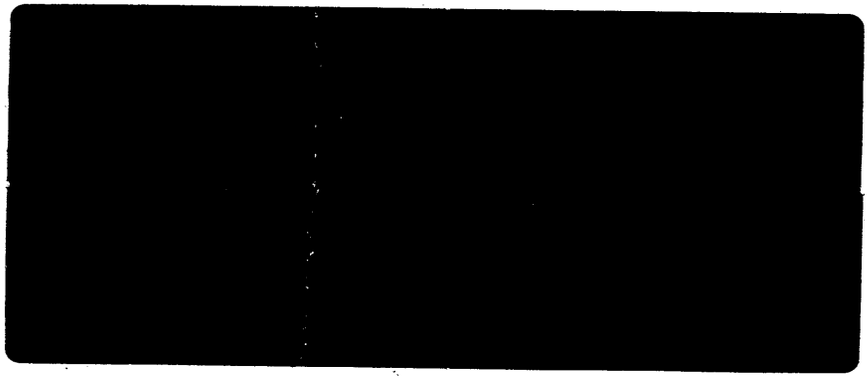


# WCR
# GRUMBY - 1
# (W737)

**BEACH PETROLEUM**

BEACH PETROLEUM N.L.

# GRUMBY NO.1

## WELL COMPLETION REPORT



Prepared by J.D.C. Patchett
May, 1981

Distribution: Beach 2
Department of Minerals and Energy 1

CONTENTS



APPENDICES

## FIGURES

1. Regional Location Map
2. Detailed Location Map
3. Grumby Prospect - Top Waarre Sandstone Structure Map

## ENCLOSURES

| | | | |
|---|---|---|---|
| 1. | Exploration Logging Mud Log | | |
| 2. | Composite Well Log | | |
| 3A. | DLL-MSFL-GR-SP-CAL | Run 1 | Scale 1:200 |
| B. | DLL-MSFL-GR-SP-CAL | Run 1 | Scale 1:500 |
| 4A. | BHCS-GR-CAL | Run 1 | Scale 1:200 |
| B. | BHCS-GR-CAL | Run 1 | Scale 1:500 |
| 5A. | CNL-FDC-GR-CAL | Run 1 | Scale 1:200 |
| B. | CNL-FDC-GR-CAL | Run 1 | Scale 1:500 |
| 6. | RFT | Run 1 | |
| 7. | CBL-VDL-GR | | Scale 1:200 |
| 8. | CCL | | Scale 1:200 |

## SUMMARY

The Grumby No.1 well was spudded after the drilling of North Paarratte No.2. The rig was released on 14th March, 1981.

This well was proposed to test a dip closed feature on the south eastern flank of the Port Campbell High.

The well encountered a gas saturated Waarre Formation 1664.5 m. The well has been completed as a potential producer.

The extent of the gas was determined by the wireline log suite and was confirmed using the report formation tester. Production casing was run and the well deliverability was determined during production testing.

The well was drilled with O.D. & E's rig 8, an Ideco Rambler H35 drilling rig, with the following contract services:-

| | | |
|---|---|---|
| Halliburton | - | Cementing and Testing |
| Schlumberger | - | Electric Logging |
| Go International | - | Production Testing |
| Exlog | - | Mud Logging |

1. PURPOSE OF WELL

The Grumby No.1 well was proposed as a new field wildcat test of a discrete dip closed feature to the south of the North Paaratte Gas Field.

The well was programmed to intersect the prospective Waarre Formation at the highest mapped point of the feature. If this well was successful it was expected to be in such a position to be producer throughout the production history of the field.

## 2. GENERAL STRATIGRAPHIC TABLE

TABLE 1: Generalised Stratigraphy of the Port Campbell Embayment

| Age | Group | Formation |
|---|---|---|
| Tertiary | Heytesbury | Port Campbell Limestone<br>Gellibrand Marl<br>Clifton Formation |
| | u | |
| | Nirranda | Narrawaturk Marl<br>Mepunga Formation |
| | u | |
| | Wangerrip | Dilwyn Formation<br>Pember Mudstone<br>Pebble Point Formation |
| u | u | |
| Upper Cretaceous | Sherbrook | Paaratte Formation<br>Belfast Formation<br>Flaxmans Formation<br>Waarre Formation |
| u | u | |
| Lower Cretaceous | Otway | Eumeralla Formation |

## 3. WELL HISTORY

### 3.1 Location

The well, located as close as was practicable to Shot Point No.94, Line PCH-80-20 of the Beach 1980 Port Campbell High Seismic Survey, was on Crown Allotment 12, Section 6, Parish of Paaratte, County of Heytesbury owned by Mr. E. McKenzie. (Refer to Figures 1 and 2).

The approximate geographical co-ordinates are:-

$38^{o}$ 35' 08.5"S; $142^{o}$ 57' 11.5" E

### 3.2 General Data

(i) Well Name and Number

Beach Petroleum NL Grumby No.1

(ii) Petroleum Title

Petroleum Exploration Permit No.93, Victoria.

(iii) District

1:250 000 map sheet: Colac Sheet SJ54-12

part of the Western District of Victoria.

(iv) Elevation

| | |
|---|---|
| Ground Level | 88.0 m |
| Kelly Bushing (datum) | 91.2 m |

(v) Total Depth

| | |
|---|---|
| Driller | 1811 m |
| Schlumberger | 1813.6 m |

(vi) Date Drilling Commenced

19th February, 1981 at 1400 hours.

(vii) Date Total Depth Reached

7th March, 1981 at 1445 hours.

(viii) Date Rig Released

14th March, 1981 at 1300 hours.

(ix) Drilling Time to Total Depth

16 days.

(x) Status

Completed and suspended as a potential producing gas well.

### 3.3 Drilling Data

#### 3.3.1 Rig

Ideco H-35; details of this rig are contained in Appendix 1.

3.3.2 Drilling Contractor

O.D. & E. Pty. Ltd.; 50 Bridge Street, Sydney, N.S.W., 2000.

3.3.3 Casing and Cementing Details

(i) Conductor

| | |
|---|---|
| Size | 19½ inch |
| Set at | 7.6 m |
| Cement | 25 sacks, construction |

(ii) Surface Casing

| | |
|---|---|
| Size | 9 5/8 inch |
| Weight | 36 pound |
| Grade | J55 |
| Range | 3 |
| Coupling | ST & C |
| Centralisers | 378 m, 402 m |
| Float Collar | 402 m |
| Shoe | 410 m |
| Cemented to | Surface with good returns with 50 sacks, construction, 15.6 ppg slurry |
| Method | Double plug displacement |
| Equipment | Halliburton Twin T-10 pump truck |

(iii) Production Casing

| | |
|---|---|
| Size | 7 inch |
| Weight | 23 pound |
| Grade | J55 |
| Range | 3 |
| Coupling | LT&C |
| Centralisers | 1611 m, 1634 m, 1658 m 1694 m, 1717 m, 1741 m |
| Float Collar | 1800 m |
| Shoe | 1812 m |
| Cement | 250 sacks, construction - 15 ppg slurry |
| Cemented to | 998 m |
| Method | Double plug displacement |
| Equipment | Halliburton Twin T-10 pump truck |

3.3.4 Drilling Fluid

(i) 12¼ inch hole

The mud used during this drilling phase had the following range of properties:-

| | |
|---|---|
| SG | 1.10 to 1.12 |
| Visc. | 37 to 42 sec. |
| Filtrate | 11.5 to 17 ml. |
| Cake | 2 mm |
| pH | 8.5 to 10 |

Comment

In previous wells drilled in this district, moderate to severe mud ringing had been experienced whilst penetrating the Gellibrand Marl. Mud ringing was not a problem whilst drilling this unit in Grumby No.1 due to:-

(a) use of a light weight non dispersed mud.

(b) adequate annular velocity - both pumps were used.

(c) controlled drilling rates - weight on bit was restricted to approximately 5000 lb with a consequent average penetration rate of 15 m/hr.

(ii) 8½ inch hole

After drilling out cement, the mud was treated with sodium bicarbonate. Prior to penetrating the Waarre Formation the mud had the following properties:-

| | |
|---|---|
| SG | 1.17 |
| Visc. | 53 |
| Filtrate | 7 ml |
| Cake | 2 mm |
| pH | 9 |
| Sand | Trace |

These properties were maintained to total depth. Few hole problems were experienced during the drilling of the 8½ inch hole.

3.3.5 Water Supply

Drilling water was obtained from the Port Campbell-Timboon pipeline at the North Paaratte No.2 well site and trucked 4 km. to Grumby No.1. There was no restriction to supply from this source.

3.3.6 Perforations

The 7 inch production casing was perforated from 1665.5 to 1667.5 m with 4 shots per foot using Schlumberger Hyperjet II end loaded 4 inch guns.

3.3.7 Production Tubing

A production string comprising:-

- Catcher sub
- Otis Type 'XN nipple
- 1 joint 2 7/8 inch J55 6.5 pound tubing
- Otis Type 'RH hydraulic packer
- 1 joint 2 7/8 inch J55 6.5 pound tubing
- Otis Sliding Side Door sub
- 184 joints reducing to 169 joints of
- 2 7/8 inch J55 6.5 pound tubing

was run to 1794 m. The drilling mud was displaced with a completion fluid; thereafter the packer was pulled back and set at 1638 m.

3.3.8 Completion Fluid

A calcium chloride brine with SG 1.07 and treated with a corrosion inhibitor (Coat B-1400) was used.

3.3.9 Christmas Tree Details

See Appendix 2.

3.4 Formation Sampling and Testing

3.4.1 Cuttings

Representative lagged cuttings samples were taken as follows:

30 m to 1400 m every 10 m.
1400 m to 1719.8 m (T.D.) every 3 m.

Cuttings were continuously described on site using a binocular microscope.

3.4.2 Cores

No cores were cut in this well.

3.4.3 Formation Tests

(i) Drill Stem Tests

No conventional open hole drill stem tests were carried out on this well.

(ii) Wire Line Tests

Four tests and six pressure readings were made during two runs in the hole with the Schlumberger Repeat Formation Tester (RFT).

RFT NO.1

| | |
|---|---|
| Depth | 1680 m |
| Initial Shut In | ½ min. |
| Sampling Time | 21 min. |
| Final Shut In | inst. |
| Initial Shut In Pressure | 2292 psi |
| Initial Floor Pressure | 1475 psi |
| Final Flow Pressure | 2292 psi |
| Final Shut in Pressure | 2292 psi |
| Hydrostatic Pressure | 2790 psi |
| Surface Chamber Pressure | 1360 psi |
| Choke size | 1 x 0.020 inch |
| Recovered | 41.6 cu ft gas |
| | 3 ml condensate |
| | 350 ml water/filtrate |

RFT NO.2

| | |
|---|---|
| Depth | 1671.8 m |
| Initial Shut In | inst. |
| Sampling Time | 15 min. |
| Final Shut In | inst. |
| Initial Shut In Pressure | 2289.5 psi |
| Initial Flow Pressure | 750 psi approx. |
| Final Shut In Pressure | 2288.5 psi |
| Hydrostatic Pressure | 2288.5 psi |
| Surface Chamber Pressure | 2761 psi |
| Choke size | 1 x 0.020 inch |
| Recovered | 15.2 cu.ft. gas |
| | 10 ml condensate |
| | 6200 ml water/filtrate |

RFT NO.3

| | |
|---|---|
| Depth | 1676 m |
| Initial Shut In | inst. |
| Sampling Time | 15 min. |
| Final Shut In | inst. |
| Initial Shut In Pressure | 2291 psi |
| Initial Flow Pressure | 2261 psi |
| Final Flow Pressure | 2290.5 psi |
| Final Shut In Pressure | 2290.5 psi |
| Hydrostatic Pressure | 2767 psi |
| Surface Chamber Pressure | 1600 psi |
| Choke Size | 1 x 0.020 inch |
| Recovered | 54.7 cu ft gas |
| | 10 ml water/filtrate |

RFT NO.4

| | |
|---|---|
| Depth | 1666.4 m |
| Initial Shut In | - |
| Sampling Time | 6 min. |
| Final Shut In | 3 min. |
| Initial Shut In Pressure | 2287 psi |
| Initial Flow Pressure | 163.5 psi |
| Final Flow Pressure | 164 psi |
| Final Shut In Pressure | 192 psi |
| Hydrostatic Pressure | 2767 psi |
| Surface Chamber Pressure | 0 |
| Choke size | 1 x 0.020 inch |
| Recovered | 2.5 cu ft gas |
| | 300 ml water/filtrate |

Pressure Readings (Initial Shut In Pressure)

| Depth | Pressure | Build-up Time |
|---|---|---|
| 1666.4 m | 2287 psi | 30 sec. (RFT 4) |
| 1671.8 m | 2289.5 psi | inst. (RFT 2) |
| 1676 m | 2291 psi | inst. (RFT 3) |
| 1680 m | 2292 psi | 30 sec. (RFT 1) |
| 1683 m | 2293 psi | 20 sec. |
| 1686 m | 2293.5 psi | 30 sec. |
| 1688.5 m | 2296 psi | 16 sec. |
| 1695 m | 2305.6 psi | 18 sec. |
| 1714 m | 2332 psi | 3 min. |
| 1748 m | 2380.5 psi | 20 sec. |

## 3.5 Logging and Surveys

### 3.5.1 Mud Logging

A trailer mounted standard Exploration Logging (EXLOG) unit was contracted to provide a complete mud logging service. Drill penetration rate, continuous drilling mud gas detection and intermittent cuttings gas analyses were performed and the mud log is enclosed as Enclosure 1.

3.5.2 Electric Logging

Schlumberger recorded the following Logs in open hole:-

Run 1.

| | | |
|---|---|---|
| Dual Laterolog | (DLL-GR-SP) | 415.2 to 1813.3m |
| Micro Spherically Focussed Log | (MSFL-Cal) | (1380 to 1490m<br>(1605 to 1813.3m |
| Compensated Neutron-Formation Density | (CNL-FDC-GR-Cal) | 1380 to 1813.3m |
| Borehole Compensated Sonic Log | (BHC-GR-Cal) | 415.2 to 1812m |
| Repeat Formation Tester | (RFT) | |

Schlumberger recorded the following Logs in cased hole:-

Run 1.

| | | |
|---|---|---|
| Cement Bond Log | (CBL-VDL-GR) | 997 to 1795m |
| Casing Collar Log and Perforating Record | (CCL) | |

3.5.3 Deviation Surveys

During drilling, deviation surveys were taken using a 'Sure Shot' survey instrument. Results were:-

| | |
|---|---|
| 64 m | ½° |
| 122 m | ½° |
| 184 m | 0 |
| 304 m | 0 |
| 576 m | ½° |
| 732 m | 0 |
| 924 m | ¼° |
| 1108 m | 4° |
| 1145 m | 3° |
| 1181 m | 3° |
| 1256 m | 2½° |
| 1298 m | 2° |
| 1384 m | 1¼° |
| 1495 m | 1½° |
| 1649 m | 2° |
| 1686 m | 2° |
| 1806 m | 3/4° |

## 4. RESULTS OF DRILLING

### 4.1 General

Grumby No.1 proved the presence of gas in the Waarre Sandstone within the Grumby feature. The Grumby structure is on the southern flank of the Port Campbell High. The well has been completed as a potential producer with production casing, tubing and a christmas tree.

Top of the Waarre Sandstone was at 1664.5 m. The gas/water contact was at 1686.5 m. Net gas bearing sand is 17 m.

The recovered gas has been analysed to contain 51.7% $CO_2$. See Appendix No.5 for gas analyses. Flow tests established that condensate production was in excess of 6 barrels/million scf.

### 4.2 Formation Tops

| | KB | Subsea | Thickness (Metres) |
|---|---|---|---|
| Port Campbell Limestone (outcrop) | 3.2 | +91.2 | 88.8 |
| Gellibrand Marl | 92 | 0.8 | 238 |
| Clifton Formation | 330 | 238.8 | 15 |
| Narrawaturk Marl | 345 | 253.8 | 35 |
| Mepunga Formation | 380 | 288.8 | 80 |
| Dilwyn Formation | 460 | 368.8 | 83 |
| Pember Mudstone | 743 | 651.8 | 52 |
| Pebble Point Formation | 795 | 703.8 | 68 |
| Paaratte Formation | 863 | 771.8 | 524 |
| Skull Creek Member | 1387 | 1245.8 | 50 |
| Nullawarre Equivalent | 1437 | 1345.8 | 13 |
| Belfast Formation | 1450 | 1358.8 | 190 |
| Flaxmans Formation | 1640 | 1548.8 | 25 |
| Waarre Formation | 1665 | 1573.8 | 89 |
| Eumeralla Formation | 1754 | 1662.8 | 57+ |
| Total Depth | 1811 | 1719.8 | |

Formation Tops were picked using wireline log and on-site cuttings evaluation.

4.3 Lithologic Description

0-92m Limestone buff-tan at surface becoming grey with depth. In part grainstone grades to calcarenite and, with depth becomes more marly friable to firm to hard. Contains abundant echinoid spines, bryozoans, forams and shell fragments. Minor glauconite and pyrite. Upper 35 m weathered.

92-330m Marl grey, plastic, amorphous. Slightly hydratable and very slightly dispersive. Traces of glauconite and disseminated pyrite. Abundant fossil fragments. Slightly calcareous.

330-345m Sandstone grading to limestone, yellow brown to dark brown. Friable unconsolidated coarse to fine grained, poorly sorted. Dominantly quartz grains with occasional lithic pebbles. Lime or calcareous ferriginous matrix. Poor to fair porosity.

345-380m Marl light brown to grey amorphous, plastic soft moderately to very calcareous. Occasional disseminated and nodular pyrite. Occasional shell fragments.

380-460m Claystone grading to sandy claystone and occasional siltstone. Light brown to light grey. Very soft, dispersive. Moderately silty in part. Abundant pyrite. Calcareous. Sandsize fractions of shell fragments and clear quartz grains. Rare to abundant fossils. Bivalves dominate although echinoid, spines, gastropods, forams and bryozoans are common.

460-743m Sandstone clear - yellow brown (iron stained 460-540 m) loosely consolidated - friable, medium - coarse grained, subangular to subrounded, poorly sorted. Dominantly quartz grained with only very minor amounts of lithic and chert grains. In general the sandstone becomes more clear - white coloured with depth.

Only rare siltstone beds were penetrated (540-550 m). At 620-630 m the sandstone changed to become Sandstone varicolour, white-brown-light brown-orange-yellow, medium grained, well rounded, well sorted. Containing

quartz and lithic grains. It was friable and contained no matrix. Below 635 m sandstone reverted to the clear-white variety.

743-795m Siltstone brown-grey to light dark grey to green grey. Moderately firm, slightly hydrateable. Calcareous matrix. Common glauconite pallets. Pyrite as nodules and disseminated grains. Occasional mollusc fragments.

795-863m Sandstone conglomerate clear white-brown-yellow-orange. Non consolidated friable. Medium-coarse-pebble sized grains. Subangular-subrounded, poorly sorted. Dominantly quartz grains with minor lithic pebble sized grains, occasional chert grains. Grains often iron stained. Common glauconite.

863-990m Sandstone clear white (iron stained at the top) friable to loosely consolidated, very fine to coarse grained, subangular to subrounded poorly sorted. Dominantly quartz grains with very minor lithics and chert grains. In part grades to pebble sized grains.

990-1387m Sandstone and siltstone

sandstone - as for the interval 863-990m

siltstone - medium to dark grey non calcareous with, often, common carbonaceous laminae. Siltstone is associated with up to 5% coal brown-black, lignitic.

The sequence becomes siltstone dominated with depth.

At 1280-1287 and 1345-1349 are distinctive sandstone beds.

Sandstone white to clear, loose very fine grained at top grading to coarse grained at base. Grades to granules in part. Subangular, poorly sorted. Quartz grains and common brown-black coaly material with associated resin. Minor dolomite, minor pyrite cement. Good visual porosity.

1387-1437m Claystone grading to siltstone in part firm, mid grey with often abundant mid pink brown dolomite. Non calcareous with occasional pyrite nodules and disseminated grains.

1437-1450m Sandstone dirty white-grey brown. Friable to hard. Very fine grained to granules. Subangular but predominantly subrounded. Dolomite, ankerite and calcite cement. Occasional dolomite and pyrite nodules. Poor visual porosity.

1450-1640m Claystone mid brown-mid grey. Soft, plastic. Non dispersive, rare pyrite, rare fossil fragments. With depth grades, in part, to siltstone which is very slightly calcareous. Occasional to common glauconite. Below 1548 m glauconite becomes very common to abundant.

1640-1615m Claystone-grading to siltstone dark brown-grey. Moderately firm, non calcareous abdundant pyrite and glauconite with occasional large white-cream quartz grains. Occasional shell fragments.

1665-1754m Interbedded sandstone and siltstone: This unit is a complexity inter-bedded sequence of variable types of sandstone and siltstone with occasional thin coals.

Sandstone Type A grey-white-light brown. Friable. Fine to medium ground, subangular-subrounded. Moderately well sorted. Dominantly quartz grains with fine white clay matrix. Occurs as micro laminated fine and medium grained sand laminae. Trace pyrite, trace shell fragments. Occasional carbonaceous laminae, trace coal fragments. Poor visual porosity.

Sandstone Type B white-clear, friable medium-coarse grained subrounded and moderately sorted. No visible matrix. Good visible porosity.

Sandstone Type C Sandstone as for type B but matrix/ cement is of clear silica. Recognised by fracturing of individual quartz grains. Poor visual porosity.

Sandstone Type D Sandstone of type A with common siliceous and dolomitic cement. Poor visual porosity.

Siltstone mid brown-mud grey glauconitic slightly calcareous with Inoceramus fragments. With micro-carbonaceous laminae.

Coal brown-black soft sub-conchoidal fracture. For relationship of the sandstones and the siltstone see the composite log.

1754-1811m (TD) Claystone mid green-grey, soft to firm soluble dispersive plastic. With minor sandstone varicolour (white-mid grey-green grey-green-orange-brown) fine to coarse grained with abundant lithic fragments and only minor quartz grains.

## 5. POST DRILLING COMPILATION AND LABORATORY STUDIES

### 4.1 Composite Well Log

A composite well log has been compiled and is included as Enclosure 2.

### 4.2 Gas Analyses

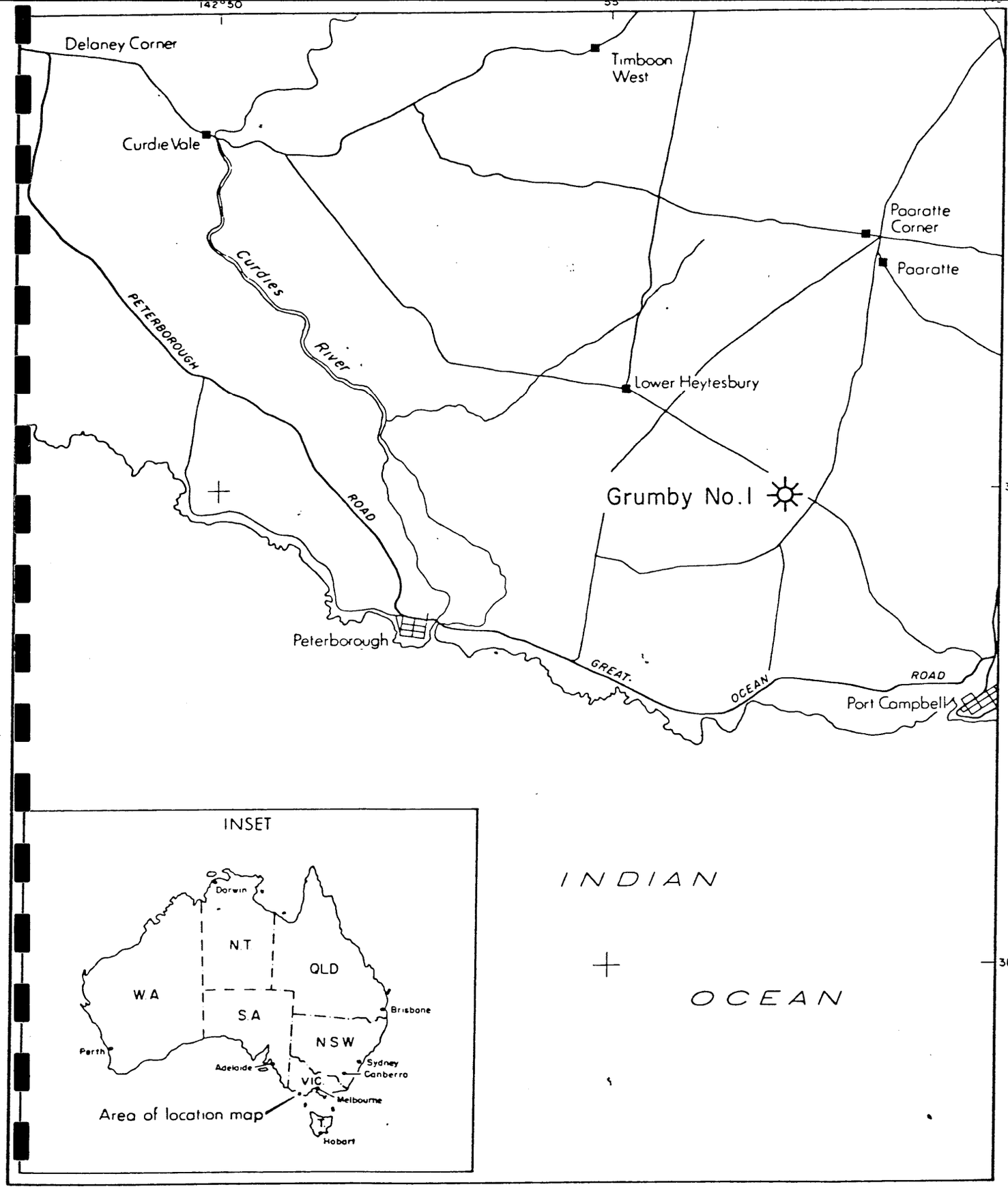
The following gas analyses have been done;

(i) On site gas chromatography by EXLOG of the gas recovered in RFT No.1 and 2.

(ii) A low pressure sample collected by displacing water in a sample bottle was anlyzed by the Gas and Fuel Corporation of Victoria.

(iii) Analyses of high pressure production test results.

Results of gas analyses are included as Appendix No.5.




BEACH PETROLEUM N.L.

# GRUMBY No.1

## WELL LOCATION MAP

Scale 1:100 000

MILES 0 0.5 1 2 3 4 MILES

KILOMETRES 0 0.5 1 2 3 4 5 KILOMETRES

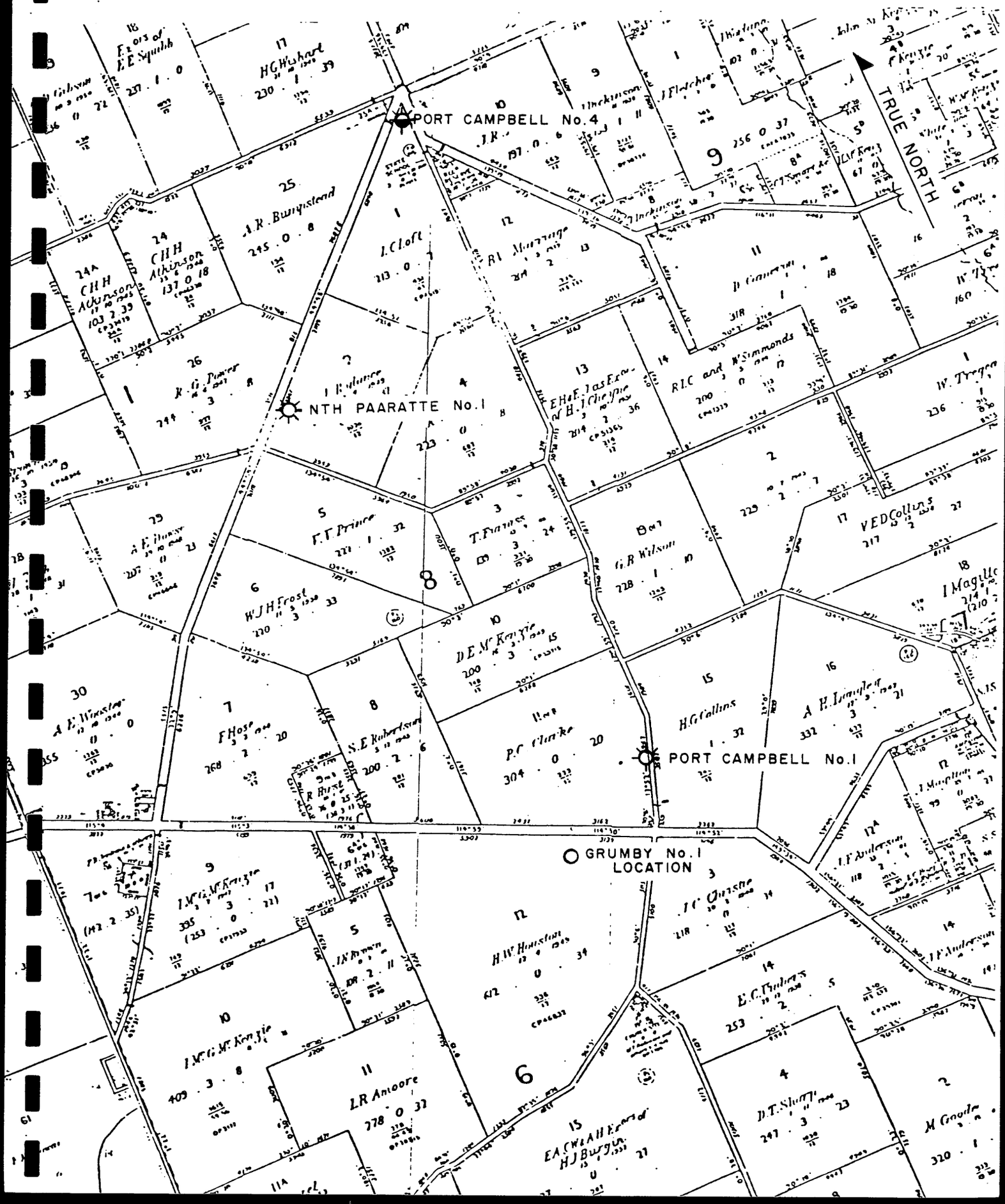
FIGURE 1

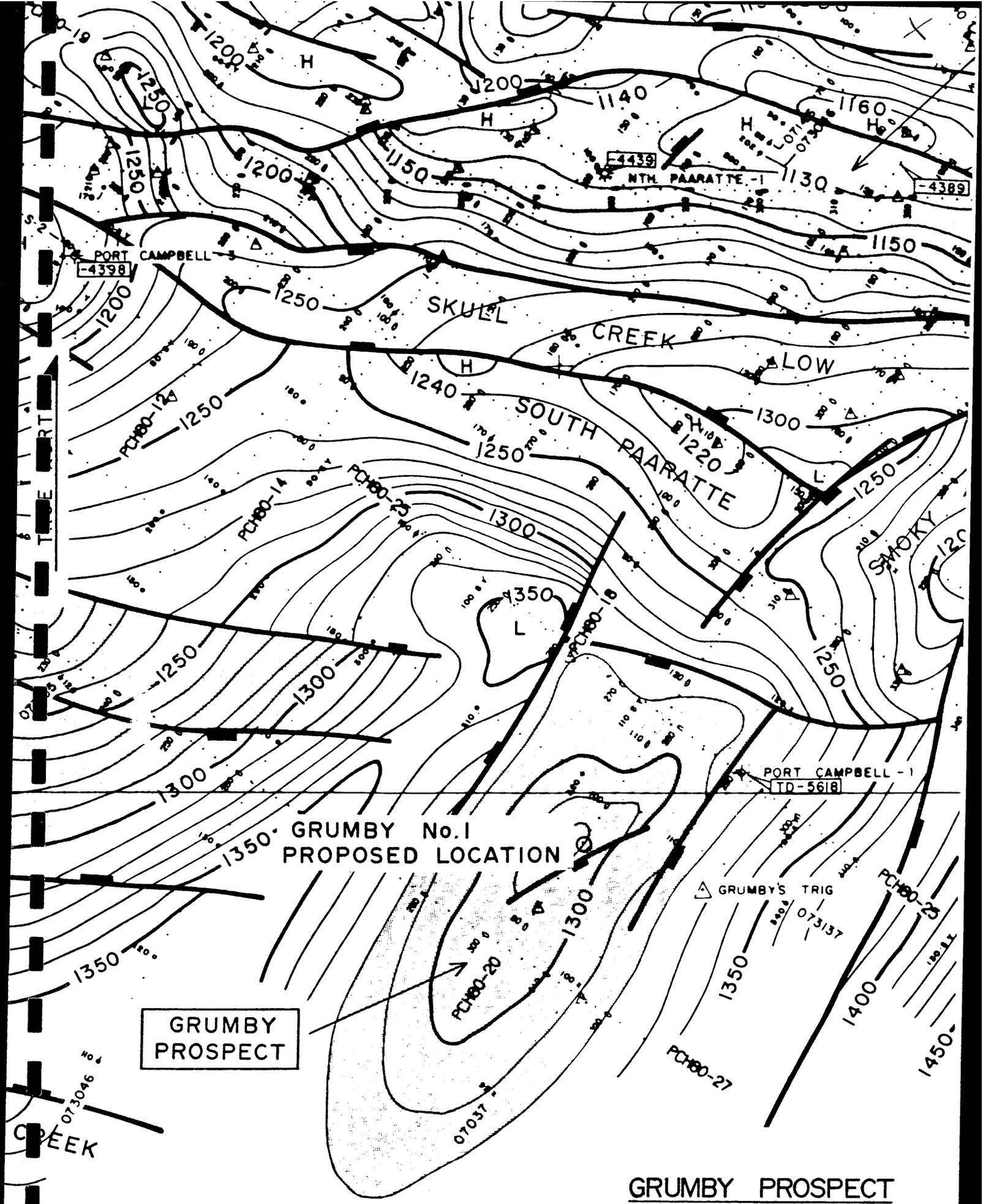
FIGURE 2

# PAARATTE

## COUNTY OF HEYTESBURY

SCALE OF CHAINS






# GRUMBY PROSPECT

## TOP WAARRE SANDSTONE STRUCTURE MAP

FIGURE 3

# APPENDIX 1

Details of Drilling Plant

# SCHEDULE I

CONTRACTOR'S RIG # 8

| | |
|---|---|
| DRAWWORKS | : Ideco H-35 double drum with 15' Hydromatic Brake. |
| ENGINES | : Two (2) GM 6-71 twin diesel units. |
| ROTARY TABLE | : Ideco 17-1/2". |
| SUBSTRUCTURE | : Mast Subbase 8'6" high. |
| RIG LIGHTING | : Rig-A-Lite explosion proof system. |
| MAST | : Ideco KM 103-195-GH Gross nominal capacity 195,000 pounds. |
| TRAVELLING BLOCK WITH UNITISED HOOK | : Ideco D110-3-24. |
| SWIVEL | : Ideco TL-120. |
| KELLY DRIVE | : Ideco Squarehex 4-1/4". |
| MUD PUMPS | : Emsco D300 7-1/4" x 14" powered by twin GM 6-71 diesel engine. |
| | : National C150B 7-1/4" x 12" powered by twin GM 6-71 diesel engine. |
| MIXING PUMP | : (1) 6 x 4 Warman Centrifugal powered by GM 4-71 diesel engine. |
| MUD TANK | : One (1) 35' long x 8' wide x 4'6" high - skid mounted. |
| SHALE SHAKER | : Rumba unit. |
| DESANDER/DESILTER | : Combination unit with 2 x 8" and 8 x 4" cones with Warman 6 x 4 centrifugal pump powered by GM 3-71 diesel engine. |
| GENERATORS | : Two (2) 75 Kw units powered by GM 6-71 diesel engines. |
| B.O.P.'s & ACCUMULATOR | : One (1) 10" - 3000 psi WP Shaffer Annular BOP.<br>One (1) 10" - 3000 psi WP Shaffer Doubel Gate BOP.<br>Koomey 60 gallon Accumulator system. |
| KELLY COCK | : Omsco unit - 10,000 psi. |
| AIR COMPRESSOR & RECEIVERS | : Two (2) Ingersoll Rand Compressors with 120 gallon receivers. |
| | One (1) 2 AVC Westinghouse Compressor. |
| SPOOLS | : One (1) 10" - 3000 x 10" - 3000 Drilling Spool with 2" outlets. |
| | One (1) 10" - 3000 x 6" - 3000 Studded Adaptor. |
| | One (1) 10" - 3000 x 10"- 3000 Spacer Spool. |

| | |
|---|---|
| RAT HOLE DRILLER | : C & W unit. |
| CHOKE MANIFOLD | : 2 Choke 3000 psi WP unit. |
| DRILL PIPE | : 7000 ft 4½" internally plastic coated aluminium 8.35lb/ft with 6-1/8" OD 18 degree taper hard band tool joints. (Weight of drill pipe with tool joints = 10.75 lb/ft).<br>6 joints 4-1/2" hevi-wate. |
| DRILL COLLARS | : 4 x 8" OD with 6-5/8" Regular connections.<br>12 x 6-1/4" OD with 4" IF connections. |
| KELLY | : 4-1/4" square with 6-5/8" Regular Box Up. |
| FISHING TOOLS | : (1) Bowen 7-5/8" series 150 SH Overshot.<br>(1) Bowen 9-5/8" series 150 Overshot.<br>(1) Baash-Ross 6-1/8" OD Bumper Sub.<br>(1) McCullough 6-1/8" OD Rotary Jars.<br>(1) Junk Sub for 8-1/2" hole. |
| HANDLING TOOLS | : (1) Varco CU Casing Bushing for 17-1/2" Table and to handle 13-3/8" and 9-5/8" casing.<br>(1) set CMS 13-3/8" Casing Slips.<br>(1) set CMS 9-5/8" Casing Slips.<br>(1) set 13-3/8" Side Door Elevators.<br>(1) set 9-5/8" Side Door Elevators.<br>(1) set 13-3/8" Single Joint Elevators.<br>(1) set 9-5/8" Single Joint Elevators.<br>(1) set 5-1/2" CMS Casing Slips.<br>(1) set 5-1/2" Side Door Elevators.<br>(1) set 5-1/2" Single Joint Elevators.<br>(1) set 4-1/2" Drill Pipe Slips.<br>(1) set 4-1/2" MAA Drill Pipe Elevators.<br>(1) set 5-1/2" - 7" Drill Collar Slips.<br>(1) set 6-3/4" - 8-1/4" Drill Collar Slips.<br>(1) set 2 Elevator Links 2-1/4" x 108" (110 ton).<br>(1) set Web Welson type B Tongs with jaws from 3-1/2" to 10-3/4".<br>(1) set BJ type B tongs with 13-3/8" jaws. |
| INSTRUMENTS & INDICATORS | : Martin Decker Clipper Weight Indicator.<br>Pump Pressure Gauge.<br>Martin Decker Tong Torque Indicator.<br>Geolograph G3 Recorder. |
| DEVIATION RECORDER | : Sure Shot $0^{o}$ - $7^{o}$ unit. |
| TOOLHOUSE | : (1) 28' long x 8' wide x 7' high. |
| DOG HOUSE | : (1) 24' long x 8' wide x 7' high. |
| GENERATOR HOUSE | : (1) 34' long x 8' wide x 7' high. |
| WELDING EQUIPMENT | : (1) Lincoln 400 AMP with diesel engine.<br>(1) set Oxygen/Acetylene. |
| PIPE RACKS | : (1) set (6) 26' long x 42" high. |
| CATWALKS | : (1) 45' long x 5' wide x 42" high. |
| WATER TANKS | : (1) 28' long x 8' wide x 7' high. |

| | |
|---|---|
| DAY FUEL TANK | : (1) 1500 gallon unit. |
| SUBSTITUTES | : (2) 6-5/8" Reg. Pick up Subs.<br>(2) 4" IF Pick up Subs.<br>(1) 4" IF Box x 6-5/8" Reg Pin Sub.<br>(1) 6-5/8" Reg Box x 4" IF Pin Sub.<br>(1) 4" IF Pin x 4-1/2" FH Pin Sub.<br>(1) 4-1/2" FH Pin x 4" IF Box Sub.<br>(1) 4" IF Pin x 4-1/2" Reg Box Sub.<br>(1) 6-5/8" Reg Pin x 6-5/8" Reg Box Sub.<br>(2) Kelly Saver Subs. |
| MUD TESTING | : Magcobar Rig Lab complete. |
| JUNK BOX | : (1) 20' x 8' x 4' high. |
| MATTING | : (1) set Hardwood mats. |
| WATER PUMPS | : (2) AEI - 2" x 1-1/2" powered by electric motors. |
| FIRE EXTINGUISHERS | : (1) set for rig and surrounding areas as per the applicable State Mines Department Regulation. |
| TOOLPUSHER/OPERATOR OFFICE | : (1) 30' x 10' wide x 9' high with office and living facilities. |

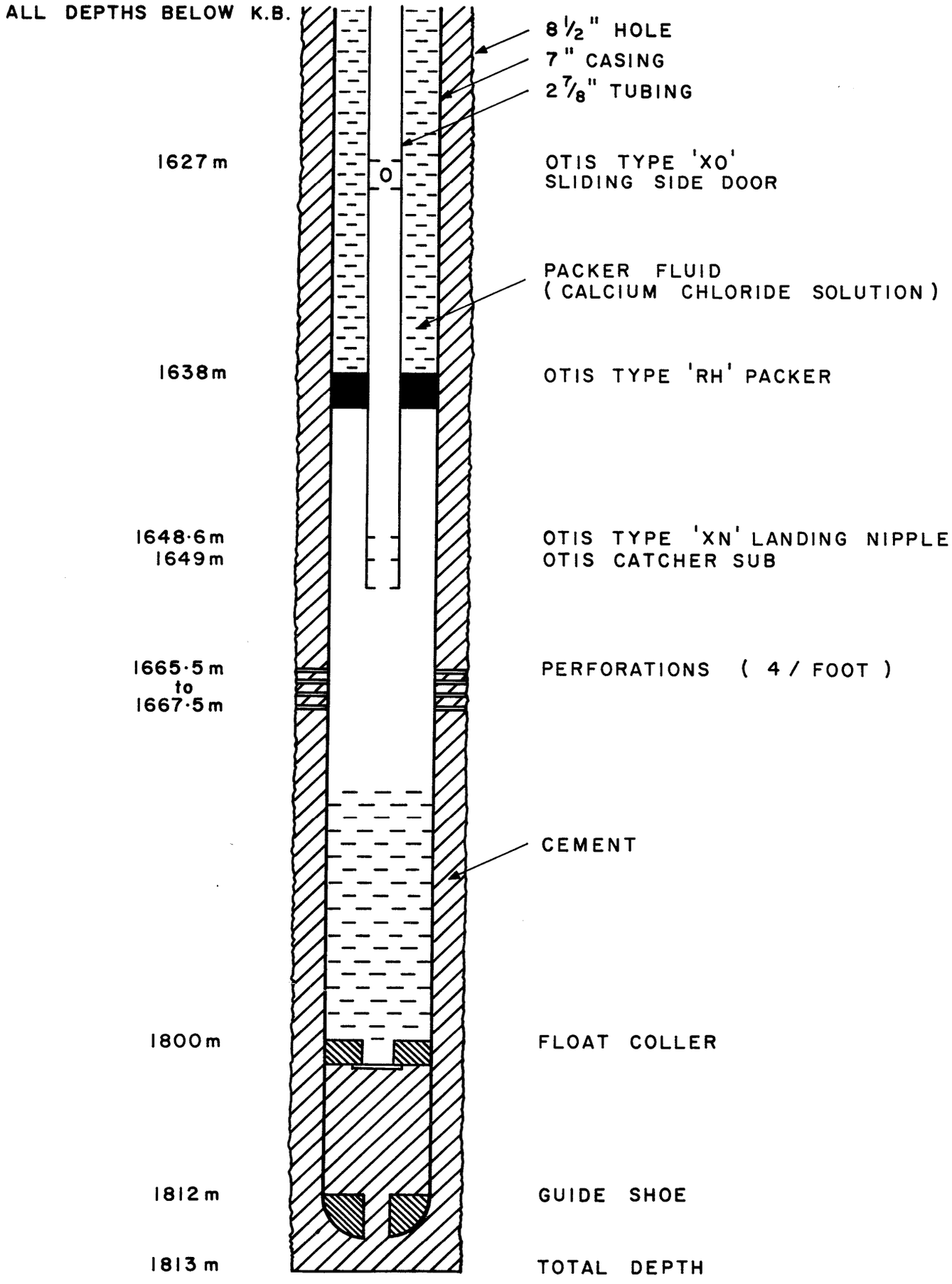
# APPENDIX 2

Completion Details

BEACH PETROLEUM N.L.

# COMPLETION - GRUMBY No.1

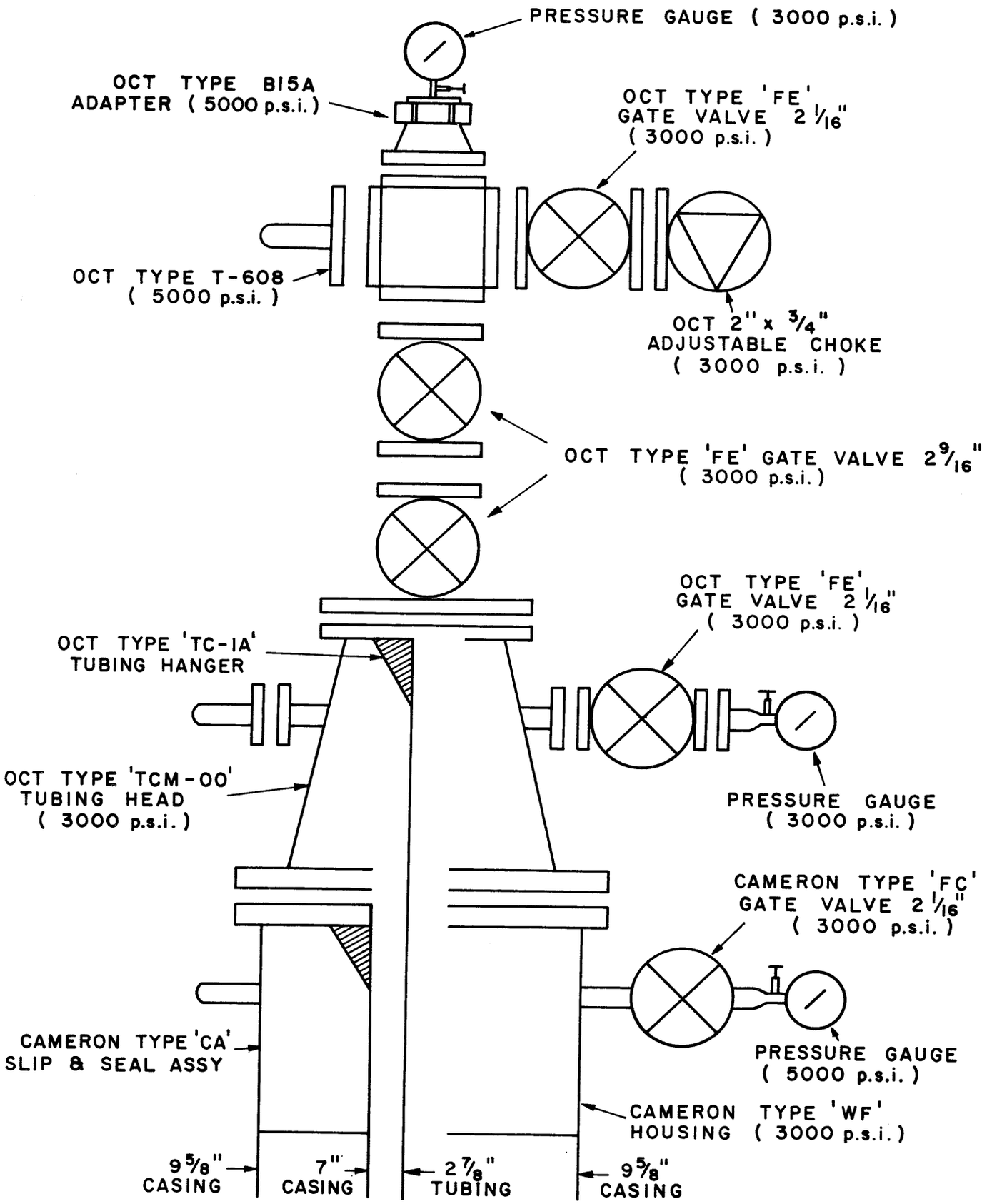
( NOT TO SCALE )



BEACH PETROLEUM N.L.

# CHRISTMAS TREE — GRUMBY No.1

( SCHEMATIC — NOT TO SCALE )



# OTIS

P.O. BOX 324, SALE,
VICTORIA, 3850, AUSTRALIA.

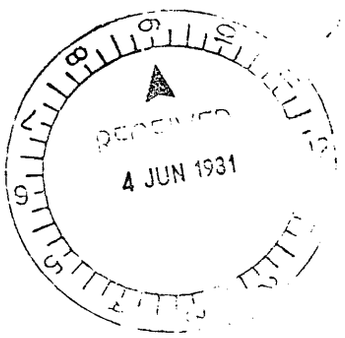
Telephone: ~~44 2212~~
Telex: OTISALE
AA51140

FW

ADS-319-81

29 MAY 1981

BEACH PETROLEUM ,
P.O. BOX 1180,
MELBOURNE, VIC., 3001




ATTENTION: Mr FRED WARD

Dear Sir,

Enclosed is the well schematic that you requested.

If there is any additional information you need, please let us know.

Yours sincerely,

A. D. SMITH

# OTIS COMPLETION GUIDE

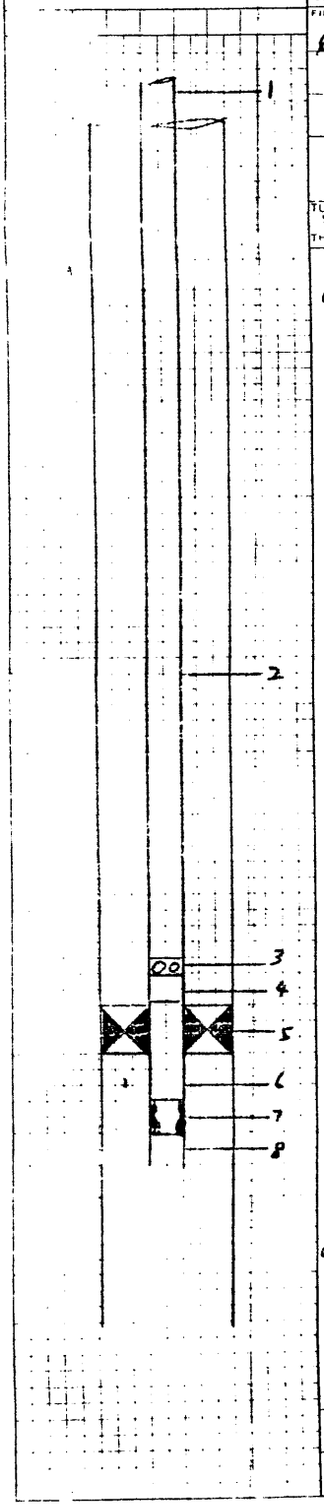
OTIS ENGINEERING CORPORATION
GENERAL OFFICE: Bell Line Rd. at Webb Chapel
P.O. Box 34380, DALLAS, TEXAS 75234
A HALLIBURTON Company

PREPARED FOR: MR. | COMPANY: Beach Petroleum | TELEPHONE: | DATE: 14 Mar 1988

FIELD NAME: Granberg | WELL NAME: Granberg #1 | COUNTY: | STATE: VIC | ☒ NEW COMPLETION ☐ WORKOVER

| | SIZE | WEIGHT | GRADE | THREAD | DEPTH |
|---|---|---|---|---|---|
| CASING | 7" | | | | |
| LINER | | | | | |

◯ SAFETY EQUIPMENT ◯ GAS LIFT EQUIPMENT ⊗ PACKERS AND ACCESSORIES
⊗ COMPLETION EQUIPMENT ◯ POST COMPLETION EQUIPMENT




| TUBING SIZE / THREAD UT / MT / LT | DESCRIPTION OF EQUIPMENT AND SERVICES | ESTIMATE Feet |
|---|---|---|
| 2 7/8 EUE 8RD 8.5# J55 | | |
| | 1 - tubing Hanger | 0.00 |
| | 2 - 170 joints 2 7/8" EUE 8RD tubing | 0.500 |
| | 3 - OTIS Type XO Sliding Sleeve. p/N 124X03 Seal Bore ID. 2.313" | 5344.65 |
| | 4 - 1 joint 2 7/8" tubing. | 5347.60 |
| | 5 - OTIS 7" Type JRH packer. p/N 12RH 70-32 Minimum ID 2.38" | 5377.24 |
| | 6 - 1 joint 2 7/8" tubing | 5385.53 |
| | 7 - OTIS 2 7/8" Type XN Landing Nipple Seal Bore ID. 2.313" No Go ID. 2.205" p/N 11XN23101 | 5415.13 |
| | 8 - OTIS 2 7/8" Catcher Sub. 2 7/8 after joint opinion is 2.38" | 5416.42 |
| | TOTAL ESTIMATE | |

COMPLETION PROCEDURE

All Granberg Gas OTIS Equipment. OTIS Type RH packer, hydraulic set - release straight pull 35,000 lb above Rig Weight. Minimum ID on ILE Assembly is 2.205"

PREPARED BY: N. Cheng | OFFICE: Sale | TELEPHONE: [illegible]
WELL NAME: Granberg | FIELD NAME: Granberg #1 | DATE: 14/3/88

# APPENDIX 3

Bit Record

PRINTED IN U. S. A.

# BIT RECORD

| COUNTY | FIELD | STATE | SECTION | TOWNSHIP | RANGE | LOCATION | WELL NO. |
|---|---|---|---|---|---|---|---|
| | GRUMBLY | VICTORIA | | | | OTWAY BASIN | 1 |

| CONTRACTOR | RIG NO. | OPERATOR | TOOLPUSHER | SALESMAN |
|---|---|---|---|---|
| O.D.E. | 8 | BEACH PETROLEUM | CROSE H. SCHMORL | |

| SPUD | UNDER SURF. | UNDER INTER. | SET SAND ST. | REACHED T.D. | PUMP NO. 1 | LINER | PUMP NO. 2 | LINER | PUMP POWER | TYPE MUD |
|---|---|---|---|---|---|---|---|---|---|---|
| 19-2-81 | 23-2-81 | | | | NATIONAL H380 | 5¼ | NATIONAL C150B | 5¾ | G.M. | GEL CHEMICAL |

| DRILL PIPE | TOOL JOINTS SIZE | TOOL JOINTS TYPE | TOOL JOINTS O.D. | DRILL COLLARS NUMBER | DRILL COLLARS O.D. | DRILL COLLARS I.D. | DRILL COLLARS LENGTH | DRAWWORKS POWER |
|---|---|---|---|---|---|---|---|---|
| 4½ ALUMINIUM | 6¼ | REED ALSTAN | 6¼ | 12 | 6" | 2 13/16 | | 2 SM671 |

| NO. | SIZE | MAKE | TYPE | JET 32ND IN | SERIAL | DEPTH OUT | FEET | HOURS | FT/HR | ACCUM DRLG HRS | WT. 1000 LBS. | R P M | VERT DEV. | PUMP PRESS | PUMP OPER. ATION | SPM 1 | SPM 2 | MUD WT | MUD VIS. | MUD W.L. | DULL. COND. T | DULL. COND. B | DULL. COND. G | DULL. COND. OTHER | FORMATION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12¼ | HTC | OSC 3J | 3X18 | H95527 | 1363 | 1363 | 28½ | 47.3 | 28½ | 12 | 160 | ½° | 850 | P | 55 | 55 | 9.1 | 42 | 11.5 | 1 | 2 | I | | RUN & CSG |
| 2 | 8½ | HTC | OSC1GJ | 3X13 | SNQ3163 | 2438 | 1075 | 23 | 46.7 | 51½ | 12 | 160 | 0° | 550 | S | 65 | | 9.0 | 33 | 12 | 5 | 7 | I | | NEW BIT |
| 3 | 8½ | HTC | J3 | 3X10 | JF291 | 3650 | 1212 | 25 | 48.4 | 76½ | 20 | 80 | | 1200 | S | 64 | | 9.1 | 35 | 10 | 5 | 6 | 1/8 | | New Bit |
| 4 | 8½ | SEC | S44 | 3X10 | 550477 | 4128 | 478 | 15¼ | 31.3 | 91¾ | 14 | 100 | 3° | 1250 | S | 64 | | 9.3 | 43 | 10.9 | 6 | 4 | 1/8 | | New Bit |
| 5 | 8½ | SEC | M44N | 3X12 | 506682 | 4296 | 168 | 8 | 21 | 99¾ | 20 | 100 | 2° | 850 | S | 64 | | 9.3 | 43 | 8.5 | 5 | 5 | I | | New Bit |
| 6 | 8½ | HTC | OSC 1GJ | 3X10 | SN983 | 4552 | 256 | 12½ | 20.4 | 112¼ | 20 | 85 | 1° | 1300 | S | 65 | | 9.3 | 38 | 8.5 | 4 | 6 | 1/8 | | New Bit |
| 7 | 8½ | HTC | OSC 1GJ | 3X10 | SN984 | 4941 | 389 | 22¾ | 17 | 134 | 25 | 85 | 1½ | 1400 | S | 65 | | 9.5 | 43 | 9 | 6 | 4 | 1/8 | | New Bit |
| 8 | 8½ | HTC | OSC 3AJ | 3X10 | PR363 | 5448 | 507 | 34¾ | 14.5 | 161¾ | 25 | 80 | 2 | 1400 | S | 62 | | 9.5 | 41 | 8.5 | 6 | 6 | 1/16 | | New Bit |
| 9 | 8½ | HTC | OSC 3J | 3X11 | 233BF | 5555 | 107 | 10¾ | 9.9 | 178½ | 25 | 80 | 2 | 1400 | S | 62 | | 9.8 | 41 | 7.5 | 5 | 2 | 1/4 | | New Bit |
| 10 | 8½ | HTC | J22 | 3X10 | 680XK | 5940 | 385 | 36 | 10.8 | 208½ | 25 | 65 | ¾ | 1400 | S | 62 | | 9.4 | 45 | 5 | 2 | 3 | I | | FCM Log |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | TD | 5940 | | | | | | | | | | | | | | | | | | |
| | | | | | | 7-3-81 | | | | | | | | | | | | | | | | | | | |

Yours for the asking . . .

Technical information and help to get your holes down faster with fewer problems. Advice on rock bit performance, bit selection, drill string analysis, hydraulics programs and recommendations on the best bit weight and rotary speed. This information is tailored for you, your location and your rig.

Your Hughes Tool Company representative is your best source for drilling information . . . wherever you drill.

Compliments of

**HUGHES TOOL COMPANY**

Houston, Texas
U.S.A.

HTC 557 E

# APPENDIX 4

Velocity Data Report

# WELL VELOCITY SURVEY

## GRUMBY NO. 1

## P.E.P. 93

## VICTORIA

for

BEACH PETROLEUM N.L.

by

VELOCITY DATA PTY. LTD.

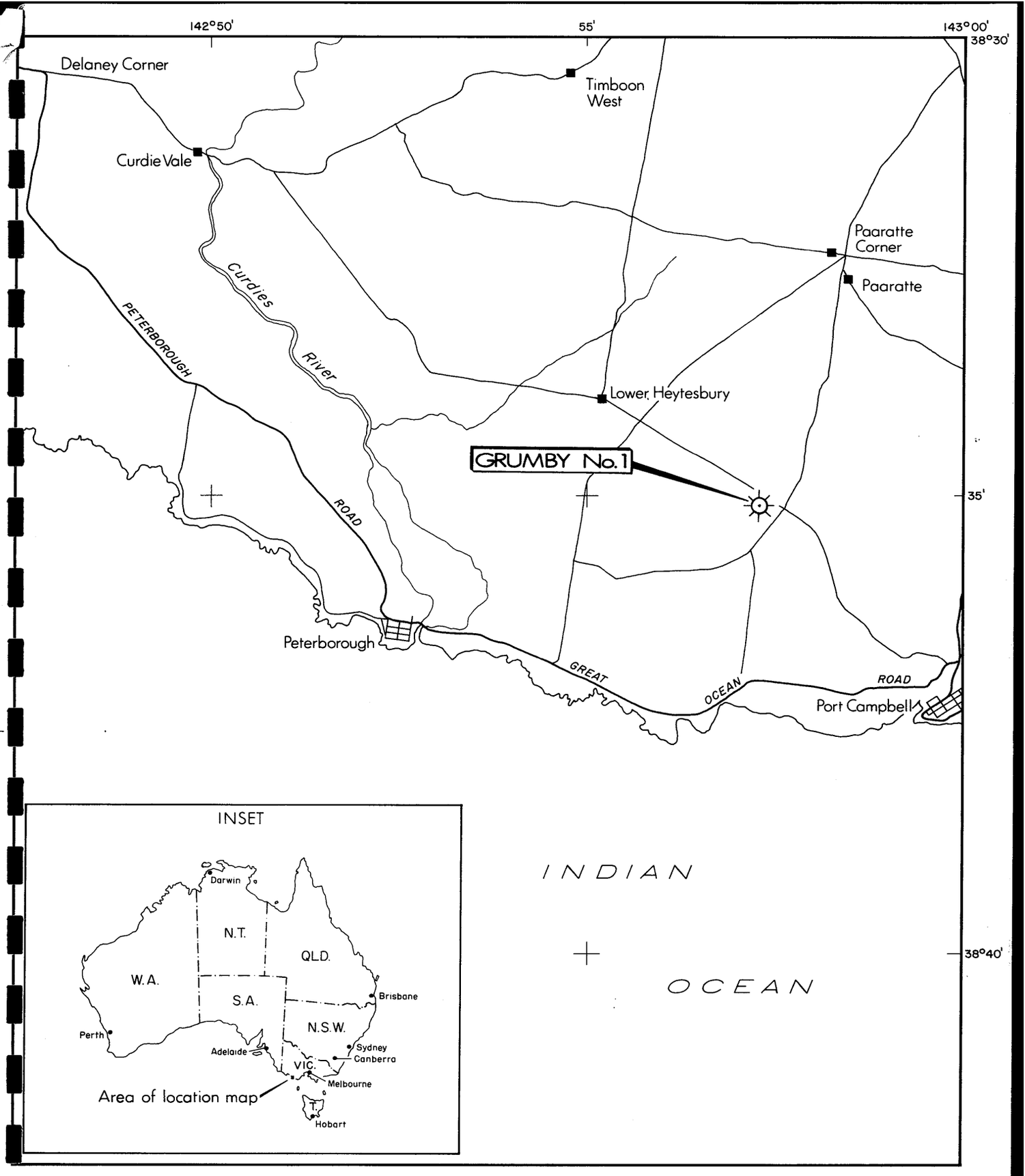
Brisbane, Australia

March 8, 1981

INDEX



Figures:




# BEACH PETROLEUM N.L.

# GRUMBY No.1

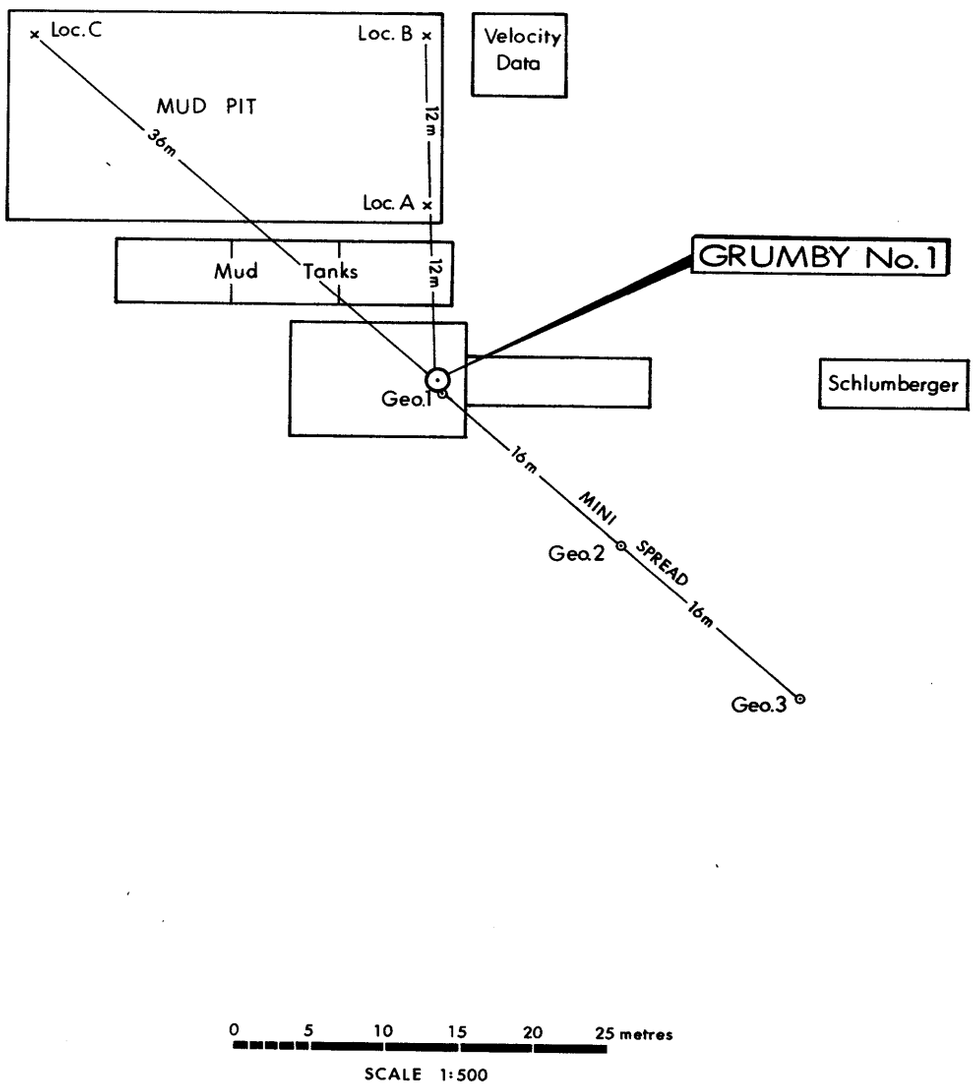
## WELL LOCATION MAP

Scale 1 : 100 000

MILES 0 0·5 1 2 3 4 MILES

KILOMETRES 0 0·5 1 2 3 4 5 KILOMETRES

**Figure 1**




BEACH PETROLEUM N.L.

# GRUMBY No.1

## SHOT POINT LOCATION SKETCH

Figure 2

## SUMMARY

Velocity Data Pty. Ltd. conducted a velocity survey for Beach Petroleum N.L. in the Grumby No. 1 well, PEP93, Victoria. The date of the survey was March 8, 1981.

Twenty-three shots were taken in the well over fifteen levels. Record quality was fair to good and the results are considered to be reliable. The recording at total depth has not been used in calculations since the time appears about .005 secs. long, possibly because of the sonde resting in loose material at the bottom of the hole. Elsewhere, where more than one satisfactory shot was taken at a level, times have been averaged.

Explosives were used as an energy source with charges being fired in the mud pit at a depth of .9 metres and offset 36 metres from the well head. Charge size was 300 grms. for all shots below the datum.

Because the shot at total depth has not been used in calculations, interval velocities below the 1754 metre level are based on unadjusted sonic interval times.

The survey was used to calibrate the sonic log. A calculated depth function of $Z = 2840t^{1.250}$ is a fair fit to the time-depth curve over the entire depth of the well.

## GENERAL

| | | |
|---|---|---|
| Name of Well | : | Grumby No. 1 |
| Location | : | PEP93, Victoria |
| Co-ordinates | : | Lat. 38°35'8.5"S.<br>Long. 142°57'11.5"E. |
| Date of Survey | : | March 8, 1981 |
| Elevation of K.B. | : | 91.2 metres A.S.L. |
| Elevation of Datum | : | Sea level |
| Logging | : | Schlumberger |
| Sonic Interval | : | 415.2 to 1813.6 metres |
| Depth surveyed | : | 1814 metres |
| Weather | : | Fine - warm |
| Operator | : | B. Prosser |

EQUIPMENT

| | | |
|---|---|---|
| Energy Source | : | Dynamite |
| Recording Instruments | : | S.I.E. RS44W Well-shoot system |
| Downhole Geophone | : | Geospace WLS1050 Wall lock |
| Reference Geophone | : | Mk. L1 |

RECORDING

| | | |
|---|---|---|
| Charge Size | : | 50 to 300 grms. |
| Depth of shots | : | .9 metres |
| Shot offset | : | 36 metres |
| Reference sensors | : | Refer Fig. 2 |

Downhole sensor:
6 HS1 4.5 Hz-215 ohm, high temperature detectors in series parallel. Frequency response 8-300Hz within 3db.

Preamplifier -48db fixed gain. Frequency response 5-200Hz within 3db.

Record Traces:

1. Time Break
2. Well Geophone - high gain
3. Well Geophone - medium gain
4. Well Geophone - medium gain
5. Well Geophone - low gain
6. Reference phone No. 1 - well head
7. Reference phone No. 2 - offset 16 metres from well head
8. Reference phone No. 3 - offset 32 metres from well head
9. Confirmation time break
10. Timing Trace

COMPUTING

Sonic times are adjusted to check-shot times using two methods.

1) A linear correction

$$\frac{(t_{L_2} - t_{R_2}) - (t_{L_1} - t_{R_1})}{Z_2 - Z_1} = \text{correction in } \mu\text{secs/ft.}$$

11) A differential correction

$$100\ (1 - \frac{(t_{R_2} - t_{R_1})}{(t_{L_2} - t_{L_1})}) = \%\ \text{decrease in interval time}$$

where $t_L$ = sonic log time

$t_R$ = record time

and $Z_2 - Z_1$ = depth interval

Where check-shot interval times are longer than corresponding sonic interval times, errors are assumed to be instrumental and are adjusted using the linear correction. However, if formation characteristics, such as high porosity or the presence of gas are suspected, the differential correction is used.

The differential correction is also applied where check-shot interval times are shorter than corresponding sonic times and these differences are assumed to arise from caving or mud cake effects.

Six shots were taken at datum from varying offset distances and using charge sizes which varied from a cap to 100 grms. of dynamite. Corrected times are in close agreement and have been averaged to give a datum correction time of $-.048^4$ secs. No other corrections have been applied when relating the survey results to the record time section. All shots except shot 10 at total depth have been used in calculations. Where more than one satisfactory shot was obtained at a level, times have been averaged.

Discrepancies between shot interval times and sonic interval times are moderate to small.

Generally, shot interval times are longer than the corresponding sonic interval times. Exceptions to this are over the Paaratte, Flaxmans and Warre formations where shot interval times are shorter.

A calculated depth function of $Z = 2840t^{1.250}$ is a fair fit to the time-depth curve over the surveyed interval of the well.

Time-depth and velocity curves are submitted with this report together with copies of the field records.

L.W. Pfitzner.

PE905794

This is an enclosure indicator page.
The enclosure PE905794 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905794 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905794 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Time Depth Points and Velocity Function Graph for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = WELL |
| SUBTYPE | = VELOCITY_CHART |
| DESCRIPTION | = Time Depth Points and Velocity Function Graph (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 8/03/81 |
| DATE_RECEIVED | = 3/07/81 |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE902707

This is an enclosure indicator page.
The enclosure PE902707 is enclosed within the container PE902706 at this location in this document.

The enclosure PE902707 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE902707 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Time Depth & Velocity Curves |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = VELOCITY_CHART |
| DESCRIPTION | = Time Depth & Velocity Curves (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 8/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Velocity Data Pty Ltd |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905797

This is an enclosure indicator page.
The enclosure PE905797 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905797 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905797 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 1 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 23 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905798

This is an enclosure indicator page.
The enclosure PE905798 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905798 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905798 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 2 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 21 and 22 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905799

This is an enclosure indicator page.
The enclosure PE905799 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905799 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905799 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 3 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 19 and 20 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905800

This is an enclosure indicator page.
The enclosure PE905800 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905800 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905800 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 4 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 17 and 18 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905801

This is an enclosure indicator page.
The enclosure PE905801 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905801 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905801 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 5 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 15 and 16 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905802

This is an enclosure indicator page.
The enclosure PE905802 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905802 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905802 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 6 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 13 and 14 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905803

This is an enclosure indicator page.
The enclosure PE905803 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905803 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905803 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 7 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 11 and 12 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905804

This is an enclosure indicator page.
The enclosure PE905804 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905804 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905804 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 8 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 9 and 10 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905805

This is an enclosure indicator page.
The enclosure PE905805 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905805 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905805 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 9 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 7 and 8 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905806

This is an enclosure indicator page.
The enclosure PE905806 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905806 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905806 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 10 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 5 and 6 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905807

This is an enclosure indicator page.
The enclosure PE905807 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905807 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905807 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 11 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 3 and 4 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905808

This is an enclosure indicator page.
The enclosure PE905808 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905808 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905808 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Velocity Survey Shot Data (sheet 12 of 12) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = SEISMIC |
| SUBTYPE | = FEILD |
| DESCRIPTION | = Seismic Shot Data (from Appendix 4--Velocity Data Report--of WCR) for Grumby-1 |
| REMARKS | = record no. 1 and 2 |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

# APPENDIX 5

Gas Analyses

The Australian Mineral Development Laboratories

Flemington Street, Frewville,
South Australia 5063
Phone Adelaide 79 1662
Telex AA 82520

Please address all correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

amdel

3/944/0 - AC 4841/81

24 April 1981

# NATA CERTIFICATE

Mr. J.A. Hinkins,
Executive Director,
Beach Petroleum N.L.,
G.P.O. Box 1280L,
MELBOURNE VIC. 3001

REPORT AC 4841/81

YOUR REFERENCE: Order Number 048

IDENTIFICATION: As listed

DATE RECEIVED: 2 April 1981

D.K. Rowley
Manager
Analytical Chemistry Division

for Norton Jackson
Managing Director

ij

Pilot Plant: Osman Place
Thebarton S.A.
Telephone 43 8053
Branch Laboratory: Perth

# GAS CHROMATOGRAPHY ANALYSIS

Well tested: Grumby # 1

Date tested: 19/3/81 at 1420 hours

Type of test:

Type of sample: Gas

Source of sample: Separator

Field sampling conditions: 32°F 420 psi

Reference: O/N 048

## RESULTS OF ANALYSIS

| | | |
|---|---|---|
| Oxygen plus argon | <0.01 | % mol vol |
| Nitrogen | 1.35 | |
| Hydrogen | None Detected | |
| Helium | 0.02 | |
| Carbon dioxide | 52.6 | |
| Methane | 43.5 | |
| Ethane | 1.55 | |
| Propane | 0.53 | |
| i Butane | 0.10 | |
| n Butane | 0.14 | |
| i Pentane | 0.04 | |
| n Pentane | 0.03 | |
| Hexanes | 0.04 | |
| Heptanes | 0.06 | |
| Octanes & higher hydrocarbons | 0.04 | |

Calculated Gas Density (relative air = 1) 1.089

REMARKS:

GAS AND FUEL CORPORATION OF VICTORIA
SCIENTIFIC SERVICES DEPARTMENT

# SPECIAL TEST REPORT

| | | | |
|---|---|---|---|
| Requested by | Beach Petroleum N.L. | Sample book no. | 81/204 |
| Date received | 10.3.81 | | |
| Material | Natural Gas | | |
| Query | Full Analysis | Job no. | 234 |
| Origin of sample | Grumby No.1 | Report no. | 81/145/AN |

Report: SAMPLES FROM BEACH PETROLEUM N/L. GRUMBY No.1

| R F T | 1 | 1 | 2 | 2 |
|---|---|---|---|---|
| Sample No:- | 1 | 2 | 1 | 2 |
| Depth (m) | 1680 | 1665.5 | 1676 | 1672 |
| **ANALYSIS AS RECEIVED - MOLE %** | | | | |
| Methane | 38.97 | 27.58 | 40.48 | 26.12 |
| Ethane | 1.31 | 0.91 | 1.39 | 0.90 |
| Propane | 0.45 | 0.31 | 0.48 | 0.34 |
| i Butane | 0.089 | 0.062 | 0.100 | 0.074 |
| n Butane | 0.108 | 0.072 | 0.115 | 0.094 |
| i Pentane | 0.039 | 0.024 | 0.040 | 0.033 |
| n Pentane | 0.031 | 0.018 | 0.031 | 0.025 |
| Hexanes + | 0.145 | 0.061 | 0.108 | 0.093 |
| Carbon Dioxide | 40.64 | 28.92 | 32.71 | 36.31 |
| Nitrogen | 14.54 | 33.42 | 19.63 | 28.72 |
| Oxygen + Argon | 3.68 | 8.62 | 4.92 | 7.29 |
| HV ($MJ/m^3$ gross) | 16.63 | 11.64 | 17.14 | 11.24 |
| WI | 16.24 | 11.46 | 17.16 | 10.82 |
| SG (air = 1.0) | 1.048 | 1.032 | 0.998 | 1.079 |
| **CALCULATED TO AIR FREE BASIS - MOLE %** | | | | |
| Methane | 47.29 | 46.90 | 52.92 | 40.10 |
| Ethane | 1.59 | 1.55 | 1.82 | 1.38 |
| Propane | 0.55 | 0.53 | 0.63 | 0.52 |
| i Butane | 0.108 | 0.106 | 0.131 | 0.114 |
| n Butane | 0.131 | 0.123 | 0.150 | 0.144 |
| i Pentane | 0.047 | 0.041 | 0.052 | 0.051 |
| n Pentane | 0.038 | 0.031 | 0.041 | 0.038 |
| Hexanes + | 0.176 | 0.104 | 0.141 | 0.143 |
| Carbon Dioxide | 49.31 | 49.18 | 42.77 | 55.73 |
| Nitrogen | 0.76 | 1.43 | 1.35 | 1.78 |
| HV ($MJ/m^3$ gross) | 20.18 | 19.80 | 22.44 | 17.25 |

Distribution:
Mr. F. Ward - Beach Petroleum N.L.(2) ✓
O. Anderson

Chemist O. Anderson
Checked O. Anderson
Date 16.3.81
Laboratory Analytical

23-25-4566

GAS AND FUEL CORPORATION OF VICTORIA
SCIENTIFIC SERVICES DEPARTMENT

# SPECIAL TEST REPORT

Requested by: Beach Petroleum N/L
Date Received: 20/3/81
Material: Natural Gas
Query: Full Analysis
Origin of Sample: Wellhead Grumby No. 1 - 18/3/81

Sample Book No. 81/238
Job No. 238
Report No. 81/193/AN

REPORT

The sample was received in a cylinder identified only as CORE LAB 10000 PSI WP S/N 1068/81.

Some difficulty was experienced in obtaining reasonable samples from the cylinder, as condensate was also present. The results indicate the gaseous section of the sample at 25°C.

Please type only within the lines

| Component | Concentration mole % | Estimated Error mole % |
|---|---|---|
| Methane | 44.26 | ± 0.5 |
| Ethane | 1.42 | ± 0.04 |
| Propane | 0.52 | ± 0.02 |
| i-Butane | 0.098 | ± 0.002 |
| n-Butane | 0.119 | ± 0.002 |
| i-Pentane | 0.044 | ± 0.002 |
| n-Pentane | 0.035 | ± 0.002 |
| Hexanes + | 0.41 | ± 0.008 |
| Carbon Dioxide | 51.72 | ± 0.5 |
| Nitrogen | 1.37 | ± 0.02 |
| Oxygen + Argon | < 0.01 | ± 0.01 |

Characteristics for the dry gas at 15°C, 101.325 kPa.
Heating Value = 19.3 ± 0.1 $MJ/m^3$ gross.
Specific Gravity = 0.574 ± 0.003.
(Air = 1)

"This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed with its terms of registration.

A Laboratory Certificate, Statement or Report may not be published except in full unless permission for the publication of an approved abstract has been obtained, in writing"

Distribution: Mr.F.Ward
Beach Petroleum N/L (2)
O. Anderson
G. Mitchelmore (2)
Master File

Chemist: I. Strudwick
Checked: O. Anderson.
Date Laboratory: 24/3/81

23/25/4561

# CORE LABORATORIES INTERNATIONAL LTD.

*Petroleum Reservoir Engineering*

SINGAPORE

## GAS ANALYSIS

| | |
|---|---|
| COMPANY | Beach Petroleum N.L. |
| DST/PROD'N TEST | |
| WELL | Grumby No. 1. |
| SAMPLING POINT | Top of Test Sep. |
| FIELD | Wildcat |
| AREA | |
| COUNTRY | Australia |
| FILE | WA-CA-8 |

| COMPONENTS | | MOL % |
|---|---|---|
| Hydrogen | | |
| Helium | | |
| Carbon Monoxide | | |
| Hydrogen Sulphide | | |
| Carbon Dioxide | | 32.79 |
| Oxygen | | |
| Nitrogen | | 0.99 |
| Methane | | 62.88 |
| Ethane | 0.2972 | 1.18 |
| Propane | 0.2086 | 0.76 |
| Iso-Butane | 0.2838 | 0.87 |
| N-Butane | 0.3238 | 1.03 |
| Iso-Pentane | 0.1095 | 0.30 |
| N-Pentane | 0.0614 | 0.17 |
| Hexanes | 0.0041 | 0.01 |
| Heptanes Plus | 0.0045 | 0.01 |

CALCULATED GAS GRAVITY= 0.93 GPM= 1.2929

CALCULATED GROSS HEATING VALUE= 756.84 BTU per cubic foot of dry gas @ 14.696 psia and 60 °F

COLLECTED @ 457 psig and 25 °F ON 18 MARCH 81

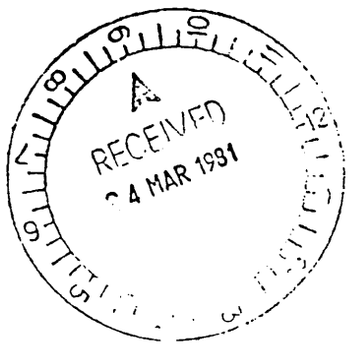
REMARKS:

DEPARTMENT OF
MINERALS AND ENERGY
CHEMICAL BRANCH
STATE LABORATORIES 5 PARLIAMENT PLACE MELBOURNE, VIC. 3002

TELEPHONE: (03) 651 9111
TELEX: MINERG AA 36595

*Our Ref.* CM:JC
*Your Ref.* An GP 18/3
*Contact* D R 10.3.81
*Ext.* 1245

18 March 1981




REPORT ON SAMPLE NOS. 430 - 433/81

Sample : Gases

Locality : Point Campbell

Sender : J Patchett
Beach Petroleum
32 nd floor
360 Collins St.
MELBOURNE 3000

DETAILS OF SAMPLES:

Four samples of gas from a drilling operation by Beach Petroleum near Point Campbell was received for analysis with special emphasis on content of carbon dioxide, alkanes including nature and a possible hydrogen sulphide content.

The given laboratory numbers and discriptions are as follows:

RESULTS:

| Lab No | Description |
|---|---|
| 430 | RFT1 Sample 1 |
| 431 | RFT1 Sample 2 |
| 432 | RFT2 Sample 1 |
| 433 | RFT2 Sample 2 |

RESULTS - RATIONALISED

| Lab No | Senders No | % Oxygen | % Nitrogen | % Carbon Dioxide | % Methane | % Ethane | % Propane |
|---|---|---|---|---|---|---|---|
| 430 | RFT1 5.1 | 10.7 | 39.5 | 27.4 | 21.7 | 0.7 | <0.1 |
| 431 | RFT1 5.2 | 11.5 | 43.2 | 20.0 | 24.3 | 0.8 | 0.2 |
| 432 | RFT2 5.1 | 11.4 | 42.2 | 21.6 | 23.9 | 0.7 | 0.2 |
| 433 | RFT2 5.2 | 18.2 | 70.1 | 5.4 | 6.1 | 0.2 | <0.1 |

NOTE:

1 Gases were stored over water so the carbon dioxide would be lower, due to its solubility in water.

2 Because of the water present we thought a test for hydrogen sulphide would not be merited.

3 It would be appreciated if further samples could be taken in relation to A.S.T.M. practice.

CHIEF CHEMIST

# APPENDIX 6

Liquids Analyses

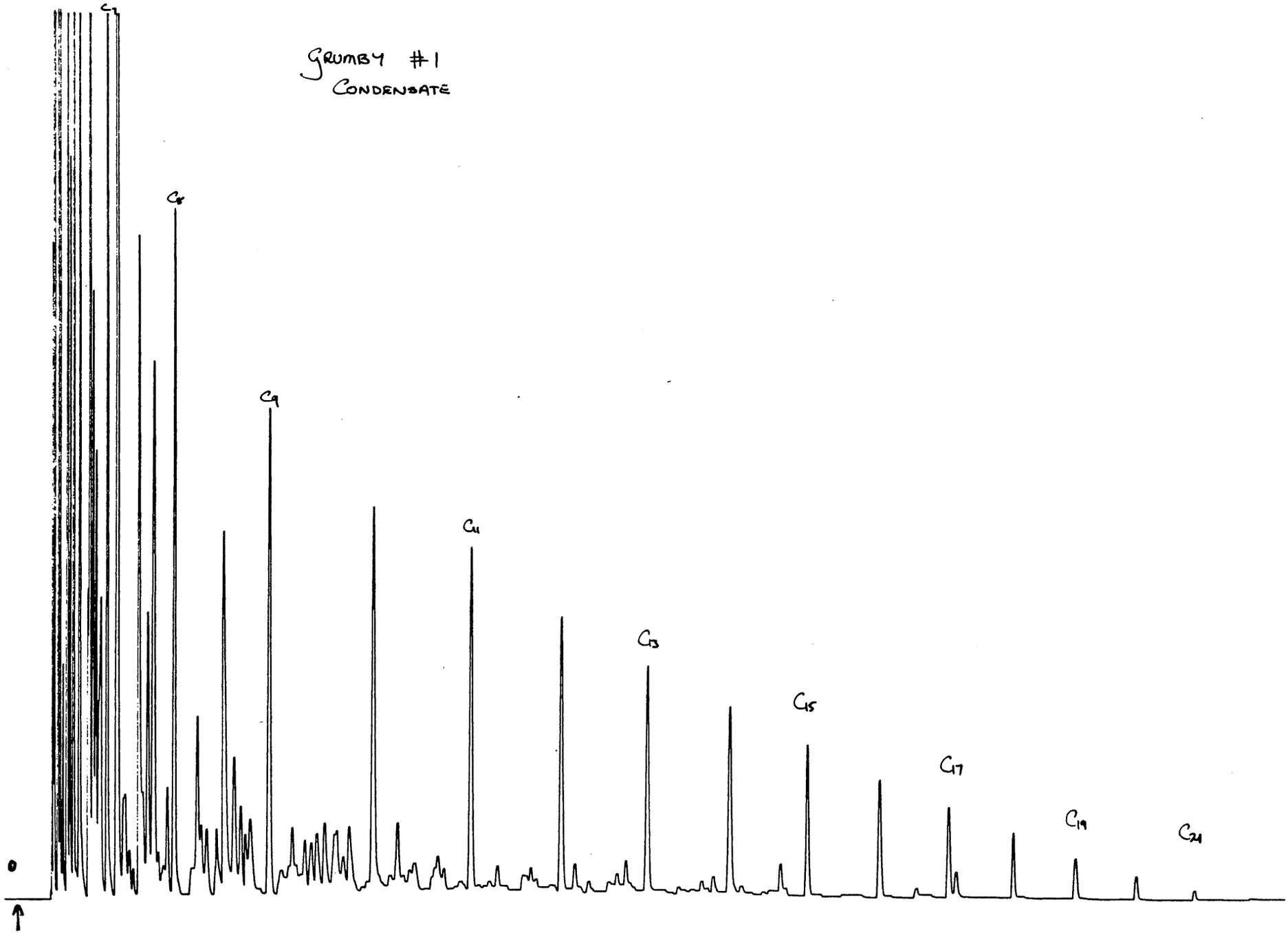
GRUMBY # 1

Condensate ex Separator

Results of Analysis:

| | | |
|---|---|---|
| Propane | 0.50 | Wt % |
| Butanes | 3.10 | |
| Pentanes | 5.80 | |
| Hexanes | 8.35 | |
| Heptanes | 17.95 | |
| Octanes | 23.65 | |
| Nonanes | 11.70 | |
| Decanes | 8.70 | |
| $C_{11}$ hydrocarbons | 5.40 | |
| $C_{12}$ " | 3.75 | |
| $C_{13}$ " | 3.30 | |
| $C_{14}$ " | 2.15 | |
| $C_{15}$ " | 1.80 | |
| $C_{16}$ " | 1.15 | |
| $C_{17}$ " | 0.90 | |
| $C_{18}$ " | 0.80 | |
| $C_{19}$ " | 0.45 | |
| $C_{20}$ " | 0.25 | |
| $C_{21}$ " | 0.15 | |
| $C_{22}$ and higher hydrocarbons | 0.15 | |

Specific Gravity 0.744 at 15.6°C


GRUMBY #1
CONDENSATE
C1
C5
C9
C11
C13
C15
C17
C19
C21
0

# APPENDIX - 7

## PRODUCTION TESTING

PRODUCTION TEST No.1

This test was of short duration and was designed primarily to clean the well after swabbing.

Date 14th March, 1981

| | |
|---|---|
| 1020 hours | Commenced swabbing |
| 1105 hours | Swabbed to 550m; well commenced to unload completion fluid from the tubing; shut master gate and removed lubricator. |
| 1115 hours | Opened master gate; well commenced to flow. |
| 1205 hours | Attempted to flare gas - flare could not be maintained. |
| 1215 hours | Shut wing gate. |
| 1230 hours | Shut master gate and secured the well. |

Flow Measurements

Flow fates were estimated from readings on a 3000 psi gauge upstream of the well head variable choke.

| Time | Choke | THP | CHP | Q |
|---|---|---|---|---|
| 1117 | open | 915 psia | 215 psia | u/a |
| 1130 | open | 940 psia | 215 psia | u/a |
| 1145 | ½ inch | 1265 psia | 240 psia | 7.92 MMCFD |
| 1200 | ½ inch | 1265 psia | 265 psia | 7.92 MMCFD |
| 1205 | ¼ inch | 1515 psia | 315 psia | 2.23 MMCFD |
| 1215 | ¼ inch | 1540 psia | 415 psia | 2.27 MMCFD |

The above tabulated flow rates are not considered to be reliable.

Shut in Pressure

At 1230 hours (that is after a closed in period of 15 minutes) the shut in tubing head pressure was:-

1660 psig

PE905795

This is an enclosure indicator page.
The enclosure PE905795 is enclosed within the container PE902706 at this location in this document.

The enclosure PE905795 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905795 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Check Shot and Sonic Calibration Data Sheet (1 of 2) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = WELL |
| SUBTYPE | = VELOCITY_CHART |
| DESCRIPTION | = Check Shot and Sonic Calibration Data Sheet, 1 of 2,( from appendix 7--Production Testing--of WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PE905796

This is an enclosure indicator page.
The enclosure PE905796 is enclosed within the container PE902706 at this location in this document.

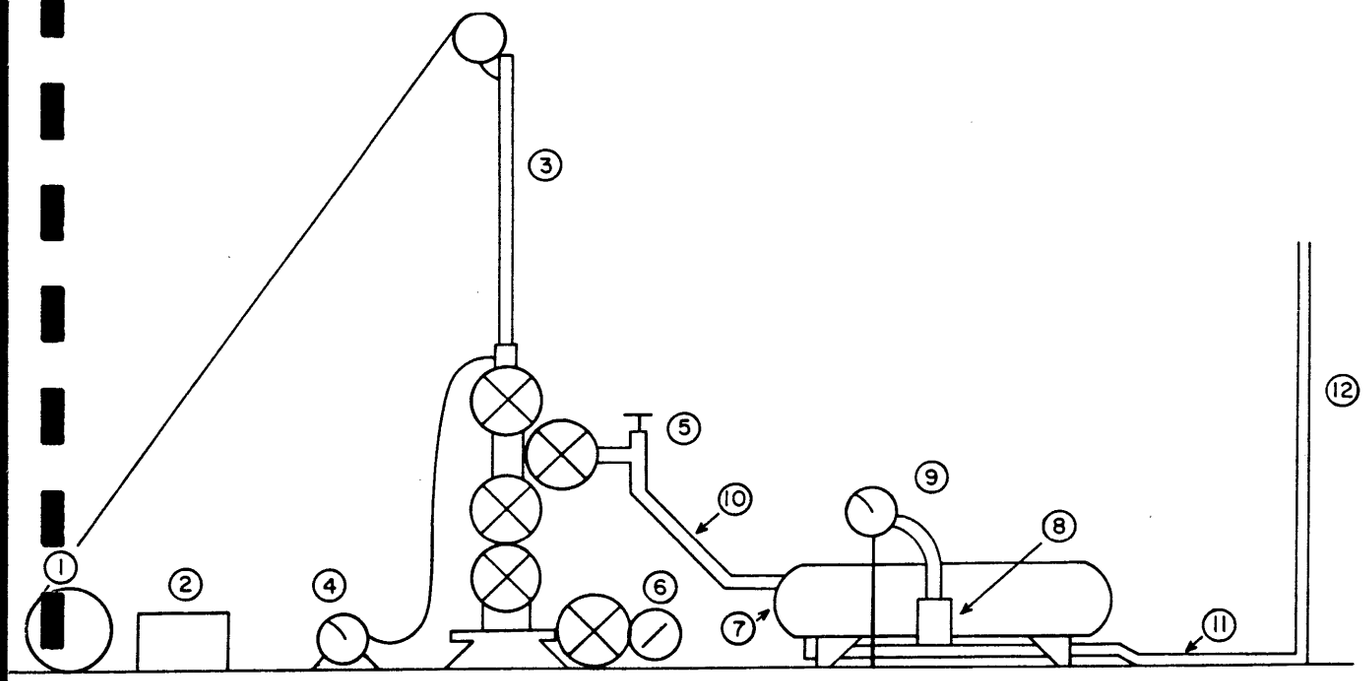
The enclosure PE905796 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE905796 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Check Shot and Sonic Calibration Data Sheet (2 of 2) for Grumby-1 |
| BASIN | = OTWAY |
| PERMIT | = PEP/93 |
| TYPE | = WELL |
| SUBTYPE | = VELOCITY_CHART |
| DESCRIPTION | = Check Shot and Sonic Calibration Data Sheet, 2 of 2,( from appendix 7--Production Testing--of WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = GRUMBY-1 |
| CONTRACTOR | = |
| CLIENT_OP_CO | = BEACH PETROLEUM NL. |

(Inserted by DNRE - Vic Govt Mines Dept)

PRODUCTION TEST NO.3

Surface Installation (Schematic - not to scale)




1 - Logging truck (Hewlett-Packard bottom hole pressure gauge)

2 - H-P gauge recorder

3 - Lubricator

4 - Recording pressure gauge - tubing head pressure (THP)

5 - Adjustable choke

6 - Pressure gauge - casing head (7" x 2 7/8" annulus) pressure (CHP)

7 - Separator

8 - Orifice Meter (3 inch)

9 - Recording pressure gauge (differential and static pressures)

10 - 2 inch flow line (100 feet long)

11 - 2 inch flow line (100 feet long)

12 - Vertical stand pipe (7 inch diam. 10 feet high).

Notes

(a) The lubricator was supported by a crane (not shown on diagram).

(b) Under Country Fire Authority regulations, gas could only be flared in the period 0800 to 1800 hours daily and then only if the temperature did not exceed 32$^{o}$C and the wind velocity was not more than 8 kph.

The three point isochromal test was carried out by Go International Australia Pty. Ltd. whose report follows:-

Assessment of Results

It had been planned to carry out a four point isochromal test on this well, however a number of difficulties were encountered.

(i) Because of its high $CO_2$ content, the gas was difficult to flare; this problem was overcome by using a 7 inch diameter flare prover.

(ii) At higher flow rates, partial freezing was occuring in the separator and as a consequence some condensate was discharged through the flare line. Methanol or ethylene glycol injection at the well head could probably have alleviated this freezing.

(iii) Because of strong winds and the ejection of condensate, it was decided not to flare the gas during the third flow period. However, after two hours flow, the quantity of condensate being vented was considered hazardous and the well was shut in.

(iv) As continuing unfavourable weather conditions were forecast, the fourth flow period was not attempted.

The tests conducted on this well were designed to be of a preliminary nature only and it was considered that more rigorous testing should be carried out by reservoir engineers at the appropriate time.

For this reason the data collected have been used to derive the Open Flow Potential of the well, as it is a general industry rule of thumb that a well can be economically produced at about 15% of this volume.

The attached graph shows that the OFP of this well is about 29 MMCFD; thus an initial production rate of approximately 4 MMCFD is indicated.

Preliminary data indicate that condensate will be produced at least at the rate of 5 barrels per MMCF. As noted earlier, considerable quantities of condensate by passed the separator, so that this production rate is very conservative.

Plot Points

| | $\frac{Pc^2}{Pc^2-Pw^2}$ | | |
|---|---|---|---|
| | | | 3052 |
| 1 | 3052-2978 | = | 74 vs 3.360 |
| 2 | 3052-2921 | = | 131 vs 4.315 |
| 3 | 3052-2783 | = | 269 vs 7.110 |

GO INTERNATIONAL WIRELINE SERVICES

GO INTERNATIONAL AUSTRALIA PTY. LTD.

(INCORPORATED IN W.A.)

BEACH PETROLEUM N.L.

GRUMBY NO. 1

MARCH 16, 1981

P.O. BOX 380 ● SALE, VICTORIA, 3850, AUSTRALIA ● TELEPHONE (051) 44 3607, 44 3044

TELEX: 55254

GO INTERNATIONAL WIRELINE SERVICES
GO INTERNATIONAL AUSTRALIA PTY. LTD.
(INCORPORATED IN W.A.)

Beach Petroleum N.L. Grumby No. 1 March 16, 1981

| Hours | Remarks |
|---|---|
| March 16, 1981 | |
| 1530 | Rig up to clean up well |
| 1700 | W.O.M. Orders |
| March 17, 1981 | |
| 1200 | Flow well flare would not burn |
| 1300 | Shut in well make up 7 inch flare burner |
| 1620 | Flow well to clean up 20/64 |
| 1800 | Shut in well |
| March 18, 1981 | |
| 0630 | Rig up on well |
| 0700 | Run in hole hang @ 1660 metres |
| 1000 | Flow well 18/64 1.5 orifice |
| 1230 | Shut in well choke to be found washed out change chokes |
| 1500 | Flow well on 22/64 choke 1.500 orifice |
| 1730 | Shut in well |
| March 19, 1981 | |
| 0001 | Well shut in |
| 1230 | Flow well on 28/64 choke @ 2.000 inch orifice |
| 1430 | Shut in well condensate icing up Coming out flare line |
| 1635 | Pull out of hole |
| 1652 | Hang at 1524 metres |
| 1730 | Hang at 1219 metres |
| 1808 | Hang at 914 metres |
| 1848 | Hang at 609 metres |
| 1935 | Hang at 305 metres |
| 2024 | Hang at 0 metres |
| 2050 | Shut in well bleed down |
| March 20, 1981 | |
| 0800 | Run in hole with X plug |
| 0930 | Set plug @ 5420 feet trouble going through sliding sleeve |
| 1030 | Out of hole rigging down |
| 1200 | Leave location |

P.O. BOX 380 • SALE, VICTORIA, 3850, AUSTRALIA • TELEPHONE (051) 44 3607, 44 3044
TELEX: 55254

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 08:49:00 | 154.6 | 2305.18 | 08:50:00 | 154.5 | 2305.13 | 08:51:00 | 154.6 | 2305.08 |
| 08:52:00 | 154.5 | 2305.00 | 08:53:00 | 154.6 | 2304.94 | 08:54:00 | 154.6 | 2304.89 |
| 08:55:00 | 154.6 | 2304.86 | 08:56:00 | 154.6 | 2304.82 | 08:57:00 | 154.6 | 2304.77 |
| 08:58:00 | 154.6 | 2304.76 | 08:59:00 | 154.6 | 2304.73 | 09:00:00 | 154.6 | 2304.72 |
| 09:01:00 | 154.7 | 2304.70 | 09:02:00 | 154.7 | 2304.70 | 09:03:00 | 154.7 | 2304.67 |
| 09:04:00 | 154.7 | 2304.66 | 09:05:00 | 154.7 | 2304.66 | 09:06:00 | 154.7 | 2304.65 |
| 09:07:00 | 154.7 | 2304.64 | 09:08:00 | 154.7 | 2304.64 | 09:09:00 | 154.7 | 2304.63 |
| 09:10:00 | 154.8 | 2304.64 | 09:11:00 | 154.7 | 2304.64 | 09:12:00 | 154.8 | 2304.63 |
| 09:13:00 | 154.7 | 2304.62 | 09:14:00 | 154.8 | 2304.65 | 09:15:00 | 154.8 | 2304.64 |
| 09:16:00 | 154.8 | 2304.62 | 09:17:00 | 154.7 | 2304.62 | 09:18:00 | 154.8 | 2304.63 |
| 09:19:00 | 154.7 | 2304.62 | 09:20:00 | 154.7 | 2304.62 | 09:21:00 | 154.8 | 2304.63 |
| 09:22:00 | 154.8 | 2304.63 | 09:23:00 | 154.8 | 2304.63 | 09:24:00 | 154.8 | 2304.63 |
| 09:25:00 | 154.8 | 2304.64 | 09:26:00 | 154.8 | 2304.63 | 09:27:00 | 154.8 | 2304.63 |
| 09:28:00 | 154.8 | 2304.63 | 09:29:00 | 154.8 | 2304.61 | 09:30:00 | 154.8 | 2304.63 |
| 09:31:00 | 154.7 | 2304.62 | 09:32:00 | 154.8 | 2304.63 | 09:33:00 | 154.8 | 2304.62 |
| 09:34:00 | 154.8 | 2304.62 | 09:35:00 | 154.8 | 2304.62 | 09:36:00 | 154.7 | 2304.61 |
| 09:37:00 | 154.8 | 2304.62 | 09:38:00 | 154.8 | 2304.62 | 09:39:00 | 154.8 | 2304.63 |
| 09:40:00 | 154.8 | 2304.63 | 09:41:00 | 154.8 | 2304.61 | 09:42:00 | 154.8 | 2304.62 |
| 09:43:00 | 154.8 | 2304.62 | 09:44:00 | 154.8 | 2304.62 | 09:45:00 | 154.8 | 2304.61 |
| 09:46:00 | 154.8 | 2304.62 | 09:47:00 | 154.9 | 2304.63 | 09:48:00 | 154.9 | 2304.62 |
| 09:49:00 | 154.9 | 2304.63 | 09:50:00 | 154.8 | 2304.61 | 09:51:00 | 154.8 | 2304.63 |
| 09:52:00 | 154.9 | 2304.57 | 09:53:00 | 154.9 | 2304.61 | 09:54:00 | 154.8 | 2304.62 |
| 09:55:00 | 154.8 | 2304.62 | 09:56:00 | 154.9 | 2304.62 | 09:57:00 | 154.8 | 2304.63 |
| 09:58:00 | 154.8 | 2304.63 | 09:59:00 | 154.9 | 2304.62 | 10:00:00 | 154.9 | 2304.63 |
| 10:00:10 | 154.8 | 2304.62 | 10:00:20 | 154.9 | 2304.61 | 10:00:30 | 154.8 | 2304.62 |
| 10:00:40 | 154.9 | 2304.63 | 10:00:50 | 154.8 | 2304.62 | 10:01:00 | 154.8 | 2302.78 |
| 10:01:10 | 154.5 | 2296.06 | 10:01:20 | 154.3 | 2289.69 | 10:01:30 | 154.1 | 2282.76 |
| 10:01:40 | 154.0 | 2278.49 | 10:01:50 | 154.0 | 2275.33 | 10:02:00 | 154.3 | 2272.93 |
| 10:02:10 | 154.6 | 2271.16 | 10:02:20 | 154.9 | 2269.62 | 10:02:30 | 155.0 | 2268.32 |
| 10:02:40 | 155.1 | 2267.43 | 10:02:50 | 155.3 | 2266.92 | 10:03:00 | 155.4 | 2266.60 |
| 10:03:10 | 155.5 | 2266.50 | 10:03:20 | 155.5 | 2266.50 | 10:03:30 | 155.5 | 2266.64 |
| 10:03:40 | 155.5 | 2266.81 | 10:03:50 | 155.5 | 2267.06 | 10:04:00 | 155.6 | 2267.52 |
| 10:04:10 | 155.6 | 2267.67 | 10:04:20 | 155.6 | 2267.88 | 10:04:30 | 155.5 | 2268.17 |
| 10:04:40 | 155.5 | 2268.29 | 10:04:50 | 155.5 | 2268.71 | 10:05:00 | 155.5 | 2268.79 |
| 10:05:10 | 155.5 | 2268.82 | 10:05:20 | 155.6 | 2268.91 | 10:05:30 | 155.6 | 2268.98 |
| 10:05:40 | 155.6 | 2268.99 | 10:05:50 | 155.6 | 2269.38 | 10:06:00 | 155.6 | 2269.20 |
| 10:06:10 | 155.6 | 2269.52 | 10:06:20 | 155.6 | 2269.30 | 10:06:30 | 155.5 | 2269.41 |
| 10:06:40 | 155.5 | 2269.45 | 10:06:50 | 155.6 | 2269.59 | 10:07:00 | 155.6 | 2269.46 |
| 10:07:10 | 155.6 | 2269.50 | 10:07:20 | 155.6 | 2269.38 | 10:07:30 | 155.6 | 2269.71 |
| 10:07:40 | 155.6 | 2269.58 | 10:07:50 | 155.6 | 2269.59 | 10:08:00 | 155.6 | 2269.50 |
| 10:08:10 | 155.6 | 2269.55 | 10:08:20 | 155.6 | 2269.75 | 10:08:30 | 155.7 | 2269.70 |
| 10:08:40 | 155.6 | 2269.55 | 10:08:50 | 155.6 | 2269.50 | 10:09:00 | 155.6 | 2269.42 |
| 10:09:10 | 155.6 | 2269.46 | 10:09:20 | 155.6 | 2269.40 | 10:09:30 | 155.6 | 2269.34 |
| 10:09:40 | 155.7 | 2269.50 | 10:09:50 | 155.7 | 2269.36 | 10:10:00 | 155.7 | 2269.34 |
| 10:10:10 | 155.6 | 2269.54 | 10:10:20 | 155.6 | 2269.44 | 10:10:30 | 155.6 | 2269.55 |
| 10:10:40 | 155.7 | 2269.66 | 10:10:50 | 155.6 | 2269.83 | 10:11:00 | 155.7 | 2269.83 |
| 10:11:10 | 155.7 | 2269.84 | 10:11:20 | 155.6 | 2269.79 | 10:11:30 | 155.7 | 2269.64 |
| 10:11:40 | 155.7 | 2269.64 | 10:11:50 | 155.6 | 2269.59 | 10:12:00 | 155.7 | 2269.77 |
| 10:12:10 | 155.7 | 2269.69 | 10:12:20 | 155.7 | 2269.68 | 10:12:30 | 155.7 | 2269.79 |
| 10:12:40 | 155.7 | 2269.71 | 10:12:50 | 155.6 | 2269.50 | 10:13:00 | 155.6 | 2269.61 |
| 10:13:10 | 155.7 | 2269.64 | 10:13:20 | 155.7 | 2269.64 | 10:13:30 | 155.6 | 2269.57 |
| 10:13:40 | 155.6 | 2269.48 | 10:13:50 | 155.7 | 2269.57 | 10:14:00 | 155.7 | 2269.52 |
| 10:14:10 | 155.7 | 2269.54 | 10:14:20 | 155.7 | 2269.53 | 10:14:30 | 155.7 | 2269.42 |
| 10:14:40 | 155.6 | 2269.37 | 10:14:50 | 155.7 | 2269.19 | 10:15:00 | 155.6 | 2269.11 |
| 10:15:10 | 155.7 | 2269.34 | 10:15:20 | 155.7 | 2269.13 | 10:15:30 | 155.7 | 2269.12 |
| 10:16:00 | 155.7 | 2269.03 | 10:16:30 | 155.7 | 2269.25 | 10:17:00 | 155.7 | 2269.56 |
| 10:17:30 | 155.7 | 2269.49 | 10:18:00 | 155.6 | 2269.17 | 10:18:30 | 155.7 | 2268.94 |
| 10:19:00 | 155.7 | 2268.91 | 10:19:30 | 155.7 | 2268.86 | 10:20:00 | 155.7 | 2268.65 |
| 10:20:30 | 155.7 | 2268.47 | 10:21:00 | 155.7 | 2268.35 | 10:21:30 | 155.7 | 2268.30 |
| 10:22:00 | 155.7 | 2268.30 | 10:22:30 | 155.7 | 2268.28 | 10:23:00 | 155.7 | 2268.38 |
| 10:23:30 | 155.7 | 2268.45 | 10:24:00 | 155.8 | 2268.51 | 10:24:30 | 155.7 | 2268.61 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 10:25:00 | 155.7 | 2268.68 | 10:25:30 | 155.7 | 2268.72 | 10:26:00 | 155.8 | 2268.69 |
| 10:26:30 | 155.7 | 2268.74 | 10:27:00 | 155.8 | 2268.77 | 10:27:30 | 155.8 | 2268.79 |
| 10:28:00 | 155.8 | 2268.87 | 10:28:30 | 155.8 | 2268.98 | 10:29:00 | 155.8 | 2269.19 |
| 10:29:30 | 155.7 | 2269.29 | 10:30:00 | 155.7 | 2269.38 | 10:31:00 | 155.8 | 2269.46 |
| 10:32:00 | 155.8 | 2269.40 | 10:33:00 | 155.8 | 2269.37 | 10:34:00 | 155.9 | 2269.37 |
| 10:35:00 | 155.8 | 2269.39 | 10:36:00 | 155.9 | 2269.49 | 10:37:00 | 155.8 | 2269.53 |
| 10:38:00 | 155.8 | 2269.66 | 10:39:00 | 155.9 | 2269.81 | 10:40:00 | 155.9 | 2269.90 |
| 10:41:00 | 155.8 | 2269.91 | 10:42:00 | 155.9 | 2269.97 | 10:43:00 | 155.9 | 2270.07 |
| 10:44:00 | 155.9 | 2270.15 | 10:45:00 | 155.9 | 2270.24 | 10:46:00 | 155.9 | 2270.49 |
| 10:47:00 | 156.0 | 2270.53 | 10:48:00 | 155.9 | 2270.69 | 10:49:00 | 156.0 | 2270.78 |
| 10:50:00 | 156.0 | 2270.91 | 10:51:00 | 155.9 | 2270.88 | 10:52:00 | 156.0 | 2270.98 |
| 10:53:00 | 156.0 | 2271.17 | 10:54:00 | 156.0 | 2271.31 | 10:55:00 | 156.0 | 2271.49 |
| 10:56:00 | 156.0 | 2271.72 | 10:57:00 | 156.0 | 2271.83 | 10:58:00 | 156.0 | 2271.90 |
| 10:59:00 | 156.0 | 2271.87 | 11:00:00 | 156.0 | 2271.85 | 11:01:00 | 156.0 | 2271.89 |
| 11:02:00 | 156.0 | 2271.93 | 11:03:00 | 156.0 | 2271.91 | 11:04:00 | 156.1 | 2271.99 |
| 11:05:00 | 156.1 | 2271.99 | 11:06:00 | 156.0 | 2271.99 | 11:07:00 | 156.0 | 2271.93 |
| 11:08:00 | 156.0 | 2272.00 | 11:09:00 | 156.1 | 2271.99 | 11:10:00 | 156.1 | 2271.99 |
| 11:11:00 | 156.1 | 2272.02 | 11:12:00 | 156.1 | 2272.07 | 11:13:00 | 156.1 | 2272.04 |
| 11:14:00 | 156.1 | 2271.99 | 11:15:00 | 156.1 | 2272.01 | 11:16:00 | 156.1 | 2271.99 |
| 11:17:00 | 156.1 | 2272.05 | 11:18:00 | 156.1 | 2272.01 | 11:19:00 | 156.1 | 2271.99 |
| 11:20:00 | 156.1 | 2272.01 | 11:21:00 | 156.2 | 2272.02 | 11:22:00 | 156.2 | 2271.96 |
| 11:23:00 | 156.2 | 2272.01 | 11:24:00 | 156.1 | 2272.06 | 11:25:00 | 156.2 | 2272.12 |
| 11:26:00 | 156.2 | 2272.15 | 11:27:00 | 156.1 | 2272.15 | 11:28:00 | 156.2 | 2272.19 |
| 11:29:00 | 156.2 | 2272.21 | 11:30:00 | 156.1 | 2272.31 | 11:31:00 | 156.2 | 2272.35 |
| 11:32:00 | 156.2 | 2272.36 | 11:33:00 | 156.2 | 2272.42 | 11:34:00 | 156.2 | 2272.49 |
| 11:35:00 | 156.2 | 2272.80 | 11:36:00 | 156.2 | 2272.93 | 11:37:00 | 156.2 | 2272.95 |
| 11:38:00 | 156.3 | 2273.01 | 11:39:00 | 156.2 | 2273.01 | 11:40:00 | 156.2 | 2273.07 |
| 11:41:00 | 156.2 | 2273.05 | 11:42:00 | 156.3 | 2273.04 | 11:43:00 | 156.2 | 2273.11 |
| 11:44:00 | 156.3 | 2273.19 | 11:45:00 | 156.2 | 2273.15 | 11:46:00 | 156.3 | 2273.15 |
| 11:47:00 | 156.3 | 2273.21 | 11:48:00 | 156.2 | 2272.97 | 11:49:00 | 156.2 | 2272.50 |
| 11:50:00 | 156.3 | 2272.63 | 11:51:00 | 156.3 | 2272.74 | 11:52:00 | 156.2 | 2272.80 |
| 11:53:00 | 156.3 | 2272.90 | 11:54:00 | 156.3 | 2273.21 | 11:55:00 | 156.3 | 2273.27 |
| 11:56:00 | 156.3 | 2273.39 | 11:57:00 | 156.3 | 2273.43 | 11:58:00 | 156.3 | 2273.40 |
| 11:59:00 | 156.3 | 2273.42 | 12:00:00 | 156.3 | 2273.40 | 12:01:00 | 156.3 | 2273.40 |
| 12:02:00 | 156.3 | 2273.48 | 12:03:00 | 156.4 | 2273.55 | 12:04:00 | 156.3 | 2273.62 |
| 12:05:00 | 156.4 | 2273.61 | 12:06:00 | 156.3 | 2273.66 | 12:07:00 | 156.3 | 2273.71 |
| 12:08:00 | 156.4 | 2273.77 | 12:09:00 | 156.3 | 2273.87 | 12:10:00 | 156.4 | 2274.04 |
| 12:11:00 | 156.3 | 2274.14 | 12:12:00 | 156.4 | 2274.24 | 12:13:00 | 156.3 | 2274.02 |
| 12:14:00 | 156.4 | 2274.04 | 12:15:00 | 156.4 | 2274.15 | 12:16:00 | 156.3 | 2274.13 |
| 12:17:00 | 156.4 | 2274.10 | 12:18:00 | 156.4 | 2274.20 | 12:19:00 | 156.4 | 2274.25 |
| 12:20:00 | 156.4 | 2274.28 | 12:21:00 | 156.4 | 2274.34 | 12:23:00 | 156.4 | 2274.35 |
| 12:24:00 | 156.4 | 2274.47 | 12:25:00 | 156.4 | 2274.54 | 12:26:00 | 156.4 | 2274.59 |
| 12:27:00 | 156.4 | 2274.68 | 12:28:00 | 156.5 | 2274.76 | 12:29:00 | 156.4 | 2274.81 |
| 12:29:30 | 156.5 | 2274.83 | 12:29:40 | 156.5 | 2274.82 | 12:29:50 | 156.4 | 2274.83 |
| 12:30:00 | 156.5 | 2274.82 | 12:30:10 | 156.4 | 2274.85 | 12:30:20 | 156.4 | 2274.85 |
| 12:30:30 | 156.6 | 2284.44 | 12:30:40 | 157.1 | 2294.17 | 12:30:50 | 157.2 | 2298.49 |
| 12:31:00 | 157.2 | 2300.07 | 12:31:10 | 157.2 | 2300.72 | 12:31:20 | 157.2 | 2301.14 |
| 12:31:30 | 157.1 | 2301.48 | 12:31:40 | 157.1 | 2301.76 | 12:31:50 | 157.1 | 2302.02 |
| 12:32:00 | 157.0 | 2302.22 | 12:32:10 | 157.1 | 2302.41 | 12:32:20 | 157.0 | 2302.57 |
| 12:32:30 | 157.1 | 2302.71 | 12:32:40 | 157.0 | 2302.84 | 12:32:50 | 157.0 | 2302.97 |
| 12:33:00 | 157.0 | 2303.10 | 12:33:10 | 156.9 | 2303.20 | 12:33:20 | 156.9 | 2303.30 |
| 12:33:30 | 156.9 | 2303.37 | 12:33:40 | 156.9 | 2303.43 | 12:33:50 | 156.9 | 2303.51 |
| 12:34:00 | 156.9 | 2303.57 | 12:34:10 | 156.8 | 2303.59 | 12:34:20 | 156.9 | 2303.67 |
| 12:34:30 | 156.9 | 2303.69 | 12:34:40 | 156.8 | 2303.73 | 12:34:50 | 156.9 | 2303.76 |
| 12:35:00 | 156.8 | 2303.78 | 12:35:10 | 156.8 | 2303.83 | 12:35:20 | 156.8 | 2303.84 |
| 12:35:30 | 156.8 | 2303.88 | 12:35:40 | 156.8 | 2303.88 | 12:35:50 | 156.8 | 2303.90 |
| 12:36:00 | 156.8 | 2303.91 | 12:36:10 | 156.8 | 2303.92 | 12:36:20 | 156.8 | 2303.94 |
| 12:36:30 | 156.7 | 2303.95 | 12:36:40 | 156.7 | 2303.96 | 12:36:50 | 156.7 | 2303.98 |
| 12:37:00 | 156.7 | 2303.98 | 12:37:10 | 156.7 | 2303.98 | 12:37:20 | 156.7 | 2304.00 |
| 12:37:30 | 156.7 | 2304.00 | 12:37:40 | 156.7 | 2304.00 | 12:37:50 | 156.7 | 2304.01 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 12:38:00 | 156.7 | 2304.00 | 12:38:10 | 156.7 | 2304.01 | 12:38:20 | 156.7 | 2304.02 |
| 12:38:30 | 156.7 | 2304.03 | 12:38:40 | 156.7 | 2304.01 | 12:38:50 | 156.6 | 2304.03 |
| 12:39:00 | 156.6 | 2304.05 | 12:39:10 | 156.6 | 2304.05 | 12:39:20 | 156.6 | 2304.05 |
| 12:39:30 | 156.7 | 2304.05 | 12:39:40 | 156.7 | 2304.06 | 12:39:50 | 156.6 | 2304.08 |
| 12:40:00 | 156.6 | 2304.08 | 12:40:30 | 156.5 | 2304.06 | 12:41:00 | 156.6 | 2304.05 |
| 12:41:30 | 156.6 | 2304.07 | 12:42:00 | 156.6 | 2304.09 | 12:42:30 | 156.5 | 2304.10 |
| 12:43:00 | 156.5 | 2304.11 | 12:43:30 | 156.5 | 2304.12 | 12:44:00 | 156.5 | 2304.10 |
| 12:44:30 | 156.4 | 2304.11 | 12:45:00 | 156.4 | 2304.10 | 12:45:30 | 156.4 | 2304.11 |
| 12:46:00 | 156.4 | 2304.10 | 12:46:30 | 156.4 | 2304.14 | 12:47:00 | 156.3 | 2304.16 |
| 12:47:30 | 156.4 | 2304.17 | 12:48:00 | 156.3 | 2304.14 | 12:48:30 | 156.3 | 2304.14 |
| 12:49:00 | 156.3 | 2304.14 | 12:49:30 | 156.3 | 2304.14 | 12:50:00 | 156.2 | 2304.12 |
| 12:51:00 | 156.2 | 2304.14 | 12:52:00 | 156.2 | 2304.15 | 12:53:00 | 156.2 | 2304.16 |
| 12:54:00 | 156.2 | 2304.17 | 12:55:00 | 156.1 | 2304.16 | 12:56:00 | 156.2 | 2304.17 |
| 12:57:00 | 156.1 | 2304.18 | 12:58:00 | 156.1 | 2304.19 | 12:59:00 | 156.1 | 2304.19 |
| 13:00:00 | 156.1 | 2304.21 | 13:01:00 | 156.1 | 2304.23 | 13:02:00 | 156.1 | 2304.21 |
| 13:03:00 | 156.0 | 2304.23 | 13:04:00 | 156.0 | 2304.22 | 13:05:00 | 156.0 | 2304.23 |
| 13:06:00 | 156.0 | 2304.26 | 13:07:00 | 156.0 | 2304.25 | 13:08:00 | 155.9 | 2304.25 |
| 13:09:00 | 155.9 | 2304.26 | 13:10:00 | 156.0 | 2304.26 | 13:11:00 | 155.9 | 2304.27 |
| 13:12:00 | 155.9 | 2304.27 | 13:13:00 | 155.9 | 2304.29 | 13:14:00 | 155.9 | 2304.29 |
| 13:15:00 | 155.9 | 2304.28 | 13:16:00 | 155.8 | 2304.27 | 13:17:00 | 155.9 | 2304.30 |
| 13:18:00 | 155.9 | 2304.30 | 13:19:00 | 155.9 | 2304.30 | 13:20:00 | 155.9 | 2304.31 |
| 13:21:00 | 155.9 | 2304.32 | 13:22:00 | 155.8 | 2304.30 | 13:23:00 | 155.8 | 2304.30 |
| 13:24:00 | 155.9 | 2304.32 | 13:25:00 | 155.9 | 2304.33 | 13:26:00 | 155.8 | 2304.31 |
| 13:27:00 | 155.8 | 2304.31 | 13:28:00 | 155.8 | 2304.32 | 13:29:00 | 155.8 | 2304.33 |
| 13:30:00 | 155.8 | 2304.31 | 13:31:00 | 155.7 | 2304.32 | 13:32:00 | 155.8 | 2304.32 |
| 13:33:00 | 155.8 | 2304.32 | 13:34:00 | 155.7 | 2304.33 | 13:35:00 | 155.7 | 2304.34 |
| 13:36:00 | 155.7 | 2304.34 | 13:37:00 | 155.7 | 2304.35 | 13:38:00 | 155.7 | 2304.34 |
| 13:39:00 | 155.7 | 2304.35 | 13:40:00 | 155.7 | 2304.36 | 13:41:00 | 155.7 | 2304.34 |
| 13:42:00 | 155.7 | 2304.35 | 13:43:00 | 155.7 | 2304.36 | 13:44:00 | 155.7 | 2304.34 |
| 13:45:00 | 155.7 | 2304.36 | 13:46:00 | 155.6 | 2304.34 | 13:47:00 | 155.7 | 2304.37 |
| 13:48:00 | 155.7 | 2304.36 | 13:49:00 | 155.7 | 2304.36 | 13:50:00 | 155.7 | 2304.36 |
| 13:51:00 | 155.7 | 2304.37 | 13:52:00 | 155.7 | 2304.36 | 13:53:00 | 155.6 | 2304.37 |
| 13:54:00 | 155.6 | 2304.37 | 13:55:00 | 155.7 | 2304.37 | 13:56:00 | 155.7 | 2304.37 |
| 13:57:00 | 155.7 | 2304.37 | 13:58:00 | 155.7 | 2304.37 | 13:59:00 | 155.7 | 2304.37 |
| 14:00:00 | 155.7 | 2304.39 | 14:01:00 | 155.6 | 2304.39 | 14:10:00 | 155.6 | 2304.38 |
| 14:20:00 | 155.6 | 2304.39 | 14:30:00 | 155.5 | 2304.40 | 14:40:00 | 155.6 | 2304.41 |
| 14:50:00 | 155.5 | 2304.42 | 14:59:40 | 155.4 | 2304.39 | 14:59:50 | 155.5 | 2304.40 |
| 15:00:00 | 155.5 | 2304.42 | 15:00:10 | 155.4 | 2304.39 | 15:00:20 | 155.3 | 2299.70 |
| 15:00:30 | 155.0 | 2293.32 | 15:00:40 | 154.7 | 2280.55 | 15:00:50 | 154.3 | 2270.33 |
| 15:01:00 | 154.1 | 2262.91 | 15:01:10 | 154.1 | 2257.59 | 15:01:20 | 154.5 | 2253.44 |
| 15:01:30 | 155.0 | 2250.09 | 15:01:40 | 155.4 | 2247.42 | 15:01:50 | 155.5 | 2245.50 |
| 15:02:00 | 155.6 | 2244.22 | 15:02:10 | 155.6 | 2243.31 | 15:02:20 | 155.7 | 2242.61 |
| 15:02:30 | 155.6 | 2242.10 | 15:02:40 | 155.6 | 2241.64 | 15:02:50 | 155.6 | 2241.21 |
| 15:03:00 | 155.6 | 2240.92 | 15:03:10 | 155.6 | 2240.69 | 15:03:20 | 155.6 | 2240.53 |
| 15:03:30 | 155.5 | 2240.43 | 15:03:40 | 155.5 | 2240.33 | 15:03:50 | 155.5 | 2240.28 |
| 15:04:00 | 155.5 | 2240.26 | 15:04:10 | 155.5 | 2240.27 | 15:04:20 | 155.5 | 2240.32 |
| 15:04:30 | 155.5 | 2240.44 | 15:04:40 | 155.5 | 2240.58 | 15:04:50 | 155.5 | 2240.76 |
| 15:05:00 | 155.5 | 2240.89 | 15:05:10 | 155.5 | 2241.02 | 15:05:20 | 155.5 | 2241.12 |
| 15:05:30 | 155.5 | 2241.18 | 15:05:40 | 155.5 | 2241.20 | 15:05:50 | 155.5 | 2241.21 |
| 15:06:00 | 155.5 | 2241.25 | 15:06:10 | 155.5 | 2241.22 | 15:06:20 | 155.5 | 2241.22 |
| 15:06:30 | 155.5 | 2241.17 | 15:06:40 | 155.5 | 2241.15 | 15:06:50 | 155.4 | 2241.07 |
| 15:07:00 | 155.4 | 2240.98 | 15:07:10 | 155.4 | 2240.86 | 15:07:20 | 155.4 | 2240.81 |
| 15:07:30 | 155.4 | 2240.74 | 15:07:40 | 155.5 | 2240.76 | 15:07:50 | 155.4 | 2240.81 |
| 15:08:00 | 155.4 | 2240.86 | 15:08:10 | 155.5 | 2240.95 | 15:08:20 | 155.4 | 2241.01 |
| 15:08:30 | 155.5 | 2241.09 | 15:08:40 | 155.4 | 2241.07 | 15:08:50 | 155.4 | 2241.09 |
| 15:09:00 | 155.5 | 2241.16 | 15:09:10 | 155.5 | 2241.17 | 15:09:20 | 155.5 | 2241.20 |
| 15:09:30 | 155.5 | 2241.31 | 15:09:40 | 155.5 | 2241.36 | 15:09:50 | 155.4 | 2241.44 |
| 15:10:00 | 155.5 | 2241.56 | 15:10:10 | 155.5 | 2241.61 | 15:10:30 | 155.5 | 2241.78 |
| 15:11:00 | 155.4 | 2241.89 | 15:11:30 | 155.5 | 2242.12 | 15:12:00 | 155.4 | 2242.30 |
| 15:12:30 | 155.4 | 2242.49 | 15:13:00 | 155.5 | 2242.62 | 15:13:30 | 155.5 | 2242.74 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 15:14:00 | 155.4 | 2242.82 | 15:14:30 | 155.5 | 2242.78 | 15:15:00 | 155.5 | 2242.92 |
| 15:15:30 | 155.4 | 2242.97 | 15:16:00 | 155.5 | 2243.02 | 15:16:30 | 155.5 | 2243.11 |
| 15:17:00 | 155.5 | 2243.16 | 15:17:30 | 155.5 | 2243.32 | 15:18:00 | 155.5 | 2243.37 |
| 15:18:30 | 155.5 | 2243.35 | 15:19:00 | 155.5 | 2243.18 | 15:19:30 | 155.5 | 2243.47 |
| 15:20:00 | 155.5 | 2243.32 | 15:20:30 | 155.5 | 2243.17 | 15:21:00 | 155.5 | 2243.13 |
| 15:21:30 | 155.5 | 2243.20 | 15:22:00 | 155.5 | 2243.12 | 15:22:30 | 155.5 | 2243.11 |
| 15:23:00 | 155.5 | 2243.15 | 15:24:00 | 155.5 | 2243.03 | 15:25:00 | 155.5 | 2242.95 |
| 15:26:00 | 155.5 | 2242.87 | 15:27:00 | 155.6 | 2243.01 | 15:28:00 | 155.5 | 2243.15 |
| 15:29:00 | 155.6 | 2243.36 | 15:30:00 | 155.5 | 2243.44 | 15:40:00 | 155.6 | 2244.39 |
| 15:50:00 | 155.6 | 2242.18 | 16:00:00 | 155.6 | 2242.85 | 16:10:00 | 155.6 | 2243.72 |
| 16:16:00 | 155.7 | 2244.11 | 16:17:00 | 155.6 | 2244.19 | 16:18:00 | 155.7 | 2244.28 |
| 16:19:00 | 155.7 | 2244.46 | 16:20:00 | 155.7 | 2244.65 | 16:21:00 | 155.7 | 2244.74 |
| 16:22:00 | 155.7 | 2244.79 | 16:23:00 | 155.7 | 2244.79 | 16:24:00 | 155.7 | 2244.75 |
| 16:25:00 | 155.7 | 2244.71 | 16:26:00 | 155.7 | 2244.75 | 16:27:00 | 155.7 | 2244.71 |
| 16:28:00 | 155.7 | 2244.29 | 16:29:00 | 155.7 | 2244.14 | 16:30:00 | 155.7 | 2244.22 |
| 16:31:00 | 155.7 | 2244.27 | 16:32:00 | 155.7 | 2244.16 | 16:33:00 | 155.7 | 2244.14 |
| 16:34:00 | 155.7 | 2244.38 | 16:35:00 | 155.7 | 2244.48 | 16:36:00 | 155.7 | 2244.48 |
| 16:37:00 | 155.7 | 2244.48 | 16:38:00 | 155.8 | 2244.45 | 16:39:00 | 155.7 | 2244.42 |
| 16:40:00 | 155.7 | 2244.46 | 16:41:00 | 155.8 | 2244.40 | 16:42:00 | 155.7 | 2244.67 |
| 16:43:00 | 155.8 | 2244.72 | 16:44:00 | 155.8 | 2244.64 | 16:45:00 | 155.8 | 2244.62 |
| 16:46:00 | 155.8 | 2244.62 | 16:47:00 | 155.8 | 2244.63 | 16:48:00 | 155.8 | 2244.64 |
| 16:49:00 | 155.8 | 2244.77 | 16:50:00 | 155.7 | 2244.85 | 16:51:00 | 155.8 | 2245.08 |
| 16:52:00 | 155.8 | 2245.05 | 16:53:00 | 155.8 | 2245.10 | 16:54:00 | 155.8 | 2245.22 |
| 16:55:00 | 155.8 | 2245.28 | 16:56:00 | 155.8 | 2245.35 | 16:57:00 | 155.8 | 2245.30 |
| 16:58:00 | 155.8 | 2245.35 | 16:59:00 | 155.8 | 2245.37 | 17:00:00 | 155.9 | 2245.42 |
| 17:01:00 | 155.8 | 2245.48 | 17:02:00 | 155.8 | 2245.44 | 17:03:00 | 155.8 | 2245.47 |
| 17:04:00 | 155.8 | 2245.42 | 17:05:00 | 155.8 | 2245.43 | 17:06:00 | 155.8 | 2245.54 |
| 17:07:00 | 155.8 | 2245.57 | 17:08:00 | 155.8 | 2245.57 | 17:09:00 | 155.9 | 2245.61 |
| 17:10:00 | 155.8 | 2245.62 | 17:11:00 | 155.9 | 2245.61 | 17:12:00 | 155.8 | 2245.55 |
| 17:13:00 | 155.9 | 2245.54 | 17:14:00 | 155.9 | 2245.54 | 17:15:00 | 155.9 | 2245.56 |
| 17:16:00 | 155.9 | 2245.58 | 17:17:00 | 155.9 | 2245.60 | 17:18:00 | 155.8 | 2245.65 |
| 17:19:00 | 155.8 | 2245.68 | 17:20:00 | 155.9 | 2245.74 | 17:21:00 | 155.9 | 2245.76 |
| 17:22:00 | 155.9 | 2245.76 | 17:23:00 | 155.9 | 2245.58 | 17:24:00 | 155.9 | 2245.07 |
| 17:25:00 | 155.9 | 2244.92 | 17:26:00 | 155.9 | 2245.01 | 17:27:00 | 155.8 | 2245.24 |
| 17:28:00 | 155.9 | 2245.48 | 17:29:00 | 155.9 | 2245.44 | 17:29:50 | 155.9 | 2245.37 |
| 17:30:00 | 155.9 | 2245.35 | 17:30:10 | 155.9 | 2245.31 | 17:30:20 | 155.9 | 2245.29 |
| 17:30:30 | 156.3 | 2260.47 | 17:30:40 | 157.0 | 2275.08 | 17:30:50 | 157.5 | 2284.75 |
| 17:31:00 | 157.7 | 2291.15 | 17:31:10 | 157.7 | 2295.24 | 17:31:20 | 157.8 | 2297.75 |
| 17:31:30 | 157.7 | 2299.46 | 17:31:40 | 157.7 | 2300.65 | 17:31:50 | 157.5 | 2301.45 |
| 17:32:00 | 157.5 | 2302.08 | 17:32:10 | 157.5 | 2302.54 | 17:32:20 | 157.4 | 2302.89 |
| 17:32:30 | 157.3 | 2303.16 | 17:32:40 | 157.3 | 2303.39 | 17:32:50 | 157.3 | 2303.56 |
| 17:33:00 | 157.3 | 2303.70 | 17:33:10 | 157.2 | 2303.80 | 17:33:20 | 157.2 | 2303.88 |
| 17:33:30 | 157.2 | 2303.94 | 17:33:40 | 157.2 | 2303.99 | 17:33:50 | 157.1 | 2304.04 |
| 17:34:00 | 157.1 | 2304.05 | 17:34:10 | 157.0 | 2304.06 | 17:34:20 | 157.1 | 2304.06 |
| 17:34:30 | 157.0 | 2304.06 | 17:34:40 | 157.0 | 2304.06 | 17:34:50 | 157.0 | 2304.06 |
| 17:35:00 | 156.9 | 2304.05 | 17:35:10 | 156.9 | 2304.05 | 17:35:20 | 157.0 | 2304.02 |
| 17:35:30 | 157.0 | 2304.01 | 17:35:40 | 156.9 | 2303.99 | 17:35:50 | 156.9 | 2303.98 |
| 17:36:00 | 156.8 | 2303.95 | 17:36:10 | 156.8 | 2303.92 | 17:36:20 | 156.8 | 2303.92 |
| 17:36:30 | 156.8 | 2303.90 | 17:36:40 | 156.8 | 2303.89 | 17:36:50 | 156.8 | 2303.88 |
| 17:37:00 | 156.8 | 2303.86 | 17:37:10 | 156.8 | 2303.85 | 17:37:20 | 156.7 | 2303.82 |
| 17:37:30 | 156.7 | 2303.81 | 17:37:40 | 156.7 | 2303.81 | 17:37:50 | 156.7 | 2303.79 |
| 17:38:00 | 156.7 | 2303.76 | 17:38:10 | 156.7 | 2303.75 | 17:38:20 | 156.6 | 2303.74 |
| 17:38:30 | 156.6 | 2303.74 | 17:38:40 | 156.6 | 2303.73 | 17:38:50 | 156.6 | 2303.72 |
| 17:39:00 | 156.6 | 2303.72 | 17:39:10 | 156.6 | 2303.70 | 17:39:20 | 156.6 | 2303.70 |
| 17:39:30 | 156.6 | 2303.69 | 17:39:40 | 156.6 | 2303.70 | 17:39:50 | 156.6 | 2303.68 |
| 17:40:00 | 156.6 | 2303.67 | 17:40:30 | 156.5 | 2303.66 | 17:41:00 | 156.5 | 2303.65 |
| 17:41:30 | 156.5 | 2303.66 | 17:42:00 | 156.5 | 2303.66 | 17:42:30 | 156.4 | 2303.65 |
| 17:43:00 | 156.4 | 2303.65 | 17:43:30 | 156.4 | 2303.65 | 17:44:00 | 156.4 | 2303.67 |
| 17:44:30 | 156.4 | 2303.67 | 17:45:00 | 156.3 | 2303.67 | 17:45:30 | 156.3 | 2303.66 |
| 17:46:00 | 156.3 | 2303.67 | 17:46:30 | 156.3 | 2303.69 | 17:47:00 | 156.3 | 2303.71 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 17:47:30 | 156.3 | 2303.71 | 17:48:00 | 156.2 | 2303.71 | 17:48:30 | 156.2 | 2303.71 |
| 17:49:00 | 156.2 | 2303.73 | 17:49:30 | 156.2 | 2303.76 | 17:50:00 | 156.2 | 2303.75 |
| 17:50:30 | 156.2 | 2303.76 | 17:51:00 | 156.2 | 2303.76 | 17:51:30 | 156.2 | 2303.77 |
| 17:52:00 | 156.2 | 2303.77 | 17:53:00 | 156.1 | 2303.78 | 17:54:00 | 156.2 | 2303.83 |
| 17:55:00 | 156.1 | 2303.82 | 17:56:00 | 156.1 | 2303.83 | 17:57:00 | 156.0 | 2303.84 |
| 17:58:00 | 156.1 | 2303.86 | 17:59:00 | 156.1 | 2303.87 | 18:00:00 | 156.0 | 2303.86 |
| 18:01:00 | 156.0 | 2303.88 | 18:02:00 | 156.0 | 2303.90 | 18:03:00 | 156.0 | 2303.89 |
| 18:04:00 | 156.0 | 2303.90 | 18:05:00 | 156.0 | 2303.93 | 18:06:00 | 156.0 | 2303.93 |
| 18:07:00 | 156.0 | 2303.91 | 18:08:00 | 155.9 | 2303.93 | 18:09:00 | 155.9 | 2303.94 |
| 18:10:00 | 156.0 | 2303.95 | 18:11:00 | 156.0 | 2303.95 | 18:12:00 | 155.9 | 2303.95 |
| 18:13:00 | 156.0 | 2303.97 | 18:14:00 | 155.9 | 2303.97 | 18:15:00 | 155.9 | 2303.97 |
| 18:16:00 | 155.9 | 2303.97 | 18:17:00 | 155.9 | 2303.97 | 18:18:00 | 155.9 | 2303.97 |
| 18:19:00 | 155.9 | 2303.97 | 18:20:00 | 155.9 | 2303.99 | 18:21:00 | 155.9 | 2303.99 |
| 18:22:00 | 155.9 | 2303.99 | 18:23:00 | 155.8 | 2303.97 | 18:24:00 | 155.8 | 2303.99 |
| 18:25:00 | 155.9 | 2304.01 | 18:26:00 | 155.8 | 2303.99 | 18:27:00 | 155.9 | 2304.01 |
| 18:28:00 | 155.8 | 2304.00 | 18:29:00 | 155.8 | 2303.99 | 18:30:00 | 155.8 | 2304.01 |
| 18:31:00 | 155.8 | 2304.01 | 18:32:00 | 155.7 | 2304.03 | 18:33:00 | 155.7 | 2304.03 |
| 18:40:00 | 155.7 | 2304.04 | 18:50:00 | 155.8 | 2304.05 | 19:00:00 | 155.7 | 2304.07 |
| 19:10:00 | 155.7 | 2304.09 | 19:20:00 | 155.6 | 2304.12 | 19:30:00 | 155.6 | 2304.12 |
| 19:40:00 | 155.6 | 2304.13 | 19:50:00 | 155.5 | 2304.12 | 20:00:00 | 155.5 | 2304.14 |
| 20:10:00 | 155.5 | 2304.15 | 20:20:00 | 155.5 | 2304.15 | 20:30:00 | 155.5 | 2304.17 |
| 20:40:00 | 155.5 | 2304.17 | 20:50:00 | 155.5 | 2304.17 | 21:00:00 | 155.5 | 2304.18 |
| 21:10:00 | 155.4 | 2304.17 | 21:20:00 | 155.4 | 2304.19 | 21:30:00 | 155.5 | 2304.20 |
| 21:40:00 | 155.4 | 2304.19 | 21:50:00 | 155.4 | 2304.20 | 22:00:00 | 155.4 | 2304.21 |
| 22:10:00 | 155.3 | 2304.19 | 22:20:00 | 155.4 | 2304.21 | 22:30:00 | 155.3 | 2304.20 |
| 22:40:00 | 155.3 | 2304.20 | 22:50:00 | 155.4 | 2304.21 | 23:00:00 | 155.4 | 2304.21 |
| 23:10:00 | 155.4 | 2304.22 | 23:20:00 | 155.3 | 2304.21 | 23:30:00 | 155.3 | 2304.20 |
| 23:40:00 | 155.4 | 2304.21 | 23:50:00 | 155.3 | 2304.20 | 00:00:00 | 155.3 | 2304.21 |
| 00:10:00 | 155.3 | 2304.21 | 00:20:00 | 155.3 | 2304.21 | 00:30:00 | 155.3 | 2304.20 |
| 00:40:00 | 155.3 | 2304.21 | 00:50:00 | 155.3 | 2304.20 | 01:00:00 | 155.3 | 2304.21 |
| 01:10:00 | 155.4 | 2304.22 | 01:20:00 | 155.3 | 2304.20 | 01:30:00 | 155.3 | 2304.21 |
| 01:40:00 | 155.3 | 2304.19 | 01:50:00 | 155.3 | 2304.20 | 02:00:00 | 155.3 | 2304.21 |
| 02:10:00 | 155.3 | 2304.21 | 02:20:00 | 155.3 | 2304.21 | 02:30:00 | 155.3 | 2304.20 |
| 02:40:00 | 155.3 | 2304.20 | 02:50:00 | 155.3 | 2304.20 | 03:00:00 | 155.3 | 2304.19 |
| 03:10:00 | 155.3 | 2304.19 | 03:20:00 | 155.3 | 2304.19 | 03:30:00 | 155.3 | 2304.19 |
| 03:40:00 | 155.3 | 2304.18 | 03:50:00 | 155.3 | 2304.19 | 04:00:00 | 155.3 | 2304.18 |
| 04:10:00 | 155.3 | 2304.18 | 04:20:00 | 155.3 | 2304.19 | 04:30:00 | 155.3 | 2304.19 |
| 04:40:00 | 155.3 | 2304.19 | 04:50:00 | 155.3 | 2304.17 | 05:00:00 | 155.3 | 2304.18 |
| 05:10:00 | 155.3 | 2304.19 | 05:20:00 | 155.3 | 2304.19 | 05:30:00 | 155.3 | 2304.19 |
| 05:40:00 | 155.3 | 2304.19 | 05:50:00 | 155.4 | 2304.18 | 06:00:00 | 155.3 | 2304.19 |
| 06:10:00 | 155.3 | 2304.19 | 06:20:00 | 155.3 | 2304.19 | 06:30:00 | 155.3 | 2304.19 |
| 06:40:00 | 155.3 | 2304.19 | 06:50:00 | 155.3 | 2304.19 | 07:00:00 | 155.3 | 2304.19 |
| 07:10:00 | 155.3 | 2304.19 | 07:20:00 | 155.4 | 2304.20 | 07:30:00 | 155.3 | 2304.19 |
| 07:33:20 | 155.3 | 2304.19 | 07:33:30 | 155.3 | 2304.19 | 07:33:40 | 155.3 | 2304.18 |
| 07:40:00 | 155.4 | 2304.20 | 07:50:00 | 155.3 | 2304.17 | 08:00:00 | 155.4 | 2304.18 |
| 08:10:00 | 155.3 | 2304.18 | 08:20:00 | 155.3 | 2304.19 | 08:30:00 | 155.3 | 2304.19 |
| 08:40:00 | 155.3 | 2304.18 | 08:50:00 | 155.3 | 2304.19 | 09:00:00 | 155.4 | 2304.19 |
| 09:10:00 | 155.3 | 2304.18 | 09:20:00 | 155.3 | 2304.19 | 09:30:00 | 155.4 | 2304.20 |
| 09:40:00 | 155.4 | 2304.19 | 09:50:00 | 155.4 | 2304.20 | 10:00:00 | 155.4 | 2304.20 |
| 10:10:00 | 155.3 | 2304.19 | 10:20:00 | 155.3 | 2304.18 | 10:30:00 | 155.3 | 2304.19 |
| 10:40:00 | 155.4 | 2304.20 | 10:50:00 | 155.4 | 2304.20 | 11:00:00 | 155.4 | 2304.20 |
| 11:10:00 | 155.4 | 2304.19 | 11:20:00 | 155.4 | 2304.20 | 11:30:00 | 155.3 | 2304.19 |
| 11:40:00 | 155.4 | 2304.18 | 11:50:00 | 155.4 | 2304.18 | 12:00:00 | 155.3 | 2304.17 |
| 12:10:00 | 155.4 | 2304.18 | 12:20:00 | 155.3 | 2304.17 | 12:29:20 | 155.3 | 2304.17 |
| 12:29:30 | 155.4 | 2304.19 | 12:29:40 | 155.4 | 2304.19 | 12:29:50 | 155.3 | 2304.18 |
| 12:30:00 | 155.4 | 2304.19 | 12:30:10 | 155.4 | 2304.18 | 12:30:20 | 155.3 | 2302.04 |
| 12:30:30 | 155.0 | 2290.70 | 12:30:40 | 154.4 | 2273.35 | 12:30:50 | 153.6 | 2257.86 |
| 12:31:00 | 153.3 | 2245.49 | 12:31:10 | 153.8 | 2234.31 | 12:31:20 | 154.3 | 2223.85 |
| 12:31:30 | 154.6 | 2215.75 | 12:31:40 | 154.7 | 2209.90 | 12:31:50 | 154.8 | 2205.58 |
| 12:32:00 | 154.8 | 2202.33 | 12:32:10 | 154.8 | 2199.85 | 12:32:20 | 154.8 | 2197.85 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 12:32:30 | 154.7 | 2196.33 | 12:32:40 | 154.6 | 2194.98 | 12:32:50 | 154.6 | 2194.04 |
| 12:33:00 | 154.5 | 2193.34 | 12:33:10 | 154.5 | 2192.90 | 12:33:20 | 154.5 | 2192.71 |
| 12:33:30 | 154.5 | 2192.64 | 12:33:40 | 154.4 | 2192.62 | 12:33:50 | 154.4 | 2192.71 |
| 12:34:00 | 154.4 | 2192.81 | 12:34:10 | 154.4 | 2192.96 | 12:34:20 | 154.3 | 2193.06 |
| 12:34:30 | 154.3 | 2193.21 | 12:34:40 | 154.3 | 2193.34 | 12:34:50 | 154.3 | 2193.57 |
| 12:35:00 | 154.3 | 2193.65 | 12:35:10 | 154.3 | 2193.82 | 12:35:20 | 154.3 | 2193.96 |
| 12:35:30 | 154.2 | 2194.15 | 12:35:40 | 154.2 | 2194.30 | 12:35:50 | 154.2 | 2194.41 |
| 12:36:00 | 154.2 | 2194.50 | 12:36:10 | 154.2 | 2194.61 | 12:36:20 | 154.2 | 2194.64 |
| 12:36:30 | 154.2 | 2194.68 | 12:36:40 | 154.2 | 2194.65 | 12:36:50 | 154.2 | 2194.58 |
| 12:37:00 | 154.2 | 2194.57 | 12:37:10 | 154.1 | 2194.53 | 12:37:20 | 154.2 | 2194.49 |
| 12:37:30 | 154.1 | 2194.44 | 12:37:40 | 154.2 | 2194.43 | 12:37:50 | 154.2 | 2194.42 |
| 12:38:00 | 154.2 | 2194.41 | 12:38:10 | 154.2 | 2194.50 | 12:38:20 | 154.2 | 2194.49 |
| 12:38:30 | 154.2 | 2194.49 | 12:38:40 | 154.1 | 2194.52 | 12:38:50 | 154.1 | 2194.55 |
| 12:39:00 | 154.1 | 2194.61 | 12:39:10 | 154.1 | 2194.67 | 12:39:20 | 154.1 | 2194.67 |
| 12:39:30 | 154.1 | 2194.75 | 12:39:40 | 154.1 | 2194.82 | 12:39:50 | 154.1 | 2194.91 |
| 12:40:00 | 154.1 | 2195.01 | 12:40:30 | 154.2 | 2195.30 | 12:41:00 | 154.2 | 2195.65 |
| 12:41:30 | 154.2 | 2195.98 | 12:42:00 | 154.2 | 2196.14 | 12:42:30 | 154.1 | 2196.16 |
| 12:43:00 | 154.1 | 2196.23 | 12:43:30 | 154.1 | 2196.25 | 12:44:00 | 154.2 | 2196.27 |
| 12:44:30 | 154.1 | 2196.30 | 12:45:00 | 154.2 | 2196.38 | 12:45:30 | 154.2 | 2196.14 |
| 12:46:00 | 154.2 | 2196.09 | 12:46:30 | 154.1 | 2196.09 | 12:47:00 | 154.2 | 2196.14 |
| 12:47:30 | 154.2 | 2196.14 | 12:48:00 | 154.2 | 2196.06 | 12:48:30 | 154.1 | 2195.71 |
| 12:49:00 | 154.2 | 2195.29 | 12:49:30 | 154.2 | 2194.89 | 12:50:00 | 154.1 | 2194.62 |
| 12:51:00 | 154.1 | 2194.25 | 12:52:00 | 154.1 | 2194.04 | 12:53:00 | 154.1 | 2193.85 |
| 12:54:00 | 154.1 | 2193.66 | 12:55:00 | 154.1 | 2193.51 | 12:56:00 | 154.1 | 2193.43 |
| 12:57:00 | 154.1 | 2193.34 | 12:58:00 | 154.1 | 2193.23 | 12:59:00 | 154.1 | 2193.17 |
| 13:00:00 | 154.1 | 2193.19 | 13:01:00 | 154.1 | 2193.14 | 13:02:00 | 154.1 | 2193.08 |
| 13:03:00 | 154.1 | 2193.06 | 13:04:00 | 154.1 | 2192.99 | 13:05:00 | 154.1 | 2192.93 |
| 13:06:00 | 154.1 | 2192.83 | 13:07:00 | 154.1 | 2192.79 | 13:08:00 | 154.1 | 2192.78 |
| 13:09:00 | 154.2 | 2192.46 | 13:10:00 | 154.1 | 2192.46 | 13:11:00 | 154.1 | 2192.31 |
| 13:12:00 | 154.1 | 2192.17 | 13:13:00 | 154.1 | 2192.11 | 13:14:00 | 154.2 | 2192.03 |
| 13:15:00 | 154.1 | 2192.05 | 13:16:00 | 154.1 | 2192.09 | 13:17:00 | 154.1 | 2192.11 |
| 13:18:00 | 154.1 | 2192.15 | 13:19:00 | 154.1 | 2192.18 | 13:20:00 | 154.2 | 2192.17 |
| 13:21:00 | 154.2 | 2192.29 | 13:22:00 | 154.1 | 2192.29 | 13:23:00 | 154.2 | 2192.29 |
| 13:24:00 | 154.1 | 2192.36 | 13:25:00 | 154.2 | 2192.37 | 13:26:00 | 154.2 | 2192.40 |
| 13:27:00 | 154.2 | 2192.48 | 13:28:00 | 154.1 | 2192.52 | 13:29:00 | 154.2 | 2192.56 |
| 13:30:00 | 154.2 | 2192.65 | 13:31:00 | 154.2 | 2192.68 | 13:32:00 | 154.2 | 2192.79 |
| 13:33:00 | 154.2 | 2192.80 | 13:34:00 | 154.2 | 2192.84 | 13:35:00 | 154.2 | 2192.89 |
| 13:36:00 | 154.2 | 2192.89 | 13:37:00 | 154.2 | 2192.89 | 13:38:00 | 154.3 | 2192.95 |
| 13:39:00 | 154.2 | 2192.97 | 13:40:00 | 154.3 | 2193.02 | 13:41:00 | 154.2 | 2193.03 |
| 13:42:00 | 154.2 | 2193.06 | 13:43:00 | 154.2 | 2193.06 | 13:44:00 | 154.2 | 2193.10 |
| 13:45:00 | 154.2 | 2193.17 | 13:46:00 | 154.3 | 2193.14 | 13:47:00 | 154.2 | 2193.15 |
| 13:48:00 | 154.3 | 2193.20 | 13:49:00 | 154.2 | 2193.22 | 13:50:00 | 154.3 | 2193.33 |
| 13:51:00 | 154.3 | 2193.27 | 13:52:00 | 154.3 | 2193.28 | 13:53:00 | 154.3 | 2193.21 |
| 13:54:00 | 154.2 | 2192.93 | 13:55:00 | 154.3 | 2193.13 | 13:56:00 | 154.3 | 2193.19 |
| 13:57:00 | 154.3 | 2193.26 | 13:58:00 | 154.3 | 2193.25 | 13:59:00 | 154.2 | 2193.25 |
| 14:00:00 | 154.3 | 2193.27 | 14:01:00 | 154.3 | 2193.24 | 14:02:00 | 154.3 | 2193.23 |
| 14:03:00 | 154.3 | 2193.28 | 14:04:00 | 154.3 | 2193.29 | 14:05:00 | 154.3 | 2193.30 |
| 14:06:00 | 154.3 | 2193.32 | 14:07:00 | 154.3 | 2193.35 | 14:08:00 | 154.3 | 2193.38 |
| 14:09:00 | 154.3 | 2193.48 | 14:10:00 | 154.3 | 2193.46 | 14:11:00 | 154.3 | 2193.46 |
| 14:12:00 | 154.3 | 2193.44 | 14:13:00 | 154.3 | 2193.44 | 14:14:00 | 154.4 | 2193.43 |
| 14:15:00 | 154.3 | 2193.43 | 14:16:00 | 154.3 | 2193.56 | 14:17:00 | 154.4 | 2193.51 |
| 14:18:00 | 154.4 | 2193.48 | 14:19:00 | 154.3 | 2193.48 | 14:20:00 | 154.3 | 2193.50 |
| 14:21:00 | 154.4 | 2193.53 | 14:22:00 | 154.3 | 2193.52 | 14:23:00 | 154.3 | 2193.60 |
| 14:24:00 | 154.3 | 2193.53 | 14:25:00 | 154.3 | 2193.51 | 14:26:00 | 154.4 | 2193.51 |
| 14:27:00 | 154.4 | 2193.50 | 14:28:00 | 154.3 | 2193.46 | 14:29:00 | 154.4 | 2193.43 |
| 14:29:40 | 154.3 | 2193.58 | 14:29:50 | 154.3 | 2193.59 | 14:30:00 | 154.4 | 2193.60 |
| 14:30:10 | 154.4 | 2193.60 | 14:30:20 | 154.3 | 2193.67 | 14:30:30 | 154.7 | 2210.07 |
| 14:30:40 | 155.7 | 2234.15 | 14:30:50 | 156.3 | 2253.75 | 14:31:00 | 156.7 | 2269.62 |
| 14:31:10 | 156.8 | 2281.36 | 14:31:20 | 157.0 | 2289.20 | 14:31:30 | 157.0 | 2294.00 |
| 14:31:40 | 156.9 | 2296.73 | 14:31:50 | 156.9 | 2298.42 | 14:32:00 | 156.9 | 2299.58 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 14:32:10 | 156.8 | 2300.45 | 14:32:20 | 156.8 | 2301.14 | 14:32:30 | 156.8 | 2301.69 |
| 14:32:40 | 156.8 | 2302.11 | 14:32:50 | 156.7 | 2302.44 | 14:33:00 | 156.7 | 2302.70 |
| 14:33:10 | 156.6 | 2302.89 | 14:33:20 | 156.6 | 2303.06 | 14:33:30 | 156.6 | 2303.18 |
| 14:33:40 | 156.5 | 2303.28 | 14:33:50 | 156.5 | 2303.36 | 14:34:00 | 156.4 | 2303.40 |
| 14:34:10 | 156.5 | 2303.46 | 14:34:20 | 156.4 | 2303.49 | 14:34:30 | 156.3 | 2303.50 |
| 14:34:40 | 156.3 | 2303.50 | 14:34:50 | 156.4 | 2303.51 | 14:35:00 | 156.3 | 2303.51 |
| 14:35:10 | 156.3 | 2303.52 | 14:35:20 | 156.3 | 2303.52 | 14:35:30 | 156.2 | 2303.51 |
| 14:35:40 | 156.2 | 2303.51 | 14:35:50 | 156.2 | 2303.50 | 14:36:00 | 156.2 | 2303.49 |
| 14:36:10 | 156.2 | 2303.49 | 14:36:20 | 156.1 | 2303.47 | 14:36:30 | 156.2 | 2303.48 |
| 14:36:40 | 156.1 | 2303.46 | 14:36:50 | 156.1 | 2303.45 | 14:37:00 | 156.2 | 2303.45 |
| 14:37:10 | 156.1 | 2303.42 | 14:37:20 | 156.1 | 2303.41 | 14:37:30 | 156.1 | 2303.41 |
| 14:37:40 | 156.1 | 2303.39 | 14:37:50 | 156.0 | 2303.39 | 14:38:00 | 156.0 | 2303.37 |
| 14:38:10 | 156.0 | 2303.37 | 14:38:20 | 156.0 | 2303.37 | 14:38:30 | 156.0 | 2303.35 |
| 14:38:40 | 156.0 | 2303.34 | 14:38:50 | 156.0 | 2303.34 | 14:39:00 | 156.0 | 2303.33 |
| 14:39:10 | 156.0 | 2303.33 | 14:39:20 | 155.9 | 2303.33 | 14:39:30 | 155.9 | 2303.31 |
| 14:39:40 | 156.0 | 2303.31 | 14:39:50 | 155.9 | 2303.31 | 14:40:00 | 155.9 | 2303.30 |
| 14:40:10 | 155.9 | 2303.29 | 14:40:30 | 155.9 | 2303.29 | 14:41:00 | 155.9 | 2303.29 |
| 14:41:30 | 155.8 | 2303.26 | 14:42:00 | 155.9 | 2303.28 | 14:42:30 | 155.8 | 2303.25 |
| 14:43:00 | 155.8 | 2303.27 | 14:43:30 | 155.8 | 2303.26 | 14:44:00 | 155.8 | 2303.27 |
| 14:44:30 | 155.8 | 2303.27 | 14:45:00 | 155.7 | 2303.27 | 14:45:30 | 155.7 | 2303.29 |
| 14:46:00 | 155.7 | 2303.29 | 14:46:30 | 155.7 | 2303.30 | 14:47:00 | 155.7 | 2303.31 |
| 14:47:30 | 155.6 | 2303.31 | 14:48:00 | 155.6 | 2303.31 | 14:48:30 | 155.6 | 2303.32 |
| 14:49:00 | 155.6 | 2303.34 | 14:49:30 | 155.6 | 2303.34 | 14:50:00 | 155.6 | 2303.36 |
| 14:50:30 | 155.6 | 2303.34 | 14:51:00 | 155.6 | 2303.36 | 14:52:00 | 155.7 | 2303.35 |
| 14:53:00 | 155.7 | 2303.37 | 14:54:00 | 155.7 | 2303.39 | 14:55:00 | 155.7 | 2303.40 |
| 14:56:00 | 155.6 | 2303.43 | 14:57:00 | 155.6 | 2303.44 | 14:58:00 | 155.6 | 2303.46 |
| 14:59:00 | 155.6 | 2303.46 | 15:00:00 | 155.6 | 2303.48 | 15:01:00 | 155.6 | 2303.48 |
| 15:02:00 | 155.6 | 2303.50 | 15:03:00 | 155.6 | 2303.50 | 15:04:00 | 155.5 | 2303.49 |
| 15:05:00 | 155.6 | 2303.52 | 15:06:00 | 155.6 | 2303.52 | 15:07:00 | 155.6 | 2303.53 |
| 15:08:00 | 155.6 | 2303.53 | 15:09:00 | 155.5 | 2303.53 | 15:10:00 | 155.5 | 2303.55 |
| 15:11:00 | 155.5 | 2303.55 | 15:12:00 | 155.5 | 2303.56 | 15:13:00 | 155.5 | 2303.56 |
| 15:14:00 | 155.5 | 2303.57 | 15:15:00 | 155.5 | 2303.57 | 15:16:00 | 155.5 | 2303.57 |
| 15:17:00 | 155.5 | 2303.59 | 15:18:00 | 155.5 | 2303.59 | 15:19:00 | 155.5 | 2303.59 |
| 15:20:00 | 155.5 | 2303.59 | 15:21:00 | 155.4 | 2303.59 | 15:22:00 | 155.4 | 2303.59 |
| 15:23:00 | 155.5 | 2303.61 | 15:24:00 | 155.5 | 2303.61 | 15:25:00 | 155.5 | 2303.61 |
| 15:26:00 | 155.4 | 2303.61 | 15:27:00 | 155.4 | 2303.61 | 15:28:00 | 155.5 | 2303.63 |
| 15:29:00 | 155.4 | 2303.61 | 15:30:00 | 155.4 | 2303.61 | 15:31:00 | 155.4 | 2303.62 |
| 15:32:00 | 155.4 | 2303.62 | 15:33:00 | 155.4 | 2303.63 | 15:34:00 | 155.4 | 2303.63 |
| 15:35:00 | 155.4 | 2303.62 | 15:36:00 | 155.5 | 2303.65 | 15:37:00 | 155.4 | 2303.63 |
| 15:38:00 | 155.4 | 2303.63 | 15:39:00 | 155.4 | 2303.65 | 15:40:00 | 155.5 | 2303.67 |
| 15:41:00 | 155.4 | 2303.64 | 15:42:00 | 155.5 | 2303.65 | 15:43:00 | 155.4 | 2303.65 |
| 15:44:00 | 155.4 | 2303.65 | 15:45:00 | 155.4 | 2303.65 | 15:46:00 | 155.4 | 2303.65 |
| 15:47:00 | 155.4 | 2303.66 | 15:48:00 | 155.4 | 2303.67 | 15:49:00 | 155.4 | 2303.66 |
| 15:50:00 | 155.4 | 2303.66 | 15:51:00 | 155.4 | 2303.67 | 15:52:00 | 155.4 | 2303.67 |
| 15:53:00 | 155.4 | 2303.65 | 15:54:00 | 155.4 | 2303.67 | 15:55:00 | 155.4 | 2303.67 |
| 15:56:00 | 155.4 | 2303.67 | 15:57:00 | 155.4 | 2303.67 | 15:58:00 | 155.4 | 2303.68 |
| 15:59:00 | 155.4 | 2303.68 | 16:00:00 | 155.4 | 2303.67 | 16:01:00 | 155.3 | 2303.67 |
| 16:02:00 | 155.4 | 2303.68 | 16:03:00 | 155.4 | 2303.68 | 16:04:00 | 155.4 | 2303.68 |
| 16:05:00 | 155.4 | 2303.68 | 16:06:00 | 155.4 | 2303.69 | 16:07:00 | 155.4 | 2303.69 |
| 16:08:00 | 155.4 | 2303.70 | 16:09:00 | 155.4 | 2303.70 | 16:10:00 | 155.3 | 2303.71 |
| 16:11:00 | 155.4 | 2303.71 | 16:12:00 | 155.4 | 2303.71 | 16:13:00 | 155.4 | 2303.71 |
| 16:14:00 | 155.4 | 2303.71 | 16:15:00 | 155.4 | 2303.71 | 16:16:00 | 155.3 | 2303.71 |
| 16:17:00 | 155.4 | 2303.71 | 16:18:00 | 155.4 | 2303.73 | 16:19:00 | 155.3 | 2303.71 |
| 16:20:00 | 155.4 | 2303.73 | 16:21:00 | 155.4 | 2303.73 | 16:22:00 | 155.3 | 2303.73 |
| 16:23:00 | 155.4 | 2303.72 | 16:24:00 | 155.4 | 2303.73 | 16:25:00 | 155.4 | 2303.73 |
| 16:26:00 | 155.3 | 2303.73 | 16:27:00 | 155.3 | 2303.73 | 16:28:00 | 155.3 | 2303.73 |
| 16:29:00 | 155.4 | 2303.75 | 16:30:00 | 155.3 | 2303.75 | 16:31:00 | 155.4 | 2303.75 |
| 16:32:00 | 155.4 | 2303.75 | 16:33:00 | 155.3 | 2303.74 | 16:34:00 | 155.3 | 2303.75 |
| 16:35:00 | 155.3 | 2303.75 | 16:52:00 | 146.8 | 2256.55 | 16:53:00 | 146.8 | 2256.51 |
| 16:54:00 | 146.8 | 2256.62 | 16:55:00 | 146.7 | 2256.69 | 16:56:00 | 146.7 | 2256.77 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

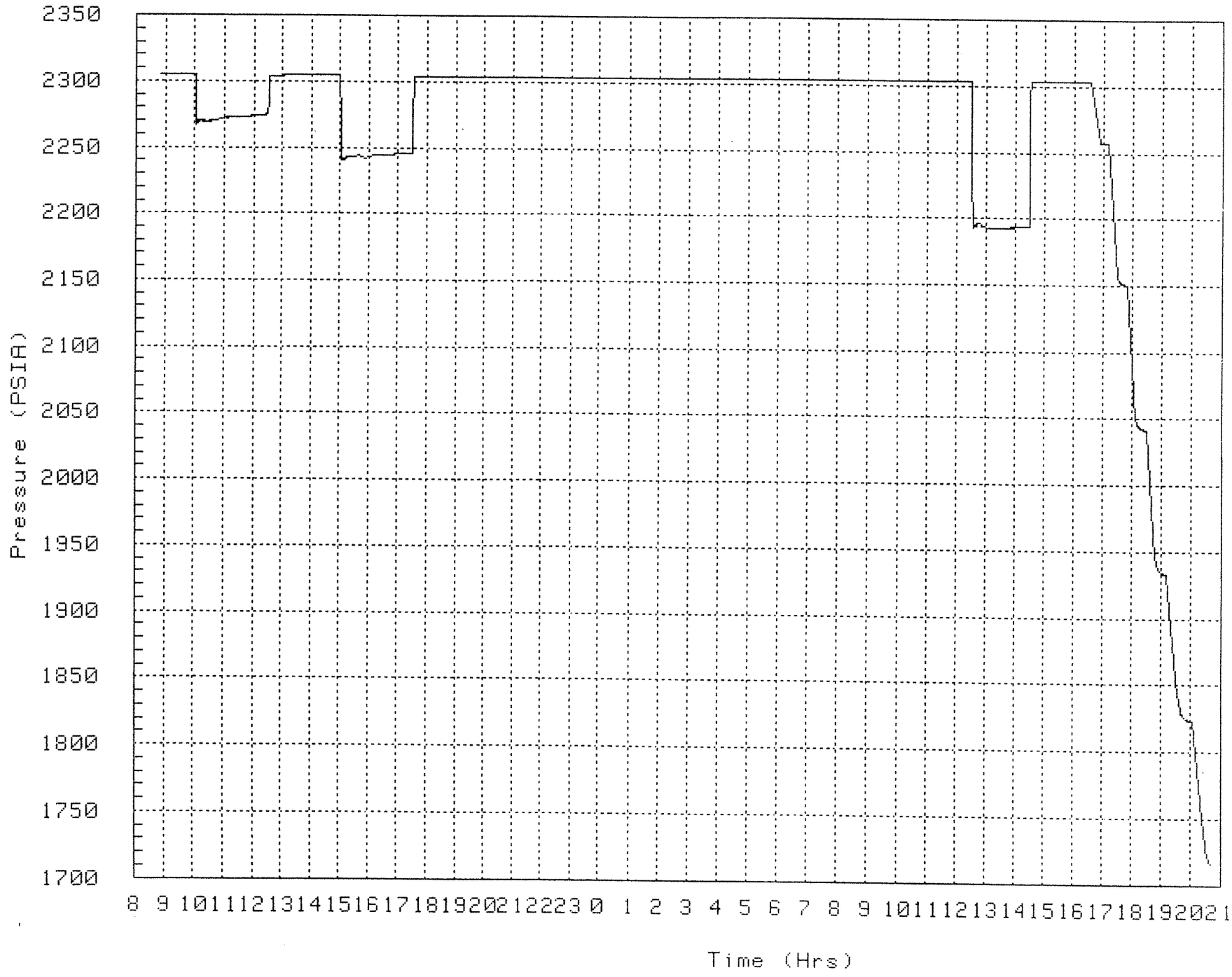
Tool Positioned at a depth of: 1660

| Time | Temp. | PSIA. | Time | Temp. | PSIA. | Time | Temp. | PSIA. |
|---|---|---|---|---|---|---|---|---|
| 16:57:00 | 146.6 | 2256.85 | 16:58:00 | 146.7 | 2256.91 | 16:59:00 | 146.7 | 2256.94 |
| 17:00:00 | 146.6 | 2256.96 | 17:01:00 | 146.5 | 2256.97 | 17:02:00 | 146.6 | 2256.99 |
| 17:03:00 | 146.6 | 2257.01 | 17:04:00 | 146.5 | 2257.01 | 17:05:00 | 146.5 | 2257.02 |
| 17:06:00 | 146.6 | 2257.04 | 17:07:00 | 146.5 | 2257.03 | 17:08:00 | 146.5 | 2257.05 |
| 17:09:00 | 146.5 | 2257.05 | 17:10:00 | 146.5 | 2257.06 | 17:30:00 | 130.0 | 2155.85 |
| 17:31:00 | 130.0 | 2154.73 | 17:32:00 | 129.9 | 2154.02 | 17:33:00 | 129.9 | 2153.40 |
| 17:34:00 | 130.0 | 2152.88 | 17:35:00 | 129.9 | 2152.44 | 17:36:00 | 129.9 | 2152.06 |
| 17:37:00 | 129.8 | 2151.73 | 17:38:00 | 129.9 | 2151.43 | 17:39:00 | 129.8 | 2151.18 |
| 17:40:00 | 129.8 | 2150.99 | 17:41:00 | 129.8 | 2150.82 | 17:42:00 | 129.8 | 2150.68 |
| 17:43:00 | 129.7 | 2150.56 | 17:44:00 | 129.7 | 2150.46 | 17:45:00 | 129.7 | 2150.39 |
| 17:46:00 | 129.7 | 2150.32 | 17:47:00 | 129.7 | 2150.25 | 17:48:00 | 129.7 | 2150.21 |
| 17:49:00 | 129.7 | 2150.17 | 17:50:00 | 129.6 | 2150.12 | 18:08:00 | 118.1 | 2048.97 |
| 18:09:00 | 118.0 | 2047.73 | 18:10:00 | 118.0 | 2046.77 | 18:11:00 | 118.0 | 2045.99 |
| 18:12:00 | 117.9 | 2045.30 | 18:13:00 | 117.9 | 2044.74 | 18:14:00 | 117.9 | 2044.25 |
| 18:15:00 | 117.9 | 2043.84 | 18:16:00 | 117.9 | 2043.52 | 18:17:00 | 117.8 | 2043.22 |
| 18:18:00 | 117.9 | 2042.99 | 18:19:00 | 117.8 | 2042.80 | 18:20:00 | 117.8 | 2042.62 |
| 18:21:00 | 117.8 | 2042.48 | 18:22:00 | 117.8 | 2042.35 | 18:23:00 | 117.7 | 2042.24 |
| 18:24:00 | 117.7 | 2042.15 | 18:25:00 | 117.8 | 2042.07 | 18:26:00 | 117.7 | 2041.99 |
| 18:27:00 | 117.7 | 2041.94 | 18:28:00 | 117.7 | 2041.88 | 18:29:00 | 117.7 | 2041.86 |
| 18:30:00 | 117.7 | 2041.81 | 18:48:00 | 104.5 | 1944.71 | 18:49:00 | 104.5 | 1942.91 |
| 18:50:00 | 104.4 | 1941.37 | 18:51:00 | 104.4 | 1940.09 | 18:52:00 | 104.4 | 1939.00 |
| 18:53:00 | 104.4 | 1938.07 | 18:54:00 | 104.4 | 1937.26 | 18:55:00 | 104.4 | 1936.60 |
| 18:56:00 | 104.3 | 1936.03 | 18:57:00 | 104.3 | 1935.54 | 18:58:00 | 104.3 | 1935.13 |
| 18:59:00 | 104.3 | 1934.78 | 19:00:00 | 104.3 | 1934.48 | 19:01:00 | 104.2 | 1934.24 |
| 19:02:00 | 104.2 | 1934.01 | 19:03:00 | 104.2 | 1933.82 | 19:04:00 | 104.2 | 1933.66 |
| 19:05:00 | 104.2 | 1933.51 | 19:06:00 | 104.2 | 1933.40 | 19:07:00 | 104.2 | 1933.29 |
| 19:08:00 | 104.1 | 1933.20 | 19:09:00 | 104.1 | 1933.13 | 19:10:00 | 104.1 | 1933.05 |
| 19:11:00 | 104.1 | 1932.99 | 19:35:00 | 89.5 | 1841.26 | 19:36:00 | 89.4 | 1838.70 |
| 19:37:00 | 89.4 | 1836.43 | 19:38:00 | 89.4 | 1834.46 | 19:39:00 | 89.4 | 1832.77 |
| 19:40:00 | 89.3 | 1831.33 | 19:41:00 | 89.3 | 1830.10 | 19:42:00 | 89.2 | 1829.06 |
| 19:43:00 | 89.2 | 1828.17 | 19:44:00 | 89.2 | 1827.42 | 19:45:00 | 89.2 | 1826.78 |
| 19:46:00 | 89.1 | 1826.25 | 19:47:00 | 89.1 | 1825.80 | 19:48:00 | 89.1 | 1825.42 |
| 19:49:00 | 89.1 | 1825.10 | 19:50:00 | 89.1 | 1824.83 | 19:51:00 | 89.1 | 1824.58 |
| 19:52:00 | 89.1 | 1824.39 | 19:53:00 | 89.1 | 1824.20 | 19:54:00 | 89.1 | 1824.06 |
| 19:55:00 | 89.1 | 1823.93 | 19:56:00 | 89.0 | 1823.83 | 19:57:00 | 89.0 | 1823.73 |
| 19:58:00 | 89.0 | 1823.63 | 19:59:00 | 89.0 | 1823.56 | 20:00:00 | 89.0 | 1823.51 |
| 20:01:00 | 89.0 | 1823.45 | 20:02:00 | 89.0 | 1823.40 | 20:03:00 | 89.0 | 1823.36 |
| 20:04:00 | 89.0 | 1823.32 | 20:24:00 | 66.2 | 1750.44 | 20:25:00 | 66.1 | 1747.63 |
| 20:26:00 | 65.9 | 1744.02 | 20:27:00 | 65.8 | 1740.19 | 20:28:00 | 65.6 | 1736.55 |
| 20:29:00 | 65.5 | 1733.25 | 20:30:00 | 65.4 | 1730.35 | 20:31:00 | 65.2 | 1727.86 |
| 20:32:00 | 65.1 | 1725.67 | 20:33:00 | 64.9 | 1723.83 | 20:34:00 | 64.8 | 1722.29 |
| 20:35:00 | 64.6 | 1720.90 | 20:36:00 | 64.6 | 1719.68 | 20:37:00 | 64.5 | 1718.59 |
| 20:38:00 | 64.4 | 1717.66 | 20:39:00 | 64.3 | 1716.84 | 20:40:00 | 64.2 | 1716.14 |

GO INTERNATIONAL AUSTRALIA - LINEAR PRESSURE PLOT

BEACH PETROLEUM . GRUMBY #1

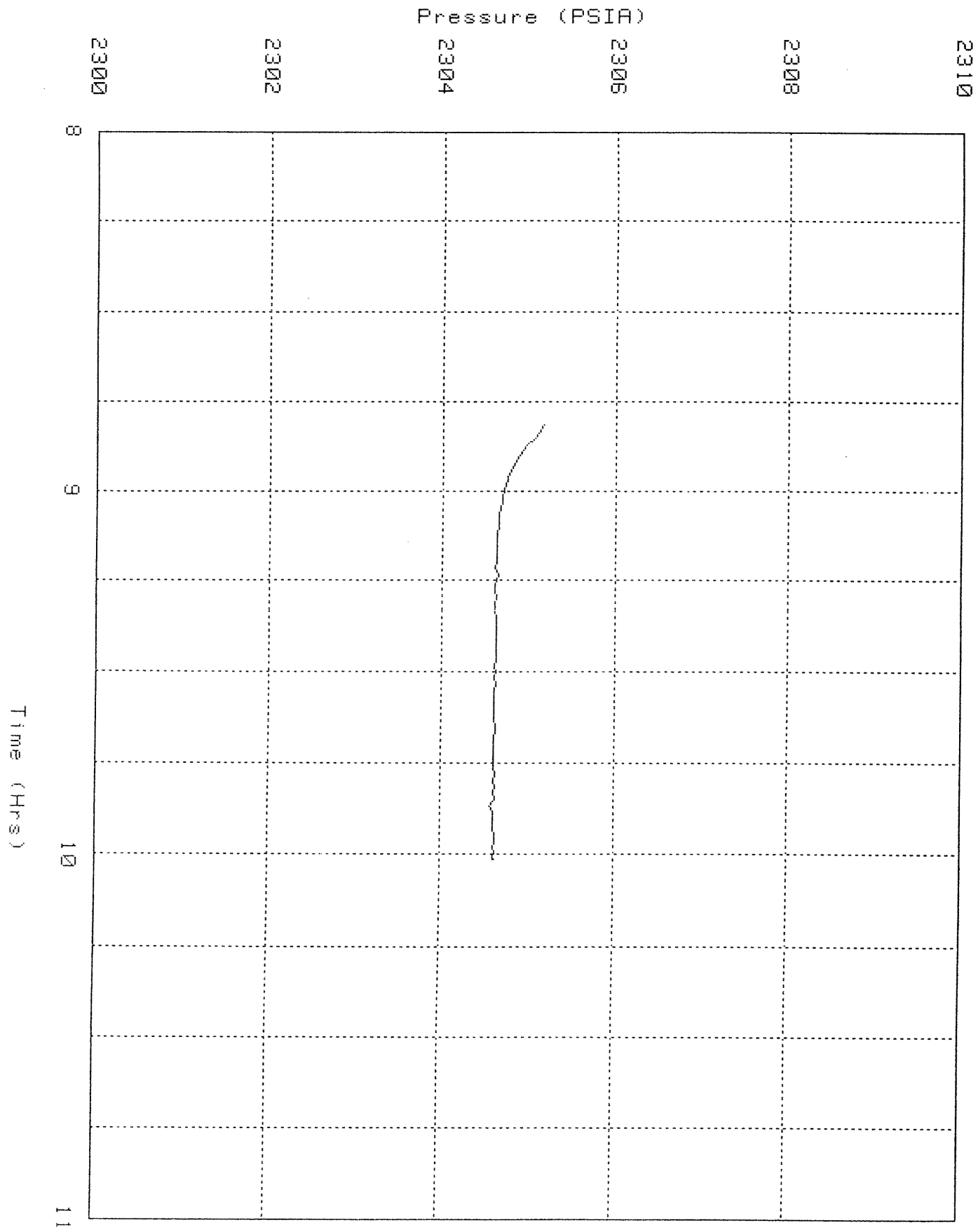
Plotted from: 08:49:00 to 20:40:00 (~ 36 hrs.)



GO INTERNATIONAL AUSTRALIA - LINEAR PRESSURE PLOT

BEACH PETROLEUM · GRUMBY #1

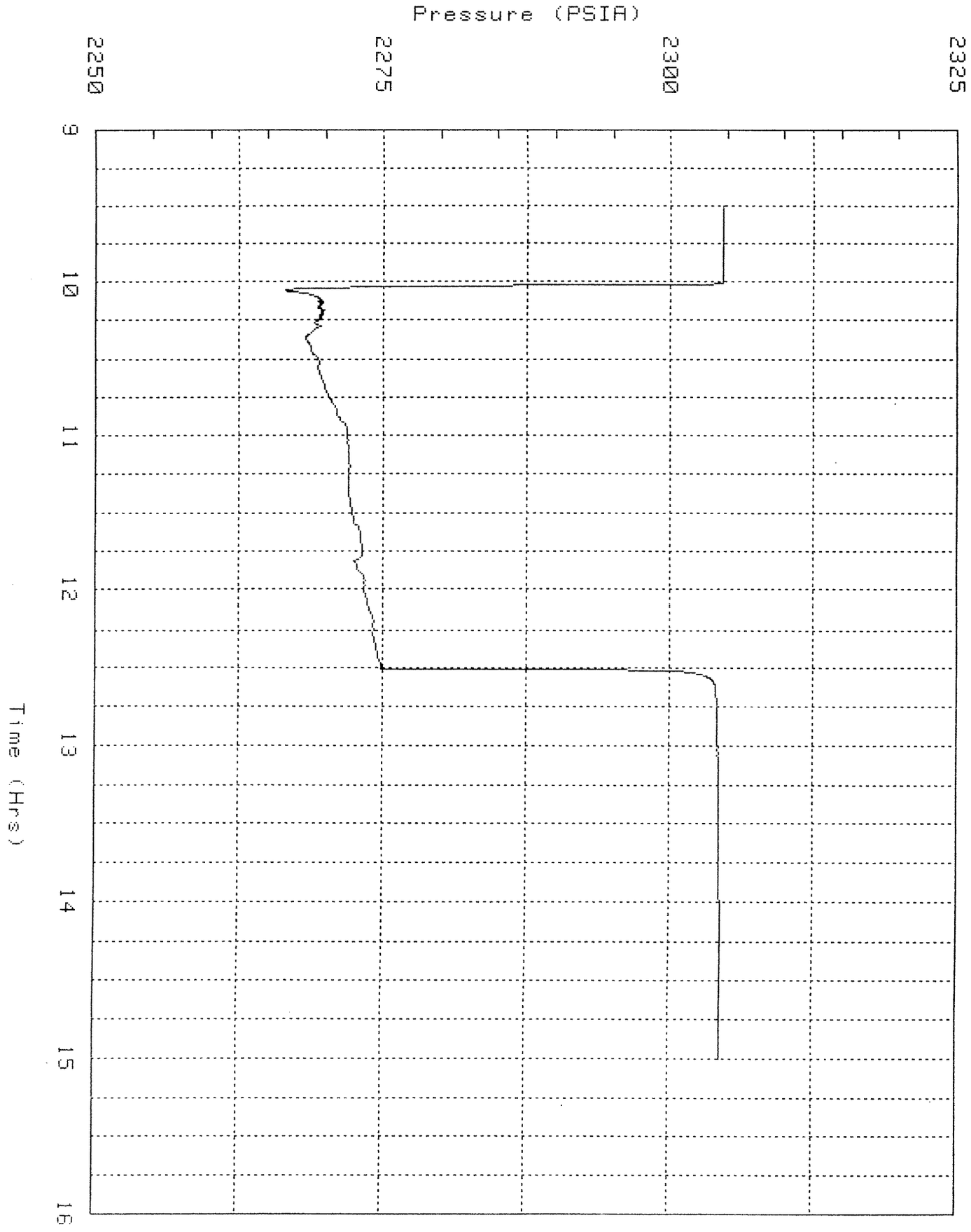
Plotted from: 08:49:00 to 10:00:50 (~ 1 hrs.)



GO INTERNATIONAL AUSTRALIA - LINEAR PRESSURE PLOT

BEACH PETROLEUM . GRUMBY #1

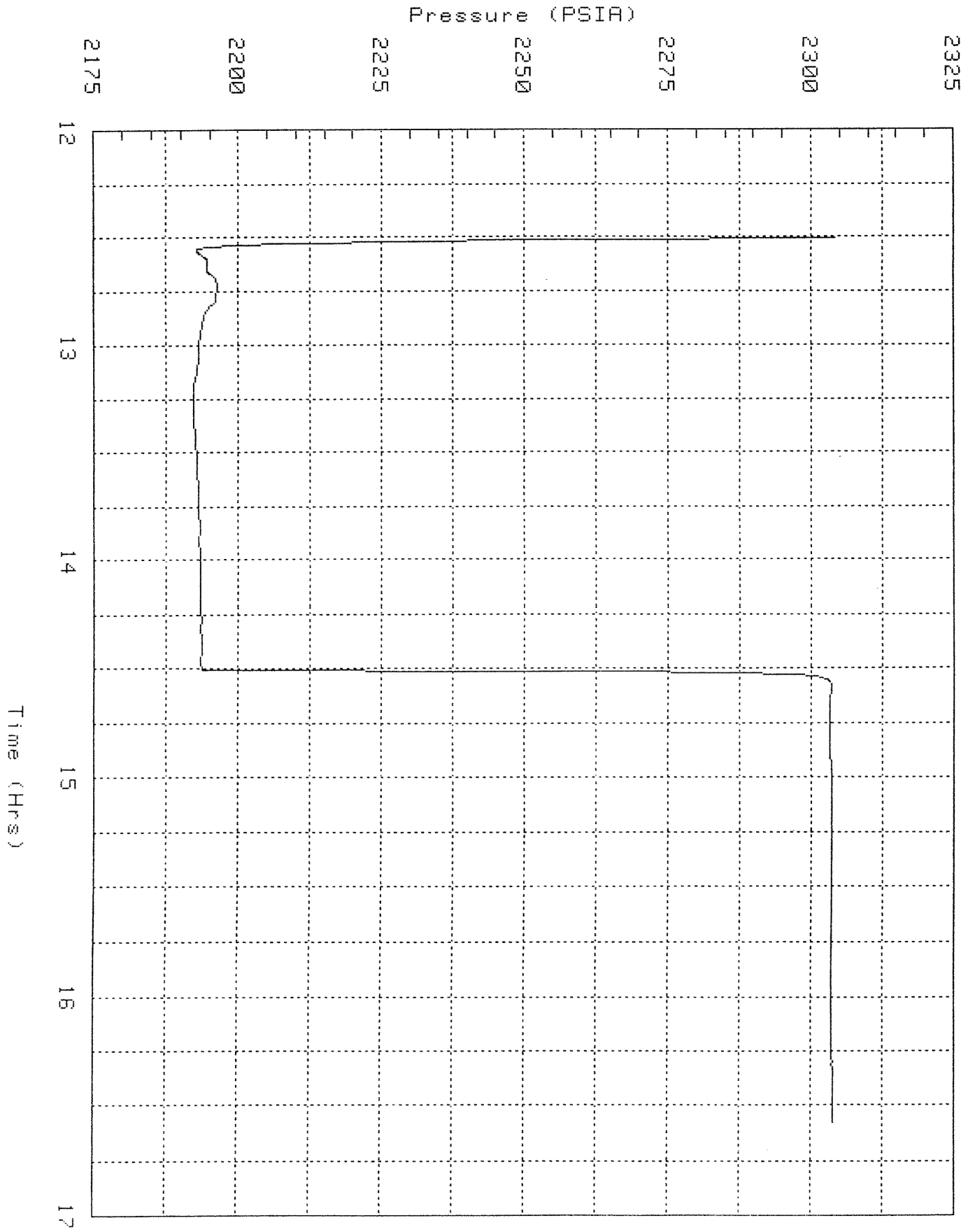
Plotted from: 09:30:00 to 15:00:10 (~ 6 hrs.)



GO INTERNATIONAL AUSTRALIA - LINEAR PRESSURE PLOT

BEACH PETROLEUM . GRUMBY #1

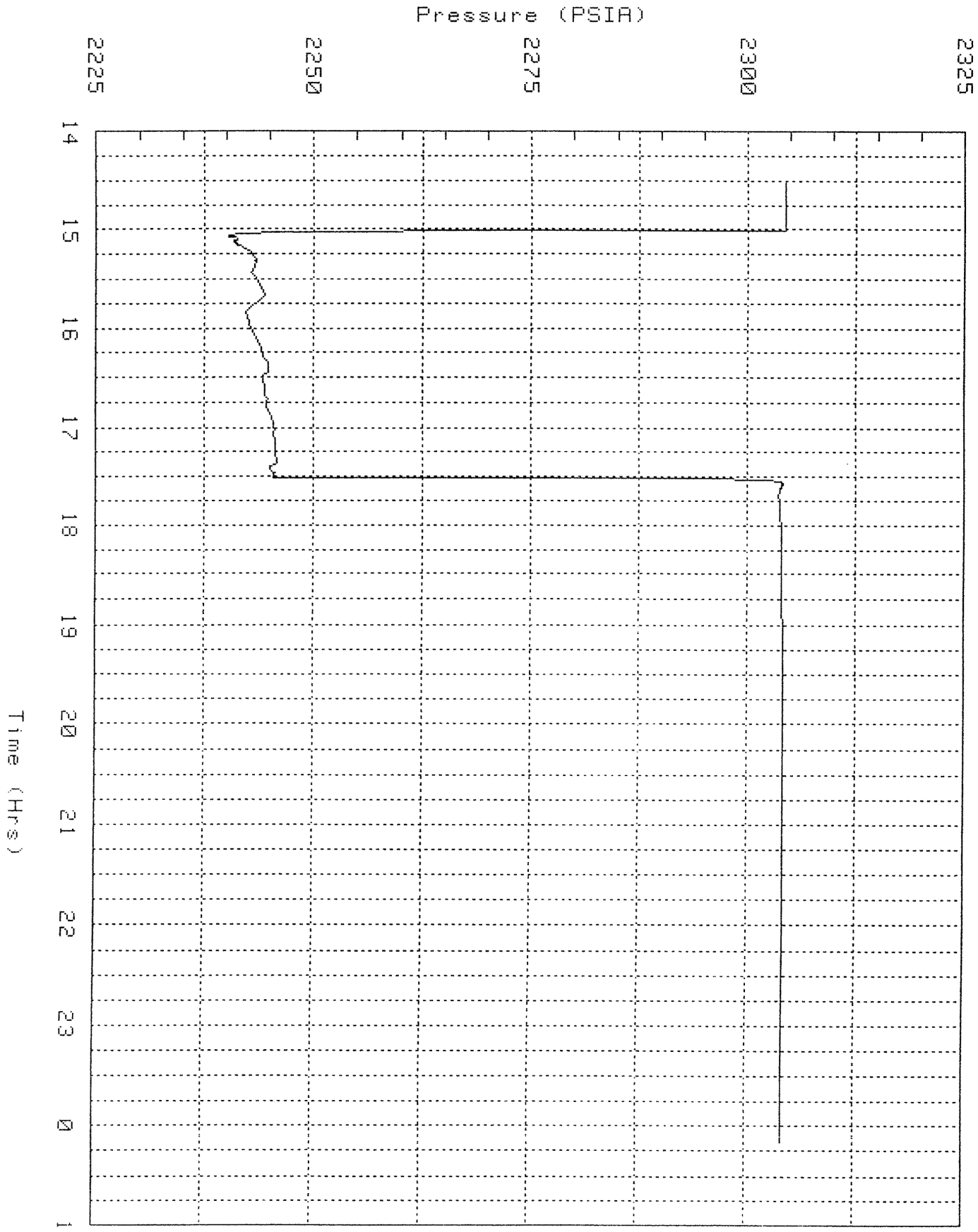
Plotted from: 12:30:10 to 16:35:00 (~ 4 hrs.)



GO INTERNATIONAL AUSTRALIA - LINEAR PRESSURE PLOT

BEACH PETROLEUM . GRUMBY #1

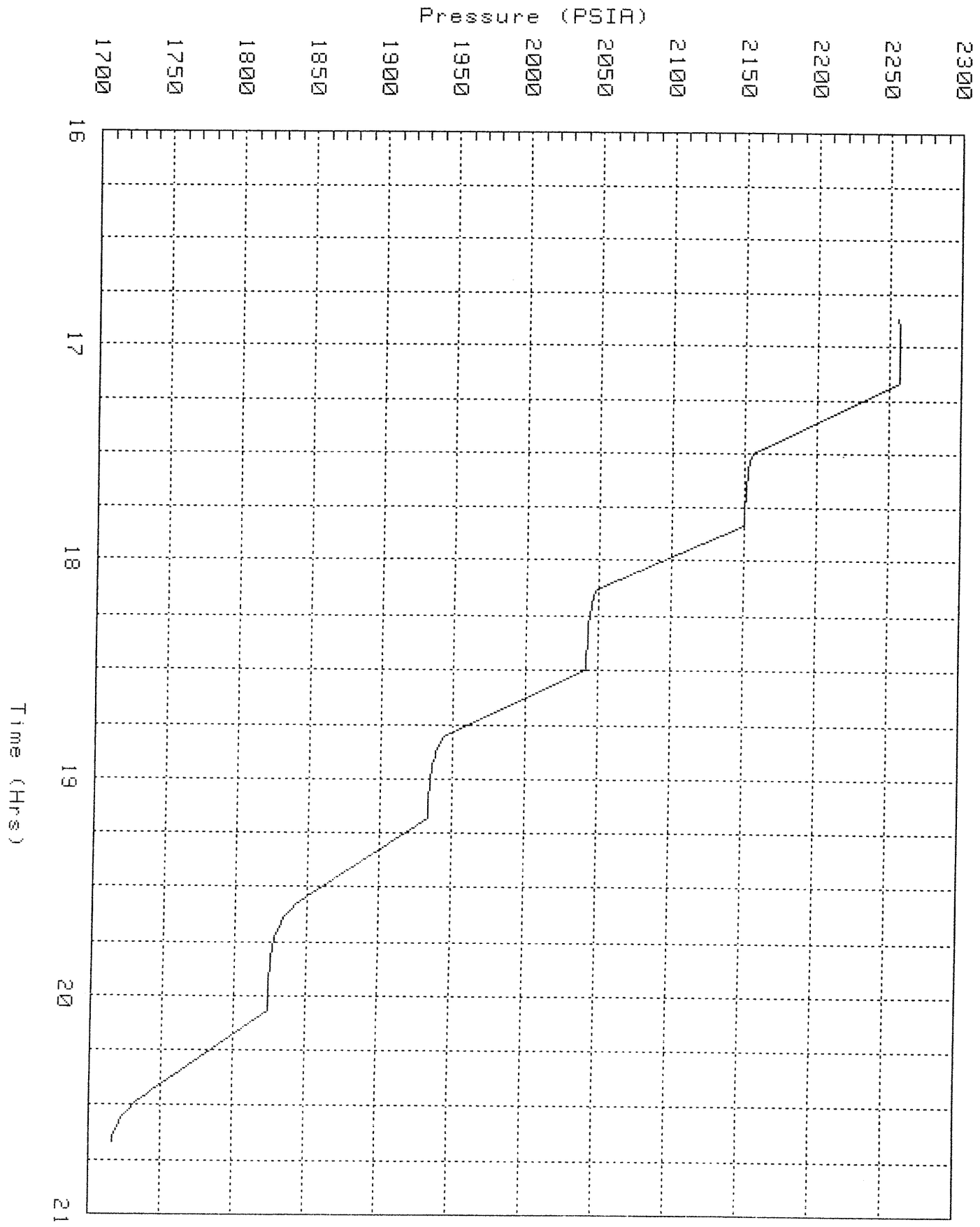
Plotted from: 14:30:00 to 00:10:00 (~ 10 hrs.)



GO INTERNATIONAL AUSTRALIA - LINEAR PRESSURE PLOT

BEACH PETROLEUM . GRUMBY #1

Plotted from: 16:52:00 to 20:40:00 (~ 4 hrs.)



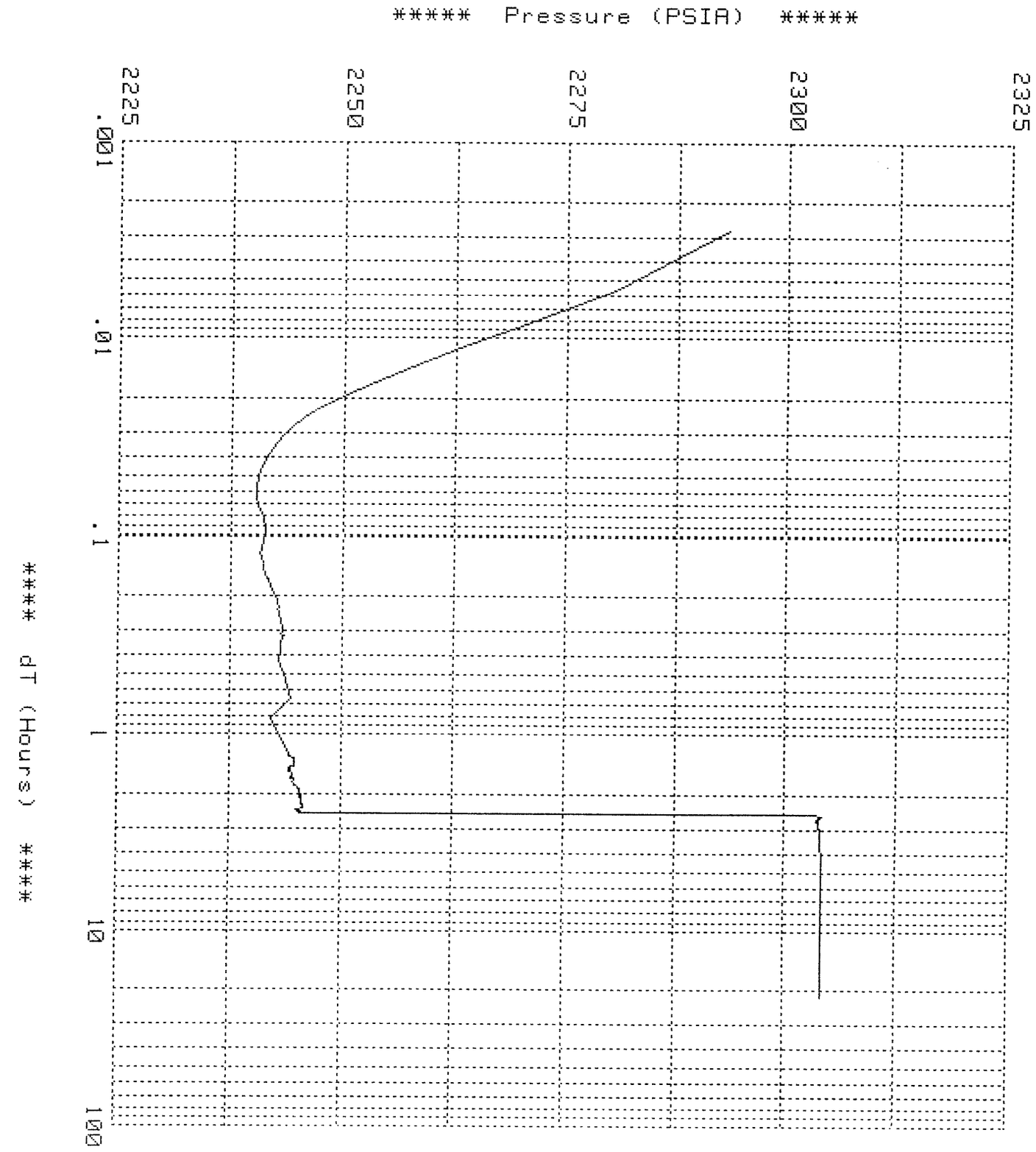
GO INTERNATIONAL AUSTRALIA

LINEAR PRESSURE VS. LOG TIME

BEACH PETROLEUM  GRUMBY #1  22/64 CHOKE

Start of plot: 15:00:20  Date: 18/03/81

Finish of plot : 12:30:10  Date: 19/03/81



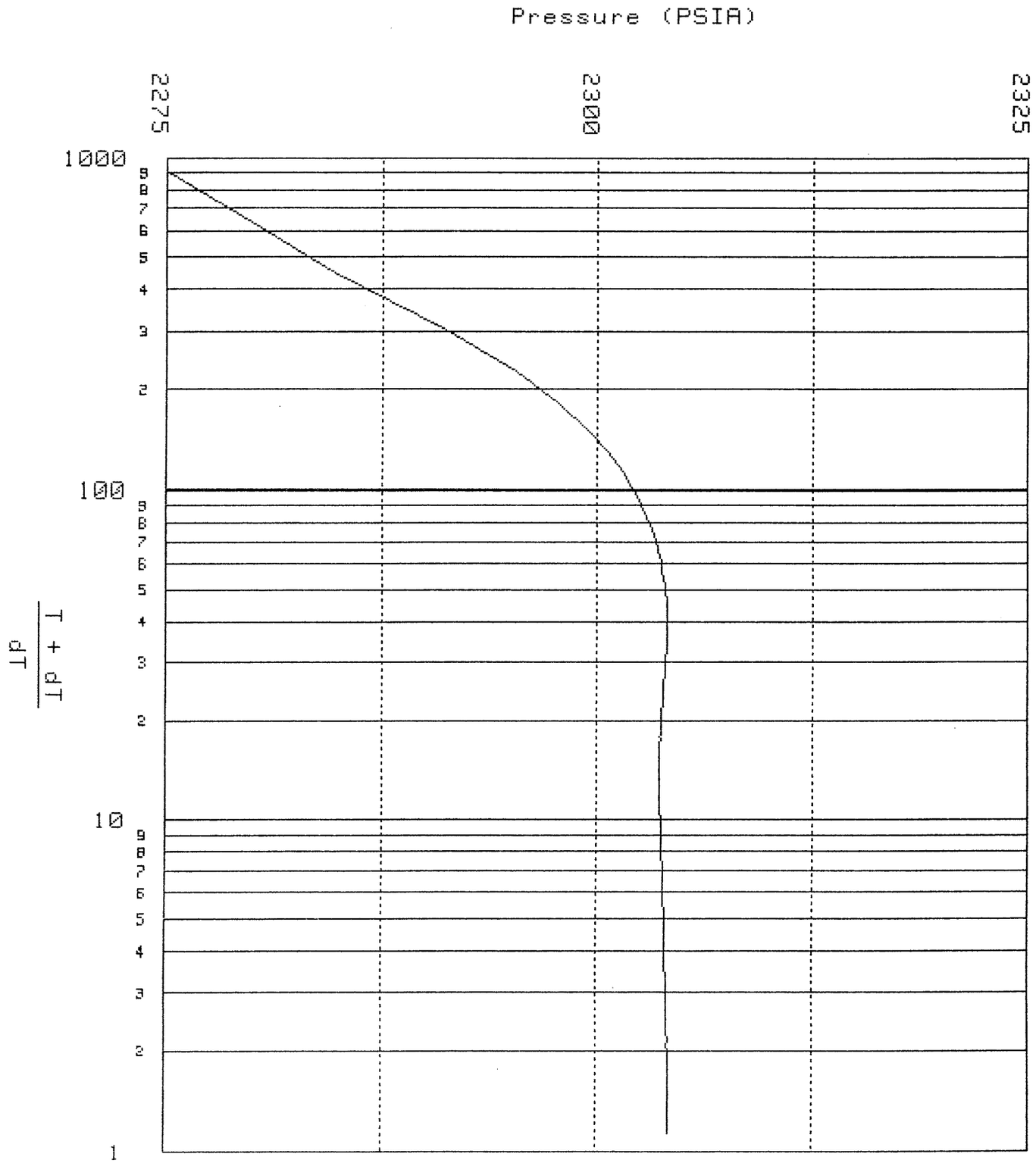
GO INTERNATIONAL AUSTRALIA - HORNER PLOT

BEACH PETROLEUM GRUMBY #1 22/64 CHOKE

Time well flowed:15:00:20 Date: 18/03/81

Time well shut in:17:30:30 Date: 18/03/81

Time build-up completed:12:30:10 Date:19/03/81



Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 17:30:40 | 157.0 | 2275.08 | .003 | 14.61 | 902.000 |
| 17:30:50 | 157.5 | 2284.75 | .006 | 24.28 | 451.500 |
| 17:31:00 | 157.7 | 2291.15 | .008 | 30.68 | 301.333 |
| 17:31:10 | 157.7 | 2295.24 | .011 | 34.77 | 226.250 |
| 17:31:20 | 157.8 | 2297.75 | .014 | 37.28 | 181.200 |
| 17:31:30 | 157.7 | 2299.46 | .017 | 38.99 | 151.167 |
| 17:31:40 | 157.7 | 2300.65 | .019 | 40.18 | 129.714 |
| 17:31:50 | 157.5 | 2301.45 | .022 | 40.98 | 113.625 |
| 17:32:00 | 157.5 | 2302.08 | .025 | 41.61 | 101.111 |
| 17:32:10 | 157.5 | 2302.54 | .028 | 42.07 | 91.100 |
| 17:32:20 | 157.4 | 2302.89 | .031 | 42.42 | 82.909 |
| 17:32:30 | 157.3 | 2303.16 | .033 | 42.69 | 76.083 |
| 17:32:40 | 157.3 | 2303.39 | .036 | 42.92 | 70.308 |
| 17:32:50 | 157.3 | 2303.56 | .039 | 43.09 | 65.357 |
| 17:33:00 | 157.3 | 2303.70 | .042 | 43.23 | 61.067 |
| 17:33:10 | 157.2 | 2303.80 | .044 | 43.33 | 57.313 |
| 17:33:20 | 157.2 | 2303.88 | .047 | 43.41 | 54.000 |
| 17:33:30 | 157.2 | 2303.94 | .050 | 43.47 | 51.056 |
| 17:33:40 | 157.2 | 2303.99 | .053 | 43.52 | 48.421 |
| 17:33:50 | 157.1 | 2304.04 | .056 | 43.57 | 46.050 |
| 17:34:00 | 157.1 | 2304.05 | .058 | 43.58 | 43.905 |
| 17:34:10 | 157.0 | 2304.06 | .061 | 43.59 | 41.955 |
| 17:34:20 | 157.1 | 2304.06 | .064 | 43.59 | 40.174 |
| 17:34:30 | 157.0 | 2304.06 | .067 | 43.59 | 38.542 |
| 17:34:40 | 157.0 | 2304.06 | .069 | 43.59 | 37.040 |
| 17:34:50 | 157.0 | 2304.06 | .072 | 43.59 | 35.654 |
| 17:35:00 | 156.9 | 2304.05 | .075 | 43.58 | 34.370 |
| 17:35:10 | 156.9 | 2304.05 | .078 | 43.58 | 33.179 |
| 17:35:20 | 157.0 | 2304.02 | .081 | 43.55 | 32.069 |
| 17:35:30 | 157.0 | 2304.01 | .083 | 43.54 | 31.033 |
| 17:35:40 | 156.9 | 2303.99 | .086 | 43.52 | 30.065 |
| 17:35:50 | 156.9 | 2303.98 | .089 | 43.51 | 29.156 |
| 17:36:00 | 156.8 | 2303.95 | .092 | 43.48 | 28.303 |
| 17:36:10 | 156.8 | 2303.92 | .094 | 43.45 | 27.500 |
| 17:36:20 | 156.8 | 2303.92 | .097 | 43.45 | 26.743 |
| 17:36:30 | 156.8 | 2303.90 | .100 | 43.43 | 26.028 |
| 17:36:40 | 156.8 | 2303.89 | .103 | 43.42 | 25.351 |
| 17:36:50 | 156.8 | 2303.88 | .106 | 43.41 | 24.711 |
| 17:37:00 | 156.8 | 2303.86 | .108 | 43.39 | 24.103 |
| 17:37:10 | 156.8 | 2303.85 | .111 | 43.38 | 23.525 |
| 17:37:20 | 156.7 | 2303.82 | .114 | 43.35 | 22.976 |
| 17:37:30 | 156.7 | 2303.81 | .117 | 43.34 | 22.452 |
| 17:37:40 | 156.7 | 2303.81 | .119 | 43.34 | 21.953 |
| 17:37:50 | 156.7 | 2303.79 | .122 | 43.32 | 21.477 |
| 17:38:00 | 156.7 | 2303.76 | .125 | 43.29 | 21.022 |
| 17:38:10 | 156.7 | 2303.75 | .128 | 43.28 | 20.587 |
| 17:38:20 | 156.6 | 2303.74 | .131 | 43.27 | 20.170 |
| 17:38:30 | 156.6 | 2303.74 | .133 | 43.27 | 19.771 |
| 17:38:40 | 156.6 | 2303.73 | .136 | 43.26 | 19.388 |
| 17:38:50 | 156.6 | 2303.72 | .139 | 43.25 | 19.020 |
| 17:39:00 | 156.6 | 2303.72 | .142 | 43.25 | 18.667 |
| 17:39:10 | 156.6 | 2303.70 | .144 | 43.23 | 18.327 |
| 17:39:20 | 156.6 | 2303.70 | .147 | 43.23 | 18.000 |
| 17:39:30 | 156.6 | 2303.69 | .150 | 43.22 | 17.685 |
| 17:39:40 | 156.6 | 2303.70 | .153 | 43.23 | 17.382 |
| 17:39:50 | 156.6 | 2303.68 | .156 | 43.21 | 17.089 |
| 17:40:00 | 156.6 | 2303.67 | .158 | 43.20 | 16.807 |
| 17:40:30 | 156.5 | 2303.66 | .167 | 43.19 | 16.017 |
| 17:41:00 | 156.5 | 2303.65 | .175 | 43.18 | 15.302 |
| 17:41:30 | 156.5 | 2303.66 | .183 | 43.19 | 14.652 |
| 17:42:00 | 156.5 | 2303.66 | .192 | 43.19 | 14.058 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 17:42:30 | 156.4 | 2303.65 | .200 | 43.18 | 13.514 |
| 17:43:00 | 156.4 | 2303.65 | .208 | 43.18 | 13.013 |
| 17:43:30 | 156.4 | 2303.65 | .217 | 43.18 | 12.551 |
| 17:44:00 | 156.4 | 2303.67 | .225 | 43.20 | 12.123 |
| 17:44:30 | 156.4 | 2303.67 | .233 | 43.20 | 11.726 |
| 17:45:00 | 156.3 | 2303.67 | .242 | 43.20 | 11.356 |
| 17:45:30 | 156.3 | 2303.66 | .250 | 43.19 | 11.011 |
| 17:46:00 | 156.3 | 2303.67 | .258 | 43.20 | 10.688 |
| 17:46:30 | 156.3 | 2303.69 | .267 | 43.22 | 10.385 |
| 17:47:00 | 156.3 | 2303.71 | .275 | 43.24 | 10.101 |
| 17:47:30 | 156.3 | 2303.71 | .283 | 43.24 | 9.833 |
| 17:48:00 | 156.2 | 2303.71 | .292 | 43.24 | 9.581 |
| 17:48:30 | 156.2 | 2303.71 | .300 | 43.24 | 9.343 |
| 17:49:00 | 156.2 | 2303.73 | .308 | 43.26 | 9.117 |
| 17:49:30 | 156.2 | 2303.76 | .317 | 43.29 | 8.904 |
| 17:50:00 | 156.2 | 2303.75 | .325 | 43.28 | 8.701 |
| 17:50:30 | 156.2 | 2303.76 | .333 | 43.29 | 8.508 |
| 17:51:00 | 156.2 | 2303.76 | .342 | 43.29 | 8.325 |
| 17:51:30 | 156.2 | 2303.77 | .350 | 43.30 | 8.151 |
| 17:52:00 | 156.2 | 2303.77 | .358 | 43.30 | 7.984 |
| 17:53:00 | 156.1 | 2303.78 | .375 | 43.31 | 7.674 |
| 17:54:00 | 156.2 | 2303.83 | .392 | 43.36 | 7.390 |
| 17:55:00 | 156.1 | 2303.82 | .408 | 43.35 | 7.129 |
| 17:56:00 | 156.1 | 2303.83 | .425 | 43.36 | 6.889 |
| 17:57:00 | 156.0 | 2303.84 | .442 | 43.37 | 6.667 |
| 17:58:00 | 156.1 | 2303.86 | .458 | 43.39 | 6.461 |
| 17:59:00 | 156.1 | 2303.87 | .475 | 43.40 | 6.269 |
| 18:00:00 | 156.0 | 2303.86 | .492 | 43.39 | 6.090 |
| 18:01:00 | 156.0 | 2303.88 | .508 | 43.41 | 5.923 |
| 18:02:00 | 156.0 | 2303.90 | .525 | 43.43 | 5.767 |
| 18:03:00 | 156.0 | 2303.89 | .542 | 43.42 | 5.621 |
| 18:04:00 | 156.0 | 2303.90 | .558 | 43.43 | 5.483 |
| 18:05:00 | 156.0 | 2303.93 | .575 | 43.46 | 5.353 |
| 18:06:00 | 156.0 | 2303.93 | .592 | 43.46 | 5.230 |
| 18:07:00 | 156.0 | 2303.91 | .608 | 43.44 | 5.114 |
| 18:08:00 | 155.9 | 2303.93 | .625 | 43.46 | 5.004 |
| 18:09:00 | 155.9 | 2303.94 | .642 | 43.47 | 4.900 |
| 18:10:00 | 156.0 | 2303.95 | .658 | 43.48 | 4.802 |
| 18:11:00 | 156.0 | 2303.95 | .675 | 43.48 | 4.708 |
| 18:12:00 | 155.9 | 2303.95 | .692 | 43.48 | 4.618 |
| 18:13:00 | 156.0 | 2303.97 | .708 | 43.50 | 4.533 |
| 18:14:00 | 155.9 | 2303.97 | .725 | 43.50 | 4.452 |
| 18:15:00 | 155.9 | 2303.97 | .742 | 43.50 | 4.375 |
| 18:16:00 | 155.9 | 2303.97 | .758 | 43.50 | 4.300 |
| 18:17:00 | 155.9 | 2303.97 | .775 | 43.50 | 4.229 |
| 18:18:00 | 155.9 | 2303.97 | .792 | 43.50 | 4.161 |
| 18:19:00 | 155.9 | 2303.97 | .808 | 43.50 | 4.096 |
| 18:20:00 | 155.9 | 2303.99 | .825 | 43.52 | 4.034 |
| 18:21:00 | 155.9 | 2303.99 | .842 | 43.52 | 3.974 |
| 18:22:00 | 155.9 | 2303.99 | .858 | 43.52 | 3.916 |
| 18:23:00 | 155.8 | 2303.97 | .875 | 43.50 | 3.860 |
| 18:24:00 | 155.8 | 2303.99 | .892 | 43.52 | 3.807 |
| 18:25:00 | 155.9 | 2304.01 | .908 | 43.54 | 3.755 |
| 18:26:00 | 155.8 | 2303.99 | .925 | 43.52 | 3.706 |
| 18:27:00 | 155.9 | 2304.01 | .942 | 43.54 | 3.658 |
| 18:28:00 | 155.8 | 2304.00 | .958 | 43.53 | 3.612 |
| 18:29:00 | 155.8 | 2303.99 | .975 | 43.52 | 3.567 |
| 18:30:00 | 155.8 | 2304.01 | .992 | 43.54 | 3.524 |
| 18:31:00 | 155.8 | 2304.01 | 1.008 | 43.54 | 3.482 |
| 18:32:00 | 155.7 | 2304.03 | 1.025 | 43.56 | 3.442 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 18:33:00 | 155.7 | 2304.03 | 1.042 | 43.56 | 3.403 |
| 18:40:00 | 155.7 | 2304.04 | 1.158 | 43.57 | 3.161 |
| 18:50:00 | 155.8 | 2304.05 | 1.325 | 43.58 | 2.889 |
| 19:00:00 | 155.7 | 2304.07 | 1.492 | 43.60 | 2.678 |
| 19:10:00 | 155.7 | 2304.09 | 1.658 | 43.62 | 2.509 |
| 19:20:00 | 155.6 | 2304.12 | 1.825 | 43.65 | 2.371 |
| 19:30:00 | 155.6 | 2304.12 | 1.992 | 43.65 | 2.257 |
| 19:40:00 | 155.6 | 2304.13 | 2.158 | 43.66 | 2.160 |
| 19:50:00 | 155.5 | 2304.12 | 2.325 | 43.65 | 2.076 |
| 20:00:00 | 155.5 | 2304.14 | 2.492 | 43.67 | 2.004 |
| 20:10:00 | 155.5 | 2304.15 | 2.658 | 43.68 | 1.941 |
| 20:20:00 | 155.5 | 2304.15 | 2.825 | 43.68 | 1.886 |
| 20:30:00 | 155.5 | 2304.17 | 2.992 | 43.70 | 1.837 |
| 20:40:00 | 155.5 | 2304.17 | 3.158 | 43.70 | 1.792 |
| 20:50:00 | 155.5 | 2304.17 | 3.325 | 43.70 | 1.753 |
| 21:00:00 | 155.5 | 2304.18 | 3.492 | 43.71 | 1.717 |
| 21:10:00 | 155.4 | 2304.17 | 3.658 | 43.70 | 1.684 |
| 21:20:00 | 155.4 | 2304.19 | 3.825 | 43.72 | 1.654 |
| 21:30:00 | 155.5 | 2304.20 | 3.992 | 43.73 | 1.627 |
| 21:40:00 | 155.4 | 2304.19 | 4.158 | 43.72 | 1.602 |
| 21:50:00 | 155.4 | 2304.20 | 4.325 | 43.73 | 1.579 |
| 22:00:00 | 155.4 | 2304.21 | 4.492 | 43.74 | 1.557 |
| 22:10:00 | 155.3 | 2304.19 | 4.658 | 43.72 | 1.537 |
| 22:20:00 | 155.4 | 2304.21 | 4.825 | 43.74 | 1.519 |
| 22:30:00 | 155.3 | 2304.20 | 4.992 | 43.73 | 1.501 |
| 22:40:00 | 155.3 | 2304.20 | 5.158 | 43.73 | 1.485 |
| 22:50:00 | 155.4 | 2304.21 | 5.325 | 43.74 | 1.470 |
| 23:00:00 | 155.4 | 2304.21 | 5.492 | 43.74 | 1.456 |
| 23:10:00 | 155.4 | 2304.22 | 5.658 | 43.75 | 1.442 |
| 23:20:00 | 155.3 | 2304.21 | 5.825 | 43.74 | 1.430 |
| 23:30:00 | 155.3 | 2304.20 | 5.992 | 43.73 | 1.418 |
| 23:40:00 | 155.4 | 2304.21 | 6.158 | 43.74 | 1.406 |
| 23:50:00 | 155.3 | 2304.20 | 6.325 | 43.73 | 1.396 |
| 19/03/81 | | | | | |
| 00:00:00 | 155.3 | 2304.21 | 6.492 | 43.74 | 1.386 |
| 00:10:00 | 155.3 | 2304.21 | 6.658 | 43.74 | 1.376 |
| 00:20:00 | 155.3 | 2304.21 | 6.825 | 43.74 | 1.367 |
| 00:30:00 | 155.3 | 2304.20 | 6.992 | 43.73 | 1.358 |
| 00:40:00 | 155.3 | 2304.21 | 7.158 | 43.74 | 1.350 |
| 00:50:00 | 155.3 | 2304.20 | 7.325 | 43.73 | 1.342 |
| 01:00:00 | 155.3 | 2304.21 | 7.492 | 43.74 | 1.334 |
| 01:10:00 | 155.4 | 2304.22 | 7.658 | 43.75 | 1.327 |
| 01:20:00 | 155.3 | 2304.20 | 7.825 | 43.73 | 1.320 |
| 01:30:00 | 155.3 | 2304.21 | 7.992 | 43.74 | 1.313 |
| 01:40:00 | 155.3 | 2304.19 | 8.158 | 43.72 | 1.307 |
| 01:50:00 | 155.3 | 2304.20 | 8.325 | 43.73 | 1.301 |
| 02:00:00 | 155.3 | 2304.21 | 8.492 | 43.74 | 1.295 |
| 02:10:00 | 155.3 | 2304.21 | 8.658 | 43.74 | 1.289 |
| 02:20:00 | 155.3 | 2304.21 | 8.825 | 43.74 | 1.284 |
| 02:30:00 | 155.3 | 2304.20 | 8.992 | 43.73 | 1.278 |
| 02:40:00 | 155.3 | 2304.20 | 9.158 | 43.73 | 1.273 |
| 02:50:00 | 155.3 | 2304.20 | 9.325 | 43.73 | 1.268 |
| 03:00:00 | 155.3 | 2304.19 | 9.492 | 43.72 | 1.264 |
| 03:10:00 | 155.3 | 2304.19 | 9.658 | 43.72 | 1.259 |
| 03:20:00 | 155.3 | 2304.19 | 9.825 | 43.72 | 1.255 |
| 03:30:00 | 155.3 | 2304.19 | 9.992 | 43.72 | 1.250 |
| 03:40:00 | 155.3 | 2304.18 | 10.158 | 43.71 | 1.246 |
| 03:50:00 | 155.3 | 2304.19 | 10.325 | 43.72 | 1.242 |
| 04:00:00 | 155.3 | 2304.18 | 10.492 | 43.71 | 1.239 |
| 04:10:00 | 155.3 | 2304.18 | 10.658 | 43.71 | 1.235 |
| 04:20:00 | 155.3 | 2304.19 | 10.825 | 43.72 | 1.231 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 04:30:00 | 155.3 | 2304.19 | 10.992 | 43.72 | 1.228 |
| 04:40:00 | 155.3 | 2304.19 | 11.158 | 43.72 | 1.224 |
| 04:50:00 | 155.3 | 2304.17 | 11.325 | 43.70 | 1.221 |
| 05:00:00 | 155.3 | 2304.18 | 11.492 | 43.71 | 1.218 |
| 05:10:00 | 155.3 | 2304.19 | 11.658 | 43.72 | 1.215 |
| 05:20:00 | 155.3 | 2304.19 | 11.825 | 43.72 | 1.212 |
| 05:30:00 | 155.3 | 2304.19 | 11.992 | 43.72 | 1.209 |
| 05:40:00 | 155.3 | 2304.19 | 12.158 | 43.72 | 1.206 |
| 05:50:00 | 155.4 | 2304.18 | 12.325 | 43.71 | 1.203 |
| 06:00:00 | 155.3 | 2304.19 | 12.492 | 43.72 | 1.200 |
| 06:10:00 | 155.3 | 2304.19 | 12.658 | 43.72 | 1.198 |
| 06:20:00 | 155.3 | 2304.19 | 12.825 | 43.72 | 1.195 |
| 06:30:00 | 155.3 | 2304.19 | 12.992 | 43.72 | 1.193 |
| 06:40:00 | 155.3 | 2304.19 | 13.158 | 43.72 | 1.190 |
| 06:50:00 | 155.3 | 2304.19 | 13.325 | 43.72 | 1.188 |
| 07:00:00 | 155.3 | 2304.19 | 13.492 | 43.72 | 1.186 |
| 07:10:00 | 155.3 | 2304.19 | 13.658 | 43.72 | 1.183 |
| 07:20:00 | 155.4 | 2304.20 | 13.825 | 43.73 | 1.181 |
| 07:30:00 | 155.3 | 2304.19 | 13.992 | 43.72 | 1.179 |
| 07:33:20 | 155.3 | 2304.19 | 14.047 | 43.72 | 1.178 |
| 07:33:30 | 155.3 | 2304.19 | 14.050 | 43.72 | 1.178 |
| 07:33:40 | 155.3 | 2304.18 | 14.053 | 43.71 | 1.178 |
| 07:40:00 | 155.4 | 2304.20 | 14.158 | 43.73 | 1.177 |
| 07:50:00 | 155.3 | 2304.17 | 14.325 | 43.70 | 1.175 |
| 08:00:00 | 155.4 | 2304.18 | 14.492 | 43.71 | 1.173 |
| 08:10:00 | 155.3 | 2304.18 | 14.658 | 43.71 | 1.171 |
| 08:20:00 | 155.3 | 2304.19 | 14.825 | 43.72 | 1.169 |
| 08:30:00 | 155.3 | 2304.19 | 14.992 | 43.72 | 1.167 |
| 08:40:00 | 155.3 | 2304.18 | 15.158 | 43.71 | 1.165 |
| 08:50:00 | 155.3 | 2304.19 | 15.325 | 43.72 | 1.163 |
| 09:00:00 | 155.4 | 2304.19 | 15.492 | 43.72 | 1.162 |
| 09:10:00 | 155.3 | 2304.18 | 15.658 | 43.71 | 1.160 |
| 09:20:00 | 155.3 | 2304.19 | 15.825 | 43.72 | 1.158 |
| 09:30:00 | 155.4 | 2304.20 | 15.992 | 43.73 | 1.157 |
| 09:40:00 | 155.4 | 2304.19 | 16.158 | 43.72 | 1.155 |
| 09:50:00 | 155.4 | 2304.20 | 16.325 | 43.73 | 1.153 |
| 10:00:00 | 155.4 | 2304.20 | 16.492 | 43.73 | 1.152 |
| 10:10:00 | 155.3 | 2304.19 | 16.658 | 43.72 | 1.150 |
| 10:20:00 | 155.3 | 2304.18 | 16.825 | 43.71 | 1.149 |
| 10:30:00 | 155.3 | 2304.19 | 16.992 | 43.72 | 1.147 |
| 10:40:00 | 155.4 | 2304.20 | 17.158 | 43.73 | 1.146 |
| 10:50:00 | 155.4 | 2304.20 | 17.325 | 43.73 | 1.144 |
| 11:00:00 | 155.4 | 2304.20 | 17.492 | 43.73 | 1.143 |
| 11:10:00 | 155.4 | 2304.19 | 17.658 | 43.72 | 1.142 |
| 11:20:00 | 155.4 | 2304.20 | 17.825 | 43.73 | 1.140 |
| 11:30:00 | 155.3 | 2304.19 | 17.992 | 43.72 | 1.139 |
| 11:40:00 | 155.4 | 2304.18 | 18.158 | 43.71 | 1.138 |
| 11:50:00 | 155.4 | 2304.18 | 18.325 | 43.71 | 1.137 |
| 12:00:00 | 155.3 | 2304.17 | 18.492 | 43.70 | 1.135 |
| 12:10:00 | 155.4 | 2304.18 | 18.658 | 43.71 | 1.134 |
| 12:20:00 | 155.3 | 2304.17 | 18.825 | 43.70 | 1.133 |
| 12:29:20 | 155.3 | 2304.17 | 18.981 | 43.70 | 1.132 |
| 12:29:30 | 155.4 | 2304.19 | 18.983 | 43.72 | 1.132 |
| 12:29:40 | 155.4 | 2304.19 | 18.986 | 43.72 | 1.132 |
| 12:29:50 | 155.3 | 2304.18 | 18.989 | 43.71 | 1.132 |
| 12:30:00 | 155.4 | 2304.19 | 18.992 | 43.72 | 1.132 |
| 12:30:10 | 155.4 | 2304.18 | 18.994 | 43.71 | 1.132 |

GO INTERNATIONAL AUSTRALIA

dP/dT PLOT

Drawdown

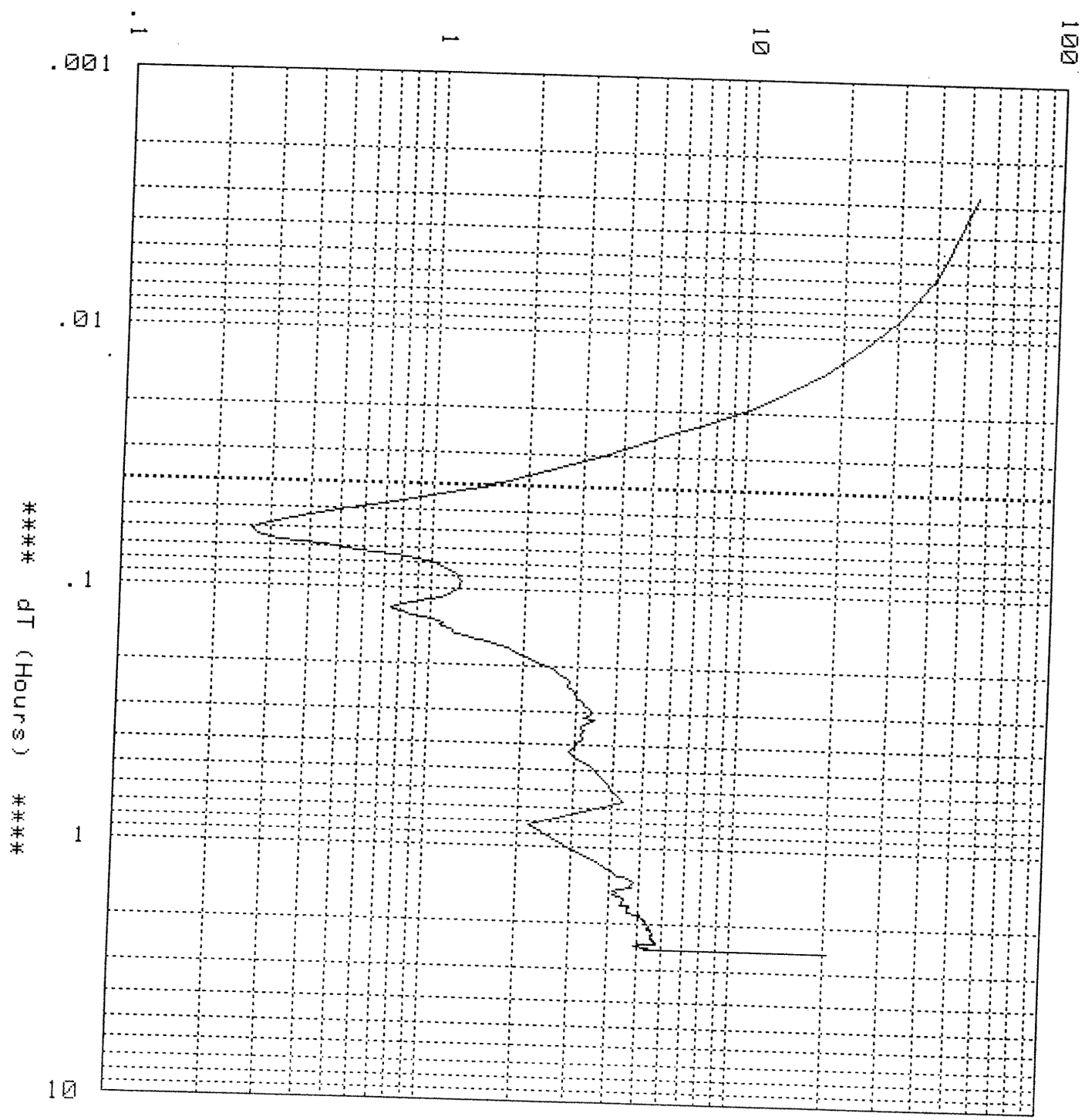
BEACH PETROLEUM GRUMBY #1

22/64 CHOKE

Time well flowed:15:00:20 Date: 18/03/81

Time well shut in: 17:30:30 Date: 18/03/81

Time build-up completed: 12:30:10 Date: 19/03/81

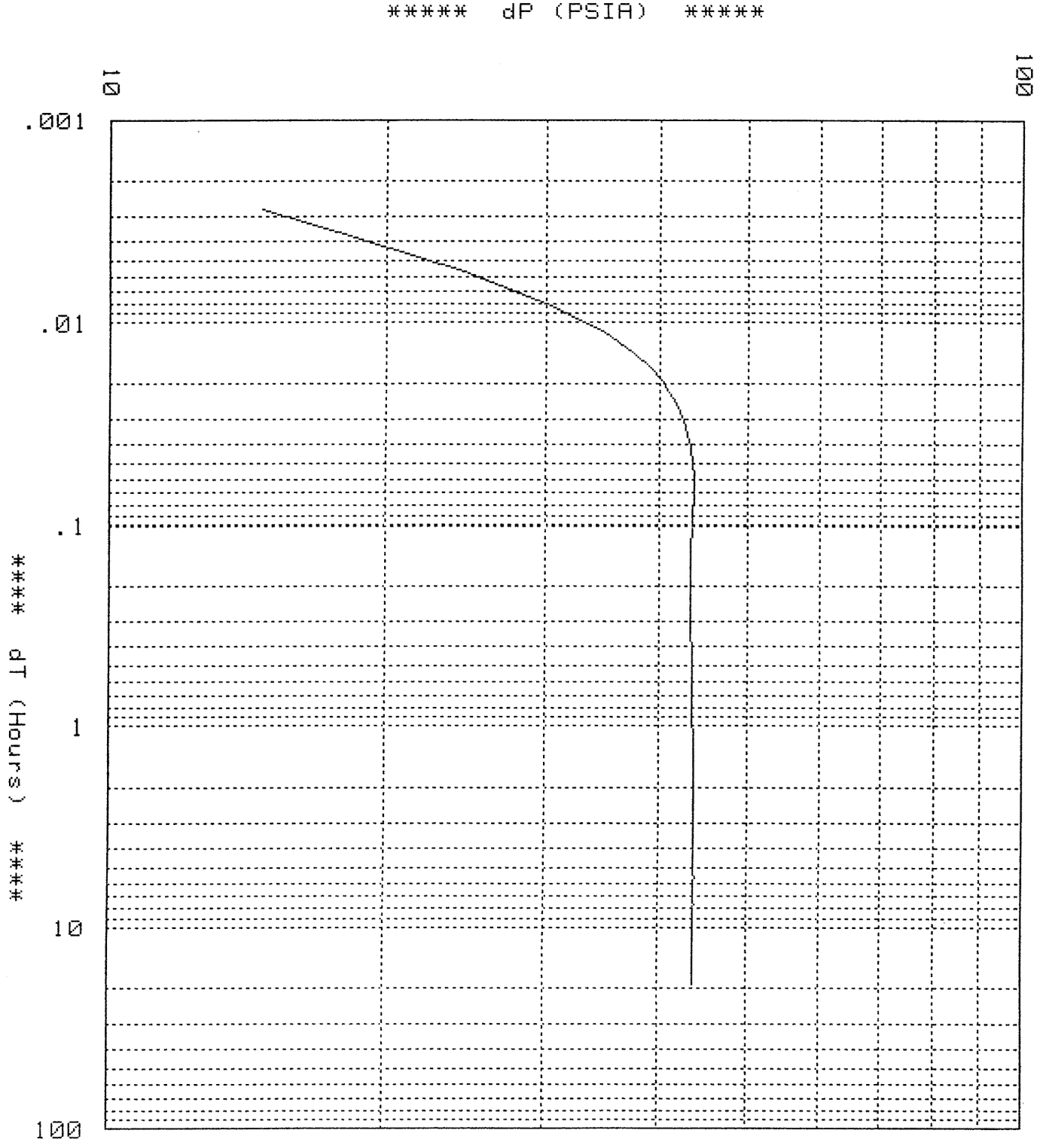


GO INTERNATIONAL AUSTRALIA

dP/dT PLOT — Build-up

BEACH PETROLEUM — GRUMBY #1 — 22/64 CHOKE

Time well flowed: 15:00:20 Date: 18/03/81
Time well shut in: 17:30:30 Date: 18/03/81
Time build-up completed: 12:30:10 Date: 19/03/81



Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 15:00:30 | 155.0 | 2293.32 | .003 | 53.32 | 902.000 |
| 15:00:40 | 154.7 | 2280.55 | .006 | 40.55 | 451.500 |
| 15:00:50 | 154.3 | 2270.33 | .008 | 30.33 | 301.333 |
| 15:01:00 | 154.1 | 2262.91 | .011 | 22.91 | 226.250 |
| 15:01:10 | 154.1 | 2257.59 | .014 | 17.59 | 181.200 |
| 15:01:20 | 154.5 | 2253.44 | .017 | 13.44 | 151.167 |
| 15:01:30 | 155.0 | 2250.09 | .019 | 10.09 | 129.714 |
| 15:01:40 | 155.4 | 2247.42 | .022 | 7.42 | 113.625 |
| 15:01:50 | 155.5 | 2245.50 | .025 | 5.50 | 101.111 |
| 15:02:00 | 155.6 | 2244.22 | .028 | 4.22 | 91.100 |
| 15:02:10 | 155.6 | 2243.31 | .031 | 3.31 | 82.909 |
| 15:02:20 | 155.7 | 2242.61 | .033 | 2.61 | 76.083 |
| 15:02:30 | 155.6 | 2242.10 | .036 | 2.10 | 70.308 |
| 15:02:40 | 155.6 | 2241.64 | .039 | 1.64 | 65.357 |
| 15:02:50 | 155.6 | 2241.21 | .042 | 1.21 | 61.067 |
| 15:03:00 | 155.6 | 2240.92 | .044 | .92 | 57.313 |
| 15:03:10 | 155.6 | 2240.69 | .047 | .69 | 54.000 |
| 15:03:20 | 155.6 | 2240.53 | .050 | .53 | 51.056 |
| 15:03:30 | 155.5 | 2240.43 | .053 | .43 | 48.421 |
| 15:03:40 | 155.5 | 2240.33 | .056 | .33 | 46.050 |
| 15:03:50 | 155.5 | 2240.28 | .058 | .28 | 43.905 |
| 15:04:00 | 155.5 | 2240.26 | .061 | .26 | 41.955 |
| 15:04:10 | 155.5 | 2240.27 | .064 | .27 | 40.174 |
| 15:04:20 | 155.5 | 2240.32 | .067 | .32 | 38.542 |
| 15:04:30 | 155.5 | 2240.44 | .069 | .44 | 37.040 |
| 15:04:40 | 155.5 | 2240.58 | .072 | .58 | 35.654 |
| 15:04:50 | 155.5 | 2240.76 | .075 | .76 | 34.370 |
| 15:05:00 | 155.5 | 2240.89 | .078 | .89 | 33.179 |
| 15:05:10 | 155.5 | 2241.02 | .081 | 1.02 | 32.069 |
| 15:05:20 | 155.5 | 2241.12 | .083 | 1.12 | 31.033 |
| 15:05:30 | 155.5 | 2241.18 | .086 | 1.18 | 30.065 |
| 15:05:40 | 155.5 | 2241.20 | .089 | 1.20 | 29.156 |
| 15:05:50 | 155.5 | 2241.21 | .092 | 1.21 | 28.303 |
| 15:06:00 | 155.5 | 2241.25 | .094 | 1.25 | 27.500 |
| 15:06:10 | 155.5 | 2241.22 | .097 | 1.22 | 26.743 |
| 15:06:20 | 155.5 | 2241.22 | .100 | 1.22 | 26.028 |
| 15:06:30 | 155.5 | 2241.17 | .103 | 1.17 | 25.351 |
| 15:06:40 | 155.5 | 2241.15 | .106 | 1.15 | 24.711 |
| 15:06:50 | 155.4 | 2241.07 | .108 | 1.07 | 24.103 |
| 15:07:00 | 155.4 | 2240.98 | .111 | .98 | 23.525 |
| 15:07:10 | 155.4 | 2240.86 | .114 | .86 | 22.976 |
| 15:07:20 | 155.4 | 2240.81 | .117 | .81 | 22.452 |
| 15:07:30 | 155.4 | 2240.74 | .119 | .74 | 21.953 |
| 15:07:40 | 155.5 | 2240.76 | .122 | .76 | 21.477 |
| 15:07:50 | 155.4 | 2240.81 | .125 | .81 | 21.022 |
| 15:08:00 | 155.4 | 2240.86 | .128 | .86 | 20.587 |
| 15:08:10 | 155.5 | 2240.95 | .131 | .95 | 20.170 |
| 15:08:20 | 155.4 | 2241.01 | .133 | 1.01 | 19.771 |
| 15:08:30 | 155.5 | 2241.09 | .136 | 1.09 | 19.388 |
| 15:08:40 | 155.4 | 2241.07 | .139 | 1.07 | 19.020 |
| 15:08:50 | 155.4 | 2241.09 | .142 | 1.09 | 18.667 |
| 15:09:00 | 155.5 | 2241.16 | .144 | 1.16 | 18.327 |
| 15:09:10 | 155.5 | 2241.17 | .147 | 1.17 | 18.000 |
| 15:09:20 | 155.5 | 2241.20 | .150 | 1.20 | 17.685 |
| 15:09:30 | 155.5 | 2241.31 | .153 | 1.31 | 17.382 |
| 15:09:40 | 155.5 | 2241.36 | .156 | 1.36 | 17.089 |
| 15:09:50 | 155.4 | 2241.44 | .158 | 1.44 | 16.807 |
| 15:10:00 | 155.5 | 2241.56 | .161 | 1.56 | 16.534 |
| 15:10:10 | 155.5 | 2241.61 | .164 | 1.61 | 16.271 |
| 15:10:30 | 155.5 | 2241.78 | .169 | 1.78 | 15.770 |
| 15:11:00 | 155.4 | 2241.89 | .178 | 1.89 | 15.078 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 15:11:30 | 155.5 | 2242.12 | .186 | 2.12 | 14.448 |
| 15:12:00 | 155.4 | 2242.30 | .194 | 2.30 | 13.871 |
| 15:12:30 | 155.4 | 2242.49 | .203 | 2.49 | 13.342 |
| 15:13:00 | 155.5 | 2242.62 | .211 | 2.62 | 12.855 |
| 15:13:30 | 155.5 | 2242.74 | .219 | 2.74 | 12.405 |
| 15:14:00 | 155.4 | 2242.82 | .228 | 2.82 | 11.988 |
| 15:14:30 | 155.5 | 2242.78 | .236 | 2.78 | 11.600 |
| 15:15:00 | 155.5 | 2242.92 | .244 | 2.92 | 11.239 |
| 15:15:30 | 155.4 | 2242.97 | .253 | 2.97 | 10.901 |
| 15:16:00 | 155.5 | 2243.02 | .261 | 3.02 | 10.585 |
| 15:16:30 | 155.5 | 2243.11 | .269 | 3.11 | 10.289 |
| 15:17:00 | 155.5 | 2243.16 | .278 | 3.16 | 10.010 |
| 15:17:30 | 155.5 | 2243.32 | .286 | 3.32 | 9.748 |
| 15:18:00 | 155.5 | 2243.37 | .294 | 3.37 | 9.500 |
| 15:18:30 | 155.5 | 2243.35 | .303 | 3.35 | 9.266 |
| 15:19:00 | 155.5 | 2243.18 | .311 | 3.18 | 9.045 |
| 15:19:30 | 155.5 | 2243.47 | .319 | 3.47 | 8.835 |
| 15:20:00 | 155.5 | 2243.32 | .328 | 3.32 | 8.636 |
| 15:20:30 | 155.5 | 2243.17 | .336 | 3.17 | 8.446 |
| 15:21:00 | 155.5 | 2243.13 | .344 | 3.13 | 8.266 |
| 15:21:30 | 155.5 | 2243.20 | .353 | 3.20 | 8.094 |
| 15:22:00 | 155.5 | 2243.12 | .361 | 3.12 | 7.931 |
| 15:22:30 | 155.5 | 2243.11 | .369 | 3.11 | 7.774 |
| 15:23:00 | 155.5 | 2243.15 | .378 | 3.15 | 7.625 |
| 15:24:00 | 155.5 | 2243.03 | .394 | 3.03 | 7.345 |
| 15:25:00 | 155.5 | 2242.95 | .411 | 2.95 | 7.088 |
| 15:26:00 | 155.5 | 2242.87 | .428 | 2.87 | 6.851 |
| 15:27:00 | 155.6 | 2243.01 | .444 | 3.01 | 6.631 |
| 15:28:00 | 155.5 | 2243.15 | .461 | 3.15 | 6.428 |
| 15:29:00 | 155.6 | 2243.36 | .478 | 3.36 | 6.238 |
| 15:30:00 | 155.5 | 2243.44 | .494 | 3.44 | 6.062 |
| 15:40:00 | 155.6 | 2244.39 | .661 | 4.39 | 4.786 |
| 15:50:00 | 155.6 | 2242.18 | .828 | 2.18 | 4.023 |
| 16:00:00 | 155.6 | 2242.85 | .994 | 2.85 | 3.517 |
| 16:10:00 | 155.6 | 2243.72 | 1.161 | 3.72 | 3.156 |
| 16:16:00 | 155.7 | 2244.11 | 1.261 | 4.11 | 2.985 |
| 16:17:00 | 155.6 | 2244.19 | 1.278 | 4.19 | 2.959 |
| 16:18:00 | 155.7 | 2244.28 | 1.294 | 4.28 | 2.933 |
| 16:19:00 | 155.7 | 2244.46 | 1.311 | 4.46 | 2.909 |
| 16:20:00 | 155.7 | 2244.65 | 1.328 | 4.65 | 2.885 |
| 16:21:00 | 155.7 | 2244.74 | 1.344 | 4.74 | 2.862 |
| 16:22:00 | 155.7 | 2244.79 | 1.361 | 4.79 | 2.839 |
| 16:23:00 | 155.7 | 2244.79 | 1.378 | 4.79 | 2.817 |
| 16:24:00 | 155.7 | 2244.75 | 1.394 | 4.75 | 2.795 |
| 16:25:00 | 155.7 | 2244.71 | 1.411 | 4.71 | 2.774 |
| 16:26:00 | 155.7 | 2244.75 | 1.428 | 4.75 | 2.753 |
| 16:27:00 | 155.7 | 2244.71 | 1.444 | 4.71 | 2.733 |
| 16:28:00 | 155.7 | 2244.29 | 1.461 | 4.29 | 2.713 |
| 16:29:00 | 155.7 | 2244.14 | 1.478 | 4.14 | 2.694 |
| 16:30:00 | 155.7 | 2244.22 | 1.494 | 4.22 | 2.675 |
| 16:31:00 | 155.7 | 2244.27 | 1.511 | 4.27 | 2.656 |
| 16:32:00 | 155.7 | 2244.16 | 1.528 | 4.16 | 2.638 |
| 16:33:00 | 155.7 | 2244.14 | 1.544 | 4.14 | 2.621 |
| 16:34:00 | 155.7 | 2244.38 | 1.561 | 4.38 | 2.603 |
| 16:35:00 | 155.7 | 2244.48 | 1.578 | 4.48 | 2.586 |
| 16:36:00 | 155.7 | 2244.48 | 1.594 | 4.48 | 2.570 |
| 16:37:00 | 155.7 | 2244.48 | 1.611 | 4.48 | 2.553 |
| 16:38:00 | 155.8 | 2244.45 | 1.628 | 4.45 | 2.538 |
| 16:39:00 | 155.7 | 2244.42 | 1.644 | 4.42 | 2.522 |
| 16:40:00 | 155.7 | 2244.46 | 1.661 | 4.46 | 2.507 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 16:41:00 | 155.8 | 2244.40 | 1.678 | 4.40 | 2.492 |
| 16:42:00 | 155.7 | 2244.67 | 1.694 | 4.67 | 2.477 |
| 16:43:00 | 155.8 | 2244.72 | 1.711 | 4.72 | 2.463 |
| 16:44:00 | 155.8 | 2244.64 | 1.728 | 4.64 | 2.449 |
| 16:45:00 | 155.8 | 2244.62 | 1.744 | 4.62 | 2.435 |
| 16:46:00 | 155.8 | 2244.62 | 1.761 | 4.62 | 2.421 |
| 16:47:00 | 155.8 | 2244.63 | 1.778 | 4.63 | 2.408 |
| 16:48:00 | 155.8 | 2244.64 | 1.794 | 4.64 | 2.395 |
| 16:49:00 | 155.8 | 2244.77 | 1.811 | 4.77 | 2.382 |
| 16:50:00 | 155.7 | 2244.85 | 1.828 | 4.85 | 2.369 |
| 16:51:00 | 155.8 | 2245.08 | 1.844 | 5.08 | 2.357 |
| 16:52:00 | 155.8 | 2245.05 | 1.861 | 5.05 | 2.345 |
| 16:53:00 | 155.8 | 2245.10 | 1.878 | 5.10 | 2.333 |
| 16:54:00 | 155.8 | 2245.22 | 1.894 | 5.22 | 2.321 |
| 16:55:00 | 155.8 | 2245.28 | 1.911 | 5.28 | 2.310 |
| 16:56:00 | 155.8 | 2245.35 | 1.928 | 5.35 | 2.298 |
| 16:57:00 | 155.8 | 2245.30 | 1.944 | 5.30 | 2.287 |
| 16:58:00 | 155.8 | 2245.35 | 1.961 | 5.35 | 2.276 |
| 16:59:00 | 155.8 | 2245.37 | 1.978 | 5.37 | 2.265 |
| 17:00:00 | 155.9 | 2245.42 | 1.994 | 5.42 | 2.255 |
| 17:01:00 | 155.8 | 2245.48 | 2.011 | 5.48 | 2.244 |
| 17:02:00 | 155.8 | 2245.44 | 2.028 | 5.44 | 2.234 |
| 17:03:00 | 155.8 | 2245.47 | 2.044 | 5.47 | 2.224 |
| 17:04:00 | 155.8 | 2245.42 | 2.061 | 5.42 | 2.214 |
| 17:05:00 | 155.8 | 2245.43 | 2.078 | 5.43 | 2.205 |
| 17:06:00 | 155.8 | 2245.54 | 2.094 | 5.54 | 2.195 |
| 17:07:00 | 155.8 | 2245.57 | 2.111 | 5.57 | 2.186 |
| 17:08:00 | 155.8 | 2245.57 | 2.128 | 5.57 | 2.176 |
| 17:09:00 | 155.9 | 2245.61 | 2.144 | 5.61 | 2.167 |
| 17:10:00 | 155.8 | 2245.62 | 2.161 | 5.62 | 2.158 |
| 17:11:00 | 155.9 | 2245.61 | 2.178 | 5.61 | 2.149 |
| 17:12:00 | 155.8 | 2245.55 | 2.194 | 5.55 | 2.141 |
| 17:13:00 | 155.9 | 2245.54 | 2.211 | 5.54 | 2.132 |
| 17:14:00 | 155.9 | 2245.54 | 2.228 | 5.54 | 2.123 |
| 17:15:00 | 155.9 | 2245.56 | 2.244 | 5.56 | 2.115 |
| 17:16:00 | 155.9 | 2245.58 | 2.261 | 5.58 | 2.107 |
| 17:17:00 | 155.9 | 2245.60 | 2.278 | 5.60 | 2.099 |
| 17:18:00 | 155.8 | 2245.65 | 2.294 | 5.65 | 2.091 |
| 17:19:00 | 155.8 | 2245.68 | 2.311 | 5.68 | 2.083 |
| 17:20:00 | 155.9 | 2245.74 | 2.328 | 5.74 | 2.075 |
| 17:21:00 | 155.9 | 2245.76 | 2.344 | 5.76 | 2.068 |
| 17:22:00 | 155.9 | 2245.76 | 2.361 | 5.76 | 2.060 |
| 17:23:00 | 155.9 | 2245.58 | 2.378 | 5.58 | 2.053 |
| 17:24:00 | 155.9 | 2245.07 | 2.394 | 5.07 | 2.045 |
| 17:25:00 | 155.9 | 2244.92 | 2.411 | 4.92 | 2.038 |
| 17:26:00 | 155.9 | 2245.01 | 2.428 | 5.01 | 2.031 |
| 17:27:00 | 155.8 | 2245.24 | 2.444 | 5.24 | 2.024 |
| 17:28:00 | 155.9 | 2245.48 | 2.461 | 5.48 | 2.017 |
| 17:29:00 | 155.9 | 2245.44 | 2.478 | 5.44 | 2.010 |
| 17:29:50 | 155.9 | 2245.37 | 2.492 | 5.37 | 2.004 |
| 17:30:00 | 155.9 | 2245.35 | 2.494 | 5.35 | 2.003 |
| 17:30:10 | 155.9 | 2245.31 | 2.497 | 5.31 | 2.002 |
| 17:30:20 | 155.9 | 2245.29 | 2.500 | 5.29 | 2.001 |
| 17:30:30 | 156.3 | 2260.47 | 2.503 | 20.47 | 2.000 |

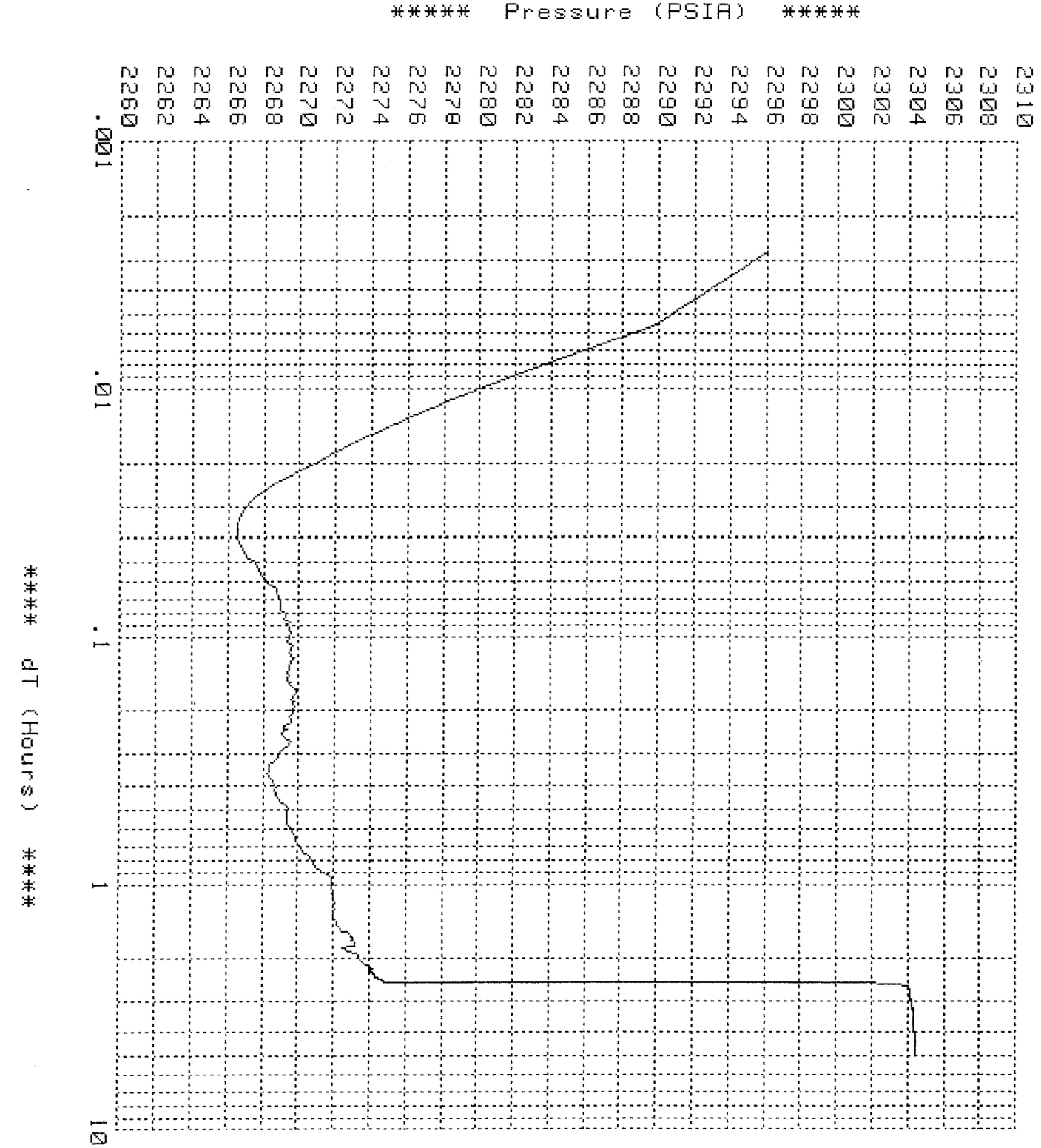
GO INTERNATIONAL AUSTRALIA

LINEAR PRESSURE VS. LOG TIME

BEACH PETROLEUM GRUMBY #1 18/64 CHOKE

Start of plot: 10:01:00 Date: 18/03/81

Finish of plot : 15:00:10 Date: 18/03/81



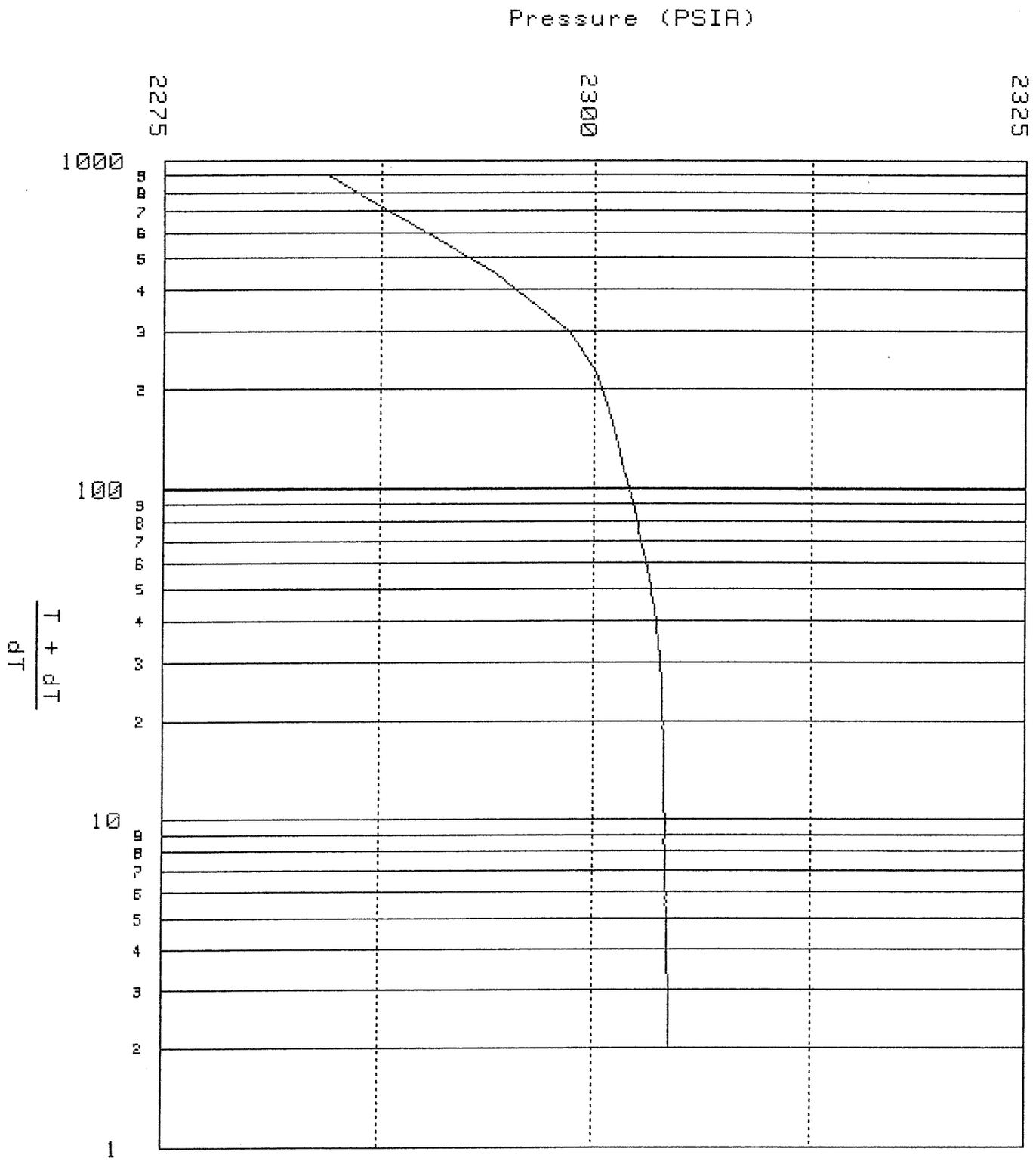
GO INTERNATIONAL AUSTRALIA - HORNER PLOT

BEACH PETROLEUM GRUMBY #1 18/64 CHOKE

Time well flowed:10:01:00 Date: 18/03/81

Time well shut in:12:30:20 Date: 18/03/81

Time build-up completed:15:00:10 Date:18/03/81



Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 12:30:30 | 156.6 | 2284.44 | .003 | 9.59 | 897.000 |
| 12:30:40 | 157.1 | 2294.17 | .006 | 19.32 | 449.000 |
| 12:30:50 | 157.2 | 2298.49 | .008 | 23.64 | 299.667 |
| 12:31:00 | 157.2 | 2300.07 | .011 | 25.22 | 225.000 |
| 12:31:10 | 157.2 | 2300.72 | .014 | 25.87 | 180.200 |
| 12:31:20 | 157.2 | 2301.14 | .017 | 26.29 | 150.333 |
| 12:31:30 | 157.1 | 2301.48 | .019 | 26.63 | 129.000 |
| 12:31:40 | 157.1 | 2301.76 | .022 | 26.91 | 113.000 |
| 12:31:50 | 157.1 | 2302.02 | .025 | 27.17 | 100.556 |
| 12:32:00 | 157.0 | 2302.22 | .028 | 27.37 | 90.600 |
| 12:32:10 | 157.1 | 2302.41 | .031 | 27.56 | 82.455 |
| 12:32:20 | 157.0 | 2302.57 | .033 | 27.72 | 75.667 |
| 12:32:30 | 157.1 | 2302.71 | .036 | 27.86 | 69.923 |
| 12:32:40 | 157.0 | 2302.84 | .039 | 27.99 | 65.000 |
| 12:32:50 | 157.0 | 2302.97 | .042 | 28.12 | 60.733 |
| 12:33:00 | 157.0 | 2303.10 | .044 | 28.25 | 57.000 |
| 12:33:10 | 156.9 | 2303.20 | .047 | 28.35 | 53.706 |
| 12:33:20 | 156.9 | 2303.30 | .050 | 28.45 | 50.778 |
| 12:33:30 | 156.9 | 2303.37 | .053 | 28.52 | 48.158 |
| 12:33:40 | 156.9 | 2303.43 | .056 | 28.58 | 45.800 |
| 12:33:50 | 156.9 | 2303.51 | .058 | 28.66 | 43.667 |
| 12:34:00 | 156.9 | 2303.57 | .061 | 28.72 | 41.727 |
| 12:34:10 | 156.8 | 2303.59 | .064 | 28.74 | 39.957 |
| 12:34:20 | 156.9 | 2303.67 | .067 | 28.82 | 38.333 |
| 12:34:30 | 156.9 | 2303.69 | .069 | 28.84 | 36.840 |
| 12:34:40 | 156.8 | 2303.73 | .072 | 28.88 | 35.462 |
| 12:34:50 | 156.9 | 2303.76 | .075 | 28.91 | 34.185 |
| 12:35:00 | 156.8 | 2303.78 | .078 | 28.93 | 33.000 |
| 12:35:10 | 156.8 | 2303.83 | .081 | 28.98 | 31.897 |
| 12:35:20 | 156.8 | 2303.84 | .083 | 28.99 | 30.867 |
| 12:35:30 | 156.8 | 2303.88 | .086 | 29.03 | 29.903 |
| 12:35:40 | 156.8 | 2303.88 | .089 | 29.03 | 29.000 |
| 12:35:50 | 156.8 | 2303.90 | .092 | 29.05 | 28.152 |
| 12:36:00 | 156.8 | 2303.91 | .094 | 29.06 | 27.353 |
| 12:36:10 | 156.8 | 2303.92 | .097 | 29.07 | 26.600 |
| 12:36:20 | 156.8 | 2303.94 | .100 | 29.09 | 25.889 |
| 12:36:30 | 156.7 | 2303.95 | .103 | 29.10 | 25.216 |
| 12:36:40 | 156.7 | 2303.96 | .106 | 29.11 | 24.579 |
| 12:36:50 | 156.7 | 2303.98 | .108 | 29.13 | 23.974 |
| 12:37:00 | 156.7 | 2303.98 | .111 | 29.13 | 23.400 |
| 12:37:10 | 156.7 | 2303.98 | .114 | 29.13 | 22.854 |
| 12:37:20 | 156.7 | 2304.00 | .117 | 29.15 | 22.333 |
| 12:37:30 | 156.7 | 2304.00 | .119 | 29.15 | 21.837 |
| 12:37:40 | 156.7 | 2304.00 | .122 | 29.15 | 21.364 |
| 12:37:50 | 156.7 | 2304.01 | .125 | 29.16 | 20.911 |
| 12:38:00 | 156.7 | 2304.00 | .128 | 29.15 | 20.478 |
| 12:38:10 | 156.7 | 2304.01 | .131 | 29.16 | 20.064 |
| 12:38:20 | 156.7 | 2304.02 | .133 | 29.17 | 19.667 |
| 12:38:30 | 156.7 | 2304.03 | .136 | 29.18 | 19.286 |
| 12:38:40 | 156.7 | 2304.01 | .139 | 29.16 | 18.920 |
| 12:38:50 | 156.6 | 2304.03 | .142 | 29.18 | 18.569 |
| 12:39:00 | 156.6 | 2304.05 | .144 | 29.20 | 18.231 |
| 12:39:10 | 156.6 | 2304.05 | .147 | 29.20 | 17.906 |
| 12:39:20 | 156.6 | 2304.05 | .150 | 29.20 | 17.593 |
| 12:39:30 | 156.7 | 2304.05 | .153 | 29.20 | 17.291 |
| 12:39:40 | 156.7 | 2304.06 | .156 | 29.21 | 17.000 |
| 12:39:50 | 156.6 | 2304.08 | .158 | 29.23 | 16.719 |
| 12:40:00 | 156.6 | 2304.08 | .161 | 29.23 | 16.448 |
| 12:40:30 | 156.5 | 2304.06 | .169 | 29.21 | 15.689 |
| 12:41:00 | 156.6 | 2304.05 | .178 | 29.20 | 15.000 |
| 12:41:30 | 156.6 | 2304.07 | .186 | 29.22 | 14.373 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 12:42:00 | 156.6 | 2304.09 | .194 | 29.24 | 13.800 |
| 12:42:30 | 156.5 | 2304.10 | .203 | 29.25 | 13.274 |
| 12:43:00 | 156.5 | 2304.11 | .211 | 29.26 | 12.789 |
| 12:43:30 | 156.5 | 2304.12 | .219 | 29.27 | 12.342 |
| 12:44:00 | 156.5 | 2304.10 | .228 | 29.25 | 11.927 |
| 12:44:30 | 156.4 | 2304.11 | .236 | 29.26 | 11.541 |
| 12:45:00 | 156.4 | 2304.10 | .244 | 29.25 | 11.182 |
| 12:45:30 | 156.4 | 2304.11 | .253 | 29.26 | 10.846 |
| 12:46:00 | 156.4 | 2304.10 | .261 | 29.25 | 10.532 |
| 12:46:30 | 156.4 | 2304.14 | .269 | 29.29 | 10.237 |
| 12:47:00 | 156.3 | 2304.16 | .278 | 29.31 | 9.960 |
| 12:47:30 | 156.4 | 2304.17 | .286 | 29.32 | 9.699 |
| 12:48:00 | 156.3 | 2304.14 | .294 | 29.29 | 9.453 |
| 12:48:30 | 156.3 | 2304.14 | .303 | 29.29 | 9.220 |
| 12:49:00 | 156.3 | 2304.14 | .311 | 29.29 | 9.000 |
| 12:49:30 | 156.3 | 2304.14 | .319 | 29.29 | 8.791 |
| 12:50:00 | 156.2 | 2304.12 | .328 | 29.27 | 8.593 |
| 12:51:00 | 156.2 | 2304.14 | .344 | 29.29 | 8.226 |
| 12:52:00 | 156.2 | 2304.15 | .361 | 29.30 | 7.892 |
| 12:53:00 | 156.2 | 2304.16 | .378 | 29.31 | 7.588 |
| 12:54:00 | 156.2 | 2304.17 | .394 | 29.32 | 7.310 |
| 12:55:00 | 156.1 | 2304.16 | .411 | 29.31 | 7.054 |
| 12:56:00 | 156.2 | 2304.17 | .428 | 29.32 | 6.818 |
| 12:57:00 | 156.1 | 2304.18 | .444 | 29.33 | 6.600 |
| 12:58:00 | 156.1 | 2304.19 | .461 | 29.34 | 6.398 |
| 12:59:00 | 156.1 | 2304.19 | .478 | 29.34 | 6.209 |
| 13:00:00 | 156.1 | 2304.21 | .494 | 29.36 | 6.034 |
| 13:01:00 | 156.1 | 2304.23 | .511 | 29.38 | 5.870 |
| 13:02:00 | 156.1 | 2304.21 | .528 | 29.36 | 5.716 |
| 13:03:00 | 156.0 | 2304.23 | .544 | 29.38 | 5.571 |
| 13:04:00 | 156.0 | 2304.22 | .561 | 29.37 | 5.436 |
| 13:05:00 | 156.0 | 2304.23 | .578 | 29.38 | 5.308 |
| 13:06:00 | 156.0 | 2304.26 | .594 | 29.41 | 5.187 |
| 13:07:00 | 156.0 | 2304.25 | .611 | 29.40 | 5.073 |
| 13:08:00 | 155.9 | 2304.25 | .628 | 29.40 | 4.965 |
| 13:09:00 | 155.9 | 2304.26 | .644 | 29.41 | 4.862 |
| 13:10:00 | 156.0 | 2304.26 | .661 | 29.41 | 4.765 |
| 13:11:00 | 155.9 | 2304.27 | .678 | 29.42 | 4.672 |
| 13:12:00 | 155.9 | 2304.27 | .694 | 29.42 | 4.584 |
| 13:13:00 | 155.9 | 2304.29 | .711 | 29.44 | 4.500 |
| 13:14:00 | 155.9 | 2304.29 | .728 | 29.44 | 4.420 |
| 13:15:00 | 155.9 | 2304.28 | .744 | 29.43 | 4.343 |
| 13:16:00 | 155.8 | 2304.27 | .761 | 29.42 | 4.270 |
| 13:17:00 | 155.9 | 2304.30 | .778 | 29.45 | 4.200 |
| 13:18:00 | 155.9 | 2304.30 | .794 | 29.45 | 4.133 |
| 13:19:00 | 155.9 | 2304.30 | .811 | 29.45 | 4.068 |
| 13:20:00 | 155.9 | 2304.31 | .828 | 29.46 | 4.007 |
| 13:21:00 | 155.9 | 2304.32 | .844 | 29.47 | 3.947 |
| 13:22:00 | 155.8 | 2304.30 | .861 | 29.45 | 3.890 |
| 13:23:00 | 155.8 | 2304.30 | .878 | 29.45 | 3.835 |
| 13:24:00 | 155.9 | 2304.32 | .894 | 29.47 | 3.783 |
| 13:25:00 | 155.9 | 2304.33 | .911 | 29.48 | 3.732 |
| 13:26:00 | 155.8 | 2304.31 | .928 | 29.46 | 3.683 |
| 13:27:00 | 155.8 | 2304.31 | .944 | 29.46 | 3.635 |
| 13:28:00 | 155.8 | 2304.32 | .961 | 29.47 | 3.590 |
| 13:29:00 | 155.8 | 2304.33 | .978 | 29.48 | 3.545 |
| 13:30:00 | 155.8 | 2304.31 | .994 | 29.46 | 3.503 |
| 13:31:00 | 155.7 | 2304.32 | 1.011 | 29.47 | 3.462 |
| 13:32:00 | 155.8 | 2304.32 | 1.028 | 29.47 | 3.422 |
| 13:33:00 | 155.8 | 2304.32 | 1.044 | 29.47 | 3.383 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

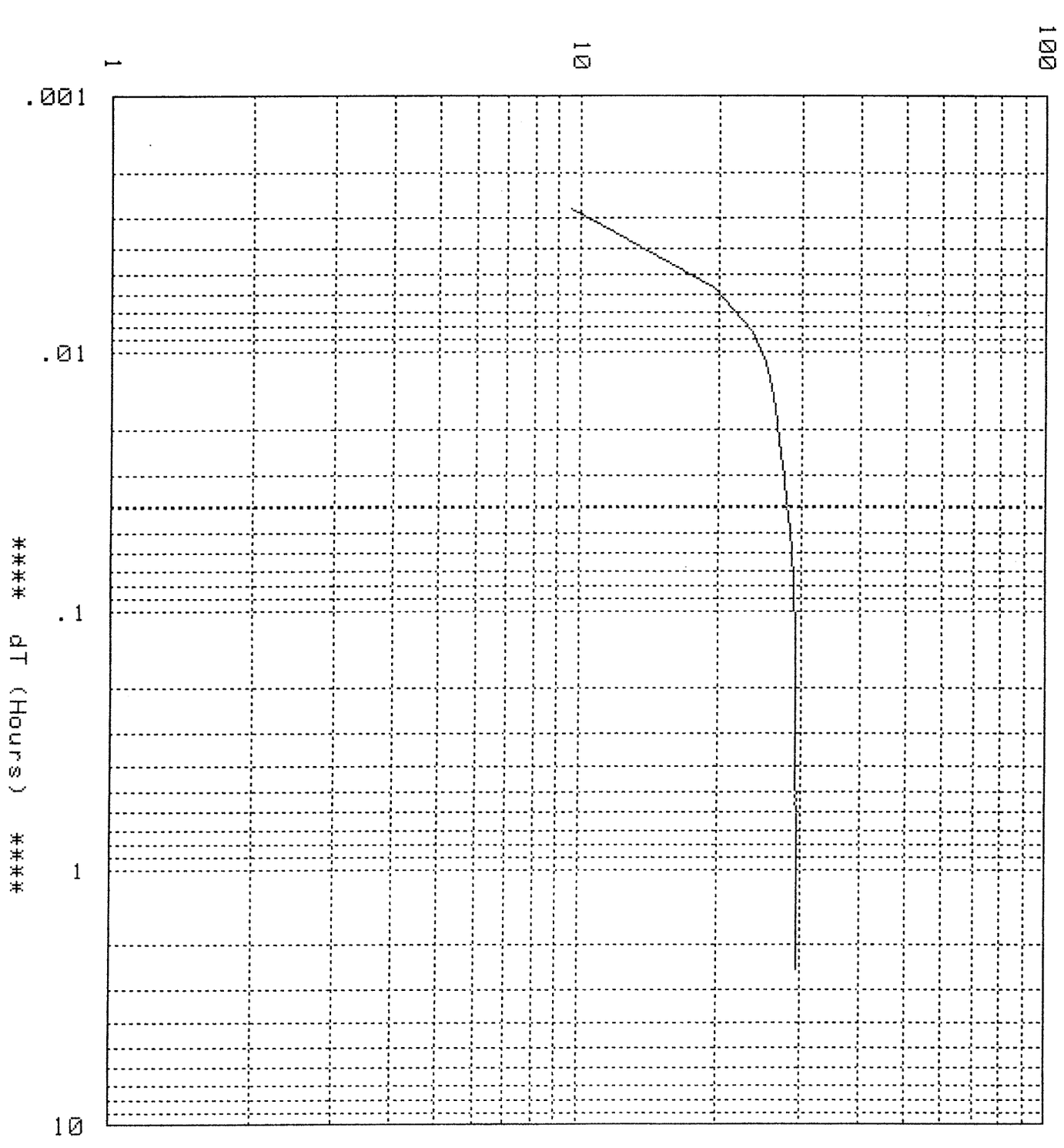
| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 13:34:00 | 155.7 | 2304.33 | 1.061 | 29.48 | 3.346 |
| 13:35:00 | 155.7 | 2304.34 | 1.078 | 29.49 | 3.309 |
| 13:36:00 | 155.7 | 2304.34 | 1.094 | 29.49 | 3.274 |
| 13:37:00 | 155.7 | 2304.35 | 1.111 | 29.50 | 3.240 |
| 13:38:00 | 155.7 | 2304.34 | 1.128 | 29.49 | 3.207 |
| 13:39:00 | 155.7 | 2304.35 | 1.144 | 29.50 | 3.175 |
| 13:40:00 | 155.7 | 2304.36 | 1.161 | 29.51 | 3.144 |
| 13:41:00 | 155.7 | 2304.34 | 1.178 | 29.49 | 3.113 |
| 13:42:00 | 155.7 | 2304.35 | 1.194 | 29.50 | 3.084 |
| 13:43:00 | 155.7 | 2304.36 | 1.211 | 29.51 | 3.055 |
| 13:44:00 | 155.7 | 2304.34 | 1.228 | 29.49 | 3.027 |
| 13:45:00 | 155.7 | 2304.36 | 1.244 | 29.51 | 3.000 |
| 13:46:00 | 155.6 | 2304.34 | 1.261 | 29.49 | 2.974 |
| 13:47:00 | 155.7 | 2304.37 | 1.278 | 29.52 | 2.948 |
| 13:48:00 | 155.7 | 2304.36 | 1.294 | 29.51 | 2.923 |
| 13:49:00 | 155.7 | 2304.36 | 1.311 | 29.51 | 2.898 |
| 13:50:00 | 155.7 | 2304.36 | 1.328 | 29.51 | 2.874 |
| 13:51:00 | 155.7 | 2304.37 | 1.344 | 29.52 | 2.851 |
| 13:52:00 | 155.7 | 2304.36 | 1.361 | 29.51 | 2.829 |
| 13:53:00 | 155.6 | 2304.37 | 1.378 | 29.52 | 2.806 |
| 13:54:00 | 155.6 | 2304.37 | 1.394 | 29.52 | 2.785 |
| 13:55:00 | 155.7 | 2304.37 | 1.411 | 29.52 | 2.764 |
| 13:56:00 | 155.7 | 2304.37 | 1.428 | 29.52 | 2.743 |
| 13:57:00 | 155.7 | 2304.37 | 1.444 | 29.52 | 2.723 |
| 13:58:00 | 155.7 | 2304.37 | 1.461 | 29.52 | 2.703 |
| 13:59:00 | 155.7 | 2304.37 | 1.478 | 29.52 | 2.684 |
| 14:00:00 | 155.7 | 2304.39 | 1.494 | 29.54 | 2.665 |
| 14:01:00 | 155.6 | 2304.39 | 1.511 | 29.54 | 2.647 |
| 14:10:00 | 155.6 | 2304.38 | 1.661 | 29.53 | 2.498 |
| 14:20:00 | 155.6 | 2304.39 | 1.828 | 29.54 | 2.362 |
| 14:30:00 | 155.5 | 2304.40 | 1.994 | 29.55 | 2.248 |
| 14:40:00 | 155.6 | 2304.41 | 2.161 | 29.56 | 2.152 |
| 14:50:00 | 155.5 | 2304.42 | 2.328 | 29.57 | 2.069 |
| 14:59:40 | 155.4 | 2304.39 | 2.489 | 29.54 | 2.000 |
| 14:59:50 | 155.5 | 2304.40 | 2.492 | 29.55 | 1.999 |
| 15:00:00 | 155.5 | 2304.42 | 2.494 | 29.57 | 1.998 |
| 15:00:10 | 155.4 | 2304.39 | 2.497 | 29.54 | 1.997 |

GO INTERNATIONAL AUSTRALIA

dP/dT PLOT Build-up

BEACH PETROLEUM GRUMBY #1 18/64 CHOKE

Time well flowed:10:01:00 Date: 18/03/81
Time well shut in: 12:30:20 Date: 18/03/81
Time build-up completed: 15:00:10 Date: 18/03/81

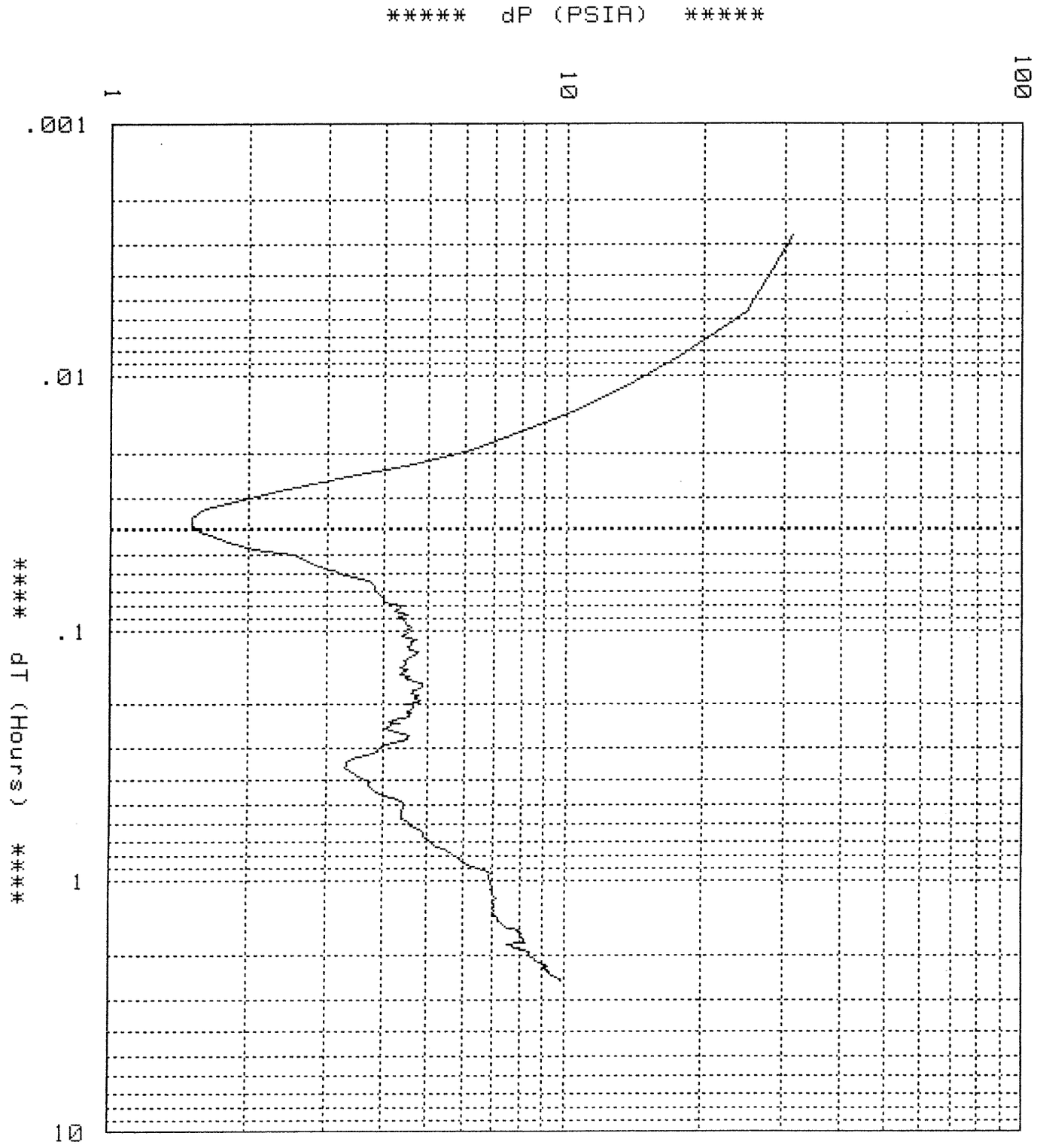


GO INTERNATIONAL AUSTRALIA

dP/dT PLOT Drawdown

BEACH PETROLEUM GRUMBY #1 18/64 CHOKE

Time well flowed:10:01:00 Date: 18/03/81
Time well shut in: 12:30:20 Date: 18/03/81
Time build-up completed: 15:00:10 Date: 18/03/81



Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 10:01:10 | 154.5 | 2296.06 | .003 | 31.06 | 897.000 |
| 10:01:20 | 154.3 | 2289.69 | .006 | 24.69 | 449.000 |
| 10:01:30 | 154.1 | 2282.76 | .008 | 17.76 | 299.667 |
| 10:01:40 | 154.0 | 2278.49 | .011 | 13.49 | 225.000 |
| 10:01:50 | 154.0 | 2275.33 | .014 | 10.33 | 180.200 |
| 10:02:00 | 154.3 | 2272.93 | .017 | 7.93 | 150.333 |
| 10:02:10 | 154.6 | 2271.16 | .019 | 6.16 | 129.000 |
| 10:02:20 | 154.9 | 2269.62 | .022 | 4.62 | 113.000 |
| 10:02:30 | 155.0 | 2268.32 | .025 | 3.32 | 100.556 |
| 10:02:40 | 155.1 | 2267.43 | .028 | 2.43 | 90.600 |
| 10:02:50 | 155.3 | 2266.92 | .031 | 1.92 | 82.455 |
| 10:03:00 | 155.4 | 2266.60 | .033 | 1.60 | 75.667 |
| 10:03:10 | 155.5 | 2266.50 | .036 | 1.50 | 69.923 |
| 10:03:20 | 155.5 | 2266.50 | .039 | 1.50 | 65.000 |
| 10:03:30 | 155.5 | 2266.64 | .042 | 1.64 | 60.733 |
| 10:03:40 | 155.5 | 2266.81 | .044 | 1.81 | 57.000 |
| 10:03:50 | 155.5 | 2267.06 | .047 | 2.06 | 53.706 |
| 10:04:00 | 155.6 | 2267.52 | .050 | 2.52 | 50.778 |
| 10:04:10 | 155.6 | 2267.67 | .053 | 2.67 | 48.158 |
| 10:04:20 | 155.6 | 2267.88 | .056 | 2.88 | 45.800 |
| 10:04:30 | 155.5 | 2268.17 | .058 | 3.17 | 43.667 |
| 10:04:40 | 155.5 | 2268.29 | .061 | 3.29 | 41.727 |
| 10:04:50 | 155.5 | 2268.71 | .064 | 3.71 | 39.957 |
| 10:05:00 | 155.5 | 2268.79 | .067 | 3.79 | 38.333 |
| 10:05:10 | 155.5 | 2268.82 | .069 | 3.82 | 36.840 |
| 10:05:20 | 155.6 | 2268.91 | .072 | 3.91 | 35.462 |
| 10:05:30 | 155.6 | 2268.98 | .075 | 3.98 | 34.185 |
| 10:05:40 | 155.6 | 2268.99 | .078 | 3.99 | 33.000 |
| 10:05:50 | 155.6 | 2269.38 | .081 | 4.38 | 31.897 |
| 10:06:00 | 155.6 | 2269.20 | .083 | 4.20 | 30.867 |
| 10:06:10 | 155.6 | 2269.52 | .086 | 4.52 | 29.903 |
| 10:06:20 | 155.6 | 2269.30 | .089 | 4.30 | 29.000 |
| 10:06:30 | 155.5 | 2269.41 | .092 | 4.41 | 28.152 |
| 10:06:40 | 155.5 | 2269.45 | .094 | 4.45 | 27.353 |
| 10:06:50 | 155.6 | 2269.59 | .097 | 4.59 | 26.600 |
| 10:07:00 | 155.6 | 2269.46 | .100 | 4.46 | 25.889 |
| 10:07:10 | 155.6 | 2269.50 | .103 | 4.50 | 25.216 |
| 10:07:20 | 155.6 | 2269.38 | .106 | 4.38 | 24.579 |
| 10:07:30 | 155.6 | 2269.71 | .108 | 4.71 | 23.974 |
| 10:07:40 | 155.6 | 2269.58 | .111 | 4.58 | 23.400 |
| 10:07:50 | 155.6 | 2269.59 | .114 | 4.59 | 22.854 |
| 10:08:00 | 155.6 | 2269.50 | .117 | 4.50 | 22.333 |
| 10:08:10 | 155.6 | 2269.55 | .119 | 4.55 | 21.837 |
| 10:08:20 | 155.6 | 2269.75 | .122 | 4.75 | 21.364 |
| 10:08:30 | 155.7 | 2269.70 | .125 | 4.70 | 20.911 |
| 10:08:40 | 155.6 | 2269.55 | .128 | 4.55 | 20.478 |
| 10:08:50 | 155.6 | 2269.50 | .131 | 4.50 | 20.064 |
| 10:09:00 | 155.6 | 2269.42 | .133 | 4.42 | 19.667 |
| 10:09:10 | 155.6 | 2269.46 | .136 | 4.46 | 19.286 |
| 10:09:20 | 155.6 | 2269.40 | .139 | 4.40 | 18.920 |
| 10:09:30 | 155.6 | 2269.34 | .142 | 4.34 | 18.569 |
| 10:09:40 | 155.7 | 2269.50 | .144 | 4.50 | 18.231 |
| 10:09:50 | 155.7 | 2269.36 | .147 | 4.36 | 17.906 |
| 10:10:00 | 155.7 | 2269.34 | .150 | 4.34 | 17.593 |
| 10:10:10 | 155.6 | 2269.54 | .153 | 4.54 | 17.291 |
| 10:10:20 | 155.6 | 2269.44 | .156 | 4.44 | 17.000 |
| 10:10:30 | 155.6 | 2269.55 | .158 | 4.55 | 16.719 |
| 10:10:40 | 155.7 | 2269.66 | .161 | 4.66 | 16.448 |
| 10:10:50 | 155.6 | 2269.83 | .164 | 4.83 | 16.186 |
| 10:11:00 | 155.7 | 2269.83 | .167 | 4.83 | 15.933 |
| 10:11:10 | 155.7 | 2269.84 | .169 | 4.84 | 15.689 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 10:11:20 | 155.6 | 2269.79 | .172 | 4.79 | 15.452 |
| 10:11:30 | 155.7 | 2269.64 | .175 | 4.64 | 15.222 |
| 10:11:40 | 155.7 | 2269.64 | .178 | 4.64 | 15.000 |
| 10:11:50 | 155.6 | 2269.59 | .181 | 4.59 | 14.785 |
| 10:12:00 | 155.7 | 2269.77 | .183 | 4.77 | 14.576 |
| 10:12:10 | 155.7 | 2269.69 | .186 | 4.69 | 14.373 |
| 10:12:20 | 155.7 | 2269.68 | .189 | 4.68 | 14.176 |
| 10:12:30 | 155.7 | 2269.79 | .192 | 4.79 | 13.986 |
| 10:12:40 | 155.7 | 2269.71 | .194 | 4.71 | 13.800 |
| 10:12:50 | 155.6 | 2269.50 | .197 | 4.50 | 13.620 |
| 10:13:00 | 155.6 | 2269.61 | .200 | 4.61 | 13.444 |
| 10:13:10 | 155.7 | 2269.64 | .203 | 4.64 | 13.274 |
| 10:13:20 | 155.7 | 2269.64 | .206 | 4.64 | 13.108 |
| 10:13:30 | 155.6 | 2269.57 | .208 | 4.57 | 12.947 |
| 10:13:40 | 155.6 | 2269.48 | .211 | 4.48 | 12.789 |
| 10:13:50 | 155.7 | 2269.57 | .214 | 4.57 | 12.636 |
| 10:14:00 | 155.7 | 2269.52 | .217 | 4.52 | 12.487 |
| 10:14:10 | 155.7 | 2269.54 | .219 | 4.54 | 12.342 |
| 10:14:20 | 155.7 | 2269.53 | .222 | 4.53 | 12.200 |
| 10:14:30 | 155.7 | 2269.42 | .225 | 4.42 | 12.062 |
| 10:14:40 | 155.6 | 2269.37 | .228 | 4.37 | 11.927 |
| 10:14:50 | 155.7 | 2269.19 | .231 | 4.19 | 11.795 |
| 10:15:00 | 155.6 | 2269.11 | .233 | 4.11 | 11.667 |
| 10:15:10 | 155.7 | 2269.34 | .236 | 4.34 | 11.541 |
| 10:15:20 | 155.7 | 2269.13 | .239 | 4.13 | 11.419 |
| 10:15:30 | 155.7 | 2269.12 | .242 | 4.12 | 11.299 |
| 10:16:00 | 155.7 | 2269.03 | .250 | 4.03 | 10.956 |
| 10:16:30 | 155.7 | 2269.25 | .258 | 4.25 | 10.634 |
| 10:17:00 | 155.7 | 2269.56 | .267 | 4.56 | 10.333 |
| 10:17:30 | 155.7 | 2269.49 | .275 | 4.49 | 10.051 |
| 10:18:00 | 155.6 | 2269.17 | .283 | 4.17 | 9.784 |
| 10:18:30 | 155.7 | 2268.94 | .292 | 3.94 | 9.533 |
| 10:19:00 | 155.7 | 2268.91 | .300 | 3.91 | 9.296 |
| 10:19:30 | 155.7 | 2268.86 | .308 | 3.86 | 9.072 |
| 10:20:00 | 155.7 | 2268.65 | .317 | 3.65 | 8.860 |
| 10:20:30 | 155.7 | 2268.47 | .325 | 3.47 | 8.658 |
| 10:21:00 | 155.7 | 2268.35 | .333 | 3.35 | 8.467 |
| 10:21:30 | 155.7 | 2268.30 | .342 | 3.30 | 8.285 |
| 10:22:00 | 155.7 | 2268.30 | .350 | 3.30 | 8.111 |
| 10:22:30 | 155.7 | 2268.28 | .358 | 3.28 | 7.946 |
| 10:23:00 | 155.7 | 2268.38 | .367 | 3.38 | 7.788 |
| 10:23:30 | 155.7 | 2268.45 | .375 | 3.45 | 7.637 |
| 10:24:00 | 155.8 | 2268.51 | .383 | 3.51 | 7.493 |
| 10:24:30 | 155.7 | 2268.61 | .392 | 3.61 | 7.355 |
| 10:25:00 | 155.7 | 2268.68 | .400 | 3.68 | 7.222 |
| 10:25:30 | 155.7 | 2268.72 | .408 | 3.72 | 7.095 |
| 10:26:00 | 155.8 | 2268.69 | .417 | 3.69 | 6.973 |
| 10:26:30 | 155.7 | 2268.74 | .425 | 3.74 | 6.856 |
| 10:27:00 | 155.8 | 2268.77 | .433 | 3.77 | 6.744 |
| 10:27:30 | 155.8 | 2268.79 | .442 | 3.79 | 6.635 |
| 10:28:00 | 155.8 | 2268.87 | .450 | 3.87 | 6.531 |
| 10:28:30 | 155.8 | 2268.98 | .458 | 3.98 | 6.430 |
| 10:29:00 | 155.8 | 2269.19 | .467 | 4.19 | 6.333 |
| 10:29:30 | 155.7 | 2269.29 | .475 | 4.29 | 6.240 |
| 10:30:00 | 155.7 | 2269.38 | .483 | 4.38 | 6.149 |
| 10:31:00 | 155.8 | 2269.46 | .500 | 4.46 | 5.978 |
| 10:32:00 | 155.8 | 2269.40 | .517 | 4.40 | 5.817 |
| 10:33:00 | 155.8 | 2269.37 | .533 | 4.37 | 5.667 |
| 10:34:00 | 155.9 | 2269.37 | .550 | 4.37 | 5.525 |
| 10:35:00 | 155.8 | 2269.39 | .567 | 4.39 | 5.392 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 10:36:00 | 155.9 | 2269.49 | .583 | 4.49 | 5.267 |
| 10:37:00 | 155.8 | 2269.53 | .600 | 4.53 | 5.148 |
| 10:38:00 | 155.8 | 2269.66 | .617 | 4.66 | 5.036 |
| 10:39:00 | 155.9 | 2269.81 | .633 | 4.81 | 4.930 |
| 10:40:00 | 155.9 | 2269.90 | .650 | 4.90 | 4.829 |
| 10:41:00 | 155.8 | 2269.91 | .667 | 4.91 | 4.733 |
| 10:42:00 | 155.9 | 2269.97 | .683 | 4.97 | 4.642 |
| 10:43:00 | 155.9 | 2270.07 | .700 | 5.07 | 4.556 |
| 10:44:00 | 155.9 | 2270.15 | .717 | 5.15 | 4.473 |
| 10:45:00 | 155.9 | 2270.24 | .733 | 5.24 | 4.394 |
| 10:46:00 | 155.9 | 2270.49 | .750 | 5.49 | 4.319 |
| 10:47:00 | 156.0 | 2270.53 | .767 | 5.53 | 4.246 |
| 10:48:00 | 155.9 | 2270.69 | .783 | 5.69 | 4.177 |
| 10:49:00 | 156.0 | 2270.78 | .800 | 5.78 | 4.111 |
| 10:50:00 | 156.0 | 2270.91 | .817 | 5.91 | 4.048 |
| 10:51:00 | 155.9 | 2270.88 | .833 | 5.88 | 3.987 |
| 10:52:00 | 156.0 | 2270.98 | .850 | 5.98 | 3.928 |
| 10:53:00 | 156.0 | 2271.17 | .867 | 6.17 | 3.872 |
| 10:54:00 | 156.0 | 2271.31 | .883 | 6.31 | 3.818 |
| 10:55:00 | 156.0 | 2271.49 | .900 | 6.49 | 3.765 |
| 10:56:00 | 156.0 | 2271.72 | .917 | 6.72 | 3.715 |
| 10:57:00 | 156.0 | 2271.83 | .933 | 6.83 | 3.667 |
| 10:58:00 | 156.0 | 2271.90 | .950 | 6.90 | 3.620 |
| 10:59:00 | 156.0 | 2271.87 | .967 | 6.87 | 3.575 |
| 11:00:00 | 156.0 | 2271.85 | .983 | 6.85 | 3.531 |
| 11:01:00 | 156.0 | 2271.89 | 1.000 | 6.89 | 3.489 |
| 11:02:00 | 156.0 | 2271.93 | 1.017 | 6.93 | 3.448 |
| 11:03:00 | 156.0 | 2271.91 | 1.033 | 6.91 | 3.409 |
| 11:04:00 | 156.1 | 2271.99 | 1.050 | 6.99 | 3.370 |
| 11:05:00 | 156.1 | 2271.99 | 1.067 | 6.99 | 3.333 |
| 11:06:00 | 156.0 | 2271.99 | 1.083 | 6.99 | 3.297 |
| 11:07:00 | 156.0 | 2271.93 | 1.100 | 6.93 | 3.263 |
| 11:08:00 | 156.0 | 2272.00 | 1.117 | 7.00 | 3.229 |
| 11:09:00 | 156.1 | 2271.99 | 1.133 | 6.99 | 3.196 |
| 11:10:00 | 156.1 | 2271.99 | 1.150 | 6.99 | 3.164 |
| 11:11:00 | 156.1 | 2272.02 | 1.167 | 7.02 | 3.133 |
| 11:12:00 | 156.1 | 2272.07 | 1.183 | 7.07 | 3.103 |
| 11:13:00 | 156.1 | 2272.04 | 1.200 | 7.04 | 3.074 |
| 11:14:00 | 156.1 | 2271.99 | 1.217 | 6.99 | 3.046 |
| 11:15:00 | 156.1 | 2272.01 | 1.233 | 7.01 | 3.018 |
| 11:16:00 | 156.1 | 2271.99 | 1.250 | 6.99 | 2.991 |
| 11:17:00 | 156.1 | 2272.05 | 1.267 | 7.05 | 2.965 |
| 11:18:00 | 156.1 | 2272.01 | 1.283 | 7.01 | 2.939 |
| 11:19:00 | 156.1 | 2271.99 | 1.300 | 6.99 | 2.915 |
| 11:20:00 | 156.1 | 2272.01 | 1.317 | 7.01 | 2.890 |
| 11:21:00 | 156.2 | 2272.02 | 1.333 | 7.02 | 2.867 |
| 11:22:00 | 156.2 | 2271.96 | 1.350 | 6.96 | 2.844 |
| 11:23:00 | 156.2 | 2272.01 | 1.367 | 7.01 | 2.821 |
| 11:24:00 | 156.1 | 2272.06 | 1.383 | 7.06 | 2.799 |
| 11:25:00 | 156.2 | 2272.12 | 1.400 | 7.12 | 2.778 |
| 11:26:00 | 156.2 | 2272.15 | 1.417 | 7.15 | 2.757 |
| 11:27:00 | 156.1 | 2272.15 | 1.433 | 7.15 | 2.736 |
| 11:28:00 | 156.2 | 2272.19 | 1.450 | 7.19 | 2.716 |
| 11:29:00 | 156.2 | 2272.21 | 1.467 | 7.21 | 2.697 |
| 11:30:00 | 156.1 | 2272.31 | 1.483 | 7.31 | 2.678 |
| 11:31:00 | 156.2 | 2272.35 | 1.500 | 7.35 | 2.659 |
| 11:32:00 | 156.2 | 2272.36 | 1.517 | 7.36 | 2.641 |
| 11:33:00 | 156.2 | 2272.42 | 1.533 | 7.42 | 2.623 |
| 11:34:00 | 156.2 | 2272.49 | 1.550 | 7.49 | 2.606 |
| 11:35:00 | 156.2 | 2272.80 | 1.567 | 7.80 | 2.589 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 18/03/81

Tool Positioned at a depth of: 1660

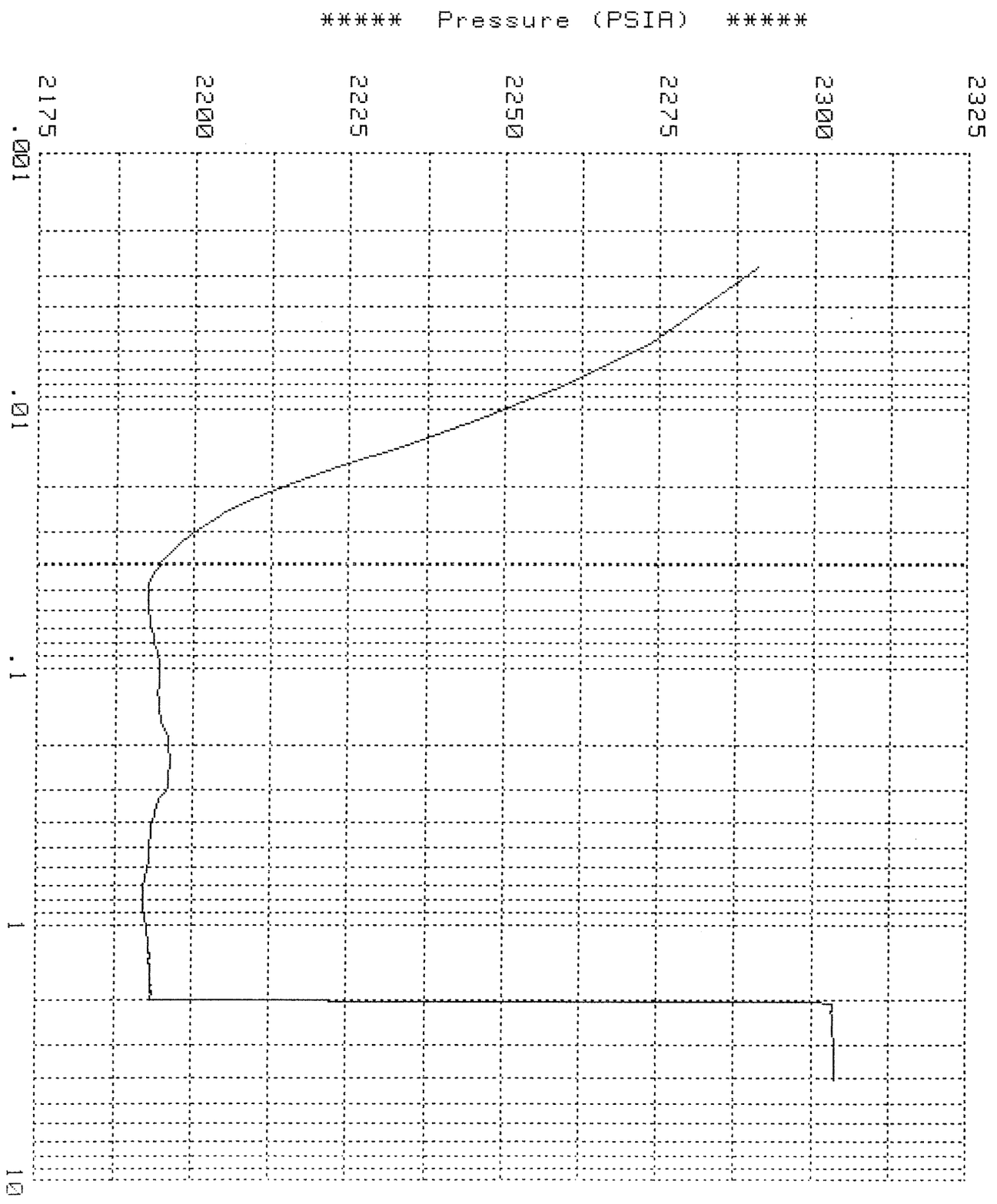
| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 11:36:00 | 156.2 | 2272.93 | 1.583 | 7.93 | 2.572 |
| 11:37:00 | 156.2 | 2272.95 | 1.600 | 7.95 | 2.556 |
| 11:38:00 | 156.3 | 2273.01 | 1.617 | 8.01 | 2.540 |
| 11:39:00 | 156.2 | 2273.01 | 1.633 | 8.01 | 2.524 |
| 11:40:00 | 156.2 | 2273.07 | 1.650 | 8.07 | 2.508 |
| 11:41:00 | 156.2 | 2273.05 | 1.667 | 8.05 | 2.493 |
| 11:42:00 | 156.3 | 2273.04 | 1.683 | 8.04 | 2.479 |
| 11:43:00 | 156.2 | 2273.11 | 1.700 | 8.11 | 2.464 |
| 11:44:00 | 156.3 | 2273.19 | 1.717 | 8.19 | 2.450 |
| 11:45:00 | 156.2 | 2273.15 | 1.733 | 8.15 | 2.436 |
| 11:46:00 | 156.3 | 2273.15 | 1.750 | 8.15 | 2.422 |
| 11:47:00 | 156.3 | 2273.21 | 1.767 | 8.21 | 2.409 |
| 11:48:00 | 156.2 | 2272.97 | 1.783 | 7.97 | 2.396 |
| 11:49:00 | 156.2 | 2272.50 | 1.800 | 7.50 | 2.383 |
| 11:50:00 | 156.3 | 2272.63 | 1.817 | 7.63 | 2.370 |
| 11:51:00 | 156.3 | 2272.74 | 1.833 | 7.74 | 2.358 |
| 11:52:00 | 156.2 | 2272.80 | 1.850 | 7.80 | 2.345 |
| 11:53:00 | 156.3 | 2272.90 | 1.867 | 7.90 | 2.333 |
| 11:54:00 | 156.3 | 2273.21 | 1.883 | 8.21 | 2.322 |
| 11:55:00 | 156.3 | 2273.27 | 1.900 | 8.27 | 2.310 |
| 11:56:00 | 156.3 | 2273.39 | 1.917 | 8.39 | 2.299 |
| 11:57:00 | 156.3 | 2273.43 | 1.933 | 8.43 | 2.287 |
| 11:58:00 | 156.3 | 2273.40 | 1.950 | 8.40 | 2.276 |
| 11:59:00 | 156.3 | 2273.42 | 1.967 | 8.42 | 2.266 |
| 12:00:00 | 156.3 | 2273.40 | 1.983 | 8.40 | 2.255 |
| 12:01:00 | 156.3 | 2273.40 | 2.000 | 8.40 | 2.244 |
| 12:02:00 | 156.3 | 2273.48 | 2.017 | 8.48 | 2.234 |
| 12:03:00 | 156.4 | 2273.55 | 2.033 | 8.55 | 2.224 |
| 12:04:00 | 156.3 | 2273.62 | 2.050 | 8.62 | 2.214 |
| 12:05:00 | 156.4 | 2273.61 | 2.067 | 8.61 | 2.204 |
| 12:06:00 | 156.3 | 2273.66 | 2.083 | 8.66 | 2.195 |
| 12:07:00 | 156.3 | 2273.71 | 2.100 | 8.71 | 2.185 |
| 12:08:00 | 156.4 | 2273.77 | 2.117 | 8.77 | 2.176 |
| 12:09:00 | 156.3 | 2273.87 | 2.133 | 8.87 | 2.167 |
| 12:10:00 | 156.4 | 2274.04 | 2.150 | 9.04 | 2.158 |
| 12:11:00 | 156.3 | 2274.14 | 2.167 | 9.14 | 2.149 |
| 12:12:00 | 156.4 | 2274.24 | 2.183 | 9.24 | 2.140 |
| 12:13:00 | 156.3 | 2274.02 | 2.200 | 9.02 | 2.131 |
| 12:14:00 | 156.4 | 2274.04 | 2.217 | 9.04 | 2.123 |
| 12:15:00 | 156.4 | 2274.15 | 2.233 | 9.15 | 2.114 |
| 12:16:00 | 156.3 | 2274.13 | 2.250 | 9.13 | 2.106 |
| 12:17:00 | 156.4 | 2274.10 | 2.267 | 9.10 | 2.098 |
| 12:18:00 | 156.4 | 2274.20 | 2.283 | 9.20 | 2.090 |
| 12:19:00 | 156.4 | 2274.25 | 2.300 | 9.25 | 2.082 |
| 12:20:00 | 156.4 | 2274.28 | 2.317 | 9.28 | 2.074 |
| 12:21:00 | 156.4 | 2274.34 | 2.333 | 9.34 | 2.067 |
| 12:23:00 | 156.4 | 2274.35 | 2.367 | 9.35 | 2.052 |
| 12:24:00 | 156.4 | 2274.47 | 2.383 | 9.47 | 2.044 |
| 12:25:00 | 156.4 | 2274.54 | 2.400 | 9.54 | 2.037 |
| 12:26:00 | 156.4 | 2274.59 | 2.417 | 9.59 | 2.030 |
| 12:27:00 | 156.4 | 2274.68 | 2.433 | 9.68 | 2.023 |
| 12:28:00 | 156.5 | 2274.76 | 2.450 | 9.76 | 2.016 |
| 12:29:00 | 156.4 | 2274.81 | 2.467 | 9.81 | 2.009 |
| 12:29:30 | 156.5 | 2274.83 | 2.475 | 9.83 | 2.006 |
| 12:29:40 | 156.5 | 2274.82 | 2.478 | 9.82 | 2.004 |
| 12:29:50 | 156.4 | 2274.83 | 2.481 | 9.83 | 2.003 |
| 12:30:00 | 156.5 | 2274.82 | 2.483 | 9.82 | 2.002 |
| 12:30:10 | 156.4 | 2274.85 | 2.486 | 9.85 | 2.001 |
| 12:30:20 | 156.4 | 2274.85 | 2.489 | 9.85 | 2.000 |

GO INTERNATIONAL AUSTRALIA

LINEAR PRESSURE VS. LOG TIME

BEACH PETROLEUM GRUMBY #1 28/64 CHOKE

Start of plot: 12:30:20 Date: 19/03/81
Finish of plot : 16:35:00 Date: 19/03/81



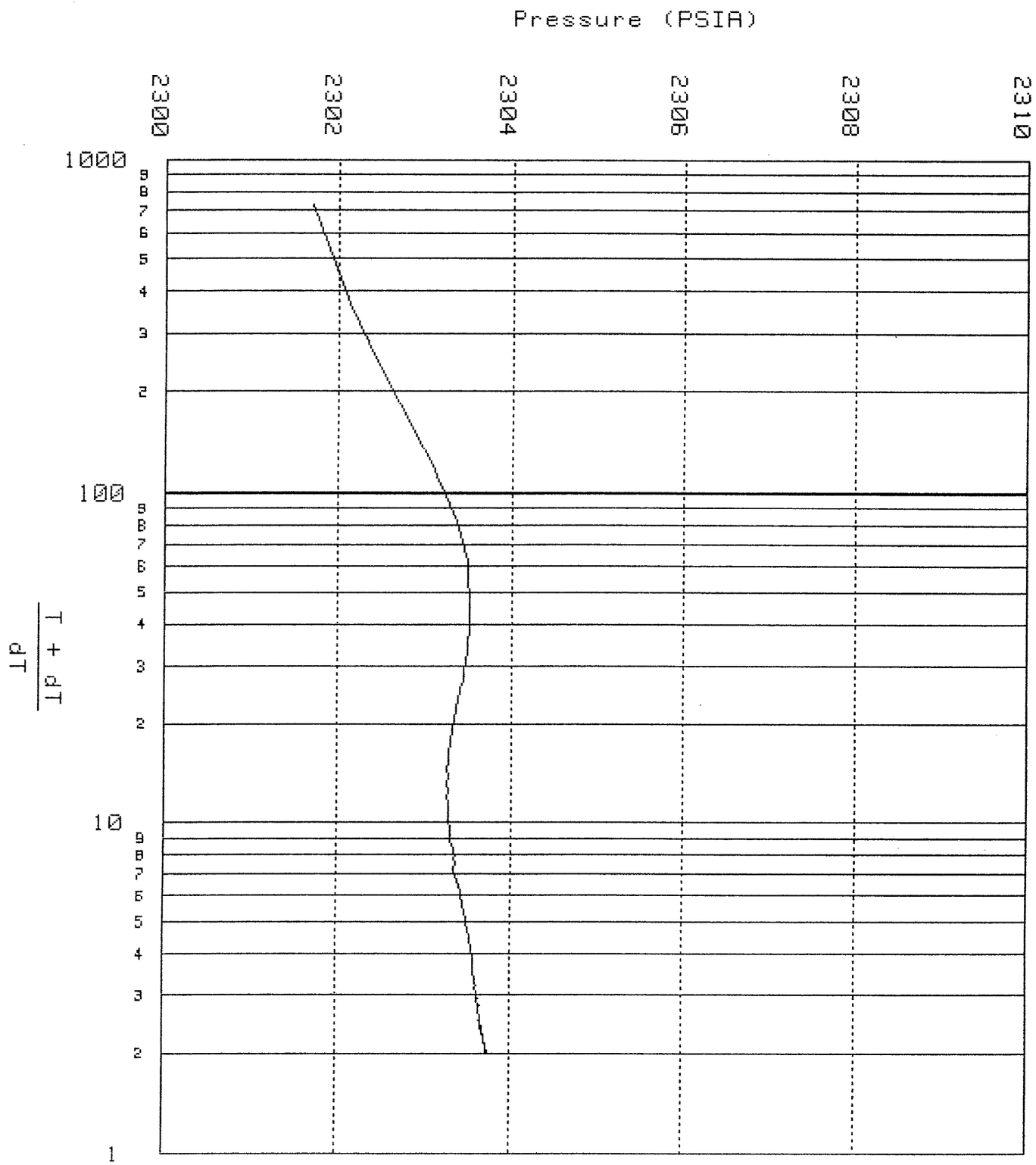
GO INTERNATIONAL AUSTRALIA - HORNER PLOT

BEACH PETROLEUM GRUMBY #1 28/64 CHOKE

Time well flowed:12:30:20 Date: 19/03/81

Time well shut in:14:32:20 Date: 19/03/81

Time build-up completed:16:35:00 Date:19/03/81



Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 14:32:30 | 156.8 | 2301.69 | .003 | .55 | 733.000 |
| 14:32:40 | 156.8 | 2302.11 | .006 | .97 | 367.000 |
| 14:32:50 | 156.7 | 2302.44 | .008 | 1.30 | 245.000 |
| 14:33:00 | 156.7 | 2302.70 | .011 | 1.56 | 184.000 |
| 14:33:10 | 156.6 | 2302.89 | .014 | 1.75 | 147.400 |
| 14:33:20 | 156.6 | 2303.06 | .017 | 1.92 | 123.000 |
| 14:33:30 | 156.6 | 2303.18 | .019 | 2.04 | 105.571 |
| 14:33:40 | 156.5 | 2303.28 | .022 | 2.14 | 92.500 |
| 14:33:50 | 156.5 | 2303.36 | .025 | 2.22 | 82.333 |
| 14:34:00 | 156.4 | 2303.40 | .028 | 2.26 | 74.200 |
| 14:34:10 | 156.5 | 2303.46 | .031 | 2.32 | 67.545 |
| 14:34:20 | 156.4 | 2303.49 | .033 | 2.35 | 62.000 |
| 14:34:30 | 156.3 | 2303.50 | .036 | 2.36 | 57.308 |
| 14:34:40 | 156.3 | 2303.50 | .039 | 2.36 | 53.286 |
| 14:34:50 | 156.4 | 2303.51 | .042 | 2.37 | 49.800 |
| 14:35:00 | 156.3 | 2303.51 | .044 | 2.37 | 46.750 |
| 14:35:10 | 156.3 | 2303.52 | .047 | 2.38 | 44.059 |
| 14:35:20 | 156.3 | 2303.52 | .050 | 2.38 | 41.667 |
| 14:35:30 | 156.2 | 2303.51 | .053 | 2.37 | 39.526 |
| 14:35:40 | 156.2 | 2303.51 | .056 | 2.37 | 37.600 |
| 14:35:50 | 156.2 | 2303.50 | .058 | 2.36 | 35.857 |
| 14:36:00 | 156.2 | 2303.49 | .061 | 2.35 | 34.273 |
| 14:36:10 | 156.2 | 2303.49 | .064 | 2.35 | 32.826 |
| 14:36:20 | 156.1 | 2303.47 | .067 | 2.33 | 31.500 |
| 14:36:30 | 156.2 | 2303.48 | .069 | 2.34 | 30.280 |
| 14:36:40 | 156.1 | 2303.46 | .072 | 2.32 | 29.154 |
| 14:36:50 | 156.1 | 2303.45 | .075 | 2.31 | 28.111 |
| 14:37:00 | 156.2 | 2303.45 | .078 | 2.31 | 27.143 |
| 14:37:10 | 156.1 | 2303.42 | .081 | 2.28 | 26.241 |
| 14:37:20 | 156.1 | 2303.41 | .083 | 2.27 | 25.400 |
| 14:37:30 | 156.1 | 2303.41 | .086 | 2.27 | 24.613 |
| 14:37:40 | 156.1 | 2303.39 | .089 | 2.25 | 23.875 |
| 14:37:50 | 156.0 | 2303.39 | .092 | 2.25 | 23.182 |
| 14:38:00 | 156.0 | 2303.37 | .094 | 2.23 | 22.529 |
| 14:38:10 | 156.0 | 2303.37 | .097 | 2.23 | 21.914 |
| 14:38:20 | 156.0 | 2303.37 | .100 | 2.23 | 21.333 |
| 14:38:30 | 156.0 | 2303.35 | .103 | 2.21 | 20.784 |
| 14:38:40 | 156.0 | 2303.34 | .106 | 2.20 | 20.263 |
| 14:38:50 | 156.0 | 2303.34 | .108 | 2.20 | 19.769 |
| 14:39:00 | 156.0 | 2303.33 | .111 | 2.19 | 19.300 |
| 14:39:10 | 156.0 | 2303.33 | .114 | 2.19 | 18.854 |
| 14:39:20 | 155.9 | 2303.33 | .117 | 2.19 | 18.429 |
| 14:39:30 | 155.9 | 2303.31 | .119 | 2.17 | 18.023 |
| 14:39:40 | 156.0 | 2303.31 | .122 | 2.17 | 17.636 |
| 14:39:50 | 155.9 | 2303.31 | .125 | 2.17 | 17.267 |
| 14:40:00 | 155.9 | 2303.30 | .128 | 2.16 | 16.913 |
| 14:40:10 | 155.9 | 2303.29 | .131 | 2.15 | 16.574 |
| 14:40:30 | 155.9 | 2303.29 | .136 | 2.15 | 15.939 |
| 14:41:00 | 155.9 | 2303.29 | .144 | 2.15 | 15.077 |
| 14:41:30 | 155.8 | 2303.26 | .153 | 2.12 | 14.309 |
| 14:42:00 | 155.9 | 2303.28 | .161 | 2.14 | 13.621 |
| 14:42:30 | 155.8 | 2303.25 | .169 | 2.11 | 13.000 |
| 14:43:00 | 155.8 | 2303.27 | .178 | 2.13 | 12.438 |
| 14:43:30 | 155.8 | 2303.26 | .186 | 2.12 | 11.925 |
| 14:44:00 | 155.8 | 2303.27 | .194 | 2.13 | 11.457 |
| 14:44:30 | 155.8 | 2303.27 | .203 | 2.13 | 11.027 |
| 14:45:00 | 155.7 | 2303.27 | .211 | 2.13 | 10.632 |
| 14:45:30 | 155.7 | 2303.29 | .219 | 2.15 | 10.266 |
| 14:46:00 | 155.7 | 2303.29 | .228 | 2.15 | 9.927 |
| 14:46:30 | 155.7 | 2303.30 | .236 | 2.16 | 9.612 |
| 14:47:00 | 155.7 | 2303.31 | .244 | 2.17 | 9.318 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 14:47:30 | 155.6 | 2303.31 | .253 | 2.17 | 9.044 |
| 14:48:00 | 155.6 | 2303.31 | .261 | 2.17 | 8.787 |
| 14:48:30 | 155.6 | 2303.32 | .269 | 2.18 | 8.546 |
| 14:49:00 | 155.6 | 2303.34 | .278 | 2.20 | 8.320 |
| 14:49:30 | 155.6 | 2303.34 | .286 | 2.20 | 8.107 |
| 14:50:00 | 155.6 | 2303.36 | .294 | 2.22 | 7.906 |
| 14:50:30 | 155.6 | 2303.34 | .303 | 2.20 | 7.716 |
| 14:51:00 | 155.6 | 2303.36 | .311 | 2.22 | 7.536 |
| 14:52:00 | 155.7 | 2303.35 | .328 | 2.21 | 7.203 |
| 14:53:00 | 155.7 | 2303.37 | .344 | 2.23 | 6.903 |
| 14:54:00 | 155.7 | 2303.39 | .361 | 2.25 | 6.631 |
| 14:55:00 | 155.7 | 2303.40 | .378 | 2.26 | 6.382 |
| 14:56:00 | 155.6 | 2303.43 | .394 | 2.29 | 6.155 |
| 14:57:00 | 155.6 | 2303.44 | .411 | 2.30 | 5.946 |
| 14:58:00 | 155.6 | 2303.46 | .428 | 2.32 | 5.753 |
| 14:59:00 | 155.6 | 2303.46 | .444 | 2.32 | 5.575 |
| 15:00:00 | 155.6 | 2303.48 | .461 | 2.34 | 5.410 |
| 15:01:00 | 155.6 | 2303.48 | .478 | 2.34 | 5.256 |
| 15:02:00 | 155.6 | 2303.50 | .494 | 2.36 | 5.112 |
| 15:03:00 | 155.6 | 2303.50 | .511 | 2.36 | 4.978 |
| 15:04:00 | 155.5 | 2303.49 | .528 | 2.35 | 4.853 |
| 15:05:00 | 155.6 | 2303.52 | .544 | 2.38 | 4.735 |
| 15:06:00 | 155.6 | 2303.52 | .561 | 2.38 | 4.624 |
| 15:07:00 | 155.6 | 2303.53 | .578 | 2.39 | 4.519 |
| 15:08:00 | 155.6 | 2303.53 | .594 | 2.39 | 4.421 |
| 15:09:00 | 155.5 | 2303.53 | .611 | 2.39 | 4.327 |
| 15:10:00 | 155.5 | 2303.55 | .628 | 2.41 | 4.239 |
| 15:11:00 | 155.5 | 2303.55 | .644 | 2.41 | 4.155 |
| 15:12:00 | 155.5 | 2303.56 | .661 | 2.42 | 4.076 |
| 15:13:00 | 155.5 | 2303.56 | .678 | 2.42 | 4.000 |
| 15:14:00 | 155.5 | 2303.57 | .694 | 2.43 | 3.928 |
| 15:15:00 | 155.5 | 2303.57 | .711 | 2.43 | 3.859 |
| 15:16:00 | 155.5 | 2303.57 | .728 | 2.43 | 3.794 |
| 15:17:00 | 155.5 | 2303.59 | .744 | 2.45 | 3.731 |
| 15:18:00 | 155.5 | 2303.59 | .761 | 2.45 | 3.672 |
| 15:19:00 | 155.5 | 2303.59 | .778 | 2.45 | 3.614 |
| 15:20:00 | 155.5 | 2303.59 | .794 | 2.45 | 3.559 |
| 15:21:00 | 155.4 | 2303.59 | .811 | 2.45 | 3.507 |
| 15:22:00 | 155.4 | 2303.59 | .828 | 2.45 | 3.456 |
| 15:23:00 | 155.5 | 2303.61 | .844 | 2.47 | 3.408 |
| 15:24:00 | 155.5 | 2303.61 | .861 | 2.47 | 3.361 |
| 15:25:00 | 155.5 | 2303.61 | .878 | 2.47 | 3.316 |
| 15:26:00 | 155.4 | 2303.61 | .894 | 2.47 | 3.273 |
| 15:27:00 | 155.4 | 2303.61 | .911 | 2.47 | 3.232 |
| 15:28:00 | 155.5 | 2303.63 | .928 | 2.49 | 3.192 |
| 15:29:00 | 155.4 | 2303.61 | .944 | 2.47 | 3.153 |
| 15:30:00 | 155.4 | 2303.61 | .961 | 2.47 | 3.116 |
| 15:31:00 | 155.4 | 2303.62 | .978 | 2.48 | 3.080 |
| 15:32:00 | 155.4 | 2303.62 | .994 | 2.48 | 3.045 |
| 15:33:00 | 155.4 | 2303.63 | 1.011 | 2.49 | 3.011 |
| 15:34:00 | 155.4 | 2303.63 | 1.028 | 2.49 | 2.978 |
| 15:35:00 | 155.4 | 2303.62 | 1.044 | 2.48 | 2.947 |
| 15:36:00 | 155.5 | 2303.65 | 1.061 | 2.51 | 2.916 |
| 15:37:00 | 155.4 | 2303.63 | 1.078 | 2.49 | 2.887 |
| 15:38:00 | 155.4 | 2303.63 | 1.094 | 2.49 | 2.858 |
| 15:39:00 | 155.4 | 2303.65 | 1.111 | 2.51 | 2.830 |
| 15:40:00 | 155.5 | 2303.67 | 1.128 | 2.53 | 2.803 |
| 15:41:00 | 155.4 | 2303.64 | 1.144 | 2.50 | 2.777 |
| 15:42:00 | 155.5 | 2303.65 | 1.161 | 2.51 | 2.751 |
| 15:43:00 | 155.4 | 2303.65 | 1.178 | 2.51 | 2.726 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

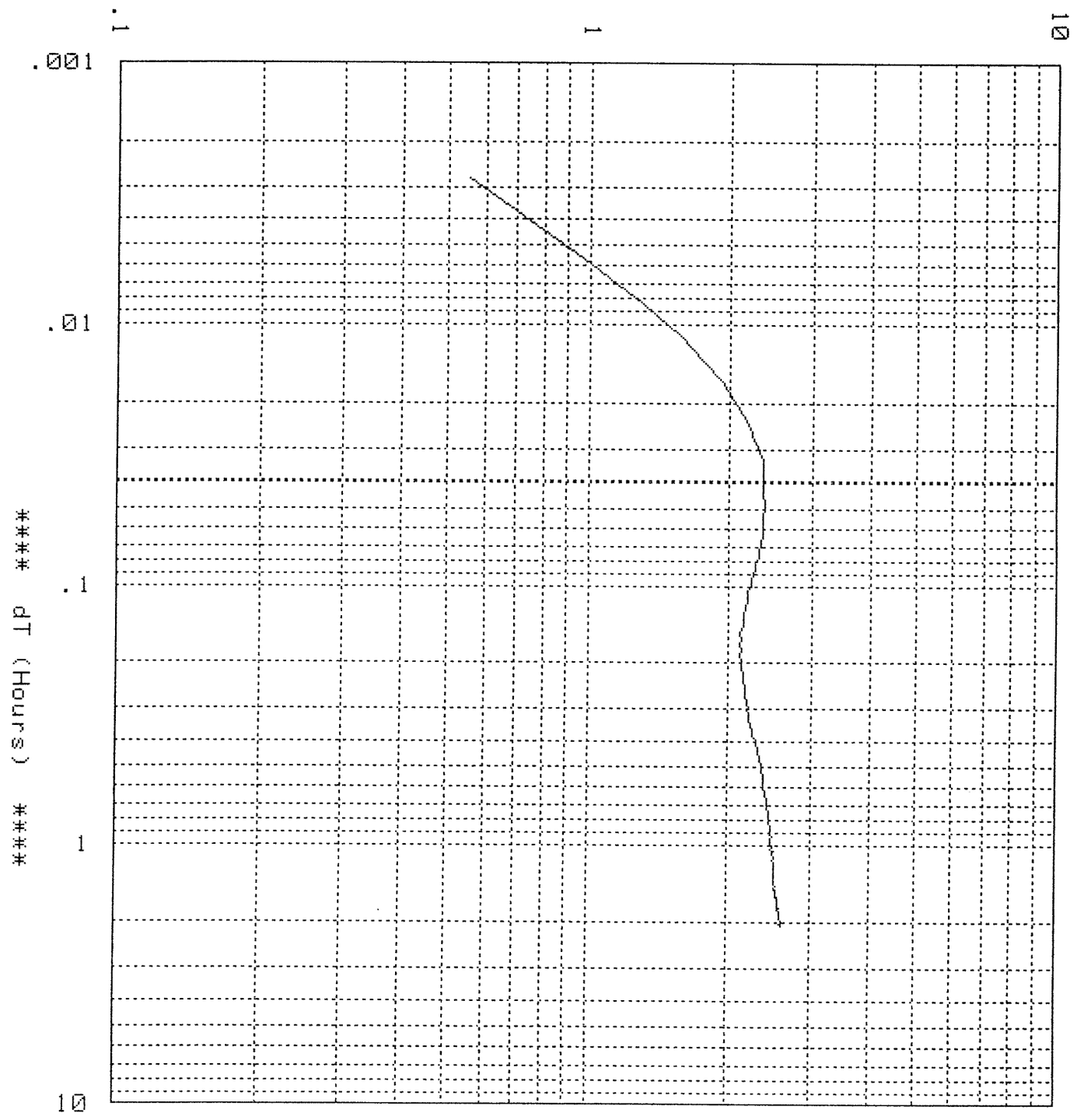
| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 15:44:00 | 155.4 | 2303.65 | 1.194 | 2.51 | 2.702 |
| 15:45:00 | 155.4 | 2303.65 | 1.211 | 2.51 | 2.679 |
| 15:46:00 | 155.4 | 2303.65 | 1.228 | 2.51 | 2.656 |
| 15:47:00 | 155.4 | 2303.66 | 1.244 | 2.52 | 2.634 |
| 15:48:00 | 155.4 | 2303.67 | 1.261 | 2.53 | 2.612 |
| 15:49:00 | 155.4 | 2303.66 | 1.278 | 2.52 | 2.591 |
| 15:50:00 | 155.4 | 2303.66 | 1.294 | 2.52 | 2.571 |
| 15:51:00 | 155.4 | 2303.67 | 1.311 | 2.53 | 2.551 |
| 15:52:00 | 155.4 | 2303.67 | 1.328 | 2.53 | 2.531 |
| 15:53:00 | 155.4 | 2303.65 | 1.344 | 2.51 | 2.512 |
| 15:54:00 | 155.4 | 2303.67 | 1.361 | 2.53 | 2.494 |
| 15:55:00 | 155.4 | 2303.67 | 1.378 | 2.53 | 2.476 |
| 15:56:00 | 155.4 | 2303.67 | 1.394 | 2.53 | 2.458 |
| 15:57:00 | 155.4 | 2303.67 | 1.411 | 2.53 | 2.441 |
| 15:58:00 | 155.4 | 2303.68 | 1.428 | 2.54 | 2.424 |
| 15:59:00 | 155.4 | 2303.68 | 1.444 | 2.54 | 2.408 |
| 16:00:00 | 155.4 | 2303.67 | 1.461 | 2.53 | 2.392 |
| 16:01:00 | 155.3 | 2303.67 | 1.478 | 2.53 | 2.376 |
| 16:02:00 | 155.4 | 2303.68 | 1.494 | 2.54 | 2.361 |
| 16:03:00 | 155.4 | 2303.68 | 1.511 | 2.54 | 2.346 |
| 16:04:00 | 155.4 | 2303.68 | 1.528 | 2.54 | 2.331 |
| 16:05:00 | 155.4 | 2303.68 | 1.544 | 2.54 | 2.317 |
| 16:06:00 | 155.4 | 2303.69 | 1.561 | 2.55 | 2.302 |
| 16:07:00 | 155.4 | 2303.69 | 1.578 | 2.55 | 2.289 |
| 16:08:00 | 155.4 | 2303.70 | 1.594 | 2.56 | 2.275 |
| 16:09:00 | 155.4 | 2303.70 | 1.611 | 2.56 | 2.262 |
| 16:10:00 | 155.3 | 2303.71 | 1.628 | 2.57 | 2.249 |
| 16:11:00 | 155.4 | 2303.71 | 1.644 | 2.57 | 2.236 |
| 16:12:00 | 155.4 | 2303.71 | 1.661 | 2.57 | 2.224 |
| 16:13:00 | 155.4 | 2303.71 | 1.678 | 2.57 | 2.212 |
| 16:14:00 | 155.4 | 2303.71 | 1.694 | 2.57 | 2.200 |
| 16:15:00 | 155.4 | 2303.71 | 1.711 | 2.57 | 2.188 |
| 16:16:00 | 155.3 | 2303.71 | 1.728 | 2.57 | 2.177 |
| 16:17:00 | 155.4 | 2303.71 | 1.744 | 2.57 | 2.166 |
| 16:18:00 | 155.4 | 2303.73 | 1.761 | 2.59 | 2.155 |
| 16:19:00 | 155.3 | 2303.71 | 1.778 | 2.57 | 2.144 |
| 16:20:00 | 155.4 | 2303.73 | 1.794 | 2.59 | 2.133 |
| 16:21:00 | 155.4 | 2303.73 | 1.811 | 2.59 | 2.123 |
| 16:22:00 | 155.3 | 2303.73 | 1.828 | 2.59 | 2.112 |
| 16:23:00 | 155.4 | 2303.72 | 1.844 | 2.58 | 2.102 |
| 16:24:00 | 155.4 | 2303.73 | 1.861 | 2.59 | 2.093 |
| 16:25:00 | 155.4 | 2303.73 | 1.878 | 2.59 | 2.083 |
| 16:26:00 | 155.3 | 2303.73 | 1.894 | 2.59 | 2.073 |
| 16:27:00 | 155.3 | 2303.73 | 1.911 | 2.59 | 2.064 |
| 16:28:00 | 155.3 | 2303.73 | 1.928 | 2.59 | 2.055 |
| 16:29:00 | 155.4 | 2303.75 | 1.944 | 2.61 | 2.046 |
| 16:30:00 | 155.3 | 2303.75 | 1.961 | 2.61 | 2.037 |
| 16:31:00 | 155.4 | 2303.75 | 1.978 | 2.61 | 2.028 |
| 16:32:00 | 155.4 | 2303.75 | 1.994 | 2.61 | 2.019 |
| 16:33:00 | 155.3 | 2303.74 | 2.011 | 2.60 | 2.011 |
| 16:34:00 | 155.3 | 2303.75 | 2.028 | 2.61 | 2.003 |
| 16:35:00 | 155.3 | 2303.75 | 2.044 | 2.61 | 1.995 |

GO INTERNATIONAL AUSTRALIA

dP/dT PLOT Build-up

BEACH PETROLEUM GRUMBY #1 28/64 CHOKE

Time well flowed:12:30:20 Date: 19/03/81
Time well shut in: 14:32:20 Date: 19/03/81
Time build-up completed: 16:35:00 Date: 19/03/81



GO INTERNATIONAL AUSTRALIA

dP/dT PLOT

Drawdown

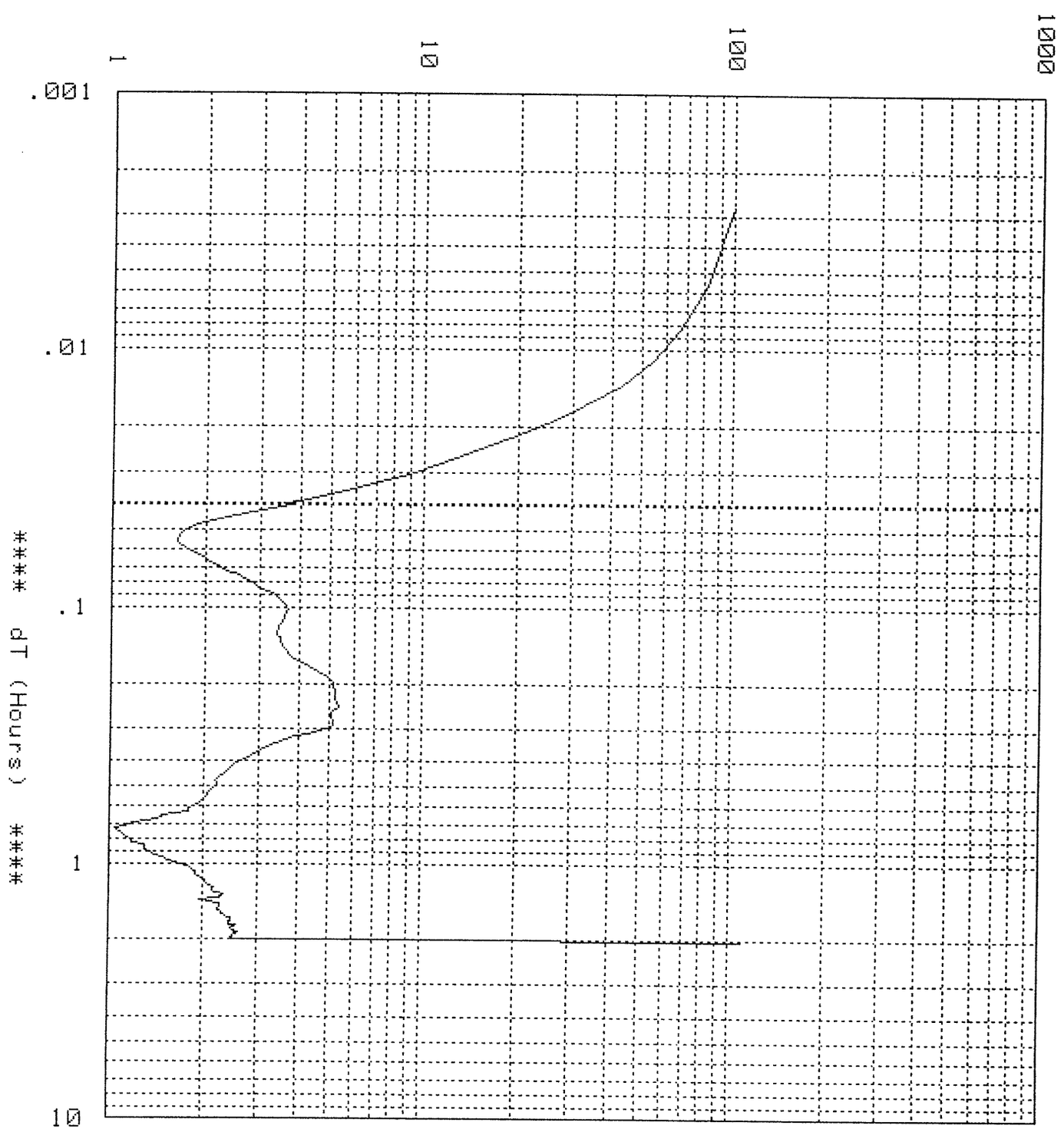
BEACH PETROLEUM GRUMBY #1

28/64 CHOKE

Time well flowed:12:30:20 Date: 19/03/81

Time well shut in: 14:32:20 Date: 19/03/81

Time build-up completed: 16:35:00 Date: 19/03/81



Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 12:30:30 | 155.0 | 2290.70 | .003 | 99.70 | 733.000 |
| 12:30:40 | 154.4 | 2273.35 | .006 | 82.35 | 367.000 |
| 12:30:50 | 153.6 | 2257.86 | .008 | 66.86 | 245.000 |
| 12:31:00 | 153.3 | 2245.49 | .011 | 54.49 | 184.000 |
| 12:31:10 | 153.8 | 2234.31 | .014 | 43.31 | 147.400 |
| 12:31:20 | 154.3 | 2223.85 | .017 | 32.85 | 123.000 |
| 12:31:30 | 154.6 | 2215.75 | .019 | 24.75 | 105.571 |
| 12:31:40 | 154.7 | 2209.90 | .022 | 18.90 | 92.500 |
| 12:31:50 | 154.8 | 2205.58 | .025 | 14.58 | 82.333 |
| 12:32:00 | 154.8 | 2202.33 | .028 | 11.33 | 74.200 |
| 12:32:10 | 154.8 | 2199.85 | .031 | 8.85 | 67.545 |
| 12:32:20 | 154.8 | 2197.85 | .033 | 6.85 | 62.000 |
| 12:32:30 | 154.7 | 2196.33 | .036 | 5.33 | 57.308 |
| 12:32:40 | 154.6 | 2194.98 | .039 | 3.98 | 53.286 |
| 12:32:50 | 154.6 | 2194.04 | .042 | 3.04 | 49.800 |
| 12:33:00 | 154.5 | 2193.34 | .044 | 2.34 | 46.750 |
| 12:33:10 | 154.5 | 2192.90 | .047 | 1.90 | 44.059 |
| 12:33:20 | 154.5 | 2192.71 | .050 | 1.71 | 41.667 |
| 12:33:30 | 154.5 | 2192.64 | .053 | 1.64 | 39.526 |
| 12:33:40 | 154.4 | 2192.62 | .056 | 1.62 | 37.600 |
| 12:33:50 | 154.4 | 2192.71 | .058 | 1.71 | 35.857 |
| 12:34:00 | 154.4 | 2192.81 | .061 | 1.81 | 34.273 |
| 12:34:10 | 154.4 | 2192.96 | .064 | 1.96 | 32.826 |
| 12:34:20 | 154.3 | 2193.06 | .067 | 2.06 | 31.500 |
| 12:34:30 | 154.3 | 2193.21 | .069 | 2.21 | 30.280 |
| 12:34:40 | 154.3 | 2193.34 | .072 | 2.34 | 29.154 |
| 12:34:50 | 154.3 | 2193.57 | .075 | 2.57 | 28.111 |
| 12:35:00 | 154.3 | 2193.65 | .078 | 2.65 | 27.143 |
| 12:35:10 | 154.3 | 2193.82 | .081 | 2.82 | 26.241 |
| 12:35:20 | 154.3 | 2193.96 | .083 | 2.96 | 25.400 |
| 12:35:30 | 154.2 | 2194.15 | .086 | 3.15 | 24.613 |
| 12:35:40 | 154.2 | 2194.30 | .089 | 3.30 | 23.875 |
| 12:35:50 | 154.2 | 2194.41 | .092 | 3.41 | 23.182 |
| 12:36:00 | 154.2 | 2194.50 | .094 | 3.50 | 22.529 |
| 12:36:10 | 154.2 | 2194.61 | .097 | 3.61 | 21.914 |
| 12:36:20 | 154.2 | 2194.64 | .100 | 3.64 | 21.333 |
| 12:36:30 | 154.2 | 2194.68 | .103 | 3.68 | 20.784 |
| 12:36:40 | 154.2 | 2194.65 | .106 | 3.65 | 20.263 |
| 12:36:50 | 154.2 | 2194.58 | .108 | 3.58 | 19.769 |
| 12:37:00 | 154.2 | 2194.57 | .111 | 3.57 | 19.300 |
| 12:37:10 | 154.1 | 2194.53 | .114 | 3.53 | 18.854 |
| 12:37:20 | 154.2 | 2194.49 | .117 | 3.49 | 18.429 |
| 12:37:30 | 154.1 | 2194.44 | .119 | 3.44 | 18.023 |
| 12:37:40 | 154.2 | 2194.43 | .122 | 3.43 | 17.636 |
| 12:37:50 | 154.2 | 2194.42 | .125 | 3.42 | 17.267 |
| 12:38:00 | 154.2 | 2194.41 | .128 | 3.41 | 16.913 |
| 12:38:10 | 154.2 | 2194.50 | .131 | 3.50 | 16.574 |
| 12:38:20 | 154.2 | 2194.49 | .133 | 3.49 | 16.250 |
| 12:38:30 | 154.2 | 2194.49 | .136 | 3.49 | 15.939 |
| 12:38:40 | 154.1 | 2194.52 | .139 | 3.52 | 15.640 |
| 12:38:50 | 154.1 | 2194.55 | .142 | 3.55 | 15.353 |
| 12:39:00 | 154.1 | 2194.61 | .144 | 3.61 | 15.077 |
| 12:39:10 | 154.1 | 2194.67 | .147 | 3.67 | 14.811 |
| 12:39:20 | 154.1 | 2194.67 | .150 | 3.67 | 14.556 |
| 12:39:30 | 154.1 | 2194.75 | .153 | 3.75 | 14.309 |
| 12:39:40 | 154.1 | 2194.82 | .156 | 3.82 | 14.071 |
| 12:39:50 | 154.1 | 2194.91 | .158 | 3.91 | 13.842 |
| 12:40:00 | 154.1 | 2195.01 | .161 | 4.01 | 13.621 |
| 12:40:30 | 154.2 | 2195.30 | .169 | 4.30 | 13.000 |
| 12:41:00 | 154.2 | 2195.65 | .178 | 4.65 | 12.438 |
| 12:41:30 | 154.2 | 2195.98 | .186 | 4.98 | 11.925 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 12:42:00 | 154.2 | 2196.14 | .194 | 5.14 | 11.457 |
| 12:42:30 | 154.1 | 2196.16 | .203 | 5.16 | 11.027 |
| 12:43:00 | 154.1 | 2196.23 | .211 | 5.23 | 10.632 |
| 12:43:30 | 154.1 | 2196.25 | .219 | 5.25 | 10.266 |
| 12:44:00 | 154.2 | 2196.27 | .228 | 5.27 | 9.927 |
| 12:44:30 | 154.1 | 2196.30 | .236 | 5.30 | 9.612 |
| 12:45:00 | 154.2 | 2196.38 | .244 | 5.38 | 9.318 |
| 12:45:30 | 154.2 | 2196.14 | .253 | 5.14 | 9.044 |
| 12:46:00 | 154.2 | 2196.09 | .261 | 5.09 | 8.787 |
| 12:46:30 | 154.1 | 2196.09 | .269 | 5.09 | 8.546 |
| 12:47:00 | 154.2 | 2196.14 | .278 | 5.14 | 8.320 |
| 12:47:30 | 154.2 | 2196.14 | .286 | 5.14 | 8.107 |
| 12:48:00 | 154.2 | 2196.06 | .294 | 5.06 | 7.906 |
| 12:48:30 | 154.1 | 2195.71 | .303 | 4.71 | 7.716 |
| 12:49:00 | 154.2 | 2195.29 | .311 | 4.29 | 7.536 |
| 12:49:30 | 154.2 | 2194.89 | .319 | 3.89 | 7.365 |
| 12:50:00 | 154.1 | 2194.62 | .328 | 3.62 | 7.203 |
| 12:51:00 | 154.1 | 2194.25 | .344 | 3.25 | 6.903 |
| 12:52:00 | 154.1 | 2194.04 | .361 | 3.04 | 6.631 |
| 12:53:00 | 154.1 | 2193.85 | .378 | 2.85 | 6.382 |
| 12:54:00 | 154.1 | 2193.66 | .394 | 2.66 | 6.155 |
| 12:55:00 | 154.1 | 2193.51 | .411 | 2.51 | 5.946 |
| 12:56:00 | 154.1 | 2193.43 | .428 | 2.43 | 5.753 |
| 12:57:00 | 154.1 | 2193.34 | .444 | 2.34 | 5.575 |
| 12:58:00 | 154.1 | 2193.23 | .461 | 2.23 | 5.410 |
| 12:59:00 | 154.1 | 2193.17 | .478 | 2.17 | 5.256 |
| 13:00:00 | 154.1 | 2193.19 | .494 | 2.19 | 5.112 |
| 13:01:00 | 154.1 | 2193.14 | .511 | 2.14 | 4.978 |
| 13:02:00 | 154.1 | 2193.08 | .528 | 2.08 | 4.853 |
| 13:03:00 | 154.1 | 2193.06 | .544 | 2.06 | 4.735 |
| 13:04:00 | 154.1 | 2192.99 | .561 | 1.99 | 4.624 |
| 13:05:00 | 154.1 | 2192.93 | .578 | 1.93 | 4.519 |
| 13:06:00 | 154.1 | 2192.83 | .594 | 1.83 | 4.421 |
| 13:07:00 | 154.1 | 2192.79 | .611 | 1.79 | 4.327 |
| 13:08:00 | 154.1 | 2192.78 | .628 | 1.78 | 4.239 |
| 13:09:00 | 154.2 | 2192.46 | .644 | 1.46 | 4.155 |
| 13:10:00 | 154.1 | 2192.46 | .661 | 1.46 | 4.076 |
| 13:11:00 | 154.1 | 2192.31 | .678 | 1.31 | 4.000 |
| 13:12:00 | 154.1 | 2192.17 | .694 | 1.17 | 3.928 |
| 13:13:00 | 154.1 | 2192.11 | .711 | 1.11 | 3.859 |
| 13:14:00 | 154.2 | 2192.03 | .728 | 1.03 | 3.794 |
| 13:15:00 | 154.1 | 2192.05 | .744 | 1.05 | 3.731 |
| 13:16:00 | 154.1 | 2192.09 | .761 | 1.09 | 3.672 |
| 13:17:00 | 154.1 | 2192.11 | .778 | 1.11 | 3.614 |
| 13:18:00 | 154.1 | 2192.15 | .794 | 1.15 | 3.559 |
| 13:19:00 | 154.1 | 2192.18 | .811 | 1.18 | 3.507 |
| 13:20:00 | 154.2 | 2192.17 | .828 | 1.17 | 3.456 |
| 13:21:00 | 154.2 | 2192.29 | .844 | 1.29 | 3.408 |
| 13:22:00 | 154.1 | 2192.29 | .861 | 1.29 | 3.361 |
| 13:23:00 | 154.2 | 2192.29 | .878 | 1.29 | 3.316 |
| 13:24:00 | 154.1 | 2192.36 | .894 | 1.36 | 3.273 |
| 13:25:00 | 154.2 | 2192.37 | .911 | 1.37 | 3.232 |
| 13:26:00 | 154.2 | 2192.40 | .928 | 1.40 | 3.192 |
| 13:27:00 | 154.2 | 2192.48 | .944 | 1.48 | 3.153 |
| 13:28:00 | 154.1 | 2192.52 | .961 | 1.52 | 3.116 |
| 13:29:00 | 154.2 | 2192.56 | .978 | 1.56 | 3.080 |
| 13:30:00 | 154.2 | 2192.65 | .994 | 1.65 | 3.045 |
| 13:31:00 | 154.2 | 2192.68 | 1.011 | 1.68 | 3.011 |
| 13:32:00 | 154.2 | 2192.79 | 1.028 | 1.79 | 2.978 |
| 13:33:00 | 154.2 | 2192.80 | 1.044 | 1.80 | 2.947 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 13:34:00 | 154.2 | 2192.84 | 1.061 | 1.84 | 2.916 |
| 13:35:00 | 154.2 | 2192.89 | 1.078 | 1.89 | 2.887 |
| 13:36:00 | 154.2 | 2192.89 | 1.094 | 1.89 | 2.858 |
| 13:37:00 | 154.2 | 2192.89 | 1.111 | 1.89 | 2.830 |
| 13:38:00 | 154.3 | 2192.95 | 1.128 | 1.95 | 2.803 |
| 13:39:00 | 154.2 | 2192.97 | 1.144 | 1.97 | 2.777 |
| 13:40:00 | 154.3 | 2193.02 | 1.161 | 2.02 | 2.751 |
| 13:41:00 | 154.2 | 2193.03 | 1.178 | 2.03 | 2.726 |
| 13:42:00 | 154.2 | 2193.06 | 1.194 | 2.06 | 2.702 |
| 13:43:00 | 154.2 | 2193.06 | 1.211 | 2.06 | 2.679 |
| 13:44:00 | 154.2 | 2193.10 | 1.228 | 2.10 | 2.656 |
| 13:45:00 | 154.2 | 2193.17 | 1.244 | 2.17 | 2.634 |
| 13:46:00 | 154.3 | 2193.14 | 1.261 | 2.14 | 2.612 |
| 13:47:00 | 154.2 | 2193.15 | 1.278 | 2.15 | 2.591 |
| 13:48:00 | 154.3 | 2193.20 | 1.294 | 2.20 | 2.571 |
| 13:49:00 | 154.2 | 2193.22 | 1.311 | 2.22 | 2.551 |
| 13:50:00 | 154.3 | 2193.33 | 1.328 | 2.33 | 2.531 |
| 13:51:00 | 154.3 | 2193.27 | 1.344 | 2.27 | 2.512 |
| 13:52:00 | 154.3 | 2193.28 | 1.361 | 2.28 | 2.494 |
| 13:53:00 | 154.3 | 2193.21 | 1.378 | 2.21 | 2.476 |
| 13:54:00 | 154.2 | 2192.93 | 1.394 | 1.93 | 2.458 |
| 13:55:00 | 154.3 | 2193.13 | 1.411 | 2.13 | 2.441 |
| 13:56:00 | 154.3 | 2193.19 | 1.428 | 2.19 | 2.424 |
| 13:57:00 | 154.3 | 2193.26 | 1.444 | 2.26 | 2.408 |
| 13:58:00 | 154.3 | 2193.25 | 1.461 | 2.25 | 2.392 |
| 13:59:00 | 154.2 | 2193.25 | 1.478 | 2.25 | 2.376 |
| 14:00:00 | 154.3 | 2193.27 | 1.494 | 2.27 | 2.361 |
| 14:01:00 | 154.3 | 2193.24 | 1.511 | 2.24 | 2.346 |
| 14:02:00 | 154.3 | 2193.23 | 1.528 | 2.23 | 2.331 |
| 14:03:00 | 154.3 | 2193.28 | 1.544 | 2.28 | 2.317 |
| 14:04:00 | 154.3 | 2193.29 | 1.561 | 2.29 | 2.302 |
| 14:05:00 | 154.3 | 2193.30 | 1.578 | 2.30 | 2.289 |
| 14:06:00 | 154.3 | 2193.32 | 1.594 | 2.32 | 2.275 |
| 14:07:00 | 154.3 | 2193.35 | 1.611 | 2.35 | 2.262 |
| 14:08:00 | 154.3 | 2193.38 | 1.628 | 2.38 | 2.249 |
| 14:09:00 | 154.3 | 2193.48 | 1.644 | 2.48 | 2.236 |
| 14:10:00 | 154.3 | 2193.46 | 1.661 | 2.46 | 2.224 |
| 14:11:00 | 154.3 | 2193.46 | 1.678 | 2.46 | 2.212 |
| 14:12:00 | 154.3 | 2193.44 | 1.694 | 2.44 | 2.200 |
| 14:13:00 | 154.3 | 2193.44 | 1.711 | 2.44 | 2.188 |
| 14:14:00 | 154.4 | 2193.43 | 1.728 | 2.43 | 2.177 |
| 14:15:00 | 154.3 | 2193.43 | 1.744 | 2.43 | 2.166 |
| 14:16:00 | 154.3 | 2193.56 | 1.761 | 2.56 | 2.155 |
| 14:17:00 | 154.4 | 2193.51 | 1.778 | 2.51 | 2.144 |
| 14:18:00 | 154.4 | 2193.48 | 1.794 | 2.48 | 2.133 |
| 14:19:00 | 154.3 | 2193.48 | 1.811 | 2.48 | 2.123 |
| 14:20:00 | 154.3 | 2193.50 | 1.828 | 2.50 | 2.112 |
| 14:21:00 | 154.4 | 2193.53 | 1.844 | 2.53 | 2.102 |
| 14:22:00 | 154.3 | 2193.52 | 1.861 | 2.52 | 2.093 |
| 14:23:00 | 154.3 | 2193.60 | 1.878 | 2.60 | 2.083 |
| 14:24:00 | 154.3 | 2193.53 | 1.894 | 2.53 | 2.073 |
| 14:25:00 | 154.3 | 2193.51 | 1.911 | 2.51 | 2.064 |
| 14:26:00 | 154.4 | 2193.51 | 1.928 | 2.51 | 2.055 |
| 14:27:00 | 154.4 | 2193.50 | 1.944 | 2.50 | 2.046 |
| 14:28:00 | 154.3 | 2193.46 | 1.961 | 2.46 | 2.037 |
| 14:29:00 | 154.4 | 2193.43 | 1.978 | 2.43 | 2.028 |
| 14:29:40 | 154.3 | 2193.58 | 1.989 | 2.58 | 2.022 |
| 14:29:50 | 154.3 | 2193.59 | 1.992 | 2.59 | 2.021 |
| 14:30:00 | 154.4 | 2193.60 | 1.994 | 2.60 | 2.019 |
| 14:30:10 | 154.4 | 2193.60 | 1.997 | 2.60 | 2.018 |

Well Name: GRUMBY #1 Company: BEACH PETROLEUM Date: 19/03/81

Tool Positioned at a depth of: 1660

| Time | Temperature | PSIA | Dt | Dp | T+Dt/Dt |
|---|---|---|---|---|---|
| 14:30:20 | 154.3 | 2193.67 | 2.000 | 2.67 | 2.017 |
| 14:30:30 | 154.7 | 2210.07 | 2.003 | 19.07 | 2.015 |
| 14:30:40 | 155.7 | 2234.15 | 2.006 | 43.15 | 2.014 |
| 14:30:50 | 156.3 | 2253.75 | 2.008 | 62.75 | 2.012 |
| 14:31:00 | 156.7 | 2269.62 | 2.011 | 78.62 | 2.011 |
| 14:31:10 | 156.8 | 2281.36 | 2.014 | 90.36 | 2.010 |
| 14:31:20 | 157.0 | 2289.20 | 2.017 | 98.20 | 2.008 |
| 14:31:30 | 157.0 | 2294.00 | 2.019 | 103.00 | 2.007 |
| 14:31:40 | 156.9 | 2296.73 | 2.022 | 105.73 | 2.005 |
| 14:31:50 | 156.9 | 2298.42 | 2.025 | 107.42 | 2.004 |
| 14:32:00 | 156.9 | 2299.58 | 2.028 | 108.58 | 2.003 |
| 14:32:10 | 156.8 | 2300.45 | 2.031 | 109.45 | 2.001 |
| 14:32:20 | 156.8 | 2301.14 | 2.033 | 110.14 | 2.000 |

# GO INTERNATIONAL AUSTRALIA PTY. LTD.

COMPANY..BEACH PETROLEUM

STATE...VICTORIA

FIELD....GRUMBY

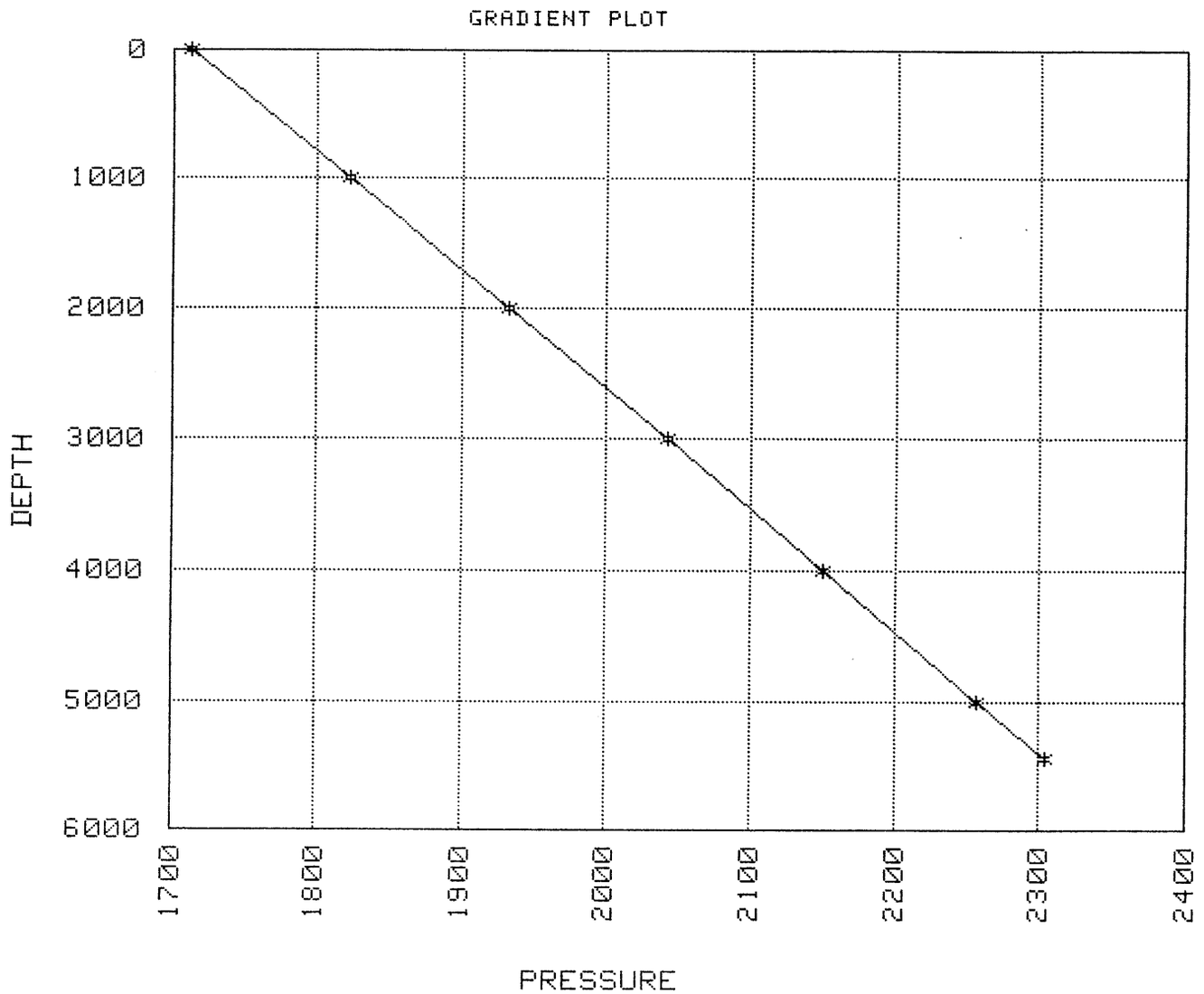
WELL....#1

DATE.....19/03/81

PURPOSE.....GRADIENT

ELEMENT.....H.P.PROBE

SERIAL No...509




| DEPTH (TVD)FT | PRESSURE | GRADIENT (PSI/FT.) |
|---|---|---|
| 0.0 | 1713.24 | |
| 1000.6 | 1823.32 | .110 |
| 1998.0 | 1932.99 | .110 |
| 2998.7 | 2041.81 | .109 |
| 3999.3 | 2150.12 | .108 |
| 4999.9 | 2257.06 | .107 |
| 5446.1 | 2303.75 | .105 |

GO INTERNATIONAL AUSTRALIA PTY. LTD.
P.O. BOX 380
SALE, VICTORIA 3850

BEACH PETROLEUM N.L. EXPLORATION GRUMBY NO. 1
March 18, 1981

Type of Test: Isochronal

| HOURS | TUBING PRESS | CASING PRESS | WELL HEAD TEMP | DIFF PRESS H20 X2 | STATIC PRESS | SEPARATOR TEMP F° | GAS VOLUME MCF/DAY | ORIFICE PLATE |
|---|---|---|---|---|---|---|---|---|
| March 18, 1981 | | | | | | | | |
| 0700 | Run in hole and hang @ 1660 metres | | | | | | | |
| 0955 | 1697 | 200 | | | | | | |
| 1000 | Flow well on 18/64 choke and 1.5 orifice | | | | | | | |
| 1010 | 1655 | | | | | | | |
| 1015 | 1653 | | | 73.00 | 465 | 25 | | |
| 1030 | 1652 | 420 | 70 | 73.00 | 460 | 26 | | |
| 1045 | 1657 | 450 | 74 | 73.40 | 465 | 27 | Co2 53% | |
| 1100 | 1660 | 480 | 75 | 72.00 | 465 | 28 | | |
| 1115 | 1663 | 500 | 77 | 73.20 | 455 | 27 | | |
| 1130 | 1664 | 510 | 77 | 72.00 | 457 | 25 | | |
| 1145 | 1665 | 525 | 78 | 72.00 | 457 | 25 | | |
| 1200 | 1667 | 550 | 79 | 72.50 | 450 | 27 | | |
| 1215 | 1669 | 560 | 79 | 71.00 | 465 | 28 | 3.96 MMCD/DAY | |
| 1230 | 1670 | 590 | 80 | Shut in well | | | | |
| 1235 | 1715 | 590 | 80 | | | | | |
| 1240 | 1713 | 564 | 80 | | | | | |
| 1245 | 1713 | 565 | 80 | | | | | |
| 1300 | 1709 | 480 | 80 | | | | | |
| 1330 | 1705 | 420 | 79 | | | | | |
| 1430 | 1704 | 400 | 78 | | | | | |
| 1500 | 1704 | 375 | 77 | Flow well on 22/64 choke | | | | |
| 1505 | 1616 | 375 | 76 | | | | | |
| 1510 | 1618 | 380 | 76 | | | | | |
| 1515 | 1620 | 395 | 76 | 90.00 | 525 | 33 | | |
| 1530 | 1620 | 410 | 76 | 92.00 | 525 | 32 | | |
| 1545 | 1618 | 475 | 75 | 94.80 | 510 | 28 | | |
| 1600 | 1699 | 495 | 75 | 96.50 | 510 | 27 | | |
| 1615 | 1620 | 500 | 76 | 96.50 | 510 | 27 | | |
| 1630 | 1620 | 550 | 75 | 89.00 | 555 | 23 | 4.9 MMCF/DAY | |
| 1645 | 1622 | 550 | 75 | 87.00 | 585 | 36 | | |
| 1700 | 1622 | 580 | 75 | 96.00 | 485 | 31 | | |
| 1715 | 1622 | 600 | 75 | 85.80 | 640 | 39 | | |
| 1730 | 1620 | 600 | 76 | 85.80 | 640 | 39 | Shut in well | |
| 1735 | 1723 | 600 | 76 | | | | | |
| 1740 | 1720 | 600 | 75 | | | | | |
| 1745 | 1718 | 595 | 74 | | | | | |
| 1800 | 1715 | 530 | 70 | | | | | |
| 1815 | 1713 | 490 | 69 | | | | | |
| 1900 | 1710 | 480 | 64 | | | | | |
| 2000 | 1705 | 340 | | | | | | |
| 2100 | 1704 | 300 | | | | | | |
| 2200 | 1703 | | | | | | | |
| 2400 | 1792 | | | | | | | |

GO INTERNATIONAL AUSTRALIA PTY. LTD.

BEACH PETROLEUM N.L. GRUMBY NO. 1

| HOURS | TUBING PRESS | CASING PRESS | WELL HEAD TEMP | DIFF PRESS H20 X2 | STATIC PRESS | SEPARATOR TEMP F° | GAS VOLUME MCF/DAY | ORIFICE PLATE |
|---|---|---|---|---|---|---|---|---|
| March 19, 1981 | | | | | | | | |
| 0200 | 1702 | | | | | | | |
| 0400 | 1701 | | | | | | | |
| 0600 | 1700 | 280 | | | | | | |
| 0800 | 1698 | 280 | | | | | | |
| 1230 | 1698 | 280 | | Flow well on 28/64 choke | | | | 2.00 inch |
| 1235 | 1515 | 300 | 68 | | | | | |
| 1240 | 1519 | 310 | 67 | | | | | |
| 1245 | 1522 | 330 | 68 | 85.00 | 360 | 22 | | |
| 1300 | 1515 | 400 | 73 | 94.70 | 337 | 19 | | |
| 1315 | 1512 | 450 | 74 | 93.80 | 352 | 21 | 7.62 MMCF/DAY | |
| 1330 | 1513 | 490 | 73 | 97.00 | 315 | 17 | | |
| 1345 | 1514 | 500 | 74 | 93.00 | 385 | 20 | 53 CO2 | |
| 1400 | 1514 | 540 | 72 | 89.00 | 405 | 25 | | |
| 1415 | 1515 | 590 | 74 | 85.00 | 535 | 28 | 8.88 MMCF/DAY | |
| 1430 | 1515 | 600 | 74 | 78.5 | 585 | 34 | Shut in well | |
| 1435 | 1727 | 600 | 73 | | | | | |
| 1440 | 1721 | 600 | 73 | | | | | |
| 1445 | 1719 | 600 | 71 | | | | | |
| 1500 | 1715 | 550 | 70 | | | | | |
| 1520 | 1713 | | | | | | | |
| 1530 | 1710 | | | | | | | |
| 1635 | Pull up hole first gradient | | | | | | | |
| 1652 | Hang at 1524 metres | | | | | | | |
| 1730 | Hang at 1219 metres | | | | | | | |
| 1808 | Hang at 914 metres | | | | | | | |
| 1848 | Hang at 609 metres | | | | | | | |
| 1935 | Hang in lubricator | | | | | | | |
| 2050 | Shut in well bleed down | | | | | | | |

ENCLOSURES:

PE601394

This is an enclosure indicator page.
The enclosure PE601394 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601394 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601394 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Composite Well Log |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = COMPOSITE_LOG |
| DESCRIPTION | = Composite Well Log (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 14/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601395

This is an enclosure indicator page.
The enclosure PE601395 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601395 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601395 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Exploration Logging Mudlog |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = MUD_LOG |
| DESCRIPTION | = Exploration Logging Mudlog (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Exploration Logging |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601396

This is an enclosure indicator page.
The enclosure PE601396 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601396 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601396 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Dual Laterolog Micro Spherically Focused Log |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Dual Laterolog Micro Spherically Focused Log, 1:200, (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601397

This is an enclosure indicator page.
The enclosure PE601397 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601397 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601397 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Dual Laterolog Micro Spherically Focused Log |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Dual Laterolog Micro Spherically Focused Log, 1:500, (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601398

This is an enclosure indicator page.
The enclosure PE601398 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601398 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601398 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Borehole Compensated Sonic Log |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Borehole Compensated Sonic Log, 1:200 (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601399

This is an enclosure indicator page.
The enclosure PE601399 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601399 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601399 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Borehole Compensated Sonic Log |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Borehole Compensated Sonic Log, 1:500 (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE602492

This is an enclosure indicator page.
The enclosure PE602492 is enclosed within the container PE902706 at this location in this document.

The enclosure PE602492 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE602492 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Compensated Neutron Formation Density |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Compensated Neutron Formation Density, 1:500, (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = 3/07/81 |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601400

This is an enclosure indicator page.
The enclosure PE601400 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601400 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601400 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Compensated Neutron Formation Density |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Compensated Neutron Formation Density, 1:200, (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 7/03/81 |
| DATE_RECEIVED | = 11/03/81 |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE902708

This is an enclosure indicator page.
The enclosure PE902708 is enclosed within the container PE902706 at this location in this document.

The enclosure PE902708 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE902708 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Repeat Formation Tester |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = RFT |
| DESCRIPTION | = Repeat Formation Tester (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 9/03/81 |
| DATE_RECEIVED | = 3/07/81 |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601401

This is an enclosure indicator page.
The enclosure PE601401 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601401 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE601401 |
| CONTAINER_BARCODE | = PE902706 |
| NAME | = Cement Bond Log |
| BASIN | = OTWAY |
| PERMIT | = PEP 93 |
| TYPE | = WELL |
| SUBTYPE | = WELL_LOG |
| DESCRIPTION | = Cement Bond Log, 1:200, (enclosure from WCR) for Grumby-1 |
| REMARKS | = |
| DATE_CREATED | = 12/03/81 |
| DATE_RECEIVED | = 3/07/81 |
| W_NO | = W737 |
| WELL_NAME | = Grumby-1 |
| CONTRACTOR | = Schlumberger |
| CLIENT_OP_CO | = Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)

PE601402

This is an enclosure indicator page.
The enclosure PE601402 is enclosed within the container PE902706 at this location in this document.

The enclosure PE601402 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | PE601402 |
| CONTAINER_BARCODE | PE902706 |
| NAME | Casing Collar Log and Perforating Record |
| BASIN | OTWAY |
| PERMIT | PEP 93 |
| TYPE | WELL |
| SUBTYPE | WELL_LOG |
| DESCRIPTION | Casing Collar Log and Perforating Record, 1:200, (enclosure from WCR) for Grumby-1 |
| REMARKS | |
| DATE_CREATED | 12/03/81 |
| DATE_RECEIVED | 16/03/81 |
| W_NO | W737 |
| WELL_NAME | Grumby-1 |
| CONTRACTOR | Schlumberger |
| CLIENT_OP_CO | Beach Petroleum NL |

(Inserted by DNRE - Vic Govt Mines Dept)