

Input Source: D:\OP_Folder\Clients\Eso2008\HLA_A-16a\GUN\COMP_HLA_A16A_PLUG_PERF_106.DLIS
Format: DLIS
Storage Set ID: Default Storage Set

Max Record Length: 8192
Storage Unit Sequence: 1

File Header File: **PERFO_101LUP** Sequence: **1**

Defining Origin: 41

File ID: PERFO_101LUP File Type: DEPTH LOG

Producer Name: Schlumberger Product/Version: OP 15C0-309 File Set: 41 File Number: 100 25-JAN-2008 23:17:48

Company Name: Esso Australia Pty Ltd.
Well Name: A-16a
Field Name: Halibut
Tool String: SHM_GUN, CCL-L
Computations: WELLCAD

Error Summary File: **PERFO_101LUP** Sequence: **1**

No errors detected in file.

Well Site Data File: **PERFO_101LUP** Sequence: **1**

Origin: 41

Well Data

| | | |
|----------------------------|--------------------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | CN |
| Well Name | A-16a | WN |
| Field Name | Halibut | FN |
| Rig: | Crane | CLAB, COUN |
| State: | Victoria | SLAB, STAT |
| Nation | Australia | NATI |
| Field Location | Gippsland | FL |
| | Basin | FL1 |
| | Bass Strait | FL2 |
| Service Order Number | AUSL07336276 | SON |
| Longitude | 148° 19' 07.62"E | LONG |
| Latitude | 38° 24' 20.36"S | LATI |
| Maximum Hole Deviation | 48.0 (deg) | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | EKB |
| Elevation of Ground Level | -73.0 (m) | EGL |
| Elevation of Derrick Floor | 29.5 (m) | EDF |
| Permanent Datum | M.S.L | PDAT, EPD |
| Log Measured From | K.B | LMF, APD |
| Drilling Measured From | K.B | DMF |
| | Elevation of Permanent Datum 0.0 (m) | |
| | Above Permanent Datum 29.5 (m) | |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | |
|------------------------|-------------------------------------|------------|
| Date as Month-Day-Year | 25-Jan-2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth - Driller | 2563.0 (m) | TDD |
| Total Depth - Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |
| Top Log Interval | 2380.0 (m) | TLI |
| Current Casing Size | 7.00 (in) | CSIZ |
| Casing Depth From | 12.0 (m) | CDF |
| Casing Depth To | 2563.0 (m) | CADT |
| Casing Grade | L-80 | CASG |
| Casing Weight | 26.0 (lbm/ft) | CWEI |
| Bit Size | 8.50 (in) | BS |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| Logging Unit Number | 889 | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | ENGI |
| Witness's Name | B White | WITN |
| Service Order Number | AUSL07336276 | SON |
| | Time Logger At Bottom 11:00 | |
| | Logging Unit Location Prod 4 / AUSL | |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | |
|---|-------------------|-----------------------------|
| Drilling Fluid Type | Production Fluids | DFT |
| Maximum Recorded Temperature | 229.0 (degF) | MRT |
| | 229.0 (degF) | MRT1 |
| Date Logger At Bottom | 25-Jan-2008 | Time Logger At Bottom 11:00 |
| | | DLAB, TLAB |
| Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS | | |
| PVT Data | | |
| Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR | | |
| Cement Data | | |
| Cement Job Type | Primary | CJT |
| Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA | | |
| Remarks | | |
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | | R1 |
| Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2-1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | | R5 |
| CCL to top shot = 3.4m MDKB | | R6 |
| CCL Stop Depth = 2483.6m MDKB | | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | | R9 |
| Top of seal @ 2490.4m MDKB | | R11 |
| CCL to top of seal = 7m | | R12 |
| CCL Stop Depth: 2483.4m MDKB | | R13 |
| Dump Bailers: | | R14 |
| CCL to bottom of bailer = 11m | | R15 |
| 2 cement runs were made with 1-11/16", 32ft long dump bailers. | | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | | R17 |
| Other Services | | |
| PLT Survey | | OS1 |

| | | | | | | |
|---|--------------|-------------|-------------------|-----------------|----------------------|-------------------|
| Frame Summary File: PERFO_101LUP Sequence: 1 | | | | | | |
| Origin: 41 | | | | | | |
| <u>Index Type</u> | <u>Start</u> | <u>Stop</u> | <u>Spacing</u> | <u>Channels</u> | <u>Index Channel</u> | <u>Frame Name</u> |
| BOREHOLE-DEPTH | 2481.53 | 2373.78 m | -60.0 (0.1 in) up | 7 | TDEP | 60B |
| | 8141.50 | 7788.00 ft | | | | |
| BOREHOLE-DEPTH | 2481.53 | 2373.81 m | -10.0 (0.1 in) up | 7 | TDEP;1 | 10B |
| | 8141.50 | 7788.08 ft | | | | |

| | | | | | |
|---|--|------------------------------|--|--------------|---|
| File Header | | File: PERFO_104PUP | | Sequence: 2 | |
| Defining Origin: 41 | | | | | |
| File ID: PERFO_104PUP File Type: PLAYBACK | | | | | |
| Producer Name: Schlumberger | | Product/Version: OP 15C0-309 | | File Set: 41 | File Number: 105 26-JAN-2008 2:13:07 |
| Company Name: | | Esso Australia Pty Ltd. | | | |
| Well Name: | | A-16a | | | |
| Field Name: | | Halibut | | | |
| Tool String: | | SHM_GUN, CCL-L | | | |
| Computations: | | WELLCAD | | | |

| | | |
|---|--|--|
| Error Summary File: PERFO_104PUP Sequence: 2 | | |
| No errors detected in file. | | |

| | | |
|--|--|--|
| Well Site Data File: PERFO_104PUP Sequence: 2 | | |
| Origin: 41 | | |

Well Data

| | | |
|--------------------------------------|-------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | CN |
| Well Name | A-16a | WN |
| Field Name | Halibut | FN |
| Rig: | Crane | CLAB, COUN |
| State: | Victoria | SLAB, STAT |
| Nation | Australia | NATI |
| Field Location | Gippsland | FL |
| | Basin | FL1 |
| | Bass Strait | FL2 |
| Service Order Number | AUSL07336276 | SON |
| Longitude | 148° 19' 07.62"E | LONG |
| Latitude | 38° 24' 20.36"S | LATI |
| Maximum Hole Deviation | 48.0 (deg) | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | EKB |
| Elevation of Ground Level | -73.0 (m) | EGL |
| Elevation of Derrick Floor | 29.5 (m) | EDF |
| Permanent Datum | M.S.L | PDAT, EPD |
| Log Measured From | K.B | LMF, APD |
| Drilling Measured From | K.B | DMF |
| Elevation of Permanent Datum 0.0 (m) | | |
| Above Permanent Datum 29.5 (m) | | |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | |
|-------------------------------------|--------------------|------------|
| Date as Month-Day-Year | 25-Jan-2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth - Driller | 2563.0 (m) | TDD |
| Total Depth - Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |
| Top Log Interval | 2380.0 (m) | TLI |
| Current Casing Size | 7.00 (in) | CSIZ |
| Casing Depth From | 12.0 (m) | CDF |
| Casing Depth To | 2563.0 (m) | CADT |
| Casing Grade | L-80 | CASG |
| Casing Weight | 26.0 (lbm/ft) | CWEI |
| Bit Size | 8.50 (in) | BS |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| Logging Unit Number | 889 | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | ENGI |
| Witness's Name | B White | WITN |
| Service Order Number | AUSL07336276 | SON |
| Time Logger At Bottom 11:00 | | |
| Logging Unit Location Prod 4 / AUSL | | |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | |
|------------------------------|-------------------|------------|
| Drilling Fluid Type | Production Fluids | DFT |
| Maximum Recorded Temperature | 229.0 (degF) | MRT |
| | 229.0 (degF) | MRT1 |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| Time Logger At Bottom 11:00 | | |

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

| | | |
|-----------------|---------|-----|
| Cement Job Type | Primary | CJT |
|-----------------|---------|-----|

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

| | |
|---|-----|
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | R1 |
| Objectives: Perforate the well over the interval 2487m - 2489.2m MDKB using 2-1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | R5 |
| CCL to top shot = 3.4m MDKB | R6 |
| CCL Stop Depth = 2483.6m MDKB | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | R9 |
| Top of seal @ 2490.4m MDKB | R11 |
| CCL to top of seal = 7m | R12 |
| CCL Stop Depth: 2483.4m MDKB | R13 |
| Dump Bailers: | R14 |
| CCL to bottom of bailer = 11m | R15 |
| 2 cement runs were made with 1-11/16", 32ft long dump bailers. | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | R17 |

Other Services

| | |
|------------|-----|
| PLT Survey | OS1 |
|------------|-----|

PER Survey

001

| | | | | | | |
|-------------------|--------------|--------------------|-------------------|-----------------|----------------------|-------------------|
| Frame Summary | | File: PERFO_104PUP | | Sequence: 2 | | |
| Origin: 41 | | | | | | |
| <u>Index Type</u> | <u>Start</u> | <u>Stop</u> | <u>Spacing</u> | <u>Channels</u> | <u>Index Channel</u> | <u>Frame Name</u> |
| BOREHOLE-DEPTH | 2478.33 | 2400.00 m | -60.0 (0.1 in) up | 7 | TDEP | 60B |
| | 8131.00 | 7874.00 ft | | | | |
| BOREHOLE-DEPTH | 2478.33 | 2400.02 m | -10.0 (0.1 in) up | 4 | TDEP;1 | 10B |
| | 8131.00 | 7874.08 ft | | | | |

| | | | | | |
|---|--|------------------------------|--|--------------|---|
| File Header | | File: PERFO_073PUP | | Sequence: 3 | |
| Defining Origin: 33 | | | | | |
| File ID: PERFO_073PUP File Type: PLAYBACK | | | | | |
| Producer Name: Schlumberger | | Product/Version: OP 15C0-309 | | File Set: 41 | File Number: 72 25-JAN-2008 12:50:57 |
| Company Name: Esso Australia Pty Ltd. | | | | | |
| Well Name: A-16a | | | | | |
| Field Name: Halibut | | | | | |
| Tool String: MWPT-CA, MWGT-AA | | | | | |
| Computations: WELLCAD, BORDYN | | | | | |

| | | |
|-----------------------------|--------------------|-------------|
| Error Summary | File: PERFO_073PUP | Sequence: 3 |
| No errors detected in file. | | |

| | | | |
|---|-------------------------|--------------------------------------|-------------|
| Well Site Data | | File: PERFO_073PUP | Sequence: 3 |
| Origin: 33 | | | |
| Well Data | | | |
| Company Name | Esso Australia Pty Ltd. | | CN |
| Well Name | A-16a | | WN |
| Field Name | Halibut | | FN |
| Rig: | Crane | | CLAB, COUN |
| State: | Victoria | | SLAB, STAT |
| Nation | Australia | | NATI |
| Field Location | Gippsland | | FL |
| | Basin | | FL1 |
| | Bass Strait | | FL2 |
| Service Order Number | AUSL07336276 | | SON |
| Longitude | 148° 19' 07.62"E | | LONG |
| Latitude | 38° 24' 20.36"S | | LATI |
| Maximum Hole Deviation | 48.0 (deg) | | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | | EKB |
| Elevation of Ground Level | -73.0 (m) | | EGL |
| Elevation of Derrick Floor | 29.5 (m) | | EDF |
| Permanent Datum | M.S.L | Elevation of Permanent Datum 0.0 (m) | PDAT, EPD |
| Log Measured From | K.B | Above Permanent Datum 29.5 (m) | LMF, APD |
| Drilling Measured From | K.B | | DMF |
| Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN | | | |
| Job Data | | | |
| Date as Month-Day-Year | 25-Jan-2008 | | DATE |
| Run Number | 1 through 5 | | RUN |
| Total Depth - Driller | 2563.0 (m) | | TDD |
| Total Depth - Logger | 2500.0 (m) | | TDL |
| Bottom Log Interval | 2500.0 (m) | | BLI |
| Top Log Interval | 2380.0 (m) | | TLI |
| Current Casing Size | 7.00 (in) | | CSIZ |
| Casing Depth From | 12.0 (m) | | CDF |
| Casing Depth To | 2563.0 (m) | | CADT |
| Casing Grade | L-80 | | CASG |
| Casing Weight | 26.0 (lbm/ft) | | CWEI |
| Bit Size | 8.50 (in) | | BS |

Date Logger At Bottom

Logging Unit Number

Engineer's Name

Witness's Name

Service Order Number

25-Jan-2008

889

S Gilbert / R Sani

B White

AUSL07336276

Time Logger At Bottom

11:00

DLAB, TLAB

LUN, LUL

ENGI

WITN

SON

Absent Valued Parameters: BSDF, BSDT

Mud Data

Drilling Fluid Type

Maximum Recorded Temperature

229.0 (degC)

Production Fluids

106.7 (degC)

Date Logger At Bottom

25-Jan-2008

Time Logger At Bottom

11:00

DLAB, TLAB

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

Cement Job Type

Primary

CJT

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

Log correlated to ExxonMobil Solar Composite Log supplied with logging program.

Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2–1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT.

Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top.

Maximum deviation of well of 48 deg @ 2316m MDKB.

Perforation interval: 2487m to 2489.2m MDKB.

CCL to top shot = 3.4m MDKB

CCL Stop Depth = 2483.6m MDKB

Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia

After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia

Top of seal @ 2490.4m MDKB

CCL to top of seal = 7m

CCL Stop Depth: 2483.4m MDKB

Dump Bailers:

CCL to bottom of bailer = 11m

2 cement runs were made with 1–11/16", 32ft long dump bailers.

Schlumberger crews: J Light, Z Casey, G Martin, C Shiells

R1

R2

R3

R4

R5

R6

R7

R8

R9

R11

R12

R13

R14

R15

R16

R17

Other Services

PLT Survey

OS1

Frame Summary

File: PERFO_073PUP

Sequence: 3

Origin: 33

Index Type

Start

Stop

Spacing

Channels

Index Channel

Frame Name

BOREHOLE-DEPTH

2530.45

2412.64 m

–60.0 (0.1 in) up

22

TDEP

60B

BOREHOLE-DEPTH

2530.45

2412.82 m

–10.0 (0.1 in) up

10

TDEP;1

10B

File Header

File: PERFO_064LUP

Sequence: 4

Defining Origin: 14

File ID: PERFO_064LUP

File Type: DEPTH LOG

Producer Name: Schlumberger

Product/Version: OP 15C0-309

File Set: 41

File Number: 63

25-JAN-2008 10:34:30

Company Name:

Esso Australia Pty Ltd.

Well Name:

A-16a

Field Name:

Halibut

Tool String:

MWP_GUN, MWPT-CA, MWGT-AA

Computations:

WELLCAD, BORDYN

Error Summary

File: PERFO_064LUP

Sequence: 4

No errors detected in file.

Well Site Data

File: PERFO_064LUP

Sequence: 4

Origin: 14

Well Data

Company Name

Esso Australia Pty Ltd.

CN

| | | |
|--------------------------------------|-------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | CN |
| Well Name | A-16a | WN |
| Field Name | Halibut | FN |
| Rig: | Crane | CLAB, COUN |
| State: | Victoria | SLAB, STAT |
| Nation | Australia | NATI |
| Field Location | Gippsland | FL |
| | Basin | FL1 |
| | Bass Strait | FL2 |
| Service Order Number | AUSL07336276 | SON |
| Longitude | 148° 19' 07.62"E | LONG |
| Latitude | 38° 24' 20.36"S | LATI |
| Maximum Hole Deviation | 48.0 (deg) | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | EKB |
| Elevation of Ground Level | -73.0 (m) | EGL |
| Elevation of Derrick Floor | 29.5 (m) | EDF |
| Permanent Datum | M.S.L | PDAT, EPD |
| Log Measured From | K.B | LMF, APD |
| Drilling Measured From | K.B | DMF |
| Elevation of Permanent Datum 0.0 (m) | | |
| Above Permanent Datum 29.5 (m) | | |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | |
|-------------------------------------|--------------------|------------|
| Date as Month–Day–Year | 25–Jan–2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth – Driller | 2563.0 (m) | TDD |
| Total Depth – Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |
| Top Log Interval | 2380.0 (m) | TLI |
| Current Casing Size | 7.00 (in) | CSIZ |
| Casing Depth From | 12.0 (m) | CDF |
| Casing Depth To | 2563.0 (m) | CADT |
| Casing Grade | L–80 | CASG |
| Casing Weight | 26.0 (lbm/ft) | CWEI |
| Bit Size | 8.50 (in) | BS |
| Date Logger At Bottom | 25–Jan–2008 | DLAB, TLAB |
| Logging Unit Number | 889 | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | ENGI |
| Witness's Name | B White | WITN |
| Service Order Number | AUSL07336276 | SON |
| Time Logger At Bottom 11:00 | | |
| Logging Unit Location Prod 4 / AUSL | | |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | |
|------------------------------|-------------------|------------|
| Drilling Fluid Type | Production Fluids | DFT |
| Maximum Recorded Temperature | 106.7 (degC) | MRT |
| | 229.0 (degC) | MRT1 |
| Date Logger At Bottom | 25–Jan–2008 | DLAB, TLAB |
| Time Logger At Bottom 11:00 | | |

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

| | | |
|-----------------|---------|-----|
| Cement Job Type | Primary | CJT |
|-----------------|---------|-----|

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

| | |
|---|-----|
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | R1 |
| Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2–1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | R5 |
| CCL to top shot = 3.4m MDKB | R6 |
| CCL Stop Depth = 2483.6m MDKB | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | R9 |
| Top of seal @ 2490.4m MDKB | R11 |
| CCL to top of seal = 7m | R12 |
| CCL Stop Depth: 2483.4m MDKB | R13 |
| Dump Bailers: | R14 |
| CCL to bottom of bailer = 11m | R15 |
| 2 cement runs were made with 1–11/16", 32ft long dump bailers. | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | R17 |

Other Services

| | |
|------------|-----|
| PLT Survey | OS1 |
|------------|-----|

Origin: 14

| <u>Index Type</u> | <u>Start</u> | <u>Stop</u> | <u>Spacing</u> | <u>Channels</u> | <u>Index Channel</u> | <u>Frame Name</u> |
|-------------------|--------------------|-------------------------|-------------------|-----------------|----------------------|-------------------|
| BOREHOLE-DEPTH | 2518.87 8264.00 | 2471.62 m 8109.00 ft | -60.0 (0.1 in) up | 22 | TDEP | 60B |
| BOREHOLE-DEPTH | 2518.87 8264.00 | 2471.65 m 8109.08 ft | -10.0 (0.1 in) up | 10 | TDEP,1 | 10B |

Defining Origin: 14

| | | | | | |
|-----------------------------|------------------------------|--------------|-----------------|----------------------|--|
| File ID: PERFO_065LUP | File Type: DEPTH LOG | | | | |
| Producer Name: Schlumberger | Product/Version: OP 15C0-309 | File Set: 41 | File Number: 64 | 25-JAN-2008 10:43:33 | |
| Company Name: | Esso Australia Pty Ltd. | | | | |
| Well Name: | A-16a | | | | |
| Field Name: | Halibut | | | | |
| Tool String: | MWP_GUN, MWPT-CA, MWGT-AA | | | | |
| Computations: | WELLCAD, BORDYN | | | | |

No errors detected in file.

Origin: 14

Well Data

| | | | |
|----------------------------|-------------------------|--------------------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | | CN |
| Well Name | A-16a | | WN |
| Field Name | Halibut | | FN |
| Rig: | Crane | | CLAB, COUN |
| State: | Victoria | | SLAB, STAT |
| Nation | Australia | | NATI |
| Field Location | Gippsland | | FL |
| | Basin | | FL1 |
| | Bass Strait | | FL2 |
| Service Order Number | AUSL07336276 | | SON |
| Longitude | 148° 19' 07.62"E | | LONG |
| Latitude | 38° 24' 20.36"S | | LATI |
| Maximum Hole Deviation | 48.0 (deg) | | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | | EKB |
| Elevation of Ground Level | -73.0 (m) | | EGL |
| Elevation of Derrick Floor | 29.5 (m) | | EDF |
| Permanent Datum | M.S.L | Elevation of Permanent Datum 0.0 (m) | PDAT, EPD |
| Log Measured From | K.B | Above Permanent Datum 29.5 (m) | LMF, APD |
| Drilling Measured From | K.B | | DMF |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | |
|------------------------|---------------|------|
| Date as Month-Day-Year | 25-Jan-2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth - Driller | 2563.0 (m) | TDD |
| Total Depth - Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |
| Top Log Interval | 2380.0 (m) | TLI |
| Current Casing Size | 7.00 (in) | CSIZ |
| Casing Depth From | 12.0 (m) | CDF |
| Casing Depth To | 2563.0 (m) | CADT |
| Casing Grade | L-80 | CASG |
| Casing Weight | 26.0 (lbm/ft) | CWEI |

| | | | | |
|---|--------------------|-----------------------|---------------|------------|
| Bit Size | 8.50 (in) | Time Logger At Bottom | 11:00 | BS |
| Date Logger At Bottom | 25–Jan–2008 | Logging Unit Location | Prod 4 / AUSL | DLAB, TLAB |
| Logging Unit Number | 889 | | | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | | | ENGI |
| Witness's Name | B White | | | WITN |
| Service Order Number | AUSL07336276 | | | SON |
| Absent Valued Parameters: BSDF, BSDT | | | | |
| Mud Data | | | | |
| Drilling Fluid Type | Production Fluids | | | DFT |
| Maximum Recorded Temperature | 106.7 (degC) | | | MRT |
| | 229.0 (degC) | | | MRT1 |
| Date Logger At Bottom | 25–Jan–2008 | Time Logger At Bottom | 11:00 | DLAB, TLAB |
| Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS | | | | |
| PVT Data | | | | |
| Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR | | | | |
| Cement Data | | | | |
| Cement Job Type | Primary | | | CJT |
| Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA | | | | |
| Remarks | | | | |
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | | | | R1 |
| Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2–1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | | | | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | | | | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | | | | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | | | | R5 |
| CCL to top shot = 3.4m MDKB | | | | R6 |
| CCL Stop Depth = 2483.6m MDKB | | | | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | | | | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | | | | R9 |
| Top of seal @ 2490.4m MDKB | | | | R11 |
| CCL to top of seal = 7m | | | | R12 |
| CCL Stop Depth: 2483.4m MDKB | | | | R13 |
| Dump Bailers: | | | | R14 |
| CCL to bottom of bailer = 11m | | | | R15 |
| 2 cement runs were made with 1–11/16", 32ft long dump bailers. | | | | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | | | | R17 |
| Other Services | | | | |
| PLT Survey | | | | OS1 |

| | | | | | | |
|---|--------------|-------------|-------------------|-----------------|----------------------|-------------------|
| Frame Summary File: PERFO_065LUP Sequence: 5 | | | | | | |
| Origin: 14 | | | | | | |
| <u>Index Type</u> | <u>Start</u> | <u>Stop</u> | <u>Spacing</u> | <u>Channels</u> | <u>Index Channel</u> | <u>Frame Name</u> |
| BOREHOLE–DEPTH | 2517.80 | 2462.33 m | –60.0 (0.1 in) up | 22 | TDEP | 60B |
| | 8260.50 | 8078.50 ft | | | | |
| BOREHOLE–DEPTH | 2517.80 | 2462.35 m | –10.0 (0.1 in) up | 10 | TDEP;1 | 10B |
| | 8260.50 | 8078.58 ft | | | | |

| | | | |
|---|---------------------------|------------------------------|----------------------|
| File Header | | File: PERFO_066LTP | Sequence: 6 |
| Defining Origin: 14 | | | |
| File ID: PERFO_066LTP File Type: STATION | | | |
| Producer Name: Schlumberger | | Product/Version: OP 15C0–309 | File Set: 41 |
| | | File Number: 65 | 25–JAN–2008 10:47:34 |
| Company Name: | Esso Australia Pty Ltd. | | |
| Well Name: | A–16a | | |
| Field Name: | Halibut | | |
| Tool String: | MWP_GUN, MWPT–CA, MWGT–AA | | |
| Computations: | WELLCAD, BORDYN | | |

| | | |
|---|--|--|
| Error Summary File: PERFO_066LTP Sequence: 6 | | |
| No errors detected in file | | |

Well Site DataFile: **PERFO_066LTP** Sequence: **6****Origin: 14****Well Data**

| | | |
|----------------------------|--------------------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | CN |
| Well Name | A-16a | WN |
| Field Name | Halibut | FN |
| Rig: | Crane | CLAB, COUN |
| State: | Victoria | SLAB, STAT |
| Nation | Australia | NATI |
| Field Location | Gippsland | FL |
| | Basin | FL1 |
| | Bass Strait | FL2 |
| Service Order Number | AUSL07336276 | SON |
| Longitude | 148° 19' 07.62"E | LONG |
| Latitude | 38° 24' 20.36"S | LATI |
| Maximum Hole Deviation | 48.0 (deg) | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | EKB |
| Elevation of Ground Level | -73.0 (m) | EGL |
| Elevation of Derrick Floor | 29.5 (m) | EDF |
| Permanent Datum | M.S.L | PDAT, EPD |
| Log Measured From | K.B | LMF, APD |
| Drilling Measured From | K.B | DMF |
| | Elevation of Permanent Datum 0.0 (m) | |
| | Above Permanent Datum 29.5 (m) | |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | |
|------------------------|-------------------------------------|------------|
| Date as Month-Day-Year | 25-Jan-2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth - Driller | 2563.0 (m) | TDD |
| Total Depth - Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |
| Top Log Interval | 2380.0 (m) | TLI |
| Current Casing Size | 7.00 (in) | CSIZ |
| Casing Depth From | 12.0 (m) | CDF |
| Casing Depth To | 2563.0 (m) | CADT |
| Casing Grade | L-80 | CASG |
| Casing Weight | 26.0 (lbm/ft) | CWEI |
| Bit Size | 8.50 (in) | BS |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| Logging Unit Number | 889 | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | ENGI |
| Witness's Name | B White | WITN |
| Service Order Number | AUSL07336276 | SON |
| | Time Logger At Bottom 11:00 | |
| | Logging Unit Location Prod 4 / AUSL | |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | |
|------------------------------|-----------------------------|------------|
| Drilling Fluid Type | Production Fluids | DFT |
| Maximum Recorded Temperature | 106.7 (degC) | MRT |
| | 229.0 (degC) | MRT1 |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| | Time Logger At Bottom 11:00 | |

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

| | | |
|-----------------|---------|-----|
| Cement Job Type | Primary | CJT |
|-----------------|---------|-----|

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

| | |
|---|-----|
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | R1 |
| Objectives: Perforate the well over the interval 2487m - 2489.2m MDKB using 2-1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | R5 |
| CCL to top shot = 3.4m MDKB | R6 |
| CCL Stop Depth = 2483.6m MDKB | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | R9 |
| Top of seal @ 2490.4m MDKB | R11 |
| CCL to top of seal = 7m | R12 |
| CCL Stop Depth: 2483.4m MDKB | R13 |

| | | | | | | | |
|--|--|--|--|--|--|--|-----|
| Dump Bailers: | | | | | | | R14 |
| CCL to bottom of bailer = 11m | | | | | | | R15 |
| 2 cement runs were made with 1–11/16", 32ft long dump bailers. | | | | | | | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | | | | | | | R17 |
| Other Services | | | | | | | |
| PLT Survey | | | | | | | OS1 |

| | | |
|---------------|--------------------|-------------|
| Frame Summary | File: PERFO_066LTP | Sequence: 6 |
|---------------|--------------------|-------------|

| | | | | | | |
|------------|---------|-----------|-----------------|----------|---------------|------------|
| Origin: 14 | | | | | | |
| Index Type | Start | Stop | Spacing | Channels | Index Channel | Frame Name |
| TIME | 2434.53 | 2926.53 s | 2000.0 (0.5 ms) | 7 | TIME;2 | 2000T |
| TIME | 2434.53 | 2927.03 s | 1000.0 (0.5 ms) | 14 | TIME;4 | 1000T |
| TIME | 2434.53 | 2927.28 s | 500.0 (0.5 ms) | 4 | TIME;5 | 500T |

| | | |
|-------------|-------------------|-------------|
| File Header | File: MPBT_085LUP | Sequence: 7 |
|-------------|-------------------|-------------|

| | | | | | | |
|-----------------------------|------------------------------|--------------|-----------------|----------------------|--|--|
| Defining Origin: 72 | | | | | | |
| File ID: MPBT_085LUP | File Type: DEPTH LOG | | | | | |
| Producer Name: Schlumberger | Product/Version: OP 15C0–309 | File Set: 41 | File Number: 84 | 25–JAN–2008 17:07:16 | | |
| Company Name: | Esso Australia Pty Ltd. | | | | | |
| Well Name: | A–16a | | | | | |
| Field Name: | Halibut | | | | | |
| Tool String: | MPEX–BA, MPSU–CA, CCL–I | | | | | |
| Computations: | WELLCAD | | | | | |

| | | |
|---------------|-------------------|-------------|
| Error Summary | File: MPBT_085LUP | Sequence: 7 |
|---------------|-------------------|-------------|

| |
|-----------------------------|
| No errors detected in file. |
|-----------------------------|

| | | |
|----------------|-------------------|-------------|
| Well Site Data | File: MPBT_085LUP | Sequence: 7 |
|----------------|-------------------|-------------|

| | | | | | | |
|---|-------------------------|------------------------------|---------------|--|--|------------|
| Origin: 72 | | | | | | |
| Well Data | | | | | | |
| Company Name | Esso Australia Pty Ltd. | | | | | CN |
| Well Name | A–16a | | | | | WN |
| Field Name | Halibut | | | | | FN |
| Rig: | Crane | | | | | CLAB, COUN |
| State: | Victoria | | | | | SLAB, STAT |
| Nation | Australia | | | | | NATI |
| Field Location | Gippsland | | | | | FL |
| | Basin | | | | | FL1 |
| | Bass Strait | | | | | FL2 |
| Service Order Number | AUSL07336276 | | | | | SON |
| Longitude | 148° 19' 07.62"E | | | | | LONG |
| Latitude | 38° 24' 20.36"S | | | | | LATI |
| Maximum Hole Deviation | 48.0 (deg) | | | | | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | | | | | EKB |
| Elevation of Ground Level | –73.0 (m) | | | | | EGL |
| Elevation of Derrick Floor | 29.5 (m) | | | | | EDF |
| Permanent Datum | M.S.L | Elevation of Permanent Datum | 0.0 (m) | | | PDAT, EPD |
| Log Measured From | K.B | Above Permanent Datum | 29.5 (m) | | | LMF, APD |
| Drilling Measured From | K.B | | | | | DMF |
| Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN | | | | | | |
| Job Data | | | | | | |
| Date as Month–Day–Year | 25–Jan–2008 | | | | | DATE |
| Run Number | 1 through 5 | | | | | RUN |
| Total Depth – Driller | 2563.0 (m) | | | | | TDD |
| Total Depth – Logger | 2500.0 (m) | | | | | TDL |
| Bottom Log Interval | 2500.0 (m) | | | | | BLI |
| Top Log Interval | 2380.0 (m) | | | | | TLI |
| Current Casing Size | 7.00 (in) | | | | | CSIZ |
| Casing Depth From | 12.0 (m) | | | | | CDF |
| Casing Depth To | 2563.0 (m) | | | | | CADT |
| Casing Grade | L–80 | | | | | CASG |
| Casing Weight | 26.0 (lbm/ft) | | | | | CWEI |
| Bit Size | 8.50 (in) | | | | | BS |
| Date Logger At Bottom | 25–Jan–2008 | Time Logger At Bottom | 11:00 | | | DLAB, TLAB |
| Logging Unit Number | 889 | Logging Unit Location | Prod 4 / AUSL | | | LUIN, LUUL |

Logging Unit Number: 003

Engineer's Name: S Gilbert / R Sani

Witness's Name: B White

Service Order Number: AUSL07336276

Logging Unit Location: 1100 47 ASSL

LOG, LOG

ENGI

WITN

SON

Absent Valued Parameters: BSDF, BSDT

Mud Data

Drilling Fluid Type: Production Fluids

Maximum Recorded Temperature: 229.0 (degF)

Date Logger At Bottom: 25-Jan-2008

Time Logger At Bottom: 11:00

DFT

MRT

MRT1

DLAB, TLAB

Absent Valued Parameters: DFD, DFV, DFL, DFP, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

Cement Job Type: Primary

CJT

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

Log correlated to ExxonMobil Solar Composite Log supplied with logging program.

Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2–1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT.

Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top.

Maximum deviation of well of 48 deg @ 2316m MDKB.

Perforation interval: 2487m to 2489.2m MDKB.

CCL to top shot = 3.4m MDKB

CCL Stop Depth = 2483.6m MDKB

Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia

After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia

Top of seal @ 2490.4m MDKB

CCL to top of seal = 7m

CCL Stop Depth: 2483.4m MDKB

Dump Bailers:

CCL to bottom of bailer = 11m

2 cement runs were made with 1–11/16", 32ft long dump bailers.

Schlumberger crews: J Light, Z Casey, G Martin, C Shiells

R1

R2

R3

R4

R5

R6

R7

R8

R9

R11

R12

R13

R14

R15

R16

R17

Other Services

PLT Survey

OS1

| Frame Summary | | | | | | |
|-------------------|---------|-------------|-------------------|----------|---------------|------------|
| File: MPBT_085LUP | | Sequence: 7 | | | | |
| Origin: 72 | | | | | | |
| Index Type | Start | Stop | Spacing | Channels | Index Channel | Frame Name |
| BOREHOLE-DEPTH | 2461.87 | 2419.96 m | -60.0 (0.1 in) up | 7 | TDEP | 60B |
| | 8077.00 | 7939.50 ft | | | | |
| BOREHOLE-DEPTH | 2461.87 | 2419.99 m | -10.0 (0.1 in) up | 7 | TDEP,1 | 10B |
| | 8077.00 | 7939.58 ft | | | | |

File Header

File: MPBT_090LUP

Sequence: 8

Defining Origin: 72

File ID: MPBT_090LUP

File Type: DEPTH LOG

Producer Name: Schlumberger

Product/Version: OP 15C0-309

File Set: 41

File Number: 89

25-JAN-2008 17:58:26

Company Name: Esso Australia Pty Ltd.

Well Name: A-16a

Field Name: Halibut

Tool String: MPEX-BA, MPSU-CA, CCL-I

Computations: WELLCAD

Error Summary

File: MPBT_090LUP

Sequence: 8

Origin: 72

Well Data

| | | | |
|----------------------------|-------------------------|--------------------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | | CN |
| Well Name | A-16a | | WN |
| Field Name | Halibut | | FN |
| Rig: | Crane | | CLAB, COUN |
| State: | Victoria | | SLAB, STAT |
| Nation | Australia | | NATI |
| Field Location | Gippsland | | FL |
| | Basin | | FL1 |
| | Bass Strait | | FL2 |
| Service Order Number | AUSL07336276 | | SON |
| Longitude | 148° 19' 07.62"E | | LONG |
| Latitude | 38° 24' 20.36"S | | LATI |
| Maximum Hole Deviation | 48.0 (deg) | | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | | EKB |
| Elevation of Ground Level | -73.0 (m) | | EGL |
| Elevation of Derrick Floor | 29.5 (m) | | EDF |
| Permanent Datum | M.S.L | Elevation of Permanent Datum 0.0 (m) | PDAT, EPD |
| Log Measured From | K.B | Above Permanent Datum 29.5 (m) | LMF, APD |
| Drilling Measured From | K.B | | DMF |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | | |
|------------------------|--------------------|-------------------------------------|------------|
| Date as Month-Day-Year | 25-Jan-2008 | | DATE |
| Run Number | 1 through 5 | | RUN |
| Total Depth - Driller | 2563.0 (m) | | TDD |
| Total Depth - Logger | 2500.0 (m) | | TDL |
| Bottom Log Interval | 2500.0 (m) | | BLI |
| Top Log Interval | 2380.0 (m) | | TLI |
| Current Casing Size | 7.00 (in) | | CSIZ |
| Casing Depth From | 12.0 (m) | | CDF |
| Casing Depth To | 2563.0 (m) | | CADT |
| Casing Grade | L-80 | | CASG |
| Casing Weight | 26.0 (lbm/ft) | | CWEI |
| Bit Size | 8.50 (in) | | BS |
| Date Logger At Bottom | 25-Jan-2008 | Time Logger At Bottom 11:00 | DLAB, TLAB |
| Logging Unit Number | 889 | Logging Unit Location Prod 4 / AUSL | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | | ENGI |
| Witness's Name | B White | | WITN |
| Service Order Number | AUSL07336276 | | SON |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | | |
|------------------------------|-------------------|-----------------------------|------------|
| Drilling Fluid Type | Production Fluids | | DFT |
| Maximum Recorded Temperature | 229.0 (degF) | | MRT |
| | 229.0 (degF) | | MRT1 |
| Date Logger At Bottom | 25-Jan-2008 | Time Logger At Bottom 11:00 | DLAB, TLAB |

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

| | | | |
|-----------------|---------|--|-----|
| Cement Job Type | Primary | | CJT |
|-----------------|---------|--|-----|

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

| | | |
|---|--|-----|
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | | R1 |
| Objectives: Perforate the well over the interval 2487m - 2489.2m MDKB using 2-1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | | R5 |
| CCL to top shot = 3.4m MDKB | | R6 |
| CCL Stop Depth = 2483.6m MDKB | | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | | R9 |
| Top of seal @ 2490.4m MDKB | | R11 |
| CCL to top of seal = 7m | | R12 |
| CCL Stop Depth = 2488.4m MDKB | | R13 |

| | |
|--|-----|
| CCL Stop Depth: 2483.4m MDKB | R13 |
| Dump Bailers: | R14 |
| CCL to bottom of bailer = 11m | R15 |
| 2 cement runs were made with 1–11/16", 32ft long dump bailers. | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | R17 |
| Other Services | |
| PLT Survey | OS1 |

| Frame Summary | | File: MPBT_090LUP | Sequence: 8 | | | |
|-------------------|--------------|-------------------|-------------------|-----------------|----------------------|-------------------|
| Origin: 72 | | | | | | |
| <u>Index Type</u> | <u>Start</u> | <u>Stop</u> | <u>Spacing</u> | <u>Channels</u> | <u>Index Channel</u> | <u>Frame Name</u> |
| BOREHOLE-DEPTH | 2483.36 | 2419.81 m | -60.0 (0.1 in) up | 7 | TDEP | 60B |
| | 8147.50 | 7939.00 ft | | | | |
| BOREHOLE-DEPTH | 2483.36 | 2419.83 m | -10.0 (0.1 in) up | 7 | TDEP;1 | 10B |
| | 8147.50 | 7939.08 ft | | | | |

| | | |
|-----------------------------|------------------------------|----------------------|
| File Header | File: MPBT_088LUP | Sequence: 9 |
| Defining Origin: 72 | | |
| File ID: MPBT_088LUP | File Type: DEPTH LOG | |
| Producer Name: Schlumberger | Product/Version: OP 15C0–309 | File Set: 41 |
| | | File Number: 87 |
| | | 25–JAN–2008 17:32:42 |
| Company Name: | Esso Australia Pty Ltd. | |
| Well Name: | A–16a | |
| Field Name: | Halibut | |
| Tool String: | MPEX–BA, MPSU–CA, CCL–I | |
| Computations: | WELLCAD | |

| | | |
|-----------------------------|-------------------|-------------|
| Error Summary | File: MPBT_088LUP | Sequence: 9 |
| No errors detected in file. | | |

| | | |
|---|--------------------------------------|-------------|
| Well Site Data | File: MPBT_088LUP | Sequence: 9 |
| Origin: 72 | | |
| Well Data | | |
| Company Name | Esso Australia Pty Ltd. | CN |
| Well Name | A–16a | WN |
| Field Name | Halibut | FN |
| Rig: | Crane | CLAB, COUN |
| State: | Victoria | SLAB, STAT |
| Nation | Australia | NATI |
| Field Location | Gippsland | FL |
| | Basin | FL1 |
| | Bass Strait | FL2 |
| Service Order Number | AUSL07336276 | SON |
| Longitude | 148° 19' 07.62"E | LONG |
| Latitude | 38° 24' 20.36"S | LATI |
| Maximum Hole Deviation | 48.0 (deg) | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | EKB |
| Elevation of Ground Level | –73.0 (m) | EGL |
| Elevation of Derrick Floor | 29.5 (m) | EDF |
| Permanent Datum | M.S.L | PDAT, EPD |
| Log Measured From | K.B | LMF, APD |
| Drilling Measured From | K.B | DMF |
| | Elevation of Permanent Datum 0.0 (m) | |
| | Above Permanent Datum 29.5 (m) | |
| Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN | | |
| Job Data | | |
| Date as Month–Day–Year | 25–Jan–2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth – Driller | 2563.0 (m) | TDD |
| Total Depth – Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |

| | | | | |
|-----------------------|--------------------|-----------------------|---------------|------------|
| Top Log Interval | 2380.0 (m) | | | TLI |
| Current Casing Size | 7.00 (in) | | | CSIZ |
| Casing Depth From | 12.0 (m) | | | CDF |
| Casing Depth To | 2563.0 (m) | | | CADT |
| Casing Grade | L-80 | | | CASG |
| Casing Weight | 26.0 (lbm/ft) | | | CWEI |
| Bit Size | 8.50 (in) | | | BS |
| Date Logger At Bottom | 25-Jan-2008 | Time Logger At Bottom | 11:00 | DLAB, TLAB |
| Logging Unit Number | 889 | Logging Unit Location | Prod 4 / AUSL | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | | | ENGI |
| Witness's Name | B White | | | WITN |
| Service Order Number | AUSL07336276 | | | SON |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | | | |
|------------------------------|-------------------|-----------------------|-------|------------|
| Drilling Fluid Type | Production Fluids | | | DFT |
| Maximum Recorded Temperature | 229.0 (degF) | | | MRT |
| | 229.0 (degF) | | | MRT1 |
| Date Logger At Bottom | 25-Jan-2008 | Time Logger At Bottom | 11:00 | DLAB, TLAB |

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

| | | | | |
|-----------------|---------|--|--|-----|
| Cement Job Type | Primary | | | CJT |
|-----------------|---------|--|--|-----|

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

| | |
|---|-----|
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | R1 |
| Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2–1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | R5 |
| CCL to top shot = 3.4m MDKB | R6 |
| CCL Stop Depth = 2483.6m MDKB | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | R9 |
| Top of seal @ 2490.4m MDKB | R11 |
| CCL to top of seal = 7m | R12 |
| CCL Stop Depth: 2483.4m MDKB | R13 |
| Dump Bailers: | R14 |
| CCL to bottom of bailer = 11m | R15 |
| 2 cement runs were made with 1–11/16", 32ft long dump bailers. | R16 |
| Schlumberger crews: J Light, Z Casey, G Martin, C Shiells | R17 |

Other Services

| | | | | |
|------------|--|--|--|-----|
| PLT Survey | | | | OS1 |
|------------|--|--|--|-----|

| | | |
|---------------|-------------------|-------------|
| Frame Summary | File: MPBT_088LUP | Sequence: 9 |
|---------------|-------------------|-------------|

| | | | | | | |
|----------------|----------|-------------|-------------------|----------|---------------|------------|
| Origin: 72 | | | | | | |
| Index Type | Start | Stop | Spacing | Channels | Index Channel | Frame Name |
| BOREHOLE-DEPTH | 12192.00 | 11834.62 m | -60.0 (0.1 in) up | 7 | TDEP | 60B |
| | 40000.00 | 38827.50 ft | | | | |
| BOREHOLE-DEPTH | 12192.00 | 11834.65 m | -10.0 (0.1 in) up | 4 | TDEP;1 | 10B |
| | 40000.00 | 38827.58 ft | | | | |

| | | |
|-------------|--------------------|--------------|
| File Header | File: PERFO_096LUP | Sequence: 10 |
|-------------|--------------------|--------------|

| | | | | | | |
|-----------------------------|------------------------------|--------------|-----------------|----------------------|--|--|
| Defining Origin: 41 | | | | | | |
| File ID: PERFO_096LUP | File Type: DEPTH LOG | | | | | |
| Producer Name: Schlumberger | Product/Version: OP 15C0-309 | File Set: 41 | File Number: 95 | 25-JAN-2008 21:00:49 | | |
| Company Name: | Esso Australia Pty Ltd. | | | | | |
| Well Name: | A-16a | | | | | |
| Field Name: | Halibut | | | | | |
| Tool String: | SHM_GUN, CCL-L | | | | | |
| Computations: | WELLCAD | | | | | |

| | | |
|---------------|--------------------|--------------|
| Error Summary | File: PERFO_096LUP | Sequence: 10 |
|---------------|--------------------|--------------|

No errors detected in file.

Origin: 41

Well Data

| | | |
|--------------------------------------|-------------------------|------------|
| Company Name | Esso Australia Pty Ltd. | CN |
| Well Name | A-16a | WN |
| Field Name | Halibut | FN |
| Rig: | Crane | CLAB, COUN |
| State: | Victoria | SLAB, STAT |
| Nation | Australia | NATI |
| Field Location | Gippsland | FL |
| | Basin | FL1 |
| | Bass Strait | FL2 |
| Service Order Number | AUSL07336276 | SON |
| Longitude | 148° 19' 07.62"E | LONG |
| Latitude | 38° 24' 20.36"S | LATI |
| Maximum Hole Deviation | 48.0 (deg) | MHD |
| Elevation of Kelly Bushing | 29.5 (m) | EKB |
| Elevation of Ground Level | -73.0 (m) | EGL |
| Elevation of Derrick Floor | 29.5 (m) | EDF |
| Permanent Datum | M.S.L | PDAT, EPD |
| Log Measured From | K.B | LMF, APD |
| Drilling Measured From | K.B | DMF |
| Elevation of Permanent Datum 0.0 (m) | | |
| Above Permanent Datum 29.5 (m) | | |

Absent Valued Parameters: CN1, CONT, SECT, TOWN, RANG, APIN

Job Data

| | | |
|-------------------------------------|--------------------|------------|
| Date as Month-Day-Year | 25-Jan-2008 | DATE |
| Run Number | 1 through 5 | RUN |
| Total Depth - Driller | 2563.0 (m) | TDD |
| Total Depth - Logger | 2500.0 (m) | TDL |
| Bottom Log Interval | 2500.0 (m) | BLI |
| Top Log Interval | 2380.0 (m) | TLI |
| Current Casing Size | 7.00 (in) | CSIZ |
| Casing Depth From | 12.0 (m) | CDF |
| Casing Depth To | 2563.0 (m) | CADT |
| Casing Grade | L-80 | CASG |
| Casing Weight | 26.0 (lbm/ft) | CWEI |
| Bit Size | 8.50 (in) | BS |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| Logging Unit Number | 889 | LUN, LUL |
| Engineer's Name | S Gilbert / R Sani | ENGI |
| Witness's Name | B White | WITN |
| Service Order Number | AUSL07336276 | SON |
| Time Logger At Bottom 11:00 | | |
| Logging Unit Location Prod 4 / AUSL | | |

Absent Valued Parameters: BSDF, BSDT

Mud Data

| | | |
|------------------------------|-------------------|------------|
| Drilling Fluid Type | Production Fluids | DFT |
| Maximum Recorded Temperature | 229.0 (degF) | MRT |
| | 229.0 (degF) | MRT1 |
| Date Logger At Bottom | 25-Jan-2008 | DLAB, TLAB |
| Time Logger At Bottom 11:00 | | |

Absent Valued Parameters: DFD, DFV, DFL, DFPH, BSAL, MSS, RMS, MST, RMFS, MFST, RMCS, MCST, RMB, RMFB, MRT2, MRT3, DCS, TCS

PVT Data

Absent Valued Parameters: ODEN, BSAL, GGRA, BO, BW, IBG, BPP, BPT, SGOR

Cement Data

| | | |
|-----------------|---------|-----|
| Cement Job Type | Primary | CJT |
|-----------------|---------|-----|

Absent Valued Parameters: CTOP, CASN, LCMT, LCVO, CDEN, CWLO, CADD, TCTY, TCV, TCDE, TCWL, TCA

Remarks

| | |
|---|-----|
| Log correlated to ExxonMobil Solar Composite Log supplied with logging program. | R1 |
| Objectives: Perforate the well over the interval 2487m – 2489.2m MDKB using 2–1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT. | R2 |
| Set 7" posiset plug with top of seal at 2490.4m MDKB then dump approximately 1m of cement on top. | R3 |
| Maximum deviation of well of 48 deg @ 2316m MDKB. | R4 |
| Perforation interval: 2487m to 2489.2m MDKB. | R5 |
| CCL to top shot = 3.4m MDKB | R6 |
| CCL Stop Depth = 2483.6m MDKB | R7 |
| Before gun shot: SBHT = 228.6 degF SBHP = 3236.8 psia | R8 |
| After gun shot: SBHT = 229.2 degF SBHP = 3236.7 psia | R9 |
| Top of seal @ 2490.4m MDKB | R11 |
| CCL to top of seal = 7m | R12 |
| CCL Stop Depth: 2483.4m MDKB | R13 |
| Dump Bailers: | R14 |

CCL to bottom of bailer = 11m
2 cement runs were made with 1–11/16", 32ft long dump bailers.
Schlumberger crews: J Light, Z Casey, G Martin, C Shiells

R15
R16
R17

Other Services

PLT Survey

OS1

Frame Summary

File: **PERFO_096LUP**

Sequence: **10**

Origin: 41

| <u>Index Type</u> | <u>Start</u> | <u>Stop</u> | <u>Spacing</u> | <u>Channels</u> | <u>Index Channel</u> | <u>Frame Name</u> |
|-------------------|--------------|-------------|-------------------|-----------------|----------------------|-------------------|
| BOREHOLE-DEPTH | 2482.14 | 2414.63 m | –60.0 (0.1 in) up | 7 | TDEP | 60B |
| | 8143.50 | 7922.00 ft | | | | |
| BOREHOLE-DEPTH | 2482.14 | 2414.65 m | –10.0 (0.1 in) up | 7 | TDEP;1 | 10B |
| | 8143.50 | 7922.08 ft | | | | |



Verification Listing

Listing Completed: 26–JAN–2008 9:27:13