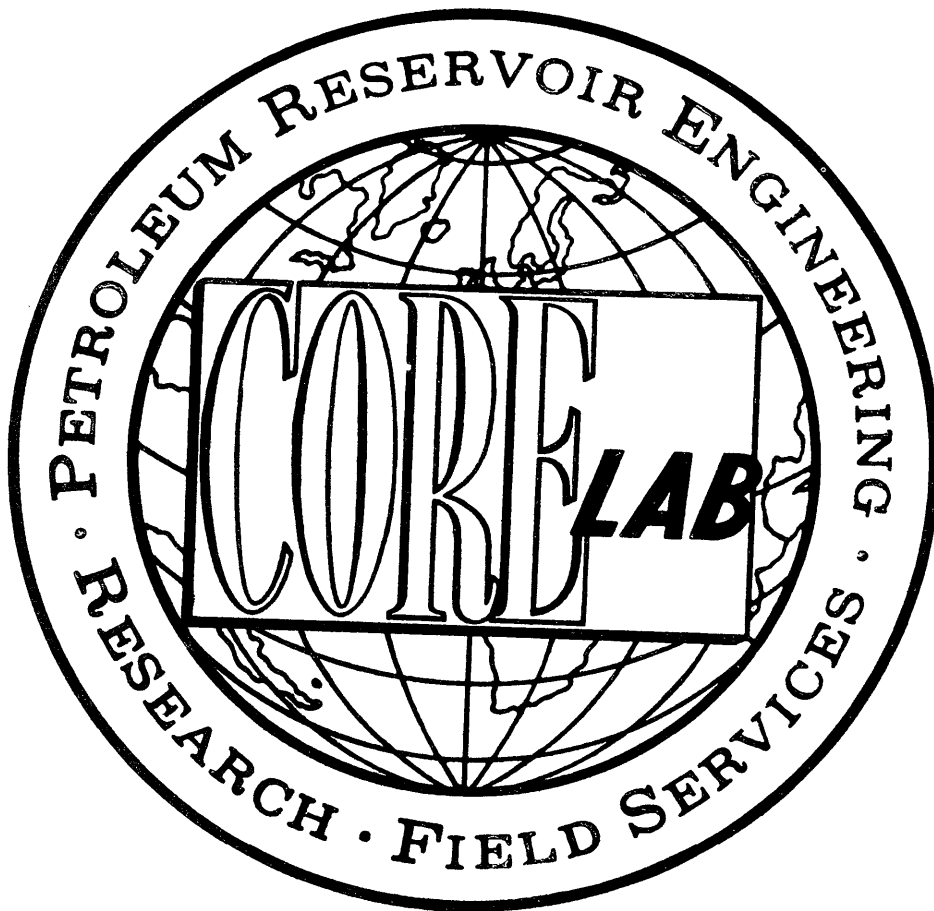


ATTACHMENT TO WCR
FINAL WELL REPORT
KIPPER-1
(W930)



REC'D
16-6-86
JF.

FINAL WELL REPORT

ESSO AUSTRALIA LIMITED

16 JUN 1986 KIPPER #1

W930

PETROLEUM DIVISION

INDEX

- 1. INTRODUCTION
- 2. RIG SPECIFICATIONS
- 3. WELL INFORMATION, PROGRESS AND HISTORY
- 4. LITHOLOGY AND CORE-O-GRAPHS
- 5. EXTENDED SERVICE PACKAGE :
 - A. INTRODUCTION
 - B. EQUIPMENT
 - C. MONITORING EQUIPMENT
- 6. ESP PLOT DESCRIPTIONS AND CONCLUSIONS
- 7. B.H.T. ESTIMATION
- 8. OVERBRUDEN GRADIENT CALCULATIONS AND PLOT
- 9. GAS ANALYSES :
 - A. COMPOSITION GRAPHICS
 - B. SIDEWALL CORES
- 10. CORE LAB DATA SHEETS :
 - A. BIT RECORDS
 - B. MUD DATA
 - C. R.F.T. DATA
 - D. PRODUCTION TEST DATA

COMPUTER DATA LISTINGS :

- BIT RECORD AND INITIALIZATION DATA
- HYDRAULIC ANALYSIS
- DATA LIST A
- DATA LIST B
- DATA LIST C
- DATA LIST D

APPENDED PLOTS :

- DRILL DATA PLOT
- TEMPERATURE PLOT
- PRESSURE PLOT
- GEO PLOT
- GRAPHOLOG
- TRITIUM PLOT

1. INTRODUCTION

INTRODUCTION

KIPPER #1 was drilled by ESSO AUSTRALIA LIMITED, in the Bass Strait, Australia.

Well co-ordinates were :

Latitude : 38°10' 35.855"S
Longitude : 148°35' 46.777"E

The well was drilled by South Seas Drilling Company's semi-submersible rig "Southern Cross", and monitored by Core Laboratories Extended Service Field Laboratory 2007.

KIPPER #1 was spudded on 5th March 1986 and reached a total depth of 2875 metres on 28th March 1986, a total drilling time of 24 days. The main objectives of the well were to :

1. Evaluate the hydrocarbon potential of a series of intra-Latrobe Group fault dependent closures; and
2. Test the hydrocarbon potential of a small Top of Latrobe Group anticlinal closure.

Elevations were :

Kelly bushings to mean sea level 21 metres
Water depth 94 metres
Kelly bushings to mean sea bed 115 metres

All depths used in this report and accompanying logs refer to depth below rotary kelly bushings (RKB).

Core Laboratories personnel involved in the logging of KIPPER #1 were as follows :

B. Paulet	-	Unit Supervisor
T. Wyeth	-	Pressure Engineer
B. Giftson	-	Logging Crew Chief
M. Smith	-	Well Logger
C. Nedin	-	Well Logger
S. Williamson	-	Well Logger
R. Poltorak	-	Tritium Operator
J. Bagnall	-	Tritium Operator
A. Hoff	-	Tritium Operator

2. RIG SPECIFICATIONS

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LIMITED

WELL KIPPER #1

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N ^o 107)
TYPE	SEMI-SUBMERSIBLE, TWIN HULLED
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPACITY OF 1,000,000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNER	DRILLCO 5½" x 50' HEX KELLY
ROTARY TABLE	OILWELL A 37½ SINGLE ELECTRIC MOTOR
ROTARY SLIPS	VARCO DCS-L
MUD PUMPS	TWO OILWELL A 1700PT. RATED AT 1600HP
MUD SYSTEM	FOUR MUD TANKS HAVING A TOTAL CAPACITY OF 1200 BBL, AND ONE PILL TANK HAVING A CAPACITY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6 x 8" CENTRIFUGAL BY TW 100HP ELECTRIC MOTORS. DESANDER: 1 DEMCO 4 CONE 12" MODEL N ^o 124 DESILTER: 1 DEMCO 4"-16H 16 CONE DEGASSER: 1 SWACO MODEL N ^o 36 SHALE SHAKERS: 2 BRANDT DUAL UNIT TANDEM - GHI DUAL UNIT
BLOW OUT PREVENTORS	THREE SHAFFER L.W.S. 18 3/4" - 10,000 psi TWO HYDRIL G.L. 18 3/4" - 5,000 psi
WELL CONTROL EQUIP.	FOUR VALV CON ACCUMULATORS CHOKES: 2 C.I.W. ABJ H2 2 1/16" - 10,000 psi, 1 SWACO SUPER CHOKE 2" - 10,000 psi
TUBULAR DRILLING EQUIPMENT	DC: 6½" x 2 13/16" (4" IF TJ) 8" x 2 13/16" (6 5/8" H90 TJ) 9 3/4" x 3" (7 5/8" H90 YJ) HWDP: 5" 50lb/ft GRADE G (6½") 4½" IF TJ DP : 5" 19½lb/ft GRADE G & E (6 3/8" OO 4½" IF TJ)
CEMENTING UNIT MONITORING EQUIPMENT	HALLIBURTON HT-400 UNIT MARTIN DECKER: MUD VOLUME TOTALIZER 6 CHANNEL DRILLING RECORDER 4 PRESSURE GAUGES FLOWSHOW INDICATOR
POWER SUPPLY	2 EMD MD 18 DIESEL ENGINES RATED AT 1950 HP EACH 1 EMD MD 13 DIESEL ENGINE RATED AT 1500 HP
DIRECTIONAL EQUIP.	-
MISCELLANEOUS (E.G. RISER, COMPENSATION SYSTEM, PIPE RACKER, DP EQUIPMENT)	
RISER: REGAN FC-7 TELESCOPIC 21" ID. PLUS FLOW DIVERTOR.	
CASING POWER TONGS: ECKEL 13 3/8" (20,000 ft lbs), 20" (35,000 ft lbs)	
CMT BULK TANKS: 3 x 1570 cu ft. RISER TENSIONER: 6 WESTERN GEAR, 50' STROKE, 80,000 lbs.	
MUD BULK TANKS: 3 x 1570 cu ft. GUIDE LINE TENSIONERS: 4 WESTERN GEAR 16,000 lbs, 40' STROKE	

3. WELL INFORMATION, PROGRESS AND HISTORY

WELL INFORMATION SHEET

COMPANY Esso Australia Limited
 WELL Kipper #1

Sheet No. 1

WELL NAME Kipper #1

OPERATOR Esso Australia Limited
 PARTNERS BHP, Shell, TNT, News Corp, Crusader, Mincorp

RIG OWNER South Seas Drilling Company
 NAME OR NUMBER Southern Cross
 TYPE Semi Submersible

LOCATION LATITUDE (X) 38°10'35.855"S LONGITUDE (Y) 148°35'46.777"E
 FIELD Kipper AREA Gippsland Basin
 COUNTY Bass Strait STATE Victoria
 COUNTRY Australia
 DESCRIPTION Wildcat

DATUM Mean Water Depth 94 metres RKB to Water Level 21 metres

DATES SPUD 5th March, 1986 TOTAL DEPTH 28th March 1986

HOLE SIZES	Depth From	Depth To	Bit Size (Inches)	No. of Bits	No. of Reamers	Date From	Date To	Cased	Logged
	95	256	26	1	-	5/3/86	5/3/86	Y	N
	256	846	17½	1	-	6/3/86	7/3/86	Y	Y
	846	2875	12½	7	-	9/3/86	28/3/86	Y	Y

DRILLING FLUIDS	Depth From	Depth To	Weights	Type
	95	256	8.6 TO 8.6	Seawater
	256	846	8.6 TO 9.2	Seawater Drill Solids
	846	2875	9.2 TO 10.5	Seawater-Gel-Polymer

WIRELINE LOGGING	Depth From	Depth To	Hole Size	Date Run	Logs Run
	834.8	238	17½	7/3/86	SDT-GR
	2139.5	1195	12½	17/3/86	DLL-MSFL-GR-LDTC-CNTH
	-	-	12½	17-18/3/86	RFT's 1 to 37
	2869	1980	12½	28/3/86	DLTE-LDTC-CNTH-MSFL-SP-GR
	1980	1450	12½	28/3/86	CAL
	-	-	12½	29-30/3/86	RFT's 38 to 64
	2870	832	12½	30/3/86	DITE-SDT-GR
	2870	1350	12½	30/3/86	HDT-GR

RISER CASING & LINER	Depth From	Depth To	OD (Ins)	ID (Ins)	Weight	Grade	Thread	Date Run	Cement	Stages	Exces
	0	115	22	21							
	115	241	20	19.124	94	X52	JB Box	5/3/86	'G'	1	1
	115	830	13 3/8	12.615	54.5	K55	Butt	8/3/86	'G'	1	-
	115	2861	9 5/8	8.681	47	N80	Butt	1/4/86	'G'	2	-

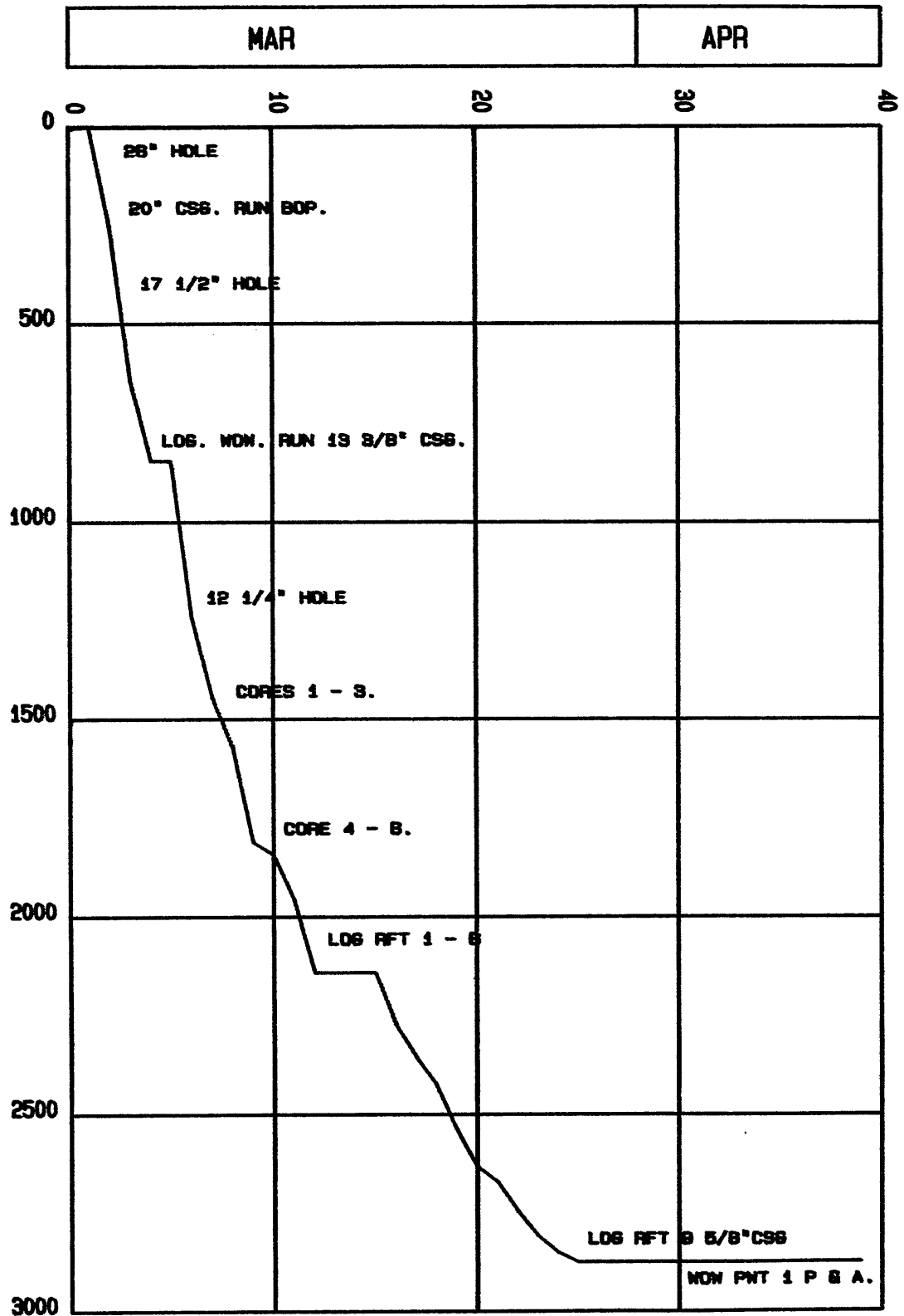
WELL INFORMATION SHEET
(SUPPLEMENTARY)

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 1

Depth from (m)	Depth to (m)	Hole size (ins.)	Date run	Logs run
2870	421	12½	30/3/86	WST-GR
-	-	12½	31/3/86	CST's
2870	95	12½	2/4/86	CCL-GR

PROGRESS LOG
ESSO AUSTRALIA LTD. KIPPER 1



WELL HISTORY
KIPPER #1

4TH MAR 1986 Ran anchors and ballasted rig.

5TH MAR 1986 Drilled 26" hole from 115 metres to 256 metres, ran 20" casing.

6TH MAR 1986 Ran B.O.P.'s and drilled 17½" hole from 256 metres to 646 metres.

7TH MAR 1986 Drilled 17½" hole to 846 metres, ran wiper trip; circulated out. Waited on weather.

8TH MAR 1986 Waited on weather; ran wiper trip; circulated out; ran 13 3/8" casing and tested B.O.P.'s.

9TH MAR 1986 R.I.H. with 12½" bit and drilled cement; conducted phase I P.I.T. Drilled out shoe and formation to 851 metres; conducted phase II P.I.T. (16.7 ppg E.M.W.). Drilled ahead to 1244 metres.

10TH MAR 1986 Drilled ahead to 1427 metres; P.O.O.H. to cut core #1 (1427.5 metres - 1436.0 metres); recovered 100%. Cut core #2 (1436.0 metres - 1445.5 metres); recovered 100%.

11TH MAR 1986 Cut core #3 (1445.5 metres - 1455.3 metres); recovered 90%. Drilled 12½" hole from 1455.3 metres - 1572 metres.

12TH MAR 1986 Drilled ahead to 1813 metres, P.O.O.H. to cut core #4.

13TH MAR 1986 Cut core #4 (1813.2 metres - 1822.9 metres); recovered 76%. Drilled 12½" hole from 1823 metres to 1832 metres. P.O.O.H. to cut core #5. Cut core #5 (1832.2 metres - 1841.6 metres); recovered 91%.

14TH MAR 1986 Cut core #6 (1841.6 metres - 1851.1 metres); recovered 100%. Drilled 12½" hole from 1851.1 metres to 1955 metres.

15TH MAR 1986 Drilled ahead to 2140 metres (proposed T.D.). Ran wiper trip.

16TH MAR 1986 Circulated out after wiper trip. Observed a 10-15 barrel increase in pit levels; closed annular preventer (SIDPP = 0 psi, SCP = 0 psi). Opened preventer; well was unloaded. Closed annular preventer (SIDPP = 0 psi, SICP = 240 psi). Circulated out at 40 SPM with 10.2 ppg mud. After circulation SIDPP was 0 psi, and SICP was 0 psi. Ran wiper trip and circulated out, 210 units gas on bottoms up. Increased mud weight to 10.5 ppg.

17TH MAR 1986 P.O.O.H. and ran E logs and R.F.T.'s 1 to 32.

18TH MAR 1986 Ran R.F.T.'s 32 to 37, tested B.O.P.'s and R.I.H. with HTC J22; circulated and conditioned mud.

19TH MAR 1986 Drilled 12½" hole to 2191 metres, conducted 10-10-10, gas was 34-34-34. Drilled ahead to 2274 metres.

20TH MAR 1986 Drilled ahead to 2355 metres.

21ST MAR 1986 Drilled to 2400.6 metres. P.O.O.H. for bit change due to low R.O.P.'s. R.I.H. with NB6 HTC J22. Trip gas was 15-39-15 units. Drilled from 2400.6 metres to 2424 metres.

22ND MAR 1986 Drilled ahead to 2538 metres.

23RD MAR 1986 Drilled to 2626 metres, flow checked drilling break; no flow. Drilled to 2632 metres.

24TH MAR 1986 Drilled to 2650.3 metres. P.O.O.H. for bit change due to high hours. R.I.H. with NB7 (HTC J22). Trip gas was 20-62-30 units. Drilled to 2671 metres.

25TH MAR 1986 Drilled ahead 2746 metres.

26TH MAR 1986 Drilled ahead to 2809 metres.

27TH MAR 1986 Drilled to 2840 metres. P.O.O.H. for bit change due to high hours. R.I.H. with NB8 (HTC J33). Trip gas was 25-46-18 units. Drilled to 2850 metres.

28TH MAR 1986 Reached T.D. (2875 metres). Made a wiper trip, before pulling out to log.

29-30TH MAR 1986 Logged the hole.

31ST MAR 1986 Completed the logging, then cleaned the well-bore in preparation for a production test.

1ST APR 1986 Ran the string of production casing (9 5/8" diameter) and cemented same, in two stages.

2ND APR 1986 Rotary bushings accidently fell down the hole. Fished for the bushings. Had to pull the B.O.P.'s to recover the fish. Then reran the B.O.P.'s.

3RD APR 1986 Laid down the 12½" B.H.A., then conditioned the mud.

4TH APR 1986 Ran the casing scraper, then the gauge ring (GR-CCL). Set the packer at 1996.1 metres. Ran the lower test assembly and 3½" tubing.

5TH APR 1986 Rigged up the upper test assembly; tested equipment; then waited on weather.

6TH APR 1986 Displaced the tubing. Perforated the interval 2005-2013 metres at daylight. Flowed the well (clean-up flow period). Shut in the well to run the wireline.

7TH APR 1986 Flowed the well through the separator.

Typical flow rates of 25 million cubic feet of gas per day, and 520 barrels of condensate per day confirmed Kipper #1 as a discovery well.

Killed the well, then rigged down all the production equipment.

8TH APR 1986 Plugged and abandoned the well.

4. LITHOLOGY AND CORE-O-GRAPHS

LITHOLOGY SUMMARY

The main objectives of Kipper #1 were:

1. To evaluate the hydrocarbon potential of a series of intra-Latrobe Group fault dependent closures.
2. To test the hydrocarbon potential of a small Top of Latrobe Group anticlinal closure.

Formation tops are based on cuttings examination only.

Gippsland Limestone (260 metres - 900 metres)

260 metres - 480 metres	Interbedded Calcarenite and Calcilutite Limestone.
480 metres - 610 metres	Calcisiltite Limestone with minor Calcilutite interbeds, and occasional Calcarenite stringers.
610 metres - 780 metres	Predominantly Calcilutite Limestone (to 100%) with minor interbeds of Calcisiltite Limestone.
780 metres - 900 metres	Interbedded Calcilutite and Calcisiltite Limestone grading to predominantly Calcisiltite Limestone at 800 metres. After 850 metres the formation is exclusively Calcisiltite Limestone.

Seaspray Group (900 metres - 1420 metres)

900 metres - 1220 metres	Calcareous Siltstone. Homogeneous throughout interval. Grades in part to very fine grained Calcarenite Limestone.
1220 metres - 1280 metres	Calcareous Siltstone grading to Silty Claystone and Claystone.
1280 metres - 1420 metres	Claystone (Marl).

Gurnard Formation (1420 metres - 1447 metres)

1420 metres - 1447 metres	Silty Sandstone with common Siltstone interbedding.
---------------------------	---

Cores 1 - 3 cut in this interval.

N.B. The Basal Gurnard Formation occurs after 1438 metres with a change in the Sandstone grain sizes from medium-coarse grained above 1438 metres, to very fine to fine grained below the latter grade rapidly to 100% Siltstone at 1447 metres. Wet Gas hydrocarbon shows occurred in this interval.

The Latrobe Group (1447 metres - 2875 metres)

1447 metres - 1455.5 metres	Siltstone (100%). This unit constituted the major portion of Core no. 3.
1455.5 metres - 1550 metres	Sandstone with minor Coals. Also minor Shales and Siltstone.
1550 metres - 1600 metres	Sandstone with very minor Coal and Siltstone stringers.
1600 metres - 1612 metres	Massive Siltstone, minor Claystone and Coal.
1612 metres - 1640 metres	Predominantly Sandstone with minor Siltstone.
1640 metres - 1695 metres	Coal, Claystone and predominant Siltstone with minor interbedded Sandstone and Shale.
1695 metres - 1790 metres	Predominantly Sandstone with minor carbonaceous Shale and Siltstone interbedding.
1790 metres - 1851 metres	Sandstone with minor Coals, Shale and Siltstone. Cores 4, 5 and 6 were cut in this interval. Wet Gas and Oil Hydrocarbon shows were observed.
1851 metres - 1895 metres	Sandstone with minor Siltstone and Shale stringers.
1895 metres - 2005 metres	Altered volcanics.
2005 metres - 2080 metres	Predominantly Sandstone with minor Siltstone and Coal stringers.
2080 metres - 2140 metres	Predominantly Sandstone, with Conglomerate (to 40%) and minor Siltstone.
2140 metres - 2150 metres	Volcanics-Siltstone interbed.
2150 metres - 2260 metres	Predominantly Sandstone. (Major Siltstone interbedding with minor Shale and Coal).
2260 metres - 2305 metres	Conglomerate with minor Silstones.

2305 metres - 2350 metres	Massive Siltstone.
2350 metres - 2450 metres	Sandstone and interbedded Siltstone, with minor Shale and Coal stringers.
2450 metres - 2525 metres	Interbedded Sandstone and Siltstone.
2525 metres - 2570 metres	Major Siltstone, minor Sandstone and Shale.
2570 metres - 2640 metres	Siltstone with interbedded Sandstone.
2640 metres - 2800 metres	Siltstone with minor Sandstone interbedding.
2800 metres - 2830 metres	Siltstone with very minor Sandstone.
2830 metres - 2875 metres	Major Sandstone interbedded with minor Siltstone, and very minor Coal.

SUMMARY OF HYDROCARBON OCCURRENCES

Gippsland Limestone and Seaspray Group

260 metres - 680 metres	Background Gas: averaging 20 to 30 units. C ₁ and C ₂ only.
680 metres - 1240 metres	Background Gas: averaging 20 units. C ₁ to C ₃ present.
1240 metres - 1405 metres	Background Gas: averaging 7 units, reading 10 units by 1405 metres.
1405 metres - 1420 metres	Background Gas: 10-12 units. C ₁ and C ₂ increasing with re-emergence of C ₃ . C ₄ present and increasing at a minor magnitude.

Gurnard Formation (inclusive of Basal Gurnard and Latrobe Group Formation Change)

1420 metres - 1465 metres This zone is characterised by the occurrence of wet hydrocarbon gases (condensate related) with oil fluorescence and solvent-cutting occurring between 1427 metres and 1447 metres (10 to 20% sample fluorescence increasing to 30% to 100% fluorescence from 1435 metres). Bright yellow pin-point fluorescence yielding instant to slow streaming pale-bright milky white cut; pale white residue.

Background peaks occur to 105 units.

High magnitude C₁. Relatively high magnitude C₂-C₆ reaching 200 ppm (C₂) and 20 ppm (C₆).

Cores 1-3 were cut in this interval between 1427.5 metres and 1455.4 metres.

Latrobe Group

1465 metres - 1695 metres Characterised by Coal - related gas peaks between 1465 metres and 1560 metres. Background gas peaks oscillate between 5 and 88 units, averaging 20 units. C₂ and C₃ present to 200 ppg and 40 ppm respectively. After 1560 metres background gas becomes steadier averaging 10 units with C₂ and C₃ present.

- 1695 metres - 1735 metres Background gas oscillates in peaks to 40 units C_2 to C_4 at increasing magnitudes, averages: C_2 100 ppm, C_3 65 ppm, C_4 15 ppm respectively. (Non-Coal related gas).
- 1735 metres - 1790 metres Two minor oil shows with 5-15% fluorescence were located at two intervals: 1735 metres - 1745 metres and 1770 metres - 1775 metres respectively. Sandstone - 5% dull orange/yellow sample fluorescence; slow, blue white streaming cut.
- Wet gas peaks with emergence of C_5 (140 ppm) in one peak at 1740 metres. Background gas to 52 units.
- 1790 metres - 1900 metres Wet gas hydrocarbon (condensate-related) shows with oil fluorescence noticeable in four columns: between 1800 metres - 1813 metres (10%), 1815 metres - 1817.5 metres (to 80%), 1825 metres - 1839.5 metres (predominantly 100%) and one minor band 1840.5 metres to 1841 metres (100%).
- Background gas peaks reached as high as 300 units (1800 metres) and throughout, oscillating high magnitude hydrocarbon gases occurred to C_6 . (This reached a maximum reading of 120 ppm). Between 1850 metres and 1900 metres background gas remained steady averaging 15-20 units with lower magnitude C_1 - C_6 gases continuing. Cores 4, 5 and 6 were cut in this interval between 1813.2 metres and 1851.1 metres.
- 1900 metres - 1990 metres (Altered Volcanics). Background gas was low, averaging $3\frac{1}{2}$ units after 1915 metres; only C_1 and C_2 gases remained, with low magnitude readings.
- 1990 metres - 2285 metres (To the Basal Conglomerate at 2285 metres)
- High average background gas with oscillating peaks.
- Steady to 2140 metres: between 50 and 270 units (average 150 units); C_1 - C_6 (relatively high magnitudes).

From 2140 metres to 2220 metres background gas oscillated markedly (to 600 units). High magnitude C₁-C₆ readings.

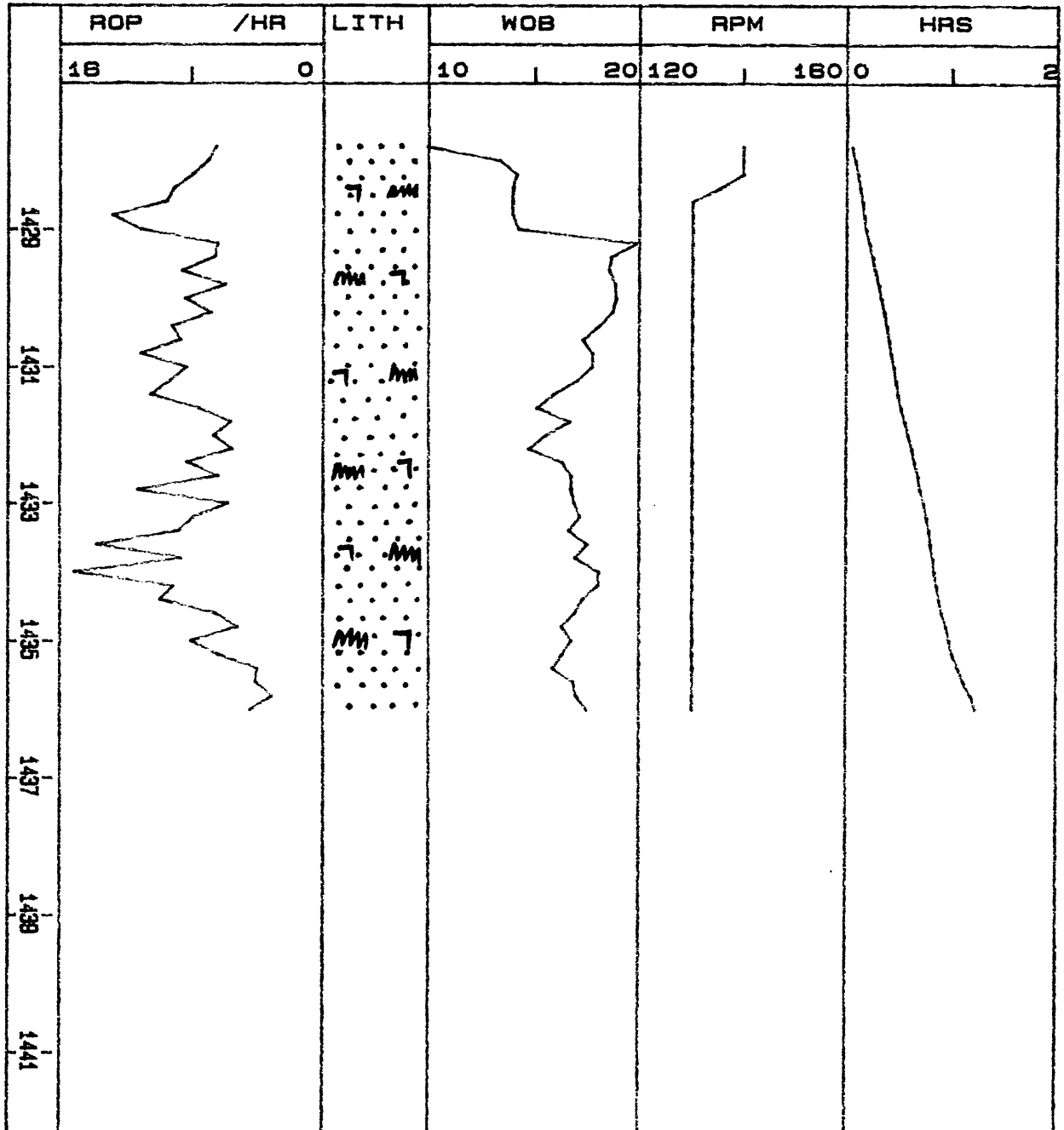
2220 metres - 2285 metres: Steadier background gas levels; smaller oscillation of peaks. (Average background gas was 280 units falling to 50 units. C₄, C₅ and C₆ disappeared at the end of the interval.)

Proposed T.D. was 2121 metres but was extended to 2875 metres because further evaluation was required to test the porosity of underlying Latrobe Group Sandstones, and to match a fault dependent closure with the possible arrival of Strzelecki Formation sediments.

2285 metres - 2450 metres	Background gas 5-20 units averaging 15 units C ₁ -C ₃ .
2450 metres - 2550 metres	Background gas: up to C ₄ at 15 ppm (7-15 units).
2550 metres - 2600 metres	Oscillation background gas. Peaks to 190 units; average 20 units to 50 units; C ₁ to C ₅ present to 30 ppm C ₅ .
2600 metres - 2830 metres	Background gas steady, averaging 8-10 units.
2830 metres - 2855 metres	Background gas: climbing to 20 units; peaks to 750 units. C ₁ to C ₆ (C ₆ peaked at 35 ppm).
2855 metres - 2875 metres	Diminishing background gas: 25 units falling to 5 units; C ₁ to C ₄ (at 15 ppm C ₄).

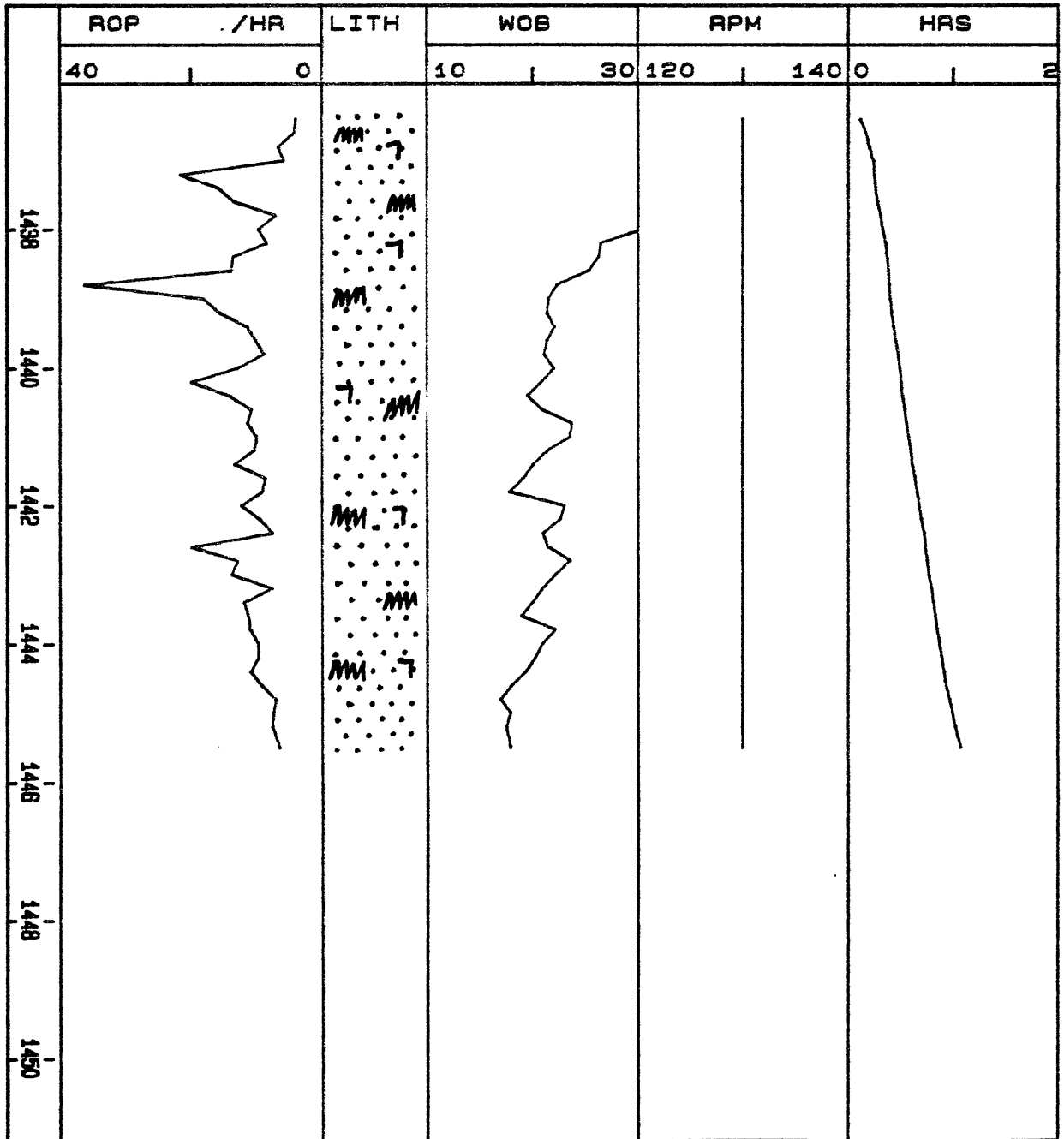
CORE-O-GRAPH

CLIENT: ESSO AUSTRALIA LTD.
 WELL: KIPPER NO.1
 CORE NO.: 1
 INTERVAL CORED FROM 1427.5m. TO 1436.0m.
 CUT: 8.5 RECOVERED: 9.1m. (107.1%)
 FORMATION: LATROBE GROUP
 BIT MAKE & TYPE: CHRIS RC478
 CORE BARREL SIZE: 8.00in.x 4.75in.x 10.80m.
 BIT SIZE: 9.88 MUD WT.: 9.2



CORE-O-GRAPH

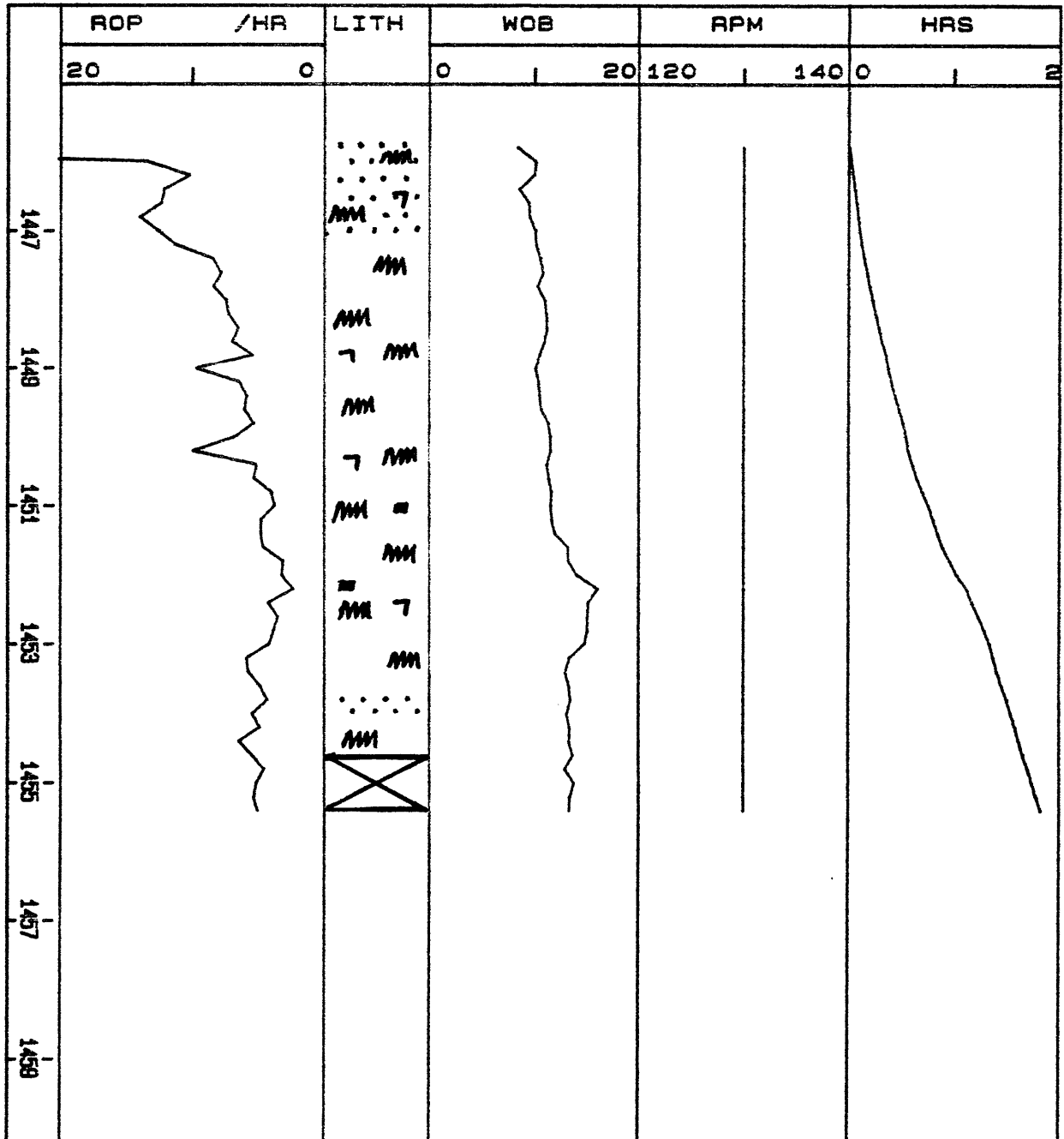
CLIENT:	ESSO AUSTRALIA LTD.
WELL:	KIPPER NO.1
CORE NO.:	2
INTERVAL CORED FROM	1438.0m. TO 1445.5m.
CUT: 8.6	RECOVERED: 8.5m. (100.0%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRIS RC478
CORE BARREL SIZE:	8.00in.x 4.75in.x 10.80m.
BIT SIZE: 8.88	MUD WT.: 8.2



1st timer '81

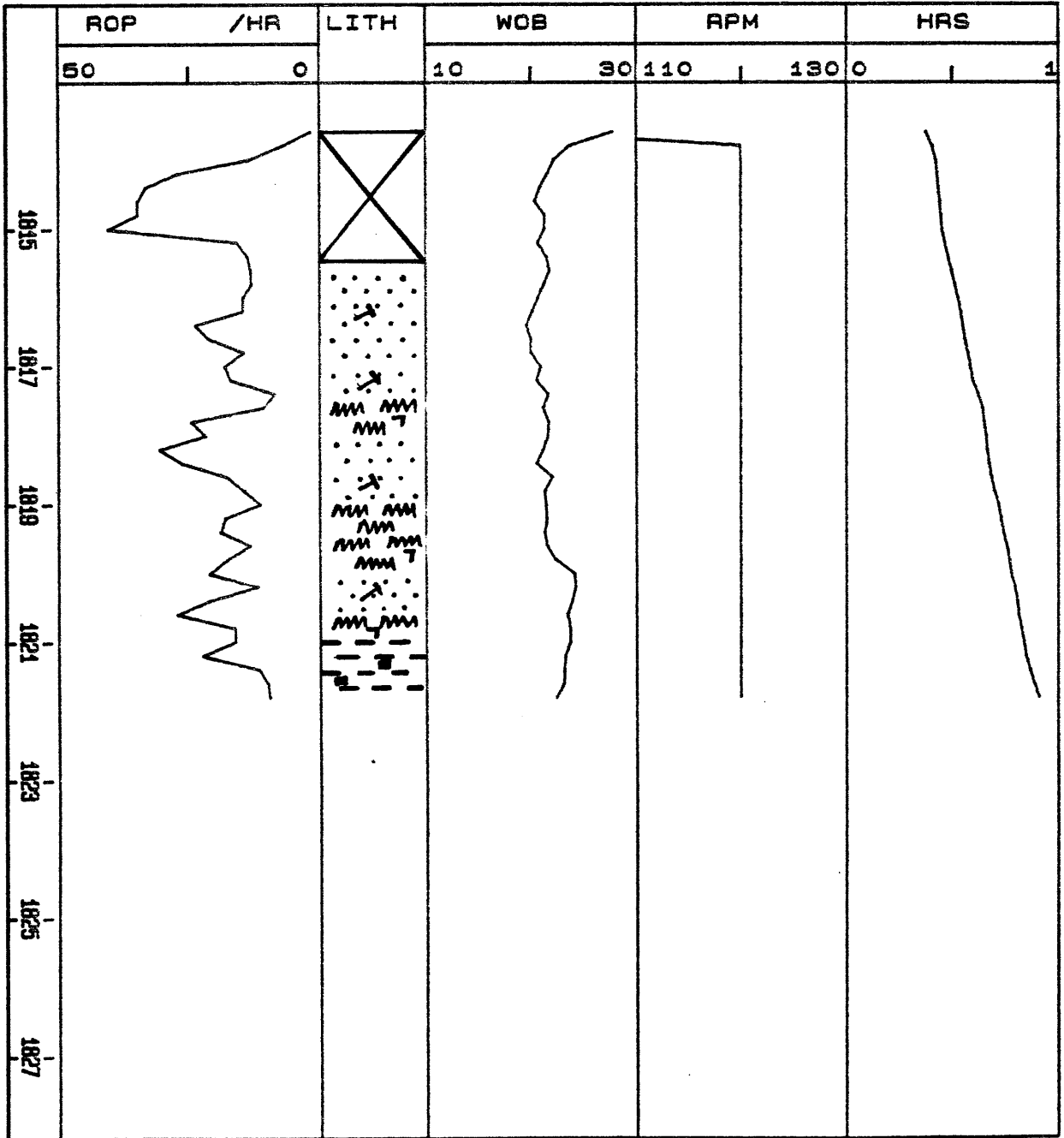
CORE-O-GRAPH

CLIENT: ESSO AUSTRALIA LTD.
 WELL: KIPPER NO.1
 CORE NO.: 3
 INTERVAL CORED FROM 1445.5m. TO 1455.4m.
 CUT: 9.9 RECOVERED: 8.9m. (89.9%)
 FORMATION: LATROBE GROUP
 BIT MAKE & TYPE: CHRIS RC478
 CORE BARREL SIZE: 8.00in.x 4.75in.x 10.80m.
 BIT SIZE: 9.88 MUD WT.: 9.2



CORE-O-GRAPH

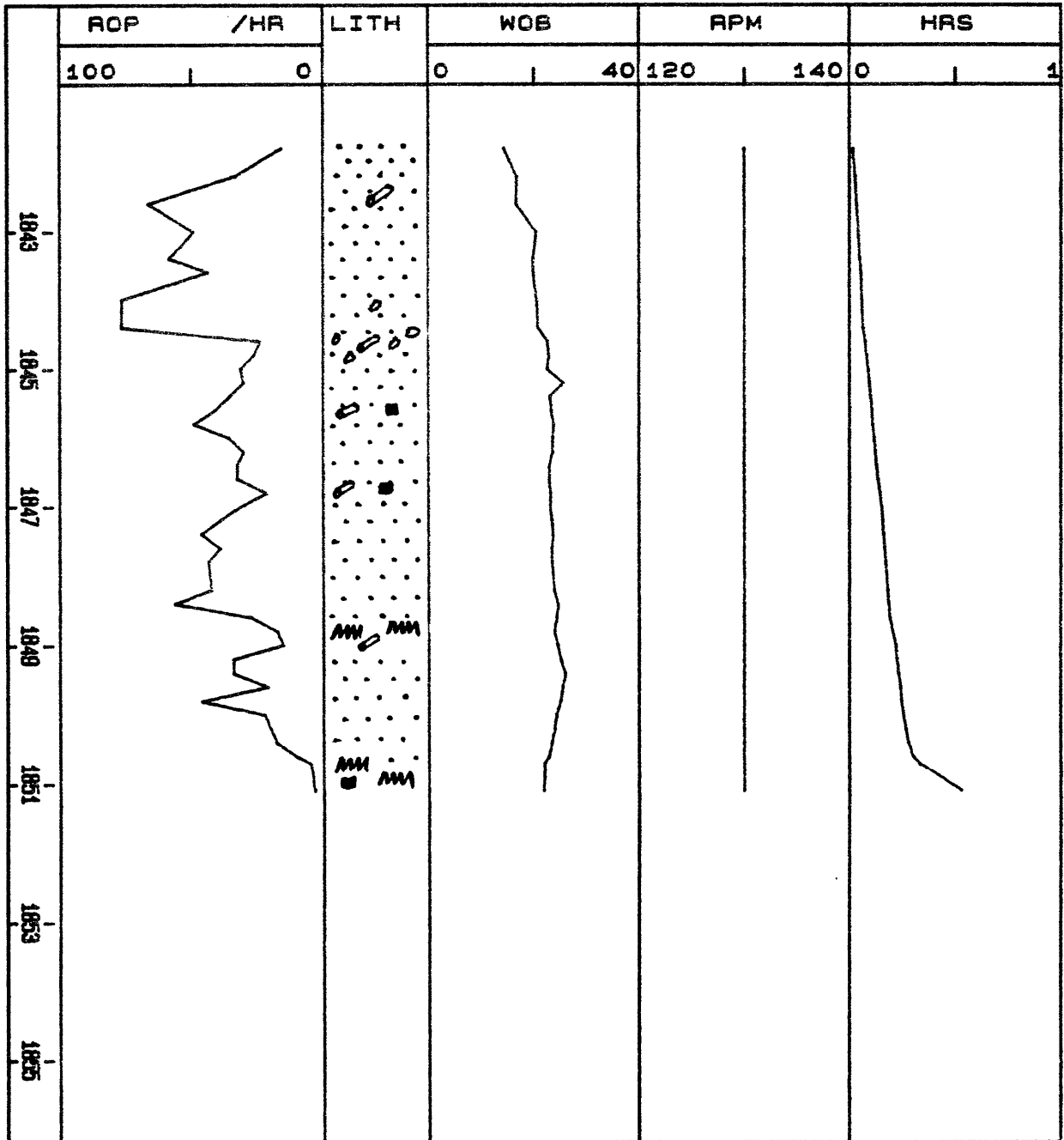
CLIENT: ESSO AUSTRALIA LTD.
 WELL: KIPPER NO.1
 CORE NO.: 4
 INTERVAL CORED FROM 1813.2m. TO 1821.6m.
 CUT: 9.6 RECOVERED: 7.4m. (77.1%)
 FORMATION: LATROBE GROUP
 BIT MAKE & TYPE: CHRIS RC478
 CORE BARREL SIZE: 8.00in.x 4.75in.x 10.20m.
 BIT SIZE: 9.68 MUD WT.: 9.8



Jettmer '81

CORE-O-GRAPH

CLIENT: ESSO AUSTRALIA LTD.
 WELL: KIPPER NO.1
 CORE NO.: 8
 INTERVAL CORED FROM 1841.8m. TO 1851.1m.
 CUT: 9.5 RECOVERED: 9.5m. (100.0%)
 FORMATION: LATROBE GROUP
 BIT MAKE & TYPE: CHRIS RC478
 CORE BARREL SIZE: 8.00in.x 4.75in.x 10.80m.
 BIT SIZE: 9.88 MUD WT.: 9.7



latimer '84

5. EXTENDED SERVICE PACKAGE

EXTENDED SERVICE INTRODUCTION

The Core Laboratories Extended Service Package includes sensors, recorders and computer facilities useful in the drilling operation, for the detection of abnormal formation pressure, and the optimization of drilling.

Presented graphically on Core Laboratories E.S. logs (discussed individually in the following section of this report) are the various functions necessary for well control, abnormal formation pressure detection and drilling optimization.

Other available services include electric log interpretation programs for the wellsite geologist, hydraulics (synthesis and analysis), well kill, cost per foot, bit nozzle selection, swab and surge created by pipe movement, and bit performance programs for the drilling engineer.

Core Laboratories E.S. logs include the following :

E.S. PRESSURE LOG

Information plotted on this log includes formation pore pressure, mud weight in and formation fracture pressure. This is plotted on linear graph paper at a vertical scale of 1:5000. The formation pore pressure and fracture pressure gradients are based on all available information. This is the conclusion log, therefore the information may be modified by results from formation drill stem tests, data from adjacent wells, kicks, R.F.T.'s, and formation breakdown tests.

CORE LAB DRILL DATA PLOT

This plot, which is drawn while drilling is in progress, is the primary tool by which formation overpressure is detected. Drawn on a 1:5000 scale it is particularly useful in that five plots are drawn side by side, and thus any trend can be readily recognised.

The main plot is that of the corrected "d" exponent, which is presented on a logarithmic scale. The "d" exponent was first developed by Jordan and Shirley in 1966 to assist in interpreting rate of penetration data by normalizing for rotary speed and weight-on-bit per inch of bit diameter.

The modified "dc" exponent was proposed by Rhem and McClendon to compensate for increases in mud weight. This involves multiplying the standard "d" exponent value by the inverse ratio of the mud weight. A multiple of 9 ppg was used for convenience to return the magnitude of the "dc" to a comparable value of it's uncorrected state. In this case, a multiplier of 10 ppg was used. The equation for "dc" is therefore :

$$'dc' = \frac{\text{Log } \frac{(\text{ROP})}{(\text{RPM} \times 60)}}{\text{Log } \frac{(\text{WOB} \times 12)}{(\text{Bit diam} \times 1000)}} \times \frac{10}{\text{MDI}}$$

Deviations from the normal "dc"s trend may be interpreted as being due to a change in formation pore pressure. An equation derived by Eaton is used in an attempt to evaluate pore pressure from deviations in the "dc"s plot. This method of overpressure detection can be fairly accurate for homogeneous shales, but where the sand/silt/shale ratio varies a great deal, inaccuracies often occur.

The other main plots are a logarithmic rate of penetration, which complements the "dc"s plot and a linear plot of total mud gas.

Shale densities are also plotted on a linear scale in order to show up a decreasing density trend, and hence a possible transition into abnormally pressured shales. The points are determined by measuring the density of air-dried shale samples in an accurately calibrated liquid density column.

An interpreted lithology column is also included on the log, as is a plot of mud density in , to assist in interpretation. All relevant information, such as casing points, bit runs, etc. are also included.

E.S. GEO-PLOT LOG

This is plotted by the computer while drilling is in progress. At a later date this plot can be re-run on different scales to suit the client. The data is stored on magnetic tape during the drilling operations. Functions plotted on this log are : rate of penetration, corrected "d" exponent, break-even analysis, formation pore pressure, mud density in and formation fracture pressure. A Geo-plot is included in this report, at a scale of 1:5000.

E.S. FLOWLINE TEMPERATURE, FLOWLINE TEMPERATURE END-TO-END PLOTS

Flowline temperature and end-to-end plot of flowline temperature are the two main plots relating to the temperature of the returning drilling fluid. These are plotted on a vertical scale of 1:5000. The use of these plots as an indicator of the presence of over-pressure takes secondary role to the E.S. drill log. Continuous observation of flowline temperature may indicate an increase in geothermal gradient. Factors affecting temperature are noted on the log, such as new bit runs, changes in the circulation rates, circulating cuttings out and the addition of water and chemicals to the active mud system. Since the goal of the end-to-end plot is to provide a representation of the geothermal gradient, all surface changes which would cause artificial changes in the flowline temperature are disregarded.

ELECTRIC LOG PLOT

A plot of shale resistivity (ohm-metres squared/metre), sonic travel time (microseconds per foot), bulk density (gm/cc) and neutron porosity (%), may be made using data supplied by Schlumberger. Two-cycle semi-log paper is used, with a vertical scale of 1:10000. As far as possible only clean shale points are selected and plotted. The relatively compressed vertical scale makes deviations from the normal compaction trend easier to identify.

PROGRESS LOG

This is the traditional presentation of footage against elapsed time in days. It shows actual drilling time from spud to total depth.

DATA RECORDING

Data is recorded on tape while drilling, both as raw input numbers and computer calculated numbers. This data can be accessed later for use in interpretative programs or to review data. Comprehensive data lists are included in this report.

MUD DATA SHEETS

These are a record of the mud properties while drilling, and are derived from the mud engineer's daily report.

DRILLING PARAMETER PLOT

The drilling parameter plot shows : rate of penetration, weight-on-bit, rotary speed, pump pressure, hydraulic horsepower, impact force and jet velocity. This plot is drawn by the computer and is designed to aid the drilling engineer in drilling optimization. The scale chosen here is 1:5000.

HYDRAULIC ANALYSES

During drilling, routine hydraulic analyses are calculated by the computer, and these are made available to the drilling engineer. This report includes a sample hydraulics for each 100 metres.

GAS COMPOSITION ANALYSIS

For each significant gas show the chromatograph results are analysed using two techniques :-

1. Log plot
2. Triangulation plot

Both plots are included in this report.

GRAPHOLOG

This is plotted on the industry-standard form on a vertical scale of 1:500. Rate of penetration is plotted in metres per hour, together with mud gas chromatography results. Total gas is also plotted, and a percentage lithology log is drawn. A lithology description is presented in an abbreviated form. All relevant drilling data is included, as is bit and mud data.

MISCELLANEOUS

Various data collected from this well are also included in this report for reference. These include formation leak-off test data, R.F.T. and well test data where appropriate.

CORE LABORATORIES EQUIPMENT

Core Laboratories Field Laboratory 2007 monitoring equipment includes the following :

A. MUD LOGGING

1. T.H.M. total gas detector and recorder.
2. F.I.D. (Flame Ionization Detector) chromatograph and recorder.
3. Cuttings gas detector.
4. Gas trap and support equipment for the above.
5. Pit volume totalizer and recorder.
6. Digital depth counter.
7. Two integrated pump stroke counters.
8. Ultra-violet fluoroscope.
9. Binocular microscope.
10. Calcimeter.
11. Steam-still gas analyzer.

B. EXTENDED SERVICE PACKAGE

1. HEWLETT PACKARD 9825B desktop computer.
2. HEWLETT PACKARD 9872B plotter
3. HEWLETT PACKARD 2631A printer.
4. Two HEWLETT PACKARD 2621P visual display units. (one located in the client's office).
5. Hookload/weight-on-bit transducer and recorder.
6. Rotary speed sensor and recorder.
7. Stand-pipe pump pressure transducer and recorder.
8. Mud flow out sensor and recorder.
9. Mud temperature sensors and recorders (in and out).
10. Mud conductivity sensors and recorders (in and out).
11. Mud density sensors (in and out) and recorders.
12. Rotary torque sensor and recorder.
13. Shale density apparatus.
14. Hydrogen sulphide gas detector.
15. Carbon dioxide gas detector.
16. DATALOGGER computer, monitor and impact printer.
17. DIGITAL remote paging display (located in the client's office).
18. Casing pressure transducer and recorder.

All the above sensors and gas detectors have displays on the DATALOGGER monitors except the Cuttings gas detector and steam-still.

CORE LABORATORIES MONITORING EQUIPMENT

DEPTH

Depth registered every 0.1 metres and rate of penetration calculated each metre (or every 0.2m while coring); ROP displayed on the computer monitor and chart.

WEIGHT-ON-BIT

A DeLaval 0-5000 psi, solid state pressure transducer is connected to the rig's deadline anchor. The weight-on-bit is calculated in the Datalogger, and displayed (with hookload) on the computer monitor and recorder chart.

ROTARY SPEED

This is a proximity limit switch which pulses once for every revolution of the rotary drive shaft. The value is displayed on the computer monitor and a recorder chart.

PUMP PRESSURE

This is a DeLaval 0-5000 psi transducer mounted on the stand-pipe manifold. The pressure is displayed on the computer monitor and recorder chart.

CASING PRESSURE

This is a DeLaval 0-5000 psi transducer mounted on the choke manifold. The signal is displayed on the computer monitor and on a recorder chart.

PIT VOLUME

Four individual pits are displayed on the monitor. The pit volume total is calculated by the Datalogger and displayed on the monitor. The sensors are vertical floats triggering magnetic switches accurate to +/- 1 barrel.

In addition, a sensor is fitted to the rig's trip tank, so that hole fill-up during trips may be closely monitored. A recorder chart displays the levels of the active pits, the pit volume total, and the trip tank.

PUMP STROKES

These are the limit switch type, counting individual strokes. The pump rates per minute are displayed on the monitor.

ROTARY TORQUE

An American Aerospace Controls bi-directional current sensor is clamped over the power cable of the rotary table motor. Torque is displayed on the computer monitor and recorder chart.

MUD TEMPERATURE

This is a platinum probe resistance thermometer, and an electronics module calibrated 0-100 deg.C. Temperature in and out is displayed on the monitor and recorder.

MUD CONDUCTIVITY

A Balsbaugh electrode-less conductivity sensor contains two toroidally-wound coils and a thermistor enclosed in a donut-shaped housing. Current is induced into the mud by the primary coil and is sampled by the secondary coil, the amplitude of the current being directly proportional to the conductivity of the mud.

MUD DENSITY

Two density sensors (in and out) located in the possum belly and in the pit room, operate on a system of differential pressure. This function is displayed on both chart and monitor.

All the sensors are 12 to 36V DC powered with the exception of the air driven gas trap. Along with monitoring and maintaining the above equipment, Core Lab performed other duties...

CUTTINGS

Microscopic and ultra-violet inspection of cuttings samples at predetermined intervals. Samples were washed, dried, sacked and boxed where necessary. Geochemical samples were canned and boxed.

GAS

1. Flame Ionization Total Hydrocarbon gas detector.

The T.H.M. accurately determines hydrocarbon concentrations up to 100% saturation.

2. Flame Ionization Detector chromatograph.

The F.I.D. is capable of accurate determination of hydrocarbon concentration from C1 to C6+.

3. Cuttings gas detector (Wheatstone Bridge type).

An auxiliary system for total gas detection.

4. Hydrogen Sulphide detector.

Two sensors are located at the shale-shakers and in the pit room, linked to a TAC 404B H2S monitor, to detect H2S emanating from the drilling fluid.

5. Carbon Dioxide detector.

An Infra-red gas analyzer determines the percentage of CO2 present in gas samples broken out of the mud by the gas trap.

SHALE DENSITY

Manual determination of shale density in an accurately calibrated variable density liquid column.

6. E.S.P. PLOT DESCRIPTIONS AND CONCLUSIONS

ESP PLOT DESCRIPTIONS AND CONCLUSIONS
(with particular reference to Pore Pressure)

A prime aim during the drilling of Kipper #1 was utilization of data collected by Core Laboratories DL2007 to provide an estimation of formation pressures. This is described below.

The main pressure indicators that were used while drilling the well were those of rates of penetration, gas levels, 'd' c exponent, mud weight, flowline temperature and lithology.

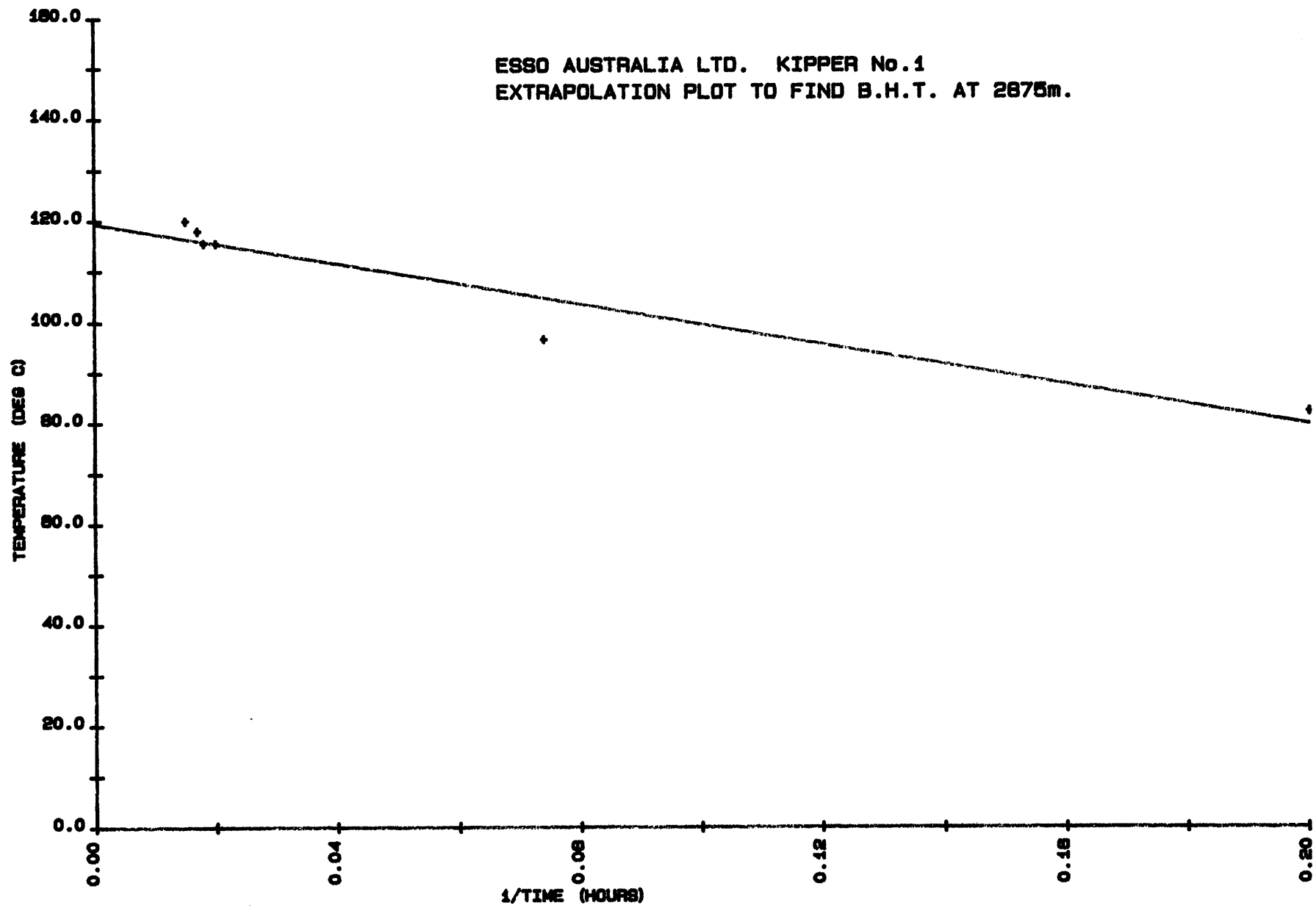
The "Drill Data Plot" (see attached plots inside back cover), shows the rate of penetration, corrected 'd' exponent and mud density plotted against lithology. This plot indicates a normal pressure profile for the Gippsland Basin down to 1990 metres with any irregularities in rate of penetration, corrected 'd' exponent and gas levels being due to lithology changes. The drilling of altered volcanics from 1900 to 1990 metres gave rise to an effective seal structure. On breaking through the seal at 1990 metres a gas column was encountered having a pore pressure of 9.6 ppg (E.M.W.) at the top grading to 8.6 ppg at the base (2270 metres). No connection gas was observed. The pressure profile of the well was then normal until 2845 metres where a sandstone formation was encountered under a siltstone seal. Here the pore pressure was found to be 9.8 ppg.

The "Temperature Plot" displays the flowline temperature in and out and their differential plotted against depth. The temperature plot of Kipper #1 shows a temperature gradient of 1.49°F/100 feet. It shows a normal trend with depth until 1870 metres where the gradient at increases over the volcanic section; it resumes its normal trend after 2000 metres only differing with the expected gradient at points where the mud system was being treated to maintain specifications. The bottom hole temperature was extrapolated to give 119.4°C (246.9°F) at 2875 metres from wireline logging data.

The "Pressure Plot" is a summary of the pressures found in the drilling of Kipper #1. On this plot, estimated pore pressure is plotted along with mud weight and the fracture gradient. The pore pressure of the well was estimated to be 8.4 - 8.5 ppg (E.M.W.) down to 1990 metres and 9.6 ppg grading down to 8.6 ppg from 1990 metres to 2270 metres. The pressure profile of the well was then normal until 2845 metres here the pore pressure was found to be 9.8 ppg.

The fracture gradient curve was based on information obtained from a pressure integrity test carried out after drilling out the 13 3/8" casing shoe (830 metres, 16.7 ppg). As there is no available Overburden Gradient curve for the Gippsland Basin the shape of the curve is based on that of the U.S. Gulf Coast Basin curve and offset to match local data.

7. B.H.T. ESTIMATION



CORE LAB
=====

STRAIGHT LINE LEAST SQUARES BEST FIT

1/TIME ON A LINEAR SCALE AGAINST
TEMP. ON A LINEAR SCALE

ENTERED DATA:

DATA SET #	1/TIME	TEMP.
1	0.200	82.0
2	0.074	96.5
3	0.020	115.5
4	0.018	115.5
5	0.017	118.0
6	0.015	120.0

COEFFICIENT & CONSTANT:

$Y = m.X + c$ where $m = -1.9959493E 02$ and $c = 1.1936011E 02$

INTERPOLATED DATA:

1/TIME	TEMP.
0.000	119.4

8. OVERBURDEN GRADIENT CALCULATIONS AND PLOT

OVERBURDEN GRADIENT CALCULATIONS

DEPTHmetres

BULK DENSITYgm/cc

OVERBURDEN PRESSURE INCREMENT. .psi

CUMULATIVE OVERBURDEN PRESSURE .psi

OVERBURDEN PRESSURE GRADIENT . .psi/ft

OVERBURDEN EQUIVALENT DENSITY. .Pounds per gallon

BULK DENSITY TAKEN FROM AVERAGED F.D.C. LOG, OR FROM SONIC
LOG FOR SECTIONS WHERE THE F.D.C. LOG IS NOT AVAILABLE.

OVERBURDEN GRADIENT CALCULATIONS

=====

DEPTH from	DEPTH to	AVR. BULK DENSITY	O/BURDEN INC.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
metres	metres	gm/cc	psi	psi	psi/ft	ppg
0	94	1.02	136.21	136.21	0.442	8.49
94	100	1.40	11.93	148.14	0.452	8.68
100	150	1.45	102.99	251.13	0.510	9.81
150	200	1.50	106.54	357.68	0.545	10.48
200	240	1.55	88.08	445.76	0.566	10.89
240	250	1.53	21.74	467.49	0.570	10.96
250	275	1.60	56.82	524.31	0.581	11.18
275	300	1.57	55.76	580.07	0.589	11.33
300	325	1.53	54.34	634.41	0.595	11.44
325	350	1.62	57.53	691.95	0.603	11.59
350	375	1.64	58.24	750.19	0.610	11.73
375	400	1.77	62.86	813.05	0.620	11.91
400	425	1.86	66.06	879.11	0.630	12.12
425	450	1.92	68.19	947.30	0.642	12.34
450	475	1.93	68.54	1015.84	0.652	12.54
475	500	1.86	66.06	1081.90	0.660	12.68
500	525	1.92	68.19	1150.09	0.668	12.84
525	550	1.99	70.67	1220.76	0.677	13.01
550	575	1.86	66.06	1286.82	0.682	13.12
575	600	1.86	66.06	1352.88	0.687	13.22
600	625	1.95	69.25	1422.13	0.694	13.34
625	650	1.93	68.54	1490.68	0.699	13.44
650	675	1.93	68.54	1559.22	0.704	13.54
675	700	1.95	69.25	1628.48	0.709	13.64
700	725	2.01	71.39	1699.86	0.715	13.74
725	750	1.99	70.67	1770.54	0.720	13.84
750	775	2.03	72.10	1842.63	0.725	13.94
775	800	2.04	72.45	1915.08	0.730	14.03
800	825	2.10	74.58	1989.66	0.735	14.14
825	850	2.10	74.58	2064.24	0.740	14.23
850	900	2.14	152.00	2216.25	0.751	14.43
900	1000	2.17	308.27	2524.52	0.769	14.80
1000	1100	2.20	312.53	2837.05	0.786	15.12
1100	1200	2.23	316.79	3153.84	0.801	15.41
1200	1300	2.26	321.06	3474.90	0.815	15.67
1300	1370	2.30	228.72	3703.62	0.824	15.85
1370	1400	2.34	99.73	3803.34	0.828	15.92
1400	1425	2.18	77.42	3880.77	0.830	15.96
1425	1450	2.40	85.24	3966.00	0.834	16.03
1450	1475	2.32	82.39	4048.40	0.837	16.09
1475	1500	2.33	82.75	4131.15	0.839	16.14
1500	1525	2.35	83.46	4214.61	0.842	16.20
1525	1550	2.31	82.04	4296.65	0.845	16.25
1550	1575	2.31	82.04	4378.69	0.847	16.30
1575	1600	2.35	83.46	4462.15	0.850	16.35

DEPTH from	DEPTH to	AVR. BULK DENSITY	O/BURDEN INC.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
metres	metres	gm/cc	psi	psi	psi/ft	ppg
1600	1625	2.24	79.55	4541.70	0.852	16.38
1625	1650	2.31	82.04	4623.74	0.854	16.43
1650	1675	2.30	81.68	4705.42	0.856	16.47
1675	1700	2.29	81.33	4786.75	0.858	16.50
1700	1725	2.29	81.33	4868.08	0.860	16.54
1725	1750	2.35	83.46	4951.54	0.862	16.58
1750	1775	2.38	84.53	5036.07	0.865	16.63
1775	1800	2.35	83.46	5119.53	0.867	16.67
1800	1825	2.38	84.53	5204.05	0.869	16.71
1825	1850	2.34	83.11	5287.16	0.871	16.75
1850	1875	2.33	82.75	5369.91	0.873	16.79
1875	1900	2.36	83.82	5453.72	0.875	16.82
1900	1925	2.40	85.24	5538.96	0.877	16.87
1925	1950	2.38	84.53	5623.49	0.879	16.90
1950	1975	2.34	83.11	5706.59	0.881	16.94
1975	2000	2.42	85.95	5792.54	0.883	16.98
2000	2025	2.35	83.46	5876.00	0.884	17.01
2025	2050	2.32	82.39	5958.39	0.886	17.04
2050	2075	2.36	83.82	6042.21	0.888	17.07
2075	2100	2.35	83.46	6125.67	0.889	17.10
2100	2125	2.35	83.46	6209.13	0.891	17.13
2125	2150	2.42	85.95	6295.07	0.892	17.16
2150	2175	2.42	85.95	6381.02	0.894	17.20
2175	2200	2.45	87.01	6468.03	0.896	17.23
2200	2225	2.48	88.08	6556.11	0.898	17.27
2225	2250	2.41	85.59	6641.70	0.900	17.30
2250	2275	2.43	86.30	6728.00	0.901	17.33
2275	2300	2.52	89.50	6817.50	0.903	17.37
2300	2325	2.56	90.92	6908.42	0.906	17.42
2325	2350	2.53	89.85	6998.27	0.908	17.46
2350	2375	2.52	89.50	7087.77	0.910	17.49
2375	2400	2.54	90.21	7177.98	0.912	17.53
2400	2425	2.57	91.27	7269.25	0.914	17.57
2425	2450	2.54	90.21	7359.46	0.916	17.61
2450	2475	2.51	89.14	7448.60	0.917	17.64
2475	2500	2.54	90.21	7538.81	0.919	17.68
2500	2525	2.57	91.27	7630.08	0.921	17.71
2525	2550	2.61	92.69	7722.78	0.923	17.75
2550	2575	2.56	90.92	7813.69	0.925	17.79
2575	2600	2.53	89.85	7903.55	0.927	17.82
2600	2625	2.55	90.56	7994.11	0.928	17.85
2625	2650	2.55	90.56	8084.67	0.930	17.88
2650	2675	2.61	92.69	8177.37	0.932	17.92
2675	2700	2.62	93.05	8270.42	0.934	17.95
2700	2725	2.56	90.92	8361.34	0.935	17.99
2725	2750	2.60	92.34	8453.67	0.937	18.02
2750	2775	2.60	92.34	8546.01	0.939	18.05
2775	2800	2.62	93.05	8639.06	0.940	18.09
2800	2825	2.65	94.11	8733.18	0.942	18.12
2825	2850	2.58	91.63	8824.81	0.944	18.15

DEPTH from	DEPTH to	AVR. BULK DENSITY	O/BURDEN INC.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
metres	metres	gm/cc	psi	psi	psi/ft	ppg
2850	2875	2.65	94.11	8918.92	0.946	18.18

0

1

2

3

DEPTH (in metres) x 1000

ESSO AUSTRALIA LTD
KIPPER No 1
OVERBURDEN GRADIENT

PSI/FT.

0.5

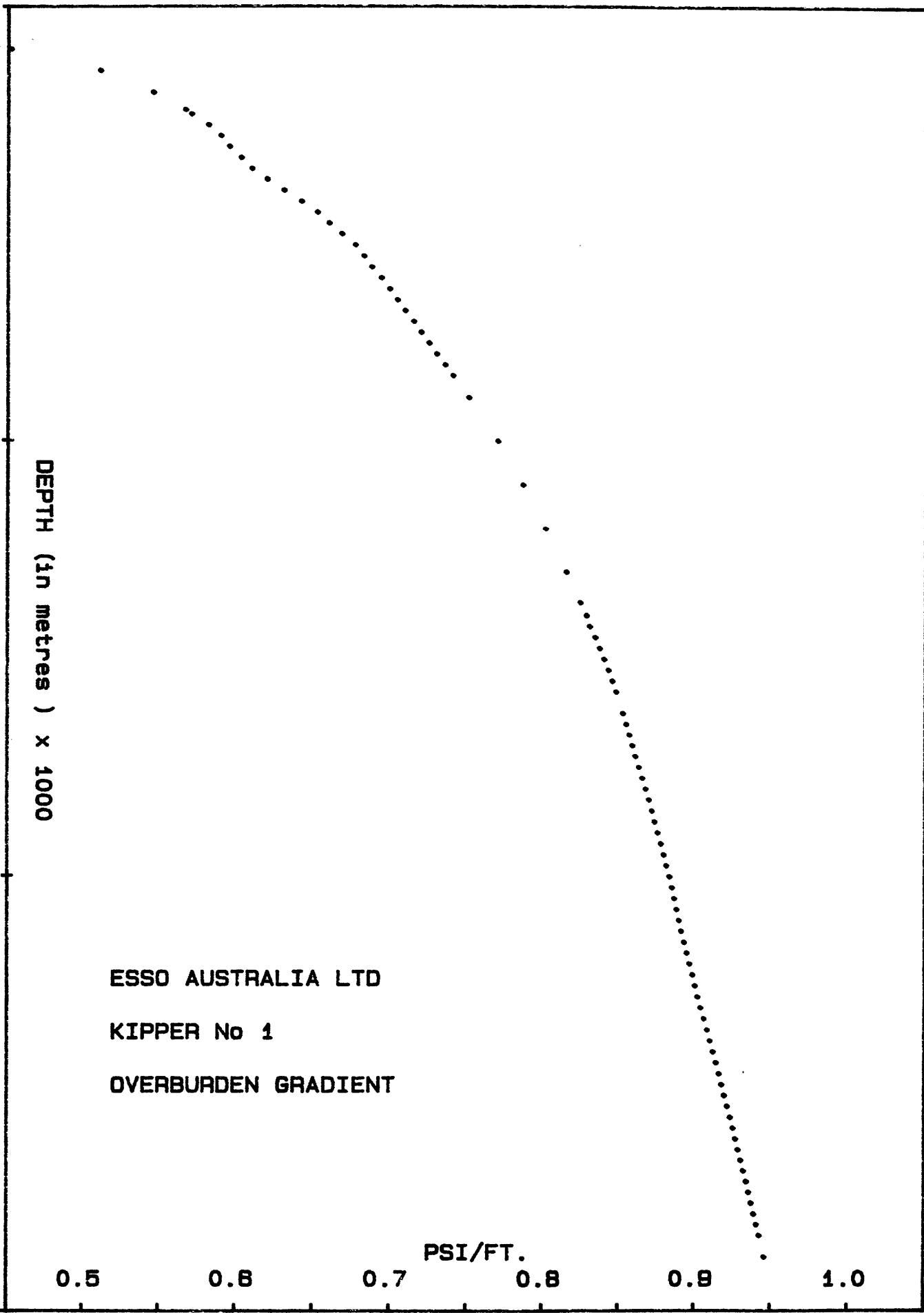
0.6

0.7

0.8

0.9

1.0



9. GAS ANALYSES

SIDEWALL CORE GAS ANALYSIS DATA SHEET

SHEET NO. 1

COMPANY Esso Australia Limited
WELL Kipper #1

LOGGING SUITE NO. 3

No.	DEPTH (M)	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
2	2845	No Sample						
34	2276.5	700	740	54	45	14	Tr	
35	2270	Tr	-	-	-			
31	2227	140	47	Tr	-	-	-	
39	2221.5	526	90	61	35	10	-	
41	2196.5	537	93	68	38	12	-	
44	2181.0	513	86	66	30	12	-	
46	2158	490	78	64	37	12	-	
48	2148	490	86	69	40	12	-	
50	2128	234	47	32	14	-	-	
52	2098	514	101	42	20	14	Tr	
55	2028	572	109	78	47	14	Tr	
57	2008	526	121	71	44	14	Tr	
59	1993	572	109	81	49	17	Tr	
61	1973	109	42	32	18	14	18	

GAS COMPOSITION ANALYSIS

The composition of entrained reservoir gas in the mud is significant in determining the origin and the value of a show. Two graphical methods are employed for processing the mud gas chromatography results. These techniques however are empirical and by no means definitive.

LOG PLOT

The ratios of C1/C2, C1/C3, C1/C4, C1/C5, and C1/C6 are plotted on three-cycle log paper for each hydrocarbon show. The plots can be evaluated by the following criteria :

1. Productive dry gas zones may show only C1, but abnormally high shows of C1 are usually indicative of saltwater.
2. A ratio of C1/C2 between approximately 2 and 15 indicates oil and between 15 and 65, gas. If the C1/C2 ratio is below about 2, or above about 65, the zone is probably non-productive.

The actual values of the gas/oil/water limits will vary from area to area.
3. If the C1/C2 ratio is low in the oil section and the C1/C4 ratio is high in the gas section, the zone is probably non-productive.
4. If any ratio (with the exception of C1/C5, if oil is used in the mud) is lower than the preceding ratio, the zone is probably non-productive.
5. The ratios may not be definitive for low permeability zones; however, steep ratio plots may indicate a tight zone.

TRIANGULATION PLOT

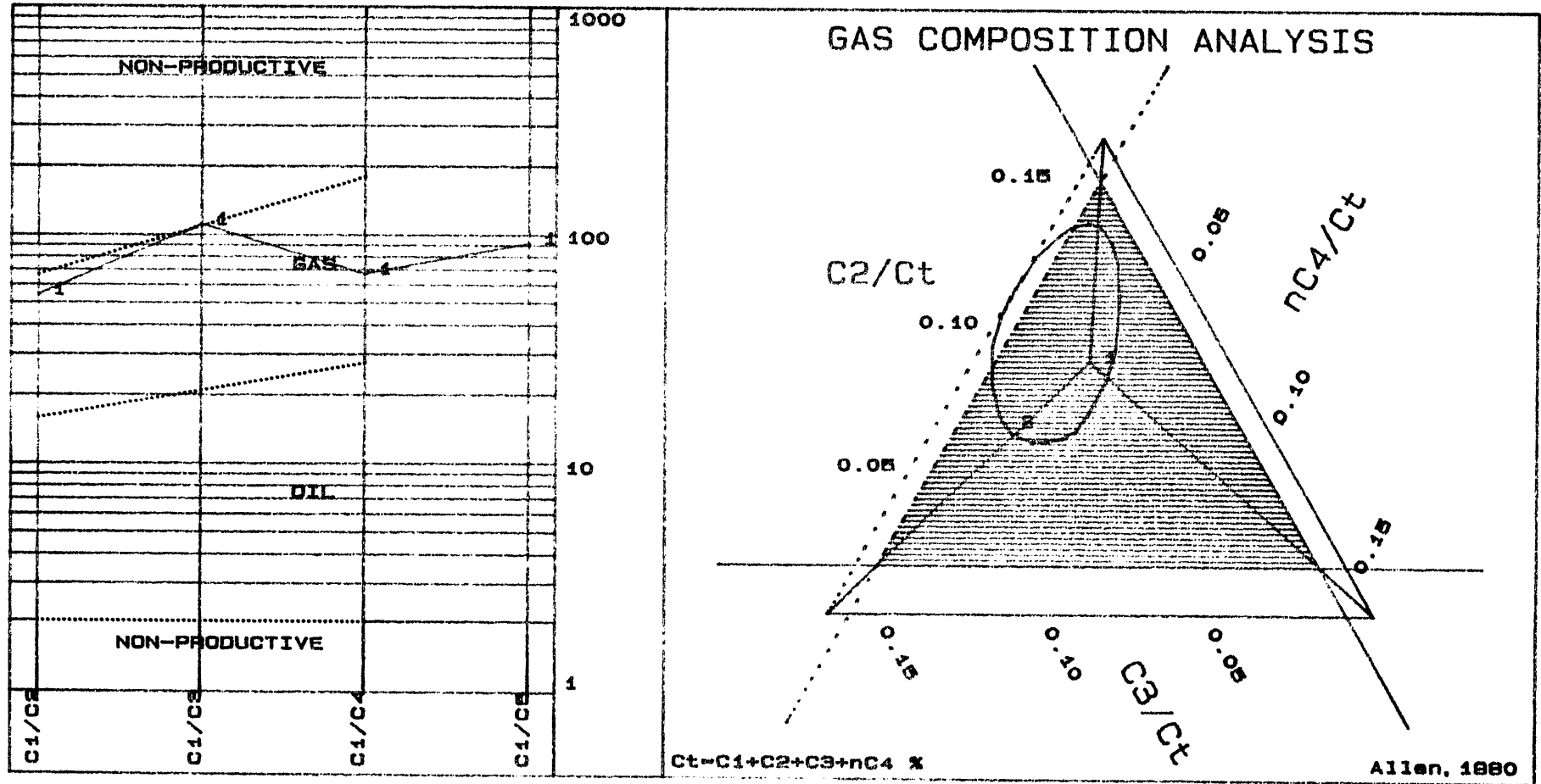
The triangulation diagram is obtained by tracing lines on three scales at 120 degrees to each other, corresponding respectively to the ratios of C2, C3 and normal C4 to the total gas (C1 to C4). The scales are arranged in such a way that if the apex of the triangle is upward, a gas zone is indicated, while if the apex points downward, an oil zone is suggested.

A large triangle plot represents dry gas or low GOR oil, while small triangles represent wet gases or high GOR oils. The homothetic centre of the plot should fall inside the top part of the triangle, otherwise the heavier hydrocarbon is abnormal and may indicate a dead show, (or coal gas).

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



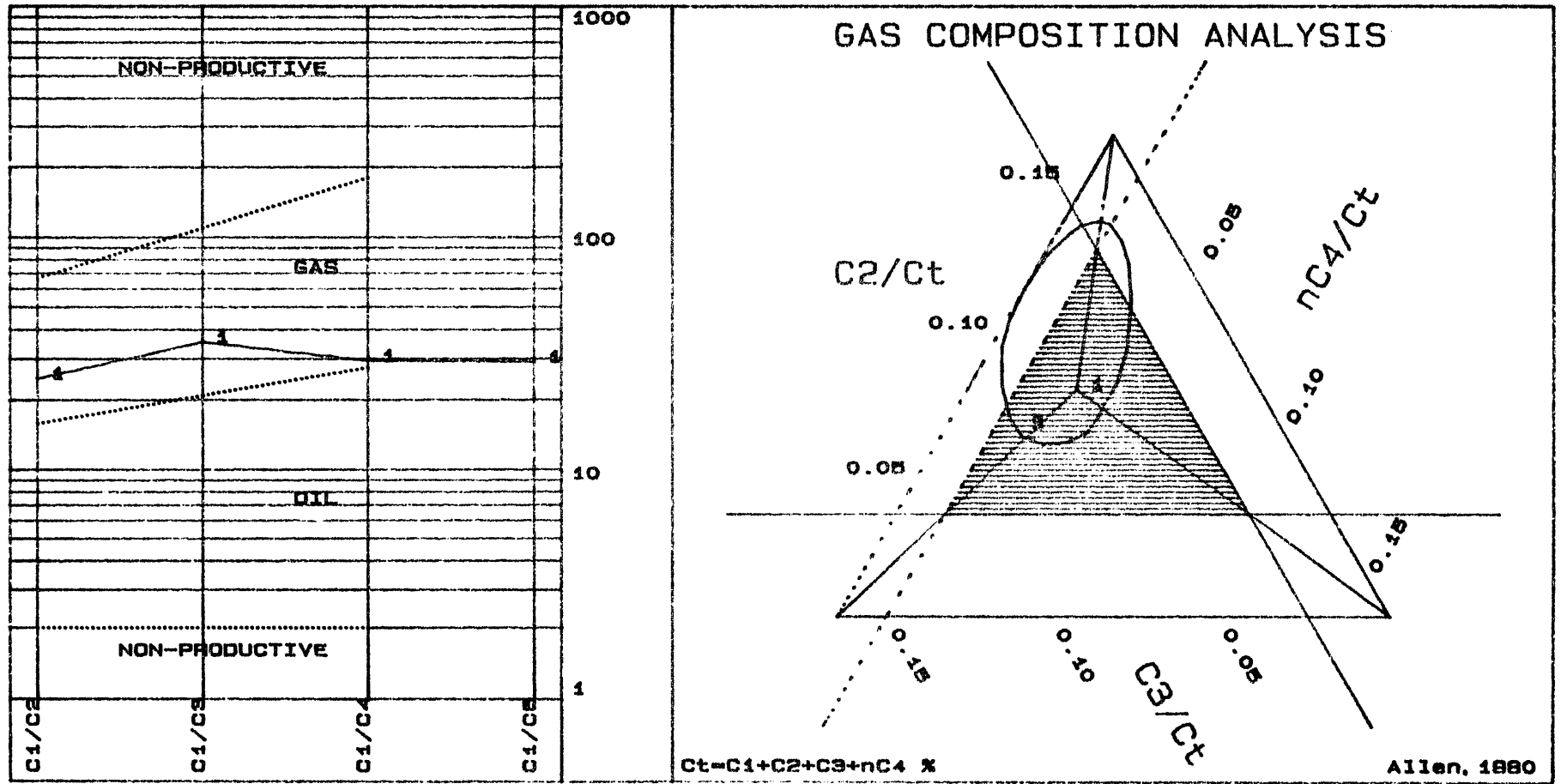
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1498	0.424	0.008	0.004	0.003	0.003	0.005	0.002	0.438	54	112	87	92

CONCLUSION: Non-productive gas zone

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



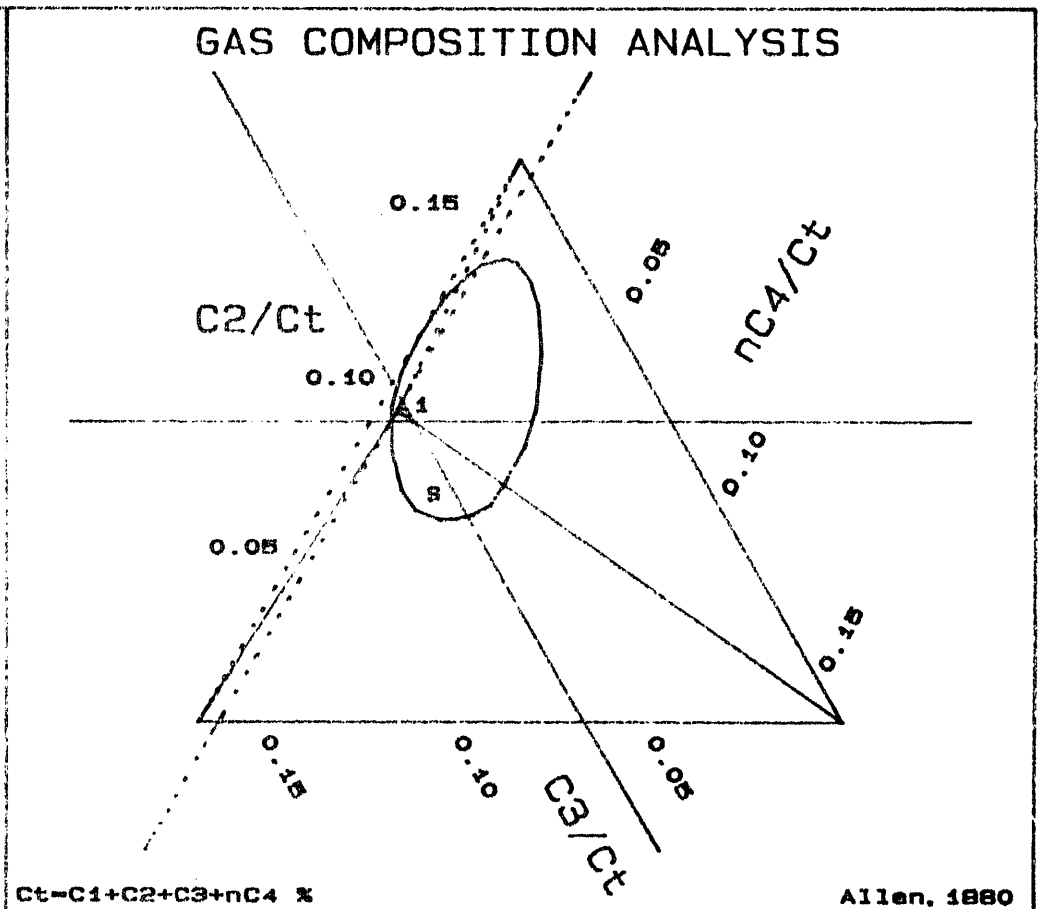
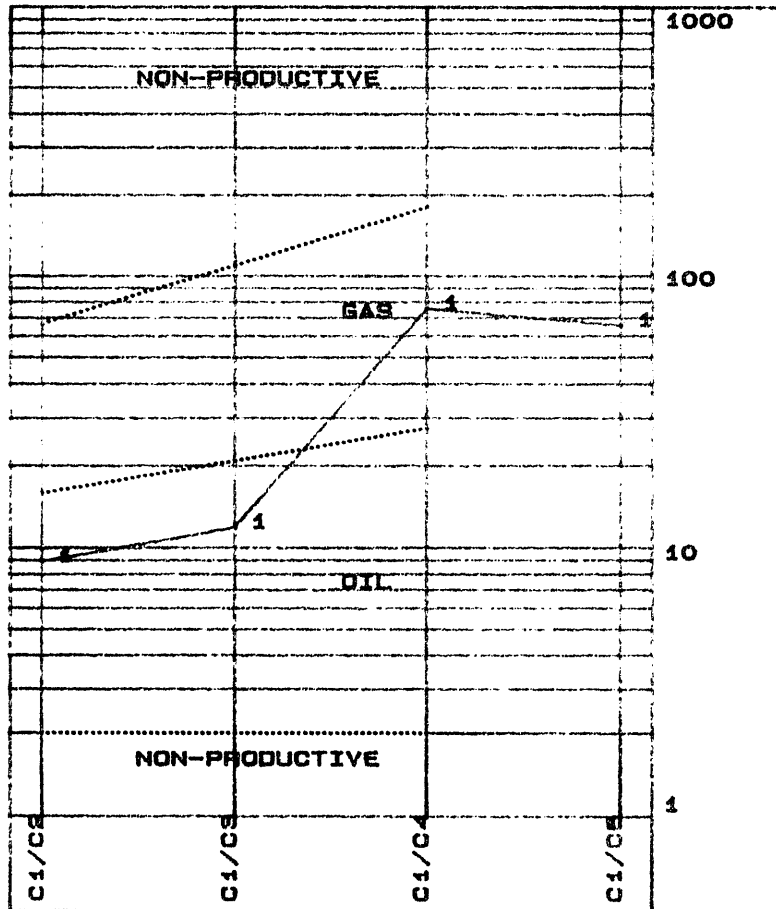
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1440	0.450	0.018	0.013	0.008	0.008	0.018	0.005	0.488	25	35	29	28

CONCLUSION: Non-productive gas zone

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



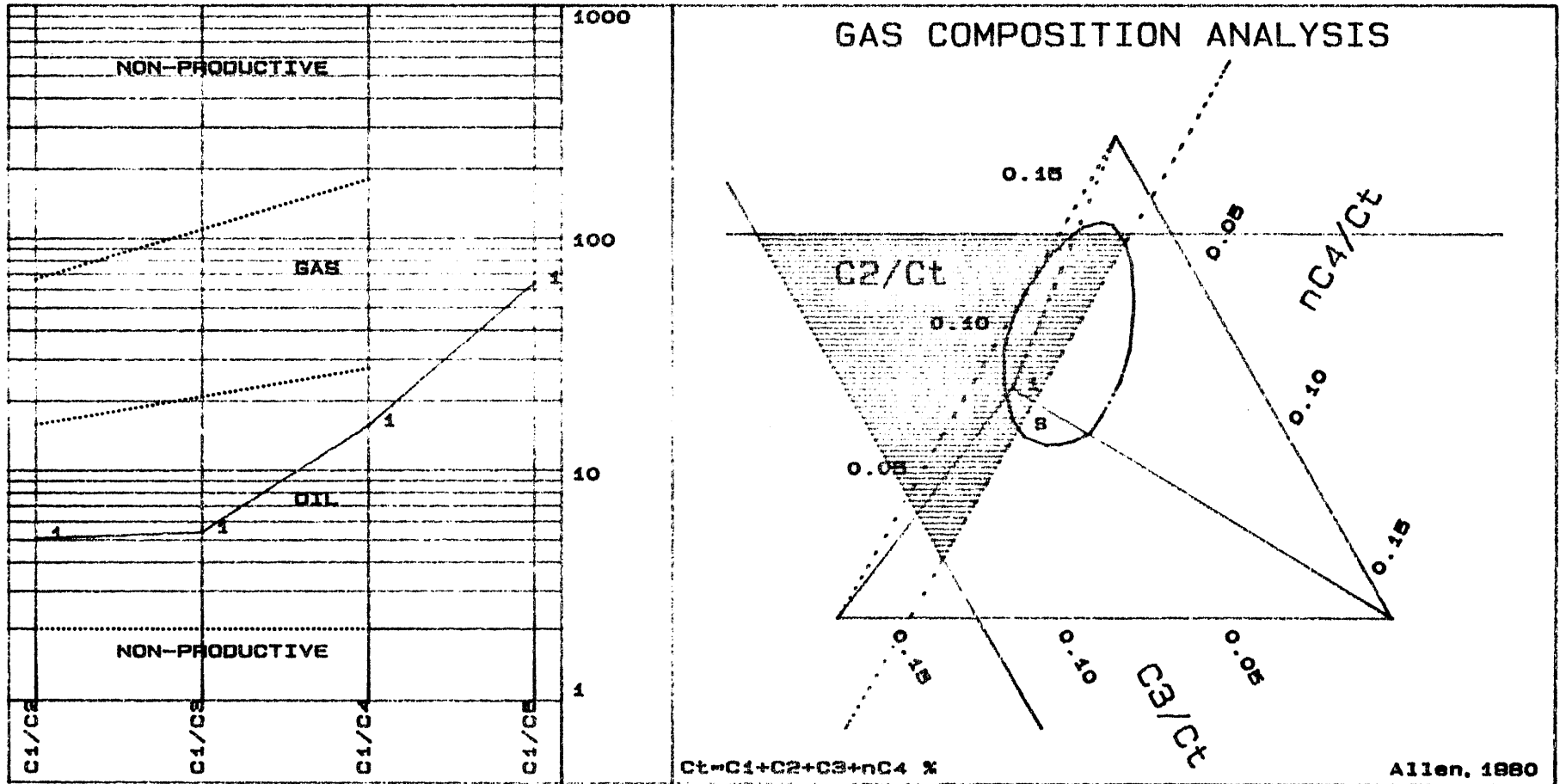
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1740	0.788	0.088	0.088	0.005	0.005	0.012	0.004	0.845	8	12	78	85

CONCLUSION: Non-productive wet gas zone

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



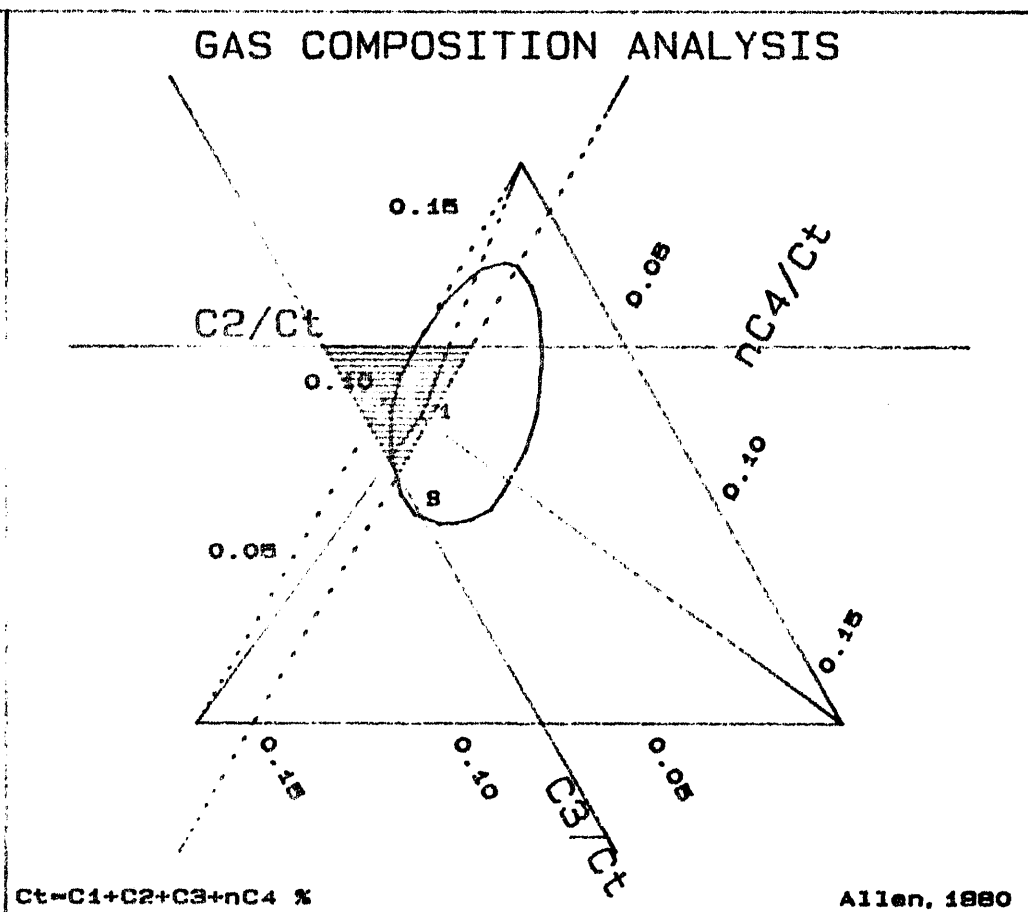
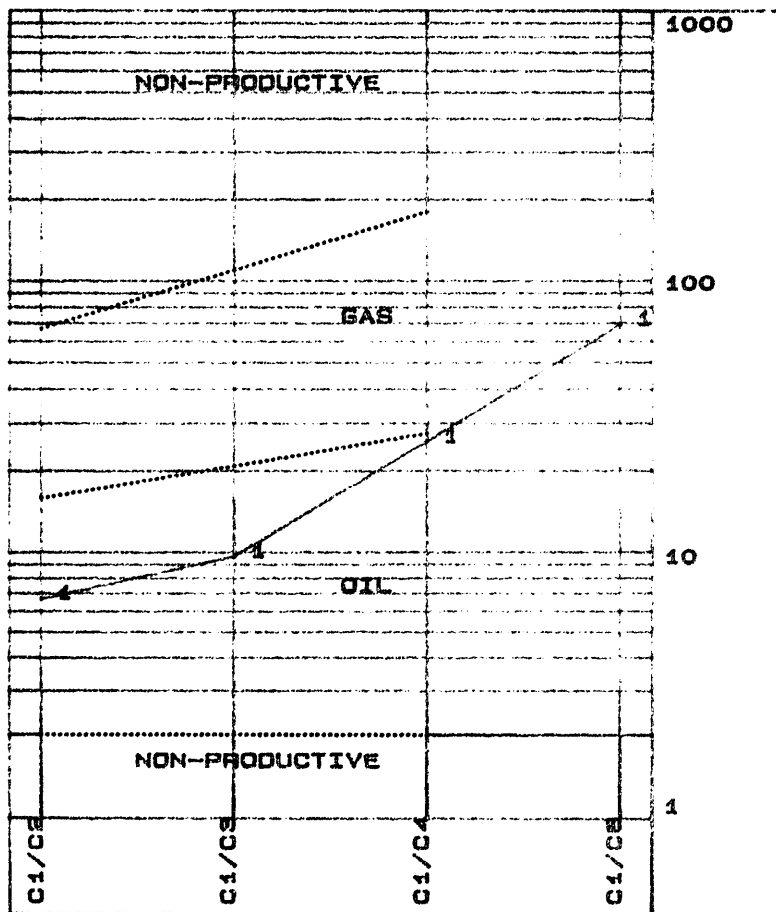
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1800	2.481	0.480	0.480	0.078	0.078	0.038	0.010	3.508	5	5	18	84

CONCLUSION: Low porosity, low G.O.R. oil zone.

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



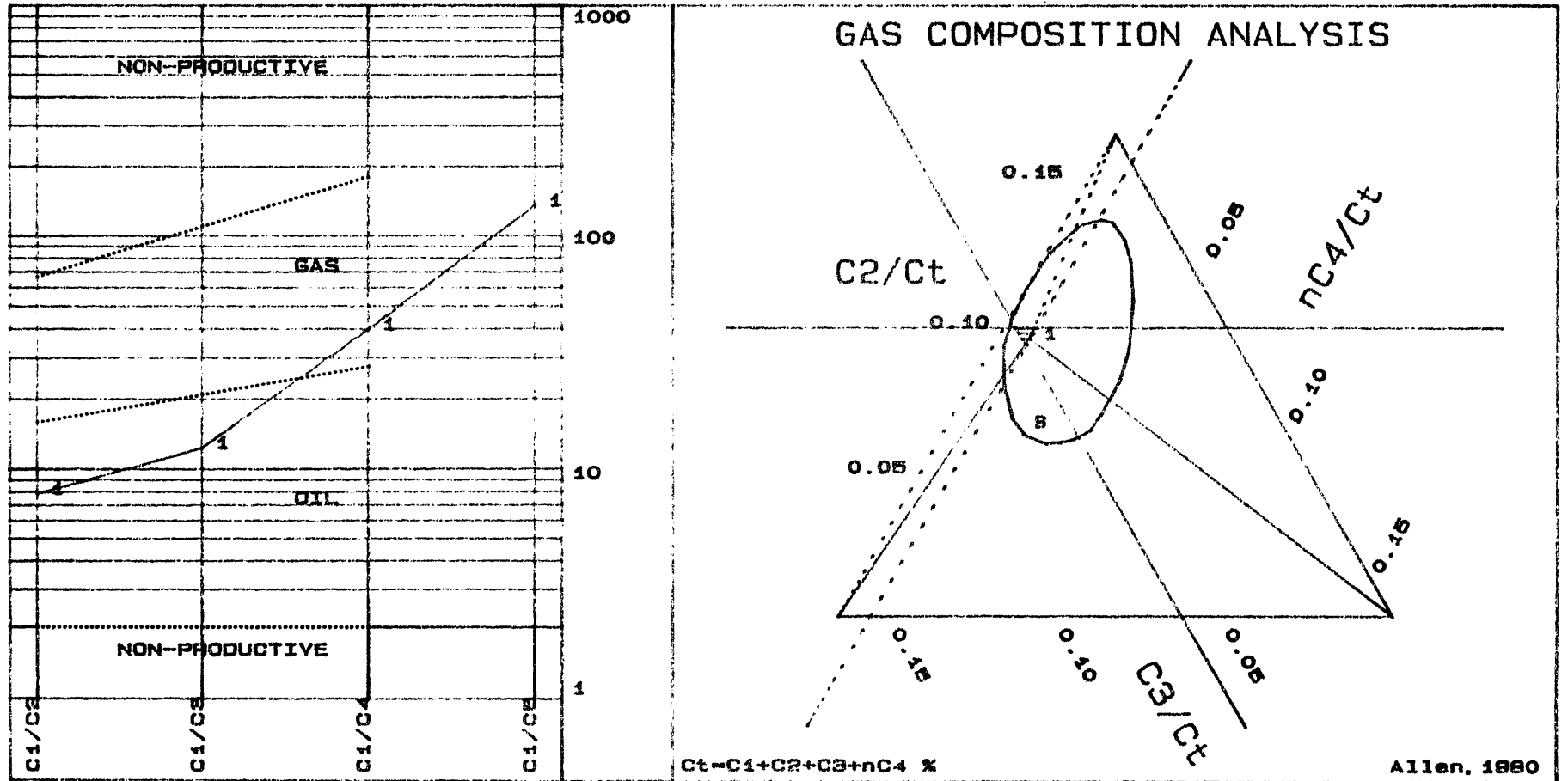
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1812	0.413	0.082	0.043	0.008	0.008	0.008	0.003	0.528	7	10	28	88

CONCLUSION: Possible productive oil zone.

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



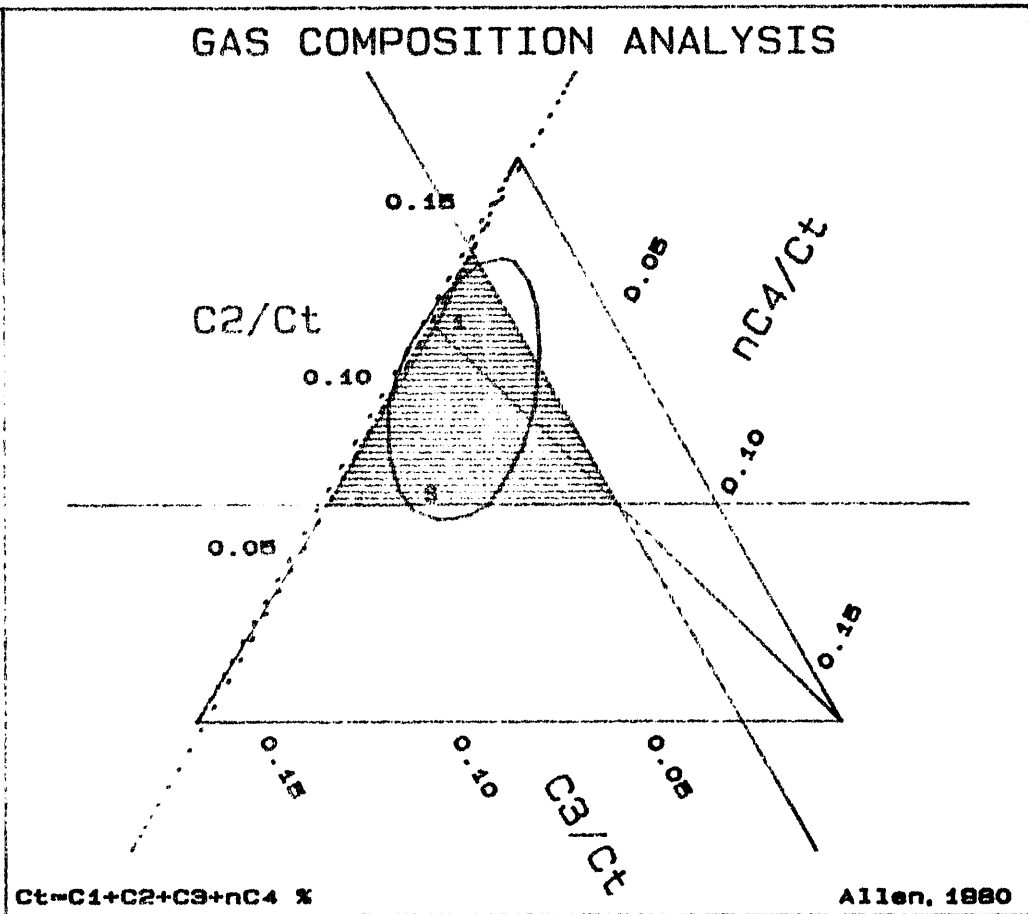
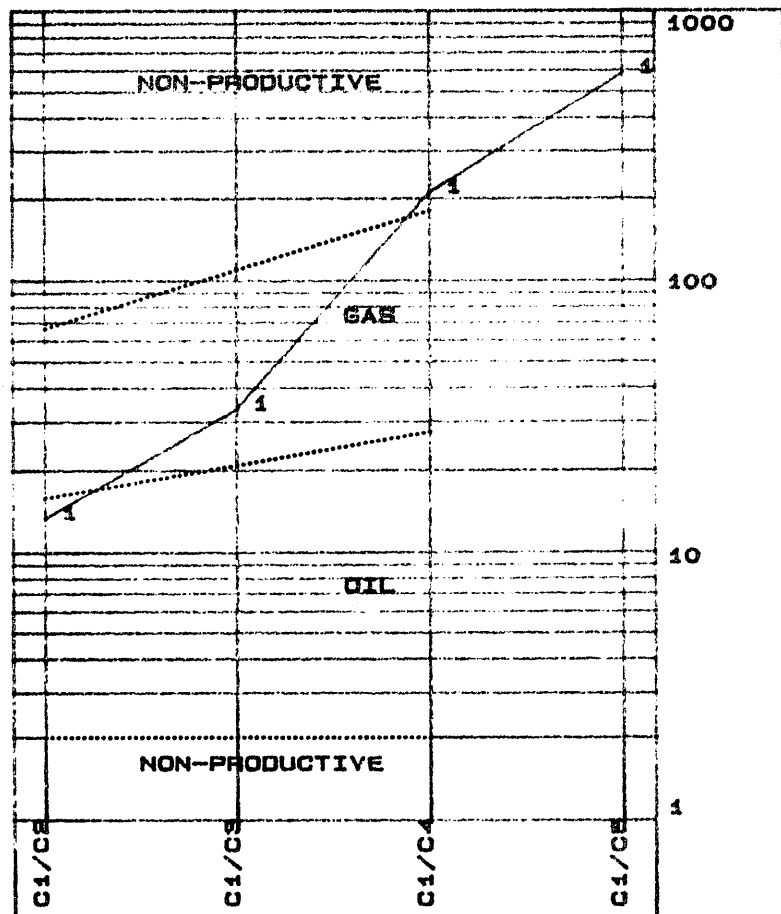
NO.	DEPTH	C1	C2	C3	1C4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1828	0.888	0.088	0.058	0.008	0.008	0.005	0.004	0.840	8	12	40	135

CONCLUSION: Low porosity, low G.O.R. oil zone.

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



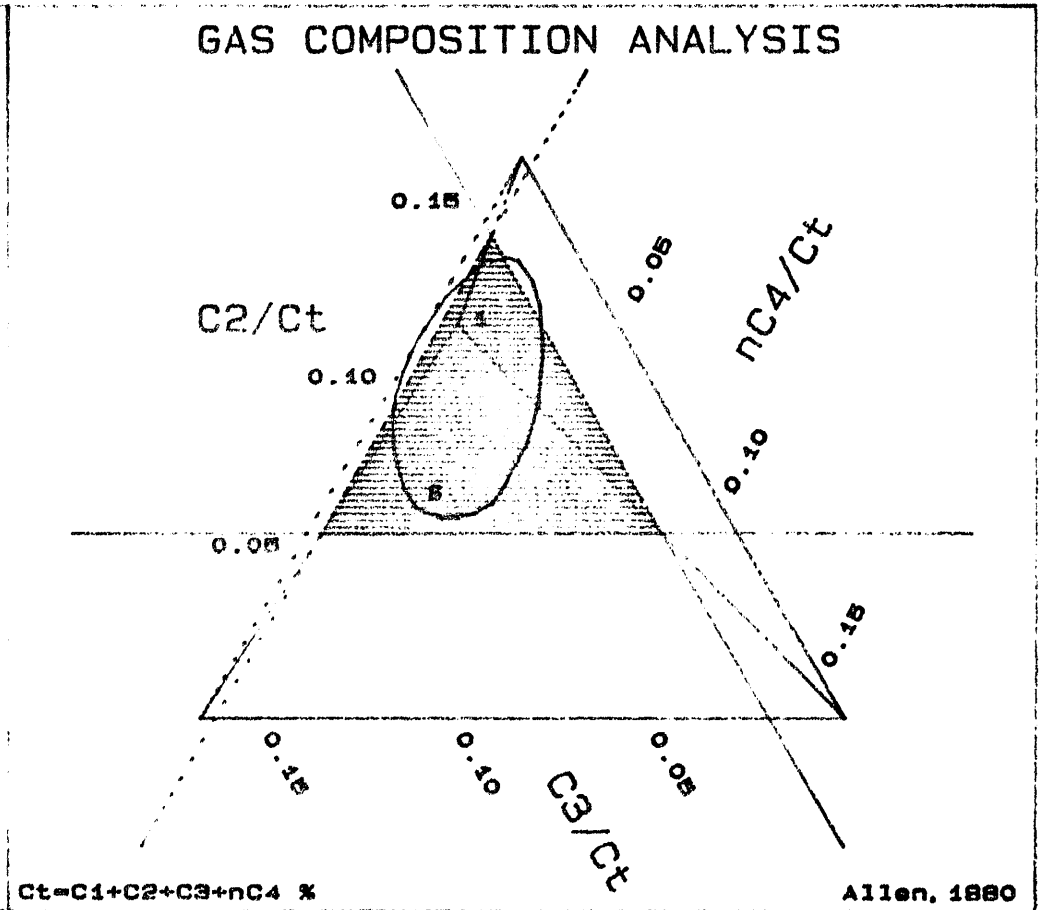
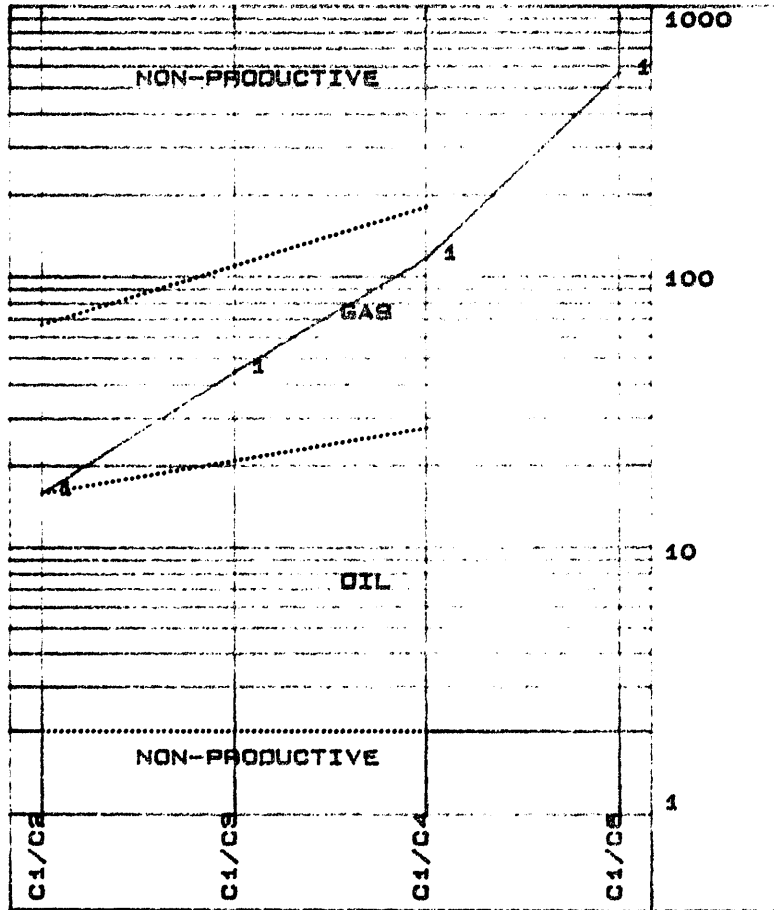
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2020	2.530	0.188	0.078	0.008	0.008	0.004	0.002	2.800	13	33	211	588

CONCLUSION: Non-productive gas zone.

CORE LAB. INTL. LTD.

Client: ESSO AUSTRALIA LTD.

Well: KIPPER No.1



NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C5 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2118	4.244	0.288	0.085	0.018	0.018	0.008	0.002	4.828	18	48	118	588

CONCLUSION: Non-productive gas zone.

10. CORELAB DATA SHEETS

BIT RECORD

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 1

Bit No.	Make	Type	IADC Code	Size (Inches)	Jets	Depth In Metres	Hole Made (m)	Drill Time	On Bottom Hours	Turns K	Condition T B G	Remarks
1	HTC	R1	111	17½	20/20/20	256	590	18 3/4	14.49	109.8	2-2-I	Pulled to run 13 3/8" CSG
2	HTC	J1	116	12½	18/18/18	846	581.5	22½	17.08	134.1	2-3-I	Pulled to cut Core #1
2	CHRIS	RC476	4	9 7/8	Equivalent 14/14/14	1427.5	8.5	1½	1.23	9.7	10%	Core #1
2	CHRIS	RC476	4	9 7/8	Equivalent 14/14/14	1436	9.5	1½	1.08	8.4	10%	Core #2
2	CHRIS	RC476	4	9 7/8	Equivalent 14/14/14	1445.5	9.9	1 3/4	1.83	14.3	10%	Core #3
3	HTC	J22	517	12½	16/16/16	1455.4	357.8	26½	2435	102.1	2-3-1/8	Pulled to cut Core #4
3	CHRIS	RC476	4	9 7/8	Equivalent 14/14/14	1813.2	8.6	1	0.91	6.1	30%	Core #4
4	HTC	J22	517	12½	16/16/16	1821.8	10.4	3/4	0.69	2.9	-	Pulled to cut Core #5
4	CHRIS	RC476	4	9 7/8	Equivalent 14/14/14	1832.2	9.4	1	0.60	4.6	30%	Core #5
4	CHRIS	RC476	4	9 7/8	Equivalent 14/14/14	1841.6	9.5	½	0.33	2.6	40%	Core #6
RR4	HTC	J22	517	12½	16/16/16	1851.1	289.0	28½	25.80	100.6	4-3-1/8	Pulled at proposed T.D.
5	HTC	J22	517	12½	16/16/16	2140.1	260.5	53	50.21	195.8	6-5-1/8	Pulled due to low ROP's
6	HTC	J22	517	12½	16/16/16	2400.6	249.7	61	57.92	215.4	5-4-1/8	Pulled due to high hours
7	HTC	J22	517	12½	16/16/16	2650.3	189.7	65 3/4	63.91	191.7	2-4-½	Pulled due to high hours
8	HTC	J33	537	12½	16/16/16	2840	35.0	12 3/4	12.35	33.5	1-1-I	Pulled at T.D.

COMPANY Esso Australia Limited
 WELL Kipper #1

BIT RECORD

Sheet No. 1

Bit No.	Make	Type	IADC Code	Size (Inches)	Cost A\$	Jets	Depth In (m)	Depth Out (m)	Hole Made m	Drill Time	On Bottom Hours	TurnsK	Avg ROP	Avg Cost/m	Condition T B G
1	HTC	R1	111	17½	4978	20/20/20	256	846	590	18 3/4	14.49	109.8	40.7	108.26	2-2-I
2	HTC	J1	116	12½	2566	18/18/18	846	1427.5	581.5	22½	17.08	134.1	34.0	139.94	2-3-I
2	CHRIS	RC476	4	9 7/8	-	Equivalent 14/14/14	1427.5	1436	8.5	1½	1.23	9.7	6.9	2461.88	10%
2	CHRIS	RC476	4	9 7/8	-	Equivalent 14/14/14	1436	1445.5	9.5	1½	1.08	8.4	8.8	2145.07	10%
2	CHRIS	RC476	4	9 7/8	-	Equivalent 14/14/14	1445.5	1455.4	9.9	1 3/4	1.83	14.3	5.4	2335.07	10%
3	HTC	J22	517	12½	8520	16/16/16	1455.4	1813.2	357.8	26½	24.35	102.1	14.7	328.49	2-3-1/8
3	CHRIS	RC476	4	9 7/8	-	Equivalent 14/14/14	1813.2	1821.8	8.6	1	0.91	6.1	9.5	2934.34	30%
4	HTC	J22	517	12½	8520	16/16/16	1821.8	1832.2	10.4	3/4	0.69	2.9	15.1	3168.45	-
4	CHRIS	RC476	4	9 7/8	-	Equivalent 14/14/14	1832.2	1841.6	9.4	1	0.60	4.6	15.7	2952.90	30%
4	CHRIS	RC476	4	9 7/8	-	Equivalent 14/14/14	1841.6	1851.1	9.5	½	0.33	2.6	28.6	2434.24	40%
RR4	HTC	J22	517	12½	-	16/16/16	1851.1	2140.1	289.0	28½	25.80	100.6	11.2	401.85	4-3-1/8
5	HTC	J22	517	12½	8520	16/16/16	2140.1	2400.6	260.5	53	50.21	195.8	5.2	848.76	6-5-1/8
6	HTC	J22	517	12½	8520	16/16/16	2400.6	2650.3	249.7	61	57.92	215.4	4.3	986.54	5-4-1/8
7	HTC	J22	517	12½	8520	16/16/16	2650.3	2840	189.7	65 3/4	63.91	191.7	3.0	1423.51	2-4-½
8	HTC	J33	537	12½	8266	16/16/16	2840	2875	35.0	12 3/4	12.35	33.5	2.8	2369.98	1-1-I

MUD INFORMATION SHEETS

DEPTH Metres

MUD WEIGHT Pounds per gallon

FUNNEL VISCOSITY A.P.I.seconds

PLASTIC VISCOSITY. Centipoise

YIELD POINT. Pounds/100 square feet

GEL : INITIAL/10 min . Pounds/100 square feet

FILTRATE A.P.I. c.c.

CAKE THICKNESS Thirty-seconds of an inch

SALINITY : Ca/Cl ppm

SOLIDS/SAND/OIL. Percentage

MUD INFORMATION SHEET

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 1

DEPTH	838	846	1206	1427	1458	1760
DATE	7/3/86	8/3/86	9/3/86	10/3/86	11/3/86	12/3/86
TIME	03:40	09:00	22:45	13:30	15:30	15:00
WEIGHT	9.2+	9.2+	9.1	9.3	9.3+	9.5+
FUNNEL VISCOSITY	34	38	30	38	24	40
PV/YP	4/18	4/18	3/10	8/22	12/20	11/22
N/K	0.24/4.90	0.24/4.90	0.30/2.01	0.34/3.58	0.46/1.83	0.4/2.48
GEL: INITIAL/10 MIN	9/13	9/16	5/7	9/15	-	10/19
pH	9.6	9.6	10.2	10.5	10.5	10.5
FILTRATE:API/API HTHP	-	-	-	8.5/22	8/21	8/22
CAKE	-	-	-	1	1	1
SALINITY (PPM)	18,000	18,000	18,000	18,000	18,500	18,500
SAND	-	-	-	Tr	Tr	Tr
SOLIDS	-	-	-	5	6	7
OIL	-	-	-	-	-	-
TRITIUM (DPM)	-	-	3,583	3,030	3,172	3,393
REMARKS:	17½" Hole	Run 13 3/8" CSG	12¼" Hole	Cores 1 - 3		12¼" Hole

DEPTH	1828	1868	2096	2140	2140	2140
DATE	13/3/86	14/3/86	15/3/86	16/3/86	17/3/86	18/3/86
TIME	15:30	15:10	15:10	13:30	13:00	13:00
WEIGHT	9.5+	9.5+	9.6	10.2+	10.5	10.5
FUNNEL VISCOSITY	40	40	43	42	43	43
PV/YP	10/22	11/22	11/24	13/22	12/22	12/22
N/K	0.39/2.77	0.41/2.48	0.39/3.00	0.46/2.04	0.44/2.24	0.44/2.24
GEL: INITIAL/10 MIN	12/20	12/20	14/25	14/22	14/25	14/27
pH	10.5	10.5	10.5	10.5	10.5	10.5
FILTRATE:API/API HTHP	8/22	8.2/21	7.8/20	7.0/19	8/20	9/20
CAKE	1	1	1	1	1	1
SALINITY (PPM)	18,000	18,000	17,500	17,000	17,000	17,000
SAND	Tr	Tr	Tr	Tr	Tr	Tr
SOLIDS	7	7	7	9	11	11
OIL	-	-	-	-	-	-
TRITIUM (DPM)	3,390	3,236	3,363	3,325	3,117	3,122
REMARKS:	Cores 4 - 5	Core 6 12¼" Hole		Took a kick. Increased Mud Wt. to 10.5 ppg	Logging	

MUD INFORMATION SHEET

COMPANY Esso Australia Limited
 WELL Kipper #1

Sheet No. 2

DEPTH	2265	2340	2411	2524	2617	2667
DATE	19/3/86	20/3/86	21/3/86	22/3/86	23/3/86	24/3/86
TIME	22:00	20:00	20:00	20:00	20:00	23:00
WEIGHT	10.5	10.5	10.5	10.4	10.3	10.3+
FUNNEL VISCOSITY	37	40	43	41	41	42
PV/YP	15/20	16/20	14/23	13/23	12/23	15/24
N/K	0.51/1.42	0.53/1.32	0.46/2.07	0.44/2.25	0.43/2.47	0.47/2.09
GEL: INITIAL/10 MIN	12/25	13/26	22/36	18/35	16/32	22/31
pH	10.5	10.5	10.5	10.5	10.5	10.3
FILTRATE:API/API HTHP	7/16	7/16	10/20	11/22	11/22	8.5/20
CAKE	1	1	1	1	1	1
SALINITY (PPM)	18,500	19,000	18,500	19,000	20,000	19,000
SAND	Tr	Tr	Tr	Tr	Tr	Tr
SOLIDS	12	12	12	12	12	12
OIL	-	-	-	-	-	-
TRITIUM (DPM)	3,349	3,398	3,159	3,200	3,282	3,210

REMARKS: ----- Drilled 12½" -----
 Hole

DEPTH	2732	2803	2846	2875	PIT	PIT
DATE	25/3/86	26/3/86	27/3/86	28/3/86	29/3/86	30/3/86
TIME	20:00	20:30	22:45	11:00	16:00	15:00
WEIGHT	10.4	10.4	10.4	10.4	10.4	10.4
FUNNEL VISCOSITY	41	44	41	43	45	45
PV/YP	14/22	15/25	14/21	15/22	15/22	15/22
N/K	0.47/1.88	0.46/2.28	0.49/1.70	0.49/1.73	0.49/1.73	0.49/1.73
GEL: INITIAL/10 MIN	22/30	23/34	20/30	20/31	22/32	22/32
pH	10.4	10.5	10.4	10.5	10.4	10.4
FILTRATE:API/API HTHP	9.2/23	8.5/22	8.5/22	8/22	7.8/24	7.8/24
CAKE	1	1	1	1	1	1
SALINITY (PPM)	19,000	18,500	18,000	20,000	20,500	20,500
SAND	Tr	Tr	Tr	Tr	Tr	Tr
SOLIDS	12	12	12	12	12	12
OIL	-	-	-	-	-	-
TRITIUM (DPM)	3,205	3,238	3,161	3,101	-	-

REMARKS: ----- Drilled 12½" Hole ----- ----- Logging -----

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 3

DEPTH	2875	2875	
DATE	31/3/86	1/4/86	
TIME	10:30	10:10	
WEIGHT	10.4	10.4	
FUNNEL VISCOSITY	45	45	
PV/YP	14/23	15/22	
N/K	0.46/2.07	0.49/1.79	
GEL: INITIAL/10 MIN	20/31	22/32	
pH	10.6	10.6	
FILTRATE:API/API HTHP	9.6/24	9.4/24	
CAKE	1	1	
SALINITY (PPM)	20,000	20,000	
SAND	Tr	Tr	
SOLIDS	12	12	
OIL	-	-	
TRITIUM (DPM)	-	3,462	
REMARKS:	Wiper Trip	Ran casing	Production Test

DEPTH
DATE
TIME
WEIGHT
FUNNEL VISCOSITY
PV/YP
N/K
GEL: INITIAL/10 MIN
pH
FILTRATE:API/API HTHP
CAKE
SALINITY (PPM)
SAND
SOLIDS
OIL
TRITIUM (DPM)

REMARKS:

R.F.T. DATA SHEETS

P O R E P R E S S U R E D A T A S H E E T

COMPANY : ESSO AUSTRALIA LTD.

DATA FROM RFT'S

WELL : KIPPER No.1

DEPTH (FROM RKB)	DEPTH (FROM MSL)	PORE PRESS	PORE PRESS GRADIENT E.M.W. (MSL)	PORE PRESS GRADIENT
METRES	TVD. METRES	PSIA	PPG	PSI/M
1437.7	1416.7	2072.27	8.513	1.463
1459.3	1438.3	2097.02	8.486	1.458
1474.9	1453.9	2117.58	8.478	1.456
1719.0	1698.0	2474.38	8.491	1.457
1736.6	1715.6	2501.71	8.497	1.458
1745.5	1724.5	2513.15	8.492	1.457
1782.0	1761.0	2564.84	8.488	1.456
1801.0	1780.0	2599.56	8.512	1.460
1814.0	1793.0	2615.20	8.501	1.459
1816.0	1795.0	2617.48	8.499	1.458
1823.4	1802.4	2633.00	8.515	1.461
1832.0	1811.0	2645.30	8.514	1.461
1842.5	1821.5	2656.11	8.500	1.458
1855.8	1834.8	2675.30	8.500	1.458
1890.0	1869.0	2724.72	8.499	1.458
1992.7	1971.7	3253.57	9.629	1.650
2006.4	1985.4	3260.32	9.582	1.642
2028.5	2007.5	3263.71	9.487	1.626
2055.5	2034.5	3271.51	9.383	1.608
2113.0	2092.0	3287.78	9.171	1.572
2117.2	2096.2	3289.90	9.158	1.569
2124.0	2103.0	3289.51	9.128	1.564
2157.0	2136.0	3298.40	9.011	1.544
2196.0	2175.0	3309.00	8.878	1.521
2213.5	2192.5	3314.80	8.823	1.512
2231.5	2210.5	3320.20	8.765	1.502
2249.0	2228.0	3327.40	8.715	1.493
2269.5	2248.5	3330.90	8.645	1.481
2276.5	2255.5	3334.20	8.627	1.478
2390.0	2369.0	3524.30	8.684	1.488
2448.0	2427.0	3582.20	8.616	1.476
2457.0	2436.0	3604.20	8.637	1.480
2845.5	2824.5	4740.40	9.807	1.678

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 1

RUN No.	2	2	3	3	4	4
SEAT No.	32	32	33	33	34	34
CHAMBER CAPACITY (L)	45.4	3.8	45.4	10.4	45.4	3.8
DEPTH (metres)	2028.4	2028.4	1823.2	1823.2	1801.4	1801.4

RECOVERY VOLUMES

GAS (Cu Ft)	278.8	PRE-	67.3	PRE-	139.7	PRE-
OIL (cc)	-	SERVED	34,500	SERVED	28,000	SERVED
WATER/FILTRATE (cc)	650 mud		500		1,750	
OTHER (cc)	650 cond		-		-	
SURFACE PRESSURE (PSI)	2,700		1,400		1,225	

GAS COMPOSITION

C1 (PPM)	161,793	PRE-	317,368	PRE-	339,763	PRE-
C2 (PPM)	10,068	SERVED	57,231	SERVED	63,590	SERVED
C3 (PPM)	2,995		27,648		37,325	
C4 (PPM)	962		7,000		10,588	
C5 (PPM)	829		2,404		3,150	
C6 (PPM)	104		768		990	
CO2 (%)	7		2		1	
H2S (PPM)	-		-		-	

OIL PROPERTIES

DENSITY (Cond.)	54.1	43	53
COLOUR	lt brn	dk brn	dk grn/brn
FLUORESCENCE	Pale blue	Cream	Cream
POUR POINT (°C)	-	-	-

WATER PROPERTIES

RESISTIVITY (Ωm) @ 20°C			0.308
C1 (frm resis) (PPM)			22,000
C1 (frm titrat) (PPM)			17,000
TRITIUM (DPM)			2,535
pH			7.6

COMMENTS

Condensate

Tritium
when drilling
3444 DPM

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 2

RUN No.	5	5	6	6
SEAT No.	36	36	37	37
CHAMBER CAPACITY (L)	45.4	3.8	45.4	3.8
DEPTH (metres)	1736.5	1736.5	1437.7	1437.7

RECOVERY VOLUMES

GAS (Cu Ft)	37	PRE-	24.3	PRE-
OIL (cc)	40,000	SERVED	18,000	SERVED
WATER/FILTRATE (cc)	-		23,750	
OTHER (cc)	<100		-	
SURFACE PRESSURE (PSI)	600		650	

GAS COMPOSITION

C1 (PPM)	355,942	PRE-	444,928	PRE-
C2 (PPM)	47,163	SERVED	16,560	SERVED
C3 (PPM)	18,432		5,184	
C4 (PPM)	7,220		6,242	
C5 (PPM)	3,730		2,486	
C6 (PPM)	1,472		600	
CO2 (%)	2		-	
H2S (PPM)	-		-	

OIL PROPERTIES

DENSITY (°API at 60°F)	34,5	47
COLOUR	Dk brn	Dk brn
	Grn tinge	Grn tinge
FLUORESCENCE	Cream	Cream
POUR POINT (°C)	-	-

WATER PROPERTIES

RESISTIVITY (Ω m) @ 20°C	260
Cl (frm resis) (PPM)	26,000
Cl (frm titrat) (PPM)	19,000
TRITIUM (DPM)	2,922
pH	10.7

COMMENTS

Tritium
when drilling
3,300 DPM

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 3

RUN No.	8	8	9	9	10	10
SEAT No.	59	59	61	61	62	62
CHAMBER CAPACITY (L)	45.4	3.8	45.4	10.4	10.4	45.4
DEPTH (metres)	2845.5	2845.5	2276.4	2276.4	2269.5	2269.5

RECOVERY VOLUMES

GAS (Cu Ft)	225.2		15.7	12.2		64.0
OIL (cc)	Scum		Tr scum	Tr scum		Scum
WATER/FILTRATE (cc)	4,500		32,000	5,300		34,500
OTHER (cc)						
SURFACE PRESSURE (PSI)	1,780		500	1,050		1,625

GAS COMPOSITION

C1 (PPM)	418,611	PRE-	388,710	403,660	PRE-	269,107
C2 (PPM)	45,926	SERVED	59,904	57,907	SERVED	35,947
C3 (PPM)	10,816		18,171	17,305		16,872
C4 (PPM)	4,008		6,458	5,345		3,340
C5 (PPM)	1,248		2,159	1,928		1,620
C6 (PPM)	474		767	590		501
CO2 (%)	15		7	7		12
H2S (PPM)	0		0	0		0

OIL PROPERTIES

DENSITY (°API @ 15.6°C)	36.5	-	-		41.5
COLOUR	lt brn	Clear	Clear		cl, lt brn
FLUORESCENCE	Yel-wht	P1 wht	P1 wht		P1 wht
POUR POINT (°C)					

WATER PROPERTIES

RESISTIVITY (Ωm) @ 20°C	0.215	0.222	0.223		0.217
Cl (frm resis) (PPM)	32,000	31,500	31,500		30,200
Cl (frm titrat) (PPM)	21,000	22,000	21,500		21,500
TRITIUM (DPM)	3,008	3,213	2,939		3,061
pH	6.8	7.6	7.1		7.1

COMMENTS

API by Refractometer DPM @ 2845.5m = 3169	DPM @ 2276.4 = 3475	3575 Mud Tritium
--	------------------------	------------------------

API by
Refractometer

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Kipper #1

Sheet No. 4

RUN No.	11	11	12	12
SEAT No.	63	63	64	64
CHAMBER CAPACITY (L)	45.4	3.8	45.4	3.8
DEPTH (metres)	2221.5	2221.5	2157.0	2157.0

RECOVERY VOLUMES

GAS (Cu Ft)	274.4		283.6	
OIL (cc) Condensate	86		500	
WATER/FILTRATE (cc)	-		1,250	
OTHER (cc)	-		-	
SURFACE PRESSURE (PSI)	2,000		2,025	

GAS COMPOSITION

C1 (PPM)	358,809	PRE-	379,740	PRE-
C2 (PPM)	95,846	SERVED	59,904	SERVED
C3 (PPM)	16,926		20,766	
C4 (PPM)	6,931		7,896	
C5 (PPM)	1,861		3,084	
C6 (PPM)	676		1,092	
CO2 (%)	13		10	
H2S (PPM)	Nil		Nil	

OIL PROPERTIES

DENSITY (°API at 60°F)	46.6		48.76	
COLOUR	Trans to lt brn		Trans to lt brn	
FLUORESCENCE	Pale wht		Pale wht	
POUR POINT (°C)				

WATER PROPERTIES

RESISTIVITY (Ωm)			0.241	
Cl (frm resis) (PPM)			30,000	
Cl (frm titrat) (PPM)			22,000	
TRITIUM (DPM)			2,363	
pH			7.6	

COMMENTS

2,157 DPM
Mud trit

PRODUCTION TEST DATA SHEETS

PRODUCTION TEST DATA SHEET (LIQUIDS)

COMPANY Esso Australia Limited
 TEST NO. 1
 FLOW PERIOD Final

DATE 7 April 1986

WELL Kipper #1
 PERFORATIONS 2005 - 2013
 SHEET NO. 1

TIME	SAMPLING POINT	SHAKE-OUT (%)			°API at 60°F	COLOUR	POUR POINT	WATER			COMMENTS
		OIL	H ₂ O	SOLIDS				Chlor	H ₃ O	pH	
17:15	SEPARATOR				54.1	Tan-brn					
17:45	SEPARATOR				54.9	Lt tan					
18:00	SEPARATOR				55.1	Lt tan					
18:30	SEPARATOR				54.9	Lt tan					
19:00	SEPARATOR				56.1	Gld/yel clr	1300	0.6	6.4		
19:30	SEPARATOR				55.0	Gld/yel	1300	0.0	6.5		
20:00	SEPARATOR				55.1	Gld/yel clr	1650	4.6	6.5		
20:30	SEPARATOR				54.7	P1 yel-clr	1350	0.0	6.4		
21:00	SEPARATOR				54.7	P1 yel-clr	1300	0.0	6.4		
21:30	SEPARATOR				54.7	P1 yel-clr	1250	1.0	6.4		
01:00	SEPARATOR				54.8	P1 yel	850		6.3		
01:30	SEPARATOR				54.6	Clr					
02:00	SEPARATOR				54.6	Clr					
02:30	SEPARATOR				54.5	Clr/yel					
03:00	SEPARATOR				54.6	Clr	850		6.3		
03:30	SEPARATOR				54.4	Almost clr	800	0.0	6.2		
04:00	SEPARATOR				55.1	Almost clr	750	0.0	6.2		

COMPUTER DATA LISTINGS

Data is fed to the computer while drilling is in progress, using the DRILL program and is stored on a tape at 10, 5, 1, or 0.2m intervals. This data is then available at a later date for use in other programs (for example KICK, SURGE, COST, OPTBIT, and HYDRL).

The data can also be accessed by the REPORT program, which allows the operator to list both raw and calculated data in various formats. Either detailed data or data averaged over any particular depth interval, may be listed.

In addition, the data may be plotted in various formats, at any scale the operator desires.

the following data lists have been made for this well :

- (a). Bit record and bit initialization data
- (b). Hydraulic analyses
- (c). Data list A
- (d). Data list B
- (e). Data list C
- (f). Data list D

COMPUTER PLOTS

Using the REPORT program, the following plots have been drawn for this well :

GEO PLOT - 1:5000 SCALE - 2m averages

Since all the data is stored on tape, further data lists or plots are available at any time on request.

(a). BIT RECORD AND BIT INITIALIZATION DATA

BIT SIZE Inches

BIT COST Australian dollars

JET SIZE Thirty-seconds of an inch

DEPTHS Metres

HOLE MADE Metres

DRILLING TIME Hours

AVERAGE ROP Metres/hour

AVERAGE COST/METRE . . . Australian dollars

BIT CONDITION Teeth

Bearings

Gauge Inches

WELL: KIPPER NO.1

BIT RECORD

BIT IADC No. CODE MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP AROP TIME		CCOST	TOTAL TURNS	CONDITION T B G
1 111 HTC R1	17.500	0.00	20 20 20	256.0	846.0	590.0	14.49	40.7	3.0	108.26	109766	2 2 0.000
2 116 HTC J1	12.250	2566.00	18 18 18	846.0	1427.5	581.5	17.08	34.0	4.5	139.94	134081	2 3 0.000
2 4 CHRIS RC476	9.875	0.00	15 15 16	1427.5	1436.0	8.5	1.23	6.9	4.5	2461.98	9672	0 0 0.000
2 4 CHRIS RC476	9.875	0.00	15 15 16	1436.0	1445.5	9.5	1.08	8.8	4.5	2145.07	8392	0 0 0.000
2 4 CHRIS RC476	9.875	0.00	15 15 16	1445.5	1455.4	9.9	1.83	5.4	4.5	2335.07	14268	0 0 0.000
3 517 HTC J22	12.250	8520.00	16 16 16	1455.4	1813.2	357.8	24.35	14.7	5.5	328.49	102063	2 3 0.125
3 4 CHRIS RC476	9.875	0.00	15 15 16	1813.2	1821.8	8.6	0.91	9.5	6.0	2934.34	6058	0 0 0.000
4 517 HTC J22	12.250	8520.00	16 16 16	1821.8	1832.2	10.4	0.69	15.1	6.0	3168.45	2889	0 0 0.000
4 4 CHRIS RC476	9.875	0.00	15 15 16	1832.2	1841.6	9.4	0.60	15.7	7.0	2952.90	4641	0 0 0.000
4 4 CHRIS RC476	9.875	0.00	15 15 16	1841.6	1851.1	9.5	0.33	28.6	6.0	2434.24	2591	0 0 0.000
4 517 HTC J22	12.250	0.00	16 16 16	1851.1	2140.1	289.0	25.80	11.2	6.0	401.85	100622	4 3 0.125

WELL: KIPPER NO.1

BIT RECORD

BIT IADC No. CODE MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP AROP TIME		CCOST	TOTAL TURNS	CONDITION T B G
5 517 HTC J22	12.250	8520.00	16 16 16	2140.1	2400.6	260.5	50.21	5.2	8.0	848.76	195837	6 5 0.125
6 517 HTC J22	12.250	8520.00	16 16 16	2400.6	2650.3	249.7	57.92	4.3	7.2	986.54	215379	5 4 0.125
7 517 HTC J22	12.250	8520.00	16 16 16	2650.3	2840.0	189.7	63.91	3.0	7.7	1423.51	191717	2 4 0.250
8 537 HTC J33	12.250	8266.00	16 16 16	2840.0	2875.0	35.0	12.35	2.8	8.1	2369.98	33460	1 1 0.000

BIT NUMBER: 1 IADC CODE 111 HTC R1

STARTING DEPTH, TVD.....	256.0	256.0	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	3.0		
BIT DIAMETER.....	17.500		
NOZZLES.....	20	20	20
HW DRILL COLLAR LENGTH, OD, ID....	21.03	9.750	2.813
DRILL COLLAR LENGTH, OD, ID.....	93.91	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.40	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	238.00	19.124	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.0	2.00	
FINISHING DEPTH.....	846.0		
CUMULATIVE HOURS, TURNS.....	14.5	109766	
BIT CONDITION OUT.....	T 2	B 2	G 0.000

BIT NUMBER: 2 IADC CODE 116 HTC J1

STARTING DEPTH, TVD.....	846.0	846.0	
BIT COST, RIG COST/HOUR.....	2566.00	3652.00	
TRIP TIME.....	4.5		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	153.34	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.124
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	830.00	12.415	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.20	
FINISHING DEPTH.....	1427.5		
CUMULATIVE HOURS, TURNS.....	17.1	134081	
BIT CONDITION OUT.....	T 2	B 3	G 0.000

BIT NUMBER: 2 IADC CODE 4 CHRIS RC476

STARTING DEPTH, TVD.....	1427.5	1427.5	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	4.5		
BIT DIAMETER.....	9.875		
NOZZLES.....	15	15	16
DRILL COLLAR LENGTH, OD, ID.....	132.74	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	1427.50	830.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.20	

FINISHING DEPTH.....	1436.0		
CUMULATIVE HOURS, TURNS.....	1.2	9672	
BIT CONDITION OUT.....	T 0	R 0	G 0.000

BIT NUMBER: 2 IADC CODE 4 CHRIS RC476

STARTING DEPTH, TVD.....	1436.0	1436.0	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	4.5		
BIT DIAMETER.....	9.875		
NOZZLES.....	15	15	16
DRILL COLLAR LENGTH, OD, ID.....	132.74	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	1427.50	830.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.20	

FINISHING DEPTH.....	1445.5		
CUMULATIVE HOURS, TURNS.....	1.1	8392	
BIT CONDITION OUT.....	T 0	R 0	G 0.000

BIT NUMBER: 2 IADC CODE 4 CHRIS RC476

STARTING DEPTH, TVD.....	1445.5	1445.5	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	4.5		
BIT DIAMETER.....	9.875		
NOZZLES.....	15	15	16
DRILL COLLAR LENGTH, OD, ID.....	132.74	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	1427.50	830.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.20	
FINISHING DEPTH.....	1455.4		
CUMULATIVE HOURS, TURNS.....	1.8	14268	
BIT CONDITION OUT.....	T 0	B 0	G 0.000

BIT NUMBER: 3 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	1455.4	1455.4	
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	5.5		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	152.37	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	830.00	12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.2	2.30	
FINISHING DEPTH.....	1813.2		
CUMULATIVE HOURS, TURNS.....	24.4	102063	
BIT CONDITION OUT.....	T 2	B 3	G 0.125

BIT NUMBER: 3 IADC CODE 4 CHRIS RC476

STARTING DEPTH, TVD.....	1813.2	1813.2	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	6.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	15	15	16
DRILL COLLAR LENGTH, OD, ID.....	132.74	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	1813.00	830.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR.....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.30	

FINISHING DEPTH.....	1821.8		
CUMULATIVE HOURS, TURNS.....	0.9	6058	
BIT CONDITION OUT.....	T 0	B 0	G 0.000

BIT NUMBER: 4 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	1821.8	1821.8	
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	6.0		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	152.37	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	830.00	12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR.....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.40	

FINISHING DEPTH.....	1832.2		
CUMULATIVE HOURS, TURNS.....	0.7	2889	
BIT CONDITION OUT.....	T 0	B 0	G 0.000

BIT NUMBER: 4 IADC CODE 4 CHRIS RC476

STARTING DEPTH, TVD.....	1832.2	1832.2	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	7.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	15	15	16
DRILL COLLAR LENGTH, OD, ID.....	132.80	5.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	1832.00	830.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.30	
FINISHING DEPTH.....	1841.6		
CUMULATIVE HOURS, TURNS.....	0.6	4641	
BIT CONDITION OUT.....	T 0	B 0	G 0.000

BIT NUMBER: 4 IADC CODE 4 CHRIS RC476

STARTING DEPTH, TVD.....	1841.6	1841.6	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	6.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	15	15	16
DRILL COLLAR LENGTH, OD, ID.....	132.80	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	1832.00	830.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.20	
FINISHING DEPTH.....	1851.1		
CUMULATIVE HOURS, TURNS.....	0.3	2591	
BIT CONDITION OUT.....	T 0	B 0	G 0.000

BIT NUMBER: 4 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	1851.1	1851.1	
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	6.0		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	152.80	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	830.00	12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.30	
FINISHING DEPTH.....	2140.1		
CUMULATIVE HOURS, TURNS.....	25.8	100622	
BIT CONDITION OUT.....	T 4	B 3	G 0.125

BIT NUMBER: 5 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	2140.1	2140.0		
BIT COST, RIG COST/HOUR.....	8520.00	3652.00		
TRIP TIME.....	8.0			
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	16	
DRILL COLLAR LENGTH, OD, ID.....	152.00	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	830.00	12.615		
RISER LENGTH, ID.....	115.00	21.000		
PUMP VOLUMES 1 AND 2.....	0.119	0.119		
PORE PRESSURE CALC EXPONENT.....	1.20			
NORMAL PORE PRESSURE.....	8.4			
OVERBURDEN GRADIENT MODIFIER.....	0.00			
STRESS RATIO MODIFIER.....	0.40			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.0	2.40		
FINISHING DEPTH.....	2400.6			
CUMULATIVE HOURS, TURNS.....	50.2	195837		
BIT CONDITION OUT.....	T 6	B 5	G 0.125	

BIT NUMBER: 6 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	2400.6	2400.4		
BIT COST, RIG COST/HOUR.....	8520.00	3652.00		
TRIP TIME.....	7.2			
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	16	
DRILL COLLAR LENGTH, OD, ID.....	152.00	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	830.00	12.615		
RISER LENGTH, ID.....	115.00	21.000		
PUMP VOLUMES 1 AND 2.....	0.119	0.119		
PORE PRESSURE CALC EXPONENT.....	1.20			
NORMAL PORE PRESSURE.....	8.4			
OVERBURDEN GRADIENT MODIFIER.....	0.00			
STRESS RATIO MODIFIER.....	0.40			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.0	2.40		
FINISHING DEPTH.....	2650.3			
CUMULATIVE HOURS, TURNS.....	57.9	215379		
BIT CONDITION OUT.....	T 5	B 4	G 0.125	

BIT NUMBER: 7 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	2650.3	2650.0	
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	7.7		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	170.49	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	830.00	12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	

FINISHING DEPTH.....	2840.0		
CUMULATIVE HOURS, TURNS.....	63.9	191717	
BIT CONDITION OUT.....	T 2	B 4	G 0.250

BIT NUMBER: 8 IADC CODE 537 HTC J33

STARTING DEPTH, TVD.....	2840.0	2839.6	
BIT COST, RIG COST/HOUR.....	8266.00	3652.00	
TRIP TIME.....	8.1		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	170.49	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.38	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	830.00	12.615	
RISER LENGTH, ID.....	115.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.40		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	

FINISHING DEPTH.....	2875.0		
CUMULATIVE HOURS, TURNS.....	12.4	33460	
BIT CONDITION OUT.....	T 1	B 1	G 0.000

(b). HYDRAULIC ANALYSIS

Data listed from the tape every 100m for each bit run.

DEPTH. Metres

FLOW RATE. Rate of mud flow into the well,
in gallons per minute.

ANNULAR VOLUMES. . . . Barrels, Barrels/metre

ANNULAR VELOCITIES . . Metres/minute

CRITICAL VELOCITIES. . The annular velocity above which
the flow becomes turbulent

SLIP VELOCITY. The rate of slip of cuttings in the
annulus under laminar flow

ASCENT VELOCITY. . . . The rate of ascent of cuttings in
the annulus under laminar flow

PRESSURE UNITS Pounds per square inch

IMPACT FORCE The impact force at the bit,
in foot-pounds per second squared.

H.H.P. Hydraulic horsepower at the bit

JET VELOCITY The velocity of mud through the
bit nozzles, in metres per second.

DENSITY UNITS. Pounds per gallon

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 109 SPM 2 111 FLOW RATE 1104

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	39	15	TURBULENT			0.0
DC/OH	0.772	32	34	14	TURBULENT			0.1
DC/CSG	0.961	51	27	14	TURBULENT			0.0
HWDP/CSG	1.085	76	24	13	TURBULENT			0.0
HWDP/RIS	1.325	18	20	12	TURBULENT			0.0
DP/RIS	1.325	135	20	12	TURBULENT			0.0
TOTAL VOLUME		325			TOTAL PRESSURE DROP			0.2

LAG: 12.4 MINUTES 1354 STROKES #1 AND 1378 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1139.3 HHP 734 IMPACT FORCE 1891
% SURFACE PRESSURE 57.9 HHP/sqin 3.05 JET VELOCITY 117

PRESSURE BREAKDOWN:

SURFACE 68.8
STRING 529.6
BIT 1139.3
ANNULUS 0.2
TOTAL 1737.9 PUMP PRESSURE 1968.7 % DIFFERENCE 11.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 440.2
CIRCULATING:	ECD 8.60	CIRCULATING PRESSURE 440.4
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.4
	EFFECTIVE MUD WEIGHT 8.59	BOTTOM HOLE PRESSURE 439.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 114 SPM 2 112 FLOW RATE 1129

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	40	15	TURBULENT			0.1
DC/OH	0.772	72	35	14	TURBULENT			0.1
HWDP/OH	0.896	42	30	13	TURBULENT			0.0
HWDP/CSG	1.085	39	25	12	TURBULENT			0.0
DP/CSG	1.085	94	25	12	TURBULENT			0.0
DP/RIS	1.325	152	20	12	TURBULENT			0.0
TOTAL VOLUME		415			TOTAL PRESSURE DROP			0.3

LAG: 15.4 MINUTES 1752 STROKES #1 AND 1733 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1247.1 HHP 821 IMPACT FORCE 2070
% SURFACE PRESSURE 57.6 HHP/sqin 3.42 JET VELOCITY 120

PRESSURE BREAKDOWN:

SURFACE 74.3
STRING 614.7
BIT 1247.1
ANNULUS 0.3
TOTAL 1936.4 PUMP PRESSURE 2165.6 % DIFFERENCE 10.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.00	HYDROSTATIC PRESSURE 614.2
CIRCULATING:	ECD 9.00	CIRCULATING PRESSURE 614.5
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.6
	EFFECTIVE MUD WEIGHT 8.99	BOTTOM HOLE PRESSURE 613.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 112 SPM 2 109 FLOW RATE 1106

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	39	15	TURBULENT			0.0
DC/OH	0.772	72	34	14	TURBULENT			0.1
HWDP/OH	0.896	75	29	13	TURBULENT			0.1
DP/OH	0.896	57	29	13	TURBULENT			0.0
DP/CSG	1.085	134	24	12	TURBULENT			0.1
DP/RIS	1.325	152	20	12	TURBULENT			0.0
TOTAL VOLUME		504			TOTAL PRESSURE DROP		0.4	

LAG: 19.2 MINUTES 2150 STROKES #1 AND 2088 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1196.3 HHP 772 IMPACT FORCE 1986
 % SURFACE PRESSURE 54.6 HHP/sqin 3.21 JET VELOCITY 117

PRESSURE BREAKDOWN:

SURFACE 71.6
 STRING 633.3
 BIT 1196.3
 ANNULUS 0.4
 TOTAL 1901.5 PUMP PRESSURE 2190.3 % DIFFERENCE 13.2

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.00	HYDROSTATIC PRESSURE 767.7
CIRCULATING:	ECD 9.00	CIRCULATING PRESSURE 768.1
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.8
	EFFECTIVE MUD WEIGHT 8.99	BOTTOM HOLE PRESSURE 766.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 112 SPM 2 107 FLOW RATE 1095

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	39	70	LAMINAR	1	38	0.1
DC/OH	0.772	72	34	67	LAMINAR	0	33	0.5
HWDP/OH	0.896	75	29	65	LAMINAR	0	29	0.3
DP/OH	0.896	147	29	65	LAMINAR	0	29	0.5
DP/CSG	1.085	134	24	63	LAMINAR	0	24	0.3
DP/RIS	1.325	152	20	62	LAMINAR	0	20	0.2
TOTAL VOLUME		594			TOTAL PRESSURE DROP		1.9	

LAG: 22.8 MINUTES 2555 STROKES #1 AND 2436 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1200.3 HHP 767 IMPACT FORCE 1993
 % SURFACE PRESSURE 52.9 HHP/sqin 3.19 JET VELOCITY 116

PRESSURE BREAKDOWN:

SURFACE 94.5
 STRING 890.8
 BIT 1200.3
 ANNULUS 1.9
 TOTAL 2187.5 PUMP PRESSURE 2269.8 % DIFFERENCE 3.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.20	HYDROSTATIC PRESSURE 941.7
CIRCULATING:	ECD 9.22	CIRCULATING PRESSURE 943.6
PULLING OUT:	TRIP MARGIN 0.04	ESTIMATED SWAB 3.8
	EFFECTIVE MUD WEIGHT 9.16	BOTTOM HOLE PRESSURE 938.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 109 SPM 2 106 FLOW RATE 1076

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	38	70	LAMINAR	1	38	0.1
DC/OH	0.772	72	33	67	LAMINAR	0	33	0.5
HWDP/OH	0.896	75	29	65	LAMINAR	0	28	0.3
DP/OH	0.896	236	29	65	LAMINAR	0	28	0.8
DP/CSG	1.085	134	24	63	LAMINAR	0	23	0.3
DP/RIS	1.325	152	19	62	LAMINAR	0	19	0.2
TOTAL VOLUME		683			TOTAL PRESSURE DROP		2.2	

LAG: 26.7 MINUTES 2915 STROKES #1 AND 2828 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1158.6 HHP 728 IMPACT FORCE 1923
 % SURFACE PRESSURE 50.1 HHP/sqin 3.02 JET VELOCITY 114

PRESSURE BREAKDOWN:

SURFACE 91.6
 STRING 915.7
 BIT 1158.6
 ANNULUS 2.2
 TOTAL 2168.0 PUMP PRESSURE 2310.6 % DIFFERENCE 6.2

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.20	HYDROSTATIC PRESSURE 1098.7
CIRCULATING: ECD	9.22	CIRCULATING PRESSURE 1100.9
PULLING OUT: TRIP MARGIN	0.04	ESTIMATED SWAB 4.3
EFFECTIVE MUD WEIGHT	9.16	BOTTOM HOLE PRESSURE 1094.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 110 SPM 2 106 FLOW RATE 1082

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	38	70	LAMINAR	1	38	0.1
DC/OH	0.772	72	33	67	LAMINAR	0	33	0.5
HWDP/OH	0.896	75	29	65	LAMINAR	0	29	0.3
DP/OH	0.896	326	29	65	LAMINAR	0	29	1.1
DP/CSG	1.085	134	24	63	LAMINAR	0	24	0.3
DP/RIS	1.325	152	19	62	LAMINAR	0	19	0.2
TOTAL VOLUME		773			TOTAL PRESSURE DROP		2.5	

LAG: 30.0 MINUTES 3311 STROKES #1 AND 3185 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1171.6 HHP 740 IMPACT FORCE 1945
 % SURFACE PRESSURE 48.5 HHP/sqin 3.08 JET VELOCITY 115

PRESSURE BREAKDOWN:

SURFACE 92.5
 STRING 978.2
 BIT 1171.6
 ANNULUS 2.5
 TOTAL 2244.8 PUMP PRESSURE 2413.5 % DIFFERENCE 7.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE 1255.6
CIRCULATING:	ECD	9.22	CIRCULATING PRESSURE 1258.1
PULLING OUT:	TRIP MARGIN	0.04	ESTIMATED SWAB 5.0
	EFFECTIVE MUD WEIGHT	9.16	BOTTOM HOLE PRESSURE 1250.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 100 SPM 2 72 FLOW RATE 863

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	19	75	90	LAMINAR	1	74	1.8
DC/CSG	0.287	24	72	89	LAMINAR	1	71	2.1
HWDP/CSG	0.411	34	50	82	LAMINAR	0	50	0.8
DP/CSG	0.411	226	50	82	LAMINAR	0	50	5.6
DP/RIS	1.325	152	15	73	LAMINAR	0	15	0.2
TOTAL VOLUME		455	TOTAL PRESSURE DROP					10.5

LAG: 22.2 MINUTES 2222 STROKES #1 AND 1604 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1072.5 HHP 540 IMPACT FORCE 1442
 % SURFACE PRESSURE 40.0 HHP/sqin 4.58 JET VELOCITY 113

PRESSURE BREAKDOWN:

SURFACE 61.5
 STRING 773.6
 BIT 1072.5
 ANNULUS 10.5
 TOTAL 1918.1 PUMP PRESSURE 2680.3 % DIFFERENCE 28.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.70	HYDROSTATIC PRESSURE 1335.8
CIRCULATING:	ECD 8.77	CIRCULATING PRESSURE 1346.4
PULLING OUT:	TRIP MARGIN 0.14	ESTIMATED SWAB 21.1
	EFFECTIVE MUD WEIGHT 8.56	BOTTOM HOLE PRESSURE 1314.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 97 SPM 2 100 FLOW RATE 987

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	86	89	LAMINAR	1	85	4.3
HWDP/OH	0.398	7	59	82	LAMINAR	0	59	0.2
HWDP/CSG	0.411	27	57	82	LAMINAR	0	57	0.7
DP/CSG	0.411	267	57	82	LAMINAR	0	57	7.0
DP/RIS	1.325	152	18	73	LAMINAR	0	18	0.3
TOTAL VOLUME		495			TOTAL PRESSURE DROP			12.4

LAG: 21.1 MINUTES 2051 STROKES #1 AND 2110 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1419.7	HHP	817	IMPACT FORCE	1909
% SURFACE PRESSURE	51.7	HHP/sqin	6.93	JET VELOCITY	129

PRESSURE BREAKDOWN:

SURFACE	79.0		
STRING	1040.2		
BIT	1419.7		
ANNULUS	12.4		
TOTAL	2551.3	PUMP PRESSURE	2744.7
		% DIFFERENCE	7.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.80	HYDROSTATIC PRESSURE 1501.3
CIRCULATING:	ECD 8.87	CIRCULATING PRESSURE 1513.7
PULLING OUT:	TRIP MARGIN 0.15	ESTIMATED SWAB 24.8
	EFFECTIVE MUD WEIGHT 8.65	BOTTOM HOLE PRESSURE 1476.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 100 SPM 2 100 FLOW RATE 998

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	87	89	LAMINAR	1	86	4.3
HWDP/OH	0.398	33	60	82	LAMINAR	0	59	0.9
DP/OH	0.398	13	60	82	LAMINAR	0	59	0.4
DP/CSG	0.411	294	58	82	LAMINAR	0	57	7.7
DP/RIS	1.325	152	18	73	LAMINAR	0	18	0.3
TOTAL VOLUME		535			TOTAL PRESSURE DROP		13.6	

LAG: 22.5 MINUTES 2241 STROKES #1 AND 2255 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1453.5 HHP 847 IMPACT FORCE 1955
 % SURFACE PRESSURE 50.8 HHP/sqin 7.18 JET VELOCITY 131

PRESSURE BREAKDOWN:

SURFACE 80.7
 STRING 1109.0
 BIT 1453.5
 ANNULUS 13.6
 TOTAL 2656.8 PUMP PRESSURE 2858.9 % DIFFERENCE 7.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS:
NOT CIRCULATING:	MUD WEIGHT 8.80	HYDROSTATIC PRESSURE 1651.4
CIRCULATING:	ECD 8.87	CIRCULATING PRESSURE 1665.0
PULLING OUT:	TRIP MARGIN 0.14	ESTIMATED SWAB 27.1
	EFFECTIVE MUD WEIGHT 8.66	BOTTOM HOLE PRESSURE 1624.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 98 SPM 2 97 FLOW RATE 974

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	85	87	LAMINAR	1	84	4.3
HWDP/OH	0.398	33	58	81	LAMINAR	0	58	0.9
DP/OH	0.398	53	58	81	LAMINAR	0	58	1.5
DP/CSG	0.411	294	56	80	LAMINAR	0	56	7.6
DP/RIS	1.325	152	18	71	LAMINAR	0	17	0.3
TOTAL VOLUME		575			TOTAL PRESSURE DROP			14.6

LAG: 24.8 MINUTES 2429 STROKES #1 AND 2402 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1431.0	HHP	813	IMPACT FORCE	1924
% SURFACE PRESSURE	48.5	HHP/sqin	6.90	JET VELOCITY	127

PRESSURE BREAKDOWN:

SURFACE	79.3		
STRING	1135.5		
BIT	1431.0		
ANNULUS	14.6		
TOTAL	2660.4	PUMP PRESSURE	2948.1
		% DIFFERENCE	9.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.10	HYDROSTATIC PRESSURE 1863.0
CIRCULATING:	ECD 9.17	CIRCULATING PRESSURE 1877.5
PULLING OUT:	TRIP MARGIN 0.14	ESTIMATED SWAB 29.1
EFFECTIVE MUD WEIGHT	8.96	BOTTOM HOLE PRESSURE 1833.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1300.0

SPM 1 99 SPM 2 94 FLOW RATE 965

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	84	87	LAMINAR	1	83	4.2
HWDP/OH	0.398	33	58	80	LAMINAR	0	57	0.9
DP/OH	0.398	93	58	80	LAMINAR	0	57	2.6
DP/CSG	0.411	294	56	80	LAMINAR	0	56	7.6
DP/RIS	1.325	152	17	71	LAMINAR	0	17	0.3

TOTAL VOLUME 615 TOTAL PRESSURE DROP 15.6

LAG: 26.7 MINUTES 2654 STROKES #1 AND 2512 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1420.5 HHP 800 IMPACT FORCE 1910
 % SURFACE PRESSURE 47.2 HHP/sqin 6.79 JET VELOCITY 126

PRESSURE BREAKDOWN:

SURFACE 78.7
 STRING 1172.2
 BIT 1420.5
 ANNULUS 15.6
 TOTAL 2687.1 PUMP PRESSURE 3009.5 % DIFFERENCE 10.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.20	HYDROSTATIC PRESSURE 2040.4
CIRCULATING:	ECD 9.27	CIRCULATING PRESSURE 2056.0
PULLING OUT:	TRIP MARGIN 0.14	ESTIMATED SWAB 31.2
	EFFECTIVE MUD WEIGHT 9.06	BOTTOM HOLE PRESSURE 2009.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 94 SPM 2 95 FLOW RATE 945

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	82	87	LAMINAR	1	81	4.2
HWDP/OH	0.398	33	56	80	LAMINAR	0	56	0.9
DP/OH	0.398	133	56	80	LAMINAR	0	56	3.7
DP/CSG	0.411	294	55	80	LAMINAR	0	54	7.5
DP/RIS	1.325	152	17	71	LAMINAR	0	17	0.3
TOTAL VOLUME		655				TOTAL PRESSURE DROP		16.6

LAG: 29.1 MINUTES 2743 STROKES #1 AND 2758 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1360.2 HHP 750 IMPACT FORCE 1829
% SURFACE PRESSURE 44.4 HHP/sqin 6.36 JET VELOCITY 124

PRESSURE BREAKDOWN:

SURFACE 75.7
STRING 1170.9
BIT 1360.2
ANNULUS 16.6
TOTAL 2623.3 PUMP PRESSURE 3064.0 % DIFFERENCE 14.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.20	HYDROSTATIC PRESSURE 2197.4
CIRCULATING:	ECD 9.27	CIRCULATING PRESSURE 2213.9
PULLING OUT:	TRIP MARGIN 0.14	ESTIMATED SWAB 33.1
	EFFECTIVE MUD WEIGHT 9.06	BOTTOM HOLE PRESSURE 2164.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1430.0 AND TVD 1430.0

SPM 1 100 SPM 2 0 FLOW RATE 502

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.107	0	112	99	TURBULENT			0.3
DC/LIN	0.274	36	44	87	LAMINAR	0	43	2.7
HWDP/LIN	0.398	33	30	80	LAMINAR	0	30	0.7
DP/LIN	0.398	153	30	80	LAMINAR	0	30	3.3
DP/CSG	0.427	306	28	79	LAMINAR	0	28	5.5
DP/RIS	1.325	152	9	71	LAMINAR	0	9	0.2
TOTAL VOLUME		680			TOTAL PRESSURE DROP		12.7	

LAG: 56.9 MINUTES 5715 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 727.6 HHP 213 IMPACT FORCE 711
 % SURFACE PRESSURE 81.8 HHP/sqin 2.78 JET VELOCITY 90

PRESSURE BREAKDOWN:

SURFACE 24.2
 STRING 360.5
 BIT 727.6
 ANNULUS 12.7
 TOTAL 1125.0 PUMP PRESSURE 889.7 % DIFFERENCE 26.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.20	HYDROSTATIC PRESSURE 2244.5
CIRCULATING: ECD	9.25	CIRCULATING PRESSURE 2257.1
PULLING OUT: TRIP MARGIN	0.10	ESTIMATED SWAB 25.4
EFFECTIVE MUD WEIGHT	9.10	BOTTOM HOLE PRESSURE 2219.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1440.0 AND TVD 1440.0

SPM 1 100 SPM 2 0 FLOW RATE 502

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.107	1	112	98	TURBULENT			1.5
DC/LIN	0.274	33	44	86	LAMINAR	0	43	2.5
HWDP/LIN	0.398	33	30	79	LAMINAR	0	30	0.7
DP/LIN	0.398	157	30	79	LAMINAR	0	30	3.3
DP/CSG	0.427	306	28	79	LAMINAR	0	28	5.5
DP/RIS	1.325	152	9	70	LAMINAR	0	9	0.2
TOTAL VOLUME		682			TOTAL PRESSURE DROP		13.8	

LAG: 57.1 MINUTES 5734 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 738.8 HHP 716 IMPACT FORCE 722
 % SURFACE PRESSURE 75.0 HHP/sqin 2.82 JET VELOCITY 90

PRESSURE BREAKDOWN:

SURFACE 24.5
 STRING 366.3
 BIT 738.8
 ANNULUS 13.8
 TOTAL 1143.4 PUMP PRESSURE 985.3 % DIFFERENCE 16.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.35	HYDROSTATIC PRESSURE 2297.0
CIRCULATING:	ECD 9.41	CIRCULATING PRESSURE 2310.8
PULLING OUT:	TRIP MARGIN 0.11	ESTIMATED SWAB 27.5
	EFFECTIVE MUD WEIGHT 9.24	BOTTOM HOLE PRESSURE 2269.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1450.0 AND TVD 1450.0

SPM 1 0 SPM 2 101 FLOW RATE 507

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.107	2	113	98	TURBULENT			2.7
DC/LIN	0.274	30	44	86	LAMINAR	0	44	2.3
HWDP/LIN	0.398	33	30	79	LAMINAR	0	30	0.7
DP/LIN	0.398	161	30	79	LAMINAR	0	30	3.4
DP/CSG	0.427	306	28	79	LAMINAR	0	28	5.5
DP/RIS	1.325	152	9	70	LAMINAR	0	9	0.2
TOTAL VOLUME		685	TOTAL PRESSURE DROP			14.9		

LAG: 56.8 MINUTES 0 STROKES #1 AND 5754 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	753.5	HHP	223	IMPACT FORCE	736
% SURFACE PRESSURE	73.7	HHP/sqin	2.91	JET VELOCITY	91

PRESSURE BREAKDOWN:

SURFACE	25.0		
STRING	374.3		
BIT	753.5		
ANNULUS	14.9		
TOTAL	1167.8	PUMP PRESSURE	1021.9
		% DIFFERENCE	14.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.35	HYDROSTATIC PRESSURE 2313.0
CIRCULATING:	ECD 9.41	CIRCULATING PRESSURE 2327.9
PULLING OUT:	TRIP MARGIN 0.12	ESTIMATED SWAB 29.8
	EFFECTIVE MUD WEIGHT 9.23	BOTTOM HOLE PRESSURE 2283.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1500.0

SPM 1 83 SPM 2 85 FLOW RATE 838

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	73	135	LAMINAR	0	72	8.2
HWDP/OH	0.398	33	50	132	LAMINAR	0	50	2.1
DP/OH	0.398	173	50	132	LAMINAR	0	50	10.8
DP/CSG	0.427	306	47	132	LAMINAR	0	47	16.4
DP/RIS	1.325	152	15	128	LAMINAR	0	15	0.8
TOTAL VOLUME		706			TOTAL PRESSURE DROP		38.3	

LAG: 35.4 MINUTES 2920 STROKES #1 AND 3012 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1760.9 HHP 861 IMPACT FORCE 1871
 % SURFACE PRESSURE 59.0 HHP/sqin 7.30 JET VELOCITY 139

PRESSURE BREAKDOWN:

SURFACE 62.3
 STRING 997.6
 BIT 1760.9
 ANNULUS 38.3
 TOTAL 2859.1 PUMP PRESSURE 2985.2 % DIFFERENCE 4.2

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.45	HYDROSTATIC PRESSURE 2418.3
CIRCULATING:	ECD 9.60	CIRCULATING PRESSURE 2456.6
PULLING OUT:	TRIP MARGIN 0.30	ESTIMATED SWAB 76.6
	EFFECTIVE MUD WEIGHT 9.15	BOTTOM HOLE PRESSURE 2341.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1600.0

SPM 1 85 SPM 2 85 FLOW RATE 848

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	74	137	LAMINAR	0	73	8.8
HWDP/OH	0.398	33	51	127	LAMINAR	0	50	2.11
DP/OH	0.398	213	51	127	LAMINAR	0	50	12.7
DP/CSG	0.427	306	47	126	LAMINAR	0	47	15.4
DP/RIS	1.325	152	15	114	LAMINAR	0	15	0.6
TOTAL VOLUME		746				TOTAL PRESSURE DROP		39.4

LAG: 36.9 MINUTES 3132 STROKES #1 AND 3135 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1784.4 HHP 883 IMPACT FORCE 1896
 % SURFACE PRESSURE 58.1 HHP/sqin 7.49 JET VELOCITY 140

PRESSURE BREAKDOWN:

SURFACE 72.5
 STRING 1202.7
 BIT 1784.4
 ANNULUS 39.4
 TOTAL 3099.0 PUMP PRESSURE 3070.7 % DIFFERENCE 0.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.35	HYDROSTATIC PRESSURE 2552.2
CIRCULATING:	ECD 9.49	CIRCULATING PRESSURE 2591.7
PULLING OUT:	TRIP MARGIN 0.29	ESTIMATED SWAB 78.9
	EFFECTIVE MUD WEIGHT 9.06	BOTTOM HOLE PRESSURE 2473.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1700.0

SPM 1 87 SPM 2 80 FLOW RATE 832

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	72	137	LAMINAR	0	72	8.7
HWDP/OH	0.398	33	50	127	LAMINAR	0	50	2.0
DP/OH	0.398	253	50	127	LAMINAR	0	50	14.9
DP/CSG	0.427	306	46	126	LAMINAR	0	46	15.3
DP/RIS	1.325	152	15	114	LAMINAR	0	15	0.6
TOTAL VOLUME		786			TOTAL PRESSURE DROP		41.5	

LAG: 39.6 MINUTES 3436 STROKES #1 AND 3165 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1720.0 HHP 835 IMPACT FORCE 1827
 % SURFACE PRESSURE 55.9 HHP/sqin 7.09 JET VELOCITY 138

PRESSURE BREAKDOWN:

SURFACE 70.2
 STRING 1204.0
 BIT 1720.0
 ANNULUS 41.5
 TOTAL 3035.7 PUMP PRESSURE 3074.2 % DIFFERENCE 1.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.35	HYDROSTATIC PRESSURE 2711.7
CIRCULATING:	ECD 9.49	CIRCULATING PRESSURE 2753.2
PULLING OUT:	TRIP MARGIN 0.29	ESTIMATED SWAB 83.0
	EFFECTIVE MUD WEIGHT 9.06	BOTTOM HOLE PRESSURE 2628.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1800.0

SPM 1 86 SPM 2 79 FLOW RATE 826

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	72	135	LAMINAR	0	71	8.7
HWDP/OH	0.398	33	49	125	LAMINAR	0	49	2.0
DP/OH	0.398	293	49	125	LAMINAR	0	49	17.2
DP/CSG	0.427	306	46	125	LAMINAR	0	46	15.3
DP/RIS	1.325	152	15	113	LAMINAR	0	15	0.6

TOTAL VOLUME 825 TOTAL PRESSURE DROP 43.7

LAG: 42.0 MINUTES 3617 STROKES #1 AND 3319 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1727.5 HHP 832 IMPACT FORCE 1835
 % SURFACE PRESSURE 55.5 HHP/sqin 7.06 JET VELOCITY 137

PRESSURE BREAKDOWN:

SURFACE 70.3
 STRING 1246.7
 BIT 1727.5
 ANNULUS 43.7
 TOTAL 3088.3 PUMP PRESSURE 3114.8 % DIFFERENCE 0.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.55	HYDROSTATIC PRESSURE 2932.7
CIRCULATING:	ECD 9.69	CIRCULATING PRESSURE 2976.4
PULLING OUT:	TRIP MARGIN 0.28	ESTIMATED SWAB 87.4
	EFFECTIVE MUD WEIGHT 9.27	BOTTOM HOLE PRESSURE 2845.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1820.0 AND TVD 1820.0

SPM 1 100 SPM 2 0 FLOW RATE 499

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.107	1	111	143	LAMINAR	0	111	1.4
DC/LIN	0.274	34	43	126	LAMINAR	0	43	5.3
HWDP/LIN	0.398	33	30	116	LAMINAR	0	30	1.4
DP/LIN	0.398	308	30	116	LAMINAR	0	30	13.1
DP/CSG	0.427	306	28	115	LAMINAR	0	28	11.0
DP/RIS	1.325	152	9	103	LAMINAR	0	9	0.4
TOTAL VOLUME		835			TOTAL PRESSURE DROP		32.5	

LAG: 70.2 MINUTES 7014 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 755.2 HHP 220 IMPACT FORCE 738
 % SURFACE PRESSURE 74.1 HHP/sqin 2.87 JET VELOCITY 90

PRESSURE BREAKDOWN:

SURFACE 28.7
 STRING 490.6
 BIT 755.2
 ANNULUS 32.5
 TOTAL 1306.9 PUMP PRESSURE 1018.7 % DIFFERENCE 28.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.65	HYDROSTATIC PRESSURE 2996.3
CIRCULATING: ECD	9.75	CIRCULATING PRESSURE 3028.8
PULLING OUT: TRIP MARGIN	0.21	ESTIMATED SWAB 65.0
EFFECTIVE MUD WEIGHT	9.44	BOTTOM HOLE PRESSURE 2931.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1830.0 AND TVD 1830.0

SPM 1 81 SPM 2 79 FLOW RATE 798

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	69	134	LAMINAR	0	69	8.6
HWDP/OH	0.398	33	48	125	LAMINAR	0	48	1.9
DP/OH	0.398	304	48	125	LAMINAR	0	48	17.7
DP/CSG	0.427	306	44	124	LAMINAR	0	44	15.1
DP/RIS	1.325	152	14	112	LAMINAR	0	14	0.6

TOTAL VOLUME 837 TOTAL PRESSURE DROP 43.8

LAG: 44.1 MINUTES 3572 STROKES #1 AND 3465 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1632.9 HHP 761 IMPACT FORCE 1735
 % SURFACE PRESSURE 56.2 HHP/sqin 6.45 JET VELOCITY 132

PRESSURE BREAKDOWN:

SURFACE 66.7
 STRING 1195.4
 BIT 1632.9
 ANNULUS 43.8
 TOTAL 2938.9 PUMP PRESSURE 2905.9 % DIFFERENCE 1.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.65	HYDROSTATIC PRESSURE 3012.8
CIRCULATING:	ECD 9.79	CIRCULATING PRESSURE 3056.6
PULLING OUT:	TRIP MARGIN 0.28	ESTIMATED SWAB 87.7
	EFFECTIVE MUD WEIGHT 9.37	BOTTOM HOLE PRESSURE 2925.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1840.0 AND TVD 1840.0

SPM 1 96 SPM 2 0 FLOW RATE 480

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.231	2	49	124	LAMINAR	0	49	0.3
DC/LIN	0.398	50	29	116	LAMINAR	0	29	2.1
HWDP/LIN	0.398	33	29	116	LAMINAR	0	29	1.4
DP/LIN	0.398	316	29	116	LAMINAR	0	29	13.2
DP/CSG	0.427	306	27	115	LAMINAR	0	27	10.8
DP/RIS	1.325	152	9	103	LAMINAR	0	9	0.4
TOTAL VOLUME		859			TOTAL PRESSURE DROP		28.1	

LAG: 75.2 MINUTES 7218 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 698.4 HHP 196 IMPACT FORCE 682
 % SURFACE PRESSURE 85.7 HHP/sqin 2.55 JET VELOCITY 86

PRESSURE BREAKDOWN:

SURFACE 26.7
 STRING 460.4
 BIT 698.4
 ANNULUS 28.1
 TOTAL 1213.6 PUMP PRESSURE 815.1 % DIFFERENCE 48.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.65	HYDROSTATIC PRESSURE 3029.2
CIRCULATING: ECD	9.74	CIRCULATING PRESSURE 3057.4
PULLING OUT: TRIP MARGIN	0.18	ESTIMATED SWAB 56.3
EFFECTIVE MUD WEIGHT	9.47	BOTTOM HOLE PRESSURE 2973.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1850.0 AND TVD 1850.0

SPM 1 0 SPM 2 101 FLOW RATE 505

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.107	2	113	150	LAMINAR	0	112	3.8
DC/LIN	0.274	31	44	134	LAMINAR	0	44	5.4
HWDP/LIN	0.398	33	30	125	LAMINAR	0	30	1.6
DP/LIN	0.398	320	30	125	LAMINAR	0	30	15.6
DP/CSG	0.427	306	28	124	LAMINAR	0	28	12.6
DP/RIS	1.325	152	9	112	LAMINAR	0	9	0.5
TOTAL VOLUME		845			TOTAL PRESSURE DROP		39.5	

LAG: 70.3 MINUTES 0 STROKES #1 AND 7099 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 772.1 HHP 227 IMPACT FORCE 754
 % SURFACE PRESSURE 83.9 HHP/sqin 2.97 JET VELOCITY 91

PRESSURE BREAKDOWN:

SURFACE 29.2
 STRING 505.6
 BIT 772.1
 ANNULUS 39.5
 TOTAL 1346.3 PUMP PRESSURE 920.4 % DIFFERENCE 46.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.65	HYDROSTATIC PRESSURE 3045.7
CIRCULATING: ECD	9.78	CIRCULATING PRESSURE 3085.1
PULLING OUT: TRIP MARGIN	0.25	ESTIMATED SWAB 78.9
EFFECTIVE MUD WEIGHT	9.40	BOTTOM HOLE PRESSURE 2966.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1900.0

SPM 1 80 SPM 2 82 FLOW RATE 812

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	71	133	LAMINAR	0	70	8.6
HWDP/OH	0.398	33	49	123	LAMINAR	0	48	1.9
DP/OH	0.398	332	49	123	LAMINAR	0	48	19.0
DP/CSG	0.427	306	45	122	LAMINAR	0	45	14.7
DP/RIS	1.325	152	15	109	LAMINAR	0	15	0.5
TOTAL VOLUME		865	TOTAL PRESSURE DROP			44.8		

LAG: 44.8 MINUTES 3587 STROKES #1 AND 3684 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1688.8 HHP R00 IMPACT FORCE 1794
 % SURFACE PRESSURE 57.6 HHP/sqin 6.79 JET VELOCITY 134

PRESSURE BREAKDOWN:

SURFACE 70.1
 STRING 1285.3
 BIT 1688.8
 ANNULUS 44.8
 TOTAL 3089.0 PUMP PRESSURE 2932.1 % DIFFERENCE 5.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS:
NOT CIRCULATING:	MUD WEIGHT 9.65	HYDROSTATIC PRESSURE 3128.0
CIRCULATING:	ECD 9.79	CIRCULATING PRESSURE 3172.0
PULLING OUT:	TRIP MARGIN 0.28	ESTIMATED SWAB 89.6
	EFFECTIVE MUD WEIGHT 9.37	BOTTOM HOLE PRESSURE 3038.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 1999.9

SPM 1 81 SPM 2 20 FLOW RATE 504

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	44	134	LAMINAR	0	44	7.1
HWDP/OH	0.398	33	30	123	LAMINAR	0	30	1.6
DP/OH	0.398	372	30	123	LAMINAR	0	30	17.4
DP/CSG	0.427	306	28	123	LAMINAR	0	28	12.1
DP/RIS	1.325	152	9	109	LAMINAR	0	9	0.4
TOTAL VOLUME		905	TOTAL PRESSURE DROP			38.6		

LAG: 75.4 MINUTES 6111 STROKES #1 AND 1495 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 643.5 HHP 189 IMPACT FORCE 684
 % SURFACE PRESSURE 21.4 HHP/sqin 1.60 JET VELOCITY 83

PRESSURE BREAKDOWN:

SURFACE 29.5
 STRING 556.9
 BIT 643.5
 ANNULUS 38.6
 TOTAL 1268.4 PUMP PRESSURE 3005.8 % DIFFERENCE 57.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.55	HYDROSTATIC PRESSURE 3258.4
CIRCULATING:	ECD 9.66	CIRCULATING PRESSURE 3297.0
PULLING OUT:	TRIP MARGIN 0.23	ESTIMATED SWAB 77.2
	EFFECTIVE MUD WEIGHT 9.32	BOTTOM HOLE PRESSURE 3181.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2099.9

SPM 1 79 SPM 2 79 FLOW RATE 788

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	68	134	LAMINAR	0	68	8.5
HWDP/OH	0.398	33	47	123	LAMINAR	0	47	1.9
DP/OH	0.398	412	47	123	LAMINAR	0	47	23.2
DP/CSG	0.427	306	44	123	LAMINAR	0	44	14.6
DP/RIS	1.325	152	14	109	LAMINAR	0	14	0.5
TOTAL VOLUME		945			TOTAL PRESSURE DROP		48.7	

LAG: 50.4 MINUTES 3984 STROKES #1 AND 3957 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1574.0 HHP 724 IMPACT FORCE 1672
 % SURFACE PRESSURE 52.3 HHP/sqin 6.14 JET VELOCITY 130

PRESSURE BREAKDOWN:

SURFACE 65.9
 STRING 1283.6
 BIT 1574.0
 ANNULUS 48.7
 TOTAL 2972.2 PUMP PRESSURE 3009.7 % DIFFERENCE 1.2

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.55	HYDROSTATIC PRESSURE 3421.3
CIRCULATING:	ECD 9.69	CIRCULATING PRESSURE 3470.0
PULLING OUT:	TRIP MARGIN 0.27	ESTIMATED SWAB 97.5
	EFFECTIVE MUD WEIGHT 9.28	BOTTOM HOLE PRESSURE 3323.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2199.9

SPM 1 74 SPM 2 72 FLOW RATE 731

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	63	126	LAMINAR	0	63	8.1
HWDP/OH	0.398	33	44	112	LAMINAR	0	44	1.7
DP/OH	0.398	452	44	112	LAMINAR	0	44	22.8
DP/CSG	0.427	306	41	110	LAMINAR	0	41	12.9
DP/RIS	1.325	152	13	94	LAMINAR	0	13	0.4
TOTAL VOLUME		985			TOTAL PRESSURE DROP		46.0	

LAG: 56.6 MINUTES 4178 STROKES #1 AND 4098 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1475.4	HHP	629	IMPACT FORCE	1568
% SURFACE PRESSURE	51.8	HHP/sqin	5.34	JET VELOCITY	121

PRESSURE BREAKDOWN:

SURFACE	65.6		
STRING	1313.4		
BIT	1475.4		
ANNULUS	46.0		
TOTAL	2900.4	PUMP PRESSURE	2850.9
		% DIFFERENCE	1.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.40	HYDROSTATIC PRESSURE 3903.2
CIRCULATING:	ECD 10.52	CIRCULATING PRESSURE 3949.1
PULLING OUT:	TRIP MARGIN 0.24	ESTIMATED SWAB 91.9
	EFFECTIVE MUD WEIGHT 10.16	BOTTOM HOLE PRESSURE 3811.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2299.8

SPM 1 78 SPM 2 69 FLOW RATE 733

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	64	125	LAMINAR	0	63	8.2
HWDP/OH	0.398	33	44	111	LAMINAR	0	44	1.7
DP/OH	0.398	492	44	111	LAMINAR	0	44	24.9
DP/CSG	0.427	306	41	110	LAMINAR	0	41	12.9
DP/RIS	1.325	152	13	93	LAMINAR	0	13	0.4
TOTAL VOLUME		1025	TOTAL PRESSURE DROP				48.0	

LAG: 58.7 MINUTES 4568 STROKES #1 AND 4043 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1496.1 HHP 640 IMPACT FORCE 1590
% SURFACE PRESSURE 52.2 HHP/sqin 5.43 JET VELOCITY 121

PRESSURE BREAKDOWN:

SURFACE 66.3
STRING 1367.0
BIT 1496.1
ANNULUS 48.0
TOTAL 2977.4 PUMP PRESSURE 2865.8 % DIFFERENCE 3.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	10.50	HYDROSTATIC PRESSURE 4119.8
CIRCULATING: ECD	10.62	CIRCULATING PRESSURE 4167.8
PULLING OUT: TRIP MARGIN	0.24	ESTIMATED SWAB 96.0
EFFECTIVE MUD WEIGHT	10.26	BOTTOM HOLE PRESSURE 4023.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2399.8

SPM 1 76 SPM 2 71 FLOW RATE 732

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	64	118	LAMINAR	0	63	7.4
HWDP/OH	0.398	33	44	103	LAMINAR	0	44	1.5
DP/OH	0.398	532	44	103	LAMINAR	0	44	23.9
DP/CSG	0.427	306	41	102	LAMINAR	0	41	11.5
DP/RIS	1.325	152	13	85	LAMINAR	0	13	0.3

TOTAL VOLUME 1065 TOTAL PRESSURE DROP 44.6

LAG: 61.1 MINUTES 4636 STROKES #1 AND 4310 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1494.8 HHP 639 IMPACT FORCE 1588
 % SURFACE PRESSURE 50.5 HHP/sqin 5.42 JET VELOCITY 121

PRESSURE BREAKDOWN:

SURFACE 66.3
 STRING 1404.1
 BIT 1494.8
 ANNULUS 44.6
 TOTAL 3009.9 PUMP PRESSURE 2958.1 % DIFFERENCE 1.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.50	HYDROSTATIC PRESSURE 4298.8
CIRCULATING:	ECD 10.61	CIRCULATING PRESSURE 4343.4
PULLING OUT:	TRIP MARGIN 0.22	ESTIMATED SWAB 89.3
	EFFECTIVE MUD WEIGHT 10.28	BOTTOM HOLE PRESSURE 4209.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2499.8

SPM 1 73 SPM 2 73 FLOW RATE 731

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	63	117	LAMINAR	0	63	7.4
HWD/PH	0.398	33	44	102	LAMINAR	0	44	1.5
DP/OH	0.398	572	44	102	LAMINAR	0	44	25.3
DP/CSG	0.427	306	41	101	LAMINAR	0	41	11.3
DP/RIS	1.325	152	13	83	LAMINAR	0	13	0.3
TOTAL VOLUME		1104			TOTAL PRESSURE DROP		45.8	

LAG: 63.5 MINUTES 4646 STROKES #1 AND 4634 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1488.4 HHP 635 IMPACT FORCE 1581
 % SURFACE PRESSURE 51.2 HHP/sqin 5.38 JET VELOCITY 121

PRESSURE BREAKDOWN:

SURFACE 66.9
 STRING 1455.4
 BIT 1488.4
 ANNULUS 45.8
 TOTAL 3056.5 PUMP PRESSURE 2908.2 % DIFFERENCE 5.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.50	HYDROSTATIC PRESSURE 4477.9
CIRCULATING:	ECD 10.61	CIRCULATING PRESSURE 4523.7
PULLING OUT:	TRIP MARGIN 0.21	ESTIMATED SWAB 91.7
	EFFECTIVE MUD WEIGHT 10.29	BOTTOM HOLE PRESSURE 4386.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2599.7

SPM 1 95 SPM 2 27 FLOW RATE 608

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	42	53	130	LAMINAR	0	53	7.8
HWDP/OH	0.398	33	36	117	LAMINAR	0	36	1.7
DP/OH	0.398	611	36	117	LAMINAR	0	36	30.5
DP/CSG	0.427	306	34	116	LAMINAR	0	34	12.8
DP/RIS	1.325	152	11	100	LAMINAR	0	11	0.4
TOTAL VOLUME		1144			TOTAL PRESSURE DROP			53.2

LAG: 79.0 MINUTES 7514 STROKES #1 AND 2101 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1020.4 HHP 362 IMPACT FORCE 1084
 % SURFACE PRESSURE 61.4 HHP/sqin 3.07 JET VELOCITY 101

PRESSURE BREAKDOWN:

SURFACE 46.4
 STRING 1036.6
 BIT 1020.4
 ANNULUS 53.2
 TOTAL 2156.6 PUMP PRESSURE 1663.2 % DIFFERENCE 29.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.40	HYDROSTATIC PRESSURE 4612.6
CIRCULATING:	ECD 10.52	CIRCULATING PRESSURE 4665.7
PULLING OUT:	TRIP MARGIN 0.24	ESTIMATED SWAB 106.3
	EFFECTIVE MUD WEIGHT 10.16	BOTTOM HOLE PRESSURE 4506.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2700.0 AND TVD 2699.7

SPM 1 74 SPM 2 73 FLOW RATE 734

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	64	131	LAMINAR	0	63	9.6
HWDP/OH	0.398	33	44	120	LAMINAR	0	44	1.9
DP/OH	0.398	644	44	120	LAMINAR	0	44	36.4
DP/CSG	0.427	306	41	119	LAMINAR	0	41	14.6
DP/RIS	1.325	152	13	105	LAMINAR	0	13	0.5
TOTAL VOLUME		1182	TOTAL PRESSURE DROP				63.1	

LAG: 67.7 MINUTES 5005 STROKES #1 AND 4926 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1485.2 HHP 636 IMPACT FORCE 1578
 % SURFACE PRESSURE 52.1 HHP/sqin 5.39 JET VELOCITY 121

PRESSURE BREAKDOWN:

SURFACE 63.1
 STRING 1488.9
 BIT 1485.2
 ANNULUS 63.1
 TOTAL 3100.3 PUMP PRESSURE 2850.8 % DIFFERENCE 8.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.40	HYDROSTATIC PRESSURE 4790.0
CIRCULATING:	ECD 10.54	CIRCULATING PRESSURE 4853.1
PULLING OUT:	TRIP MARGIN 0.27	ESTIMATED SWAB 126.1
	EFFECTIVE MUD WEIGHT 10.13	BOTTOM HOLE PRESSURE 4663.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2800.0 AND TVD 2799.7

SPM 1 73 SPM 2 72 FLOW RATE 725

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	63	125	LAMINAR	0	63	9.1
HWDP/OH	0.398	33	43	112	LAMINAR	0	43	1.7
DP/OH	0.398	684	43	112	LAMINAR	0	43	35.0
DP/CSG	0.427	306	40	111	LAMINAR	0	40	13.1
DP/RIS	1.325	152	13	95	LAMINAR	0	13	0.4
TOTAL VOLUME		1222			TOTAL PRESSURE DROP		59.3	

LAG: 70.8 MINUTES 5144 STROKES #1 AND 5122 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1463.4 HHP 619 IMPACT FORCE 1555
 % SURFACE PRESSURE 50.5 HHP/sqin 5.25 JET VELOCITY 120

PRESSURE BREAKDOWN:

SURFACE 64.1
 STRING 1550.7
 BIT 1463.4
 ANNULUS 59.3
 TOTAL 3137.5 PUMP PRESSURE 2895.9 % DIFFERENCE 8.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.50	HYDROSTATIC PRESSURE 5015.1
CIRCULATING:	ECD 10.62	CIRCULATING PRESSURE 5074.4
PULLING OUT:	TRIP MARGIN 0.25	ESTIMATED SWAB 118.5
	EFFECTIVE MUD WEIGHT 10.25	BOTTOM HOLE PRESSURE 4896.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2850.0 AND TVD 2849.6

SPM 1 71 SPM 2 70 FLOW RATE 706

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	61	122	LAMINAR	0	61	8.6
HWDP/OH	0.398	33	42	108	LAMINAR	0	42	1.6
DP/OH	0.398	704	42	108	LAMINAR	0	42	33.5
DP/CSG	0.427	306	39	107	LAMINAR	0	39	12.2
DP/RIS	1.325	152	13	91	LAMINAR	0	13	0.4
TOTAL VOLUME		1242			TOTAL PRESSURE DROP		56.2	

LAG: 73.9 MINUTES 5232 STROKES #1 AND 5201 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1389.1 HHP 572 IMPACT FORCE 1476
 % SURFACE PRESSURE 48.9 HHP/sqin 4.85 JET VELOCITY 117

PRESSURE BREAKDOWN:

SURFACE 61.2
 STRING 1497.3
 BIT 1389.1
 ANNULUS 56.2
 TOTAL 3003.9 PUMP PRESSURE 2840.5 % DIFFERENCE 5.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 10.50	HYDROSTATIC PRESSURE 5104.6
CIRCULATING:	ECD 10.62	CIRCULATING PRESSURE 5160.8
PULLING OUT:	TRIP MARGIN 0.23	ESTIMATED SWAB 112.5
	EFFECTIVE MUD WEIGHT 10.27	BOTTOM HOLE PRESSURE 4992.1

(c). COMPUTER DATA LISTING : LIST A

INTERVAL All depth records (data not averaged)

DEPTH. Well depth, in metres

ROP. Rate of penetration, in metres/hour

WOB. Weight-on-bit, in thousands of pounds

RPM. Rotary speed, in revolutions per minute

MW Mud weight in, in pounds per gallon

'dc' Calculated 'd' exponent, corrected for variations in mud weight in, using a correction factor of 10 ppg.

HOURS. Cumulative bit hours. The number of hours that the bit has actually been on bottom, recorded in decimal hours.

TURNS. Cumulative bit turns. The number of turns made by the bit, while actually on bottom

ICOST. Incremental cost per metre, calculated from the rate of penetration, in Australian dollars.

CCOST. Cumulative cost per metre, calculated from the drilling time, in A dollars.

PP Pore pressure gradient, in equivalent pounds per gallon. The pressure exerted by the fluid in the pore spaces of the formation.

FG Fracture gradient, in equivalent pounds per gallon. The pressure required to fracture the formation, calculated by the DRILL program using Eaton's equation.

It is dependent on the pore pressure, the overburden gradient and the matrix stress. this value may be modified by leak-off information.

BIT NUMBER	1	IADC CODE	111	INTERVAL	256.0- 846.0
HTC R1		SIZE	17.500	NOZZLES	20 20 20
COST	0.00	TRIP TIME	3.0	BIT RUN	590.0
TOTAL HOURS	14.49	TOTAL TURNS	109766	CONDITION	T2 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
257.0	86.0	5.0	70	8.6	0.55	0.01	49	42	10998	8.4	14.7
258.0	120.0	7.0	70	8.6	0.52	0.02	84	30	5514	8.4	14.7
259.0	201.0	11.0	70	8.6	0.44	0.02	105	18	3682	8.4	14.7
260.0	186.0	24.0	70	8.6	0.55	0.03	127	20	2767	8.4	14.7
261.0	240.0	40.5	70	8.6	0.54	0.03	145	15	2216	8.4	14.7
262.0	98.6	34.6	70	8.6	0.80	0.04	187	37	1853	8.4	14.7
263.0	232.3	43.6	70	8.6	0.57	0.05	205	16	1591	8.4	14.7
264.0	225.0	43.5	70	8.6	0.58	0.05	224	16	1394	8.4	14.7
265.0	120.0	41.6	70	8.6	0.77	0.06	259	30	1242	8.4	14.7
266.0	145.0	20.0	70	8.6	0.59	0.07	288	25	1121	8.4	14.7
267.0	143.0	32.0	70	8.6	0.67	0.08	317	26	1021	8.4	14.7
268.0	125.0	21.0	70	8.6	0.64	0.08	351	29.22	938.44	8.4	14.7
269.0	153.2	31.2	70	8.6	0.64	0.09	378	23.84	868.09	8.4	14.7
270.0	165.0	21.0	70	8.6	0.56	0.10	404	22.13	807.66	8.4	14.7
271.0	308.6	18.2	70	8.6	0.38	0.10	418	11.84	754.61	8.4	14.7
272.0	105.9	18.4	70	8.6	0.66	0.11	457	34.49	709.60	8.4	14.8
273.0	125.0	20.0	70	8.6	0.63	0.12	491	29.22	669.58	8.4	14.8
274.0	300.0	21.7	70	8.6	0.40	0.12	505	12.17	633.05	8.4	14.8
275.0	225.0	22.1	70	8.6	0.48	0.12	523	16.23	600.59	8.4	14.8
276.0	200.0	20.0	70	8.6	0.50	0.13	544	18.26	571.47	8.4	14.8
277.0	225.0	23.7	70	8.6	0.49	0.13	563	16.23	545.03	8.4	14.8
278.0	156.0	20.0	70	8.6	0.57	0.14	590	23.41	521.32	8.4	14.8
279.0	154.0	18.9	70	8.6	0.57	0.15	617	23.71	499.69	8.4	14.8
280.0	120.0	22.1	70	8.6	0.66	0.16	652	30.43	480.14	8.4	14.8
281.0	62.1	23.4	70	8.6	0.85	0.17	720	58.84	463.28	8.4	14.8
282.0	109.1	15.6	70	8.6	0.63	0.18	759	33.48	446.75	8.4	14.8
283.0	58.1	18.9	70	8.6	0.83	0.20	831	62.90	432.54	8.4	14.8
284.0	109.1	20.1	70	8.6	0.67	0.21	869	33.48	418.28	8.4	14.8
285.0	75.0	11.0	70	8.6	0.67	0.22	925	48.69	405.54	8.4	14.8
286.0	92.3	16.9	70	8.6	0.69	0.23	971	39.56	393.34	8.4	14.8
287.0	40.0	13.5	70	8.6	0.86	0.26	1076	91.30	383.60	8.4	14.8
288.0	94.7	14.4	71	8.6	0.66	0.27	1121	38.55	372.81	8.4	14.8
289.0	56.2	15.4	75	8.6	0.82	0.28	1201	64.92	363.48	8.4	14.8
290.0	90.0	4.9	75	8.6	0.56	0.30	1251	40.58	353.99	8.4	14.8
291.0	61.0	8.3	75	8.6	0.70	0.31	1325	59.85	345.58	8.4	14.8
292.0	56.2	11.2	75	8.6	0.76	0.33	1405	64.92	337.79	8.4	14.8
293.0	83.7	13.9	75	8.6	0.70	0.34	1458	43.62	329.84	8.4	14.8
294.0	94.7	12.0	75	8.6	0.65	0.35	1506	38.55	322.17	8.4	14.8
295.0	90.0	12.1	75	8.6	0.66	0.36	1556	40.58	314.95	8.4	14.8
296.0	61.0	11.2	75	8.6	0.74	0.38	1630	59.85	308.57	8.4	14.8
297.0	94.7	12.7	75	8.6	0.66	0.39	1677	38.55	301.99	8.4	14.9
298.0	83.7	12.3	75	8.6	0.68	0.40	1731	43.62	295.84	8.4	14.9
299.0	56.2	14.4	75	8.6	0.80	0.42	1811	64.92	290.47	8.4	14.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	TCOST	CCOST	PP	FG
300.0	60.0	8.3	75	8.6	0.70	0.44	1886	60.87	285.25	8.4	14.9
301.0	80.0	5.7	75	8.6	0.60	0.45	1942	45.65	279.92	8.4	14.9
302.0	64.3	10.1	75	8.6	0.72	0.46	2012	56.81	275.07	8.4	14.9
303.0	61.0	11.0	75	8.6	0.74	0.48	2086	59.85	270.49	8.4	14.9
304.0	81.8	11.3	75	8.6	0.67	0.49	2141	44.64	265.79	8.4	14.9
305.0	90.0	11.7	75	8.6	0.66	0.50	2191	40.58	261.19	8.4	14.9
306.0	73.5	11.6	75	8.6	0.70	0.52	2252	49.71	256.96	8.4	14.9
307.0	63.2	10.9	75	8.6	0.73	0.53	2323	57.82	253.06	8.4	14.9
308.0	92.3	10.9	75	8.6	0.64	0.54	2372	39.56	248.95	8.4	14.9
309.0	120.0	12.9	75	8.6	0.60	0.55	2410	30.43	244.83	8.4	14.9
310.0	92.3	14.3	75	8.6	0.68	0.56	2458	39.56	241.03	8.4	14.9
311.0	144.0	15.7	75	8.6	0.58	0.57	2490	25.36	237.11	8.4	14.9
312.0	138.5	17.7	75	8.6	0.60	0.58	2522	26.38	233.34	8.4	14.9
313.0	116.1	17.0	75	8.6	0.64	0.59	2561	31.45	229.80	8.4	14.9
314.0	102.9	16.9	75	8.6	0.68	0.60	2605	35.51	226.45	8.4	14.9
315.0	128.6	19.0	75	8.6	0.63	0.60	2640	28.40	223.09	8.4	14.9
316.0	94.7	17.0	75	8.6	0.70	0.61	2687	38.55	220.02	8.4	14.9
317.0	105.9	17.4	75	8.6	0.67	0.62	2730	34.49	216.98	8.4	14.9
318.0	39.1	13.9	75	8.6	0.89	0.65	2845	93.33	214.98	8.4	14.9
319.0	75.0	15.4	75	8.6	0.74	0.66	2905	48.69	212.34	8.4	14.9
320.0	46.8	13.2	75	8.6	0.84	0.68	3001	78.11	210.25	8.4	14.9
321.0	50.7	16.0	75	8.6	0.85	0.70	3090	72.03	208.12	8.4	14.9
322.0	52.9	16.4	75	8.6	0.84	0.72	3175	68.98	206.01	8.4	14.9
323.0	65.5	15.7	75	8.6	0.78	0.74	3243	55.79	203.77	8.4	15.0
324.0	78.3	15.9	75	8.6	0.74	0.75	3301	46.66	201.46	8.4	15.0
325.0	49.3	15.6	75	8.6	0.85	0.77	3392	74.05	199.61	8.4	15.0
326.0	50.0	15.0	75	8.6	0.84	0.79	3482	73.04	197.80	8.4	15.0
327.0	85.0	17.0	75	8.6	0.73	0.80	3535	42.96	195.62	8.4	15.0
328.0	84.7	15.2	75	8.6	0.71	0.82	3588	43.11	193.51	8.4	15.0
329.0	92.3	18.4	75	8.6	0.72	0.83	3637	39.56	191.40	8.4	15.0
330.0	87.8	16.5	75	8.6	0.71	0.84	3688	41.59	189.37	8.4	15.0
331.0	105.9	20.9	75	8.6	0.70	0.85	3731	34.49	187.31	8.4	15.0
332.0	97.3	20.3	75	8.6	0.72	0.86	3777	37.53	185.34	8.4	15.0
333.0	66.7	16.5	75	8.6	0.78	0.87	3844	54.78	183.64	8.4	15.0
334.0	105.9	19.2	75	8.6	0.69	0.88	3887	34.49	181.73	8.4	15.0
335.0	80.0	16.7	75	8.6	0.74	0.89	3943	45.65	180.01	8.4	15.0
336.0	109.1	20.0	75	8.6	0.69	0.90	3984	33.48	178.17	8.4	15.0
337.0	94.7	21.5	75	8.6	0.74	0.91	4032	38.55	176.45	8.4	15.0
338.0	120.0	15.0	75	8.6	0.62	0.92	4069	30.43	174.67	8.4	15.0
339.0	92.3	18.3	75	8.6	0.72	0.93	4118	39.56	173.04	8.4	15.0
340.0	64.3	16.7	75	8.6	0.80	0.95	4188	56.81	171.66	8.4	15.0
341.0	100.0	18.9	75	8.6	0.70	0.96	4233	36.52	170.07	8.4	15.0
342.0	128.6	19.3	75	8.6	0.64	0.97	4268	28.40	168.42	8.4	15.0
343.0	124.1	19.9	75	8.6	0.65	0.97	4304	29.42	166.82	8.4	15.0
344.0	138.5	18.8	75	8.6	0.61	0.98	4337	26.38	165.23	8.4	15.0
345.0	120.0	17.8	75	8.6	0.64	0.99	4374	30.43	163.71	8.4	15.0
346.0	105.9	16.0	75	8.6	0.66	1.00	4417	34.49	162.28	8.4	15.0
347.0	62.1	14.7	75	8.6	0.78	1.02	4489	58.84	161.14	8.4	15.0
348.0	163.6	17.8	75	8.6	0.56	1.02	4517	22.32	159.63	8.4	15.0
349.0	138.5	20.7	75	8.6	0.63	1.03	4549	26.38	158.20	8.4	15.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
350.0	156.5	19.3	75	8.6	0.58	1.04	4578	23.33	156.76	8.4	15.1
351.0	154.0	20.0	75	8.6	0.59	1.04	4607	23.71	155.36	8.4	15.1
352.0	167.4	19.4	75	8.6	0.57	1.05	4634	21.81	153.97	8.4	15.1
353.0	163.6	18.3	75	8.6	0.56	1.05	4662	22.32	152.62	8.4	15.1
354.0	171.4	18.6	75	8.6	0.55	1.06	4688	21.30	151.28	8.4	15.1
355.0	135.0	18.0	75	8.6	0.61	1.07	4721	27.05	150.02	8.4	15.1
356.0	120.0	16.3	75	8.6	0.63	1.08	4759	30.43	148.82	8.4	15.1
357.0	211.8	20.1	75	8.6	0.51	1.08	4780	17.25	147.52	8.4	15.1
358.0	156.5	23.2	75	8.6	0.61	1.09	4809	23.33	146.30	8.4	15.1
359.0	124.1	22.1	75	8.6	0.67	1.09	4845	29.42	145.17	8.4	15.1
360.0	120.0	22.6	75	8.6	0.68	1.10	4883	30.43	144.07	8.4	15.1
361.0	128.6	22.1	75	8.6	0.66	1.11	4918	28.40	142.96	8.4	15.1
362.0	138.5	23.1	75	8.6	0.64	1.12	4950	26.38	141.86	8.4	15.1
363.0	133.3	19.6	75	8.6	0.63	1.13	4984	27.39	140.80	8.4	15.1
364.0	128.0	23.0	75	8.6	0.66	1.13	5019	28.53	139.76	8.4	15.1
365.0	122.0	23.0	75	8.6	0.68	1.14	5056	29.93	138.75	8.4	15.1
366.0	135.0	23.5	75	8.6	0.65	1.15	5089	27.05	137.73	8.4	15.1
367.0	98.2	24.8	75	8.6	0.75	1.16	5135	37.20	136.83	8.4	15.1
368.0	112.5	17.6	75	8.6	0.66	1.17	5175	32.46	135.90	8.4	15.1
369.0	97.3	25.5	75	8.6	0.76	1.18	5221	37.53	135.02	8.4	15.1
370.0	62.1	18.5	75	8.6	0.82	1.19	5294	58.84	134.36	8.4	15.1
371.0	171.4	15.7	75	8.6	0.53	1.20	5320	21.30	133.37	8.4	15.1
372.0	171.4	16.9	75	8.6	0.54	1.21	5346	21.30	132.41	8.4	15.1
373.0	189.5	16.4	75	8.6	0.51	1.21	5370	19.27	131.44	8.4	15.1
374.0	87.8	22.5	75	8.6	0.77	1.22	5421	41.59	130.68	8.4	15.1
375.0	122.0	25.0	75	8.6	0.69	1.23	5458	29.93	129.83	8.4	15.1
376.0	145.0	25.0	75	8.6	0.64	1.24	5489	25.19	128.96	8.4	15.2
377.0	140.0	23.0	75	8.6	0.64	1.24	5521	26.09	128.11	8.4	15.2
378.0	75.0	17.0	75	8.6	0.76	1.26	5581	48.69	127.46	8.4	15.2
379.0	116.1	17.7	75	8.9	0.63	1.27	5620	31.45	126.68	8.4	15.2
380.0	150.0	19.2	75	9.0	0.57	1.27	5650	24.35	125.85	8.4	15.2
381.0	112.5	21.6	75	9.0	0.66	1.28	5690	32.46	125.11	8.4	15.2
382.0	85.7	18.9	75	9.0	0.71	1.29	5743	42.61	124.45	8.4	15.2
383.0	128.6	12.4	75	9.0	0.55	1.30	5778	28.40	123.69	8.4	15.2
384.0	62.1	17.3	75	9.0	0.78	1.32	5850	58.84	123.19	8.4	15.2
385.0	42.4	15.7	75	9.0	0.85	1.34	5956	86.23	122.90	8.4	15.2
386.0	97.3	19.9	75	9.0	0.68	1.35	6003	37.53	122.25	8.4	15.2
387.0	43.4	14.0	75	9.0	0.83	1.37	6106	84.20	121.95	8.4	15.2
388.0	94.7	22.2	75	9.0	0.71	1.39	6154	38.55	121.32	8.4	15.2
389.0	87.8	22.8	75	9.0	0.73	1.40	6205	41.59	120.72	8.4	15.2
390.0	105.9	25.6	75	9.0	0.70	1.41	6248	34.49	120.08	8.4	15.2
391.0	133.3	27.2	75	9.0	0.65	1.41	6281	27.39	119.39	8.4	15.2
392.0	105.9	27.4	75	9.0	0.72	1.42	6324	34.49	118.77	8.4	15.2
393.0	102.9	27.1	75	9.0	0.72	1.43	6368	35.51	118.16	8.4	15.2
394.0	83.7	28.0	75	9.0	0.79	1.44	6421	43.62	117.62	8.4	15.2
395.0	100.0	27.7	75	9.0	0.73	1.45	6466	36.52	117.04	8.4	15.2
396.0	80.0	34.3	75	9.0	0.84	1.47	6523	45.65	116.53	8.4	15.2
397.0	124.1	34.2	75	9.0	0.71	1.48	6559	29.42	115.91	8.4	15.2
398.0	189.5	32.7	75	9.0	0.58	1.48	6583	19.27	115.23	8.4	15.2
399.0	112.5	32.7	75	9.0	0.73	1.49	6623	32.46	114.65	8.4	15.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
400.0	150.0	32.5	75	9.0	0.65	1.50	6653	24.35	114.02	8.4	15.2
401.0	133.3	33.0	75	9.0	0.68	1.50	6686	27.39	113.43	8.4	15.2
402.0	124.1	34.0	75	9.0	0.71	1.51	6723	29.42	112.85	8.4	15.2
403.0	128.6	34.5	75	9.0	0.70	1.52	6758	28.40	112.28	8.4	15.3
404.0	122.0	35.0	75	9.0	0.72	1.53	6794	29.93	111.72	8.4	15.3
405.0	130.0	34.0	75	9.0	0.70	1.54	6829	28.09	111.16	8.4	15.3
406.0	138.5	34.7	75	9.0	0.68	1.54	6862	26.38	110.59	8.4	15.3
407.0	81.8	33.3	75	9.0	0.83	1.55	6917	44.64	110.16	8.4	15.3
408.0	69.2	32.1	75	9.0	0.87	1.57	6982	52.75	109.78	8.4	15.3
409.0	128.6	32.9	75	9.0	0.69	1.58	7017	28.40	109.25	8.4	15.3
410.0	144.0	32.9	75	9.0	0.66	1.58	7048	25.36	108.70	8.4	15.3
411.0	124.1	32.8	75	9.0	0.70	1.59	7084	29.42	108.19	8.4	15.3
412.0	94.7	33.2	75	9.0	0.79	1.60	7132	38.55	107.74	8.4	15.3
413.0	105.9	33.3	75	9.0	0.75	1.61	7174	34.49	107.28	8.4	15.3
414.0	109.1	33.4	75	9.0	0.74	1.62	7215	33.48	106.81	8.4	15.3
415.0	100.0	32.0	75	9.0	0.76	1.63	7260	36.52	106.37	8.4	15.3
416.0	94.7	30.3	75	9.0	0.77	1.64	7308	38.55	105.94	8.4	15.3
417.0	225.0	28.5	75	9.0	0.51	1.65	7328	16.23	105.39	8.4	15.3
418.0	133.3	28.1	75	9.0	0.66	1.65	7362	27.39	104.91	8.4	15.3
419.0	105.9	28.5	75	9.0	0.72	1.66	7404	34.49	104.47	8.4	15.3
420.0	90.0	29.8	75	9.0	0.78	1.67	7454	40.58	104.08	8.4	15.3
421.0	116.1	31.1	75	9.0	0.71	1.68	7493	31.45	103.64	8.4	15.3
422.0	85.7	31.3	75	9.0	0.80	1.69	7545	42.61	103.28	8.4	15.3
423.0	128.6	30.2	75	9.0	0.68	1.70	7580	28.40	102.83	8.4	15.3
424.0	100.0	31.0	75	9.0	0.76	1.71	7625	36.52	102.43	8.4	15.3
425.0	120.0	28.7	75	9.0	0.69	1.72	7663	30.43	102.01	8.4	15.3
426.0	90.0	28.0	75	9.0	0.77	1.73	7713	40.58	101.65	8.4	15.3
427.0	70.6	26.4	75	9.0	0.82	1.75	7777	51.74	101.35	8.4	15.3
428.0	72.0	28.6	75	9.0	0.83	1.76	7839	50.72	101.06	8.4	15.3
429.0	73.5	30.2	75	9.0	0.84	1.77	7900	49.71	100.76	8.4	15.3
430.0	163.6	30.6	75	9.0	0.61	1.78	7928	22.32	100.31	8.4	15.4
431.0	85.0	30.0	75	9.0	0.80	1.79	7981	42.96	99.98	8.4	15.4
432.0	48.0	32.0	75	9.0	0.98	1.81	8074	76.08	99.85	8.4	15.4
433.0	86.0	30.0	75	9.0	0.79	1.82	8127	42.47	99.52	8.4	15.4
434.0	46.0	25.0	75	9.0	0.93	1.85	8225	79.39	99.41	8.4	15.4
435.0	98.2	32.1	75	9.0	0.77	1.86	8270	37.20	99.06	8.4	15.4
436.0	85.7	31.0	75	9.0	0.80	1.87	8323	42.61	98.75	8.4	15.4
437.0	72.0	31.5	75	9.0	0.85	1.88	8385	50.72	98.48	8.4	15.4
438.0	124.1	32.4	75	9.0	0.70	1.89	8422	29.42	98.11	8.4	15.4
439.0	120.0	32.6	75	9.0	0.71	1.90	8459	30.43	97.74	8.4	15.4
440.0	85.7	31.6	75	9.0	0.80	1.91	8512	42.61	97.44	8.4	15.4
441.0	59.0	31.8	75	9.0	0.91	1.93	8588	61.88	97.24	8.4	15.4
442.0	73.5	32.6	75	9.0	0.86	1.94	8649	49.71	96.99	8.4	15.4
443.0	75.0	32.0	75	9.0	0.85	1.95	8709	48.69	96.73	8.4	15.4
444.0	97.3	29.5	75	9.0	0.75	1.96	8755	37.53	96.41	8.4	15.4
445.0	83.7	29.2	75	9.0	0.79	1.98	8809	43.62	96.14	8.4	15.4
446.0	53.0	31.0	75	9.0	0.94	1.99	8894	68.91	95.99	8.4	15.4
447.0	62.0	32.0	75	9.0	0.90	2.01	8967	58.90	95.80	8.4	15.4
448.0	30.4	31.3	75	9.0	1.10	2.04	9115	120.28	95.93	8.4	15.4
449.0	133.3	30.8	75	9.0	0.67	2.05	9149	27.39	95.57	8.4	15.4

DEPTH	ROP	WOB	RPM	MW	"d" "c	HOURS	TURNS	ICOST	CCOST	PP	FG
450.0	80.0	30.7	75	9.0	0.82	2.06	9205	45.65	95.31	8.4	15.4
451.0	45.6	30.9	75	9.0	0.98	2.09	9304	80.14	95.24	8.4	15.4
452.0	63.2	31.2	75	9.0	0.89	2.10	9375	57.82	95.04	8.4	15.4
453.0	80.0	33.0	75	9.0	0.83	2.11	9431	45.65	94.79	8.4	15.4
454.0	154.3	32.8	75	9.0	0.64	2.12	9460	23.67	94.43	8.4	15.4
455.0	69.2	31.4	75	9.0	0.86	2.13	9525	52.75	94.23	8.4	15.4
456.0	41.9	33.5	75	9.0	1.03	2.16	9633	87.24	94.19	8.4	15.4
457.0	47.4	33.0	75	9.0	0.99	2.18	9728	77.10	94.11	8.4	15.4
458.0	72.0	32.8	75	9.0	0.86	2.19	9790	50.72	93.89	8.4	15.5
459.0	57.1	33.7	75	9.0	0.94	2.21	9869	63.91	93.74	8.4	15.5
460.0	124.1	33.6	75	9.0	0.71	2.22	9905	29.42	93.43	8.4	15.5
461.0	51.4	33.3	75	9.0	0.97	2.24	9993	71.01	93.32	8.4	15.5
462.0	64.3	33.1	75	9.0	0.90	2.25	10063	56.81	93.14	8.4	15.5
463.0	75.0	33.1	75	9.0	0.85	2.27	10123	48.69	92.93	8.4	15.5
464.0	41.9	32.5	75	9.0	1.02	2.29	10230	87.24	92.90	8.4	15.5
465.0	92.3	32.6	75	9.0	0.79	2.30	10279	39.56	92.64	8.4	15.5
466.0	40.9	32.0	75	9.0	1.02	2.33	10389	89.27	92.63	8.4	15.5
467.0	22.8	33.1	75	9.0	1.20	2.37	10587	160.28	92.95	8.4	15.5
468.0	41.4	24.9	75	9.0	0.96	2.39	10695	88.26	92.93	8.4	15.5
469.0	35.0	31.4	75	9.0	1.06	2.42	10824	104.49	92.98	8.4	15.5
470.0	85.7	29.3	75	9.0	0.79	2.43	10877	42.61	92.74	8.4	15.5
471.0	34.3	31.6	75	9.0	1.07	2.46	11008	106.52	92.81	8.4	15.5
472.0	33.3	32.0	75	9.0	1.08	2.49	11143	109.56	92.89	8.4	15.5
473.0	43.4	31.2	75	9.0	1.00	2.52	11247	84.20	92.85	8.4	15.5
474.0	61.0	31.2	75	9.0	0.90	2.53	11320	59.85	92.70	8.4	15.5
475.0	59.0	28.0	75	9.0	0.88	2.55	11397	61.88	92.55	8.4	15.5
476.0	57.1	27.9	75	9.0	0.89	2.57	11475	63.91	92.42	8.4	15.5
477.0	51.4	30.5	75	9.0	0.94	2.59	11563	71.01	92.33	8.4	15.5
478.0	48.6	30.1	75	9.0	0.96	2.61	11655	75.07	92.25	8.4	15.5
479.0	43.9	32.1	75	9.0	1.00	2.63	11758	83.18	92.21	8.4	15.5
480.0	43.4	31.4	75	9.0	1.00	2.65	11862	84.20	92.17	8.4	15.5
481.0	32.4	31.4	75	9.0	1.08	2.68	12000	112.60	92.26	8.4	15.5
482.0	40.0	31.0	75	9.0	1.02	2.71	12113	91.30	92.26	8.4	15.5
483.0	47.0	17.4	75	9.0	0.85	2.73	12209	77.77	92.20	8.4	15.5
484.0	42.4	23.9	75	9.0	0.94	2.75	12315	86.23	92.17	8.4	15.5
485.0	42.9	25.3	75	9.0	0.95	2.78	12420	85.21	92.14	8.4	15.5
486.0	67.9	26.1	75	9.0	0.83	2.79	12486	53.77	91.97	8.4	15.5
487.0	31.0	26.1	75	9.0	1.05	2.82	12631	117.68	92.08	8.4	15.6
488.0	48.6	25.7	75	9.0	0.92	2.85	12724	75.07	92.01	8.4	15.6
489.0	45.0	26.4	75	9.0	0.95	2.87	12824	81.16	91.96	8.4	15.6
490.0	42.4	27.4	75	9.0	0.97	2.89	12930	86.23	91.94	8.4	15.6
491.0	30.3	28.4	75	9.0	1.08	2.92	13079	120.72	92.06	8.4	15.6
492.0	60.0	27.0	75	9.0	0.87	2.94	13154	60.87	91.93	8.4	15.6
493.0	51.4	17.2	75	9.0	0.82	2.96	13241	71.01	91.84	8.4	15.6
494.0	38.0	28.0	75	9.0	1.01	2.99	13360	96.11	91.86	8.4	15.6
495.0	25.0	29.0	75	9.0	1.14	3.03	13540	146.08	92.09	8.4	15.6
496.0	27.5	28.7	75	9.0	1.11	3.06	13703	132.89	92.26	8.4	15.6
497.0	34.0	29.8	75	9.0	1.06	3.09	13836	107.53	92.32	8.4	15.6
498.0	30.8	29.7	75	9.0	1.08	3.12	13982	118.69	92.43	8.4	15.6
499.0	54.5	29.6	75	9.0	0.92	3.14	14065	66.95	92.32	8.4	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
500.0	54.5	29.5	75	9.0	0.92	3.16	14147	66.95	92.22	8.4	15.6
501.0	36.0	30.0	75	9.0	1.04	3.19	14272	101.44	92.26	8.4	15.6
502.0	29.0	31.0	75	9.0	1.11	3.22	14427	125.93	92.39	8.4	15.6
503.0	24.4	30.3	75	9.0	1.16	3.26	14612	149.91	92.63	8.4	15.6
504.0	45.6	31.5	75	9.0	0.99	3.29	14711	80.14	92.58	8.4	15.6
505.0	63.2	31.2	75	9.0	0.89	3.30	14782	57.82	92.44	8.4	15.6
506.0	37.5	30.9	75	9.0	1.04	3.33	14902	97.39	92.46	8.4	15.6
507.0	33.6	32.1	75	9.0	1.08	3.36	15036	108.55	92.52	8.4	15.6
508.0	73.5	32.3	75	9.0	0.85	3.37	15097	49.71	92.35	8.4	15.6
509.0	50.0	32.9	75	9.0	0.97	3.39	15187	73.04	92.27	8.4	15.6
510.0	34.6	32.5	75	9.0	1.08	3.42	15317	105.50	92.33	8.4	15.6
511.0	53.7	32.3	75	9.0	0.95	3.44	15401	67.97	92.23	8.4	15.6
512.0	60.0	27.1	75	9.0	0.87	3.46	15476	60.87	92.11	8.4	15.6
513.0	48.6	31.2	75	9.0	0.96	3.48	15568	75.07	92.04	8.4	15.6
514.0	47.4	31.5	75	9.0	0.98	3.50	15663	77.10	91.98	8.4	15.6
515.0	55.4	31.6	75	9.0	0.93	3.52	15744	65.94	91.88	8.4	15.6
516.0	55.4	31.5	75	9.0	0.93	3.53	15826	65.94	91.78	8.4	15.7
517.0	34.3	31.7	75	9.1	1.05	3.56	15957	106.52	91.84	8.4	15.7
518.0	65.5	31.7	75	9.2	0.86	3.58	16026	55.79	91.70	8.4	15.7
519.0	61.0	31.8	75	9.2	0.88	3.60	16099	59.85	91.58	8.4	15.7
520.0	45.0	32.1	75	9.2	0.97	3.62	16199	81.16	91.54	8.4	15.7
521.0	29.8	32.0	75	9.2	1.09	3.65	16351	122.75	91.66	8.4	15.7
522.0	43.4	27.2	75	9.2	0.94	3.67	16454	84.20	91.63	8.4	15.7
523.0	65.5	27.1	75	9.2	0.83	3.69	16523	55.79	91.50	8.4	15.7
524.0	40.4	27.6	75	9.2	0.97	3.71	16634	90.29	91.49	8.4	15.7
525.0	64.3	28.0	75	9.2	0.84	3.73	16704	56.81	91.36	8.4	15.7
526.0	25.9	28.4	75	9.2	1.10	3.77	16878	141.01	91.55	8.4	15.7
527.0	49.3	28.5	75	9.2	0.92	3.79	16969	74.05	91.48	8.4	15.7
528.0	60.0	28.3	75	9.2	0.86	3.81	17044	60.87	91.37	8.4	15.7
529.0	50.7	27.8	75	9.2	0.91	3.83	17133	72.03	91.30	8.4	15.7
531.0	44.0	28.4	75	9.2	0.95	3.87	17338	83.00	91.24	8.4	15.7
532.0	35.6	27.7	145	9.2	1.18	3.90	17582	102.57	91.28	8.4	15.7
533.0	67.9	27.2	145	9.2	1.00	3.91	17710	53.77	91.15	8.4	15.7
534.0	40.9	29.4	145	9.2	1.16	3.94	17923	89.27	91.14	8.4	15.7
535.0	40.9	29.5	145	9.2	1.16	3.96	18136	89.27	91.13	8.4	15.7
536.0	35.6	29.7	145	9.2	1.20	3.99	18380	102.46	91.17	8.4	15.7
537.0	52.9	30.1	145	9.2	1.10	4.01	18544	68.98	91.09	8.4	15.7
538.0	46.8	29.9	145	9.2	1.13	4.03	18730	78.11	91.05	8.4	15.7
539.0	39.1	29.7	145	9.2	1.18	4.06	18952	93.33	91.06	8.4	15.7
540.0	33.3	29.8	145	9.2	1.22	4.09	19213	109.56	91.12	8.4	15.7
541.0	42.4	25.8	145	9.2	1.11	4.11	19419	86.23	91.10	8.4	15.7
542.0	36.7	29.9	145	9.2	1.20	4.14	19656	99.42	91.13	8.4	15.7
543.0	66.7	30.7	145	9.2	1.04	4.15	19786	54.78	91.01	8.4	15.7
544.0	56.2	30.2	145	9.2	1.08	4.17	19941	64.92	90.92	8.4	15.7
545.0	40.4	30.4	145	9.2	1.17	4.19	20156	90.29	90.91	8.4	15.8
546.0	50.7	29.5	145	9.2	1.10	4.21	20327	72.03	90.85	8.4	15.8
547.0	50.7	31.0	145	9.2	1.12	4.23	20499	72.03	90.78	8.4	15.8
548.0	30.8	30.2	145	9.2	1.25	4.27	20782	118.69	90.88	8.4	15.8
549.0	37.9	30.6	145	9.2	1.19	4.29	21011	96.37	90.90	8.4	15.8
550.0	42.4	29.8	145	9.2	1.16	4.32	21217	86.23	90.88	8.4	15.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
551.0	49.3	27.8	145	9.2	1.09	4.34	21393	74.05	90.83	8.4	15.8
552.0	52.9	32.3	145	9.2	1.12	4.36	21558	68.98	90.75	8.4	15.8
553.0	47.4	31.6	145	9.2	1.14	4.38	21741	77.10	90.71	8.4	15.8
554.0	30.5	31.3	145	9.2	1.26	4.41	22026	119.70	90.80	8.4	15.8
555.0	30.0	28.5	145	9.2	1.24	4.44	22316	121.73	90.91	8.4	15.8
556.0	36.4	28.5	145	9.2	1.18	4.47	22556	100.43	90.94	8.4	15.8
557.0	34.0	28.8	145	9.2	1.21	4.50	22812	107.53	90.99	8.4	15.8
558.0	30.0	28.7	145	9.2	1.24	4.53	23102	121.73	91.09	8.4	15.8
559.0	30.0	29.7	145	9.2	1.25	4.57	23392	121.73	91.20	8.4	15.8
560.0	23.7	28.2	145	9.2	1.30	4.61	23759	154.20	91.40	8.4	15.8
561.0	39.1	27.2	145	9.2	1.15	4.63	23981	93.33	91.41	8.4	15.8
562.0	49.3	28.1	145	9.2	1.10	4.65	24158	74.05	91.35	8.4	15.8
563.0	33.3	27.6	145	9.2	1.20	4.68	24419	109.56	91.41	8.4	15.8
564.0	27.1	28.9	145	9.2	1.27	4.72	24740	134.92	91.55	8.4	15.8
565.0	37.5	29.4	145	9.2	1.19	4.75	24972	97.39	91.57	8.4	15.8
566.0	29.5	29.5	145	9.2	1.25	4.78	25267	123.76	91.68	8.4	15.8
567.0	21.6	29.8	145	9.2	1.34	4.83	25671	169.41	91.93	8.4	15.8
568.0	37.1	29.9	145	9.2	1.19	4.86	25905	98.40	91.95	8.4	15.8
569.0	38.3	29.4	145	9.2	1.18	4.88	26132	95.36	91.96	8.4	15.8
570.0	38.7	28.9	145	9.2	1.17	4.91	26357	94.34	91.97	8.4	15.8
571.0	48.6	30.1	145	9.2	1.12	4.93	26536	75.07	91.91	8.4	15.8
572.0	39.1	30.9	145	9.2	1.19	4.95	26758	93.33	91.92	8.4	15.8
573.0	28.8	31.0	145	9.2	1.28	4.99	27060	126.81	92.03	8.4	15.8
574.0	52.9	30.7	145	9.2	1.10	5.01	27225	68.98	91.95	8.4	15.8
575.0	47.4	31.0	145	9.2	1.14	5.03	27408	77.10	91.91	8.4	15.9
576.0	37.5	30.8	145	9.2	1.20	5.05	27640	97.39	91.92	8.4	15.9
577.0	48.0	31.0	145	9.2	1.13	5.08	27822	76.08	91.87	8.4	15.9
578.0	47.0	32.0	145	9.2	1.15	5.10	28007	77.70	91.83	8.4	15.9
579.0	50.0	35.0	145	9.2	1.16	5.12	28181	73.04	91.77	8.4	15.9
580.0	49.3	34.5	145	9.2	1.16	5.14	28357	74.05	91.72	8.4	15.9
581.0	39.1	33.6	145	9.2	1.22	5.16	28579	93.33	91.72	8.4	15.9
582.0	44.4	30.9	145	9.2	1.15	5.19	28775	82.17	91.69	8.4	15.9
583.0	49.3	29.1	145	9.2	1.11	5.21	28952	74.05	91.64	8.4	15.9
584.0	54.5	30.3	145	9.2	1.09	5.22	29111	66.95	91.56	8.4	15.9
585.0	48.6	31.1	145	9.2	1.13	5.24	29290	75.07	91.51	8.4	15.9
586.0	46.2	30.7	145	9.2	1.14	5.27	29478	79.13	91.48	8.4	15.9
587.0	34.3	30.7	145	9.2	1.22	5.30	29732	106.52	91.52	8.4	15.9
588.0	21.6	29.6	145	9.2	1.34	5.34	30136	169.41	91.76	8.4	15.9
589.0	51.4	24.6	145	9.2	1.05	5.36	30305	71.01	91.69	8.4	15.9
590.0	42.4	25.3	145	9.2	1.11	5.38	30510	86.23	91.68	8.4	15.9
591.0	35.3	27.8	145	9.2	1.19	5.41	30757	103.47	91.71	8.4	15.9
592.0	48.6	27.8	145	9.2	1.10	5.43	30936	75.07	91.66	8.4	15.9
593.0	45.6	27.5	145	9.2	1.11	5.46	31127	80.14	91.63	8.4	15.9
594.0	43.4	27.9	145	9.2	1.13	5.48	31327	84.20	91.61	8.4	15.9
595.0	34.3	27.8	145	9.2	1.19	5.51	31581	106.52	91.65	8.4	15.9
596.0	52.9	27.7	145	9.2	1.07	5.53	31745	68.98	91.58	8.4	15.9
597.0	38.3	26.8	145	9.2	1.15	5.55	31972	95.36	91.60	8.4	15.9
598.0	40.0	28.0	145	9.2	1.15	5.58	32190	91.30	91.60	8.4	15.9
599.0	45.8	27.6	145	9.2	1.11	5.60	32380	79.71	91.56	8.4	15.9
600.0	56.2	28.4	145	9.2	1.06	5.62	32534	64.92	91.48	8.4	15.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
601.0	39.1	31.2	145	9.2	1.19	5.64	32757	93.33	91.49	8.4	15.9
602.0	34.6	31.9	145	9.2	1.23	5.67	33008	105.50	91.53	8.4	15.9
603.0	45.6	31.7	145	9.2	1.15	5.69	33199	80.14	91.50	8.4	15.9
604.0	45.0	31.5	145	9.2	1.16	5.72	33392	81.16	91.47	8.4	15.9
605.0	44.4	31.5	145	9.2	1.16	5.74	33588	82.17	91.44	8.4	15.9
606.0	46.8	30.8	145	9.2	1.14	5.76	33774	78.11	91.40	8.4	16.0
607.0	48.0	20.9	145	9.2	1.03	5.78	33955	76.08	91.36	8.4	16.0
608.0	38.0	28.0	145	9.2	1.17	5.81	34184	96.11	91.37	8.4	16.0
609.0	43.8	30.9	145	9.2	1.16	5.83	34383	83.41	91.35	8.4	16.0
610.0	48.6	30.9	145	9.2	1.13	5.85	34562	75.07	91.30	8.4	16.0
611.0	53.7	30.4	145	9.2	1.09	5.87	34724	67.97	91.24	8.4	16.0
612.0	52.9	31.1	145	9.2	1.11	5.89	34888	68.98	91.17	8.4	16.0
613.0	37.5	30.8	145	9.2	1.20	5.91	35120	97.39	91.19	8.4	16.0
614.0	26.3	31.2	145	9.2	1.30	5.95	35451	138.98	91.33	8.4	16.0
615.0	33.3	30.7	145	9.2	1.23	5.98	35712	109.56	91.38	8.4	16.0
616.0	43.4	31.1	145	9.2	1.16	6.01	35913	84.20	91.36	8.4	16.0
617.0	45.0	32.0	145	9.2	1.16	6.03	36106	81.16	91.33	8.4	16.0
618.0	55.4	30.7	145	9.2	1.09	6.05	36263	65.94	91.26	8.4	16.0
619.0	50.7	30.9	145	9.2	1.12	6.07	36435	72.03	91.21	8.4	16.0
620.0	34.6	33.0	145	9.2	1.24	6.09	36686	105.50	91.24	8.4	16.0
621.0	32.1	34.7	145	9.2	1.28	6.13	36957	113.62	91.31	8.4	16.0
622.0	51.4	34.2	145	9.2	1.14	6.15	37126	71.01	91.25	8.4	16.0
623.0	50.0	34.1	145	9.2	1.15	6.17	37300	73.04	91.20	8.4	16.0
624.0	38.7	33.4	145	9.2	1.22	6.19	37525	94.34	91.21	8.4	16.0
625.0	36.7	34.6	145	9.2	1.24	6.22	37762	99.42	91.23	8.4	16.0
626.0	42.4	34.7	145	9.2	1.20	6.24	37967	86.23	91.22	8.4	16.0
627.0	45.0	33.0	145	9.2	1.17	6.26	38160	81.16	91.19	8.4	16.0
628.0	50.5	32.3	145	9.2	1.13	6.28	38333	72.28	91.14	8.4	16.0
629.0	57.1	32.6	145	9.2	1.10	6.30	38485	63.91	91.07	8.4	16.0
630.0	46.2	32.5	145	9.2	1.16	6.32	38673	79.13	91.03	8.4	16.0
631.0	60.0	32.4	145	9.2	1.08	6.34	38818	60.87	90.95	8.4	16.0
632.0	55.4	32.1	145	9.2	1.10	6.36	38975	65.94	90.89	8.4	16.0
633.0	48.6	32.4	145	9.2	1.14	6.38	39154	75.07	90.85	8.4	16.0
634.0	43.9	32.5	145	9.2	1.17	6.40	39352	83.18	90.83	8.4	16.0
635.0	46.8	32.4	145	9.2	1.15	6.42	39538	78.11	90.79	8.4	16.0
636.0	40.9	32.4	145	9.2	1.19	6.45	39751	89.27	90.79	8.4	16.0
637.0	120.0	32.8	145	9.2	0.89	6.46	39824	30.43	90.63	8.4	16.1
638.0	46.8	32.3	145	9.2	1.15	6.48	40010	78.11	90.60	8.4	16.1
639.0	56.2	32.9	145	9.2	1.10	6.49	40164	64.92	90.53	8.4	16.1
640.0	56.2	34.4	145	9.2	1.12	6.51	40319	64.92	90.46	8.4	16.1
641.0	60.0	34.4	145	9.2	1.10	6.53	40464	60.87	90.39	8.4	16.1
642.0	49.3	33.3	145	9.2	1.15	6.55	40640	74.05	90.34	8.4	16.1
643.0	61.0	33.3	145	9.2	1.08	6.57	40783	59.85	90.27	8.4	16.1
644.0	50.7	33.8	145	9.2	1.14	6.59	40955	72.03	90.22	8.4	16.1
645.0	52.2	33.7	145	9.2	1.13	6.60	41121	70.00	90.17	8.4	16.1
646.0	54.0	33.0	145	9.2	1.12	6.62	41282	67.63	90.11	8.4	16.1
647.0	36.0	30.3	145	9.2	1.21	6.65	41524	101.44	90.14	8.4	16.1
648.0	34.3	30.4	145	9.2	1.22	6.68	41778	106.52	90.18	8.4	16.1
649.0	36.4	31.2	145	9.2	1.21	6.71	42017	100.43	90.21	8.4	16.1
650.0	30.8	30.5	145	9.2	1.25	6.74	42300	118.69	90.28	8.4	16.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
651.0	26.5	30.9	145	9.2	1.30	6.78	42629	137.96	90.40	8.4	16.1
652.0	33.6	32.0	145	9.2	1.24	6.81	42887	108.55	90.44	8.4	16.1
653.0	33.6	32.3	145	9.2	1.25	6.84	43146	108.55	90.49	8.4	16.1
654.0	36.7	31.3	145	9.2	1.21	6.86	43383	99.42	90.51	8.4	16.1
655.0	45.0	31.4	145	9.2	1.15	6.89	43576	81.16	90.49	8.4	16.1
656.0	42.0	32.0	145	9.2	1.18	6.91	43783	86.95	90.48	8.4	16.1
657.0	37.6	32.7	145	9.2	1.22	6.94	44014	97.10	90.50	8.4	16.1
658.0	41.9	33.6	145	9.2	1.20	6.96	44222	87.24	90.49	8.4	16.1
659.0	33.6	33.8	145	9.2	1.26	6.99	44481	108.55	90.53	8.4	16.1
660.0	24.7	33.4	145	9.2	1.35	7.03	44834	148.11	90.68	8.4	16.1
661.0	35.3	33.9	145	9.2	1.25	7.06	45080	103.47	90.71	8.4	16.1
662.0	35.6	33.5	145	9.2	1.24	7.09	45324	102.46	90.74	8.4	16.1
663.0	43.9	33.3	145	9.2	1.18	7.11	45522	83.18	90.72	8.4	16.1
664.0	41.4	33.2	145	9.2	1.20	7.13	45733	88.26	90.71	8.4	16.1
665.0	42.0	33.0	145	9.2	1.19	7.16	45940	86.95	90.70	8.4	16.1
666.0	32.0	30.9	145	9.2	1.25	7.19	46212	114.13	90.76	8.4	16.1
667.0	30.0	33.7	145	9.2	1.29	7.22	46502	121.73	90.83	8.4	16.1
668.0	35.6	33.6	145	9.2	1.24	7.25	46746	102.46	90.86	8.4	16.1
669.0	38.7	32.5	145	9.2	1.21	7.28	46970	94.34	90.87	8.4	16.2
670.0	40.0	33.1	145	9.2	1.20	7.30	47188	91.30	90.87	8.4	16.2
671.0	41.9	33.0	145	9.2	1.19	7.33	47396	87.24	90.86	8.4	16.2
672.0	29.0	33.9	145	9.2	1.30	7.36	47695	125.79	90.95	8.4	16.2
673.0	40.0	33.7	145	9.2	1.21	7.38	47913	91.30	90.95	8.4	16.2
674.0	38.3	32.1	145	9.2	1.21	7.41	48140	95.36	90.96	8.4	16.2
675.0	39.1	33.6	145	9.2	1.22	7.44	48362	93.33	90.96	8.4	16.2
676.0	36.9	33.9	145	9.2	1.23	7.46	48598	98.91	90.98	8.4	16.2
677.0	45.0	33.6	145	9.2	1.18	7.49	48791	81.16	90.96	8.4	16.2
678.0	45.6	32.6	145	9.2	1.16	7.51	48982	80.14	90.93	8.4	16.2
679.0	48.6	33.7	145	9.2	1.15	7.53	49161	75.07	90.90	8.4	16.2
680.0	36.0	33.4	145	9.2	1.24	7.56	49403	101.44	90.92	8.4	16.2
681.0	45.0	34.4	145	9.2	1.18	7.58	49596	81.16	90.90	8.4	16.2
682.0	35.0	33.8	145	9.2	1.25	7.61	49845	104.49	90.93	8.4	16.2
683.0	40.4	33.5	145	9.2	1.20	7.63	50060	90.29	90.93	8.4	16.2
684.0	36.0	33.2	145	9.2	1.24	7.66	50302	101.44	90.95	8.4	16.2
685.0	24.2	31.6	145	9.2	1.33	7.70	50662	151.15	91.09	8.4	16.2
686.0	39.6	33.7	145	9.2	1.21	7.73	50882	92.31	91.10	8.4	16.2
687.0	46.8	34.3	145	9.2	1.17	7.75	51068	78.11	91.07	8.4	16.2
688.0	41.9	34.0	145	9.2	1.20	7.77	51276	87.24	91.06	8.4	16.2
689.0	43.4	34.7	145	9.2	1.20	7.79	51476	84.20	91.04	8.4	16.2
690.0	32.7	34.3	145	9.2	1.27	7.83	51742	111.59	91.09	8.4	16.2
691.0	40.0	33.7	145	9.2	1.21	7.85	51960	91.30	91.09	8.4	16.2
692.0	39.6	31.8	145	9.2	1.20	7.88	52180	92.31	91.09	8.4	16.2
693.0	35.0	31.0	145	9.2	1.22	7.90	52428	104.34	91.12	8.4	16.2
694.0	35.0	32.1	145	9.2	1.23	7.93	52677	104.34	91.15	8.4	16.2
695.0	33.5	34.2	145	9.2	1.27	7.96	52937	109.05	91.19	8.4	16.2
696.0	41.9	31.3	145	9.2	1.17	7.99	53144	87.24	91.19	8.4	16.2
697.0	41.4	32.2	145	9.2	1.19	8.01	53355	88.26	91.18	8.4	16.2
698.0	10.8	23.9	145	9.2	1.46	8.10	54162	338.82	91.74	8.4	16.2
699.0	9.6	16.1	145	9.2	1.36	8.21	55066	379.40	92.39	8.4	16.2
700.0	20.7	27.7	145	9.2	1.33	8.26	55486	176.51	92.58	8.4	16.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
701.0	25.5	31.2	145	9.2	1.31	8.29	55827	143.04	92.69	8.4	16.2
702.0	20.9	30.7	145	9.2	1.36	8.34	56243	174.48	92.87	8.4	16.3
703.0	30.3	28.7	145	9.2	1.24	8.38	56530	120.72	92.94	8.4	16.3
704.0	25.0	35.0	145	9.2	1.36	8.42	56878	146.08	93.06	8.4	16.3
705.0	21.0	32.0	145	9.2	1.38	8.46	57292	173.90	93.24	8.4	16.3
706.0	25.0	31.2	145	9.2	1.32	8.50	57640	146.08	93.35	8.4	16.3
707.0	23.5	32.2	145	9.2	1.35	8.55	58011	155.40	93.49	8.4	16.3
708.0	26.8	32.0	145	9.2	1.31	8.58	58335	136.27	93.59	8.4	16.3
709.0	25.4	31.8	145	9.2	1.32	8.62	58678	143.78	93.70	8.4	16.3
710.0	26.2	30.5	145	9.2	1.30	8.66	59010	139.39	93.80	8.4	16.3
711.0	32.6	30.4	145	9.2	1.24	8.69	59277	112.02	93.84	8.4	16.3
712.0	30.4	32.0	145	9.2	1.27	8.72	59563	120.13	93.89	8.4	16.3
713.0	29.0	31.0	145	9.2	1.27	8.76	59863	125.93	93.96	8.4	16.3
714.0	32.0	32.0	145	9.2	1.26	8.79	60135	114.13	94.01	8.4	16.3
715.0	32.0	32.0	145	9.2	1.26	8.82	60407	114.13	94.05	8.4	16.3
716.0	27.0	31.7	145	9.2	1.30	8.86	60729	135.26	94.14	8.4	16.3
717.0	16.2	35.5	145	9.2	1.49	8.92	61265	225.21	94.43	8.4	16.3
718.0	33.0	36.2	145	9.2	1.29	8.95	61529	110.57	94.46	8.4	16.3
719.0	36.7	36.0	145	9.2	1.26	8.98	61766	99.42	94.47	8.4	16.3
720.0	37.1	36.2	145	9.2	1.26	9.00	62000	98.40	94.48	8.4	16.3
721.0	22.0	35.9	145	9.2	1.41	9.05	62395	166.00	94.63	8.4	16.3
722.0	20.0	35.0	145	9.2	1.42	9.10	62830	182.60	94.82	8.4	16.3
723.0	23.0	36.0	145	9.2	1.39	9.14	63209	158.78	94.96	8.4	16.3
724.0	15.0	34.9	145	9.2	1.51	9.21	63789	243.47	95.28	8.4	16.3
725.0	20.3	34.9	145	9.2	1.42	9.26	64216	179.56	95.46	8.4	16.3
726.0	27.3	35.4	145	9.2	1.34	9.30	64535	133.91	95.54	8.4	16.3
727.0	33.6	36.4	145	9.2	1.29	9.33	64794	108.55	95.57	8.4	16.3
728.0	27.9	36.1	145	9.2	1.34	9.36	65106	130.86	95.64	8.4	16.3
729.0	30.5	36.2	145	9.2	1.31	9.39	65391	119.70	95.69	8.4	16.3
730.0	20.5	35.4	145	9.2	1.42	9.44	65816	178.54	95.87	8.4	16.3
731.0	22.6	36.0	145	9.2	1.40	9.49	66201	161.30	96.00	8.4	16.3
732.0	25.7	36.3	145	9.2	1.36	9.53	66539	142.02	96.10	8.4	16.3
733.0	30.5	37.6	145	9.2	1.33	9.56	66824	119.70	96.15	8.4	16.3
734.0	16.9	23.5	145	9.2	1.33	9.62	67339	216.08	96.40	8.4	16.3
735.0	26.7	35.1	145	9.2	1.34	9.66	67665	136.95	96.49	8.4	16.4
736.0	29.0	37.7	145	9.2	1.34	9.69	67965	125.79	96.55	8.4	16.4
737.0	25.9	37.8	145	9.2	1.38	9.73	68301	141.01	96.64	8.4	16.4
738.0	18.6	36.6	145	9.2	1.46	9.78	68769	196.80	96.85	8.4	16.4
739.0	20.8	37.0	145	9.2	1.43	9.83	69188	175.50	97.01	8.4	16.4
740.0	23.1	34.2	145	9.2	1.37	9.87	69565	158.25	97.14	8.4	16.4
741.0	21.6	36.9	145	9.2	1.42	9.92	69968	169.41	97.29	8.4	16.4
742.0	23.4	38.4	145	9.2	1.41	9.96	70340	156.22	97.41	8.4	16.4
743.0	30.0	38.0	145	9.2	1.34	10.00	70630	121.73	97.46	8.4	16.4
744.0	32.7	37.3	145	9.2	1.30	10.03	70896	111.59	97.49	8.4	16.4
745.0	20.9	33.8	145	9.2	1.40	10.07	71312	174.48	97.64	8.4	16.4
746.0	20.9	35.8	145	9.2	1.42	10.12	71727	174.48	97.80	8.4	16.4
747.0	24.0	34.3	145	9.2	1.36	10.16	72090	152.17	97.91	8.4	16.4
748.0	24.0	34.9	145	9.2	1.37	10.21	72452	152.17	98.02	8.4	16.4
749.0	30.8	35.0	145	9.2	1.30	10.24	72735	118.69	98.06	8.4	16.4
750.0	38.3	35.3	145	9.2	1.24	10.26	72962	95.36	98.06	8.4	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
751.0	29.3	34.3	145	9.2	1.31	10.30	73260	124.78	98.11	8.4	16.4
752.0	27.1	34.8	145	9.2	1.33	10.34	73581	134.92	98.19	8.4	16.4
753.0	40.0	32.0	145	9.2	1.19	10.36	73799	91.30	98.17	8.4	16.4
754.0	33.6	38.2	145	9.2	1.30	10.39	74057	108.55	98.19	8.4	16.4
755.0	22.2	36.0	145	9.2	1.40	10.43	74449	164.34	98.33	8.4	16.4
756.0	19.4	36.5	145	9.2	1.45	10.49	74898	188.69	98.51	8.4	16.4
757.0	20.5	36.4	145	9.2	1.43	10.54	75323	178.54	98.67	8.4	16.4
758.0	23.5	36.7	145	9.2	1.39	10.58	75693	155.21	98.78	8.4	16.4
759.0	22.1	36.0	145	9.2	1.41	10.62	76087	165.35	98.91	8.4	16.4
760.0	23.8	36.5	145	9.2	1.39	10.67	76452	153.18	99.02	8.4	16.4
761.0	31.9	36.4	145	9.2	1.30	10.70	76725	114.63	99.05	8.4	16.4
762.0	34.0	37.1	145	9.2	1.29	10.73	76981	107.53	99.07	8.4	16.4
763.0	5.9	8.8	145	9.2	1.30	10.90	78460	620.84	100.10	8.4	16.4
764.0	18.8	35.2	145	9.2	1.44	10.95	78922	193.76	100.28	8.4	16.4
765.0	30.8	35.7	145	9.2	1.31	10.98	79205	118.69	100.32	8.4	16.4
766.0	31.6	35.0	145	9.2	1.29	11.01	79480	115.65	100.35	8.4	16.4
767.0	22.8	34.7	145	9.2	1.38	11.06	79862	160.28	100.46	8.4	16.4
768.0	17.8	35.6	145	9.2	1.47	11.11	80350	204.92	100.67	8.4	16.4
769.0	17.3	35.6	145	9.2	1.47	11.17	80853	211.00	100.88	8.4	16.5
770.0	23.8	35.4	145	9.2	1.38	11.21	81218	153.18	100.98	8.4	16.5
771.0	32.1	35.1	145	9.2	1.29	11.24	81488	113.62	101.01	8.4	16.5
772.0	29.0	35.0	145	9.2	1.32	11.28	81788	125.93	101.06	8.4	16.5
773.0	28.6	36.6	145	9.2	1.34	11.31	82092	127.53	101.11	8.4	16.5
774.0	22.4	36.9	145	9.2	1.41	11.36	82481	163.33	101.23	8.4	16.5
775.0	24.3	37.7	145	9.2	1.39	11.40	82839	150.14	101.32	8.4	16.5
776.0	15.6	36.9	145	9.2	1.52	11.46	83397	234.34	101.58	8.4	16.5
777.0	22.0	35.9	145	9.2	1.41	11.51	83794	166.37	101.70	8.4	16.5
778.0	15.9	32.0	145	9.2	1.46	11.57	84340	229.26	101.95	8.4	16.5
779.0	22.1	33.6	145	9.2	1.38	11.62	84734	165.35	102.07	8.4	16.5
780.0	22.0	36.2	145	9.2	1.41	11.66	85130	166.37	102.19	8.4	16.5
781.0	20.3	35.6	145	9.2	1.43	11.71	85558	179.56	102.34	8.4	16.5
782.0	14.8	36.6	145	9.2	1.53	11.78	86146	246.85	102.61	8.4	16.5
783.0	18.3	33.7	145	9.2	1.44	11.83	86622	199.85	102.80	8.4	16.5
784.0	14.3	31.3	145	9.2	1.48	11.90	87231	255.64	103.09	8.4	16.5
785.0	27.1	29.6	145	9.2	1.28	11.94	87552	134.92	103.15	8.4	16.5
786.0	36.7	33.8	145	9.2	1.24	11.97	87789	99.42	103.14	8.4	16.5
787.0	34.3	34.3	145	9.2	1.26	12.00	88043	106.52	103.15	8.4	16.5
788.0	23.2	34.7	145	9.2	1.38	12.04	88417	157.24	103.25	8.4	16.5
789.0	18.9	33.3	145	9.2	1.42	12.09	88877	192.74	103.42	8.4	16.5
790.0	23.7	32.5	145	9.2	1.35	12.14	89244	154.20	103.51	8.4	16.5
791.0	25.0	34.0	145	9.2	1.35	12.18	89592	146.08	103.59	8.4	16.5
792.0	24.3	34.9	145	9.2	1.37	12.22	89950	150.48	103.68	8.4	16.5
793.0	30.8	34.5	145	9.2	1.29	12.25	90233	118.69	103.71	8.4	16.5
794.0	31.0	34.3	145	9.2	1.29	12.28	90513	117.68	103.73	8.4	16.5
795.0	38.3	34.9	145	9.2	1.23	12.31	90741	95.36	103.72	8.4	16.5
796.0	34.6	35.1	145	9.2	1.27	12.34	90992	105.50	103.72	8.4	16.5
797.0	34.3	35.7	145	9.2	1.27	12.37	91246	106.52	103.73	8.4	16.5
798.0	25.7	35.7	145	9.2	1.36	12.40	91584	142.02	103.80	8.4	16.5
799.0	37.9	36.0	145	9.2	1.25	12.43	91814	96.37	103.78	8.4	16.5
800.0	23.1	35.3	145	9.2	1.39	12.47	92191	158.25	103.88	8.4	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
801.0	7.9	18.5	145	9.2	1.45	12.60	93288	460.56	104.54	8.4	16.5
802.0	23.4	35.7	145	9.2	1.39	12.64	93660	156.22	104.63	8.4	16.5
803.0	24.3	35.9	145	9.2	1.38	12.68	94018	150.14	104.71	8.4	16.6
804.0	36.4	35.7	145	9.2	1.26	12.71	94257	100.43	104.71	8.4	16.6
805.0	25.2	35.8	145	9.2	1.37	12.75	94602	145.07	104.78	8.4	16.6
806.0	27.3	35.5	145	9.2	1.34	12.79	94921	133.91	104.83	8.4	16.6
807.0	30.0	35.6	145	9.2	1.31	12.82	95211	121.73	104.86	8.4	16.6
808.0	23.5	35.8	145	9.2	1.39	12.86	95581	155.21	104.96	8.4	16.6
809.0	24.2	35.8	145	9.2	1.38	12.91	95941	151.15	105.04	8.4	16.6
810.0	32.0	35.0	145	9.2	1.29	12.94	96213	114.13	105.06	8.4	16.6
811.0	41.1	32.2	145	9.2	1.19	12.96	96425	88.76	105.03	8.4	16.6
812.0	39.1	34.4	145	9.2	1.22	12.99	96647	93.33	105.00	8.4	16.6
813.0	28.6	35.7	145	9.2	1.33	13.02	96951	127.82	105.05	8.4	16.6
814.0	26.5	36.1	145	9.2	1.35	13.06	97280	137.96	105.10	8.4	16.6
815.0	28.8	36.1	145	9.2	1.33	13.09	97582	126.81	105.14	8.4	16.6
816.0	29.0	36.4	145	9.2	1.33	13.13	97882	125.79	105.18	8.4	16.6
817.0	27.9	36.2	145	9.2	1.34	13.16	98194	130.86	105.23	8.4	16.6
818.0	26.1	36.0	145	9.2	1.36	13.20	98527	139.99	105.29	8.4	16.6
819.0	23.0	36.0	145	9.2	1.39	13.25	98905	158.78	105.38	8.4	16.6
820.0	25.0	32.0	145	9.2	1.33	13.29	99253	146.08	105.46	8.4	16.6
821.0	19.0	36.6	145	9.2	1.46	13.34	99710	191.73	105.61	8.4	16.6
822.0	20.2	37.9	145	9.2	1.45	13.39	100140	180.57	105.74	8.4	16.6
823.0	28.1	37.4	145	9.2	1.35	13.42	100450	129.85	105.78	8.4	16.6
824.0	25.0	37.8	145	9.2	1.39	13.46	100798	146.08	105.85	8.4	16.6
825.0	24.3	38.8	145	9.2	1.41	13.50	101155	150.14	105.93	8.4	16.6
826.0	21.1	38.6	145	9.2	1.45	13.55	101569	173.47	106.05	8.4	16.6
827.0	23.4	36.5	145	9.2	1.39	13.59	101941	156.22	106.14	8.4	16.6
828.0	25.2	33.4	145	9.2	1.34	13.63	102286	145.07	106.21	8.4	16.6
829.0	23.2	37.0	145	9.2	1.40	13.68	102661	157.24	106.30	8.4	16.6
830.0	24.8	37.7	145	9.2	1.39	13.72	103011	147.09	106.37	8.4	16.6
831.0	23.8	37.8	145	9.2	1.40	13.76	103376	153.18	106.45	8.4	16.6
832.0	24.7	37.9	145	9.2	1.39	13.80	103729	148.11	106.52	8.4	16.6
833.0	21.8	38.2	145	9.2	1.43	13.85	104128	167.38	106.63	8.4	16.6
834.0	22.6	35.7	145	9.2	1.40	13.89	104512	161.30	106.72	8.4	16.6
835.0	18.8	37.4	145	9.2	1.47	13.94	104976	194.77	106.87	8.4	16.6
836.0	16.8	33.0	145	9.2	1.45	14.00	105493	217.09	107.06	8.4	16.6
837.0	19.4	32.2	145	9.2	1.40	14.05	105943	188.69	107.20	8.4	16.6
838.0	21.2	35.9	145	9.2	1.42	14.10	106354	172.46	107.31	8.4	16.6
839.0	25.0	34.0	145	9.2	1.35	14.14	106702	146.08	107.38	8.4	16.7
840.0	30.0	31.0	145	9.2	1.26	14.18	106992	121.73	107.41	8.4	16.7
841.0	32.4	31.4	145	9.2	1.25	14.21	107260	112.60	107.41	8.4	16.7
842.0	21.2	34.3	145	9.2	1.40	14.25	107671	172.46	107.53	8.4	16.7
843.0	30.8	34.7	145	9.2	1.30	14.29	107953	118.69	107.54	8.4	16.7
844.0	17.2	34.4	145	9.2	1.46	14.34	108458	212.02	107.72	8.4	16.7
846.0	16.4	36.1	145	9.2	1.50	14.47	109522	223.18	108.11	8.4	16.7

BIT NUMBER	2	IADC CODE	116	INTERVAL	846.0- 1427.5
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2566.00	TRIP TIME	4.5	BIT RUN	581.5
TOTAL HOURS	17.08	TOTAL TURNS	134081	CONDITION	T2 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
847.0	14.8	31.7	65	9.2	1.37	0.07	264	247	19247	8.4	16.7
848.0	21.6	30.3	65	9.2	1.24	0.11	445	169	9708	8.4	16.7
852.0	9.8	21.2	65	9.2	1.35	0.52	2038	373	3485	8.4	16.7
853.0	12.0	20.9	69	9.2	1.30	0.61	2386	304	3030	8.4	16.7
854.0	11.1	20.4	70	9.2	1.32	0.70	2763	328	2693	8.4	16.7
855.0	9.8	19.6	70	9.2	1.34	0.80	3192	373	2435	8.4	16.7
856.0	12.9	21.7	70	9.2	1.30	0.88	3519	284	2220	8.4	16.7
857.0	13.2	23.3	70	8.9	1.35	0.95	3837	277	2043	8.4	16.7
858.0	19.3	27.2	70	8.6	1.35	1.00	4055	190	1889	8.4	16.7
859.0	18.3	28.4	70	8.6	1.38	1.06	4285	200	1759	8.4	16.7
860.0	24.0	32.4	70	8.6	1.34	1.10	4460	152	1644	8.4	16.7
861.0	20.7	32.3	70	8.6	1.39	1.15	4663	177	1546	8.4	16.7
862.0	20.3	30.3	101	8.6	1.49	1.20	4960	180	1461	8.4	16.7
863.0	20.8	29.9	110	8.6	1.51	1.25	5277	175	1385	8.4	16.7
864.0	22.2	30.3	110	8.6	1.49	1.29	5574	164	1317	8.4	16.7
865.0	24.2	30.3	110	8.6	1.46	1.33	5848	151	1256	8.4	16.7
866.0	29.3	31.7	110	8.6	1.42	1.37	6073	125	1199	8.4	16.7
867.0	23.2	32.8	110	8.6	1.51	1.41	6357	157	1150	8.4	16.7
868.0	22.2	31.3	110	8.6	1.50	1.45	6654	164	1105	8.4	16.7
869.0	21.7	30.3	110	8.6	1.50	1.50	6959	168	1064	8.4	16.7
870.0	21.3	30.9	110	8.6	1.51	1.55	7268	171	1027	8.4	16.7
871.0	22.9	32.2	110	8.6	1.50	1.59	7556	159.27	992.37	8.4	16.7
872.0	19.8	31.2	110	8.6	1.54	1.64	7890	184.63	961.30	8.4	16.7
873.0	20.1	31.1	110	8.6	1.53	1.69	8218	181.59	932.42	8.4	16.7
874.0	24.2	31.7	110	8.6	1.48	1.73	8491	151.15	904.52	8.4	16.7
875.0	29.5	31.3	110	8.6	1.41	1.77	8715	123.76	877.60	8.4	16.8
876.0	29.5	31.4	110	8.6	1.41	1.80	8939	123.76	852.47	8.4	16.8
877.0	30.3	31.0	110	8.6	1.40	1.83	9157	120.72	828.86	8.4	16.8
878.0	22.0	31.5	110	8.6	1.51	1.88	9457	166.37	808.16	8.4	16.8
879.0	22.6	33.0	110	8.6	1.52	1.92	9749	161.30	788.56	8.4	16.8
880.0	21.1	32.4	110	8.6	1.54	1.97	10062	173.47	770.47	8.4	16.8
881.0	23.1	32.6	110	8.6	1.50	2.01	10348	158.25	752.98	8.4	16.8
882.0	21.2	32.7	110	8.7	1.52	2.06	10660	172.46	736.85	8.4	16.8
883.0	19.0	32.1	110	8.7	1.55	2.11	11007	191.73	722.12	8.4	16.8
884.0	18.7	31.5	110	8.7	1.55	2.17	11360	195.79	708.27	8.4	16.8
885.0	22.0	31.6	110	8.7	1.49	2.21	11661	166.37	694.37	8.4	16.8
886.0	24.7	31.0	110	8.7	1.45	2.25	11929	148.11	680.72	8.4	16.8
888.0	31.3	15.4	110	8.7	1.14	2.32	12350	116.66	653.86	8.4	16.8
889.0	27.1	30.6	110	8.7	1.41	2.35	12594	134.92	641.79	8.4	16.8
890.0	32.4	31.7	110	8.7	1.37	2.38	12798	112.60	629.76	8.4	16.8
891.0	28.8	31.2	110	8.7	1.40	2.42	13027	126.81	618.58	8.4	16.8
892.0	28.8	32.5	110	8.7	1.42	2.45	13256	126.81	607.89	8.4	16.8
893.0	27.1	32.2	110	8.7	1.43	2.49	13500	134.92	597.83	8.4	16.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
894.0	25.5	31.9	110	8.7	1.45	2.53	13758	143.04	588.35	8.4	16.8
895.0	25.7	33.3	110	8.7	1.46	2.57	14015	142.02	579.25	8.4	16.8
896.0	27.7	33.7	110	8.7	1.44	2.61	14253	131.88	570.30	8.4	16.8
898.0	27.0	31.8	110	8.7	1.43	2.68	14742	135.26	553.57	8.4	16.8
899.0	24.0	31.8	110	8.7	1.47	2.72	15017	152.17	545.99	8.4	16.8
900.0	24.0	32.1	110	8.7	1.47	2.76	15292	152.17	538.70	8.4	16.8
901.0	21.4	31.3	110	8.7	1.50	2.81	15600	170.43	532.00	8.4	16.8
902.0	22.9	32.1	110	8.7	1.49	2.85	15888	159.27	525.35	8.4	16.8
903.0	27.9	32.6	110	8.7	1.43	2.89	16125	130.86	518.43	8.4	16.8
904.0	28.8	33.2	110	8.7	1.42	2.92	16354	126.81	511.67	8.4	16.8
905.0	25.7	32.6	110	8.7	1.45	2.96	16610	142.02	505.41	8.4	16.8
906.0	24.5	31.1	110	8.7	1.45	3.00	16880	149.12	499.47	8.4	16.8
908.0	26.6	29.8	110	8.7	1.41	3.08	17377	137.51	487.80	8.4	16.8
909.0	21.7	30.3	110	8.7	1.48	3.12	17681	168.40	482.73	8.4	16.8
910.0	17.6	29.1	110	8.7	1.53	3.18	18057	207.96	478.43	8.4	16.8
911.0	22.2	30.7	110	8.7	1.48	3.23	18354	164.34	473.60	8.4	16.8
912.0	21.7	30.4	110	8.7	1.48	3.27	18658	168.40	468.98	8.4	16.9
913.0	20.8	30.4	110	8.7	1.50	3.32	18976	175.50	464.60	8.4	16.9
914.0	20.1	30.9	110	8.7	1.51	3.37	19304	181.59	460.43	8.4	16.9
915.0	16.3	32.1	110	8.7	1.60	3.43	19709	224.19	457.01	8.4	16.9
916.0	14.4	28.7	110	8.7	1.59	3.50	20167	253.61	454.10	8.4	16.9
917.0	360.0	11.2	110	8.7	0.44	3.50	20186	10.14	447.85	8.4	16.9
918.0	56.2	21.7	110	8.7	1.07	3.52	20303	64.92	442.53	8.4	16.9
919.0	20.2	39.2	110	8.7	1.62	3.57	20629	180.57	438.94	8.4	16.9
920.0	25.4	36.4	118	8.7	1.53	3.61	20909	144.05	434.96	8.4	16.9
921.0	25.9	6.6	140	8.7	1.05	3.65	21233	141.01	431.04	8.4	16.9
922.0	25.4	2.2	140	8.7	0.86	3.69	21565	144.05	427.26	8.4	16.9
923.0	26.7	27.9	140	8.7	1.46	3.73	21880	136.95	423.49	8.4	16.9
924.0	32.7	39.8	140	8.7	1.54	3.76	22136	111.59	419.49	8.4	16.9
925.0	34.3	30.8	140	8.7	1.42	3.79	22381	106.52	415.53	8.4	16.9
926.0	36.4	31.2	140	8.7	1.40	3.81	22612	100.43	411.59	8.4	16.9
927.0	27.1	25.8	140	8.7	1.42	3.85	22923	134.92	408.18	8.4	16.9
928.0	45.0	28.8	140	8.7	1.30	3.87	23109	81.16	404.19	8.4	16.9
929.0	45.0	32.2	140	8.7	1.34	3.90	23296	81.16	400.30	8.4	16.9
930.0	39.1	32.4	140	8.7	1.39	3.92	23511	93.33	396.64	8.4	16.9
931.0	34.3	32.2	140	8.7	1.43	3.95	23756	106.52	393.23	8.4	16.9
932.0	31.9	31.8	140	8.7	1.45	3.98	24019	114.63	389.99	8.4	16.9
933.0	19.0	26.1	140	8.7	1.54	4.03	24460	191.73	387.71	8.4	16.9
934.0	15.9	25.8	140	8.7	1.59	4.10	24990	230.28	385.92	8.4	16.9
935.0	11.3	25.9	140	8.7	1.70	4.19	25732	322.59	385.21	8.4	16.9
936.0	17.1	21.8	140	8.7	1.50	4.24	26222	213.03	383.30	8.4	16.9
937.0	17.6	20.2	140	8.7	1.46	4.30	26698	206.95	381.36	8.4	16.9
938.0	20.1	19.5	140	8.7	1.41	4.35	27116	181.59	379.19	8.4	16.9
939.0	14.5	19.4	140	8.7	1.50	4.42	27694	251.58	377.82	8.4	16.9
940.0	14.0	19.2	140	8.7	1.51	4.49	28294	260.71	376.57	8.4	16.9
941.0	13.3	20.6	140	8.7	1.55	4.57	28926	274.91	375.50	8.4	16.9
942.0	12.2	24.5	140	8.7	1.64	4.65	29612	298.25	374.70	8.4	16.9
943.0	12.3	25.8	140	8.8	1.65	4.73	30296	297.23	373.90	8.4	16.9
944.0	15.1	26.4	140	8.8	1.60	4.79	30854	242.45	372.56	8.4	16.9
946.0	34.0	28.5	140	8.8	1.37	4.85	31348	107.53	367.26	8.4	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
947.0	26.3	30.3	140	8.8	1.48	4.89	31668	138.98	365.00	8.4	16.9
948.0	32.1	29.6	140	8.8	1.40	4.92	31929	113.62	362.53	8.4	16.9
949.0	17.9	32.4	140	8.8	1.63	4.98	32398	203.90	360.99	8.4	16.9
950.0	22.1	37.1	140	8.8	1.63	5.02	32779	165.35	359.11	8.4	17.0
951.0	29.5	37.1	140	8.8	1.53	5.06	33063	123.76	356.87	8.4	17.0
952.0	27.9	37.9	140	8.8	1.56	5.09	33364	130.86	354.74	8.4	17.0
953.0	24.8	39.0	140	8.8	1.61	5.13	33703	147.09	352.80	8.4	17.0
954.0	26.1	39.6	140	8.8	1.60	5.17	34025	139.99	350.83	8.4	17.0
956.0	27.7	27.6	140	8.8	1.43	5.24	34631	131.88	346.84	8.4	17.0
957.0	23.7	29.4	140	8.8	1.50	5.29	34986	154.20	345.11	8.4	17.0
958.0	24.0	29.1	140	8.8	1.49	5.33	35336	152.17	343.39	8.4	17.0
959.0	22.6	30.1	140	8.8	1.52	5.37	35707	161.30	341.78	8.4	17.0
960.0	24.7	30.5	140	8.8	1.50	5.41	36048	148.11	340.08	8.4	17.0
961.0	23.2	29.4	140	8.8	1.51	5.46	36409	157.24	338.49	8.4	17.0
962.0	27.9	30.2	140	8.8	1.46	5.49	36710	130.86	336.70	8.4	17.0
963.0	27.7	30.5	140	8.8	1.47	5.53	37014	131.88	334.95	8.4	17.0
964.0	29.3	30.7	140	8.8	1.45	5.56	37301	124.78	333.16	8.4	17.0
973.0	41.8	25.4	140	8.8	1.27	5.78	39109	87.35	315.75	8.4	17.0
975.0	39.1	27.0	140	8.8	1.31	5.83	39538	93.33	312.30	8.4	17.0
976.0	30.8	31.4	140	8.8	1.44	5.86	39811	118.69	310.81	8.4	17.0
977.0	23.5	30.1	140	8.8	1.51	5.90	40168	155.21	309.62	8.4	17.0
978.0	15.9	30.2	140	8.8	1.64	5.97	40696	229.26	309.01	8.4	17.0
979.0	18.5	31.1	140	8.8	1.61	6.02	41151	197.82	308.18	8.4	17.0
980.0	24.2	31.8	140	8.8	1.53	6.06	41498	151.15	307.00	8.4	17.0
981.0	31.3	32.6	140	8.8	1.45	6.09	41767	116.66	305.59	8.4	17.0
982.0	27.9	33.6	140	8.8	1.50	6.13	42068	130.86	304.31	8.4	17.0
983.0	29.5	33.5	140	8.8	1.48	6.16	42352	123.76	302.99	8.4	17.0
985.0	41.1	25.0	140	8.8	1.26	6.21	42761	88.76	299.91	8.4	17.0
986.0	24.5	26.8	140	8.8	1.45	6.25	43104	149.12	298.83	8.4	17.0
987.0	28.6	29.3	140	8.8	1.44	6.29	43398	127.82	297.62	8.4	17.0
988.0	26.9	28.2	140	8.8	1.44	6.33	43710	135.94	296.48	8.4	17.0
989.0	41.4	27.3	140	8.8	1.29	6.35	43913	88.26	295.02	8.4	17.1
990.0	26.5	28.5	140	8.8	1.45	6.39	44231	137.96	293.93	8.4	17.1
991.0	21.6	28.9	140	8.8	1.52	6.43	44620	169.41	293.07	8.4	17.1
992.0	25.5	24.9	140	8.8	1.41	6.47	44949	143.04	292.05	8.4	17.1
994.0	37.9	22.0	140	8.8	1.25	6.53	45393	96.37	289.40	8.4	17.1
995.0	34.0	29.8	140	8.8	1.39	6.56	45640	107.53	288.18	8.4	17.1
996.0	28.1	30.1	140	8.8	1.46	6.59	45939	129.85	287.13	8.4	17.1
997.0	44.4	28.7	140	8.8	1.29	6.61	46128	82.17	285.77	8.4	17.1
998.0	48.0	30.0	140	8.8	1.28	6.63	46303	76.08	284.39	8.4	17.1
999.0	42.4	30.5	140	8.8	1.33	6.66	46501	86.23	283.09	8.4	17.1
1000.0	48.0	30.1	140	8.8	1.28	6.68	46676	76.08	281.75	8.4	17.1
1001.0	34.3	30.7	140	8.8	1.40	6.71	46921	106.52	280.62	8.4	17.1
1002.0	35.0	29.6	140	8.8	1.38	6.74	47161	104.49	279.49	8.4	17.1
1004.0	55.4	27.5	140	8.8	1.21	6.77	47465	65.94	276.79	8.4	17.1
1005.0	45.0	29.7	140	8.8	1.30	6.79	47651	81.16	275.56	8.4	17.1
1006.0	27.5	33.8	140	8.8	1.51	6.83	47957	132.89	274.67	8.4	17.1
1007.0	26.3	31.8	140	8.8	1.50	6.87	48277	138.98	273.82	8.4	17.1
1008.0	29.0	31.0	140	8.8	1.46	6.90	48566	125.79	272.91	8.4	17.1
1009.0	46.8	30.2	140	8.8	1.29	6.92	48746	78.11	271.71	8.4	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1010.0	53.7	30.2	140	8.8	1.25	6.94	48902	67.97	270.47	8.4	17.1
1011.0	55.4	31.5	140	8.8	1.25	6.96	49054	65.94	269.23	8.4	17.1
1012.0	45.6	30.8	140	8.8	1.31	6.98	49238	80.14	268.09	8.4	17.1
1014.0	54.5	28.9	140	8.8	1.23	7.02	49546	66.95	265.70	8.4	17.1
1015.0	31.6	33.2	140	8.8	1.46	7.05	49812	115.65	264.81	8.4	17.1
1016.0	39.6	33.7	140	8.8	1.39	7.08	50024	92.31	263.80	8.4	17.1
1017.0	64.3	32.7	140	8.8	1.22	7.09	50155	56.81	262.59	8.4	17.1
1018.0	53.7	31.0	140	8.8	1.26	7.11	50311	67.97	261.45	8.4	17.1
1019.0	36.4	30.2	140	8.8	1.37	7.14	50542	100.43	260.52	8.4	17.1
1020.0	38.0	28.0	140	8.8	1.33	7.16	50764	96.11	259.58	8.4	17.1
1021.0	28.0	28.0	140	8.8	1.43	7.20	51064	130.43	258.84	8.4	17.1
1022.0	42.1	31.9	140	8.8	1.35	7.22	51263	86.74	257.86	8.4	17.1
1023.0	72.0	18.6	140	8.8	1.01	7.24	51380	50.72	256.69	8.4	17.1
1024.0	62.1	28.5	140	8.8	1.18	7.25	51515	58.84	255.58	8.4	17.1
1025.0	48.0	24.5	140	8.8	1.21	7.28	51690	76.08	254.58	8.4	17.1
1026.0	59.0	27.0	140	8.8	1.18	7.29	51832	61.88	253.51	8.4	17.1
1027.0	61.0	29.3	140	8.8	1.20	7.31	51970	59.85	252.44	8.4	17.1
1028.0	64.3	27.4	140	8.8	1.16	7.32	52101	56.81	251.36	8.4	17.1
1029.0	45.0	28.6	140	8.8	1.28	7.35	52287	81.16	250.43	8.4	17.2
1030.0	58.1	31.1	140	8.8	1.23	7.36	52432	62.90	249.41	8.4	17.2
1031.0	62.1	30.2	140	8.8	1.20	7.38	52567	58.84	248.38	8.4	17.2
1032.0	60.0	28.0	140	8.8	1.19	7.40	52707	60.87	247.37	8.4	17.2
1033.0	62.1	25.7	140	8.8	1.15	7.41	52843	58.84	246.37	8.4	17.2
1034.0	43.4	24.8	140	8.8	1.25	7.44	53036	84.20	245.50	8.4	17.2
1035.0	36.7	29.9	140	8.8	1.37	7.46	53265	99.42	244.73	8.4	17.2
1036.0	62.1	29.3	140	8.8	1.19	7.48	53400	58.84	243.75	8.4	17.2
1037.0	60.0	29.6	140	8.8	1.20	7.50	53540	60.87	242.79	8.4	17.2
1038.0	66.7	30.1	140	8.8	1.18	7.51	53666	54.78	241.82	8.4	17.2
1039.0	61.0	31.2	140	8.8	1.22	7.53	53804	59.85	240.87	8.4	17.2
1040.0	54.5	28.9	140	8.8	1.23	7.55	53958	66.95	239.98	8.4	17.2
1041.0	56.2	28.7	140	8.8	1.21	7.56	54107	64.92	239.08	8.4	17.2
1042.0	57.6	25.6	140	8.8	1.17	7.58	54253	63.40	238.18	8.4	17.2
1043.0	62.1	29.6	140	8.8	1.19	7.60	54389	58.84	237.27	8.4	17.2
1044.0	50.7	30.7	140	8.8	1.27	7.62	54554	72.03	236.44	8.4	17.2
1045.0	55.4	29.8	140	8.8	1.23	7.63	54706	65.94	235.58	8.4	17.2
1046.0	63.2	28.9	140	8.8	1.18	7.65	54839	57.82	234.69	8.4	17.2
1047.0	67.9	30.0	140	8.8	1.17	7.66	54963	53.77	233.79	8.4	17.2
1048.0	66.7	29.6	140	8.8	1.17	7.68	55089	54.78	232.91	8.4	17.2
1049.0	47.4	31.0	140	8.8	1.30	7.70	55266	77.10	232.14	8.4	17.2
1050.0	47.4	29.9	140	8.8	1.28	7.72	55443	77.10	231.38	8.4	17.2
1051.0	48.0	30.0	140	8.8	1.28	7.74	55618	76.08	230.62	8.4	17.2
1052.0	64.6	29.8	140	8.8	1.18	7.76	55748	56.52	229.78	8.4	17.2
1053.0	48.6	31.6	140	8.8	1.30	7.78	55921	75.07	229.03	8.4	17.2
1054.0	46.8	29.8	140	8.8	1.29	7.80	56101	78.11	228.30	8.4	17.2
1055.0	48.0	30.7	140	8.8	1.29	7.82	56276	76.08	227.57	8.4	17.2
1056.0	48.6	30.8	140	8.8	1.29	7.84	56448	75.07	226.85	8.4	17.2
1057.0	41.4	29.0	140	8.8	1.32	7.87	56651	88.26	226.19	8.4	17.2
1058.0	44.4	29.2	140	8.8	1.30	7.89	56840	82.17	225.51	8.4	17.2
1059.0	42.9	28.7	140	8.8	1.30	7.91	57036	85.21	224.85	8.4	17.2
1060.0	46.8	28.3	140	8.8	1.27	7.93	57216	78.11	224.17	8.4	17.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1061.0	60.0	29.6	140	8.8	1.20	7.95	57356	60.87	223.41	8.4	17.2
1062.0	40.9	27.2	140	8.8	1.30	7.97	57561	89.27	222.79	8.4	17.2
1063.0	40.4	26.7	140	8.8	1.29	8.00	57769	90.29	222.18	8.4	17.2
1064.0	46.2	27.3	140	8.8	1.26	8.02	57951	79.13	221.52	8.4	17.2
1065.0	53.7	27.3	140	8.8	1.21	8.04	58107	67.97	220.82	8.4	17.2
1066.0	64.3	26.1	140	8.8	1.14	8.05	58238	56.81	220.07	8.4	17.2
1067.0	55.4	26.3	140	8.8	1.19	8.07	58390	65.94	219.38	8.4	17.2
1068.0	54.5	26.5	140	8.8	1.20	8.09	58544	66.95	218.69	8.4	17.2
1069.0	47.4	25.7	140	8.8	1.23	8.11	58721	77.10	218.05	8.4	17.2
1070.0	50.0	26.0	140	8.8	1.22	8.13	58889	73.04	217.41	8.4	17.3
1071.0	51.4	13.8	140	8.8	1.03	8.15	59052	71.01	216.76	8.4	17.3
1072.0	58.1	28.5	140	8.8	1.20	8.17	59197	62.90	216.08	8.4	17.3
1073.0	45.0	28.3	140	8.8	1.28	8.19	59384	81.16	215.48	8.4	17.3
1074.0	56.2	28.0	140	8.8	1.21	8.21	59533	64.92	214.82	8.4	17.3
1075.0	46.8	29.0	140	8.8	1.28	8.23	59713	78.11	214.22	8.4	17.3
1076.0	46.2	27.3	140	8.8	1.26	8.25	59895	79.13	213.64	8.4	17.3
1077.0	65.5	28.5	140	8.8	1.16	8.27	60023	55.79	212.95	8.4	17.3
1078.0	41.9	28.8	140	8.8	1.31	8.29	60224	87.24	212.41	8.4	17.3
1079.0	54.5	28.0	140	8.8	1.22	8.31	60378	66.95	211.79	8.4	17.3
1080.0	39.1	25.6	140	8.8	1.29	8.34	60592	93.33	211.28	8.4	17.3
1081.0	75.8	29.1	140	8.8	1.12	8.35	60703	48.19	210.59	8.4	17.3
1082.0	59.0	27.1	140	8.8	1.18	8.37	60845	61.88	209.96	8.4	17.3
1083.0	45.6	26.3	140	8.8	1.25	8.39	61030	80.14	209.41	8.4	17.3
1084.0	51.4	27.8	140	8.8	1.23	8.41	61193	71.01	208.83	8.4	17.3
1085.0	58.1	27.7	140	8.8	1.19	8.42	61338	62.90	208.22	8.4	17.3
1086.0	50.7	27.4	140	8.8	1.23	8.44	61503	72.03	207.65	8.4	17.3
1087.0	49.3	28.2	140	8.8	1.25	8.46	61674	74.05	207.09	8.4	17.3
1088.0	62.1	28.1	140	8.8	1.18	8.48	61809	58.84	206.48	8.4	17.3
1089.0	52.9	27.8	140	8.8	1.22	8.50	61968	68.98	205.92	8.4	17.3
1090.0	54.0	27.0	140	8.8	1.21	8.52	62123	67.63	205.35	8.4	17.3
1091.0	58.1	23.3	140	8.8	1.14	8.53	62268	62.90	204.77	8.4	17.3
1092.0	53.7	23.4	140	8.8	1.16	8.55	62424	67.97	204.21	8.4	17.3
1093.0	43.4	22.2	140	8.8	1.21	8.58	62618	84.20	203.73	8.4	17.3
1094.0	59.0	24.5	140	8.8	1.15	8.59	62760	61.88	203.15	8.4	17.3
1095.0	52.2	24.9	140	8.8	1.19	8.61	62921	70.00	202.62	8.4	17.3
1096.0	60.0	24.4	140	8.8	1.14	8.63	63061	60.87	202.05	8.4	17.3
1097.0	60.0	24.1	140	8.8	1.14	8.65	63201	60.87	201.49	8.4	17.3
1098.0	53.7	23.3	140	8.8	1.16	8.66	63358	67.97	200.96	8.4	17.3
1099.0	42.9	22.4	140	8.8	1.22	8.69	63554	85.21	200.50	8.4	17.3
1100.0	37.5	21.4	140	8.8	1.24	8.71	63778	97.39	200.10	8.4	17.3
1101.0	54.5	28.5	140	8.8	1.22	8.73	63932	66.95	199.57	8.4	17.3
1102.0	51.4	26.8	140	8.8	1.22	8.75	64095	71.01	199.07	8.4	17.3
1103.0	52.2	29.2	140	8.8	1.25	8.77	64256	70.00	198.57	8.4	17.3
1104.0	58.1	29.6	140	8.8	1.22	8.79	64401	62.90	198.04	8.4	17.3
1105.0	48.6	27.5	140	8.8	1.25	8.81	64573	75.07	197.57	8.4	17.3
1106.0	50.7	27.1	140	8.8	1.23	8.83	64739	72.03	197.09	8.4	17.3
1107.0	52.9	27.3	140	8.8	1.22	8.85	64898	68.98	196.60	8.4	17.3
1108.0	38.7	24.7	140	8.8	1.28	8.87	65115	94.34	196.21	8.4	17.3
1109.0	42.0	25.0	140	8.8	1.26	8.90	65315	86.95	195.79	8.4	17.3
1110.0	58.8	24.3	140	8.8	1.15	8.91	65458	62.13	195.28	8.4	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1111.0	49.3	26.1	140	8.8	1.22	8.93	65628	74.05	194.83	8.4	17.4
1112.0	58.1	26.6	140	8.8	1.18	8.95	65773	62.90	194.33	8.4	17.4
1113.0	50.7	27.7	140	8.8	1.24	8.97	65938	72.03	193.87	8.4	17.4
1114.0	52.2	27.2	140	8.8	1.22	8.99	66099	70.00	193.41	8.4	17.4
1115.0	66.7	27.7	140	8.8	1.15	9.01	66225	54.78	192.89	8.4	17.4
1116.0	46.2	29.0	140	8.8	1.28	9.03	66407	79.13	192.47	8.4	17.4
1117.0	53.7	28.3	140	8.8	1.22	9.05	66564	67.97	192.01	8.4	17.4
1118.0	37.9	25.6	140	8.8	1.30	9.07	66785	96.37	191.66	8.4	17.4
1119.0	43.4	26.7	140	8.8	1.27	9.10	66979	84.20	191.27	8.4	17.4
1120.0	48.6	28.3	140	8.8	1.26	9.12	67152	75.07	190.84	8.4	17.4
1121.0	48.6	28.3	140	8.8	1.26	9.14	67324	75.07	190.42	8.4	17.4
1122.0	52.9	28.2	140	8.8	1.23	9.16	67483	68.98	189.98	8.4	17.4
1123.0	50.7	28.6	140	8.8	1.25	9.18	67649	72.03	189.56	8.4	17.4
1124.0	46.8	28.4	140	8.8	1.27	9.20	67828	78.11	189.16	8.4	17.4
1125.0	41.9	27.6	140	8.8	1.29	9.22	68029	87.24	188.79	8.4	17.4
1126.0	48.0	28.5	140	8.8	1.26	9.24	68204	76.08	188.39	8.4	17.4
1127.0	35.3	26.3	140	8.8	1.33	9.27	68442	103.47	188.09	8.4	17.4
1128.0	13.9	22.7	140	8.8	1.56	9.34	69046	262.74	188.35	8.4	17.4
1129.0	47.4	22.1	140	8.8	1.18	9.36	69224	77.10	187.96	8.4	17.4
1130.0	54.5	25.8	140	8.8	1.19	9.38	69378	66.95	187.53	8.4	17.4
1131.0	56.2	26.1	140	8.8	1.18	9.40	69527	64.92	187.10	8.4	17.4
1132.0	54.5	25.6	140	8.8	1.19	9.42	69681	66.95	186.68	8.4	17.4
1133.0	50.0	26.1	140	8.8	1.22	9.44	69849	73.04	186.29	8.4	17.4
1134.0	42.4	27.3	140	8.8	1.29	9.46	70047	86.23	185.94	8.4	17.4
1135.0	40.0	26.3	140	8.8	1.29	9.49	70257	91.30	185.61	8.4	17.4
1136.0	45.0	28.0	140	8.8	1.28	9.51	70444	81.16	185.25	8.4	17.4
1137.0	43.0	28.0	140	8.8	1.29	9.53	70639	84.93	184.91	8.4	17.4
1138.0	68.0	27.0	140	8.8	1.14	9.55	70763	53.71	184.46	8.4	17.4
1139.0	61.5	28.9	140	8.8	1.19	9.56	70899	59.42	184.03	8.4	17.4
1140.0	40.4	28.6	140	8.8	1.32	9.59	71107	90.29	183.71	8.4	17.4
1141.0	43.4	28.3	140	8.9	1.28	9.61	71301	84.20	183.37	8.4	17.4
1142.0	51.4	28.4	140	9.1	1.20	9.63	71464	71.01	182.99	8.4	17.4
1143.0	57.1	28.8	140	9.1	1.17	9.65	71611	63.91	182.59	8.4	17.4
1144.0	58.1	28.3	140	9.1	1.16	9.66	71756	62.90	182.19	8.4	17.4
1145.0	50.0	26.2	140	9.1	1.18	9.68	71924	73.04	181.83	8.4	17.4
1146.0	45.0	26.4	140	9.1	1.21	9.71	72110	81.16	181.49	8.4	17.4
1147.0	44.4	27.0	140	9.1	1.23	9.73	72299	82.17	181.16	8.4	17.4
1148.0	51.4	27.3	140	9.1	1.19	9.75	72463	71.01	180.80	8.4	17.4
1149.0	54.5	29.1	140	9.1	1.19	9.77	72617	66.95	180.42	8.4	17.4
1150.0	46.2	28.0	140	9.1	1.23	9.79	72799	79.13	180.09	8.4	17.4
1151.0	48.0	27.8	140	9.1	1.21	9.81	72974	76.08	179.75	8.4	17.4
1152.0	51.4	28.1	140	9.1	1.20	9.83	73137	71.01	179.39	8.4	17.4
1153.0	36.0	26.0	140	9.1	1.28	9.86	73370	101.44	179.14	8.4	17.4
1154.0	39.6	26.4	140	9.1	1.25	9.88	73583	92.31	178.86	8.4	17.5
1155.0	47.4	24.5	140	9.1	1.18	9.90	73760	77.10	178.53	8.4	17.5
1156.0	47.4	24.6	140	9.1	1.18	9.92	73937	77.10	178.20	8.4	17.5
1157.0	48.0	25.0	140	9.1	1.18	9.94	74112	76.08	177.87	8.4	17.5
1158.0	49.1	17.6	140	9.1	1.07	9.96	74284	74.39	177.54	8.4	17.5
1159.0	42.4	23.5	140	9.1	1.20	9.99	74482	86.23	177.25	8.4	17.5
1160.0	49.3	23.0	140	9.1	1.14	10.01	74652	74.05	176.92	8.4	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1161.0	53.7	25.8	140	9.1	1.15	10.03	74809	67.97	176.57	8.4	17.5
1162.0	52.9	24.1	140	9.1	1.14	10.05	74967	68.98	176.23	8.4	17.5
1163.0	46.2	25.1	140	9.1	1.19	10.07	75149	79.13	175.93	8.4	17.5
1164.0	50.7	25.3	140	9.1	1.17	10.09	75315	72.03	175.60	8.4	17.5
1165.0	43.9	26.1	140	9.1	1.22	10.11	75506	83.18	175.31	8.4	17.5
1166.0	35.6	25.6	140	9.1	1.27	10.14	75742	102.46	175.08	8.4	17.5
1168.0	45.0	29.3	140	9.1	1.25	10.18	76115	81.16	174.50	8.4	17.5
1169.0	45.6	27.8	140	9.1	1.23	10.20	76300	80.14	174.21	8.4	17.5
1170.0	46.8	27.7	140	9.1	1.22	10.23	76479	78.11	173.91	8.4	17.5
1171.0	51.4	26.7	140	9.1	1.18	10.25	76643	71.01	173.59	8.4	17.5
1172.0	45.0	26.6	140	9.1	1.22	10.27	76829	81.16	173.31	8.4	17.5
1173.0	54.5	28.3	140	9.1	1.18	10.29	76983	66.95	172.98	8.4	17.5
1174.0	48.0	28.5	140	9.1	1.22	10.31	77158	76.08	172.69	8.4	17.5
1175.0	43.9	28.1	140	9.1	1.24	10.33	77350	83.18	172.42	8.4	17.5
1176.0	47.4	28.3	140	9.1	1.22	10.35	77527	77.10	172.13	8.4	17.5
1177.0	52.0	28.0	140	9.1	1.19	10.37	77688	70.23	171.82	8.4	17.5
1178.0	61.0	27.7	140	9.1	1.14	10.39	77826	59.85	171.48	8.4	17.5
1179.0	40.4	26.7	140	9.1	1.25	10.41	78034	90.29	171.24	8.4	17.5
1180.0	47.4	27.4	140	9.1	1.21	10.43	78211	77.10	170.96	8.4	17.5
1181.0	54.5	26.7	140	9.1	1.16	10.45	78365	66.95	170.65	8.4	17.5
1182.0	45.0	26.3	140	9.1	1.21	10.47	78552	81.16	170.38	8.4	17.5
1183.0	48.6	26.1	140	9.1	1.19	10.49	78724	75.07	170.10	8.4	17.5
1184.0	47.4	26.0	140	9.1	1.19	10.51	78902	77.10	169.82	8.4	17.5
1185.0	56.2	25.9	140	9.1	1.14	10.53	79051	64.92	169.51	8.4	17.5
1186.0	43.9	24.2	140	9.1	1.19	10.56	79242	83.18	169.26	8.4	17.5
1187.0	51.4	25.0	140	9.1	1.16	10.57	79406	71.01	168.97	8.4	17.5
1188.0	49.3	27.0	140	9.1	1.20	10.60	79576	74.05	168.69	8.4	17.5
1189.0	36.0	24.6	140	9.1	1.26	10.62	79809	101.44	168.50	8.4	17.5
1190.0	52.9	27.4	140	9.1	1.18	10.64	79968	68.98	168.21	8.4	17.5
1191.0	48.6	27.0	140	9.1	1.20	10.66	80141	75.07	167.94	8.4	17.5
1192.0	46.8	25.9	140	9.1	1.20	10.68	80320	78.11	167.68	8.4	17.5
1193.0	34.3	26.3	140	9.1	1.30	10.71	80565	106.52	167.50	8.4	17.5
1194.0	38.3	26.2	140	9.1	1.26	10.74	80785	95.36	167.29	8.4	17.5
1195.0	35.3	25.7	140	9.1	1.28	10.77	81023	103.47	167.11	8.4	17.5
1196.0	36.0	37.0	140	9.1	1.41	10.80	81256	101.44	166.92	8.4	17.5
1197.0	34.1	28.8	140	9.1	1.33	10.82	81503	107.24	166.75	8.4	17.5
1198.0	30.8	27.8	140	9.1	1.35	10.86	81776	118.69	166.62	8.4	17.5
1199.0	59.0	25.5	140	9.1	1.12	10.87	81918	61.88	166.32	8.4	17.6
1200.0	45.6	23.9	140	9.1	1.18	10.90	82102	80.14	166.08	8.4	17.6
1201.0	40.9	23.2	140	9.1	1.20	10.92	82308	89.27	165.86	8.4	17.6
1202.0	42.9	22.8	140	9.1	1.18	10.94	82504	85.21	165.63	8.4	17.6
1203.0	40.0	23.0	140	9.2	1.19	10.97	82714	91.30	165.43	8.4	17.6
1204.0	49.3	23.8	140	9.2	1.14	10.99	82884	74.05	165.17	8.4	17.6
1205.0	40.9	22.6	140	9.2	1.18	11.01	83089	89.27	164.96	8.4	17.6
1206.0	51.4	25.5	140	9.2	1.15	11.03	83253	71.01	164.70	8.4	17.6
1207.0	42.9	28.5	140	9.2	1.24	11.06	83449	85.21	164.48	8.4	17.6
1208.0	25.2	28.0	140	9.2	1.40	11.10	83782	145.07	164.43	8.4	17.6
1209.0	31.9	28.3	140	9.2	1.33	11.13	84046	114.63	164.29	8.4	17.6
1210.0	45.0	27.6	140	9.2	1.22	11.15	84233	81.16	164.06	8.4	17.6
1211.0	41.4	26.5	140	9.2	1.23	11.17	84436	88.26	163.85	8.4	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1212.0	45.0	26.6	140	9.2	1.20	11.20	84622	81.16	163.63	8.4	17.6
1213.0	42.9	26.6	140	9.2	1.22	11.22	84818	85.21	163.41	8.4	17.6
1214.0	49.3	26.8	140	9.2	1.18	11.24	84989	74.05	163.17	8.4	17.6
1215.0	47.0	32.0	140	9.2	1.25	11.26	85167	77.70	162.94	8.4	17.6
1216.0	42.4	32.8	140	9.2	1.30	11.28	85366	86.23	162.73	8.4	17.6
1217.0	33.0	29.1	140	9.2	1.33	11.31	85620	110.57	162.59	8.4	17.6
1218.0	30.5	28.9	140	9.2	1.35	11.35	85895	119.70	162.47	8.4	17.6
1219.0	35.6	28.4	140	9.2	1.30	11.38	86131	102.46	162.31	8.4	17.6
1220.0	42.9	28.3	140	9.2	1.24	11.40	86327	85.21	162.11	8.4	17.6
1221.0	43.9	28.9	140	9.2	1.24	11.42	86518	83.18	161.90	8.4	17.6
1222.0	45.0	29.1	140	9.2	1.23	11.44	86705	81.16	161.68	8.4	17.6
1223.0	39.6	29.8	140	9.2	1.28	11.47	86917	92.31	161.50	8.4	17.6
1224.0	40.9	29.5	140	9.2	1.27	11.49	87123	89.27	161.31	8.4	17.6
1225.0	45.0	26.0	140	9.2	1.20	11.52	87309	81.16	161.10	8.4	17.6
1226.0	51.4	24.2	140	9.2	1.13	11.54	87473	71.01	160.86	8.4	17.6
1227.0	32.1	23.5	140	9.2	1.26	11.57	87734	113.62	160.73	8.4	17.6
1228.0	33.3	24.3	140	9.2	1.26	11.60	87986	109.56	160.60	8.4	17.6
1229.0	35.0	27.1	140	9.2	1.29	11.62	88226	104.49	160.45	8.4	17.6
1230.0	35.0	27.6	140	9.2	1.29	11.65	88467	104.49	160.31	8.4	17.6
1231.0	39.1	27.8	140	9.2	1.26	11.68	88681	93.33	160.13	8.4	17.6
1232.0	31.9	27.2	140	9.2	1.32	11.71	88945	114.63	160.02	8.4	17.6
1233.0	43.4	27.2	140	9.2	1.22	11.73	89139	84.20	159.82	8.4	17.6
1234.0	40.4	25.8	140	9.2	1.23	11.76	89346	90.29	159.64	8.4	17.6
1235.0	45.0	25.8	140	9.2	1.19	11.78	89533	81.16	159.44	8.4	17.6
1236.0	50.0	27.5	140	9.2	1.18	11.80	89701	73.04	159.22	8.4	17.6
1237.0	41.9	25.3	140	9.2	1.21	11.82	89902	87.24	159.03	8.4	17.6
1238.0	42.4	23.0	140	9.2	1.18	11.85	90100	86.23	158.85	8.4	17.6
1239.0	47.4	27.4	140	9.2	1.20	11.87	90277	77.10	158.64	8.4	17.6
1240.0	46.8	26.9	140	9.2	1.20	11.89	90457	78.11	158.44	8.4	17.6
1241.0	42.4	27.3	140	9.2	1.23	11.91	90655	86.23	158.25	8.4	17.6
1242.0	50.0	27.2	140	9.2	1.18	11.93	90823	73.04	158.04	8.4	17.6
1243.0	48.0	28.2	140	9.2	1.20	11.95	90998	76.08	157.83	8.4	17.6
1244.0	49.3	29.8	140	9.2	1.21	11.98	91169	74.05	157.62	8.4	17.7
1245.0	32.1	27.3	140	9.2	1.31	12.01	91430	113.62	157.51	8.4	17.7
1246.0	39.6	26.1	140	9.2	1.24	12.03	91642	92.31	157.35	8.4	17.7
1247.0	37.5	27.0	140	9.2	1.26	12.06	91866	97.39	157.20	8.4	17.7
1248.0	43.4	24.2	140	9.2	1.18	12.08	92060	84.20	157.02	8.4	17.7
1249.0	45.6	25.8	140	9.2	1.19	12.10	92244	80.14	156.83	8.4	17.7
1250.0	43.9	25.0	140	9.2	1.19	12.13	92436	83.18	156.64	8.4	17.7
1251.0	39.6	26.5	140	9.2	1.24	12.15	92648	92.31	156.48	8.4	17.7
1252.0	33.3	25.6	140	9.2	1.28	12.18	92900	109.56	156.37	8.4	17.7
1253.0	33.3	26.4	140	9.2	1.29	12.21	93152	109.56	156.25	8.4	17.7
1254.0	33.0	27.0	140	9.2	1.30	12.24	93407	110.67	156.14	8.4	17.7
1255.0	34.1	24.7	140	9.2	1.26	12.27	93653	107.24	156.02	8.4	17.7
1256.0	47.4	24.6	140	9.2	1.16	12.29	93831	77.10	155.83	8.4	17.7
1257.0	42.9	24.6	140	9.2	1.19	12.32	94027	85.21	155.66	8.4	17.7
1258.0	40.9	25.6	140	9.2	1.22	12.34	94232	89.27	155.50	8.4	17.7
1259.0	37.9	25.7	140	9.2	1.24	12.37	94454	96.37	155.35	8.4	17.7
1260.0	44.4	24.7	140	9.2	1.18	12.39	94643	82.17	155.18	8.4	17.7
1261.0	39.1	24.8	140	9.2	1.22	12.41	94857	93.33	155.03	8.4	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1262.0	33.0	24.1	140	9.2	1.26	12.44	95112	110.57	154.92	8.4	17.7
1263.0	35.0	25.0	140	9.2	1.26	12.47	95352	104.34	154.80	8.4	17.7
1264.0	46.5	24.8	140	9.2	1.17	12.49	95532	78.62	154.62	8.4	17.7
1265.0	30.8	26.3	140	9.2	1.31	12.53	95805	118.69	154.53	8.4	17.7
1266.0	34.6	22.6	140	9.2	1.23	12.56	96048	105.50	154.42	8.4	17.7
1267.0	25.9	21.4	140	9.2	1.29	12.59	96372	141.01	154.38	8.4	17.7
1268.0	40.9	24.5	140	9.2	1.21	12.62	96578	89.27	154.23	8.4	17.7
1269.0	36.7	23.5	140	9.2	1.22	12.65	96806	99.42	154.10	8.4	17.7
1270.0	28.8	24.2	140	9.2	1.30	12.68	97098	126.81	154.04	8.4	17.7
1271.0	31.6	24.3	140	9.2	1.28	12.71	97364	115.65	153.95	8.4	17.7
1272.0	30.3	25.0	140	9.2	1.30	12.75	97642	120.72	153.87	8.4	17.7
1273.0	32.0	26.0	140	9.2	1.30	12.78	97904	114.13	153.77	8.4	17.7
1274.0	32.0	30.0	140	9.2	1.35	12.81	98167	114.13	153.68	8.4	17.7
1275.0	36.0	20.0	140	9.2	1.18	12.84	98400	101.44	153.56	8.4	17.7
1276.0	38.7	18.5	140	9.2	1.14	12.86	98617	94.34	153.42	8.4	17.7
1277.0	36.7	24.5	140	9.2	1.24	12.89	98846	99.42	153.30	8.4	17.7
1278.0	44.4	24.2	140	9.2	1.18	12.91	99035	82.17	153.13	8.4	17.7
1279.0	33.3	24.4	140	9.2	1.26	12.94	99287	109.56	153.03	8.4	17.7
1280.0	23.5	23.4	140	9.2	1.35	12.98	99644	155.21	153.04	8.4	17.7
1281.0	29.0	23.3	140	9.2	1.29	13.02	99933	125.79	152.97	8.4	17.7
1282.0	39.6	22.4	140	9.2	1.19	13.04	100145	92.31	152.83	8.4	17.7
1283.0	33.3	24.4	140	9.2	1.26	13.07	100397	109.56	152.74	8.4	17.7
1284.0	45.0	24.5	140	9.2	1.18	13.10	100584	81.16	152.57	8.4	17.7
1285.0	31.9	24.5	140	9.2	1.28	13.13	100848	114.63	152.49	8.4	17.7
1286.0	38.7	27.3	140	9.2	1.26	13.15	101065	94.34	152.35	8.4	17.7
1287.0	50.7	27.3	140	9.2	1.18	13.17	101230	72.03	152.17	8.4	17.7
1288.0	38.7	26.5	140	9.2	1.25	13.20	101447	94.34	152.04	8.4	17.7
1289.0	48.6	26.7	140	9.2	1.18	13.22	101620	75.07	151.87	8.4	17.7
1290.0	41.9	26.7	140	9.2	1.23	13.24	101821	87.24	151.72	8.4	17.8
1291.0	43.9	27.3	140	9.2	1.22	13.27	102012	83.18	151.57	8.4	17.8
1292.0	40.9	27.7	140	9.2	1.25	13.29	102217	89.27	151.43	8.4	17.8
1293.0	40.4	27.7	140	9.2	1.25	13.32	102425	90.29	151.29	8.4	17.8
1294.0	31.0	26.2	140	9.2	1.31	13.35	102696	117.68	151.22	8.4	17.8
1295.0	35.6	26.1	140	9.2	1.27	13.38	102931	102.46	151.11	8.4	17.8
1296.0	32.7	28.7	140	9.2	1.33	13.41	103188	111.59	151.02	8.4	17.8
1297.0	33.3	29.7	140	9.2	1.33	13.44	103440	109.56	150.93	8.4	17.8
1298.0	42.9	31.6	140	9.2	1.28	13.46	103636	85.21	150.78	8.4	17.8
1299.0	36.4	30.9	140	9.2	1.32	13.49	103867	100.43	150.67	8.4	17.8
1300.0	42.4	30.2	140	9.2	1.27	13.51	104065	86.23	150.53	8.4	17.8
1301.0	43.4	30.6	140	9.2	1.26	13.53	104259	84.20	150.38	8.4	17.8
1302.0	33.0	31.0	140	9.2	1.35	13.56	104513	110.57	150.30	8.4	17.8
1303.0	34.0	31.3	140	9.2	1.35	13.59	104761	107.53	150.20	8.4	17.8
1304.0	30.3	33.0	140	9.2	1.41	13.63	105038	120.72	150.14	8.4	17.8
1305.0	32.1	33.1	140	9.2	1.39	13.66	105300	113.62	150.06	8.4	17.8
1306.0	42.9	32.8	140	9.2	1.29	13.68	105496	85.21	149.92	8.4	17.8
1307.0	36.7	33.6	140	9.2	1.35	13.71	105724	99.42	149.81	8.4	17.8
1308.0	40.9	33.8	140	9.2	1.32	13.73	105930	89.27	149.68	8.4	17.8
1309.0	46.8	33.4	140	9.2	1.27	13.75	106109	78.11	149.52	8.4	17.8
1310.0	45.6	33.7	140	9.2	1.28	13.78	106294	80.14	149.37	8.4	17.8
1311.0	37.1	33.7	140	9.2	1.35	13.80	106520	98.40	149.26	8.4	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1312.0	28.6	33.4	140	9.2	1.43	13.84	106814	127.82	149.22	8.4	17.8
1313.0	40.9	33.9	140	9.2	1.32	13.86	107019	89.27	149.09	8.4	17.8
1314.0	33.0	32.6	140	9.2	1.37	13.89	107274	110.57	149.01	8.4	17.8
1315.0	37.1	33.1	140	9.2	1.34	13.92	107500	98.40	148.90	8.4	17.8
1316.0	37.5	26.0	140	9.2	1.25	13.95	107724	97.39	148.79	8.4	17.8
1317.0	45.0	29.7	140	9.2	1.24	13.97	107911	81.16	148.65	8.4	17.8
1318.0	36.0	27.4	140	9.2	1.28	14.00	108144	101.44	148.55	8.4	17.8
1319.0	40.0	29.6	140	9.2	1.28	14.02	108354	91.30	148.42	8.4	17.8
1320.0	43.4	31.2	140	9.2	1.27	14.04	108548	84.20	148.29	8.4	17.8
1321.0	45.0	30.0	140	9.2	1.25	14.07	108734	81.16	148.15	8.4	17.8
1322.0	51.4	28.5	140	9.2	1.19	14.09	108898	71.01	147.99	8.4	17.8
1323.0	30.8	27.9	140	9.2	1.34	14.12	109171	118.69	147.92	8.4	17.8
1324.0	37.9	29.7	140	9.2	1.29	14.14	109392	96.37	147.82	8.4	17.8
1325.0	46.2	29.2	140	9.2	1.23	14.17	109574	79.13	147.67	8.4	17.8
1326.0	36.7	29.4	140	9.2	1.30	14.19	109803	99.42	147.57	8.4	17.8
1327.0	35.0	28.9	140	9.2	1.31	14.22	110043	104.49	147.48	8.4	17.8
1328.0	36.7	30.9	140	9.2	1.32	14.25	110272	99.42	147.38	8.4	17.8
1329.0	34.3	30.7	140	9.2	1.34	14.28	110517	106.52	147.30	8.4	17.8
1330.0	42.4	30.6	140	9.2	1.27	14.30	110715	86.23	147.17	8.4	17.8
1331.0	45.0	30.0	140	9.2	1.25	14.32	110902	81.16	147.04	8.4	17.8
1332.0	48.0	28.5	140	9.2	1.21	14.35	111077	76.08	146.89	8.4	17.8
1333.0	32.7	28.5	140	9.2	1.32	14.38	111334	111.59	146.82	8.4	17.8
1334.0	37.5	29.1	140	9.2	1.29	14.40	111558	97.39	146.72	8.4	17.8
1335.0	39.1	28.6	140	9.2	1.27	14.43	111772	93.33	146.61	8.4	17.8
1336.0	37.1	28.7	140	9.2	1.29	14.45	111999	98.40	146.51	8.4	17.8
1337.0	41.4	28.0	140	9.2	1.25	14.48	112202	88.26	146.39	8.4	17.8
1338.0	36.7	28.7	140	9.2	1.29	14.51	112430	99.42	146.29	8.4	17.9
1339.0	37.9	30.0	140	9.2	1.30	14.53	112652	96.37	146.19	8.4	17.9
1340.0	47.4	30.4	140	9.2	1.23	14.55	112829	77.10	146.05	8.4	17.9
1341.0	41.9	29.2	140	9.2	1.26	14.58	113030	87.24	145.93	8.4	17.9
1342.0	37.9	26.7	140	9.2	1.26	14.60	113252	96.37	145.83	8.4	17.9
1343.0	44.4	26.4	140	9.2	1.21	14.63	113441	82.17	145.71	8.4	17.9
1344.0	31.3	28.8	140	9.2	1.34	14.66	113709	116.66	145.65	8.4	17.9
1345.0	30.0	25.6	140	9.2	1.31	14.69	113989	121.73	145.60	8.4	17.9
1346.0	34.3	27.8	140	9.2	1.30	14.72	114234	106.52	145.52	8.4	17.9
1347.0	41.9	29.2	140	9.2	1.26	14.74	114435	87.24	145.41	8.4	17.9
1348.0	37.5	30.0	140	9.2	1.30	14.77	114659	97.39	145.31	8.4	17.9
1349.0	40.9	29.3	140	9.2	1.27	14.80	114864	89.27	145.20	8.4	17.9
1350.0	42.0	30.0	140	9.2	1.27	14.82	115064	86.95	145.08	8.4	17.9
1351.0	35.0	32.0	140	9.2	1.35	14.85	115304	104.34	145.00	8.4	17.9
1352.0	43.9	32.2	140	9.2	1.28	14.87	115495	83.18	144.88	8.4	17.9
1353.0	30.8	32.1	140	9.2	1.39	14.90	115768	118.69	144.83	8.4	17.9
1354.0	36.4	32.6	140	9.2	1.34	14.93	115999	100.43	144.74	8.4	17.9
1355.0	27.3	33.0	140	9.2	1.44	14.97	116307	133.91	144.72	8.4	17.9
1356.0	41.4	32.8	140	9.2	1.30	14.99	116510	88.26	144.61	8.4	17.9
1357.0	43.9	31.6	140	9.2	1.27	15.01	116702	83.18	144.49	8.4	17.9
1358.0	45.0	33.3	140	9.2	1.28	15.04	116888	81.16	144.37	8.4	17.9
1359.0	39.1	33.3	140	9.2	1.33	15.06	117103	93.33	144.27	8.4	17.9
1360.0	38.3	32.5	140	9.2	1.33	15.09	117322	95.36	144.17	8.4	17.9
1361.0	42.9	27.2	140	9.2	1.23	15.11	117518	85.21	144.06	8.4	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1362.0	42.4	27.6	140	9.2	1.24	15.14	117717	86.23	143.94	8.4	17.9
1363.0	40.9	27.4	140	9.2	1.24	15.16	117922	89.27	143.84	8.4	17.9
1364.0	29.3	29.9	140	9.2	1.38	15.19	118209	124.78	143.80	8.4	17.9
1365.0	35.3	31.3	140	9.2	1.34	15.22	118447	103.47	143.72	8.4	17.9
1366.0	26.5	30.5	140	9.2	1.42	15.26	118764	137.96	143.71	8.4	17.9
1367.0	24.3	31.2	140	9.2	1.45	15.30	119110	150.14	143.73	8.4	17.9
1368.0	27.5	31.5	140	9.2	1.42	15.34	119415	132.89	143.70	8.4	17.9
1369.0	24.2	30.7	140	9.2	1.45	15.38	119763	151.15	143.72	8.4	17.9
1370.0	28.0	32.0	140	9.2	1.42	15.41	120063	130.43	143.69	8.4	17.9
1371.0	35.2	32.8	140	9.2	1.36	15.44	120302	103.70	143.62	8.4	17.9
1372.0	27.7	32.1	140	9.2	1.42	15.48	120605	131.88	143.59	8.4	17.9
1373.0	26.9	33.1	140	9.2	1.44	15.52	120918	135.94	143.58	8.4	17.9
1374.0	34.6	32.6	140	9.2	1.36	15.55	121160	105.50	143.51	8.4	17.9
1375.0	36.0	33.0	140	9.2	1.35	15.57	121394	101.44	143.43	8.4	17.9
1376.0	33.0	31.6	140	9.2	1.36	15.60	121648	110.57	143.37	8.4	17.9
1377.0	37.5	32.8	140	9.2	1.34	15.63	121872	97.39	143.28	8.4	17.9
1378.0	26.5	31.6	140	9.2	1.43	15.67	122189	137.96	143.27	8.4	17.9
1379.0	27.0	34.0	140	9.2	1.45	15.71	122500	135.26	143.26	8.4	17.9
1380.0	28.8	36.4	140	9.2	1.46	15.74	122792	126.81	143.22	8.4	17.9
1381.0	25.0	34.7	140	9.2	1.49	15.78	123128	146.08	143.23	8.4	17.9
1382.0	29.3	32.4	140	9.2	1.41	15.81	123415	124.78	143.20	8.4	17.9
1383.0	37.1	35.7	140	9.2	1.37	15.84	123641	98.40	143.11	8.4	17.9
1384.0	33.3	33.8	140	9.2	1.38	15.87	123893	109.56	143.05	8.4	17.9
1385.0	33.0	33.0	140	9.2	1.38	15.90	124148	110.67	142.99	8.4	17.9
1386.0	34.0	33.6	140	9.2	1.38	15.93	124395	107.53	142.92	8.4	17.9
1387.0	28.8	34.4	140	9.2	1.44	15.97	124687	126.81	142.89	8.4	18.0
1388.0	27.9	33.7	140	9.2	1.44	16.00	124988	130.86	142.87	8.4	18.0
1389.0	32.0	33.0	140	9.2	1.39	16.03	125250	114.13	142.82	8.4	18.0
1390.0	35.3	34.2	140	9.2	1.37	16.06	125488	103.47	142.75	8.4	18.0
1391.0	30.5	33.1	140	9.2	1.40	16.09	125764	119.70	142.70	8.4	18.0
1392.0	26.9	32.9	140	9.2	1.44	16.13	126076	135.94	142.69	8.4	18.0
1393.0	23.7	31.7	140	9.2	1.47	16.17	126431	154.20	142.71	8.4	18.0
1394.0	31.0	32.4	140	9.2	1.39	16.21	126702	117.68	142.67	8.4	18.0
1395.0	21.6	32.5	140	9.2	1.51	16.25	127091	169.41	142.72	8.4	18.0
1396.0	31.0	30.7	140	9.2	1.37	16.28	127362	117.68	142.67	8.4	18.0
1397.0	40.0	30.8	140	9.2	1.29	16.31	127572	91.30	142.58	8.4	18.0
1398.0	31.6	31.4	140	9.2	1.37	16.34	127838	115.65	142.53	8.4	18.0
1399.0	25.0	32.1	140	9.2	1.45	16.38	128174	146.08	142.53	8.4	18.0
1400.0	33.3	33.5	140	9.2	1.38	16.41	128426	109.56	142.48	8.4	18.0
1401.0	48.6	32.9	140	9.2	1.25	16.43	128599	75.07	142.35	8.4	18.0
1402.0	38.7	32.6	140	9.2	1.32	16.46	128816	94.34	142.27	8.4	18.0
1403.0	42.4	32.1	140	9.2	1.29	16.48	129014	86.23	142.17	8.4	18.0
1404.0	50.7	31.4	140	9.2	1.22	16.50	129180	72.03	142.04	8.4	18.0
1405.0	32.7	32.1	140	9.2	1.37	16.53	129436	111.59	141.99	8.4	18.0
1406.0	33.3	33.4	140	9.2	1.38	16.56	129688	109.56	141.93	8.4	18.0
1407.0	42.9	32.7	140	9.2	1.29	16.58	129884	85.21	141.83	8.4	18.0
1408.0	43.0	32.0	140	9.2	1.28	16.61	130080	84.93	141.73	8.4	18.0
1409.0	45.0	30.9	140	9.2	1.26	16.63	130267	81.16	141.62	8.4	18.0
1410.0	46.2	31.1	140	9.2	1.25	16.65	130449	79.13	141.51	8.4	18.0
1411.0	49.3	29.6	140	9.2	1.21	16.67	130619	74.05	141.39	8.4	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1412.0	38.3	27.4	140	9.2	1.26	16.70	130838	95.36	141.31	8.4	18.0
1413.0	54.5	32.8	140	9.2	1.22	16.72	130992	66.95	141.18	8.4	18.0
1414.0	31.0	31.7	140	9.2	1.38	16.75	131263	117.68	141.13	8.4	18.0
1415.0	40.9	32.2	140	9.2	1.30	16.77	131468	89.27	141.04	8.4	18.0
1416.0	43.4	32.4	140	9.2	1.29	16.80	131662	84.20	140.94	8.4	18.0
1417.0	37.1	31.1	140	9.2	1.32	16.82	131888	98.40	140.87	8.4	18.0
1418.0	35.0	29.3	140	9.2	1.31	16.85	132129	104.49	140.81	8.4	18.0
1419.0	23.0	30.3	140	9.2	1.46	16.89	132494	158.93	140.84	8.4	18.0
1420.0	21.3	31.1	140	9.2	1.49	16.94	132888	171.44	140.89	8.4	18.0
1421.0	26.9	34.1	140	9.2	1.46	16.98	133201	135.94	140.88	8.4	18.0
1422.0	44.4	32.6	140	9.2	1.28	17.00	133390	82.17	140.78	8.4	18.0
1423.0	65.5	33.5	140	9.2	1.17	17.02	133518	55.79	140.63	8.4	18.0
1424.0	62.1	34.4	140	9.2	1.19	17.03	133654	58.84	140.49	8.4	18.0
1425.0	53.7	34.3	140	9.2	1.24	17.05	133810	67.97	140.37	8.4	18.0
1426.0	75.0	34.3	140	9.2	1.13	17.06	133922	48.69	140.21	8.4	18.0
1427.0	78.0	35.0	140	9.2	1.13	17.08	134030	46.82	140.05	8.4	18.0
1427.5	82.0	34.5	140	9.2	1.10	17.08	134081	44.54	139.97	8.4	18.0

BIT NUMBER	2	IADC CODE	4	INTERVAL	1427.5- 1436.0
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	8.5
TOTAL HOURS	1.23	TOTAL TURNS	9672	CONDITION	TO B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1427.8	6.3	9.9	140	9.2	1.48	0.05	399	578	55358	8.5	18.0
1428.0	6.8	13.4	140	9.2	1.57	0.08	646	538	33430	8.5	18.0
1428.2	7.7	14.2	140	9.2	1.55	0.10	863	472	24013	8.5	18.0
1428.4	8.9	14.0	135	9.2	1.50	0.13	1046	411	18768	8.5	18.0
1428.6	9.4	14.0	130	9.2	1.48	0.15	1213	391	15427	8.5	18.0
1428.8	12.6	14.0	130	9.2	1.40	0.16	1337	289	13098	8.5	18.0
1429.0	10.9	14.3	130	9.2	1.44	0.18	1480	335	11396	8.5	18.0
1429.2	6.2	20.0	130	9.2	1.74	0.21	1731	588	10125	8.5	18.0
1429.4	6.4	18.7	130	9.2	1.70	0.24	1976	573	9119	8.5	18.0
1429.6	8.4	18.6	130	9.2	1.62	0.27	2162	436	8292	8.5	18.0
1429.8	5.7	18.9	130	9.2	1.74	0.30	2435	639	7627	8.5	18.0
1430.0	8.2	19.0	130	9.2	1.64	0.33	2626	446	7052	8.5	18.0
1430.2	6.6	18.8	130	9.2	1.69	0.36	2862	553	6571	8.5	18.0
1430.4	9.0	18.2	130	9.2	1.59	0.38	3035	406	6146	8.5	18.0
1430.6	8.5	17.4	130	9.2	1.59	0.40	3219	431	5777	8.5	18.0
1430.8	10.9	17.8	130	9.2	1.53	0.42	3362	335	5447	8.5	18.0
1431.0	8.1	17.8	130	9.2	1.61	0.45	3555	451	5162	8.5	18.0
1431.2	9.1	17.1	130	9.2	1.56	0.47	3726	401	4904	8.5	18.0
1431.4	10.3	16.0	130	9.2	1.50	0.49	3878	355	4671	8.5	18.0
1431.6	7.3	15.2	130	9.2	1.57	0.52	4090	497	4468	8.5	18.0
1431.8	5.4	16.8	130	9.2	1.70	0.55	4381	680	4291	8.5	18.0
1432.0	6.4	15.6	130	9.2	1.62	0.58	4623	568	4126	8.5	18.0
1432.2	5.3	14.8	130	9.2	1.65	0.62	4918	690	3980	8.5	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1432.4	8.1	16.4	130	9.2	1.58	0.65	5111	451	3836	8.5	18.0
1432.6	6.2	16.8	130	9.2	1.66	0.68	5364	593	3708	8.5	18.0
1432.8	11.1	16.8	130	9.2	1.50	0.70	5505	330	3581	8.5	18.0
1433.0	5.5	17.0	130	9.2	1.70	0.73	5787	659	3475	8.5	18.0
1433.2	7.7	17.2	130	9.2	1.61	0.76	5991	477	3370	8.5	18.0
1433.4	8.6	16.7	130	9.2	1.57	0.78	6173	426	3270	8.5	18.0
1433.6	13.6	17.6	130	9.2	1.46	0.80	6287	269	3171	8.5	18.0
1433.8	8.4	17.0	130	9.2	1.58	0.82	6474	436	3085	8.5	18.0
1434.0	15.0	18.1	130	9.2	1.44	0.83	6578	243	2997	8.5	18.0
1434.2	8.9	18.1	130	9.2	1.59	0.86	6753	411	2920	8.5	18.0
1434.4	9.7	17.3	130	9.2	1.55	0.88	6913	375	2846	8.5	18.0
1434.6	6.3	17.0	130	9.2	1.66	0.91	7160	578	2782	8.5	18.0
1434.8	5.0	16.3	130	9.2	1.71	0.95	7475	735	2726	8.5	18.0
1435.0	7.8	16.8	130	9.2	1.60	0.98	7674	467	2666	8.5	18.0
1435.2	6.2	16.4	130	9.2	1.65	1.01	7927	593	2612	8.5	18.0
1435.4	3.8	15.9	130	9.2	1.78	1.06	8343	974	2571	8.5	18.0
1435.6	3.9	16.9	130	9.2	1.80	1.11	8749	949	2531	8.5	18.0
1435.8	2.8	17.0	130	9.2	1.89	1.18	9297	1283	2501	8.5	18.0
1436.0	4.2	17.6	130	9.2	1.79	1.23	9672	877	2462	8.5	18.0

BIT NUMBER	2	IADC CODE	4	INTERVAL	1436.0- 1445.5
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
CDST	0.00	TRIP TIME	4.5	BIT RUN	9.5
TOTAL HOURS	1.08	TOTAL TURNS	8392	CONDITION	TO B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1436.4	3.5	21.4	130	9.2	1.94	0.11	893	1045	42130	8.5	18.0
1436.6	3.7	21.1	130	9.2	1.92	0.17	1311	979	28413	8.5	18.0
1436.8	6.2	20.8	130	9.2	1.76	0.20	1562	588	21457	8.5	18.0
1437.0	5.3	20.7	130	9.2	1.80	0.24	1859	695	17304	8.5	18.0
1437.2	21.2	21.7	130	9.2	1.41	0.25	1933	172	14449	8.5	18.0
1437.4	15.3	21.6	130	9.2	1.51	0.26	2034	238	12419	8.5	18.0
1437.6	12.9	21.4	130	9.2	1.55	0.28	2156	284	10902	8.5	18.0
1437.8	6.5	21.5	130	9.2	1.76	0.31	2394	558	9753	8.5	18.0
1438.0	9.2	20.3	130	9.2	1.63	0.33	2563	396	8817	8.5	18.0
1438.2	7.9	18.3	130	9.2	1.63	0.35	2760	462	8057	8.5	18.0
1438.4	13.1	18.2	130	9.2	1.48	0.37	2879	279	7409	8.5	18.0
1438.6	13.3	17.7	130	9.2	1.47	0.38	2996	274	6860	8.5	18.0
1438.8	36.0	16.2	130	9.2	1.16	0.39	3040	101	6378	8.5	18.0
1439.0	17.6	15.8	130	9.3	1.33	0.40	3129	208	5966	8.5	18.0
1439.2	15.0	15.8	130	9.3	1.37	0.41	3233	243	5609	8.5	18.0
1439.4	10.9	16.1	130	9.3	1.46	0.43	3376	335	5298	8.5	18.0
1439.6	9.6	15.8	130	9.3	1.49	0.45	3538	380	5025	8.5	18.0
1439.8	8.4	15.6	130	9.3	1.52	0.48	3724	436	4784	8.5	18.0
1440.0	12.4	16.1	130	9.4	1.43	0.49	3850	294	4559	8.5	18.0
1440.2	19.5	15.5	130	9.4	1.29	0.50	3930	188	4351	8.5	18.0
1440.4	13.6	14.8	130	9.4	1.38	0.52	4045	269	4165	8.5	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1440.6	10.3	15.5	130	9.4	1.47	0.54	4197	355	4000	8.5	18.0
1440.8	10.9	17.0	130	9.3	1.48	0.56	4340	335	3847	8.5	18.0
1441.0	9.5	16.9	130	9.4	1.52	0.58	4504	385	3709	8.5	18.0
1441.2	9.9	15.8	130	9.3	1.48	0.60	4663	370	3580	8.5	18.0
1441.4	12.9	15.1	130	9.4	1.40	0.61	4784	284	3458	8.5	18.0
1441.6	8.2	14.6	130	9.3	1.51	0.64	4975	446	3351	8.5	18.1
1441.8	8.7	14.0	130	9.4	1.47	0.66	5154	421	3250	8.5	18.1
1442.0	11.8	16.6	130	9.4	1.45	0.68	5287	309	3152	8.5	18.1
1442.2	9.0	16.4	130	9.4	1.52	0.70	5460	406	3063	8.5	18.1
1442.4	7.1	15.6	130	9.3	1.57	0.73	5681	517	2983	8.5	18.1
1442.6	19.5	15.8	130	9.4	1.30	0.74	5761	188	2899	8.5	18.1
1442.8	12.4	16.9	130	9.4	1.45	0.75	5887	294	2822	8.5	18.1
1443.0	13.3	16.1	130	9.4	1.41	0.77	6004	274	2749	8.5	18.1
1443.2	7.1	15.5	130	9.4	1.57	0.80	6223	512	2687	8.5	18.1
1443.4	11.4	15.0	130	9.4	1.43	0.82	6359	320	2623	8.5	18.1
1443.6	10.7	14.5	130	9.4	1.43	0.83	6504	340	2563	8.5	18.1
1443.8	10.4	16.2	130	9.4	1.48	0.85	6654	350	2506	8.5	18.1
1444.0	9.2	15.5	130	9.4	1.50	0.87	6823	396	2454	8.5	18.1
1444.2	9.2	15.2	130	9.4	1.49	0.90	6992	396	2403	8.5	18.1
1444.4	10.4	14.7	130	9.4	1.44	0.92	7141	350	2354	8.5	18.1
1444.6	8.7	14.0	130	9.4	1.47	0.94	7321	421	2310	8.5	18.1
1444.8	6.5	13.5	130	9.4	1.53	0.97	7559	558	2270	8.5	18.1
1445.0	7.0	14.0	130	9.4	1.52	1.00	7782	522	2231	8.5	18.1
1445.2	7.1	13.8	130	9.4	1.51	1.03	8002	514	2194	8.5	18.1
1445.5	6.0	14.0	130	9.4	1.56	1.08	8392	609	2143	8.5	18.1

BIT NUMBER	2	IADC CODE	4	INTERVAL	1445.5- 1455.4
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.9
TOTAL HOURS	1.83	TOTAL TURNS	14268	CONDITION	T0 B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1445.8	60.0	8.5	130	9.4	0.86	0.01	39	61	54841	8.5	18.1
1446.0	13.3	10.2	130	9.4	1.26	0.02	156	274	33014	8.5	18.1
1446.2	10.0	10.1	130	9.4	1.33	0.04	312	365	23686	8.5	18.1
1446.4	12.0	8.6	130	9.4	1.24	0.06	442	304	18490	8.5	18.1
1446.6	12.2	9.6	130	9.3	1.27	0.07	570	299	15183	8.5	18.1
1446.8	13.8	9.6	130	9.3	1.24	0.09	682	264	12887	8.5	18.1
1447.0	12.4	10.2	130	9.4	1.28	0.10	808	294	11208	8.5	18.1
1447.2	11.1	10.2	130	9.4	1.31	0.12	949	330	9928	8.5	18.1
1447.4	8.2	10.6	130	9.3	1.39	0.15	1140	446	8930	8.5	18.1
1447.6	7.6	10.9	130	9.3	1.42	0.17	1346	482	8126	8.5	18.1
1447.8	8.2	10.4	130	9.3	1.39	0.20	1536	446	7458	8.5	18.1
1448.0	7.2	11.1	130	9.3	1.44	0.22	1753	507	6902	8.5	18.1
1448.2	7.0	11.2	130	9.4	1.45	0.25	1976	522	6429	8.5	18.1
1448.4	6.3	11.3	130	9.4	1.48	0.29	2225	583	6026	8.5	18.1
1448.6	6.7	11.1	130	9.4	1.46	0.31	2457	543	5672	8.5	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1448.8	5.2	10.6	130	9.4	1.51	0.35	2758	705	5371	8.5	18.1
1449.0	9.5	10.2	130	9.4	1.35	0.37	2923	385	5086	8.5	18.1
1449.2	6.2	10.5	130	9.4	1.46	0.41	3176	593	4844	8.5	18.1
1449.4	5.6	10.6	130	9.4	1.49	0.44	3454	649	4628	8.5	18.1
1449.6	5.8	10.8	130	9.4	1.48	0.48	3722	629	4433	8.5	18.1
1449.8	5.1	11.4	130	9.4	1.54	0.52	4030	720	4261	8.5	18.1
1450.0	6.5	11.7	130	9.4	1.48	0.55	4268	558	4096	8.5	18.1
1450.2	9.7	11.7	130	9.4	1.38	0.57	4429	375	3938	8.5	18.1
1450.4	4.9	11.3	130	9.4	1.54	0.61	4749	751	3808	8.5	18.1
1450.6	5.1	11.5	130	9.4	1.54	0.65	5057	720	3687	8.5	18.1
1450.8	3.7	11.7	130	9.3	1.63	0.70	5477	984	3585	8.5	18.1
1451.0	3.5	11.7	130	9.4	1.64	0.76	5922	1040	3492	8.5	18.1
1451.2	4.6	11.8	130	9.4	1.58	0.80	6264	801	3398	8.5	18.1
1451.4	4.6	12.0	130	9.4	1.58	0.85	6606	801	3310	8.5	18.1
1451.6	4.4	13.3	130	9.3	1.63	0.89	6964	837	3229	8.5	18.1
1451.8	2.9	13.4	130	9.4	1.74	0.96	7503	1263	3166	8.5	18.1
1452.0	3.0	14.2	130	9.4	1.76	1.03	8025	1222	3106	8.5	18.1
1452.2	2.1	16.2	130	9.4	1.92	1.12	8769	1740	3066	8.5	18.1
1452.4	4.0	15.3	130	9.3	1.72	1.17	9161	918	3003	8.5	18.1
1452.6	3.3	15.2	130	9.4	1.77	1.24	9640	1121	2950	8.5	18.1
1452.8	3.6	15.2	130	9.3	1.74	1.29	10075	1020	2897	8.5	18.1
1453.0	3.9	14.9	130	9.3	1.71	1.34	10472	928	2845	8.5	18.1
1453.2	5.6	13.5	130	9.4	1.57	1.38	10749	649	2788	8.5	18.1
1453.4	5.5	13.0	130	9.4	1.57	1.41	11035	670	2734	8.5	18.1
1453.6	4.6	13.4	130	9.4	1.62	1.46	11375	796	2686	8.5	18.1
1453.8	4.0	13.6	130	9.4	1.66	1.51	11761	903	2643	8.5	18.1
1454.0	5.2	13.2	130	9.4	1.58	1.55	12061	702	2598	8.5	18.1
1454.2	4.6	13.5	130	9.4	1.62	1.59	12400	794	2556	8.5	18.1
1454.4	6.2	13.4	130	9.4	1.54	1.62	12651	589	2512	8.5	18.1
1454.6	5.2	13.8	130	9.4	1.59	1.66	12951	702	2472	8.5	18.1
1454.8	4.3	13.0	130	9.4	1.62	1.71	13314	849	2437	8.5	18.1
1455.0	4.9	13.9	130	9.4	1.61	1.75	13633	745	2402	8.5	18.1
1455.2	5.1	13.5	130	9.4	1.59	1.79	13938	716	2367	8.5	18.1
1455.4	4.8	13.4	130	9.4	1.60	1.83	14263	761	2335	8.5	18.1

BIT NUMBER	3	IADC CODE	517	INTERVAL	1455.4- 1813.2
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	5.5	BIT RUN	357.8
TOTAL HOURS	24.35	TOTAL TURNS	102063	CONDITION	T2 B3 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1456.0	11.0	35.0	65	9.4	1.48	0.05	213	332	48009	8.5	18.1
1457.0	11.4	38.8	64	9.5	1.50	0.14	551	321	18204	8.5	18.1
1458.0	10.9	39.1	65	9.5	1.52	0.23	908	334	11331	8.5	18.1
1459.0	14.1	39.4	65	9.5	1.44	0.30	1184	259	8255	8.5	18.1
1460.0	27.9	39.7	65	9.5	1.22	0.34	1324	131	6489	8.5	18.1
1461.0	51.4	38.2	65	9.5	1.01	0.36	1399	71	5343	8.5	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1462.0	15.2	38.3	65	9.5	1.41	0.43	1656	240	4570	8.5	18.1
1463.0	13.7	39.2	65	9.5	1.45	0.50	1940	266	4004	8.5	18.1
1464.0	12.2	41.0	65	9.5	1.51	0.58	2258	298	3573	8.5	18.1
1465.0	19.6	40.4	65	9.5	1.35	0.63	2458	187	3220	8.5	18.1
1466.0	33.3	38.8	65	9.5	1.16	0.66	2575	110	2927	8.5	18.1
1467.0	26.1	39.6	65	9.5	1.24	0.70	2724	140	2686	8.5	18.1
1468.0	53.7	40.4	65	9.5	1.01	0.72	2797	68	2479	8.5	18.1
1469.0	85.7	35.8	65	9.4	0.83	0.73	2842	43	2299	8.5	18.1
1470.0	16.7	44.7	65	9.5	1.44	0.79	3075	218	2157	8.5	18.1
1471.0	18.3	41.2	65	9.5	1.38	0.84	3289	200	2031	8.5	18.1
1472.0	19.7	38.9	65	9.5	1.33	0.90	3487	186	1920	8.5	18.1
1473.0	37.9	39.0	65	9.5	1.12	0.92	3590	96	1817	8.5	18.1
1474.0	90.0	39.4	65	9.5	0.84	0.93	3633	41	1721	8.5	18.1
1475.0	72.0	36.6	65	9.4	0.89	0.95	3687	51	1636	8.5	18.1
1476.0	17.3	36.2	65	9.5	1.34	1.00	3913	211	1567	8.5	18.1
1477.0	8.1	37.7	65	9.5	1.60	1.13	4395	451	1515	8.5	18.1
1478.0	9.7	38.0	65	9.5	1.55	1.23	4799	378	1465	8.5	18.1
1479.0	19.7	38.2	65	9.5	1.32	1.28	4997	186	1411	8.5	18.1
1480.0	50.0	35.7	65	9.5	1.00	1.30	5075	73	1356	8.5	18.1
1481.0	120.0	36.2	65	9.5	0.73	1.31	5108	30	1304	8.5	18.1
1482.0	171.4	35.8	65	9.5	0.61	1.32	5130	21	1256	8.5	18.1
1486.0	60.0	36.4	65	9.5	0.95	1.38	5390	61	1100	8.5	18.1
1487.0	37.9	37.5	65	9.5	1.10	1.41	5493	96	1068	8.5	18.1
1488.0	24.7	38.7	65	9.4	1.25	1.45	5651	148	1040	8.5	18.1
1489.0	40.0	37.5	65	9.5	1.09	1.48	5749	91	1012	8.5	18.1
1490.0	40.4	38.2	65	9.5	1.09	1.50	5845	90.29	985.09	8.5	18.1
1491.0	40.4	37.7	65	9.5	1.08	1.52	5942	90.29	959.95	8.5	18.1
1492.0	39.6	39.9	65	9.4	1.11	1.55	6040	92.31	936.25	8.5	18.1
1493.0	16.4	38.6	65	9.5	1.38	1.61	6278	222.16	917.26	8.5	18.1
1494.0	18.0	39.0	65	9.5	1.35	1.67	6494	202.89	898.75	8.5	18.1
1495.0	10.3	37.3	65	9.5	1.52	1.76	6873	355.06	885.02	8.5	18.2
1496.0	17.0	37.3	65	9.5	1.36	1.82	7103	215.06	868.52	8.5	18.2
1497.0	12.5	37.4	65	9.5	1.46	1.90	7414	291.15	854.64	8.5	18.2
1498.0	16.8	36.8	65	9.4	1.36	1.96	7646	217.09	839.67	8.5	18.2
1499.0	12.5	37.3	65	9.5	1.46	2.04	7959	293.17	827.14	8.5	18.2
1500.0	7.8	36.3	65	9.4	1.60	2.17	8462	470.70	819.15	8.5	18.2
1501.0	9.3	36.8	65	9.4	1.55	2.28	8883	394.62	809.84	8.5	18.2
1502.0	18.7	36.6	65	9.5	1.32	2.33	9092	195.79	796.66	8.5	18.2
1503.0	15.4	36.8	65	9.5	1.38	2.40	9346	237.38	784.91	8.5	18.2
1504.0	19.0	37.0	65	9.4	1.33	2.45	9551	192.21	772.71	8.5	18.2
1505.0	10.8	33.0	65	9.4	1.46	2.54	9911	337.30	763.94	8.5	18.2
1506.0	12.4	32.5	65	9.4	1.42	2.62	10225	294.19	754.65	8.5	18.2
1507.0	10.6	37.5	65	9.4	1.53	2.72	10595	345.93	746.73	8.5	18.2
1508.0	9.9	35.4	65	9.4	1.52	2.82	10987	367.23	739.52	8.5	18.2
1509.0	8.4	36.1	65	9.4	1.58	2.94	11449	433.17	733.80	8.5	18.2
1510.0	24.7	34.1	65	9.4	1.22	2.98	11608	148.11	723.07	8.5	18.2
1511.0	17.6	33.2	65	9.4	1.32	3.03	11830	207.96	713.81	8.5	18.2
1512.0	9.4	33.5	65	9.4	1.51	3.14	12242	386.50	708.03	8.5	18.2
1513.0	7.0	35.3	65	9.3	1.63	3.28	12801	523.45	704.82	8.5	18.2
1514.0	9.0	35.0	65	9.4	1.54	3.39	13235	405.78	699.72	8.5	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1515.0	11.8	36.6	65	9.4	1.48	3.48	13565	308.84	693.16	8.5	18.2
1516.0	9.1	42.0	65	9.3	1.63	3.59	13991	399.69	688.32	8.5	18.2
1517.0	14.6	41.1	65	9.3	1.46	3.66	14258	249.55	681.20	8.5	18.2
1518.0	33.3	39.5	65	9.4	1.18	3.69	14375	109.56	672.06	8.5	18.2
1519.0	4.3	41.7	65	9.4	1.88	3.92	15281	848.08	674.83	8.5	18.2
1520.0	14.0	38.0	65	9.4	1.44	3.99	15559	260.86	668.42	8.5	18.2
1521.0	12.0	40.0	65	9.4	1.51	4.07	15884	304.33	662.87	8.5	18.2
1522.0	18.0	42.0	65	9.4	1.40	4.13	16101	202.89	655.97	8.5	18.2
1523.0	9.0	36.8	65	9.4	1.56	4.24	16534	405.78	652.26	8.5	18.2
1524.0	9.5	37.2	65	9.4	1.56	4.35	16946	385.49	648.38	8.5	18.2
1525.0	17.7	41.1	65	9.4	1.40	4.40	17166	205.93	642.02	8.5	18.2
1526.0	18.6	41.1	65	9.4	1.39	4.46	17376	196.80	635.71	8.5	18.2
1527.0	48.0	38.2	65	9.3	1.04	4.48	17457	76.08	627.90	8.5	18.2
1528.0	12.3	40.9	65	9.4	1.52	4.56	17775	297.23	623.34	8.5	18.2
1529.0	24.2	41.0	65	9.3	1.30	4.60	17936	151.15	616.93	8.5	18.2
1530.0	61.0	37.6	65	9.3	0.96	4.62	18000	59.85	609.46	8.5	18.2
1531.0	10.5	39.3	65	9.4	1.55	4.71	18373	348.97	606.01	8.5	18.2
1532.0	15.1	41.4	65	9.4	1.46	4.78	18632	242.45	601.27	8.5	18.2
1539.0	7.1	43.4	65	9.4	1.73	5.76	22461	512.29	593.82	8.5	18.2
1540.0	6.4	43.3	65	9.4	1.77	5.92	23068	568.09	593.51	8.5	18.2
1541.0	7.5	44.2	65	9.4	1.73	6.05	23587	485.92	592.26	8.5	18.2
1542.0	11.8	45.4	65	9.4	1.59	6.13	23918	310.42	589.00	8.5	18.2
1543.0	32.4	43.8	65	9.3	1.22	6.16	24038	112.60	583.56	8.5	18.2
1544.0	18.1	45.1	65	9.3	1.44	6.22	24254	201.87	579.26	8.5	18.2
1545.0	6.0	44.5	65	9.4	1.80	6.39	24902	606.64	579.56	8.5	18.2
1546.0	120.0	36.6	65	9.4	0.74	6.39	24934	30.43	573.50	8.5	18.2
1547.0	75.0	42.1	65	9.3	0.93	6.41	24986	48.69	567.77	8.5	18.2
1548.0	80.0	44.3	65	9.4	0.92	6.42	25035	45.65	562.13	8.5	18.2
1549.0	45.0	45.0	65	9.4	1.12	6.44	25122	81.16	556.99	8.5	18.3
1550.0	36.0	45.0	65	9.4	1.19	6.47	25230	101.44	552.18	8.5	18.3
1551.0	58.0	46.0	65	9.4	1.04	6.49	25297	62.97	547.06	8.5	18.3
1552.0	45.0	45.0	65	9.4	1.12	6.51	25384	81.16	542.24	8.5	18.3
1553.0	40.0	47.3	65	9.4	1.18	6.53	25482	91.30	537.62	8.5	18.3
1554.0	30.0	44.9	65	9.3	1.26	6.57	25612	121.73	533.40	8.5	18.3
1555.0	12.7	45.3	65	9.4	1.56	6.65	25919	288.10	530.94	8.5	18.3
1556.0	22.9	44.5	65	9.4	1.35	6.69	26089	159.27	527.24	8.5	18.3
1557.0	11.9	44.2	65	9.4	1.57	6.77	26418	307.38	525.08	8.5	18.3
1558.0	11.9	44.7	65	9.4	1.57	6.86	26746	307.38	522.96	8.5	18.3
1559.0	12.9	44.4	65	9.4	1.54	6.94	27049	284.04	520.65	8.5	18.3
1560.0	21.3	43.9	65	9.4	1.37	6.98	27232	171.44	517.31	8.5	18.3
1561.0	15.3	44.4	65	9.4	1.49	7.05	27488	239.41	514.68	8.5	18.3
1562.0	16.0	44.0	65	9.4	1.46	7.11	27732	228.25	511.99	8.5	18.3
1563.0	6.3	43.2	65	9.3	1.77	7.27	28351	580.26	512.63	8.5	18.3
1564.0	6.7	44.3	65	9.4	1.77	7.42	28935	546.79	512.94	8.5	18.3
1565.0	7.9	43.9	65	9.3	1.70	7.55	29426	459.54	512.45	8.5	18.3
1566.0	9.8	43.3	65	9.4	1.62	7.65	29822	371.29	511.18	8.5	18.3
1567.0	14.5	43.1	65	9.4	1.49	7.72	30092	252.60	508.86	8.5	18.3
1568.0	9.3	44.3	65	9.4	1.66	7.83	30514	394.62	507.85	8.5	18.3
1569.0	30.3	43.4	65	9.4	1.24	7.86	30643	120.72	504.44	8.5	18.3
1570.0	47.4	45.1	65	9.4	1.11	7.88	30725	77.10	500.71	8.5	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1571.0	39.6	43.2	65	9.3	1.15	7.90	30823	92.31	497.18	8.5	18.3
1572.0	53.7	42.0	65	9.4	1.04	7.92	30896	67.97	493.50	8.5	18.3
1573.0	8.2	38.8	65	9.4	1.63	8.05	31373	446.36	493.10	8.5	18.3
1574.0	26.7	38.6	65	9.4	1.24	8.08	31519	136.95	490.09	8.5	18.3
1575.0	28.0	39.0	65	9.4	1.22	8.12	31658	130.43	487.09	8.5	18.3
1576.0	26.0	38.0	65	9.4	1.24	8.16	31808	140.46	484.21	8.5	18.3
1577.0	16.4	39.1	68	9.4	1.42	8.22	32058	223.18	482.06	8.5	18.3
1578.0	163.6	35.0	90	9.4	0.73	8.22	32091	22.32	478.31	8.5	18.3
1579.0	15.9	38.0	90	9.3	1.51	8.29	32430	229.26	476.30	8.5	18.3
1580.0	16.0	38.0	90	9.4	1.50	8.35	32767	228.25	474.31	8.5	18.3
1581.0	20.0	35.0	90	9.4	1.39	8.40	33037	182.60	471.99	8.5	18.3
1582.0	30.0	30.4	90	9.3	1.22	8.43	33217	121.73	469.22	8.5	18.3
1583.0	17.1	41.8	90	9.4	1.53	8.49	33534	214.05	467.22	8.5	18.3
1584.0	31.6	41.6	90	9.4	1.32	8.52	33705	115.65	464.49	8.5	18.3
1585.0	23.7	41.3	90	9.4	1.41	8.57	33933	154.20	462.09	8.5	18.3
1586.0	105.9	40.9	90	9.4	0.91	8.57	33984	34.49	458.82	8.5	18.3
1587.0	24.5	42.4	90	9.3	1.41	8.62	34204	149.12	456.46	8.5	18.3
1588.0	15.7	43.0	90	9.4	1.57	8.68	34548	232.31	454.77	8.5	18.3
1589.0	10.7	42.7	90	9.4	1.70	8.77	35052	340.85	453.92	8.5	18.3
1590.0	10.2	42.4	90	9.4	1.71	8.87	35581	358.10	453.21	8.5	18.3
1591.0	37.9	42.4	90	9.3	1.27	8.90	35724	96.37	450.58	8.5	18.3
1592.0	9.7	40.0	90	9.4	1.70	9.00	36282	377.37	450.04	8.5	18.3
1593.0	40.0	45.3	90	9.4	1.28	9.03	36417	91.30	447.43	8.5	18.3
1594.0	23.7	44.2	90	9.4	1.45	9.07	36645	154.20	445.32	8.5	18.3
1595.0	26.7	42.4	90	9.4	1.39	9.11	36847	136.95	443.11	8.5	18.3
1596.0	11.3	43.8	90	9.4	1.69	9.19	37327	324.62	442.27	8.5	18.3
1597.0	43.9	43.4	90	9.3	1.23	9.22	37450	83.18	439.73	8.5	18.3
1598.0	12.2	43.4	90	9.4	1.66	9.30	37894	300.28	438.75	8.5	18.3
1599.0	32.1	42.3	90	9.4	1.32	9.33	38062	113.62	436.49	8.5	18.3
1600.0	83.1	36.7	90	9.4	0.96	9.34	38127	43.96	433.77	8.5	18.3
1601.0	65.5	44.3	90	9.3	1.10	9.36	38210	55.79	431.18	8.5	18.3
1602.0	16.2	42.4	90	9.4	1.55	9.42	38543	225.21	429.77	8.5	18.3
1603.0	11.2	42.4	90	9.4	1.68	9.51	39024	325.64	429.07	8.5	18.3
1604.0	12.8	42.1	90	9.4	1.63	9.59	39447	286.07	428.11	8.5	18.3
1605.0	11.3	43.1	90	9.4	1.68	9.68	39926	323.61	427.41	8.5	18.4
1606.0	12.8	43.3	90	9.4	1.64	9.75	40347	285.06	426.46	8.5	18.4
1607.0	7.7	43.3	90	9.4	1.82	9.88	41049	474.76	426.78	8.5	18.4
1608.0	28.1	42.5	90	9.4	1.37	9.92	41241	129.85	424.83	8.5	18.4
1609.0	31.0	42.6	90	9.4	1.34	9.95	41415	117.68	422.84	8.5	18.4
1610.0	8.7	44.1	90	9.3	1.79	10.07	42038	420.99	422.82	8.5	18.4
1611.0	11.9	41.1	77	9.4	1.59	10.15	42425	306.36	422.07	8.5	18.4
1612.0	8.5	39.9	70	9.3	1.66	10.27	42922	432.15	422.14	8.5	18.4
1613.0	24.7	40.2	70	9.4	1.31	10.31	43092	148.11	420.40	8.5	18.4
1614.0	42.9	39.6	70	9.3	1.12	10.33	43190	85.21	418.29	8.5	18.4
1615.0	20.8	40.3	70	9.4	1.36	10.38	43392	175.50	416.77	8.5	18.4
1616.0	80.0	39.6	70	9.4	0.91	10.39	43445	45.65	414.45	8.5	18.4
1617.0	94.7	39.6	70	9.4	0.86	10.40	43489	38.55	412.13	8.5	18.4
1618.0	180.0	38.8	70	9.4	0.64	10.41	43512	20.29	409.72	8.5	18.4
1619.0	75.0	39.0	70	9.4	0.92	10.42	43568	48.69	407.51	8.5	18.4
1620.0	90.0	36.0	70	9.4	0.84	10.43	43615	40.58	405.28	8.5	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1621.0	80.0	35.5	70	9.4	0.88	10.45	43667	45.65	403.11	8.5	18.4
1622.0	171.4	37.3	70	9.3	0.65	10.45	43692	21.30	400.82	8.5	18.4
1623.0	138.5	40.3	70	9.4	0.74	10.46	43722	26.38	398.59	8.5	18.4
1624.0	46.8	40.0	70	9.3	1.09	10.48	43812	78.11	396.68	8.5	18.4
1625.0	40.4	38.5	70	9.4	1.13	10.51	43916	90.29	394.88	8.5	18.4
1626.0	10.8	38.5	70	9.4	1.56	10.60	44306	338.82	394.55	8.5	18.4
1627.0	12.1	38.3	70	9.4	1.52	10.68	44652	301.29	394.01	8.5	18.4
1628.0	7.1	39.4	70	9.4	1.71	10.82	45240	511.28	394.69	8.5	18.4
1629.0	11.9	39.7	70	9.4	1.54	10.90	45592	306.36	394.18	8.5	18.4
1630.0	35.0	37.0	70	9.4	1.16	10.93	45713	104.49	392.52	8.5	18.4
1631.0	80.0	31.6	70	9.4	0.85	10.95	45765	45.65	390.54	8.5	18.4
1632.0	10.1	40.6	70	9.4	1.61	11.04	46180	361.14	390.38	8.5	18.4
1633.0	7.6	41.3	70	9.4	1.71	11.18	46736	482.88	390.90	8.5	18.4
1634.0	11.7	39.2	70	9.4	1.54	11.26	47096	313.46	390.46	8.5	18.4
1635.0	10.6	39.8	70	9.4	1.58	11.36	47492	343.90	390.20	8.5	18.4
1636.0	20.6	38.2	70	9.4	1.34	11.41	47696	177.53	389.03	8.5	18.4
1637.0	32.4	38.3	70	9.3	1.20	11.44	47825	112.60	387.50	8.5	18.4
1638.0	24.3	37.4	70	9.4	1.28	11.48	47998	150.14	386.20	8.5	18.4
1639.0	26.0	38.0	70	9.4	1.26	11.52	48160	140.46	384.87	8.5	18.4
1640.0	45.0	24.5	70	9.4	0.96	11.54	48253	81.16	383.22	8.5	18.4
1641.0	75.0	36.0	70	9.3	0.91	11.55	48309	48.69	381.42	8.5	18.4
1642.0	8.6	36.1	70	9.3	1.60	11.67	48798	425.05	381.65	8.5	18.4
1643.0	7.5	36.6	70	9.3	1.65	11.80	49356	484.90	382.20	8.5	18.4
1644.0	9.9	36.2	70	9.4	1.56	11.90	49778	367.23	382.12	8.5	18.4
1645.0	10.6	37.2	70	9.4	1.55	12.00	50175	344.91	381.93	8.5	18.4
1646.0	11.7	37.1	70	9.4	1.52	12.08	50535	313.46	381.57	8.5	18.4
1647.0	12.1	36.0	70	9.4	1.49	12.16	50883	302.30	381.15	8.5	18.4
1648.0	7.1	36.3	70	9.4	1.66	12.30	51473	513.31	381.84	8.5	18.4
1649.0	8.0	35.9	70	9.4	1.62	12.43	52000	458.53	382.24	8.5	18.4
1650.0	17.9	34.5	70	9.3	1.35	12.49	52235	203.90	381.32	8.5	18.4
1651.0	7.7	35.4	70	9.3	1.63	12.62	52782	475.77	381.80	8.5	18.4
1652.0	8.9	36.5	70	9.4	1.59	12.73	53253	409.84	381.94	8.5	18.4
1653.0	8.8	37.6	70	9.4	1.61	12.84	53731	414.91	382.11	8.5	18.4
1654.0	8.2	38.4	70	9.4	1.65	12.96	54244	446.36	382.44	8.5	18.4
1655.0	7.3	38.1	70	9.4	1.68	13.10	54820	501.14	383.03	8.5	18.4
1656.0	8.4	38.5	70	9.4	1.64	13.22	55318	433.17	383.28	8.5	18.4
1657.0	12.8	37.9	70	9.4	1.50	13.30	55647	286.07	382.80	8.5	18.4
1658.0	17.6	38.8	70	9.4	1.40	13.36	55885	206.95	381.93	8.5	18.4
1659.0	28.6	37.8	70	9.4	1.23	13.39	56032	127.82	380.68	8.5	18.4
1660.0	11.6	39.1	70	9.4	1.54	13.48	56395	315.49	380.36	8.5	18.4
1661.0	8.2	39.4	70	9.3	1.66	13.60	56905	443.31	380.67	8.5	18.4
1662.0	10.1	39.6	70	9.4	1.60	13.70	57323	363.17	380.58	8.5	18.5
1663.0	8.0	40.3	70	9.3	1.68	13.82	57849	457.51	380.96	8.5	18.5
1664.0	10.3	40.1	70	9.4	1.60	13.92	58258	356.07	380.84	8.5	18.5
1665.0	18.1	38.9	70	9.3	1.39	13.98	58491	201.87	379.98	8.5	18.5
1666.0	14.0	38.6	70	9.4	1.47	14.05	58790	260.71	379.42	8.5	18.5
1667.0	15.0	38.0	70	9.4	1.44	14.11	59070	243.47	378.77	8.5	18.5
1668.0	20.0	45.0	70	9.4	1.42	14.16	59280	182.60	377.85	8.5	18.5
1669.0	9.2	44.3	70	9.3	1.68	14.27	59735	395.63	377.93	8.5	18.5
1670.0	12.0	41.4	70	9.4	1.56	14.36	60087	305.35	377.60	8.5	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1671.0	19.3	39.0	70	9.4	1.38	14.41	60305	189.70	376.72	8.5	18.5
1672.0	43.4	38.6	70	9.4	1.10	14.43	60402	84.20	375.37	8.5	18.5
1673.0	13.5	38.0	70	9.4	1.48	14.50	60713	270.86	374.89	8.5	18.5
1674.0	8.8	39.0	70	9.3	1.63	14.62	61191	415.92	375.08	8.5	18.5
1675.0	8.3	40.3	70	9.4	1.67	14.74	61700	442.30	375.39	8.5	18.5
1676.0	8.4	40.5	70	9.4	1.66	14.86	62198	433.17	375.65	8.5	18.5
1677.0	17.4	40.0	70	9.4	1.42	14.92	62440	209.99	374.90	8.5	18.5
1678.0	75.0	38.2	70	9.3	0.92	14.93	62496	48.69	373.44	8.5	18.5
1679.0	52.9	35.0	70	9.3	1.01	14.95	62575	68.98	372.07	8.5	18.5
1680.0	13.7	34.5	70	9.4	1.43	15.02	62882	266.80	371.61	8.5	18.5
1681.0	8.7	36.2	70	9.4	1.60	15.14	63364	418.97	371.82	8.5	18.5
1682.0	17.5	37.1	70	9.3	1.39	15.19	63604	208.98	371.10	8.5	18.5
1683.0	13.6	37.9	70	9.3	1.48	15.27	63912	267.81	370.64	8.5	18.5
1684.0	6.6	37.6	70	9.3	1.71	15.42	64548	552.87	371.44	8.5	18.5
1685.0	8.1	37.7	70	9.3	1.64	15.54	65064	448.38	371.78	8.5	18.5
1686.0	10.1	36.6	70	9.4	1.56	15.64	65479	361.14	371.73	8.5	18.5
1687.0	25.7	35.4	70	9.3	1.24	15.68	65642	142.02	370.74	8.5	18.5
1688.0	35.0	35.0	70	9.4	1.14	15.71	65762	104.34	369.59	8.5	18.5
1689.0	41.0	32.6	70	9.4	1.07	15.73	65865	89.05	368.39	8.5	18.5
1690.0	13.1	33.8	70	9.4	1.44	15.81	66185	278.97	368.01	8.5	18.5
1691.0	13.4	34.3	70	9.4	1.44	15.88	66499	272.89	367.61	8.5	18.5
1692.0	52.9	34.7	70	9.3	1.01	15.90	66579	68.98	366.34	8.5	18.5
1693.0	75.0	32.1	70	9.3	0.88	15.91	66635	48.69	365.01	8.5	18.5
1694.0	52.9	29.0	70	9.3	0.96	15.93	66714	68.98	363.77	8.5	18.5
1695.0	39.1	27.6	70	9.4	1.03	15.96	66821	93.33	362.64	8.5	18.5
1696.0	39.6	35.4	70	9.3	1.11	15.98	66927	92.31	361.51	8.5	18.5
1697.0	45.0	34.0	70	9.4	1.05	16.01	67021	81.16	360.35	8.5	18.5
1698.0	120.0	28.8	70	9.4	0.71	16.01	67056	30.43	358.99	8.5	18.5
1699.0	87.8	32.9	70	9.3	0.83	16.03	67104	41.59	357.69	8.5	18.5
1700.0	37.9	32.8	70	9.3	1.10	16.05	67214	96.37	356.62	8.5	18.5
1701.0	81.8	37.8	70	9.4	0.89	16.06	67266	44.64	355.35	8.5	18.5
1702.0	42.9	37.3	70	9.3	1.10	16.09	67364	85.21	354.26	8.5	18.5
1703.0	43.9	35.0	70	9.3	1.07	16.11	67459	83.18	353.16	8.5	18.5
1704.0	43.4	35.1	70	9.4	1.07	16.13	67556	84.20	352.08	8.5	18.5
1705.0	34.3	35.5	70	9.4	1.15	16.16	67679	106.52	351.10	8.5	18.5
1706.0	39.1	35.5	70	9.4	1.11	16.19	67786	93.33	350.07	8.5	18.5
1707.0	35.0	35.0	70	9.4	1.14	16.22	67906	104.34	349.09	8.5	18.5
1708.0	30.9	33.1	70	9.4	1.16	16.25	68042	118.35	348.18	8.5	18.5
1709.0	35.6	33.7	70	9.4	1.12	16.28	68160	102.46	347.21	8.5	18.5
1710.0	31.9	33.3	70	9.3	1.15	16.31	68292	114.63	346.30	8.5	18.5
1711.0	34.6	32.7	70	9.3	1.12	16.34	68413	105.50	345.35	8.5	18.5
1712.0	29.5	33.4	70	9.3	1.18	16.37	68556	123.76	344.49	8.5	18.5
1713.0	31.6	33.7	70	9.4	1.16	16.40	68689	115.65	343.60	8.5	18.5
1714.0	30.5	33.8	70	9.3	1.17	16.44	68826	119.70	342.74	8.5	18.5
1715.0	30.0	33.5	70	9.3	1.17	16.47	68966	121.73	341.88	8.5	18.5
1716.0	28.8	32.6	70	9.4	1.18	16.50	69112	126.81	341.06	8.5	18.5
1717.0	29.0	32.0	70	9.4	1.16	16.54	69257	125.93	340.24	8.5	18.5
1718.0	25.9	36.5	70	9.4	1.25	16.58	69419	140.90	339.48	8.5	18.5
1719.0	32.1	34.3	70	9.4	1.16	16.61	69550	113.62	338.62	8.5	18.5
1720.0	30.3	35.0	70	9.4	1.19	16.64	69688	120.72	337.80	8.5	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1721.0	25.4	33.6	70	9.4	1.23	16.68	69854	144.05	337.07	8.5	18.6
1722.0	32.4	34.9	70	9.3	1.16	16.71	69984	112.60	336.23	8.5	18.6
1723.0	28.3	34.4	70	9.3	1.20	16.75	70132	128.83	335.45	8.5	18.6
1724.0	28.3	34.3	70	9.3	1.20	16.78	70280	128.83	334.68	8.5	18.6
1725.0	26.5	34.5	70	9.3	1.22	16.82	70439	137.96	333.95	8.5	18.6
1726.0	28.0	34.0	70	9.4	1.20	16.86	70589	130.43	333.20	8.5	18.6
1727.0	15.0	43.0	70	9.4	1.50	16.92	70869	243.47	332.87	8.5	18.6
1728.0	19.8	35.4	70	9.4	1.33	16.97	71081	184.63	332.33	8.5	18.6
1729.0	16.4	35.8	70	9.4	1.39	17.03	71338	223.18	331.93	8.5	18.6
1730.0	11.3	35.8	70	9.4	1.50	17.12	71710	323.61	331.90	8.5	18.6
1731.0	7.5	35.5	70	9.5	1.61	17.26	72270	486.93	332.46	8.5	18.6
1732.0	5.6	34.7	70	9.5	1.69	17.43	73014	647.22	333.60	8.5	18.6
1733.0	7.1	34.7	70	9.5	1.62	17.58	73609	517.37	334.26	8.5	18.6
1734.0	13.9	34.6	70	9.5	1.41	17.65	73911	262.74	334.00	8.5	18.6
1735.0	10.1	34.4	70	9.5	1.50	17.75	74329	363.17	334.11	8.5	18.6
1736.0	11.0	34.0	70	9.5	1.47	17.84	74711	332.00	334.10	8.5	18.6
1737.0	9.6	36.2	70	9.5	1.54	17.94	75148	380.42	334.26	8.5	18.6
1738.0	16.6	34.9	70	9.5	1.36	18.00	75401	220.13	333.86	8.5	18.6
1739.0	51.4	32.3	70	9.5	0.98	18.02	75483	71.01	332.93	8.5	18.6
1740.0	56.2	28.5	70	9.5	0.92	18.04	75558	64.92	331.99	8.5	18.6
1741.0	55.4	25.4	70	9.5	0.90	18.06	75634	65.94	331.06	8.5	18.6
1742.0	8.0	35.9	70	9.5	1.60	18.18	76157	455.49	331.49	8.5	18.6
1743.0	6.0	33.7	70	9.5	1.66	18.35	76860	610.70	332.46	8.5	18.6
1744.0	6.4	32.5	70	9.6	1.60	18.50	77513	568.09	333.28	8.5	18.6
1745.0	5.6	34.1	70	9.7	1.65	18.68	78259	648.23	334.37	8.5	18.6
1746.0	8.0	33.4	70	9.7	1.53	18.81	78784	456.50	334.79	8.5	18.6
1747.0	10.0	34.0	70	9.7	1.47	18.91	79204	365.20	334.89	8.5	18.6
1748.0	15.9	7.8	70	9.7	0.93	18.97	79468	229.77	334.53	8.5	18.6
1749.0	15.0	38.0	70	9.7	1.39	19.04	79748	243.47	334.22	8.5	18.6
1750.0	14.9	38.1	70	9.7	1.40	19.10	80030	245.72	333.92	8.5	18.6
1751.0	33.0	34.6	70	9.7	1.11	19.13	80158	110.57	333.17	8.5	18.6
1752.0	27.3	37.5	70	9.7	1.20	19.17	80312	133.91	332.50	8.5	18.6
1753.0	27.3	37.4	70	9.7	1.20	19.21	80466	133.91	331.83	8.5	18.6
1754.0	13.6	38.4	70	9.7	1.43	19.28	80775	268.83	331.62	8.5	18.6
1755.0	8.5	39.9	70	9.7	1.59	19.40	81267	428.10	331.94	8.5	18.6
1756.0	31.9	37.0	70	9.7	1.15	19.43	81399	114.63	331.22	8.5	18.6
1757.0	150.0	36.2	70	9.7	0.66	19.44	81427	24.35	330.20	8.5	18.6
1758.0	52.2	36.0	70	9.7	0.99	19.46	81507	70.00	329.34	8.5	18.6
1759.0	11.7	35.6	70	9.7	1.44	19.54	81866	311.43	329.28	8.5	18.6
1760.0	6.6	35.7	70	9.7	1.62	19.69	82501	552.87	330.01	8.5	18.6
1761.0	6.8	36.6	70	9.7	1.62	19.84	83120	537.66	330.69	8.5	18.6
1762.0	7.0	37.1	70	9.7	1.62	19.98	83718	520.41	331.31	8.5	18.6
1763.0	6.8	37.6	70	9.7	1.63	20.13	84332	533.60	331.97	8.5	18.6
1764.0	36.0	37.6	70	9.7	1.12	20.16	84449	101.44	331.22	8.5	18.6
1765.0	33.0	38.0	70	9.7	1.15	20.19	84576	110.67	330.51	8.5	18.6
1766.0	11.8	39.5	70	9.7	1.49	20.27	84931	308.39	330.44	8.5	18.6
1767.0	7.2	38.6	70	9.7	1.63	20.41	85514	507.22	331.01	8.5	18.6
1768.0	17.4	35.9	70	9.7	1.32	20.47	85755	209.99	330.62	8.5	18.6
1769.0	7.5	38.5	70	9.7	1.62	20.60	86317	487.95	331.12	8.5	18.6
1770.0	6.0	41.3	70	9.7	1.73	20.77	87021	612.72	332.02	8.5	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1771.0	7.6	40.4	70	9.7	1.63	20.90	87571	477.80	332.48	8.5	18.6
1772.0	10.0	41.1	70	9.7	1.56	21.00	87992	366.21	332.58	8.5	18.6
1773.0	9.3	39.4	70	9.7	1.56	21.11	88446	394.62	332.78	8.5	18.6
1774.0	6.2	38.7	70	9.7	1.68	21.27	89125	590.41	333.59	8.5	18.6
1775.0	9.9	37.8	70	9.7	1.52	21.37	89548	367.74	333.70	8.5	18.6
1776.0	19.5	37.6	70	9.7	1.31	21.42	89763	187.67	333.24	8.5	18.6
1777.0	19.9	39.5	70	9.7	1.32	21.47	89975	183.61	332.77	8.5	18.6
1778.0	24.8	38.8	70	9.7	1.24	21.51	90144	147.09	332.20	8.5	18.6
1779.0	33.3	39.2	70	9.7	1.15	21.54	90270	109.56	331.51	8.5	18.6
1780.0	34.3	39.3	70	9.7	1.15	21.57	90392	106.52	330.82	8.5	18.6
1781.0	32.4	38.5	70	9.7	1.16	21.60	90522	112.60	330.15	8.5	18.6
1782.0	48.6	39.0	70	9.7	1.03	21.62	90608	75.07	329.37	8.5	18.7
1783.0	50.7	39.8	70	9.7	1.03	21.64	90691	72.03	328.58	8.5	18.7
1784.0	18.9	42.8	70	9.7	1.37	21.69	90913	192.74	328.17	8.5	18.7
1785.0	15.2	41.0	70	9.7	1.42	21.76	91189	240.42	327.90	8.5	18.7
1786.0	42.9	37.0	70	9.6	1.06	21.78	91287	85.21	327.17	8.5	18.7
1787.0	12.3	38.3	70	9.6	1.48	21.87	91629	297.23	327.08	8.5	18.7
1788.0	6.4	38.9	70	9.6	1.70	22.02	92288	573.16	327.82	8.5	18.7
1789.0	4.8	34.3	70	9.6	1.72	22.23	93158	756.78	329.10	8.5	18.7
1790.0	6.9	33.5	70	9.6	1.60	22.38	93771	532.58	329.71	8.5	18.7
1791.0	7.2	37.9	70	9.6	1.65	22.51	94357	509.25	330.25	8.5	18.7
1792.0	8.8	39.5	70	9.6	1.60	22.63	94835	415.92	330.50	8.5	18.7
1793.0	5.9	39.3	70	9.6	1.73	22.80	95549	620.84	331.36	8.5	18.7
1794.0	6.3	39.6	70	9.6	1.71	22.96	96215	579.25	332.09	8.5	18.7
1795.0	11.9	38.9	70	9.6	1.50	23.04	96567	306.36	332.02	8.5	18.7
1796.0	12.6	38.7	70	9.6	1.48	23.12	96901	290.13	331.89	8.5	18.7
1797.0	7.7	39.8	70	9.6	1.65	23.25	97449	476.79	332.32	8.5	18.7
1798.0	10.7	36.8	70	9.6	1.51	23.34	97841	340.85	332.34	8.5	18.7
1799.0	21.4	36.8	70	9.6	1.29	23.39	98037	170.43	331.87	8.5	18.7
1800.0	15.6	36.3	70	9.6	1.38	23.46	98307	234.34	331.59	8.5	18.7
1801.0	31.3	36.3	70	9.6	1.16	23.49	98441	116.66	330.97	8.5	18.7
1802.0	34.3	36.8	70	9.6	1.14	23.52	98564	106.52	330.32	8.5	18.7
1803.0	33.3	35.9	70	9.6	1.14	23.55	98690	109.56	329.68	8.5	18.7
1804.0	22.4	35.5	70	9.6	1.26	23.59	98877	163.33	329.21	8.5	18.7
1805.0	8.6	38.9	70	9.6	1.61	23.71	99369	427.08	329.49	8.5	18.7
1806.0	12.6	39.2	70	9.6	1.48	23.79	99701	289.12	329.37	8.5	18.7
1807.0	13.3	38.7	70	9.6	1.46	23.86	100017	274.91	329.22	8.5	18.7
1808.0	7.6	38.4	70	9.6	1.63	23.99	100567	477.80	329.64	8.5	18.7
1809.0	6.6	38.1	70	9.6	1.68	24.15	101204	553.89	330.27	8.5	18.7
1810.0	9.0	39.3	70	9.6	1.59	24.26	101673	407.81	330.49	8.5	18.7
1811.0	34.6	39.6	70	9.6	1.16	24.29	101794	105.50	329.86	8.5	18.7
1812.0	33.6	39.8	70	9.6	1.17	24.32	101919	108.55	329.24	8.5	18.7
1813.0	34.8	40.2	70	9.5	1.17	24.34	102039	104.83	328.61	8.5	18.7
1813.2	36.0	40.0	70	9.6	1.15	24.35	102063	101.44	328.48	8.5	18.7

BIT NUMBER	3	IADC CODE	4	INTERVAL	1813.2- 1821.8
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	6.0	BIT RUN	8.6
TOTAL HOURS	0.91	TOTAL TURNS	6058	CONDITION	TO B0 G0.000

DEPTH	ROP	WOB	RPM	MW "d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1813.6	1.1	27.9	97	9.6 2.30	0.38	2206	3444	58224	8.5	18.7
1813.8	6.5	23.8	120	9.6 1.72	0.41	2428	563	39004	8.5	18.7
1814.0	12.9	22.3	120	9.6 1.49	0.42	2540	284	29324	8.5	18.7
1814.2	26.7	21.7	120	9.6 1.27	0.43	2594	137	23486	8.5	18.7
1814.4	32.7	21.0	120	9.6 1.20	0.44	2638	112	19591	8.5	18.7
1814.6	34.3	20.5	120	9.6 1.18	0.44	2680	107	16807	8.5	18.7
1814.8	34.3	21.5	120	9.6 1.19	0.45	2722	107	14720	8.5	18.7
1815.0	40.0	21.4	120	9.6 1.15	0.45	2758	91	13094	8.5	18.7
1815.2	15.0	20.8	120	9.6 1.42	0.47	2854	243	11809	8.5	18.7
1815.4	13.1	21.7	120	9.6 1.47	0.48	2964	279	10761	8.5	18.7
1815.6	12.6	22.0	120	9.6 1.49	0.50	3078	289	9888	8.5	18.7
1815.8	12.4	21.4	120	9.6 1.48	0.51	3194	294	9150	8.5	18.7
1816.0	14.1	20.8	120	9.6 1.44	0.53	3296	259	8515	8.5	18.7
1816.2	14.1	20.3	120	9.6 1.43	0.54	3398	259	7965	8.5	18.7
1816.4	23.2	19.7	120	9.6 1.28	0.55	3460	157	7477	8.5	18.7
1816.6	20.6	20.2	120	9.6 1.32	0.56	3530	178	7047	8.5	18.7
1816.8	13.8	20.2	120	9.6 1.43	0.58	3634	264	6671	8.5	18.7
1817.0	17.6	21.1	120	9.6 1.38	0.59	3716	208	6330	8.5	18.7
1817.2	16.4	20.7	120	9.6 1.39	0.60	3804	223	6025	8.5	18.7
1817.4	7.9	21.8	120	9.6 1.62	0.62	3986	462	5760	8.5	18.7
1817.6	10.1	21.3	120	9.6 1.54	0.64	4128	360	5515	8.5	18.7
1817.8	24.0	21.9	120	9.6 1.30	0.65	4188	152	5282	8.5	18.7
1818.0	21.2	21.8	120	9.6 1.34	0.66	4256	172	5069	8.5	18.7
1818.2	30.0	21.3	120	9.6 1.23	0.67	4304	122	4871	8.5	18.7
1818.4	25.7	20.7	120	9.6 1.26	0.68	4360	142	4689	8.5	18.7
1818.6	17.1	22.2	120	9.6 1.41	0.69	4444	213	4523	8.5	18.7
1818.8	13.8	21.5	120	9.6 1.46	0.70	4548	264	4371	8.5	18.7
1819.0	10.7	21.6	120	9.6 1.53	0.72	4682	340	4232	8.5	18.7
1819.2	17.6	21.7	120	9.7 1.38	0.73	4764	208	4098	8.5	18.7
1819.4	18.5	21.5	120	9.6 1.36	0.74	4842	198	3972	8.5	18.7
1819.6	12.6	21.7	120	9.6 1.47	0.76	4956	289	3857	8.5	18.7
1819.8	17.1	22.5	120	9.7 1.40	0.77	5040	213	3747	8.5	18.7
1820.0	20.6	24.3	120	9.7 1.37	0.78	5110	178	3642	8.5	18.7
1820.2	11.3	24.4	120	9.7 1.55	0.80	5238	325	3547	8.5	18.7
1820.4	20.6	24.0	120	9.7 1.37	0.81	5308	178	3453	8.5	18.7
1820.6	26.7	23.6	120	9.7 1.29	0.82	5362	137	3364	8.5	18.7
1820.8	15.7	23.9	120	9.7 1.45	0.83	5454	233	3281	8.5	18.7
1821.0	15.7	23.9	120	9.7 1.45	0.84	5546	233	3203	8.5	18.7
1821.2	21.8	23.4	120	9.7 1.34	0.85	5612	167	3127	8.5	18.7
1821.4	10.9	23.3	120	9.6 1.54	0.87	5744	335	3059	8.5	18.7
1821.6	9.4	23.2	120	9.7 1.59	0.89	5898	391	2996	8.5	18.7
1821.8	9.0	22.5	120	9.6 1.58	0.91	6058	406	2935	8.5	18.7

BIT NUMBER	4	IADC CODE	517	INTERVAL	1821.8- 1832.2
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	6.0	BIT RUN	10.4
TOTAL HOURS	0.69	TOTAL TURNS	2889	CONDITION	TO B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1822.0	10.0	35.0	70	9.7	1.48	0.02	84	365	152525	8.5	18.7
1823.0	12.1	14.1	70	9.6	1.13	0.10	430	301	25672	8.5	18.7
1824.0	16.9	19.5	70	9.7	1.13	0.16	679	216	14101	8.5	18.7
1825.0	11.7	25.3	70	9.7	1.32	0.25	1039	313	9792	8.5	18.7
1826.0	28.6	30.7	70	9.7	1.12	0.28	1186	128	7491	8.5	18.7
1827.0	10.7	31.8	70	9.7	1.43	0.38	1579	342	6116	8.5	18.7
1828.0	12.1	35.8	70	9.7	1.44	0.46	1926	301	5178	8.5	18.7
1829.0	8.0	40.9	70	9.7	1.64	0.58	2453	459	4523	8.5	18.7
1830.0	28.8	41.0	70	9.6	1.22	0.62	2599	127	3987	8.5	18.7
1831.0	29.8	41.0	70	9.7	1.21	0.65	2740	123	3567	8.5	18.7
1832.0	48.0	41.5	70	9.6	1.06	0.67	2828	76	3225	8.5	18.7
1832.2	13.6	39.8	70	9.6	1.45	0.69	2889	269	3168	8.5	18.7

BIT NUMBER	4	IADC CODE	4	INTERVAL	1832.2- 1841.6
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	7.0	BIT RUN	9.4
TOTAL HOURS	0.60	TOTAL TURNS	4641	CONDITION	TO B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1832.4	36.0	18.8	130	9.7	1.15	0.01	43	101	127921	8.5	18.7
1832.6	7.7	17.8	130	9.7	1.55	0.03	247	477	64199	8.5	18.7
1832.8	36.0	14.3	130	9.7	1.07	0.04	290	101	42833	8.5	18.7
1833.0	36.0	13.6	130	9.7	1.06	0.04	334	101	32150	8.5	18.7
1833.4	43.6	12.8	130	9.7	1.00	0.05	405	84	21461	8.5	18.7
1833.6	34.3	12.0	130	9.6	1.04	0.06	451	107	18411	8.5	18.7
1834.0	62.6	13.2	130	9.7	0.91	0.06	500	58	14332	8.5	18.7
1834.4	36.0	12.6	130	9.6	1.04	0.08	587	101	11745	8.5	18.7
1834.6	17.6	11.9	130	9.7	1.20	0.09	676	208	10784	8.5	18.7
1834.8	22.5	13.0	130	9.7	1.16	0.10	745	162	9967	8.5	18.7
1835.0	14.1	13.0	130	9.7	1.28	0.11	856	259	9273	8.5	18.7
1835.2	18.5	13.6	130	9.6	1.23	0.12	940	198	8668	8.5	18.7
1835.4	16.0	13.0	130	9.7	1.25	0.13	1038	228	8141	8.5	18.7
1835.6	15.7	12.5	130	9.7	1.24	0.15	1138	233	7675	8.5	18.7
1835.8	30.0	11.9	130	9.7	1.07	0.15	1190	122	7256	8.5	18.7
1836.0	25.7	12.5	130	9.7	1.12	0.16	1250	142	6881	8.5	18.7
1836.2	27.7	11.9	130	9.7	1.09	0.17	1307	132	6544	8.5	18.7
1836.4	34.3	11.4	130	9.6	1.03	0.17	1352	107	6237	8.5	18.7
1836.6	30.0	11.3	130	9.7	1.06	0.18	1404	122	5959	8.5	18.7
1836.8	21.8	12.9	130	9.7	1.17	0.19	1476	167	5708	8.5	18.7
1837.0	36.0	12.3	130	9.7	1.03	0.19	1519	101	5474	8.5	18.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1837.2	22.5	12.0	130	9.7	1.14	0.20	1588	162	5262	8.5	18.7
1837.4	30.0	11.3	130	9.7	1.06	0.21	1640	122	5064	8.5	18.7
1837.6	16.4	12.4	130	9.6	1.23	0.22	1735	223	4885	8.5	18.7
1837.8	11.4	12.7	130	9.7	1.33	0.24	1872	320	4722	8.5	18.7
1838.0	14.1	14.3	130	9.7	1.31	0.25	1982	259	4568	8.5	18.7
1838.2	7.1	13.8	130	9.6	1.48	0.28	2203	517	4433	8.5	18.7
1838.4	6.4	14.0	130	9.7	1.50	0.31	2446	568	4308	8.5	18.7
1838.6	9.1	14.8	130	9.6	1.44	0.34	2617	401	4186	8.5	18.7
1838.8	7.3	15.2	130	9.6	1.50	0.36	2830	497	4074	8.5	18.7
1839.0	19.5	17.0	130	9.7	1.28	0.37	2910	188	3960	8.5	18.7
1839.2	8.5	16.5	130	9.7	1.49	0.40	3094	431	3859	8.5	18.7
1839.4	15.0	16.5	130	9.6	1.34	0.41	3198	243	3759	8.5	18.7
1839.6	7.5	17.0	130	9.7	1.54	0.44	3406	487	3670	8.5	18.7
1839.8	9.1	16.5	130	9.6	1.47	0.46	3577	401	3584	8.5	18.7
1840.0	9.6	16.3	130	9.6	1.46	0.48	3740	380	3502	8.5	18.7
1840.2	14.4	15.7	130	9.7	1.34	0.49	3848	254	3421	8.5	18.7
1840.4	14.7	15.7	130	9.6	1.33	0.51	3954	249	3343	8.5	18.7
1840.6	12.6	16.3	130	9.6	1.38	0.52	4078	289	3271	8.5	18.7
1840.8	9.0	16.1	130	9.6	1.47	0.55	4251	406	3204	8.5	18.7
1841.0	12.6	15.5	130	9.6	1.37	0.56	4375	289	3138	8.5	18.7
1841.2	14.7	16.3	130	9.6	1.34	0.57	4481	249	3074	8.5	18.7
1841.3	6.1	15.4	130	9.7	1.55	0.59	4609	599	3046	8.5	18.7
1841.6	7.0	15.0	130	9.7	1.50	0.63	4943	522	2966	8.5	18.7

BIT NUMBER	4	IADC CODE	4	INTERVAL	1841.6- 1851.1
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
CDST	0.00	TRIP TIME	6.0	BIT RUN	9.5
TOTAL HOURS	0.33	TOTAL TURNS	2591	CONDITION	T0 B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1841.8	14.4	14.5	130	9.7	1.31	0.01	108	254	109814	8.5	18.7
1842.2	32.0	16.9	130	9.7	1.15	0.03	206	114	36681	8.5	18.7
1842.6	65.5	16.8	130	9.7	0.96	0.03	254	56	22031	8.5	18.7
1843.0	48.0	20.7	130	9.7	1.10	0.04	319	76	15758	8.5	18.7
1843.4	57.6	20.1	130	9.6	1.04	0.05	373	63	12270	8.5	18.7
1843.6	42.4	20.1	130	9.7	1.12	0.05	410	86	11052	8.5	18.7
1844.0	75.8	20.8	130	9.7	0.97	0.06	451	48	9218	8.5	18.7
1844.4	75.8	21.1	130	9.7	0.97	0.06	492	48	7908	8.5	18.7
1844.6	22.5	22.9	130	9.7	1.35	0.07	561	162	7392	8.5	18.7
1844.8	24.8	23.1	130	9.7	1.32	0.08	624	147	6939	8.5	18.7
1845.0	30.0	22.7	130	9.7	1.26	0.09	676	122	6538	8.5	18.8
1845.2	28.8	26.0	130	9.6	1.32	0.09	730	127	6182	8.5	18.8
1845.4	34.3	23.3	130	9.6	1.23	0.10	776	107	5862	8.5	18.8
1845.6	40.0	23.6	130	9.7	1.19	0.10	815	91	5573	8.5	18.8
1845.8	48.0	24.1	130	9.7	1.14	0.11	847	76	5312	8.5	18.8
1846.0	34.3	23.8	130	9.6	1.24	0.11	893	107	5075	8.5	18.8
1846.2	28.8	23.9	130	9.6	1.29	0.12	947	127	4860	8.5	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1846.4	31.3	23.2	130	9.7	1.26	0.13	997	117	4662	8.5	18.8
1846.6	31.3	23.2	130	9.7	1.26	0.13	1047	117	4480	8.5	18.8
1846.8	20.0	23.4	130	9.7	1.39	0.14	1125	183	4315	8.5	18.8
1847.0	30.0	23.4	130	9.7	1.27	0.15	1177	122	4160	8.5	18.8
1847.2	37.9	23.7	130	9.7	1.21	0.16	1218	96	4015	8.5	18.8
1847.4	45.0	23.9	130	9.6	1.16	0.16	1252	81	3879	8.5	18.8
1847.6	37.9	23.7	130	9.7	1.21	0.17	1294	96	3753	8.5	18.8
1847.8	42.4	23.7	130	9.7	1.18	0.17	1330	86	3635	8.5	18.8
1848.2	41.1	24.1	130	9.7	1.19	0.18	1406	89	3420	8.5	18.8
1848.4	55.4	24.8	130	9.7	1.11	0.18	1434	66	3321	8.5	18.8
1848.6	25.7	24.5	130	9.7	1.34	0.19	1495	142	3230	8.5	18.8
1848.8	16.0	24.1	130	9.7	1.47	0.20	1593	228	3147	8.5	18.8
1849.0	13.8	24.8	130	9.6	1.52	0.22	1705	264	3069	8.5	18.8
1849.2	32.7	25.3	130	9.7	1.28	0.22	1753	112	2991	8.5	18.8
1849.4	32.7	26.2	130	9.7	1.29	0.23	1801	112	2917	8.5	18.8
1849.6	19.5	25.7	130	9.7	1.44	0.24	1881	188	2849	8.5	18.8
1849.8	45.0	25.3	130	9.6	1.18	0.25	1915	81	2782	8.5	18.8
1850.0	20.6	24.5	130	9.7	1.40	0.26	1991	178	2720	8.5	18.8
1850.2	18.5	24.1	130	9.6	1.43	0.27	2076	198	2661	8.5	18.8
1850.4	16.4	23.6	130	9.6	1.45	0.28	2171	223	2606	8.5	18.8
1850.6	8.6	23.0	130	9.6	1.63	0.30	2353	426	2557	8.5	18.8
1850.7	3.3	22.2	130	9.7	1.89	0.33	2591	1116	2541	8.5	18.8
1851.1	2.0	22.0	130	9.7	2.02	0.53	4151	1826	2511	8.5	18.8

BIT NUMBER	4	IADC CODE	517	INTERVAL	1851.1- 2140.1
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	6.0	BIT RUN	289.0
TOTAL HOURS	25.80	TOTAL TURNS	100622	CONDITION	T4 B3 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1855.0	8.0	39.7	65	9.7	1.60	0.49	1901	457	6075	8.5	18.8
1855.2	7.1	39.6	65	9.7	1.63	0.52	2011	512	5804	8.5	18.8
1859.0	4.9	40.9	65	9.7	1.77	1.29	5025	743	3369	8.5	18.8
1860.0	12.6	43.3	65	9.7	1.49	1.37	5336	291	3023	8.5	18.8
1862.0	58.1	44.0	65	9.6	0.99	1.40	5470	63	2480	8.5	18.8
1863.0	7.7	43.2	65	9.7	1.65	1.53	5974	472	2311	8.5	18.8
1864.0	5.6	41.6	65	9.6	1.73	1.71	6665	647	2182	8.5	18.8
1865.0	13.3	42.4	65	9.7	1.46	1.78	6958	275	2045	8.5	18.8
1866.0	15.1	42.7	65	9.7	1.43	1.85	7217	242	1924	8.5	18.8
1867.0	29.8	41.7	65	9.7	1.19	1.88	7348	123	1811	8.5	18.8
1868.0	31.6	41.8	65	9.7	1.18	1.92	7472	116	1711	8.5	18.8
1869.0	30.5	43.3	65	9.7	1.20	1.95	7600	120	1622	8.5	18.8
1870.0	31.3	41.1	65	9.6	1.17	1.98	7724	117	1542	8.5	18.8
1871.0	25.7	38.2	65	9.7	1.21	2.02	7876	142	1472	8.5	18.8
1872.0	40.4	35.5	65	9.6	1.04	2.04	7972	90	1406	8.5	18.8
1873.0	8.3	39.2	65	9.7	1.58	2.16	8440	438	1361	8.5	18.8
1874.0	6.2	39.9	65	9.7	1.68	2.32	9065	585	1328	8.5	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1875.0	34.0	38.6	65	9.6	1.12	2.35	9180	108	1277	8.5	18.8
1876.0	12.3	37.5	65	9.7	1.43	2.44	9498	297	1237	8.5	18.8
1877.0	37.9	37.5	65	9.7	1.08	2.46	9601	96	1193	8.5	18.8
1878.0	54.5	38.1	65	9.6	0.97	2.48	9672	67	1151	8.5	18.8
1879.0	41.4	38.3	65	9.7	1.06	2.50	9766	88	1113	8.5	18.8
1880.0	34.6	37.7	65	9.7	1.11	2.53	9879	106	1078	8.5	18.8
1881.0	16.1	36.2	65	9.7	1.33	2.60	10121	227	1050	8.5	18.8
1882.0	42.9	34.9	65	9.6	1.02	2.62	10212	85	1019	8.5	18.8
1883.0	35.6	34.9	65	9.7	1.08	2.65	10321	102.46	989.88	8.5	18.8
1884.0	8.0	35.3	65	9.7	1.54	2.77	10809	456.50	973.66	8.5	18.8
1885.0	13.5	35.6	65	9.7	1.38	2.85	11097	269.84	952.90	8.5	18.8
1886.0	34.3	35.3	65	9.7	1.09	2.87	11211	106.52	928.65	8.5	18.8
1887.0	44.4	36.7	65	9.7	1.02	2.90	11299	82.17	905.07	8.5	18.8
1888.0	34.3	36.4	65	9.7	1.10	2.93	11412	106.52	883.43	8.5	18.8
1889.0	11.0	36.8	65	9.7	1.46	3.02	11765	330.71	868.85	8.5	18.8
1890.0	16.2	37.9	65	9.7	1.35	3.08	12006	225.21	852.30	8.5	18.8
1891.0	73.5	38.0	65	9.6	0.88	3.09	12059	49.71	832.19	8.5	18.8
1892.0	37.5	37.9	65	9.7	1.09	3.12	12163	97.39	814.22	8.5	18.8
1893.0	23.4	37.0	65	9.7	1.23	3.16	12330	156.22	798.52	8.5	18.8
1894.0	19.5	37.4	65	9.7	1.29	3.21	12530	187.67	784.28	8.5	18.8
1895.0	9.7	39.0	65	9.7	1.53	3.32	12934	378.39	775.03	8.5	18.8
1896.0	9.9	38.2	65	9.7	1.51	3.42	13328	368.24	765.97	8.5	18.8
1897.0	6.7	39.1	65	9.7	1.65	3.57	13914	548.81	761.24	8.5	18.8
1898.0	6.7	39.7	65	9.6	1.65	3.72	14493	542.73	756.58	8.5	18.8
1899.0	7.1	39.6	65	9.7	1.63	3.86	15041	513.31	751.50	8.5	18.8
1900.0	25.7	37.3	65	9.7	1.20	3.90	15193	142.02	739.04	8.5	18.8
1901.0	10.0	37.9	65	9.7	1.50	4.00	15583	365.20	731.55	8.5	18.8
1902.0	8.4	37.5	65	9.7	1.55	4.11	16047	434.18	725.71	8.5	18.8
1903.0	11.1	37.1	65	9.7	1.46	4.20	16398	328.68	718.06	8.5	18.8
1904.0	11.9	37.9	65	9.7	1.45	4.29	16725	306.36	710.27	8.5	18.8
1905.0	15.3	38.2	65	9.7	1.37	4.35	16981	239.41	701.54	8.5	18.8
1906.0	12.8	37.6	65	9.7	1.42	4.43	17286	286.07	693.97	8.5	18.8
1907.0	12.0	36.4	65	9.7	1.43	4.52	17610	303.32	686.98	8.5	18.8
1908.0	12.5	39.4	65	9.7	1.45	4.60	17923	293.17	680.06	8.5	18.8
1909.0	10.2	39.0	65	9.7	1.51	4.69	18307	359.11	674.52	8.5	18.8
1910.0	8.0	35.7	65	9.7	1.55	4.82	18794	456.50	670.82	8.5	18.9
1911.0	8.6	34.7	65	9.6	1.51	4.94	19247	424.04	666.70	8.5	18.9
1912.0	12.2	36.5	65	9.7	1.42	5.02	19568	300.28	660.68	8.5	18.9
1913.0	7.4	36.8	65	9.6	1.58	5.15	20092	490.99	657.94	8.5	18.9
1914.0	6.2	37.6	65	9.6	1.65	5.31	20720	588.38	656.83	8.5	18.9
1915.0	7.6	39.9	65	9.7	1.61	5.44	21233	479.83	654.06	8.5	18.9
1916.0	13.4	41.6	65	9.6	1.45	5.52	21523	271.87	648.17	8.5	18.9
1917.0	9.8	42.0	65	9.7	1.56	5.62	21921	372.30	643.99	8.5	18.9
1918.0	6.9	40.7	65	9.7	1.66	5.77	22487	530.55	642.29	8.5	18.9
1919.0	7.7	39.6	65	9.7	1.61	5.90	22995	475.77	639.84	8.5	18.9
1920.0	10.0	36.3	65	9.7	1.49	6.00	23386	366.21	635.87	8.5	18.9
1921.0	5.6	37.3	65	9.6	1.68	6.18	24087	656.35	636.16	8.5	18.9
1922.0	4.6	37.8	65	9.6	1.75	6.40	24944	802.43	638.51	8.5	18.9
1923.0	5.4	39.7	65	9.7	1.72	6.58	25667	676.63	639.04	8.5	18.9
1924.0	7.9	39.4	65	9.6	1.60	6.71	26162	463.60	636.63	8.5	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1925.0	11.0	40.2	65	9.7	1.50	6.80	26515	330.71	632.49	8.5	18.9
1926.0	6.8	39.5	65	9.6	1.65	6.95	27089	537.66	631.22	8.5	18.9
1927.0	7.2	39.2	65	9.7	1.62	7.09	27632	508.24	629.60	8.5	18.9
1928.0	6.3	41.1	65	9.7	1.69	7.24	28248	577.22	628.92	8.5	18.9
1929.0	6.9	40.0	65	9.7	1.65	7.39	28815	530.55	627.66	8.5	18.9
1930.0	11.6	39.8	65	9.7	1.48	7.47	29152	315.49	623.70	8.5	18.9
1931.0	11.3	38.4	65	9.7	1.47	7.56	29499	324.62	619.96	8.5	18.9
1932.0	10.9	39.3	65	9.7	1.49	7.66	29856	334.77	616.43	8.5	18.9
1933.0	10.5	39.5	65	9.7	1.51	7.75	30229	348.97	613.17	8.5	18.9
1934.0	8.8	39.7	65	9.7	1.56	7.86	30670	412.88	610.75	8.5	18.9
1935.0	9.6	39.9	65	9.6	1.54	7.97	31077	381.43	608.02	8.5	18.9
1936.0	7.5	40.7	65	9.6	1.63	8.10	31598	487.95	606.60	8.5	18.9
1937.0	8.5	40.5	65	9.7	1.59	8.22	32058	431.14	604.56	8.5	18.9
1938.0	8.0	40.0	65	9.7	1.59	8.35	32546	456.50	602.86	8.5	18.9
1939.0	7.3	40.8	65	9.6	1.64	8.48	33077	497.08	601.65	8.5	18.9
1940.0	9.3	40.6	65	9.7	1.56	8.59	33496	392.59	599.30	8.5	18.9
1941.0	12.1	40.5	65	9.7	1.47	8.67	33818	301.29	595.99	8.5	18.9
1942.0	13.5	43.5	65	9.7	1.47	8.75	34107	270.86	592.41	8.5	18.9
1943.0	10.2	45.4	65	9.7	1.58	8.84	34489	358.10	589.86	8.5	18.9
1944.0	8.4	44.4	65	9.7	1.64	8.96	34953	434.18	588.19	8.5	18.9
1945.0	5.8	41.7	65	9.6	1.73	9.14	35629	633.01	588.66	8.5	18.9
1946.0	13.5	44.0	65	9.7	1.48	9.21	35918	270.86	585.31	8.5	18.9
1947.0	7.9	43.6	65	9.6	1.65	9.34	36410	460.56	584.01	8.5	18.9
1948.0	7.1	39.8	65	9.7	1.63	9.48	36957	512.29	583.27	8.5	18.9
1949.0	7.7	40.7	65	9.7	1.62	9.61	37466	476.79	582.19	8.5	18.9
1950.0	10.9	41.0	65	9.7	1.51	9.70	37824	334.77	579.68	8.5	18.9
1951.0	9.5	39.7	65	9.7	1.54	9.80	38235	384.47	577.73	8.5	18.9
1952.0	9.1	38.9	65	9.6	1.55	9.91	38662	400.71	575.98	8.5	18.9
1953.0	8.0	38.4	65	9.7	1.58	10.04	39151	457.51	574.81	8.5	18.9
1954.0	9.8	39.5	65	9.7	1.53	10.14	39551	374.33	572.86	8.5	18.9
1955.0	6.2	39.2	65	9.6	1.67	10.30	40179	588.38	573.01	8.5	18.9
1956.0	8.4	37.8	65	9.7	1.56	10.42	40644	435.20	571.70	8.5	18.9
1957.0	8.3	37.9	65	9.7	1.56	10.54	41113	439.25	570.45	8.5	18.9
1958.0	8.0	36.0	65	9.7	1.54	10.67	41600	456.50	569.38	8.5	18.9
1959.0	8.0	36.5	65	9.7	1.56	10.79	42090	458.53	568.36	8.5	18.9
1960.0	6.5	37.3	65	9.7	1.63	10.95	42695	566.06	568.34	8.5	18.9
1961.0	6.3	40.2	65	9.6	1.68	11.11	43312	578.23	568.43	8.5	18.9
1962.0	5.7	42.0	65	9.6	1.74	11.28	44002	646.20	569.13	8.5	18.9
1963.0	5.7	42.4	65	9.7	1.74	11.46	44687	641.13	569.77	8.5	18.9
1964.0	6.5	42.6	65	9.6	1.70	11.61	45289	564.03	569.72	8.5	18.9
1965.0	7.1	42.1	65	9.7	1.66	11.75	45836	512.29	569.22	8.5	18.9
1966.0	6.1	42.4	65	9.7	1.72	11.92	46472	595.48	569.44	8.5	18.9
1967.0	5.9	41.4	65	9.6	1.71	12.08	47129	614.75	569.83	8.5	18.9
1968.0	5.4	43.2	65	9.7	1.77	12.27	47847	672.91	570.72	8.5	18.9
1969.0	6.8	42.2	65	9.7	1.68	12.42	48424	539.68	570.45	8.5	18.9
1970.0	11.1	41.9	65	9.7	1.52	12.51	48776	329.69	568.43	8.5	18.9
1971.0	6.6	41.5	65	9.7	1.68	12.66	49366	552.87	568.30	8.5	18.9
1972.0	10.7	41.5	65	9.7	1.52	12.75	49729	339.84	566.41	8.5	18.9
1973.0	9.8	40.7	65	9.6	1.55	12.85	50129	374.33	564.83	8.5	18.9
1974.0	10.5	40.4	65	9.6	1.53	12.95	50502	348.97	563.08	8.5	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1975.0	11.8	40.4	65	9.6	1.49	13.03	50831	308.39	561.02	8.5	18.9
1976.0	11.4	40.1	65	9.6	1.50	13.12	51173	320.56	559.10	8.5	18.9
1977.0	8.0	40.1	65	9.6	1.62	13.25	51662	457.51	558.29	8.5	19.0
1978.0	5.3	40.9	65	9.6	1.76	13.43	52391	682.72	559.27	8.5	19.0
1979.0	5.5	41.4	65	9.6	1.76	13.62	53103	666.49	560.11	8.5	19.0
1980.0	6.1	42.3	65	9.6	1.73	13.78	53741	597.51	560.40	8.5	19.0
1981.0	5.2	42.7	65	9.6	1.79	13.97	54496	707.07	561.53	8.5	19.0
1982.0	7.1	43.0	65	9.6	1.69	14.11	55045	514.32	561.17	8.5	19.0
1983.0	14.2	43.3	65	9.6	1.47	14.18	55319	256.65	558.86	8.5	19.0
1984.0	11.8	43.5	65	9.6	1.53	14.27	55650	309.41	556.98	8.5	19.0
1985.0	10.8	42.6	65	9.6	1.55	14.36	56009	336.80	555.34	8.5	19.0
1986.0	12.7	41.9	65	9.6	1.49	14.44	56317	288.10	553.36	8.5	19.0
1987.0	11.5	42.0	65	9.6	1.52	14.53	56657	318.54	551.63	8.5	19.0
1988.0	7.2	41.8	65	9.6	1.67	14.67	57199	507.22	551.30	8.5	19.0
1989.0	9.8	41.6	65	9.6	1.57	14.77	57598	374.33	550.02	8.5	19.0
1990.0	6.6	40.5	65	9.6	1.69	14.92	58193	556.93	550.07	8.5	19.0
1991.0	7.0	41.6	65	9.6	1.68	15.06	58751	522.44	549.87	8.5	19.0
1992.0	16.7	41.0	65	9.6	1.39	15.12	58984	218.11	547.52	9.6	18.8
1993.0	128.6	38.1	65	9.6	0.71	15.13	59014	28.40	543.86	9.6	18.8
1994.0	38.3	56.4	65	9.6	1.24	15.16	59116	95.36	540.72	9.6	18.8
1995.0	90.0	36.4	65	9.6	0.81	15.17	59160	40.58	537.25	9.6	18.8
1996.0	11.7	41.4	65	9.6	1.51	15.25	59493	312.45	535.69	9.6	18.8
1997.0	5.2	43.4	65	9.6	1.80	15.45	60241	699.97	536.82	9.6	18.8
1998.0	8.3	45.5	65	9.6	1.67	15.57	60711	440.27	536.16	9.6	18.8
1999.0	7.5	41.4	65	9.6	1.66	15.70	61233	488.96	535.84	9.6	18.8
2000.0	4.6	42.6	65	9.6	1.83	15.92	62088	800.40	537.62	9.6	18.8
2001.0	15.9	43.5	65	9.6	1.43	15.98	62333	229.26	535.56	9.6	18.8
2002.0	8.6	44.3	65	9.6	1.64	16.10	62787	425.05	534.83	9.6	18.8
2003.0	7.5	42.3	65	9.6	1.67	16.23	63310	489.98	534.54	9.6	18.8
2004.0	9.4	41.5	65	9.6	1.58	16.34	63724	387.52	533.57	9.6	18.8
2005.0	8.6	43.8	65	9.6	1.64	16.46	64179	426.07	532.88	9.6	18.8
2006.0	19.4	45.1	65	9.6	1.38	16.51	64380	188.69	530.65	9.6	18.8
2007.0	109.1	44.1	65	9.6	0.80	16.52	64416	33.48	527.46	9.6	18.8
2008.0	72.0	36.3	65	9.6	0.88	16.53	64470	50.72	524.43	9.6	18.8
2009.0	99.0	36.0	65	9.6	0.77	16.54	64509	36.89	521.34	9.6	18.8
2010.0	64.9	36.2	65	9.6	0.91	16.56	64570	56.30	518.41	9.5	18.9
2011.0	26.7	43.6	65	9.6	1.26	16.59	64716	136.95	516.03	9.5	18.9
2012.0	6.7	43.8	65	9.6	1.72	16.74	65298	544.76	516.20	9.5	18.9
2013.0	48.0	42.5	65	9.6	1.06	16.76	65379	76.08	513.49	9.5	18.9
2014.0	90.0	42.4	65	9.6	0.85	16.77	65422	40.58	510.58	9.5	18.9
2015.0	11.3	42.1	65	9.6	1.53	16.86	65769	324.62	509.45	9.5	18.9
2016.0	16.0	40.0	65	9.6	1.39	16.93	66013	228.25	507.74	9.5	18.9
2017.0	33.8	37.3	65	9.6	1.13	16.96	66128	108.21	505.33	9.5	18.9
2018.0	11.9	43.5	65	9.6	1.53	17.04	66455	306.36	504.14	9.5	18.9
2019.0	24.3	43.7	65	9.6	1.29	17.08	66616	150.14	502.03	9.5	18.9
2020.0	9.4	45.1	65	9.6	1.63	17.19	67033	390.56	501.37	9.5	18.9
2021.0	17.8	43.2	65	9.6	1.39	17.24	67252	204.92	499.63	9.5	18.9
2022.0	32.4	42.4	65	9.6	1.19	17.27	67372	112.60	497.36	9.5	18.9
2023.0	67.9	43.2	65	9.6	0.95	17.29	67429	53.77	494.78	9.5	18.9
2024.0	45.0	43.0	65	9.6	1.08	17.31	67516	81.16	492.39	9.5	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2076.0	28.1	45.0	65	9.6	1.26	20.25	78975	129.85	426.25	9.3	19.0
2077.0	5.6	45.4	65	9.6	1.80	20.43	79672	653.30	427.26	9.3	19.0
2078.0	11.5	45.2	65	9.6	1.56	20.52	80010	316.51	426.77	9.3	19.0
2079.0	29.5	45.0	65	9.6	1.24	20.55	80142	123.76	425.44	9.3	19.0
2080.0	31.9	44.4	65	9.6	1.21	20.58	80265	114.63	424.08	9.3	19.0
2081.0	34.3	43.1	65	9.6	1.17	20.61	80379	106.52	422.70	9.3	19.0
2082.0	14.5	45.0	65	9.6	1.48	20.68	80647	251.58	421.96	9.3	19.0
2083.0	26.3	43.5	65	9.6	1.27	20.72	80796	138.98	420.74	9.3	19.0
2084.0	21.7	43.0	65	9.6	1.32	20.76	80976	168.40	419.66	9.3	19.0
2085.0	17.0	44.6	65	9.6	1.42	20.82	81205	215.06	418.78	9.3	19.0
2086.0	33.0	44.5	65	9.6	1.20	20.85	81323	110.57	417.47	9.3	19.0
2087.0	7.5	44.9	65	9.6	1.70	20.99	81843	486.93	417.77	9.3	19.0
2088.0	7.0	45.8	65	9.6	1.73	21.13	82402	523.45	418.21	9.3	19.0
2089.0	5.0	45.4	65	9.6	1.84	21.33	83184	732.43	419.53	9.3	19.0
2090.0	5.2	45.4	65	9.6	1.83	21.52	83940	707.07	420.74	9.3	19.0
2091.0	6.4	45.0	65	9.6	1.75	21.68	84552	573.16	421.37	9.3	19.0
2092.0	11.0	46.0	65	9.6	1.57	21.77	84906	332.00	421.00	9.3	19.0
2093.0	22.5	46.4	65	9.6	1.34	21.82	85079	162.31	419.93	9.3	19.0
2094.0	6.9	45.4	65	9.6	1.73	21.96	85642	526.50	420.37	9.3	19.0
2095.0	4.8	45.3	65	9.6	1.86	22.17	86462	768.44	421.80	9.3	19.0
2096.0	5.4	45.9	65	9.6	1.82	22.35	87180	671.56	422.82	9.3	19.0
2097.0	4.5	45.8	65	9.6	1.88	22.58	88045	810.54	424.39	9.3	19.0
2098.0	4.9	45.9	65	9.6	1.85	22.78	88838	742.57	425.68	9.3	19.0
2099.0	8.7	45.7	65	9.6	1.66	22.89	89289	422.01	425.67	9.3	19.0
2100.0	33.0	44.4	65	9.6	1.20	22.92	89407	110.57	424.40	9.2	19.0
2101.0	14.3	45.1	65	9.6	1.48	22.99	89679	254.63	423.72	9.2	19.0
2102.0	16.1	44.6	65	9.6	1.44	23.06	89920	226.22	422.93	9.2	19.0
2103.0	19.3	42.4	65	9.6	1.36	23.11	90123	189.70	422.01	9.2	19.0
2104.0	7.7	43.6	65	9.6	1.67	23.24	90632	476.79	422.23	9.2	19.0
2105.0	9.5	43.5	65	9.6	1.60	23.34	91044	385.49	422.08	9.2	19.0
2106.0	28.8	42.9	65	9.6	1.23	23.38	91179	126.81	420.92	9.2	19.0
2107.0	34.3	41.9	65	9.6	1.16	23.41	91293	106.52	419.69	9.2	19.0
2108.0	21.1	43.1	65	9.6	1.33	23.46	91478	173.47	418.74	9.2	19.0
2109.0	33.0	41.9	65	9.6	1.17	23.49	91596	110.57	417.54	9.2	19.0
2110.0	12.9	44.2	65	9.6	1.51	23.56	91900	284.04	417.02	9.2	19.0
2111.0	13.0	44.6	65	9.6	1.51	23.64	92200	281.00	416.50	9.2	19.0
2112.0	14.0	44.0	65	9.6	1.47	23.71	92478	260.86	415.90	9.2	19.0
2113.0	10.8	44.7	65	9.6	1.57	23.80	92838	336.80	415.60	9.2	19.0
2114.0	42.4	44.2	65	9.6	1.11	23.83	92930	86.23	414.35	9.2	19.0
2115.0	25.4	43.9	65	9.6	1.28	23.87	93084	144.05	413.33	9.2	19.0
2116.0	24.8	44.1	65	9.6	1.29	23.91	93241	147.09	412.32	9.2	19.0
2117.0	27.7	44.3	65	9.6	1.25	23.94	93382	131.88	411.27	9.2	19.0
2118.0	26.0	44.3	65	9.5	1.28	23.98	93532	140.46	410.25	9.2	19.0
2119.0	20.9	44.3	65	9.6	1.35	24.03	93719	174.99	409.37	9.2	19.1
2120.0	11.0	44.3	65	9.6	1.55	24.12	94073	332.00	409.09	9.2	19.1
2121.0	8.8	44.6	65	9.6	1.64	24.23	94516	414.40	409.11	9.2	19.1
2122.0	9.1	44.2	65	9.6	1.63	24.34	94945	401.72	409.08	9.2	19.1
2123.0	8.4	45.2	65	9.6	1.66	24.46	95411	436.21	409.18	9.2	19.1
2124.0	8.0	44.8	65	9.6	1.67	24.59	95896	454.47	409.34	9.2	19.1
2125.0	20.8	44.3	65	9.6	1.35	24.64	96083	175.50	408.49	9.2	19.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2025.0	23.8	43.4	65	9.6	1.30	17.35	67679	153.18	490.44	9.5	18.9
2026.0	21.2	40.2	65	9.6	1.30	17.40	67864	172.46	488.62	9.5	18.9
2027.0	6.0	42.5	65	9.6	1.74	17.57	68509	604.61	489.28	9.5	18.9
2028.0	6.6	44.6	65	9.6	1.74	17.72	69104	556.93	489.66	9.5	18.9
2029.0	42.4	43.6	65	9.6	1.11	17.74	69196	86.23	487.40	9.5	18.9
2030.0	57.1	43.1	65	9.6	1.00	17.76	69264	63.91	485.03	9.5	18.9
2031.0	66.7	42.2	65	9.6	0.95	17.78	69323	54.78	482.64	9.5	18.9
2032.0	52.9	45.8	65	9.6	1.05	17.79	69397	68.98	480.35	9.5	18.9
2033.0	17.2	45.7	65	9.6	1.43	17.85	69623	212.02	478.88	9.5	18.9
2034.0	48.0	42.8	65	9.6	1.06	17.87	69704	76.08	476.67	9.5	18.9
2035.0	44.4	43.6	65	9.6	1.09	17.90	69792	82.17	474.53	9.5	18.9
2036.0	46.2	40.8	65	9.6	1.06	17.92	69876	79.13	472.39	9.5	18.9
2037.0	31.0	41.8	65	9.6	1.19	17.95	70002	117.68	470.48	9.5	18.9
2038.0	33.0	35.8	65	9.6	1.12	17.98	70120	110.57	468.56	9.5	18.9
2039.0	43.4	36.2	65	9.6	1.04	18.00	70210	84.20	466.51	9.5	18.9
2040.0	22.6	40.0	65	9.6	1.28	18.05	70382	161.30	464.90	9.4	18.9
2041.0	26.3	38.9	65	9.6	1.22	18.08	70531	138.98	463.18	9.4	18.9
2042.0	61.0	36.8	65	9.6	0.94	18.10	70595	59.85	461.07	9.4	18.9
2043.0	10.3	40.1	65	9.6	1.54	18.20	70973	354.04	460.51	9.4	18.9
2044.0	36.7	40.5	65	9.6	1.13	18.23	71079	99.42	458.64	9.4	18.9
2045.0	50.7	38.4	65	9.6	1.01	18.25	71156	72.03	456.64	9.4	18.9
2046.0	52.0	40.0	65	9.6	1.01	18.26	71231	70.23	454.66	9.4	18.9
2047.0	53.1	41.1	65	9.5	1.01	18.28	71304	68.76	452.69	9.4	18.9
2048.0	12.9	41.9	65	9.5	1.49	18.36	71605	282.02	451.82	9.4	18.9
2049.0	9.0	43.4	65	9.5	1.63	18.47	72039	405.78	451.59	9.4	18.9
2050.0	27.1	43.4	65	9.5	1.26	18.51	72183	134.92	450.00	9.4	18.9
2051.0	46.8	43.7	65	9.5	1.08	18.53	72266	78.11	448.14	9.4	18.9
2052.0	36.7	43.3	65	9.5	1.16	18.56	72372	99.42	446.40	9.4	18.9
2053.0	5.0	45.2	65	9.5	1.85	18.76	73152	730.40	447.81	9.4	18.9
2055.0	6.1	46.4	65	9.5	1.80	19.08	74431	598.52	449.29	9.4	18.9
2056.0	7.3	44.4	65	9.5	1.71	19.22	74965	500.12	449.54	9.4	18.9
2057.0	41.9	43.6	65	9.5	1.12	19.25	75058	87.24	447.78	9.4	18.9
2058.0	70.6	43.7	65	9.5	0.94	19.26	75113	51.74	445.86	9.4	18.9
2059.0	40.9	40.8	65	9.5	1.10	19.28	75209	89.27	444.15	9.4	18.9
2060.0	9.9	44.7	65	9.5	1.60	19.38	75601	367.23	443.78	9.4	18.9
2061.0	31.6	44.8	65	9.6	1.22	19.42	75724	115.65	442.22	9.4	18.9
2062.0	7.0	44.8	65	9.6	1.72	19.56	76283	523.45	442.60	9.4	18.9
2063.0	11.0	44.1	65	9.6	1.56	19.65	76636	330.71	442.07	9.4	18.9
2064.0	28.1	42.8	65	9.6	1.24	19.69	76775	129.85	440.61	9.4	18.9
2065.0	25.0	40.9	65	9.6	1.26	19.73	76931	146.08	439.23	9.4	18.9
2066.0	25.4	42.2	65	9.6	1.26	19.77	77085	144.05	437.86	9.4	19.0
2067.0	11.8	43.5	65	9.6	1.53	19.85	77414	308.39	437.26	9.4	19.0
2068.0	43.4	42.4	65	9.6	1.09	19.87	77504	84.20	435.63	9.4	19.0
2069.0	42.9	43.1	65	9.6	1.10	19.90	77595	85.21	434.02	9.4	19.0
2070.0	35.3	43.1	65	9.6	1.16	19.92	77706	103.47	432.51	9.3	19.0
2071.0	17.8	44.0	65	9.6	1.40	19.98	77925	204.92	431.47	9.3	19.0
2072.0	8.1	44.6	65	9.6	1.67	20.10	78409	453.46	431.57	9.3	19.0
2073.0	18.2	44.9	65	9.6	1.40	20.16	78623	200.86	430.53	9.3	19.0
2074.0	49.1	44.7	65	9.5	1.07	20.18	78703	74.39	428.94	9.3	19.0
2075.0	29.3	44.2	65	9.6	1.24	20.21	78836	124.78	427.58	9.3	19.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2126.0	25.2	43.5	65	9.6	1.28	24.68	96238	145.07	407.53	9.2	19.1
2127.0	15.0	43.0	65	9.6	1.44	24.74	96498	243.47	406.94	9.2	19.1
2128.0	13.4	44.7	65	9.6	1.50	24.82	96790	272.89	406.45	9.2	19.1
2129.0	5.5	44.9	65	9.6	1.80	25.00	97496	661.42	407.37	9.2	19.1
2130.0	20.6	43.7	65	9.6	1.35	25.05	97686	177.53	406.55	9.1	19.1
2131.0	11.8	44.1	65	9.6	1.54	25.13	98017	310.42	406.20	9.1	19.1
2132.0	19.1	42.2	65	9.5	1.36	25.18	98221	191.05	405.44	9.1	19.1
2133.0	21.0	40.0	65	9.6	1.30	25.23	98407	173.90	404.62	9.1	19.1
2134.0	15.0	40.0	65	9.6	1.41	25.30	98667	243.47	404.05	9.1	19.1
2135.0	22.5	40.6	65	9.6	1.29	25.34	98840	162.31	403.19	9.1	19.1
2136.0	11.8	41.5	65	9.6	1.51	25.43	99171	309.41	402.87	9.1	19.1
2137.0	15.0	40.6	65	9.6	1.42	25.50	99431	243.47	402.31	9.1	19.1
2138.0	17.3	39.9	65	9.6	1.37	25.55	99656	211.00	401.64	9.1	19.1
2139.0	21.4	40.7	65	9.6	1.30	25.60	99838	170.43	400.84	9.1	19.1
2140.0	6.3	43.7	65	9.6	1.74	25.76	100453	576.20	401.44	9.1	19.1
2140.1	2.3	43.4	65	9.6	2.07	25.80	100622	1583	402	9.1	19.1

BIT NUMBER	5	TADC CODE	517	INTERVAL	2140.1- 2400.6
ITC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	8.0	BIT RUN	260.5
TOTAL HOURS	50.21	TOTAL TURNS	195837	CONDITION	T6 B5 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2141.0	5.1	36.3	65	10.4	1.57	0.18	691	719	42648	9.1	19.1
2142.0	7.1	45.6	65	10.4	1.58	0.32	1240	514	20472	9.1	19.1
2143.0	3.7	45.5	65	10.4	1.79	0.59	2305	997	13757	9.1	19.1
2144.0	3.4	45.3	65	10.4	1.81	0.89	3455	1076	10505	9.1	19.1
2145.0	3.5	45.7	65	10.4	1.80	1.17	4562	1037	8573	9.1	19.1
2146.0	3.3	45.4	65	10.4	1.82	1.47	5746	1109	7308	9.1	19.1
2147.0	3.8	45.1	65	10.4	1.77	1.74	6783	971	6389	9.1	19.1
2148.0	6.2	46.4	65	10.4	1.64	1.90	7412	589	5655	9.1	19.1
2149.0	19.6	45.0	65	10.4	1.27	1.95	7611	187	5041	9.1	19.1
2151.0	60.0	46.4	65	10.4	0.93	1.98	7741	61	4127	9.0	19.1
2152.0	18.6	46.1	65	10.4	1.29	2.04	7952	197	3797	9.0	19.1
2153.0	14.6	46.0	65	10.4	1.36	2.11	8219	251	3522	9.0	19.1
2154.0	19.5	46.5	65	10.4	1.28	2.16	8420	188	3282	9.0	19.1
2155.0	17.1	46.5	65	10.4	1.32	2.22	8648	214	3076	9.0	19.1
2156.0	17.8	46.7	65	10.4	1.31	2.27	8867	205	2896	9.0	19.1
2157.0	12.1	46.8	65	10.4	1.43	2.36	9189	301	2742	9.0	19.1
2158.0	4.6	47.8	65	10.4	1.74	2.57	10028	786	2633	9.0	19.1
2159.0	16.0	47.3	65	10.4	1.35	2.63	10272	228	2506	9.0	19.1
2160.0	20.5	47.2	65	10.4	1.27	2.68	10463	179	2389	9.0	19.1
2161.0	17.6	41.2	65	10.4	1.26	2.74	10685	208	2284	9.0	19.1
2162.0	20.6	43.1	65	10.4	1.23	2.79	10874	178	2188	9.0	19.1
2163.0	19.8	43.4	65	10.4	1.25	2.84	11072	185	2101	9.0	19.1
2164.0	12.4	43.6	65	10.4	1.39	2.92	11387	295	2025	9.0	19.1
2165.0	19.0	43.5	65	10.4	1.26	2.97	11592	192	1951	9.0	19.1
2166.0	9.4	44.8	65	10.4	1.49	3.08	12008	390	1891	9.0	19.1
2167.0	17.9	46.0	65	10.4	1.30	3.13	12225	204	1828	9.0	19.1
2168.0	13.7	44.3	65	10.4	1.37	3.21	12510	267	1772	9.0	19.1
2169.0	14.9	44.0	65	10.4	1.34	3.27	12771	244	1720	9.0	19.1
2171.0	7.4	43.7	65	10.4	1.55	3.55	13827	494	1640	9.0	19.1
2172.0	4.8	44.9	65	10.4	1.70	3.75	14639	761	1613	9.0	19.2
2173.0	4.9	45.7	65	10.4	1.70	3.96	15430	741	1586	9.0	19.2
2174.0	13.8	50.4	65	10.4	1.42	4.03	15712	264	1547	9.0	19.2
2175.0	5.2	43.6	65	10.4	1.65	4.22	16455	696	1523	9.0	19.2
2176.0	7.1	42.9	65	10.4	1.55	4.36	17006	516	1495	9.0	19.2
2177.0	11.5	43.2	65	10.4	1.41	4.45	17344	317	1463	9.0	19.2
2178.0	5.4	42.6	65	10.4	1.63	4.63	18062	672	1442	9.0	19.2
2179.0	6.9	42.8	65	10.4	1.56	4.78	18626	529	1418	9.0	19.2
2180.0	18.4	40.9	65	10.4	1.25	4.83	18838	199	1388	9.0	19.2
2181.0	17.4	44.2	65	10.4	1.29	4.89	19063	210	1359	8.9	19.2
2182.0	7.1	44.7	65	10.4	1.57	5.03	19612	514	1339	8.9	19.2
2183.0	14.7	45.6	65	10.4	1.36	5.10	19877	249	1314	8.9	19.2
2184.0	12.9	45.7	65	10.4	1.40	5.17	20181	284	1290	8.9	19.2
2185.0	17.0	45.5	65	10.4	1.31	5.23	20410	215	1266	8.9	19.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2186.0	9.4	46.3	65	10.4	1.50	5.34	20825	389	1247	8.9	19.2
2187.0	9.6	47.3	65	10.4	1.51	5.44	21231	380	1229	8.9	19.2
2188.0	15.4	47.4	65	10.4	1.36	5.51	21485	237	1208	8.9	19.2
2189.0	6.9	48.8	65	10.4	1.63	5.65	22047	526	1194	8.9	19.2
2190.0	5.6	46.1	65	10.4	1.66	5.83	22746	654	1183	8.9	19.2
2191.0	3.9	40.6	65	10.4	1.71	6.09	23752	942	1178	8.9	19.2
2192.0	12.2	42.9	65	10.4	1.39	6.17	24073	300	1161	8.9	19.2
2193.0	14.8	41.0	65	10.4	1.31	6.24	24336	247	1144	8.9	19.2
2194.0	7.1	41.8	65	10.4	1.54	6.38	24889	517	1133	8.9	19.2
2195.0	5.4	43.5	65	10.4	1.64	6.57	25611	677	1124	8.9	19.2
2196.0	4.3	43.4	65	10.4	1.71	6.80	26519	850	1119	8.9	19.2
2197.0	5.5	45.7	65	10.4	1.66	6.98	27228	663	1111	8.9	19.2
2198.0	11.1	46.0	65	10.4	1.45	7.07	27580	330	1098	8.9	19.2
2199.0	17.3	47.2	65	10.4	1.32	7.13	27805	211	1083	8.9	19.2
2200.0	12.2	41.6	65	10.4	1.37	7.21	28124	298	1070	8.9	19.2
2201.0	4.0	40.0	65	10.4	1.69	7.46	29099	913	1067	8.9	19.2
2202.0	5.2	41.9	65	10.4	1.64	7.65	29850	704	1061	8.9	19.2
2203.0	4.3	43.0	65	10.4	1.70	7.88	30750	842	1058	8.9	19.2
2204.0	3.9	43.5	65	10.4	1.74	8.14	31742	929	1056	8.9	19.2
2205.0	5.2	41.9	65	10.4	1.64	8.33	32494	704	1050	8.9	19.2
2206.0	4.4	41.5	65	10.4	1.68	8.56	33377	827	1047	8.9	19.2
2207.0	3.8	40.5	65	10.4	1.71	8.82	34395	954	1045	8.9	19.2
2208.0	8.8	41.4	65	10.4	1.47	8.93	34837	414	1036	8.9	19.2
2209.0	2.0	44.7	65	10.4	1.96	9.42	36754	1796	1047	8.9	19.2
2210.0	3.0	44.8	65	10.4	1.83	9.75	38038	1202	1049	8.9	19.2
2211.0	3.3	44.5	65	10.5	1.80	10.06	39229	1115	1050	8.8	19.2
2212.0	4.1	45.2	65	10.5	1.74	10.30	40185	896	1048	8.8	19.2
2213.0	12.5	45.0	65	10.5	1.40	10.38	40498	293	1038	8.8	19.2
2214.0	12.9	45.9	65	10.5	1.39	10.46	40800	282	1028	8.8	19.2
2215.0	11.0	46.7	65	10.5	1.45	10.55	41155	333	1018	8.8	19.2
2216.0	12.9	45.7	65	10.5	1.39	10.63	41456	282	1009	8.8	19.2
2218.0	30.0	39.8	65	10.5	1.09	10.70	41716	121.73	985.87	8.8	19.2
2219.0	4.4	50.2	65	10.5	1.78	10.93	42613	839.45	984.02	8.8	19.2
2220.0	10.2	49.1	65	10.5	1.50	11.02	42995	358.10	976.18	8.8	19.2
2221.0	12.3	48.0	65	10.5	1.43	11.11	43311	296.22	967.78	8.8	19.2
2222.0	7.7	47.4	65	10.5	1.57	11.23	43815	471.72	961.72	8.8	19.2
2223.0	9.5	47.4	65	10.5	1.51	11.34	44226	384.47	954.76	8.8	19.2
2224.0	10.4	46.7	65	10.5	1.47	11.44	44600	351.00	947.56	8.8	19.3
2225.0	12.5	47.3	65	10.5	1.42	11.52	44914	293.17	939.85	8.8	19.3
2226.0	6.8	48.3	65	10.5	1.62	11.66	45491	540.70	935.21	8.8	19.3
2227.0	10.4	46.4	65	10.5	1.47	11.76	45866	351.00	928.48	8.8	19.3
2228.0	16.6	44.5	65	10.5	1.30	11.82	46101	220.13	920.42	8.8	19.3
2229.0	12.3	48.5	65	10.5	1.43	11.90	46417	296.22	913.40	8.8	19.3
2230.0	10.2	48.2	65	10.5	1.49	12.00	46799	357.08	907.22	8.8	19.3
2231.0	9.5	47.9	65	10.5	1.51	12.10	47208	383.46	901.45	8.8	19.3
2232.0	11.8	47.6	65	10.5	1.44	12.19	47540	310.42	895.02	8.8	19.3
2233.0	11.3	48.9	65	10.5	1.47	12.28	47885	323.61	888.87	8.8	19.3
2234.0	11.4	50.5	65	10.5	1.48	12.37	48227	320.56	882.82	8.8	19.3
2235.0	10.2	50.2	65	10.5	1.51	12.46	48611	359.11	877.30	8.8	19.3
2236.0	5.9	49.9	65	10.5	1.68	12.63	49275	621.85	874.64	8.8	19.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2237.0	5.9	50.4	65	10.5	1.69	12.80	49933	615.77	871.97	8.8	19.3
2238.0	27.7	43.2	65	10.5	1.14	12.84	50073	131.88	864.41	8.8	19.3
2239.0	9.3	48.5	65	10.5	1.52	12.95	50493	392.59	859.63	8.8	19.3
2240.0	10.0	47.6	65	10.5	1.49	13.05	50884	366.21	854.70	8.8	19.3
2241.0	9.2	48.2	65	10.5	1.52	13.16	51306	395.63	850.15	8.7	19.3
2242.0	10.3	48.0	65	10.5	1.49	13.25	51685	355.06	845.29	8.7	19.3
2243.0	10.4	48.8	65	10.5	1.49	13.35	52061	352.01	840.49	8.7	19.3
2244.0	9.2	48.3	65	10.5	1.52	13.46	52484	395.63	836.21	8.7	19.3
2245.0	7.4	48.8	65	10.5	1.60	13.59	53014	496.06	832.97	8.7	19.3
2246.0	9.1	48.8	65	10.5	1.53	13.70	53442	400.71	828.89	8.7	19.3
2247.0	6.8	48.8	65	10.5	1.63	13.85	54016	537.66	826.16	8.7	19.3
2248.0	4.0	48.9	65	10.5	1.79	14.10	54991	913.00	826.97	8.7	19.3
2249.0	4.5	48.5	65	10.5	1.75	14.32	55851	805.47	826.77	8.7	19.3
2250.0	7.9	48.3	65	10.5	1.57	14.45	56345	462.59	823.46	8.7	19.3
2251.0	8.9	47.7	65	10.5	1.53	14.56	56784	410.85	819.74	8.7	19.3
2252.0	10.3	47.9	65	10.5	1.48	14.66	57161	353.03	815.57	8.7	19.3
2253.0	7.2	47.7	65	10.5	1.59	14.80	57702	507.22	812.83	8.7	19.3
2254.0	7.9	46.8	65	10.5	1.56	14.92	58195	461.57	809.75	8.7	19.3
2255.0	7.2	46.1	65	10.5	1.58	15.06	58739	509.25	807.14	8.7	19.3
2256.0	8.0	46.9	65	10.5	1.55	15.19	59227	456.50	804.11	8.7	19.3
2257.0	8.8	47.8	65	10.5	1.54	15.30	59672	416.94	800.80	8.7	19.3
2258.0	5.3	48.6	65	10.5	1.70	15.49	60413	693.88	799.89	8.7	19.3
2259.0	4.3	48.7	65	10.5	1.77	15.72	61320	849.09	800.30	8.7	19.3
2260.0	8.4	48.0	65	10.5	1.55	15.84	61783	434.18	797.25	8.7	19.3
2261.0	5.5	48.0	65	10.5	1.69	16.03	62498	669.53	796.19	8.7	19.3
2262.0	9.3	48.6	65	10.5	1.52	16.13	62916	391.58	792.88	8.7	19.3
2263.0	4.0	48.2	65	10.5	1.78	16.38	63882	903.87	793.78	8.7	19.3
2264.0	5.1	48.7	65	10.5	1.72	16.58	64652	721.27	793.19	8.7	19.3
2265.0	3.3	45.4	65	10.5	1.81	16.88	65822	1096	796	8.7	19.3
2266.0	4.5	45.2	65	10.5	1.71	17.10	66689	811.56	795.74	8.7	19.3
2267.0	6.2	46.8	65	10.5	1.63	17.26	67316	587.36	794.10	8.7	19.3
2268.0	4.2	44.4	65	10.5	1.72	17.50	68247	872.42	794.71	8.7	19.3
2269.0	3.9	45.2	65	10.5	1.76	17.76	69245	934.30	795.79	8.7	19.3
2270.0	4.5	45.5	65	10.5	1.72	17.98	70118	817.64	795.96	8.7	19.3
2271.0	7.6	45.7	65	10.5	1.56	18.11	70632	480.85	793.56	8.6	19.3
2272.0	6.4	47.9	65	10.5	1.63	18.27	71242	571.13	791.87	8.6	19.3
2273.0	5.2	49.4	65	10.5	1.72	18.46	71993	703.01	791.20	8.6	19.3
2274.0	2.8	51.0	65	10.5	1.93	18.82	73384	1303	795	8.6	19.3
2275.0	4.0	50.8	65	10.5	1.81	19.06	74349	903.87	795.83	8.6	19.3
2276.0	12.0	43.3	65	10.5	1.39	19.15	74674	304.33	792.21	8.6	19.4
2277.0	7.2	46.7	65	10.5	1.58	19.29	75213	505.19	790.11	8.6	19.4
2278.0	4.5	45.0	65	10.5	1.71	19.51	76080	811.56	790.27	8.6	19.4
2279.0	8.1	42.6	65	10.5	1.50	19.63	76560	449.40	787.81	8.6	19.4
2280.0	4.7	48.0	65	10.5	1.73	19.84	77392	779.09	787.75	8.6	19.4
2281.0	2.3	50.9	65	10.5	1.99	20.28	79083	1584	793	8.6	19.4
2282.0	2.2	49.6	65	10.5	1.99	20.72	80825	1631	799	8.6	19.4
2283.0	4.6	51.2	65	10.5	1.77	20.94	81669	790.25	799.24	8.6	19.4
2284.0	1.9	52.5	65	10.5	2.08	21.48	83760	1958	807	8.6	19.4
2285.0	40.0	33.2	65	10.5	0.95	21.50	83857	91.30	802.35	8.6	19.4
2286.0	4.9	46.0	65	10.5	1.70	21.71	84660	751.70	802.00	8.6	19.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2287.0	2.6	48.5	65	10.5	1.92	22.09	86148	1394	806	8.6	19.4
2288.0	2.7	49.2	65	10.5	1.92	22.46	87608	1366	810	8.6	19.4
2289.0	2.9	52.8	65	10.5	1.93	22.80	88933	1241	813	8.6	19.4
2290.0	2.4	51.2	65	10.5	1.98	23.22	90566	1530	817	8.6	19.4
2291.0	2.1	49.6	65	10.5	1.99	23.69	92408	1725	824	8.6	19.4
2292.0	2.4	51.0	65	10.5	1.97	24.11	94022	1512	828	8.6	19.4
2293.0	2.7	51.1	65	10.5	1.93	24.48	95459	1345	831	8.6	19.4
2294.0	2.2	51.2	65	10.5	2.00	24.93	97214	1643	837	8.6	19.4
2295.0	2.9	52.6	65	10.5	1.93	25.27	98553	1254	839	8.6	19.4
2296.0	3.4	48.9	65	10.5	1.84	25.56	99702	1076	841	8.6	19.4
2297.0	3.5	48.7	65	10.5	1.82	25.85	100805	1033	842	8.6	19.4
2298.0	2.6	51.1	65	10.5	1.95	26.23	102291	1392	846	8.6	19.4
2299.0	2.6	52.1	65	10.5	1.96	26.61	103775	1390	849	8.6	19.4
2300.0	2.7	53.1	65	10.5	1.96	26.98	105234	1365	852	8.6	19.4
2301.0	2.1	53.1	65	10.5	2.04	27.46	107103	1751	858	8.6	19.4
2302.0	2.8	52.0	65	10.5	1.94	27.82	108497	1305	861	8.6	19.4
2303.0	4.5	51.7	65	10.5	1.78	28.04	109357	805.47	860.27	8.6	19.4
2304.0	5.8	52.9	65	10.5	1.71	28.21	110024	624.90	858.84	8.6	19.4
2305.0	10.3	51.1	65	10.5	1.51	28.31	110402	354.04	855.78	8.6	19.4
2306.0	11.8	53.0	65	10.5	1.49	28.39	110734	310.42	852.49	8.6	19.4
2307.0	3.9	52.6	65	10.5	1.83	28.65	111723	926.19	852.93	8.6	19.4
2308.0	4.8	48.6	65	10.5	1.72	28.86	112536	761.85	852.39	8.6	19.4
2309.0	3.1	47.3	65	10.5	1.85	29.18	113802	1185	854	8.6	19.4
2310.0	3.3	49.1	65	10.5	1.84	29.48	114969	1094	856	8.6	19.4
2311.0	2.9	47.8	65	10.5	1.88	29.83	116329	1273	858	8.6	19.4
2312.0	2.3	46.5	65	10.5	1.93	30.26	118026	1589	862	8.6	19.4
2313.0	3.0	46.2	65	10.5	1.84	30.60	119332	1223	865	8.6	19.4
2314.0	2.7	45.8	65	10.5	1.87	30.97	120772	1348	867	8.6	19.4
2315.0	2.3	47.2	65	10.5	1.94	31.41	122502	1620	872	8.6	19.4
2316.0	2.5	48.6	65	10.5	1.93	31.82	124085	1482	875	8.6	19.4
2317.0	3.3	48.9	65	10.5	1.85	32.12	125276	1116	876	8.6	19.4
2318.0	3.4	48.3	65	10.5	1.83	32.41	126412	1063	878	8.6	19.4
2319.0	3.1	50.1	65	10.5	1.88	32.74	127679	1187	879	8.6	19.4
2320.0	2.0	49.5	65	10.5	2.01	33.24	129627	1824	884	8.6	19.4
2321.0	2.9	49.1	65	10.5	1.89	33.58	130979	1266	887	8.6	19.4
2322.0	2.7	49.2	65	10.5	1.91	33.95	132407	1337	889	8.6	19.4
2323.0	3.4	48.3	65	10.5	1.83	34.25	133557	1077	890	8.6	19.4
2324.0	5.9	46.1	65	10.5	1.63	34.41	134216	616.78	888.62	8.6	19.4
2325.0	6.3	46.9	65	10.5	1.62	34.57	134838	582.29	886.96	8.6	19.4
2326.0	3.8	46.7	65	10.5	1.77	34.83	135852	949.52	887.30	8.6	19.4
2327.0	4.9	47.9	65	10.5	1.71	35.04	136649	746.63	886.55	8.6	19.4
2328.0	4.5	47.9	65	10.5	1.74	35.26	137523	818.66	886.19	8.6	19.4
2329.0	4.1	48.8	65	10.5	1.78	35.51	138475	890.68	886.21	8.6	19.4
2330.0	9.8	48.5	65	10.5	1.50	35.61	138874	374.33	883.51	8.6	19.4
2331.0	4.9	48.9	65	10.5	1.72	35.81	139663	738.52	882.75	8.6	19.4
2332.0	4.6	48.7	65	10.5	1.74	36.03	140518	800.40	882.33	8.6	19.4
2333.0	3.9	48.3	65	10.5	1.79	36.29	141525	943.43	882.64	8.6	19.4
2334.0	4.5	48.6	65	10.5	1.74	36.51	142386	806.48	882.25	8.6	19.4
2335.0	3.5	48.9	65	10.5	1.82	36.79	143494	1037	883	8.6	19.4
2336.0	9.2	48.6	65	10.5	1.52	36.90	143917	396.65	880.56	8.6	19.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2337.0	5.9	49.6	65	10.5	1.67	37.07	144580	620.84	879.24	8.6	19.4
2338.0	13.0	48.7	65	10.5	1.41	37.15	144880	281.00	876.22	8.6	19.4
2339.0	14.7	48.9	65	10.5	1.38	37.22	145146	248.54	873.06	8.6	19.4
2340.0	5.7	48.7	65	10.5	1.67	37.39	145835	645.19	871.92	8.6	19.4
2341.0	6.0	49.4	65	10.5	1.66	37.56	146481	605.62	870.60	8.6	19.4
2342.0	5.5	49.1	65	10.5	1.69	37.74	147186	659.39	869.55	8.6	19.4
2343.0	4.2	48.5	65	10.5	1.76	37.98	148104	860.25	869.50	8.6	19.4
2344.0	6.1	47.9	65	10.5	1.64	38.14	148745	599.54	868.18	8.6	19.4
2345.0	3.5	49.5	65	10.5	1.84	38.43	149872	1056	869	8.6	19.4
2346.0	3.0	49.9	65	10.5	1.89	38.76	151172	1217	871	8.6	19.4
2347.0	3.0	49.7	65	10.5	1.88	39.09	152467	1212	872	8.6	19.4
2348.0	3.3	49.3	65	10.5	1.85	39.40	153649	1107	874	8.6	19.4
2349.0	4.7	49.0	65	10.5	1.73	39.61	154474	773.01	873.08	8.6	19.4
2350.0	3.5	49.0	65	10.5	1.83	39.89	155590	1045	874	8.7	19.4
2351.0	2.8	50.3	65	10.5	1.91	40.25	156971	1293	876	8.7	19.4
2352.0	2.6	48.9	65	10.5	1.92	40.63	158474	1407	878	8.7	19.4
2353.0	4.4	48.0	65	10.5	1.74	40.86	159350	820.69	878.13	8.7	19.4
2354.0	4.5	48.3	65	10.5	1.74	41.08	160208	803.44	877.78	8.7	19.4
2355.0	6.2	47.6	65	10.5	1.63	41.24	160838	589.39	876.44	8.7	19.4
2356.0	5.6	47.5	65	10.5	1.67	41.42	161538	655.33	875.41	8.7	19.4
2357.0	5.5	47.4	65	10.5	1.67	41.60	162248	665.48	874.44	8.7	19.4
2358.0	2.9	48.5	65	10.5	1.88	41.94	163574	1242	876	8.7	19.4
2359.0	3.4	50.0	65	10.5	1.85	42.23	164714	1067	877	8.7	19.4
2360.0	4.0	50.1	65	10.5	1.80	42.48	165689	913.00	877.17	8.7	19.4
2361.0	8.6	50.0	65	10.5	1.56	42.60	166144	426.07	875.12	8.7	19.4
2362.0	9.5	49.7	65	10.5	1.52	42.71	166555	384.47	872.91	8.7	19.4
2363.0	5.4	50.7	65	10.5	1.71	42.89	167278	677.65	872.04	8.7	19.4
2364.0	5.4	51.1	65	10.5	1.71	43.08	167999	674.61	871.16	8.7	19.4
2365.0	6.8	49.8	65	10.5	1.63	43.22	168575	539.68	869.68	8.7	19.4
2366.0	7.2	50.2	65	10.5	1.61	43.36	169116	506.21	868.07	8.7	19.5
2367.0	13.0	49.1	65	10.5	1.42	43.44	169415	279.99	865.48	8.7	19.5
2368.0	11.0	48.9	65	10.5	1.47	43.53	169768	330.71	863.13	8.7	19.5
2369.0	12.9	48.9	65	10.5	1.42	43.61	170071	284.04	860.60	8.7	19.5
2370.0	11.1	48.9	65	10.5	1.46	43.70	170421	327.67	858.29	8.7	19.5
2371.0	18.4	51.0	65	10.5	1.33	43.75	170633	198.83	855.43	8.7	19.5
2372.0	12.2	52.4	65	10.5	1.47	43.83	170954	300.28	853.04	8.7	19.5
2373.0	7.1	50.1	65	10.5	1.62	43.97	171501	512.29	851.57	8.7	19.5
2374.0	4.6	50.8	65	10.5	1.76	44.19	172354	798.37	851.35	8.7	19.5
2375.0	3.9	50.4	65	10.5	1.81	44.45	173359	941.40	851.73	8.7	19.5
2376.0	2.7	50.5	65	10.5	1.93	44.82	174817	1365	854	8.7	19.5
2377.0	2.7	50.0	65	10.5	1.92	45.19	176240	1332	856	8.7	19.5
2378.0	5.0	50.3	65	10.5	1.73	45.39	177018	729.39	855.39	8.7	19.5
2379.0	4.9	51.7	65	10.5	1.75	45.59	177808	739.53	854.91	8.7	19.5
2380.0	3.0	50.2	65	10.5	1.89	45.92	179100	1209	856	8.7	19.5
2381.0	6.9	49.4	65	10.5	1.62	46.07	179662	526.50	855.02	8.7	19.5
2382.0	11.8	49.1	65	10.5	1.45	46.15	179991	308.39	852.76	8.7	19.5
2383.0	6.9	50.0	65	10.5	1.63	46.30	180558	530.55	851.43	8.7	19.5
2384.0	3.1	50.3	65	10.5	1.88	46.62	181814	1177	853	8.7	19.5
2385.0	2.9	50.3	65	10.5	1.90	46.96	183157	1257	854	8.7	19.5
2386.0	3.2	50.6	65	10.5	1.88	47.28	184387	1152	856	8.7	19.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2387.0	4.0	50.5	65	10.5	1.81	47.53	185372	922.13	855.89	8.7	19.5
2388.0	6.8	50.6	65	10.5	1.64	47.68	185944	535.63	854.60	8.7	19.5
2389.0	4.8	48.3	65	10.5	1.72	47.88	186751	755.76	854.21	8.7	19.5
2390.0	9.6	46.6	65	10.5	1.49	47.99	187156	379.40	852.31	8.7	19.5
2391.0	5.2	46.5	65	10.5	1.67	48.18	187903	698.95	851.69	8.7	19.5
2392.0	15.0	45.2	65	10.5	1.34	48.25	188163	243.47	849.28	8.7	19.5
2393.0	8.3	46.9	65	10.5	1.53	48.37	188631	438.24	847.65	8.7	19.5
2394.0	7.1	48.5	65	10.5	1.60	48.51	189182	516.35	846.35	8.7	19.5
2395.0	8.0	48.7	65	10.5	1.56	48.63	189667	454.47	844.81	8.7	19.5
2396.0	4.8	48.8	65	10.5	1.72	48.84	190475	755.76	844.46	8.7	19.5
2397.0	4.5	48.9	65	10.5	1.75	49.06	191350	819.67	844.37	8.7	19.5
2398.0	4.3	49.9	65	10.5	1.78	49.30	192265	857.21	844.42	8.7	19.5
2399.0	2.8	50.5	65	10.5	1.91	49.65	193645	1292	846	8.7	19.5
2400.0	3.1	50.0	65	10.5	1.88	49.98	194917	1191	847	8.7	19.5
2400.6	2.5	46.9	65	10.5	1.90	50.21	195837	1435	849	8.7	19.5

BIT NUMBER	6	IADC CODE	517	INTERVAL	2400.6- 2650.3
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.2	BIT RUN	249.7
TOTAL HOURS	57.92	TOTAL TURNS	215379	CONDITION	T0 B5 G4.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2401.0	3.7	40.0	65	10.5	1.70	0.11	420	984	88020	8.7	19.5
2402.0	4.5	40.7	65	10.5	1.65	0.33	1287	812	25728	8.7	19.5
2403.0	3.3	42.6	65	10.5	1.77	0.64	2479	1116	15473	8.7	19.5
2404.0	3.1	45.6	65	10.5	1.82	0.95	3717	1160	11263	8.7	19.5
2405.0	3.0	46.7	65	10.5	1.85	1.29	5018	1218	8980	8.7	19.5
2406.0	3.7	47.1	65	10.5	1.79	1.56	6086	1000	7503	8.7	19.5
2407.0	4.2	48.0	65	10.5	1.76	1.80	7022	876	6467	8.7	19.5
2408.0	4.3	48.7	65	10.5	1.76	2.03	7935	855	5709	8.7	19.5
2409.0	4.0	49.9	65	10.5	1.80	2.28	8905	908	5137	8.7	19.5
2410.0	3.7	50.8	65	10.5	1.83	2.56	9968	995	4697	8.7	19.5
2411.0	3.6	51.1	65	10.5	1.85	2.84	11066	1029	4344	8.7	19.5
2412.0	7.3	50.7	65	10.5	1.61	2.97	11598	498	4007	8.7	19.5
2413.0	5.5	49.9	65	10.5	1.70	3.16	12311	668	3737	8.7	19.5
2414.0	7.4	49.6	65	10.5	1.60	3.29	12839	494	3495	8.7	19.5
2415.0	4.2	50.2	65	10.5	1.78	3.53	13765	867	3313	8.7	19.5
2416.0	4.1	50.2	65	10.5	1.79	3.77	14719	894	3156	8.7	19.5
2417.0	3.8	50.9	65	10.5	1.83	4.04	15751	966	3022	8.7	19.5
2418.0	3.7	51.8	65	10.5	1.85	4.31	16819	1000	2906	8.7	19.5
2419.0	3.0	52.2	65	10.5	1.91	4.64	18101	1201	2813	8.7	19.5
2420.0	3.4	52.2	65	10.5	1.87	4.93	19238	1064	2723	8.7	19.5
2421.0	4.3	51.2	65	10.5	1.79	5.17	20153	857	2632	8.7	19.5
2422.0	2.7	49.5	65	10.5	1.91	5.54	21587	1342	2571	8.7	19.5
2423.0	2.9	52.0	65	10.5	1.93	5.88	22937	1265	2513	8.7	19.5
2424.0	2.1	51.2	65	10.5	2.02	6.37	24825	1767	2481	8.7	19.5
2425.0	2.2	50.6	65	10.5	2.00	6.83	26632	1692	2449	8.7	19.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2426.0	2.3	52.1	65	10.5	2.00	7.26	28321	1582	2415	8.7	19.5
2427.0	3.3	48.8	65	10.5	1.85	7.57	29511	1115	2365	8.7	19.5
2428.0	4.0	45.0	65	10.5	1.74	7.82	30479	906	2312	8.7	19.5
2429.0	4.9	47.3	65	10.5	1.70	8.02	31278	749	2257	8.7	19.5
2430.0	4.9	49.7	65	10.5	1.73	8.22	32076	748	2206	8.7	19.5
2431.0	4.3	45.8	65	10.5	1.73	8.46	32984	850	2161	8.6	19.5
2432.0	5.3	45.8	65	10.5	1.66	8.65	33719	688	2114	8.6	19.6
2433.0	4.4	45.5	65	10.5	1.71	8.87	34606	831	2075	8.6	19.6
2434.0	4.3	45.1	65	10.5	1.71	9.10	35505	842	2038	8.6	19.6
2435.0	4.9	47.2	65	10.5	1.70	9.31	36307	751	2000	8.6	19.6
2436.0	4.7	47.9	65	10.5	1.72	9.52	37128	769	1966	8.6	19.6
2437.0	4.2	48.2	65	10.5	1.76	9.76	38055	868	1935	8.6	19.6
2438.0	5.8	50.3	65	10.5	1.69	9.93	38730	632	1901	8.6	19.6
2439.0	4.0	50.9	65	10.5	1.81	10.18	39712	919	1875	8.6	19.6
2440.0	4.5	51.0	65	10.5	1.77	10.40	40573	806	1848	8.6	19.6
2441.0	3.1	50.9	65	10.5	1.89	10.73	41835	1182	1831	8.6	19.6
2442.0	3.7	49.9	65	10.5	1.82	11.00	42899	996	1811	8.6	19.6
2443.0	4.6	49.6	65	10.5	1.75	11.22	43756	802	1787	8.6	19.6
2444.0	3.9	50.0	65	10.5	1.81	11.48	44762	942	1768	8.6	19.6
2445.0	3.9	49.7	65	10.5	1.80	11.74	45768	942	1749	8.6	19.6
2446.0	10.3	49.1	65	10.5	1.49	11.83	46148	355	1719	8.6	19.6
2447.0	18.6	47.9	65	10.5	1.29	11.89	46358	197	1686	8.6	19.6
2448.0	16.4	49.4	65	10.5	1.35	11.95	46596	223	1655	8.6	19.6
2449.0	12.5	46.5	65	10.5	1.40	12.03	46908	292	1627	8.6	19.6
2450.0	15.8	39.1	65	10.5	1.26	12.09	47155	231	1599	8.6	19.6
2451.0	17.6	44.2	65	10.5	1.28	12.15	47377	208	1571	8.6	19.6
2452.0	14.5	45.6	65	10.5	1.35	12.22	47646	252	1545	8.6	19.6
2453.0	4.8	47.4	65	10.5	1.71	12.43	48460	763	1530	8.6	19.6
2454.0	3.6	49.5	65	10.5	1.83	12.71	49556	1026	1521	8.6	19.6
2455.0	6.0	49.6	65	10.5	1.66	12.87	50201	605	1504	8.6	19.6
2456.0	12.9	49.8	65	10.5	1.43	12.95	50504	283	1482	8.6	19.6
2457.0	11.0	50.9	65	10.5	1.49	13.04	50859	333	1462	8.6	19.6
2458.0	16.8	50.2	65	10.5	1.35	13.10	51091	217	1440	8.6	19.6
2459.0	14.0	49.8	65	10.5	1.40	13.17	51369	261	1420	8.6	19.6
2460.0	17.9	48.2	65	10.5	1.31	13.23	51587	204	1399	8.6	19.6
2461.0	14.2	48.1	65	10.5	1.38	13.30	51861	257	1380	8.6	19.6
2462.0	4.8	49.4	65	10.5	1.73	13.51	52674	761	1370	8.6	19.6
2463.0	5.1	50.1	65	10.5	1.72	13.70	53432	710	1360	8.6	19.6
2464.0	8.7	50.5	65	10.5	1.56	13.82	53879	419	1345	8.6	19.6
2465.0	6.8	50.2	65	10.5	1.63	13.96	54450	535	1332	8.6	19.6
2466.0	12.8	48.7	65	10.5	1.42	14.04	54756	286	1316	8.6	19.6
2467.0	4.6	49.1	65	10.5	1.74	14.26	55607	797	1309	8.6	19.6
2468.0	5.2	47.8	65	10.5	1.69	14.45	56362	707	1300	8.6	19.6
2469.0	5.2	47.3	65	10.5	1.68	14.64	57108	698	1291	8.6	19.6
2470.0	4.9	47.0	65	10.5	1.70	14.85	57896	739	1283	8.6	19.6
2471.0	10.1	47.0	65	10.5	1.48	14.94	58283	362	1270	8.6	19.6
2472.0	6.3	47.3	65	10.5	1.62	15.10	58902	579	1260	8.6	19.6
2473.0	8.3	48.3	65	10.5	1.55	15.22	59370	438	1249	8.6	19.6
2474.0	6.5	48.0	65	10.5	1.62	15.38	59971	563	1239	8.6	19.6
2475.0	10.7	47.8	65	10.5	1.47	15.47	60336	342	1227	8.6	19.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2476.0	14.2	49.0	65	10.5	1.39	15.54	60611	258	1214	8.6	19.6
2477.0	14.0	49.7	65	10.5	1.40	15.61	60891	262	1202	8.6	19.6
2478.0	17.1	50.0	65	10.5	1.34	15.67	61119	214	1189	8.6	19.6
2479.0	13.0	50.2	65	10.5	1.43	15.75	61418	280	1178	8.6	19.6
2480.0	9.7	47.6	65	10.5	1.49	15.85	61821	377	1168	8.6	19.6
2481.0	7.0	48.4	65	10.5	1.60	15.99	62376	519	1160	8.6	19.6
2482.0	9.4	48.5	65	10.5	1.51	16.10	62791	389	1150	8.6	19.6
2483.0	8.7	49.4	65	10.5	1.55	16.22	63239	420	1141	8.6	19.6
2484.0	6.9	49.3	65	10.5	1.62	16.36	63803	528	1134	8.6	19.6
2485.0	4.3	50.2	65	10.5	1.78	16.59	64716	855	1131	8.6	19.6
2486.0	4.2	49.0	65	10.5	1.77	16.83	65643	868	1127	8.6	19.6
2487.0	5.1	51.2	65	10.5	1.74	17.03	66415	722	1123	8.6	19.6
2488.0	5.0	51.3	65	10.5	1.74	17.23	67198	733	1118	8.6	19.6
2489.0	5.0	48.9	65	10.5	1.71	17.43	67978	730	1114	8.6	19.6
2490.0	6.0	47.1	65	10.5	1.64	17.60	68632	613	1108	8.6	19.6
2491.0	8.0	47.0	65	10.5	1.55	17.72	69121	458	1101	8.6	19.6
2492.0	5.9	49.7	65	10.5	1.67	17.89	69784	621	1096	8.6	19.6
2493.0	5.1	49.2	65	10.5	1.72	18.09	70555	722	1092	8.6	19.6
2494.0	5.0	47.6	65	10.5	1.70	18.29	71329	724	1088	8.6	19.6
2495.0	4.6	49.3	65	10.5	1.75	18.51	72185	802	1085	8.6	19.6
2496.0	4.2	50.2	65	10.5	1.79	18.75	73121	876	1083	8.6	19.6
2497.0	4.0	48.6	65	10.5	1.78	19.00	74088	905	1081	8.6	19.6
2498.0	7.6	46.4	65	10.5	1.56	19.13	74601	481	1075	8.6	19.6
2499.0	10.1	43.2	65	10.5	1.44	19.23	74989	363	1067	8.6	19.6
2500.0	8.0	47.1	65	10.5	1.55	19.35	75474	454	1061	8.6	19.6
2501.0	5.1	49.9	65	10.5	1.72	19.55	76237	714	1058	8.6	19.6
2502.0	4.1	49.1	65	10.5	1.78	19.79	77180	883	1056	8.6	19.6
2503.0	4.9	51.5	65	10.5	1.75	19.99	77973	743	1053	8.6	19.6
2504.0	7.0	51.0	65	10.5	1.63	20.14	78533	524	1048	8.6	19.6
2505.0	5.4	50.3	65	10.5	1.71	20.32	79256	678	1044	8.6	19.6
2506.0	4.3	50.6	65	10.5	1.78	20.56	80170	855	1043	8.6	19.6
2507.0	4.1	50.1	65	10.5	1.79	20.80	81112	883	1041	8.6	19.6
2508.0	3.9	49.2	65	10.5	1.80	21.05	82112	936	1040	8.6	19.6
2509.0	4.9	47.2	65	10.5	1.70	21.26	82907	745	1037	8.6	19.6
2510.0	7.4	47.3	65	10.5	1.58	21.39	83436	495	1032	8.6	19.6
2511.0	5.9	48.0	65	10.5	1.65	21.56	84102	624	1029	8.6	19.6
2512.0	3.6	51.7	65	10.5	1.85	21.84	85176	1005	1028	8.6	19.6
2513.0	5.3	50.5	65	10.5	1.71	22.03	85910	688	1025	8.6	19.7
2514.0	2.9	50.4	65	10.5	1.90	22.37	87251	1256	1027	8.6	19.7
2515.0	3.5	47.9	65	10.5	1.81	22.65	88354	1033	1028	8.6	19.7
2516.0	3.8	47.6	65	10.5	1.78	22.92	89377	958	1027	8.6	19.7
2517.0	3.7	43.5	60	10.3	1.75	23.19	90357	987	1027	8.6	19.7
2518.0	4.4	47.6	60	10.3	1.75	23.42	91182	837	1025	8.6	19.7
2519.0	3.6	49.3	60	10.3	1.83	23.69	92184	1016	1025	8.6	19.7
2520.0	2.5	49.8	60	10.3	1.95	24.09	93615	1452	1028	8.6	19.7
2521.0	3.3	49.9	60	10.3	1.87	24.39	94701	1102	1029	8.6	19.7
2522.0	3.3	51.5	60	10.3	1.89	24.70	95797	1112	1030	8.6	19.7
2523.0	3.8	50.4	60	10.3	1.83	24.96	96741	958	1029	8.6	19.7
2524.0	2.8	51.7	60	10.3	1.94	25.31	98013	1290	1031	8.6	19.7
2525.0	3.0	51.4	60	10.3	1.92	25.65	99207	1211	1033	8.6	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2526.0	4.6	47.6	60	10.3	1.74	25.86	99995	799	1031	8.6	19.7
2527.0	3.5	50.2	60	10.3	1.85	26.15	101011	1031	1031	8.6	19.7
2528.0	4.4	51.6	60	10.3	1.80	26.38	101832	833	1029	8.6	19.7
2529.0	3.0	51.3	60	10.3	1.92	26.71	103046	1231	1031	8.6	19.7
2530.0	3.5	51.4	60	10.3	1.87	27.00	104080	1049	1031	8.6	19.7
2531.0	3.5	51.7	60	10.3	1.87	27.28	105106	1041	1031	8.6	19.7
2532.0	4.9	50.6	60	10.3	1.75	27.49	105842	747	1029	8.6	19.7
2533.0	3.4	50.5	60	10.3	1.87	27.78	106905	1078	1029	8.6	19.7
2534.0	3.2	51.7	60	10.3	1.90	28.10	108034	1145	1030	8.6	19.7
2535.0	3.3	52.5	60	10.3	1.90	28.40	109115	1097	1031	8.6	19.7
2536.0	3.0	52.6	60	10.3	1.93	28.73	110303	1205	1032	8.6	19.7
2537.0	3.6	47.3	60	10.3	1.81	29.01	111314	1026	1032	8.6	19.7
2538.0	3.7	48.5	60	10.3	1.81	29.28	112281	981	1032	8.6	19.7
2539.0	3.1	51.6	60	10.3	1.91	29.60	113457	1193	1033	8.6	19.7
2540.0	2.8	51.9	60	10.3	1.94	29.96	114721	1282	1035	8.6	19.7
2541.0	3.6	51.1	60	10.3	1.86	30.23	115727	1021	1034	8.6	19.7
2542.0	3.1	52.3	60	10.3	1.92	30.56	116891	1181	1035	8.6	19.7
2543.0	3.0	51.0	60	10.3	1.91	30.89	118080	1206	1037	8.6	19.7
2544.0	3.2	52.2	60	10.3	1.90	31.20	119213	1149	1037	8.6	19.7
2545.0	3.6	52.6	60	10.4	1.85	31.48	120215	1016	1037	8.6	19.7
2546.0	4.0	49.4	60	10.4	1.79	31.73	121125	923	1037	8.6	19.7
2547.0	4.5	50.0	60	10.4	1.75	31.96	121927	814	1035	8.6	19.7
2548.0	3.7	50.0	60	10.4	1.81	32.23	122900	987	1035	8.6	19.7
2549.0	3.5	51.3	60	10.4	1.85	32.51	123927	1042	1035	8.6	19.7
2550.0	3.7	51.5	60	10.4	1.83	32.78	124893	980	1034	8.6	19.7
2551.0	3.2	52.6	60	10.4	1.89	33.09	126017	1140	1035	8.6	19.7
2552.0	3.2	51.6	60	10.4	1.88	33.41	127156	1155	1036	8.6	19.7
2553.0	3.7	51.0	60	10.4	1.82	33.68	128125	983	1035	8.6	19.7
2554.0	8.2	50.7	60	10.4	1.57	33.80	128563	444	1032	8.6	19.7
2555.0	5.5	50.9	60	10.4	1.70	33.98	129213	659	1029	8.6	19.7
2556.0	11.9	50.2	60	10.4	1.44	34.06	129516	307	1025	8.6	19.7
2557.0	5.2	51.1	60	10.4	1.72	34.26	130209	703	1023	8.6	19.7
2558.0	4.6	51.8	60	10.4	1.76	34.47	130987	789	1021	8.6	19.7
2559.0	4.4	51.1	60	10.4	1.78	34.70	131814	839	1020	8.6	19.7
2560.0	5.3	50.9	60	10.4	1.71	34.89	132495	691	1018	8.6	19.7
2561.0	4.2	51.1	60	10.4	1.78	35.13	133348	865	1017	8.6	19.7
2562.0	3.7	52.2	60	10.4	1.84	35.40	134312	978	1017	8.6	19.7
2563.0	5.7	52.7	60	10.4	1.71	35.57	134948	645	1014	8.6	19.7
2564.0	4.6	51.8	60	10.4	1.77	35.79	135734	797	1013	8.6	19.7
2565.0	5.8	49.1	60	10.4	1.66	35.96	136354	629	1011	8.6	19.7
2566.0	4.2	50.3	60	10.4	1.78	36.20	137219	877	1010	8.6	19.7
2567.0	5.4	50.0	60	10.4	1.69	36.39	137887	678	1008	8.6	19.7
2568.0	4.0	48.7	60	10.4	1.77	36.64	138787	913	1007	8.6	19.7
2569.0	6.7	49.5	60	10.4	1.62	36.79	139324	545	1005	8.6	19.7
2570.0	6.5	50.0	60	10.4	1.64	36.94	139878	562	1002	8.6	19.7
2571.0	7.6	50.0	60	10.4	1.58	37.07	140350	478.82	998.89	8.6	19.7
2572.0	8.0	50.0	60	10.4	1.57	37.20	140800	456.50	995.72	8.6	19.7
2573.0	5.7	51.0	60	10.4	1.69	37.38	141436	645.19	993.69	8.6	19.7
2574.0	4.1	51.6	60	10.4	1.80	37.62	142318	894.74	993.12	8.6	19.7
2575.0	3.7	50.3	60	10.4	1.82	37.89	143282	977.92	993.03	8.6	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2576.0	4.0	49.9	60	10.4	1.79	38.14	144183	914.01	992.58	8.6	19.7
2577.0	5.3	50.1	60	10.4	1.70	38.33	144864	690.84	990.87	8.6	19.7
2578.0	4.5	50.2	60	10.4	1.75	38.55	145663	810.54	989.85	8.6	19.7
2579.0	4.5	51.4	60	10.4	1.77	38.77	146461	809.53	988.84	8.6	19.7
2580.0	8.1	48.3	60	10.4	1.55	38.89	146903	448.38	985.83	8.6	19.7
2581.0	4.3	51.1	60	10.4	1.78	39.12	147732	840.97	985.03	8.6	19.7
2582.0	5.2	52.3	60	10.4	1.73	39.32	148421	698.95	983.45	8.6	19.7
2583.0	3.7	50.8	60	10.4	1.82	39.59	149389	981.98	983.44	8.6	19.7
2584.0	3.6	51.0	60	10.4	1.84	39.87	150399	1025	984	8.6	19.7
2585.0	3.5	49.4	60	10.4	1.82	40.15	151419	1035	984	8.6	19.7
2586.0	4.0	47.8	60	10.4	1.76	40.40	152310	903.87	983.51	8.6	19.7
2587.0	6.1	48.5	60	10.4	1.64	40.56	152903	601.57	981.46	8.6	19.7
2588.0	4.5	48.2	60	10.4	1.73	40.78	153695	803.44	980.51	8.6	19.7
2589.0	4.7	49.0	60	10.4	1.73	41.00	154469	785.18	979.47	8.6	19.7
2590.0	3.9	49.4	60	10.4	1.79	41.25	155394	938.36	979.26	8.6	19.7
2591.0	3.6	50.9	60	10.4	1.84	41.53	156404	1025	979	8.6	19.7
2592.0	3.2	50.1	60	10.4	1.86	41.84	157521	1133	980	8.6	19.7
2593.0	3.4	50.0	60	10.4	1.84	42.14	158577	1071	981	8.6	19.7
2594.0	4.8	49.4	60	10.4	1.72	42.34	159323	756.78	979.61	8.6	19.7
2595.0	7.0	50.2	60	10.4	1.61	42.49	159838	522.44	977.26	8.6	19.7
2596.0	6.3	50.3	60	10.4	1.65	42.65	160412	582.29	975.24	8.6	19.8
2597.0	4.0	51.2	60	10.4	1.81	42.90	161321	922.13	974.97	8.6	19.8
2598.0	3.9	50.8	60	10.4	1.81	43.16	162244	936.33	974.77	8.6	19.8
2599.0	2.7	50.8	60	10.4	1.93	43.53	163576	1351	977	8.6	19.8
2600.0	2.5	50.3	60	10.4	1.95	43.93	165036	1481	979	8.6	19.8
2601.0	2.0	50.8	60	10.4	2.03	44.44	166862	1852	984	8.6	19.8
2602.0	2.7	50.1	60	10.4	1.92	44.82	168218	1376	986	8.6	19.8
2603.0	3.7	49.0	60	10.4	1.80	45.08	169182	977.92	985.47	8.6	19.8
2604.0	5.2	44.4	60	10.4	1.64	45.27	169871	698.95	984.06	8.6	19.8
2605.0	3.4	47.5	60	10.4	1.81	45.56	170916	1060	984	8.6	19.8
2606.0	3.9	47.0	60	10.4	1.76	45.82	171844	941.40	984.22	8.6	19.8
2607.0	3.1	46.5	60	10.4	1.83	46.15	173015	1188	985	8.6	19.8
2608.0	3.9	47.1	60	10.4	1.76	46.40	173935	933.29	984.96	8.6	19.8
2609.0	3.1	47.5	60	10.4	1.84	46.73	175103	1185	986	8.6	19.8
2610.0	3.9	47.5	60	10.4	1.76	46.98	176016	926.19	985.63	8.6	19.8
2611.0	4.3	49.0	60	10.4	1.76	47.22	176857	853.15	985.00	8.6	19.8
2612.0	8.2	49.3	60	10.4	1.55	47.34	177295	444.33	982.44	8.6	19.8
2613.0	4.6	48.4	60	10.4	1.72	47.55	178073	789.24	981.53	8.6	19.8
2614.0	6.2	49.6	60	10.4	1.65	47.72	178658	593.45	979.72	8.6	19.8
2615.0	4.3	50.0	60	10.4	1.77	47.95	179501	855.18	979.13	8.6	19.8
2616.0	4.0	49.7	60	10.4	1.79	48.20	180409	921.12	978.87	8.6	19.8
2617.0	3.9	50.0	60	10.4	1.80	48.46	181342	946.48	978.72	8.6	19.8
2618.0	3.8	49.6	60	10.4	1.80	48.73	182295	966.77	978.66	8.6	19.8
2619.0	3.6	50.1	60	10.4	1.82	49.00	183286	1005	979	8.6	19.8
2620.0	4.0	49.5	60	10.4	1.78	49.25	184176	902.86	978.44	8.6	19.8
2621.0	3.7	50.0	60	10.4	1.81	49.52	185145	983.00	978.46	8.6	19.8
2622.0	3.3	49.6	60	10.4	1.84	49.82	186227	1098	979	8.6	19.8
2623.0	9.7	46.7	60	10.4	1.47	49.92	186598	376.36	976.29	8.6	19.8
2624.0	8.6	46.3	60	10.4	1.51	50.04	187015	423.02	973.81	8.6	19.8
2625.0	8.1	48.4	60	10.4	1.55	50.16	187462	453.46	971.49	8.6	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2626.0	10.2	49.1	60	10.4	1.48	50.26	187814	357.08	968.76	8.6	19.8
2627.0	4.7	48.3	60	10.4	1.72	50.47	188582	779.09	967.93	8.6	19.8
2628.0	3.4	48.9	60	10.4	1.83	50.76	189634	1067	968	8.6	19.8
2629.0	3.6	49.4	60	10.4	1.81	51.04	190627	1007	969	8.6	19.8
2630.0	3.3	50.4	60	10.4	1.86	51.34	191721	1110	969	8.6	19.8
2631.0	3.7	48.9	60	10.4	1.80	51.61	192693	986.04	969.22	8.6	19.8
2632.0	3.6	47.7	60	10.4	1.79	51.89	193684	1005	969	8.6	19.8
2633.0	8.2	43.9	60	10.4	1.50	52.01	194124	446.36	967.13	8.6	19.8
2634.0	3.6	48.6	60	10.4	1.81	52.29	195138	1029	967	8.6	19.8
2635.0	4.0	49.9	60	10.4	1.79	52.55	196047	922.13	967.20	8.6	19.8
2636.0	2.8	49.7	60	10.4	1.90	52.90	197325	1296	969	8.6	19.8
2637.0	3.3	50.0	60	10.4	1.85	53.21	198421	1112	969	8.6	19.8
2638.0	4.5	50.4	60	10.4	1.76	53.43	199220	810.54	968.54	8.6	19.8
2639.0	3.3	51.2	60	10.4	1.87	53.73	200314	1110	969	8.6	19.8
2640.0	2.8	50.8	60	10.4	1.92	54.09	201613	1318	971	8.6	19.8
2641.0	2.6	51.9	60	10.4	1.95	54.47	202983	1390	972	8.6	19.8
2642.0	4.3	50.3	60	10.4	1.77	54.70	203811	839.96	971.78	8.6	19.8
2643.0	3.2	50.0	60	10.4	1.86	55.01	204920	1125	972	8.6	19.8
2644.0	2.6	50.9	60	10.4	1.94	55.39	206301	1401	974	8.6	19.8
2645.0	2.7	49.6	60	10.4	1.91	55.77	207652	1371	976	8.6	19.8
2646.0	3.0	49.9	60	10.4	1.88	56.11	208870	1236	977	8.6	19.8
2647.0	3.1	50.1	60	10.4	1.87	56.43	210031	1178	978	8.6	19.8
2648.0	2.2	51.9	60	10.4	2.01	56.88	211667	1660	980	8.6	19.8
2649.0	2.5	46.6	60	10.4	1.90	57.28	213107	1461	982	8.6	19.8
2650.0	2.4	47.8	60	10.4	1.92	57.70	214607	1522	985	8.6	19.8
2650.3	1.4	40.4	60	10.4	1.98	57.92	215379	2609	986	8.6	19.8

BIT NUMBER	7	IADC CODE	517	INTERVAL	2650.3- 2840.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.7	BIT RUN	189.7
TOTAL HOURS	63.91	TOTAL TURNS	191717	CONDITION	T2 B4 G0.250

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2651.0	6.0	34.0	50	10.4	1.42	0.12	350	609	52952	8.6	19.8
2652.0	3.4	40.0	50	10.4	1.66	0.41	1231	1072	22434	8.6	19.8
2653.0	5.3	43.0	50	10.4	1.56	0.60	1796	688	14380	8.6	19.8
2654.0	3.7	46.6	50	10.4	1.72	0.87	2605	985	10760	8.6	19.8
2655.0	3.1	47.8	50	10.4	1.78	1.19	3564	1168	8719	8.6	19.8
2656.0	2.6	49.3	50	10.4	1.86	1.58	4730	1419	7438	8.6	19.8
2657.0	3.2	49.3	50	10.4	1.79	1.89	5663	1135	6498	8.6	19.8
2658.0	3.0	50.3	50	10.4	1.83	2.23	6675	1233	5814	8.6	19.8
2659.0	3.0	51.0	50	10.4	1.84	2.56	7691	1237	5288	8.6	19.8
2660.0	4.3	50.9	50	10.4	1.72	2.79	8381	841	4829	8.6	19.8
2661.0	2.1	46.6	50	10.4	1.90	3.28	9840	1775	4544	8.6	19.8
2662.0	2.7	46.2	50	10.4	1.81	3.65	10948	1349	4271	8.6	19.8
2664.0	3.0	48.8	50	10.4	1.81	4.32	12967	1229	3827	8.6	19.8
2665.0	3.0	50.0	50	10.4	1.82	4.65	13962	1212	3649	8.6	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2666.0	2.7	49.7	50	10.4	1.85	5.02	15062	1339	3502	8.6	19.8
2667.0	2.9	49.1	50	10.4	1.83	5.37	16108	1273	3368	8.6	19.8
2668.0	2.9	48.5	50	10.4	1.82	5.72	17152	1270	3250	8.6	19.8
2669.0	3.6	48.7	50	10.4	1.75	6.00	17993	1025	3131	8.6	19.8
2670.0	2.8	48.6	50	10.4	1.83	6.36	19082	1326	3039	8.6	19.8
2671.0	3.0	47.2	50	10.4	1.79	6.70	20086	1221	2951	8.6	19.8
2672.0	3.0	47.8	50	10.4	1.79	7.03	21077	1207	2871	8.6	19.8
2673.0	3.3	47.1	50	10.4	1.76	7.33	21979	1098	2793	8.6	19.8
2674.0	3.4	48.0	50	10.4	1.76	7.62	22867	1080	2721	8.6	19.8
2675.0	3.6	48.1	50	10.4	1.74	7.90	23697	1011	2651	8.6	19.8
2676.0	3.4	48.0	50	10.4	1.76	8.19	24578	1072	2590	8.6	19.8
2677.0	3.5	47.8	50	10.4	1.75	8.48	25440	1049	2532	8.6	19.8
2678.0	3.3	48.3	50	10.4	1.77	8.78	26352	1111	2481	8.6	19.8
2679.0	3.1	48.6	50	10.4	1.80	9.11	27330	1190	2436	8.6	19.8
2680.0	3.6	47.1	50	10.4	1.73	9.39	28175	1029	2389	8.6	19.8
2681.0	2.9	46.5	50	10.4	1.79	9.73	29197	1245	2351	8.6	19.9
2682.0	3.1	47.1	50	10.4	1.77	10.05	30156	1167	2314	8.6	19.9
2683.0	2.8	46.3	50	10.4	1.80	10.41	31223	1300	2283	8.6	19.9
2684.0	3.1	46.0	50	10.4	1.76	10.73	32192	1180	2250	8.6	19.9
2685.0	2.7	50.1	50	10.4	1.86	11.10	33313	1364	2225	8.6	19.9
2686.0	2.9	49.6	50	10.4	1.82	11.44	34332	1240	2197	8.6	19.9
2687.0	2.8	49.7	50	10.4	1.84	11.80	35396	1295	2172	8.6	19.9
2688.0	2.7	49.1	50	10.4	1.85	12.17	36509	1355	2151	8.6	19.9
2689.0	2.0	48.8	50	10.4	1.94	12.68	38030	1851	2143	8.6	19.9
2690.0	2.6	47.8	50	10.4	1.84	13.06	39181	1401	2124	8.6	19.9
2691.0	3.0	48.8	50	10.4	1.81	13.40	40195	1235	2102	8.6	19.9
2692.0	2.8	47.7	50	10.4	1.82	13.75	41265	1303	2083	8.6	19.9
2693.0	3.3	46.1	50	10.4	1.74	14.06	42170	1102	2060	8.6	19.9
2694.0	2.7	46.5	50	10.4	1.81	14.43	43280	1351	2044	8.6	19.9
2695.0	3.1	47.9	50	10.4	1.79	14.75	44263	1197	2025	8.6	19.9
2696.0	2.8	49.2	50	10.4	1.84	15.11	45337	1308	2009	8.6	19.9
2697.0	2.8	48.5	50	10.4	1.83	15.47	46420	1318	1995	8.6	19.9
2698.0	2.7	47.0	50	10.4	1.82	15.85	47547	1372	1982	8.6	19.9
2699.0	3.5	47.4	50	10.4	1.74	16.14	48406	1046	1962	8.6	19.9
2700.0	4.2	47.5	50	10.4	1.69	16.37	49122	872	1940	8.6	19.9
2701.0	2.6	47.8	50	10.4	1.84	16.75	50257	1381	1929	8.6	19.9
2702.0	3.3	45.3	50	10.4	1.74	17.06	51176	1119	1914	8.6	19.9
2703.0	4.8	47.2	50	10.4	1.64	17.26	51795	754	1892	8.6	19.9
2704.0	8.3	45.3	50	10.4	1.45	17.39	52157	441	1865	8.6	19.9
2705.0	5.2	46.2	50	10.4	1.60	17.58	52729	696	1843	8.6	19.9
2706.0	19.7	45.2	50	10.4	1.18	17.63	52882	186	1814	8.6	19.9
2707.0	9.0	44.9	50	10.4	1.42	17.74	53214	405	1789	8.6	19.9
2708.0	12.7	44.3	50	10.4	1.31	17.82	53450	287	1763	8.6	19.9
2709.0	5.7	45.1	50	10.4	1.56	17.99	53975	639	1744	8.6	19.9
2710.0	3.7	44.6	50	10.4	1.70	18.27	54797	1000	1731	8.6	19.9
2711.0	3.6	46.1	50	10.4	1.72	18.54	55625	1008	1719	8.6	19.9
2712.0	3.1	49.6	50	10.4	1.81	18.87	56596	1182	1710	8.6	19.9
2713.0	4.4	48.8	50	10.4	1.69	19.09	57275	827	1696	8.6	19.9
2714.0	3.1	50.9	50	10.4	1.83	19.42	58251	1188	1688	8.6	19.9
2715.0	2.9	48.4	50	10.4	1.81	19.76	59276	1248	1682	8.6	19.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2716.0	2.7	49.0	50	10.4	1.85	20.13	60392	1359	1677	8.6	19.9
2717.0	2.8	49.8	50	10.4	1.84	20.48	61451	1288	1671	8.6	19.9
2718.0	3.5	50.3	50	10.4	1.78	20.77	62316	1053	1662	8.6	19.9
2719.0	2.3	45.3	50	10.4	1.84	21.20	63603	1567	1660	8.6	19.9
2720.0	2.6	49.1	50	10.4	1.86	21.59	64767	1416	1657	8.6	19.9
2721.0	2.3	50.9	50	10.4	1.93	22.03	66098	1621	1656	8.6	19.9
2722.0	2.5	49.5	50	10.4	1.87	22.43	67296	1458	1654	8.6	19.9
2723.0	2.4	48.5	50	10.4	1.88	22.86	68567	1547	1652	8.6	19.9
2724.0	2.8	48.8	50	10.4	1.83	23.22	69648	1317	1648	8.6	19.9
2725.0	3.1	49.1	50	10.4	1.80	23.53	70604	1164	1641	8.6	19.9
2726.0	2.8	50.0	50	10.4	1.85	23.89	71678	1308	1637	8.6	19.9
2727.0	3.1	50.9	50	10.4	1.82	24.22	72647	1180	1631	8.6	19.9
2728.0	4.8	45.2	50	10.4	1.62	24.42	73275	764	1620	8.6	19.9
2729.0	2.8	48.5	50	10.4	1.83	24.78	74347	1305	1616	8.6	19.9
2730.0	3.4	50.7	50	10.4	1.79	25.08	75227	1072	1609	8.6	19.9
2731.0	2.8	45.2	50	10.4	1.78	25.43	76295	1300	1605	8.6	19.9
2732.0	3.1	48.0	50	10.4	1.79	25.76	77276	1194	1600	8.6	19.9
2733.0	3.2	47.9	50	10.4	1.78	26.07	78212	1140	1594	8.6	19.9
2734.0	3.1	49.7	50	10.4	1.81	26.40	79188	1188	1589	8.6	19.9
2735.0	3.5	50.1	50	10.4	1.77	26.68	80044	1041	1583	8.6	19.9
2736.0	3.5	50.2	50	10.4	1.78	26.97	80911	1056	1577	8.6	19.9
2737.0	3.2	47.5	50	10.4	1.77	27.28	81838	1128	1572	8.6	19.9
2738.0	3.8	45.8	50	10.4	1.69	27.54	82620	952	1565	8.6	19.9
2739.0	3.7	45.6	50	10.4	1.71	27.81	83441	999	1558	8.6	19.9
2740.0	2.8	48.2	50	10.4	1.83	28.17	84524	1319	1556	8.6	19.9
2741.0	3.2	48.0	50	10.4	1.78	28.49	85469	1150	1551	8.6	19.9
2742.0	3.3	46.8	50	10.4	1.76	28.80	86387	1117	1546	8.6	19.9
2743.0	3.1	49.8	50	10.4	1.81	29.11	87342	1163	1542	8.6	19.9
2744.0	4.1	47.6	50	10.4	1.70	29.36	88077	895	1535	8.6	19.9
2745.0	3.8	47.4	50	10.4	1.72	29.62	88871	967	1529	8.6	19.9
2746.0	3.9	50.7	50	10.4	1.75	29.88	89646	943	1523	8.6	19.9
2747.0	6.1	49.4	50	10.4	1.59	30.05	90137	599	1514	8.6	19.9
2748.0	4.8	44.5	50	10.4	1.61	30.25	90759	757	1506	8.6	19.9
2749.0	3.1	50.2	50	10.4	1.82	30.58	91740	1194	1503	8.6	19.9
2750.0	2.8	50.0	50	10.4	1.85	30.94	92812	1305	1501	8.6	19.9
2751.0	3.9	48.9	50	10.4	1.73	31.20	93589	946	1495	8.6	19.9
2752.0	2.6	49.9	50	10.4	1.87	31.58	94739	1400	1494	8.6	19.9
2753.0	2.5	49.9	50	10.5	1.86	31.97	95918	1435	1494	8.6	19.9
2754.0	2.6	50.1	50	10.5	1.85	32.36	97077	1410	1493	8.6	19.9
2755.0	2.6	50.6	50	10.5	1.86	32.75	98247	1425	1492	8.6	19.9
2756.0	2.2	50.8	50	10.5	1.91	33.20	99615	1665	1494	8.6	19.9
2757.0	3.4	47.6	50	10.5	1.74	33.50	100496	1072	1490	8.6	19.9
2758.0	3.6	48.9	50	10.5	1.73	33.77	101324	1008	1485	8.6	19.9
2759.0	3.2	49.6	50	10.5	1.78	34.09	102265	1145	1482	8.6	19.9
2760.0	2.6	50.7	50	10.5	1.85	34.47	103397	1379	1481	8.6	19.9
2761.0	2.9	49.9	50	10.5	1.82	34.81	104442	1271	1480	8.6	19.9
2762.0	3.1	50.6	50	10.5	1.80	35.14	105411	1180	1477	8.6	19.9
2763.0	2.6	50.3	50	10.5	1.85	35.52	106560	1399	1476	8.6	19.9
2764.0	2.7	51.2	50	10.5	1.86	35.89	107677	1360	1475	8.6	19.9
2766.0	3.7	49.6	50	10.5	1.74	36.43	109301	988	1467	8.6	19.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2767.0	3.7	50.0	50	10.5	1.74	36.71	110119	996	1463	8.6	20.0
2768.0	5.6	49.7	50	10.5	1.61	36.89	110657	654	1456	8.6	20.0
2769.0	4.0	49.1	50	10.5	1.71	37.14	111410	917	1451	8.6	20.0
2770.0	2.8	50.1	50	10.5	1.83	37.50	112488	1313	1450	8.6	20.0
2771.0	2.6	50.9	50	10.5	1.86	37.88	113644	1407	1450	8.6	20.0
2772.0	3.1	50.5	50	10.5	1.80	38.20	114611	1177	1447	8.6	20.0
2773.0	3.0	50.0	50	10.5	1.80	38.53	115595	1198	1445	8.6	20.0
2774.0	2.8	51.0	50	10.5	1.84	38.89	116666	1304	1444	8.6	20.0
2775.0	2.7	51.1	50	10.5	1.85	39.26	117770	1344	1444	8.6	20.0
2776.0	2.8	48.3	50	10.5	1.81	39.61	118838	1301	1442	8.6	20.0
2777.0	4.1	46.6	50	10.5	1.67	39.86	119567	887	1438	8.6	20.0
2778.0	2.5	48.2	50	10.5	1.84	40.25	120746	1435	1438	8.6	20.0
2779.0	3.6	48.2	50	10.5	1.73	40.53	121582	1018	1435	8.6	20.0
2780.0	2.5	48.0	50	10.5	1.83	40.92	122769	1445	1435	8.6	20.0
2781.0	2.7	49.4	50	10.5	1.83	41.29	123880	1353	1434	8.6	20.0
2782.0	3.0	49.2	50	10.5	1.80	41.63	124895	1236	1433	8.6	20.0
2783.0	2.5	49.1	50	10.5	1.85	42.03	126091	1456	1433	8.6	20.0
2784.0	2.9	46.8	50	10.5	1.78	42.38	127139	1276	1432	8.6	20.0
2785.0	3.8	49.0	50	10.5	1.72	42.64	127930	963	1428	8.6	20.0
2786.0	3.0	48.1	50	10.5	1.78	42.98	128925	1211	1427	8.6	20.0
2787.0	2.9	48.1	50	10.5	1.79	43.32	129963	1263	1425	8.6	20.0
2788.0	3.2	47.5	50	10.5	1.76	43.64	130910	1153	1423	8.6	20.0
2789.0	2.9	48.6	50	10.5	1.79	43.98	131929	1241	1422	8.6	20.0
2790.0	3.7	50.0	50	10.5	1.74	44.25	132748	996	1419	8.6	20.0
2791.0	2.7	48.2	50	10.5	1.82	44.63	133879	1378	1419	8.6	20.0
2792.0	2.9	47.1	50	10.5	1.78	44.98	134925	1273	1418	8.6	20.0
2793.0	2.1	49.8	50	10.5	1.91	45.44	136327	1706	1420	8.6	20.0
2795.0	2.4	46.6	50	10.5	1.83	46.27	138810	1512	1421	8.6	20.0
2796.0	2.6	48.2	50	10.5	1.83	46.65	139964	1405	1421	8.6	20.0
2797.0	2.1	49.9	50	10.5	1.91	47.13	141382	1726	1423	8.6	20.0
2798.0	2.4	48.4	50	10.5	1.86	47.55	142645	1538	1424	8.6	20.0
2799.0	2.4	48.0	50	10.5	1.85	47.97	143905	1534	1424	8.6	20.0
2800.0	2.6	49.3	50	10.5	1.84	48.36	145066	1413	1424	8.6	20.0
2801.0	2.7	49.8	50	10.5	1.84	48.73	146194	1373	1424	8.6	20.0
2802.0	2.2	50.2	50	10.5	1.91	49.19	147578	1685	1426	8.6	20.0
2803.0	2.1	53.0	50	10.5	1.96	49.68	149029	1767	1428	8.6	20.0
2805.0	1.6	48.9	50	10.5	1.99	50.93	152786	2287	1439	8.6	20.0
2806.0	1.5	48.8	50	10.5	2.01	51.59	154764	2407	1445	8.6	20.0
2807.0	1.6	49.8	50	10.5	2.00	52.22	156648	2294	1451	8.6	20.0
2808.0	2.1	47.4	50	10.5	1.88	52.68	158049	1705	1452	8.6	20.0
2809.0	2.2	47.4	50	10.5	1.87	53.14	159420	1670	1454	8.6	20.0
2810.0	1.4	47.0	50	10.5	2.01	53.86	161577	2625	1461	8.6	20.0
2811.0	2.4	45.4	50	10.5	1.82	54.28	162825	1520	1461	8.6	20.0
2812.0	2.3	49.1	50	10.5	1.87	54.71	164115	1570	1462	8.6	20.0
2813.0	2.9	45.4	50	10.5	1.77	55.06	165168	1281	1461	8.6	20.0
2814.0	2.8	47.7	50	10.5	1.80	55.42	166258	1327	1460	8.6	20.0
2815.0	3.3	48.2	50	10.5	1.75	55.72	167154	1091	1458	8.6	20.0
2816.0	4.6	48.4	50	10.5	1.66	55.94	167811	800	1454	8.6	20.0
2817.0	2.9	48.0	50	10.5	1.80	56.29	168861	1278	1453	8.6	20.0
2818.0	2.7	47.1	50	10.5	1.81	56.66	169984	1366	1452	8.6	20.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2819.0	2.9	46.9	50	10.5	1.77	57.00	171002	1240	1451	8.6	20.0
2820.0	2.2	49.5	50	10.5	1.90	57.46	172376	1673	1452	8.6	20.0
2821.0	2.4	49.9	50	10.5	1.88	57.88	173628	1524	1453	8.6	20.0
2822.0	2.6	49.3	50	10.5	1.84	58.26	174775	1397	1453	8.6	20.0
2823.0	2.3	50.0	50	10.5	1.88	58.69	176056	1559	1453	8.6	20.0
2824.0	2.4	51.2	50	10.5	1.89	59.10	177296	1509	1453	8.6	20.0
2825.0	3.5	42.3	50	10.5	1.66	59.38	178144	1032	1451	8.6	20.0
2826.0	2.5	49.0	50	10.5	1.85	59.78	179334	1450	1451	8.6	20.0
2827.0	2.4	48.4	50	10.5	1.85	60.19	180566	1499	1451	8.6	20.0
2828.0	3.1	50.2	50	10.5	1.79	60.51	181521	1163	1450	8.6	20.0
2829.0	2.4	50.9	50	10.5	1.88	60.92	182747	1492	1450	8.6	20.0
2830.0	2.0	50.4	50	10.5	1.94	61.43	184277	1863	1452	8.6	20.0
2831.0	3.3	48.5	50	10.5	1.75	61.72	185173	1091	1450	9.8	19.8
2832.0	2.6	48.1	50	10.5	1.82	62.10	186310	1385	1450	9.8	19.8
2833.0	3.0	46.9	50	10.5	1.77	62.43	187301	1206	1449	9.8	19.8
2834.0	5.6	46.9	50	10.5	1.58	62.61	187838	653	1444	9.8	19.8
2835.0	9.7	45.6	50	10.5	1.39	62.72	188146	375	1438	9.8	19.8
2836.0	10.5	42.6	50	10.5	1.34	62.81	188431	347	1433	9.8	19.8
2837.0	13.6	44.9	50	10.5	1.28	62.88	188651	268	1426	9.8	19.8
2838.0	3.5	43.8	50	10.5	1.68	63.17	189511	1047	1424	9.8	19.8
2839.0	2.5	46.9	50	10.5	1.82	63.57	190697	1444	1424	9.8	19.8
2840.0	2.9	43.1	50	10.5	1.73	63.91	191717	1242	1423	9.8	19.8

BIT NUMBER	8	IADC CODE	537	INTERVAL	2840.0- 2875.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	8.1	BIT RUN	35.0
TOTAL HOURS	12.35	TOTAL TURNS	33460	CONDITION	T1 B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2842.0	2.6	45.0	47	10.5	1.78	0.78	2216	1427	20351	9.8	19.8
2843.0	2.2	47.5	45	10.5	1.83	1.23	3421	1630	14111	9.8	19.8
2844.0	3.0	50.5	45	10.5	1.78	1.56	4314	1207	10885	9.8	19.8
2845.0	4.8	53.1	45	10.5	1.66	1.77	4882	768	8861	9.8	19.8
2846.0	18.8	51.8	45	10.5	1.21	1.82	5026	195	7417	9.8	19.8
2847.0	13.8	52.4	45	10.5	1.31	1.89	5221	264	6395	9.8	19.8
2848.0	12.7	51.9	45	10.5	1.33	1.97	5434	288	5632	9.8	19.8
2849.0	9.0	50.2	45	10.5	1.43	2.08	5734	407	5051	9.8	19.8
2850.0	5.2	50.7	45	10.5	1.61	2.28	6256	706	4617	9.8	19.8
2851.0	2.4	52.3	45	10.5	1.87	2.69	7375	1514	4335	9.8	19.8
2852.0	2.4	51.9	45	10.5	1.86	3.11	8494	1513	4099	9.8	19.8
2853.0	2.7	51.6	45	10.5	1.82	3.47	9487	1343	3887	9.8	19.8
2854.0	3.8	50.7	45	10.5	1.71	3.74	10201	967	3679	9.8	19.8
2855.0	2.6	49.5	45	10.5	1.81	4.12	11234	1397	3527	9.8	19.8
2856.0	4.5	51.3	45	10.5	1.66	4.34	11829	804	3356	9.8	19.8
2857.0	2.2	51.9	45	10.5	1.90	4.80	13065	1672	3257	9.8	19.8
2858.0	2.5	51.5	45	10.5	1.85	5.20	14137	1451	3157	9.8	19.8
2859.0	1.9	51.6	45	10.5	1.94	5.73	15586	1959	3094	9.8	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2860.0	1.8	52.5	45	10.5	1.96	6.28	17049	1979	3038	9.8	19.8
2861.0	2.4	52.0	45	10.5	1.87	6.70	18196	1551	2967	9.8	19.8
2862.0	1.8	51.3	45	10.5	1.95	7.26	19696	2029	2925	9.8	19.8
2863.0	1.3	49.0	45	10.5	2.03	8.04	21817	2869	2922	9.8	19.8
2864.0	2.7	48.7	45	10.5	1.79	8.42	22831	1372	2858	9.8	19.8
2865.0	2.0	50.2	45	10.5	1.90	8.91	24166	1806	2816	9.8	19.8
2866.0	2.2	50.2	45	10.5	1.88	9.37	25412	1686	2772	9.8	19.8
2867.0	2.5	49.8	45	10.5	1.83	9.77	26497	1468	2724	9.8	19.8
2868.0	2.6	48.3	45	10.5	1.80	10.16	27544	1416	2677	9.8	19.8
2869.0	3.3	47.0	45	10.5	1.71	10.47	28364	1109	2623	9.8	19.8
2870.0	3.0	48.3	45	10.5	1.75	10.79	29252	1200	2576	9.8	19.8
2871.0	5.5	49.3	45	10.5	1.57	10.98	29742	663	2514	9.8	19.8
2872.0	2.7	49.9	45	10.5	1.80	11.35	30742	1353	2478	9.8	19.8
2873.0	3.4	48.4	45	10.5	1.71	11.64	31533	1070	2435	9.8	19.8
2874.0	3.0	49.2	45	10.5	1.77	11.98	32447	1236	2400	9.8	19.8
2875.0	2.7	47.6	45	10.5	1.78	12.35	33460	1371	2370	9.8	19.8

(d). COMPUTER DATA LISTING : LIST B

INTERVAL 10m averages.

DEPTH. Well depth, in metres.

ROP. Rate of penetration, in metres per hour.

BIT RUN. Depth interval drilled by the bit, in metres.

HOURS. Cumulative bit hours. The number of hours that the bit has actually been 'on bottom', recorded in decimal hours.

TURNS. Cumulative bit turns. The number of turns made by the bit, while actually 'on bottom'.

TOTAL COST Cumulative bit cost, in A dollars.

ICOST. Incremental cost per metre, calculated from the drilling time, in A dollars.

CCOST. Cumulative cost per metre, calculated from the drilling time, in A dollars.

IC ICOST minus CCOST, expressed as a positive or negative sign. When the bit becomes worn, (and therefore uneconomic), this should change from negative to positive.

BIT NUMBER	1	IADC CODE	111	INTERVAL	256.0-	846.0
HTC R1		SIZE	17.500	NOZZLES	20	20 20
COST	0.00	TRIP TIME	3.0	BIT RUN		590.0
TOTAL HOURS	14.49	TOTAL TURNS	109766	CONDITION	T2 B2 G0.000	

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
260.0	132.0	4.0	0.03	127	11066.70	28	2767	-
270.0	151.8	14.0	0.10	404	11307.25	24.05	807.66	-
280.0	169.1	24.0	0.16	652	11523.24	21.60	480.14	-
290.0	71.3	34.0	0.30	1251	12035.54	51.23	353.99	-
300.0	70.9	44.0	0.44	1886	12550.88	51.53	285.25	-
310.0	78.6	54.0	0.56	2458	13015.49	46.46	241.03	-
320.0	82.9	64.0	0.68	3001	13455.76	44.03	210.25	-
330.0	65.5	74.0	0.84	3688	14013.56	55.78	189.37	-
340.0	90.0	84.0	0.95	4188	14419.33	40.58	171.66	-
350.0	115.4	94.0	1.04	4578	14735.84	31.65	156.76	-
360.0	147.8	104.0	1.10	4883	14982.90	24.71	144.07	-
370.0	109.4	114.0	1.19	5294	15316.62	33.37	134.36	-
380.0	126.3	124.0	1.27	5650	15605.79	28.92	125.85	-
390.0	75.3	134.0	1.41	6248	16090.69	48.49	120.08	-
400.0	111.1	144.0	1.50	6653	16419.37	32.87	114.02	-
410.0	113.9	154.0	1.58	7048	16740.14	32.08	108.70	-
420.0	110.8	164.0	1.67	7454	17069.83	32.97	104.08	-
430.0	95.0	174.0	1.78	7928	17454.31	38.45	100.31	-
440.0	77.1	184.0	1.91	8512	17928.20	47.39	97.44	-
450.0	64.9	194.0	2.06	9205	18490.77	56.26	95.31	-
460.0	64.2	204.0	2.22	9905	19059.19	56.84	93.43	-
470.0	46.3	214.0	2.43	10877	19847.42	78.82	92.74	-
480.0	45.7	224.0	2.65	11862	20646.80	79.94	92.17	-
490.0	42.1	234.0	2.89	12930	21513.81	86.70	91.94	-
500.0	37.0	244.0	3.16	14147	22501.61	98.78	92.22	+
510.0	38.5	254.0	3.42	15317	23451.05	94.94	92.33	+
520.0	51.0	264.0	3.62	16199	24167.25	71.62	91.54	-
540.0	42.7	284.0	4.09	19213	25878.36	85.56	91.12	-
550.0	43.4	294.0	4.32	21217	26719.33	84.10	90.88	-
560.0	34.2	304.0	4.61	23759	27786.53	106.72	91.40	+
570.0	33.5	314.0	4.91	26357	28877.06	109.05	91.97	+
580.0	43.5	324.0	5.14	28357	29716.61	83.95	91.72	-
590.0	40.4	334.0	5.38	30510	30620.48	90.39	91.68	-
600.0	43.0	344.0	5.62	32534	31470.14	84.97	91.48	-
610.0	42.9	354.0	5.85	34562	32321.22	85.11	91.30	-
620.0	41.0	364.0	6.09	36686	33212.92	89.17	91.24	-
630.0	43.8	374.0	6.32	38673	34047.05	83.41	91.03	-
640.0	52.9	384.0	6.51	40319	34737.88	69.08	90.46	-
650.0	43.9	394.0	6.74	42300	35569.39	83.15	90.28	-
660.0	34.3	404.0	7.03	44834	36632.96	106.36	90.68	+
670.0	37.0	414.0	7.30	47188	37621.25	98.83	90.87	+
680.0	39.3	424.0	7.56	49403	38550.99	92.97	90.92	+
690.0	37.2	434.0	7.83	51742	39532.97	98.20	91.09	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
700.0	23.2	444.0	8.26	55486	41104.56	157.16	92.58	+
710.0	24.7	454.0	8.66	59010	42583.71	147.91	93.80	+
720.0	29.1	464.0	9.00	62000	43838.90	125.52	94.48	+
730.0	22.8	474.0	9.44	65816	45440.87	160.20	95.87	+
740.0	23.2	484.0	9.87	69565	47014.27	157.34	97.14	+
750.0	25.6	494.0	10.26	72962	48440.58	142.63	98.06	+
760.0	24.9	504.0	10.67	76452	49905.44	146.49	99.02	+
770.0	18.3	514.0	11.21	81218	51905.92	200.05	100.98	+
780.0	22.2	524.0	11.66	85130	53548.16	164.22	102.19	+
790.0	21.1	534.0	12.14	89244	55275.08	172.69	103.51	+
800.0	29.5	544.0	12.47	92191	56512.03	123.69	103.88	+
810.0	21.6	554.0	12.94	96213	58200.57	168.85	105.06	+
820.0	28.6	564.0	13.29	99253	59476.76	127.62	105.46	+
830.0	23.2	574.0	13.72	103011	61054.22	157.75	106.37	+
840.0	21.9	584.0	14.18	106992	62725.01	167.08	107.41	+
846.0	20.6	590.0	14.47	109522	63787.14	177.02	108.11	+

BIT NUMBER	2	IADC CODE	116	INTERVAL	846.0- 1427.5
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2566.00	TRIP TIME	4.5	BIT RUN	581.9
TOTAL HOURS	17.08	TOTAL TURNS	134081	CONDITION	T2 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
860.0	12.7	14.0	1.10	4460	23016.64	287	1644	-
870.0	22.4	24.0	1.55	7268	24649.89	163	1027	-
880.0	23.6	34.0	1.97	10062	26195.91	154.60	770.47	-
890.0	24.1	44.0	2.38	12798	27709.46	151.36	629.76	-
900.0	26.5	54.0	2.76	15292	29089.78	138.03	538.70	-
910.0	23.9	64.0	3.18	18057	30619.67	152.99	478.43	-
920.0	23.3	74.0	3.61	20909	32186.99	156.73	434.96	-
930.0	32.3	84.0	3.92	23511	33318.09	113.11	396.64	-
940.0	17.6	94.0	4.49	28294	35397.71	207.96	376.57	-
950.0	18.7	104.0	5.02	32779	37347.47	194.98	359.11	-
960.0	25.7	114.0	5.41	36048	38768.70	142.12	340.08	-
980.0	30.8	134.0	6.06	41498	41138.45	118.49	307.00	-
990.0	30.7	144.0	6.39	44231	42326.36	118.79	293.93	-
1000.0	34.4	154.0	6.68	46676	43389.50	106.31	281.75	-
1010.0	37.7	164.0	6.94	48902	44357.28	96.78	270.47	-
1020.0	45.1	174.0	7.16	50764	45166.54	80.93	259.58	-
1030.0	50.3	184.0	7.36	52432	45891.94	72.54	249.41	-
1040.0	55.0	194.0	7.55	53958	46555.39	66.34	239.98	-
1050.0	56.6	204.0	7.72	55443	47201.08	64.57	231.38	-
1060.0	47.4	214.0	7.93	57216	47971.77	77.07	224.17	-
1070.0	50.2	224.0	8.13	58889	48699.12	72.74	217.41	-
1080.0	49.3	234.0	8.34	60592	49439.67	74.05	211.28	-
1090.0	54.9	244.0	8.52	62123	50105.31	66.56	205.35	-
1100.0	50.8	254.0	8.71	63778	50824.55	71.92	200.10	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1110.0	50.0	264.0	8.91	65458	51554.92	73.04	195.28	-
1120.0	49.6	274.0	9.12	67152	52291.40	73.65	190.84	-
1130.0	37.7	284.0	9.38	69378	53259.18	96.78	187.53	-
1140.0	48.6	294.0	9.59	71107	54011.12	75.19	183.71	-
1150.0	49.7	304.0	9.79	72799	54746.60	73.55	180.09	-
1160.0	45.3	314.0	10.01	74652	55552.40	80.58	176.92	-
1170.0	46.0	324.0	10.23	76479	56346.71	79.43	173.91	-
1180.0	48.5	334.0	10.43	78211	57099.67	75.30	170.96	-
1190.0	47.8	344.0	10.64	79968	57863.54	76.39	168.21	-
1200.0	39.4	354.0	10.90	82102	58791.47	92.79	166.08	-
1210.0	39.4	364.0	11.15	84233	59717.66	92.62	164.06	-
1220.0	40.1	374.0	11.40	86327	60628.22	91.06	162.11	-
1230.0	39.3	384.0	11.65	88467	61558.46	93.02	160.31	-
1240.0	42.2	394.0	11.89	90457	62423.78	86.53	158.44	-
1250.0	42.5	404.0	12.13	92436	63284.03	86.02	156.64	-
1260.0	38.1	414.0	12.39	94643	64243.50	95.95	155.18	-
1270.0	34.2	424.0	12.68	97098	65311.06	106.76	154.04	-
1280.0	33.0	434.0	12.98	99644	66417.82	110.68	153.04	-
1290.0	38.6	444.0	13.24	101821	67364.29	94.65	151.72	-
1300.0	37.4	454.0	13.51	104065	68340.19	97.59	150.53	-
1310.0	37.7	464.0	13.78	106294	69308.98	96.88	149.37	-
1320.0	37.3	474.0	14.04	108548	70288.94	98.00	148.29	-
1330.0	38.8	484.0	14.30	110715	71231.36	94.24	147.17	-
1340.0	39.7	494.0	14.55	112829	72150.44	91.91	146.05	-
1350.0	37.6	504.0	14.82	115064	73121.99	97.15	145.08	-
1360.0	37.2	514.0	15.09	117322	74103.83	98.18	144.17	-
1370.0	30.6	524.0	15.41	120063	75295.37	119.15	143.69	-
1380.0	30.8	534.0	15.74	122792	76481.81	118.64	143.22	-
1390.0	31.2	544.0	16.06	125488	77654.10	117.23	142.75	-
1400.0	28.6	554.0	16.41	128426	78931.28	127.72	142.48	-
1410.0	41.5	564.0	16.65	130449	79810.52	87.92	141.51	-
1420.0	34.4	574.0	16.94	132888	80871.29	106.08	140.89	-
1427.5	52.8	581.5	17.08	134081	81389.78	69.13	139.97	-

BIT NUMBER	2	IADC CODE	4	INTERVAL	1427.5- 1436.0
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	8.5
TOTAL HOURS	1.23	TOTAL TURNS	9672	CONDITION	T0 B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1430.0	7.6	2.5	0.33	2626	17631.04	479	7052	-
1436.0	6.6	8.5	1.23	9672	20930.02	550	2462	-

BIT NUMBER	2	IADC CODE	4	INTERVAL	1436.0- 1445.5
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.5
TOTAL HOURS	1.08	TOTAL TURNS	8392	CONDITION	T0 B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1440.0	8.1	4.0	0.49	3850	18236.67	451	4559	-
1445.5	9.4	9.5	1.08	8392	20363.21	387	2143	-

BIT NUMBER	2	IADC CODE	4	INTERVAL	1445.5- 1455.4
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.9
TOTAL HOURS	1.83	TOTAL TURNS	14268	CONDITION	T0 B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1450.0	8.2	4.5	0.55	4268	18432.46	444	4096	-
1455.4	4.2	9.9	1.83	14263	23112.22	867	2335	-

BIT NUMBER	3	IADC CODE	517	INTERVAL	1455.4- 1813.2
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	5.5	BIT RUN	357.8
TOTAL HOURS	24.35	TOTAL TURNS	102063	CONDITION	T2 B3 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1460.0	13.5	4.6	0.34	1324	29849.74	270	6489	-
1470.0	22.3	14.6	0.79	3075	31490.10	164	2157	-
1480.0	19.5	24.6	1.30	5075	33362.76	187	1356	-
1490.0	50.6	34.6	1.50	5845	34084.03	72.13	985.09	-
1500.0	14.9	44.6	2.17	8462	36533.91	244.99	819.15	-
1510.0	12.4	54.6	2.98	11608	39479.83	294.59	723.07	-
1520.0	9.9	64.6	3.99	15559	43180.11	370.03	668.42	-
1530.0	16.0	74.6	4.62	18000	45465.65	228.55	609.46	-
1540.0	7.7	84.6	5.92	23068	50211.22	474.56	593.51	-
1550.0	18.0	94.6	6.47	25230	52236.05	202.48	552.18	-
1560.0	19.5	104.6	6.98	27232	54110.82	187.48	517.31	-
1570.0	11.2	114.6	7.88	30725	57381.39	327.06	500.71	-
1580.0	21.3	124.6	8.35	32767	59098.87	171.75	474.31	-
1590.0	19.2	134.6	8.87	35581	61001.97	190.31	453.21	-
1600.0	21.2	144.6	9.34	38127	62723.82	172.19	433.77	-
1610.0	13.8	154.6	10.07	42038	65368.48	264.47	422.82	-
1620.0	27.2	164.6	10.43	43615	66709.57	134.11	405.28	-
1630.0	20.0	174.6	10.93	45713	68533.55	182.40	392.52	-
1640.0	16.5	184.6	11.54	48253	70742.46	220.89	383.22	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1650.0	10.5	194.6	12.49	52235	74204.76	346.23	381.32	-
1660.0	10.1	204.6	13.48	56395	77822.27	361.75	380.36	-
1670.0	11.4	214.6	14.36	60087	81031.97	320.97	377.60	-
1680.0	15.0	224.6	15.02	62882	83462.58	243.06	371.61	-
1690.0	12.7	234.6	15.81	66185	86335.11	287.25	368.01	-
1700.0	40.8	244.6	16.05	67214	87229.85	89.47	356.62	-
1710.0	39.0	254.6	16.31	68292	88166.72	93.69	346.30	-
1720.0	30.1	264.6	16.64	69688	89381.04	121.43	337.80	-
1730.0	20.8	274.6	17.12	71710	91138.63	175.76	331.90	-
1740.0	10.9	284.6	18.04	75558	94484.55	334.59	331.99	+
1750.0	9.4	294.6	19.10	80030	98373.65	388.91	333.92	+
1760.0	17.0	304.6	19.69	82501	100522.24	214.86	330.01	-
1770.0	9.3	314.6	20.77	87021	104452.29	393.01	332.02	+
1780.0	12.5	324.6	21.57	90392	107383.53	293.12	330.82	-
1790.0	12.4	334.6	22.38	93771	110321.36	293.78	329.71	-
1800.0	9.3	344.6	23.46	98307	114265.52	394.42	331.59	+
1810.0	12.5	354.6	24.26	101673	117192.19	292.67	330.49	-
1813.2	34.5	357.8	24.35	102063	117531.35	105.99	328.48	-

BIT NUMBER 3 IADC CODE 4 INTERVAL 1813.2- 1821.8
 CHRIS RC476 SIZE 9.875 NOZZLES 15 15 16
 COST 0.00 TRIP TIME 6.0 BIT RUN 8.6
 TOTAL HOURS 0.91 TOTAL TURNS 6058 CONDITION TO B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1820.0	8.7	6.8	0.78	5110	24762.59	419	3642	-
1821.8	13.7	8.6	0.91	6058	25243.44	267	2935	-

BIT NUMBER 4 IADC CODE 517 INTERVAL 1821.8- 1832.2
 HTC J22 SIZE 12.250 NOZZLES 16 16 16
 COST 8520.00 TRIP TIME 6.0 BIT RUN 10.4
 TOTAL HOURS 0.69 TOTAL TURNS 2889 CONDITION TO B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1830.0	13.3	8.2	0.62	2599	32691.84	276	3987	-
1832.2	31.8	10.4	0.69	2889	32944.44	115	3168	-

BIT NUMBER	4	IADC CODE	4	INTERVAL	1832.2- 1841.6
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	7.0	BIT RUN	9.4
TOTAL HOURS	0.60	TOTAL TURNS	4641	CONDITION	T0 B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1840.0	16.3	7.8	0.48	3740	27314.93	224	3502	-
1841.6	10.4	9.4	0.63	4943	27878.24	352	2966	-

BIT NUMBER	4	IADC CODE	4	INTERVAL	1841.6- 1851.1
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	6.0	BIT RUN	9.5
TOTAL HOURS	0.33	TOTAL TURNS	2591	CONDITION	T0 B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1850.0	32.9	8.4	0.26	1991	22844.27	111	2720	-
1851.1	4.0	9.5	0.53	4151	23855.68	919	2511	-

BIT NUMBER	4	IADC CODE	517	INTERVAL	1851.1- 2140.1
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	6.0	BIT RUN	289.0
TOTAL HOURS	25.80	TOTAL TURNS	100622	CONDITION	T4 B3 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1860.0	6.5	8.9	1.37	5336	26908.25	561	3023	-
1870.0	16.3	18.9	1.98	7724	29145.10	224	1542	-
1880.0	18.1	28.9	2.53	9879	31162.83	202	1078	-
1890.0	18.3	38.9	3.08	12006	33154.52	199.17	852.30	-
1900.0	12.2	48.9	3.90	15193	36139.02	298.45	739.04	-
1910.0	10.8	58.9	4.82	18794	39511.03	337.20	670.82	-
1920.0	8.5	68.9	6.00	23386	43811.26	430.02	635.87	-
1930.0	6.8	78.9	7.47	29152	49210.14	539.89	623.70	-
1940.0	9.0	88.9	8.59	33496	53278.06	406.79	599.30	-
1950.0	9.0	98.9	9.70	37824	57330.76	405.27	579.68	-
1960.0	8.0	108.9	10.95	42695	61891.71	456.09	568.34	-
1970.0	6.4	118.9	12.51	48776	67586.12	569.44	568.43	+
1980.0	7.9	128.9	13.78	53741	72235.32	464.92	560.40	-
1990.0	8.8	138.9	14.92	58193	76404.69	416.94	550.07	-
2000.0	10.0	148.9	15.92	62088	80051.61	364.69	537.62	-
2010.0	15.7	158.9	16.56	64570	82375.57	232.40	518.41	-
2020.0	15.8	168.9	17.19	67033	84682.08	230.65	501.37	-
2030.0	17.5	178.9	17.76	69264	86771.83	208.98	485.03	-
2040.0	34.9	188.9	18.05	70382	87818.74	104.69	464.90	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2050.0	21.7	198.9	18.51	72183	89504.75	168.60	450.00	-
2060.0	11.4	208.9	19.38	75601	92705.33	320.06	443.78	-
2070.0	18.5	218.9	19.92	77706	94676.39	197.11	432.51	-
2080.0	15.2	228.9	20.58	80265	97072.85	239.65	424.08	-
2090.0	10.6	238.9	21.52	83940	100513.84	344.10	420.74	-
2100.0	7.1	248.9	22.92	89407	105633.51	511.97	424.40	+
2110.0	15.6	258.9	23.56	91900	107967.75	233.42	417.02	-
2120.0	17.9	268.9	24.12	94073	110003.11	203.54	409.09	-
2130.0	10.8	278.9	25.05	97686	113385.77	338.27	406.55	-
2140.0	14.1	288.9	25.76	100453	115977.44	259.17	401.44	-
2140.1	2.3	289.0	25.80	100622	116135.69	1583	402	+

BIT NUMBER	5	IADC CODE	517	INTERVAL	2140.1- 2400.6
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	8.0	BIT RUN	260.5
TOTAL HOURS	50.21	TOTAL TURNS	195837	CONDITION	T6 B5 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2160.0	7.4	19.9	2.68	10463	47533.38	492	2389	-
2180.0	9.3	39.9	4.83	18838	55376.34	392	1388	-
2190.0	10.0	49.9	5.83	22746	59035.44	366	1183	-
2200.0	7.3	59.9	7.21	28124	64071.14	504	1070	-
2210.0	3.9	69.9	9.75	38038	73355.34	928	1049	-
2220.0	7.9	79.9	11.02	42995	77996.93	464.16	976.18	-
2230.0	10.3	89.9	12.00	46799	81558.64	356.17	907.22	-
2240.0	9.5	99.9	13.05	50884	85384.11	382.55	854.70	-
2250.0	7.1	109.9	14.45	56345	90497.93	511.38	823.46	-
2260.0	7.2	119.9	15.84	61783	95590.44	509.25	797.25	-
2270.0	4.7	129.9	17.98	70118	103395.57	780.51	795.96	-
2280.0	5.4	139.9	19.84	77392	110206.55	681.10	787.75	-
2290.0	3.0	149.9	23.22	90566	122543.21	1234	817	+
2300.0	2.7	159.9	26.98	105234	136277.77	1373	852	+
2310.0	4.0	169.9	29.48	114969	145394.59	911.68	855.77	+
2320.0	2.7	179.9	33.24	129627	159120.02	1373	884	+
2330.0	4.2	189.9	35.61	138874	167779.32	865.93	883.51	-
2340.0	5.6	199.9	37.39	145835	174297.12	651.78	871.92	-
2350.0	4.0	209.9	39.89	155590	183432.20	913.51	873.90	+
2360.0	3.9	219.9	42.48	165689	192888.85	945.67	877.17	+
2370.0	8.2	229.9	43.70	170421	197319.94	443.11	858.29	-
2380.0	4.5	239.9	45.92	179100	205446.65	812.67	856.38	-
2390.0	4.8	249.9	47.99	187156	212991.08	754.44	852.31	-
2400.0	5.0	259.9	49.98	194917	220258.56	726.75	847.47	-
2400.6	2.5	260.5	50.21	195837	221119.82	1435	849	+

BIT NUMBER	6	IADC CODE	517	INTERVAL	2400.6- 2650.3
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.2	BIT RUN	249.7
TOTAL HOURS	57.92	TOTAL TURNS	215379	CONDITION	T0 B5 G4.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2410.0	3.7	9.4	2.56	9968	44148.30	993	4697	-
2420.0	4.2	19.4	4.93	19238	52828.90	868	2723	-
2430.0	3.0	29.4	8.22	32076	64851.09	1202	2206	-
2440.0	4.6	39.4	10.40	40573	72807.37	796	1848	-
2450.0	5.9	49.4	12.09	47155	78970.88	616	1599	-
2460.0	8.8	59.4	13.23	51587	83120.98	415	1399	-
2470.0	6.2	69.4	14.85	57896	89029.10	591	1283	-
2480.0	9.9	79.4	15.85	61821	92704.43	368	1168	-

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
2490.0	5.7	89.4	17.60	68632	99082.25	638	1108	-
2500.0	5.7	99.4	19.35	75474	105489.48	641	1061	-
2510.0	4.9	109.4	21.39	83436	112944.63	746	1032	-
2520.0	3.7	119.4	24.09	93615	122799.96	986	1028	-
2530.0	3.4	129.4	27.00	104080	133416.12	1062	1031	+
2540.0	3.4	139.4	29.96	114721	144210.82	1079	1035	+
2550.0	3.5	149.4	32.78	124893	154529.75	1032	1034	-
2560.0	4.7	159.4	34.89	132495	162241.56	771	1018	-
2570.0	4.9	169.4	36.94	139878	169731.20	749	1002	-
2580.0	5.1	179.4	38.89	146903	176857.67	712.65	985.83	-
2590.0	4.2	189.4	41.25	155394	185471.32	861.36	979.26	-
2600.0	3.7	199.4	43.93	165036	195252.59	978.13	979.20	-
2610.0	3.3	209.4	46.98	176016	206391.19	1114	986	+
2620.0	4.4	219.4	49.25	184176	214669.06	827.79	978.44	-
2630.0	4.8	229.4	51.34	191721	222323.04	765.40	969.15	-
2640.0	3.6	239.4	54.09	201613	232357.93	1003	971	+
2650.0	2.8	249.4	57.70	214607	245540.28	1318	985	+
2650.3	1.4	249.7	57.92	215379	246322.85	2609	986	+

BIT NUMBER 7 IADC CODE 517 INTERVAL 2650.3- 2840.0
 HTC J22 SIZE 12.250 NOZZLES 16 16 16
 COST 8520.00 TRIP TIME 7.7 BIT RUN 189.7
 TOTAL HOURS 63.91 TOTAL TURNS 191717 CONDITION T2 B4 G0.250

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
2660.0	3.5	9.7	2.79	8381	46843.43	1052	4829	-
2670.0	2.8	19.7	6.36	19082	59870.14	1303	3039	-
2680.0	3.3	29.7	9.39	28175	70938.74	1107	2389	-
2690.0	2.7	39.7	13.06	39181	84336.51	1340	2124	-
2700.0	3.0	49.7	16.37	49122	96438.83	1210	1940	-
2710.0	5.3	59.7	18.27	54797	103346.18	691	1731	-
2720.0	3.0	69.7	21.59	64767	115482.99	1214	1657	-
2730.0	2.9	79.7	25.08	75227	128217.32	1273	1609	-
2740.0	3.2	89.7	28.17	84524	139534.46	1132	1556	-
2750.0	3.6	99.7	30.94	92812	149623.11	1009	1501	-
2760.0	2.8	109.7	34.47	103397	162509.60	1289	1481	-
2770.0	3.3	119.7	37.50	112488	173576.17	1107	1450	-
2780.0	2.9	129.7	40.92	122769	186090.69	1251	1435	-
2790.0	3.0	139.7	44.25	132748	198238.67	1215	1419	-
2800.0	2.4	149.7	48.36	145066	213234.18	1500	1424	+
2810.0	1.8	159.7	53.86	161577	233333.37	2010	1461	+
2820.0	2.8	169.7	57.46	172376	246479.56	1315	1452	-
2830.0	2.5	179.7	61.43	184277	260966.84	1449	1452	-
2840.0	4.0	189.7	63.91	191717	270023.80	906	1423	-

BIT NUMBER	8	IADC CODE	537	INTERVAL	2840.0- 2875.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	8.1	BIT RUN	35.0
TOTAL HOURS	12.35	TOTAL TURNS	33460	CONDITION	T1 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2850.0	4.4	10.0	2.28	6256	46166.66	832	4617	-
2860.0	2.5	20.0	6.28	17049	60764.51	1460	3038	-
2870.0	2.2	30.0	10.79	29252	77269.86	1651	2576	-
2875.0	3.2	35.0	12.35	33460	82962.59	1139	2370	-

(e). COMPUTER DATA LISTING : LIST C

INTERVAL 10m averages.

DEPTH. Well depth, in metres.

FLOW RATE. Mud flow into the well, in gallons per
minute.

PSP. Pump pressure, in pounds per square
inch.

PBIT Bit pressure drop, in pounds per
square inch.

%PSP Percentage of surface pressure dropped
at the bit.

H.H.P. Bit hydraulic horsepower.

HHP/SQ IN. Bit hydraulic horsepower per square inch
of bit diameter.

IMPACT FORCE Bit impact force, in foot-pounds per
second squared.

JET VELOCITY Mud velocity through the bit nozzles, in
metres per second.

BIT NUMBER	1	IADC CODE	111	INTERVAL	256.0- 846.0
HTC R1		SIZE	17.500	NOZZLES	20 20 20
COST	0.00	TRIP TIME	3.0	BIT RUN	590.0
TOTAL HOURS	14.49	TOTAL TURNS	109766	CONDITION	T2 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
260.0	1055	1889.0	1039.8	55.0	640	2.66	1726	112
270.0	1115	2100.0	1161.5	55.3	755	3.14	1928	118
280.0	1117	2191.8	1165.6	53.2	759	3.16	1935	118
290.0	1097	1911.3	1125.8	58.9	721	3.00	1869	116
300.0	1104	1968.7	1139.3	57.9	734	3.05	1891	117
310.0	1108	2064.7	1148.2	55.6	742	3.09	1906	117
320.0	1125	2092.3	1183.0	56.5	776	3.23	1964	119
330.0	1100	1985.8	1131.1	57.0	726	3.02	1878	117
340.0	1124	241.5	1182.2	489.6	776	3.22	1963	119
350.0	1124	2107.4	1180.7	56.0	774	3.22	1960	119
360.0	1122	2113.0	1176.2	55.7	770	3.20	1953	119
370.0	1120	2096.3	1172.1	55.9	766	3.18	1946	119
380.0	1126	2134.1	1241.0	58.2	815	3.39	2060	119
390.0	508	365.7	253.0	69.2	75	0.31	420	54
400.0	1129	2165.6	1247.1	57.6	821	3.42	2070	120
410.0	1136	2240.2	1262.5	56.4	837	3.48	2096	120
420.0	1123	2210.1	1234.9	55.9	809	3.37	2050	119
430.0	1127	2246.8	1242.1	55.3	816	3.39	2062	119
440.0	1120	2227.3	1228.1	55.1	803	3.34	2039	119
450.0	1121	2224.3	1229.0	55.3	804	3.34	2040	119
460.0	1118	2242.2	1223.7	54.6	798	3.32	2031	119
470.0	1065	2228.0	1110.8	49.9	691	2.87	1844	113
480.0	1040	1976.2	1058.7	53.6	643	2.67	1758	110
490.0	1103	2168.1	1189.7	54.9	765	3.18	1975	117
500.0	1106	2190.3	1196.3	54.6	772	3.21	1986	117
510.0	1097	2138.5	1178.0	55.1	754	3.14	1956	116
520.0	1087	2100.7	1182.8	56.3	750	3.12	1964	115
540.0	1097	2174.9	1204.0	55.4	771	3.20	1999	116
550.0	1101	2213.5	1212.7	54.8	779	3.24	2013	117
560.0	1095	2181.5	1199.4	55.0	766	3.19	1991	116
570.0	1093	2201.7	1195.9	54.3	763	3.17	1985	116
580.0	1087	2317.0	1182.2	51.0	750	3.12	1963	115
590.0	1093	2224.1	1195.3	53.7	762	3.17	1984	116
600.0	1095	2269.8	1200.3	52.9	767	3.19	1993	116
610.0	1098	2290.4	1206.8	52.7	773	3.22	2003	116
620.0	1098	2299.2	1206.3	52.5	773	3.21	2003	116
630.0	1103	2331.8	1217.6	52.2	784	3.26	2021	117
640.0	1098	2319.7	1205.8	52.0	772	3.21	2002	116
650.0	1086	2270.5	1179.8	52.0	748	3.11	1959	115
660.0	1082	2258.4	1171.2	51.9	739	3.07	1944	115
670.0	1082	2293.7	1171.1	51.1	739	3.07	1944	115
680.0	1082	2289.3	1171.0	51.2	739	3.07	1944	115
690.0	1083	2314.5	1174.0	50.7	742	3.09	1949	115

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
700.0	1076	2310.6	1158.6	50.1	728	3.02	1923	114
710.0	1075	2387.0	1155.0	48.4	724	3.01	1917	114
720.0	1081	2343.2	1169.8	49.9	738	3.07	1942	115
730.0	1062	2262.7	1129.2	49.9	700	2.91	1875	113
740.0	1080	2343.7	1167.1	49.8	736	3.06	1938	114
750.0	1080	2385.5	1165.7	48.9	734	3.05	1935	114
760.0	1079	2373.6	1164.4	49.1	733	3.05	1933	114
770.0	1080	2401.0	1166.1	48.6	735	3.05	1936	114
780.0	1082	2396.9	1170.6	48.8	739	3.07	1943	115
790.0	1081	2400.3	1169.4	48.7	738	3.07	1941	115
800.0	1082	2413.5	1171.6	48.5	740	3.08	1945	115
810.0	1075	2390.0	1155.0	48.3	724	3.01	1917	114
820.0	1080	2405.0	1165.7	48.5	734	3.05	1935	114
830.0	1085	2438.4	1177.7	48.3	746	3.10	1955	115
840.0	1076	2378.0	1157.1	48.7	726	3.02	1921	114
846.0	1073	2373.9	1152.3	48.5	722	3.00	1913	114

BIT NUMBER	2	IADC CODE	116	INTERVAL	846.0- 1427.5
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2566.00	TRIP TIME	4.5	BIT RUN	581.5
TOTAL HOURS	17.08	TOTAL TURNS	134081	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
860.0	989	2615.8	1394.8	53.3	805	6.83	1876	129
870.0	987	2565.1	1388.2	54.1	799	6.78	1867	129
880.0	998	2626.4	1418.2	54.0	825	7.00	1907	131
890.0	521	2683.1	391.3	14.6	119	1.01	526	68
900.0	863	2680.3	1072.5	40.0	540	4.58	1442	113
910.0	998	2677.9	1436.6	53.6	837	7.10	1932	131
920.0	999	2686.0	1439.9	53.6	840	7.12	1936	131
930.0	994	2640.5	1425.1	54.0	827	7.01	1916	130
940.0	619	798.6	552.2	69.1	199	1.69	743	81
950.0	501	2626.6	366.2	13.9	107	0.91	492	66
960.0	981	2645.3	1403.5	53.1	803	6.82	1887	128
980.0	992	2728.4	1434.8	52.6	830	7.04	1929	130
990.0	989	2737.1	1425.8	52.1	823	6.98	1917	129
1000.0	987	2744.7	1419.7	51.7	817	6.93	1909	129
1010.0	993	2814.1	1438.5	51.1	834	7.07	1934	130
1020.0	995	2840.0	1442.5	50.8	837	7.10	1940	130
1030.0	994	2846.0	1441.8	50.7	836	7.10	1939	130
1040.0	994	2865.4	1442.1	50.3	837	7.10	1939	130
1050.0	990	2852.7	1429.4	50.1	826	7.01	1922	130
1060.0	996	2900.6	1445.8	49.8	840	7.13	1944	130
1070.0	990	2890.0	1428.1	49.4	825	7.00	1920	129
1080.0	994	2798.7	1439.3	51.4	834	7.08	1935	130
1090.0	1000	2840.0	1457.0	51.3	850	7.21	1959	131
1100.0	998	2858.9	1453.5	50.8	847	7.18	1955	131

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1110.0	990	2831.7	1429.8	50.5	826	7.01	1923	130
1120.0	971	2834.1	1375.3	48.5	779	6.61	1849	127
1130.0	973	2857.0	1380.4	48.3	784	6.65	1856	127
1140.0	937	2630.5	1279.7	48.6	699	5.93	1721	123
1150.0	972	2862.4	1424.4	49.8	808	6.85	1915	127
1160.0	979	2960.2	1444.7	48.8	825	7.00	1943	128
1170.0	975	2938.2	1432.1	48.7	814	6.91	1926	127
1180.0	484	2934.6	352.6	12.0	99	0.84	474	63
1190.0	971	2909.5	1422.5	48.9	806	6.84	1913	127
1200.0	974	2948.1	1431.0	48.5	813	6.90	1924	127
1210.0	963	2907.4	1415.1	48.7	795	6.75	1903	126
1220.0	957	2863.4	1396.3	48.8	780	6.61	1878	125
1230.0	964	2910.0	1417.3	48.7	797	6.77	1906	126
1240.0	963	2919.4	1413.5	48.4	794	6.74	1901	126
1250.0	975	3079.6	1450.1	47.1	825	7.00	1950	128
1260.0	986	3118.1	1480.9	47.5	852	7.22	1991	129
1270.0	985	3105.1	1479.5	47.6	850	7.22	1990	129
1280.0	984	3111.1	1476.1	47.4	847	7.19	1985	129
1290.0	972	3103.0	1441.2	46.4	818	6.94	1938	127
1300.0	965	3009.5	1420.5	47.2	800	6.79	1910	126
1310.0	969	3055.6	1430.0	46.8	808	6.86	1923	127
1320.0	959	3011.7	1401.5	46.5	784	6.65	1885	125
1330.0	956	3000.4	1392.3	46.4	776	6.59	1872	125
1340.0	957	3016.8	1395.1	46.2	779	6.61	1876	125
1350.0	955	3034.0	1389.3	45.8	774	6.57	1868	125
1360.0	957	3081.4	1394.8	45.3	778	6.60	1876	125
1370.0	955	3041.0	1389.3	45.7	774	6.57	1868	125
1380.0	951	3068.0	1377.9	44.9	764	6.48	1853	124
1390.0	926	2857.6	1305.9	45.7	705	5.98	1756	121
1400.0	945	3064.0	1360.2	44.4	750	6.36	1829	124
1410.0	951	3100.9	1377.7	44.4	764	6.48	1853	124
1420.0	952	3112.7	1381.0	44.4	767	6.51	1857	125
1427.5	945	3060.0	1360.3	44.5	750	6.36	1829	124

BIT NUMBER	2	IADC CODE	4	INTERVAL	1427.5- 1436.0
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	8.5
TOTAL HOURS	1.23	TOTAL TURNS	9672	CONDITION	TO B0 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1430.0	502	889.7	727.6	81.8	213	2.78	711	90
1436.0	502	924.9	727.6	78.7	213	2.78	711	90

BIT NUMBER	2	IADC CODE	4	INTERVAL	1436.0- 1445.5
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.5
TOTAL HOURS	1.08	TOTAL TURNS	8392	CONDITION	T0 B0 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1440.0	502	985.3	738.8	75.0	216	2.82	722	90
1445.5	500	996.0	737.5	74.0	215	2.81	720	90

BIT NUMBER	2	IADC CODE	4	INTERVAL	1445.5- 1455.4
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.9
TOTAL HOURS	1.83	TOTAL TURNS	14268	CONDITION	T0 B0 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1450.0	507	1021.9	753.5	73.7	223	2.91	736	91
1455.4	505	1022.0	752.4	73.6	222	2.89	735	91

BIT NUMBER	3	IADC CODE	517	INTERVAL	1455.4- 1813.2
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	5.5	BIT RUN	357.8
TOTAL HOURS	24.35	TOTAL TURNS	102063	CONDITION	T2 B3 G0.125

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1460.0	836	3028.4	1752.8	57.9	855	7.25	1862	138
1470.0	838	3026.9	1761.0	58.2	861	7.30	1871	139
1480.0	835	2982.5	1749.7	58.7	853	7.23	1859	138
1490.0	835	3003.2	1747.0	58.2	851	7.22	1856	138
1500.0	838	2985.2	1760.9	59.0	861	7.30	1871	139
1510.0	834	2882.0	1725.5	59.9	839	7.12	1833	138
1520.0	830	2915.0	1717.5	58.9	831	7.05	1825	137
1530.0	836	2967.7	1735.3	58.5	847	7.18	1844	138
1540.0	832	2890.6	1718.1	59.4	834	7.08	1825	138
1550.0	830	2909.0	1717.5	59.0	831	7.05	1825	137
1560.0	829	2898.2	1707.2	58.9	826	7.01	1814	137
1570.0	850	3054.0	1793.1	58.7	889	7.54	1905	141
1580.0	855	3098.0	1822.5	58.8	909	7.71	1936	142
1590.0	853	3093.5	1805.2	58.4	898	7.62	1918	141
1600.0	848	3070.7	1784.4	58.1	883	7.49	1896	140
1610.0	851	3099.1	1795.5	57.9	891	7.56	1908	141
1620.0	850	3102.0	1801.2	58.1	893	7.58	1914	141
1630.0	846	3075.8	1774.9	57.7	876	7.43	1886	140
1640.0	829	2950.6	1706.3	57.8	825	7.00	1813	137

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1650.0	838	3033.0	1744.4	57.5	853	7.24	1853	139
1660.0	847	3105.5	1780.1	57.3	880	7.46	1891	140
1670.0	847	3108.5	1782.1	57.3	881	7.48	1893	140
1680.0	838	3049.3	1743.1	57.2	852	7.23	1852	139
1690.0	832	3016.0	1719.5	57.0	835	7.08	1827	138
1700.0	832	3074.2	1720.0	55.9	835	7.09	1827	138
1710.0	828	3061.6	1701.2	55.6	822	6.97	1807	137
1720.0	854	3021.9	1811.6	59.9	903	7.66	1925	141
1730.0	547	1209.7	750.1	62.0	239	2.03	797	91
1740.0	830	3126.9	1735.4	55.5	840	7.13	1844	137

1750.0	807	2957.8	1676.7	56.7	789	6.70	1781	134
1760.0	820	3063.7	1729.4	56.4	827	7.02	1837	136
1770.0	815	3012.7	1710.4	56.8	813	6.90	1817	135
1780.0	816	2970.0	1712.8	57.7	815	6.92	1820	135
1790.0	824	3046.5	1720.0	56.5	827	7.01	1828	136
1800.0	826	3114.8	1727.5	55.5	832	7.06	1835	137
1810.0	819	3081.0	1701.9	55.2	814	6.90	1808	136
1813.2	820	3080.0	1712.0	55.6	819	6.95	1819	136

BIT NUMBER	3	IADC CODE	4	INTERVAL	1813.2- 1821.8
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	6.0	BIT RUN	8.6
TOTAL HOURS	0.91	TOTAL TURNS	6058	CONDITION	TO BO GO.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1820.0	499	1018.7	755.2	74.1	220	2.87	738	90
1821.8	500	977.5	757.3	77.5	221	2.88	740	90

BIT NUMBER	4	IADC CODE	517	INTERVAL	1821.8- 1832.2
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	6.0	BIT RUN	10.4
TOTAL HOURS	0.69	TOTAL TURNS	2889	CONDITION	TO BO GO.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1830.0	798	2905.9	1632.9	56.2	761	6.45	1735	132
1832.2	788	2826.3	1592.4	56.3	733	6.22	1692	131

BIT NUMBER	4	IADC CODE	4	INTERVAL	1832.2- 1841.6
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	7.0	BIT RUN	9.4
TOTAL HOURS	0.60	TOTAL TURNS	4641	CONDITION	T0 B0 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1840.0	480	815.1	698.4	85.7	196	2.55	682	86
1841.6	250	457.0	190.3	41.6	28	0.36	186	45

BIT NUMBER	4	IADC CODE	4	INTERVAL	1841.6- 1851.1
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	6.0	BIT RUN	9.5
TOTAL HOURS	0.33	TOTAL TURNS	2591	CONDITION	T0 B0 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1850.0	505	920.4	772.1	83.9	227	2.97	754	91
1851.1	555	1000.0	937.7	93.8	304	3.96	916	100.

BIT NUMBER	4	IADC CODE	517	INTERVAL	1851.1- 2140.1
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	6.0	BIT RUN	289.0
TOTAL HOURS	25.80	TOTAL TURNS	100622	CONDITION	T4 B3 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1860.0	813	2923.8	1692.1	57.9	802	6.81	1798	135
1870.0	810	2916.5	1682.3	57.7	795	6.75	1787	134
1880.0	806	2908.1	1664.4	57.2	783	6.64	1768	133
1890.0	809	2916.1	1677.3	57.5	792	6.72	1782	134
1900.0	812	2932.1	1688.8	57.6	800	6.79	1794	134
1910.0	811	2942.2	1686.2	57.3	798	6.77	1792	134
1920.0	808	2886.7	1673.6	58.0	789	6.70	1778	134
1930.0	807	2907.5	1669.7	57.4	787	6.67	1774	134
1940.0	811	2963.4	1685.7	56.9	798	6.77	1791	134
1950.0	810	2947.3	1681.8	57.1	795	6.75	1787	134
1960.0	816	3009.3	1706.3	56.7	813	6.89	1813	135
1970.0	821	3066.3	1726.7	56.3	827	7.02	1835	136
1980.0	709	3018.9	1275.3	42.2	528	4.48	1355	117
1990.0	748	2992.9	1419.1	47.4	620	5.26	1508	124
2000.0	504	3005.8	643.5	21.4	189	1.60	684	83
2010.0	795	2795.5	1603.3	57.4	744	6.31	1703	132
2020.0	804	3008.0	1639.1	54.5	769	6.52	1742	133
2030.0	805	3042.2	1642.3	54.0	771	6.54	1745	133
2040.0	801	3043.4	1628.3	53.5	761	6.46	1730	133

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2050.0	797	3056.0	1603.4	52.5	746	6.33	1704	132
2060.0	800	3036.1	1620.6	53.4	757	6.42	1722	133
2070.0	794	3015.1	1599.1	53.0	741	6.29	1699	132
2080.0	791	3006.5	1585.0	52.7	731	6.20	1684	131
2090.0	790	3013.4	1581.8	52.5	729	6.19	1681	131
2100.0	788	3009.7	1574.0	52.3	724	6.14	1672	130
2110.0	786	3010.5	1565.2	52.0	718	6.09	1663	130
2120.0	785	3000.0	1569.0	52.3	718	6.09	1667	130
2130.0	779	2975.0	1537.6	51.7	699	5.93	1634	129
2140.0	782	3006.2	1550.5	51.6	708	6.00	1647	130
2140.1	781	2993.4	1544.8	51.6	704	5.97	1641	129

BIT NUMBER	5	IADC CODE	517	INTERVAL	2140.1- 2400.6
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	8.0	BIT RUN	260.5
TOTAL HOURS	50.21	TOTAL TURNS	195837	CONDITION	T6 B5 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2160.0	744	2992.1	1529.7	51.1	664	5.64	1625	123
2180.0	737	2864.1	1498.6	52.3	644	5.47	1592	122
2190.0	739	2917.7	1507.8	51.7	650	5.52	1602	122
2200.0	731	2850.9	1475.4	51.8	629	5.34	1568	121
2210.0	741	3018.8	1520.4	50.4	657	5.58	1615	123
2220.0	735	2928.8	1499.3	51.2	643	5.46	1593	122
2230.0	737	2941.0	1504.8	51.2	647	5.49	1599	122
2240.0	740	2944.3	1517.0	51.5	655	5.55	1612	122
2250.0	739	2949.6	1515.3	51.4	653	5.54	1610	122
2260.0	735	2908.4	1500.1	51.6	644	5.46	1594	122
2270.0	735	2924.8	1497.8	51.2	642	5.45	1591	122
2280.0	732	2824.8	1486.9	52.6	635	5.39	1580	121
2290.0	728	2804.0	1479.0	52.7	629	5.33	1571	121
2300.0	733	2865.8	1496.1	52.2	640	5.43	1590	121
2310.0	729	2807.6	1480.0	52.7	629	5.34	1572	121
2320.0	734	2863.2	1501.9	52.5	643	5.46	1596	122
2330.0	735	2865.2	1503.8	52.5	644	5.47	1598	122
2340.0	743	2958.5	1538.3	52.0	667	5.66	1634	123
2350.0	744	2936.3	1544.7	52.6	671	5.69	1641	123
2360.0	739	2901.7	1523.7	52.5	657	5.58	1619	122
2370.0	734	2916.1	1502.1	51.5	643	5.46	1596	122
2380.0	725	2771.4	1466.0	52.9	620	5.26	1558	120
2390.0	724	2892.6	1460.7	50.5	617	5.23	1552	120
2400.0	732	2958.1	1494.8	50.5	639	5.42	1588	121
2400.6	710	2750.0	1404.3	51.1	582	4.93	1492	118

BIT NUMBER	6	IADC CODE	517	INTERVAL	2400.6- 2650.3
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.2	BIT RUN	249.7
TOTAL HOURS	57.92	TOTAL TURNS	215379	CONDITION	T0 B5 G4.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2410.0	736	3024.2	1508.8	49.9	648	5.50	1603	122
2420.0	729	2910.9	1479.2	50.8	629	5.33	1572	121
2430.0	733	3039.1	1496.7	49.2	640	5.43	1590	121
2440.0	728	2892.8	1475.5	51.0	626	5.31	1568	120
2450.0	722	2929.5	1451.5	49.5	611	5.19	1542	119
2460.0	724	2959.6	1459.2	49.3	616	5.23	1550	120
2470.0	721	2862.3	1447.3	50.6	609	5.16	1538	119
2480.0	728	2977.4	1475.5	49.6	626	5.31	1568	120

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ gain	IMPACT FORCE	JET VELOCITY
2490.0	734	2962.4	1502.1	50.7	643	5.46	1596	122
2500.0	731	2908.2	1488.4	51.2	635	5.38	1581	121
2510.0	504	165.9	706.8	425.9	208	1.76	751	83
2520.0	743	2908.9	1511.1	51.9	655	5.56	1606	123
2530.0	737	2941.3	1486.4	50.5	639	5.43	1579	122
2540.0	705	2482.2	1359.2	54.8	559	4.74	1444	117
2550.0	736	2898.2	1496.0	51.6	643	5.45	1590	122
2560.0	735	2819.2	1492.5	52.9	640	5.43	1586	122
2570.0	739	2895.2	1508.6	52.1	651	5.52	1603	122
2580.0	733	2819.2	1483.0	52.6	634	5.38	1576	121
2590.0	737	2855.6	1497.7	52.4	644	5.46	1591	122
2600.0	608	1663.2	1020.4	61.4	362	3.07	1084	101
2610.0	649	2304.5	1161.9	50.4	440	3.73	1234	107
2620.0	741	2881.5	1516.5	52.6	656	5.56	1611	123
2630.0	737	2841.4	1497.5	52.7	644	5.46	1591	122
2640.0	586	1513.3	947.6	62.6	324	2.75	1007	97
2650.0	735	2880.0	1490.1	51.7	639	5.42	1583	122
2650.3	735	2890.0	1490.1	51.6	639	5.42	1583	122

BIT NUMBER 7 IADC CODE 517 INTERVAL 2650.3- 2840.0
 HTC J22 SIZE 12.250 NOZZLES 16 16 16
 COST 8520.00 TRIP TIME 7.7 BIT RUN 189.7
 TOTAL HOURS 63.91 TOTAL TURNS 191717 CONDITION T2 B4 G0.250

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ gain	IMPACT FORCE	JET VELOCITY
2660.0	731	2872.9	1475.1	51.3	629	5.34	1567	121
2670.0	734	2879.6	1489.1	51.7	638	5.41	1582	122
2680.0	727	2786.4	1457.3	52.3	618	5.24	1548	120
2690.0	734	2862.1	1488.6	52.0	638	5.41	1582	122
2700.0	734	2850.8	1485.2	52.1	636	5.39	1578	121
2710.0	741	2892.1	1515.3	52.4	655	5.56	1610	123
2720.0	723	2734.9	1443.5	52.8	609	5.17	1534	120
2730.0	725	2775.3	1452.3	52.3	615	5.21	1543	120
2740.0	730	2826.7	1470.2	52.0	626	5.31	1562	121
2750.0	728	2850.7	1464.3	51.4	622	5.28	1556	121
2760.0	726	2835.4	1467.4	51.8	621	5.27	1559	120
2770.0	728	2808.2	1476.4	52.6	627	5.32	1569	121
2780.0	731	2851.6	1487.2	52.2	634	5.38	1580	121
2790.0	728	2873.1	1476.2	51.4	627	5.32	1568	121
2800.0	725	2895.9	1463.4	50.5	619	5.25	1555	120
2810.0	520	1124.7	753.3	67.0	229	1.94	800	86
2820.0	717	2859.1	1434.4	50.2	600	5.09	1524	119
2830.0	724	2844.0	1459.9	51.3	616	5.23	1551	120
2840.0	730	2901.3	1485.2	51.2	633	5.37	1578	121

BIT NUMBER	8	IADC CODE	537	INTERVAL	2840.0- 2875.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	8.1	BIT RUN	35.0
TOTAL HOURS	12.35	TOTAL TURNS	33460	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2850.0	706	2840.5	1389.1	48.9	572	4.85	1476	117
2860.0	672	2961.6	1257.6	42.5	493	4.18	1336	111
2870.0	711	2911.9	1408.2	48.4	584	4.96	1496	118
2875.0	709	2902.8	1402.4	48.3	580	4.92	1490	117

(f). COMPUTER DATA LISTING : LIST D

INTERVAL 10m averages.

DEPTH Well depth, in metres.

SPM1 Stroke rate per minute, for Pump no.1

SPM2 Stroke rate per minute, for Pump no.2.

FLOW RATE Mud flow rate into the well, in gallons
per minute.

ANNULAR VELOCITIES : (in metres per minute)

DC/OH - Between drill collars and the open hole.

DC/CSG - Between drill collars and casing.

HW/OH - Between heavyweight drill pipe and the open hole.

HW/CSG - Between heavyweight drill pipe and casing.

DP/OH - Between drill pipe and open hole.

DP/CSG - Between drill pipe and casing.

DP/RIS - Between drill pipe and riser.

BIT NUMBER	1	IADC CODE	111	INTERVAL	256.0-	846.0
HTC R1		SIZE	17.500	NOZZLES	20	20 20
COST	0.00	TRIP TIME	3.0	BIT RUN		590.0
TOTAL HOURS	14.49	TOTAL TURNS	109766	CONDITION	T2	B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
260.0	106	105	1055	33	26		23			19
270.0	112	111	1115	34	28		24			20
280.0	112	111	1117	34	28		24			20
290.0	109	111	1097	34	27		24			20
300.0	109	111	1104	34	27		24			20
310.0	112	110	1108	34	27		24			20
320.0	112	113	1125	35	28		25		25	20
330.0	109	111	1100	34	27		24		24	20
340.0	112	113	1124	35	28		25		25	20
350.0	113	112	1124	35	28		25		25	20
360.0	112	112	1122	35		30	25		25	20
370.0	112	112	1120	35		30	25		25	20
380.0	112	113	1126	35		30	25		25	20
390.0	58	43	508	16		14	11		11	9
400.0	114	112	1129	35		30	25		25	20
410.0	113	115	1136	35		30	25		25	20
420.0	113	112	1123	35		30	25		25	20
430.0	112	113	1127	35		30	25		25	20
440.0	113	112	1120	35		30		30	25	20
450.0	113	112	1121	35		30		30	25	20
460.0	112	112	1118	35		30		30	25	20
470.0	112	101	1065	33		28		28	23	19
480.0	107	101	1040	32		28		28	23	19
490.0	113	107	1103	34		29		29	24	20
500.0	112	109	1106	34		29		29	24	20
510.0	112	107	1097	34		29		29	24	20
520.0	111	106	1087	34		29		29	24	20
540.0	112	107	1097	34		29		29	24	20
550.0	113	107	1101	34		29		29	24	20
560.0	110	109	1095	34		29		29	24	20
570.0	112	107	1093	34		29		29	24	20
580.0	112	106	1087	34		29		29	24	20
590.0	112	107	1093	34		29		29	24	20
600.0	112	107	1095	34		29		29	24	20
610.0	113	107	1098	34		29		29	24	20
620.0	114	106	1098	34		29		29	24	20
630.0	111	109	1103	34		29		29	24	20
640.0	113	107	1098	34		29		29	24	20
650.0	110	107	1086	34		29		29	24	20
660.0	109	107	1082	33		29		29	24	19
670.0	109	107	1082	33		29		29	24	19
680.0	109	107	1082	33		29		29	24	19
690.0	110	107	1083	33		29		29	24	19

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
700.0	109	106	1076	33		29		29	24	19
710.0	109	106	1075	33		29		29	24	19
720.0	110	107	1081	33		29		29	24	19
730.0	109	104	1062	33		28		28	23	19
740.0	110	107	1080	33		29		29	24	19
750.0	109	107	1080	33		29		29	24	19
760.0	109	107	1079	33		29		29	24	19
770.0	110	107	1080	33		29		29	24	19
780.0	110	107	1082	33		29		29	24	19
790.0	109	107	1081	33		29		29	24	19
800.0	110	106	1082	33		29		29	24	19
810.0	109	106	1075	33		29		29	24	19
820.0	107	109	1080	33		29		29	24	19
830.0	110	107	1085	33		29		29	24	19
840.0	110	106	1076	33		29		29	24	19
846.0	109	105	1073	33		29		29	24	19

BIT NUMBER	2	IADC CODE	116	INTERVAL	846.0- 1427.5
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2566.00	TRIP TIME	4.5	BIT RUN	581.5
TOTAL HOURS	17.08	TOTAL TURNS	134081	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
860.0	99	99	989	86	82		57		57	18
870.0	98	100	987	86	82		57		57	18
880.0	100	100	998	87	83		58		58	18
890.0	100	5	521	45	43		30		30	9
900.0	100	72	863	75	72		50		50	15
910.0	99	100	998	87	83		58		58	18
920.0	100	100	999	87	83		58		58	18
930.0	98	100	994	86	82		58		58	18
940.0	7	117	619	54	51		36		36	11
950.0	0	100	501	44	42		29		29	9
960.0	97	99	981	85	81		57		57	18
980.0	98	100	992	86	82		57		57	18
990.0	98	100	989	86		59	57		57	18
1000.0	97	100	987	86		59	57		57	18
1010.0	99	100	993	86		59	57		57	18
1020.0	99	100	995	86		59	58		58	18
1030.0	99	100	994	86		59	58		58	18
1040.0	99	100	994	86		59	58		58	18
1050.0	98	100	990	86		59	57		57	18
1060.0	99	100	996	86		60	58		58	18
1070.0	98	100	990	86		59		59	57	18
1080.0	99	100	994	86		59		59	58	18
1090.0	100	100	1000	87		60		60	58	18
1100.0	100	100	998	87		60		60	58	18

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1110.0	99	99	990	86		59		59	57	18
1120.0	100	94	971	84		58		58	56	17
1130.0	98	97	973	84		58		58	56	17
1140.0	97	90	937	81		56		56	54	17
1150.0	99	95	972	84		58		58	56	17
1160.0	99	97	979	85		58		58	57	18
1170.0	99	96	975	85		58		58	56	18
1180.0	0	97	484	42		29		29	28	9
1190.0	99	95	971	84		58		58	56	17
1200.0	98	97	974	85		58		58	56	18
1210.0	96	97	963	84		58		58	56	17
1220.0	99	92	957	83		57		57	55	17
1230.0	99	94	964	84		58		58	56	17
1240.0	99	93	963	84		58		58	56	17
1250.0	98	97	975	85		58		58	56	18
1260.0	100	97	986	86		59		59	57	18
1270.0	100	98	985	86		59		59	57	18
1280.0	99	97	984	85		59		59	57	18
1290.0	99	96	972	84		58		58	56	17
1300.0	99	94	965	84		58		58	56	17
1310.0	100	94	969	84		58		58	56	17
1320.0	96	96	959	83		57		57	55	17
1330.0	95	96	956	83		57		57	55	17
1340.0	95	97	957	83		57		57	55	17
1350.0	95	96	955	83		57		57	55	17
1360.0	96	96	957	83		57		57	55	17
1370.0	95	96	955	83		57		57	55	17
1380.0	94	96	951	83		57		57	55	17
1390.0	93	92	926	80		55		55	54	17
1400.0	94	95	945	82		56		56	55	17
1410.0	95	95	951	83		57		57	55	17
1420.0	95	95	952	83		57		57	55	17
1427.5	94	95	945	82		56		56	55	17

BIT NUMBER 2 IADC CODE 4 INTERVAL 1427.5- 1436.0
 CHRIS RC476 SIZE 9.875 NOZZLES 15 15 16
 COST 0.00 TRIP TIME 4.5 BIT RUN 8.5
 TOTAL HOURS 1.23 TOTAL TURNS 9672 CONDITION TO B0 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1430.0	100	0	502	112					28	9
1436.0	100	0	502	112					28	9

BIT NUMBER	2	IADC CODE	4	INTERVAL	1436.0- 1445.5
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.5
TOTAL HOURS	1.08	TOTAL TURNS	8392	CONDITION	T0 R0 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1440.0	100	0	502	112					28	9
1445.5	100	0	500	111					28	9

BIT NUMBER	2	IADC CODE	4	INTERVAL	1445.5- 1455.4
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	4.5	BIT RUN	9.9
TOTAL HOURS	1.83	TOTAL TURNS	14268	CONDITION	T0 R0 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1450.0	0	101	507	113					28	9
1455.4	0	101	505	113					28	9

BIT NUMBER	3	IADC CODE	517	INTERVAL	1455.4- 1813.2
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	5.5	BIT RUN	357.8
TOTAL HOURS	24.35	TOTAL TURNS	102063	CONDITION	T2 B3 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1460.0	83	84	836	73		50		50	47	15
1470.0	83	84	838	73		50		50	47	15
1480.0	83	84	835	73		50		50	47	15
1490.0	82	85	835	72		50		50	46	15
1500.0	83	85	838	73		50		50	47	15
1510.0	82	85	834	72		50		50	46	15
1520.0	81	85	830	72		50		50	46	15
1530.0	83	85	836	73		50		50	47	15
1540.0	82	85	832	72		50		50	46	15
1550.0	82	84	830	72		50		50	46	15
1560.0	82	84	829	72		50		50	46	15
1570.0	85	85	850	74		51		51	47	15
1580.0	86	85	855	74		51		51	48	15
1590.0	86	85	853	74		51		51	48	15
1600.0	85	85	848	74		51		51	47	15
1610.0	85	85	851	74		51		51	47	15
1620.0	85	85	850	74		51		51	47	15
1630.0	85	85	846	73		51		51	47	15
1640.0	84	82	829	72		50		50	46	15

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1650.0	85	82	838	73		50		50	47	15
1660.0	87	82	847	74		51		51	47	15
1670.0	86	83	847	74		51		51	47	15
1680.0	88	80	838	73		50		50	47	15
1690.0	85	81	832	72		50		50	46	15
1700.0	87	80	832	72		50		50	46	15
1710.0	85	80	828	72		49		49	46	15
1720.0	87	84	854	74		51		51	48	15
1730.0	0	109	547	48		33		33	30	10
1740.0	84	82	830	72		50		50	46	15
1750.0	81	81	807	70		48		48	45	14
1760.0	83	81	820	71		49		49	46	15
1770.0	81	82	815	71		49		49	45	15
1780.0	81	82	816	71		49		49	45	15
1790.0	82	82	824	72		49		49	46	15
1800.0	86	79	826	72		49		49	46	15
1810.0	83	81	819	71		49		49	46	15
1813.2	83	81	820	71		49		49	46	15

BIT NUMBER 3 IADC CODE 4 INTERVAL 1813.2- 1821.8
 CHRIS RC476 SIZE 9.875 NOZZLES 15 15 16
 COST 0.00 TRIP TIME 6.0 BIT RUN 8.6
 TOTAL HOURS 0.91 TOTAL TURNS 6058 CONDITION TO BO GO.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1820.0	100	0	499	111					28	9
1821.8	100	0	500	111					28	9

BIT NUMBER 4 IADC CODE 517 INTERVAL 1821.8- 1832.2
 HTC J22 SIZE 12.250 NOZZLES 16 16 16
 COST 8520.00 TRIP TIME 6.0 BIT RUN 10.4
 TOTAL HOURS 0.69 TOTAL TURNS 2889 CONDITION TO BO GO.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1830.0	81	79	798	69		48		48	44	14
1832.2	80	78	788	68		47		47	44	14

BIT NUMBER	4	IADC CODE	4	INTERVAL	1832.2- 1841.6
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	7.0	BIT RUN	9.4
TOTAL HOURS	0.60	TOTAL TURNS	4641	CONDITION	T0 B0 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1840.0	96	0	480	49					27	9
1841.6	50	0	250	26					14	4

BIT NUMBER	4	IADC CODE	4	INTERVAL	1841.6- 1851.1
CHRIS RC476		SIZE	9.875	NOZZLES	15 15 16
COST	0.00	TRIP TIME	6.0	BIT RUN	9.5
TOTAL HOURS	0.33	TOTAL TURNS	2591	CONDITION	T0 B0 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1850.0	0	101	505	113					28	9
1851.1	0	111	555	124					31	10

BIT NUMBER	4	IADC CODE	517	INTERVAL	1851.1- 2140.1
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	6.0	BIT RUN	289.0
TOTAL HOURS	25.80	TOTAL TURNS	100622	CONDITION	T4 B3 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1860.0	81	82	813	71		49		49	45	15
1870.0	80	82	810	70		48		48	45	15
1880.0	80	82	806	70		48		48	45	14
1890.0	80	82	809	70		48		48	45	15
1900.0	80	82	812	71		49		49	45	15
1910.0	80	82	811	70		48		48	45	15
1920.0	80	82	808	70		48		48	45	15
1930.0	80	82	807	70		48		48	45	15
1940.0	81	81	811	70		48		48	45	15
1950.0	80	82	810	70		48		48	45	15
1960.0	82	82	816	71		49		49	45	15
1970.0	81	83	821	71		49		49	46	15
1980.0	82	60	709	62		42		42	40	13
1990.0	80	70	748	65		45		45	42	13
2000.0	81	20	504	44		30		30	28	9
2010.0	77	82	795	69		48		48	44	14
2020.0	81	80	804	70		48		48	45	14
2030.0	81	81	805	70		48		48	45	14
2040.0	81	80	801	70		48		48	45	14

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2050.0	80	80	797	69		48		48	44	14
2060.0	80	80	800	70		48		48	45	14
2070.0	80	79	794	69		47		47	44	14
2080.0	80	79	791	69		47		47	44	14
2090.0	80	78	790	69		47		47	44	14
2100.0	79	79	788	68		47		47	44	14
2110.0	80	77	786	68		47		47	44	14
2120.0	78	79	785	68		47		47	44	14
2130.0	77	78	779	68		47		47	43	14
2140.0	78	79	782	68		47		47	44	14
2140.1	78	78	781	68		47		47	43	14

BIT NUMBER	5	IADC CODE	517	INTERVAL	2140.1- 2400.6
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	8.0	BIT RUN	260.5
TOTAL HOURS	50.21	TOTAL TURNS	195837	CONDITION	T6 B5 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2160.0	74	75	744	65		44		44	41	13
2180.0	74	74	737	64		44		44	41	13
2190.0	74	74	739	64		44		44	41	13
2200.0	74	72	731	63		44		44	41	13
2210.0	75	74	741	64		44		44	41	13
2220.0	73	74	735	64		44		44	41	13
2230.0	74	74	737	64		44		44	41	13
2240.0	74	74	740	64		44		44	41	13
2250.0	74	74	739	64		44		44	41	13
2260.0	74	73	735	64		44		44	41	13
2270.0	74	73	735	64		44		44	41	13
2280.0	75	72	732	64		44		44	41	13
2290.0	75	70	728	63		44		44	41	13
2300.0	78	69	733	64		44		44	41	13
2310.0	77	69	729	63		44		44	41	13
2320.0	74	73	734	64		44		44	41	13
2330.0	74	73	735	64		44		44	41	13
2340.0	75	74	743	65		44		44	41	13
2350.0	74	75	744	65		44		44	41	13
2360.0	76	72	739	64		44		44	41	13
2370.0	76	71	734	64		44		44	41	13
2380.0	76	69	725	63		43		43	40	13
2390.0	74	71	724	63		43		43	40	13
2400.0	76	71	732	64		44		44	41	13
2400.6	75	67	710	62		42		42	40	13

BIT NUMBER	6	IADC CODE	517	INTERVAL	2400.6- 2650.3
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.2	BIT RUN	249.7
TOTAL HOURS	57.92	TOTAL TURNS	215379	CONDITION	T0 B5 G4.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2410.0	74	74	736	64		44		44	41	13
2420.0	73	72	729	63		44		44	41	13
2430.0	73	73	733	64		44		44	41	13
2440.0	73	73	728	63		43		43	41	13
2450.0	74	71	722	63		43		43	40	13
2460.0	74	71	724	63		43		43	40	13
2470.0	74	70	721	63		43		43	40	13
2480.0	73	72	728	63		43		43	41	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2490.0	74	73	734	64		44		44	41	13
2500.0	73	73	731	63		44		44	41	13
2510.0	101	0	504	44		30		30	28	9
2520.0	74	75	743	65		44		44	41	13
2530.0	74	73	737	64		44		44	41	13
2540.0	74	67	705	61		42		42	39	13
2550.0	75	72	736	64		44		44	41	13
2560.0	74	73	735	64		44		44	41	13
2570.0	75	73	739	64		44		44	41	13
2580.0	74	72	733	64		44		44	41	13
2590.0	75	73	737	64		44		44	41	13
2600.0	95	27	608	53		36		36	34	11
2610.0	82	48	649	56		39		39	36	12
2620.0	75	74	741	64		44		44	41	13
2630.0	74	74	737	64		44		44	41	13
2640.0	100	17	586	51		35		35	33	11
2650.0	74	73	735	64		44		44	41	13
2650.3	74	73	735	64		44		44	41	13

BIT NUMBER 7 IADC CODE 517 INTERVAL 2650.3- 2840.0
 HTC J22 SIZE 12.250 NOZZLES 16 16 16
 COST 8520.00 TRIP TIME 7.7 BIT RUN 189.7
 TOTAL HOURS 63.91 TOTAL TURNS 191717 CONDITION T2 B4 G0.250

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2660.0	72	75	731	63		44		44	41	13
2670.0	74	73	734	64		44		44	41	13
2680.0	72	73	727	63		43		43	40	13
2690.0	74	73	734	64		44		44	41	13
2700.0	74	73	734	64		44		44	41	13
2710.0	74	75	741	64		44		44	41	13
2720.0	72	73	723	63		43		43	40	13
2730.0	72	74	725	63		43		43	40	13
2740.0	74	72	730	63		44		44	41	13
2750.0	73	73	728	63		44		44	41	13
2760.0	73	72	726	63		43		43	40	13
2770.0	73	72	728	63		43		43	41	13
2780.0	73	73	731	63		44		44	41	13
2790.0	73	73	728	63		43		43	41	13
2800.0	73	72	725	63		43		43	40	13
2810.0	0	104	520	45		31		31	29	9
2820.0	72	72	717	62		43		43	40	13
2830.0	72	73	724	63		43		43	40	13
2840.0	73	73	730	63		44		44	41	13

BIT NUMBER	8	IADC CODE	537	INTERVAL	2840.0- 2875.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	8.1	BIT RUN	35.0
TOTAL HOURS	12.35	TOTAL TURNS	33460	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2850.0	71	70	706	61		42		42	39	13
2860.0	79	56	672	58		40		40	37	12
2870.0	70	72	711	62		42		42	40	13
2875.0	71	71	709	62		42		42	40	13

PE604510 .

This is an enclosure indicator page.
The enclosure PE604510 is enclosed within the
container PE905997 at this location in this
document.

The enclosure PE604510 has the following characteristics:

ITEM_BARCODE = PE604510
CONTAINER_BARCODE = PE905997
NAME = Drill Data Plot
BASIN = GIPPSLAND BASIN
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Drill Data Plot (enclosure from
attachment to WCR vol.1) for Kipper-1
REMARKS =
DATE_CREATED = 28/03/86
DATE_RECEIVED = 16/06/86
W_NO = W930
WELL_NAME = KIPPER-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)

PE604511

This is an enclosure indicator page.
The enclosure PE604511 is enclosed within the
container PE905997 at this location in this
document.

The enclosure PE604511 has the following characteristics:

ITEM_BARCODE = PE604511
CONTAINER_BARCODE = PE905997
NAME = Temperature Plot
BASIN = GIPPSLAND BASIN
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Temperature Plot (enclosure from
attachment to WCR vol.1) for Kipper-1
REMARKS =
DATE_CREATED = 28/03/86
DATE_RECEIVED = 16/06/86
W_NO = W930
WELL_NAME = KIPPER-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)

PE604512

This is an enclosure indicator page.
The enclosure PE604512 is enclosed within the
container PE905997 at this location in this
document.

The enclosure PE604512 has the following characteristics:

ITEM_BARCODE = PE604512
CONTAINER_BARCODE = PE905997
NAME = Pressure Plot
BASIN = GIPPSLAND BASIN
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Pressure Plot (enclosure from
attachment to WCR vol.1) for Kipper-1
REMARKS =
DATE_CREATED = 28/03/86
DATE_RECEIVED = 16/06/86
W_NO = W930
WELL_NAME = KIPPER-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)

PE604513

This is an enclosure indicator page.
The enclosure PE604513 is enclosed within the
container PE905997 at this location in this
document.

The enclosure PE604513 has the following characteristics:

ITEM_BARCODE = PE604513
CONTAINER_BARCODE = PE905997
NAME = Geo-Plot
BASIN = GIPPSLAND BASIN
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Geo-Plot (enclosure from attachment to
WCR vol.1) for Kipper-1
REMARKS =
DATE_CREATED = 28/03/86
DATE_RECEIVED = 16/06/86
W_NO = W930
WELL_NAME = KIPPER-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)

PE604514

This is an enclosure indicator page.
The enclosure PE604514 is enclosed within the
container PE905997 at this location in this
document.

The enclosure PE604514 has the following characteristics:

ITEM_BARCODE = PE604514
CONTAINER_BARCODE = PE905997
NAME = Tritium Plot
BASIN = GIPPSLAND
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Tritium Plot (enclosure from Final Well
Report--attachment to WCR) for Kipper-1
REMARKS =
DATE_CREATED = 28/03/86
DATE_RECEIVED = 16/06/86
W_NO = W930
WELL_NAME = KIPPER-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)

PE603409

This is an enclosure indicator page.
The enclosure PE603409 is enclosed within the
container PE905997 at this location in this
document.

The enclosure PE603409 has the following characteristics:

ITEM_BARCODE = PE603409
CONTAINER_BARCODE = PE905997
NAME = Grapholog
BASIN = GIPPSLAND BASIN
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Grapholog (enclosure from attachment
to WCR vol.1) for Kipper-1
REMARKS =
DATE_CREATED = 28/03/86
DATE_RECEIVED = 16/06/86
W_NO = W930
WELL_NAME = KIPPER-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)