502           | -            | -         | -            |                       |        |
| MDT1                              | -              | 2517.6       | -         | 4472.3       |                       |        |
| Position of OOWC                  | 2531           | 2531.0       | -         | 4495.3       |                       |        |
| 67MY (Base of T1.1)               | 2539           | Not reached  | -         | Not reached  |                       |        |
| TD (Total Depth)                  | 2561.4         | 2542.9       | 18.5 high | 4515.0       |                       |        |

Drop in gas units at 4485m MDRT (-2525m TVDSS) = Possible OOWC position? (depth adjustment needed?)

## VI. GEOLOGICAL ANALYSIS - FLOUNDER A10A

### Objectives

The Flounder A10A was the first of two Flounder development wells drilled by the Ensco 102 jackup rig during 2005. The rig was demobilised from the Barracouta Platform on 19 April 2005 and cantilevered over the Flounder Platform on April 23, 2005 to initially drill the surface hole of A3A, then it drilled the A10A to TD.

The primary objective of the well was to appraise and develop T-1.1 oil reserves possibly remaining in the eastern end of the southern fault block of Flounder field. Three wells had previously been drilled into the T-1.1 reservoir in the western part of this block, namely A21 in 1986, A20 in 1987, and A11B in 1998. These wells produced a total of 17.3MBO. Subsequently A20 and A21 were abandoned and redrilled to other areas of the field in 2003 and 1999 respectively, leaving A11B as the only well currently draining the T-1.1 in the southern block. The A11B had been producing at a high but consistent water cut (87%) which suggested it was likely to have a long production tail, slowly accessing a distant or downdip oil resource, and this continued performance was viewed as encouraging for the presence of oil in the block. Simulation work also supported the possibility of incompletely drained oil in the eastern end, where the structure was mapped as a low relief area running parallel with the fault. A most likely remaining reserves potential of 1.5MBO was determined from reservoir simulation studies with a LS-HS range of 0.5-4.6MBO related largely to structural uncertainty and sweep.

The A10A well was located about 1700m east of A11B, and about 1200m east of A21. It was recognized that there was substantial risk (and a 25% chance of dry hole was carried in recognition of the strong possibility for the area to be swept), however the potential for undrained oil warranted drilling.

### Results

A10A was kicked off on May 2, 2005 from the 10 3/4" surface casing shoe at 661mMD, and drilled 8 1/2" hole with Petrofree non-aqueous fluid to Total Depth, reached on May 9, 2005 at 4515m MDRT (2542.9m TVDSS).

The Top of Latrobe was intersected at 3512mMDRT (2034.1mTVDSS), which was 18mTVD high to prediction. The Base of Tuna-Flounder Channel, which overlies the Paleocene L. balmei section of coals, shales and sands, was encountered at 2339.7m TVDSS, 10.7mTVD low. Sands within the Channel and within the underlying Paleocene L section were all wet as expected. The Mid Paleocene Marker (MPM) coal was 0.8mTVD low to prediction at 2386.8mTVDSS, where the well is located within Fault Block 6. The well subsequently cut the fault, crossed into the upthrown southern block and intersected the upper part of the T shale as planned. The fault is picked at 4330.2mMDRT (2443.2mTVDSS).

The top of the primary objective T-1.1 reservoir was intersected at 4449mMDRT (2504.4mTVDSS), which was 7.4mTVD low to prediction (this was still above the LS structure case 2510m). The top of the T-1.1 is 26.5m TVD above the field original OWC 2531mTVDSS (which corresponds to 4495.3m MDRT). The T-1.1 sand was of good reservoir quality (22% average porosity), except for some small dolomite zones near the top of the sand, however the reservoir was wet. Mud gas readings indicated that oil had previously been present, but the LWD logs established that oil had been swept from this area, implying sweep was stronger than had been predicted predrill. (A drop in gas readings occurs at 4485m MDRT (2525mTVDSS) which could possibly represent OOWC, however this is 6mTVD above the OOWC 2531mTVDSS carried fieldwide. This could suggest a possible basis for a depth adjustment, however no adjustment has been made at present).

On the basis of the LWD logs obtained while drilling, the TD of the well was shortened slightly. As no net pay was observed in the well, the well was plugged and abandoned as a dry hole. The rig ceased operations on A10A on May 14, 2005 and skidded to the A3A.

**APPENDIX 1a**  
**FLOUNDER A10A**  
**Survey Data**





## Flounder A10A Surveys

|  |   |
|--|---|
| Report Date: May 9, 2005   | Survey / DLS Computation Method: Minimum Curvature / Lubinski |
| Client: Esso Australia Pty Ltd                                     | Vertical Section Azimuth: 186.570°                            |
| Field: Flounder GDA 94   | Vertical Section Origin: S 2.140 m, E 0.050 m                 |
| Structure / Slot: Flounder Rig 19 / 10                             | TVD Reference Datum: RKB                                      |
| Well: 10   | TVD Reference Elevation: 50.5 m relative to MSL               |
| Borehole: FLA A-10A  | Sea Bed / Ground Level Elevation: -94.000 m relative to MSL   |
| UWI/API#:  | Magnetic Declination: 13.293°                                 |
| Survey Name / Date: A10A Actual Surveys / May 1, 2005              | Total Field Strength: 59967.796 nT                            |
| Tort / AHD / DDI / ERD ratio: 179.584° / 3487.37 m / 6.038 / 1.345 | Magnetic Dip: -68.768°  |
| Grid Coordinate System: GDA94/MGA94 Zone 55                        | Declination Date: May 01, 2005                                |
| Location Lat/Long: S 38 18 39.179, E 148 26 21.656                 | Magnetic Declination Model: BGGM 2004                         |
| Location Grid N/E Y/X: N 5758710.960 m, E 625838.750 m             | North Reference: Grid North                                   |
| Grid Convergence Angle: -0.89240990°                               | Total Corr Mag North -> Grid North: +14.185°                  |
| Grid Scale Factor: 0.99979502                                      | Local Coordinates Referenced To: Structure Reference Point    |

| Comments     | Measured Depth<br>(m) | Inclination<br>(deg) | Azimuth<br>(deg) | TVD<br>(m) | Vertical Section<br>(m) | NS<br>(m) | EW<br>(m) | DLS<br>(deg/30 m) |
|--------------|-----------------------|----------------------|------------------|------------|-------------------------|-----------|-----------|-------------------|
| Projected-Up | 0.00                  | 0.00                 | 0.00             | 0.00       | 0.00                    | -2.14     | 0.05      | 0.00              |
| Tie-In       | 9.70                  | 0.00                 | 0.00             | 9.70       | 0.00                    | -2.14     | 0.05      | 0.00              |
|              | 36.31                 | 0.25                 | 247.84           | 36.31      | 0.03                    | -2.16     | 0.00      | 0.28              |
|              | 46.31                 | 0.25                 | 290.93           | 46.31      | 0.03                    | -2.16     | -0.04     | 0.55              |
|              | 56.31                 | 0.25                 | 310.03           | 56.31      | 0.02                    | -2.14     | -0.08     | 0.25              |
|              | 66.31                 | 0.25                 | 298.21           | 66.31      | 0.00                    | -2.12     | -0.12     | 0.15              |
|              | 76.31                 | 0.25                 | 288.77           | 76.31      | -0.02                   | -2.10     | -0.16     | 0.12              |
|              | 86.31                 | 0.50                 | 306.86           | 86.31      | -0.04                   | -2.07     | -0.21     | 0.82              |
|              | 96.31                 | 0.50                 | 287.96           | 96.30      | -0.07                   | -2.03     | -0.29     | 0.49              |
|              | 106.31                | 0.50                 | 328.05           | 106.30     | -0.12                   | -1.98     | -0.35     | 1.03              |
|              | 116.31                | 0.50                 | 321.12           | 116.30     | -0.18                   | -1.90     | -0.40     | 0.18              |
|              | 126.31                | 0.50                 | 293.18           | 126.30     | -0.22                   | -1.85     | -0.47     | 0.72              |
|              | 136.31                | 0.50                 | 272.23           | 136.30     | -0.23                   | -1.83     | -0.56     | 0.55              |
|              | 146.31                | 1.25                 | 263.28           | 146.30     | -0.21                   | -1.85     | -0.71     | 2.28              |
|              | 156.31                | 2.00                 | 259.33           | 156.30     | -0.13                   | -1.89     | -0.99     | 2.27              |
|              | 166.31                | 3.00                 | 256.63           | 166.29     | 0.01                    | -1.98     | -1.41     | 3.02              |
|              | 176.31                | 3.75                 | 255.67           | 176.27     | 0.22                    | -2.13     | -1.98     | 2.26              |
|              | 186.31                | 4.50                 | 254.70           | 186.25     | 0.48                    | -2.31     | -2.68     | 2.26              |
|              | 196.31                | 5.25                 | 254.81           | 196.21     | 0.80                    | -2.53     | -3.50     | 2.25              |
|              | 211.31                | 5.49                 | 249.54           | 211.14     | 1.38                    | -2.96     | -4.83     | 1.10              |
|              | 226.31                | 6.59                 | 237.41           | 226.06     | 2.25                    | -3.68     | -6.23     | 3.36              |
|              | 241.31                | 7.15                 | 233.95           | 240.95     | 3.42                    | -4.69     | -7.71     | 1.39              |
|              | 256.31                | 7.77                 | 226.51           | 255.83     | 4.83                    | -5.94     | -9.20     | 2.29              |
|              | 271.31                | 8.67                 | 225.90           | 270.67     | 6.48                    | -7.42     | -10.75    | 1.81              |
|              | 286.31                | 9.93                 | 228.30           | 285.47     | 8.32                    | -9.07     | -12.53    | 2.64              |
|              | 301.31                | 10.88                | 225.90           | 300.23     | 10.38                   | -10.92    | -14.51    | 2.09              |
|              | 316.31                | 12.18                | 225.07           | 314.92     | 12.72                   | -13.02    | -16.65    | 2.62              |
|              | 331.31                | 13.79                | 221.05           | 329.54     | 15.43                   | -15.48    | -18.94    | 3.69              |
|              | 346.31                | 15.22                | 222.04           | 344.06     | 18.51                   | -18.30    | -21.43    | 2.90              |
|              | 361.31                | 16.80                | 221.56           | 358.48     | 21.89                   | -21.38    | -24.19    | 3.17              |
|              | 376.31                | 18.43                | 222.24           | 372.78     | 25.59                   | -24.76    | -27.22    | 3.29              |
|              | 391.31                | 19.91                | 220.66           | 386.94     | 29.63                   | -28.45    | -30.48    | 3.14              |
|              | 406.31                | 21.32                | 221.77           | 400.98     | 33.97                   | -32.42    | -33.96    | 2.93              |
|              | 421.31                | 23.03                | 222.11           | 414.87     | 38.59                   | -36.63    | -37.75    | 3.43              |
|              | 436.31                | 24.62                | 222.79           | 428.59     | 43.50                   | -41.10    | -41.84    | 3.23              |
|              | 451.31                | 26.17                | 222.86           | 442.14     | 48.69                   | -45.82    | -46.21    | 3.10              |
|              | 466.31                | 27.38                | 223.41           | 455.54     | 54.11                   | -50.75    | -50.83    | 2.47              |
|              | 481.31                | 28.81                | 223.55           | 468.77     | 59.76                   | -55.88    | -55.69    | 2.86              |
|              | 496.31                | 30.17                | 224.06           | 481.82     | 65.64                   | -61.21    | -60.80    | 2.77              |
|              | 511.31                | 31.66                | 224.50           | 494.69     | 71.74                   | -66.72    | -66.18    | 3.01              |
|              | 526.31                | 33.06                | 224.70           | 507.36     | 78.06                   | -72.44    | -71.82    | 2.81              |
|              | 541.31                | 34.84                | 225.02           | 519.81     | 84.63                   | -78.38    | -77.73    | 3.58              |

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|         |       |        |         |         |          |         |      |
|---------|-------|--------|---------|---------|----------|---------|------|
| 556.31  | 36.10 | 225.31 | 532.02  | 91.44   | -84.51   | -83.90  | 2.54 |
| 571.31  | 37.58 | 226.03 | 544.03  | 98.42   | -90.80   | -90.34  | 3.08 |
| 586.31  | 39.12 | 225.87 | 555.79  | 105.61  | -97.27   | -97.02  | 3.09 |
| 601.31  | 40.58 | 226.59 | 567.31  | 113.01  | -103.91  | -103.97 | 3.06 |
| 616.31  | 42.32 | 226.70 | 578.55  | 120.61  | -110.73  | -111.19 | 3.48 |
| 631.31  | 43.06 | 226.72 | 589.57  | 128.38  | -117.70  | -118.59 | 1.48 |
| 641.31  | 43.06 | 226.02 | 596.88  | 133.63  | -122.42  | -123.53 | 1.43 |
| 664.00  | 42.70 | 225.46 | 613.51  | 145.60  | -133.19  | -134.59 | 0.69 |
| 702.73  | 44.71 | 228.45 | 641.51  | 165.97  | -151.44  | -154.15 | 2.23 |
| 731.20  | 48.70 | 227.88 | 661.03  | 181.46  | -165.26  | -169.58 | 4.23 |
| 760.44  | 52.78 | 219.88 | 679.55  | 199.47  | -181.59  | -185.22 | 7.60 |
| 788.98  | 56.51 | 213.60 | 696.07  | 219.58  | -200.24  | -199.10 | 6.66 |
| 817.75  | 58.13 | 207.92 | 711.61  | 241.66  | -221.04  | -211.47 | 5.26 |
| 846.79  | 59.55 | 202.74 | 726.65  | 265.18  | -243.49  | -222.09 | 4.81 |
| 875.96  | 60.10 | 196.73 | 741.32  | 289.72  | -267.21  | -230.59 | 5.37 |
| 904.84  | 60.42 | 190.46 | 755.66  | 314.59  | -291.57  | -236.48 | 5.66 |
| 934.02  | 60.05 | 183.82 | 770.15  | 339.90  | -316.68  | -239.63 | 5.94 |
| 962.88  | 59.69 | 179.43 | 784.65  | 364.76  | -341.62  | -240.34 | 3.96 |
| 992.18  | 59.88 | 179.35 | 799.39  | 389.88  | -366.94  | -240.07 | 0.21 |
| 1021.13 | 60.56 | 179.46 | 813.77  | 414.81  | -392.07  | -239.81 | 0.71 |
| 1050.25 | 61.05 | 178.69 | 827.97  | 440.01  | -417.48  | -239.40 | 0.86 |
| 1079.30 | 61.66 | 178.71 | 841.90  | 465.27  | -442.97  | -238.82 | 0.63 |
| 1108.35 | 61.79 | 179.71 | 855.66  | 490.64  | -468.55  | -238.47 | 0.92 |
| 1137.42 | 61.08 | 180.76 | 869.56  | 516.01  | -494.08  | -238.57 | 1.20 |
| 1166.48 | 59.36 | 181.79 | 883.99  | 541.13  | -519.30  | -239.13 | 2.00 |
| 1195.15 | 57.94 | 182.82 | 898.91  | 565.54  | -543.76  | -240.11 | 1.75 |
| 1224.20 | 57.19 | 183.72 | 914.49  | 590.02  | -568.24  | -241.51 | 1.10 |
| 1253.13 | 56.73 | 183.87 | 930.26  | 614.24  | -592.44  | -243.12 | 0.49 |
| 1282.47 | 55.84 | 184.27 | 946.55  | 638.62  | -616.78  | -244.85 | 0.97 |
| 1311.03 | 55.67 | 184.42 | 962.62  | 662.22  | -640.32  | -246.64 | 0.22 |
| 1340.64 | 56.02 | 184.09 | 979.25  | 686.70  | -664.76  | -248.45 | 0.45 |
| 1369.34 | 56.33 | 183.76 | 995.22  | 710.51  | -688.54  | -250.09 | 0.43 |
| 1397.94 | 56.28 | 183.68 | 1011.09 | 734.28  | -712.29  | -251.63 | 0.09 |
| 1427.45 | 56.30 | 183.60 | 1027.47 | 758.80  | -736.79  | -253.19 | 0.07 |
| 1456.50 | 57.49 | 185.04 | 1043.33 | 783.11  | -761.05  | -255.02 | 1.75 |
| 1485.80 | 59.37 | 186.29 | 1058.67 | 808.07  | -785.89  | -257.49 | 2.21 |
| 1514.80 | 61.08 | 186.65 | 1073.07 | 833.24  | -810.90  | -260.33 | 1.80 |
| 1543.93 | 60.96 | 186.53 | 1087.19 | 858.72  | -836.21  | -263.25 | 0.16 |
| 1573.01 | 61.19 | 186.57 | 1101.25 | 884.17  | -861.50  | -266.16 | 0.24 |
| 1602.02 | 60.63 | 184.95 | 1115.36 | 909.52  | -886.72  | -268.70 | 1.57 |
| 1631.11 | 59.93 | 182.05 | 1129.78 | 934.74  | -911.93  | -270.24 | 2.70 |
| 1659.97 | 59.20 | 180.47 | 1144.40 | 959.52  | -936.81  | -270.79 | 1.61 |
| 1689.09 | 58.80 | 180.32 | 1159.40 | 984.34  | -961.77  | -270.97 | 0.43 |
| 1717.79 | 58.59 | 180.37 | 1174.31 | 1008.71 | -986.29  | -271.11 | 0.22 |
| 1746.85 | 58.55 | 180.42 | 1189.46 | 1033.37 | -1011.09 | -271.28 | 0.06 |
| 1775.97 | 58.35 | 179.86 | 1204.70 | 1058.02 | -1035.90 | -271.34 | 0.53 |
| 1804.95 | 58.26 | 180.88 | 1219.93 | 1082.54 | -1060.56 | -271.50 | 0.90 |
| 1833.89 | 58.39 | 181.38 | 1235.12 | 1107.06 | -1085.18 | -271.99 | 0.46 |
| 1862.77 | 58.53 | 182.70 | 1250.23 | 1131.59 | -1109.78 | -272.87 | 1.18 |
| 1891.34 | 58.82 | 183.08 | 1265.08 | 1155.95 | -1134.15 | -274.10 | 0.46 |
| 1920.40 | 58.74 | 182.94 | 1280.15 | 1180.75 | -1158.97 | -275.40 | 0.15 |
| 1949.24 | 59.10 | 182.71 | 1295.04 | 1205.40 | -1183.64 | -276.62 | 0.43 |
| 1978.13 | 59.13 | 182.69 | 1309.86 | 1230.13 | -1208.41 | -277.79 | 0.04 |
| 2006.46 | 59.13 | 182.64 | 1324.40 | 1254.39 | -1232.70 | -278.92 | 0.05 |
| 2035.70 | 59.27 | 182.53 | 1339.37 | 1279.45 | -1257.79 | -280.05 | 0.17 |
| 2064.50 | 59.66 | 182.74 | 1354.01 | 1304.20 | -1282.57 | -281.19 | 0.45 |
| 2093.95 | 60.15 | 182.80 | 1368.77 | 1329.62 | -1308.02 | -282.42 | 0.50 |
| 2122.58 | 60.31 | 182.75 | 1382.99 | 1354.42 | -1332.84 | -283.62 | 0.17 |
| 2151.51 | 60.65 | 182.92 | 1397.24 | 1379.54 | -1357.98 | -284.87 | 0.38 |
| 2180.24 | 61.02 | 182.66 | 1411.24 | 1404.57 | -1383.04 | -286.09 | 0.45 |
| 2209.23 | 61.21 | 182.41 | 1425.25 | 1429.89 | -1408.40 | -287.21 | 0.30 |
| 2237.99 | 61.47 | 182.30 | 1439.04 | 1455.06 | -1433.61 | -288.25 | 0.29 |
| 2267.16 | 61.66 | 182.22 | 1452.93 | 1480.64 | -1459.25 | -289.26 | 0.21 |

|         |       |        |         |         |          |         |      |
|---------|-------|--------|---------|---------|----------|---------|------|
| 2296.26 | 61.72 | 182.16 | 1466.73 | 1506.18 | -1484.85 | -290.24 | 0.08 |
| 2325.42 | 60.82 | 182.35 | 1480.75 | 1531.68 | -1510.40 | -291.25 | 0.94 |
| 2353.91 | 59.74 | 182.06 | 1494.87 | 1556.35 | -1535.12 | -292.20 | 1.17 |
| 2383.09 | 58.69 | 182.85 | 1509.81 | 1581.35 | -1560.17 | -293.27 | 1.29 |
| 2412.03 | 58.16 | 182.90 | 1524.96 | 1605.96 | -1584.79 | -294.51 | 0.55 |
| 2440.86 | 58.26 | 182.82 | 1540.15 | 1630.41 | -1609.26 | -295.73 | 0.13 |
| 2469.95 | 58.15 | 182.48 | 1555.47 | 1655.08 | -1633.96 | -296.87 | 0.32 |
| 2498.79 | 57.83 | 182.36 | 1570.76 | 1679.47 | -1658.40 | -297.91 | 0.35 |
| 2527.68 | 57.86 | 182.10 | 1586.14 | 1703.86 | -1682.84 | -298.86 | 0.23 |
| 2556.31 | 57.70 | 182.20 | 1601.40 | 1728.01 | -1707.04 | -299.77 | 0.19 |
| 2585.64 | 57.92 | 181.95 | 1617.03 | 1752.75 | -1731.84 | -300.67 | 0.31 |
| 2614.58 | 57.78 | 181.88 | 1632.43 | 1777.17 | -1756.33 | -301.49 | 0.16 |
| 2643.70 | 57.86 | 182.22 | 1647.94 | 1801.74 | -1780.96 | -302.37 | 0.31 |
| 2672.80 | 57.56 | 182.04 | 1663.48 | 1826.27 | -1805.55 | -303.28 | 0.35 |
| 2701.69 | 57.19 | 182.54 | 1679.06 | 1850.53 | -1829.86 | -304.25 | 0.58 |
| 2730.92 | 57.25 | 182.29 | 1694.88 | 1875.04 | -1854.41 | -305.29 | 0.22 |
| 2759.74 | 57.22 | 182.33 | 1710.48 | 1899.21 | -1878.63 | -306.27 | 0.05 |
| 2788.87 | 57.71 | 182.66 | 1726.15 | 1923.71 | -1903.16 | -307.33 | 0.58 |
| 2817.94 | 58.50 | 183.47 | 1741.51 | 1948.34 | -1927.81 | -308.66 | 1.08 |
| 2846.52 | 59.10 | 184.36 | 1756.31 | 1972.76 | -1952.20 | -310.32 | 1.02 |
| 2875.20 | 59.38 | 184.66 | 1770.98 | 1997.39 | -1976.77 | -312.26 | 0.40 |
| 2904.15 | 59.40 | 184.85 | 1785.72 | 2022.29 | -2001.60 | -314.33 | 0.17 |
| 2933.60 | 59.27 | 184.46 | 1800.74 | 2047.61 | -2026.84 | -316.38 | 0.37 |
| 2961.74 | 59.12 | 184.54 | 1815.15 | 2071.77 | -2050.94 | -318.28 | 0.18 |
| 2991.06 | 58.74 | 184.85 | 1830.28 | 2096.87 | -2075.97 | -320.34 | 0.47 |
| 3019.73 | 58.60 | 185.04 | 1845.19 | 2121.35 | -2100.37 | -322.45 | 0.22 |
| 3048.87 | 59.53 | 185.16 | 1860.17 | 2146.33 | -2125.26 | -324.67 | 0.96 |
| 3077.86 | 60.39 | 185.34 | 1874.68 | 2171.42 | -2150.25 | -326.97 | 0.90 |
| 3106.81 | 61.19 | 185.40 | 1888.81 | 2196.68 | -2175.41 | -329.33 | 0.83 |
| 3135.85 | 61.95 | 185.34 | 1902.64 | 2222.22 | -2200.84 | -331.72 | 0.79 |
| 3164.90 | 62.34 | 185.36 | 1916.21 | 2247.89 | -2226.41 | -334.11 | 0.40 |
| 3194.14 | 61.95 | 185.47 | 1929.87 | 2273.74 | -2252.14 | -336.55 | 0.41 |
| 3222.93 | 61.94 | 185.93 | 1943.41 | 2299.15 | -2277.43 | -339.08 | 0.42 |
| 3251.91 | 61.72 | 185.95 | 1957.09 | 2324.69 | -2302.84 | -341.72 | 0.23 |
| 3280.66 | 61.65 | 185.90 | 1970.73 | 2350.00 | -2328.01 | -344.33 | 0.09 |
| 3309.58 | 61.38 | 186.36 | 1984.52 | 2375.42 | -2353.28 | -347.05 | 0.50 |
| 3339.01 | 61.19 | 185.87 | 1998.66 | 2401.23 | -2378.95 | -349.80 | 0.48 |
| 3367.99 | 60.84 | 186.22 | 2012.70 | 2426.58 | -2404.16 | -352.47 | 0.48 |
| 3396.72 | 60.26 | 186.31 | 2026.83 | 2451.59 | -2429.03 | -355.20 | 0.61 |
| 3425.66 | 60.07 | 185.81 | 2041.23 | 2476.70 | -2453.99 | -357.85 | 0.49 |
| 3454.35 | 59.95 | 185.18 | 2055.57 | 2501.54 | -2478.72 | -360.23 | 0.58 |
| 3483.84 | 59.79 | 184.09 | 2070.37 | 2527.03 | -2504.15 | -362.29 | 0.97 |
| 3512.70 | 59.66 | 183.25 | 2084.92 | 2551.92 | -2529.02 | -363.88 | 0.77 |
| 3541.41 | 59.98 | 182.05 | 2099.36 | 2576.68 | -2553.81 | -365.03 | 1.13 |
| 3570.75 | 60.01 | 181.50 | 2114.03 | 2602.00 | -2579.20 | -365.82 | 0.49 |
| 3599.58 | 59.84 | 181.08 | 2128.48 | 2626.84 | -2604.15 | -366.38 | 0.42 |
| 3628.58 | 59.79 | 181.09 | 2143.06 | 2651.80 | -2629.21 | -366.85 | 0.05 |
| 3657.58 | 59.52 | 181.37 | 2157.71 | 2676.72 | -2654.23 | -367.39 | 0.37 |
| 3686.55 | 59.26 | 180.92 | 2172.46 | 2701.54 | -2679.16 | -367.89 | 0.48 |
| 3715.50 | 58.96 | 181.03 | 2187.32 | 2726.26 | -2704.00 | -368.31 | 0.33 |
| 3773.04 | 58.56 | 181.60 | 2217.16 | 2775.25 | -2753.18 | -369.44 | 0.33 |
| 3801.86 | 58.82 | 181.17 | 2232.14 | 2799.77 | -2777.80 | -370.04 | 0.47 |
| 3831.04 | 58.89 | 180.94 | 2247.23 | 2824.63 | -2802.77 | -370.50 | 0.21 |
| 3860.12 | 59.36 | 179.57 | 2262.16 | 2849.44 | -2827.73 | -370.61 | 1.31 |
| 3888.86 | 59.70 | 179.12 | 2276.73 | 2874.01 | -2852.49 | -370.32 | 0.54 |
| 3918.26 | 59.20 | 179.26 | 2291.67 | 2899.12 | -2877.81 | -369.97 | 0.52 |
| 3947.19 | 58.75 | 179.04 | 2306.58 | 2923.71 | -2902.60 | -369.60 | 0.51 |
| 3976.07 | 58.93 | 179.08 | 2321.53 | 2948.21 | -2927.31 | -369.19 | 0.19 |
| 4005.05 | 58.67 | 179.28 | 2336.54 | 2972.79 | -2952.10 | -368.84 | 0.32 |
| 4034.58 | 58.80 | 179.55 | 2351.87 | 2997.83 | -2977.34 | -368.58 | 0.27 |
| 4063.37 | 59.59 | 178.97 | 2366.61 | 3022.36 | -3002.06 | -368.26 | 0.97 |
| 4092.32 | 59.82 | 178.25 | 2381.21 | 3047.12 | -3027.05 | -367.65 | 0.69 |

|         |       |        |         |         |          |         |      |
|---------|-------|--------|---------|---------|----------|---------|------|
| 4121.25 | 60.61 | 178.09 | 2395.58 | 3071.96 | -3052.15 | -366.85 | 0.83 |
| 4150.55 | 61.01 | 178.17 | 2409.87 | 3097.26 | -3077.71 | -366.02 | 0.42 |
| 4179.80 | 61.40 | 179.65 | 2423.96 | 3122.66 | -3103.34 | -365.53 | 1.39 |
| 4208.30 | 61.42 | 181.48 | 2437.60 | 3147.55 | -3128.36 | -365.78 | 1.69 |
| 4237.21 | 61.85 | 183.37 | 2451.34 | 3172.92 | -3153.77 | -366.85 | 1.78 |
| 4265.76 | 63.30 | 183.27 | 2464.49 | 3198.22 | -3179.07 | -368.32 | 1.53 |
| 4294.93 | 63.11 | 183.06 | 2477.64 | 3224.21 | -3205.07 | -369.76 | 0.27 |
| 4324.16 | 62.83 | 183.13 | 2490.92 | 3250.20 | -3231.07 | -371.16 | 0.29 |
| 4353.45 | 61.37 | 182.90 | 2504.63 | 3276.03 | -3256.92 | -372.53 | 1.51 |
| 4382.03 | 59.42 | 182.55 | 2518.75 | 3300.83 | -3281.74 | -373.71 | 2.07 |
| 4410.84 | 57.47 | 182.62 | 2533.82 | 3325.31 | -3306.26 | -374.82 | 2.03 |
| 4440.07 | 56.33 | 182.99 | 2549.78 | 3349.75 | -3330.72 | -376.01 | 1.21 |
| 4468.87 | 54.82 | 183.89 | 2566.06 | 3373.47 | -3354.43 | -377.44 | 1.75 |
| 4494.63 | 53.56 | 185.76 | 2581.14 | 3394.35 | -3375.25 | -379.19 | 2.30 |
| 4515.00 | 52.56 | 187.26 | 2593.38 | 3410.63 | -3391.42 | -381.04 | 2.30 |

Proj to TD

**Survey Type:** Definitive Survey

**Survey Error Model:** SLB ISCWSA version 21 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Prog:**

**MD From ( m )**

0.00

641.31

664.00

**MD To ( m )**

641.31

664.00

4515.00

**EOU Freq**

Act-Stns

Act-Stns

Act-Stns

**Survey Tool Type**

SLB\_CNSG+DPIPE

SLB\_PHOTO-MMS

SLB\_MWD-STD

**APPENDIX 1b**

**FLOUNDER A10A**

**MD-TVD Survey Data Listing**

|                                   |  |
|-----------------------------------|--|
| Report Date:                      | 2 November 2005                            |
| Well:                             | Flounder A10a                              |
| Structure / Slot:                 | ENSCO Rig 102                              |
| TVD Reference Datum:              | Drillsite Elevation                        |
| TVD Reference Elevation:          | 92.35 m relative to MSL                    |
| Sea Bed / Ground Level Elevation: | 50.52 m relative to MSL                    |
| Grid Coordinate System:           | GDA94/MGA94 Zone 55                        |
| Location Lat/Long:                | S -38 18' 39.178800", E 148 26' 21.656400" |
| Location Grid N/E:                | N 5758710.9627 m, E 625838.7479 m          |
| Survey Azimuth Reference:         | Grid North                                 |

| MD     | Angle | Direction | TVDRT  | TVDSS   | Dnorth | Deast | Northing   | Easting   |
|--------|-------|-----------|--------|---------|--------|-------|------------|-----------|
| 0.00   | 0.00  | 360.00    | 0.00   | 50.52   | 0.00   | 0.00  | 5758710.96 | 625838.75 |
| 5.00   | 0.00  | 0.00      | 5.00   | 45.52   | 0.00   | 0.00  | 5758710.96 | 625838.75 |
| 10.00  | 0.00  | 358.74    | 10.00  | 40.52   | -0.00  | -0.00 | 5758710.96 | 625838.75 |
| 15.00  | 0.05  | 337.66    | 15.00  | 35.52   | -0.00  | -0.01 | 5758710.96 | 625838.74 |
| 20.00  | 0.10  | 316.59    | 20.00  | 30.52   | -0.01  | -0.02 | 5758710.95 | 625838.73 |
| 25.00  | 0.14  | 295.51    | 25.00  | 25.52   | -0.01  | -0.03 | 5758710.95 | 625838.72 |
| 30.00  | 0.19  | 274.44    | 30.00  | 20.52   | -0.02  | -0.04 | 5758710.94 | 625838.71 |
| 35.00  | 0.24  | 253.36    | 35.00  | 15.52   | -0.02  | -0.05 | 5758710.94 | 625838.70 |
| 40.00  | 0.25  | 263.74    | 40.00  | 10.52   | -0.02  | -0.07 | 5758710.94 | 625838.69 |
| 45.00  | 0.25  | 285.29    | 45.00  | 5.52    | -0.02  | -0.09 | 5758710.94 | 625838.67 |
| 50.00  | 0.25  | 297.98    | 50.00  | 0.52    | -0.01  | -0.11 | 5758710.95 | 625838.65 |
| 55.00  | 0.25  | 307.53    | 55.00  | -4.48   | -0.00  | -0.13 | 5758710.96 | 625838.63 |
| 60.00  | 0.25  | 305.67    | 60.00  | -9.48   | 0.01   | -0.14 | 5758710.97 | 625838.61 |
| 65.00  | 0.25  | 299.76    | 65.00  | -14.48  | 0.02   | -0.16 | 5758710.98 | 625838.59 |
| 70.00  | 0.25  | 294.73    | 70.00  | -19.48  | 0.03   | -0.18 | 5758710.99 | 625838.57 |
| 75.00  | 0.25  | 290.01    | 75.00  | -24.48  | 0.04   | -0.20 | 5758711.00 | 625838.55 |
| 80.00  | 0.34  | 295.45    | 80.00  | -29.48  | 0.05   | -0.23 | 5758711.01 | 625838.53 |
| 85.00  | 0.47  | 304.49    | 85.00  | -34.48  | 0.07   | -0.26 | 5758711.03 | 625838.50 |
| 90.00  | 0.50  | 299.89    | 90.00  | -39.48  | 0.09   | -0.29 | 5758711.05 | 625838.46 |
| 95.00  | 0.50  | 290.44    | 95.00  | -44.48  | 0.11   | -0.33 | 5758711.07 | 625838.42 |
| 100.00 | 0.50  | 302.75    | 100.00 | -49.48  | 0.13   | -0.36 | 5758711.09 | 625838.39 |
| 105.00 | 0.50  | 322.80    | 105.00 | -54.48  | 0.16   | -0.40 | 5758711.12 | 625838.36 |
| 110.00 | 0.50  | 325.49    | 110.00 | -59.48  | 0.19   | -0.42 | 5758711.15 | 625838.33 |
| 115.00 | 0.50  | 322.03    | 115.00 | -64.48  | 0.23   | -0.45 | 5758711.19 | 625838.31 |
| 120.00 | 0.50  | 310.81    | 120.00 | -69.48  | 0.25   | -0.48 | 5758711.22 | 625838.27 |
| 125.00 | 0.50  | 296.84    | 125.00 | -74.48  | 0.28   | -0.51 | 5758711.24 | 625838.24 |
| 130.00 | 0.50  | 285.45    | 130.00 | -79.48  | 0.29   | -0.55 | 5758711.25 | 625838.20 |
| 135.00 | 0.50  | 274.97    | 135.00 | -84.48  | 0.30   | -0.59 | 5758711.26 | 625838.16 |
| 140.00 | 0.78  | 268.93    | 140.00 | -89.48  | 0.30   | -0.66 | 5758711.26 | 625838.09 |
| 145.00 | 1.15  | 264.45    | 145.00 | -94.48  | 0.30   | -0.74 | 5758711.26 | 625838.02 |
| 150.00 | 1.53  | 261.82    | 149.99 | -99.47  | 0.28   | -0.86 | 5758711.24 | 625837.89 |
| 155.00 | 1.90  | 259.85    | 154.99 | -104.47 | 0.26   | -1.00 | 5758711.22 | 625837.75 |
| 160.00 | 2.37  | 258.33    | 159.99 | -109.47 | 0.22   | -1.19 | 5758711.18 | 625837.56 |
| 165.00 | 2.87  | 256.98    | 164.98 | -114.46 | 0.17   | -1.41 | 5758711.13 | 625837.35 |
| 170.00 | 3.28  | 256.28    | 169.98 | -119.46 | 0.10   | -1.67 | 5758711.07 | 625837.08 |
| 175.00 | 3.65  | 255.80    | 174.97 | -124.45 | 0.03   | -1.96 | 5758710.99 | 625836.79 |
| 180.00 | 4.03  | 255.31    | 179.96 | -129.44 | -0.05  | -2.29 | 5758710.91 | 625836.46 |
| 185.00 | 4.40  | 254.83    | 184.94 | -134.42 | -0.15  | -2.64 | 5758710.82 | 625836.12 |
| 190.00 | 4.78  | 254.74    | 189.93 | -139.41 | -0.25  | -3.03 | 5758710.71 | 625835.72 |
| 195.00 | 5.15  | 254.80    | 194.91 | -144.39 | -0.36  | -3.44 | 5758710.60 | 625835.31 |
| 200.00 | 5.31  | 253.51    | 199.89 | -149.37 | -0.50  | -3.88 | 5758710.46 | 625834.88 |
| 205.00 | 5.39  | 251.76    | 204.86 | -154.34 | -0.64  | -4.32 | 5758710.32 | 625834.43 |
| 210.00 | 5.47  | 250.00    | 209.84 | -159.32 | -0.79  | -4.77 | 5758710.18 | 625833.99 |
| 215.00 | 5.76  | 246.56    | 214.82 | -164.30 | -1.00  | -5.23 | 5758709.96 | 625833.53 |
| 220.00 | 6.13  | 242.51    | 219.79 | -169.27 | -1.24  | -5.69 | 5758709.72 | 625833.06 |
| 225.00 | 6.49  | 238.47    | 224.76 | -174.24 | -1.48  | -6.16 | 5758709.49 | 625832.59 |



| MD     | Angle | Direction | TVDRT  | TVDSS   | Dnorth | Deast  | Northing   | Easting   |
|--------|-------|-----------|--------|---------|--------|--------|------------|-----------|
| 230.00 | 6.73  | 236.56    | 229.73 | -179.21 | -1.79  | -6.65  | 5758709.17 | 625832.11 |
| 235.00 | 6.91  | 235.41    | 234.69 | -184.17 | -2.12  | -7.14  | 5758708.84 | 625831.61 |
| 240.00 | 7.10  | 234.25    | 239.66 | -189.14 | -2.46  | -7.63  | 5758708.50 | 625831.12 |
| 245.00 | 7.30  | 232.12    | 244.62 | -194.10 | -2.86  | -8.13  | 5758708.10 | 625830.63 |
| 250.00 | 7.51  | 229.64    | 249.57 | -199.05 | -3.27  | -8.63  | 5758707.69 | 625830.13 |
| 255.00 | 7.72  | 227.16    | 254.53 | -204.01 | -3.69  | -9.12  | 5758707.27 | 625829.63 |
| 260.00 | 7.99  | 226.36    | 259.48 | -208.96 | -4.16  | -9.63  | 5758706.80 | 625829.12 |
| 265.00 | 8.29  | 226.16    | 264.43 | -213.91 | -4.66  | -10.15 | 5758706.30 | 625828.61 |
| 270.00 | 8.59  | 225.95    | 269.38 | -218.86 | -5.15  | -10.66 | 5758705.81 | 625828.09 |
| 275.00 | 8.98  | 226.49    | 274.32 | -223.80 | -5.69  | -11.24 | 5758705.27 | 625827.52 |
| 280.00 | 9.40  | 227.29    | 279.25 | -228.73 | -6.24  | -11.83 | 5758704.72 | 625826.92 |
| 285.00 | 9.82  | 228.09    | 284.19 | -233.67 | -6.79  | -12.42 | 5758704.18 | 625826.33 |
| 290.00 | 10.16 | 227.71    | 289.11 | -238.59 | -7.38  | -13.07 | 5758703.58 | 625825.69 |
| 295.00 | 10.48 | 226.91    | 294.02 | -243.50 | -8.00  | -13.73 | 5758702.96 | 625825.03 |
| 300.00 | 10.80 | 226.11    | 298.94 | -248.42 | -8.61  | -14.39 | 5758702.35 | 625824.37 |
| 305.00 | 11.20 | 225.70    | 303.85 | -253.33 | -9.29  | -15.09 | 5758701.67 | 625823.67 |
| 310.00 | 11.63 | 225.42    | 308.75 | -258.23 | -9.99  | -15.80 | 5758700.97 | 625822.96 |
| 315.00 | 12.07 | 225.14    | 313.64 | -263.12 | -10.69 | -16.51 | 5758700.27 | 625822.24 |
| 320.00 | 12.58 | 224.08    | 318.52 | -268.00 | -11.48 | -17.26 | 5758699.48 | 625821.49 |
| 325.00 | 13.11 | 222.74    | 323.40 | -272.88 | -12.31 | -18.03 | 5758698.65 | 625820.73 |
| 330.00 | 13.65 | 221.40    | 328.27 | -277.75 | -13.13 | -18.79 | 5758697.83 | 625819.96 |
| 335.00 | 14.14 | 221.29    | 333.12 | -282.60 | -14.04 | -19.60 | 5758696.93 | 625819.15 |
| 340.00 | 14.62 | 221.62    | 337.96 | -287.44 | -14.97 | -20.44 | 5758695.99 | 625818.32 |
| 345.00 | 15.10 | 221.95    | 342.80 | -292.28 | -15.91 | -21.27 | 5758695.05 | 625817.49 |
| 350.00 | 15.61 | 221.92    | 347.61 | -297.09 | -16.91 | -22.16 | 5758694.05 | 625816.59 |
| 355.00 | 16.14 | 221.76    | 352.42 | -301.90 | -17.94 | -23.08 | 5758693.02 | 625815.67 |
| 360.00 | 16.66 | 221.60    | 357.22 | -306.70 | -18.97 | -24.00 | 5758691.99 | 625814.75 |
| 365.00 | 17.20 | 221.73    | 362.00 | -311.48 | -20.07 | -24.99 | 5758690.89 | 625813.77 |
| 370.00 | 17.74 | 221.95    | 366.77 | -316.25 | -21.20 | -26.00 | 5758689.77 | 625812.76 |
| 375.00 | 18.29 | 222.18    | 371.53 | -321.01 | -22.32 | -27.01 | 5758688.64 | 625811.75 |
| 380.00 | 18.79 | 221.85    | 376.27 | -325.75 | -23.53 | -28.07 | 5758687.44 | 625810.68 |
| 385.00 | 19.29 | 221.32    | 380.99 | -330.47 | -24.76 | -29.16 | 5758686.20 | 625809.59 |
| 390.00 | 19.78 | 220.80    | 385.71 | -335.19 | -25.99 | -30.25 | 5758684.97 | 625808.51 |
| 395.00 | 20.26 | 220.93    | 390.40 | -339.88 | -27.29 | -31.39 | 5758683.67 | 625807.37 |
| 400.00 | 20.73 | 221.30    | 395.08 | -344.56 | -28.61 | -32.55 | 5758682.35 | 625806.21 |
| 405.00 | 21.20 | 221.67    | 399.76 | -349.24 | -29.94 | -33.71 | 5758681.03 | 625805.05 |
| 410.00 | 21.74 | 221.85    | 404.40 | -353.88 | -31.32 | -34.94 | 5758679.64 | 625803.81 |
| 415.00 | 22.31 | 221.97    | 409.03 | -358.51 | -32.72 | -36.20 | 5758678.24 | 625802.55 |
| 420.00 | 22.88 | 222.08    | 413.66 | -363.14 | -34.12 | -37.47 | 5758676.84 | 625801.29 |
| 425.00 | 23.42 | 222.28    | 418.25 | -367.73 | -35.59 | -38.80 | 5758675.37 | 625799.95 |
| 430.00 | 23.95 | 222.50    | 422.83 | -372.31 | -37.08 | -40.17 | 5758673.88 | 625798.59 |
| 435.00 | 24.48 | 222.73    | 427.40 | -376.88 | -38.57 | -41.53 | 5758672.39 | 625797.22 |
| 440.00 | 25.00 | 222.81    | 431.93 | -381.41 | -40.12 | -42.96 | 5758670.84 | 625795.79 |
| 445.00 | 25.52 | 222.83    | 436.45 | -385.93 | -41.70 | -44.42 | 5758669.27 | 625794.33 |
| 450.00 | 26.03 | 222.85    | 440.97 | -390.45 | -43.27 | -45.88 | 5758667.69 | 625792.88 |
| 455.00 | 26.47 | 223.00    | 445.44 | -394.92 | -44.89 | -47.40 | 5758666.07 | 625791.36 |
| 460.00 | 26.87 | 223.18    | 449.91 | -399.39 | -46.54 | -48.94 | 5758664.43 | 625789.82 |
| 465.00 | 27.27 | 223.36    | 454.37 | -403.85 | -48.18 | -50.48 | 5758662.78 | 625788.28 |
| 470.00 | 27.73 | 223.44    | 458.80 | -408.28 | -49.87 | -52.08 | 5758661.09 | 625786.68 |
| 475.00 | 28.21 | 223.49    | 463.21 | -412.69 | -51.58 | -53.70 | 5758659.38 | 625785.06 |
| 480.00 | 28.69 | 223.54    | 467.62 | -417.10 | -53.29 | -55.32 | 5758657.67 | 625783.44 |
| 485.00 | 29.14 | 223.68    | 471.98 | -421.46 | -55.05 | -57.00 | 5758655.91 | 625781.76 |
| 490.00 | 29.60 | 223.85    | 476.34 | -425.82 | -56.82 | -58.70 | 5758654.14 | 625780.05 |
| 495.00 | 30.05 | 224.02    | 480.69 | -430.17 | -58.60 | -60.41 | 5758652.36 | 625778.35 |
| 500.00 | 30.54 | 224.17    | 484.99 | -434.47 | -60.42 | -62.18 | 5758650.54 | 625776.58 |
| 505.00 | 31.03 | 224.31    | 489.28 | -438.76 | -62.26 | -63.97 | 5758648.70 | 625774.78 |
| 510.00 | 31.53 | 224.46    | 493.57 | -443.05 | -64.10 | -65.76 | 5758646.86 | 625772.99 |
| 515.00 | 32.00 | 224.55    | 497.81 | -447.29 | -65.99 | -67.62 | 5758644.97 | 625771.13 |

| MD     | Angle | Direction | TVDRT  | TVDSS   | Dnorth  | Deast   | Northing   | Easting   |
|--------|-------|-----------|--------|---------|---------|---------|------------|-----------|
| 520.00 | 32.47 | 224.62    | 502.04 | -451.52 | -67.89  | -69.50  | 5758643.07 | 625769.26 |
| 525.00 | 32.94 | 224.68    | 506.26 | -455.74 | -69.80  | -71.38  | 5758641.16 | 625767.38 |
| 530.00 | 33.50 | 224.78    | 510.43 | -459.91 | -71.76  | -73.32  | 5758639.20 | 625765.43 |
| 535.00 | 34.09 | 224.89    | 514.58 | -464.06 | -73.74  | -75.29  | 5758637.22 | 625763.46 |
| 540.00 | 34.68 | 224.99    | 518.72 | -468.20 | -75.72  | -77.26  | 5758635.25 | 625761.49 |
| 545.00 | 35.15 | 225.09    | 522.82 | -472.30 | -77.74  | -79.30  | 5758633.22 | 625759.46 |
| 550.00 | 35.57 | 225.19    | 526.89 | -476.37 | -79.79  | -81.36  | 5758631.17 | 625757.40 |
| 555.00 | 35.99 | 225.28    | 530.96 | -480.44 | -81.84  | -83.41  | 5758629.13 | 625755.34 |
| 560.00 | 36.46 | 225.49    | 534.98 | -484.46 | -83.92  | -85.53  | 5758627.04 | 625753.22 |
| 565.00 | 36.96 | 225.73    | 538.98 | -488.46 | -86.01  | -87.68  | 5758624.95 | 625751.07 |
| 570.00 | 37.45 | 225.97    | 542.98 | -492.46 | -88.11  | -89.82  | 5758622.86 | 625748.93 |
| 575.00 | 37.96 | 225.99    | 546.92 | -496.40 | -90.25  | -92.03  | 5758620.71 | 625746.72 |
| 580.00 | 38.47 | 225.94    | 550.85 | -500.33 | -92.40  | -94.26  | 5758618.56 | 625744.49 |
| 585.00 | 38.99 | 225.88    | 554.77 | -504.25 | -94.56  | -96.49  | 5758616.40 | 625742.26 |
| 590.00 | 39.48 | 226.05    | 558.63 | -508.11 | -96.76  | -98.78  | 5758614.20 | 625739.97 |
| 595.00 | 39.97 | 226.29    | 562.47 | -511.95 | -98.98  | -101.10 | 5758611.98 | 625737.66 |
| 600.00 | 40.45 | 226.53    | 566.30 | -515.78 | -101.19 | -103.41 | 5758609.77 | 625735.34 |
| 605.00 | 41.01 | 226.62    | 570.07 | -519.55 | -103.45 | -105.79 | 5758607.51 | 625732.96 |
| 610.00 | 41.59 | 226.65    | 573.82 | -523.30 | -105.72 | -108.20 | 5758605.24 | 625730.56 |
| 615.00 | 42.17 | 226.69    | 577.57 | -527.05 | -108.00 | -110.60 | 5758602.97 | 625728.15 |
| 620.00 | 42.50 | 226.70    | 581.26 | -530.74 | -110.31 | -113.06 | 5758600.66 | 625725.70 |
| 625.00 | 42.75 | 226.71    | 584.94 | -534.42 | -112.63 | -115.52 | 5758598.33 | 625723.23 |
| 630.00 | 43.00 | 226.72    | 588.61 | -538.09 | -114.96 | -117.99 | 5758596.01 | 625720.76 |
| 635.00 | 43.06 | 226.46    | 592.27 | -541.75 | -117.30 | -120.46 | 5758593.66 | 625718.29 |
| 640.00 | 43.06 | 226.11    | 595.93 | -545.41 | -119.66 | -122.93 | 5758591.30 | 625715.82 |
| 645.00 | 43.00 | 225.93    | 599.59 | -549.07 | -122.03 | -125.38 | 5758588.93 | 625713.38 |
| 650.00 | 42.92 | 225.81    | 603.25 | -552.73 | -124.40 | -127.82 | 5758586.56 | 625710.94 |
| 655.00 | 42.84 | 225.68    | 606.92 | -556.40 | -126.78 | -130.25 | 5758584.18 | 625708.50 |
| 660.00 | 42.76 | 225.56    | 610.58 | -560.06 | -129.15 | -132.69 | 5758581.81 | 625706.07 |
| 665.00 | 42.75 | 225.54    | 614.23 | -563.71 | -131.52 | -135.14 | 5758579.44 | 625703.61 |
| 670.00 | 43.01 | 225.92    | 617.85 | -567.33 | -133.88 | -137.67 | 5758577.08 | 625701.09 |
| 675.00 | 43.27 | 226.31    | 621.46 | -570.94 | -136.23 | -140.19 | 5758574.73 | 625698.56 |
| 680.00 | 43.53 | 226.70    | 625.08 | -574.56 | -138.59 | -142.72 | 5758572.37 | 625696.04 |
| 685.00 | 43.79 | 227.08    | 628.69 | -578.17 | -140.95 | -145.24 | 5758570.01 | 625693.51 |
| 690.00 | 44.05 | 227.47    | 632.31 | -581.79 | -143.30 | -147.77 | 5758567.66 | 625690.99 |
| 695.00 | 44.31 | 227.85    | 635.92 | -585.40 | -145.66 | -150.29 | 5758565.30 | 625688.46 |
| 700.00 | 44.57 | 228.24    | 639.54 | -589.02 | -148.02 | -152.82 | 5758562.95 | 625685.93 |
| 705.00 | 45.03 | 228.40    | 643.07 | -592.55 | -150.40 | -155.43 | 5758560.56 | 625683.33 |
| 710.00 | 45.73 | 228.30    | 646.49 | -595.97 | -152.83 | -158.14 | 5758558.13 | 625680.62 |
| 715.00 | 46.43 | 228.20    | 649.92 | -599.40 | -155.26 | -160.85 | 5758555.70 | 625677.90 |
| 720.00 | 47.13 | 228.10    | 653.35 | -602.83 | -157.69 | -163.56 | 5758553.28 | 625675.19 |
| 725.00 | 47.83 | 228.00    | 656.78 | -606.26 | -160.11 | -166.27 | 5758550.85 | 625672.48 |
| 730.00 | 48.53 | 227.90    | 660.21 | -609.69 | -162.54 | -168.98 | 5758548.42 | 625669.77 |
| 735.00 | 49.23 | 226.84    | 663.44 | -612.92 | -165.24 | -171.66 | 5758545.72 | 625667.09 |
| 740.00 | 49.93 | 225.47    | 666.60 | -616.08 | -168.04 | -174.34 | 5758542.93 | 625664.42 |
| 745.00 | 50.63 | 224.10    | 669.77 | -619.25 | -170.83 | -177.01 | 5758540.13 | 625661.74 |
| 750.00 | 51.32 | 222.74    | 672.94 | -622.42 | -173.62 | -179.68 | 5758537.34 | 625659.07 |
| 755.00 | 52.02 | 221.37    | 676.10 | -625.58 | -176.41 | -182.36 | 5758534.55 | 625656.40 |
| 760.00 | 52.72 | 220.00    | 679.27 | -628.75 | -179.20 | -185.03 | 5758531.76 | 625653.72 |
| 765.00 | 53.38 | 218.88    | 682.19 | -631.67 | -182.43 | -187.48 | 5758528.54 | 625651.27 |
| 770.00 | 54.03 | 217.78    | 685.08 | -634.56 | -185.69 | -189.92 | 5758525.27 | 625648.84 |
| 775.00 | 54.68 | 216.68    | 687.98 | -637.46 | -188.96 | -192.35 | 5758522.00 | 625646.40 |
| 780.00 | 55.34 | 215.58    | 690.87 | -640.35 | -192.23 | -194.78 | 5758518.73 | 625643.97 |
| 785.00 | 55.99 | 214.48    | 693.77 | -643.25 | -195.50 | -197.21 | 5758515.46 | 625641.54 |
| 790.00 | 56.57 | 213.40    | 696.62 | -646.10 | -198.84 | -199.59 | 5758512.13 | 625639.16 |
| 795.00 | 56.85 | 212.41    | 699.32 | -648.80 | -202.45 | -201.74 | 5758508.51 | 625637.02 |
| 800.00 | 57.13 | 211.42    | 702.02 | -651.50 | -206.06 | -203.89 | 5758504.90 | 625634.87 |
| 805.00 | 57.41 | 210.44    | 704.73 | -654.21 | -209.68 | -206.04 | 5758501.28 | 625632.72 |

| MD      | Angle | Direction | TVDRT  | TVDSS   | Dnorth  | Deast   | Northing   | Easting   |
|---------|-------|-----------|--------|---------|---------|---------|------------|-----------|
| 810.00  | 57.69 | 209.45    | 707.43 | -656.91 | -213.29 | -208.19 | 5758497.67 | 625630.57 |
| 815.00  | 57.98 | 208.46    | 710.13 | -659.61 | -216.91 | -210.34 | 5758494.05 | 625628.42 |
| 820.00  | 58.24 | 207.52    | 712.78 | -662.26 | -220.64 | -212.34 | 5758490.32 | 625626.41 |
| 825.00  | 58.48 | 206.63    | 715.37 | -664.85 | -224.50 | -214.17 | 5758486.46 | 625624.58 |
| 830.00  | 58.73 | 205.73    | 717.96 | -667.44 | -228.37 | -216.00 | 5758482.59 | 625622.76 |
| 835.00  | 58.97 | 204.84    | 720.54 | -670.02 | -232.23 | -217.83 | 5758478.73 | 625620.93 |
| 840.00  | 59.22 | 203.95    | 723.13 | -672.61 | -236.10 | -219.65 | 5758474.86 | 625619.10 |
| 845.00  | 59.46 | 203.06    | 725.72 | -675.20 | -239.97 | -221.48 | 5758471.00 | 625617.27 |
| 850.00  | 59.61 | 202.08    | 728.26 | -677.74 | -243.96 | -223.07 | 5758467.00 | 625615.68 |
| 855.00  | 59.70 | 201.05    | 730.78 | -680.26 | -248.03 | -224.53 | 5758462.93 | 625614.22 |
| 860.00  | 59.80 | 200.02    | 733.29 | -682.77 | -252.09 | -225.99 | 5758458.87 | 625612.77 |
| 865.00  | 59.89 | 198.99    | 735.81 | -685.29 | -256.16 | -227.45 | 5758454.80 | 625611.31 |
| 870.00  | 59.99 | 197.96    | 738.32 | -687.80 | -260.22 | -228.90 | 5758450.74 | 625609.85 |
| 875.00  | 60.08 | 196.93    | 740.84 | -690.32 | -264.29 | -230.36 | 5758446.67 | 625608.39 |
| 880.00  | 60.14 | 195.85    | 743.32 | -692.80 | -268.48 | -231.47 | 5758442.48 | 625607.29 |
| 885.00  | 60.20 | 194.77    | 745.81 | -695.29 | -272.70 | -232.48 | 5758438.27 | 625606.27 |
| 890.00  | 60.26 | 193.68    | 748.29 | -697.77 | -276.91 | -233.50 | 5758434.05 | 625605.25 |
| 895.00  | 60.31 | 192.60    | 750.77 | -700.25 | -281.13 | -234.52 | 5758429.83 | 625604.23 |
| 900.00  | 60.37 | 191.51    | 753.25 | -702.73 | -285.35 | -235.54 | 5758425.62 | 625603.21 |
| 905.00  | 60.42 | 190.42    | 755.74 | -705.22 | -289.57 | -236.55 | 5758421.40 | 625602.21 |
| 910.00  | 60.35 | 189.29    | 758.22 | -707.70 | -293.87 | -237.09 | 5758417.09 | 625601.67 |
| 915.00  | 60.29 | 188.15    | 760.70 | -710.18 | -298.17 | -237.63 | 5758412.79 | 625601.13 |
| 920.00  | 60.23 | 187.01    | 763.19 | -712.67 | -302.47 | -238.17 | 5758408.49 | 625600.59 |
| 925.00  | 60.16 | 185.87    | 765.67 | -715.15 | -306.78 | -238.71 | 5758404.18 | 625600.05 |
| 930.00  | 60.10 | 184.73    | 768.16 | -717.64 | -311.08 | -239.24 | 5758399.88 | 625599.51 |
| 935.00  | 60.04 | 183.67    | 770.65 | -720.13 | -315.39 | -239.70 | 5758395.57 | 625599.05 |
| 940.00  | 59.98 | 182.91    | 773.16 | -722.64 | -319.71 | -239.83 | 5758391.25 | 625598.93 |
| 945.00  | 59.91 | 182.15    | 775.67 | -725.15 | -324.03 | -239.95 | 5758386.93 | 625598.81 |
| 950.00  | 59.85 | 181.39    | 778.18 | -727.66 | -328.35 | -240.07 | 5758382.61 | 625598.68 |
| 955.00  | 59.79 | 180.63    | 780.69 | -730.17 | -332.67 | -240.19 | 5758378.29 | 625598.56 |
| 960.00  | 59.73 | 179.87    | 783.20 | -732.68 | -336.99 | -240.32 | 5758373.97 | 625598.44 |
| 965.00  | 59.70 | 179.42    | 785.71 | -735.19 | -341.31 | -240.37 | 5758369.65 | 625598.39 |
| 970.00  | 59.74 | 179.41    | 788.23 | -737.71 | -345.63 | -240.32 | 5758365.33 | 625598.43 |
| 975.00  | 59.77 | 179.40    | 790.75 | -740.23 | -349.95 | -240.28 | 5758361.01 | 625598.48 |
| 980.00  | 59.80 | 179.38    | 793.26 | -742.74 | -354.27 | -240.23 | 5758356.69 | 625598.52 |
| 985.00  | 59.83 | 179.37    | 795.78 | -745.26 | -358.59 | -240.18 | 5758352.37 | 625598.57 |
| 990.00  | 59.87 | 179.36    | 798.29 | -747.77 | -362.92 | -240.14 | 5758348.05 | 625598.62 |
| 995.00  | 59.95 | 179.36    | 800.79 | -750.27 | -367.25 | -240.09 | 5758343.72 | 625598.66 |
| 1000.00 | 60.06 | 179.38    | 803.28 | -752.76 | -371.59 | -240.05 | 5758339.38 | 625598.71 |
| 1005.00 | 60.18 | 179.40    | 805.76 | -755.24 | -375.93 | -240.00 | 5758335.04 | 625598.75 |
| 1010.00 | 60.30 | 179.42    | 808.24 | -757.72 | -380.26 | -239.96 | 5758330.70 | 625598.80 |
| 1015.00 | 60.42 | 179.44    | 810.73 | -760.21 | -384.60 | -239.91 | 5758326.36 | 625598.84 |
| 1020.00 | 60.53 | 179.46    | 813.21 | -762.69 | -388.94 | -239.87 | 5758322.02 | 625598.89 |
| 1025.00 | 60.63 | 179.36    | 815.66 | -765.14 | -393.30 | -239.80 | 5758317.66 | 625598.95 |
| 1030.00 | 60.71 | 179.23    | 818.10 | -767.58 | -397.67 | -239.73 | 5758313.30 | 625599.02 |
| 1035.00 | 60.79 | 179.09    | 820.54 | -770.02 | -402.03 | -239.66 | 5758308.93 | 625599.09 |
| 1040.00 | 60.88 | 178.96    | 822.97 | -772.45 | -406.39 | -239.59 | 5758304.57 | 625599.16 |
| 1045.00 | 60.96 | 178.83    | 825.41 | -774.89 | -410.76 | -239.52 | 5758300.20 | 625599.23 |
| 1050.00 | 61.05 | 178.70    | 827.85 | -777.33 | -415.12 | -239.45 | 5758295.84 | 625599.30 |
| 1055.00 | 61.15 | 178.69    | 830.25 | -779.73 | -419.51 | -239.35 | 5758291.45 | 625599.40 |
| 1060.00 | 61.25 | 178.70    | 832.65 | -782.13 | -423.90 | -239.25 | 5758287.07 | 625599.50 |
| 1065.00 | 61.36 | 178.70    | 835.04 | -784.52 | -428.28 | -239.15 | 5758282.68 | 625599.60 |
| 1070.00 | 61.46 | 178.70    | 837.44 | -786.92 | -432.67 | -239.05 | 5758278.29 | 625599.70 |
| 1075.00 | 61.57 | 178.71    | 839.84 | -789.32 | -437.06 | -238.95 | 5758273.90 | 625599.80 |
| 1080.00 | 61.66 | 178.73    | 842.23 | -791.71 | -441.45 | -238.86 | 5758269.52 | 625599.89 |
| 1085.00 | 61.69 | 178.91    | 844.60 | -794.08 | -445.85 | -238.80 | 5758265.11 | 625599.96 |
| 1090.00 | 61.71 | 179.08    | 846.97 | -796.45 | -450.25 | -238.74 | 5758260.71 | 625600.02 |
| 1095.00 | 61.73 | 179.25    | 849.34 | -798.82 | -454.65 | -238.68 | 5758256.31 | 625600.08 |

| MD      | Angle | Direction | TVDRT   | TVDSS   | Dnorth  | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|---------|---------|---------|------------|-----------|
| 1100.00 | 61.75 | 179.42    | 851.71  | -801.19 | -459.06 | -238.62 | 5758251.90 | 625600.14 |
| 1105.00 | 61.78 | 179.59    | 854.07  | -803.55 | -463.46 | -238.56 | 5758247.50 | 625600.20 |
| 1110.00 | 61.75 | 179.77    | 856.45  | -805.93 | -467.86 | -238.52 | 5758243.10 | 625600.23 |
| 1115.00 | 61.63 | 179.95    | 858.84  | -808.32 | -472.25 | -238.54 | 5758238.71 | 625600.21 |
| 1120.00 | 61.51 | 180.13    | 861.23  | -810.71 | -476.64 | -238.56 | 5758234.32 | 625600.20 |
| 1125.00 | 61.38 | 180.31    | 863.62  | -813.10 | -481.03 | -238.58 | 5758229.93 | 625600.18 |
| 1130.00 | 61.26 | 180.49    | 866.01  | -815.49 | -485.42 | -238.59 | 5758225.54 | 625600.16 |
| 1135.00 | 61.14 | 180.67    | 868.40  | -817.88 | -489.82 | -238.61 | 5758221.15 | 625600.14 |
| 1140.00 | 60.93 | 180.85    | 870.84  | -820.32 | -494.18 | -238.67 | 5758216.78 | 625600.08 |
| 1145.00 | 60.63 | 181.03    | 873.33  | -822.81 | -498.52 | -238.77 | 5758212.44 | 625599.99 |
| 1150.00 | 60.34 | 181.21    | 875.81  | -825.29 | -502.86 | -238.86 | 5758208.11 | 625599.89 |
| 1155.00 | 60.04 | 181.38    | 878.29  | -827.77 | -507.19 | -238.96 | 5758203.77 | 625599.80 |
| 1160.00 | 59.74 | 181.56    | 880.78  | -830.26 | -511.53 | -239.05 | 5758199.43 | 625599.70 |
| 1165.00 | 59.45 | 181.74    | 883.26  | -832.74 | -515.87 | -239.15 | 5758195.09 | 625599.60 |
| 1170.00 | 59.19 | 181.92    | 885.83  | -835.31 | -520.16 | -239.30 | 5758190.80 | 625599.45 |
| 1175.00 | 58.94 | 182.10    | 888.43  | -837.91 | -524.43 | -239.47 | 5758186.54 | 625599.28 |
| 1180.00 | 58.69 | 182.28    | 891.03  | -840.51 | -528.69 | -239.64 | 5758182.27 | 625599.11 |
| 1185.00 | 58.44 | 182.46    | 893.63  | -843.11 | -532.96 | -239.81 | 5758178.00 | 625598.94 |
| 1190.00 | 58.20 | 182.63    | 896.23  | -845.71 | -537.22 | -239.98 | 5758173.74 | 625598.77 |
| 1195.00 | 57.95 | 182.81    | 898.83  | -848.31 | -541.49 | -240.16 | 5758169.47 | 625598.60 |
| 1200.00 | 57.81 | 182.97    | 901.51  | -850.99 | -545.71 | -240.40 | 5758165.26 | 625598.36 |
| 1205.00 | 57.69 | 183.13    | 904.19  | -853.67 | -549.92 | -240.64 | 5758161.04 | 625598.12 |
| 1210.00 | 57.56 | 183.28    | 906.88  | -856.36 | -554.13 | -240.88 | 5758156.83 | 625597.88 |
| 1215.00 | 57.43 | 183.43    | 909.56  | -859.04 | -558.34 | -241.12 | 5758152.62 | 625597.64 |
| 1220.00 | 57.30 | 183.59    | 912.24  | -861.72 | -562.56 | -241.36 | 5758148.40 | 625597.40 |
| 1225.00 | 57.18 | 183.72    | 914.93  | -864.41 | -566.77 | -241.60 | 5758144.20 | 625597.15 |
| 1230.00 | 57.10 | 183.75    | 917.65  | -867.13 | -570.95 | -241.88 | 5758140.01 | 625596.87 |
| 1235.00 | 57.02 | 183.78    | 920.38  | -869.86 | -575.13 | -242.16 | 5758135.83 | 625596.59 |
| 1240.00 | 56.94 | 183.80    | 923.11  | -872.59 | -579.31 | -242.44 | 5758131.65 | 625596.32 |
| 1245.00 | 56.86 | 183.83    | 925.83  | -875.31 | -583.49 | -242.71 | 5758127.47 | 625596.04 |
| 1250.00 | 56.78 | 183.85    | 928.56  | -878.04 | -587.68 | -242.99 | 5758123.28 | 625595.76 |
| 1255.00 | 56.67 | 183.90    | 931.30  | -880.78 | -591.85 | -243.28 | 5758119.12 | 625595.48 |
| 1260.00 | 56.52 | 183.96    | 934.08  | -883.56 | -596.00 | -243.57 | 5758114.97 | 625595.18 |
| 1265.00 | 56.37 | 184.03    | 936.85  | -886.33 | -600.14 | -243.87 | 5758110.82 | 625594.89 |
| 1270.00 | 56.22 | 184.10    | 939.63  | -889.11 | -604.29 | -244.16 | 5758106.67 | 625594.59 |
| 1275.00 | 56.07 | 184.17    | 942.40  | -891.88 | -608.44 | -244.46 | 5758102.52 | 625594.30 |
| 1280.00 | 55.91 | 184.24    | 945.18  | -894.66 | -612.59 | -244.75 | 5758098.37 | 625594.00 |
| 1285.00 | 55.82 | 184.28    | 947.97  | -897.45 | -616.72 | -245.05 | 5758094.24 | 625593.70 |
| 1290.00 | 55.80 | 184.31    | 950.79  | -900.27 | -620.85 | -245.37 | 5758090.12 | 625593.39 |
| 1295.00 | 55.77 | 184.34    | 953.60  | -903.08 | -624.97 | -245.68 | 5758085.99 | 625593.07 |
| 1300.00 | 55.74 | 184.36    | 956.41  | -905.89 | -629.09 | -245.99 | 5758081.87 | 625592.76 |
| 1305.00 | 55.71 | 184.39    | 959.23  | -908.71 | -633.21 | -246.31 | 5758077.75 | 625592.45 |
| 1310.00 | 55.68 | 184.41    | 962.04  | -911.52 | -637.33 | -246.62 | 5758073.63 | 625592.13 |
| 1315.00 | 55.72 | 184.38    | 964.85  | -914.33 | -641.46 | -246.93 | 5758069.51 | 625591.83 |
| 1320.00 | 55.78 | 184.32    | 967.66  | -917.14 | -645.58 | -247.24 | 5758065.38 | 625591.52 |
| 1325.00 | 55.84 | 184.26    | 970.47  | -919.95 | -649.71 | -247.54 | 5758061.25 | 625591.21 |
| 1330.00 | 55.89 | 184.21    | 973.27  | -922.75 | -653.83 | -247.85 | 5758057.13 | 625590.90 |
| 1335.00 | 55.95 | 184.15    | 976.08  | -925.56 | -657.96 | -248.16 | 5758053.00 | 625590.60 |
| 1340.00 | 56.01 | 184.10    | 978.89  | -928.37 | -662.09 | -248.46 | 5758048.88 | 625590.29 |
| 1345.00 | 56.07 | 184.04    | 981.67  | -931.15 | -666.23 | -248.75 | 5758044.73 | 625590.00 |
| 1350.00 | 56.12 | 183.98    | 984.46  | -933.94 | -670.37 | -249.03 | 5758040.59 | 625589.72 |
| 1355.00 | 56.18 | 183.92    | 987.24  | -936.72 | -674.52 | -249.32 | 5758036.45 | 625589.43 |
| 1360.00 | 56.23 | 183.87    | 990.02  | -939.50 | -678.66 | -249.60 | 5758032.30 | 625589.15 |
| 1365.00 | 56.28 | 183.81    | 992.81  | -942.29 | -682.80 | -249.89 | 5758028.16 | 625588.87 |
| 1370.00 | 56.33 | 183.76    | 995.59  | -945.07 | -686.95 | -250.17 | 5758024.01 | 625588.58 |
| 1375.00 | 56.32 | 183.74    | 998.36  | -947.84 | -691.10 | -250.44 | 5758019.86 | 625588.31 |
| 1380.00 | 56.31 | 183.73    | 1001.14 | -950.62 | -695.25 | -250.71 | 5758015.71 | 625588.04 |
| 1385.00 | 56.30 | 183.72    | 1003.91 | -953.39 | -699.40 | -250.98 | 5758011.56 | 625587.77 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth  | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|---------|---------|------------|-----------|
| 1390.00 | 56.29 | 183.70    | 1006.68 | -956.16  | -703.55 | -251.25 | 5758007.41 | 625587.50 |
| 1395.00 | 56.29 | 183.69    | 1009.46 | -958.94  | -707.70 | -251.52 | 5758003.26 | 625587.23 |
| 1400.00 | 56.28 | 183.67    | 1012.23 | -961.71  | -711.86 | -251.79 | 5757999.11 | 625586.97 |
| 1405.00 | 56.28 | 183.66    | 1015.01 | -964.49  | -716.01 | -252.05 | 5757994.95 | 625586.70 |
| 1410.00 | 56.29 | 183.65    | 1017.78 | -967.26  | -720.16 | -252.32 | 5757990.80 | 625586.44 |
| 1415.00 | 56.29 | 183.63    | 1020.56 | -970.04  | -724.31 | -252.58 | 5757986.65 | 625586.17 |
| 1420.00 | 56.29 | 183.62    | 1023.33 | -972.81  | -728.46 | -252.84 | 5757982.50 | 625585.91 |
| 1425.00 | 56.30 | 183.61    | 1026.11 | -975.59  | -732.61 | -253.11 | 5757978.35 | 625585.65 |
| 1430.00 | 56.40 | 183.73    | 1028.86 | -978.34  | -736.77 | -253.40 | 5757974.19 | 625585.36 |
| 1435.00 | 56.61 | 183.97    | 1031.59 | -981.07  | -740.95 | -253.71 | 5757970.01 | 625585.04 |
| 1440.00 | 56.81 | 184.22    | 1034.32 | -983.80  | -745.13 | -254.03 | 5757965.83 | 625584.72 |
| 1445.00 | 57.02 | 184.47    | 1037.05 | -986.53  | -749.30 | -254.35 | 5757961.66 | 625584.41 |
| 1450.00 | 57.22 | 184.72    | 1039.78 | -989.26  | -753.48 | -254.66 | 5757957.48 | 625584.09 |
| 1455.00 | 57.43 | 184.97    | 1042.51 | -991.99  | -757.66 | -254.98 | 5757953.31 | 625583.78 |
| 1460.00 | 57.71 | 185.19    | 1045.17 | -994.65  | -761.88 | -255.37 | 5757949.09 | 625583.39 |
| 1465.00 | 58.04 | 185.40    | 1047.78 | -997.26  | -766.11 | -255.79 | 5757944.85 | 625582.97 |
| 1470.00 | 58.36 | 185.62    | 1050.40 | -999.88  | -770.35 | -256.21 | 5757940.61 | 625582.55 |
| 1475.00 | 58.68 | 185.83    | 1053.02 | -1002.50 | -774.59 | -256.63 | 5757936.37 | 625582.12 |
| 1480.00 | 59.00 | 186.04    | 1055.64 | -1005.12 | -778.83 | -257.05 | 5757932.13 | 625581.70 |
| 1485.00 | 59.32 | 186.26    | 1058.25 | -1007.73 | -783.07 | -257.47 | 5757927.89 | 625581.28 |
| 1490.00 | 59.62 | 186.34    | 1060.76 | -1010.24 | -787.37 | -257.95 | 5757923.59 | 625580.80 |
| 1495.00 | 59.91 | 186.40    | 1063.24 | -1012.72 | -791.68 | -258.44 | 5757919.28 | 625580.32 |
| 1500.00 | 60.21 | 186.47    | 1065.72 | -1015.20 | -795.99 | -258.93 | 5757914.97 | 625579.83 |
| 1505.00 | 60.50 | 186.53    | 1068.21 | -1017.69 | -800.31 | -259.42 | 5757910.66 | 625579.34 |
| 1510.00 | 60.80 | 186.59    | 1070.69 | -1020.17 | -804.62 | -259.91 | 5757906.34 | 625578.85 |
| 1515.00 | 61.08 | 186.65    | 1073.17 | -1022.65 | -808.93 | -260.40 | 5757902.03 | 625578.36 |
| 1520.00 | 61.06 | 186.63    | 1075.59 | -1025.07 | -813.28 | -260.90 | 5757897.68 | 625577.86 |
| 1525.00 | 61.04 | 186.61    | 1078.02 | -1027.50 | -817.62 | -261.40 | 5757893.34 | 625577.35 |
| 1530.00 | 61.02 | 186.59    | 1080.44 | -1029.92 | -821.97 | -261.90 | 5757888.99 | 625576.85 |
| 1535.00 | 61.00 | 186.57    | 1082.86 | -1032.34 | -826.31 | -262.40 | 5757884.65 | 625576.35 |
| 1540.00 | 60.98 | 186.55    | 1085.28 | -1034.76 | -830.66 | -262.91 | 5757880.30 | 625575.85 |
| 1545.00 | 60.97 | 186.53    | 1087.70 | -1037.18 | -835.00 | -263.41 | 5757875.96 | 625575.35 |
| 1550.00 | 61.01 | 186.54    | 1090.12 | -1039.60 | -839.35 | -263.91 | 5757871.61 | 625574.85 |
| 1555.00 | 61.05 | 186.55    | 1092.54 | -1042.02 | -843.70 | -264.41 | 5757867.26 | 625574.35 |
| 1560.00 | 61.09 | 186.55    | 1094.96 | -1044.44 | -848.05 | -264.90 | 5757862.92 | 625573.85 |
| 1565.00 | 61.13 | 186.56    | 1097.38 | -1046.86 | -852.39 | -265.40 | 5757858.57 | 625573.35 |
| 1570.00 | 61.17 | 186.57    | 1099.80 | -1049.28 | -856.74 | -265.90 | 5757854.22 | 625572.85 |
| 1575.00 | 61.15 | 186.46    | 1102.22 | -1051.70 | -861.09 | -266.38 | 5757849.87 | 625572.38 |
| 1580.00 | 61.06 | 186.18    | 1104.65 | -1054.13 | -865.44 | -266.82 | 5757845.53 | 625571.94 |
| 1585.00 | 60.96 | 185.90    | 1107.08 | -1056.56 | -869.78 | -267.26 | 5757841.18 | 625571.50 |
| 1590.00 | 60.86 | 185.62    | 1109.51 | -1058.99 | -874.13 | -267.69 | 5757836.83 | 625571.06 |
| 1595.00 | 60.77 | 185.34    | 1111.94 | -1061.42 | -878.48 | -268.13 | 5757832.49 | 625570.62 |
| 1600.00 | 60.67 | 185.06    | 1114.37 | -1063.85 | -882.82 | -268.57 | 5757828.14 | 625570.18 |
| 1605.00 | 60.56 | 184.65    | 1116.83 | -1066.31 | -887.16 | -268.91 | 5757823.80 | 625569.85 |
| 1610.00 | 60.44 | 184.15    | 1119.31 | -1068.79 | -891.50 | -269.17 | 5757819.47 | 625569.58 |
| 1615.00 | 60.32 | 183.66    | 1121.79 | -1071.27 | -895.83 | -269.44 | 5757815.13 | 625569.32 |
| 1620.00 | 60.20 | 183.16    | 1124.27 | -1073.75 | -900.16 | -269.70 | 5757810.80 | 625569.05 |
| 1625.00 | 60.08 | 182.66    | 1126.75 | -1076.23 | -904.50 | -269.97 | 5757806.47 | 625568.79 |
| 1630.00 | 59.96 | 182.16    | 1129.23 | -1078.71 | -908.83 | -270.23 | 5757802.13 | 625568.52 |
| 1635.00 | 59.83 | 181.84    | 1131.75 | -1081.23 | -913.14 | -270.37 | 5757797.82 | 625568.39 |
| 1640.00 | 59.71 | 181.56    | 1134.28 | -1083.76 | -917.45 | -270.46 | 5757793.51 | 625568.29 |
| 1645.00 | 59.58 | 181.29    | 1136.82 | -1086.30 | -921.76 | -270.56 | 5757789.20 | 625568.20 |
| 1650.00 | 59.45 | 181.02    | 1139.35 | -1088.83 | -926.07 | -270.65 | 5757784.89 | 625568.10 |
| 1655.00 | 59.33 | 180.74    | 1141.88 | -1091.36 | -930.38 | -270.75 | 5757780.58 | 625568.01 |
| 1660.00 | 59.20 | 180.47    | 1144.42 | -1093.90 | -934.69 | -270.84 | 5757776.27 | 625567.91 |
| 1665.00 | 59.13 | 180.44    | 1146.99 | -1096.47 | -938.98 | -270.87 | 5757771.98 | 625567.88 |
| 1670.00 | 59.06 | 180.42    | 1149.57 | -1099.05 | -943.26 | -270.90 | 5757767.70 | 625567.85 |
| 1675.00 | 58.99 | 180.39    | 1152.14 | -1101.62 | -947.55 | -270.93 | 5757763.41 | 625567.82 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 1680.00 | 58.92 | 180.37    | 1154.72 | -1104.20 | -951.84  | -270.96 | 5757759.13 | 625567.79 |
| 1685.00 | 58.86 | 180.34    | 1157.29 | -1106.77 | -956.12  | -270.99 | 5757754.84 | 625567.77 |
| 1690.00 | 58.79 | 180.32    | 1159.87 | -1109.35 | -960.41  | -271.02 | 5757750.56 | 625567.74 |
| 1695.00 | 58.76 | 180.33    | 1162.47 | -1111.95 | -964.68  | -271.04 | 5757746.28 | 625567.71 |
| 1700.00 | 58.72 | 180.34    | 1165.07 | -1114.55 | -968.95  | -271.07 | 5757742.01 | 625567.69 |
| 1705.00 | 58.68 | 180.35    | 1167.67 | -1117.15 | -973.22  | -271.09 | 5757737.74 | 625567.66 |
| 1710.00 | 58.65 | 180.36    | 1170.26 | -1119.74 | -977.49  | -271.12 | 5757733.47 | 625567.63 |
| 1715.00 | 58.61 | 180.37    | 1172.86 | -1122.34 | -981.76  | -271.15 | 5757729.20 | 625567.61 |
| 1720.00 | 58.59 | 180.37    | 1175.46 | -1124.94 | -986.03  | -271.17 | 5757724.93 | 625567.58 |
| 1725.00 | 58.58 | 180.38    | 1178.07 | -1127.55 | -990.30  | -271.20 | 5757720.66 | 625567.55 |
| 1730.00 | 58.57 | 180.39    | 1180.68 | -1130.16 | -994.57  | -271.23 | 5757716.39 | 625567.52 |
| 1735.00 | 58.57 | 180.40    | 1183.28 | -1132.76 | -998.83  | -271.26 | 5757712.13 | 625567.49 |
| 1740.00 | 58.56 | 180.41    | 1185.89 | -1135.37 | -1003.10 | -271.29 | 5757707.86 | 625567.46 |
| 1745.00 | 58.55 | 180.42    | 1188.50 | -1137.98 | -1007.37 | -271.32 | 5757703.60 | 625567.43 |
| 1750.00 | 58.53 | 180.36    | 1191.11 | -1140.59 | -1011.63 | -271.34 | 5757699.33 | 625567.42 |
| 1755.00 | 58.49 | 180.26    | 1193.73 | -1143.21 | -1015.89 | -271.35 | 5757695.07 | 625567.41 |
| 1760.00 | 58.46 | 180.17    | 1196.34 | -1145.82 | -1020.15 | -271.36 | 5757690.81 | 625567.39 |
| 1765.00 | 58.43 | 180.07    | 1198.96 | -1148.44 | -1024.41 | -271.37 | 5757686.55 | 625567.38 |
| 1770.00 | 58.39 | 179.97    | 1201.58 | -1151.06 | -1028.67 | -271.38 | 5757682.29 | 625567.37 |
| 1775.00 | 58.36 | 179.88    | 1204.19 | -1153.67 | -1032.93 | -271.39 | 5757678.03 | 625567.36 |
| 1780.00 | 58.34 | 180.00    | 1206.82 | -1156.30 | -1037.19 | -271.41 | 5757673.77 | 625567.34 |
| 1785.00 | 58.32 | 180.18    | 1209.45 | -1158.93 | -1041.44 | -271.44 | 5757669.52 | 625567.31 |
| 1790.00 | 58.31 | 180.35    | 1212.07 | -1161.55 | -1045.70 | -271.47 | 5757665.26 | 625567.28 |
| 1795.00 | 58.29 | 180.53    | 1214.70 | -1164.18 | -1049.95 | -271.50 | 5757661.01 | 625567.26 |
| 1800.00 | 58.28 | 180.71    | 1217.33 | -1166.81 | -1054.21 | -271.52 | 5757656.76 | 625567.23 |
| 1805.00 | 58.26 | 180.88    | 1219.95 | -1169.43 | -1058.46 | -271.55 | 5757652.50 | 625567.20 |
| 1810.00 | 58.28 | 180.97    | 1222.58 | -1172.06 | -1062.71 | -271.64 | 5757648.25 | 625567.12 |
| 1815.00 | 58.31 | 181.05    | 1225.21 | -1174.69 | -1066.97 | -271.72 | 5757643.99 | 625567.03 |
| 1820.00 | 58.33 | 181.14    | 1227.83 | -1177.31 | -1071.22 | -271.80 | 5757639.74 | 625566.95 |
| 1825.00 | 58.35 | 181.23    | 1230.46 | -1179.94 | -1075.48 | -271.89 | 5757635.48 | 625566.87 |
| 1830.00 | 58.37 | 181.31    | 1233.08 | -1182.56 | -1079.73 | -271.97 | 5757631.23 | 625566.78 |
| 1835.00 | 58.40 | 181.43    | 1235.70 | -1185.18 | -1083.99 | -272.07 | 5757626.98 | 625566.68 |
| 1840.00 | 58.42 | 181.66    | 1238.32 | -1187.80 | -1088.24 | -272.22 | 5757622.72 | 625566.53 |
| 1845.00 | 58.44 | 181.89    | 1240.94 | -1190.42 | -1092.50 | -272.37 | 5757618.46 | 625566.38 |
| 1850.00 | 58.47 | 182.12    | 1243.55 | -1193.03 | -1096.76 | -272.53 | 5757614.20 | 625566.23 |
| 1855.00 | 58.49 | 182.34    | 1246.17 | -1195.65 | -1101.02 | -272.68 | 5757609.94 | 625566.08 |
| 1860.00 | 58.52 | 182.57    | 1248.78 | -1198.26 | -1105.28 | -272.83 | 5757605.68 | 625565.92 |
| 1865.00 | 58.55 | 182.73    | 1251.39 | -1200.87 | -1109.54 | -273.01 | 5757601.42 | 625565.74 |
| 1870.00 | 58.60 | 182.80    | 1253.99 | -1203.47 | -1113.81 | -273.23 | 5757597.16 | 625565.53 |
| 1875.00 | 58.65 | 182.86    | 1256.59 | -1206.07 | -1118.07 | -273.44 | 5757592.89 | 625565.31 |
| 1880.00 | 58.70 | 182.93    | 1259.19 | -1208.67 | -1122.34 | -273.66 | 5757588.62 | 625565.10 |
| 1885.00 | 58.76 | 183.00    | 1261.79 | -1211.27 | -1126.60 | -273.87 | 5757584.36 | 625564.88 |
| 1890.00 | 58.81 | 183.06    | 1264.39 | -1213.87 | -1130.87 | -274.09 | 5757580.09 | 625564.67 |
| 1895.00 | 58.81 | 183.06    | 1266.98 | -1216.46 | -1135.14 | -274.31 | 5757575.82 | 625564.45 |
| 1900.00 | 58.80 | 183.04    | 1269.57 | -1219.05 | -1139.41 | -274.53 | 5757571.55 | 625564.22 |
| 1905.00 | 58.78 | 183.01    | 1272.17 | -1221.65 | -1143.68 | -274.76 | 5757567.28 | 625564.00 |
| 1910.00 | 58.77 | 182.99    | 1274.76 | -1224.24 | -1147.95 | -274.98 | 5757563.01 | 625563.77 |
| 1915.00 | 58.75 | 182.97    | 1277.35 | -1226.83 | -1152.22 | -275.21 | 5757558.74 | 625563.55 |
| 1920.00 | 58.74 | 182.94    | 1279.94 | -1229.42 | -1156.49 | -275.43 | 5757554.47 | 625563.32 |
| 1925.00 | 58.80 | 182.90    | 1282.52 | -1232.00 | -1160.76 | -275.64 | 5757550.20 | 625563.11 |
| 1930.00 | 58.86 | 182.86    | 1285.10 | -1234.58 | -1165.04 | -275.85 | 5757545.92 | 625562.90 |
| 1935.00 | 58.92 | 182.82    | 1287.68 | -1237.16 | -1169.32 | -276.07 | 5757541.64 | 625562.69 |
| 1940.00 | 58.98 | 182.78    | 1290.27 | -1239.75 | -1173.60 | -276.28 | 5757537.37 | 625562.48 |
| 1945.00 | 59.05 | 182.74    | 1292.85 | -1242.33 | -1177.87 | -276.49 | 5757533.09 | 625562.27 |
| 1950.00 | 59.10 | 182.71    | 1295.43 | -1244.91 | -1182.15 | -276.70 | 5757528.81 | 625562.06 |
| 1955.00 | 59.11 | 182.71    | 1297.99 | -1247.47 | -1186.44 | -276.90 | 5757524.52 | 625561.85 |
| 1960.00 | 59.11 | 182.70    | 1300.56 | -1250.04 | -1190.72 | -277.10 | 5757520.24 | 625561.65 |
| 1965.00 | 59.12 | 182.70    | 1303.13 | -1252.61 | -1195.01 | -277.30 | 5757515.95 | 625561.45 |



| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 1970.00 | 59.12 | 182.70    | 1305.69 | -1255.17 | -1199.30 | -277.51 | 5757511.67 | 625561.25 |
| 1975.00 | 59.13 | 182.69    | 1308.26 | -1257.74 | -1203.58 | -277.71 | 5757507.38 | 625561.05 |
| 1980.00 | 59.13 | 182.69    | 1310.82 | -1260.30 | -1207.87 | -277.91 | 5757503.09 | 625560.84 |
| 1985.00 | 59.13 | 182.68    | 1313.39 | -1262.87 | -1212.16 | -278.11 | 5757498.81 | 625560.65 |
| 1990.00 | 59.13 | 182.67    | 1315.96 | -1265.44 | -1216.44 | -278.31 | 5757494.52 | 625560.45 |
| 1995.00 | 59.13 | 182.66    | 1318.52 | -1268.00 | -1220.73 | -278.51 | 5757490.23 | 625560.25 |
| 2000.00 | 59.13 | 182.65    | 1321.09 | -1270.57 | -1225.02 | -278.71 | 5757485.94 | 625560.05 |
| 2005.00 | 59.13 | 182.64    | 1323.65 | -1273.13 | -1229.30 | -278.91 | 5757481.66 | 625559.85 |
| 2010.00 | 59.15 | 182.63    | 1326.21 | -1275.69 | -1233.59 | -279.10 | 5757477.37 | 625559.65 |
| 2015.00 | 59.17 | 182.61    | 1328.77 | -1278.25 | -1237.88 | -279.30 | 5757473.08 | 625559.46 |
| 2020.00 | 59.19 | 182.59    | 1331.33 | -1280.81 | -1242.17 | -279.49 | 5757468.79 | 625559.26 |
| 2025.00 | 59.22 | 182.57    | 1333.89 | -1283.37 | -1246.46 | -279.68 | 5757464.50 | 625559.07 |
| 2030.00 | 59.24 | 182.55    | 1336.45 | -1285.93 | -1250.76 | -279.88 | 5757460.21 | 625558.88 |
| 2035.00 | 59.27 | 182.53    | 1339.01 | -1288.49 | -1255.05 | -280.07 | 5757455.92 | 625558.68 |
| 2040.00 | 59.33 | 182.56    | 1341.56 | -1291.04 | -1259.35 | -280.27 | 5757451.62 | 625558.49 |
| 2045.00 | 59.40 | 182.60    | 1344.10 | -1293.58 | -1263.65 | -280.47 | 5757447.31 | 625558.29 |
| 2050.00 | 59.46 | 182.63    | 1346.64 | -1296.12 | -1267.95 | -280.66 | 5757443.01 | 625558.09 |
| 2055.00 | 59.53 | 182.67    | 1349.18 | -1298.66 | -1272.25 | -280.86 | 5757438.71 | 625557.89 |
| 2060.00 | 59.60 | 182.71    | 1351.72 | -1301.20 | -1276.55 | -281.06 | 5757434.41 | 625557.69 |
| 2065.00 | 59.67 | 182.74    | 1354.26 | -1303.74 | -1280.86 | -281.26 | 5757430.10 | 625557.49 |
| 2070.00 | 59.75 | 182.75    | 1356.76 | -1306.24 | -1285.18 | -281.47 | 5757425.78 | 625557.29 |
| 2075.00 | 59.83 | 182.76    | 1359.27 | -1308.75 | -1289.50 | -281.68 | 5757421.46 | 625557.08 |
| 2080.00 | 59.92 | 182.77    | 1361.78 | -1311.26 | -1293.82 | -281.89 | 5757417.14 | 625556.87 |
| 2085.00 | 60.00 | 182.78    | 1364.29 | -1313.77 | -1298.14 | -282.10 | 5757412.82 | 625556.66 |
| 2090.00 | 60.08 | 182.79    | 1366.79 | -1316.27 | -1302.46 | -282.30 | 5757408.50 | 625556.45 |
| 2095.00 | 60.16 | 182.80    | 1369.29 | -1318.77 | -1306.79 | -282.51 | 5757404.18 | 625556.24 |
| 2100.00 | 60.18 | 182.79    | 1371.78 | -1321.26 | -1311.12 | -282.72 | 5757399.84 | 625556.03 |
| 2105.00 | 60.21 | 182.78    | 1374.26 | -1323.74 | -1315.46 | -282.93 | 5757395.51 | 625555.82 |
| 2110.00 | 60.24 | 182.77    | 1376.74 | -1326.22 | -1319.79 | -283.14 | 5757391.17 | 625555.61 |
| 2115.00 | 60.27 | 182.76    | 1379.22 | -1328.70 | -1324.13 | -283.35 | 5757386.84 | 625555.40 |
| 2120.00 | 60.30 | 182.75    | 1381.71 | -1331.19 | -1328.46 | -283.56 | 5757382.50 | 625555.19 |
| 2125.00 | 60.34 | 182.76    | 1384.18 | -1333.66 | -1332.80 | -283.78 | 5757378.16 | 625554.98 |
| 2130.00 | 60.40 | 182.79    | 1386.64 | -1336.12 | -1337.15 | -283.99 | 5757373.81 | 625554.76 |
| 2135.00 | 60.46 | 182.82    | 1389.11 | -1338.59 | -1341.49 | -284.21 | 5757369.47 | 625554.55 |
| 2140.00 | 60.51 | 182.85    | 1391.57 | -1341.05 | -1345.84 | -284.42 | 5757365.12 | 625554.33 |
| 2145.00 | 60.57 | 182.88    | 1394.04 | -1343.52 | -1350.18 | -284.64 | 5757360.78 | 625554.12 |
| 2150.00 | 60.63 | 182.91    | 1396.50 | -1345.98 | -1354.53 | -284.85 | 5757356.43 | 625553.90 |
| 2155.00 | 60.69 | 182.89    | 1398.94 | -1348.42 | -1358.89 | -285.07 | 5757352.08 | 625553.69 |
| 2160.00 | 60.76 | 182.84    | 1401.38 | -1350.86 | -1363.25 | -285.28 | 5757347.72 | 625553.47 |
| 2165.00 | 60.82 | 182.80    | 1403.82 | -1353.30 | -1367.61 | -285.49 | 5757343.35 | 625553.26 |
| 2170.00 | 60.89 | 182.75    | 1406.25 | -1355.73 | -1371.97 | -285.70 | 5757338.99 | 625553.05 |
| 2175.00 | 60.95 | 182.71    | 1408.69 | -1358.17 | -1376.33 | -285.92 | 5757334.63 | 625552.84 |
| 2180.00 | 61.02 | 182.66    | 1411.13 | -1360.61 | -1380.69 | -286.13 | 5757330.27 | 625552.63 |
| 2185.00 | 61.05 | 182.62    | 1413.54 | -1363.02 | -1385.06 | -286.32 | 5757325.90 | 625552.43 |
| 2190.00 | 61.08 | 182.58    | 1415.96 | -1365.44 | -1389.44 | -286.52 | 5757321.52 | 625552.24 |
| 2195.00 | 61.12 | 182.53    | 1418.37 | -1367.85 | -1393.81 | -286.71 | 5757317.15 | 625552.04 |
| 2200.00 | 61.15 | 182.49    | 1420.79 | -1370.27 | -1398.18 | -286.90 | 5757312.78 | 625551.85 |
| 2205.00 | 61.18 | 182.45    | 1423.20 | -1372.68 | -1402.56 | -287.10 | 5757308.40 | 625551.66 |
| 2210.00 | 61.22 | 182.41    | 1425.62 | -1375.10 | -1406.93 | -287.29 | 5757304.03 | 625551.46 |
| 2215.00 | 61.26 | 182.39    | 1428.01 | -1377.49 | -1411.32 | -287.47 | 5757299.64 | 625551.28 |
| 2220.00 | 61.31 | 182.37    | 1430.41 | -1379.89 | -1415.70 | -287.65 | 5757295.26 | 625551.10 |
| 2225.00 | 61.35 | 182.35    | 1432.81 | -1382.29 | -1420.08 | -287.83 | 5757290.88 | 625550.92 |
| 2230.00 | 61.40 | 182.33    | 1435.21 | -1384.69 | -1424.47 | -288.01 | 5757286.49 | 625550.74 |
| 2235.00 | 61.44 | 182.31    | 1437.61 | -1387.09 | -1428.85 | -288.19 | 5757282.11 | 625550.56 |
| 2240.00 | 61.48 | 182.29    | 1440.00 | -1389.48 | -1433.24 | -288.37 | 5757277.72 | 625550.39 |
| 2245.00 | 61.52 | 182.28    | 1442.38 | -1391.86 | -1437.63 | -288.54 | 5757273.33 | 625550.21 |
| 2250.00 | 61.55 | 182.27    | 1444.76 | -1394.24 | -1442.03 | -288.72 | 5757268.94 | 625550.04 |
| 2255.00 | 61.58 | 182.25    | 1447.14 | -1396.62 | -1446.42 | -288.89 | 5757264.54 | 625549.87 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 2260.00 | 61.61 | 182.24    | 1449.52 | -1399.00 | -1450.81 | -289.06 | 5757260.15 | 625549.69 |
| 2265.00 | 61.65 | 182.23    | 1451.90 | -1401.38 | -1455.21 | -289.24 | 5757255.76 | 625549.52 |
| 2270.00 | 61.67 | 182.21    | 1454.28 | -1403.76 | -1459.60 | -289.41 | 5757251.36 | 625549.35 |
| 2275.00 | 61.68 | 182.20    | 1456.65 | -1406.13 | -1464.00 | -289.57 | 5757246.96 | 625549.18 |
| 2280.00 | 61.69 | 182.19    | 1459.02 | -1408.50 | -1468.40 | -289.74 | 5757242.56 | 625549.01 |
| 2285.00 | 61.70 | 182.18    | 1461.39 | -1410.87 | -1472.80 | -289.91 | 5757238.16 | 625548.84 |
| 2290.00 | 61.71 | 182.17    | 1463.76 | -1413.24 | -1477.20 | -290.08 | 5757233.76 | 625548.68 |
| 2295.00 | 61.72 | 182.16    | 1466.13 | -1415.61 | -1481.60 | -290.25 | 5757229.36 | 625548.51 |
| 2300.00 | 61.60 | 182.18    | 1468.53 | -1418.01 | -1485.98 | -290.42 | 5757224.98 | 625548.34 |
| 2305.00 | 61.45 | 182.22    | 1470.93 | -1420.41 | -1490.36 | -290.59 | 5757220.60 | 625548.16 |
| 2310.00 | 61.30 | 182.25    | 1473.34 | -1422.82 | -1494.74 | -290.76 | 5757216.22 | 625547.99 |
| 2315.00 | 61.14 | 182.28    | 1475.74 | -1425.22 | -1499.12 | -290.94 | 5757211.84 | 625547.82 |
| 2320.00 | 60.99 | 182.31    | 1478.14 | -1427.62 | -1503.51 | -291.11 | 5757207.46 | 625547.65 |
| 2325.00 | 60.83 | 182.35    | 1480.55 | -1430.03 | -1507.89 | -291.28 | 5757203.07 | 625547.47 |
| 2330.00 | 60.65 | 182.30    | 1483.02 | -1432.50 | -1512.23 | -291.45 | 5757198.73 | 625547.31 |
| 2335.00 | 60.46 | 182.25    | 1485.50 | -1434.98 | -1516.57 | -291.61 | 5757194.39 | 625547.14 |
| 2340.00 | 60.27 | 182.20    | 1487.98 | -1437.46 | -1520.91 | -291.78 | 5757190.05 | 625546.97 |
| 2345.00 | 60.08 | 182.15    | 1490.45 | -1439.93 | -1525.25 | -291.95 | 5757185.71 | 625546.80 |
| 2350.00 | 59.89 | 182.10    | 1492.93 | -1442.41 | -1529.59 | -292.12 | 5757181.38 | 625546.64 |
| 2355.00 | 59.70 | 182.09    | 1495.43 | -1444.91 | -1533.91 | -292.29 | 5757177.05 | 625546.47 |
| 2360.00 | 59.52 | 182.22    | 1497.99 | -1447.47 | -1538.21 | -292.47 | 5757172.76 | 625546.28 |
| 2365.00 | 59.34 | 182.36    | 1500.55 | -1450.03 | -1542.50 | -292.65 | 5757168.46 | 625546.10 |
| 2370.00 | 59.16 | 182.50    | 1503.11 | -1452.59 | -1546.79 | -292.84 | 5757164.17 | 625545.92 |
| 2375.00 | 58.98 | 182.63    | 1505.67 | -1455.15 | -1551.08 | -293.02 | 5757159.88 | 625545.73 |
| 2380.00 | 58.80 | 182.77    | 1508.22 | -1457.70 | -1555.37 | -293.21 | 5757155.59 | 625545.55 |
| 2385.00 | 58.66 | 182.85    | 1510.81 | -1460.29 | -1559.65 | -293.40 | 5757151.31 | 625545.35 |
| 2390.00 | 58.56 | 182.86    | 1513.42 | -1462.90 | -1563.90 | -293.62 | 5757147.06 | 625545.14 |
| 2395.00 | 58.47 | 182.87    | 1516.04 | -1465.52 | -1568.16 | -293.83 | 5757142.80 | 625544.93 |
| 2400.00 | 58.38 | 182.88    | 1518.66 | -1468.14 | -1572.41 | -294.04 | 5757138.55 | 625544.71 |
| 2405.00 | 58.29 | 182.89    | 1521.28 | -1470.76 | -1576.67 | -294.26 | 5757134.30 | 625544.50 |
| 2410.00 | 58.20 | 182.90    | 1523.90 | -1473.38 | -1580.92 | -294.47 | 5757130.04 | 625544.28 |
| 2415.00 | 58.17 | 182.89    | 1526.52 | -1476.00 | -1585.17 | -294.68 | 5757125.79 | 625544.07 |
| 2420.00 | 58.19 | 182.88    | 1529.16 | -1478.64 | -1589.41 | -294.89 | 5757121.55 | 625543.86 |
| 2425.00 | 58.20 | 182.86    | 1531.79 | -1481.27 | -1593.66 | -295.11 | 5757117.30 | 625543.65 |
| 2430.00 | 58.22 | 182.85    | 1534.43 | -1483.91 | -1597.90 | -295.32 | 5757113.06 | 625543.43 |
| 2435.00 | 58.24 | 182.84    | 1537.06 | -1486.54 | -1602.15 | -295.53 | 5757108.81 | 625543.22 |
| 2440.00 | 58.26 | 182.82    | 1539.69 | -1489.17 | -1606.39 | -295.74 | 5757104.57 | 625543.01 |
| 2445.00 | 58.24 | 182.77    | 1542.33 | -1491.81 | -1610.64 | -295.94 | 5757100.32 | 625542.81 |
| 2450.00 | 58.23 | 182.71    | 1544.96 | -1494.44 | -1614.88 | -296.14 | 5757096.08 | 625542.61 |
| 2455.00 | 58.21 | 182.65    | 1547.60 | -1497.08 | -1619.13 | -296.34 | 5757091.83 | 625542.42 |
| 2460.00 | 58.19 | 182.60    | 1550.23 | -1499.71 | -1623.37 | -296.53 | 5757087.59 | 625542.22 |
| 2465.00 | 58.17 | 182.54    | 1552.87 | -1502.35 | -1627.62 | -296.73 | 5757083.34 | 625542.03 |
| 2470.00 | 58.15 | 182.48    | 1555.50 | -1504.98 | -1631.86 | -296.92 | 5757079.10 | 625541.83 |
| 2475.00 | 58.09 | 182.46    | 1558.15 | -1507.63 | -1636.10 | -297.10 | 5757074.86 | 625541.65 |
| 2480.00 | 58.04 | 182.44    | 1560.80 | -1510.28 | -1640.34 | -297.28 | 5757070.63 | 625541.47 |
| 2485.00 | 57.98 | 182.42    | 1563.45 | -1512.93 | -1644.57 | -297.46 | 5757066.39 | 625541.29 |
| 2490.00 | 57.93 | 182.40    | 1566.10 | -1515.58 | -1648.81 | -297.64 | 5757062.15 | 625541.11 |
| 2495.00 | 57.87 | 182.38    | 1568.75 | -1518.23 | -1653.04 | -297.82 | 5757057.92 | 625540.93 |
| 2500.00 | 57.83 | 182.35    | 1571.41 | -1520.89 | -1657.28 | -298.00 | 5757053.68 | 625540.76 |
| 2505.00 | 57.84 | 182.30    | 1574.07 | -1523.55 | -1661.51 | -298.16 | 5757049.45 | 625540.59 |
| 2510.00 | 57.84 | 182.26    | 1576.73 | -1526.21 | -1665.74 | -298.32 | 5757045.22 | 625540.43 |
| 2515.00 | 57.85 | 182.21    | 1579.39 | -1528.87 | -1669.97 | -298.49 | 5757040.99 | 625540.26 |
| 2520.00 | 57.85 | 182.17    | 1582.05 | -1531.53 | -1674.20 | -298.65 | 5757036.76 | 625540.10 |
| 2525.00 | 57.86 | 182.12    | 1584.71 | -1534.19 | -1678.43 | -298.82 | 5757032.53 | 625539.94 |
| 2530.00 | 57.85 | 182.11    | 1587.37 | -1536.85 | -1682.66 | -298.98 | 5757028.31 | 625539.77 |
| 2535.00 | 57.82 | 182.13    | 1590.04 | -1539.52 | -1686.88 | -299.14 | 5757024.08 | 625539.61 |
| 2540.00 | 57.79 | 182.14    | 1592.71 | -1542.19 | -1691.11 | -299.30 | 5757019.85 | 625539.46 |
| 2545.00 | 57.76 | 182.16    | 1595.37 | -1544.85 | -1695.34 | -299.46 | 5757015.63 | 625539.30 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 2550.00 | 57.74 | 182.18    | 1598.04 | -1547.52 | -1699.56 | -299.62 | 5757011.40 | 625539.14 |
| 2555.00 | 57.71 | 182.20    | 1600.70 | -1550.18 | -1703.79 | -299.77 | 5757007.17 | 625538.98 |
| 2560.00 | 57.73 | 182.17    | 1603.37 | -1552.85 | -1708.02 | -299.93 | 5757002.94 | 625538.82 |
| 2565.00 | 57.77 | 182.13    | 1606.03 | -1555.51 | -1712.25 | -300.08 | 5756998.71 | 625538.67 |
| 2570.00 | 57.80 | 182.08    | 1608.70 | -1558.18 | -1716.48 | -300.24 | 5756994.49 | 625538.52 |
| 2575.00 | 57.84 | 182.04    | 1611.36 | -1560.84 | -1720.70 | -300.39 | 5756990.26 | 625538.37 |
| 2580.00 | 57.88 | 182.00    | 1614.02 | -1563.50 | -1724.93 | -300.54 | 5756986.03 | 625538.21 |
| 2585.00 | 57.92 | 181.96    | 1616.69 | -1566.17 | -1729.16 | -300.69 | 5756981.80 | 625538.06 |
| 2590.00 | 57.90 | 181.94    | 1619.35 | -1568.83 | -1733.39 | -300.84 | 5756977.57 | 625537.92 |
| 2595.00 | 57.87 | 181.93    | 1622.01 | -1571.49 | -1737.62 | -300.98 | 5756973.34 | 625537.77 |
| 2600.00 | 57.85 | 181.92    | 1624.67 | -1574.15 | -1741.85 | -301.12 | 5756969.11 | 625537.63 |
| 2605.00 | 57.83 | 181.90    | 1627.33 | -1576.81 | -1746.09 | -301.26 | 5756964.88 | 625537.49 |
| 2610.00 | 57.80 | 181.89    | 1629.99 | -1579.47 | -1750.32 | -301.40 | 5756960.65 | 625537.35 |
| 2615.00 | 57.78 | 181.88    | 1632.65 | -1582.13 | -1754.55 | -301.55 | 5756956.41 | 625537.21 |
| 2620.00 | 57.79 | 181.94    | 1635.31 | -1584.79 | -1758.78 | -301.70 | 5756952.19 | 625537.06 |
| 2625.00 | 57.81 | 182.00    | 1637.98 | -1587.46 | -1763.01 | -301.85 | 5756947.96 | 625536.91 |
| 2630.00 | 57.82 | 182.06    | 1640.64 | -1590.12 | -1767.23 | -302.00 | 5756943.73 | 625536.75 |
| 2635.00 | 57.84 | 182.12    | 1643.30 | -1592.78 | -1771.46 | -302.15 | 5756939.50 | 625536.60 |
| 2640.00 | 57.85 | 182.18    | 1645.97 | -1595.45 | -1775.69 | -302.30 | 5756935.27 | 625536.45 |
| 2645.00 | 57.85 | 182.21    | 1648.63 | -1598.11 | -1779.92 | -302.46 | 5756931.04 | 625536.30 |
| 2650.00 | 57.80 | 182.18    | 1651.30 | -1600.78 | -1784.14 | -302.61 | 5756926.82 | 625536.14 |
| 2655.00 | 57.74 | 182.15    | 1653.97 | -1603.45 | -1788.37 | -302.77 | 5756922.59 | 625535.98 |
| 2660.00 | 57.69 | 182.12    | 1656.64 | -1606.12 | -1792.59 | -302.93 | 5756918.37 | 625535.83 |
| 2665.00 | 57.64 | 182.09    | 1659.31 | -1608.79 | -1796.82 | -303.08 | 5756914.15 | 625535.67 |
| 2670.00 | 57.59 | 182.06    | 1661.99 | -1611.47 | -1801.04 | -303.24 | 5756909.92 | 625535.51 |
| 2675.00 | 57.53 | 182.08    | 1664.67 | -1614.15 | -1805.26 | -303.40 | 5756905.71 | 625535.35 |
| 2680.00 | 57.47 | 182.16    | 1667.36 | -1616.84 | -1809.46 | -303.57 | 5756901.50 | 625535.18 |
| 2685.00 | 57.40 | 182.25    | 1670.06 | -1619.54 | -1813.67 | -303.74 | 5756897.29 | 625535.01 |
| 2690.00 | 57.34 | 182.34    | 1672.75 | -1622.23 | -1817.88 | -303.91 | 5756893.08 | 625534.85 |
| 2695.00 | 57.28 | 182.42    | 1675.45 | -1624.93 | -1822.09 | -304.08 | 5756888.87 | 625534.68 |
| 2700.00 | 57.21 | 182.51    | 1678.15 | -1627.63 | -1826.29 | -304.24 | 5756884.67 | 625534.51 |
| 2705.00 | 57.20 | 182.51    | 1680.85 | -1630.33 | -1830.50 | -304.42 | 5756880.46 | 625534.34 |
| 2710.00 | 57.21 | 182.47    | 1683.56 | -1633.04 | -1834.70 | -304.60 | 5756876.26 | 625534.16 |
| 2715.00 | 57.22 | 182.43    | 1686.26 | -1635.74 | -1838.90 | -304.77 | 5756872.06 | 625533.98 |
| 2720.00 | 57.23 | 182.38    | 1688.97 | -1638.45 | -1843.10 | -304.95 | 5756867.86 | 625533.80 |
| 2725.00 | 57.24 | 182.34    | 1691.68 | -1641.16 | -1847.30 | -305.13 | 5756863.66 | 625533.63 |
| 2730.00 | 57.25 | 182.30    | 1694.38 | -1643.86 | -1851.50 | -305.30 | 5756859.46 | 625533.45 |
| 2735.00 | 57.25 | 182.30    | 1697.09 | -1646.57 | -1855.70 | -305.47 | 5756855.26 | 625533.28 |
| 2740.00 | 57.24 | 182.30    | 1699.80 | -1649.28 | -1859.90 | -305.64 | 5756851.06 | 625533.11 |
| 2745.00 | 57.24 | 182.31    | 1702.50 | -1651.98 | -1864.10 | -305.81 | 5756846.86 | 625532.94 |
| 2750.00 | 57.23 | 182.32    | 1705.21 | -1654.69 | -1868.30 | -305.98 | 5756842.66 | 625532.77 |
| 2755.00 | 57.22 | 182.32    | 1707.91 | -1657.39 | -1872.50 | -306.15 | 5756838.46 | 625532.60 |
| 2760.00 | 57.22 | 182.33    | 1710.62 | -1660.10 | -1876.70 | -306.32 | 5756834.26 | 625532.43 |
| 2765.00 | 57.31 | 182.39    | 1713.31 | -1662.79 | -1880.92 | -306.51 | 5756830.05 | 625532.25 |
| 2770.00 | 57.39 | 182.45    | 1716.00 | -1665.48 | -1885.13 | -306.69 | 5756825.83 | 625532.06 |
| 2775.00 | 57.48 | 182.50    | 1718.69 | -1668.17 | -1889.34 | -306.87 | 5756821.62 | 625531.88 |
| 2780.00 | 57.56 | 182.56    | 1721.38 | -1670.86 | -1893.55 | -307.06 | 5756817.41 | 625531.70 |
| 2785.00 | 57.64 | 182.62    | 1724.06 | -1673.54 | -1897.76 | -307.24 | 5756813.20 | 625531.51 |
| 2790.00 | 57.74 | 182.69    | 1726.74 | -1676.22 | -1901.98 | -307.43 | 5756808.98 | 625531.32 |
| 2795.00 | 57.88 | 182.83    | 1729.38 | -1678.86 | -1906.22 | -307.66 | 5756804.74 | 625531.09 |
| 2800.00 | 58.01 | 182.97    | 1732.03 | -1681.51 | -1910.46 | -307.89 | 5756800.50 | 625530.87 |
| 2805.00 | 58.15 | 183.11    | 1734.67 | -1684.15 | -1914.70 | -308.12 | 5756796.27 | 625530.64 |
| 2810.00 | 58.28 | 183.25    | 1737.31 | -1686.79 | -1918.93 | -308.34 | 5756792.03 | 625530.41 |
| 2815.00 | 58.42 | 183.39    | 1739.95 | -1689.43 | -1923.17 | -308.57 | 5756787.79 | 625530.18 |
| 2820.00 | 58.54 | 183.53    | 1742.57 | -1692.05 | -1927.42 | -308.82 | 5756783.54 | 625529.93 |
| 2825.00 | 58.65 | 183.69    | 1745.16 | -1694.64 | -1931.69 | -309.12 | 5756779.27 | 625529.64 |
| 2830.00 | 58.75 | 183.85    | 1747.75 | -1697.23 | -1935.96 | -309.41 | 5756775.00 | 625529.35 |
| 2835.00 | 58.86 | 184.00    | 1750.34 | -1699.82 | -1940.22 | -309.70 | 5756770.74 | 625529.05 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 2840.00 | 58.96 | 184.16    | 1752.93 | -1702.41 | -1944.49 | -309.99 | 5756766.47 | 625528.76 |
| 2845.00 | 59.07 | 184.31    | 1755.52 | -1705.00 | -1948.76 | -310.28 | 5756762.20 | 625528.47 |
| 2850.00 | 59.13 | 184.40    | 1758.09 | -1707.57 | -1953.04 | -310.61 | 5756757.93 | 625528.15 |
| 2855.00 | 59.18 | 184.45    | 1760.65 | -1710.13 | -1957.32 | -310.95 | 5756753.64 | 625527.81 |
| 2860.00 | 59.23 | 184.50    | 1763.21 | -1712.69 | -1961.60 | -311.28 | 5756749.36 | 625527.47 |
| 2865.00 | 59.28 | 184.55    | 1765.76 | -1715.24 | -1965.89 | -311.62 | 5756745.08 | 625527.13 |
| 2870.00 | 59.33 | 184.61    | 1768.32 | -1717.80 | -1970.17 | -311.96 | 5756740.79 | 625526.79 |
| 2875.00 | 59.38 | 184.66    | 1770.88 | -1720.36 | -1974.45 | -312.30 | 5756736.51 | 625526.46 |
| 2880.00 | 59.38 | 184.69    | 1773.42 | -1722.90 | -1978.74 | -312.65 | 5756732.22 | 625526.10 |
| 2885.00 | 59.39 | 184.72    | 1775.97 | -1725.45 | -1983.03 | -313.01 | 5756727.93 | 625525.74 |
| 2890.00 | 59.39 | 184.76    | 1778.52 | -1728.00 | -1987.32 | -313.37 | 5756723.64 | 625525.39 |
| 2895.00 | 59.39 | 184.79    | 1781.06 | -1730.54 | -1991.61 | -313.72 | 5756719.36 | 625525.03 |
| 2900.00 | 59.40 | 184.82    | 1783.61 | -1733.09 | -1995.89 | -314.08 | 5756715.07 | 625524.67 |
| 2905.00 | 59.40 | 184.84    | 1786.15 | -1735.63 | -2000.18 | -314.44 | 5756710.78 | 625524.32 |
| 2910.00 | 59.37 | 184.77    | 1788.70 | -1738.18 | -2004.47 | -314.78 | 5756706.49 | 625523.97 |
| 2915.00 | 59.35 | 184.71    | 1791.25 | -1740.73 | -2008.76 | -315.13 | 5756702.21 | 625523.62 |
| 2920.00 | 59.33 | 184.64    | 1793.80 | -1743.28 | -2013.04 | -315.48 | 5756697.92 | 625523.27 |
| 2925.00 | 59.31 | 184.57    | 1796.35 | -1745.83 | -2017.33 | -315.83 | 5756693.63 | 625522.92 |
| 2930.00 | 59.29 | 184.51    | 1798.90 | -1748.38 | -2021.62 | -316.18 | 5756689.35 | 625522.57 |
| 2935.00 | 59.26 | 184.46    | 1801.46 | -1750.94 | -2025.90 | -316.53 | 5756685.06 | 625522.23 |
| 2940.00 | 59.24 | 184.48    | 1804.02 | -1753.50 | -2030.18 | -316.86 | 5756680.78 | 625521.89 |
| 2945.00 | 59.21 | 184.49    | 1806.58 | -1756.06 | -2034.46 | -317.20 | 5756676.50 | 625521.55 |
| 2950.00 | 59.18 | 184.51    | 1809.14 | -1758.62 | -2038.74 | -317.54 | 5756672.22 | 625521.22 |
| 2955.00 | 59.16 | 184.52    | 1811.70 | -1761.18 | -2043.03 | -317.87 | 5756667.94 | 625520.88 |
| 2960.00 | 59.13 | 184.54    | 1814.26 | -1763.74 | -2047.31 | -318.21 | 5756663.65 | 625520.54 |
| 2965.00 | 59.08 | 184.57    | 1816.83 | -1766.31 | -2051.58 | -318.56 | 5756659.38 | 625520.20 |
| 2970.00 | 59.01 | 184.63    | 1819.41 | -1768.89 | -2055.85 | -318.91 | 5756655.11 | 625519.85 |
| 2975.00 | 58.95 | 184.68    | 1822.00 | -1771.48 | -2060.12 | -319.26 | 5756650.84 | 625519.50 |
| 2980.00 | 58.88 | 184.73    | 1824.58 | -1774.06 | -2064.38 | -319.61 | 5756646.58 | 625519.15 |
| 2985.00 | 58.82 | 184.79    | 1827.16 | -1776.64 | -2068.65 | -319.96 | 5756642.31 | 625518.79 |
| 2990.00 | 58.75 | 184.84    | 1829.74 | -1779.22 | -2072.92 | -320.31 | 5756638.04 | 625518.44 |
| 2995.00 | 58.72 | 184.88    | 1832.33 | -1781.81 | -2077.18 | -320.67 | 5756633.78 | 625518.08 |
| 3000.00 | 58.70 | 184.91    | 1834.93 | -1784.41 | -2081.43 | -321.04 | 5756629.53 | 625517.71 |
| 3005.00 | 58.67 | 184.94    | 1837.53 | -1787.01 | -2085.69 | -321.41 | 5756625.27 | 625517.34 |
| 3010.00 | 58.65 | 184.98    | 1840.13 | -1789.61 | -2089.94 | -321.78 | 5756621.02 | 625516.98 |
| 3015.00 | 58.62 | 185.01    | 1842.73 | -1792.21 | -2094.20 | -322.15 | 5756616.76 | 625516.61 |
| 3020.00 | 58.61 | 185.04    | 1845.33 | -1794.81 | -2098.46 | -322.52 | 5756612.51 | 625516.24 |
| 3025.00 | 58.77 | 185.06    | 1847.90 | -1797.38 | -2102.73 | -322.90 | 5756608.23 | 625515.86 |
| 3030.00 | 58.93 | 185.08    | 1850.47 | -1799.95 | -2107.00 | -323.28 | 5756603.96 | 625515.48 |
| 3035.00 | 59.09 | 185.10    | 1853.04 | -1802.52 | -2111.27 | -323.66 | 5756599.69 | 625515.09 |
| 3040.00 | 59.25 | 185.12    | 1855.61 | -1805.09 | -2115.54 | -324.04 | 5756595.42 | 625514.71 |
| 3045.00 | 59.41 | 185.14    | 1858.18 | -1807.66 | -2119.81 | -324.42 | 5756591.15 | 625514.33 |
| 3050.00 | 59.56 | 185.17    | 1860.74 | -1810.22 | -2124.09 | -324.81 | 5756586.87 | 625513.95 |
| 3055.00 | 59.71 | 185.20    | 1863.24 | -1812.72 | -2128.41 | -325.20 | 5756582.56 | 625513.55 |
| 3060.00 | 59.86 | 185.23    | 1865.74 | -1815.22 | -2132.72 | -325.60 | 5756578.25 | 625513.16 |
| 3065.00 | 60.01 | 185.26    | 1868.25 | -1817.73 | -2137.03 | -325.99 | 5756573.94 | 625512.76 |
| 3070.00 | 60.16 | 185.29    | 1870.75 | -1820.23 | -2141.34 | -326.39 | 5756569.63 | 625512.36 |
| 3075.00 | 60.31 | 185.32    | 1873.25 | -1822.73 | -2145.65 | -326.79 | 5756565.32 | 625511.97 |
| 3080.00 | 60.45 | 185.34    | 1875.73 | -1825.21 | -2149.97 | -327.19 | 5756560.99 | 625511.57 |
| 3085.00 | 60.59 | 185.35    | 1878.17 | -1827.65 | -2154.32 | -327.60 | 5756556.65 | 625511.16 |
| 3090.00 | 60.73 | 185.37    | 1880.61 | -1830.09 | -2158.66 | -328.01 | 5756552.30 | 625510.75 |
| 3095.00 | 60.86 | 185.38    | 1883.05 | -1832.53 | -2163.01 | -328.41 | 5756547.96 | 625510.34 |
| 3100.00 | 61.00 | 185.39    | 1885.49 | -1834.97 | -2167.35 | -328.82 | 5756543.61 | 625509.93 |
| 3105.00 | 61.14 | 185.40    | 1887.93 | -1837.41 | -2171.70 | -329.23 | 5756539.27 | 625509.52 |
| 3110.00 | 61.27 | 185.39    | 1890.33 | -1839.81 | -2176.06 | -329.64 | 5756534.90 | 625509.11 |
| 3115.00 | 61.40 | 185.38    | 1892.71 | -1842.19 | -2180.44 | -330.05 | 5756530.52 | 625508.70 |
| 3120.00 | 61.54 | 185.37    | 1895.09 | -1844.57 | -2184.82 | -330.46 | 5756526.14 | 625508.29 |
| 3125.00 | 61.67 | 185.36    | 1897.47 | -1846.95 | -2189.19 | -330.87 | 5756521.77 | 625507.88 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3130.00 | 61.80 | 185.35    | 1899.85 | -1849.33 | -2193.57 | -331.29 | 5756517.39 | 625507.47 |
| 3135.00 | 61.93 | 185.34    | 1902.23 | -1851.71 | -2197.95 | -331.70 | 5756513.01 | 625507.06 |
| 3140.00 | 62.01 | 185.34    | 1904.58 | -1854.06 | -2202.35 | -332.11 | 5756508.61 | 625506.64 |
| 3145.00 | 62.07 | 185.35    | 1906.91 | -1856.39 | -2206.75 | -332.52 | 5756504.21 | 625506.23 |
| 3150.00 | 62.14 | 185.35    | 1909.25 | -1858.73 | -2211.15 | -332.93 | 5756499.81 | 625505.82 |
| 3155.00 | 62.21 | 185.35    | 1911.58 | -1861.06 | -2215.55 | -333.35 | 5756495.41 | 625505.41 |
| 3160.00 | 62.27 | 185.36    | 1913.92 | -1863.40 | -2219.95 | -333.76 | 5756491.01 | 625504.99 |
| 3165.00 | 62.34 | 185.36    | 1916.26 | -1865.74 | -2224.35 | -334.17 | 5756486.61 | 625504.58 |
| 3170.00 | 62.27 | 185.38    | 1918.59 | -1868.07 | -2228.75 | -334.59 | 5756482.21 | 625504.17 |
| 3175.00 | 62.21 | 185.40    | 1920.93 | -1870.41 | -2233.16 | -335.01 | 5756477.81 | 625503.75 |
| 3180.00 | 62.14 | 185.42    | 1923.26 | -1872.74 | -2237.56 | -335.42 | 5756473.40 | 625503.33 |
| 3185.00 | 62.07 | 185.44    | 1925.60 | -1875.08 | -2241.96 | -335.84 | 5756469.00 | 625502.91 |
| 3190.00 | 62.01 | 185.45    | 1927.94 | -1877.42 | -2246.36 | -336.26 | 5756464.60 | 625502.50 |
| 3195.00 | 61.95 | 185.48    | 1930.28 | -1879.76 | -2250.76 | -336.68 | 5756460.20 | 625502.08 |
| 3200.00 | 61.95 | 185.56    | 1932.63 | -1882.11 | -2255.15 | -337.12 | 5756455.81 | 625501.64 |
| 3205.00 | 61.95 | 185.64    | 1934.98 | -1884.46 | -2259.54 | -337.55 | 5756451.42 | 625501.20 |
| 3210.00 | 61.94 | 185.72    | 1937.33 | -1886.81 | -2263.93 | -337.99 | 5756447.03 | 625500.76 |
| 3215.00 | 61.94 | 185.80    | 1939.68 | -1889.16 | -2268.32 | -338.43 | 5756442.64 | 625500.32 |
| 3220.00 | 61.94 | 185.88    | 1942.03 | -1891.51 | -2272.71 | -338.87 | 5756438.25 | 625499.89 |
| 3225.00 | 61.92 | 185.93    | 1944.39 | -1893.87 | -2277.10 | -339.31 | 5756433.86 | 625499.44 |
| 3230.00 | 61.89 | 185.93    | 1946.75 | -1896.23 | -2281.48 | -339.77 | 5756429.48 | 625498.98 |
| 3235.00 | 61.85 | 185.94    | 1949.11 | -1898.59 | -2285.87 | -340.23 | 5756425.09 | 625498.53 |
| 3240.00 | 61.81 | 185.94    | 1951.47 | -1900.95 | -2290.25 | -340.68 | 5756420.71 | 625498.07 |
| 3245.00 | 61.77 | 185.95    | 1953.83 | -1903.31 | -2294.63 | -341.14 | 5756416.33 | 625497.62 |
| 3250.00 | 61.73 | 185.95    | 1956.19 | -1905.67 | -2299.02 | -341.60 | 5756411.94 | 625497.16 |
| 3255.00 | 61.71 | 185.94    | 1958.56 | -1908.04 | -2303.40 | -342.05 | 5756407.56 | 625496.70 |
| 3260.00 | 61.70 | 185.94    | 1960.93 | -1910.41 | -2307.78 | -342.50 | 5756403.18 | 625496.25 |
| 3265.00 | 61.69 | 185.93    | 1963.30 | -1912.78 | -2312.16 | -342.96 | 5756398.81 | 625495.79 |
| 3270.00 | 61.68 | 185.92    | 1965.67 | -1915.15 | -2316.53 | -343.41 | 5756394.43 | 625495.34 |
| 3275.00 | 61.66 | 185.91    | 1968.05 | -1917.53 | -2320.91 | -343.87 | 5756390.05 | 625494.89 |
| 3280.00 | 61.65 | 185.90    | 1970.42 | -1919.90 | -2325.29 | -344.32 | 5756385.67 | 625494.43 |
| 3285.00 | 61.61 | 185.97    | 1972.80 | -1922.28 | -2329.66 | -344.79 | 5756381.30 | 625493.96 |
| 3290.00 | 61.56 | 186.05    | 1975.18 | -1924.66 | -2334.03 | -345.26 | 5756376.93 | 625493.49 |
| 3295.00 | 61.52 | 186.13    | 1977.57 | -1927.05 | -2338.40 | -345.73 | 5756372.56 | 625493.03 |
| 3300.00 | 61.47 | 186.21    | 1979.95 | -1929.43 | -2342.77 | -346.20 | 5756368.19 | 625492.56 |
| 3305.00 | 61.42 | 186.29    | 1982.34 | -1931.82 | -2347.14 | -346.67 | 5756363.82 | 625492.09 |
| 3310.00 | 61.38 | 186.35    | 1984.72 | -1934.20 | -2351.51 | -347.14 | 5756359.45 | 625491.62 |
| 3315.00 | 61.35 | 186.27    | 1987.13 | -1936.61 | -2355.87 | -347.60 | 5756355.09 | 625491.15 |
| 3320.00 | 61.31 | 186.19    | 1989.53 | -1939.01 | -2360.23 | -348.07 | 5756350.73 | 625490.68 |
| 3325.00 | 61.28 | 186.10    | 1991.93 | -1941.41 | -2364.59 | -348.54 | 5756346.37 | 625490.22 |
| 3330.00 | 61.25 | 186.02    | 1994.33 | -1943.81 | -2368.95 | -349.00 | 5756342.01 | 625489.75 |
| 3335.00 | 61.22 | 185.94    | 1996.74 | -1946.22 | -2373.31 | -349.47 | 5756337.65 | 625489.28 |
| 3340.00 | 61.18 | 185.88    | 1999.14 | -1948.62 | -2377.67 | -349.94 | 5756333.29 | 625488.82 |
| 3345.00 | 61.12 | 185.94    | 2001.56 | -1951.04 | -2382.02 | -350.40 | 5756328.94 | 625488.36 |
| 3350.00 | 61.06 | 186.00    | 2003.99 | -1953.47 | -2386.37 | -350.86 | 5756324.60 | 625487.90 |
| 3355.00 | 61.00 | 186.06    | 2006.41 | -1955.89 | -2390.72 | -351.32 | 5756320.25 | 625487.44 |
| 3360.00 | 60.94 | 186.12    | 2008.83 | -1958.31 | -2395.07 | -351.78 | 5756315.90 | 625486.97 |
| 3365.00 | 60.88 | 186.18    | 2011.26 | -1960.74 | -2399.41 | -352.24 | 5756311.55 | 625486.51 |
| 3370.00 | 60.80 | 186.23    | 2013.69 | -1963.17 | -2403.76 | -352.71 | 5756307.21 | 625486.05 |
| 3375.00 | 60.70 | 186.24    | 2016.15 | -1965.63 | -2408.08 | -353.18 | 5756302.88 | 625485.57 |
| 3380.00 | 60.60 | 186.26    | 2018.61 | -1968.09 | -2412.41 | -353.66 | 5756298.55 | 625485.10 |
| 3385.00 | 60.50 | 186.27    | 2021.07 | -1970.55 | -2416.74 | -354.13 | 5756294.22 | 625484.62 |
| 3390.00 | 60.40 | 186.29    | 2023.53 | -1973.01 | -2421.07 | -354.61 | 5756289.89 | 625484.15 |
| 3395.00 | 60.29 | 186.30    | 2025.99 | -1975.47 | -2425.39 | -355.08 | 5756285.57 | 625483.67 |
| 3400.00 | 60.24 | 186.25    | 2028.46 | -1977.94 | -2429.71 | -355.55 | 5756281.25 | 625483.21 |
| 3405.00 | 60.21 | 186.17    | 2030.95 | -1980.43 | -2434.03 | -356.00 | 5756276.94 | 625482.75 |
| 3410.00 | 60.17 | 186.08    | 2033.44 | -1982.92 | -2438.34 | -356.46 | 5756272.62 | 625482.29 |
| 3415.00 | 60.14 | 185.99    | 2035.93 | -1985.41 | -2442.65 | -356.92 | 5756268.31 | 625481.83 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3420.00 | 60.11 | 185.91    | 2038.41 | -1987.89 | -2446.97 | -357.38 | 5756264.00 | 625481.38 |
| 3425.00 | 60.07 | 185.82    | 2040.90 | -1990.38 | -2451.28 | -357.84 | 5756259.68 | 625480.92 |
| 3430.00 | 60.05 | 185.71    | 2043.40 | -1992.88 | -2455.59 | -358.26 | 5756255.37 | 625480.50 |
| 3435.00 | 60.03 | 185.60    | 2045.90 | -1995.38 | -2459.90 | -358.67 | 5756251.06 | 625480.08 |
| 3440.00 | 60.01 | 185.50    | 2048.40 | -1997.88 | -2464.21 | -359.09 | 5756246.75 | 625479.67 |
| 3445.00 | 59.99 | 185.39    | 2050.90 | -2000.38 | -2468.52 | -359.50 | 5756242.44 | 625479.25 |
| 3450.00 | 59.97 | 185.28    | 2053.39 | -2002.87 | -2472.83 | -359.91 | 5756238.13 | 625478.84 |
| 3455.00 | 59.95 | 185.16    | 2055.90 | -2005.38 | -2477.14 | -360.32 | 5756233.82 | 625478.43 |
| 3460.00 | 59.92 | 184.97    | 2058.41 | -2007.89 | -2481.45 | -360.67 | 5756229.51 | 625478.08 |
| 3465.00 | 59.89 | 184.79    | 2060.92 | -2010.40 | -2485.76 | -361.02 | 5756225.20 | 625477.73 |
| 3470.00 | 59.87 | 184.60    | 2063.43 | -2012.91 | -2490.07 | -361.37 | 5756220.89 | 625477.38 |
| 3475.00 | 59.84 | 184.42    | 2065.94 | -2015.42 | -2494.38 | -361.72 | 5756216.58 | 625477.04 |
| 3480.00 | 59.81 | 184.23    | 2068.45 | -2017.93 | -2498.69 | -362.07 | 5756212.27 | 625476.69 |
| 3485.00 | 59.78 | 184.06    | 2070.96 | -2020.44 | -2503.00 | -362.40 | 5756207.96 | 625476.35 |
| 3490.00 | 59.76 | 183.91    | 2073.48 | -2022.96 | -2507.31 | -362.68 | 5756203.65 | 625476.08 |
| 3495.00 | 59.74 | 183.77    | 2076.00 | -2025.48 | -2511.62 | -362.95 | 5756199.34 | 625475.80 |
| 3500.00 | 59.72 | 183.62    | 2078.52 | -2028.00 | -2515.93 | -363.23 | 5756195.03 | 625475.52 |
| 3505.00 | 59.69 | 183.47    | 2081.04 | -2030.52 | -2520.24 | -363.51 | 5756190.72 | 625475.25 |
| 3510.00 | 59.67 | 183.33    | 2083.56 | -2033.04 | -2524.55 | -363.78 | 5756186.41 | 625474.97 |
| 3512.00 | 59.66 | 183.27    | 2084.57 | -2034.05 | -2526.27 | -363.89 | 5756184.69 | 625474.86 |
| 3513.00 | 59.66 | 183.24    | 2085.07 | -2034.55 | -2527.14 | -363.94 | 5756183.83 | 625474.81 |
| 3514.00 | 59.67 | 183.20    | 2085.58 | -2035.06 | -2528.00 | -363.98 | 5756182.96 | 625474.77 |
| 3515.00 | 59.69 | 183.15    | 2086.08 | -2035.56 | -2528.86 | -364.02 | 5756182.10 | 625474.73 |
| 3516.00 | 59.70 | 183.11    | 2086.58 | -2036.06 | -2529.73 | -364.06 | 5756181.24 | 625474.69 |
| 3517.00 | 59.71 | 183.07    | 2087.08 | -2036.56 | -2530.59 | -364.10 | 5756180.37 | 625474.65 |
| 3518.00 | 59.72 | 183.03    | 2087.59 | -2037.07 | -2531.45 | -364.14 | 5756179.51 | 625474.61 |
| 3519.00 | 59.73 | 182.99    | 2088.09 | -2037.57 | -2532.32 | -364.18 | 5756178.65 | 625474.57 |
| 3520.00 | 59.74 | 182.94    | 2088.59 | -2038.07 | -2533.18 | -364.22 | 5756177.78 | 625474.53 |
| 3521.00 | 59.75 | 182.90    | 2089.10 | -2038.58 | -2534.04 | -364.26 | 5756176.92 | 625474.49 |
| 3522.00 | 59.76 | 182.86    | 2089.60 | -2039.08 | -2534.91 | -364.30 | 5756176.05 | 625474.45 |
| 3523.00 | 59.77 | 182.82    | 2090.10 | -2039.58 | -2535.77 | -364.34 | 5756175.19 | 625474.41 |
| 3524.00 | 59.79 | 182.78    | 2090.60 | -2040.08 | -2536.63 | -364.38 | 5756174.33 | 625474.37 |
| 3525.00 | 59.80 | 182.74    | 2091.11 | -2040.59 | -2537.50 | -364.42 | 5756173.46 | 625474.33 |
| 3526.00 | 59.81 | 182.69    | 2091.61 | -2041.09 | -2538.36 | -364.46 | 5756172.60 | 625474.29 |
| 3527.00 | 59.82 | 182.65    | 2092.11 | -2041.59 | -2539.22 | -364.50 | 5756171.74 | 625474.25 |
| 3528.00 | 59.83 | 182.61    | 2092.61 | -2042.09 | -2540.09 | -364.54 | 5756170.87 | 625474.21 |
| 3529.00 | 59.84 | 182.57    | 2093.12 | -2042.60 | -2540.95 | -364.58 | 5756170.01 | 625474.17 |
| 3530.00 | 59.85 | 182.53    | 2093.62 | -2043.10 | -2541.81 | -364.62 | 5756169.15 | 625474.13 |
| 3531.00 | 59.86 | 182.49    | 2094.12 | -2043.60 | -2542.68 | -364.66 | 5756168.28 | 625474.09 |
| 3532.00 | 59.88 | 182.44    | 2094.63 | -2044.11 | -2543.54 | -364.70 | 5756167.42 | 625474.05 |
| 3533.00 | 59.89 | 182.40    | 2095.13 | -2044.61 | -2544.41 | -364.74 | 5756166.56 | 625474.01 |
| 3534.00 | 59.90 | 182.36    | 2095.63 | -2045.11 | -2545.27 | -364.78 | 5756165.69 | 625473.97 |
| 3535.00 | 59.91 | 182.32    | 2096.13 | -2045.61 | -2546.13 | -364.82 | 5756164.83 | 625473.93 |
| 3536.00 | 59.92 | 182.28    | 2096.64 | -2046.12 | -2547.00 | -364.86 | 5756163.97 | 625473.89 |
| 3537.00 | 59.93 | 182.23    | 2097.14 | -2046.62 | -2547.86 | -364.90 | 5756163.10 | 625473.85 |
| 3538.00 | 59.94 | 182.19    | 2097.64 | -2047.12 | -2548.72 | -364.94 | 5756162.24 | 625473.81 |
| 3539.00 | 59.95 | 182.15    | 2098.14 | -2047.62 | -2549.59 | -364.98 | 5756161.38 | 625473.77 |
| 3540.00 | 59.96 | 182.11    | 2098.65 | -2048.13 | -2550.45 | -365.02 | 5756160.51 | 625473.73 |
| 3541.00 | 59.98 | 182.07    | 2099.15 | -2048.63 | -2551.31 | -365.06 | 5756159.65 | 625473.69 |
| 3542.00 | 59.98 | 182.04    | 2099.65 | -2049.13 | -2552.18 | -365.10 | 5756158.78 | 625473.66 |
| 3543.00 | 59.98 | 182.02    | 2100.15 | -2049.63 | -2553.04 | -365.12 | 5756157.92 | 625473.63 |
| 3544.00 | 59.98 | 182.00    | 2100.65 | -2050.13 | -2553.91 | -365.15 | 5756157.05 | 625473.61 |
| 3545.00 | 59.98 | 181.98    | 2101.15 | -2050.63 | -2554.77 | -365.18 | 5756156.19 | 625473.58 |
| 3546.00 | 59.98 | 181.96    | 2101.65 | -2051.13 | -2555.64 | -365.20 | 5756155.32 | 625473.55 |
| 3547.00 | 59.99 | 181.95    | 2102.15 | -2051.63 | -2556.51 | -365.23 | 5756154.46 | 625473.52 |
| 3548.00 | 59.99 | 181.93    | 2102.65 | -2052.13 | -2557.37 | -365.26 | 5756153.59 | 625473.50 |
| 3549.00 | 59.99 | 181.91    | 2103.15 | -2052.63 | -2558.24 | -365.28 | 5756152.72 | 625473.47 |
| 3550.00 | 59.99 | 181.89    | 2103.65 | -2053.13 | -2559.10 | -365.31 | 5756151.86 | 625473.44 |



| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3551.00 | 59.99 | 181.87    | 2104.15 | -2053.63 | -2559.97 | -365.34 | 5756150.99 | 625473.42 |
| 3552.00 | 59.99 | 181.85    | 2104.65 | -2054.13 | -2560.83 | -365.36 | 5756150.13 | 625473.39 |
| 3553.00 | 59.99 | 181.83    | 2105.15 | -2054.63 | -2561.70 | -365.39 | 5756149.26 | 625473.36 |
| 3554.00 | 59.99 | 181.81    | 2105.65 | -2055.13 | -2562.56 | -365.42 | 5756148.40 | 625473.34 |
| 3555.00 | 59.99 | 181.80    | 2106.15 | -2055.63 | -2563.43 | -365.44 | 5756147.53 | 625473.31 |
| 3556.00 | 59.99 | 181.78    | 2106.65 | -2056.13 | -2564.30 | -365.47 | 5756146.67 | 625473.28 |
| 3557.00 | 60.00 | 181.76    | 2107.15 | -2056.63 | -2565.16 | -365.50 | 5756145.80 | 625473.26 |
| 3558.00 | 60.00 | 181.74    | 2107.65 | -2057.13 | -2566.03 | -365.52 | 5756144.93 | 625473.23 |
| 3559.00 | 60.00 | 181.72    | 2108.15 | -2057.63 | -2566.89 | -365.55 | 5756144.07 | 625473.20 |
| 3560.00 | 60.00 | 181.70    | 2108.65 | -2058.13 | -2567.76 | -365.58 | 5756143.20 | 625473.18 |
| 3561.00 | 60.00 | 181.68    | 2109.15 | -2058.63 | -2568.62 | -365.60 | 5756142.34 | 625473.15 |
| 3562.00 | 60.00 | 181.66    | 2109.65 | -2059.13 | -2569.49 | -365.63 | 5756141.47 | 625473.12 |
| 3563.00 | 60.00 | 181.65    | 2110.15 | -2059.63 | -2570.35 | -365.66 | 5756140.61 | 625473.10 |
| 3564.00 | 60.00 | 181.63    | 2110.65 | -2060.13 | -2571.22 | -365.69 | 5756139.74 | 625473.07 |
| 3565.00 | 60.00 | 181.61    | 2111.15 | -2060.63 | -2572.09 | -365.71 | 5756138.88 | 625473.04 |
| 3566.00 | 60.01 | 181.59    | 2111.65 | -2061.13 | -2572.95 | -365.74 | 5756138.01 | 625473.02 |
| 3567.00 | 60.01 | 181.57    | 2112.15 | -2061.63 | -2573.82 | -365.77 | 5756137.14 | 625472.99 |
| 3568.00 | 60.01 | 181.55    | 2112.65 | -2062.13 | -2574.68 | -365.79 | 5756136.28 | 625472.96 |
| 3569.00 | 60.01 | 181.53    | 2113.15 | -2062.63 | -2575.55 | -365.82 | 5756135.41 | 625472.93 |
| 3570.00 | 60.01 | 181.51    | 2113.65 | -2063.13 | -2576.41 | -365.85 | 5756134.55 | 625472.91 |
| 3571.00 | 60.01 | 181.50    | 2114.15 | -2063.63 | -2577.28 | -365.87 | 5756133.68 | 625472.88 |
| 3572.00 | 60.00 | 181.48    | 2114.65 | -2064.13 | -2578.14 | -365.89 | 5756132.82 | 625472.86 |
| 3573.00 | 60.00 | 181.47    | 2115.16 | -2064.64 | -2579.01 | -365.91 | 5756131.95 | 625472.84 |
| 3574.00 | 59.99 | 181.45    | 2115.66 | -2065.14 | -2579.87 | -365.93 | 5756131.09 | 625472.82 |
| 3575.00 | 59.98 | 181.44    | 2116.16 | -2065.64 | -2580.74 | -365.95 | 5756130.22 | 625472.81 |
| 3576.00 | 59.98 | 181.42    | 2116.66 | -2066.14 | -2581.61 | -365.97 | 5756129.36 | 625472.79 |
| 3577.00 | 59.97 | 181.41    | 2117.16 | -2066.64 | -2582.47 | -365.99 | 5756128.49 | 625472.77 |
| 3578.00 | 59.97 | 181.39    | 2117.66 | -2067.14 | -2583.34 | -366.01 | 5756127.63 | 625472.75 |
| 3579.00 | 59.96 | 181.38    | 2118.16 | -2067.64 | -2584.20 | -366.03 | 5756126.76 | 625472.73 |
| 3580.00 | 59.96 | 181.37    | 2118.66 | -2068.14 | -2585.07 | -366.05 | 5756125.90 | 625472.71 |
| 3581.00 | 59.95 | 181.35    | 2119.16 | -2068.64 | -2585.93 | -366.07 | 5756125.03 | 625472.69 |
| 3582.00 | 59.94 | 181.34    | 2119.67 | -2069.15 | -2586.80 | -366.09 | 5756124.17 | 625472.67 |
| 3583.00 | 59.94 | 181.32    | 2120.17 | -2069.65 | -2587.66 | -366.10 | 5756123.30 | 625472.65 |
| 3584.00 | 59.93 | 181.31    | 2120.67 | -2070.15 | -2588.53 | -366.12 | 5756122.44 | 625472.63 |
| 3585.00 | 59.93 | 181.29    | 2121.17 | -2070.65 | -2589.39 | -366.14 | 5756121.57 | 625472.61 |
| 3586.00 | 59.92 | 181.28    | 2121.67 | -2071.15 | -2590.26 | -366.16 | 5756120.70 | 625472.59 |
| 3587.00 | 59.91 | 181.26    | 2122.17 | -2071.65 | -2591.12 | -366.18 | 5756119.84 | 625472.57 |
| 3588.00 | 59.91 | 181.25    | 2122.67 | -2072.15 | -2591.99 | -366.20 | 5756118.97 | 625472.55 |
| 3589.00 | 59.90 | 181.23    | 2123.17 | -2072.65 | -2592.85 | -366.22 | 5756118.11 | 625472.53 |
| 3590.00 | 59.90 | 181.22    | 2123.68 | -2073.16 | -2593.72 | -366.24 | 5756117.24 | 625472.51 |
| 3591.00 | 59.89 | 181.20    | 2124.18 | -2073.66 | -2594.58 | -366.26 | 5756116.38 | 625472.49 |
| 3592.00 | 59.88 | 181.19    | 2124.68 | -2074.16 | -2595.45 | -366.28 | 5756115.51 | 625472.47 |
| 3593.00 | 59.88 | 181.18    | 2125.18 | -2074.66 | -2596.31 | -366.30 | 5756114.65 | 625472.45 |
| 3594.00 | 59.87 | 181.16    | 2125.68 | -2075.16 | -2597.18 | -366.32 | 5756113.78 | 625472.44 |
| 3595.00 | 59.87 | 181.15    | 2126.18 | -2075.66 | -2598.04 | -366.34 | 5756112.92 | 625472.42 |
| 3596.00 | 59.86 | 181.13    | 2126.68 | -2076.16 | -2598.91 | -366.36 | 5756112.05 | 625472.40 |
| 3597.00 | 59.86 | 181.12    | 2127.18 | -2076.66 | -2599.77 | -366.38 | 5756111.19 | 625472.38 |
| 3598.00 | 59.85 | 181.10    | 2127.68 | -2077.16 | -2600.64 | -366.40 | 5756110.32 | 625472.36 |
| 3599.00 | 59.84 | 181.09    | 2128.19 | -2077.67 | -2601.50 | -366.42 | 5756109.46 | 625472.34 |
| 3600.00 | 59.84 | 181.08    | 2128.69 | -2078.17 | -2602.37 | -366.43 | 5756108.59 | 625472.32 |
| 3601.00 | 59.84 | 181.08    | 2129.19 | -2078.67 | -2603.23 | -366.45 | 5756107.73 | 625472.30 |
| 3602.00 | 59.84 | 181.08    | 2129.69 | -2079.17 | -2604.10 | -366.47 | 5756106.86 | 625472.29 |
| 3603.00 | 59.83 | 181.08    | 2130.20 | -2079.68 | -2604.96 | -366.48 | 5756106.00 | 625472.27 |
| 3604.00 | 59.83 | 181.08    | 2130.70 | -2080.18 | -2605.83 | -366.50 | 5756105.14 | 625472.25 |
| 3605.00 | 59.83 | 181.08    | 2131.20 | -2080.68 | -2606.69 | -366.52 | 5756104.27 | 625472.24 |
| 3606.00 | 59.83 | 181.08    | 2131.70 | -2081.18 | -2607.55 | -366.53 | 5756103.41 | 625472.22 |
| 3607.00 | 59.83 | 181.08    | 2132.21 | -2081.69 | -2608.42 | -366.55 | 5756102.54 | 625472.20 |
| 3608.00 | 59.83 | 181.08    | 2132.71 | -2082.19 | -2609.28 | -366.57 | 5756101.68 | 625472.19 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3609.00 | 59.82 | 181.08    | 2133.21 | -2082.69 | -2610.15 | -366.58 | 5756100.82 | 625472.17 |
| 3610.00 | 59.82 | 181.08    | 2133.72 | -2083.20 | -2611.01 | -366.60 | 5756099.95 | 625472.16 |
| 3611.00 | 59.82 | 181.08    | 2134.22 | -2083.70 | -2611.87 | -366.61 | 5756099.09 | 625472.14 |
| 3612.00 | 59.82 | 181.08    | 2134.72 | -2084.20 | -2612.74 | -366.63 | 5756098.22 | 625472.12 |
| 3613.00 | 59.82 | 181.08    | 2135.22 | -2084.70 | -2613.60 | -366.65 | 5756097.36 | 625472.11 |
| 3614.00 | 59.82 | 181.08    | 2135.73 | -2085.21 | -2614.47 | -366.66 | 5756096.49 | 625472.09 |
| 3615.00 | 59.81 | 181.09    | 2136.23 | -2085.71 | -2615.33 | -366.68 | 5756095.63 | 625472.07 |
| 3616.00 | 59.81 | 181.09    | 2136.73 | -2086.21 | -2616.20 | -366.70 | 5756094.77 | 625472.06 |
| 3617.00 | 59.81 | 181.09    | 2137.23 | -2086.71 | -2617.06 | -366.71 | 5756093.90 | 625472.04 |
| 3618.00 | 59.81 | 181.09    | 2137.74 | -2087.22 | -2617.92 | -366.73 | 5756093.04 | 625472.02 |
| 3619.00 | 59.81 | 181.09    | 2138.24 | -2087.72 | -2618.79 | -366.75 | 5756092.17 | 625472.01 |
| 3620.00 | 59.80 | 181.09    | 2138.74 | -2088.22 | -2619.65 | -366.76 | 5756091.31 | 625471.99 |
| 3621.00 | 59.80 | 181.09    | 2139.25 | -2088.73 | -2620.52 | -366.78 | 5756090.44 | 625471.98 |
| 3622.00 | 59.80 | 181.09    | 2139.75 | -2089.23 | -2621.38 | -366.79 | 5756089.58 | 625471.96 |
| 3623.00 | 59.80 | 181.09    | 2140.25 | -2089.73 | -2622.25 | -366.81 | 5756088.72 | 625471.94 |
| 3624.00 | 59.80 | 181.09    | 2140.75 | -2090.23 | -2623.11 | -366.83 | 5756087.85 | 625471.93 |
| 3625.00 | 59.80 | 181.09    | 2141.26 | -2090.74 | -2623.97 | -366.84 | 5756086.99 | 625471.91 |
| 3626.00 | 59.79 | 181.09    | 2141.76 | -2091.24 | -2624.84 | -366.86 | 5756086.12 | 625471.89 |
| 3627.00 | 59.79 | 181.09    | 2142.26 | -2091.74 | -2625.70 | -366.88 | 5756085.26 | 625471.88 |
| 3628.00 | 59.79 | 181.09    | 2142.77 | -2092.25 | -2626.57 | -366.89 | 5756084.39 | 625471.86 |
| 3629.00 | 59.79 | 181.09    | 2143.27 | -2092.75 | -2627.43 | -366.91 | 5756083.53 | 625471.84 |
| 3630.00 | 59.78 | 181.10    | 2143.77 | -2093.25 | -2628.29 | -366.93 | 5756082.67 | 625471.82 |
| 3631.00 | 59.77 | 181.11    | 2144.28 | -2093.76 | -2629.16 | -366.95 | 5756081.81 | 625471.81 |
| 3632.00 | 59.76 | 181.12    | 2144.78 | -2094.26 | -2630.02 | -366.97 | 5756080.94 | 625471.79 |
| 3633.00 | 59.75 | 181.13    | 2145.29 | -2094.77 | -2630.88 | -366.98 | 5756080.08 | 625471.77 |
| 3634.00 | 59.74 | 181.14    | 2145.80 | -2095.28 | -2631.74 | -367.00 | 5756079.22 | 625471.75 |
| 3635.00 | 59.73 | 181.15    | 2146.30 | -2095.78 | -2632.61 | -367.02 | 5756078.35 | 625471.73 |
| 3636.00 | 59.72 | 181.16    | 2146.81 | -2096.29 | -2633.47 | -367.04 | 5756077.49 | 625471.71 |
| 3637.00 | 59.71 | 181.17    | 2147.31 | -2096.79 | -2634.33 | -367.06 | 5756076.63 | 625471.70 |
| 3638.00 | 59.70 | 181.18    | 2147.82 | -2097.30 | -2635.20 | -367.08 | 5756075.77 | 625471.68 |
| 3639.00 | 59.69 | 181.19    | 2148.32 | -2097.80 | -2636.06 | -367.10 | 5756074.90 | 625471.66 |
| 3640.00 | 59.68 | 181.20    | 2148.83 | -2098.31 | -2636.92 | -367.11 | 5756074.04 | 625471.64 |
| 3641.00 | 59.67 | 181.21    | 2149.33 | -2098.81 | -2637.78 | -367.13 | 5756073.18 | 625471.62 |
| 3642.00 | 59.67 | 181.22    | 2149.84 | -2099.32 | -2638.65 | -367.15 | 5756072.31 | 625471.60 |
| 3643.00 | 59.66 | 181.23    | 2150.34 | -2099.82 | -2639.51 | -367.17 | 5756071.45 | 625471.58 |
| 3644.00 | 59.65 | 181.24    | 2150.85 | -2100.33 | -2640.37 | -367.19 | 5756070.59 | 625471.57 |
| 3645.00 | 59.64 | 181.25    | 2151.35 | -2100.83 | -2641.24 | -367.21 | 5756069.73 | 625471.55 |
| 3646.00 | 59.63 | 181.26    | 2151.86 | -2101.34 | -2642.10 | -367.23 | 5756068.86 | 625471.53 |
| 3647.00 | 59.62 | 181.27    | 2152.36 | -2101.84 | -2642.96 | -367.24 | 5756068.00 | 625471.51 |
| 3648.00 | 59.61 | 181.28    | 2152.87 | -2102.35 | -2643.82 | -367.26 | 5756067.14 | 625471.49 |
| 3649.00 | 59.60 | 181.29    | 2153.37 | -2102.85 | -2644.69 | -367.28 | 5756066.27 | 625471.47 |
| 3650.00 | 59.59 | 181.30    | 2153.88 | -2103.36 | -2645.55 | -367.30 | 5756065.41 | 625471.45 |
| 3651.00 | 59.58 | 181.31    | 2154.38 | -2103.86 | -2646.41 | -367.32 | 5756064.55 | 625471.44 |
| 3652.00 | 59.57 | 181.32    | 2154.89 | -2104.37 | -2647.28 | -367.34 | 5756063.69 | 625471.42 |
| 3653.00 | 59.56 | 181.33    | 2155.39 | -2104.87 | -2648.14 | -367.35 | 5756062.82 | 625471.40 |
| 3654.00 | 59.55 | 181.34    | 2155.90 | -2105.38 | -2649.00 | -367.37 | 5756061.96 | 625471.38 |
| 3655.00 | 59.54 | 181.35    | 2156.40 | -2105.88 | -2649.86 | -367.39 | 5756061.10 | 625471.36 |
| 3656.00 | 59.53 | 181.35    | 2156.91 | -2106.39 | -2650.73 | -367.41 | 5756060.24 | 625471.34 |
| 3657.00 | 59.53 | 181.36    | 2157.41 | -2106.89 | -2651.59 | -367.43 | 5756059.37 | 625471.33 |
| 3658.00 | 59.52 | 181.36    | 2157.92 | -2107.40 | -2652.45 | -367.45 | 5756058.51 | 625471.31 |
| 3659.00 | 59.51 | 181.35    | 2158.43 | -2107.91 | -2653.31 | -367.46 | 5756057.65 | 625471.29 |
| 3660.00 | 59.50 | 181.33    | 2158.94 | -2108.42 | -2654.17 | -367.48 | 5756056.79 | 625471.27 |
| 3661.00 | 59.49 | 181.32    | 2159.45 | -2108.93 | -2655.03 | -367.50 | 5756055.93 | 625471.26 |
| 3662.00 | 59.48 | 181.30    | 2159.96 | -2109.44 | -2655.89 | -367.52 | 5756055.07 | 625471.24 |
| 3663.00 | 59.47 | 181.29    | 2160.47 | -2109.95 | -2656.75 | -367.53 | 5756054.21 | 625471.22 |
| 3664.00 | 59.46 | 181.27    | 2160.98 | -2110.46 | -2657.61 | -367.55 | 5756053.35 | 625471.20 |
| 3665.00 | 59.45 | 181.25    | 2161.49 | -2110.97 | -2658.47 | -367.57 | 5756052.49 | 625471.19 |
| 3666.00 | 59.44 | 181.24    | 2162.00 | -2111.48 | -2659.33 | -367.58 | 5756051.63 | 625471.17 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3667.00 | 59.44 | 181.22    | 2162.50 | -2111.98 | -2660.20 | -367.60 | 5756050.77 | 625471.15 |
| 3668.00 | 59.43 | 181.21    | 2163.01 | -2112.49 | -2661.06 | -367.62 | 5756049.91 | 625471.14 |
| 3669.00 | 59.42 | 181.19    | 2163.52 | -2113.00 | -2661.92 | -367.64 | 5756049.05 | 625471.12 |
| 3670.00 | 59.41 | 181.18    | 2164.03 | -2113.51 | -2662.78 | -367.65 | 5756048.19 | 625471.10 |
| 3671.00 | 59.40 | 181.16    | 2164.54 | -2114.02 | -2663.64 | -367.67 | 5756047.32 | 625471.08 |
| 3672.00 | 59.39 | 181.15    | 2165.05 | -2114.53 | -2664.50 | -367.69 | 5756046.46 | 625471.07 |
| 3673.00 | 59.38 | 181.13    | 2165.56 | -2115.04 | -2665.36 | -367.70 | 5756045.60 | 625471.05 |
| 3674.00 | 59.37 | 181.11    | 2166.07 | -2115.55 | -2666.22 | -367.72 | 5756044.74 | 625471.03 |
| 3675.00 | 59.36 | 181.10    | 2166.58 | -2116.06 | -2667.08 | -367.74 | 5756043.88 | 625471.01 |
| 3676.00 | 59.35 | 181.08    | 2167.09 | -2116.57 | -2667.94 | -367.76 | 5756043.02 | 625471.00 |
| 3677.00 | 59.35 | 181.07    | 2167.60 | -2117.08 | -2668.80 | -367.77 | 5756042.16 | 625470.98 |
| 3678.00 | 59.34 | 181.05    | 2168.11 | -2117.59 | -2669.66 | -367.79 | 5756041.30 | 625470.96 |
| 3679.00 | 59.33 | 181.04    | 2168.61 | -2118.09 | -2670.52 | -367.81 | 5756040.44 | 625470.95 |
| 3680.00 | 59.32 | 181.02    | 2169.12 | -2118.60 | -2671.38 | -367.83 | 5756039.58 | 625470.93 |
| 3681.00 | 59.31 | 181.01    | 2169.63 | -2119.11 | -2672.24 | -367.84 | 5756038.72 | 625470.91 |
| 3682.00 | 59.30 | 180.99    | 2170.14 | -2119.62 | -2673.10 | -367.86 | 5756037.86 | 625470.89 |
| 3683.00 | 59.29 | 180.98    | 2170.65 | -2120.13 | -2673.96 | -367.88 | 5756037.00 | 625470.88 |
| 3684.00 | 59.28 | 180.96    | 2171.16 | -2120.64 | -2674.82 | -367.89 | 5756036.14 | 625470.86 |
| 3685.00 | 59.27 | 180.94    | 2171.67 | -2121.15 | -2675.68 | -367.91 | 5756035.28 | 625470.84 |
| 3686.00 | 59.26 | 180.93    | 2172.18 | -2121.66 | -2676.54 | -367.93 | 5756034.42 | 625470.83 |
| 3687.00 | 59.26 | 180.92    | 2172.69 | -2122.17 | -2677.40 | -367.94 | 5756033.56 | 625470.81 |
| 3688.00 | 59.24 | 180.93    | 2173.20 | -2122.68 | -2678.26 | -367.96 | 5756032.70 | 625470.80 |
| 3689.00 | 59.23 | 180.93    | 2173.72 | -2123.20 | -2679.12 | -367.97 | 5756031.84 | 625470.78 |
| 3690.00 | 59.22 | 180.93    | 2174.23 | -2123.71 | -2679.98 | -367.99 | 5756030.98 | 625470.77 |
| 3691.00 | 59.21 | 180.94    | 2174.74 | -2124.22 | -2680.84 | -368.00 | 5756030.13 | 625470.75 |
| 3692.00 | 59.20 | 180.94    | 2175.26 | -2124.74 | -2681.69 | -368.02 | 5756029.27 | 625470.74 |
| 3693.00 | 59.19 | 180.94    | 2175.77 | -2125.25 | -2682.55 | -368.03 | 5756028.41 | 625470.72 |
| 3694.00 | 59.18 | 180.95    | 2176.28 | -2125.76 | -2683.41 | -368.05 | 5756027.55 | 625470.71 |
| 3695.00 | 59.17 | 180.95    | 2176.80 | -2126.28 | -2684.27 | -368.06 | 5756026.69 | 625470.69 |
| 3696.00 | 59.16 | 180.96    | 2177.31 | -2126.79 | -2685.13 | -368.08 | 5756025.84 | 625470.68 |
| 3697.00 | 59.15 | 180.96    | 2177.82 | -2127.30 | -2685.98 | -368.09 | 5756024.98 | 625470.66 |
| 3698.00 | 59.14 | 180.96    | 2178.34 | -2127.82 | -2686.84 | -368.11 | 5756024.12 | 625470.65 |
| 3699.00 | 59.13 | 180.97    | 2178.85 | -2128.33 | -2687.70 | -368.12 | 5756023.26 | 625470.63 |
| 3700.00 | 59.12 | 180.97    | 2179.36 | -2128.84 | -2688.56 | -368.13 | 5756022.40 | 625470.62 |
| 3701.00 | 59.11 | 180.97    | 2179.88 | -2129.36 | -2689.42 | -368.15 | 5756021.55 | 625470.61 |
| 3702.00 | 59.10 | 180.98    | 2180.39 | -2129.87 | -2690.27 | -368.16 | 5756020.69 | 625470.59 |
| 3703.00 | 59.09 | 180.98    | 2180.90 | -2130.38 | -2691.13 | -368.18 | 5756019.83 | 625470.58 |
| 3704.00 | 59.08 | 180.99    | 2181.42 | -2130.90 | -2691.99 | -368.19 | 5756018.97 | 625470.56 |
| 3705.00 | 59.07 | 180.99    | 2181.93 | -2131.41 | -2692.85 | -368.21 | 5756018.11 | 625470.55 |
| 3706.00 | 59.06 | 180.99    | 2182.44 | -2131.92 | -2693.71 | -368.22 | 5756017.26 | 625470.53 |
| 3707.00 | 59.05 | 181.00    | 2182.96 | -2132.44 | -2694.56 | -368.24 | 5756016.40 | 625470.52 |
| 3708.00 | 59.04 | 181.00    | 2183.47 | -2132.95 | -2695.42 | -368.25 | 5756015.54 | 625470.50 |
| 3709.00 | 59.03 | 181.01    | 2183.98 | -2133.46 | -2696.28 | -368.27 | 5756014.68 | 625470.49 |
| 3710.00 | 59.02 | 181.01    | 2184.50 | -2133.98 | -2697.14 | -368.28 | 5756013.82 | 625470.47 |
| 3711.00 | 59.01 | 181.01    | 2185.01 | -2134.49 | -2698.00 | -368.29 | 5756012.97 | 625470.46 |
| 3712.00 | 59.00 | 181.02    | 2185.53 | -2135.01 | -2698.85 | -368.31 | 5756012.11 | 625470.44 |
| 3713.00 | 58.99 | 181.02    | 2186.04 | -2135.52 | -2699.71 | -368.32 | 5756011.25 | 625470.43 |
| 3714.00 | 58.98 | 181.02    | 2186.55 | -2136.03 | -2700.57 | -368.34 | 5756010.39 | 625470.42 |
| 3715.00 | 58.97 | 181.03    | 2187.07 | -2136.55 | -2701.43 | -368.35 | 5756009.53 | 625470.40 |
| 3716.00 | 58.96 | 181.03    | 2187.58 | -2137.06 | -2702.28 | -368.37 | 5756008.68 | 625470.38 |
| 3717.00 | 58.95 | 181.04    | 2188.10 | -2137.58 | -2703.14 | -368.39 | 5756007.82 | 625470.36 |
| 3718.00 | 58.94 | 181.05    | 2188.62 | -2138.10 | -2703.99 | -368.41 | 5756006.97 | 625470.34 |
| 3719.00 | 58.94 | 181.06    | 2189.14 | -2138.62 | -2704.85 | -368.43 | 5756006.11 | 625470.32 |
| 3720.00 | 58.93 | 181.07    | 2189.66 | -2139.14 | -2705.70 | -368.45 | 5756005.26 | 625470.31 |
| 3721.00 | 58.92 | 181.08    | 2190.17 | -2139.65 | -2706.56 | -368.47 | 5756004.40 | 625470.29 |
| 3722.00 | 58.91 | 181.09    | 2190.69 | -2140.17 | -2707.41 | -368.49 | 5756003.55 | 625470.27 |
| 3723.00 | 58.91 | 181.10    | 2191.21 | -2140.69 | -2708.27 | -368.51 | 5756002.69 | 625470.25 |
| 3724.00 | 58.90 | 181.11    | 2191.73 | -2141.21 | -2709.12 | -368.53 | 5756001.84 | 625470.23 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3725.00 | 58.89 | 181.12    | 2192.25 | -2141.73 | -2709.98 | -368.55 | 5756000.98 | 625470.21 |
| 3726.00 | 58.89 | 181.13    | 2192.77 | -2142.25 | -2710.83 | -368.57 | 5756000.13 | 625470.19 |
| 3727.00 | 58.88 | 181.14    | 2193.29 | -2142.77 | -2711.69 | -368.59 | 5755999.27 | 625470.17 |
| 3728.00 | 58.87 | 181.15    | 2193.80 | -2143.28 | -2712.54 | -368.61 | 5755998.42 | 625470.15 |
| 3729.00 | 58.87 | 181.16    | 2194.32 | -2143.80 | -2713.40 | -368.63 | 5755997.56 | 625470.13 |
| 3730.00 | 58.86 | 181.17    | 2194.84 | -2144.32 | -2714.25 | -368.64 | 5755996.71 | 625470.11 |
| 3731.00 | 58.85 | 181.18    | 2195.36 | -2144.84 | -2715.11 | -368.66 | 5755995.86 | 625470.09 |
| 3732.00 | 58.85 | 181.19    | 2195.88 | -2145.36 | -2715.96 | -368.68 | 5755995.00 | 625470.07 |
| 3733.00 | 58.84 | 181.20    | 2196.40 | -2145.88 | -2716.82 | -368.70 | 5755994.15 | 625470.05 |
| 3734.00 | 58.83 | 181.21    | 2196.92 | -2146.40 | -2717.67 | -368.72 | 5755993.29 | 625470.03 |
| 3735.00 | 58.82 | 181.22    | 2197.44 | -2146.92 | -2718.53 | -368.74 | 5755992.44 | 625470.01 |
| 3736.00 | 58.82 | 181.23    | 2197.95 | -2147.43 | -2719.38 | -368.76 | 5755991.58 | 625469.99 |
| 3737.00 | 58.81 | 181.24    | 2198.47 | -2147.95 | -2720.23 | -368.78 | 5755990.73 | 625469.97 |
| 3738.00 | 58.80 | 181.25    | 2198.99 | -2148.47 | -2721.09 | -368.80 | 5755989.87 | 625469.95 |
| 3739.00 | 58.80 | 181.26    | 2199.51 | -2148.99 | -2721.94 | -368.82 | 5755989.02 | 625469.93 |
| 3740.00 | 58.79 | 181.27    | 2200.03 | -2149.51 | -2722.80 | -368.84 | 5755988.16 | 625469.91 |
| 3741.00 | 58.78 | 181.28    | 2200.55 | -2150.03 | -2723.65 | -368.86 | 5755987.31 | 625469.89 |
| 3742.00 | 58.78 | 181.29    | 2201.07 | -2150.55 | -2724.51 | -368.88 | 5755986.45 | 625469.87 |
| 3743.00 | 58.77 | 181.30    | 2201.58 | -2151.06 | -2725.36 | -368.90 | 5755985.60 | 625469.85 |
| 3744.00 | 58.76 | 181.31    | 2202.10 | -2151.58 | -2726.22 | -368.92 | 5755984.74 | 625469.83 |
| 3745.00 | 58.75 | 181.32    | 2202.62 | -2152.10 | -2727.07 | -368.94 | 5755983.89 | 625469.82 |
| 3746.00 | 58.75 | 181.33    | 2203.14 | -2152.62 | -2727.93 | -368.96 | 5755983.03 | 625469.80 |
| 3747.00 | 58.74 | 181.34    | 2203.66 | -2153.14 | -2728.78 | -368.98 | 5755982.18 | 625469.78 |
| 3748.00 | 58.73 | 181.35    | 2204.18 | -2153.66 | -2729.64 | -369.00 | 5755981.32 | 625469.76 |
| 3749.00 | 58.73 | 181.36    | 2204.70 | -2154.18 | -2730.49 | -369.02 | 5755980.47 | 625469.74 |
| 3750.00 | 58.72 | 181.37    | 2205.21 | -2154.69 | -2731.35 | -369.04 | 5755979.61 | 625469.72 |
| 3751.00 | 58.71 | 181.38    | 2205.73 | -2155.21 | -2732.20 | -369.06 | 5755978.76 | 625469.70 |
| 3752.00 | 58.71 | 181.39    | 2206.25 | -2155.73 | -2733.06 | -369.08 | 5755977.91 | 625469.68 |
| 3753.00 | 58.70 | 181.40    | 2206.77 | -2156.25 | -2733.91 | -369.10 | 5755977.05 | 625469.66 |
| 3754.00 | 58.69 | 181.41    | 2207.29 | -2156.77 | -2734.77 | -369.12 | 5755976.20 | 625469.64 |
| 3755.00 | 58.69 | 181.42    | 2207.81 | -2157.29 | -2735.62 | -369.14 | 5755975.34 | 625469.62 |
| 3756.00 | 58.68 | 181.43    | 2208.33 | -2157.81 | -2736.48 | -369.15 | 5755974.49 | 625469.60 |
| 3757.00 | 58.67 | 181.44    | 2208.85 | -2158.33 | -2737.33 | -369.17 | 5755973.63 | 625469.58 |
| 3758.00 | 58.66 | 181.45    | 2209.36 | -2158.84 | -2738.18 | -369.19 | 5755972.78 | 625469.56 |
| 3759.00 | 58.66 | 181.46    | 2209.88 | -2159.36 | -2739.04 | -369.21 | 5755971.92 | 625469.54 |
| 3760.00 | 58.65 | 181.47    | 2210.40 | -2159.88 | -2739.89 | -369.23 | 5755971.07 | 625469.52 |
| 3761.00 | 58.64 | 181.48    | 2210.92 | -2160.40 | -2740.75 | -369.25 | 5755970.21 | 625469.50 |
| 3762.00 | 58.64 | 181.49    | 2211.44 | -2160.92 | -2741.60 | -369.27 | 5755969.36 | 625469.48 |
| 3763.00 | 58.63 | 181.50    | 2211.96 | -2161.44 | -2742.46 | -369.29 | 5755968.50 | 625469.46 |
| 3764.00 | 58.62 | 181.51    | 2212.48 | -2161.96 | -2743.31 | -369.31 | 5755967.65 | 625469.44 |
| 3765.00 | 58.62 | 181.52    | 2212.99 | -2162.47 | -2744.17 | -369.33 | 5755966.79 | 625469.42 |
| 3766.00 | 58.61 | 181.53    | 2213.51 | -2162.99 | -2745.02 | -369.35 | 5755965.94 | 625469.40 |
| 3767.00 | 58.60 | 181.54    | 2214.03 | -2163.51 | -2745.88 | -369.37 | 5755965.08 | 625469.38 |
| 3768.00 | 58.60 | 181.55    | 2214.55 | -2164.03 | -2746.73 | -369.39 | 5755964.23 | 625469.36 |
| 3769.00 | 58.59 | 181.56    | 2215.07 | -2164.55 | -2747.59 | -369.41 | 5755963.37 | 625469.34 |
| 3770.00 | 58.58 | 181.57    | 2215.59 | -2165.07 | -2748.44 | -369.43 | 5755962.52 | 625469.32 |
| 3771.00 | 58.57 | 181.58    | 2216.11 | -2165.59 | -2749.30 | -369.45 | 5755961.66 | 625469.31 |
| 3772.00 | 58.57 | 181.59    | 2216.62 | -2166.10 | -2750.15 | -369.47 | 5755960.81 | 625469.29 |
| 3773.00 | 58.56 | 181.60    | 2217.14 | -2166.62 | -2751.01 | -369.49 | 5755959.96 | 625469.27 |
| 3774.00 | 58.57 | 181.59    | 2217.66 | -2167.14 | -2751.86 | -369.51 | 5755959.10 | 625469.25 |
| 3775.00 | 58.58 | 181.57    | 2218.18 | -2167.66 | -2752.71 | -369.53 | 5755958.25 | 625469.22 |
| 3776.00 | 58.59 | 181.56    | 2218.70 | -2168.18 | -2753.57 | -369.55 | 5755957.39 | 625469.20 |
| 3777.00 | 58.60 | 181.54    | 2219.22 | -2168.70 | -2754.42 | -369.57 | 5755956.54 | 625469.18 |
| 3778.00 | 58.60 | 181.53    | 2219.74 | -2169.22 | -2755.28 | -369.59 | 5755955.68 | 625469.16 |
| 3779.00 | 58.61 | 181.51    | 2220.26 | -2169.74 | -2756.13 | -369.61 | 5755954.83 | 625469.14 |
| 3780.00 | 58.62 | 181.50    | 2220.78 | -2170.26 | -2756.99 | -369.63 | 5755953.98 | 625469.12 |
| 3781.00 | 58.63 | 181.48    | 2221.30 | -2170.78 | -2757.84 | -369.65 | 5755953.12 | 625469.10 |
| 3782.00 | 58.64 | 181.47    | 2221.82 | -2171.30 | -2758.69 | -369.67 | 5755952.27 | 625469.08 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3783.00 | 58.65 | 181.45    | 2222.34 | -2171.82 | -2759.55 | -369.69 | 5755951.41 | 625469.06 |
| 3784.00 | 58.66 | 181.44    | 2222.86 | -2172.34 | -2760.40 | -369.72 | 5755950.56 | 625469.04 |
| 3785.00 | 58.67 | 181.42    | 2223.38 | -2172.86 | -2761.26 | -369.74 | 5755949.71 | 625469.02 |
| 3786.00 | 58.68 | 181.41    | 2223.90 | -2173.38 | -2762.11 | -369.76 | 5755948.85 | 625469.00 |
| 3787.00 | 58.69 | 181.39    | 2224.42 | -2173.90 | -2762.96 | -369.78 | 5755948.00 | 625468.98 |
| 3788.00 | 58.69 | 181.38    | 2224.94 | -2174.42 | -2763.82 | -369.80 | 5755947.14 | 625468.96 |
| 3789.00 | 58.70 | 181.36    | 2225.46 | -2174.94 | -2764.67 | -369.82 | 5755946.29 | 625468.94 |
| 3790.00 | 58.71 | 181.35    | 2225.98 | -2175.46 | -2765.53 | -369.84 | 5755945.43 | 625468.91 |
| 3791.00 | 58.72 | 181.33    | 2226.50 | -2175.98 | -2766.38 | -369.86 | 5755944.58 | 625468.89 |
| 3792.00 | 58.73 | 181.32    | 2227.02 | -2176.50 | -2767.23 | -369.88 | 5755943.73 | 625468.87 |
| 3793.00 | 58.74 | 181.30    | 2227.54 | -2177.02 | -2768.09 | -369.90 | 5755942.87 | 625468.85 |
| 3794.00 | 58.75 | 181.29    | 2228.06 | -2177.54 | -2768.94 | -369.92 | 5755942.02 | 625468.83 |
| 3795.00 | 58.76 | 181.27    | 2228.58 | -2178.06 | -2769.80 | -369.94 | 5755941.16 | 625468.81 |
| 3796.00 | 58.77 | 181.26    | 2229.10 | -2178.58 | -2770.65 | -369.96 | 5755940.31 | 625468.79 |
| 3797.00 | 58.78 | 181.24    | 2229.62 | -2179.10 | -2771.51 | -369.98 | 5755939.46 | 625468.77 |
| 3798.00 | 58.79 | 181.23    | 2230.14 | -2179.62 | -2772.36 | -370.00 | 5755938.60 | 625468.75 |
| 3799.00 | 58.79 | 181.21    | 2230.65 | -2180.13 | -2773.21 | -370.03 | 5755937.75 | 625468.73 |
| 3800.00 | 58.80 | 181.20    | 2231.17 | -2180.65 | -2774.07 | -370.05 | 5755936.89 | 625468.71 |
| 3801.00 | 58.81 | 181.18    | 2231.69 | -2181.17 | -2774.92 | -370.07 | 5755936.04 | 625468.69 |
| 3802.00 | 58.82 | 181.17    | 2232.21 | -2181.69 | -2775.78 | -370.09 | 5755935.19 | 625468.67 |
| 3803.00 | 58.82 | 181.16    | 2232.73 | -2182.21 | -2776.63 | -370.10 | 5755934.33 | 625468.65 |
| 3804.00 | 58.83 | 181.15    | 2233.25 | -2182.73 | -2777.49 | -370.12 | 5755933.47 | 625468.64 |
| 3805.00 | 58.83 | 181.15    | 2233.77 | -2183.25 | -2778.34 | -370.13 | 5755932.62 | 625468.62 |
| 3806.00 | 58.83 | 181.14    | 2234.28 | -2183.76 | -2779.20 | -370.15 | 5755931.76 | 625468.60 |
| 3807.00 | 58.83 | 181.13    | 2234.80 | -2184.28 | -2780.05 | -370.17 | 5755930.91 | 625468.59 |
| 3808.00 | 58.83 | 181.12    | 2235.32 | -2184.80 | -2780.91 | -370.18 | 5755930.05 | 625468.57 |
| 3809.00 | 58.84 | 181.11    | 2235.83 | -2185.31 | -2781.77 | -370.20 | 5755929.20 | 625468.56 |
| 3810.00 | 58.84 | 181.11    | 2236.35 | -2185.83 | -2782.62 | -370.21 | 5755928.34 | 625468.54 |
| 3811.00 | 58.84 | 181.10    | 2236.87 | -2186.35 | -2783.48 | -370.23 | 5755927.48 | 625468.53 |
| 3812.00 | 58.84 | 181.09    | 2237.39 | -2186.87 | -2784.33 | -370.24 | 5755926.63 | 625468.51 |
| 3813.00 | 58.85 | 181.08    | 2237.90 | -2187.38 | -2785.19 | -370.26 | 5755925.77 | 625468.49 |
| 3814.00 | 58.85 | 181.07    | 2238.42 | -2187.90 | -2786.04 | -370.28 | 5755924.92 | 625468.48 |
| 3815.00 | 58.85 | 181.07    | 2238.94 | -2188.42 | -2786.90 | -370.29 | 5755924.06 | 625468.46 |
| 3816.00 | 58.85 | 181.06    | 2239.45 | -2188.93 | -2787.76 | -370.31 | 5755923.21 | 625468.45 |
| 3817.00 | 58.86 | 181.05    | 2239.97 | -2189.45 | -2788.61 | -370.32 | 5755922.35 | 625468.43 |
| 3818.00 | 58.86 | 181.04    | 2240.49 | -2189.97 | -2789.47 | -370.34 | 5755921.49 | 625468.42 |
| 3819.00 | 58.86 | 181.03    | 2241.01 | -2190.49 | -2790.32 | -370.35 | 5755920.64 | 625468.40 |
| 3820.00 | 58.86 | 181.03    | 2241.52 | -2191.00 | -2791.18 | -370.37 | 5755919.78 | 625468.38 |
| 3821.00 | 58.87 | 181.02    | 2242.04 | -2191.52 | -2792.03 | -370.39 | 5755918.93 | 625468.37 |
| 3822.00 | 58.87 | 181.01    | 2242.56 | -2192.04 | -2792.89 | -370.40 | 5755918.07 | 625468.35 |
| 3823.00 | 58.87 | 181.00    | 2243.07 | -2192.55 | -2793.75 | -370.42 | 5755917.22 | 625468.34 |
| 3824.00 | 58.87 | 181.00    | 2243.59 | -2193.07 | -2794.60 | -370.43 | 5755916.36 | 625468.32 |
| 3825.00 | 58.88 | 180.99    | 2244.11 | -2193.59 | -2795.46 | -370.45 | 5755915.50 | 625468.31 |
| 3826.00 | 58.88 | 180.98    | 2244.63 | -2194.11 | -2796.31 | -370.46 | 5755914.65 | 625468.29 |
| 3827.00 | 58.88 | 180.97    | 2245.14 | -2194.62 | -2797.17 | -370.48 | 5755913.79 | 625468.27 |
| 3828.00 | 58.88 | 180.96    | 2245.66 | -2195.14 | -2798.02 | -370.50 | 5755912.94 | 625468.26 |
| 3829.00 | 58.89 | 180.96    | 2246.18 | -2195.66 | -2798.88 | -370.51 | 5755912.08 | 625468.24 |
| 3830.00 | 58.89 | 180.95    | 2246.70 | -2196.18 | -2799.74 | -370.53 | 5755911.23 | 625468.23 |
| 3831.00 | 58.89 | 180.94    | 2247.21 | -2196.69 | -2800.59 | -370.54 | 5755910.37 | 625468.21 |
| 3832.00 | 58.91 | 180.89    | 2247.73 | -2197.21 | -2801.45 | -370.55 | 5755909.51 | 625468.21 |
| 3833.00 | 58.92 | 180.85    | 2248.24 | -2197.72 | -2802.31 | -370.55 | 5755908.65 | 625468.20 |
| 3834.00 | 58.94 | 180.80    | 2248.75 | -2198.23 | -2803.17 | -370.56 | 5755907.79 | 625468.20 |
| 3835.00 | 58.95 | 180.75    | 2249.27 | -2198.75 | -2804.02 | -370.56 | 5755906.94 | 625468.20 |
| 3836.00 | 58.97 | 180.71    | 2249.78 | -2199.26 | -2804.88 | -370.56 | 5755906.08 | 625468.19 |
| 3837.00 | 58.99 | 180.66    | 2250.29 | -2199.77 | -2805.74 | -370.57 | 5755905.22 | 625468.19 |
| 3838.00 | 59.00 | 180.61    | 2250.80 | -2200.28 | -2806.60 | -370.57 | 5755904.36 | 625468.18 |
| 3839.00 | 59.02 | 180.56    | 2251.32 | -2200.80 | -2807.46 | -370.57 | 5755903.50 | 625468.18 |
| 3840.00 | 59.03 | 180.52    | 2251.83 | -2201.31 | -2808.32 | -370.58 | 5755902.65 | 625468.18 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3841.00 | 59.05 | 180.47    | 2252.34 | -2201.82 | -2809.17 | -370.58 | 5755901.79 | 625468.17 |
| 3842.00 | 59.07 | 180.42    | 2252.86 | -2202.34 | -2810.03 | -370.59 | 5755900.93 | 625468.17 |
| 3843.00 | 59.08 | 180.38    | 2253.37 | -2202.85 | -2810.89 | -370.59 | 5755900.07 | 625468.16 |
| 3844.00 | 59.10 | 180.33    | 2253.88 | -2203.36 | -2811.75 | -370.59 | 5755899.21 | 625468.16 |
| 3845.00 | 59.12 | 180.28    | 2254.40 | -2203.88 | -2812.61 | -370.60 | 5755898.35 | 625468.16 |
| 3846.00 | 59.13 | 180.24    | 2254.91 | -2204.39 | -2813.47 | -370.60 | 5755897.50 | 625468.15 |
| 3847.00 | 59.15 | 180.19    | 2255.42 | -2204.90 | -2814.32 | -370.60 | 5755896.64 | 625468.15 |
| 3848.00 | 59.16 | 180.14    | 2255.94 | -2205.42 | -2815.18 | -370.61 | 5755895.78 | 625468.15 |
| 3849.00 | 59.18 | 180.09    | 2256.45 | -2205.93 | -2816.04 | -370.61 | 5755894.92 | 625468.14 |
| 3850.00 | 59.20 | 180.05    | 2256.96 | -2206.44 | -2816.90 | -370.62 | 5755894.06 | 625468.14 |
| 3851.00 | 59.21 | 180.00    | 2257.48 | -2206.96 | -2817.76 | -370.62 | 5755893.20 | 625468.13 |
| 3852.00 | 59.23 | 179.95    | 2257.99 | -2207.47 | -2818.61 | -370.62 | 5755892.35 | 625468.13 |
| 3853.00 | 59.24 | 179.91    | 2258.50 | -2207.98 | -2819.47 | -370.63 | 5755891.49 | 625468.13 |
| 3854.00 | 59.26 | 179.86    | 2259.02 | -2208.50 | -2820.33 | -370.63 | 5755890.63 | 625468.12 |
| 3855.00 | 59.28 | 179.81    | 2259.53 | -2209.01 | -2821.19 | -370.63 | 5755889.77 | 625468.12 |
| 3856.00 | 59.29 | 179.76    | 2260.04 | -2209.52 | -2822.05 | -370.64 | 5755888.91 | 625468.12 |
| 3857.00 | 59.31 | 179.72    | 2260.55 | -2210.03 | -2822.91 | -370.64 | 5755888.06 | 625468.11 |
| 3858.00 | 59.33 | 179.67    | 2261.07 | -2210.55 | -2823.76 | -370.65 | 5755887.20 | 625468.11 |
| 3859.00 | 59.34 | 179.62    | 2261.58 | -2211.06 | -2824.62 | -370.65 | 5755886.34 | 625468.10 |
| 3860.00 | 59.36 | 179.58    | 2262.09 | -2211.57 | -2825.48 | -370.65 | 5755885.48 | 625468.10 |
| 3861.00 | 59.37 | 179.56    | 2262.60 | -2212.08 | -2826.34 | -370.64 | 5755884.62 | 625468.11 |
| 3862.00 | 59.38 | 179.54    | 2263.11 | -2212.59 | -2827.20 | -370.64 | 5755883.76 | 625468.12 |
| 3863.00 | 59.39 | 179.52    | 2263.62 | -2213.10 | -2828.07 | -370.63 | 5755882.90 | 625468.13 |
| 3864.00 | 59.41 | 179.51    | 2264.12 | -2213.60 | -2828.93 | -370.62 | 5755882.03 | 625468.14 |
| 3865.00 | 59.42 | 179.49    | 2264.63 | -2214.11 | -2829.79 | -370.61 | 5755881.17 | 625468.15 |
| 3866.00 | 59.43 | 179.48    | 2265.14 | -2214.62 | -2830.65 | -370.60 | 5755880.31 | 625468.16 |
| 3867.00 | 59.44 | 179.46    | 2265.64 | -2215.12 | -2831.51 | -370.59 | 5755879.45 | 625468.17 |
| 3868.00 | 59.45 | 179.45    | 2266.15 | -2215.63 | -2832.37 | -370.58 | 5755878.59 | 625468.18 |
| 3869.00 | 59.47 | 179.43    | 2266.66 | -2216.14 | -2833.24 | -370.57 | 5755877.72 | 625468.19 |
| 3870.00 | 59.48 | 179.42    | 2267.17 | -2216.65 | -2834.10 | -370.56 | 5755876.86 | 625468.20 |
| 3871.00 | 59.49 | 179.40    | 2267.67 | -2217.15 | -2834.96 | -370.55 | 5755876.00 | 625468.21 |
| 3872.00 | 59.50 | 179.38    | 2268.18 | -2217.66 | -2835.82 | -370.54 | 5755875.14 | 625468.22 |
| 3873.00 | 59.51 | 179.37    | 2268.69 | -2218.17 | -2836.68 | -370.53 | 5755874.28 | 625468.23 |
| 3874.00 | 59.52 | 179.35    | 2269.19 | -2218.67 | -2837.55 | -370.52 | 5755873.42 | 625468.24 |
| 3875.00 | 59.54 | 179.34    | 2269.70 | -2219.18 | -2838.41 | -370.51 | 5755872.55 | 625468.25 |
| 3876.00 | 59.55 | 179.32    | 2270.21 | -2219.69 | -2839.27 | -370.50 | 5755871.69 | 625468.26 |
| 3877.00 | 59.56 | 179.31    | 2270.72 | -2220.20 | -2840.13 | -370.49 | 5755870.83 | 625468.27 |
| 3878.00 | 59.57 | 179.29    | 2271.22 | -2220.70 | -2840.99 | -370.48 | 5755869.97 | 625468.28 |
| 3879.00 | 59.58 | 179.27    | 2271.73 | -2221.21 | -2841.86 | -370.47 | 5755869.11 | 625468.29 |
| 3880.00 | 59.60 | 179.26    | 2272.24 | -2221.72 | -2842.72 | -370.46 | 5755868.24 | 625468.30 |
| 3881.00 | 59.61 | 179.24    | 2272.74 | -2222.22 | -2843.58 | -370.45 | 5755867.38 | 625468.31 |
| 3882.00 | 59.62 | 179.23    | 2273.25 | -2222.73 | -2844.44 | -370.44 | 5755866.52 | 625468.32 |
| 3883.00 | 59.63 | 179.21    | 2273.76 | -2223.24 | -2845.30 | -370.43 | 5755865.66 | 625468.33 |
| 3884.00 | 59.64 | 179.20    | 2274.27 | -2223.75 | -2846.16 | -370.42 | 5755864.80 | 625468.34 |
| 3885.00 | 59.65 | 179.18    | 2274.77 | -2224.25 | -2847.03 | -370.41 | 5755863.94 | 625468.35 |
| 3886.00 | 59.67 | 179.16    | 2275.28 | -2224.76 | -2847.89 | -370.40 | 5755863.07 | 625468.36 |
| 3887.00 | 59.68 | 179.15    | 2275.79 | -2225.27 | -2848.75 | -370.39 | 5755862.21 | 625468.37 |
| 3888.00 | 59.69 | 179.13    | 2276.29 | -2225.77 | -2849.61 | -370.38 | 5755861.35 | 625468.38 |
| 3889.00 | 59.70 | 179.12    | 2276.80 | -2226.28 | -2850.47 | -370.37 | 5755860.49 | 625468.39 |
| 3890.00 | 59.68 | 179.13    | 2277.31 | -2226.79 | -2851.33 | -370.36 | 5755859.63 | 625468.40 |
| 3891.00 | 59.66 | 179.13    | 2277.82 | -2227.30 | -2852.20 | -370.34 | 5755858.77 | 625468.41 |
| 3892.00 | 59.65 | 179.13    | 2278.33 | -2227.81 | -2853.06 | -370.33 | 5755857.90 | 625468.42 |
| 3893.00 | 59.63 | 179.14    | 2278.83 | -2228.31 | -2853.92 | -370.32 | 5755857.04 | 625468.43 |
| 3894.00 | 59.61 | 179.14    | 2279.34 | -2228.82 | -2854.78 | -370.31 | 5755856.18 | 625468.45 |
| 3895.00 | 59.60 | 179.15    | 2279.85 | -2229.33 | -2855.64 | -370.30 | 5755855.32 | 625468.46 |
| 3896.00 | 59.58 | 179.15    | 2280.36 | -2229.84 | -2856.50 | -370.28 | 5755854.46 | 625468.47 |
| 3897.00 | 59.56 | 179.16    | 2280.87 | -2230.35 | -2857.36 | -370.27 | 5755853.60 | 625468.48 |
| 3898.00 | 59.54 | 179.16    | 2281.38 | -2230.86 | -2858.22 | -370.26 | 5755852.74 | 625468.49 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3899.00 | 59.53 | 179.17    | 2281.88 | -2231.36 | -2859.08 | -370.25 | 5755851.88 | 625468.51 |
| 3900.00 | 59.51 | 179.17    | 2282.39 | -2231.87 | -2859.95 | -370.23 | 5755851.02 | 625468.52 |
| 3901.00 | 59.49 | 179.18    | 2282.90 | -2232.38 | -2860.81 | -370.22 | 5755850.15 | 625468.53 |
| 3902.00 | 59.48 | 179.18    | 2283.41 | -2232.89 | -2861.67 | -370.21 | 5755849.29 | 625468.54 |
| 3903.00 | 59.46 | 179.19    | 2283.92 | -2233.40 | -2862.53 | -370.20 | 5755848.43 | 625468.56 |
| 3904.00 | 59.44 | 179.19    | 2284.43 | -2233.91 | -2863.39 | -370.19 | 5755847.57 | 625468.57 |
| 3905.00 | 59.43 | 179.20    | 2284.93 | -2234.41 | -2864.25 | -370.17 | 5755846.71 | 625468.58 |
| 3906.00 | 59.41 | 179.20    | 2285.44 | -2234.92 | -2865.11 | -370.16 | 5755845.85 | 625468.59 |
| 3907.00 | 59.39 | 179.21    | 2285.95 | -2235.43 | -2865.97 | -370.15 | 5755844.99 | 625468.60 |
| 3908.00 | 59.37 | 179.21    | 2286.46 | -2235.94 | -2866.83 | -370.14 | 5755844.13 | 625468.62 |
| 3909.00 | 59.36 | 179.22    | 2286.97 | -2236.45 | -2867.70 | -370.13 | 5755843.27 | 625468.63 |
| 3910.00 | 59.34 | 179.22    | 2287.47 | -2236.95 | -2868.56 | -370.11 | 5755842.40 | 625468.64 |
| 3911.00 | 59.32 | 179.23    | 2287.98 | -2237.46 | -2869.42 | -370.10 | 5755841.54 | 625468.65 |
| 3912.00 | 59.31 | 179.23    | 2288.49 | -2237.97 | -2870.28 | -370.09 | 5755840.68 | 625468.67 |
| 3913.00 | 59.29 | 179.23    | 2289.00 | -2238.48 | -2871.14 | -370.08 | 5755839.82 | 625468.68 |
| 3914.00 | 59.27 | 179.24    | 2289.51 | -2238.99 | -2872.00 | -370.06 | 5755838.96 | 625468.69 |
| 3915.00 | 59.26 | 179.24    | 2290.02 | -2239.50 | -2872.86 | -370.05 | 5755838.10 | 625468.70 |
| 3916.00 | 59.24 | 179.25    | 2290.52 | -2240.00 | -2873.72 | -370.04 | 5755837.24 | 625468.71 |
| 3917.00 | 59.22 | 179.25    | 2291.03 | -2240.51 | -2874.58 | -370.03 | 5755836.38 | 625468.73 |
| 3918.00 | 59.20 | 179.26    | 2291.54 | -2241.02 | -2875.45 | -370.02 | 5755835.52 | 625468.74 |
| 3919.00 | 59.19 | 179.25    | 2292.05 | -2241.53 | -2876.30 | -370.00 | 5755834.66 | 625468.75 |
| 3920.00 | 59.17 | 179.25    | 2292.57 | -2242.05 | -2877.16 | -369.99 | 5755833.80 | 625468.76 |
| 3921.00 | 59.16 | 179.24    | 2293.09 | -2242.57 | -2878.02 | -369.98 | 5755832.94 | 625468.78 |
| 3922.00 | 59.14 | 179.23    | 2293.60 | -2243.08 | -2878.87 | -369.97 | 5755832.09 | 625468.79 |
| 3923.00 | 59.13 | 179.22    | 2294.12 | -2243.60 | -2879.73 | -369.95 | 5755831.23 | 625468.80 |
| 3924.00 | 59.11 | 179.22    | 2294.63 | -2244.11 | -2880.59 | -369.94 | 5755830.37 | 625468.81 |
| 3925.00 | 59.10 | 179.21    | 2295.15 | -2244.63 | -2881.44 | -369.93 | 5755829.52 | 625468.83 |
| 3926.00 | 59.08 | 179.20    | 2295.66 | -2245.14 | -2882.30 | -369.91 | 5755828.66 | 625468.84 |
| 3927.00 | 59.06 | 179.19    | 2296.18 | -2245.66 | -2883.16 | -369.90 | 5755827.80 | 625468.85 |
| 3928.00 | 59.05 | 179.19    | 2296.69 | -2246.17 | -2884.02 | -369.89 | 5755826.95 | 625468.87 |
| 3929.00 | 59.03 | 179.18    | 2297.21 | -2246.69 | -2884.87 | -369.88 | 5755826.09 | 625468.88 |
| 3930.00 | 59.02 | 179.17    | 2297.72 | -2247.20 | -2885.73 | -369.86 | 5755825.23 | 625468.89 |
| 3931.00 | 59.00 | 179.16    | 2298.24 | -2247.72 | -2886.59 | -369.85 | 5755824.38 | 625468.90 |
| 3932.00 | 58.99 | 179.16    | 2298.75 | -2248.23 | -2887.44 | -369.84 | 5755823.52 | 625468.92 |
| 3933.00 | 58.97 | 179.15    | 2299.27 | -2248.75 | -2888.30 | -369.83 | 5755822.66 | 625468.93 |
| 3934.00 | 58.96 | 179.14    | 2299.79 | -2249.27 | -2889.16 | -369.81 | 5755821.81 | 625468.94 |
| 3935.00 | 58.94 | 179.13    | 2300.30 | -2249.78 | -2890.01 | -369.80 | 5755820.95 | 625468.95 |
| 3936.00 | 58.92 | 179.13    | 2300.82 | -2250.30 | -2890.87 | -369.79 | 5755820.09 | 625468.97 |
| 3937.00 | 58.91 | 179.12    | 2301.33 | -2250.81 | -2891.73 | -369.77 | 5755819.24 | 625468.98 |
| 3938.00 | 58.89 | 179.11    | 2301.85 | -2251.33 | -2892.58 | -369.76 | 5755818.38 | 625468.99 |
| 3939.00 | 58.88 | 179.10    | 2302.36 | -2251.84 | -2893.44 | -369.75 | 5755817.52 | 625469.00 |
| 3940.00 | 58.86 | 179.09    | 2302.88 | -2252.36 | -2894.30 | -369.74 | 5755816.66 | 625469.02 |
| 3941.00 | 58.85 | 179.09    | 2303.39 | -2252.87 | -2895.15 | -369.72 | 5755815.81 | 625469.03 |
| 3942.00 | 58.83 | 179.08    | 2303.91 | -2253.39 | -2896.01 | -369.71 | 5755814.95 | 625469.04 |
| 3943.00 | 58.82 | 179.07    | 2304.42 | -2253.90 | -2896.87 | -369.70 | 5755814.09 | 625469.06 |
| 3944.00 | 58.80 | 179.06    | 2304.94 | -2254.42 | -2897.72 | -369.69 | 5755813.24 | 625469.07 |
| 3945.00 | 58.78 | 179.06    | 2305.46 | -2254.94 | -2898.58 | -369.67 | 5755812.38 | 625469.08 |
| 3946.00 | 58.77 | 179.05    | 2305.97 | -2255.45 | -2899.44 | -369.66 | 5755811.52 | 625469.09 |
| 3947.00 | 58.75 | 179.04    | 2306.49 | -2255.97 | -2900.29 | -369.65 | 5755810.67 | 625469.11 |
| 3948.00 | 58.76 | 179.04    | 2307.00 | -2256.48 | -2901.15 | -369.63 | 5755809.81 | 625469.12 |
| 3949.00 | 58.76 | 179.04    | 2307.52 | -2257.00 | -2902.01 | -369.62 | 5755808.96 | 625469.13 |
| 3950.00 | 58.77 | 179.04    | 2308.04 | -2257.52 | -2902.86 | -369.61 | 5755808.10 | 625469.15 |
| 3951.00 | 58.77 | 179.05    | 2308.56 | -2258.04 | -2903.72 | -369.59 | 5755807.24 | 625469.16 |
| 3952.00 | 58.78 | 179.05    | 2309.07 | -2258.55 | -2904.57 | -369.58 | 5755806.39 | 625469.18 |
| 3953.00 | 58.79 | 179.05    | 2309.59 | -2259.07 | -2905.43 | -369.56 | 5755805.53 | 625469.19 |
| 3954.00 | 58.79 | 179.05    | 2310.11 | -2259.59 | -2906.28 | -369.55 | 5755804.68 | 625469.20 |
| 3955.00 | 58.80 | 179.05    | 2310.63 | -2260.11 | -2907.14 | -369.54 | 5755803.82 | 625469.22 |
| 3956.00 | 58.80 | 179.05    | 2311.14 | -2260.62 | -2908.00 | -369.52 | 5755802.97 | 625469.23 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 3957.00 | 58.81 | 179.05    | 2311.66 | -2261.14 | -2908.85 | -369.51 | 5755802.11 | 625469.25 |
| 3958.00 | 58.82 | 179.05    | 2312.18 | -2261.66 | -2909.71 | -369.49 | 5755801.25 | 625469.26 |
| 3959.00 | 58.82 | 179.06    | 2312.70 | -2262.18 | -2910.56 | -369.48 | 5755800.40 | 625469.27 |
| 3960.00 | 58.83 | 179.06    | 2313.21 | -2262.69 | -2911.42 | -369.47 | 5755799.54 | 625469.29 |
| 3961.00 | 58.84 | 179.06    | 2313.73 | -2263.21 | -2912.27 | -369.45 | 5755798.69 | 625469.30 |
| 3962.00 | 58.84 | 179.06    | 2314.25 | -2263.73 | -2913.13 | -369.44 | 5755797.83 | 625469.32 |
| 3963.00 | 58.85 | 179.06    | 2314.76 | -2264.24 | -2913.98 | -369.42 | 5755796.98 | 625469.33 |
| 3964.00 | 58.85 | 179.06    | 2315.28 | -2264.76 | -2914.84 | -369.41 | 5755796.12 | 625469.34 |
| 3965.00 | 58.86 | 179.06    | 2315.80 | -2265.28 | -2915.70 | -369.40 | 5755795.27 | 625469.36 |
| 3966.00 | 58.87 | 179.07    | 2316.32 | -2265.80 | -2916.55 | -369.38 | 5755794.41 | 625469.37 |
| 3967.00 | 58.87 | 179.07    | 2316.83 | -2266.31 | -2917.41 | -369.37 | 5755793.55 | 625469.39 |
| 3968.00 | 58.88 | 179.07    | 2317.35 | -2266.83 | -2918.26 | -369.35 | 5755792.70 | 625469.40 |
| 3969.00 | 58.89 | 179.07    | 2317.87 | -2267.35 | -2919.12 | -369.34 | 5755791.84 | 625469.42 |
| 3970.00 | 58.89 | 179.07    | 2318.39 | -2267.87 | -2919.97 | -369.32 | 5755790.99 | 625469.43 |
| 3971.00 | 58.90 | 179.07    | 2318.90 | -2268.38 | -2920.83 | -369.31 | 5755790.13 | 625469.44 |
| 3972.00 | 58.90 | 179.07    | 2319.42 | -2268.90 | -2921.69 | -369.30 | 5755789.28 | 625469.46 |
| 3973.00 | 58.91 | 179.08    | 2319.94 | -2269.42 | -2922.54 | -369.28 | 5755788.42 | 625469.47 |
| 3974.00 | 58.92 | 179.08    | 2320.46 | -2269.94 | -2923.40 | -369.27 | 5755787.56 | 625469.49 |
| 3975.00 | 58.92 | 179.08    | 2320.97 | -2270.45 | -2924.25 | -369.25 | 5755786.71 | 625469.50 |
| 3976.00 | 58.93 | 179.08    | 2321.49 | -2270.97 | -2925.11 | -369.24 | 5755785.85 | 625469.51 |
| 3977.00 | 58.92 | 179.09    | 2322.01 | -2271.49 | -2925.96 | -369.23 | 5755785.00 | 625469.53 |
| 3978.00 | 58.91 | 179.09    | 2322.53 | -2272.01 | -2926.82 | -369.22 | 5755784.14 | 625469.54 |
| 3979.00 | 58.90 | 179.10    | 2323.05 | -2272.53 | -2927.67 | -369.20 | 5755783.29 | 625469.55 |
| 3980.00 | 58.89 | 179.11    | 2323.56 | -2273.04 | -2928.53 | -369.19 | 5755782.43 | 625469.56 |
| 3981.00 | 58.89 | 179.11    | 2324.08 | -2273.56 | -2929.38 | -369.18 | 5755781.58 | 625469.57 |
| 3982.00 | 58.88 | 179.12    | 2324.60 | -2274.08 | -2930.24 | -369.17 | 5755780.72 | 625469.59 |
| 3983.00 | 58.87 | 179.13    | 2325.12 | -2274.60 | -2931.09 | -369.15 | 5755779.87 | 625469.60 |
| 3984.00 | 58.86 | 179.13    | 2325.64 | -2275.12 | -2931.95 | -369.14 | 5755779.01 | 625469.61 |
| 3985.00 | 58.85 | 179.14    | 2326.15 | -2275.63 | -2932.81 | -369.13 | 5755778.16 | 625469.62 |
| 3986.00 | 58.84 | 179.15    | 2326.67 | -2276.15 | -2933.66 | -369.12 | 5755777.30 | 625469.64 |
| 3987.00 | 58.83 | 179.16    | 2327.19 | -2276.67 | -2934.52 | -369.11 | 5755776.45 | 625469.65 |
| 3988.00 | 58.82 | 179.16    | 2327.71 | -2277.19 | -2935.37 | -369.09 | 5755775.59 | 625469.66 |
| 3989.00 | 58.81 | 179.17    | 2328.23 | -2277.71 | -2936.23 | -369.08 | 5755774.74 | 625469.67 |
| 3990.00 | 58.81 | 179.18    | 2328.74 | -2278.22 | -2937.08 | -369.07 | 5755773.88 | 625469.68 |
| 3991.00 | 58.80 | 179.18    | 2329.26 | -2278.74 | -2937.94 | -369.06 | 5755773.02 | 625469.70 |
| 3992.00 | 58.79 | 179.19    | 2329.78 | -2279.26 | -2938.79 | -369.04 | 5755772.17 | 625469.71 |
| 3993.00 | 58.78 | 179.20    | 2330.30 | -2279.78 | -2939.65 | -369.03 | 5755771.31 | 625469.72 |
| 3994.00 | 58.77 | 179.20    | 2330.82 | -2280.30 | -2940.50 | -369.02 | 5755770.46 | 625469.73 |
| 3995.00 | 58.76 | 179.21    | 2331.33 | -2280.81 | -2941.36 | -369.01 | 5755769.60 | 625469.75 |
| 3996.00 | 58.75 | 179.22    | 2331.85 | -2281.33 | -2942.21 | -369.00 | 5755768.75 | 625469.76 |
| 3997.00 | 58.74 | 179.22    | 2332.37 | -2281.85 | -2943.07 | -368.98 | 5755767.89 | 625469.77 |
| 3998.00 | 58.73 | 179.23    | 2332.89 | -2282.37 | -2943.92 | -368.97 | 5755767.04 | 625469.78 |
| 3999.00 | 58.72 | 179.24    | 2333.41 | -2282.89 | -2944.78 | -368.96 | 5755766.18 | 625469.79 |
| 4000.00 | 58.72 | 179.25    | 2333.92 | -2283.40 | -2945.63 | -368.95 | 5755765.33 | 625469.81 |
| 4001.00 | 58.71 | 179.25    | 2334.44 | -2283.92 | -2946.49 | -368.93 | 5755764.47 | 625469.82 |
| 4002.00 | 58.70 | 179.26    | 2334.96 | -2284.44 | -2947.34 | -368.92 | 5755763.62 | 625469.83 |
| 4003.00 | 58.69 | 179.27    | 2335.48 | -2284.96 | -2948.20 | -368.91 | 5755762.76 | 625469.84 |
| 4004.00 | 58.68 | 179.27    | 2336.00 | -2285.48 | -2949.06 | -368.90 | 5755761.91 | 625469.86 |
| 4005.00 | 58.67 | 179.28    | 2336.51 | -2285.99 | -2949.91 | -368.89 | 5755761.05 | 625469.87 |
| 4006.00 | 58.67 | 179.29    | 2337.03 | -2286.51 | -2950.77 | -368.88 | 5755760.20 | 625469.88 |
| 4007.00 | 58.68 | 179.30    | 2337.55 | -2287.03 | -2951.62 | -368.87 | 5755759.34 | 625469.89 |
| 4008.00 | 58.68 | 179.31    | 2338.07 | -2287.55 | -2952.47 | -368.86 | 5755758.49 | 625469.89 |
| 4009.00 | 58.69 | 179.32    | 2338.59 | -2288.07 | -2953.33 | -368.85 | 5755757.63 | 625469.90 |
| 4010.00 | 58.69 | 179.33    | 2339.11 | -2288.59 | -2954.18 | -368.84 | 5755756.78 | 625469.91 |
| 4011.00 | 58.70 | 179.33    | 2339.63 | -2289.11 | -2955.04 | -368.83 | 5755755.92 | 625469.92 |
| 4012.00 | 58.70 | 179.34    | 2340.15 | -2289.63 | -2955.89 | -368.82 | 5755755.07 | 625469.93 |
| 4013.00 | 58.70 | 179.35    | 2340.67 | -2290.15 | -2956.75 | -368.82 | 5755754.21 | 625469.94 |
| 4014.00 | 58.71 | 179.36    | 2341.19 | -2290.67 | -2957.60 | -368.81 | 5755753.36 | 625469.95 |



| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 4015.00 | 58.71 | 179.37    | 2341.70 | -2291.18 | -2958.46 | -368.80 | 5755752.50 | 625469.96 |
| 4016.00 | 58.72 | 179.38    | 2342.22 | -2291.70 | -2959.31 | -368.79 | 5755751.65 | 625469.96 |
| 4017.00 | 58.72 | 179.39    | 2342.74 | -2292.22 | -2960.17 | -368.78 | 5755750.79 | 625469.97 |
| 4018.00 | 58.73 | 179.40    | 2343.26 | -2292.74 | -2961.02 | -368.77 | 5755749.94 | 625469.98 |
| 4019.00 | 58.73 | 179.41    | 2343.78 | -2293.26 | -2961.88 | -368.76 | 5755749.08 | 625469.99 |
| 4020.00 | 58.74 | 179.42    | 2344.30 | -2293.78 | -2962.73 | -368.75 | 5755748.23 | 625470.00 |
| 4021.00 | 58.74 | 179.43    | 2344.82 | -2294.30 | -2963.59 | -368.75 | 5755747.37 | 625470.01 |
| 4022.00 | 58.74 | 179.43    | 2345.34 | -2294.82 | -2964.44 | -368.74 | 5755746.52 | 625470.02 |
| 4023.00 | 58.75 | 179.44    | 2345.86 | -2295.34 | -2965.30 | -368.73 | 5755745.67 | 625470.03 |
| 4024.00 | 58.75 | 179.45    | 2346.38 | -2295.86 | -2966.15 | -368.72 | 5755744.81 | 625470.03 |
| 4025.00 | 58.76 | 179.46    | 2346.89 | -2296.37 | -2967.01 | -368.71 | 5755743.96 | 625470.04 |
| 4026.00 | 58.76 | 179.47    | 2347.41 | -2296.89 | -2967.86 | -368.70 | 5755743.10 | 625470.05 |
| 4027.00 | 58.77 | 179.48    | 2347.93 | -2297.41 | -2968.72 | -368.69 | 5755742.25 | 625470.06 |
| 4028.00 | 58.77 | 179.49    | 2348.45 | -2297.93 | -2969.57 | -368.68 | 5755741.39 | 625470.07 |
| 4029.00 | 58.78 | 179.50    | 2348.97 | -2298.45 | -2970.42 | -368.68 | 5755740.54 | 625470.08 |
| 4030.00 | 58.78 | 179.51    | 2349.49 | -2298.97 | -2971.28 | -368.67 | 5755739.68 | 625470.09 |
| 4031.00 | 58.78 | 179.52    | 2350.01 | -2299.49 | -2972.13 | -368.66 | 5755738.83 | 625470.10 |
| 4032.00 | 58.79 | 179.53    | 2350.53 | -2300.01 | -2972.99 | -368.65 | 5755737.97 | 625470.10 |
| 4033.00 | 58.79 | 179.54    | 2351.05 | -2300.53 | -2973.84 | -368.64 | 5755737.12 | 625470.11 |
| 4034.00 | 58.80 | 179.54    | 2351.56 | -2301.04 | -2974.70 | -368.63 | 5755736.26 | 625470.12 |
| 4035.00 | 58.81 | 179.54    | 2352.08 | -2301.56 | -2975.55 | -368.62 | 5755735.41 | 625470.13 |
| 4036.00 | 58.84 | 179.52    | 2352.59 | -2302.07 | -2976.41 | -368.61 | 5755734.55 | 625470.14 |
| 4037.00 | 58.87 | 179.50    | 2353.11 | -2302.59 | -2977.27 | -368.60 | 5755733.69 | 625470.15 |
| 4038.00 | 58.89 | 179.48    | 2353.62 | -2303.10 | -2978.13 | -368.59 | 5755732.83 | 625470.16 |
| 4039.00 | 58.92 | 179.46    | 2354.13 | -2303.61 | -2978.99 | -368.58 | 5755731.97 | 625470.18 |
| 4040.00 | 58.95 | 179.44    | 2354.64 | -2304.12 | -2979.85 | -368.57 | 5755731.11 | 625470.19 |
| 4041.00 | 58.98 | 179.42    | 2355.15 | -2304.63 | -2980.71 | -368.56 | 5755730.25 | 625470.20 |
| 4042.00 | 59.00 | 179.40    | 2355.67 | -2305.15 | -2981.57 | -368.54 | 5755729.39 | 625470.21 |
| 4043.00 | 59.03 | 179.38    | 2356.18 | -2305.66 | -2982.43 | -368.53 | 5755728.54 | 625470.22 |
| 4044.00 | 59.06 | 179.36    | 2356.69 | -2306.17 | -2983.28 | -368.52 | 5755727.68 | 625470.23 |
| 4045.00 | 59.09 | 179.34    | 2357.20 | -2306.68 | -2984.14 | -368.51 | 5755726.82 | 625470.24 |
| 4046.00 | 59.11 | 179.32    | 2357.71 | -2307.19 | -2985.00 | -368.50 | 5755725.96 | 625470.25 |
| 4047.00 | 59.14 | 179.30    | 2358.23 | -2307.71 | -2985.86 | -368.49 | 5755725.10 | 625470.26 |
| 4048.00 | 59.17 | 179.28    | 2358.74 | -2308.22 | -2986.72 | -368.48 | 5755724.24 | 625470.28 |
| 4049.00 | 59.20 | 179.26    | 2359.25 | -2308.73 | -2987.58 | -368.47 | 5755723.38 | 625470.29 |
| 4050.00 | 59.22 | 179.24    | 2359.76 | -2309.24 | -2988.44 | -368.46 | 5755722.52 | 625470.30 |
| 4051.00 | 59.25 | 179.22    | 2360.28 | -2309.76 | -2989.30 | -368.44 | 5755721.67 | 625470.31 |
| 4052.00 | 59.28 | 179.20    | 2360.79 | -2310.27 | -2990.15 | -368.43 | 5755720.81 | 625470.32 |
| 4053.00 | 59.31 | 179.18    | 2361.30 | -2310.78 | -2991.01 | -368.42 | 5755719.95 | 625470.33 |
| 4054.00 | 59.33 | 179.16    | 2361.81 | -2311.29 | -2991.87 | -368.41 | 5755719.09 | 625470.34 |
| 4055.00 | 59.36 | 179.14    | 2362.32 | -2311.80 | -2992.73 | -368.40 | 5755718.23 | 625470.35 |
| 4056.00 | 59.39 | 179.12    | 2362.84 | -2312.32 | -2993.59 | -368.39 | 5755717.37 | 625470.36 |
| 4057.00 | 59.42 | 179.10    | 2363.35 | -2312.83 | -2994.45 | -368.38 | 5755716.51 | 625470.38 |
| 4058.00 | 59.44 | 179.08    | 2363.86 | -2313.34 | -2995.31 | -368.37 | 5755715.65 | 625470.39 |
| 4059.00 | 59.47 | 179.06    | 2364.37 | -2313.85 | -2996.17 | -368.36 | 5755714.80 | 625470.40 |
| 4060.00 | 59.50 | 179.04    | 2364.88 | -2314.36 | -2997.03 | -368.34 | 5755713.94 | 625470.41 |
| 4061.00 | 59.52 | 179.02    | 2365.40 | -2314.88 | -2997.88 | -368.33 | 5755713.08 | 625470.42 |
| 4062.00 | 59.55 | 179.00    | 2365.91 | -2315.39 | -2998.74 | -368.32 | 5755712.22 | 625470.43 |
| 4063.00 | 59.58 | 178.98    | 2366.42 | -2315.90 | -2999.60 | -368.31 | 5755711.36 | 625470.44 |
| 4064.00 | 59.60 | 178.95    | 2366.93 | -2316.41 | -3000.46 | -368.29 | 5755710.50 | 625470.46 |
| 4065.00 | 59.60 | 178.93    | 2367.43 | -2316.91 | -3001.33 | -368.27 | 5755709.64 | 625470.48 |
| 4066.00 | 59.61 | 178.90    | 2367.94 | -2317.42 | -3002.19 | -368.25 | 5755708.77 | 625470.50 |
| 4067.00 | 59.62 | 178.88    | 2368.44 | -2317.92 | -3003.05 | -368.23 | 5755707.91 | 625470.52 |
| 4068.00 | 59.63 | 178.85    | 2368.95 | -2318.43 | -3003.92 | -368.21 | 5755707.05 | 625470.54 |
| 4069.00 | 59.63 | 178.83    | 2369.45 | -2318.93 | -3004.78 | -368.19 | 5755706.18 | 625470.56 |
| 4070.00 | 59.64 | 178.81    | 2369.95 | -2319.43 | -3005.64 | -368.17 | 5755705.32 | 625470.59 |
| 4071.00 | 59.65 | 178.78    | 2370.46 | -2319.94 | -3006.51 | -368.15 | 5755704.46 | 625470.61 |
| 4072.00 | 59.66 | 178.76    | 2370.96 | -2320.44 | -3007.37 | -368.13 | 5755703.59 | 625470.63 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 4073.00 | 59.67 | 178.73    | 2371.47 | -2320.95 | -3008.23 | -368.11 | 5755702.73 | 625470.65 |
| 4074.00 | 59.67 | 178.71    | 2371.97 | -2321.45 | -3009.10 | -368.08 | 5755701.87 | 625470.67 |
| 4075.00 | 59.68 | 178.68    | 2372.48 | -2321.96 | -3009.96 | -368.06 | 5755701.00 | 625470.69 |
| 4076.00 | 59.69 | 178.66    | 2372.98 | -2322.46 | -3010.82 | -368.04 | 5755700.14 | 625470.71 |
| 4077.00 | 59.70 | 178.63    | 2373.49 | -2322.97 | -3011.68 | -368.02 | 5755699.28 | 625470.73 |
| 4078.00 | 59.71 | 178.61    | 2373.99 | -2323.47 | -3012.55 | -368.00 | 5755698.41 | 625470.75 |
| 4079.00 | 59.71 | 178.58    | 2374.49 | -2323.97 | -3013.41 | -367.98 | 5755697.55 | 625470.77 |
| 4080.00 | 59.72 | 178.56    | 2375.00 | -2324.48 | -3014.27 | -367.96 | 5755696.69 | 625470.80 |
| 4081.00 | 59.73 | 178.53    | 2375.50 | -2324.98 | -3015.14 | -367.94 | 5755695.82 | 625470.82 |
| 4082.00 | 59.74 | 178.51    | 2376.01 | -2325.49 | -3016.00 | -367.92 | 5755694.96 | 625470.84 |
| 4083.00 | 59.75 | 178.48    | 2376.51 | -2325.99 | -3016.86 | -367.90 | 5755694.10 | 625470.86 |
| 4084.00 | 59.75 | 178.46    | 2377.02 | -2326.50 | -3017.73 | -367.87 | 5755693.23 | 625470.88 |
| 4085.00 | 59.76 | 178.43    | 2377.52 | -2327.00 | -3018.59 | -367.85 | 5755692.37 | 625470.90 |
| 4086.00 | 59.77 | 178.41    | 2378.03 | -2327.51 | -3019.45 | -367.83 | 5755691.51 | 625470.92 |
| 4087.00 | 59.78 | 178.38    | 2378.53 | -2328.01 | -3020.32 | -367.81 | 5755690.64 | 625470.94 |
| 4088.00 | 59.79 | 178.36    | 2379.03 | -2328.51 | -3021.18 | -367.79 | 5755689.78 | 625470.96 |
| 4089.00 | 59.79 | 178.33    | 2379.54 | -2329.02 | -3022.04 | -367.77 | 5755688.92 | 625470.98 |
| 4090.00 | 59.80 | 178.31    | 2380.04 | -2329.52 | -3022.91 | -367.75 | 5755688.06 | 625471.01 |
| 4091.00 | 59.81 | 178.28    | 2380.55 | -2330.03 | -3023.77 | -367.73 | 5755687.19 | 625471.03 |
| 4092.00 | 59.82 | 178.26    | 2381.05 | -2330.53 | -3024.63 | -367.71 | 5755686.33 | 625471.05 |
| 4093.00 | 59.84 | 178.25    | 2381.55 | -2331.03 | -3025.50 | -367.68 | 5755685.46 | 625471.07 |
| 4094.00 | 59.87 | 178.24    | 2382.05 | -2331.53 | -3026.37 | -367.65 | 5755684.60 | 625471.10 |
| 4095.00 | 59.89 | 178.24    | 2382.55 | -2332.03 | -3027.23 | -367.63 | 5755683.73 | 625471.13 |
| 4096.00 | 59.92 | 178.23    | 2383.04 | -2332.52 | -3028.10 | -367.60 | 5755682.86 | 625471.16 |
| 4097.00 | 59.95 | 178.22    | 2383.54 | -2333.02 | -3028.97 | -367.57 | 5755681.99 | 625471.18 |
| 4098.00 | 59.98 | 178.22    | 2384.04 | -2333.52 | -3029.84 | -367.54 | 5755681.13 | 625471.21 |
| 4099.00 | 60.00 | 178.21    | 2384.53 | -2334.01 | -3030.70 | -367.52 | 5755680.26 | 625471.24 |
| 4100.00 | 60.03 | 178.21    | 2385.03 | -2334.51 | -3031.57 | -367.49 | 5755679.39 | 625471.27 |
| 4101.00 | 60.06 | 178.20    | 2385.53 | -2335.01 | -3032.44 | -367.46 | 5755678.52 | 625471.29 |
| 4102.00 | 60.08 | 178.20    | 2386.02 | -2335.50 | -3033.31 | -367.43 | 5755677.66 | 625471.32 |
| 4103.00 | 60.11 | 178.19    | 2386.52 | -2336.00 | -3034.17 | -367.40 | 5755676.79 | 625471.35 |
| 4104.00 | 60.14 | 178.19    | 2387.02 | -2336.50 | -3035.04 | -367.38 | 5755675.92 | 625471.38 |
| 4105.00 | 60.17 | 178.18    | 2387.51 | -2336.99 | -3035.91 | -367.35 | 5755675.05 | 625471.40 |
| 4106.00 | 60.19 | 178.17    | 2388.01 | -2337.49 | -3036.78 | -367.32 | 5755674.19 | 625471.43 |
| 4107.00 | 60.22 | 178.17    | 2388.51 | -2337.99 | -3037.64 | -367.29 | 5755673.32 | 625471.46 |
| 4108.00 | 60.25 | 178.16    | 2389.00 | -2338.48 | -3038.51 | -367.27 | 5755672.45 | 625471.49 |
| 4109.00 | 60.28 | 178.16    | 2389.50 | -2338.98 | -3039.38 | -367.24 | 5755671.58 | 625471.52 |
| 4110.00 | 60.30 | 178.15    | 2390.00 | -2339.48 | -3040.24 | -367.21 | 5755670.72 | 625471.54 |
| 4111.00 | 60.33 | 178.15    | 2390.49 | -2339.97 | -3041.11 | -367.18 | 5755669.85 | 625471.57 |
| 4112.00 | 60.36 | 178.14    | 2390.99 | -2340.47 | -3041.98 | -367.16 | 5755668.98 | 625471.60 |
| 4113.00 | 60.38 | 178.14    | 2391.49 | -2340.97 | -3042.85 | -367.13 | 5755668.11 | 625471.63 |
| 4114.00 | 60.41 | 178.13    | 2391.98 | -2341.46 | -3043.71 | -367.10 | 5755667.25 | 625471.65 |
| 4115.00 | 60.44 | 178.12    | 2392.48 | -2341.96 | -3044.58 | -367.07 | 5755666.38 | 625471.68 |
| 4116.00 | 60.47 | 178.12    | 2392.98 | -2342.46 | -3045.45 | -367.04 | 5755665.51 | 625471.71 |
| 4117.00 | 60.49 | 178.11    | 2393.47 | -2342.95 | -3046.32 | -367.02 | 5755664.64 | 625471.74 |
| 4118.00 | 60.52 | 178.11    | 2393.97 | -2343.45 | -3047.18 | -366.99 | 5755663.78 | 625471.76 |
| 4119.00 | 60.55 | 178.10    | 2394.47 | -2343.95 | -3048.05 | -366.96 | 5755662.91 | 625471.79 |
| 4120.00 | 60.58 | 178.10    | 2394.96 | -2344.44 | -3048.92 | -366.93 | 5755662.04 | 625471.82 |
| 4121.00 | 60.60 | 178.09    | 2395.46 | -2344.94 | -3049.79 | -366.91 | 5755661.18 | 625471.85 |
| 4122.00 | 60.62 | 178.09    | 2395.95 | -2345.43 | -3050.66 | -366.88 | 5755660.30 | 625471.88 |
| 4123.00 | 60.63 | 178.09    | 2396.44 | -2345.92 | -3051.53 | -366.85 | 5755659.43 | 625471.90 |
| 4124.00 | 60.65 | 178.10    | 2396.93 | -2346.41 | -3052.40 | -366.82 | 5755658.56 | 625471.93 |
| 4125.00 | 60.66 | 178.10    | 2397.41 | -2346.89 | -3053.28 | -366.79 | 5755657.69 | 625471.96 |
| 4126.00 | 60.67 | 178.10    | 2397.90 | -2347.38 | -3054.15 | -366.76 | 5755656.81 | 625471.99 |
| 4127.00 | 60.69 | 178.11    | 2398.39 | -2347.87 | -3055.02 | -366.74 | 5755655.94 | 625472.02 |
| 4128.00 | 60.70 | 178.11    | 2398.88 | -2348.36 | -3055.89 | -366.71 | 5755655.07 | 625472.05 |
| 4129.00 | 60.72 | 178.11    | 2399.36 | -2348.84 | -3056.77 | -366.68 | 5755654.20 | 625472.08 |
| 4130.00 | 60.73 | 178.11    | 2399.85 | -2349.33 | -3057.64 | -366.65 | 5755653.32 | 625472.10 |

| MD      | Angle | Direction | TVDRT   | TVDSS    | Dnorth   | Deast   | Northing   | Easting   |
|---------|-------|-----------|---------|----------|----------|---------|------------|-----------|
| 4131.00 | 60.74 | 178.12    | 2400.34 | -2349.82 | -3058.51 | -366.62 | 5755652.45 | 625472.13 |
| 4132.00 | 60.76 | 178.12    | 2400.83 | -2350.31 | -3059.38 | -366.59 | 5755651.58 | 625472.16 |
| 4133.00 | 60.77 | 178.12    | 2401.32 | -2350.80 | -3060.26 | -366.56 | 5755650.71 | 625472.19 |
| 4134.00 | 60.78 | 178.12    | 2401.80 | -2351.28 | -3061.13 | -366.54 | 5755649.83 | 625472.22 |
| 4135.00 | 60.80 | 178.13    | 2402.29 | -2351.77 | -3062.00 | -366.51 | 5755648.96 | 625472.25 |
| 4136.00 | 60.81 | 178.13    | 2402.78 | -2352.26 | -3062.87 | -366.48 | 5755648.09 | 625472.28 |
| 4137.00 | 60.83 | 178.13    | 2403.27 | -2352.75 | -3063.75 | -366.45 | 5755647.22 | 625472.30 |
| 4138.00 | 60.84 | 178.14    | 2403.75 | -2353.23 | -3064.62 | -366.42 | 5755646.34 | 625472.33 |
| 4139.00 | 60.85 | 178.14    | 2404.24 | -2353.72 | -3065.49 | -366.39 | 5755645.47 | 625472.36 |
| 4140.00 | 60.87 | 178.14    | 2404.73 | -2354.21 | -3066.36 | -366.36 | 5755644.60 | 625472.39 |
| 4141.00 | 60.88 | 178.14    | 2405.22 | -2354.70 | -3067.24 | -366.34 | 5755643.73 | 625472.42 |
| 4142.00 | 60.89 | 178.15    | 2405.71 | -2355.19 | -3068.11 | -366.31 | 5755642.85 | 625472.45 |
| 4143.00 | 60.91 | 178.15    | 2406.19 | -2355.67 | -3068.98 | -366.28 | 5755641.98 | 625472.47 |
| 4144.00 | 60.92 | 178.15    | 2406.68 | -2356.16 | -3069.85 | -366.25 | 5755641.11 | 625472.50 |
| 4145.00 | 60.93 | 178.15    | 2407.17 | -2356.65 | -3070.73 | -366.22 | 5755640.23 | 625472.53 |
| 4146.00 | 60.95 | 178.16    | 2407.66 | -2357.14 | -3071.60 | -366.19 | 5755639.36 | 625472.56 |
| 4147.00 | 60.96 | 178.16    | 2408.14 | -2357.62 | -3072.47 | -366.17 | 5755638.49 | 625472.59 |
| 4148.00 | 60.98 | 178.16    | 2408.63 | -2358.11 | -3073.34 | -366.14 | 5755637.62 | 625472.62 |
| 4149.00 | 60.99 | 178.17    | 2409.12 | -2358.60 | -3074.22 | -366.11 | 5755636.74 | 625472.65 |
| 4150.00 | 61.00 | 178.17    | 2409.61 | -2359.09 | -3075.09 | -366.08 | 5755635.87 | 625472.67 |
| 4151.00 | 61.02 | 178.19    | 2410.09 | -2359.57 | -3075.96 | -366.06 | 5755635.00 | 625472.70 |
| 4152.00 | 61.03 | 178.24    | 2410.57 | -2360.05 | -3076.84 | -366.04 | 5755634.12 | 625472.71 |
| 4153.00 | 61.04 | 178.29    | 2411.06 | -2360.54 | -3077.72 | -366.02 | 5755633.25 | 625472.73 |
| 4154.00 | 61.06 | 178.34    | 2411.54 | -2361.02 | -3078.59 | -366.01 | 5755632.37 | 625472.75 |

**APPENDIX 2a**  
**FLOUNDER A10A**  
**Petrophysics Evaluation Summary**

**Esso Australia Pty Ltd.**  
**Exploration Department**

**Flounder A10A**  
**Petrophysics Report**

**Petrophysicist: K.Kuttan**  
**October 2005**

## Flounder A10A Log Interpretation

The FLA-A10A well was designed to appraise and develop the remaining oil and gas reserves in the T-1.1 reservoir in the eastern portion of the southern fault-block of the Flounder field. The well was drilled from the abandoned Flounder A10 wellbore which had an existing 10 3/4" casing shoe set at 661mMDRT. The 8 1/2" hole section was drilled with non-aqueous fluid (NAF) from 661mMDRT to 4515mMDRT (2593.4mTVDRT), with the hole angle built up to 63°. After reaching a TD of 4515mMDRT, Flounder A10A was plugged and abandoned since the T -1.1 reservoir was found to be water bearing.

The well was logged with Schlumberger's 6.75 inch LWD tools which consisted of GR-ARC6-ADN.

The LWD logs have been analysed for porosity, water saturation and net pay over the interval 3752-4485mMD.

Note that all depth quoted in this report are logged mMDRT unless otherwise specified

### DATA

Data from the following logging surveys were used in the interpretation:

| Survey/Log    | Suite | Company      | Top<br>(m MDRT) | Bottom<br>(m MDRT) |
|---------------|-------|--------------|-----------------|--------------------|
| GR-ARC 6 -ADN | 1     | Schlumberger | 670             | 4515               |

### Deviation

The well angle over the T reservoirs was 54 degrees.

### Mud Data

Mud Type : NAF (Petrofree SBM)  
Mud Weight: 10. ppg  
BHT: 111°C

### Hole Size

661-4515 mMDRT 8½ inches

### Data Acquisition & Log Quality

No problems were encountered in the acquisition of the logs. The data quality was met all of Esso's requirements.

### Data Processing

Only memory logs were used in the interpretation. The bottom bulk density ROBB and all the associated curves (PEB, DRHB, HORD, VERD, TAB\_ADN, RHOB) was depth matched to the GR. The resistivity curves (P40H, P28H, P34H, A40H etc) were depth matched to the GR depth-matched ROBB. The TNPH and associated curves (the near and far neutron count rates from the various banks) were depth matched to the GR depth-matched ROBB. No additional environmental corrections other than those applied in the field were applied to the final logs. ).

## INTERPRETATION

### Logs Used

The primary logs used in the interpretation were P40H (deep resistivity), GR\_ARC (gamma ray), ROBB (bottom bulk density) and TNPH (thermal neutron porosity in limestone matrix, environmentally corrected for bit size, temperature and hydrogen index). In addition coal intervals were identified using a coal flag (Flag\_coal). A temperature log was created using the following data. The listed temperatures were derived from a geothermal gradient determined from the maximum measured temperatures during logging:

| <u>Depth</u> | <u>Temperature (deg. C)</u> |
|--------------|-----------------------------|
| 92.3         | 10                          |
| 4504         | 111                         |

### Formation Water Salinity

$R_{wa}$  analysis using  $a = 1$ ,  $m = 2$  and  $n = 2$  indicates clean water sands have an apparent formation water salinity of 40,000 ppm NaCl equivalent.

### Hydrocarbon Type Identification

The well was essentially a dry hole and as such there was little need for determining hydrocarbon type.

### Shale Volume, Porosity and Water Saturation

Schlumberger's Geoframe ELAN+ module was used to determine mineral volumes, total porosity, effective porosity and effective saturation. The details of the models are illustrated in the figures and tables below.

## ELAN+ MODEL

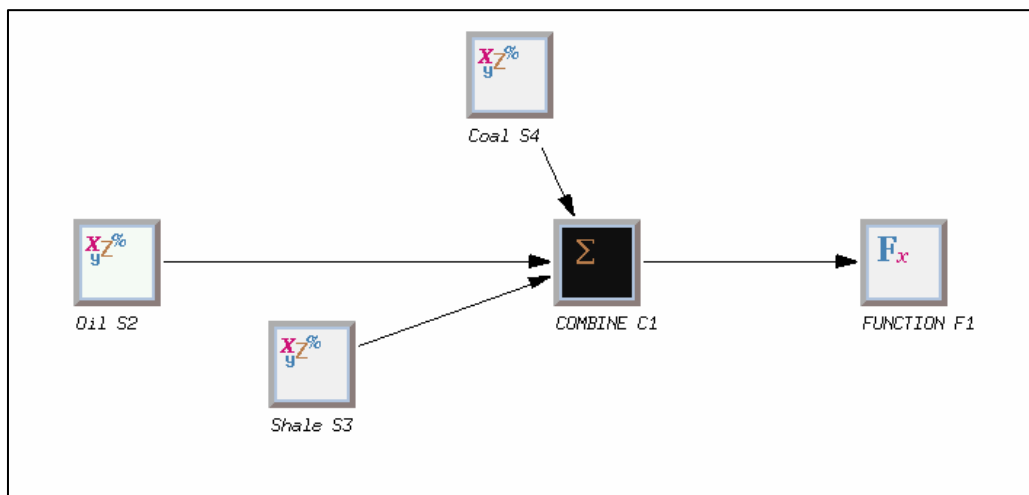


Figure1: Elan + Model and Module Configuration

## ELAN Input Channels

| Log Curve Selector | Selector Options   |                                       |
|--------------------|--------------------|---------------------------------------|
|                    | Compound Name Spec | FLOUNDER A10A                         |
| TEMP_CH            | TEMP;*             | TEMP TEMP TEMP@PRELIM_LWD_MEM;2 [A1   |
| RHOB_IFAC_CH       | IFRH;*             |                                       |
| NPHI_IFAC_CH       | INPH;*             |                                       |
| RHOB_CH            | ROBB;*             | ROBB ROBB ROBB@PRELIM_LWD_MEM;4 [A1   |
| NPHI_CH            | TNPH;*             | TNPH TNPH TNPH@PRELIM_LWD_MEM;3 [A12  |
| CUDC_CH/RT_CH      | P40H;*             | P40H P40H.DM P40H@Res_DM_to_ROBB;3 [A |
| GR_CH              | GR_ARC;*           | RC GR_ARC GR_ARC@PRELIM_LWD_MEM;2 [A  |
| PRB2_CH            | PRB2;*             |                                       |
| PRB3_CH            | PRB3;*             |                                       |
| PRB4_CH            | FLAG_COAL;*        | FLAG_COAL@PRELIM_LWD_MEM;3 [A1221660] |
| M_CH               | MXP;*              |                                       |
| N_CH               | SXP;*              |                                       |

## ELAN Global Parameters

|                     |                        |
|---------------------|------------------------|
| Reference Index     | MD                     |
| Processing Interval | 3745.0(m) To 4485.0(m) |
| Sampling Rate       | 0.3281(m)              |
| Uncertainty Channel | FALSE                  |
| Clay Input          | DRY                    |
| Special Fluids      | IMMOVABLE_HYDROCARBON  |

## ELAN Zone Definition

|                 |                         |
|-----------------|-------------------------|
| Name            | Bottom To Top           |
| Coarse Clastics | 4514(m) To 3750.0000(m) |

## ELAN Process Definition

### Process SOLVE2 "Oil"

|                  |                                 |      |               |      |      |      |
|------------------|---------------------------------|------|---------------|------|------|------|
| Equations        | RHOB                            | NPHI | CUDC_DWA      | GR   | CT2  | CT3  |
| Volumes          | QUAR                            | ORTH | ILLI          | XWAT | UWAT | XOIL |
| User Constraints | constraint(maxDolomite, DOLO<0) |      |               |      |      |      |
| Constraint Zones | Bottom                          |      | Top           |      |      |      |
| UNDEFINED        | 4514.7002(m )                   |      | 3750.0000(m ) |      |      |      |



---

**Process SOLVE3 "Shale"**

Equations                RHOB                CUDC\_DWA    GR  
Volumes                QUAR                ILLI                XWAT                UWAT

Constraint Zones    Bottom                                Top  
UNDEFINED                4514.7002(m )                3750.0000(m )

---

**Process SOLVE4 "Coal"**

Equations                RHOB  
Volumes                COAL

Constraint Zones    Bottom                                Top  
UNDEFINED                4514.7002(m )                3750.0000(m )

---

**Process COMBINE 1 "COMBINE"**

Order                        SOL.2   SOL.3   SOL.4

Combine Method  
"Tuna                        " 14812.0088 (m ) Internal Average

Probability Functions  
probability(SOL.4, PRB4\_CH)  
prob3 = linear(ILLI\_VOL.SOL.3, 0.3, 0, 0.5, 1)  
probability(SOL.3, prob3)

---

**Process FUNCTION 1 "FUNCTION"**

Outputs                        VCL                        SXWI                        SWT                        SUWI                        PIGN                        PHIT

User-defined Function  
swt\_cmp=if((PRB4\_CH > 0),1,(UWAT\_VOL + XBWA\_VOL)/(UWAT\_VOL + XBWA\_VOL + UOIL\_VOL))

output(SWT, swt\_cmp)

---

**LAN Same Parameters**

| Parameter | Value          | Parameter | Value          |
|-----------|----------------|-----------|----------------|
| RHOB_QUAR | 2.650(g/cm3 )  | RHOB_CALC | 2.710(g/cm3 )  |
| RHOB_DOLO | 2.847(g/cm3 )  | RHOB_ORTH | 2.570(g/cm3 )  |
| RHOB_PYRI | 4.990(g/cm3 )  | RHOB_GLAU | 2.650(g/cm3 )  |
| RHOB_ILLI | 2.780(g/cm3 )  | RHOB_KAOL | 2.620(g/cm3 )  |
| RHOB_COAL | 1.200(g/cm3 )  | RHOB_IGNE | 3.000(g/cm3 )  |
| RHOB_XWAT | 0.900(g/cm3 )  | RHOB_UWAT | 0.994(g/cm3 )  |
| RHOB_XOIL | 0.700(g/cm3 )  | RHOB_UOIL | 0.700(g/cm3 )  |
| RHOB_XGAS | -0.051(g/cm3 ) | RHOB_UGAS | -0.051(g/cm3 ) |
| RHOB_XBWA | 0.957(g/cm3 )  | NPHI_QUAR | -0.059(m3/m3 ) |
| NPHI_CALC | 0.000(m3/m3 )  | NPHI_DOLO | 0.032(m3/m3 )  |
| NPHI_ORTH | -0.010(m3/m3 ) | NPHI_PYRI | 0.008(m3/m3 )  |
| NPHI_GLAU | 0.410(m3/m3 )  | NPHI_ILLI | 0.247(m3/m3 )  |
| NPHI_KAOL | 0.450(m3/m3 )  | NPHI_COAL | 0.450(m3/m3 )  |

| Parameter | Value           | Parameter | Value           |
|-----------|-----------------|-----------|-----------------|
| NPHI_XWAT | 0.900(m3/m3 )   | NPHI_UWAT | 1.000(m3/m3 )   |
| NPHI_XOIL | 1.000(m3/m3 )   | NPHI_UOIL | 1.000(m3/m3 )   |
| NPHI_XGAS | 0.039(m3/m3 )   | NPHI_UGAS | 0.039(m3/m3 )   |
| NPHI_XBWA | 1.000(m3/m3 )   | DT_QUAR   | 55.500(us/m )   |
| DT_CALC   | 47.800(us/m )   | DT_DOLO   | 43.500(us/m )   |
| DT_ORTH   | 60.000(us/m )   | DT_ILLI   | 60.000(us/m )   |
| DT_KAOL   | 91.318(us/m )   | DT_COAL   | 121.920(us/m )  |
| DT_IGNE   | 16.916(us/m )   | DT_XWAT   | 0.000(us/m )    |
| DT_UWAT   | 220.000(us/m )  | DT_XOIL   | 0.000(us/m )    |
| DT_UOIL   | 240.000(us/m )  | DT_XGAS   | 0.000(us/m )    |
| DT_UGAS   | 289.865(us/m )  | DT_XBWA   | 189.000(us/m )  |
| U_QUAR    | 5.000( )        | U_CALC    | 14.100( )       |
| U_DOLO    | 9.100( )        | U_ILLI    | 9.900( )        |
| U_KAOL    | 5.100( )        | U_COAL    | 1.000( )        |
| U_XWAT    | 0.692( )        | U_UWAT    | 0.000( )        |
| U_XOIL    | 0.136( )        | U_UOIL    | 0.000( )        |
| U_XGAS    | 0.012( )        | U_UGAS    | 0.000( )        |
| U_XBWA    | 0.398( )        | CXDC_ILLI | -999.250(mS/m ) |
| CXDC_KAOL | -999.250(mS/m ) | CXDC_XWAT | 20.038(mS/m )   |
| CXDC_XBWA | 11.445(mS/m )   | CUDC_GLAU | -999.250(mS/m ) |
| CUDC_ILLI | -999.250(mS/m ) | CUDC_KAOL | -999.250(mS/m ) |
| CUDC_UWAT | 18.386(mS/m )   | CUDC_UBWA | 5.363(mS/m )    |
| GR_QUAR   | 40.000(gAPI )   | GR_CALC   | 11.000(gAPI )   |
| GR_DOLO   | 3.000(gAPI )    | GR_ORTH   | 200.000(gAPI )  |
| GR_PYRI   | 0.000(gAPI )    | GR_GLAU   | 150.000(gAPI )  |
| GR_ILLI   | 235.000(gAPI )  | GR_KAOL   | 98.000(gAPI )   |
| GR_COAL   | 40.000(gAPI )   | GR_IGNE   | 40.000(gAPI )   |
| GR_XWAT   | 0.000(gAPI )    | GR_UWAT   | 0.000(gAPI )    |
| GR_XOIL   | 0.000(gAPI )    | GR_UOIL   | 0.000(gAPI )    |
| GR_XGAS   | 0.000(gAPI )    | GR_UGAS   | 0.000(gAPI )    |
| GR_XBWA   | 0.000(gAPI )    | EX1_QUAR  | 0.000( )        |
| EX1_CALC  | 0.000( )        | EX1_ORTH  | 0.000( )        |
| EX1_PYRI  | 0.000( )        | EX1_ILLI  | 0.000( )        |
| EX1_COAL  | 0.000( )        | EX1_XWAT  | 0.000( )        |
| EX1_UWAT  | 0.000( )        | EX1_XOIL  | 0.000( )        |
| EX1_UOIL  | 0.000( )        | EX1_XGAS  | 0.000( )        |
| EX1_UGAS  | 0.000( )        | EX1_XBWA  | 0.000( )        |
| CT1_QUAR  | 0.000( )        | CT1_CALC  | 0.000( )        |
| CT1_DOLO  | 0.000( )        | CT1_ORTH  | 0.000( )        |
| CT1_PYRI  | 0.000( )        | CT1_GLAU  | 0.000( )        |
| CT1_ILLI  | 0.000( )        | CT1_KAOL  | 0.000( )        |
| CT1_COAL  | 0.000( )        | CT1_IGNE  | 0.000( )        |
| CT1_XWAT  | 0.000( )        | CT1_UWAT  | 0.000( )        |
| CT1_XOIL  | 0.000( )        | CT1_UOIL  | 0.000( )        |
| CT1_XGAS  | 1.000( )        | CT1_UGAS  | -0.300( )       |
| CT1_XBWA  | 0.000( )        | CT2_QUAR  | 0.000( )        |
| CT2_CALC  | 0.000( )        | CT2_DOLO  | 0.000( )        |
| CT2_ORTH  | 0.000( )        | CT2_PYRI  | 0.000( )        |
| CT2_GLAU  | 0.000( )        | CT2_ILLI  | 0.000( )        |
| CT2_KAOL  | 0.000( )        | CT2_COAL  | 0.000( )        |
| CT2_IGNE  | 0.000( )        | CT2_XWAT  | 0.000( )        |
| CT2_UWAT  | 0.000( )        | CT2_XOIL  | 1.000( )        |
| CT2_UOIL  | -0.300( )       | CT2_XGAS  | 0.000( )        |
| CT2_UGAS  | 0.000( )        | CT2_XBWA  | 0.000( )        |
| CT3_QUAR  | -0.050( )       | CT3_CALC  | 0.000( )        |
| CT3_ORTH  | 1.000( )        | CT3_PYRI  | 0.000( )        |
| CT3_GLAU  | 0.000( )        | CT3_ILLI  | 0.000( )        |
| CT3_KAOL  | 0.000( )        | CT3_COAL  | 0.000( )        |
| CT3_XWAT  | 0.000( )        | CT3_UWAT  | 0.000( )        |

| Parameter    | Value           | Parameter    | Value           |
|--------------|-----------------|--------------|-----------------|
| CT3_XOIL     | 0.000( )        | CT3_UOIL     | 0.000( )        |
| CT3_XGAS     | 0.000( )        | CT3_UGAS     | 0.000( )        |
| CT3_XBWA     | 0.000( )        | CT4_QUAR     | 0.010( )        |
| CT4_CALC     | 0.000( )        | CT4_ORTH     | 0.000( )        |
| CT4_PYRI     | -1.000( )       | CT4_GLAU     | 0.000( )        |
| CT4_ILLI     | 0.000( )        | CT4_COAL     | 0.000( )        |
| CT4_XWAT     | 0.000( )        | CT4_UWAT     | 0.000( )        |
| CT4_XOIL     | 0.000( )        | CT4_UOIL     | 0.000( )        |
| CT4_XGAS     | 0.000( )        | CT4_UGAS     | 0.000( )        |
| CT4_XBWA     | 0.000( )        | ARHOB_GLAU   | 2.960(g/cm3 )   |
| ARHOB_ILLI   | 2.780(g/cm3 )   | ARHOB_KAOL   | 2.620(g/cm3 )   |
| WCLP_GLAU    | 0.156(m3/m3 )   | WCLP_ILLI    | 0.154(m3/m3 )   |
| WCLP_KAOL    | 0.058(m3/m3 )   | CBWA_GLAU    | -999.250(mS/m ) |
| CBWA_ILLI    | -999.250(mS/m ) | CBWA_KAOL    | -999.250(mS/m ) |
| CECA_GLAU    | 0.233(meq/g )   | CECA_ILLI    | 0.200(meq/g )   |
| CECA_KAOL    | 0.090(meq/g )   | RMF          | 0.160(ohm.m )   |
| MST          | 61.880(degC )   | RW           | 0.301(ohm.m )   |
| RWT          | -999.250(degC ) | SALIN_ISOL   | -999.250(ppk )  |
| SALIN_PARA   | -999.250(ppk )  | SALIN_XWAT   | 12.924(ppk )    |
| SALIN_UWAT   | 30.000(ppk )    | SALIN_XIWA   | -999.250(ppk )  |
| SALIN_UIWA   | -999.250(ppk )  | SALIN_XOIL   | 0.000(ppk )     |
| SALIN_UOIL   | 0.000(ppk )     | SALIN_XGAS   | 0.000(ppk )     |
| SALIN_UGAS   | 0.000(ppk )     | SALIN_XSFL   | -999.250(ppk )  |
| SALIN_USFL   | -999.250(ppk )  | CT1_ZP       | 0.000( )        |
| CT2_ZP       | 0.000( )        | CT3_ZP       | 0.000( )        |
| CT4_ZP       | 0.000( )        | RHOB_UNC_ZP  | 0.027(g/cm3 )   |
| NPHI_UNC_ZP  | 0.015(m3/m3 )   | DT_UNC_ZP    | 2.250(us/m )    |
| U_UNC_ZP     | 0.225( )        | CXDC_UNC_ZP  | 0.072(mS/m )    |
| CUDC_UNC_ZP  | 0.064(mS/m )    | GR_UNC_ZP    | 2.250(gAPI )    |
| EX1_UNC_ZP   | 0.015( )        | CT1_UNC_ZP   | 0.015( )        |
| CT2_UNC_ZP   | 0.015( )        | CT3_UNC_ZP   | 0.015( )        |
| CT4_UNC_ZP   | 0.015( )        | VOLS_UNC_ZP  | 0.015(m3/m3 )   |
| RHOB_UNC_WM  | 1.000( )        | NPHI_UNC_WM  | 1.000( )        |
| DT_UNC_WM    | 0.300( )        | U_UNC_WM     | 0.400( )        |
| CXDC_UNC_WM  | 0.500( )        | CUDC_UNC_WM  | 0.700( )        |
| GR_UNC_WM    | 0.300( )        | EX1_UNC_WM   | 1.000( )        |
| CT1_UNC_WM   | 0.200( )        | CT2_UNC_WM   | 0.200( )        |
| CT3_UNC_WM   | 0.900( )        | CT4_UNC_WM   | 1.000( )        |
| VOLS_UNC_WM  | 1.000( )        | RHOB_IFAC_ZP | 1.000( )        |
| NPHI_IFAC_ZP | 1.000( )        | A_ZP         | 1.000( )        |
| N_ZP         | 2.000( )        | C_DWA        | 0.000( )        |
| M_DWA        | 2.000( )        | BVIRR        | 0.010(m3/m3 )   |
| CT1_UGAS     | -0.300( )       | CT1_XBWA     | 0.000( )        |
| CT2_QUAR     | 0.000( )        | CT2_CALC     | 0.000( )        |
| CT2_DOLO     | 0.000( )        | CT2_ORTH     | 0.000( )        |
| CT2_PYRI     | 0.000( )        | CT2_GLAU     | 0.000( )        |
| CT2_ILLI     | 0.000( )        | CT2_KAOL     | 0.000( )        |
| CT2_COAL     | 0.000( )        | CT2_IGNE     | 0.000( )        |
| CT2_XWAT     | 0.000( )        | CT2_UWAT     | 0.000( )        |
| CT2_XOIL     | 1.000( )        | CT2_UOIL     | -0.300( )       |
| CT2_XGAS     | 0.000( )        | CT2_UGAS     | 0.000( )        |
| CT2_XBWA     | 0.000( )        | CT3_QUAR     | -0.050( )       |
| CT3_CALC     | 0.000( )        | CT3_ORTH     | 1.000( )        |
| CT3_PYRI     | 0.000( )        | CT3_GLAU     | 0.000( )        |
| CT3_ILLI     | 0.000( )        | CT3_KAOL     | 0.000( )        |
| CT3_COAL     | 0.000( )        | CT3_XWAT     | 0.000( )        |
| CT3_UWAT     | 0.000( )        | CT3_XOIL     | 0.000( )        |
| CT3_UOIL     | 0.000( )        | CT3_XGAS     | 0.000( )        |
| CT3_UGAS     | 0.000( )        | CT3_XBWA     | 0.000( )        |

| Parameter   | Value           | Parameter   | Value           |
|-------------|-----------------|-------------|-----------------|
| CT4_CALC    | 0.000( )        | CT4_ORTH    | 0.000( )        |
| CT4_PYRI    | -1.000( )       | CT4_GLAU    | 0.000( )        |
| CT4_ILLI    | 0.000( )        | CT4_COAL    | 0.000( )        |
| CT4_XWAT    | 0.000( )        | CT4_UWAT    | 0.000( )        |
| CT4_XOIL    | 0.000( )        | CT4_UOIL    | 0.000( )        |
| CT4_XGAS    | 0.000( )        | CT4_UGAS    | 0.000( )        |
| CT4_XBWA    | 0.000( )        | ARHOB_GLAU  | 2.960(g/cm3 )   |
| ARHOB_ILLI  | 2.780(g/cm3 )   | ARHOB_KAOL  | 2.620(g/cm3 )   |
| WCLP_GLAU   | 0.156(m3/m3 )   | WCLP_ILLI   | 0.170(m3/m3 )   |
| WCLP_KAOL   | 0.058(m3/m3 )   | CBWA_GLAU   | -999.250(mS/m ) |
| CBWA_ILLI   | -999.250(mS/m ) | CBWA_KAOL   | -999.250(mS/m ) |
| CECA_GLAU   | 0.233(meq/g )   | CECA_ILLI   | 0.200(meq/g )   |
| CECA_KAOL   | 0.090(meq/g )   | RMF         | 0.160(ohm.m )   |
| MST         | 61.880(degC )   | RW          | 0.460(ohm.m )   |
| RWT         | -999.250(degC ) | SALIN_ISOL  | -999.250(ppk )  |
| SALIN_PARA  | -999.250(ppk )  | SALIN_XWAT  | 12.924(ppk )    |
| SALIN_UWAT  | 30.000(ppk )    | SALIN_XIWA  | -999.250(ppk )  |
| SALIN_UIWA  | -999.250(ppk )  | SALIN_XOIL  | 0.000(ppk )     |
| SALIN_UOIL  | 0.000(ppk )     | SALIN_XGAS  | 0.000(ppk )     |
| SALIN_UGAS  | 0.000(ppk )     | SALIN_XSFL  | -999.250(ppk )  |
| SALIN_USFL  | -999.250(ppk )  | CT1_ZP      | 0.000( )        |
| CT2_ZP      | 0.000( )        | CT3_ZP      | 0.000( )        |
| CT4_ZP      | 0.000( )        | RHOB_UNC_ZP | 0.027(g/cm3 )   |
| NPFI_UNC_ZP | 0.015(m3/m3 )   | DT_UNC_ZP   | 2.250(us/m )    |
| U_UNC_ZP    | 0.225( )        | CXDC_UNC_ZP | 0.072(mS/m )    |
| GR_UNC_ZP   | 2.250(gAPI )    | EX1_UNC_ZP  | 0.015( )        |
| CT1_UNC_ZP  | 0.015( )        | CT2_UNC_ZP  | 0.015( )        |
| CT3_UNC_ZP  | 0.015( )        | CT4_UNC_ZP  | 0.015( )        |
| VOLS_UNC_ZP | 0.015(m3/m3 )   | RHOB_UNC_WM | 1.000( )        |
| NPFI_UNC_WM | 1.000( )        | DT_UNC_WM   | 0.300( )        |
| U_UNC_WM    | 0.400( )        | CXDC_UNC_WM | 0.500( )        |
| CUDC_UNC_WM | 0.700( )        | EX1_UNC_WM  | 1.000( )        |
| CT1_UNC_WM  | 0.200( )        | CT2_UNC_WM  | 0.200( )        |
| CT3_UNC_WM  | 0.900( )        | CT4_UNC_WM  | 1.000( )        |
| VOLS_UNC_WM | 1.000( )        | A_ZP        | 1.000( )        |
| N_ZP        | 2.000( )        | C_DWA       | 0.000( )        |
| M_DWA       | 2.000( )        | BVIRR       | 0.010(m3/m3 )   |

## RESULTS AND DISCUSSION

The primary target of this well the T-1.1 reservoir is essentially water bearing except for a small zone (4454 - 4455mMD) which could be oil bearing. This small zone occurs within a dolomite-cemented interval. All other sands in this well are water bearing.

## Flounder A10A

Petrophysical Summary 4449.2 - 4585m MD

Depth Reference:

Mean VCL, Mean PHIE (or PIGN), Mean SWE (or SUWI) is based on a PHIE or PIGN cutoff:

Primary: MDKB

0.08 for Gas, 0.12 for oil and water

| Zone  | Top Depth<br>mMD | Top Depth<br>mTVDSS | Bottom<br>Depth<br>mMD | Bottom<br>Depth<br>mTVDSS | Gross<br>Thickness<br>mMD | Gross<br>Thickness<br>mTVD | Net<br>Reservoir<br>Thickness<br>mMD | Net<br>Reservoir<br>Thickness<br>mTVD | Net/Gross | Mean VCL | Mean PHIE | Mean SWE | Comments      |
|-------|------------------|---------------------|------------------------|---------------------------|---------------------------|----------------------------|--------------------------------------|---------------------------------------|-----------|----------|-----------|----------|---------------|
| T-1.1 | 4449.2           | 2504.4              | 4485.0                 | 2525.0                    | 35.8                      | 20.6                       | 27.15                                | 15.65                                 | 0.758     | 0.11     | 0.193     | 1.0      | Water bearing |

Table 1

**APPENDIX 3a**

**FLOUNDER A10A**

**Lithology/Show Descriptions**

## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m)<br>From To   |      | %   | Lithology / Show Description   |
|--|------|-----|--|
| <b>Geologist on board from 2520 mMDRT. Drill from 670 to 4515 mMDRT with PDC bit on steerable rotary assembly.</b> |      |     |  |
| 2520   | 2550 | 100 | <b>MARL:</b> medium grey to olive grey, 60% calcareous, firm to moderately hard, subblocky to subtabular, trace to 2% quartz silt, trace very fine disseminated carbonaceous material.   |
| 2550   | 2580 | 100 | <b>MARL:</b> as above, medium grey to medium dark grey, olive grey.  |
| 2580   | 2610 | 100 | <b>MARL:</b> as above.   |
| 2610   | 2640 | 100 | <b>MARL:</b> as above, trace arenaceous (very fine grained), becoming predominantly soft to firm.  |
| 2640   | 2670 | 100 | <b>MARL:</b> as above.   |
| 2670   | 2700 | 100 | <b>MARL:</b> as above, medium grey to light olive grey, firm.  |
| 2700   | 2730 | 100 | <b>MARL:</b> as above.   |
| 2730   | 2760 | 100 | <b>MARL:</b> as above, predominantly medium dark grey to olive grey, trace micromica.  |
| 2760   | 2790 | 100 | <b>MARL:</b> as above, predominantly olive grey, firm to moderately hard.  |
| 2790   | 2820 | 100 | <b>MARL:</b> as above, predominantly firm.   |
| 2820   | 2850 | 100 | <b>MARL:</b> medium dark grey to predominantly olive grey.   |
| 2850   | 2880 | 100 | <b>MARL:</b> as above.   |
| 2880   | 2910 | 100 | <b>MARL:</b> as above.   |
| 2910   | 2940 | 100 | <b>MARL:</b> predominantly olive grey, 50 to 60% calcareous, firm to moderately hard, subblocky to subplatey, 2% quartz silt, trace micromica, trace very fine disseminated carbonaceous material.   |
| 2940   | 2970 | 100 | <b>MARL:</b> as above.   |
| 2970   | 3000 | 100 | <b>MARL:</b> as above, medium dark grey to predominantly olive grey.   |
| 3000   | 3030 | 100 | <b>MARL:</b> as above.   |
| 3030   | 3060 | 100 | <b>MARL:</b> as above, olive grey.   |
| 3060   | 3090 | 100 | <b>MARL:</b> as above.   |
| 3090   | 3120 | 100 | <b>MARL:</b> as above.   |
| 3120   | 3150 | 100 | <b>MARL:</b> as above, medium grey to light olive grey.  |
| 3150   | 3180 | 100 | <b>MARL:</b> as above.   |
| 3180   | 3210 | 100 | <b>MARL:</b> as above.   |
| 3210   | 3240 | 100 | <b>MARL:</b> as above, medium grey to light olive grey to olive grey.  |
| 3240   | 3270 | 100 | <b>MARL:</b> as above.   |
| 3270   | 3300 | 100 | <b>MARL:</b> as above, medium grey to olive grey.  |
| 3300   | 3330 | 100 | <b>MARL:</b> as above.   |
| 3330   | 3360 | 100 | <b>MARL:</b> as above, trace Foraminifera.   |
| 3360   | 3390 | 100 | <b>MARL:</b> medium grey to olive grey, 40 to 50% calcareous, grading to Calcareous Claystone, moderately hard to predominantly firm, subblocky to subplatey, 2 to 5% quartz silt, trace to 2% very fine grained arenaceous, trace micromica, trace very fine carbonaceous material.<br><b>Collect and retain 10m samples from 3390 to 4410 mMDRT.</b> |
| 3390   | 3400 | 100 | <b>MARL:</b> as above.   |
| 3400   | 3410 | 100 | <b>MARL:</b> as above, 30 to 50% calcareous, grading to Calcareous Claystone, soft to predominantly firm, plastic in part.   |
| 3410   | 3420 | 100 | <b>MARL:</b> as above, medium grey to predominantly olive grey.  |
| 3420   | 3430 | 100 | <b>MARL:</b> as above.   |
| 3430   | 3440 | 80  | <b>MARL:</b> as above, olive grey to predominantly medium grey, firm to moderately hard.   |
|  |      | 20  | <b>CALCAREOUS CLAYSTONE:</b> medium grey, 20 to 30% calcareous, grading to Marl, firm, subblocky to subtabular, trace to 2% quartz silt, trace to 2% micromica.  |
| 3440   | 3450 | 70  | <b>MARL:</b> as above.   |

## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m)<br>From To |      | %   | Lithology / Show Description   |
|----------------------------|------|-----|--|
| 3450                       | 3460 | 30  | <b>CALCAREOUS CLAYSTONE:</b> as above.   |
|                            |      | 65  | <b>MARL:</b> as above.   |
|                            |      | 35  | <b>CALCAREOUS CLAYSTONE:</b> as above.   |
| 3460                       | 3470 | 50  | <b>MARL:</b> medium grey to olive grey, 40 to 50% calcareous, grading to Calcareous Claystone, moderately hard to predominantly firm, subblocky to subplatey, 2 to 5% quartz silt, trace to 2% very fine grained arenaceous, trace micromica, trace very fine carbonaceous material.                             |
|                            |      | 50  | <b>CALCAREOUS CLAYSTONE:</b> medium grey, 20 to 30% calcareous, grading to Marl, firm, subblocky to subtabular, trace to 2% quartz silt, trace to 2% micromica.  |
|                            |      | 50  | <b>MARL:</b> as above.   |
| 3470                       | 3480 | 50  | <b>CALCAREOUS CLAYSTONE:</b> as above.   |
|                            |      | 70  | <b>CALCAREOUS CLAYSTONE:</b> as above, trace pyrite.   |
|                            |      | 30  | <b>MARL:</b> as above.   |
| 3480                       | 3490 | 80  | <b>CALCAREOUS CLAYSTONE:</b> as above.   |
|                            |      | 20  | <b>MARL:</b> as above.   |
|                            |      | 80  | <b>CALCAREOUS CLAYSTONE:</b> as above, medium grey to medium dark grey, firm to moderately hard, trace dark green glauconite.  |
| 3490                       | 3500 | 20  | <b>MARL:</b> as above.   |
|                            |      | 80  | <b>CALCAREOUS CLAYSTONE:</b> as above, medium grey to medium dark grey, firm to moderately hard, trace dark green glauconite.  |
|                            |      | 20  | <b>MARL:</b> as above.   |
| 3500                       | 3510 | 80  | <b>CALCAREOUS CLAYSTONE:</b> as above, medium grey to medium dark grey, firm to moderately hard, trace dark green glauconite.  |
|                            |      | 20  | <b>MARL:</b> as above.   |
|                            |      | 80  | <b>Adding Barocarb sized calcium carbonate bridging agent from 3500 mMDRT.</b>   |
| 3510                       | 3520 | 80  | <b>SILTSTONE:</b> greyish brown, argillaceous (25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to non calcareous, soft to firm, subblocky to predominantly subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite.             |
|                            |      | 20  | <b>CALCAREOUS CLAYSTONE:</b> as above (cavings?).  |
|                            |      | 80  | <b>SILTSTONE:</b> as above.  |
| 3520                       | 3530 | 20  | <b>CALCAREOUS CLAYSTONE:</b> as above.   |
|                            |      | 40  | <b>SILTSTONE:</b> as above.  |
|                            |      | 60  | <b>CALCAREOUS CLAYSTONE:</b> as above (cavings?).  |
| 3530                       | 3540 | 90  | <b>SILTSTONE:</b> as above, subfissile to subblocky.   |
|                            |      | 10  | <b>CALCAREOUS CLAYSTONE:</b> as above (cavings?).  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3540                       | 3550 | 100 | <b>SILTSTONE:</b> as above, trace pyrite.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above,  |
|                            |      | 100 | <b>SILTSTONE:</b> as above, brownish grey to predominantly greyish brown.  |
| 3550                       | 3560 | 100 | <b>SILTSTONE:</b> as above, subfissile to subblocky.   |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3560                       | 3570 | 100 | <b>SILTSTONE:</b> as above, 5 to 10% very fine quartz grains.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3570                       | 3580 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3580                       | 3590 | 100 | <b>SILTSTONE:</b> as above, predominantly subblocky, firm to moderately hard.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3590                       | 3600 | 100 | <b>SILTSTONE:</b> as above, predominantly greyish brown, 10% dusky yellowish brown.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above, predominantly greyish brown, 10% dusky yellowish brown.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above, predominantly greyish brown, 10% dusky yellowish brown.  |
| 3600                       | 3610 | 100 | <b>SILTSTONE:</b> predominantly greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite. |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3610                       | 3620 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3620                       | 3630 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3630                       | 3640 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3640                       | 3650 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3650                       | 3660 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3660                       | 3670 | 100 | <b>SILTSTONE:</b> as above, predominantly subblocky, firm to moderately hard.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3670                       | 3680 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3680                       | 3690 | 100 | <b>SILTSTONE:</b> as above, predominantly greyish brown, 10% dusky yellowish brown.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above, predominantly greyish brown, 10% dusky yellowish brown.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above, predominantly greyish brown, 10% dusky yellowish brown.  |
| 3690                       | 3700 | 100 | <b>SILTSTONE:</b> predominantly greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite. |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
| 3700                       | 3710 | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above.  |



## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m) |      | %   | Lithology / Show Description   |
|-----------------|------|-----|--|
| From            | To   |     |  |
| 3710            | 3720 | 100 | <b>SILTSTONE:</b> as above.  |
| 3720            | 3730 | 100 | <b>SILTSTONE:</b> as above.  |
| 3730            | 3740 | 100 | <b>SILTSTONE:</b> as above.  |
|                 |      | Tr  | <b>SANDSTONE:</b> quartzose, medium to coarse grained, subrounded, subspherical, moderately sorted, trace siliceous cement, trace to 5% argillaceous matrix, loose grains, poor to fair inferred porosity, no fluorescence.  |
| 3740            | 3750 | 90  | <b>SILTSTONE:</b> as above.  |
|                 |      | 10  | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3750            | 3760 | 90  | <b>SILTSTONE:</b> as above.  |
|                 |      | 10  | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3760            | 3770 | 80  | <b>SILTSTONE:</b> as above.  |
|                 |      | 20  | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3770            | 3780 | 60  | <b>SILTSTONE:</b> as above.  |
|                 |      | 40  | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3780            | 3790 | 50  | <b>SILTSTONE:</b> as above.  |
|                 |      | 50  | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3790            | 3800 | 70  | <b>SANDSTONE:</b> quartzose, very fine to medium grained, predominantly fine grained, moderately to well sorted, subangular to subrounded, subspherical, trace siliceous cement, trace dolomite cement, trace to 5% argillaceous matrix, loose grains, fair inferred porosity, no fluorescence.                  |
|                 |      | 30  | <b>SILTSTONE:</b> predominantly greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite. |
| 3800            | 3810 | 90  | <b>SANDSTONE:</b> as above, very fine to medium grained, predominantly fine grained, fair inferred porosity, no fluorescence.  |
|                 |      | 10  | <b>SILTSTONE:</b> as above.  |
| 3810            | 3820 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3820            | 3830 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3830            | 3840 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3840            | 3850 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3850            | 3860 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3860            | 3870 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3870            | 3880 | 100 | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3880            | 3890 | 90  | <b>SANDSTONE:</b> as above, no fluorescence.   |
|                 |      | 10  | <b>SILTSTONE:</b> predominantly greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite. |
| 3890            | 3900 | 90  | <b>SANDSTONE:</b> as above, fine to coarse grained, predominantly medium grained, fair to good inferred porosity, no fluorescence.   |
|                 |      | 10  | <b>SILTSTONE:</b> as above.  |
| 3900            | 3910 | 70  | <b>SANDSTONE:</b> as above, no fluorescence.   |
|                 |      | 30  | <b>SILTSTONE:</b> as above.  |
| 3910            | 3920 | 70  | <b>SANDSTONE:</b> as above, no fluorescence.   |
|                 |      | 30  | <b>SILTSTONE:</b> as above.  |
| 3920            | 3930 | 80  | <b>SANDSTONE:</b> as above, trace to 5% strong dolomite cement, no fluorescence.   |
|                 |      | 20  | <b>SILTSTONE:</b> as above.  |
| 3930            | 3940 | 60  | <b>SANDSTONE:</b> as above, very to fine grained, poor inferred porosity, no fluorescence.   |

## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m)<br>From To |      | %   | Lithology / Show Description   |
|----------------------------|------|-----|--|
| 3940                       | 3950 | 40  | <b>SILTSTONE:</b> as above.  |
|                            |      | 50  | <b>SANDSTONE:</b> as above, no fluorescence.   |
|                            |      | 50  | <b>SILTSTONE:</b> as above.  |
| 3950                       | 3960 | 50  | <b>SANDSTONE:</b> as above, predominantly fine grained, poor inferred porosity, no fluorescence.   |
|                            |      | 50  | <b>SILTSTONE:</b> as above.  |
|                            |      | 90  | <b>SILTSTONE:</b> brownish grey to greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, soft to firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite.  |
| 3970                       | 3980 | 10  | <b>SANDSTONE:</b> quartzose, light grey (aggregates), translucent to clear (grains), very fine to medium grained, predominantly fine grained, moderately to well sorted, subangular, subspherical, 2 to 5% weak siliceous cement, 5% argillaceous/silty matrix, trace carbonaceous material, 90% soft aggregates, 10% loose grains, very poor visual and inferred porosity, no fluorescence. |
|                            |      | 95  | <b>SILTSTONE:</b> as above.  |
|                            |      | 5   | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 3990                       | 4000 | 95  | <b>SILTSTONE:</b> as above.  |
|                            |      | 5   | <b>SANDSTONE:</b> as above.  |
|                            |      | 100 | <b>SILTSTONE:</b> as above, soft to predominantly firm.  |
| 4010                       | 4020 | 100 | <b>SILTSTONE:</b> as above.  |
| 4020                       | 4030 | 100 | <b>SILTSTONE:</b> as above.  |
| 4030                       | 4040 | 100 | <b>SILTSTONE:</b> as above.  |
| 4040                       | 4050 | 50  | <b>SANDSTONE:</b> clear to predominantly translucent, medium to coarse grained, subangular to predominantly subrounded, subspherical, trace siliceous cement, trace dolomite cement, trace pyrite cement, trace to 2% argillaceous matrix, loose grains, fair to good inferred porosity, no fluorescence.  |
|                            |      | 50  | <b>SILTSTONE:</b> brownish grey to greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, soft to firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite.  |
|                            |      | 60  | <b>SANDSTONE:</b> as above, medium to very coarse grained, predominantly coarse grained, good inferred porosity, no fluorescence.  |
| 4060                       | 4070 | 40  | <b>SILTSTONE:</b> as above.  |
|                            |      | 70  | <b>SILTSTONE:</b> as above, moderately hard.   |
|                            |      | 30  | <b>SANDSTONE:</b> as above, fair inferred porosity, no fluorescence.   |
| 4070                       | 4080 | 50  | <b>SILTSTONE:</b> as above, 15% very fine quartz.  |
|                            |      | 50  | <b>SANDSTONE:</b> as above, coarse to very coarse grained, fair to good inferred porosity.   |
|                            |      | 50  | <b>SILTSTONE:</b> as above.  |
| 4080                       | 4090 | 50  | <b>SANDSTONE:</b> as above, fair to good inferred porosity, no fluorescence.   |
|                            |      | 50  | <b>SILTSTONE:</b> as above   |
|                            |      | 50  | <b>SANDSTONE:</b> as above, fair to good inferred porosity, no fluorescence.   |
| 4100                       | 4110 | 80  | <b>SANDSTONE:</b> as above, coarse to very coarse grained, predominantly subrounded, good inferred porosity, no fluorescence.  |
|                            |      | 20  | <b>SILTSTONE:</b> as above.  |
|                            |      |     | <b>5m samples from 4110 to 4120 mMDRT</b>  |
| 4110                       | 4115 | 60  | <b>SILTSTONE:</b> as above, predominantly soft, commonly dispersive.   |
|                            |      | 40  | <b>SANDSTONE:</b> as above, predominantly fine grained, poor inferred porosity, no fluorescence.   |

## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m)<br>From To |      | %   | Lithology / Show Description  |
|----------------------------|------|-----|---|
| 4115                       | 4120 | 70  | <b>SANDSTONE:</b> as above, coarse to very coarse grained, subrounded to rounded, good inferred porosity, no fluorescence.  |
|                            |      | 30  | <b>SILTSTONE:</b> as above, firm, subblocky.  |
| 4120                       | 4130 | 80  | <b>SILTSTONE:</b> as above.   |
|                            |      | 20  | <b>SANDSTONE:</b> as above, fair inferred porosity, no fluorescence.  |
| 4130                       | 4135 | 80  | <b>SILTSTONE:</b> as above.   |
|                            |      | 10  | <b>COAL:</b> black to brownish black, dull lustre, firm, commonly subfissile to fissile.  |
|                            |      | 10  | <b>SANDSTONE:</b> as above, poor inferred porosity, no fluorescence.  |
| 4135                       | 4140 | 80  | <b>SANDSTONE:</b> clear to predominantly translucent, very fine to fine grained, moderately to well sorted, subrounded, trace weak siliceous cement, trace to 2% dolomite cement, trace to 5% argillaceous matrix, loose grains, poor inferred porosity, no fluorescence.   |
|                            |      | 20  | <b>SILTSTONE:</b> brownish grey to greyish brown, argillaceous (15 to 25% clay), grading to Silty Claystone, 2 to 5% very fine grained quartz, trace to predominantly non calcareous, soft to firm, subblocky to subfissile, trace to 5% fine carbonaceous material, trace to 2% micromica, trace pyrite, trace glauconite. |
| 4140                       | 4145 | 60  | <b>SILTSTONE:</b> as above, predominantly soft to amorphous, dispersive and washing out.  |
|                            |      | 40  | <b>SANDSTONE:</b> as above, fine to medium grained, poor inferred porosity, no fluorescence.  |
| 4145                       | 4150 | 80  | <b>SANDSTONE:</b> as above, fine to predominantly medium grained, poor to fair inferred porosity, no fluorescence.  |
|                            |      | 10  | <b>SILTSTONE:</b> as above.   |
|                            |      | 10  | <b>COAL:</b> black to brownish black, dull lustre, firm, commonly subfissile to fissile.  |
| 4150                       | 4155 | 100 | <b>COAL:</b> as above.  |
| 4155                       | 4160 | 60  | <b>SANDSTONE:</b> as above, poor inferred porosity, no fluorescence.  |
|                            |      | 40  | <b>SILTSTONE:</b> as above.   |
| 4160                       | 4165 | 70  | <b>SANDSTONE:</b> as above, fine to very coarse grained, predominantly medium grained, poor to fair inferred porosity, no fluorescence.   |
|                            |      | 30  | <b>SILTSTONE:</b> as above.   |
| 4165                       | 4170 | 50  | <b>SANDSTONE:</b> as above, poor to fair inferred porosity, no fluorescence   |
|                            |      | 50  | <b>SILTSTONE:</b> as above.   |
| 4170                       | 4175 | 60  | <b>SILTSTONE:</b> as above, 20% very fine quartz, grading in part to Arenaceous Siltstone.  |
|                            |      | 30  | <b>SANDSTONE:</b> as above, poor inferred porosity, no fluorescence.  |
|                            |      | 10  | <b>COAL:</b> as above.  |
| 4175                       | 4180 | 50  | <b>SILTSTONE:</b> as above.   |
|                            |      | 40  | <b>COAL:</b> as above.  |
|                            |      | 10  | <b>SANDSTONE:</b> as above, poor inferred porosity, no fluorescence.  |
| 4180                       | 4185 | 90  | <b>SANDSTONE:</b> as above, fine to predominantly medium grained, well sorted, 95% loose grains, 10% friable aggregates with weak siliceous cement and 10% argillaceous matrix, fair inferred and visual porosity, no fluorescence.   |
|                            |      | 10  | <b>SILTSTONE:</b> as above.   |
|                            |      | 90  | <b>SANDSTONE:</b> as above, fair inferred porosity, no fluorescence.  |
| 4185                       | 4190 | 10  | <b>SILTSTONE:</b> as above.   |
|                            |      | Tr  | <b>COAL:</b> as above.  |
| 4190                       | 4195 | 100 | <b>SANDSTONE:</b> as above, fine to coarse grained, predominantly fine to medium grained, 95% loose grains, 5% friable aggregates as above.   |
| 4195                       | 4200 | 100 | <b>SANDSTONE:</b> as above, 70% loose grains, 30% friable aggregates as above, fair inferred porosity, no fluorescence.   |
| 4200                       | 4205 | 100 | <b>COAL:</b> as above.  |
| 4205                       | 4210 | 50  | <b>SANDSTONE:</b> as above, poor to fair inferred porosity, no fluorescence.  |

## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m)<br>From To |      | %   | Lithology / Show Description  |
|----------------------------|------|-----|---|
| 4210                       | 4215 | 50  | <b>SILTSTONE:</b> as above.   |
|                            |      | 50  | <b>SILTSTONE:</b> as above.   |
|                            |      | 50  | <b>COAL:</b> as above.  |
| 4215                       | 4220 | 50  | <b>SILTSTONE:</b> as above.   |
|                            |      | 50  | <b>SANDSTONE:</b> medium to coarse grained, poor inferred porosity, no fluorescence.  |
| 4220                       | 4225 | 50  | <b>SILTSTONE:</b> as above.   |
|                            |      | 50  | <b>SANDSTONE:</b> as above, poor inferred porosity, no fluorescence.  |
| 4225                       | 4230 | 90  | <b>SANDSTONE:</b> as above, fine to predominantly medium grained, poor to fair inferred porosity, no fluorescence.  |
|                            |      | 10  | <b>SILTSTONE:</b> as above.   |
| 4230                       | 4235 | 90  | <b>SANDSTONE:</b> clear to translucent, medium to coarse grained, subrounded, subspherical, trace weak siliceous cement, trace to 5% argillaceous matrix, trace dolomite cement, poor inferred porosity, no fluorescence. |
|                            |      | 10  | <b>COAL:</b> black to brownish black, dull to earthy lustre, lignitic texture, firm, subfissile to fissile.   |
| 4235                       | 4240 | 90  | <b>SANDSTONE:</b> as above, coarse to very coarse grained, fair inferred porosity, no fluorescence.   |
|                            |      | 10  | <b>SILTSTONE:</b> as above.   |
| 4240                       | 4245 | 90  | <b>SANDSTONE:</b> as above, fair inferred porosity, no fluorescence.  |
|                            |      | 10  | <b>SILTSTONE:</b> as above.   |
| 4245                       | 4250 | 90  | <b>SANDSTONE:</b> as above, coarse to predominantly very coarse grained, good inferred porosity, no fluorescence.   |
|                            |      | 10  | <b>SILTSTONE:</b> as above.   |
| 4250                       | 4255 | 100 | <b>SANDSTONE:</b> as above, very coarse grained, trace argillaceous/limonitic argillaceous, good inferred porosity, no fluorescence.  |
|                            |      | 100 | <b>SANDSTONE:</b> as above, medium grained, well sorted, fair inferred porosity, no fluorescence.   |
| 4260                       | 4265 | 100 | <b>SANDSTONE:</b> as above, medium grained, moderately to well sorted, 2% argillaceous/limonitic matrix, poor to fair inferred porosity, no fluorescence.   |
|                            |      | 90  | <b>SANDSTONE:</b> as above, fine to medium grained, 5% matrix as above, fair inferred porosity, no fluorescence.  |
| 4270                       | 4275 | 10  | <b>SILTSTONE:</b> as above, predominantly washing out.  |
|                            |      | 90  | <b>SANDSTONE:</b> as above, no fluorescence.  |
| 4275                       | 4280 | 10  | <b>SILTSTONE:</b> as above.   |
|                            |      | 90  | <b>SANDSTONE:</b> as above, coarse to very coarse grained, 2% argillaceous/limonitic matrix, fair to good inferred porosity, no fluorescence.   |
| 4280                       | 4285 | 10  | <b>SILTSTONE:</b> as above.   |
|                            |      | 100 | <b>SANDSTONE:</b> as above, predominantly translucent, subrounded, subspherical to supelongate, trace argillaceous/limonitic matrix, good inferred porosity, no fluorescence.   |
| 4285                       | 4290 | 90  | <b>SANDSTONE:</b> as above, clear to translucent, fine to coarse grained, moderately sorted, 2% matrix as above, fair inferred porosity, no fluorescence.   |
|                            |      | 10  | <b>SILTSTONE:</b> as above, predominantly washing out.  |
| 4290                       | 4295 | 95  | <b>SANDSTONE:</b> as above, medium to very coarse grained, fair to good inferred porosity, no fluorescence.   |
|                            |      | 5   | <b>SILTSTONE:</b> as above, firm, subblocky.  |
| 4295                       | 4300 | 85  | <b>SANDSTONE:</b> as above, predominantly medium to coarse grained, trace argillaceous matrix, fair inferred porosity, n fluorescence.  |
|                            |      | 15  | <b>SILTSTONE:</b> as above.   |

## Flounder A10A Lithology / Show Descriptions

| Interval<br>(m)<br>From To |      | %   | Lithology / Show Description   |
|----------------------------|------|-----|--|
| 4300                       | 4305 | 75  | <b>SANDSTONE:</b> as above, predominantly coarse to very coarse grained, fair inferred porosity, no fluorescence.  |
|                            |      | 25  | <b>SILTSTONE:</b> as above, becoming arenaceous (20% very fine quartz).  |
| 4305                       | 4310 | 60  | <b>SANDSTONE:</b> as above, predominantly medium to coarse grained, poor inferred porosity, no fluorescence.   |
|                            |      | 40  | <b>SILTSTONE:</b> as above.  |
| 4310                       | 4315 | 60  | <b>SANDSTONE:</b> as above, predominantly coarse grained, fair inferred porosity, no fluorescence.   |
|                            |      | 40  | <b>SILTSTONE:</b> as above.  |
| 4315                       | 4320 | 80  | <b>SANDSTONE:</b> as above, medium to coarse grained, trace dolomite cement, fair inferred porosity, no fluorescence.  |
|                            |      | 20  | <b>SILTSTONE:</b> as above, 5% irregular carbonaceous/coal laminations.  |
| 4320                       | 4325 | 50  | <b>SANDSTONE:</b> clear to translucent, fine to predominantly medium grained, moderately to well sorted, subangular, subspherical, trace weak siliceous cement, trace dolomite cement, trace to 2% argillaceous matrix, loose grains, poor to fair inferred porosity, no fluorescence. |
|                            |      | 50  | <b>SILTSTONE:</b> brownish grey, argillaceous (15% clay), 5% very fine quartz, 2% carbonaceous/coal laminations, soft to firm, subfissile.   |
| 4325                       | 4330 | 60  | <b>SANDSTONE:</b> as above, medium grained, well sorted, subangular, trace argillaceous matrix, fair inferred porosity, no fluorescence.   |
|                            |      | 40  | <b>SILTSTONE:</b> as above.  |
| 4330                       | 4335 | 75  | <b>SILTSTONE:</b> as above, greyish brown to medium dark grey.   |
|                            |      | 25  | <b>SANDSTONE:</b> as above, medium to coarse grained, poor inferred porosity, no fluorescence.   |
| 4335                       | 4340 | 90  | <b>SILTSTONE:</b> as above, predominantly medium grey, firm to moderately hard.  |
|                            |      | 10  | <b>SANDSTONE:</b> as above, no fluorescence.   |
| 4340                       | 4345 | 100 | <b>SILTSTONE:</b> greyish brown to predominantly dark grey, argillaceous (15% clay), 5% calcareous, 2 to 5% very fine quartz, firm, subblocky to subfissile, trace to 2% micromica, 5% very fine carbonaceous material.  |
| 4345                       | 4350 | 100 | <b>SILTSTONE:</b> as above.  |
| 4350                       | 4355 | 100 | <b>SILTSTONE:</b> as above, soft to predominantly firm.  |
| 4355                       | 4360 | 100 | <b>SILTSTONE:</b> as above.  |
| 4360                       | 4365 | 100 | <b>SILTSTONE:</b> as above.  |
| 4365                       | 4370 | 98  | <b>SILTSTONE:</b> as above.  |
|                            |      | 2   | <b>SANDSTONE:</b> as above, very poor inferred porosity, no fluorescence.  |
| 4370                       | 4375 | 100 | <b>SILTSTONE:</b> as above, firm.  |
| 4375                       | 4380 | 100 | <b>SILTSTONE:</b> as above.  |
| 4380                       | 4385 | 100 | <b>SILTSTONE:</b> as above.  |
| 4385                       | 4390 | 100 | <b>SILTSTONE:</b> as above, trace glauconite.  |
| 4390                       | 4395 | 100 | <b>SILTSTONE:</b> as above.  |
| 4395                       | 4400 | 100 | <b>SILTSTONE:</b> as above.  |
| 4400                       | 4405 | 100 | <b>SILTSTONE:</b> as above.  |
| 4405                       | 4410 | 100 | <b>SILTSTONE:</b> as above, soft to predominantly firm, subfissile.  |
| 4410                       | 4415 | 100 | <b>SILTSTONE:</b> as above.  |
| 4415                       | 4420 | 100 | <b>SILTSTONE:</b> as above greyish brown to dark grey.   |
| 4420                       | 4425 | 100 | <b>SILTSTONE:</b> as above.  |
| 4425                       | 4430 | 100 | <b>SILTSTONE:</b> as above.  |
| 4430                       | 4435 | 100 | <b>SILTSTONE:</b> as above, firm.  |

## Flounder A10A Lithology / Show Descriptions

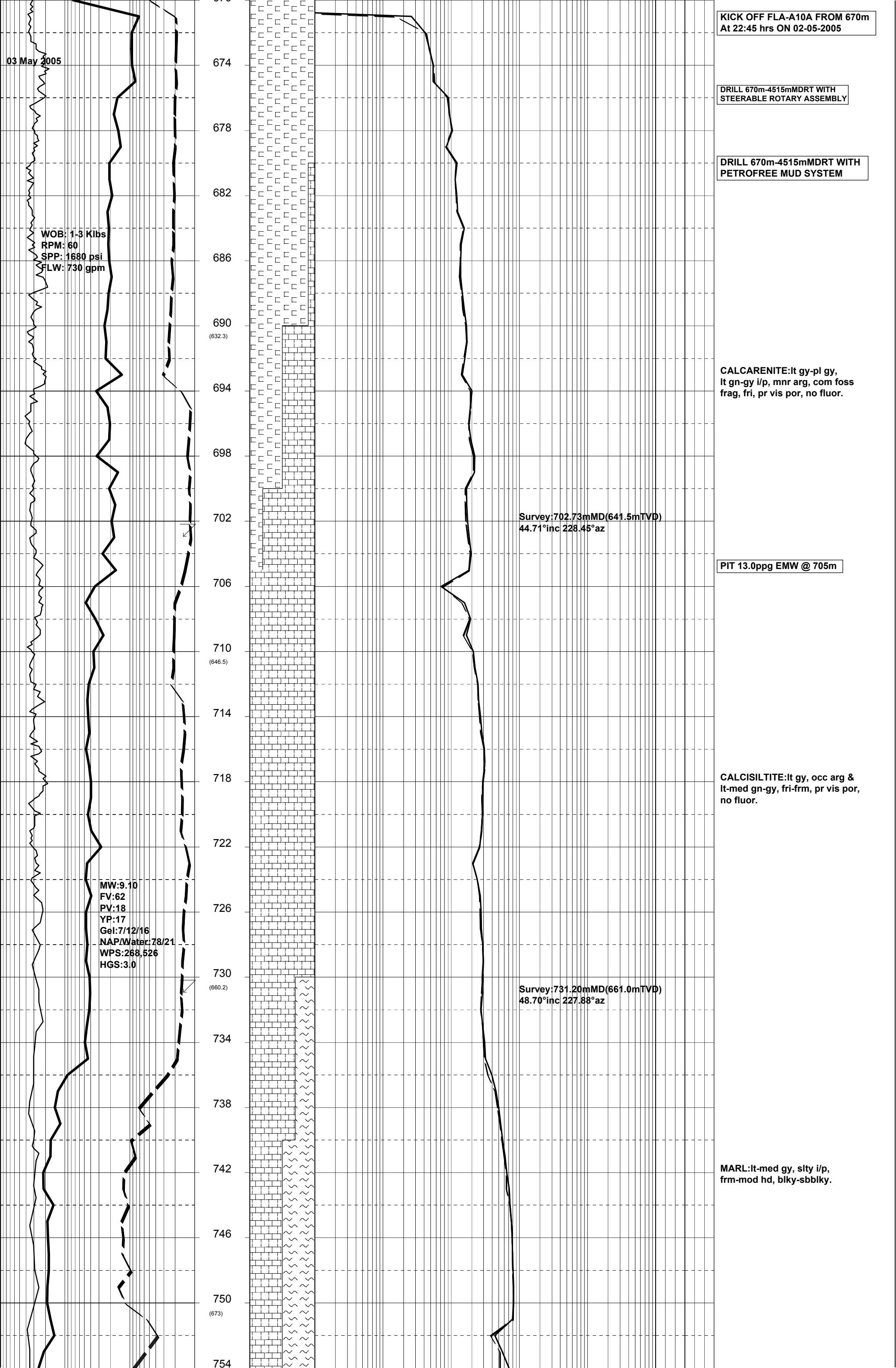
| Interval<br>(m) |      | %   | Lithology / Show Description  |
|-----------------|------|-----|---|
| From            | To   |     |   |
| 4435            | 4440 | 100 | <b>SILTSTONE:</b> as above.   |
| 4440            | 4445 | 100 | <b>SILTSTONE:</b> as above.   |
| 4445            | 4450 | 98  | <b>SILTSTONE:</b> as above.   |
|                 |      | 2   | <b>SANDSTONE:</b> quartzose, clear to translucent, fine to medium grained, predominantly fine grained, moderately sorted, subangular, trace weak siliceous cement, trace argillaceous matrix, poor inferred porosity, no fluorescence.  |
| 4450            | 4455 | 50  | <b>SANDSTONE:</b> quartzose, translucent to predominantly clear, fine to medium grained, moderately to well sorted, subangular, subspherical, trace siliceous cement, trace pulverised dolomite cement, trace argillaceous matrix, tight to very poor inferred porosity, no fluorescence.   |
|                 |      | 50  | <b>SILTSTONE:</b> greyish brown to predominantly dark grey, argillaceous (15% clay), 5% calcareous, 2 to 5% very fine quartz, firm, subblocky to subfissile, trace to 2% micromica, 5% very fine carbonaceous material.   |
| 4455            | 4460 | 60  | <b>SANDSTONE:</b> as above, fine to predominantly medium grained, poor inferred porosity, no fluorescence.  |
|                 |      | 40  | <b>SILTSTONE:</b> as above, greyish brown to predominantly dark grey, soft to firm.   |
| 4460            | 4465 | 60  | <b>SILTSTONE:</b> greyish brown to predominantly dark grey, argillaceous (15% clay), 5% calcareous, 2 to 5% very fine quartz, firm, subblocky to subfissile, trace to 2% micromica, 5% very fine carbonaceous material.   |
|                 |      | 40  | <b>SANDSTONE:</b> quartzose, translucent to predominantly clear, fine to medium grained, moderately to well sorted, subangular, subspherical, trace siliceous cement, trace pulverised dolomite cement, trace argillaceous matrix, poor to fair inferred porosity, no fluorescence.   |
| 4465            | 4470 | 90  | <b>SANDSTONE:</b> as above, fine to predominantly medium grained, fair inferred porosity, no fluorescence.  |
|                 |      | 10  | <b>SILTSTONE:</b> as above, soft t to firm.   |
| 4470            | 4475 | 90  | <b>SILTSTONE:</b> as above, soft to washing out, amorphous.   |
|                 |      | 10  | <b>SANDSTONE:</b> as above, poor inferred porosity, no fluorescence.  |
| 4475            | 4480 | 90  | <b>SILTSTONE:</b> as above.   |
|                 |      | 10  | <b>SANDSTONE:</b> as above, very poor inferred porosity, no fluorescence.   |
| 4480            | 4485 | 90  | <b>SILTSTONE:</b> as above.   |
|                 |      | 10  | <b>SANDSTONE:</b> as above, very poor inferred porosity, no fluorescence.   |
| 4485            | 4490 | 95  | <b>SILTSTONE:</b> as above.   |
|                 |      | 5   | <b>SANDSTONE:</b> as above, very poor porosity, no fluorescence.  |
| 4490            | 4495 | 50  | <b>SILTSTONE:</b> as above.   |
|                 |      | 50  | <b>SANDSTONE:</b> as above, fine to medium grained, poor inferred porosity, no fluorescence.  |
| 4495            | 4500 | 60  | <b>SILTSTONE:</b> as above.   |
|                 |      | 40  | <b>SANDSTONE:</b> as above, fine to predominantly medium grained, poor inferred porosity, no fluorescence.  |
| 4500            | 4505 | 100 | <b>SILTSTONE:</b> as above.   |
| 4505            | 4510 | 30  | <b>SILTSTONE:</b> as above.   |
|                 |      | 70  | <b>SANDSTONE:</b> predominantly dark yellowish brown, very fine grained grading to Arenaceous Siltstone, occasional coarse grains, well sorted, subangular, 5% siliceous cement, 2% dolomitic cement, 10 to 15% argillaceous/silty matrix, 70% friable aggregates, 30% loose grains, trace glauconite, trace to 1% carbonaceous material poor visual porosity, no fluorescence. |
| 4510            | 4515 | 100 | <b>SANDSTONE:</b> as above, fine to medium grained, poor to fair visual porosity, no fluorescence.  |

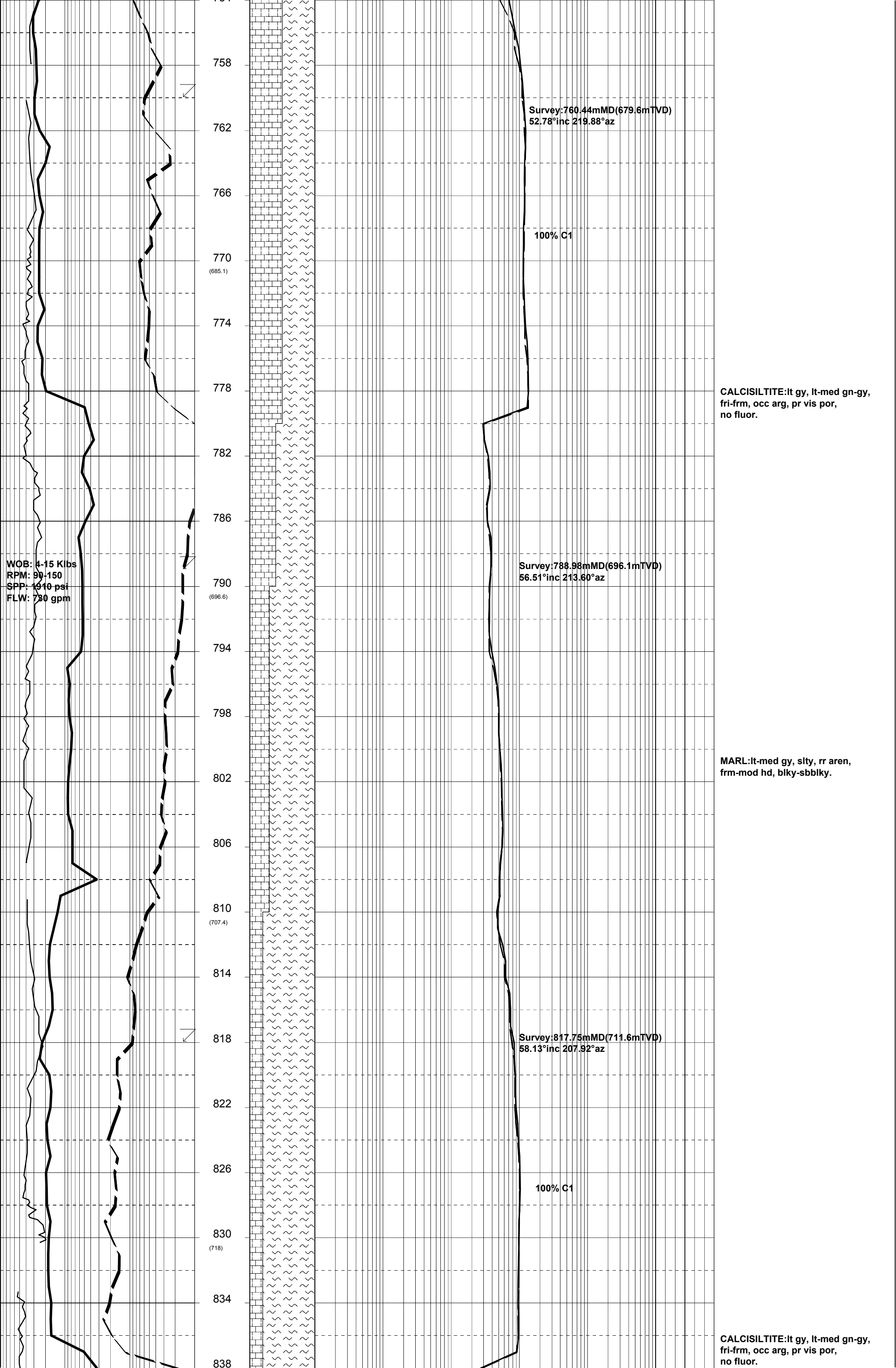
**APPENDIX 4a**  
**FLOUNDER A10A**  
**Mud Log**

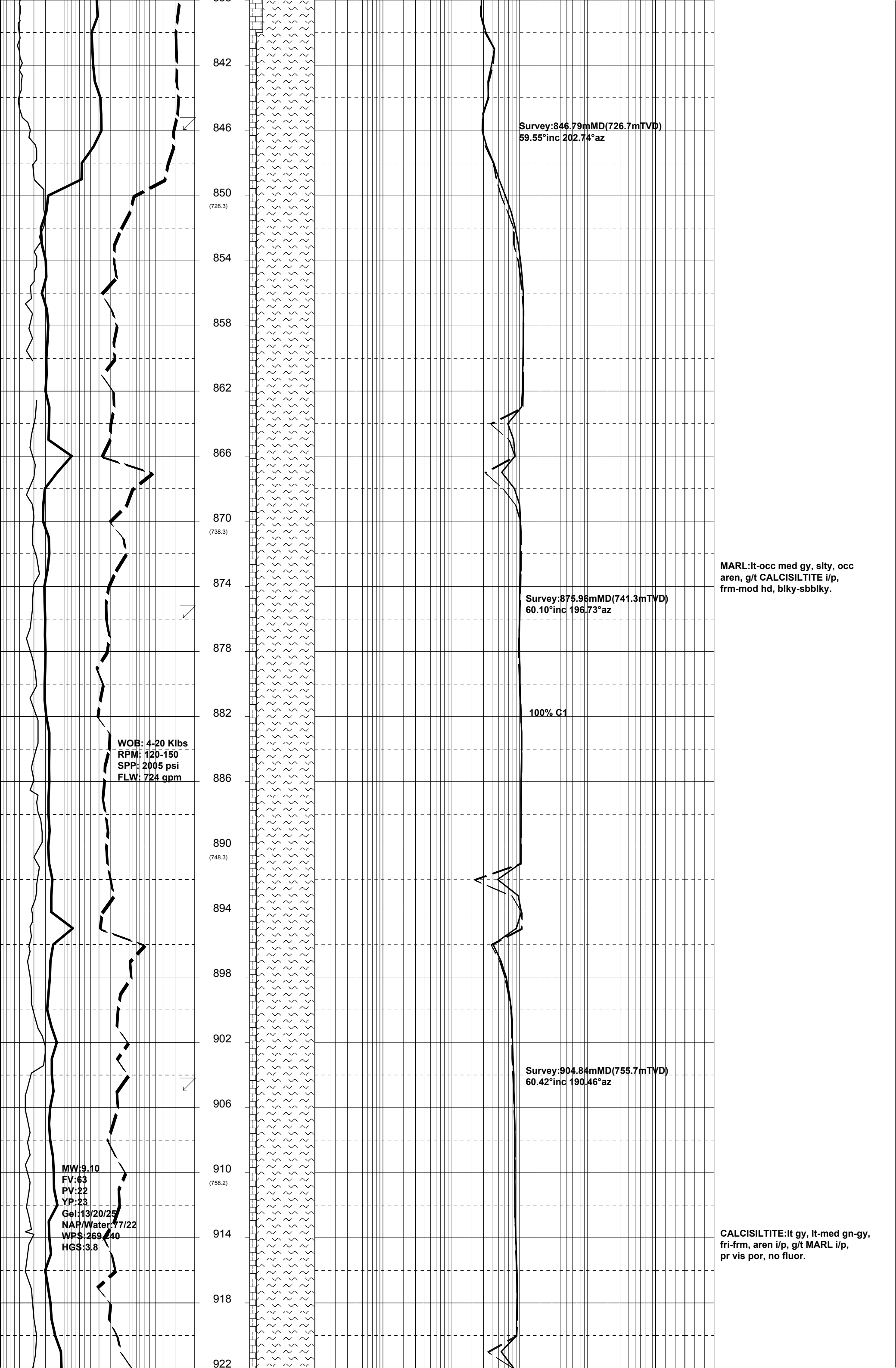


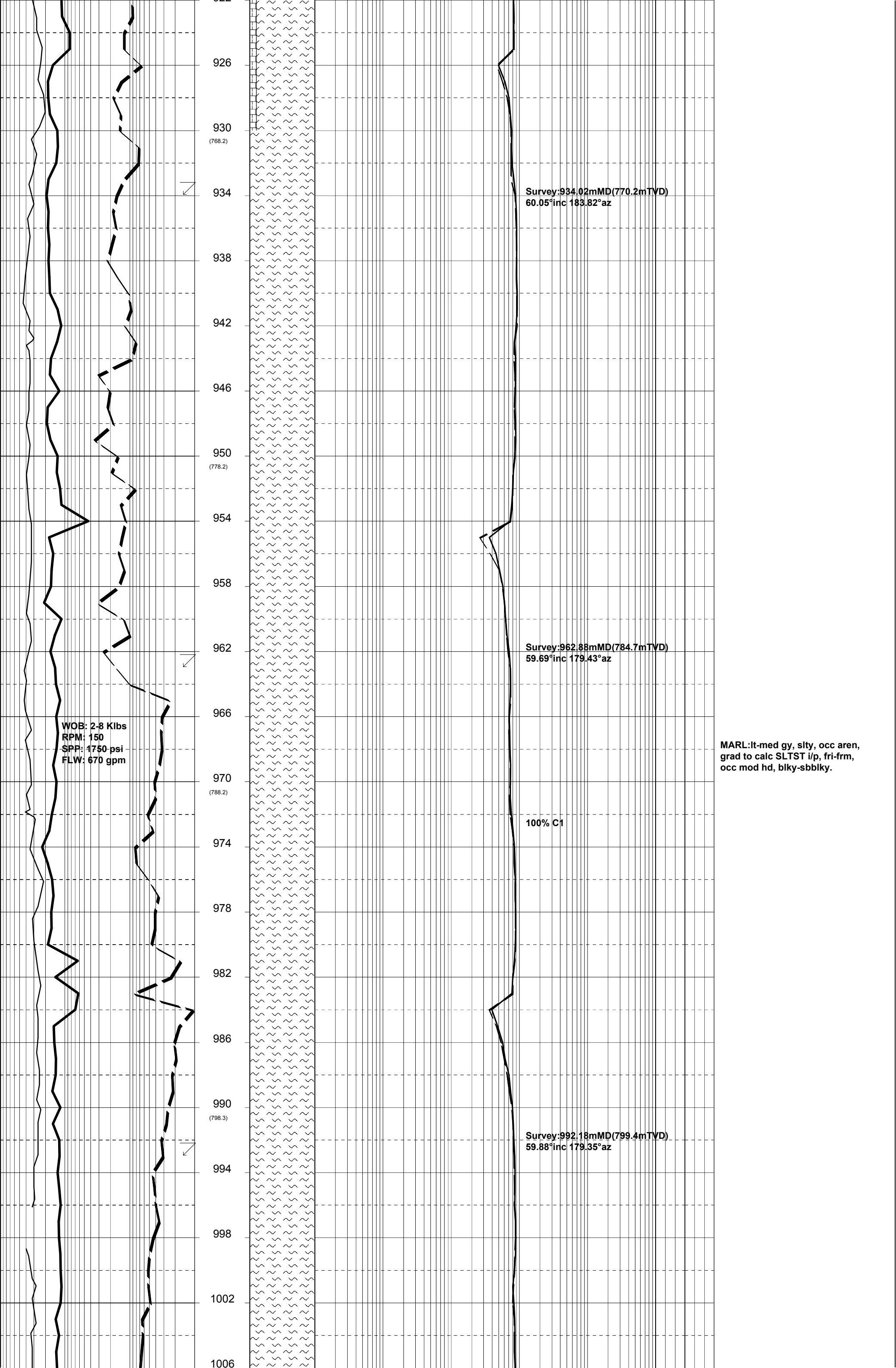
| ROP (m/hr)          |    |   | DEPTH (m) (RT)<br>(TVD)(m)(RT) | CUTTINGS<br>LITHOLOGY | TOTAL GAS & CHROMATOGRAPH DATA |     |     |  |    |     |    | CUT FLUOR |      |      | DIRECT FLUOR | LITHOLOGICAL DESCRIPTIONS<br>and<br>REMARKS   |  |  |
|---------------------|----|---|--------------------------------|-----------------------|--------------------------------|-----|-----|--|----|-----|----|-----------|------|------|--------------|---|--|--|
| WOB (klbs)          |    |   |                                |                       | %                              | C1  |     | C2   |    | C3  |    | good      | fair | poor |              |   |  |  |
| MWD Gamma Ray (api) |    |   |                                |                       | .                              | iC4 | nC4 | Total Gas in Units<br>Chromatograph in PPM |    | iC5 | TG | good      | fair | poor |              |   |  |  |
| 500                 | 50 | 5 | .5                             | 0                     | 100                            | .05 | .5  | 5  | 50 | 500 | 5K | 10        | 100  | 100K | 1000K        |   |  |  |
|                     |    |   | 650                            |                       |                                |     |     |  |    |     |    |           |      |      |              |   |  |  |
|                     |    |   | 654                            |                       |                                |     |     |  |    |     |    |           |      |      |              | FLA-A10A RE-ENTERED FROM 661m<br>AT 20:00 hrs ON 02-05-2005   |  |  |
|                     |    |   | 658                            |                       |                                |     |     |  |    |     |    |           |      |      |              | 10 3/4" CASING SET @ 661.0m   |  |  |
| 02 May 2005         |    |   | 662                            |                       |                                |     |     |  |    |     |    |           |      |      |              | BIT#1: 8½"<br>REED HYCALOG RSX162<br>JETS: 6 x 18<br>IN: 661m OUT: 4515m<br>RUN: 3854 HRS: 99.7<br>COND: 2-4-WT-A-X-I-NO-TD |  |  |
|                     |    |   | 666                            |                       |                                |     |     |  |    |     |    |           |      |      |              |   |  |  |
|                     |    |   | 670                            |                       |                                |     |     |  |    |     |    |           |      |      |              |   |  |  |

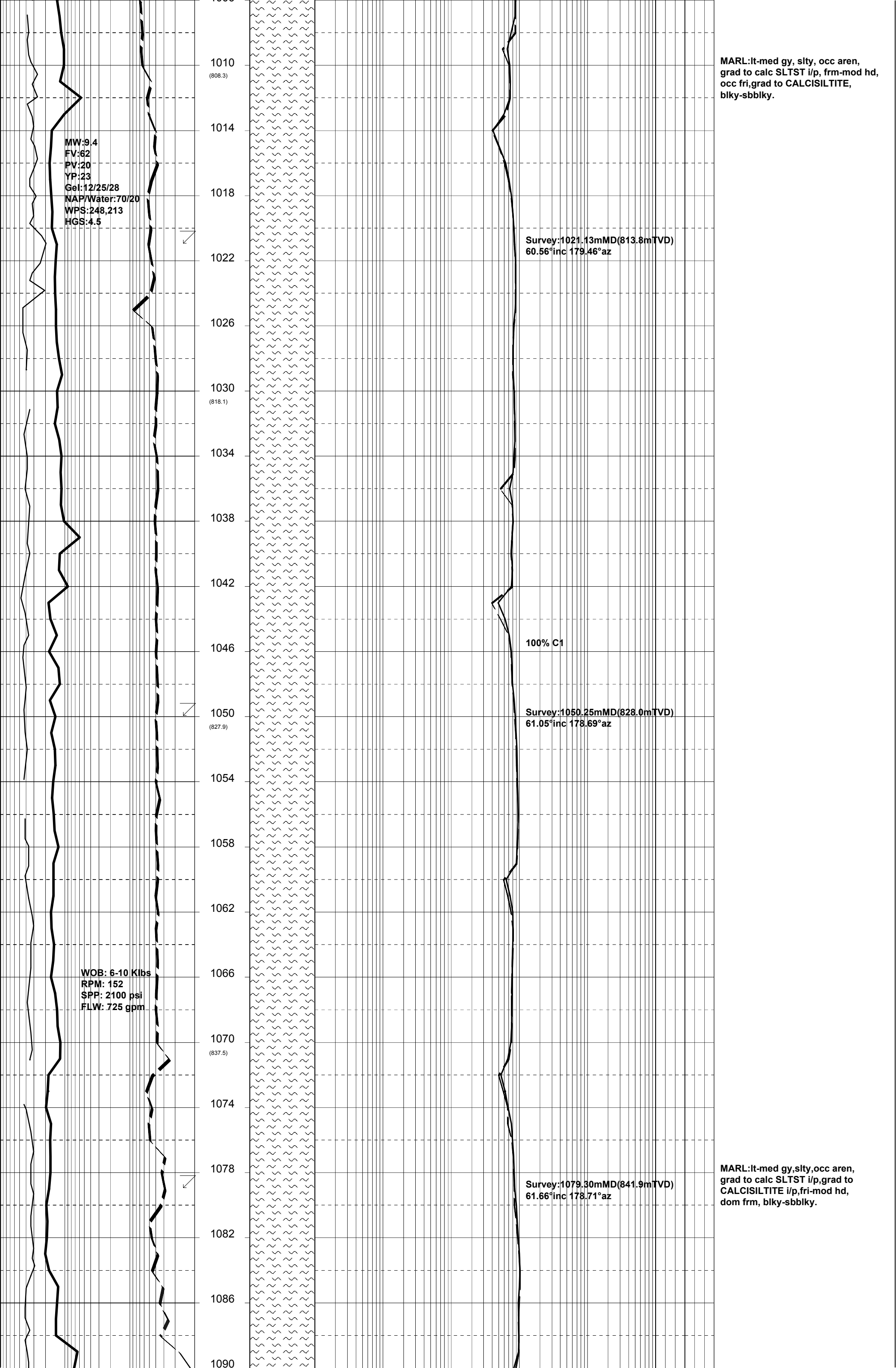


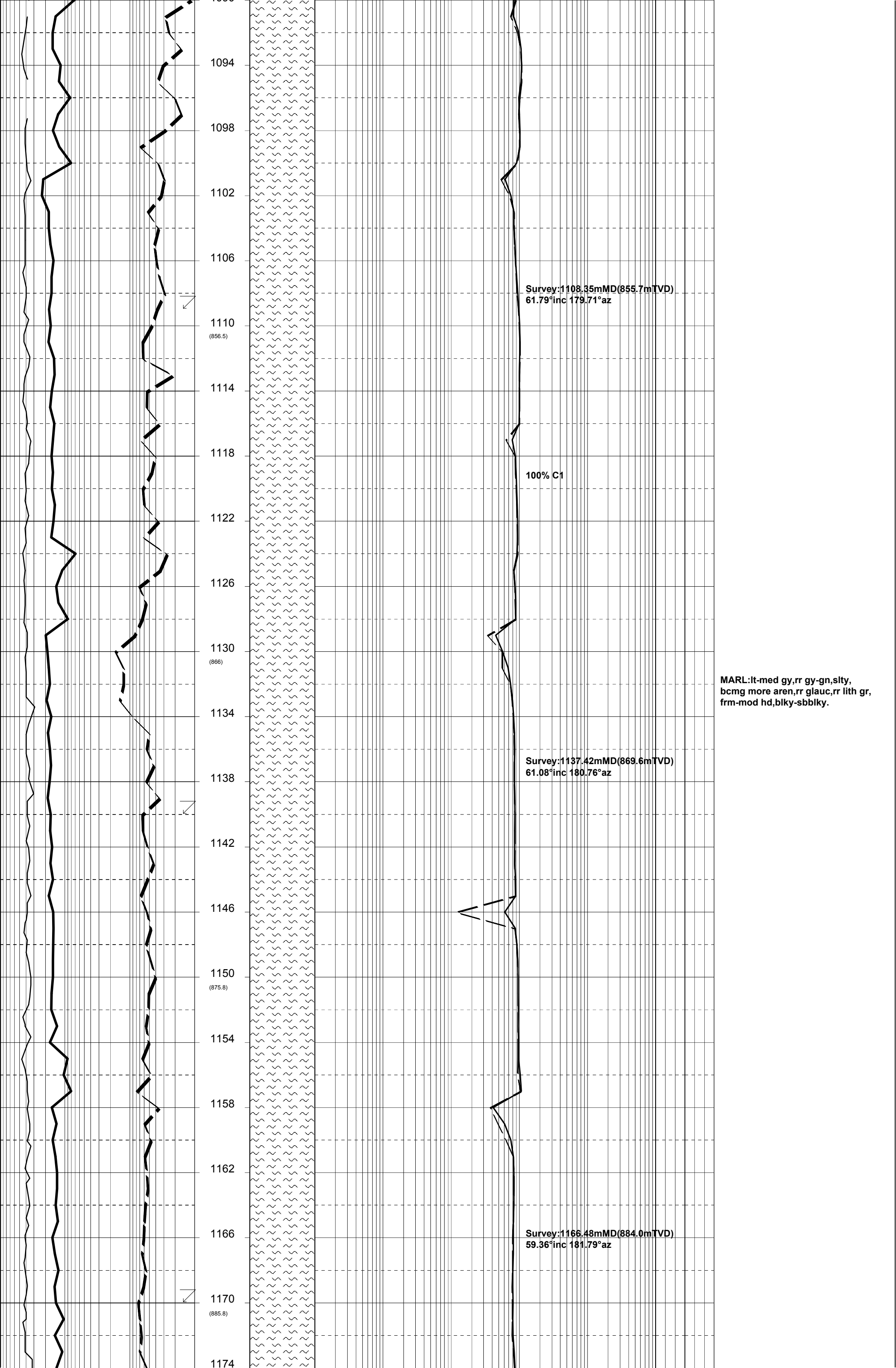


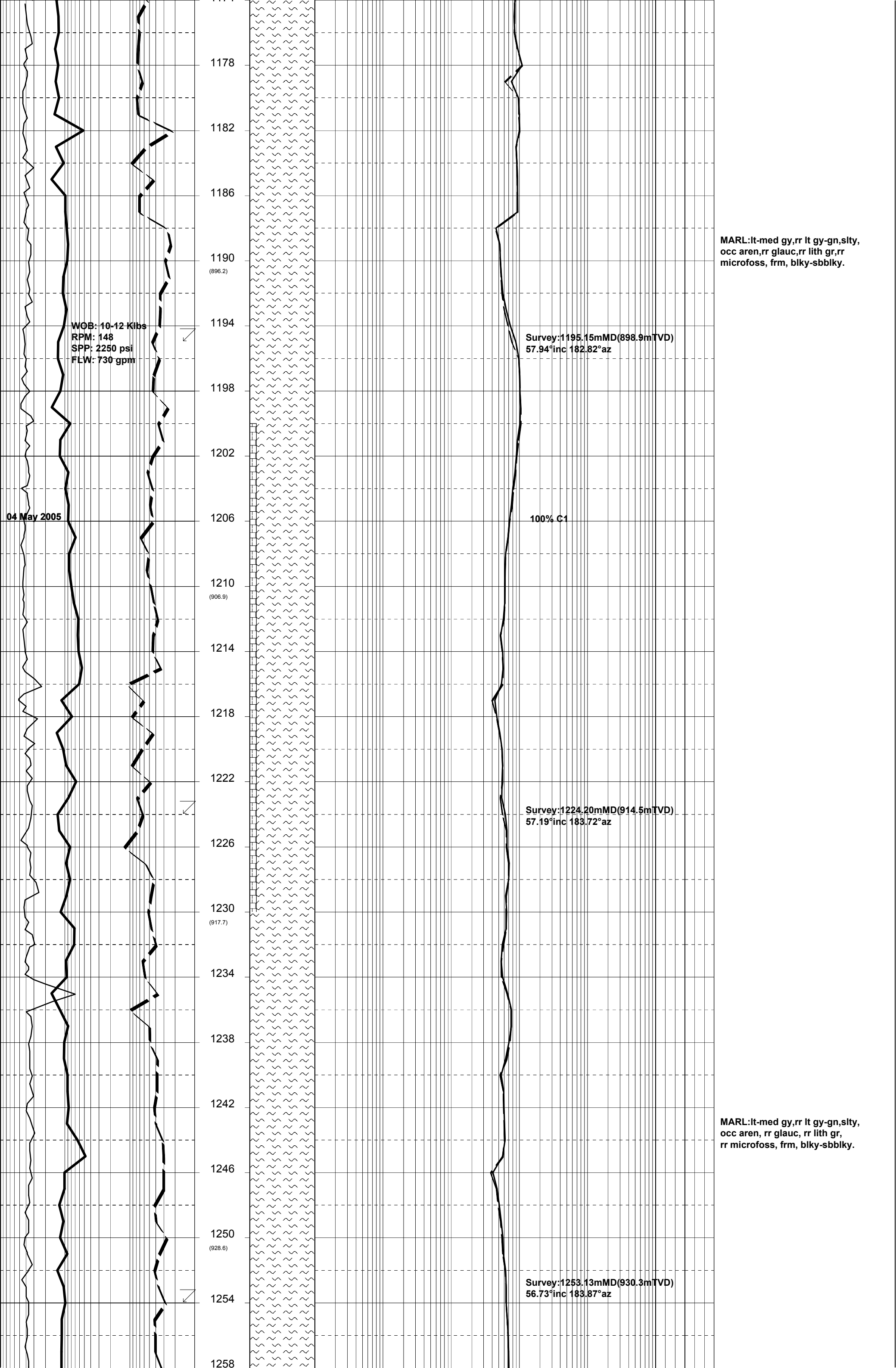


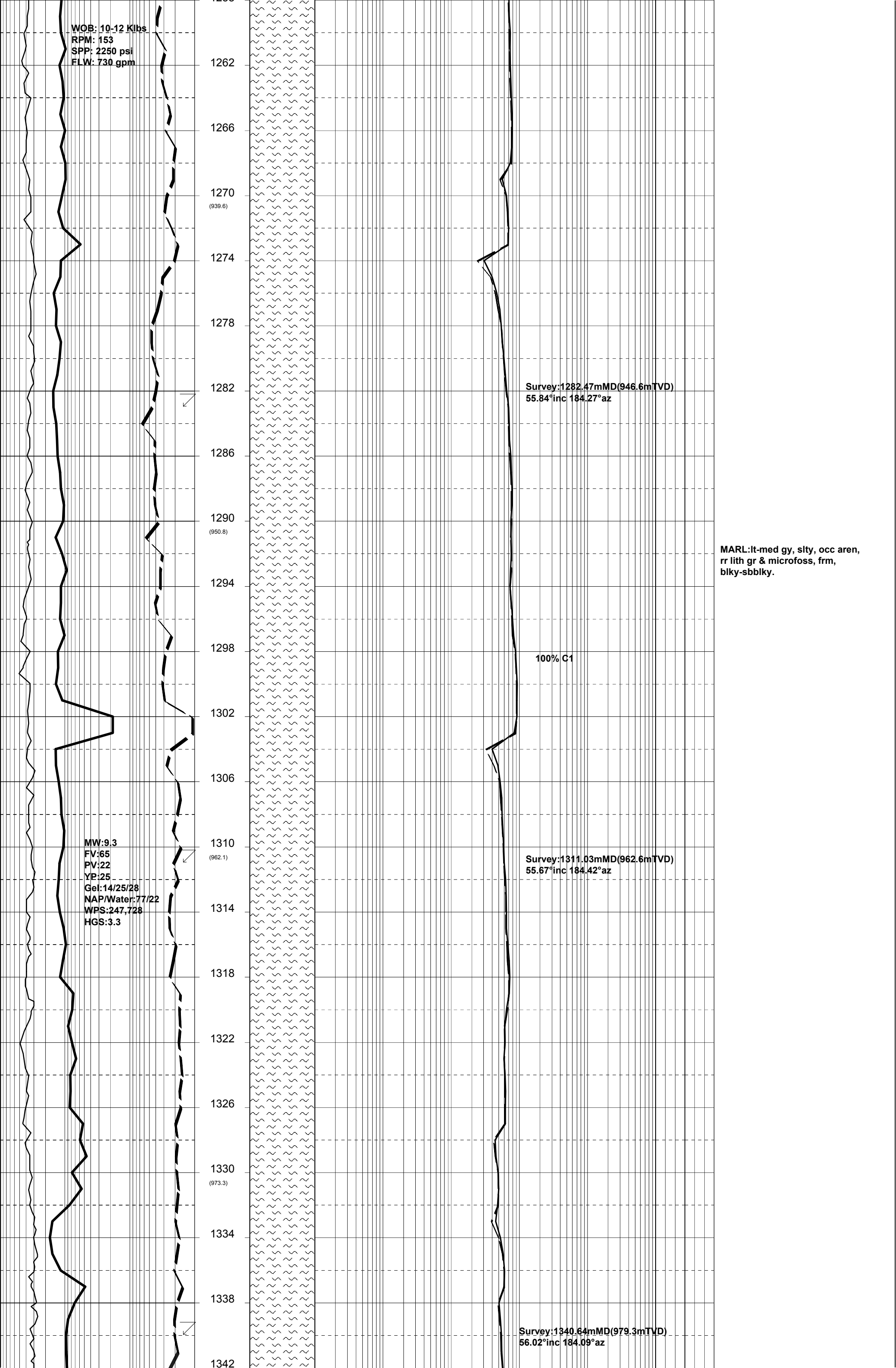




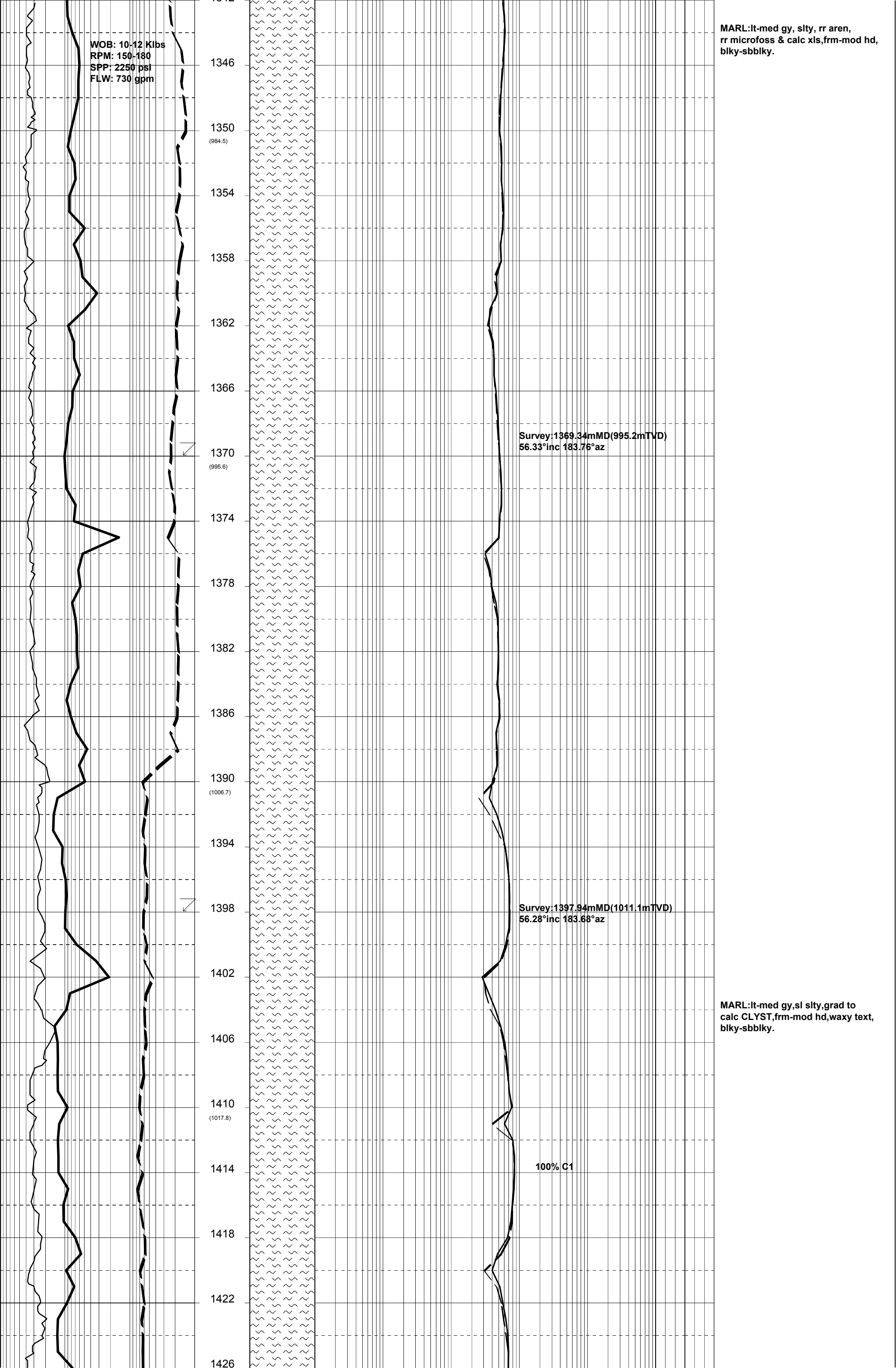


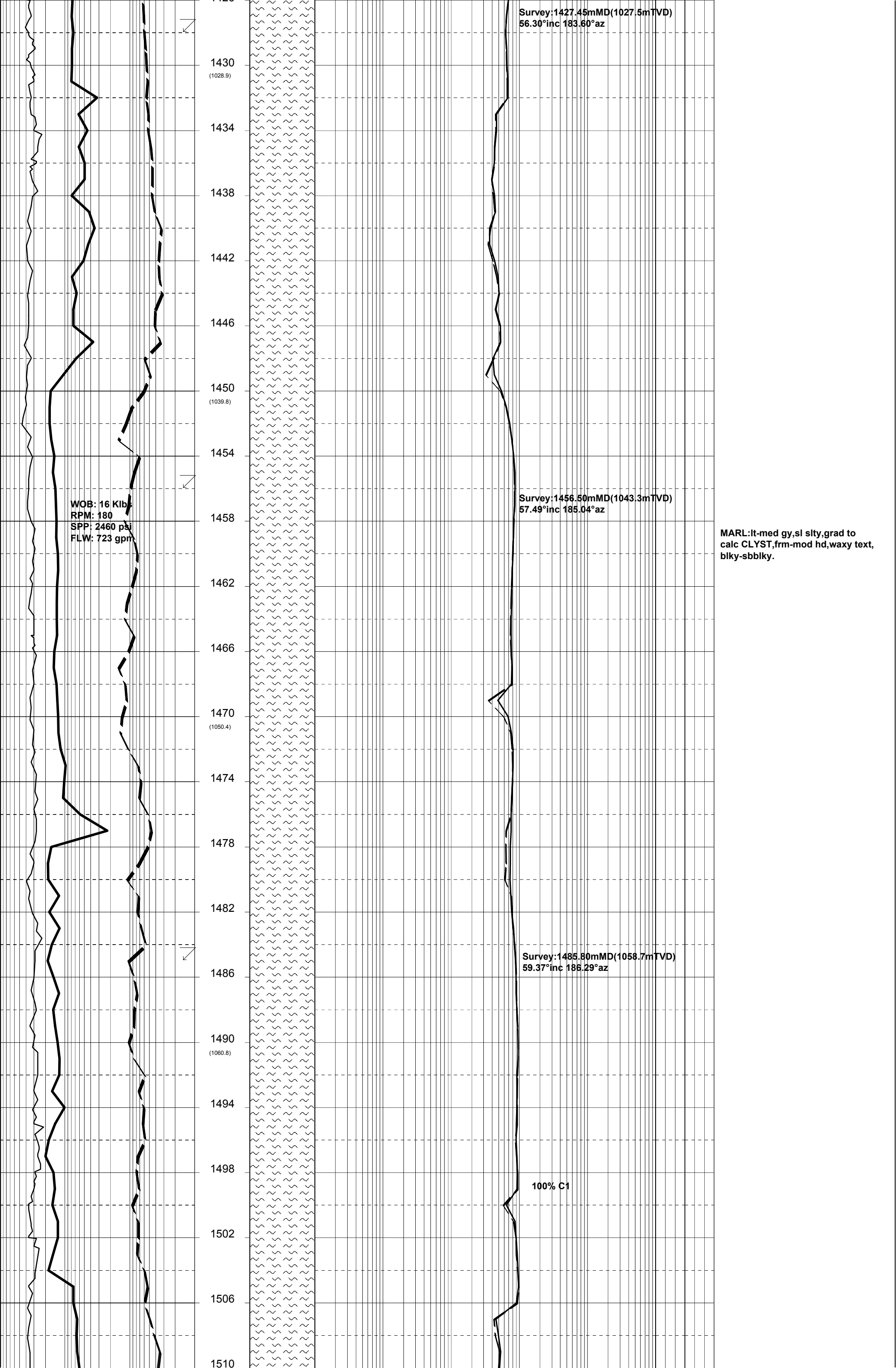


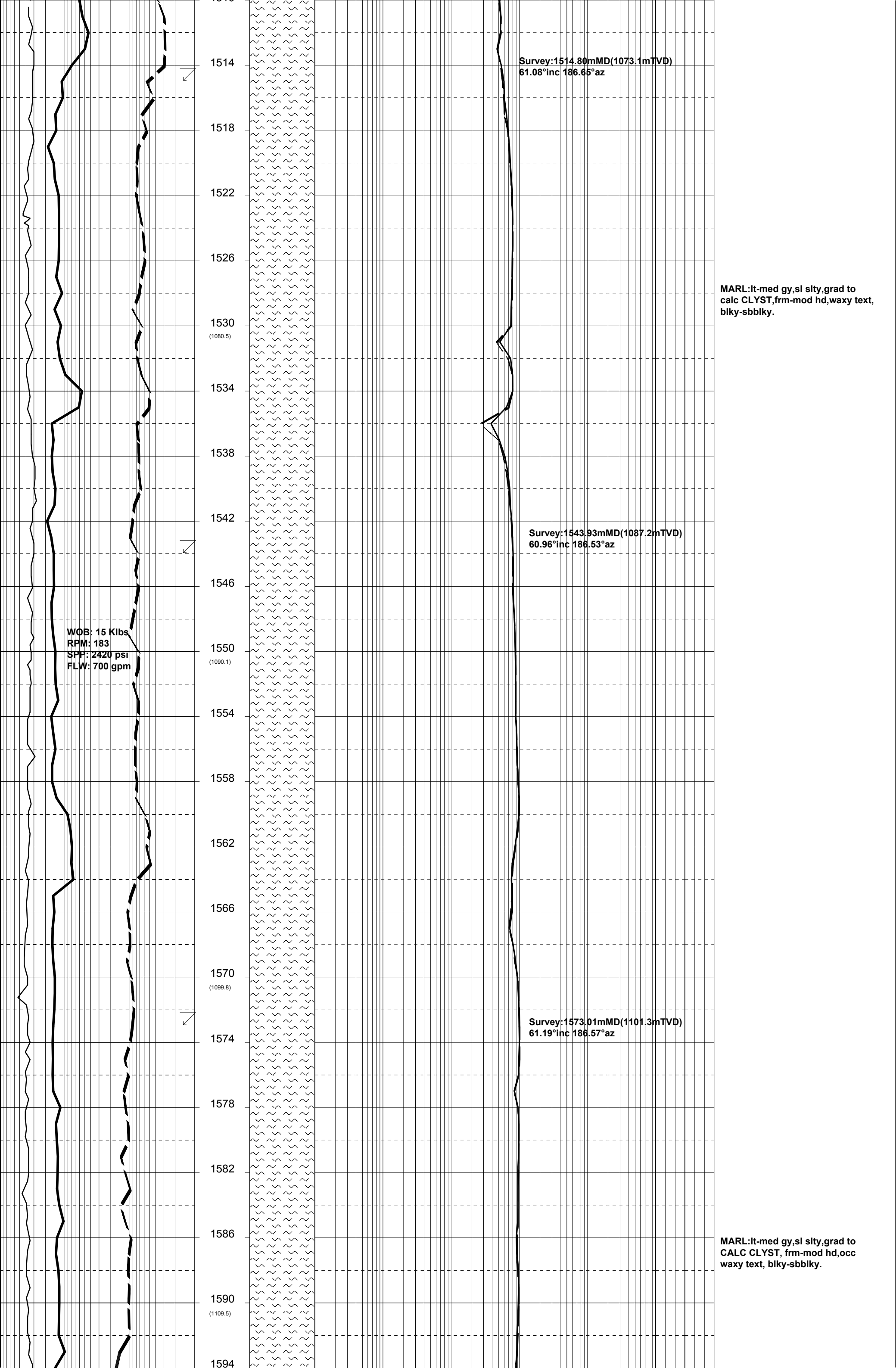


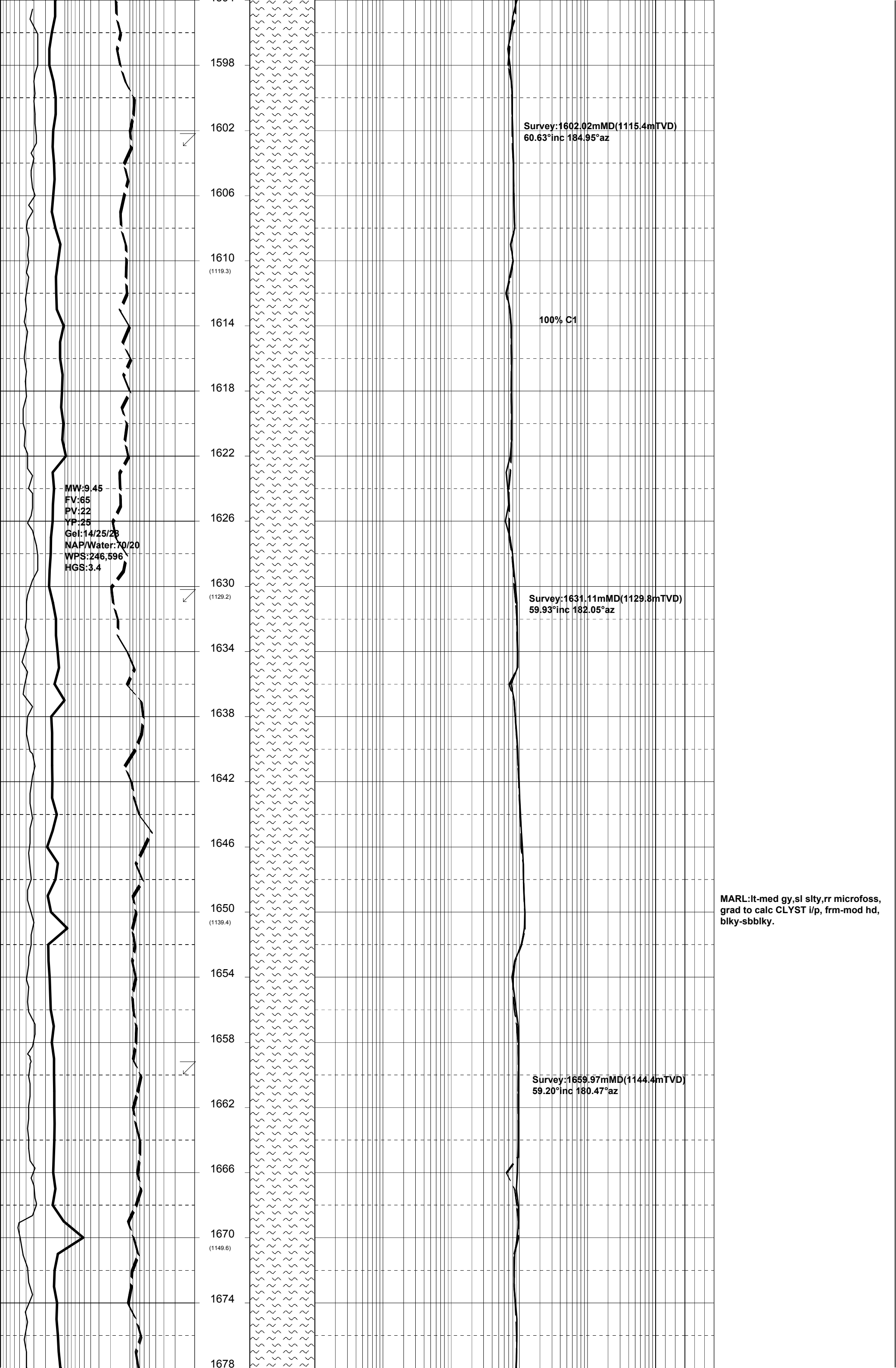


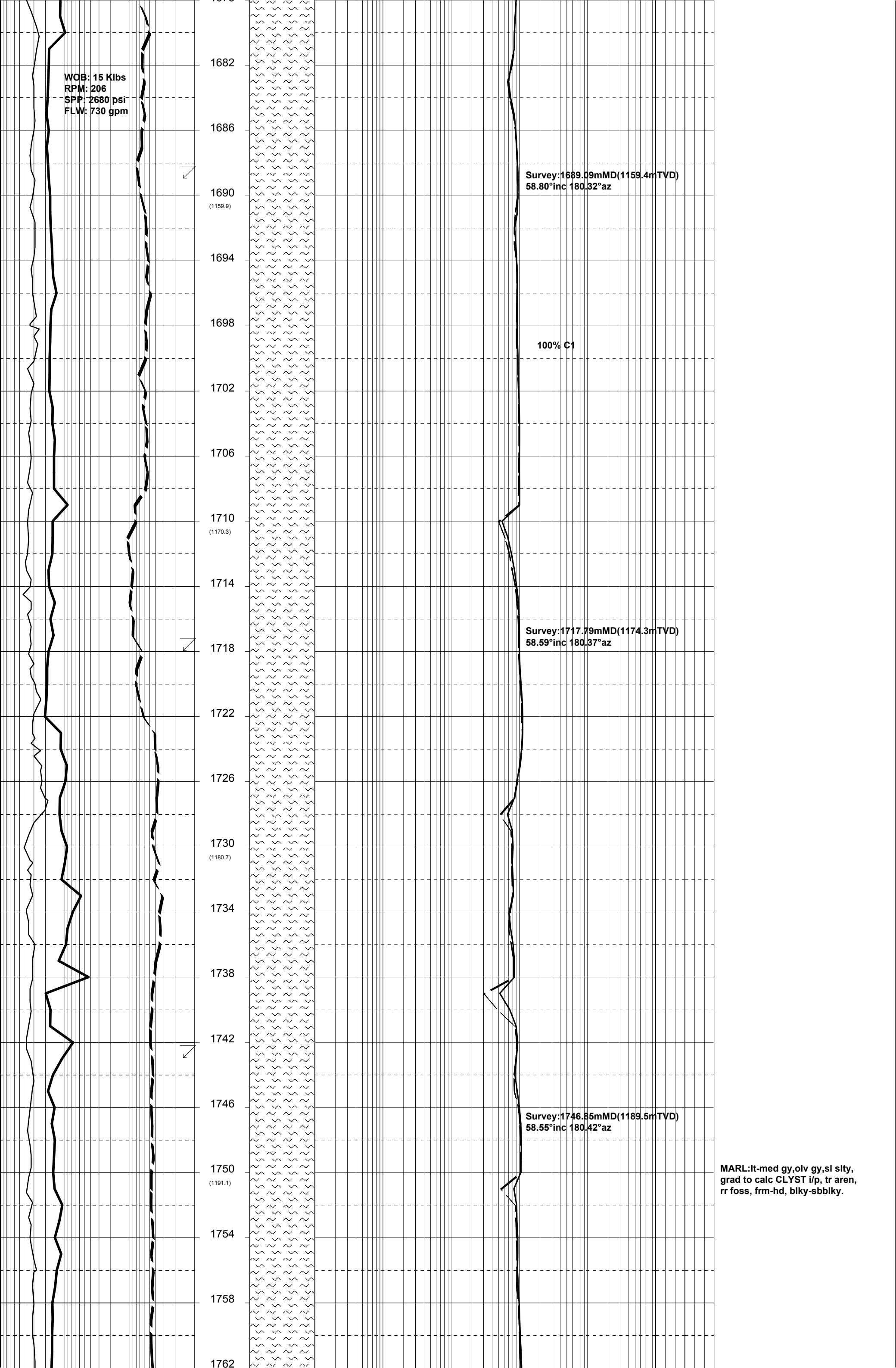


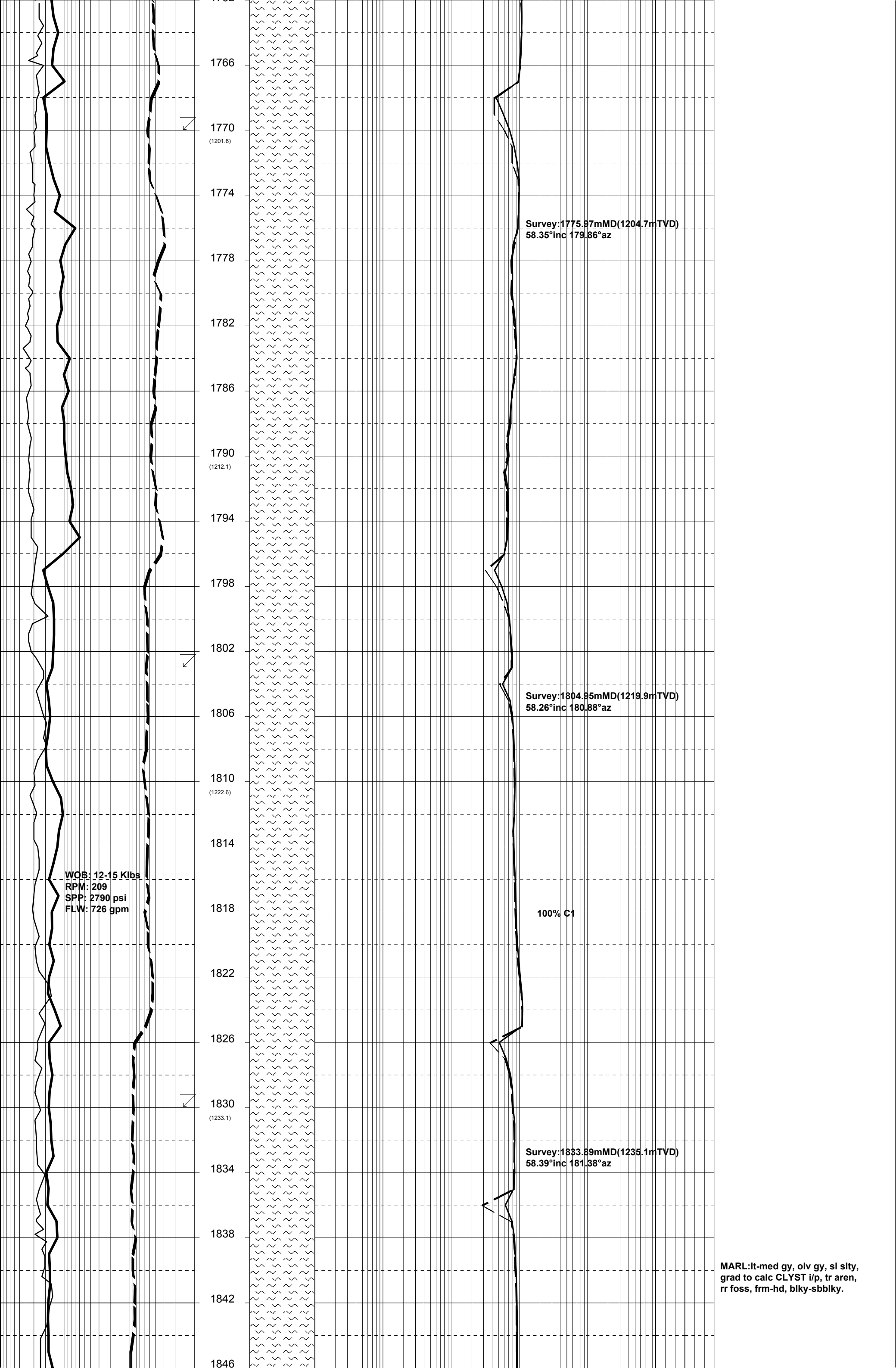


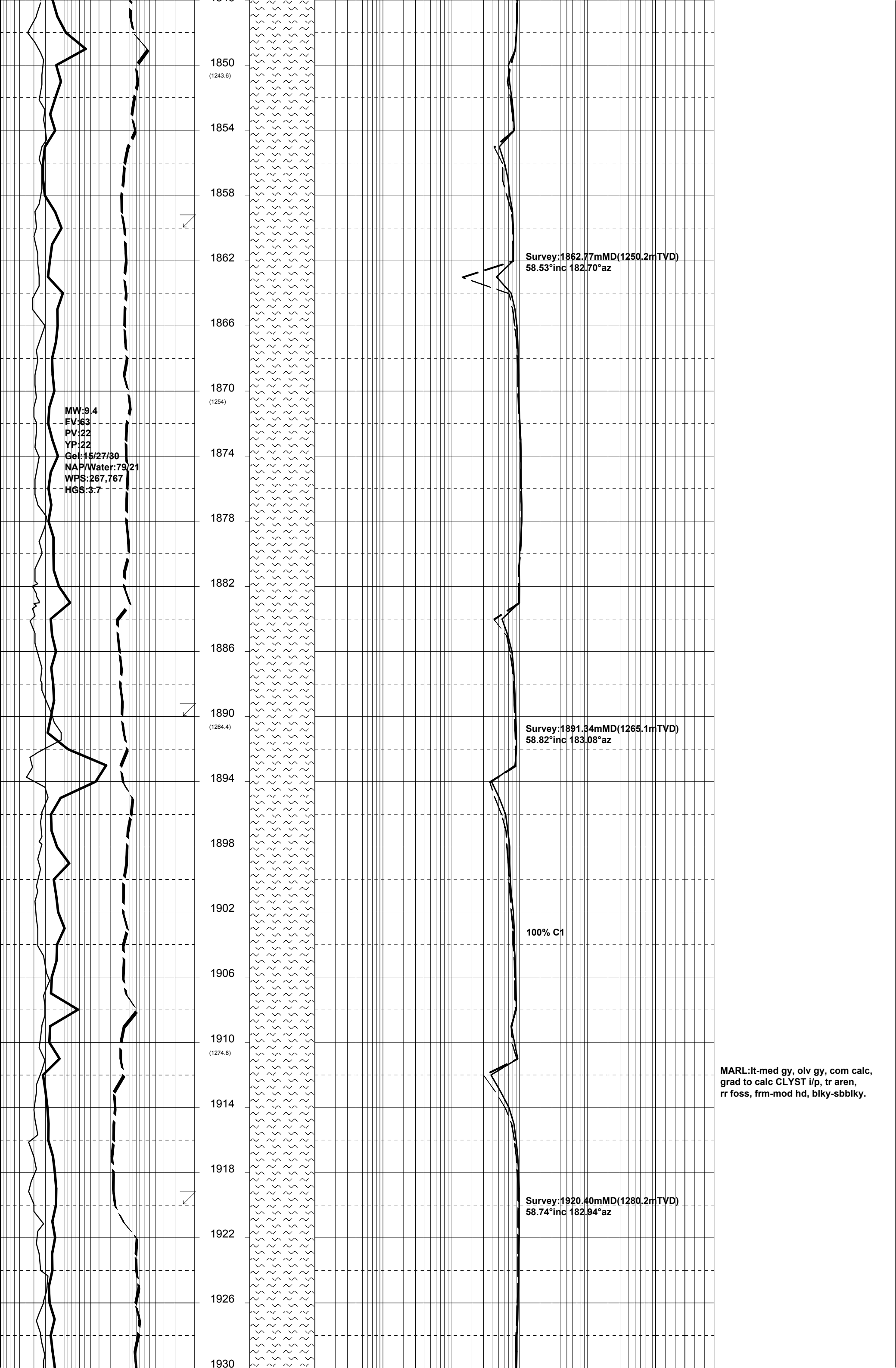


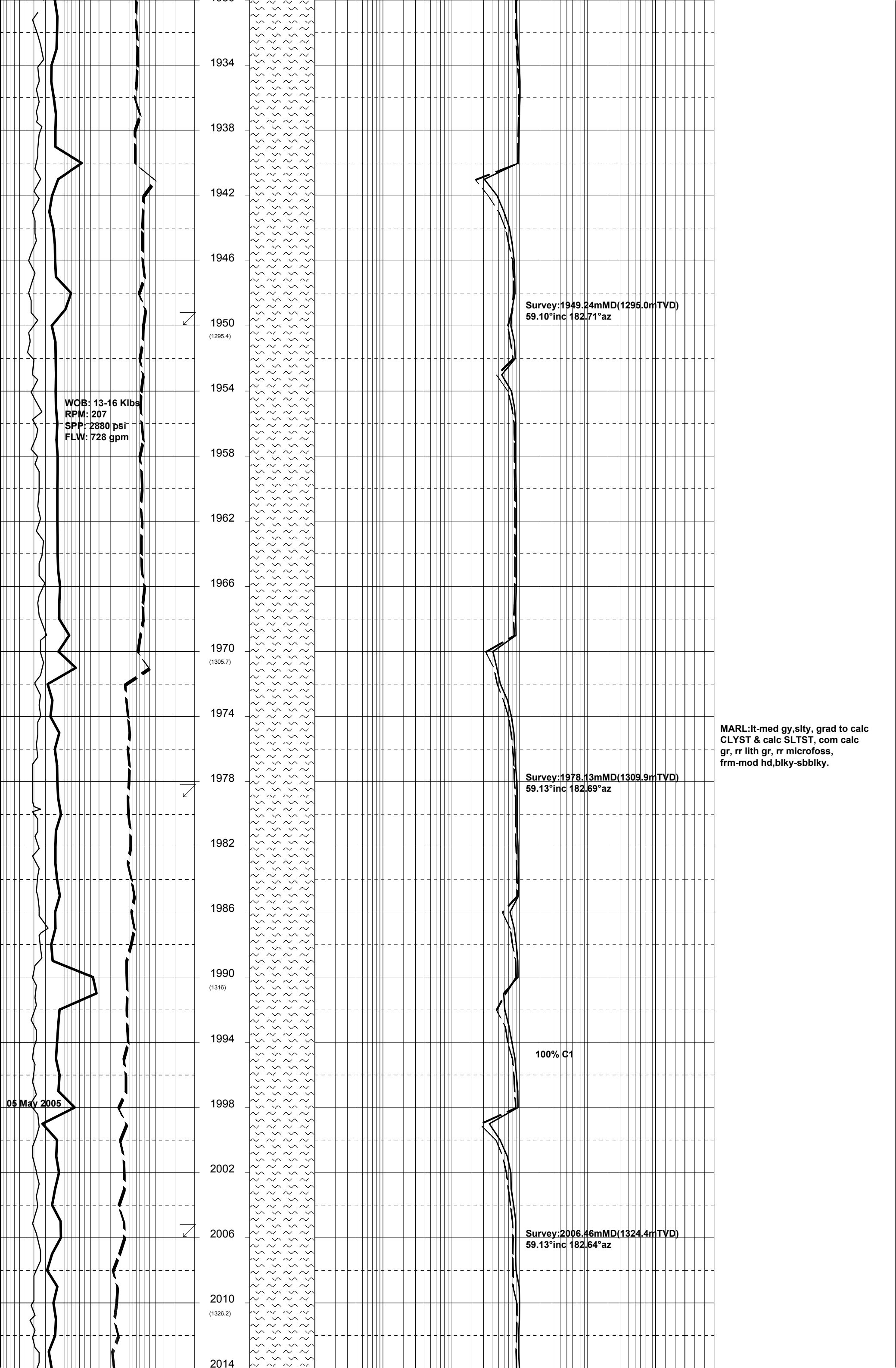




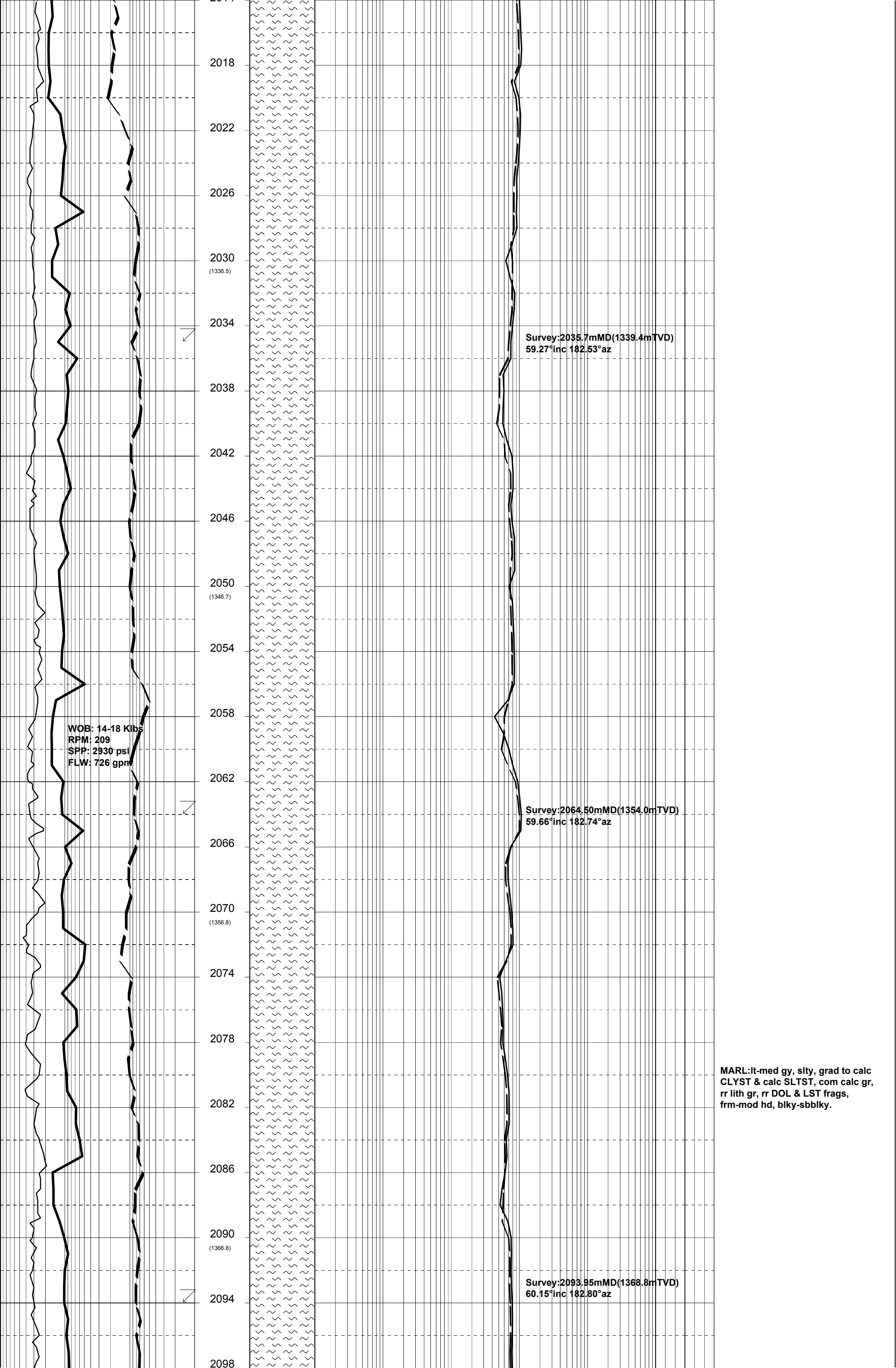


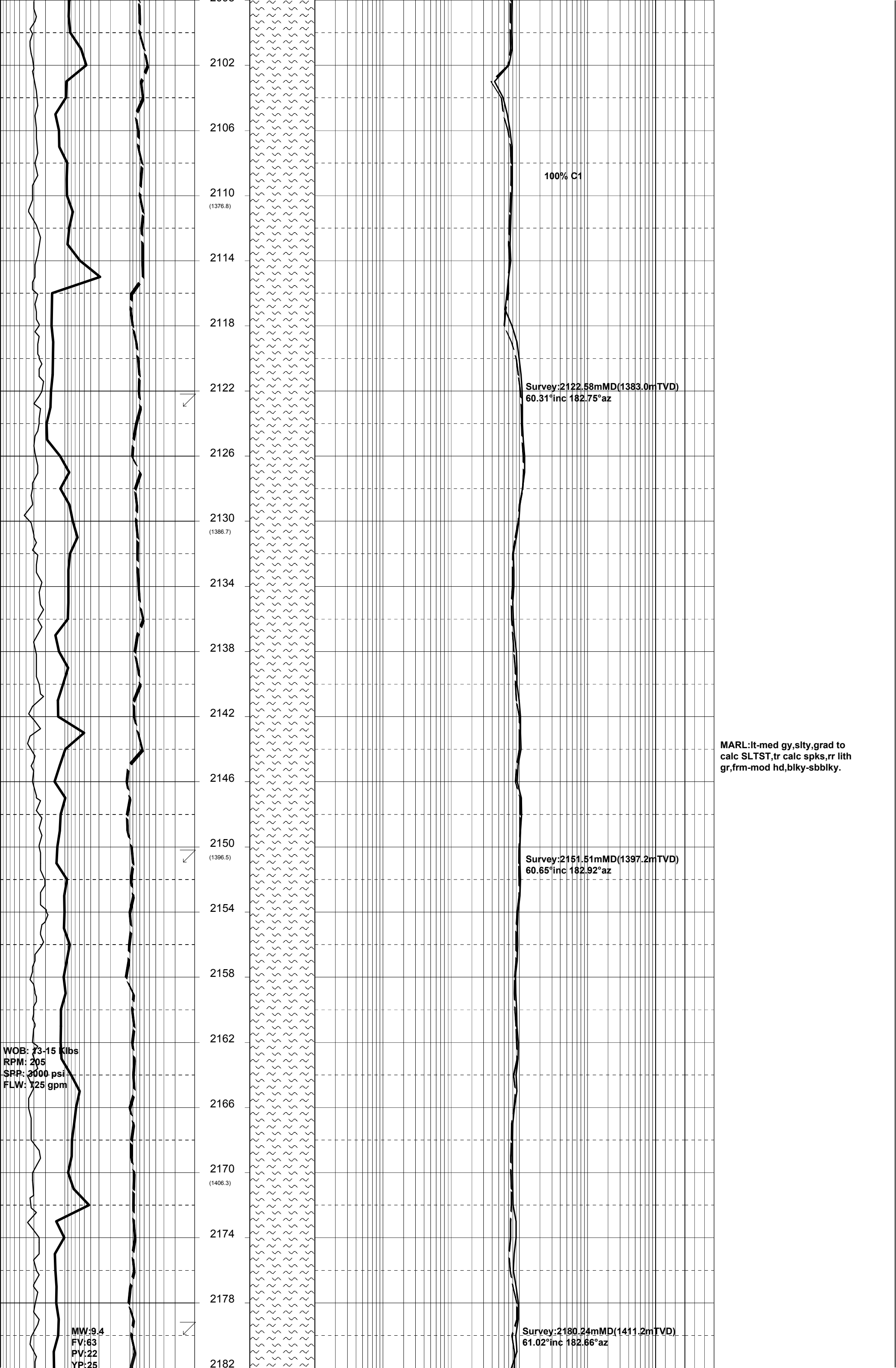


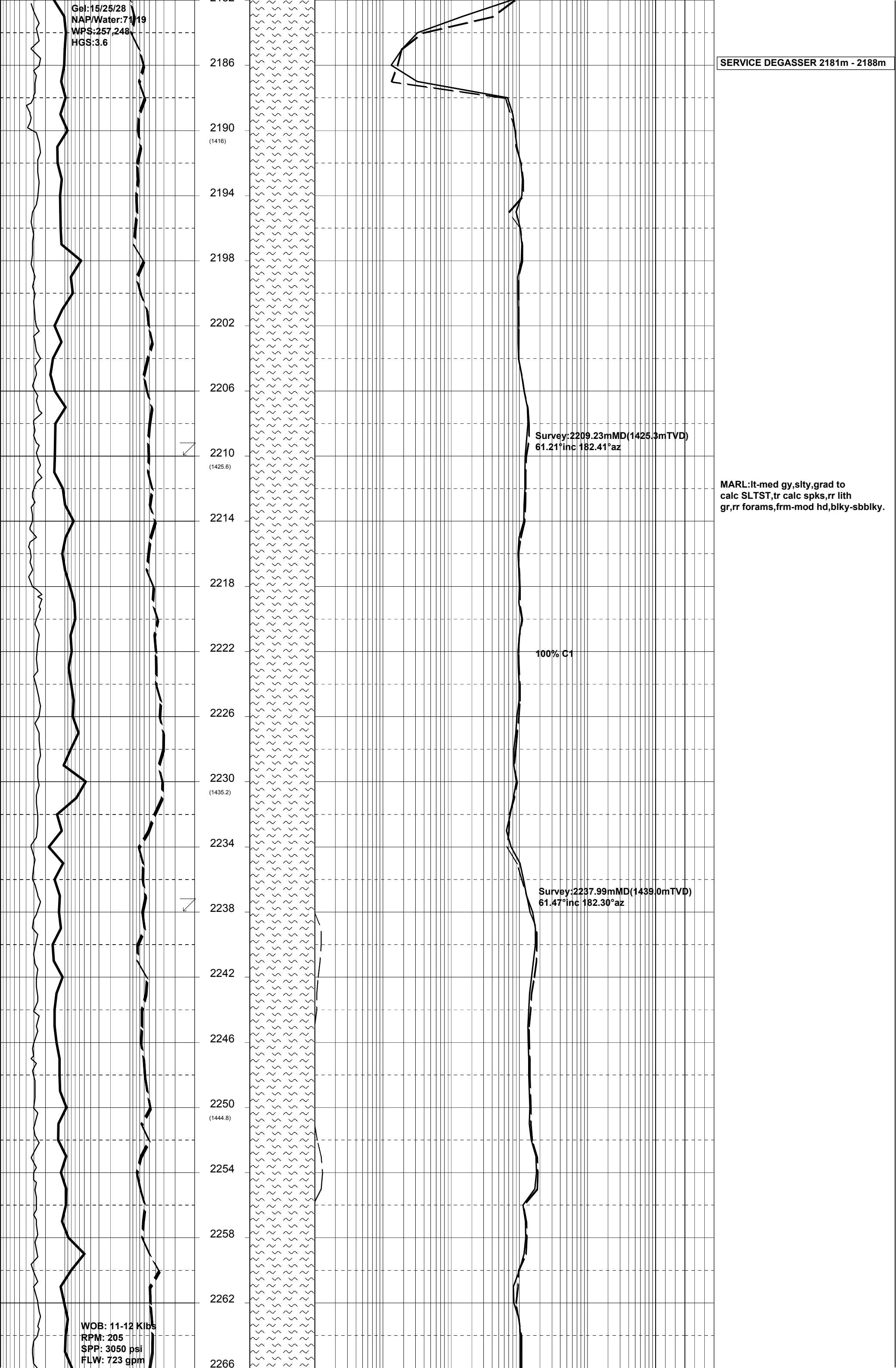


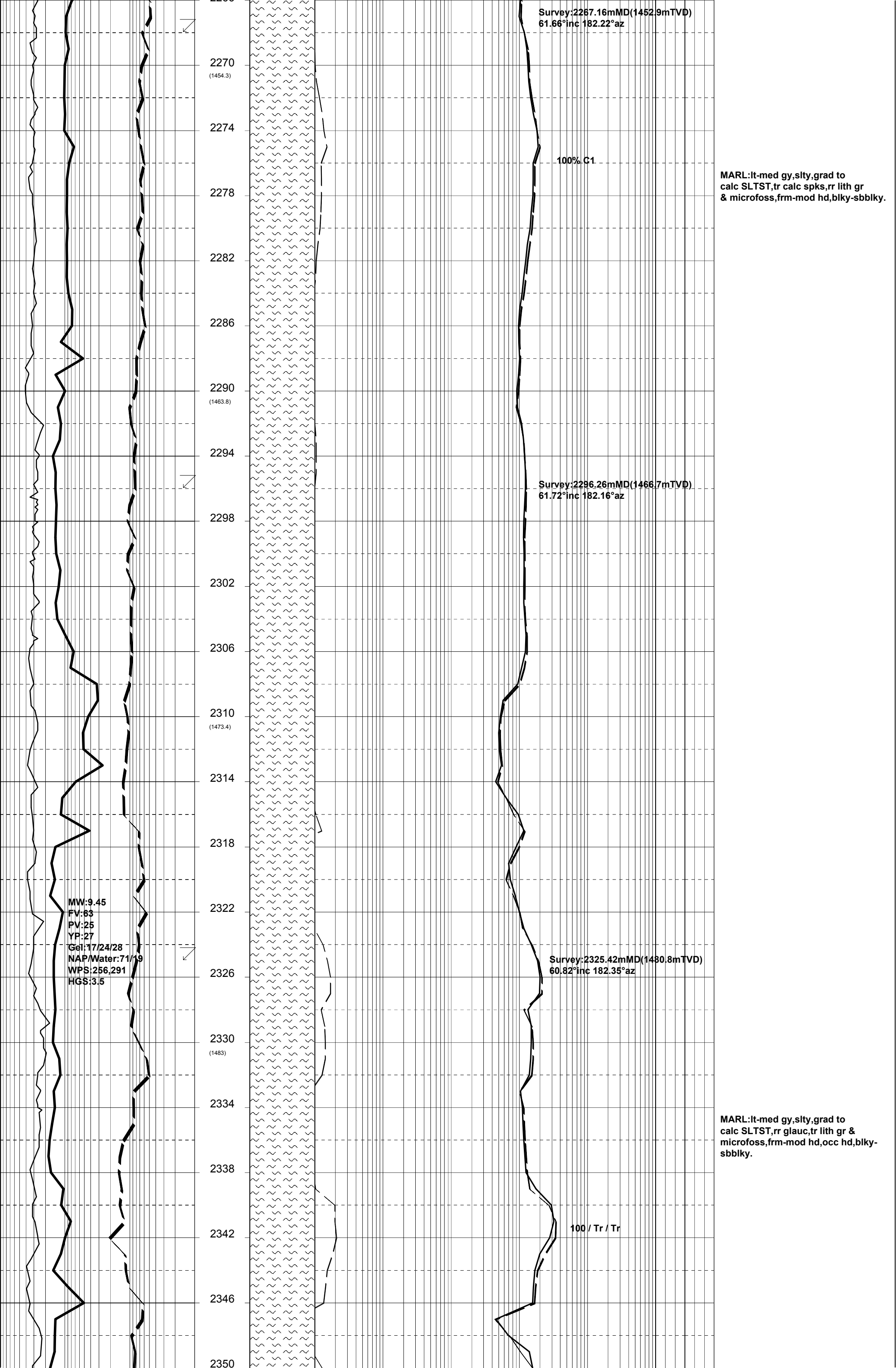


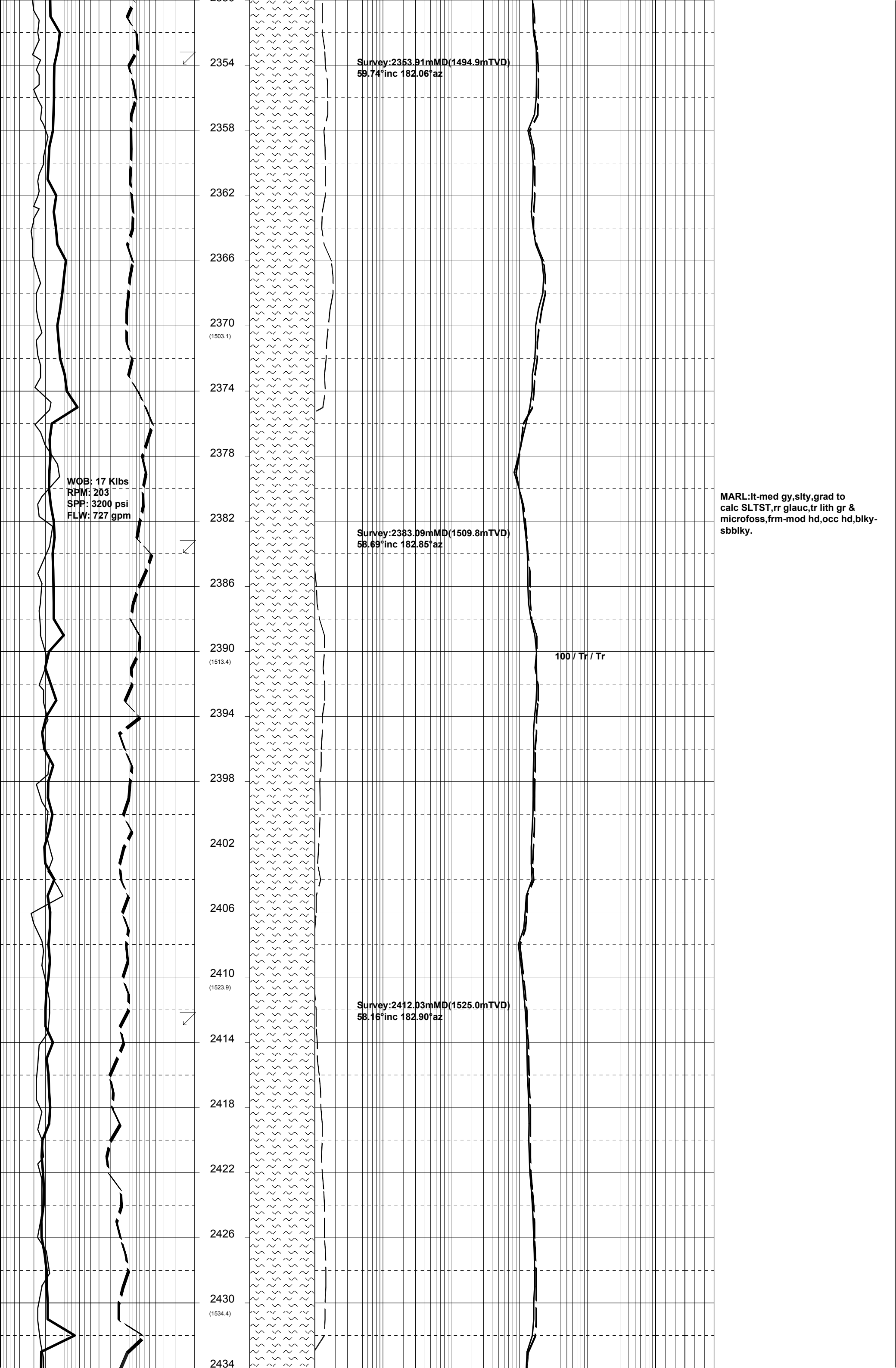


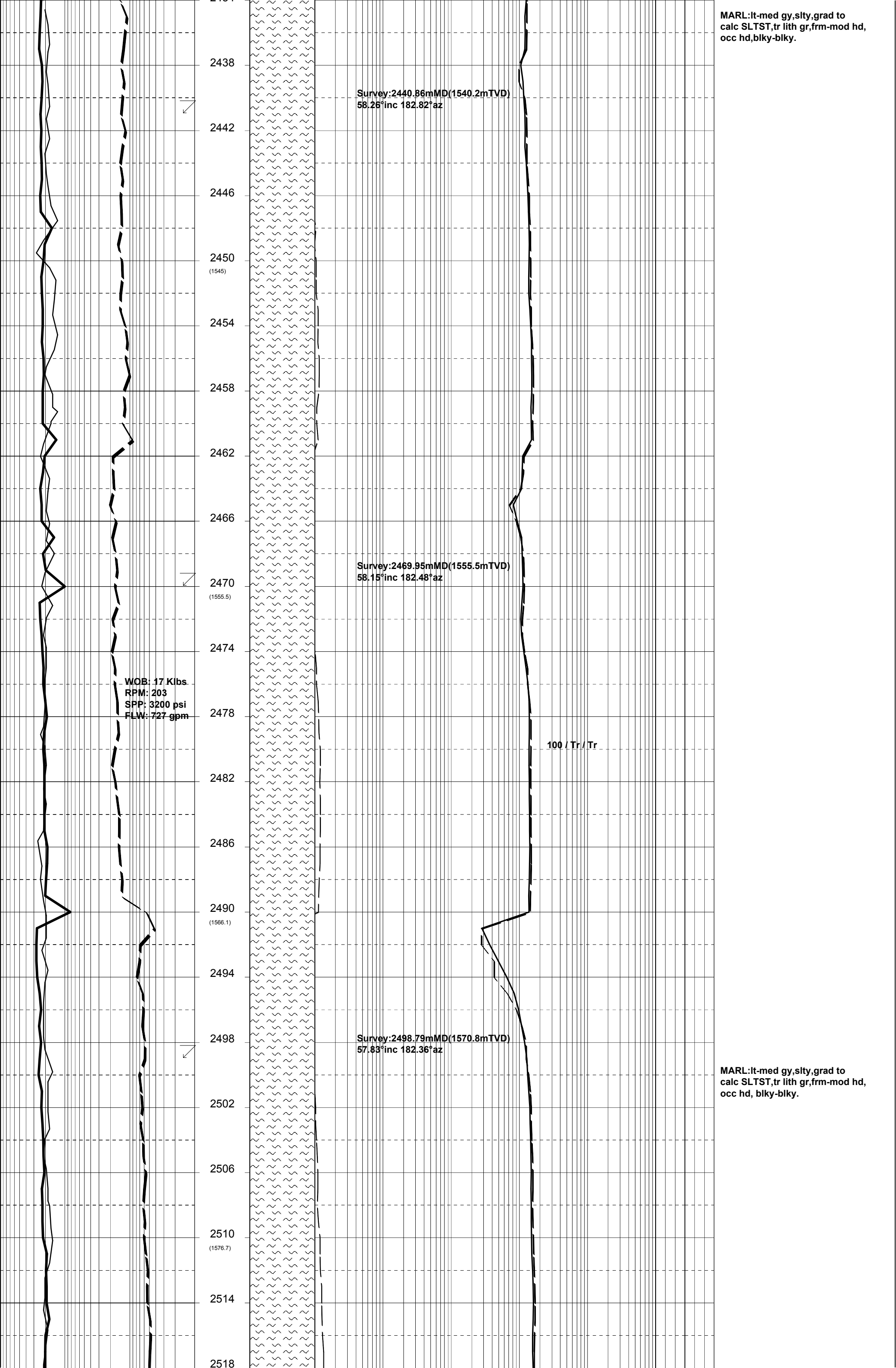


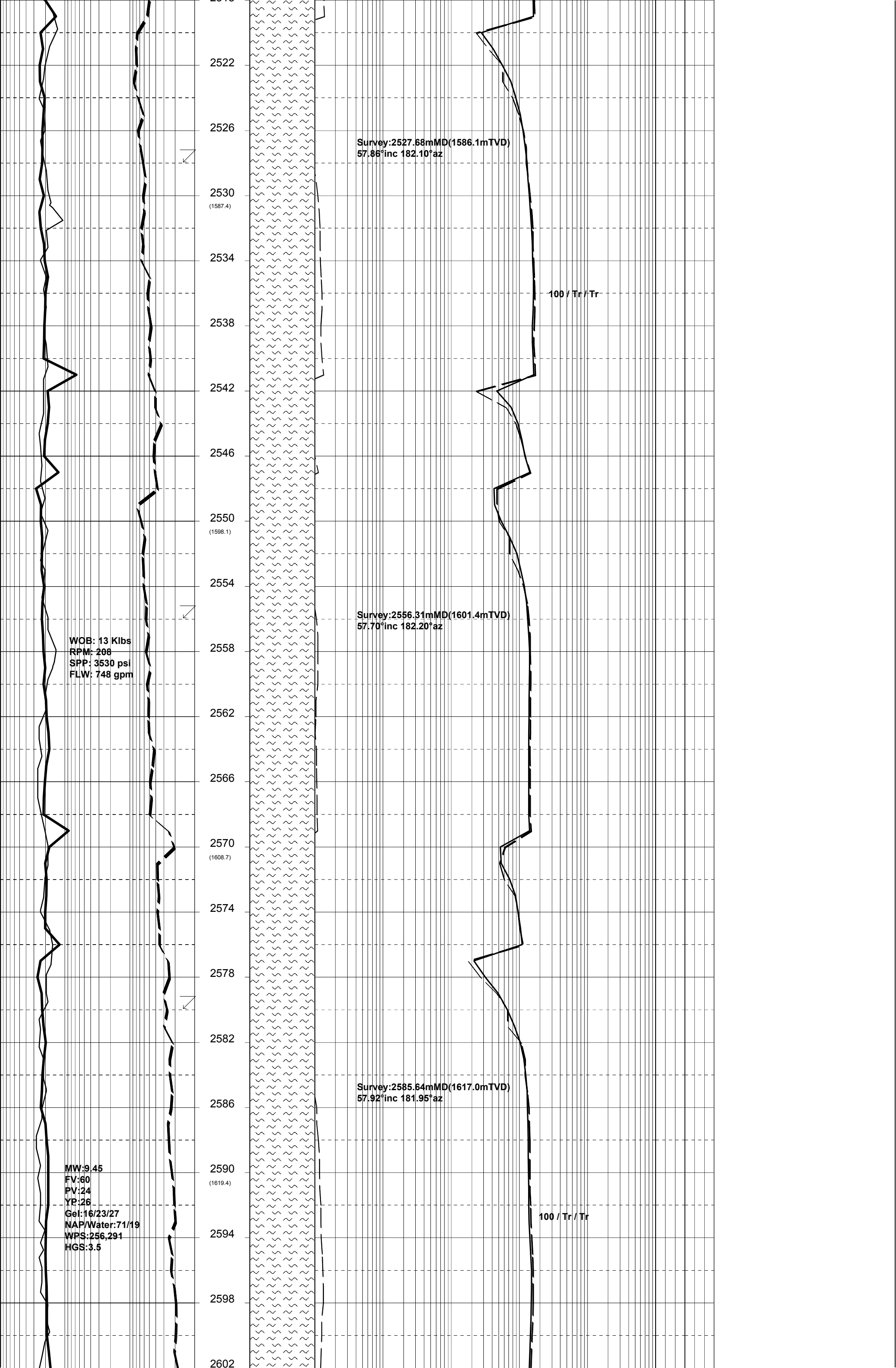


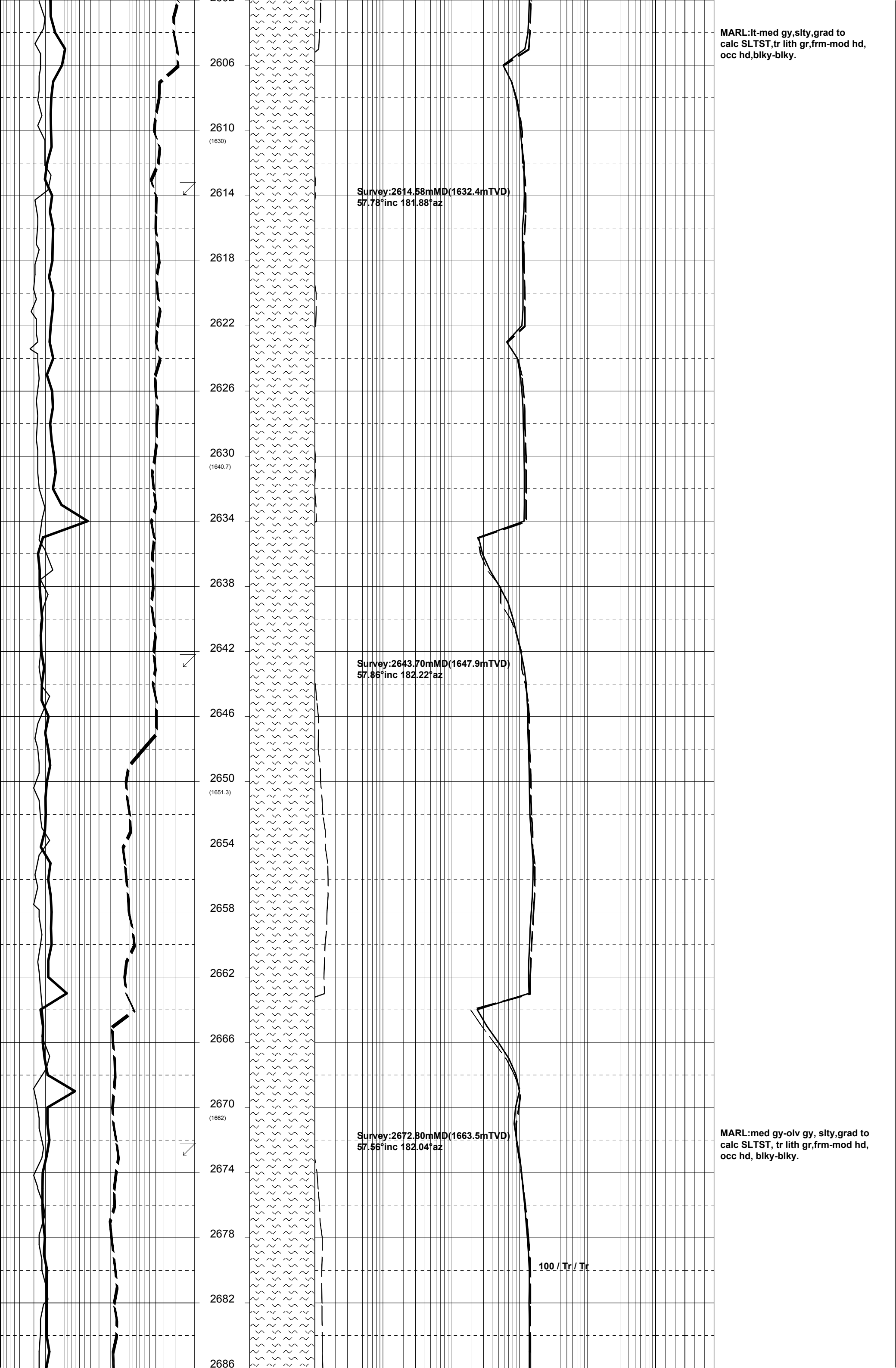




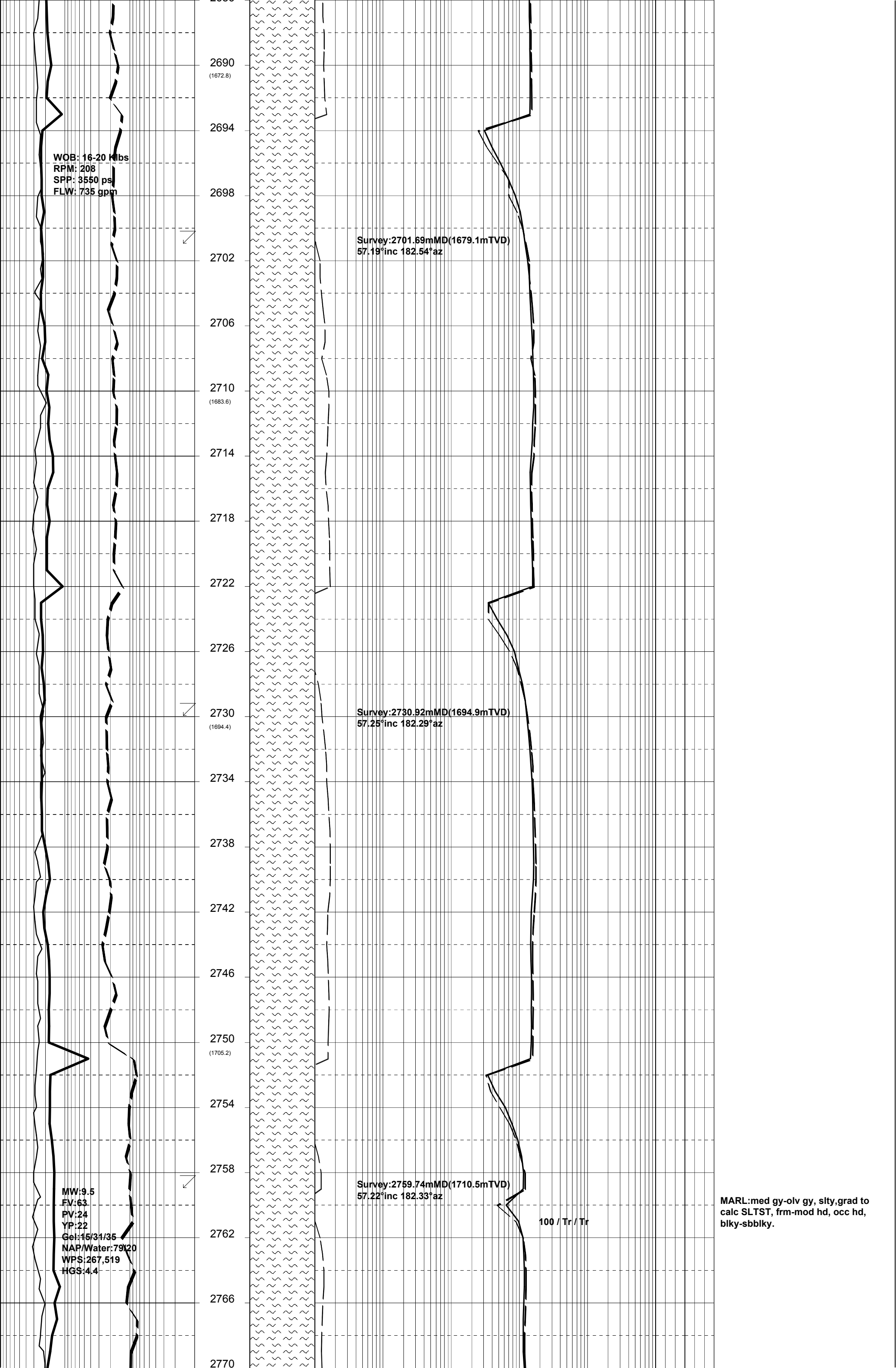


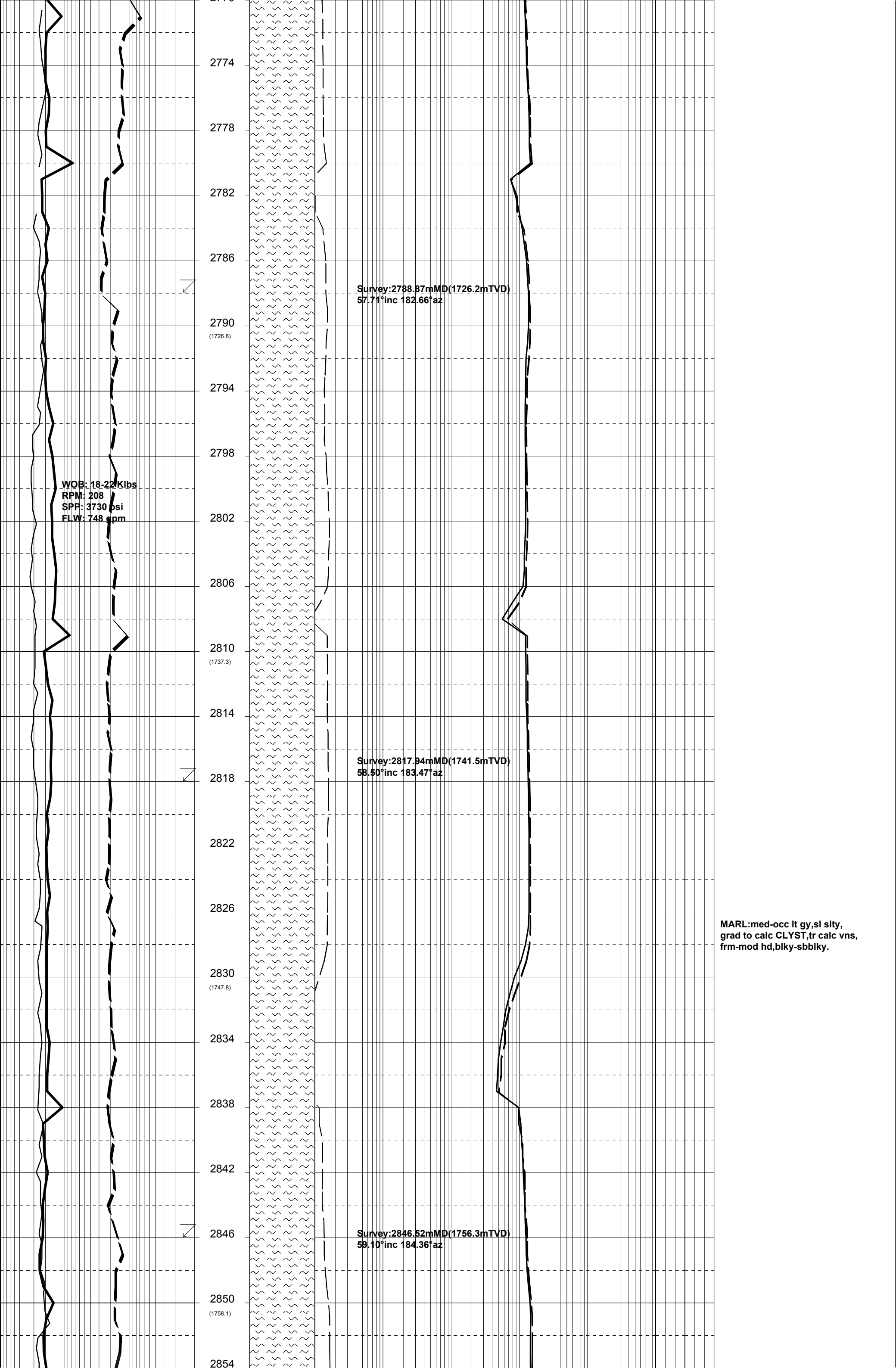


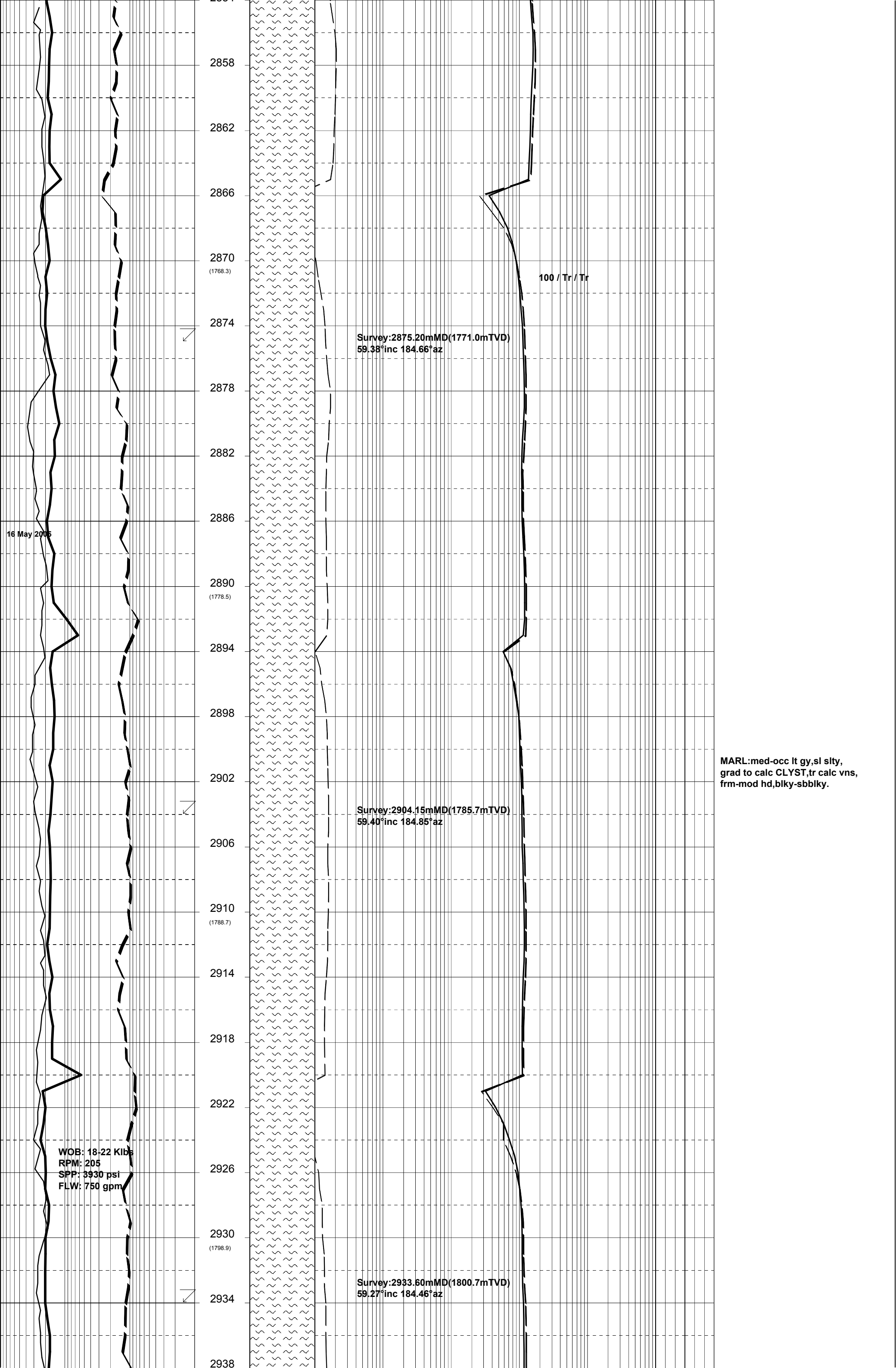


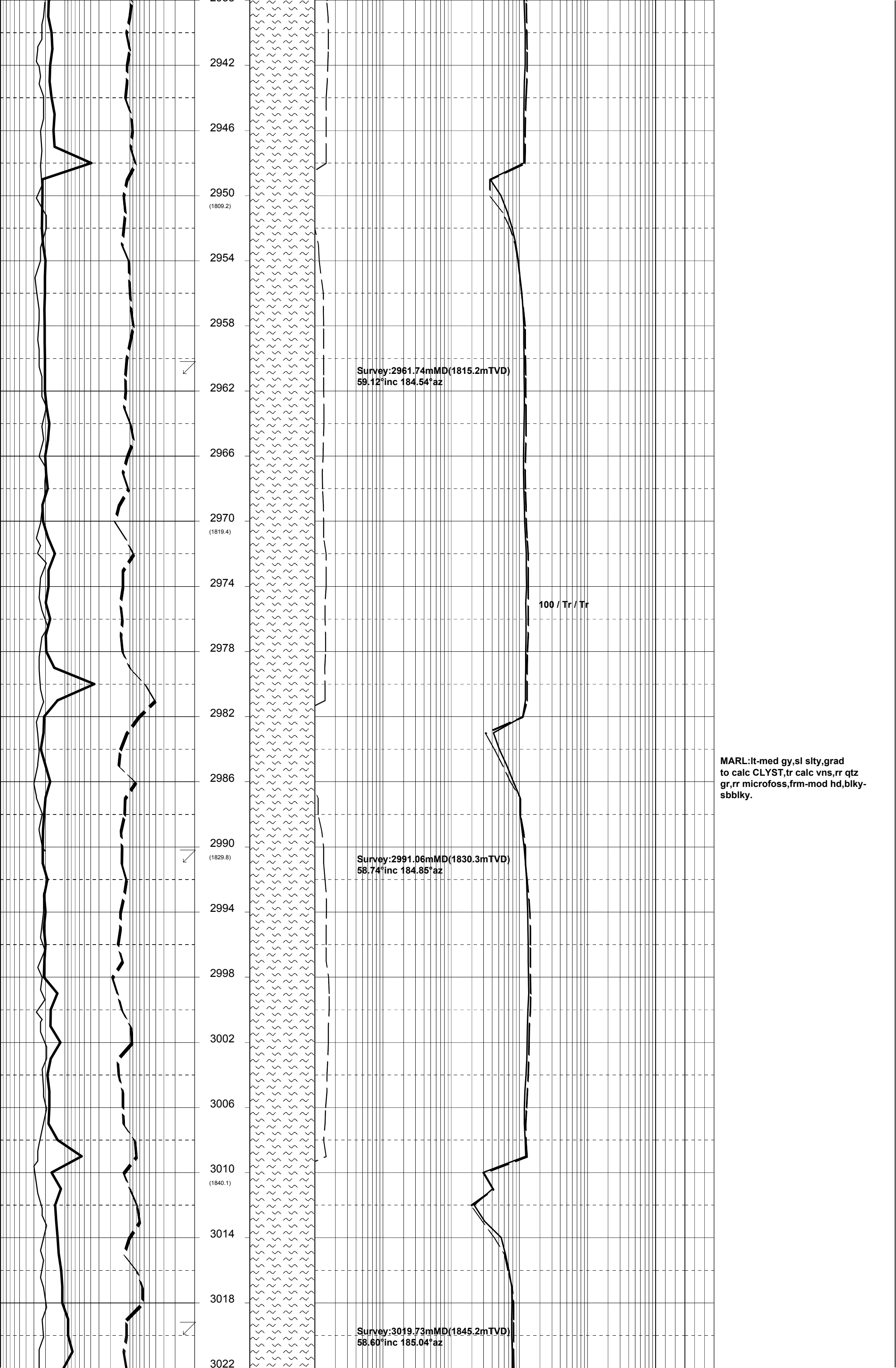


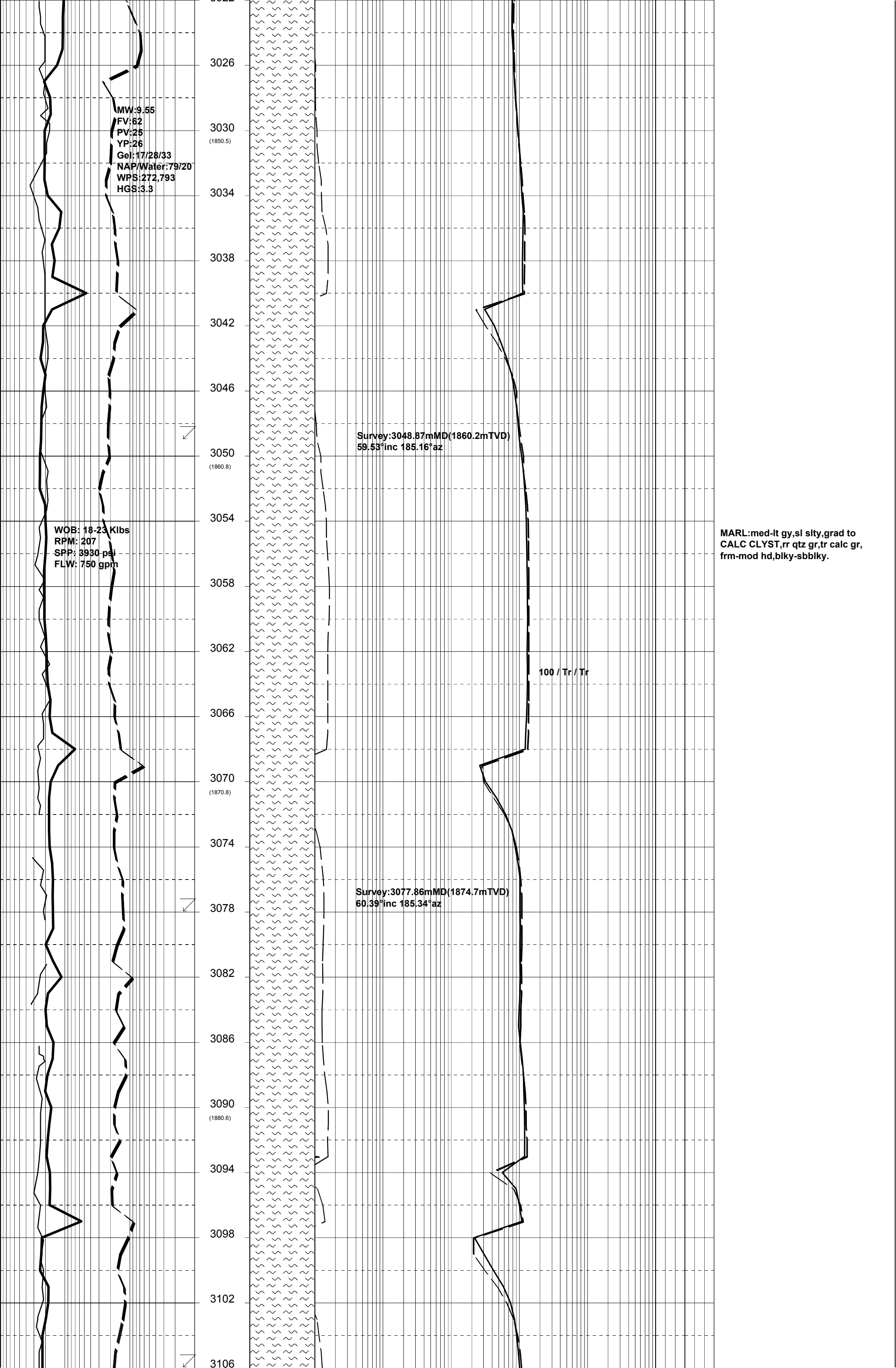


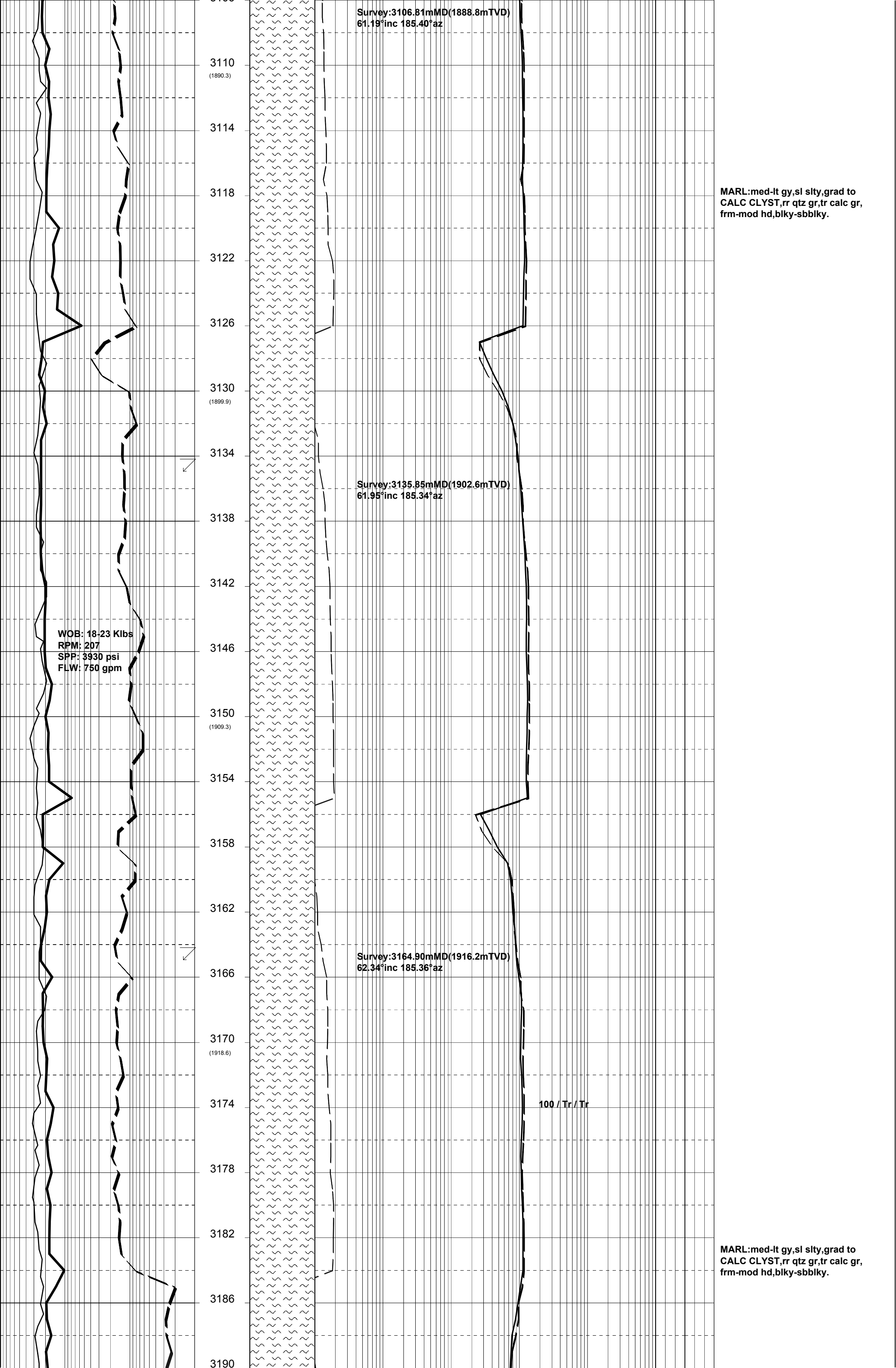


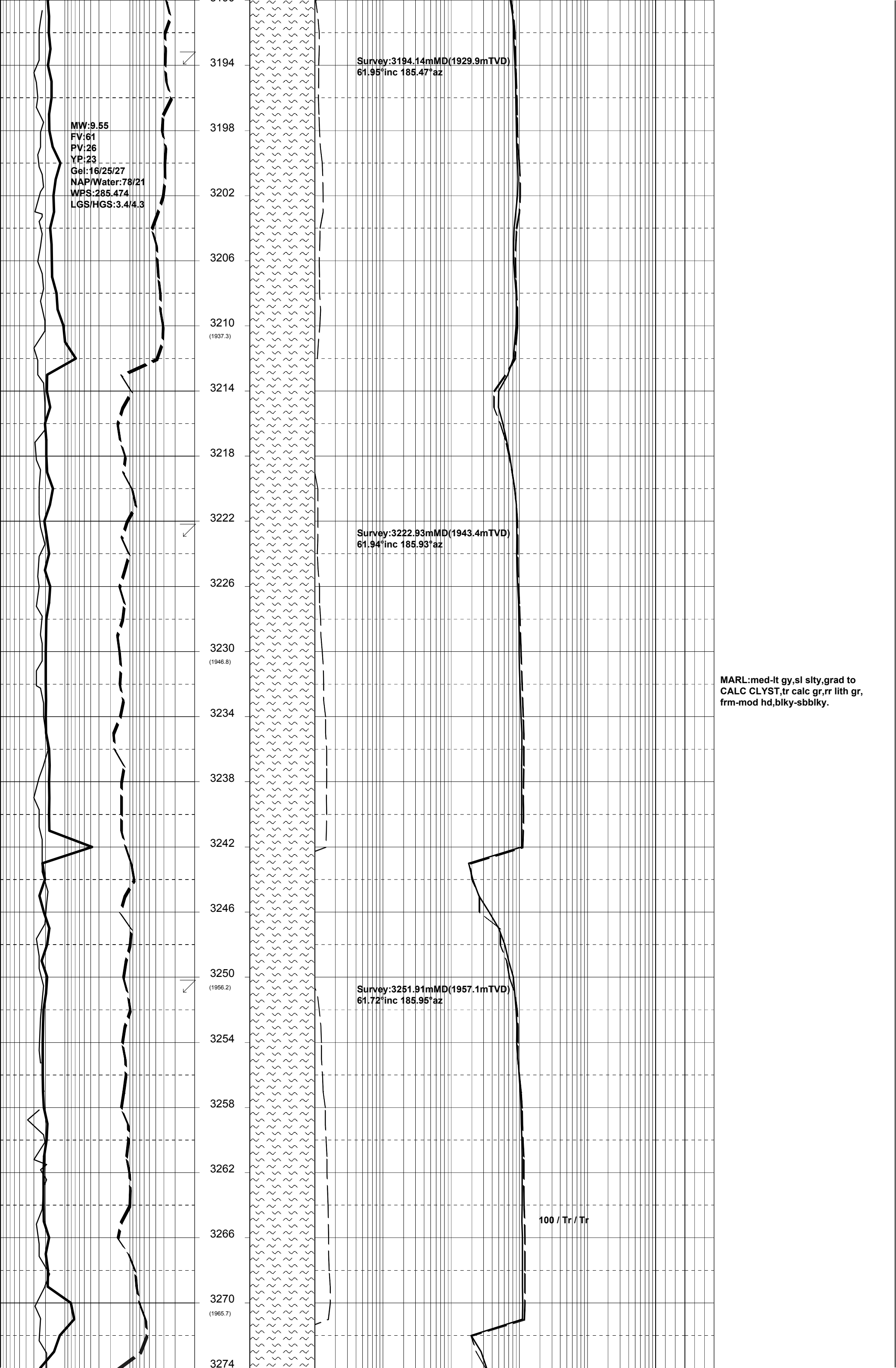


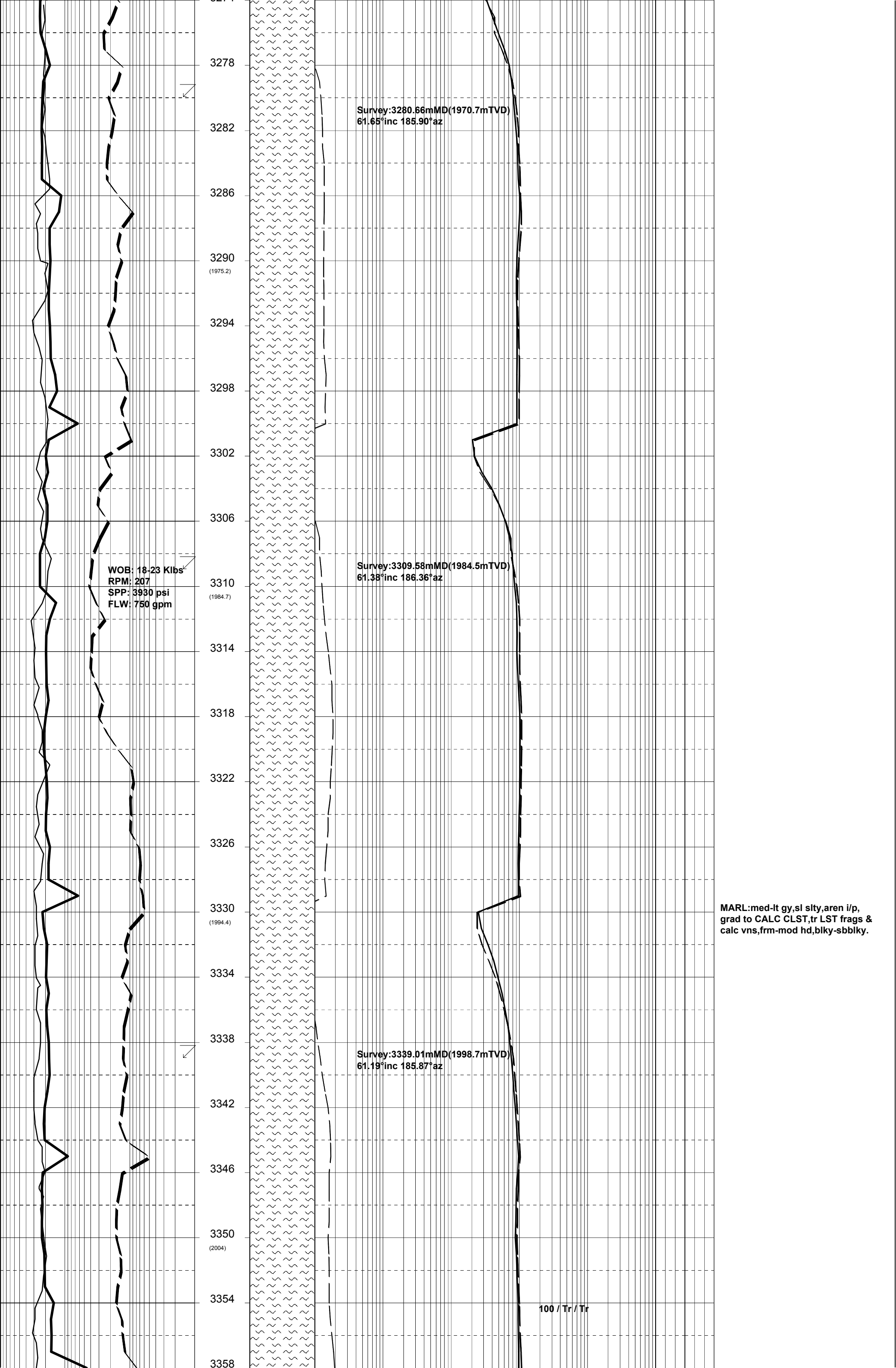




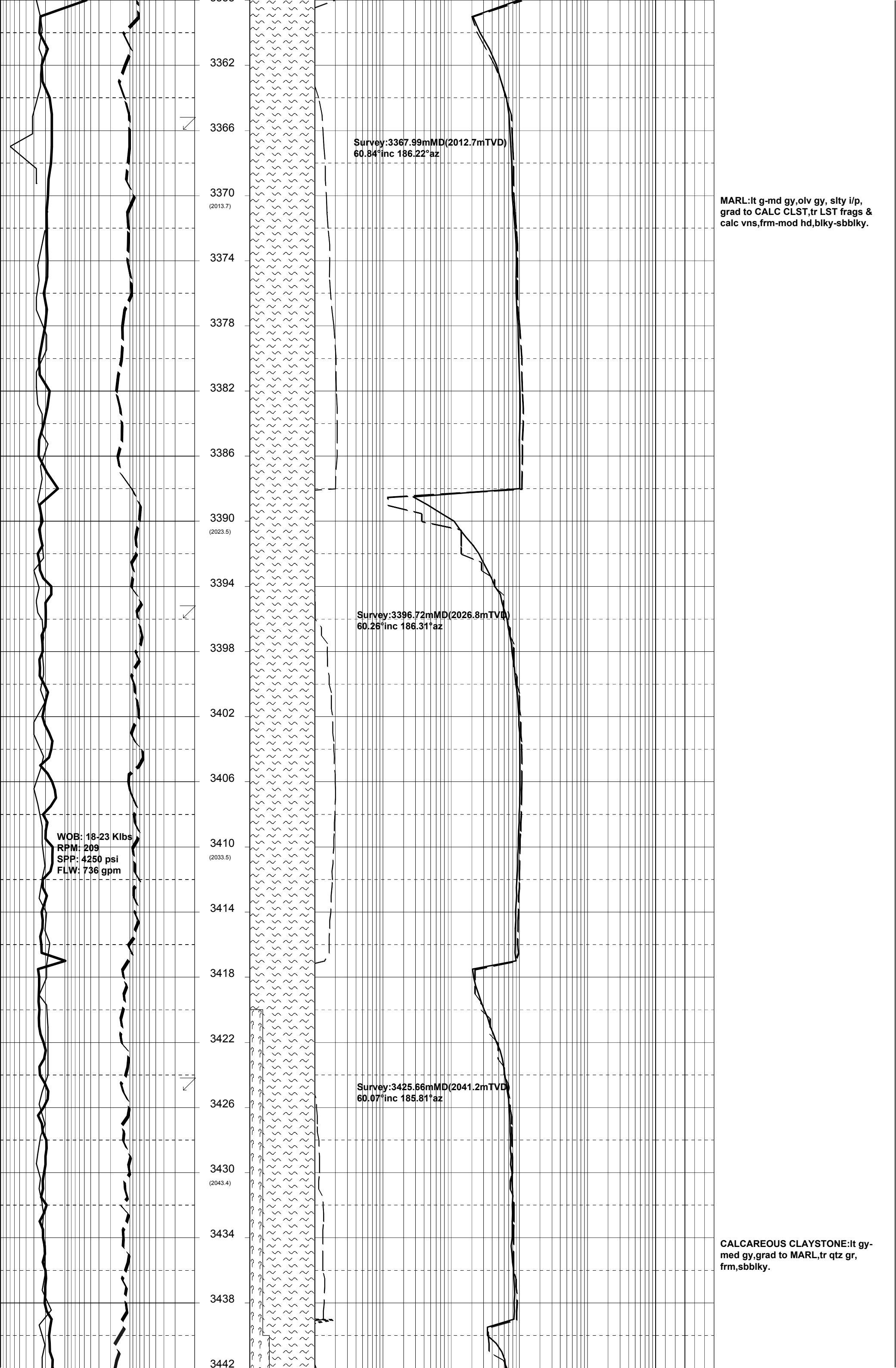


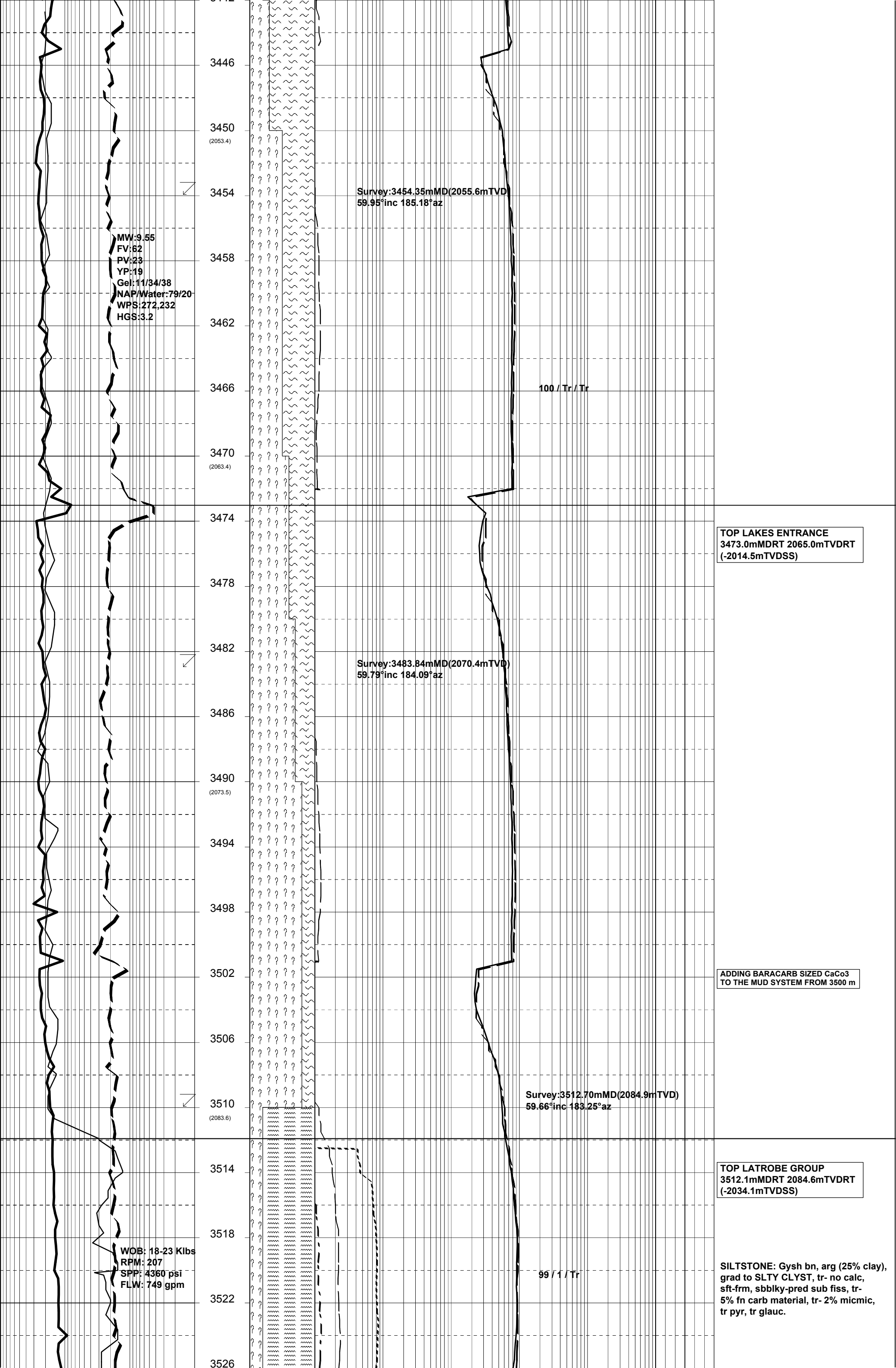


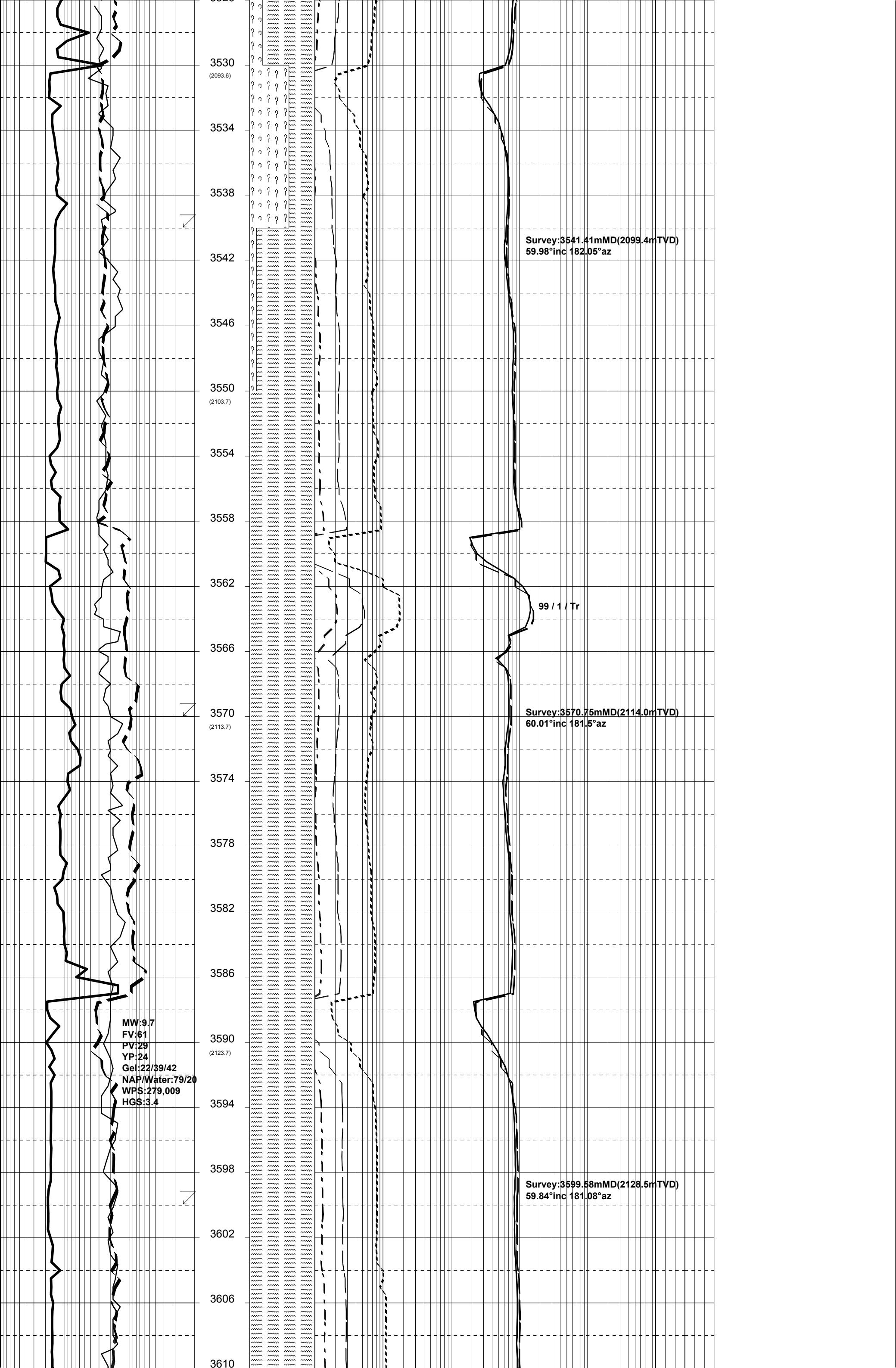


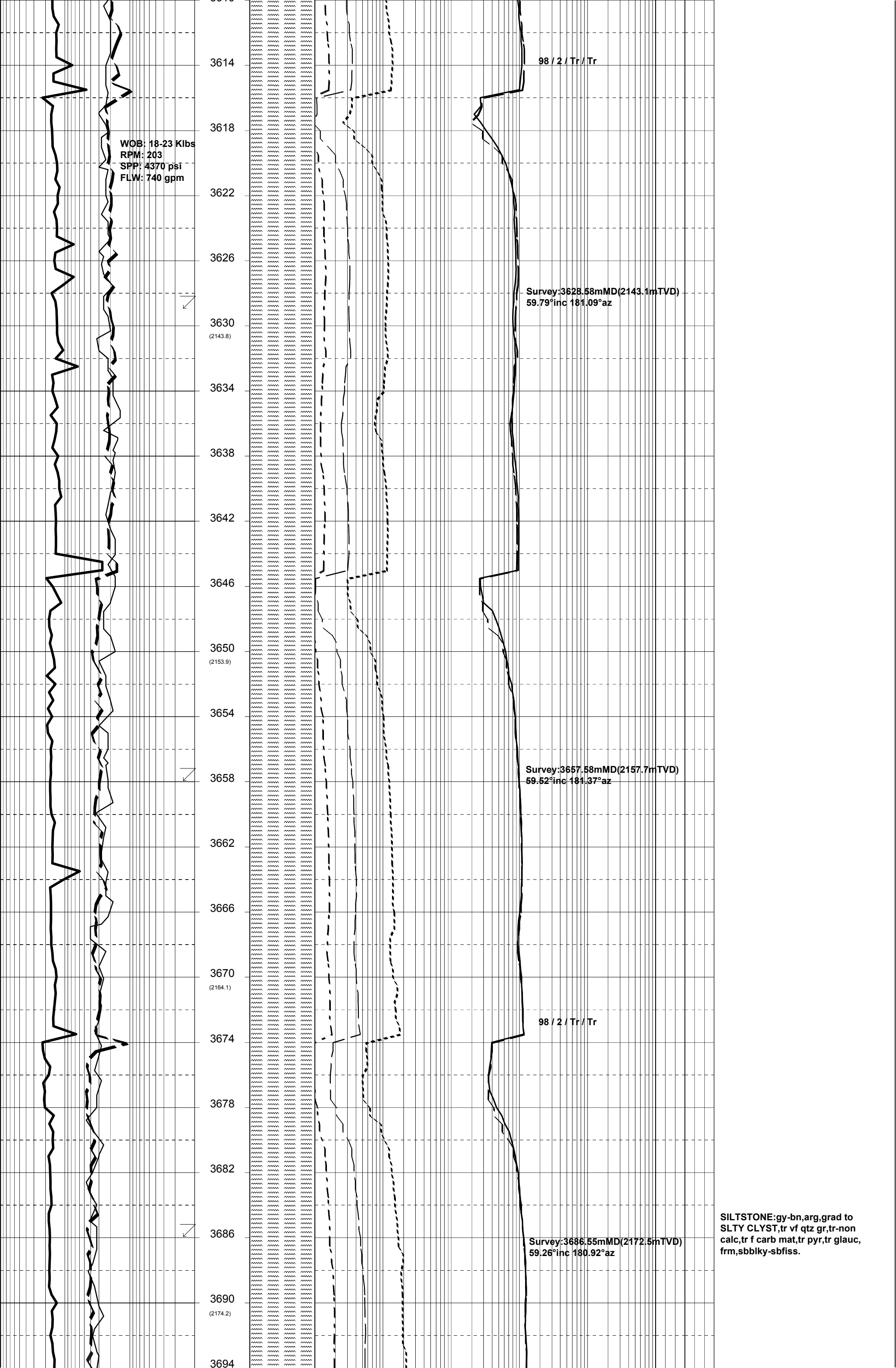


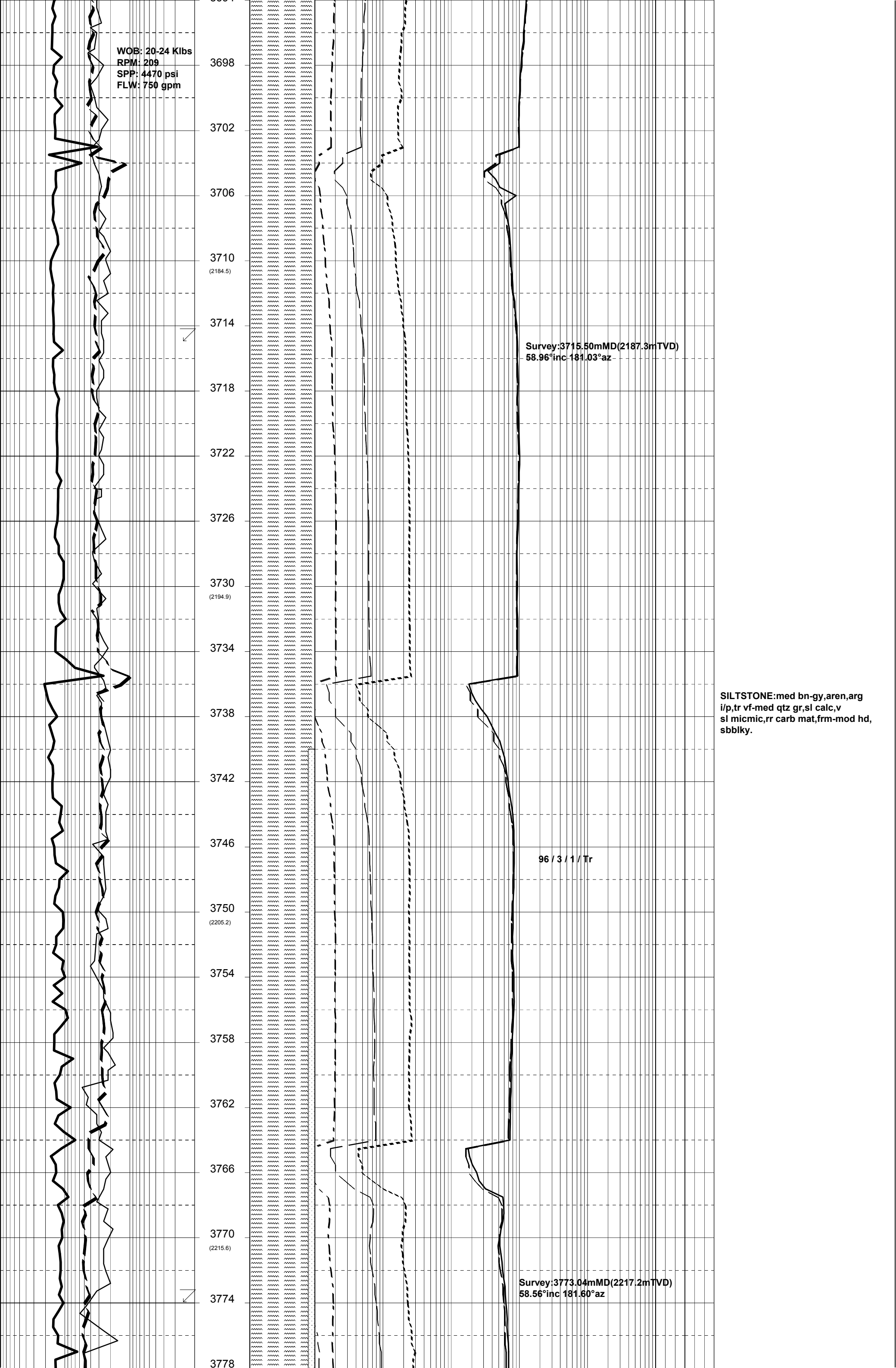


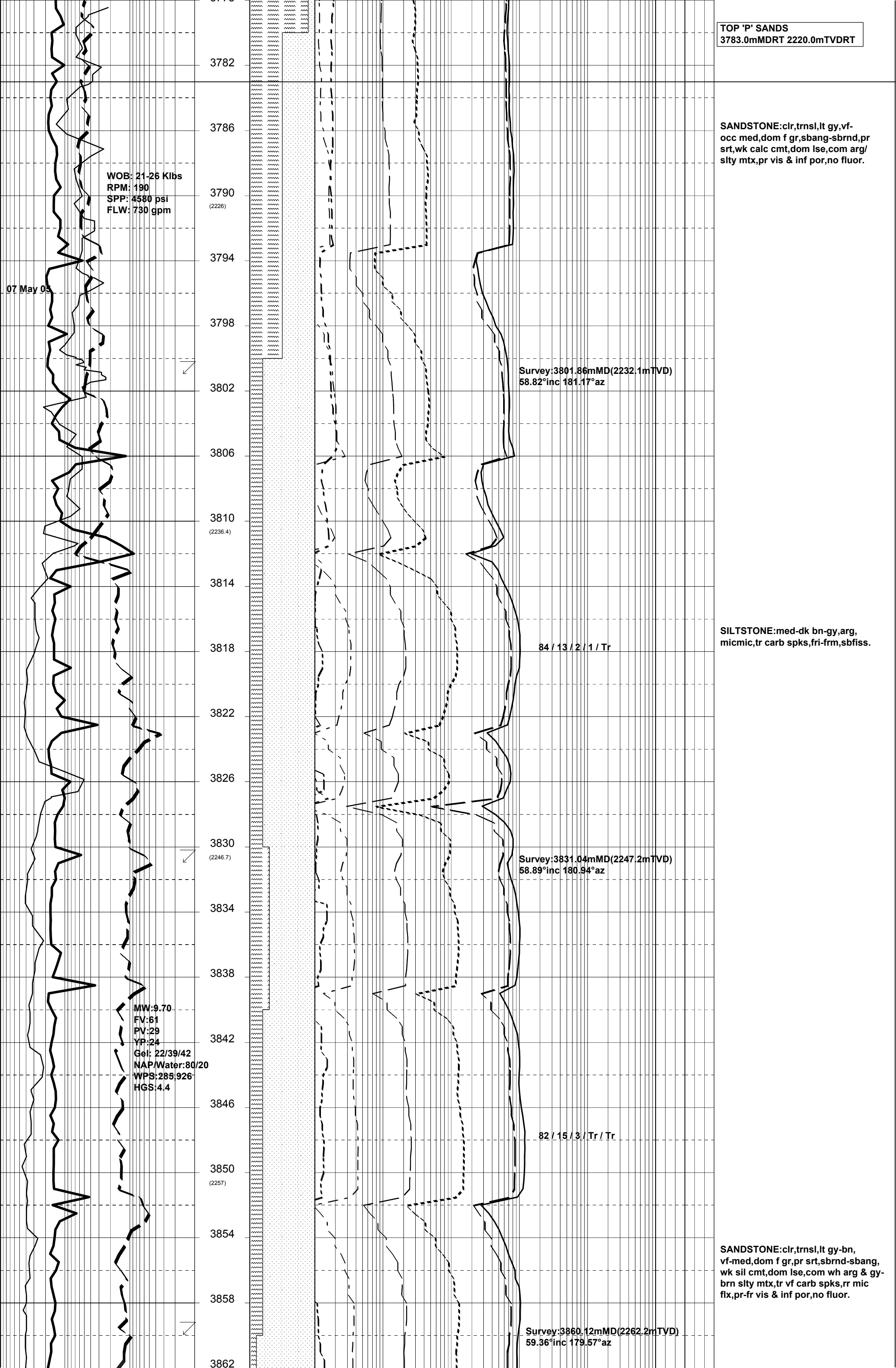


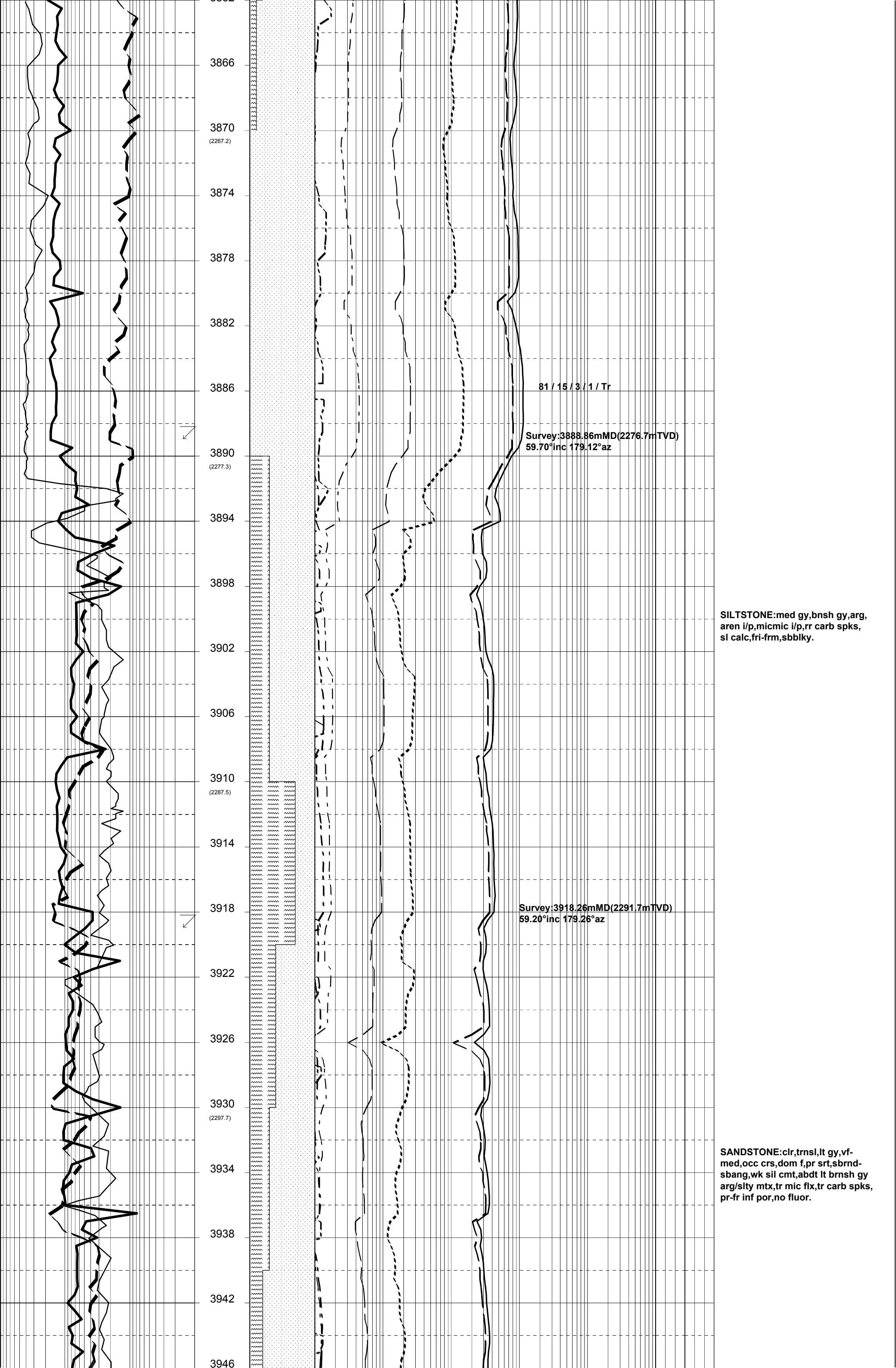


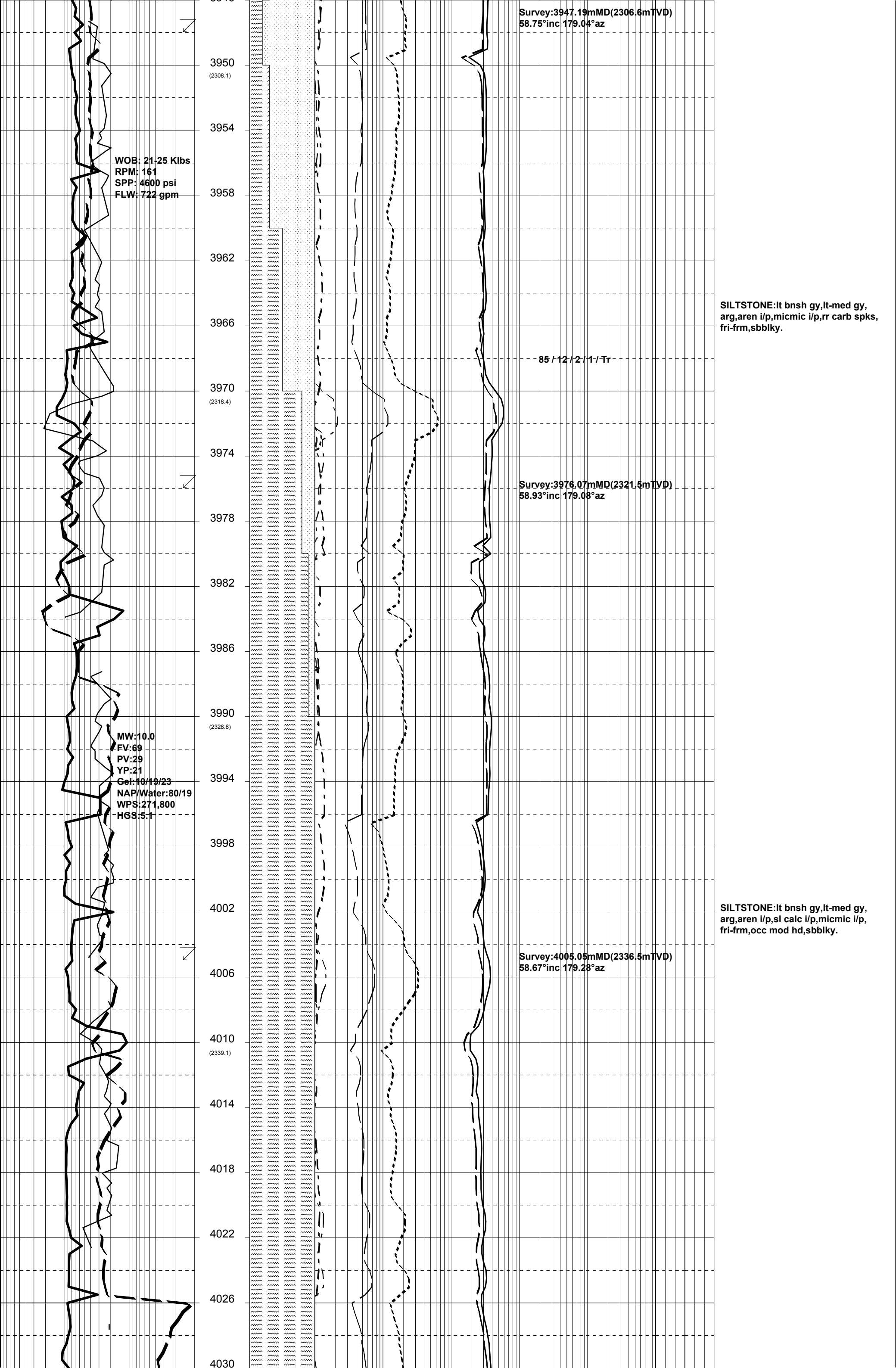




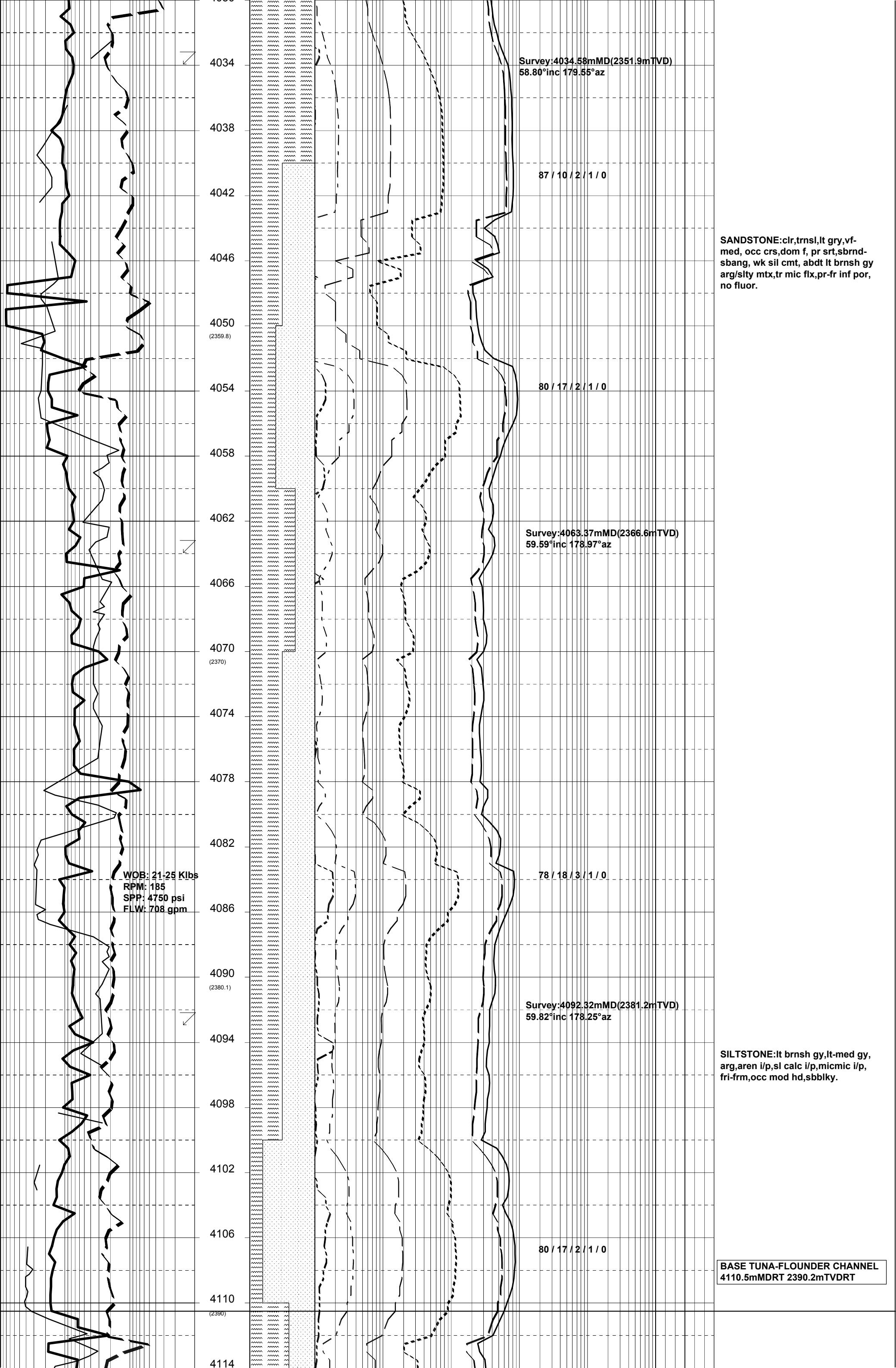


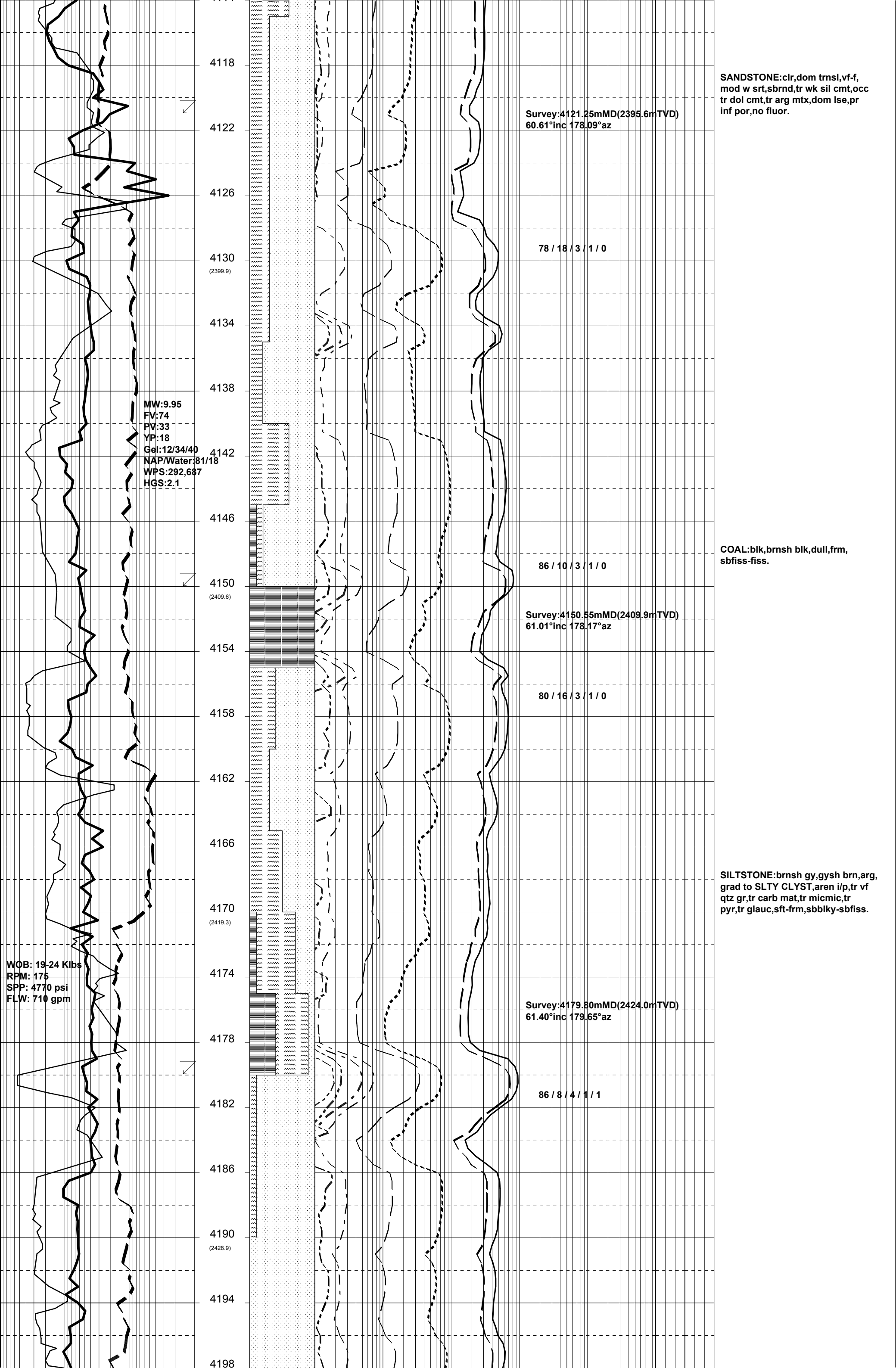


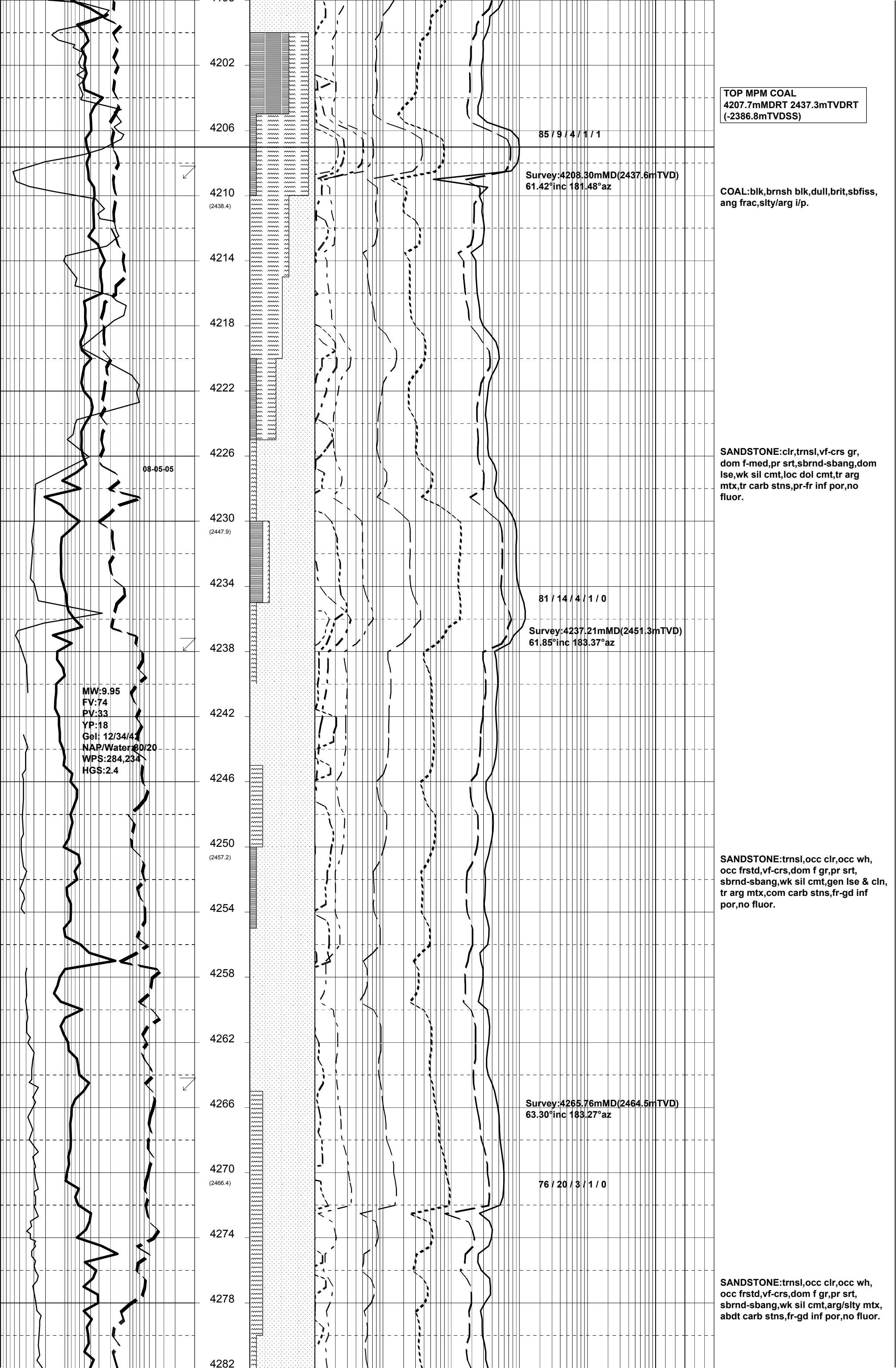


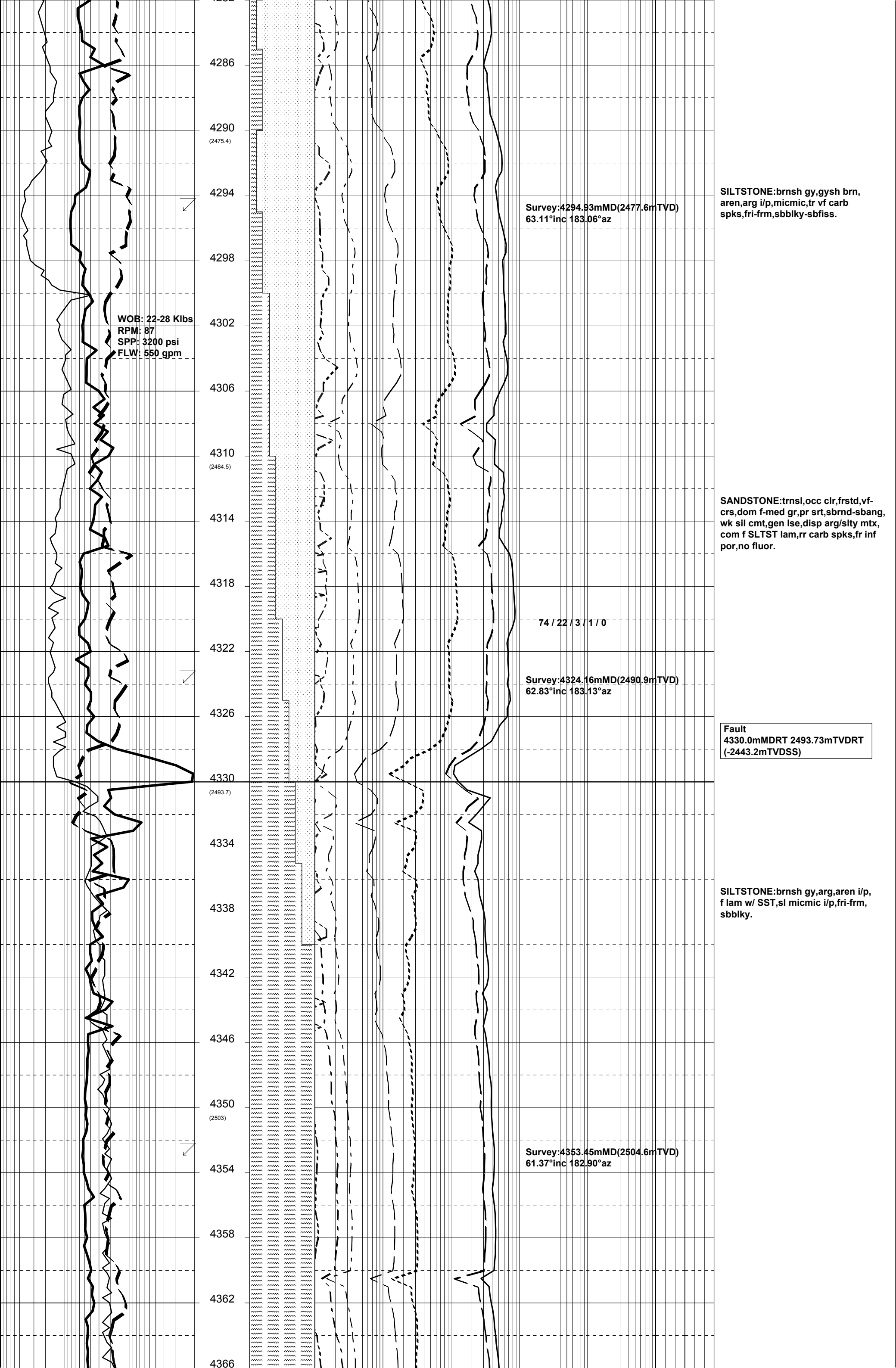












WOB: 18-22 Klbs  
RPM: 153  
SPP: 4700 psi  
FLW: 708 gpm

4370  
(2512.8)

87 / 7 / 5 / 1 / 0

SILTSTONE:brnsh gy,arg,aren i/p,  
f lam w/ SST,sl micmic i/p,fri-frn,  
sbbiky.

4374

4378

4382

Survey:4382.03mMD(2518.8mTVD)  
59.42°inc 182.55°az

4386

4390  
(2522.9)

4394

4398

TEDM MARKER  
4400.9mMDRT 2528.6mTVDRT  
(-2478.1mTVDSS)

4402

4406

4410  
(2533.4)

85 / 7 / 5 / 2 / 1

Survey:4410.84mMD(2533.8mTVD)  
57.47°inc 182.62°az

4414

84 / 8 / 5 / 2 / 1

4418

SILTSTONE:brnsh gy,arg,aren i/p,  
f lam w/ SST,sl micmic i/p,fri-frn,  
sbbiky.

4422

4426

T-1.05  
4430.7mMDRT 2544.7mTVDRT  
(-2494.2mTVDSS)

4430  
(2544.3)

86 / 8 / 4 / 2 / Tr

4434

85 / 9 / 4 / 2 / Tr

MW:10.05  
FV:85  
PV:48  
YP:22  
Gel:17/36/41  
NAP/Water:80/20  
WPS:279,051  
HGS:2.4

4438

84 / 9 / 5 / 2 / Tr

4442

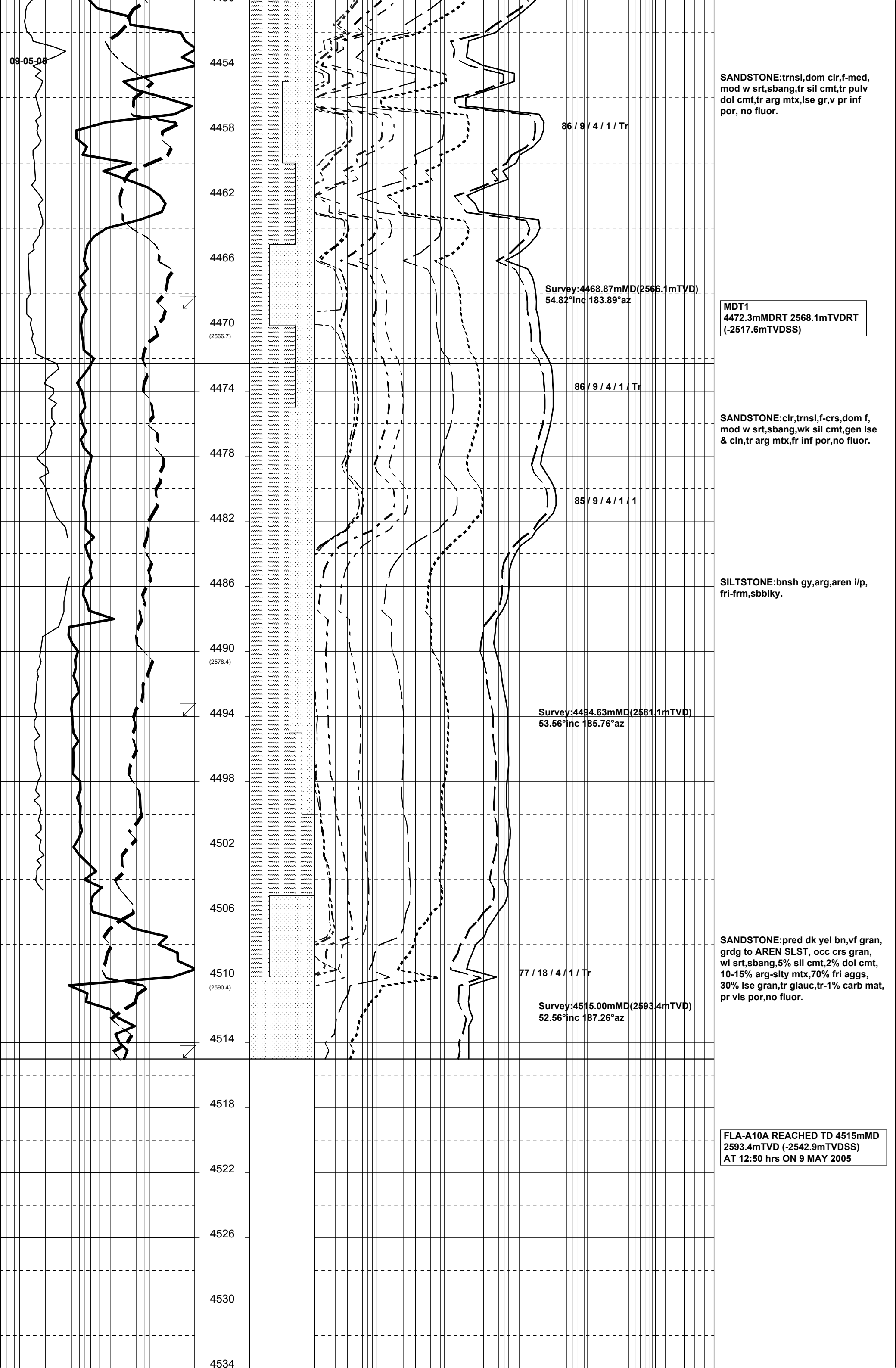
83 / 10 / 5 / 2 / Tr

Survey:4440.07mMD(2549.8mTVD)  
56.33°inc 182.99°az

4446

TOP T-1.1 SAND  
4449.2mMDRT 2554.9mTVDRT  
(-2504.4mTVDSS)

4450



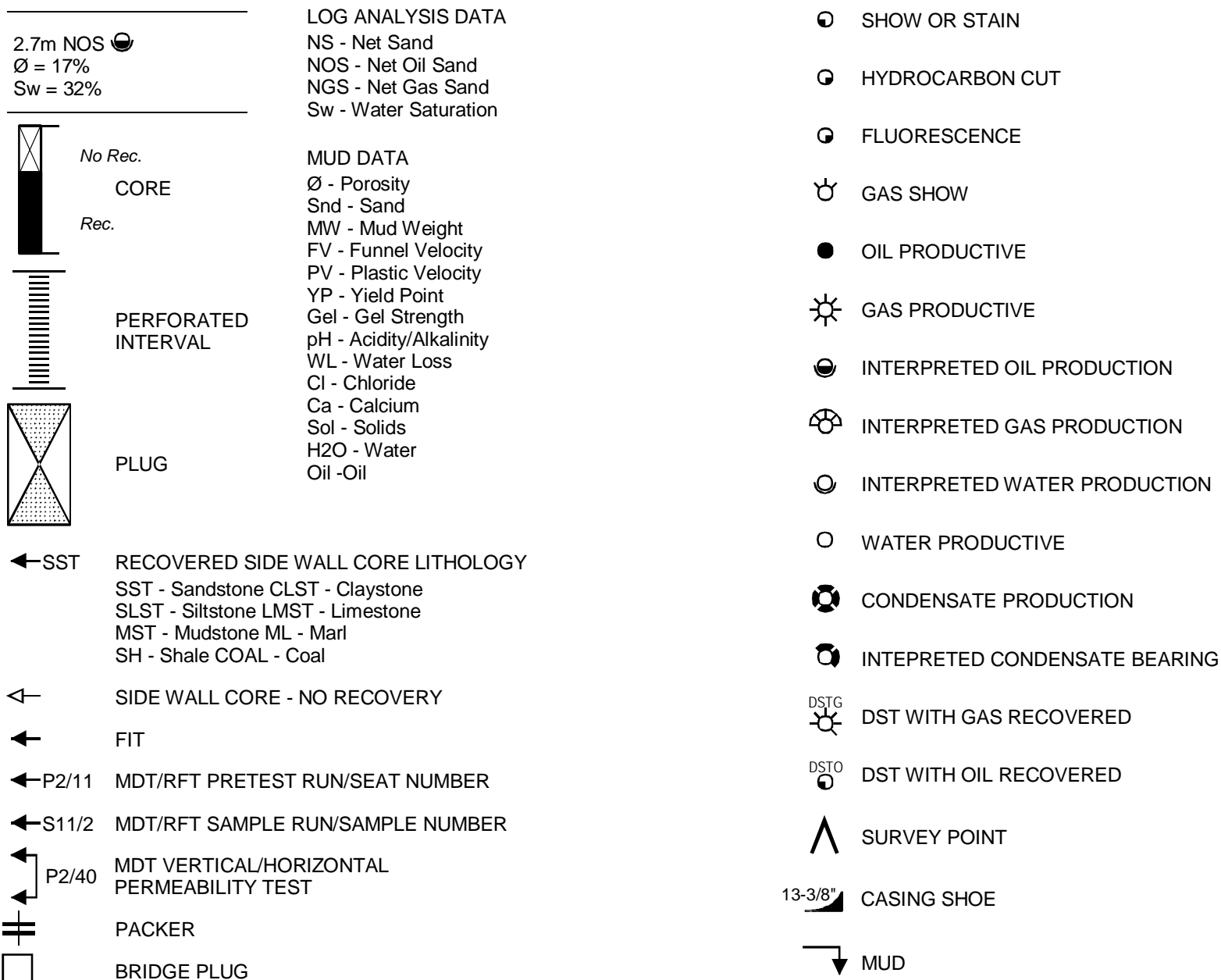
[illegible]

**APPENDIX 4b**

**FLOUNDER A10A**

**Well Completion Log**





| LITHOLOGICAL SYMBOLS |                    |  |           |  |                     |  |               |  |  |
|----------------------|--------------------|--|-----------|--|---------------------|--|---------------|--|--|
|                      | Sandstone          |  | Dolomite  |  | Mica                |  | Pelecypods    |  |  |
|                      | Siltstone          |  | Marl      |  | Chert               |  | Echinoids     |  |  |
|                      | Mudstone           |  | Anhydrite |  | Carbonaceous Matter |  | Fish Remains  |  |  |
|                      | Claystone          |  | Volcanics |  | Calcareous          |  | Plant Remains |  |  |
|                      | Shale              |  | Basement  |  | Glauconite          |  | Spores        |  |  |
|                      | Coal               |  | Granule   |  | Corals              |  | Leaves        |  |  |
|                      | Limestone          |  | Oolites   |  | Bryozoans           |  | Foram         |  |  |
|                      | Micritic Limestone |  | Dolomitic |  | Brachiopods         |  | Fossils       |  |  |
|                      | Grain Limestone    |  | Pyrite    |  | Gastropods          |  |               |  |  |
|                      | Skeletal Limestone |  |           |  | Cephalopods         |  |               |  |  |

| LOGGING AND SURVEYING                        |                  |                       |                  |
|--|------------------|-----------------------|------------------|
| Anadrill Schlumberger                        | Interval (mMDRT) | Anadrill Schlumberger | Interval (mMDRT) |
| Schlumberger Anadrill/ Powerpulse (Dir)      | 702.73 - 4494.63 |                       |                  |
| Schlumberger Anadrill/ ARC6 (Res & GR)       | 670 - 4505.0     |                       |                  |
| Schlumberger Anadrill/ ADN6 (Dens & Neutron) | 670 - 4488.0     |                       |                  |

| WELL DATA             |                             |  |  |  |
|-----------------------|-----------------------------|--|--|--|
| Date                  | 2 - 10 May 2005             |  |  |  |
| Run                   | MWD/LWD1                    |  |  |  |
| Log                   | Powerpulse-ARC6-ADN6        |  |  |  |
| Depth Driller         | 4515 mMDRT                  |  |  |  |
| Depth Logger          | 4515 mMDRT                  |  |  |  |
| Bottom Log Interval   | 4505 mMDRT                  |  |  |  |
| Top Log Interval      | 670 mMDRT (Kickoff)         |  |  |  |
| Casing Driller        | 661 mMDRT                   |  |  |  |
| Casing Logger         | Not logged                  |  |  |  |
| Casing Size           | 10 3/4"                     |  |  |  |
| Casing Weight         | 68 lb                       |  |  |  |
| Bit Size              | 8.5"                        |  |  |  |
| Type of Fluid in Hole | Petrofree SBM               |  |  |  |
| Density               | 9.95 ppg                    |  |  |  |
| Rm @ Measured Temp.   | N/A                         |  |  |  |
| Rmf @ Measured Temp.  | N/A                         |  |  |  |
| Rmc @ Measured Temp.  | N/A                         |  |  |  |
| Max. Recorded Temp.   | 111.0°C                     |  |  |  |
| Equipment / Location  | OLU-JA-9602/Sale            |  |  |  |
| Recorded By           | J.Dolan, M.Y.Tan, R. Borjas |  |  |  |
| Witnessed By          | M Turner                    |  |  |  |

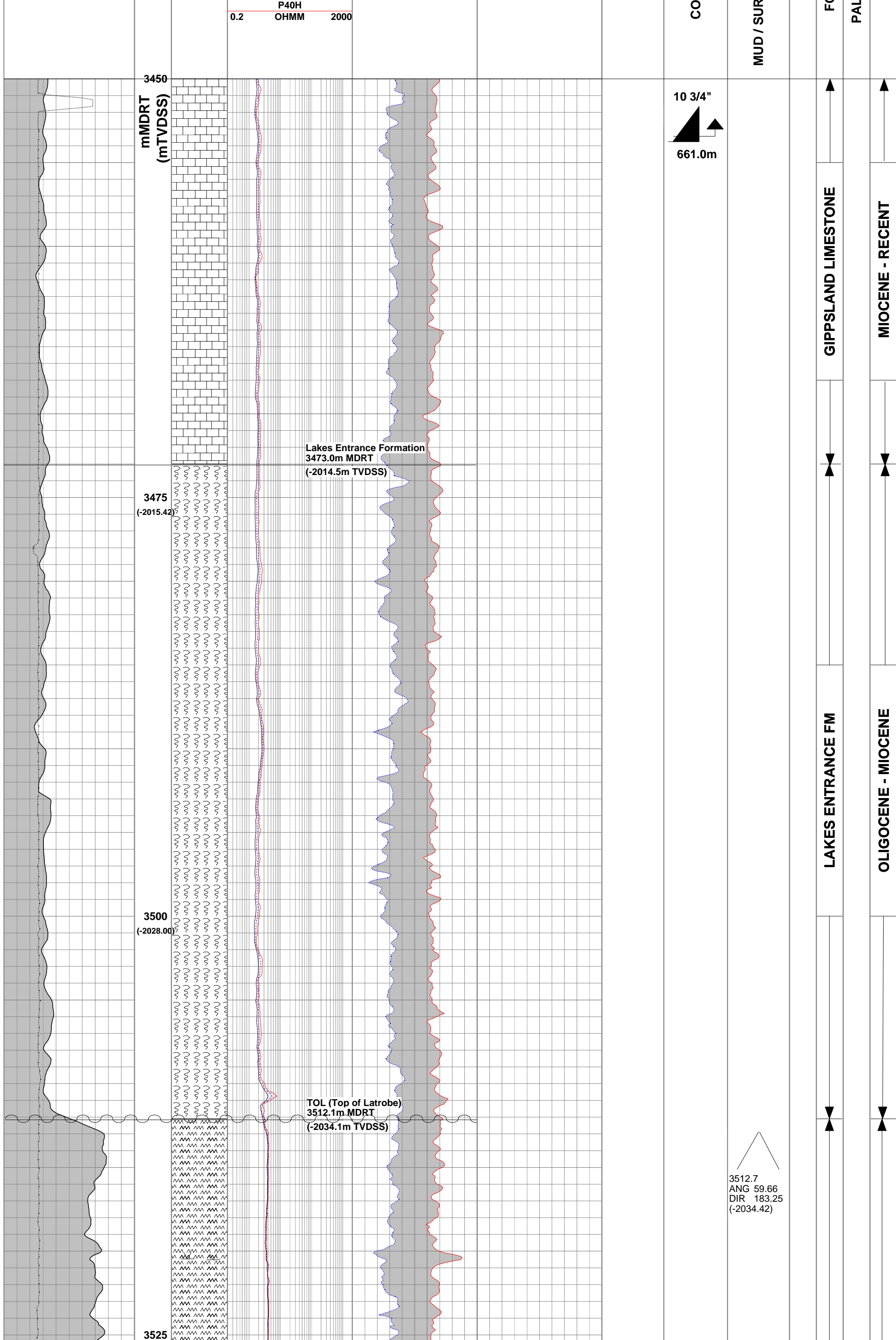
| CORES        |            |       | PERFORATIONS |            |          |
|--------------|------------|-------|--------------|------------|----------|
| From (mMDRT) | To (mMDRT) | Rec % | From (mMDRT) | To (mMDRT) | Gun Type |
|              |            |       |              |            |          |
| ----         | ----       | ---   | ---          | ---        | ---      |
|              |            |       |              |            |          |

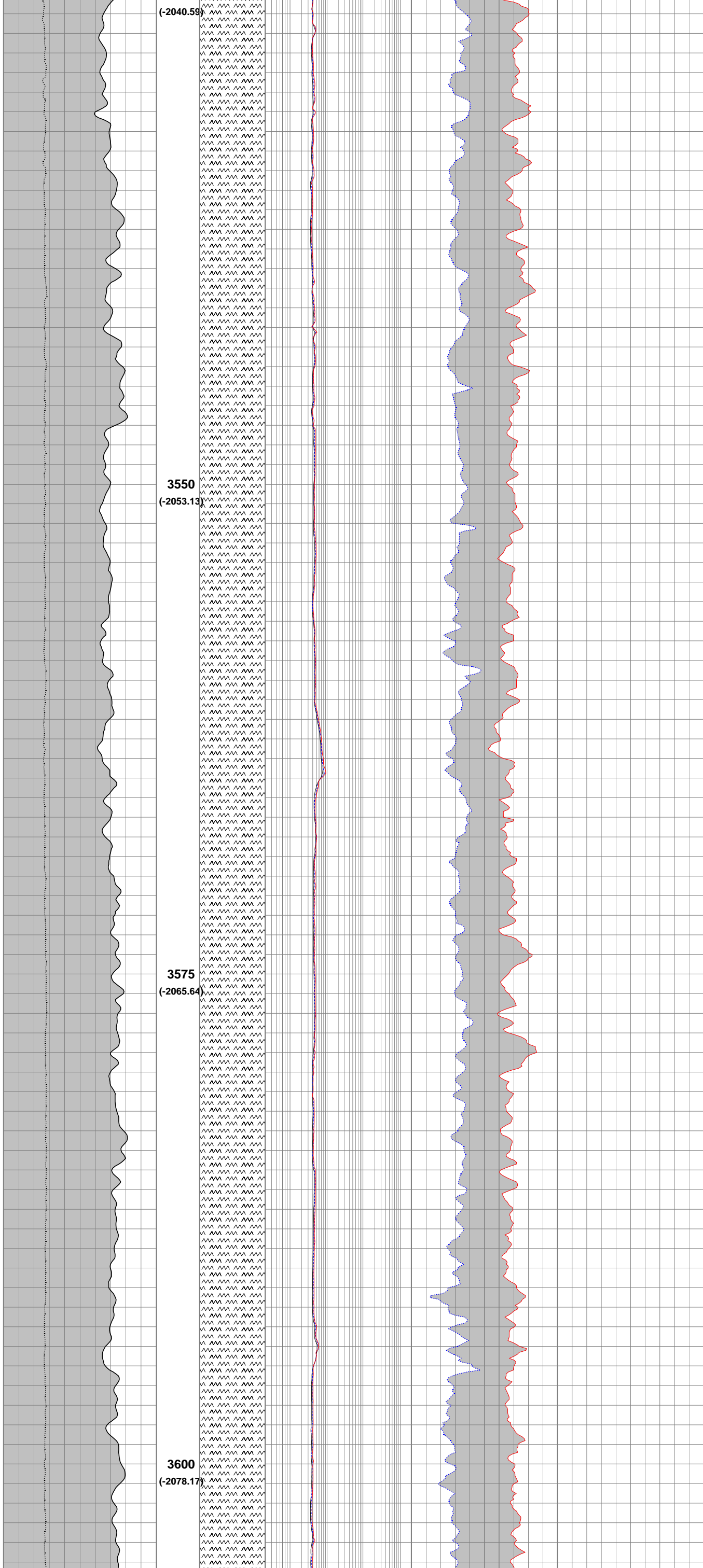
| CORES        |            |       | PERFORATIONS |            |          |
|--------------|------------|-------|--------------|------------|----------|
| From (mMDRT) | To (mMDRT) | Rec % | From (mMDRT) | To (mMDRT) | Gun Type |
|              |            |       |              |            |          |
| ----         | ----       | ---   | ---          | ---        | ---      |
|              |            |       |              |            |          |

| CASING                    |               |        |                     | PLUGS        |            |       |
|---------------------------|---------------|--------|---------------------|--------------|------------|-------|
| Size                      | Set @ (mMDRT) | SX Cmt | Formation           | From (mMDRT) | To (mMDRT) | SXCmt |
| Existing Casing<br>10.75" | 661.0         | ---    |                     | 4285         | 4443       | 210   |
|                           |               |        |                     | 4443         | 4515       | 246   |
|                           |               |        | Gippsland Limestone | 694          | 595        | 288   |

| CASING                    |               |        |                     | PLUGS        |            |       |
|---------------------------|---------------|--------|---------------------|--------------|------------|-------|
| Size                      | Set @ (mMDRT) | SX Cmt | Formation           | From (mMDRT) | To (mMDRT) | SXCmt |
| Existing Casing<br>10.75" | 661.0         | ---    |                     | 4285         | 4443       | 210   |
|                           |               |        |                     | 4443         | 4515       | 246   |
|                           |               |        | Gippsland Limestone | 694          | 595        | 288   |

|                          |      |     |       |           |       |      |      |                  |      |      |                    |     |     |      |            |             |       |           |           |     |
|--------------------------|------|-----|-------|-----------|-------|------|------|------------------|------|------|--------------------|-----|-----|------|------------|-------------|-------|-----------|-----------|-----|
| Gamma Ray                |      |     | DEPTH | LITHOLOGY | P16 H |      |      | Bulk Density     |      |      | Effective Porosity |     |     | TEST | COMPLETION | SURVEY DATA | PLUGS | FORMATION | LITHOLOGY | AGE |
| 0                        | GAPI | 200 |       |           | 0.2   | OHMM | 2000 | 1.85             | G/C3 | 2.85 | 1                  | V/V | 0   |      |            |             |       |           |           |     |
| Horizontal Hole Diameter |      |     |       |           | P28H  |      |      | Neutron Porosity |      |      | Volume of Water    |     |     |      |            |             |       |           |           |     |
| 6                        | IN   | 16  |       |           |       | 0.2  | OHMM | 2000             | 0.45 | V/V  | -0.15              | 1   | V/V | 0    |            |             |       |           |           |     |





(-2040.59)

3550  
(-2053.13)

3575  
(-2065.64)

3600  
(-2078.17)

3590  
MW 9.7ppg  
FV 61sec/qt  
PV 29cP  
YP 24

EOCENE

3625  
(-2090.74)

3650  
(-2103.36)

3675  
(-2116.06)

3628.58  
ANG 59.79  
DIR 181.09  
(-2092.56)

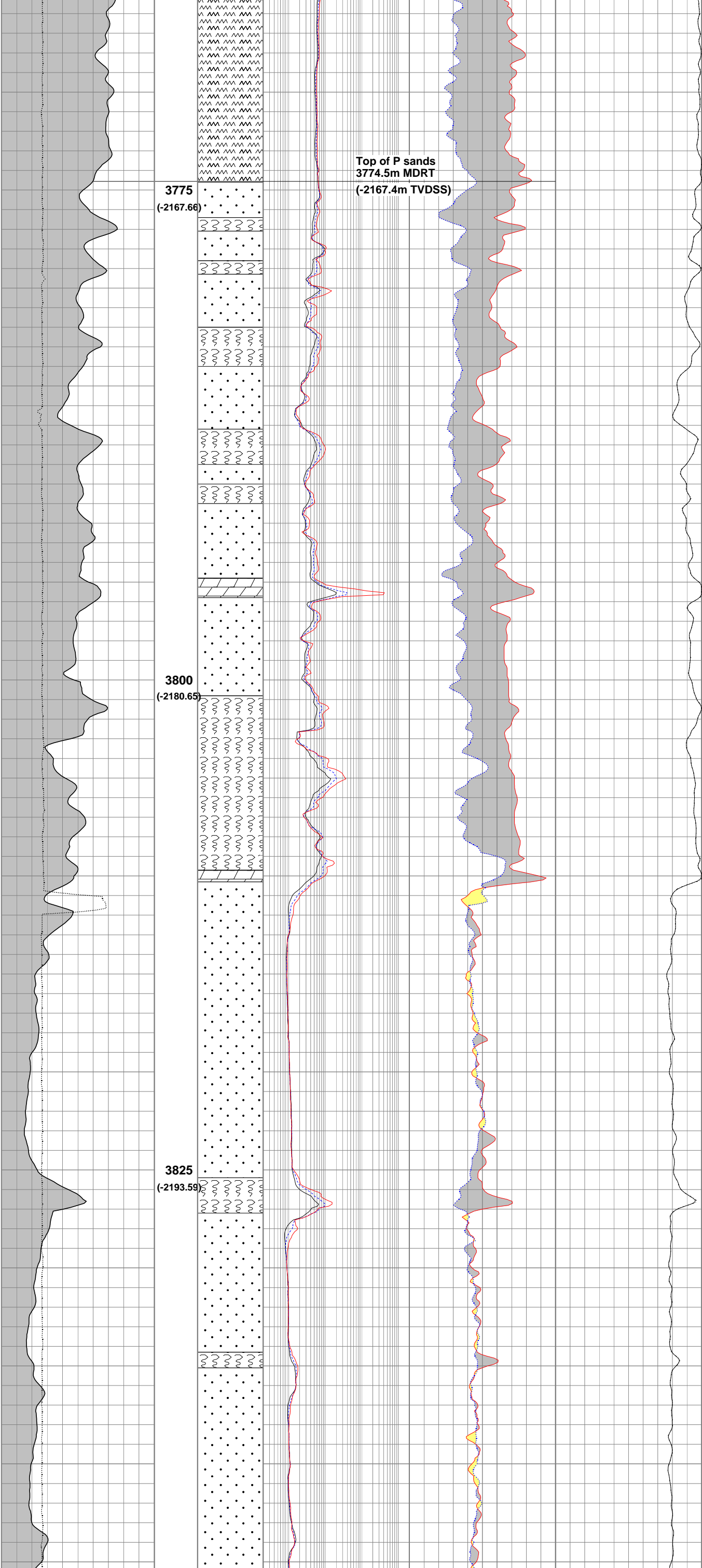


3700  
(-2128.84)

3725  
(-2141.73)

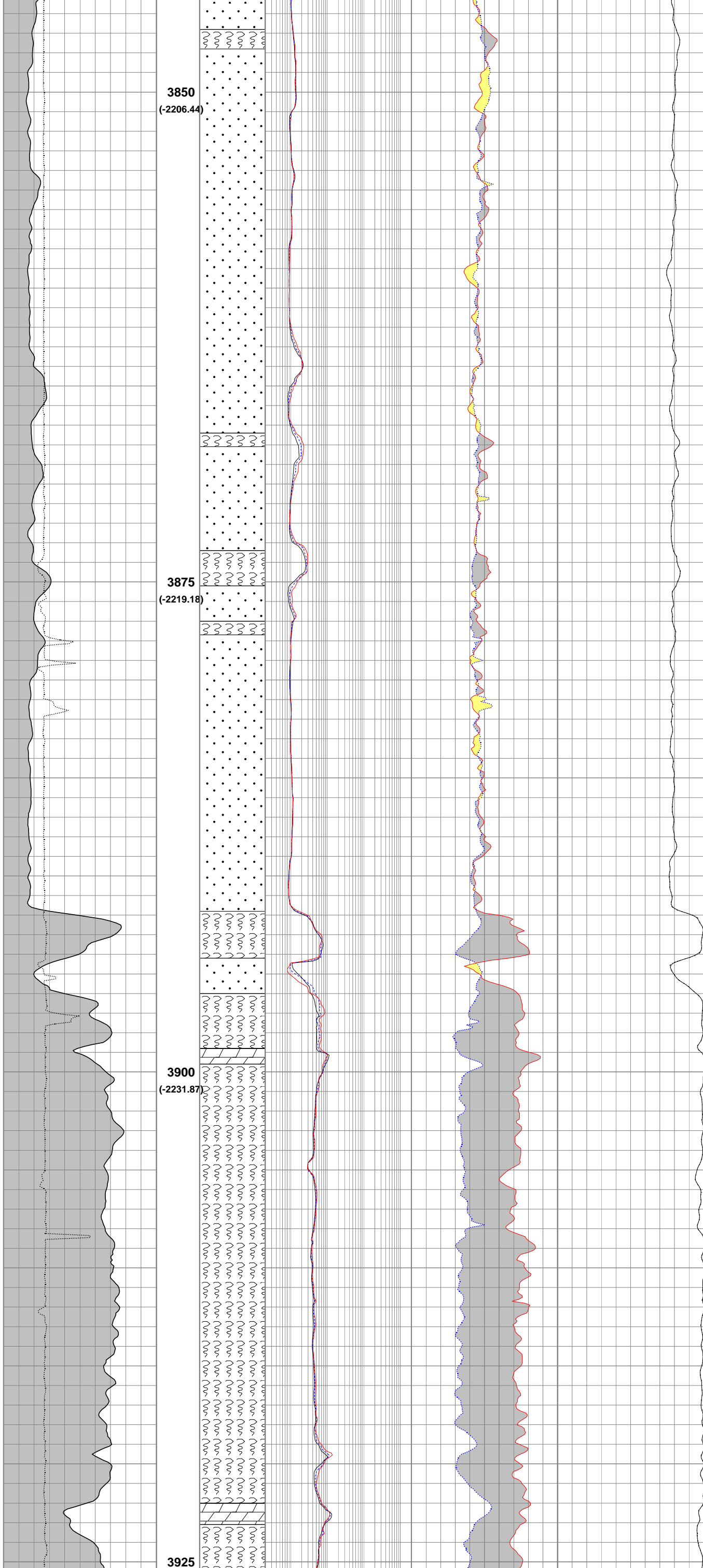
3750  
(-2154.69)

3715.5  
ANG 58.96  
DIR 181.03  
(-2136.82)



3801.86  
ANG 58.82  
DIR 181.17  
(-2181.64)

EOCENE



3850  
(-2206.44)

3875  
(-2219.18)

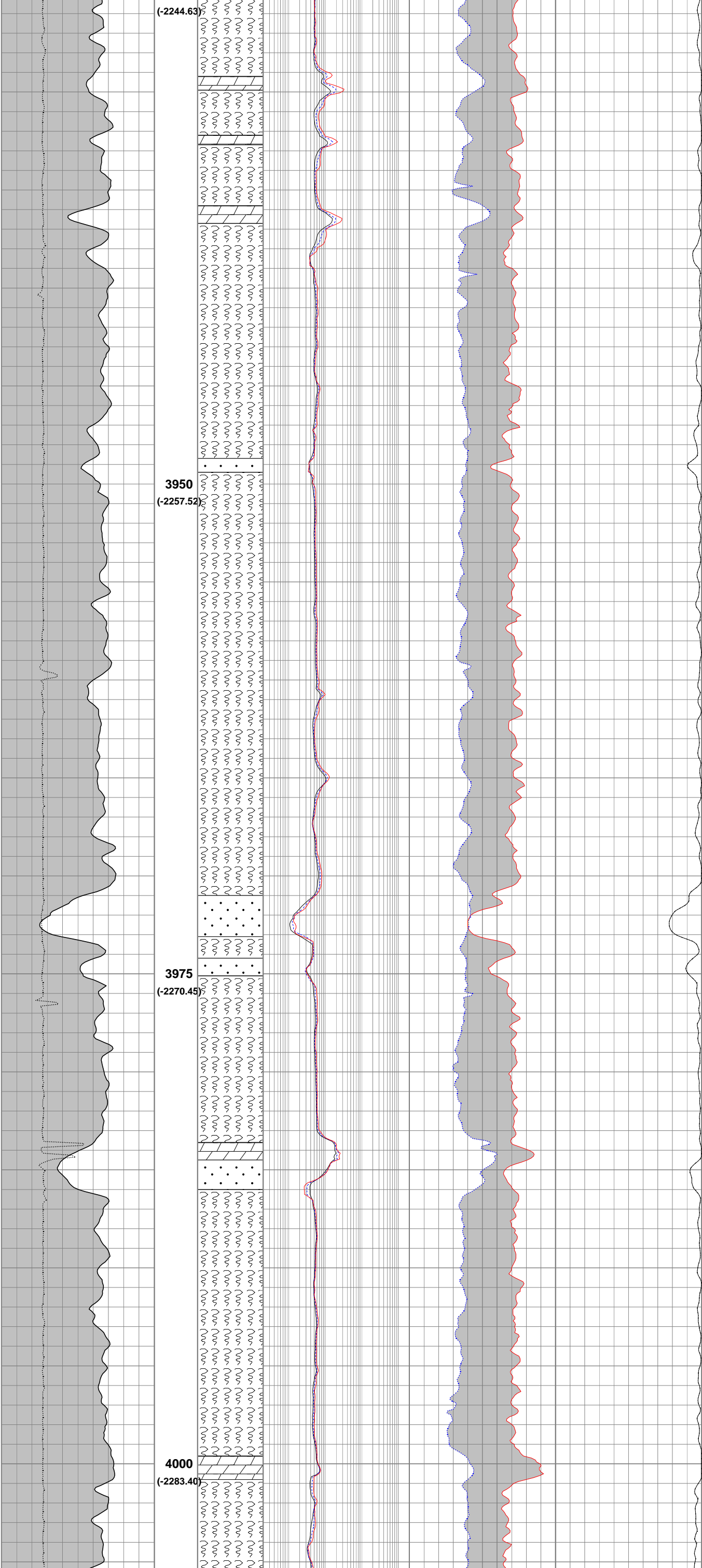
3900  
(-2231.87)

3925

3849  
MW 9.7ppg  
FV 61sec/qt  
PV 29cP  
YP 24

3918.26  
ANG 59.2  
DIR 179.26  
(-2241.17)





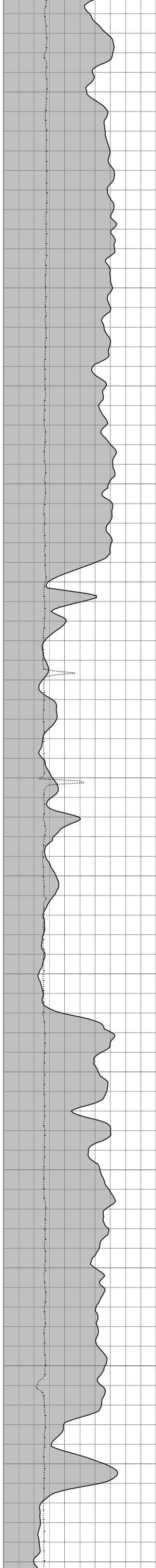
(-2244.63)

3950  
(-2257.52)

3975  
(-2270.45)

4000  
(-2283.40)

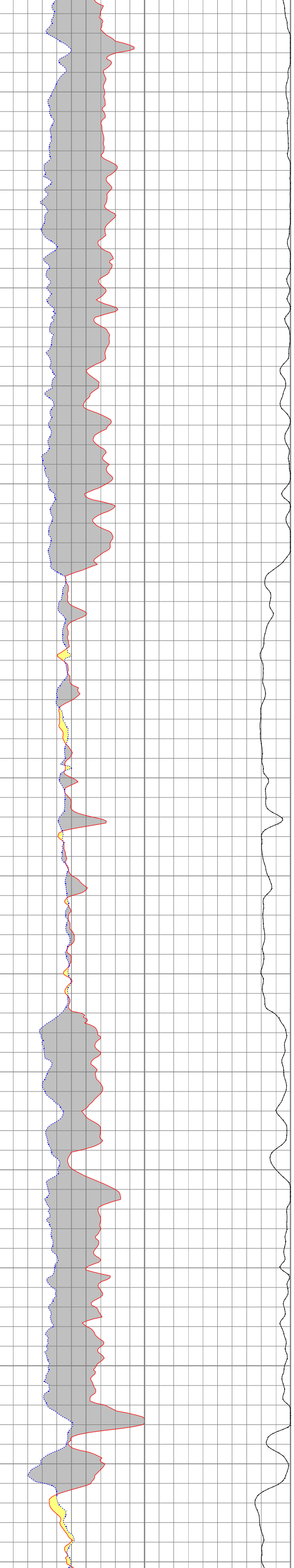
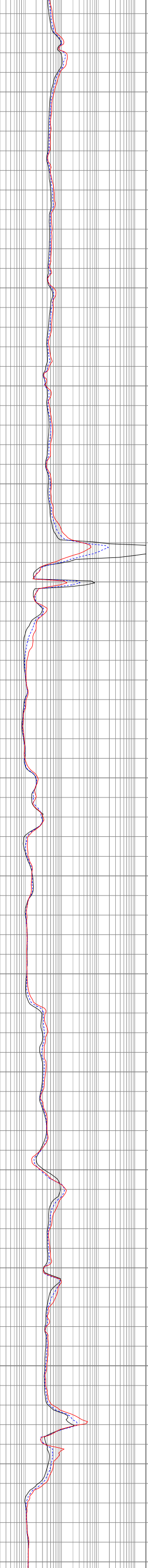
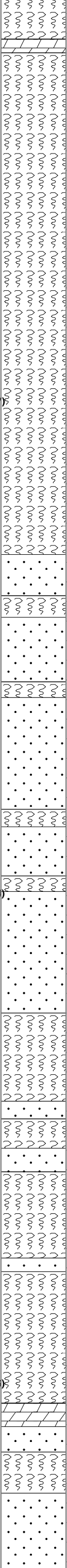
3991  
MW 10.0ppg  
FV 69sec/qt  
PV 29cP  
YP 21



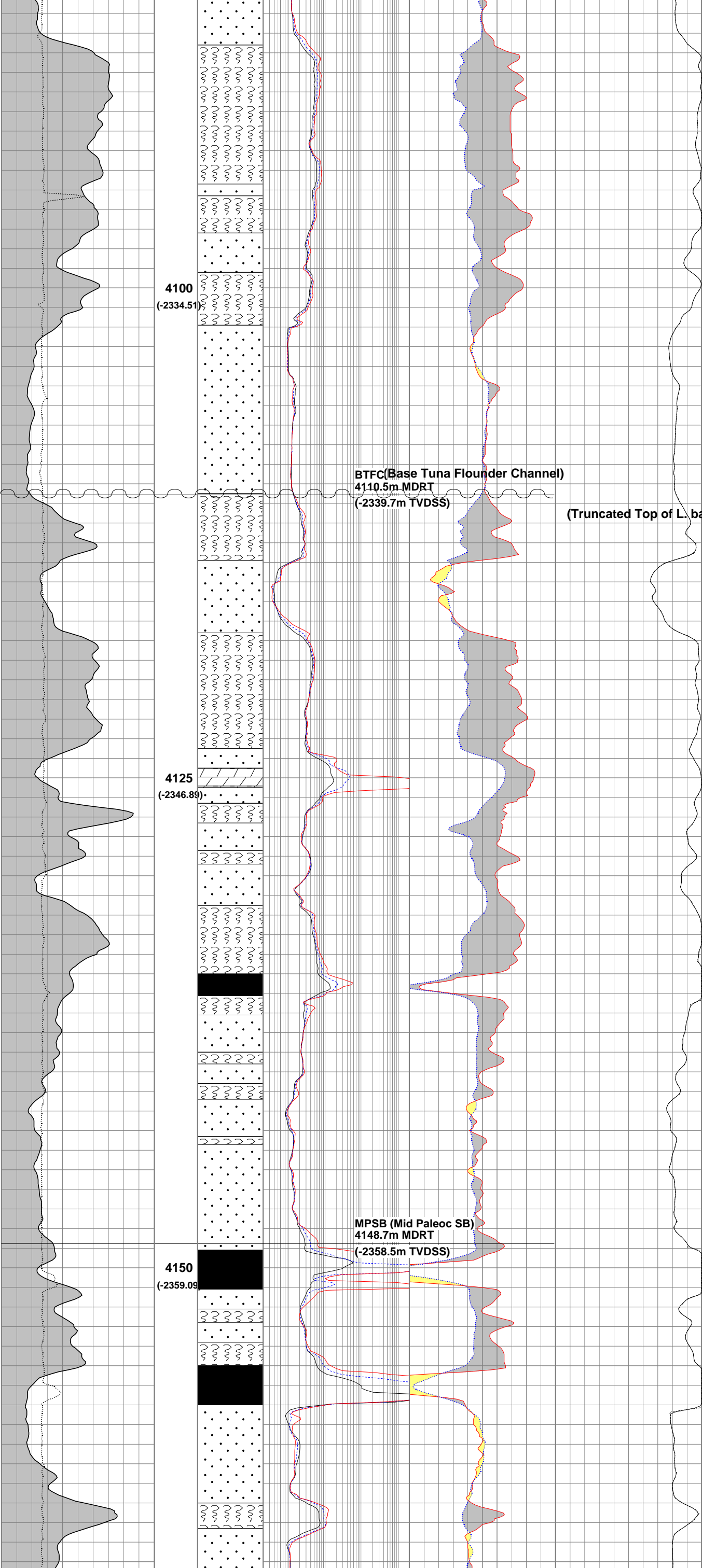
4025  
(-2296.37)

4050  
(-2309.24)

4075  
(-2321.96)



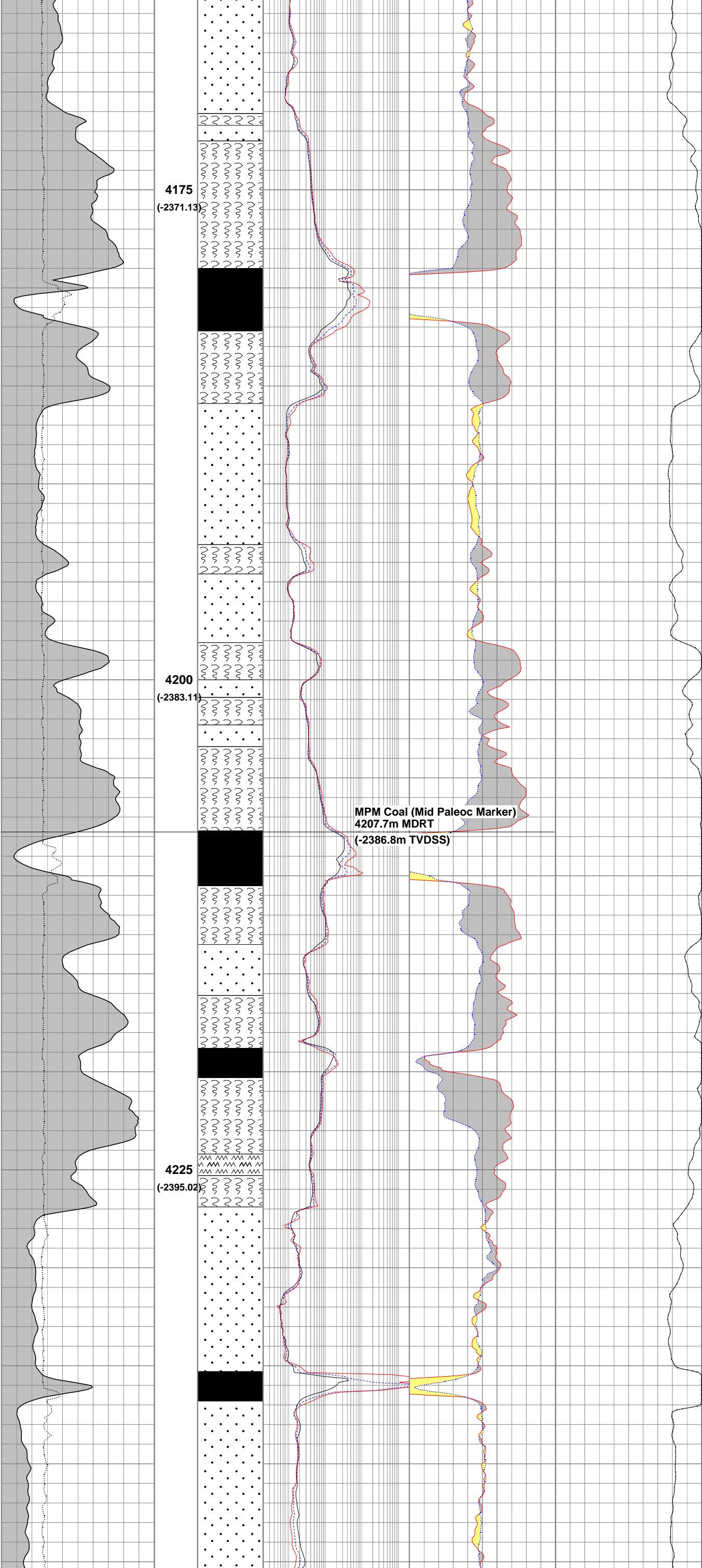
4005.05  
ANG 58.67  
DIR 179.28  
(-2286.04)



EARLY EOCENE



4121.25  
ANG 60.61  
DIR 178.09  
(-2345.08)

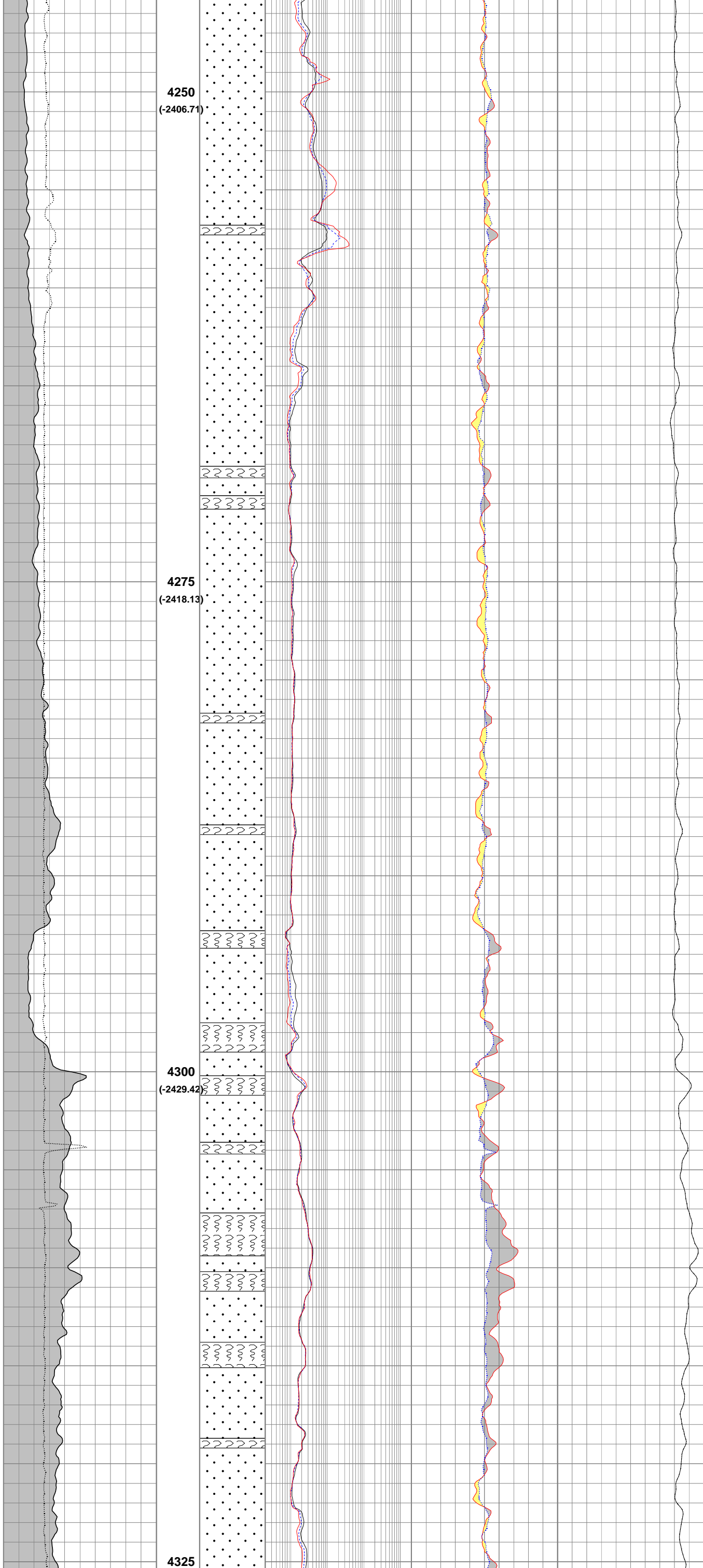


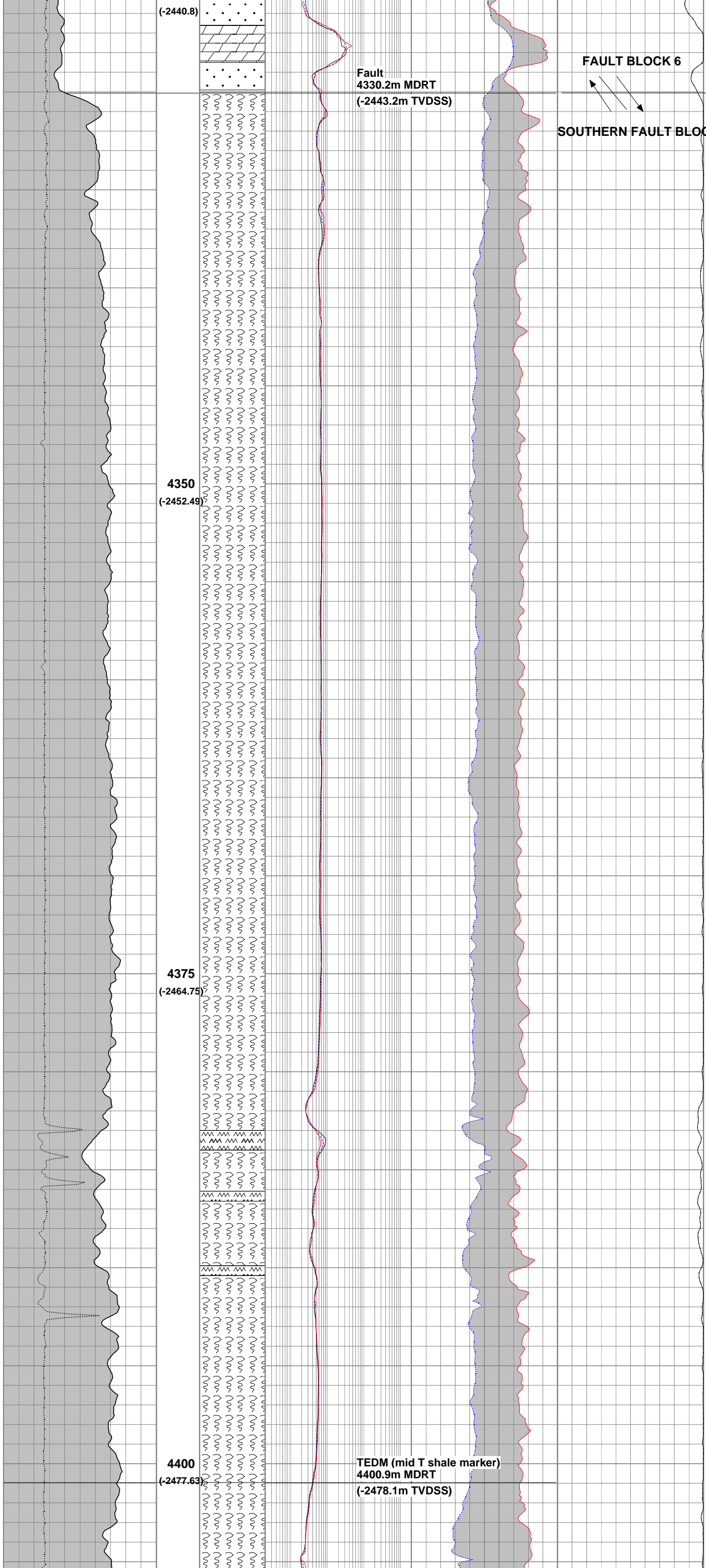
4208.3  
ANG 61.42  
DIR 181.48  
(-2387.1)

4240  
MW 10.0ppg  
FV 74sec/qt  
PV 33cP  
YP 18

LATROBE GROUP

PALEOCENE

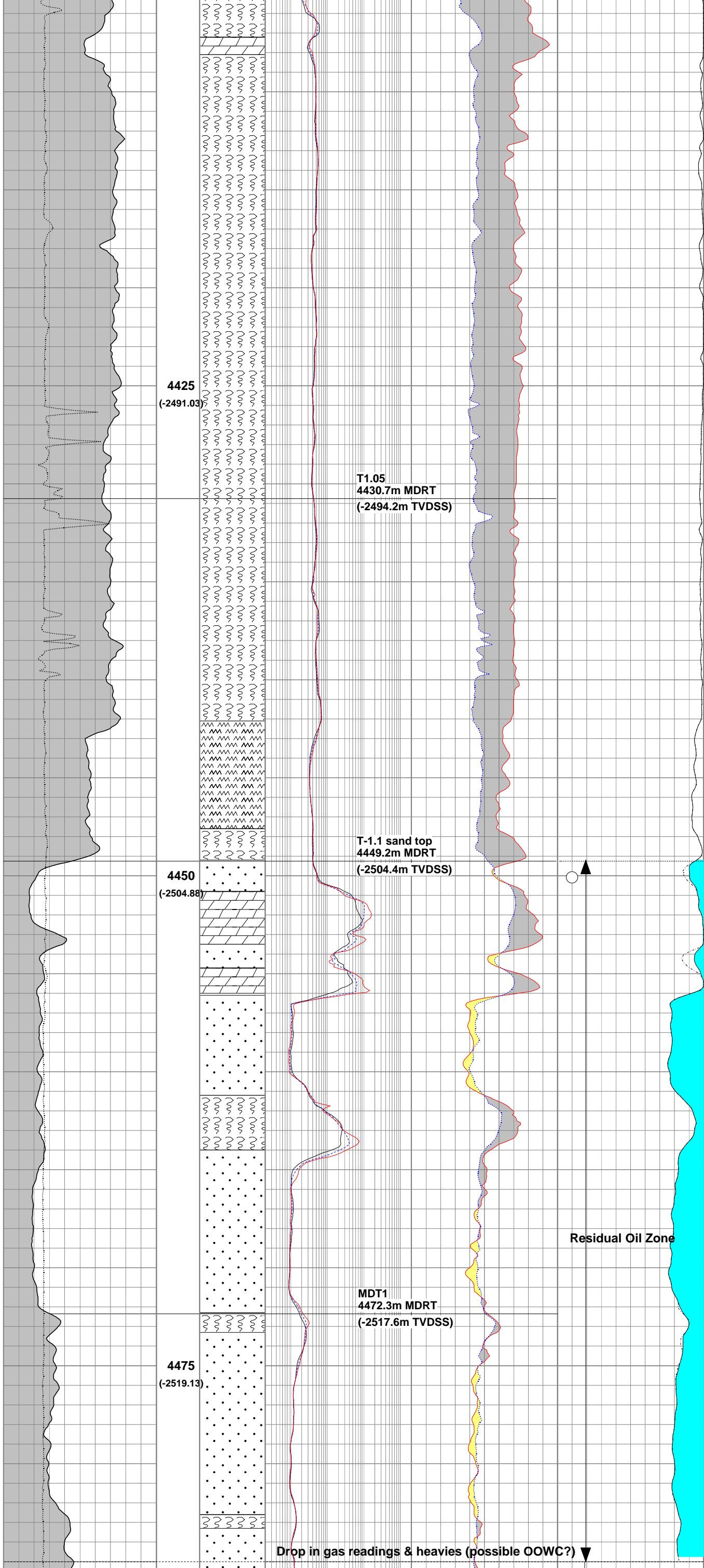




4324.16  
ANG 62.83  
DIR 183.13  
(-2440.42)







CRETACEOUS

4436  
MW 10.1ppg  
FV 85sec/qt  
PV 48cP  
YP 22

4440.07  
ANG 56.33  
DIR 182.99  
(-2499.28)

