



Company: Esso Australia Ltd.

Well: FLA A-21a

Field: Flounder

Rig: Crane/Prod 4

Country: Australia

2 1/8" Enerjet Gun  
MWPT  
Perforating Record

Rig: Crane/Prod 4

Field: Flounder

Location: Gippsland Basin

Well: FLA A-21a

Company: Esso Australia Ltd.

| LOCATION  |   |                             |                            |
|---|---|-----------------------------|----------------------------|
| Gippsland Basin<br>Bass Strait  | Elev.: K.B. 40.8 m<br>G.L. -93 m<br>D.F. 40.8 m |                             |                            |
| Permanent Datum: _____<br>Log Measured From: Kelly Bushing _____<br>Drilling Measured From: Kelly Bushing _____ | Elev.: 0.0 m<br>-40.8 m above Perm. Datum       |                             |                            |
| State: Victoria   | Max. Well Deviation 60 deg                      | Longitude 148° 26' 17.304"S | Latitude 038° 18' 44.786"E |

|                               |                           |            |  |
|-------------------------------|---------------------------|------------|--|
| Logging Date                  | 15-Dec-2005               |            |  |
| Run Number                    | 1                         |            |  |
| Depth Driller                 | 3880 m                    |            |  |
| Schlumberger Depth            | 3340.8 m                  |            |  |
| Bottom Log Interval           | 3340.8 m                  |            |  |
| Top Log Interval              | 3302.4 m                  |            |  |
| Casing Fluid Type             | Production Fluids         |            |  |
| Salinity                      |                           |            |  |
| Density                       |                           |            |  |
| Fluid Level                   |                           |            |  |
| BIT/CASING/TUBING STRING      |                           |            |  |
| Bit Size                      |                           |            |  |
| From                          |                           |            |  |
| To                            |                           |            |  |
| Casing/Tubing Size            | 7.625 in                  |            |  |
| Weight                        | 29.7 lbm/ft               |            |  |
| Grade                         | L-80                      |            |  |
| From                          | 20.43 m                   |            |  |
| To                            | 3826 m                    |            |  |
| Maximum Recorded Temperatures | 107 degC                  |            |  |
| Logger On Bottom              | 15-Dec-2005               | Time 10:45 |  |
| Unit Number                   | 1                         | VEA        |  |
| Recorded By                   | Paul Tarrant & Owen Darby |            |  |
| Witnessed By                  | Barrie White              |            |  |

|                               |         |       |       |
|-------------------------------|---------|-------|-------|
|                               | Run 1   | Run 2 | Run 3 |
| Oil Density                   |         |       |       |
| Water Salinity                |         |       |       |
| Gas Gravity                   |         |       |       |
| Bo                            |         |       |       |
| Bw                            |         |       |       |
| 1/Bg                          |         |       |       |
| Bubble Point Pressure         |         |       |       |
| Bubble Point Temperature      |         |       |       |
| Solution GOR                  |         |       |       |
| Maximum Deviation             | 60 deg  |       |       |
| CEMENTING DATA                |         |       |       |
| Primary/Squeeze               | Primary |       |       |
| Casing String No              |         |       |       |
| Lead Cement Type              |         |       |       |
| Volume                        |         |       |       |
| Density                       |         |       |       |
| Water Loss                    |         |       |       |
| Additives                     |         |       |       |
| Tail Cement Type              |         |       |       |
| Volume                        |         |       |       |
| Density                       |         |       |       |
| Water Loss                    |         |       |       |
| Additives                     |         |       |       |
| Expected Cement Top           |         |       |       |
| Logging Date                  |         |       |       |
| Run Number                    |         |       |       |
| Depth Driller                 |         |       |       |
| Schlumberger Depth            |         |       |       |
| Bottom Log Interval           |         |       |       |
| Top Log Interval              |         |       |       |
| Casing Fluid Type             |         |       |       |
| Salinity                      |         |       |       |
| Density                       |         |       |       |
| Fluid Level                   |         |       |       |
| BIT/CASING/TUBING STRING      |         |       |       |
| Bit Size                      |         |       |       |
| From                          |         |       |       |
| To                            |         |       |       |
| Casing/Tubing Size            |         |       |       |
| Weight                        |         |       |       |
| Grade                         |         |       |       |
| From                          |         |       |       |
| To                            |         |       |       |
| Maximum Recorded Temperatures |         |       |       |
| Logger On Bottom              |         |       |       |
| Unit Number                   |         |       |       |
| Recorded By                   |         |       |       |
| Witnessed By                  |         |       |       |

**DEPTH SUMMARY LISTING**

Date Created: 15-Dec-2005 10:08:00

**Depth System Equipment**

| Depth Measuring Device    |             | Tension Device            |           | Logging Cable   |           |
|---------------------------|-------------|---------------------------|-----------|---|-----------|
| Type:                     | IDW-H       | Type:                     | CMTD-C    | Type:   | 2-32ZT    |
| Serial Number:            | 797         | Serial Number:            | 1037      | Serial Number:  | 22372     |
| Calibration Date:         | 01-May-2005 | Calibration Date:         | 22 Sep 05 | Length:   | 4799.99 M |
| Calibrator Serial Number: | 1009        | Calibrator Serial Number: | 57144     | Conveyance Method: Wireline<br>Rig Type: Offshore_Fixed |           |
| Calibration Cable Type:   | 2-32ZT      | Calibration Gain:         | 1.29      |   |           |
| Wheel Correction 1:       | -3          | Calibration Offset:       | 777.00    |   |           |
| Wheel Correction 2:       | 2           |                           |           |   |           |

**Depth Control Parameters**

|                           |                             |
|---------------------------|-----------------------------|
| Log Sequence:             | Subsequent Trip To the Well |
| Reference Log Name:       | MWPT Perforation Log        |
| Reference Log Run Number: | 1                           |
| Reference Log Date:       | 21 Nov 2005                 |

**Depth Control Remarks**

|    |
|----|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |
| 6. |

**DISCLAIMER**

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

|                 |
|-----------------|
| OTHER SERVICES1 |
| OS1: MPBT       |
| OS2: DB-TT      |
| OS3:            |
| OS4:            |
| OS5:            |

|   |
|---|
| REMARKS: RUN NUMBER 1   |
| Log correlated to MWPT Perforation Record, Run 1, dated 21-Nov-2005           |
| provided by client.   |
| Objective:  |
| To perforate well at 3335.0m to 3336.0m MDKB using 2 1/8" Enerjet Gun         |
| loaded with PowerSpiral charges.  |
| Before perforating, obtain static FBHP and FBHT. After perforating, flow well |
| for 15min to obtain FBHP, FBHT and also for well clean up.                    |
| Static FBHP: 3330psi, FBHT: 3400psi   |

| Tool                                     | Tool Weight (lb) |
|--|------------------|
| AH-SWBS<br>AH-SWBS 731                   | 11.04            |
| AH-SWBS<br>AH-SWBS 761                   | 10.35            |
| AH-SWBS<br>AH-SWBS 762                   | 9.65             |
| AH-SWBS<br>AH-SWBS 763                   | 8.95             |
| MH-SWHS<br>MH-SWHS 726                   | 8.25             |
| MWGT-AA<br>MWGH-AA 19                    | 7.95             |
| MWPG GR                                  | 2.41             |
| MWPT-CA<br>MWPH-AA 74<br>MWPS-AA 74      | 6.97             |
| CCL<br>SMWP Pres<br>SMWP Temp<br>Tension | TOOL ZERO        |
| ALL FLEX JOINT                           | 4.15             |

Diagram illustrating the vertical tool structure with segments labeled 1 through 5 from bottom to top. The bottom segment is the longest, and the top segment is the shortest. The label "TOOL BOTTOM" is at the base.

TOOL BOTTOM

MAXIMUM STRING DIAMETER 2.17 IN  
MEASUREMENTS RELATIVE TO TOOL ZERO  
ALL LENGTHS IN METERS

Client: ExxonMobil

Well: FLA A-21a

Field: Flounder

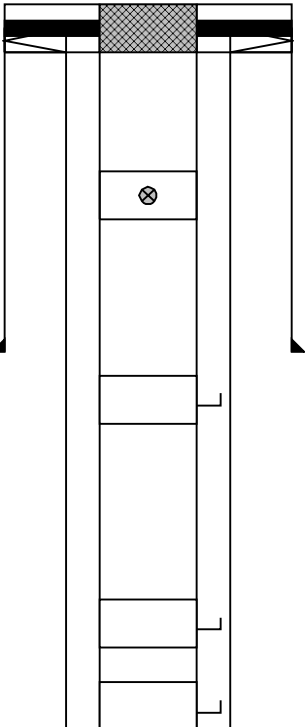
State: Victoria

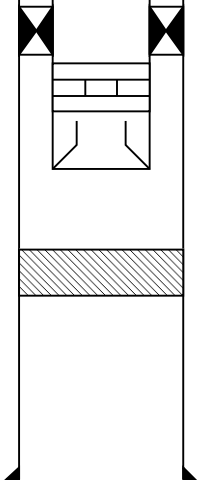
Country: Australia

Rig Name: Flounder

Reference Datum: Kelly Bushing

Elevation: 40.8 m

| Production String       | (in)            |       | (m)          | Well Schematic  | (m)          |                  | (in)  | Casing String                 |
|-------------------------|-----------------|-------|--------------|---|--------------|------------------|-------|-------------------------------|
|                         | OD              | ID    | MD           |   | MD           | OD               | ID    |                               |
| Tubing Hanger<br>Tubing | 13.375<br>4.500 | 4.500 | 19.3<br>19.3 |  | 20.4<br>20.4 | 13.375<br>13.375 | 7.625 | Casing String<br>Liner Hanger |
| Shutin Valve            | 4.500           |       | 450.1        |   |              |                  |       |                               |
| Gas Lift Mandrel        | 4.500           |       | 950.5        |   | 750.0        | 13.375           |       | Casing Shoe                   |
| Gas Lift Mandrel        | 4.500           |       | 1660.7       |   |              |                  |       |                               |
| Gas Lift Mandrel        | 4.500           |       | 1814.2       |   |              |                  |       |                               |
|                         |                 |       |              |   |              |                  |       |                               |

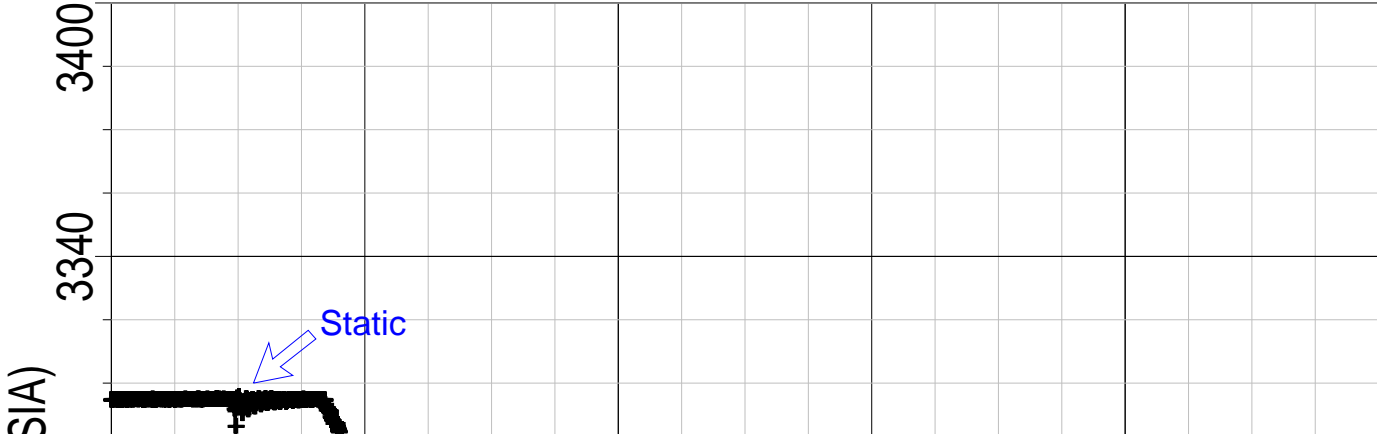
|                   |       |       |        |   |        |       |  |             |
|-------------------|-------|-------|--------|---|--------|-------|--|-------------|
| Packer            | 7.625 | 4.500 | 3289.0 |  |        |       |  |             |
| Nipple            | 4.500 |       | 3304.8 |   |        |       |  |             |
| Bell Nipple Guide | 4.500 |       | 3306.9 |   |        |       |  |             |
|                   |       |       |        |   | 3348.0 |       |  | PBTD        |
|                   |       |       |        |   | 3826.3 | 7.625 |  | Casing Shoe |

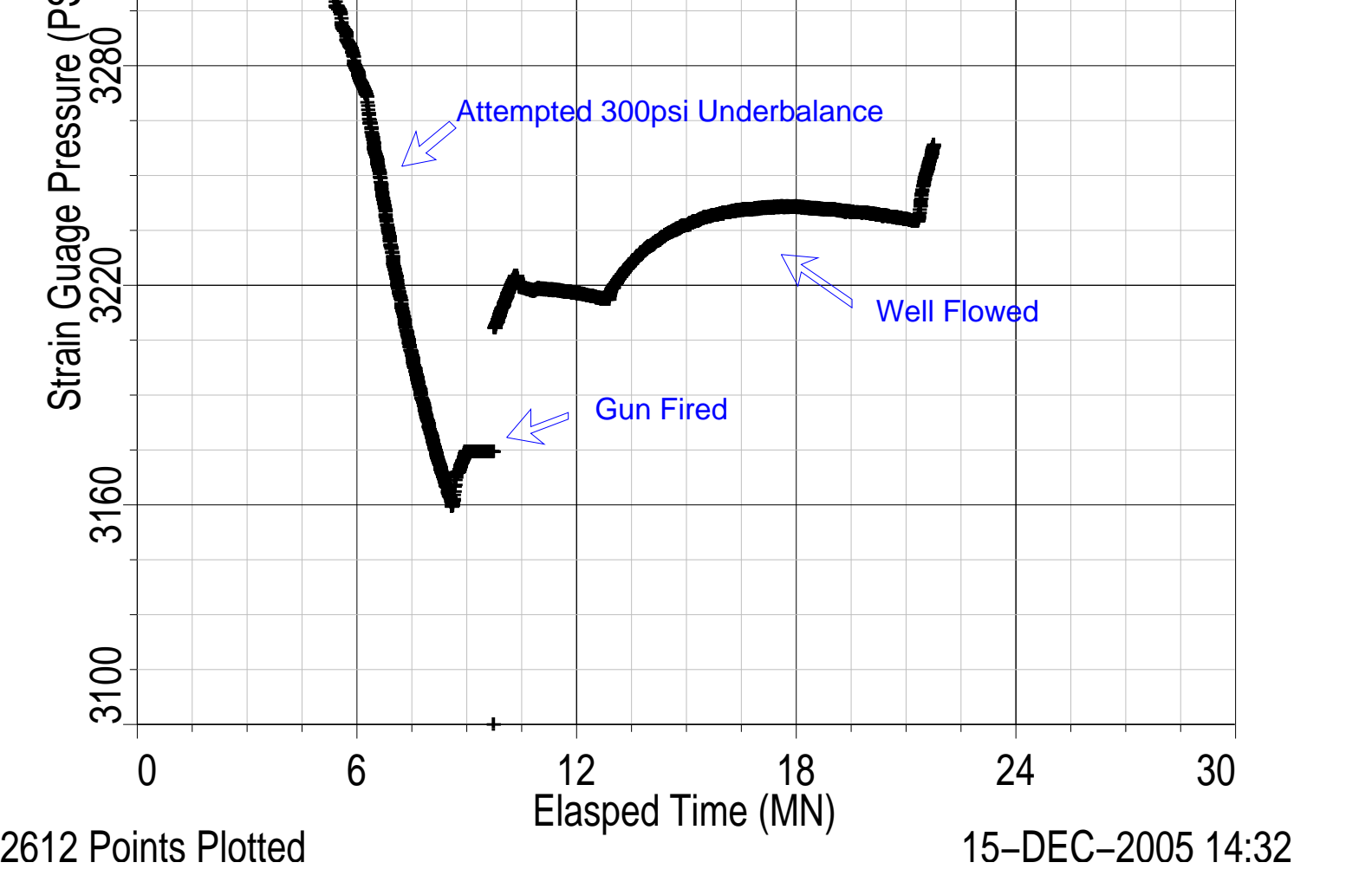


MWPT 2 1/8" Enerjet Gun  
Station Log

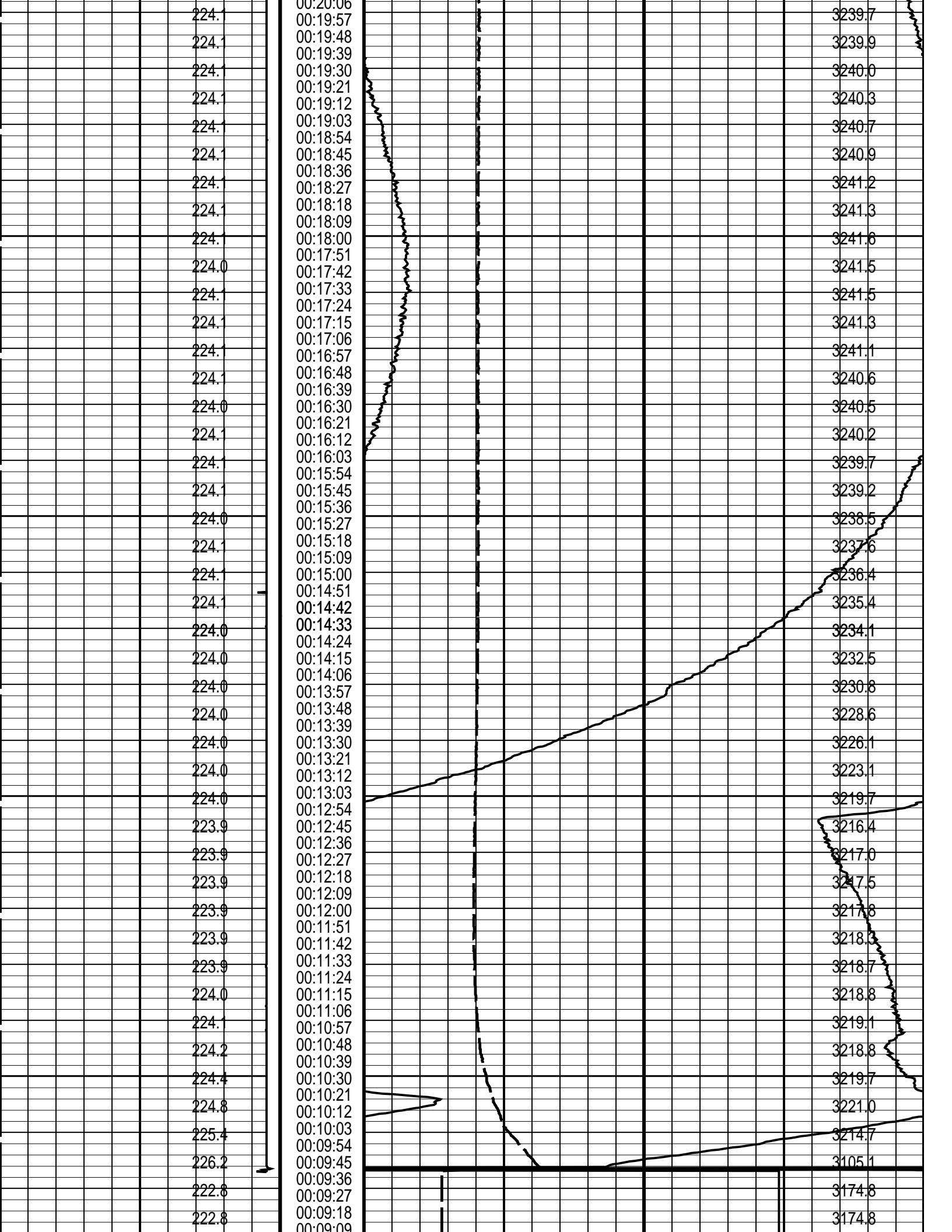
MAXIS Field Log

Index: 19984.7 – 26616.7 M

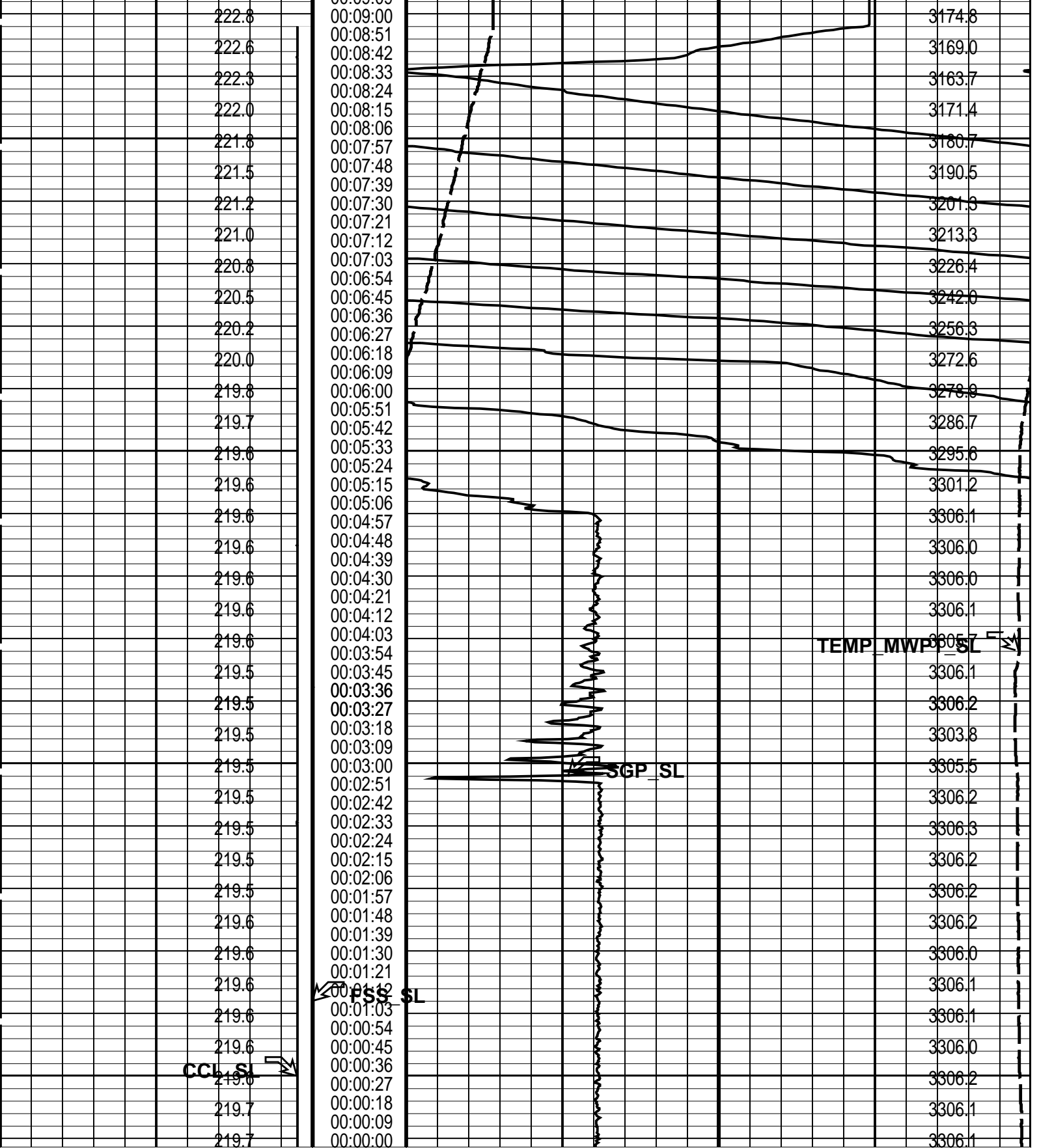




| Output DLIS Files              |  |                                      |                                       |       |                           |          |                     |                                  |  |
|--------------------------------|--|--------------------------------------|---------------------------------------|-------|---------------------------|----------|---------------------|----------------------------------|--|
| DEFAULT                        |  | PERFO_021LTP                         |                                       | FN:20 |                           | PRODUCER |                     | 15-Dec-2005 11:13 3330.4 M 3.3 M |  |
| OP System Version: 13C0-300    |  |                                      |                                       |       |                           |          |                     |                                  |  |
| MCM                            |  |                                      |                                       |       |                           |          |                     |                                  |  |
| MWP_GUN                        |  | SRC-2820-ASFS-WPP_1                  |                                       |       | MWPT-CA                   |          | SRC-2820-ASFS-WPP_1 |                                  |  |
| MWGT-AA                        |  | SRC-2820-ASFS-WPP_1                  |                                       |       |                           |          |                     |                                  |  |
| PIP SUMMARY                    |  |                                      |                                       |       |                           |          |                     |                                  |  |
| Time Mark Every 60 S           |  |                                      |                                       |       |                           |          |                     |                                  |  |
|                                |  | Temperature (TEMP_MWPT_SL) (DEGF)    |                                       |       | Pressure (SGPA_SL) (PSIA) |          |                     |                                  |  |
| CCL From CCL to T1             |  | Firing Sequence State (FSS_SL) (---- | Temperature (TEMP_MWPT_SL) (DEGF)     |       |                           |          |                     |                                  |  |
|                                |  | 0                                    | 1024                                  |       |                           |          |                     |                                  |  |
|                                |  | 0                                    | 1024                                  |       |                           |          |                     |                                  |  |
| Casing Collar Locator (CCL_SL) |  | Elapsed Time (ETIM) (S)              | Strain Gauge Pressure (SGP_SL) (PSIA) |       |                           |          |                     |                                  |  |
| -19 (----                      |  | 1                                    | 0 20                                  |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:21:45                             | 3258.0                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:21:36                             | 3249.1                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:21:27                             | 3237.7                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:21:18                             | 3238.9                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:21:09                             | 3238.5                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:21:00                             | 3239.1                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:20:51                             | 3239.4                                |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:20:42                             |                                       |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:20:33                             |                                       |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:20:24                             |                                       |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:20:15                             |                                       |       |                           |          |                     |                                  |  |
| 224.1                          |  | 00:20:06                             |                                       |       |                           |          |                     |                                  |  |








|                                |  |                                       |                                       |  |
|--------------------------------|--|---------------------------------------|---------------------------------------|--|
| Casing Collar Locator (CCL_SL) |  | Elapsed Time (ETIM) (S)               | Strain Gauge Pressure (SGP_SL) (PSIA) |  |
| -19 (----) 1                   |  | 0 1024                                | 0 20                                  |  |
| CCL From CCL to T1             |  | Firing Sequence State (FSS_SL) (----) | Temperature (TEMP_MWPT_SL) (DEGF)     |  |
|                                |  | 0 1024                                | 0 20                                  |  |

|  |             |  |                 |
|--|-------------|--|-----------------|
|  | Temperature |  | Pressure (SGPA_ |
|--|-------------|--|-----------------|

|   |  |  |                     |
|---|--|--|---------------------|
|   | (TEMP_MWPT_SL)<br>(DEGF)                 |  | (SL)<br>(PSIA)      |
| PIP SUMMARY                                 |  |  |                     |
| Time Mark Every 60 S                        |  |  |                     |
| Parameters                                  |  |  |                     |
| DLIS Name                                   | Description                              | Value                                    |                     |
| MWPT-CA: MEASUREMENT WHILE PERFORATING TOOL |  |  |                     |
| DEVI_FL_CORR                                | Deviation Angle for Flow Line Correction | 0  | DEG                 |
| FLD   | Flow Line Density                        | 1  | G/C3                |
| MWPT_NULL_SOURCE                            | MWPT NULL Temperature Source             | TEMS                                     |                     |
| MWPT_NULL_TEMP                              | MWPT NULL Temperature                    | 0.0                                      | DEGC                |
| Format: MWP_SL Vertical Scale: 1" per 60S   |  | Graphics File Created: 15-Dec-2005 11:13 |                     |
| OP System Version: 13C0-300                 |  |  |                     |
| MCM   |  |  |                     |
| MWP_GUN                                     | SRC-2820-ASFS-WPP_1                      | MWPT-CA                                  | SRC-2820-ASFS-WPP_1 |
| MWGT-AA                                     | SRC-2820-ASFS-WPP_1                      |  |                     |

|                   |              |       |                            |
|-------------------|--------------|-------|----------------------------|
| Output DLIS Files |              |       |                            |
| DEFAULT           | PERFO_021LTP | FN:20 | PRODUCER 15-Dec-2005 11:13 |



MWPT 2 1/8" Enerjet Gun  
Shooting Pass

MAXIS Field Log

|                             |                     |         |                     |                   |                   |
|-----------------------------|---------------------|---------|---------------------|-------------------|-------------------|
| Output DLIS Files           |                     |         |                     |                   |                   |
| DEFAULT                     | PERFO_020LUP        | FN:19   | PRODUCER            | 15-Dec-2005 11:12 | 3340.8 M 3302.4 M |
| OP System Version: 13C0-300 |                     |         |                     |                   |                   |
| MCM                         |                     |         |                     |                   |                   |
| MWP_GUN                     | SRC-2820-ASFS-WPP_1 | MWPT-CA | SRC-2820-ASFS-WPP_1 |                   |                   |
| MWGT-AA                     | SRC-2820-ASFS-WPP_1 |         |                     |                   |                   |

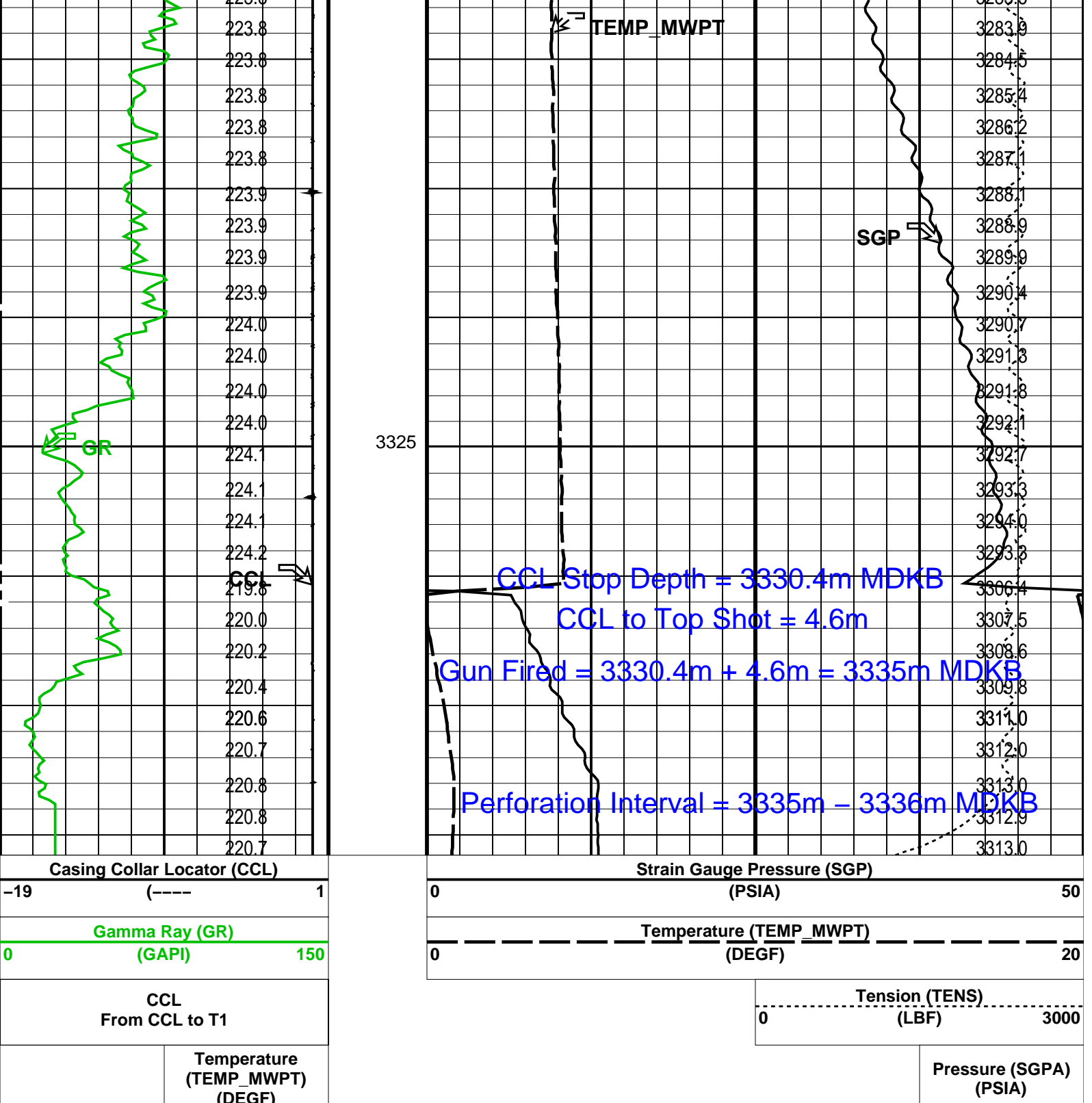
PIP SUMMARY

Time Mark Every 60 S

|                             |   |                                       |  |
|-----------------------------|---|---------------------------------------|--|
|                             | Temperature<br>(TEMP_MWPT)<br>(DEGF)      |                                       | Pressure (SGPA)<br>(PSIA)                      |
| CCL<br>From CCL to T1       |   | Tension (TENS)<br>(LBF)               | 0 3000   |
| Gamma Ray (GR)<br>(GAPI)    | 0 150                                     | Temperature (TEMP_MWPT)<br>(DEGF)     | 0 20   |
| Casing Collar Locator (CCL) |   | Strain Gauge Pressure (SGP)<br>(PSIA) | 0 50   |
| -19 (---- 1                 | 223.7<br>223.7<br>223.7<br>223.8<br>223.8 |                                       | 3281.5<br>3282.1<br>3282.6<br>3283.2<br>3283.5 |

EOT

TENS



| Parameters                                  |  |          |
|---|--|----------|
| DLIS Name                                   | Description                              | Value    |
| MWPT-CA: MEASUREMENT WHILE PERFORATING TOOL |  |          |
| DEVI_FL_CORR                                | Deviation Angle for Flow Line Correction | 0 DEG    |
| FLD   | Flow Line Density                        | 1 G/C3   |
| MWPT_NULL_SOURCE                            | MWPT NULL Temperature Source             | TEMS     |
| MWPT_NULL_TEMP                              | MWPT NULL Temperature                    | 0.0 DEGC |

Format: MWP Vertical Scale: 1:200 Graphics File Created: 15-Dec-2005 11:12

Output DLIS Files

DEFAULTPERFO\_020LUPFN:19PRODUCER15-Dec-2005 11:12

Schlumberger

MWPT 2 1/8" Enerjet Gun  
Correlation Pass

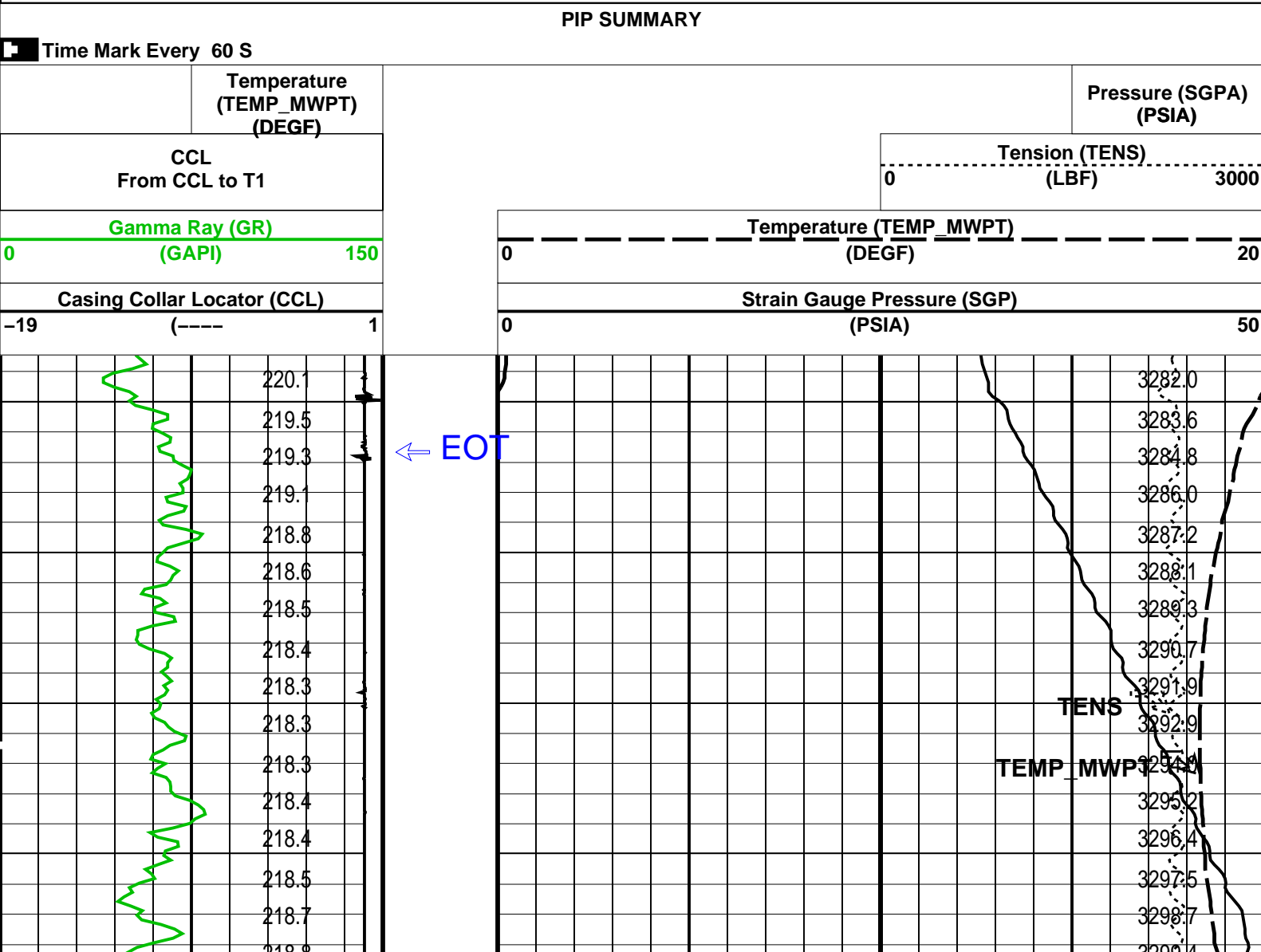
MAXIS Field Log

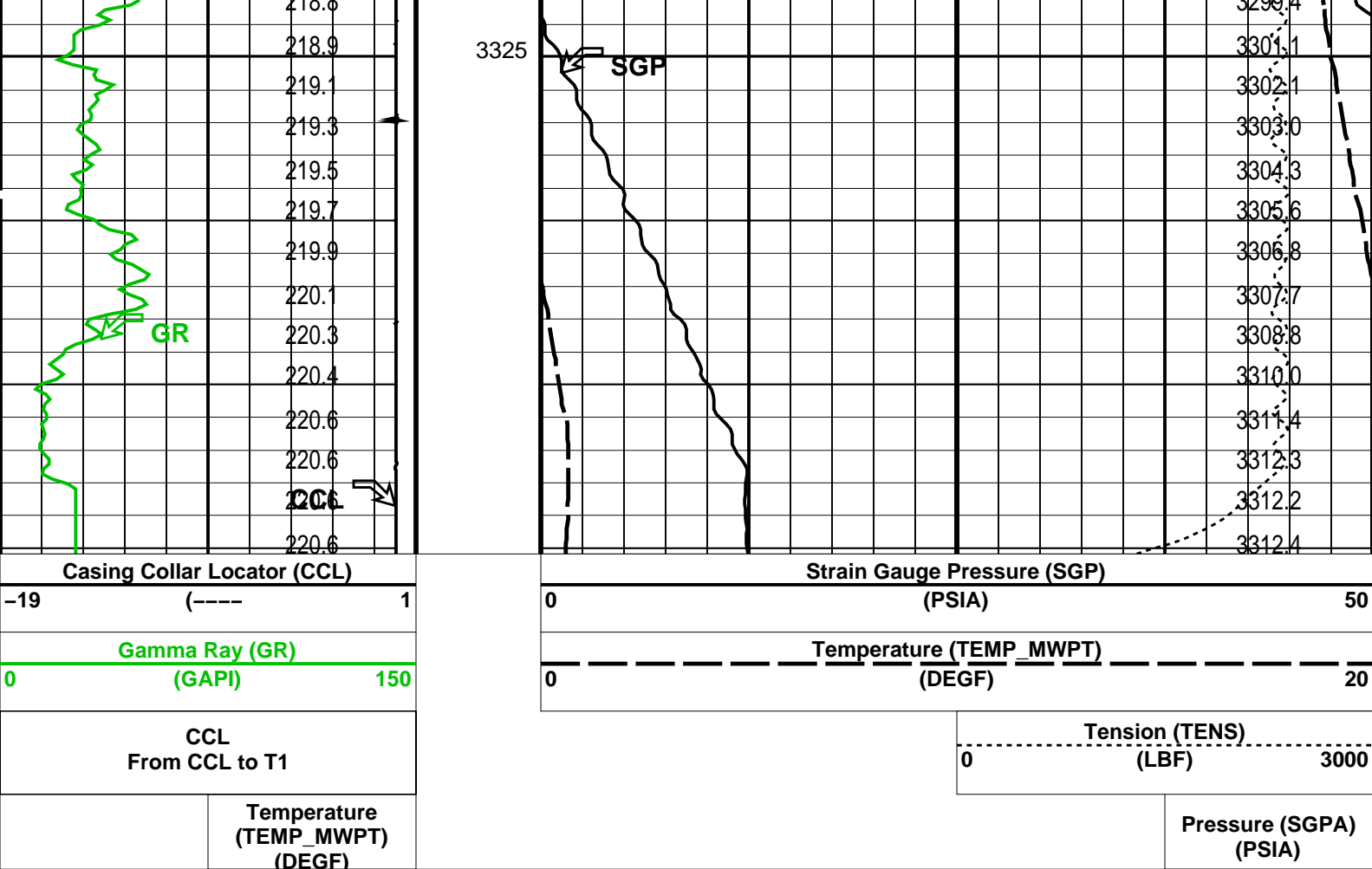
Output DLIS Files

DEFAULTPERFO\_019LUPFN:18PRODUCER15-Dec-2005 11:07

OP System Version: 13C0-300  
MCM

MWP\_GUNSRC-2820-ASFS-WPP\_1MWPT-CASRC-2820-ASFS-WPP\_1  
MWGT-ASFS-WPP\_1





Time Mark Every 60 S

| Parameters                                  |  |          |
|---|--|----------|
| DLIS Name                                   | Description                              | Value    |
| MWPT-CA: MEASUREMENT WHILE PERFORATING TOOL |  |          |
| DEVI_FL_CORR                                | Deviation Angle for Flow Line Correction | 0 DEG    |
| FLD   | Flow Line Density                        | 1 G/C3   |
| MWPT_NULL_SOURCE                            | MWPT NULL Temperature Source             | TEMS     |
| MWPT_NULL_TEMP                              | MWPT NULL Temperature                    | 0.0 DEGC |

Format: MWP Vertical Scale: 1:200 Graphics File Created: 15-Dec-2005 11:07

| OP System Version: 13C0-300 |                     |         |                     |
|-----------------------------|---------------------|---------|---------------------|
| MCM                         |                     |         |                     |
| MWP_GUN                     | SRC-2820-ASFS-WPP_1 | MWPT-CA | SRC-2820-ASFS-WPP_1 |
| MWGT-AA                     | SRC-2820-ASFS-WPP_1 |         |                     |

| Output DLIS Files |              |       |                            |
|-------------------|--------------|-------|----------------------------|
| DEFAULT           | PERFO_019LUP | FN:18 | PRODUCER 15-Dec-2005 11:07 |

Company: **Esso Australia Ltd.**

Well: **FLA A-21a**

Field: **Flounder**

Rig: **Crane/Prod 4**

Country: **Australia**

**Schlumberger**

2 1/8" Enerjet Gun  
MWPT

