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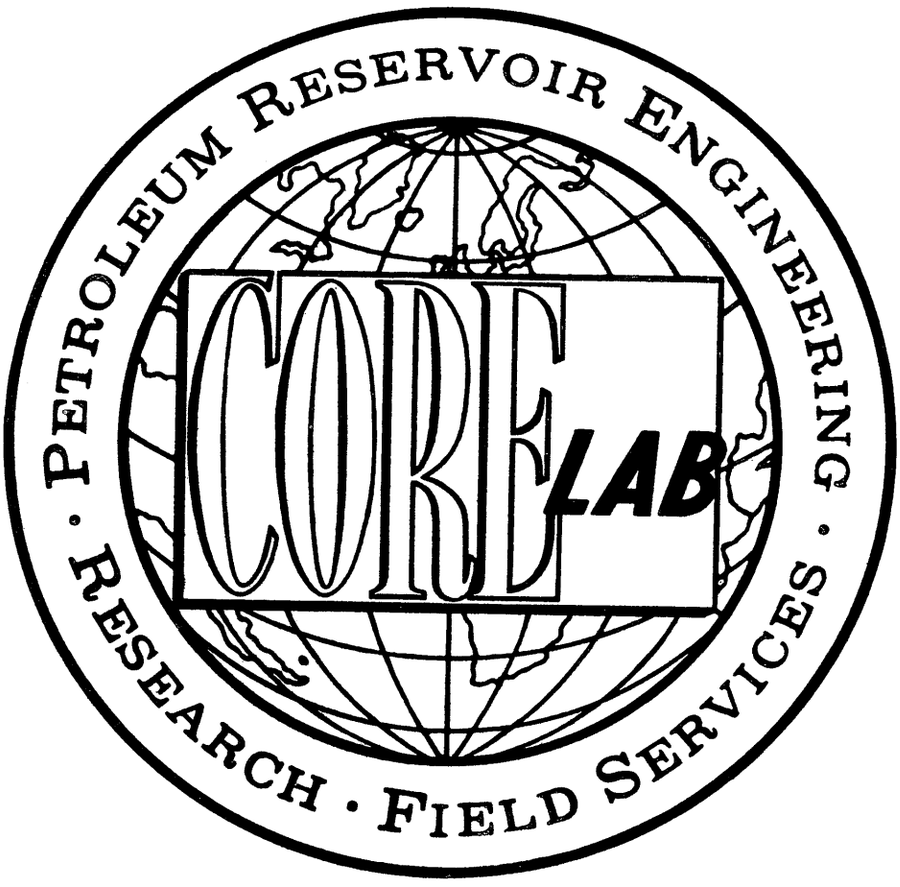
ATTACHMENT TO WCR

FINAL WELL REPORT

SNAPPER-5

(W912)



FINAL WELL REPORT

ESSO AUSTRALIA LIMITED

SNAPPER #5

INDEX

INTRODUCTION

SNAPPER #5 was drilled by ESSO AUSTRALIA LIMITED, in the Bass Strait, Australia.

Well co-ordinates were :

Latitude : 38°13' 17.761"S
Longitude : 147°59' 22.664"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.

SNAPPER #5 was spudded on 2nd July 1985 and reached a total depth of 2990 metres on 29th July 1985, a total drilling time of 28 days. The main objective of the well was to:

1. Explore for intra-Latrobe oil pools beneath the N-1 sands.

2. Test and delineate the distribution of the N-1 oil reservoir on the western flank of the field.

3. Confirm N-1 gas reserves.

Elevations were :

Kelly bushings to mean sea level ..... 21 metres
Water depth ..... 53 metres
Kelly bushings to mean sea bed ..... 74 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 SNAPPER #5 were as follows :

B. Paulet	-	Unit Supervisor
T. Wyeth	-	Pressure Engineer
B. Giftson	-	Logging Crew Chief
P. Landry	-	Well Logger
P. Gribben	-	Well Logger
D. Mackay	-	Well Logger
R. Poltorak	-	Tritium Operator
J. Van Tienen	-	Tritium Operator
A. Harwood	-	Tritium Operator

2. RIG SPECIFICATIONS

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LIMITED

WELL SNAPPER #5

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N° 107)
TYPE	SEMI-SUBMERSIBLE, TWIN HULLED
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPICITY 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 5¼" 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 CAPAICTY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6 x 8" CENTRIFUGAL BY TWO 100HP ELECTRIC MOTORS. DESANDER: 1 DEMCO 4 CONE 12" MODEL N° 124 DESILTER: 1 DEMCO 4"-16H 16 CONE DEGASSER: 1 SWACO MODEL N° 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: 6¼" 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	HALLIBURTON HT-400 UNIT
MONITORING EQUIPMENT	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 1570cu 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 Snapper #5

WELL NAME Snapper #5

OPERATOR Esso Australia Limited
PARTNERS BHP

RIG	OWNER	South Seas Drilling Company		
	NAME OR NUMBER	Southern Cross		
	TYPE	Semi-submersible		
LOCATION	LATITUDE (X)	38°13'17.761"S	LONGITUDE (Y)	147°59'22.664"E
	FIELD	Snapper	AREA	Gippsland Basin
	COUNTY	Bass Strait	STATE	Victoria
	COUNTRY	Australia		
	DESCRIPTION	Delingation of Snapper field.		
DATUM	Mean Water Depth 53 metres		RKB to Water Level	21 metres
DATES	SPUD	2nd July, 1985	TOTAL DEPTH	29th July, 1985

HOLE SIZES	Depth From	Depth To	Bit Size (Inches)	No. of Bits	No. of Reamers	Date From	Date To	Cased	Logged
	74	216	26	1	-	2/7/85	7/85	Y	N
	216	802	17½	1	-	5/7/85	6/7/85	Y	Y
	802	2990	12¼	6	-	7/7/85	29/7/85	N	Y

DRILLING FLUIDS	Depth From	Depth To	Weights			Type
	74	216	8.7	TO	8.9	Seawater
	216	802	8.9	TO	9.4	Seawater Drill Solids
	802	2990	9.4	TO	10.1	Seawater Polymer Gel

WIRELINE LOGGING	Depth From	Depth To	Hole Size	Date Run	Logs Run
	802	50	17½"	6/7/85	BHC-GR
	1728.5	787	12¼"	11/7/85	DLL-MSFL-GR-SP-CNT-LDL-CAL
	1459	1302	12¼"	11/7/85	RFL #1 Pretests
	-	-	12¼"	11-12/7/85	RFT #2-4
	2521	1650	12¼"	18/7/85	DLL-MSFL-GR-LDTC-CNL-GR
	2482	1486	12¼"	18-19/7/85	RFT #5 Pretests
	-	-	12¼"	19-22/7/85	RFT #6-21
	2900	2440	12¼"	29/7/85	DLL-MSFL-GR-LDTC-CNL-CAL

RISER CASING & LINER	Depth From	Depth To	OD (Ins)	ID (Ins)	Weight	Grade	Thread	Date Run	Cement	Stages	Exces
	0	74	22	21	---------- Riser ----------						
	74	199	20	19.124	94	X52	JV BOX	3/7/85	"G"	1	1
	74	787	13 3/8	12.615	54.5	K55	BUTT	7/7/85	"G"	1	-

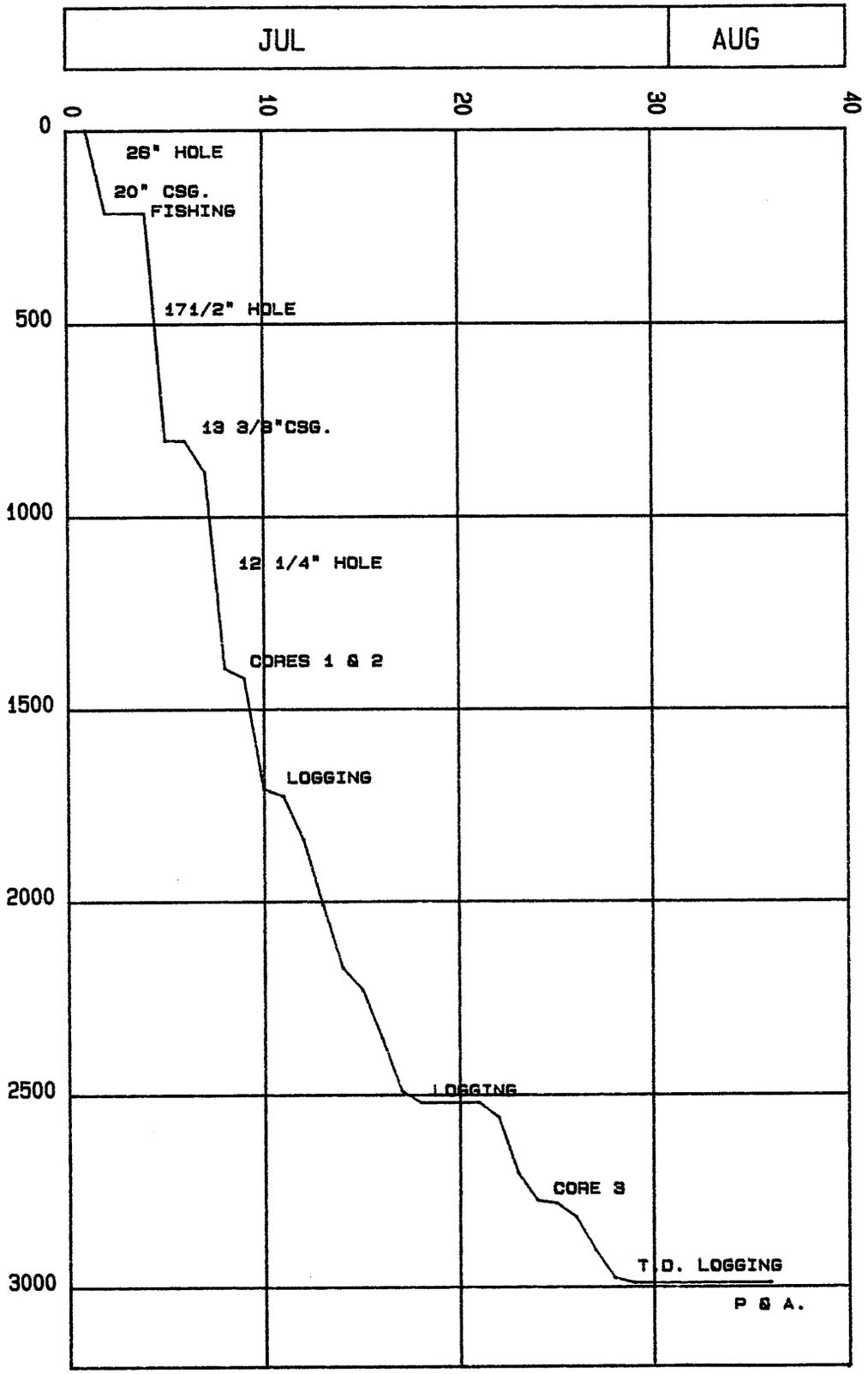
WELL INFORMATION SHEET
(SUPPLEMENTARY)

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 2

Depth from (m)	Depth to (m)	Hole size (ins.)	Date run	Logs run
-	-	12¼	30/7/85	RFT #22, 23
-	-	12¼	31/7/85	RFT #24
2991.5	787	12¼	31/7/85	BHC-GR
2989	500	12¼	1/8/85	WST
2990	1250	12¼	1/8/85	CST # 1, 2

PROGRESS LOG SNAPPER NO.5
ESSO AUSTRALIA LTD.



WELL HISTORY
SNAPPER #5

1ST JUL 1985	The rig was towed to location and anchors run.
2ND JUL 1985	Continued to run anchors prior to ballasting down. The 26" hole was then drilled from 77 metres - 216 metres.
3RD JUL 1985	The 20" casing was run and cemented and the B.O.P./riser assembly was run.
4TH JUL 1985	The B.O.P. stack was landed and latched. While nippling up the flow line a sledge hammer was dropped down the hole. Fishing runs were then made to recover same.
5TH JUL 1985	The 17½" assembly was made up and run into the hole and cement and new formation were drilled to 802 metres.
6TH JUL 1985	Two wiper trips were made to clean the hole prior to running logs (BHC-GR F/802-50m). A third wiper trip was then made prior to running 13 3/8" casing.
7TH JUL 1985	Ran and cemented 13 3/8" casing and then tested B.O.P.'s. A phase I P.I.T. was carried out followed by a phase II P.I.T. which gave no leak-off at 15.5 ppg E.M.W. The 12¼" drill assembly was then picked up and run into the hole and new formation drilled to 883 metres.
8TH JUL 1985	Drilled 12¼" hole to 901 metres where a swivel packing had to be replaced. Drilled ahead to 1329 metres where the hole was circulated out to reduce gas units. New hole was then drilled to 1395 metres.
9TH JUL 1985	Drilled to 1400 metres where the bit was pulled prior to cutting core #1 (1400 - 1409.4 metres) and core #2 (1409.4 - 1418.9 metres).
10TH JUL 1985	A new 12¼" bottom hole assembly was run into the hole and a phase III P.I.T. was carried out (E.M.W. 14.2 @ 787 metres) and drilling was recommenced. New hole was drilled down to 1709 metres.

11TH JUL 1985	12¼" hole was drilled to 1728 metres where the bit was pulled for intermediate logs. The logs run were DLL-MSFL-GR-SP-CNT-LDL-CAL (1728.5 - 787 metres)), RFT #1 (pretests 1459 - 1302 metres) and RFT #2 and 3.
12TH JUL 1985	RFT #4 was run prior to running into the hole to drill ahead. New formation was drilled from 1728 to 1838 metres.
13TH JUL 1985	Drilled new hole from 1838 - 2008 metres.
14TH JUL 1985	Drilled new hole from 2008 - 2172 metres.
15TH JUL 1985	New hole was drilled from 2172 - 2229 metres where the bit was pulled due to an increase in torque. A stack test was carried out prior to running into the hole.
16TH JUL 1985	Continued to run into the hole. Drilled new 12¼" hole to 2355 metres.
17TH JUL 1985	Drilled 12¼" hole to 2481 metres, circulated out drilling break, bottoms up gas was 95-41-12 units. Drilled to 2491 metres.
18TH JUL 1985	Drilled to 2521 metres (T.D.), circulated out and P.O.O.H. Schlumberger logged the hole, and ran RFT #5.
19TH JUL 1985	Ran RFT's #5 to #8.
20TH JUL 1985	Ran RFT's #9 and #10. R.I.H. for wiper trip, and circulated out. Bottoms up gas was 48-180-5 units. P.O.O.H. and rigged up Schumberger. Ran RFT's #11 and #12.
21ST JUL 1985	Ran RFT's #13 to #18.
22ND JUL 1985	Ran RFT's #19 to #21. Decided to drill ahead. R.I.H. with NB7 HTC J22, circulated bottoms up, gas was 50-360-18 units. Drilled 12¼" hole to 2559 metres.
23RD JUL 1985	Drilled to 2678.1 metres and circulated out drill break, gas was 18-180-45 units. Drilled ahead to 2703 metres.
24TH JUL 1985	Drilled to 2774 metres. Pulled bit due to low R.O.P.'s, conducted a phase III P.I.T. on way out of hole (11.7 ppg E.M.W. at 787 metres).

25TH JUL 1985	P.O.O.H., R.I.H. with NB8 (HTC J33). Trip gas from 2774 metres was 10-267-42 units. Drilled ahead to 2782 metres, circulated out drill break, bottoms up gas was 28-118-32 units. P.O.O.H. to cut core #3. RI.H. with core barrel.
26TH JUL 1985	Circulated out, trip gas was 18-46-30 units from 2782 metres. Cut core #3 from 2782 metres to 2788.3 metres, recovered 6.05 metres (96.18%). R.I.H. with RR8 (HTC J33), reamed rathole, trip gas from 2788.3 metres was 20-115-10 units, drilled ahead to 2817 metres.
27TH JUL 1985	Drilled 12¼" hole to 2904 metres.
28TH JUL 1985	Drilled ahead to 2934 metres, conducted a 10-10-10 test to give gas of 5.4-3.7-3.7 units. Drilled to 2977 metres.
29TH JUL 1985	Drilled to 2990 metres (T.D.), circulated bottoms up, gas was 48-9.5-7 units. P.O.O.H. and Schlumberger logged the hole.
30TH JUL 1985	Ran R.F.T.'s #22, 23. A yellow alert was called, so all non-essential personnel were evacuated from the rig.
31ST JUL 1985	All non-essential personnel returned to the rig upon cancellation of the yellow alert. RFT #24 was run followed by BHC-GR (2991.5 - 787 metres).
1ST AUG 1985	Attempted to run HDT-GR, but the tool did not work, ran WST (16 levels 2989 - 500 metres). Attempted to run CST's but all shot at wrong depth due to computer malfunction. A second CST run was carried out and 43 shots recovered. A third run of 51 shots was then carried out.
2ND - 5TH AUG 1985	Plug and abandoned Snapper #5.

4. LITHOLOGY AND CORE-O-GRAPHS

LITHOLOGY SUMMARY

The main objectives of Snapper #5 were to:

1. Explore for intra-Latrobe oil pools beneath the N-1 Sands;

2. Test and delineate the distribution of the N-1 oil reservoir of the western flank of the field; and

3. Confirm N-1 gas reserves.

(Note: All formation tops are open to speculation and are based entirely on examination of cuttings. All depths from RKB)

Gippsland Limestone (200 metres - 990 metres)

The Gippsland Limestone consisted of a light grey to grey-brown, firm to moderately hard sequence of fossiliferous interbedded calcarenites and calcisiltites, for the first 400 metres.

The sandstone encountered was brown to grey, translucent, firm to moderately hard, coarse grained, with abundant fossil fragments including shell fragments.

Below 400 metres to a depth of 700 metres, the limestone consisted of a calcisiltite - calcilutite with some interbedded calcarenites.

From 700 metres to 940 metres calcisiltite and calcilutite were dominant with little to no calcarenite. This section was light grey to medium grey, moderately hard, calcitic to occasionally argillaceous matrix with pyrite and fossil fragments, with some occasional quartz grains.

From 940 metres down to 990 metres, the limestone encountered ranged from a calcarenite to calcilutite, but predominantly calcilutite. It was grey, very soft to hard, with occasional fossils, pyrite and quartz grains.

Gas was less than 10 units over most of the interval, with no marked increases observed through this section.

Lakes Entrance Formation (990 metres - 1298 metres)

This limestone was predominantly the same as the lower section of the Gippsland Limestone but more arenaceous in texture. The calcarenites were light grey to grey, soft to moderately hard, blocky, occasionally argillaceous, with some fossil fragments and traces of pyrite.

The gas content of this section ranged from 5 - 20 units with no areas showing marked varation.

Latrobe Group (1298 metres - 2990 metres)

The Latrobe group was a stratigraphic sequence of channel deposits consisting of interbedded sandstone, siltstone, coal and minor claystone and shale.

1298 metres - 1690 metres

Sandstone with occasional coal.

The sandstone was clear, frosted, clean, coarse to very coarse quartz grains, moderately sorted, friable to moderately hard, with occasional dolomitic cement. Predominantly good visible porosity. There was a sudden and sustained increase in gas immediately upon entering the top of the Latrobe from 20 to 2000 units - tapering off to 10 - 30 units below 1420 metres. No shows were seen in drill cuttings, but two cores cut at 1400 - 1419 metres had clean unconsolidated medium to coarse grained sandstone with pale to bright blue-white fluorescence with a fast cut.

1690 metres - 2550 metres

The formation was increasingly interbedded below 1690 metres (sandstone, siltstone and coal).

The sandstone was white-clear, occasionally grey, fine grained, occasionally medium grained, sub-round to sub-angular, quartz aggregates, predominantly siliceous matrix, occasionally silty, occasionally carbonaceous, and increasingly dolomitic with depth. Visual porosity was poor, with moderate to good visual porosity in the occasional sands without excessive clay or dolomitic matrix. Gas averaged 20 - 60 units with occasional peaks to 1000 units.

Very little fluorescence was seen - trace to 5% moderately bright white fluorescence with a slow diffuse streaming cut.

The siltstone was medium grey-dark brown, carbonaceous, micro-micaceous, blocky, firm, occasionally argillaceous, grading to a very fine sandstone in parts.

2550 metres - 2990 metres (T.D.)

An interbedded siltstone/sandstone sequence, with minor coal, claystone and shale.

The siltstone was medium to dark grey-grey brown, argillaceous, firm-moderately hard, occasionally soft, very carbonaceous in part, occasionally dolomitic; grading to shale in part.

The sandstone was of two types:

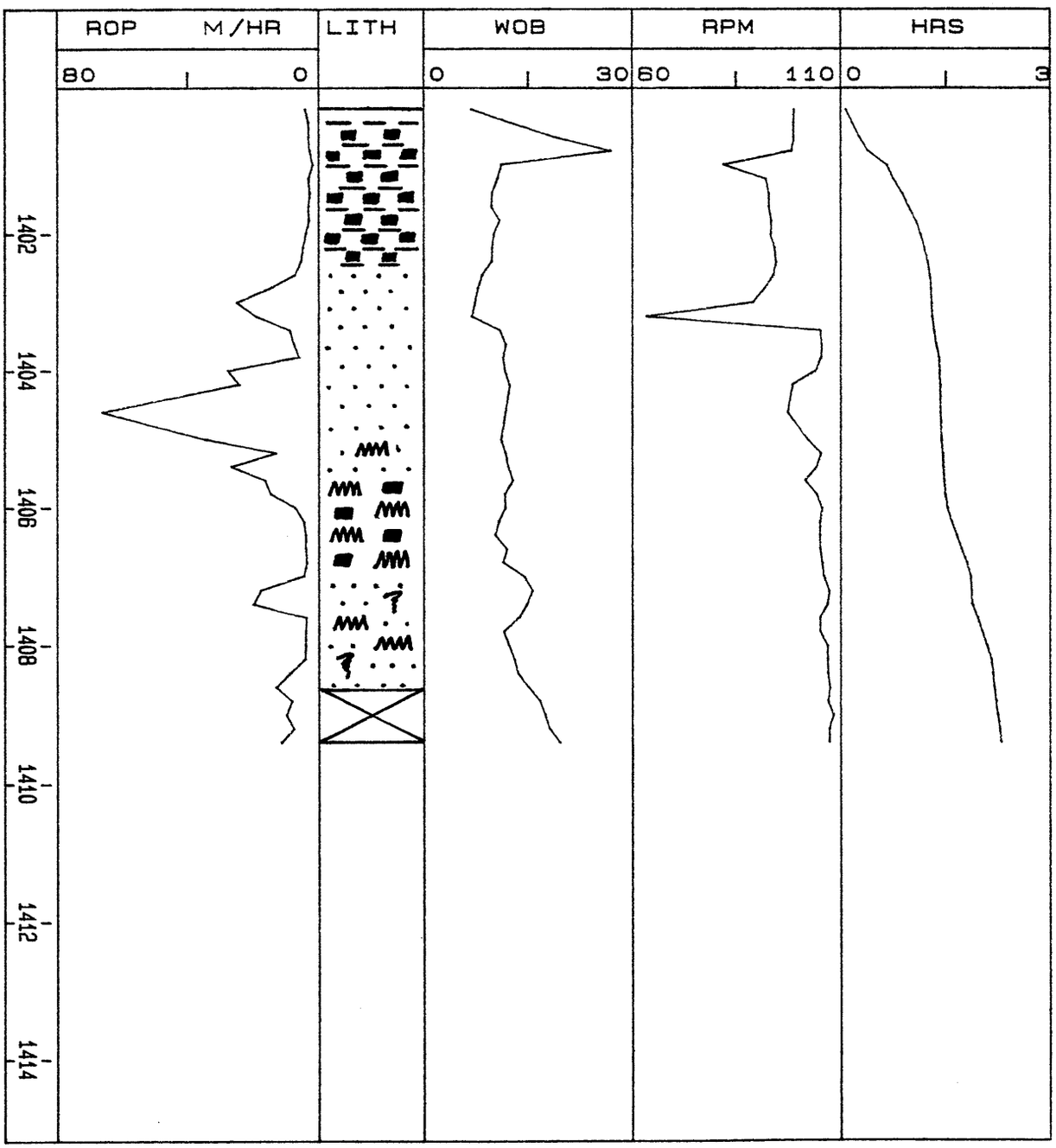
1. Light grey-brown aggregates, very fine to medium grained, sub-rounded, moderately sorted, argillaceous, siliceous and occasionally dolomitic cement, poor visual porosity;

2. Clear to translucent, loose quartz, medium to coarse grained, moderately sorted, sub-rounded.

Fluorescence was occasionally noted in sandstones down to 2890 metres - trace to 40% spotty moderately bright blue-white fluorescence, with a slow diffuse streaming cut, instant crush cut, and a pale residual ring.

CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	SNAPPER NO.5
CORE NO.:	1
INTERVAL CORED FROM	1400.0m. TO 1409.4m.
CUT: 9.4 m..	RECOVERED: 8.8m. (93.1%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRIST RC444
CORE BARREL SIZE:	8.00in.x 4.75in.x 10.94m.
BIT SIZE: 9.88	MUD WT.: 10.3



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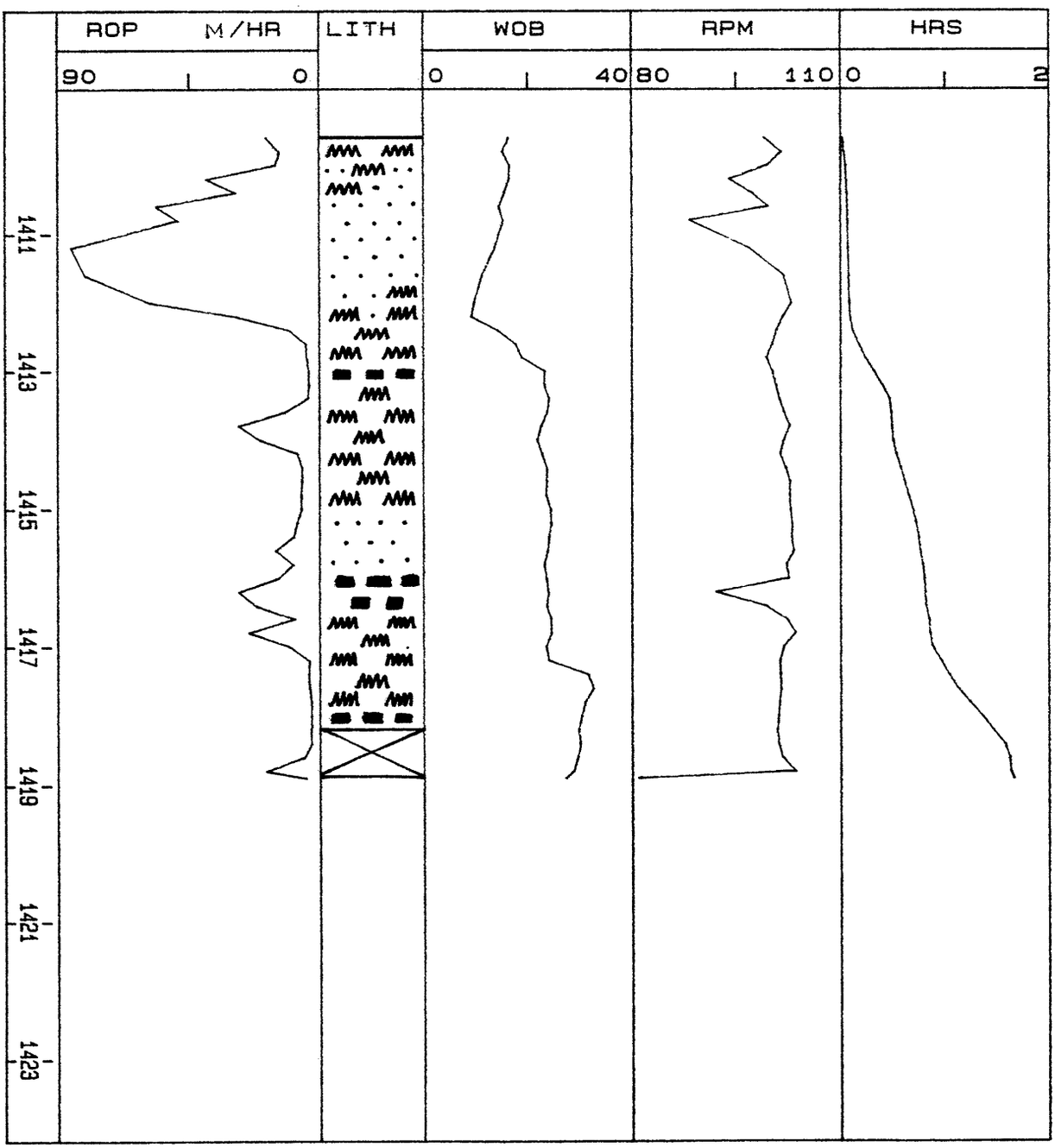
CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	SNAPPER NO.5
CORE NO.:	2
INTERVAL CORED FROM	1409.4m. TO 1418.9m.
CUT: 9.5 m.	RECOVERED: 8.8m. (92.4%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRIST RC444
CORE BARREL SIZE:	8.00in.x 4.75in.x 10.94m.
BIT SIZE: 9.88	MUD WT.: 10.3



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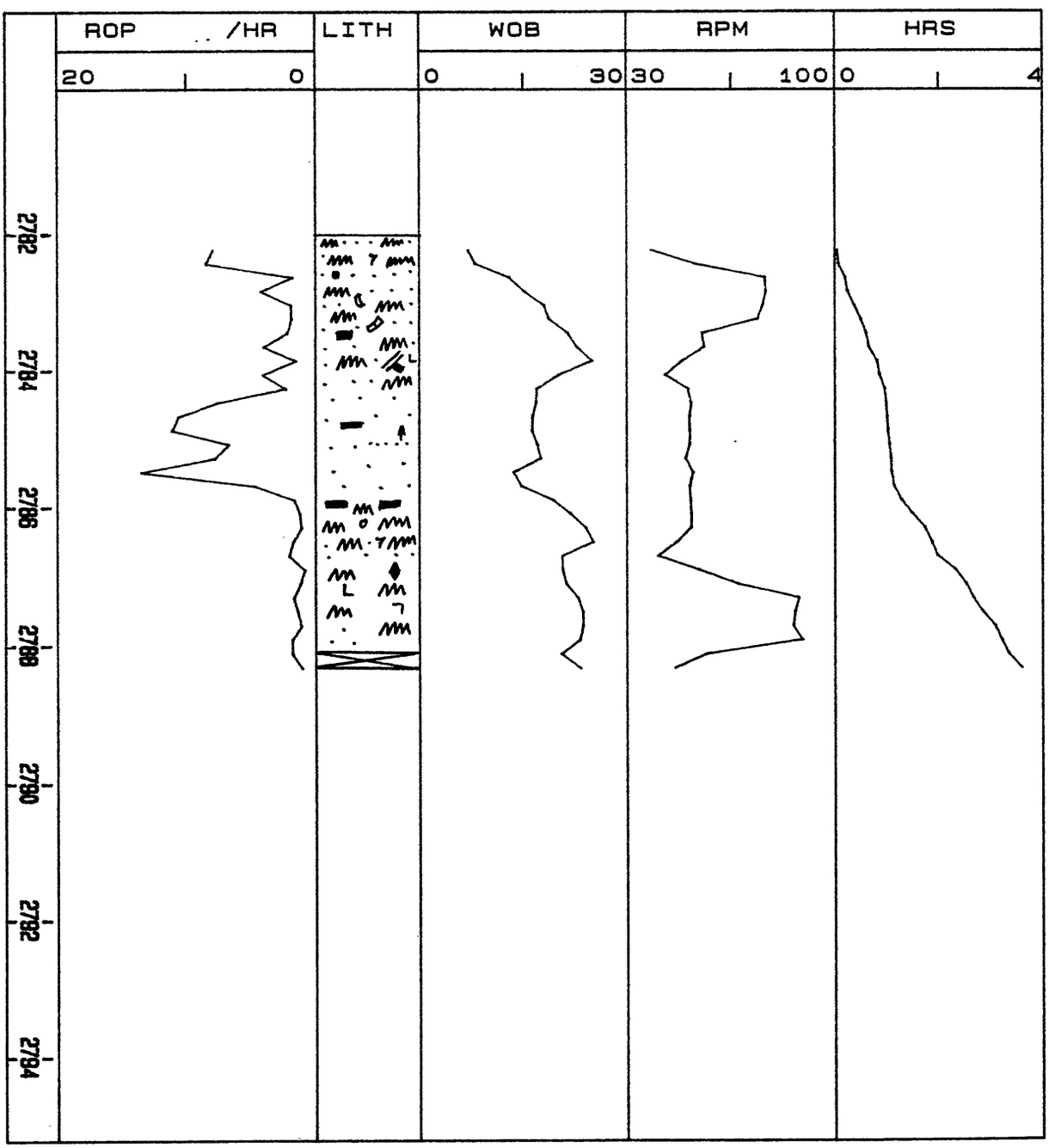
CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	SNAPPER No.5
CORE NO.:	3
INTERVAL CORED FROM	2782.0m. TO 2788.3m.
CUT: 6.3m.	RECOVERED: 6.1m. (96.0%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRIST C201
CORE BARREL SIZE:	8.00in.x 5.25in.x 19.87m.
BIT SIZE: 9.88	MUD WT.: 9.8



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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 Jorden 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 :

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

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 ths 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. ESP PLOT DISCUSSIONS AND CONCLUSIONS

ESP PLOT DISCUSSION AND CONCLUSION
(with particular reference to Pore Pressure)

A prime aim during the drilling of Snapper No.5 was utilisation of data collected by Core Laboratories DL2007 to provide an estimation of formation pressures. This is described in detail below.

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

The "Drill Data Plot" (see attached plots inside the back cover) shows the rate of penetration, corrected 'd' exponent and mud density plotted against lithology. This plot indicates a normal pressure profile throughout the well, with any irregularities in rate of penetration, corrected 'd' exponent and gas levels being due to lithology changes. No connection gas was observed.

The "Temperature Plot" displays the mud flowline temperature in and out and their differential plotted against depth. The temperature plot of Snapper No.5 shows a temperature gradient of 2.35 deg.F/100 feet. It shows a normal trend with depth 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 181.8 deg.C (359.2 deg.F) at 2990 metres from wireline logging data.

The "Pressure Plot" is a summary of the pressures found in the drilling of Snapper No.5. On this plot estimated pore pressure is plotted along with mud density and the fracture gradient. The pore pressure of the well was estimated to be 8.4 - 8.6 ppg. (E.M.W.) throughout. 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 (787 metres, 14.7 ppg.). As there is no availiable 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	0.0889	101.3
2	0.0639	138.8
3	0.0347	147.7

COEFFICIENT & CONSTANT:

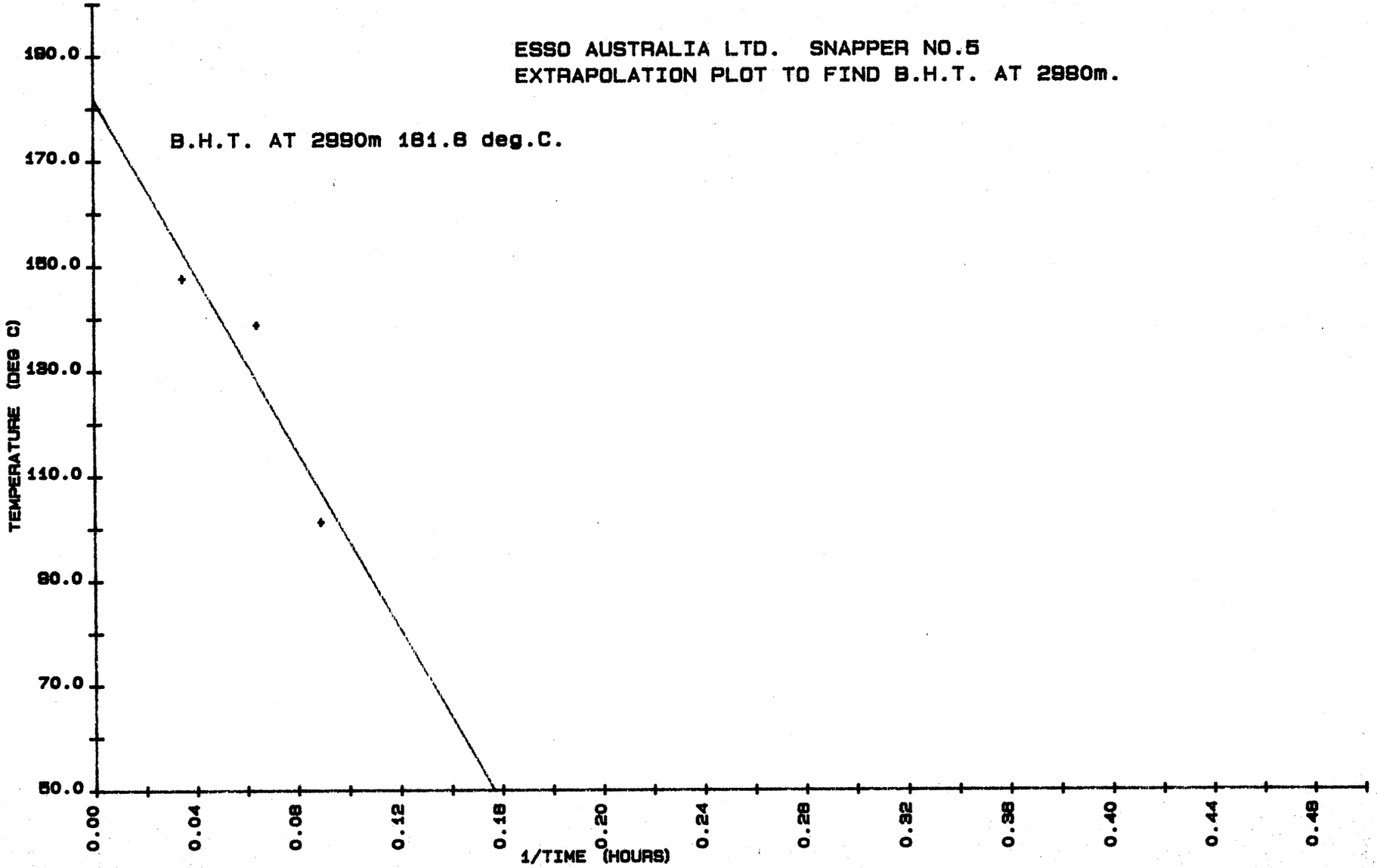
Y = m.X + c where m = -8.4077567E 02 and c = 1.8181515E 02

INTERPOLATED DATA:

1/TIME	TEMP
0.0000	181.8

ESSO AUSTRALIA LTD. SNAPPER NO.5
EXTRAPOLATION PLOT TO FIND B.H.T. AT 2990m.

B.H.T. AT 2990m 181.8 deg.C.



8. OVERBURDEN GRADIENT CALCULATIONS AND PLOT

Overburden Analysis

There were insufficent data available to calculate the overburden gradient.

9. GAS ANALYSES

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.

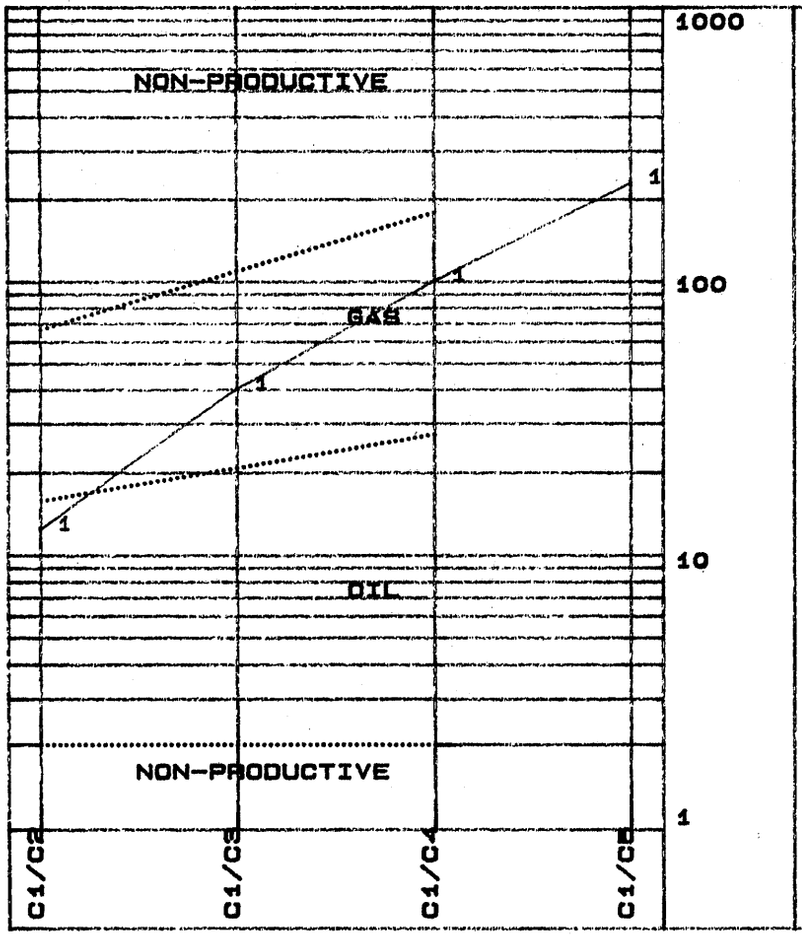
5. The ratios may not be definitive for low permeability zones; however, steep ratio plots may indicate a tight zone.

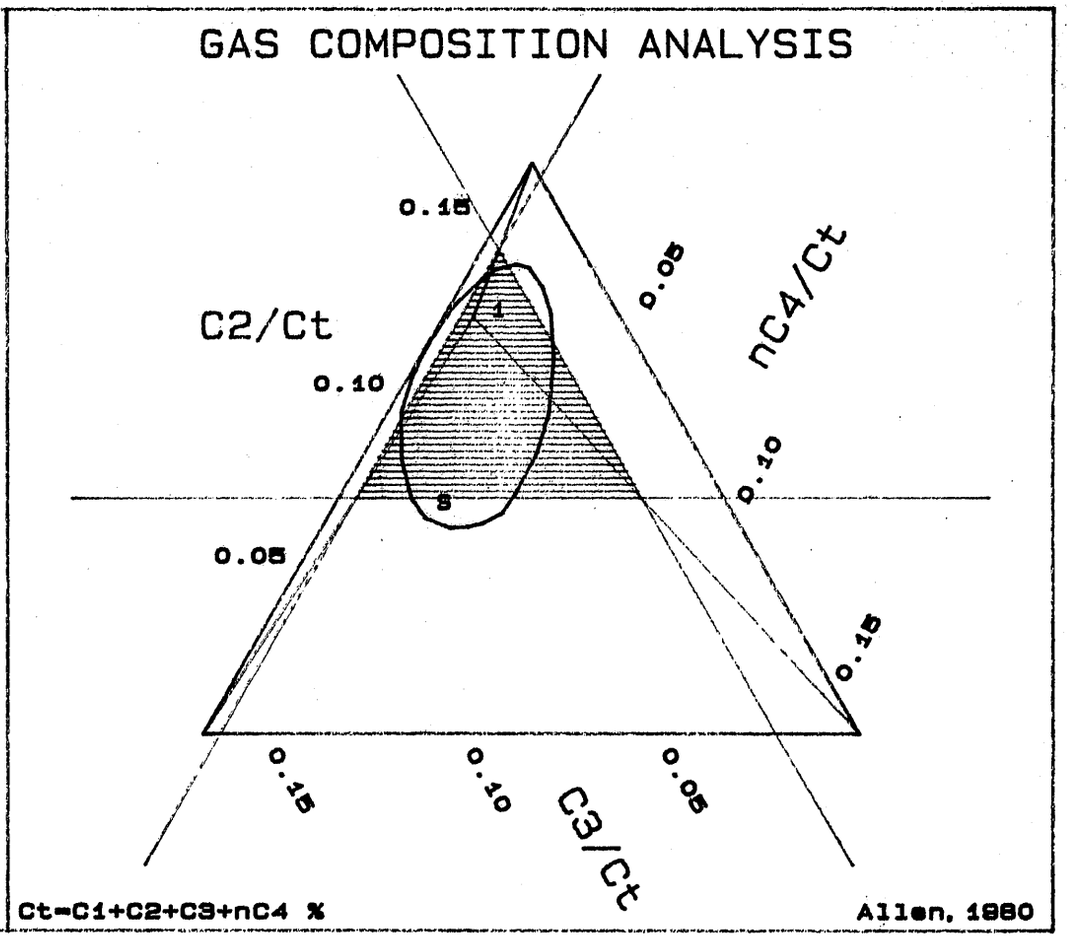
TRIANGULATION PLOT

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: SNAPPER No.5

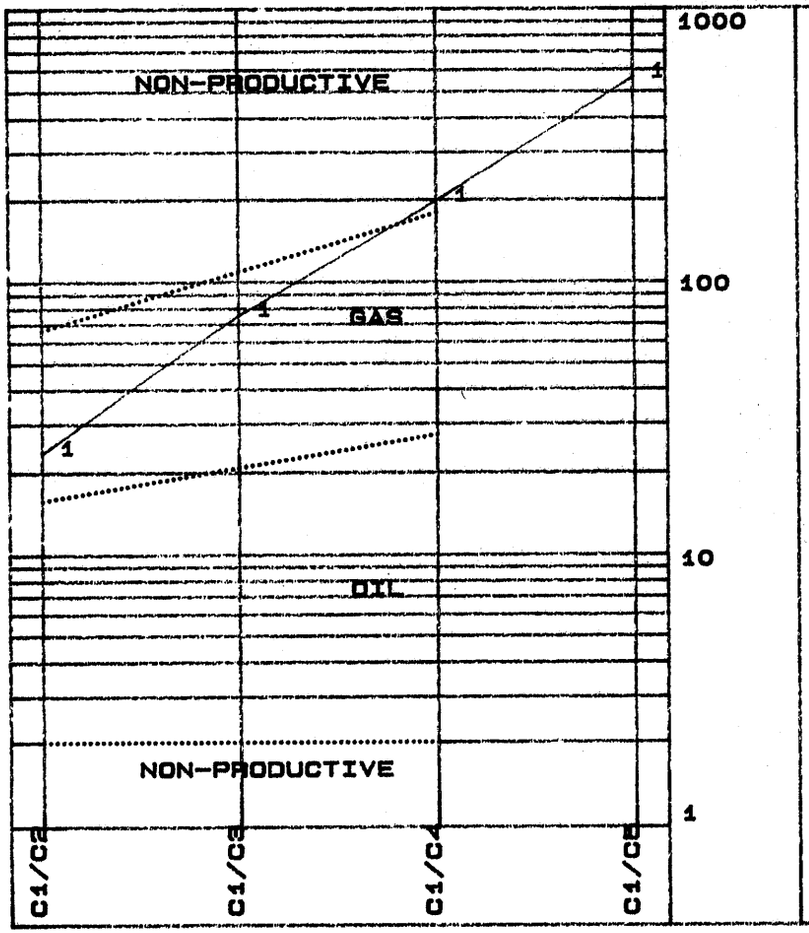


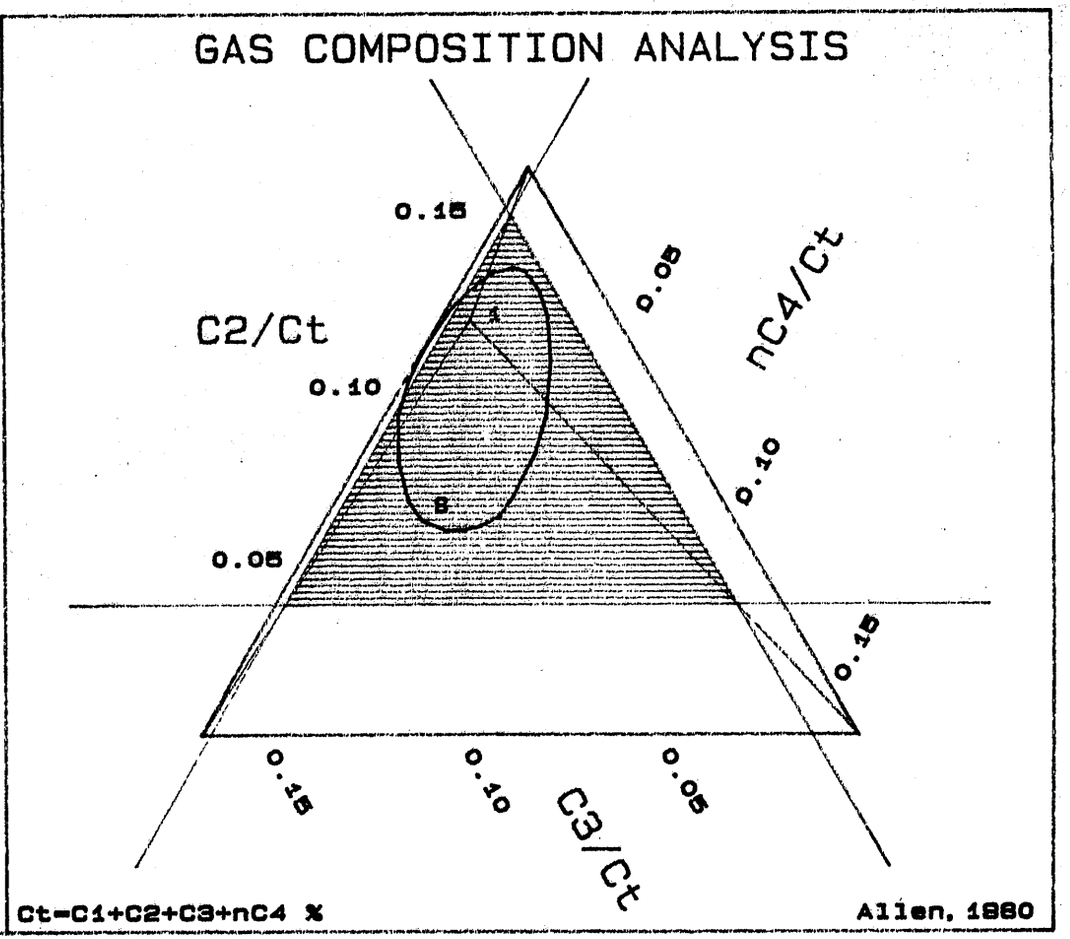


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2781	1.827	0.146	0.045	0.009	0.009	0.008	0.003	2.027	12	41	102	231

CONCLUSION: DRY GAS ZONE PRODUCTIVE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SNAPPER No.5

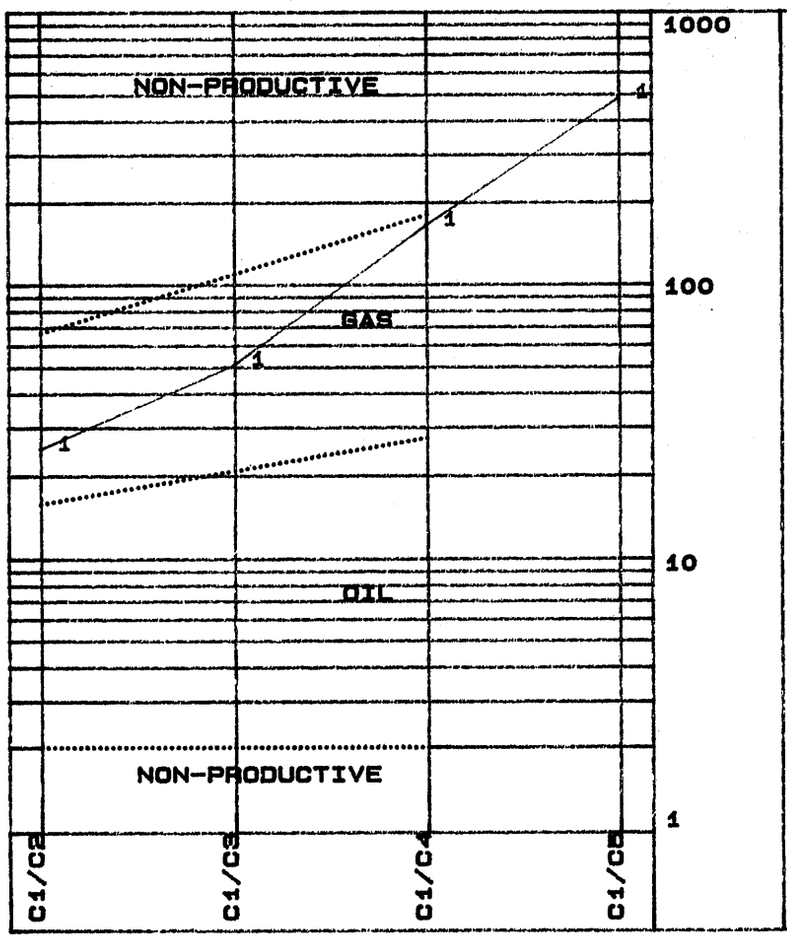


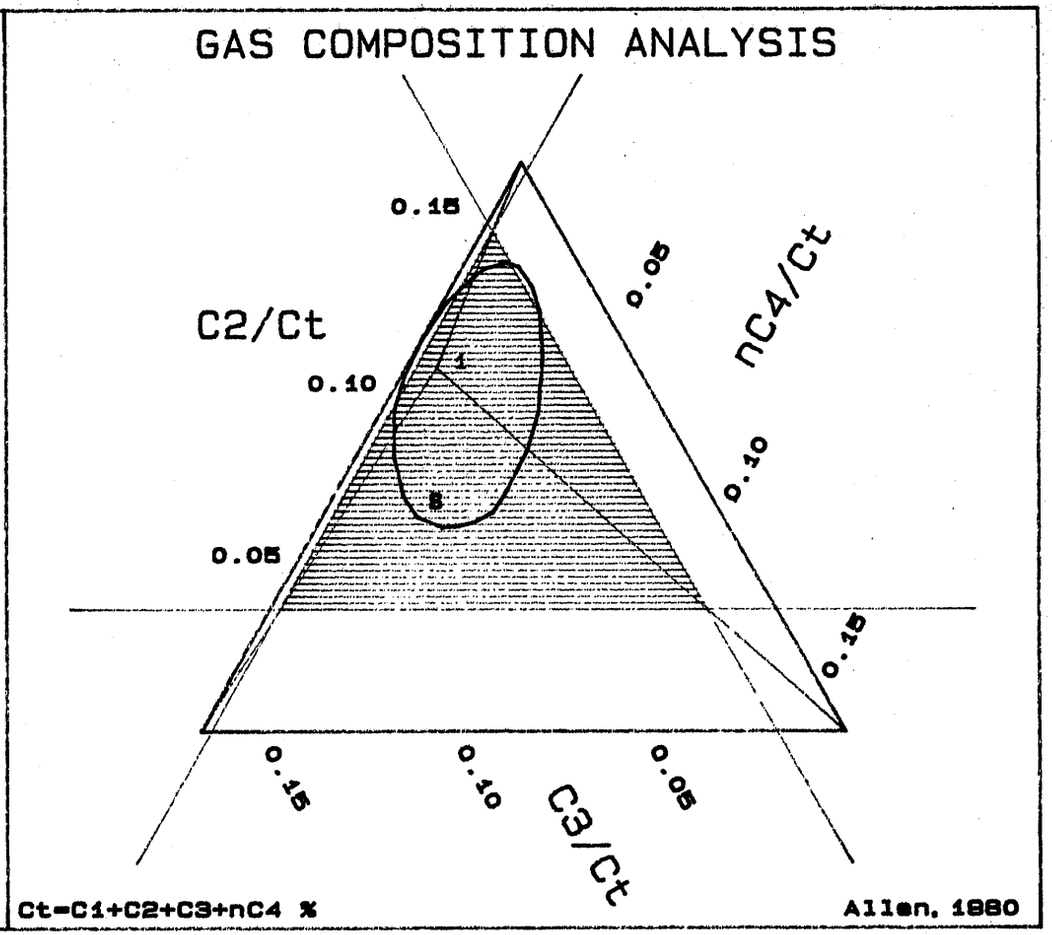


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2700	1.017	0.043	0.013	0.003	0.003	0.002	0.001	1.078	24	78	198	585

CONCLUSION: DRY GAS ZONE PRODUCTIVE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SNAPPER No.5

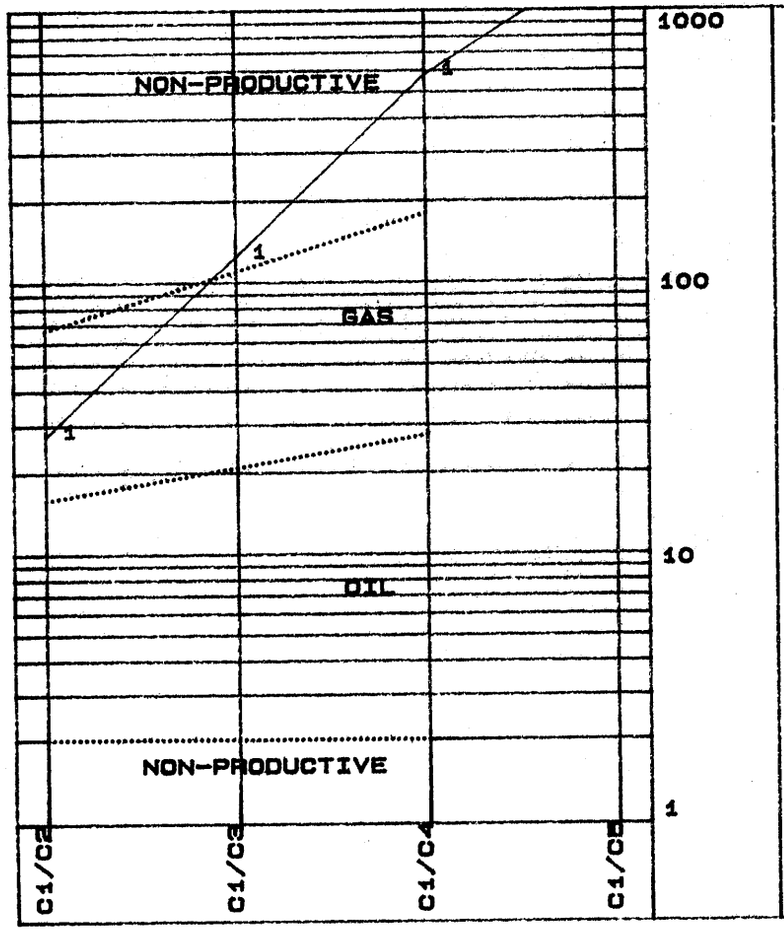


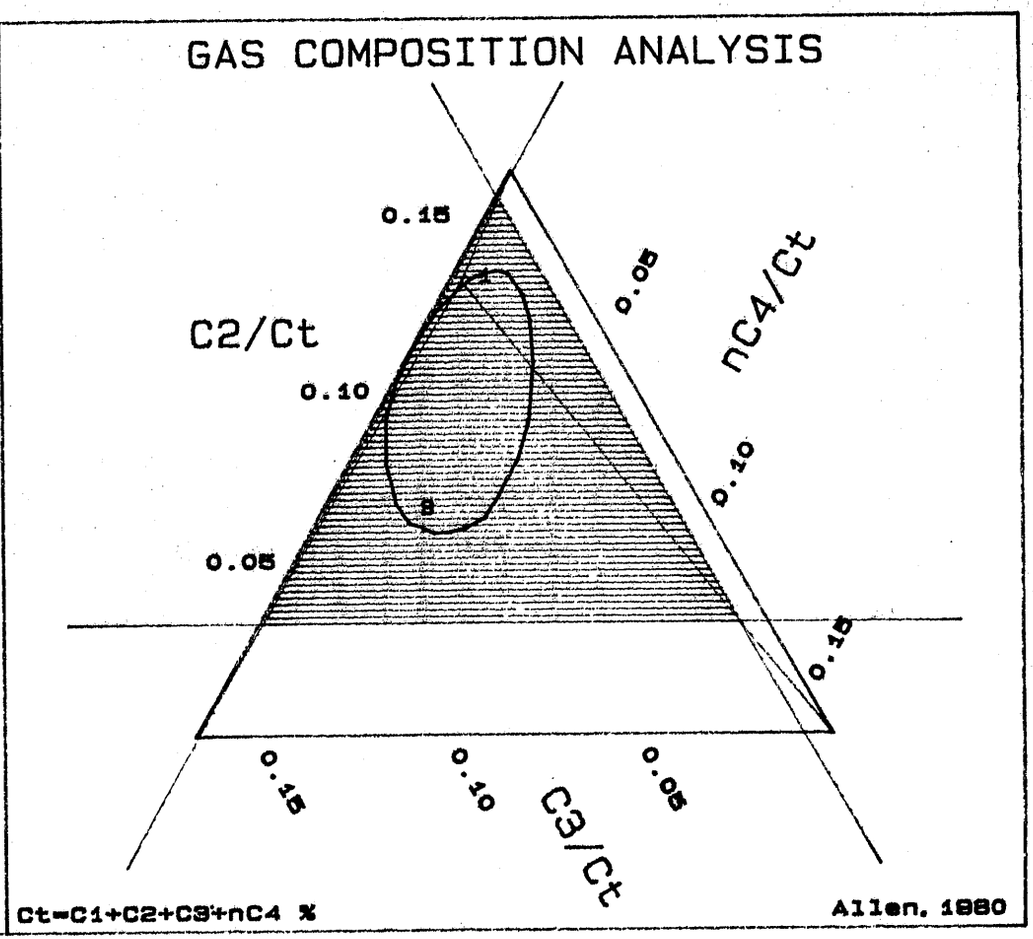


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2485	0.828	0.033	0.016	0.003	0.003	0.002	0.001	0.880	25	51	186	487

CONCLUSION: DRY GAS ZONE PRODUCTIVE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SNAPPER No.5





NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2472	2.092	0.078	0.017	0.002	0.002	0.001	0.001	2.187	27	125	581	1809

CONCLUSION: DRY GAS ZONE

SIDEWALL CORE GAS ANALYSIS DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

LOGGING SUITE NO. 3

No.	DEPTH (M)	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
5	2886.0	54	63	123	68	27	20	
7	2863.8	43	42	47	27	10	7	
14	2701.5	356	360	187	98	67	55	
15	2700.0	122	96	72	52	33	35	
17	2678.3	217	84	32	12	TR	TR	
20	2636.4	217	36	41	19	TR	TR	
22	2621.8	295	36	26	15	TR	TR	
28	2508.9	329	36	44	22	TR	TR	
29	2502.0	364	30	44	13	TR	TR	
33	2437.8	56	9	TR	TR	TR	-	
35	2414.9	203	18	16	TR	TR	-	
36	2403.9	342	73	15	6	TR	-	
41	2313.1	269	57	18	6	TR	-	
42	2294.2	91	48	18	8	TR	-	
50	2081.0	271	73	20	10	5	-	
53	2028.4	190	21	18	8	TR	TR	
58	1923.8	225	21	18	7	TR	7	
62	1854.1	2,000	1,555	3,328	3,857	2,351	1,600	
73	1756.0	624	72	104	98	53	57	C7+
76	1711.2	1,805	408	624	1,578	935	640	C7+
77	1708.9	234	42	62	131	146	200	C7+
79	1693.3	290	480	682	515	267	200	
94	1332.0	1,388	360	353	372	400	480	
98	1309.0	312	408	412	212	146	200	

10. SAMPLES COLLECTED

SAMPLES DISPATCHED FROM SNAPPER #5

Oven Dried Cuttings 220 - 2990 metres

1 Set to Esso Core Store
1 Set to VDITR (Separate transmittal)
1 Set to BMR (via VDITR)

Air Dried Cuttings 220 - 2990 metres

1 Set to Esso Core Store

Geochemistry Cans 220 - 2990 metres

1 Set to Geochemical Laboratory

Fission Track Samples 1200 - 2990 metres

2 Sets to Geochemical Laboratory

Mud Samples 843 - 2990 metres

1 Set to Geochemical Laboratory

RFT Samples sent to Esso Core Store

RFT #/Seat	5 gal metal	1 gal metal	25L plastic	4L plastic	1L plastic
3/17	2	2			
4/18	2	3		1	1
3/16		2			
7/88	2				
6/87	1				
8/89	1	2			
9/90			1		
9/19			1		
10/92	2				4
11/93		1			2
12/94			1		2
13/95					2
14/96					2
15/100					4
13/96					1
16/102				1	
17/104		2		2	
18/112				1	1
19/113					2
20/114				3	
23/157			1		
25/165			1		

RFT samples of oil - 13 small bottles sent to D. Moreton via Esso Core Store.

11. CORELAB DATA SHEETS

COMPANY Esso Australia Limited
WELL Snapper #5

BIT RECORD

Sheet No. 1

Ser No.	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	On Bottom TurnsK	Avg ROP	Avg Cost/m	Condition T B G
LJ321	RR1	HTC	3AJ + HO	111	26	-	18/18/18	77	216	139	5.3	Not Logged			-	-
115SR	2	HTC	R1	111	17½	2445	18/18/18	216	802	586	21.8	15.6	90.1	37.6	129.11	3-4-I
984YK	3	HTC	J3	136	12¼	1944	18/18/18	802	1400	598	26.8	18.8	118.0	31.8	145.99	5-8-1/8
1431126	CB1	CHRIS	RC444	4	9 7/8	22000	14/15/15	1400	1409.4	9.4	2.3	2.3	13.5	4.1	5175	20% worn
1431126	RRCB1	CHRIS	RC444	4	9 7/8	-	14/15/15	1409.4	1418.9	9.5	1.7	1.7	10.1	5.6	2560	40% worn
ZC960	4	HTC	J22	517	12¼	8520	18/18/16	1418.9	1728	309.1	21.8	18.1	76.8	17.1	329.97	2-2-1/8
212XS	5	HTC	J22	517	12¼	8520	16/18/18	1728	2229	501	68.3	64.1	241.7	7.8	511.34	6-6-I
316DS	6	HTC	J22	517	12¼	8520	16/18/18	2229	2521	292	49.5	45.4	153.2	6.4	659.75	5-4-1/8
311DS	7	HTC	J22	517	12¼	8520	16/16/16	2521	2774	253	50.8	47.9	174.8	5.3	832.66	8-4-¼
251PK	8	HTC	J22	537	12¼	8266	16/16/16	2774	2782	8	1.7	1.7	5.9	4.7	5408	1-1-I
1450701	CB2	CHRIS	C201	4	9 7/8	21000	14/14/14	2782	2788.3	6.3	4.2	4.2	12.5	1.5	10339	5% worn
251PK	RR8	HTC	J33	537	12¼	-	16/16/16	2788.3	2990	201.7	62.1	59.7	218.9	3.4	1280	4-7-1/8

BIT RECORD

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 1

Ser No.	Bit No.	Make	Type	IADC Code	Size (Inches)	Jets	Depth In Metres	Hole Made (m)	Drill Time	On Bottom Hours	On Bottom Turns K	Condition T B G	Remarks
	RR1	HTC	3AJ + 26" HO	111	26	18/18/18	77	139	5.3	Not logged		-	Pulled to run 20" CSG
	2	HTC	R1	111	17½	18/18/18	216	586	21.8	15.6	90.1	3-4-I	Pulled to run 13 3/8" CSG
	3	HTC	J3	136	12¼	18/18/18	822	598	26.8	18.8	118.0	5-8-1/8	Pulled to cut core #1
	CB1	CHRIS	RC444	4	9 7/8	14/15/15	1400	9.4	2.3	2.3	13.5	20%	Core #1
	RRCB1	CHRIS	RC444	4	9 7/8	14/15/15	1409.4	9.5	1.7	1.7	10.1	40%	Core #2
	4	HTC	J22	517	12¼	16/18/18	1418.9	309.1	21.8	18.1	76.8	2-2-1/8	Pulled to run logs
	5	HTC	J22	517	12¼	16/18/18	1728	501	68.3	64.1	241.7	6-6-I	Pulled due to high torque
	6	HTC	J22	517	12¼	16/18/18	2229	292	49.5	45.4	153.2	5-4-1/8	Pulled at T.D. (tentative)
	7	HTC	J22	517	12¼	16/16/16	2521	253	50.8	47.9	174.8	8-4-¼	Pulled due to low ROP's
	8	HTC	J33	537	12¼	16/16/16	2774	8	1.7	1.7	5.9	1-1-I	Pulled to cut core #3
	CB2	CHRIS	C201	4	9 7/8	14/14/14	2782	6.3	4.2	4.2	12.5	5%	Core #3
	RR8	HTC	J33	537	12¼	16/16/16	2788.3	201.7	62.1	59.7	218.9	4-7-1/8	Pulled at T.D

MUD INFORMATION SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 1

DEPTH	250	802	833	1354	1409	1596
DATE	5/7/85	6/7/85	7/7/85	8/7/85	9/7/85	10/7/85
TIME	03:00	08:00	21:30	22:00	18:00	15:20
WEIGHT	8.7	9.4	9.0	10.3	10.2	10.2
FUNNEL VISCOSITY	29	36	38	48	43	42
PV/YP	-	4/17	4/20	9/24	7/20	7/20
N/K	-	0.25/4.38	0.22/6.00	0.35/3.77	0.33/3.40	0.33/3.40
GEL: INITIAL/10 MIN	-	4/6	3/4	18/30	15/24	14/24
pH	9.3	10.1	10.0	10.3	10.3	9.7
FILTRATE:API/API HTHP	-	-	-	10.5/23	9.5/22	8.5/20
CAKE	-	-	-	2	2	1
SALINITY (PPM)	22,000	20,000	21,000	20,000	21,000	21,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	2	8	5	12	10	10
OIL	-	-	-	-	-	2
TRITIUM (DPM)	-	-	-	3123	3191	3198
REMARKS:	Drill 17½" hole	13 3/8" casing			Core #1 & #2	Drill 12¼" hole hole
		--------- 12¼" hole --------				

DEPTH	1728	1808	1932	2125	2192	2292
DATE	11/7/85	12/7/85	13/7/85	14/7/85	15/7/85	16/7/85
TIME	02:15	19:00	20:20	15:30	03:00	14:30
WEIGHT	10.2	10.2	9.8	9.8+	9.7+	9.8
FUNNEL VISCOSITY	46	46	43	43	39	42
PV/YP	7/22	8/25	6/25	6/26	6/20	6/25
N/K	0.31/4.15	0.31/4.69	0.26/6.32	0.25/6.82	0.30/4.02	0.26/6.32
GEL: INITIAL/10 MIN	14/32	21/36	16/30	17/33	10/21	18/34
pH	10.0	10.6	10.3	10.5	10.4	10.5
FILTRATE:API/API HTHP	8/19	7/17	3.5/21	8/20	8/20	9/23
CAKE	2	1	1	1	1	1
SALINITY (PPM)	20,000	20,000	23,000	24,000	25,000	24,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	10	10	8	9	7	9
OIL	-	-	-	-	-	-
TRITIUM (DPM)	3230	3189	3295	3214	3121	3197
REMARKS:	--- Logging---					
	---------- Drilled 12¼" hole ----------					

MUD INFORMATION SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 2

DEPTH	2451	2514	PIT	2521	PIT	2535
DATE	17/7/85	18/7/85	19/7/85	20/7/85	21/7/85	22/7/85
TIME	15:00	05:00	04:00	17:40	09:00	21:00
WEIGHT	9.8	9.8	9.8	9.8	9.8	9.8
FUNNEL VISCOSITY	41	40	44	43	43	40
PV/YP	7/23	6/23	6/22	8/25	7/25	7/23
N/K	0.30/4.55	0.27/5.35	0.28/4.89	0.31/4.69	0.29/5.40	0.30/4.55
GEL: INITIAL/10 MIN	17/28	16/26	15/25	18/35	19/38	12/24
pH	10.5	10.4	10.4	10.6	10.5	10.3
FILTRATE:API/API HTHP	8/20	7.5/19	8.0/-	7.5/19	8.0/-	9.5/22
CAKE	1	1	1	1	1	1
SALINITY (PPM)	26,000	26,000	26,000	25,000	25,000	23,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	10	10	10	11	11	9
OIL	-	-	-	-	-	-
TRITIUM (DPM)	3180	3107	3222	3057	2707	2965
REMARKS:	Drilled 12¼" hole		Logging	Wiper Trip	Logging	Drill 12¼" Hole

DEPTH	2666	2758	2781	2788	2876	2951
DATE	23/7/85	24/7/85	25/7/85	26/7/85	27/7/85	28/7/85
TIME	15:15	15:30	10:15	15:00	15:30	15:30
WEIGHT	9.8	9.8	9.8	9.9	9.8	9.8
FUNNEL VISCOSITY	39	39	42	42	42	42
PV/YP	6/22	7/22	7/24	10/24	10/20	10/25
N/K	0.28/4.89	0.31/4.15	0.29/4.97	0.37/3.35	0.41/2.26	0.36/3.65
GEL: INITIAL/10 MIN	18/20	19/24	20/32	18/25	17/26	24/35
pH	10.2	10.0	10.4	10.3	10.3	10.1
FILTRATE:API/API HTHP	8.0/17.2	14.2/27.2	12.5/26	7.9/17.1	7.5/19.6	8.5/20
CAKE	1	2	2	1.5	1	1
SALINITY (PPM)	22,000	21,000	21,000	22,000	22,000	21,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	9	9.5	9	10	9.5	9.5
OIL	-	-	-	-	-	TR
TRITIUM (DPM)	3142	3160	3160	3189	3195	3219
REMARKS:	----- Drilled 12¼" hole -----			Core #3	------ 12¼" hole -----	

MUD INFORMATION SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 3

DEPTH	2986	2990	2990	2990
DATE	29/7/85	30/7/85	31/7/85	1/8/85
TIME	04:45	04:30	04:30	22:45
WEIGHT	9.8	9.8	9.8	9.9
FUNNEL VISCOSITY	44	47	48	48
PV/YP	10/24	11/24	10/24	7/20
N/K	0.37/3.35	0.39/3.00	0.37/3.35	0.33/3.40
GEL: INITIAL/10 MIN	22/37	23/39	23/39	18/25
pH	10.4	10.5	10.4	10.5
FILTRATE:API/API HTHP	9.6/204	-	-	-
CAKE	1	1	1	1
SALINITY (PPM)	21,000	21,000	21,000	21,000
SAND	TR	TR	TR	TR
SOLIDS	9	10	9	10
OIL	TR	TR	TR	-
NITRATES (PPM)	3141	-	2465	2365
REMARKS:	Drilled 12¼" hole	---------- Logging ----------		

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
NITRATES (PPM)

REMARKS:

R.F.T. DATA

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

RUN No.	2	2	3	3	4	4
SEAT No.	16	16	17	17	18	18
CHAMBER CAPACITY (L)	45.6	10.4	45.6	10.4	45.6	10.4
DEPTH (metres)	1402.5	1402.5	1404.5	1404.5	1410.5	1410.5
RECOVERY VOLUMES						
GAS (Cu Ft)	163.6	36.2	83	21.2	81.7	26.2
OIL (cc)	0	0	42,500	8,500	35,000	6,000
WATER/FILTRATE (cc)	800	50	0	0	5,000	2,000
OTHER (cc) Condensate	3,000	55	0	0	0	0
SURFACE PRESSURE (PSI)	1,500	1,450	1,400	1,200	1,200	1,150
GAS COMPOSITION						
C1 (PPM)	424,396	463,693	471,552	440,115	46,369	408,678
C2 (PPM)	52,044	68,096	72,960	64,287	851	1,945
C3 (PPM)	20,971	39,436	29,324	32,358	2,918	12,539
C4 (PPM)	6,380	11,776	13,056	10,240	217	307
C5 (PPM)	1,962	1,891	2,128	1,260	788	5,547
C6 (PPM)	1,715	2,144	3,430	1,714	128	772
CO2 (%)	1.5	1.0	2	2	2	2
H2S (PPM)	0	0	4	4	5	400+
OIL PROPERTIES						
DENSITY (°API at 15°C)	65.1	-	39.5	44.3	44.3	43.7
COLOUR	Clear	Clear	Dk rd/brn	Dk rd/brn	Brown	Brown
FLUORESCENCE	Br wh/bl				White	White
POUR POINT (°C)			22	21	19.2	19.7
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.572 @ 13.5°C	0.970 @ 16.5°C			0.378 @ 20°C	0.623 @ 20°C
Cl (frm resis) (PPM)	14,000	7,100				
Cl (frm titrat) (PPM)	10,000	7,000			13K	10K
TRITIUM (DPM)	1,462	807			1,757	898
pH	7.2	7			6.8	6.8

COMMENTS

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 2

RUN No.	6	6	7	7	8	8
SEAT No.	87	87	88	88	89	89
CHAMBER CAPACITY (L)	22.7	10.4	22.7	10.4	22.7	10.4
DEPTH (metres)	1844	1844	1789.2	1789.2	1765.2	1765.2
RECOVERY VOLUMES						
GAS (Cu Ft)	49.63	Preserved	48.98	29.78	31.2	17.54
OIL (cc)	22,000		21,500	10,000	18,500	8,000
WATER/FILTRATE (cc)	0		0	0	0	0
OTHER (cc)	0		0	0	0	0
SURFACE PRESSURE (PSI)	1,500		1,450	1,370	1,500	1,380
GAS COMPOSITION						
C1 (PPM)	418,406		430,028	418,406	395,162	412,595
C2 (PPM)	45,588		42,332	68,382	49,862	41,212
C3 (PPM)	12,902		10,752	27,238	12,992	12,768
C4 (PPM)	3,482		2,252	6,553	2,560	2,208
C5 (PPM)	1,158		426	1,260	298	340
C6 (PPM)	442		96	138	690	207
CO2 (%)	12		13	12	14	13
H2S (PPM)	0		0	0	0	0
OIL PROPERTIES						
DENSITY (°API at 15°C)	39.1		40.1	41.0	39.1	40.19
COLOUR	Pale brn		Red-brn	Red-brn	Brn-tan	Brn-tan
FLUORESCENCE	Brt yell-wht		Brt yell-wht	Brt yell-wht	Brt wht	Brt wht
POUR POINT (°C)	24		24	24	25	24.5
WATER PROPERTIES						
RESISTIVITY (Ωm)						
Cl (frm resis) (PPM)						
Cl (frm titrat) (PPM)						
pH						
TRITIUM (DPM)						
COMMENTS						

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 3

RUN No.	9	9	10	10	11	11
SEAT No.	90	90	92	92	93	93
CHAMBER CAPACITY (L)	22.7	10.4	22.7	10.4	22.7	10.4
DEPTH (metres)	1755.5	1755.5	1716.5	1716.5	1702.7	1702.7
RECOVERY VOLUMES						
GAS (Cu Ft)	1.37	0.91	20.12	17.40	8.96	Preserved
OIL (cc)	0	0	11,750	6,750	3,250	
WATER/FILTRATE (cc)	23,000	9,750	9,750	2,000	18,750	
OTHER (cc)	0	0	0	0	0	
SURFACE PRESSURE (PSI)	600	450	1,310	1,350	1,100	
GAS COMPOSITION						
C1 (PPM)	-	215,014	337,050	337,050	342,860	
C2 (PPM)	-	11,702	50,371	37,651	40,195	
C3 (PPM)	-	2,632	17,472	10,080	11,200	
C4 (PPM)	-	1,696	5,632	2,560	3,136	
C5 (PPM)	-	788	1,874	745	4,004	
C6 (PPM)	-	380	690	207	379	
CO2 (%)	13	8	10	12	8	
H2S (PPM)	0	0	0	0	0	
OIL PROPERTIES						
DENSITY (°API at 60°F)	-	-	40.5	41.4	37.7	
COLOUR	-	-	Rust brn	Rust brn	Grey/bn	
FLUORESCENCE	-	-	Brt wh	Brt wh	Brt yell wh	
POUR POINT (°C)	-	-	24.0	24.5	23.5	
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.594 @ 20°C	0.543 @ 20°C	0.249 @ 20°C	0.250 @ 14°C	0.226 @ 20°C	
Cl (frm resis) (PPM)					32,000	
Cl (frm titrat) (PPM)	10,000	10,000	23,000	23,000	24,000	
TRITIUM (DPM)	350	199	2,942	2,814	3,031	
pH	6.5	6.1	6.5	6.8	8.0	
COMMENTS	22.4 L Chamber gas too small to measure					

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 4

RUN No.	12	12	13	13	14	14
SEAT No.	94	94	95	95	96	96
CHAMBER CAPACITY (L)	22.7	10.4	22.7	10.4	22.7	10.4
DEPTH (metres)	2309.5	2309.5	2296.5	2296.5	2102.4	2102.4
RECOVERY VOLUMES						
GAS (Cu Ft)	51.49	47.84	69.99	48.40	112.39	51.43
OIL (cc)	0	0	0	0	0	0
WATER/FILTRATE (cc)	12,750	2,000	9,750	1,750	3,000	750
OTHER (cc) Condensate	Scum	Scum	Tr Scum	Scum	Scum	Scum
SURFACE PRESSURE (PSI)	2,200	1,950	2,000	1,875	2,000	1,775
GAS COMPOSITION						
C1 (PPM)	313,804	383,539	383,539	383,539	395,161	389,350
C2 (PPM)	29,501	45,792	41,213	44,779	49,862	49,862
C3 (PPM)	9,856	16,896	11,648	14,336	16,576	17,024
C4 (PPM)	3,072	4,892	2,752	3,840	5,632	6,016
C5 (PPM)	1,001	2,002	830	1,427	1,981	2,002
C6 (PPM)	483	966	104	517	724	690
CO2 (%)	10	16	15.5	15.0	16.5	17
H2S (PPM)	0	0	0	0	0	0
OIL PROPERTIES						
DENSITY (°API at 60°F)						
COLOUR						
FLUORESCENCE						
POUR POINT (°C)						
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.239 @ 20°C	0.203 @ 20°C	0.214 @ 20°C	0.220 @ 20°C	0.234 @ 20°C	0.224 @ 20°C
Cl (frm resis) (PPM)	29,000	35,000	35,000	32,000	31,000	32,000
Cl (frm titrat) (PPM)	24,000	24,000	24,006	24,007	21,000	21,000
TRITIUM (DPM)	2,817	2,659	2,865	2,791	2,532	2,374
pH	6.8	6.5			6.4	6.4

COMMENTS

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 5

RUN No.	15	15	16	16	17	17
SEAT No.	100	100	102	102	104	104
CHAMBER CAPACITY (L)	22.7	10.4	22.7	10.4	22.7	10.4
DEPTH (metres)	1993.8	1993.8	1833.5	1833.5	1837.0	1837.0
RECOVERY VOLUMES						
GAS (Cu Ft)	41.29	40.55	1.35	0.98	3.17	4.71
OIL (cc)	0	0	0	0	500	1,500
WATER/FILTRATE (cc)	15,000	2,250	27,000	10,000	18,500	3,250
OTHER (cc) Condensate	Scum	Scum	Tr scum	Tr scum	0	0
SURFACE PRESSURE (PSI)	1,825	1,725	600	500	900	400
GAS COMPOSITION						
C1 (PPM)	406,784	418,406	395,162	290,560	348,682	302,182
C2 (PPM)	50,880	48,845	60,242	19,537	53,729	47,217
C3 (PPM)	15,680	15,053	21,504	5,734	17,203	17,920
C4 (PPM)	5,056	4,864	6,348	1,908	3,891	4,710
C5 (PPM)	1,789	1,431	2,147	817	886	954
C6 (PPM)	690	345	828	496	83	151
CO2 (%)	11	14	12	4	8	9
H2S (PPM)	0	0	0	0	0	0
OIL PROPERTIES						
DENSITY (°API at 15°C)	45.0	45.0	-	-	39.8	40.6
COLOUR	Clear	Clear			Red-brn	Red-brn
FLUORESCENCE					Brt yell-wh	Brt yell-wh
POUR POINT (°C)					27	27
WATER PROPERTIES						
RESISTIVITY (Ωm) 20°C	0.212	0.206	0.257	0.222	0.231	0.227
Cl (frm resis) (PPM)	34,000	35,000	27,500	30,500	30,000	30,800
Cl (frm titrat) (PPM)	27,000	25,000	25,000	25,000	24,000	24,000
TRITIUM (DPM)	3,042	2,964	2,942	2,432	2,921	2,813
pH	7.8	8.0	8.1	7.1	7.0	6.8
COMMENTS	API by R.I.	API by R.I.				

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 6

RUN No.	18	18	19	19	20	20
SEAT No.	112	112	113	113	114	114
CHAMBER CAPACITY (L)	22.7	10.4	22.7	10.4	22.7	3.8
DEPTH (metres)	1680.9	1680.9	2053.0	2053.0	1787.5	1787.5
RECOVERY VOLUMES						
GAS (Cu Ft)	24.18	41.06	33.13	47.14	96.7	Preserved
OIL (cc)	0	0	0	0	0	
WATER/FILTRATE (cc)	17,000	1,500	5,400	1,000	1,700	
OTHER (cc) Condensate	(thin film)	10ml	50ml	20ml	75ml	
SURFACE PRESSURE (PSI)	1,550	1,500	1,825	1,675	1,700	
GAS COMPOSITION						
C1 (PPM)	348,672	242,861	337,049	339,995	342,860	
C2 (PPM)	46,809	45,538	45,792	45,792	44,772	
C3 (PPM)	15,456	15,008	14,560	14,784	15,232	
C4 (PPM)	4,800	4,544	4,608	4,864	4,960	
C5 (PPM)	1,555	1,533	1,597	1,832	1,714	
C6 (PPM)	483	552	517	586	759	
CO2 (%)	8	10.5	16	17.5	13.5	
H2S (PPM)	0	0	0	0	0	
OIL PROPERTIES						
DENSITY (°API at 15°C)	Too sml to measure	44.1	49.9	47.8	61.7	
COLOUR		Clear-gry	Clear-gry mucky	Clear-gry mucky	Clear tgy mucky	
FLUORESCENCE						
POUR POINT (°C)						
WATER PROPERTIES						
RESISTIVITY (Ωm) @ 20°C	0.216	0.205	0.224	0.211	0.246	
Cl (frm resis) (PPM)	32,500	35,000	32,000	34,500	39,000	
Cl (frm titrat) (PPM)	24,000	24,000	23,000	24,000	20,000	
TRITIUM (DPM)	2,978	2,782	2,742	2,694	2,315	
pH	7.8	7.3	6.6	6.3	6.6	

COMMENTS

R.F.T. SAMPLING DATA SHEET

COMPANY Esso Australia Limited
WELL Snapper #5

Sheet No. 7

RUN No.	21	21	23	23	25/165
SEAT No.	115	115	157	157	165
CHAMBER CAPACITY (L)	22.7	3.8	22.7	3.8	22.7
DEPTH (metres)	1751.7	1751.7	2700.3	2700.3	2639.8
RECOVERY VOLUMES					
GAS (Cu Ft)	77.18	16.13	3.65	0	0.43
OIL (cc)	0	0	-	-	-
WATER/FILTRATE (cc)	6,000	500	42.5	3.5	34,000
OTHER (cc) Condensate	50	Scum	-	-	-
SURFACE PRESSURE (PSI)	1,670	1,625	400	300	110
GAS COMPOSITION					
C1 (PPM)	345,766	354,483	Not done due to		139,991
C2 (PPM)	43,757	44,265	rig evacuation.		10,176
C3 (PPM)	15,232	13,888	Bad weather.		3,494
C4 (PPM)	4,800	3,904			1,074
C5 (PPM)	1,597	1,036			394
C6 (PPM)	586	172			240
CO2 (%)	12.0	12.5			4
H2S (PPM)	0	0			0
OIL PROPERTIES					
DENSITY (°API at 15°C)	60.8				
COLOUR	Clear/muck gry	Thin film			
FLUORESCENCE					
POUR POINT (°C)					
WATER PROPERTIES					
RESISTIVITY (Ωm) @ 20°C	0.220	0.259	0.204	0.222	0.254
Cl (frm resis) (PPM)	32,000	27,000	35,000	31,000	27,000
Cl (frm titrat) (PPM)	20,500	17,000	18,000	17,000	20,000
TRITIUM (DPM)	2,819	2,189	1,042	1,334	2,855
pH	6.6	6.0	8.4	8.3	8.5

COMMENTS

APPENDICES

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, hte following plots have been drawn for this well :

GEOPLOT - 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: SNAPPER NO.5

BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
2	111	HTC OSC3AJ	17.500	4978.00	18 18 18	216.0	802.2	586.2	15.56	37.7	3.8	129.10	90109	3	4	0.000
3	136	HTC J3	12.250	1944.00	18 18 18	802.2	1400.0	597.8	18.77	31.8	4.6	146.02	117997	5	8	0.125
3	4	CHRIS RC444	9.875	22000.00	14 15 15	1400.0	1409.4	9.4	2.30	4.1	5.0	5176.55	13529	0	2	0.000
3	4	CHRIS RC444	9.875	0.00	14 15 15	1409.4	1418.9	9.5	1.66	5.7	5.0	2560.24	10059	0	4	0.000
4	517	HTC J22	12.250	8520.00	16 18 18	1418.9	1727.8	308.9	18.08	17.1	7.5	330.00	76827	2	2	0.125
5	517	HTC J22	12.250	8520.00	16 18 18	1727.8	2229.3	501.5	64.08	7.8	3.8	511.30	241658	6	6	0.000

WELL: SNAPPER NO.5

BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
6	517	HTC J22	12.250	8520.00	16 18 18	2229.3	2521.0	291.7	45.36	6.4	5.0	659.70	153199	5	4	0.125
7	517	HTC J22	12.250	8520.00	16 16 16	2521.0	2774.0	253.0	47.95	5.3	7.4	832.64	174772	8	4	0.250
8	537	HTC J33	12.250	8266.00	16 16 16	2774.0	2782.0	8.0	1.68	4.8	7.9	5406.52	5933	0	0	0.000
8	4	CHRIS C201	9.875	21000.00	14 14 14	2782.0	2788.3	6.3	4.20	1.5	7.9	10347.49	12508	0	0	5.000
8	537	HTC J33	12.250	8266.00	16 16 16	2788.3	2990.0	201.7	59.74	3.5	7.9	1217.39	218884	4	7	0.125

BIT NUMBER: 2 IADC CODE 111 HTC OSC3AJ

STARTING DEPTH.....	216.0		
BIT COST, RIG COST/HOUR.....	4978.00	3652.00	
TRIP TIME.....	3.8		
BIT DIAMETER.....	17.500		
NOZZLES.....	18	18	18
HW DRILL COLLAR LENGTH, OD, ID....	18.96	9.750	3.000
DRILL COLLAR LENGTH, OD, ID.....	95.25	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.53	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	199.00	19.124	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	4.0	2.00	
FINISHING DEPTH.....	802.2		
CUMULATIVE HOURS, TURNS.....	15.56	90109	
BIT CONDITION OUT.....	T 3	B 4	G 0.000

BIT NUMBER: 3 IADC CODE 136 HTC J3

STARTING DEPTH.....	802.2		
BIT COST, RIG COST/HOUR.....	1944.00	3652.00	
TRIP TIME.....	4.6		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	170.76	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.00	
FINISHING DEPTH.....	1400.0		
CUMULATIVE HOURS, TURNS.....	18.77	117997	
BIT CONDITION OUT.....	T 5	B 8	G 0.125

BIT NUMBER: 3 IADC CODE 4 CHRIS RC444

STARTING DEPTH.....	1400.0		
BIT COST, RIG COST/HOUR.....	22000.00	3652.00	
TRIP TIME.....	5.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	14	15	15
DRILL COLLAR LENGTH, OD, ID.....	152.76	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	0.5	2.00	
FINISHING DEPTH.....	1409.4		
CUMULATIVE HOURS, TURNS.....	2.30	13529	
BIT CONDITION OUT.....	T 0	B 2	G 0.000

BIT NUMBER: 3 IADC CODE 4 CHRIS RC444

STARTING DEPTH.....	1409.4		
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	5.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	14	15	15
DRILL COLLAR LENGTH, OD, ID.....	152.76	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	0.5	2.00	
FINISHING DEPTH.....	1418.9		
CUMULATIVE HOURS, TURNS.....	1.66	10059	
BIT CONDITION OUT.....	T 0	B 4	G 0.000

BIT NUMBER: 4 IADC CODE 517	HTC J22		
STARTING DEPTH.....	1418.9		
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	7.5		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	18	18
DRILL COLLAR LENGTH, OD, ID.....	170.76	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.10	
FINISHING DEPTH.....	1727.8		
CUMULATIVE HOURS, TURNS.....	18.08	76827	
BIT CONDITION OUT.....	T 2	B 2	G 0.125

BIT NUMBER: 5 IADC CODE 517	HTC J22		
STARTING DEPTH.....	1727.8		
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	3.8		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	18	18
DRILL COLLAR LENGTH, OD, ID.....	170.76	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.10	
FINISHING DEPTH.....	2229.3		
CUMULATIVE HOURS, TURNS.....	64.08	241658	
BIT CONDITION OUT.....	T 6	B 6	G 0.000

BIT NUMBER: 6 IADC CODE 517 HTC J22

STARTING DEPTH.....	2229.3		
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	5.0		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	18	18
DRILL COLLAR LENGTH, OD, ID.....	170.76	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.00	
FINISHING DEPTH.....	2521.0		
CUMULATIVE HOURS, TURNS.....	45.36	153199	
BIT CONDITION OUT.....	T 5	B 4	G 0.125

BIT NUMBER: 7 IADC CODE 517 HTC J22

STARTING DEPTH.....	2521.0		
BIT COST, RIG COST/HOUR.....	8520.00	3652.00	
TRIP TIME.....	7.4		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	170.82	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.10	
FINISHING DEPTH.....	2774.0		
CUMULATIVE HOURS, TURNS.....	47.95	174772	
BIT CONDITION OUT.....	T 8	B 4	G 0.250

BIT NUMBER: 8 IADC CODE 537 HTC J33

STARTING DEPTH.....	2774.0		
BIT COST, RIG COST/HOUR.....	8266.00	3652.00	
TRIP TIME.....	7.9		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	170.82	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.20	
FINISHING DEPTH.....	2782.0		
CUMULATIVE HOURS, TURNS.....	1.68	5933	
BIT CONDITION OUT.....	T 0	B 0	G 0.000

BIT NUMBER: 8 IADC CODE 4 CHRIS C201

STARTING DEPTH.....	2782.0		
BIT COST, RIG COST/HOUR.....	21000.00	3652.00	
TRIP TIME.....	7.9		
BIT DIAMETER.....	9.875		
NOZZLES.....	14	14	14
DRILL COLLAR LENGTH, OD, ID.....	159.89	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.20	
FINISHING DEPTH.....	2788.3		
CUMULATIVE HOURS, TURNS.....	4.20	12508	
BIT CONDITION OUT.....	T 0	B 0	G 5.000

BIT NUMBER: 8 IADC CODE 537 HTC J33

STARTING DEPTH.....	2788.3		
BIT COST, RIG COST/HOUR.....	8266.00	3652.00	
TRIP TIME.....	7.9		
PREVIOUS HOLE MADE.....	8.0		
PREVIOUS HOURS, TURNS.....	1.68	5933	
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	170.82	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.20	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	787.00	12.615	
RISER LENGTH, ID.....	74.00	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.....	0.28		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.20	
FINISHING DEPTH.....	2990.0		
CUMULATIVE HOURS, TURNS.....	59.74	218884	
BIT CONDITION OUT.....	T 4	B 7	G 0.125

(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 1 106 SPM 2 104 FLOW RATE 1053

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	13	37	208	LAMINAR	0	37	0.9
DC/OH	0.772	63	32	208	LAMINAR	0	32	3.1
DC/CSG	0.961	13	26	208	LAMINAR	0	26	0.4
HWDP/CSG	1.085	91	23	207	LAMINAR	0	23	1.8
DP/CSG	1.085	31	23	207	LAMINAR	0	23	0.6
DP/RIS	1.325	98	19	207	LAMINAR	0	19	1.3
TOTAL VOLUME		308				TOTAL PRESSURE DROP		8.1

LAG: 12.3 MINUTES 1307 STROKES #1 AND 1282 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1652.8	HHP	1015	IMPACT FORCE	2222
% SURFACE PRESSURE	59.9	HHP/sqin	4.22	JET VELOCITY	138

PRESSURE BREAKDOWN:

SURFACE	99.3		
STRING	740.3		
BIT	1652.8		
ANNULUS	8.1		
TOTAL	2500.5	PUMP PRESSURE 2759.8	% DIFFERENCE 9.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	460.6
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	468.8
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	16.3
	EFFECTIVE MUD WEIGHT	8.68	BOTTOM HOLE PRESSURE	444.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 107 SPM 2 104 FLOW RATE 1051

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	13	37	208	LAMINAR	0	37	0.9
DC/OH	0.772	74	32	208	LAMINAR	0	32	3.6
HWDP/OH	0.896	75	28	208	LAMINAR	0	28	2.2
DP/OH	0.896	3	28	208	LAMINAR	0	28	0.1
DP/CSG	1.085	136	23	207	LAMINAR	0	23	2.7
DP/RIS	1.325	98	19	207	LAMINAR	0	19	1.3
TOTAL VOLUME		398				TOTAL PRESSURE DROP		10.8

LAG: 15.9 MINUTES 1695 STROKES #1 AND 1648 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1647.8	HHP	1011	IMPACT FORCE	2216
% SURFACE PRESSURE	58.2	HHP/sqin	4.20	JET VELOCITY	138

PRESSURE BREAKDOWN:

SURFACE	99.0
STRING	795.4
BIT	1647.8
ANNULUS	10.8
TOTAL	2552.9

PUMP PRESSURE 2830.6 % DIFFERENCE 9.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	614.2
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	625.0
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	21.6
	EFFECTIVE MUD WEIGHT	8.68	BOTTOM HOLE PRESSURE	592.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 106 SPM 2 105 FLOW RATE 1056

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	13	37	208	LAMINAR	0	37	0.9
DC/OH	0.772	74	33	208	LAMINAR	0	32	3.6
HWDP/OH	0.896	75	28	208	LAMINAR	0	28	2.2
DP/OH	0.896	93	28	208	LAMINAR	0	28	2.7
DP/CSG	1.085	136	23	207	LAMINAR	0	23	2.7
DP/RIS	1.325	98	19	207	LAMINAR	0	19	1.3
TOTAL VOLUME		487			TOTAL PRESSURE DROP			13.4

LAG: 19.4 MINUTES 2064 STROKES #1 AND 2032 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1663.0	HHP	1025	IMPACT FORCE	2236
% SURFACE PRESSURE	57.2	HHP/sqin	4.26	JET VELOCITY	138

PRESSURE BREAKDOWN:

SURFACE	99.9
STRING	859.5
BIT	1663.0
ANNULUS	13.4
TOTAL	2635.8

PUMP PRESSURE 2908.1 % DIFFERENCE 9.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	767.7
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	781.1
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	26.8
	EFFECTIVE MUD WEIGHT	8.69	BOTTOM HOLE PRESSURE	740.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 107 SPM 2 105 FLOW RATE 1059

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	13	37	208	LAMINAR	0	37	0.9
DC/OH	0.772	74	33	208	LAMINAR	0	33	3.6
HWDP/OH	0.896	75	28	208	LAMINAR	0	28	2.2
DP/OH	0.896	182	28	208	LAMINAR	0	28	5.3
DP/CSG	1.085	136	23	207	LAMINAR	0	23	2.7
DP/RIS	1.325	98	19	207	LAMINAR	0	19	1.3
TOTAL VOLUME		577			TOTAL PRESSURE DROP			16.0

LAG: 22.9 MINUTES 2444 STROKES #1 AND 2404 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1673.7	HHP	1034	IMPACT FORCE	2251
% SURFACE PRESSURE	59.3	HHP/sqin	4.30	JET VELOCITY	139

PRESSURE BREAKDOWN:

SURFACE	100.4
STRING	922.4
BIT	1673.7
ANNULUS	16.0
TOTAL	2712.6

PUMP PRESSURE 2823.5 % DIFFERENCE 3.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	921.3
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	937.3
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	32.1
	EFFECTIVE MUD WEIGHT	8.69	BOTTOM HOLE PRESSURE	889.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 107 SPM 2 105 FLOW RATE 1058

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	13	37	208	LAMINAR	0	37	0.9
DC/OH	0.772	74	33	208	LAMINAR	0	33	3.6
HWDP/OH	0.896	75	28	208	LAMINAR	0	28	2.2
DP/OH	0.896	272	28	208	LAMINAR	0	28	7.9
DP/CSG	1.085	136	23	207	LAMINAR	0	23	2.7
DP/RIS	1.325	98	19	207	LAMINAR	0	19	1.3
TOTAL VOLUME		667				TOTAL PRESSURE DROP		18.6

LAG: 26.5 MINUTES 2832 STROKES #1 AND 2769 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1669.2	HHP	1030	IMPACT FORCE	2245
% SURFACE PRESSURE	59.9	HHP/sqin	4.28	JET VELOCITY	138

PRESSURE BREAKDOWN:

SURFACE	100.2
STRING	977.9
BIT	1669.2
ANNULUS	18.6
TOTAL	2765.9

PUMP PRESSURE 2786.4 % DIFFERENCE 0.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1074.8
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	1093.4
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	37.3
	EFFECTIVE MUD WEIGHT	8.69	BOTTOM HOLE PRESSURE	1037.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 108 SPM 2 104 FLOW RATE 1062

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	13	38	208	LAMINAR	0	37	0.9
DC/OH	0.772	74	33	208	LAMINAR	0	33	3.6
HWDP/OH	0.896	75	28	208	LAMINAR	0	28	2.2
DP/OH	0.896	361	28	208	LAMINAR	0	28	10.5
DP/CSG	1.085	136	23	207	LAMINAR	0	23	2.7
DP/RIS	1.325	98	19	207	LAMINAR	0	19	1.3
TOTAL VOLUME		756			TOTAL PRESSURE DROP			21.3

LAG: 29.9 MINUTES 3231 STROKES #1 AND 3123 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1681.6	HHP	1042	IMPACT FORCE	2261
% SURFACE PRESSURE	55.4	HHP/sqin	4.33	JET VELOCITY	139

PRESSURE BREAKDOWN:

SURFACE	100.9				
STRING	1042.6				
BIT	1681.6				
ANNULUS	21.3				
TOTAL	2846.2	PUMP PRESSURE	3035.0	% DIFFERENCE	6.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1228.3
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	1249.6
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	42.5
	EFFECTIVE MUD WEIGHT	8.69	BOTTOM HOLE PRESSURE	1185.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 102 SPM 2 100 FLOW RATE 1011

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	31	88	148	LAMINAR	0	87	6.8
DC/CSG	0.303	18	79	148	LAMINAR	0	79	3.1
HWDP/CSG	0.427	36	56	150	LAMINAR	0	56	2.3
DP/CSG	0.427	244	56	150	LAMINAR	0	56	16.1
DP/RIS	1.325	98	18	152	LAMINAR	0	18	0.7
TOTAL VOLUME		427				TOTAL PRESSURE DROP		29.0

LAG: 17.7 MINUTES 1808 STROKES #1 AND 1776 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1542.2	HHP	910	IMPACT FORCE	2074
% SURFACE PRESSURE	52.3	HHP/sqin	7.72	JET VELOCITY	132

PRESSURE BREAKDOWN:

SURFACE	76.6				
STRING	1013.4				
BIT	1542.2				
ANNULUS	29.0				
TOTAL	2661.3	PUMP PRESSURE	2949.0	% DIFFERENCE	9.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1397.2
CIRCULATING:	ECD	9.29	CIRCULATING PRESSURE	1426.2
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	58.0
	EFFECTIVE MUD WEIGHT	8.72	BOTTOM HOLE PRESSURE	1339.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 101 SPM 2 98 FLOW RATE 993

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	86	148	LAMINAR	0	86	10.2
HWDP/OH	0.398	17	59	150	LAMINAR	0	59	1.3
HWDP/CSG	0.427	18	55	150	LAMINAR	0	55	1.1
DP/CSG	0.427	287	55	150	LAMINAR	0	55	18.8
DP/RIS	1.325	98	18	152	LAMINAR	0	18	0.7
TOTAL VOLUME		466				TOTAL PRESSURE DROP		32.2

LAG: 19.7 MINUTES 1988 STROKES #1 AND 1932 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1487.2	HHP	862	IMPACT FORCE	2000
% SURFACE PRESSURE	48.7	HHP/sqin	7.31	JET VELOCITY	130

PRESSURE BREAKDOWN:

SURFACE	74.1
STRING	1023.6
BIT	1487.2
ANNULUS	32.2
TOTAL	2617.1

PUMP PRESSURE 3053.3 % DIFFERENCE 14.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1552.5
CIRCULATING:	ECD	9.29	CIRCULATING PRESSURE	1584.6
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	64.3
	EFFECTIVE MUD WEIGHT	8.72	BOTTOM HOLE PRESSURE	1488.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 96 SPM 2 93 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	47	82	141	LAMINAR	0	82	9.6
HWDP/OH	0.398	33	56	139	LAMINAR	0	56	2.2
DP/OH	0.398	24	56	139	LAMINAR	0	56	1.6
DP/CSG	0.427	305	53	139	LAMINAR	0	53	17.7
DP/RIS	1.325	98	17	138	LAMINAR	0	17	0.6
TOTAL VOLUME		506			TOTAL PRESSURE DROP			31.7

LAG: 22.5 MINUTES 2156 STROKES #1 AND 2098 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1346.4	HHP	742	IMPACT FORCE	1810
% SURFACE PRESSURE	45.2	HHP/sqin	6.30	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	71.8
STRING	1032.7
BIT	1346.4
ANNULUS	31.7
TOTAL	2482.6

PUMP PRESSURE 2977.5 % DIFFERENCE 16.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1707.7
CIRCULATING:	ECD	9.27	CIRCULATING PRESSURE	1739.4
PULLING OUT:	TRIP MARGIN	0.34	ESTIMATED SWAB	63.4
	EFFECTIVE MUD WEIGHT	8.76	BOTTOM HOLE PRESSURE	1644.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 97 SPM 2 45 FLOW RATE 709

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	62	134	LAMINAR	0	61	9.0
HWDP/OH	0.398	33	42	133	LAMINAR	0	42	2.1
DP/OH	0.398	63	42	133	LAMINAR	0	42	4.0
DP/CSG	0.427	305	40	133	LAMINAR	0	39	16.6
DP/RIS	1.325	98	13	131	LAMINAR	0	13	0.5
TOTAL VOLUME		546				TOTAL PRESSURE DROP		32.3

LAG: 32.3 MINUTES 3137 STROKES #1 AND 1452 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	838.1	HHP	347	IMPACT FORCE	1127
% SURFACE PRESSURE	37.6	HHP/sqin	2.94	JET VELOCITY	93

PRESSURE BREAKDOWN:

SURFACE	46.4				
STRING	694.1				
BIT	838.1				
ANNULUS	32.3				
TOTAL	1610.8	PUMP PRESSURE	2228.9	% DIFFERENCE	27.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.05	HYDROSTATIC PRESSURE	2057.5
CIRCULATING:	ECD	10.21	CIRCULATING PRESSURE	2089.7
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	64.5
	EFFECTIVE MUD WEIGHT	9.73	BOTTOM HOLE PRESSURE	1993.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1300.0

SPM 1 87 SPM 2 82 FLOW RATE 844

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	73	123	LAMINAR	0	73	9.0
HWDP/OH	0.398	33	50	115	LAMINAR	0	50	1.8
DP/OH	0.398	103	50	115	LAMINAR	0	50	5.6
DP/CSG	0.427	305	47	114	LAMINAR	0	47	14.0
DP/RIS	1.325	98	15	103	LAMINAR	0	15	0.3
TOTAL VOLUME		586			TOTAL PRESSURE DROP			30.7

LAG: 29.1 MINUTES 2540 STROKES #1 AND 2384 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1204.8	HHP	593	IMPACT FORCE	1620
% SURFACE PRESSURE	41.1	HHP/sqin	5.04	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	75.5				
STRING	1173.6				
BIT	1204.8				
ANNULUS	30.7				
TOTAL	2484.5	PUMP PRESSURE	2931.3	% DIFFERENCE	15.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.20	HYDROSTATIC PRESSURE	2262.2
CIRCULATING:	ECD	10.34	CIRCULATING PRESSURE	2292.9
PULLING OUT:	TRIP MARGIN	0.28	ESTIMATED SWAB	61.3
	EFFECTIVE MUD WEIGHT	9.92	BOTTOM HOLE PRESSURE	2200.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 89 SPM 2 84 FLOW RATE 865

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	75	138	LAMINAR	0	75	10.9
HWDP/OH	0.398	33	52	130	LAMINAR	0	52	2.3
DP/OH	0.398	143	52	130	LAMINAR	0	52	9.8
DP/CSG	0.427	305	48	130	LAMINAR	0	48	17.8
DP/RIS	1.325	98	16	120	LAMINAR	0	16	0.5
TOTAL VOLUME		626				TOTAL PRESSURE DROP		41.3

LAG: 30.4 MINUTES 2714 STROKES #1 AND 2544 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1277.7	HHP	645	IMPACT FORCE	1718
% SURFACE PRESSURE	43.6	HHP/sqin	5.47	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	79.6				
STRING	1282.0				
BIT	1277.7				
ANNULUS	41.3				
TOTAL	2680.6	PUMP PRESSURE	2931.6	% DIFFERENCE	8.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.30	HYDROSTATIC PRESSURE	2460.1
CIRCULATING:	ECD	10.47	CIRCULATING PRESSURE	2501.4
PULLING OUT:	TRIP MARGIN	0.35	ESTIMATED SWAB	82.6
	EFFECTIVE MUD WEIGHT	9.95	BOTTOM HOLE PRESSURE	2377.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1500.0

SPM 1 85 SPM 2 84 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	47	74	126	LAMINAR	0	73	9.1
HWDP/OH	0.398	33	51	120	LAMINAR	0	51	1.9
DP/OH	0.398	183	51	120	LAMINAR	0	51	10.6
DP/CSG	0.427	305	47	119	LAMINAR	0	47	15.0
DP/RIS	1.325	98	15	112	LAMINAR	0	15	0.4
TOTAL VOLUME		666					TOTAL PRESSURE DROP	37.0

LAG: 33.0 MINUTES 2810 STROKES #1 AND 2783 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1404.4	HHP	695	IMPACT FORCE	1756
% SURFACE PRESSURE	48.1	HHP/sqin	5.89	JET VELOCITY	119

PRESSURE BREAKDOWN:

SURFACE	72.4				
STRING	1207.8				
BIT	1404.4				
ANNULUS	37.0				
TOTAL	2721.6	PUMP PRESSURE	2919.4	% DIFFERENCE	6.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.20	HYDROSTATIC PRESSURE	2610.2
CIRCULATING:	ECD	10.34	CIRCULATING PRESSURE	2647.2
PULLING OUT:	TRIP MARGIN	0.29	ESTIMATED SWAB	73.9
	EFFECTIVE MUD WEIGHT	9.91	BOTTOM HOLE PRESSURE	2536.2

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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 850

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	74	126	LAMINAR	0	74	9.1
HWDP/OH	0.398	33	51	120	LAMINAR	0	51	1.9
DP/OH	0.398	223	51	120	LAMINAR	0	51	12.9
DP/CSG	0.427	305	47	120	LAMINAR	0	47	15.0
DP/RIS	1.325	98	15	112	LAMINAR	0	15	0.4

TOTAL VOLUME 705 TOTAL PRESSURE DROP 39.3

LAG: 34.9 MINUTES 2965 STROKES #1 AND 2963 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1405.3	HHP	697	IMPACT FORCE	1757
% SURFACE PRESSURE	47.1	HHP/sqin	5.91	JET VELOCITY	120

PRESSURE BREAKDOWN:

SURFACE	72.4				
STRING	1250.8				
BIT	1405.3				
ANNULUS	39.3				
TOTAL	2767.9	PUMP PRESSURE	2985.1	% DIFFERENCE	7.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.15	HYDROSTATIC PRESSURE	2770.6
CIRCULATING:	ECD	10.29	CIRCULATING PRESSURE	2809.9
PULLING OUT:	TRIP MARGIN	0.29	ESTIMATED SWAB	78.6
	EFFECTIVE MUD WEIGHT	9.86	BOTTOM HOLE PRESSURE	2692.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1699.9

SPM 1 84 SPM 2 84 FLOW RATE 837

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	73	126	LAMINAR	0	72	9.0
HWDP/OH	0.398	33	50	120	LAMINAR	0	50	1.9
DP/OH	0.398	263	50	120	LAMINAR	0	50	15.1
DP/CSG	0.427	305	47	119	LAMINAR	0	47	15.0
DP/RIS	1.325	98	15	112	LAMINAR	0	15	0.4
TOTAL VOLUME		745				TOTAL PRESSURE DROP		41.4

LAG: 37.4 MINUTES 3134 STROKES #1 AND 3129 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1369.8	HHP	669	IMPACT FORCE	1713
% SURFACE PRESSURE	46.6	HHP/sqin	5.68	JET VELOCITY	118

PRESSURE BREAKDOWN:

SURFACE	70.8				
STRING	1262.6				
BIT	1369.8				
ANNULUS	41.4				
TOTAL	2744.5	PUMP PRESSURE	2940.5	% DIFFERENCE	6.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.20	HYDROSTATIC PRESSURE	2958.1
CIRCULATING:	ECD	10.34	CIRCULATING PRESSURE	2999.5
PULLING OUT:	TRIP MARGIN	0.29	ESTIMATED SWAB	82.8
	EFFECTIVE MUD WEIGHT	9.91	BOTTOM HOLE PRESSURE	2875.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1800.0

SPM 1 80 SPM 2 82 FLOW RATE 811

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	70	124	LAMINAR	0	70	8.9
HWDP/OH	0.398	33	48	117	LAMINAR	0	48	1.8
DP/OH	0.398	302	48	117	LAMINAR	0	48	16.6
DP/CSG	0.427	305	45	116	LAMINAR	0	45	14.2
DP/RIS	1.325	98	15	107	LAMINAR	0	15	0.4
TOTAL VOLUME		785			TOTAL PRESSURE DROP			41.9

LAG: 40.6 MINUTES 3251 STROKES #1 AND 3347 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1286.4	HHP	609	IMPACT FORCE	1609
% SURFACE PRESSURE	44.9	HHP/sqin	5.17	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	68.7				
STRING	1265.1				
BIT	1286.4				
ANNULUS	41.9				
TOTAL	2662.1	PUMP PRESSURE	2865.4	% DIFFERENCE	7.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.20	HYDROSTATIC PRESSURE	3132.2
CIRCULATING:	ECD	10.34	CIRCULATING PRESSURE	3174.2
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	83.9
	EFFECTIVE MUD WEIGHT	9.93	BOTTOM HOLE PRESSURE	3048.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1900.0

SPM 1 0 SPM 2 112 FLOW RATE 562

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	49	145	LAMINAR	0	49	10.0
HWDP/OH	0.398	33	34	139	LAMINAR	0	34	2.2
DP/OH	0.398	342	34	139	LAMINAR	0	34	22.2
DP/CSG	0.427	305	31	138	LAMINAR	0	31	16.9
DP/RIS	1.325	98	10	131	LAMINAR	0	10	0.5
TOTAL VOLUME		825				TOTAL PRESSURE DROP		51.8

LAG: 61.7 MINUTES 0 STROKES #1 AND 6932 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	604.7	HHP	198	IMPACT FORCE	756
% SURFACE PRESSURE	40.8	HHP/sqin	1.68	JET VELOCITY	79

PRESSURE BREAKDOWN:

SURFACE	34.9				
STRING	662.7				
BIT	604.7				
ANNULUS	51.8				
TOTAL	1354.1	PUMP PRESSURE	1480.9	% DIFFERENCE	8.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.00	HYDROSTATIC PRESSURE	3241.4
CIRCULATING:	ECD	10.16	CIRCULATING PRESSURE	3293.2
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	103.6
	EFFECTIVE MUD WEIGHT	9.68	BOTTOM HOLE PRESSURE	3137.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 1999.9

SPM 1 79 SPM 2 85 FLOW RATE 820

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	71	146	LAMINAR	0	71	11.3
HWDP/OH	0.398	33	49	140	LAMINAR	0	49	2.4
DP/OH	0.398	382	49	140	LAMINAR	0	49	27.9
DP/CSG	0.427	305	46	140	LAMINAR	0	46	19.0
DP/RIS	1.325	98	15	132	LAMINAR	0	15	0.5
TOTAL VOLUME		865					TOTAL PRESSURE DROP	61.2

LAG: 44.3 MINUTES 3501 STROKES #1 AND 3767 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1261.4	HHP	603	IMPACT FORCE	1578
% SURFACE PRESSURE	44.3	HHP/sqin	5.12	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	67.8				
STRING	1326.0				
BIT	1261.4				
ANNULUS	61.2				
TOTAL	2716.3	PUMP PRESSURE	2850.0	% DIFFERENCE	4.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3343.7
CIRCULATING:	ECD	9.98	CIRCULATING PRESSURE	3404.8
PULLING OUT:	TRIP MARGIN	0.36	ESTIMATED SWAB	122.4
	EFFECTIVE MUD WEIGHT	9.44	BOTTOM HOLE PRESSURE	3221.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2099.9

SPM 1 78 SPM 2 85 FLOW RATE 814

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	71	146	LAMINAR	0	70	11.0
HWDP/OH	0.398	33	49	143	LAMINAR	0	49	2.5
DP/OH	0.398	422	49	143	LAMINAR	0	49	31.4
DP/CSG	0.427	305	45	142	LAMINAR	0	45	19.5
DP/RIS	1.325	98	15	138	LAMINAR	0	15	0.6
TOTAL VOLUME		905			TOTAL PRESSURE DROP			64.9

LAG: 46.7 MINUTES 3645 STROKES #1 AND 3957 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1243.7	HHP	591	IMPACT FORCE	1555
% SURFACE PRESSURE	43.8	HHP/sqin	5.01	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	63.2				
STRING	1272.4				
BIT	1243.7				
ANNULUS	64.9				
TOTAL	2644.2	PUMP PRESSURE	2838.0	% DIFFERENCE	6.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3510.9
CIRCULATING:	ECD	9.98	CIRCULATING PRESSURE	3575.8
PULLING OUT:	TRIP MARGIN	0.36	ESTIMATED SWAB	129.8
	EFFECTIVE MUD WEIGHT	9.44	BOTTOM HOLE PRESSURE	3381.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2199.9

SPM 1 80 SPM 2 85 FLOW RATE 824

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	72	126	LAMINAR	0	71	8.6
HWDP/OH	0.398	33	49	121	LAMINAR	0	49	1.9
DP/OH	0.398	462	49	121	LAMINAR	0	49	25.8
DP/CSG	0.427	305	46	121	LAMINAR	0	46	14.5
DP/RIS	1.325	98	15	115	LAMINAR	0	15	0.4
TOTAL VOLUME		944					TOTAL PRESSURE DROP	51.2

LAG: 48.1 MINUTES 3860 STROKES #1 AND 4077 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1274.4	HHP	613	IMPACT FORCE	1594
% SURFACE PRESSURE	44.9	HHP/sqin	5.20	JET VELOCITY	116

PRESSURE BREAKDOWN:

SURFACE	64.6				
STRING	1337.9				
BIT	1274.4				
ANNULUS	51.2				
TOTAL	2728.0	PUMP PRESSURE	2837.1	% DIFFERENCE	3.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3678.0
CIRCULATING:	ECD	9.94	CIRCULATING PRESSURE	3729.2
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	102.3
	EFFECTIVE MUD WEIGHT	9.53	BOTTOM HOLE PRESSURE	3575.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2300.0

SPM 1 78 SPM 2 83 FLOW RATE 805

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	70	130	LAMINAR	0	70	9.0
HWDP/OH	0.398	33	48	126	LAMINAR	0	48	2.0
DP/OH	0.398	502	48	126	LAMINAR	0	48	29.6
DP/CSG	0.427	305	45	125	LAMINAR	0	45	15.4
DP/RIS	1.325	98	14	119	LAMINAR	0	14	0.4
TOTAL VOLUME		984				TOTAL PRESSURE DROP		56.5

LAG: 51.4 MINUTES 4011 STROKES #1 AND 4260 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1216.7	HHP	571	IMPACT FORCE	1522
% SURFACE PRESSURE	42.2	HHP/sqin	4.85	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	61.9				
STRING	1318.9				
BIT	1216.7				
ANNULUS	56.5				
TOTAL	2654.0	PUMP PRESSURE	2880.9	% DIFFERENCE	7.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3845.4
CIRCULATING:	ECD	9.94	CIRCULATING PRESSURE	3901.8
PULLING OUT:	TRIP MARGIN	0.29	ESTIMATED SWAB	112.9
	EFFECTIVE MUD WEIGHT	9.51	BOTTOM HOLE PRESSURE	3732.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2400.0

SPM 1 80 SPM 2 79 FLOW RATE 797

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	69	137	LAMINAR	0	69	9.8
HWDP/OH	0.398	33	48	131	LAMINAR	0	48	2.1
DP/OH	0.398	541	48	131	LAMINAR	0	48	34.6
DP/CSG	0.427	305	44	131	LAMINAR	0	44	16.6
DP/RIS	1.325	98	14	124	LAMINAR	0	14	0.5
TOTAL VOLUME		1024				TOTAL PRESSURE DROP		63.6

LAG: 54.0 MINUTES 4340 STROKES #1 AND 4267 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1193.4	HHP	555	IMPACT FORCE	1493
% SURFACE PRESSURE	41.5	HHP/sqin	4.71	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	62.8				
STRING	1373.0				
BIT	1193.4				
ANNULUS	63.6				
TOTAL	2692.8	PUMP PRESSURE	2875.0	% DIFFERENCE	6.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4012.5
CIRCULATING:	ECD	9.96	CIRCULATING PRESSURE	4076.1
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	127.3
	EFFECTIVE MUD WEIGHT	9.49	BOTTOM HOLE PRESSURE	3885.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2500.0

SPM 1 80 SPM 2 81 FLOW RATE 806

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	70	140	LAMINAR	0	70	10.3
HWDP/OH	0.398	33	48	135	LAMINAR	0	48	2.2
DP/OH	0.398	581	48	135	LAMINAR	0	48	39.4
DP/CSG	0.427	305	45	135	LAMINAR	0	45	17.7
DP/RIS	1.325	98	14	128	LAMINAR	0	14	0.5
TOTAL VOLUME		1064				TOTAL PRESSURE DROP		70.1

LAG: 55.5 MINUTES 4441 STROKES #1 AND 4500 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1218.9	HHP	573	IMPACT FORCE	1524
% SURFACE PRESSURE	41.9	HHP/sqin	4.86	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	64.0		
STRING	1436.2		
BIT	1218.9		
ANNULUS	70.1		
TOTAL	2789.2	PUMP PRESSURE 2912.2	% DIFFERENCE 4.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4179.8
CIRCULATING:	ECD	9.96	CIRCULATING PRESSURE	4250.0
PULLING OUT:	TRIP MARGIN	0.33	ESTIMATED SWAB	140.3
	EFFECTIVE MUD WEIGHT	9.47	BOTTOM HOLE PRESSURE	4039.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2600.0

SPM 1 74 SPM 2 75 FLOW RATE 745

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	65	146	LAMINAR	0	65	10.9
HWDP/OH	0.398	33	45	140	LAMINAR	0	44	2.4
DP/OH	0.398	621	45	140	LAMINAR	0	44	44.1
DP/CSG	0.427	305	42	140	LAMINAR	0	41	18.5
DP/RIS	1.325	98	13	132	LAMINAR	0	13	0.5
TOTAL VOLUME		1104				TOTAL PRESSURE DROP		76.4

LAG: 62.2 MINUTES 4599 STROKES #1 AND 4677 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1445.4	HHP	629	IMPACT FORCE	1536
% SURFACE PRESSURE	49.1	HHP/sqin	5.33	JET VELOCITY	123

PRESSURE BREAKDOWN:

SURFACE	57.1				
STRING	1315.3				
BIT	1445.4				
ANNULUS	76.4				
TOTAL	2894.2	PUMP PRESSURE	2946.7	% DIFFERENCE	1.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4347.0
CIRCULATING:	ECD	9.97	CIRCULATING PRESSURE	4423.3
PULLING OUT:	TRIP MARGIN	0.34	ESTIMATED SWAB	152.7
	EFFECTIVE MUD WEIGHT	9.46	BOTTOM HOLE PRESSURE	4194.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2700.0 AND TVD 2700.0

SPM 1 74 SPM 2 75 FLOW RATE 747

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	65	146	LAMINAR	0	65	10.9
HWDP/OH	0.398	33	45	140	LAMINAR	0	45	2.4
DP/OH	0.398	661	45	140	LAMINAR	0	45	46.9
DP/CSG	0.427	305	42	140	LAMINAR	0	42	18.5
DP/RIS	1.325	98	13	132	LAMINAR	0	13	0.5
TOTAL VOLUME		1144				TOTAL PRESSURE DROP		79.2

LAG: 64.3 MINUTES 4770 STROKES #1 AND 4841 STROKES #?

BIT HYDRAULICS:

PRESSURE DROP	1450.4	HHP	632	IMPACT FORCE	1541
% SURFACE PRESSURE	49.2	HHP/sqin	5.36	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	57.3				
STRING	1352.4				
BIT	1450.4				
ANNULUS	79.2				
TOTAL	2939.3	PUMP PRESSURE	2948.0	% DIFFERENCE	0.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4514.2
CIRCULATING:	ECD	9.97	CIRCULATING PRESSURE	4593.4
PULLING OUT:	TRIP MARGIN	0.34	ESTIMATED SWAB	158.4
	EFFECTIVE MUD WEIGHT	9.46	BOTTOM HOLE PRESSURE	4355.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2800.0 AND TVD 2800.0

SPM 1 72 SPM 2 74 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	47	64	140	LAMINAR	0	63	10.2
HWDP/OH	0.398	33	44	132	LAMINAR	0	44	2.1
DP/OH	0.398	701	44	132	LAMINAR	0	44	44.1
DP/CSG	0.427	305	41	131	LAMINAR	0	41	16.3
DP/RIS	1.325	98	13	120	LAMINAR	0	13	0.4

TOTAL VOLUME 1184 TOTAL PRESSURE DROP 73.1

LAG: 67.8 MINUTES 4913 STROKES #1 AND 5033 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1397.9	HHP	598	IMPACT FORCE	1485
% SURFACE PRESSURE	47.2	HHP/sqin	5.07	JET VELOCITY	121

PRESSURE BREAKDOWN:

SURFACE	57.9				
STRING	1401.4				
BIT	1397.9				
ANNULUS	73.1				
TOTAL	2930.3	PUMP PRESSURE	2958.8	% DIFFERENCE	1.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4681.4
CIRCULATING:	ECD	9.95	CIRCULATING PRESSURE	4754.4
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	146.1
	EFFECTIVE MUD WEIGHT	9.49	BOTTOM HOLE PRESSURE	4535.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2900.0 AND TVD 2900.0

SPM 1 74 SPM 2 73 FLOW RATE 738

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	125	LAMINAR	0	64	8.4
HWDP/OH	0.398	33	44	115	LAMINAR	0	44	1.7
DP/OH	0.398	741	44	115	LAMINAR	0	44	37.0
DP/CSG	0.427	305	41	114	LAMINAR	0	41	12.9
DP/RIS	1.325	98	13	102	LAMINAR	0	13	0.3
TOTAL VOLUME		1223			TOTAL PRESSURE DROP			60.2

LAG: 69.6 MINUTES 5176 STROKES #1 AND 5104 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1416.7	HHP	610	IMPACT FORCE	1505
% SURFACE PRESSURE	49.0	HHP/sqin	5.18	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	58.6
STRING	1452.2
BIT	1416.7
ANNULUS	60.2
TOTAL	2987.8

PUMP PRESSURE 2893.1 % DIFFERENCE 3.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4848.5
CIRCULATING:	ECD	9.92	CIRCULATING PRESSURE	4908.8
PULLING OUT:	TRIP MARGIN	0.24	ESTIMATED SWAB	120.4
	EFFECTIVE MUD WEIGHT	9.56	BOTTOM HOLE PRESSURE	4728.1

(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	2	IADC CODE	111	INTERVAL	216.0- 802.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4978.00	TRIP TIME	3.8	BIT RUN	586.2
TOTAL HOURS	15.56	TOTAL TURNS	90109	CONDITION	T3 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
217.0	66.7	3.8	53	9.0	0.50	0.02	48	55	18910	8.4	13.6
218.0	36.0	3.7	68	9.0	0.66	0.04	161	101	9506	8.4	13.6
219.0	90.0	4.0	79	9.0	0.52	0.05	213	41	6351	8.4	13.6
220.0	57.1	3.7	78	9.0	0.60	0.07	295	64	4779	8.4	13.6
221.0	100.0	4.2	80	9.0	0.51	0.08	343	37	3831	8.4	13.6
222.0	24.0	3.6	33	9.0	0.60	0.12	427	152	3217	8.4	13.6
223.0	105.9	3.5	78	9.0	0.48	0.13	471	34	2763	8.4	13.6
224.0	45.0	2.6	77	9.0	0.61	0.15	574	81	2428	8.4	13.6
225.0	144.0	4.0	78	9.0	0.43	0.16	607	25	2161	8.4	13.6
226.0	211.8	5.1	78	9.0	0.38	0.17	629	17	1946	8.4	13.6
227.0	171.4	4.8	79	9.0	0.41	0.17	656	21	1771	8.4	13.6
228.0	156.5	4.9	79	9.0	0.44	0.18	687	23	1626	8.4	13.6
229.0	105.9	3.7	78	9.0	0.48	0.19	731	34	1503	8.4	13.6
230.0	105.9	3.7	78	9.0	0.48	0.20	775	34	1398	8.4	13.6
231.0	124.1	3.6	79	9.0	0.45	0.21	813	29	1307	8.4	13.6
232.0	56.2	5.4	72	9.0	0.62	0.22	890	65	1229	8.4	13.6
233.0	90.0	7.0	76	9.0	0.57	0.23	941	41	1160	8.4	13.6
234.0	94.7	7.5	76	9.0	0.57	0.24	989	39	1097	8.4	13.6
235.0	48.0	6.8	77	9.0	0.70	0.27	1085	76	1043	8.4	13.6
236.0	90.0	6.4	77	9.0	0.56	0.28	1136	40.58	993.35	8.4	13.6
237.0	75.0	7.1	77	9.0	0.61	0.29	1198	48.69	948.37	8.4	13.6
238.0	92.3	6.7	76	9.0	0.56	0.30	1247	39.56	907.06	8.4	13.6
239.0	109.1	7.5	76	9.0	0.54	0.31	1289	33.48	869.08	8.4	13.7
240.0	156.5	8.3	78	9.0	0.47	0.32	1319	23.33	833.84	8.4	13.7
241.0	70.6	7.1	69	9.0	0.60	0.33	1377	51.74	802.55	8.4	13.7
242.0	125.0	10.0	99	9.0	0.60	0.34	1425	29.22	772.81	8.4	13.7
243.0	154.3	11.7	107	9.0	0.59	0.35	1466	23.67	745.06	8.4	13.7
244.0	200.0	11.7	108	9.0	0.53	0.35	1499	18.26	719.11	8.4	13.7
245.0	200.0	11.6	107	9.0	0.53	0.36	1531	18.26	694.94	8.4	13.7
246.0	171.4	11.5	108	9.0	0.56	0.36	1569	21.30	672.48	8.4	13.7
247.0	163.6	11.7	108	9.0	0.57	0.37	1608	22.32	651.51	8.4	13.7
248.0	144.0	11.9	106	9.0	0.60	0.37	1653	25.36	631.94	8.4	13.7
249.0	128.6	11.6	108	9.0	0.63	0.38	1703	28.40	613.65	8.4	13.7
250.0	144.0	11.4	108	9.0	0.60	0.39	1748	25.36	596.35	8.4	13.7
251.0	120.0	10.8	107	9.0	0.63	0.40	1801	30.43	580.18	8.4	13.7
252.0	65.5	9.0	87	9.0	0.70	0.41	1881	55.79	565.62	8.4	13.7
253.0	70.6	8.2	100	9.0	0.70	0.43	1966	51.74	551.73	8.4	13.7
254.0	78.3	8.2	101	9.0	0.68	0.44	2044	46.66	538.44	8.4	13.7
255.0	69.2	8.1	100	9.0	0.70	0.45	2130	52.75	525.98	8.4	13.7
256.0	73.5	7.1	100	9.0	0.67	0.47	2212	49.71	514.08	8.4	13.7
257.0	90.0	7.3	100	9.0	0.63	0.48	2278	40.58	502.53	8.4	13.7
258.0	40.4	6.7	99	9.0	0.79	0.50	2426	90.29	492.71	8.4	13.7
259.0	132.6	8.3	100	9.0	0.56	0.51	2471	27.53	481.89	8.4	13.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
260.0	116.1	8.0	101	9.0	0.59	0.52	2523	31.45	471.66	8.4	13.7
261.0	109.1	7.5	91	9.0	0.57	0.53	2573	33.48	461.92	8.4	13.7
262.0	150.0	6.9	101	9.0	0.52	0.54	2614	24.35	452.41	8.4	13.7
263.0	133.3	8.2	100	9.0	0.56	0.54	2659	27.39	443.36	8.4	13.7
264.0	128.6	6.7	101	9.0	0.55	0.55	2706	28.40	434.72	8.4	13.8
265.0	85.7	6.7	102	9.0	0.64	0.56	2777	42.61	426.72	8.4	13.8
266.0	150.0	7.9	104	9.0	0.54	0.57	2819	24.35	418.67	8.4	13.8
267.0	163.6	8.9	105	9.0	0.54	0.58	2857	22.32	410.90	8.4	13.8
268.0	171.4	8.7	105	9.0	0.52	0.58	2894	21.30	403.41	8.4	13.8
269.0	180.0	8.9	105	9.0	0.52	0.59	2929	20.29	396.18	8.4	13.8
270.0	72.0	8.7	104	9.0	0.71	0.60	3016	50.72	389.78	8.4	13.8
271.0	32.4	6.5	98	9.0	0.82	0.63	3197	112.60	384.74	8.4	13.8
272.0	98.2	11.0	103	9.0	0.67	0.64	3260	37.20	378.53	8.4	13.8
273.0	81.8	10.8	103	9.0	0.71	0.65	3335	44.64	372.68	8.4	13.8
274.0	112.5	9.5	102	9.0	0.62	0.66	3390	32.46	366.81	8.4	13.8
275.0	30.0	8.6	101	9.0	0.89	0.70	3593	121.73	362.66	8.4	13.8
276.0	75.0	8.8	102	9.0	0.70	0.71	3674	48.69	357.42	8.4	13.8
277.0	37.1	8.2	101	9.0	0.84	0.74	3838	98.40	353.18	8.4	13.8
278.0	109.1	8.5	101	9.0	0.61	0.75	3894	33.48	348.02	8.4	13.8
279.0	138.5	10.2	104	9.0	0.59	0.75	3939	26.38	342.92	8.4	13.8
280.0	37.1	7.3	91	9.0	0.80	0.78	4086	98.40	339.09	8.4	13.8
281.0	14.3	10.1	104	9.0	1.09	0.85	4521	254.63	337.80	8.4	13.8
282.0	5.9	12.3	88	9.0	1.31	1.02	5426	622.87	342.11	8.4	13.8
283.0	125.0	13.0	99	9.0	0.63	1.03	5474	29.22	337.44	8.4	13.8
284.0	84.7	8.2	98	9.0	0.65	1.04	5544	43.11	333.12	8.4	13.8
285.0	85.7	10.7	99	9.0	0.69	1.05	5613	42.61	328.91	8.4	13.8
286.0	52.2	11.9	99	9.0	0.82	1.07	5728	70.00	325.21	8.4	13.8
287.0	40.9	11.7	99	9.0	0.87	1.09	5873	89.27	321.88	8.4	13.8
288.0	138.5	10.8	99	9.0	0.58	1.10	5916	26.38	317.78	8.4	13.8
289.0	125.0	18.0	99	9.0	0.68	1.11	5964	29.22	313.83	8.4	13.8
290.0	360.0	15.1	103	9.0	0.40	1.11	5981	10.14	309.72	8.4	13.9
291.0	240.0	9.7	103	9.0	0.46	1.12	6006	15.22	305.80	8.4	13.9
292.0	189.5	10.7	104	9.0	0.52	1.12	6039	19.27	302.03	8.4	13.9
293.0	211.8	11.4	103	9.0	0.50	1.13	6069	17.25	298.33	8.4	13.9
294.0	156.5	9.5	104	9.0	0.55	1.13	6109	23.33	294.80	8.4	13.9
295.0	70.6	6.8	102	9.0	0.68	1.15	6195	51.74	291.73	8.4	13.9
296.0	138.5	9.9	103	9.0	0.58	1.15	6240	26.38	288.41	8.4	13.9
297.0	150.0	8.9	104	9.0	0.55	1.16	6281	24.35	285.15	8.4	13.9
298.0	144.0	11.5	102	9.0	0.59	1.17	6324	25.36	281.98	8.4	13.9
299.0	124.1	10.5	104	9.0	0.61	1.18	6374	29.42	278.94	8.4	13.9
300.0	133.3	11.0	104	9.0	0.60	1.18	6420	27.39	275.94	8.4	13.9
301.0	102.9	11.2	71	9.0	0.58	1.19	6462	35.51	273.11	8.4	13.9
302.0	124.1	12.8	102	9.0	0.63	1.20	6511	29.42	270.28	8.4	13.9
303.0	138.5	13.5	104	9.0	0.62	1.21	6556	26.38	267.48	8.4	13.9
304.0	112.5	13.1	104	9.0	0.67	1.22	6612	32.46	264.81	8.4	13.9
305.0	133.3	13.5	105	9.0	0.63	1.23	6659	27.39	262.14	8.4	13.9
306.0	120.0	13.8	105	9.0	0.66	1.23	6712	30.43	259.56	8.4	13.9
307.0	124.1	14.2	104	9.0	0.65	1.24	6762	29.42	257.04	8.4	13.9
308.0	109.1	14.2	105	9.0	0.69	1.25	6819	33.48	254.61	8.4	13.9
309.0	112.5	13.3	104	9.0	0.67	1.26	6875	32.46	252.22	8.4	13.9

DEPTH	ROP	WOR	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
310.0	46.8	13.7	92	9.0	0.85	1.28	6993	78.11	250.36	8.4	13.9
311.0	78.3	13.7	102	9.0	0.75	1.29	7071	46.66	248.22	8.4	13.9
312.0	102.9	13.7	104	9.0	0.70	1.30	7132	35.51	246.00	8.4	13.9
313.0	35.6	13.7	101	9.0	0.94	1.33	7301	102.46	244.52	8.4	13.9
314.0	73.5	13.7	101	9.0	0.77	1.35	7384	49.71	242.54	8.4	13.9
315.0	116.1	13.7	104	9.0	0.66	1.35	7437	31.45	240.40	8.4	13.9
316.0	46.2	13.7	104	9.0	0.89	1.38	7573	79.13	238.79	8.4	13.9
317.0	8.9	13.7	102	9.0	1.27	1.49	8259	410.85	240.50	8.4	14.0
318.0	40.4	13.7	103	9.0	0.92	1.51	8412	90.29	239.02	8.4	14.0
319.0	26.9	13.7	101	9.0	1.01	1.55	8638	135.94	238.02	8.4	14.0
320.0	62.1	13.7	101	9.0	0.81	1.57	8736	58.84	236.30	8.4	14.0
321.0	35.3	13.7	101	9.0	0.94	1.59	8907	103.47	235.03	8.4	14.0
322.0	39.1	13.7	99	9.0	0.91	1.62	9060	93.33	233.70	8.4	14.0
323.0	61.0	13.7	101	9.0	0.81	1.64	9159	59.85	232.07	8.4	14.0
324.0	34.3	13.7	100	9.0	0.95	1.67	9334	106.52	230.91	8.4	14.0
325.0	33.6	13.7	100	9.0	0.95	1.70	9513	108.55	229.79	8.4	14.0
326.0	38.3	13.7	102	9.0	0.92	1.72	9672	95.36	228.57	8.4	14.0
327.0	48.0	13.7	101	9.0	0.87	1.74	9798	76.08	227.19	8.4	14.0
328.0	29.3	13.7	96	9.0	0.97	1.78	9995	124.78	226.28	8.4	14.0
329.0	58.1	13.7	100	9.0	0.82	1.79	10098	62.90	224.83	8.4	14.0
330.0	50.7	13.7	99	9.0	0.85	1.81	10215	72.03	223.49	8.4	14.0
331.0	72.0	14.9	100	9.0	0.78	1.83	10298	50.72	221.99	8.4	14.0
332.0	67.9	14.2	100	9.0	0.79	1.84	10387	53.77	220.54	8.4	14.0
333.0	27.1	12.4	98	9.0	0.98	1.88	10604	134.92	219.81	8.4	14.0
334.0	50.7	11.7	100	9.0	0.83	1.90	10723	72.03	218.55	8.4	14.0
335.0	52.2	11.8	101	9.0	0.82	1.92	10839	70.00	217.31	8.4	14.0
336.0	30.5	11.7	100	9.0	0.94	1.95	11036	119.70	216.49	8.4	14.0
337.0	21.7	9.8	96	9.0	0.98	2.00	11301	168.40	216.09	8.4	14.0
338.0	65.5	8.2	101	9.0	0.72	2.01	11394	55.79	214.78	8.4	14.0
339.0	49.3	5.8	101	9.0	0.73	2.03	11517	74.05	213.64	8.4	14.0
340.0	53.7	7.7	101	9.0	0.75	2.05	11630	67.97	212.46	8.4	14.0
341.0	360.0	10.6	100	9.0	0.37	2.05	11646	10.14	210.84	8.4	14.0
342.0	45.0	12.7	103	9.0	0.87	2.08	11784	81.16	209.81	8.4	14.0
343.0	56.2	12.5	103	9.0	0.82	2.09	11893	64.92	208.67	8.4	14.0
344.0	40.4	13.5	103	9.0	0.91	2.12	12047	90.29	207.75	8.4	14.1
345.0	37.5	10.9	101	9.0	0.88	2.15	12209	97.39	206.89	8.4	14.1
346.0	27.9	11.1	101	9.0	0.96	2.18	12426	130.86	206.31	8.4	14.1
347.0	55.4	11.3	101	9.0	0.80	2.20	12536	65.94	205.24	8.4	14.1
348.0	35.1	8.2	100	9.0	0.85	2.23	12707	103.98	204.47	8.4	14.1
349.0	23.4	9.7	102	9.0	0.97	2.27	12968	156.22	204.11	8.4	14.1
350.0	35.6	9.3	102	9.0	0.87	2.30	13139	102.46	203.35	8.4	14.1
351.0	80.0	10.3	103	9.0	0.71	2.31	13217	45.65	202.18	8.4	14.1
352.0	48.0	10.6	102	9.0	0.83	2.33	13345	76.08	201.25	8.4	14.1
353.0	42.9	8.9	101	9.0	0.82	2.35	13487	85.21	200.41	8.4	14.1
354.0	34.3	9.6	102	9.0	0.88	2.38	13665	106.52	199.73	8.4	14.1
355.0	50.7	9.7	102	9.0	0.80	2.40	13786	72.03	198.81	8.4	14.1
356.0	26.7	9.1	101	9.0	0.93	2.44	14014	136.95	198.36	8.4	14.1
357.0	33.0	8.7	96	9.0	0.86	2.47	14187	110.57	197.74	8.4	14.1
358.0	23.4	6.8	101	9.0	0.90	2.51	14447	156.22	197.45	8.4	14.1
359.0	32.4	5.5	100	9.0	0.80	2.55	14633	112.60	196.86	8.4	14.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
360.0	41.9	7.9	103	9.0	0.81	2.57	14780	87.24	196.10	8.4	14.1
361.0	31.9	8.2	102	9.0	0.87	2.60	14972	114.63	195.53	8.4	14.1
362.0	40.9	8.0	103	9.0	0.82	2.62	15123	89.27	194.81	8.4	14.1
363.0	43.9	7.5	102	9.0	0.79	2.65	15262	83.18	194.05	8.4	14.1
364.0	37.1	7.9	102	9.0	0.83	2.67	15427	98.40	193.40	8.4	14.1
365.0	70.6	8.8	103	9.0	0.72	2.69	15515	51.74	192.45	8.4	14.1
366.0	35.6	4.8	101	9.0	0.77	2.72	15685	102.46	191.85	8.4	14.1
367.0	20.5	8.7	97	9.0	0.97	2.77	15970	178.54	191.76	8.4	14.1
368.0	33.3	10.8	103	9.0	0.91	2.80	16155	109.56	191.22	8.4	14.1
369.0	45.0	9.7	103	9.0	0.83	2.82	16293	81.16	190.50	8.4	14.1
370.0	23.5	9.0	101	9.0	0.95	2.86	16551	155.21	190.27	8.4	14.1
371.0	78.3	10.4	104	9.0	0.72	2.87	16631	46.66	189.35	8.4	14.2
372.0	28.6	11.0	103	9.0	0.95	2.91	16847	127.82	188.95	8.4	14.2
373.0	116.1	10.4	103	9.0	0.63	2.92	16900	31.45	187.95	8.4	14.2
374.0	63.2	10.0	101	9.0	0.75	2.93	16995	57.82	187.12	8.4	14.2
375.0	23.8	11.0	102	9.0	0.99	2.97	17253	153.18	186.91	8.4	14.2
376.0	26.1	11.5	102	9.0	0.98	3.01	17488	139.99	186.62	8.4	14.2
377.0	83.1	10.2	103	9.0	0.70	3.02	17563	43.96	185.73	8.4	14.2
378.0	64.3	10.0	103	9.0	0.75	3.04	17659	56.81	184.94	8.4	14.2
379.0	31.6	10.9	104	9.0	0.93	3.07	17856	115.65	184.51	8.4	14.2
380.0	27.3	8.9	101	9.0	0.92	3.11	18079	133.91	184.20	8.4	14.2
381.0	51.4	10.9	103	9.0	0.82	3.13	18200	71.01	183.52	8.4	14.2
382.0	28.3	9.6	102	9.0	0.93	3.16	18416	128.83	183.19	8.4	14.2
383.0	39.6	10.7	102	9.0	0.87	3.19	18571	92.31	182.64	8.4	14.2
384.0	105.9	9.8	103	9.0	0.64	3.20	18629	34.49	181.76	8.4	14.2
385.0	21.2	11.2	103	9.0	1.02	3.25	18922	172.46	181.71	8.4	14.2
386.0	75.0	7.7	103	9.0	0.68	3.26	19004	48.69	180.92	8.4	14.2
387.0	28.6	10.4	90	9.0	0.91	3.29	19192	127.82	180.61	8.4	14.2
388.0	59.0	10.0	102	9.0	0.77	3.31	19295	61.88	179.92	8.4	14.2
389.0	163.6	9.7	101	9.0	0.54	3.32	19332	22.32	179.01	8.4	14.2
390.0	92.3	11.2	102	9.0	0.69	3.33	19399	39.56	178.21	8.4	14.2
391.0	69.2	10.9	103	9.0	0.75	3.34	19488	52.75	177.49	8.4	14.2
392.0	56.2	11.0	100	9.0	0.79	3.36	19595	64.92	176.85	8.4	14.2
393.0	109.1	10.9	102	9.0	0.64	3.37	19651	33.48	176.04	8.4	14.2
394.0	92.3	10.7	103	9.0	0.68	3.38	19719	39.56	175.28	8.4	14.2
395.0	35.3	10.9	103	9.0	0.90	3.41	19894	103.47	174.88	8.4	14.2
396.0	25.0	14.0	99	9.0	1.02	3.45	20131	146.08	174.72	8.4	14.2
397.0	29.0	14.0	100	9.0	0.99	3.48	20338	125.93	174.45	8.4	14.2
398.0	20.9	13.3	100	9.0	1.06	3.53	20624	174.48	174.45	8.4	14.2
399.0	30.5	13.2	101	9.0	0.97	3.56	20823	119.70	174.15	8.4	14.3
400.0	35.0	13.5	101	9.0	0.94	3.59	20997	104.49	173.77	8.4	14.3
401.0	22.2	13.5	101	9.0	1.05	3.64	21269	164.34	173.72	8.4	14.3
402.0	28.1	11.2	100	9.0	0.95	3.67	21482	129.85	173.48	8.4	14.3
403.0	30.0	11.7	100	9.0	0.95	3.71	21682	121.73	173.20	8.4	14.3
404.0	24.8	10.6	99	9.0	0.97	3.75	21923	147.09	173.07	8.4	14.3
405.0	11.4	12.0	100	9.0	1.18	3.83	22449	320.56	173.85	8.4	14.3
406.0	34.0	10.8	91	9.0	0.88	3.86	22610	107.53	173.50	8.4	14.3
407.0	37.9	9.6	81	9.0	0.81	3.89	22739	96.37	173.09	8.4	14.3
408.0	37.2	16.6	104	9.0	0.98	3.92	22907	98.06	172.70	8.4	14.3
409.0	105.9	17.1	104	9.0	0.72	3.93	22966	34.49	171.99	8.4	14.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
410.0	45.6	17.9	102	9.0	0.94	3.95	23100	80.14	171.51	8.4	14.3
411.0	60.0	17.2	101	9.0	0.86	3.96	23202	60.87	170.95	8.4	14.3
412.0	76.6	16.1	104	9.0	0.79	3.98	23283	47.68	170.32	8.4	14.3
413.0	112.5	15.4	103	9.0	0.69	3.99	23338	32.46	169.62	8.4	14.3
414.0	20.8	17.2	102	9.0	1.13	4.03	23633	175.50	169.65	8.4	14.3
415.0	52.2	17.8	103	9.0	0.91	4.05	23752	70.00	169.15	8.4	14.3
416.0	112.5	17.5	102	9.0	0.71	4.06	23806	32.46	168.46	8.4	14.3
417.0	144.0	19.9	102	9.0	0.66	4.07	23849	25.36	167.75	8.4	14.3
418.0	112.5	21.4	97	9.0	0.73	4.08	23900	32.46	167.08	8.4	14.3
419.0	48.0	23.0	102	9.0	0.98	4.10	24027	76.08	166.63	8.4	14.3
420.0	200.0	21.8	101	9.0	0.59	4.10	24058	18.26	165.91	8.4	14.3
421.0	45.0	22.3	102	9.0	0.99	4.13	24193	81.16	165.49	8.4	14.3
422.0	109.1	21.0	100	9.0	0.74	4.14	24249	33.48	164.85	8.4	14.3
423.0	75.0	21.8	100	9.0	0.85	4.15	24329	48.69	164.29	8.4	14.3
424.0	76.6	20.6	102	9.0	0.83	4.16	24409	47.68	163.73	8.4	14.3
425.0	51.4	20.3	97	9.0	0.92	4.18	24522	71.01	163.29	8.4	14.3
426.0	25.5	21.9	102	9.0	1.14	4.22	24762	143.04	163.19	8.4	14.3
427.0	120.0	21.3	102	9.0	0.72	4.23	24813	30.43	162.56	8.4	14.4
428.0	81.8	20.2	102	9.0	0.81	4.24	24888	44.64	162.00	8.4	14.4
429.0	64.3	19.7	101	9.0	0.87	4.26	24983	56.81	161.51	8.4	14.4
430.0	85.7	21.9	102	9.0	0.82	4.27	25054	42.61	160.95	8.4	14.4
431.0	83.7	21.7	98	9.0	0.81	4.28	25124	43.62	160.41	8.4	14.4
432.0	59.0	20.8	106	9.0	0.91	4.30	25232	61.88	159.95	8.4	14.4
433.0	38.7	21.5	106	9.0	1.03	4.32	25396	94.34	159.65	8.4	14.4
434.0	33.6	16.6	103	9.0	1.00	4.35	25580	108.55	159.42	8.4	14.4
435.0	58.1	21.3	107	9.0	0.92	4.37	25690	62.90	158.98	8.4	14.4
436.0	36.0	15.2	92	9.0	0.94	4.40	25843	101.44	158.71	8.4	14.4
437.0	44.4	24.8	107	9.0	1.03	4.42	25987	82.17	158.37	8.4	14.4
438.0	87.8	26.0	107	9.0	0.86	4.43	26061	41.59	157.84	8.4	14.4
439.0	47.4	21.1	101	9.0	0.96	4.45	26189	77.10	157.48	8.4	14.4
440.0	73.5	22.5	99	9.0	0.85	4.47	26269	49.71	157.00	8.4	14.4
441.0	81.8	22.3	99	9.0	0.82	4.48	26342	44.64	156.50	8.4	14.4
442.0	64.3	23.0	97	9.0	0.89	4.49	26433	56.81	156.06	8.4	14.4
443.0	53.7	22.0	98	9.0	0.93	4.51	26542	67.97	155.67	8.4	14.4
444.0	72.0	19.0	97	9.0	0.82	4.53	26622	50.72	155.21	8.4	14.4
445.0	27.3	15.5	95	9.0	1.02	4.56	26831	133.91	155.12	8.4	14.4
446.0	20.0	12.5	94	9.0	1.04	4.61	27113	182.60	155.24	8.4	14.4
447.0	41.4	13.1	95	9.0	0.88	4.64	27252	88.26	154.95	8.4	14.4
448.0	72.0	17.1	96	9.0	0.80	4.65	27332	50.72	154.50	8.4	14.4
449.0	50.0	17.3	97	9.0	0.89	4.67	27448	73.04	154.15	8.4	14.4
450.0	46.8	17.3	97	9.0	0.91	4.69	27572	78.11	153.82	8.4	14.4
451.0	61.0	17.6	97	9.0	0.85	4.71	27668	59.85	153.42	8.4	14.4
452.0	40.4	18.1	102	9.0	0.97	4.73	27820	90.29	153.15	8.4	14.4
453.0	73.5	17.9	103	9.0	0.82	4.75	27904	49.71	152.72	8.4	14.4
454.0	31.6	14.4	97	9.0	0.97	4.78	28089	115.65	152.56	8.4	14.4
455.0	22.0	8.8	99	9.0	0.96	4.82	28360	166.37	152.62	8.4	14.4
456.0	16.3	10.8	99	9.0	1.07	4.89	28725	224.19	152.92	8.4	14.5
457.0	3.1	6.8	97	9.0	1.31	5.21	30583	1167	157	8.4	14.5
458.0	43.4	6.9	93	9.0	0.76	5.23	30712	84.20	156.82	8.4	14.5
459.0	14.2	6.2	92	9.0	0.97	5.30	31099	256.65	157.23	8.4	14.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
460.0	35.0	12.1	94	9.0	0.90	5.33	31261	104.49	157.02	8.4	14.5
461.0	45.6	12.0	94	9.0	0.84	5.35	31385	80.14	156.70	8.4	14.5
462.0	56.2	9.7	95	9.0	0.76	5.37	31486	64.92	156.33	8.4	14.5
463.0	30.3	11.7	94	9.0	0.93	5.40	31672	120.72	156.19	8.4	14.5
464.0	21.8	6.6	95	9.0	0.90	5.45	31934	167.38	156.23	8.4	14.5
465.0	37.9	12.8	97	9.0	0.90	5.47	32087	96.37	155.99	8.4	14.5
466.0	46.2	12.3	97	9.0	0.85	5.49	32213	79.13	155.68	8.4	14.5
467.0	36.4	12.5	96	9.0	0.91	5.52	32372	100.43	155.46	8.4	14.5
468.0	29.0	12.0	95	9.0	0.95	5.56	32569	125.79	155.35	8.4	14.5
469.0	47.4	9.3	95	9.0	0.79	5.58	32690	77.10	155.04	8.4	14.5
470.0	40.9	8.9	95	9.0	0.82	5.60	32829	89.27	154.78	8.4	14.5
471.0	29.5	11.9	95	9.0	0.94	5.64	33022	123.76	154.66	8.4	14.5
472.0	26.1	9.9	95	9.0	0.93	5.67	33240	139.99	154.60	8.4	14.5
473.0	50.7	10.4	95	9.0	0.79	5.69	33353	72.03	154.28	8.4	14.5
474.0	24.3	8.1	91	9.0	0.90	5.73	33576	150.14	154.26	8.4	14.5
475.0	53.7	16.2	98	9.0	0.87	5.75	33686	67.97	153.93	8.4	14.5
476.0	38.3	15.9	98	9.0	0.95	5.78	33839	95.36	153.70	8.4	14.5
477.0	34.6	14.4	97	9.0	0.95	5.81	34007	105.50	153.52	8.4	14.5
478.0	35.6	14.1	96	9.0	0.93	5.84	34169	102.46	153.32	8.4	14.5
479.0	41.4	15.5	97	9.0	0.92	5.86	34310	88.26	153.08	8.4	14.5
480.0	44.4	17.1	97	9.0	0.92	5.88	34441	82.17	152.81	8.4	14.5
481.0	35.6	16.5	97	9.0	0.97	5.91	34605	102.46	152.62	8.4	14.5
482.0	52.2	16.9	97	9.0	0.88	5.93	34716	70.00	152.31	8.4	14.5
483.0	40.0	17.1	97	9.0	0.95	5.96	34862	91.30	152.08	8.4	14.5
484.0	32.7	12.9	92	9.0	0.93	5.99	35031	111.59	151.93	8.4	14.5
485.0	31.0	12.4	97	9.0	0.94	6.02	35220	117.68	151.80	8.4	14.6
486.0	42.9	9.6	98	9.0	0.83	6.04	35357	85.21	151.55	8.4	14.6
487.0	30.8	9.2	98	9.0	0.89	6.07	35547	118.69	151.43	8.4	14.6
488.0	35.6	9.2	96	9.0	0.86	6.10	35709	102.46	151.25	8.4	14.6
489.0	52.2	8.9	97	9.0	0.77	6.12	35820	70.00	150.95	8.4	14.6
490.0	42.9	9.4	97	9.0	0.82	6.14	35956	85.21	150.71	8.4	14.6
491.0	47.4	11.0	97	9.0	0.82	6.17	36078	77.10	150.45	8.4	14.6
492.0	38.3	12.9	97	9.0	0.90	6.19	36231	95.36	150.25	8.4	14.6
493.0	36.4	13.5	88	9.0	0.90	6.22	36376	100.43	150.07	8.4	14.6
494.0	42.9	12.4	98	9.0	0.87	6.24	36513	85.21	149.83	8.4	14.6
495.0	45.6	13.2	97	9.0	0.87	6.26	36641	80.14	149.58	8.4	14.6
496.0	45.6	14.9	98	9.0	0.89	6.29	36770	80.14	149.34	8.4	14.6
497.0	76.6	14.8	97	9.0	0.76	6.30	36846	47.68	148.97	8.4	14.6
498.0	51.4	15.2	98	9.0	0.86	6.32	36960	71.01	148.70	8.4	14.6
499.0	40.0	14.4	97	9.0	0.91	6.34	37106	91.30	148.50	8.4	14.6
500.0	22.2	11.8	97	9.0	1.01	6.39	37368	164.34	148.55	8.4	14.6
501.0	35.0	10.4	97	9.0	0.88	6.42	37534	104.49	148.40	8.4	14.6
502.0	36.7	14.1	97	9.0	0.93	6.44	37693	99.42	148.23	8.4	14.6
503.0	29.0	15.2	85	9.0	0.97	6.48	37869	125.79	148.15	8.4	14.6
504.0	40.9	15.2	98	9.0	0.92	6.50	38012	89.27	147.94	8.4	14.6
505.0	33.6	16.4	97	9.0	0.98	6.53	38186	108.55	147.81	8.4	14.6
506.0	75.0	15.6	98	9.0	0.78	6.55	38264	48.69	147.46	8.4	14.6
507.0	52.2	16.8	98	9.0	0.88	6.57	38377	70.00	147.20	8.4	14.6
508.0	32.4	16.6	98	9.0	1.00	6.60	38558	112.60	147.08	8.4	14.6
509.0	47.4	16.0	97	9.0	0.89	6.62	38681	77.10	146.84	8.4	14.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
510.0	49.3	16.6	98	9.0	0.89	6.64	38800	74.05	146.59	8.4	14.6
511.0	57.1	16.9	98	9.0	0.86	6.66	38902	63.91	146.31	8.4	14.6
512.0	120.0	19.3	98	9.0	0.69	6.66	38951	30.43	145.92	8.4	14.6
513.0	61.0	17.6	96	9.0	0.84	6.68	39045	59.85	145.63	8.4	14.6
514.0	92.3	18.1	95	9.0	0.74	6.69	39107	39.56	145.28	8.4	14.6
515.0	27.9	18.2	96	9.0	1.05	6.73	39314	130.86	145.23	8.4	14.7
516.0	94.7	16.4	99	9.0	0.73	6.74	39377	38.55	144.87	8.4	14.7
517.0	78.3	18.1	100	9.0	0.80	6.75	39453	46.66	144.55	8.4	14.7
518.0	41.9	18.0	98	9.0	0.95	6.77	39594	87.24	144.36	8.4	14.7
519.0	48.0	17.3	98	9.0	0.91	6.80	39717	76.08	144.13	8.4	14.7
520.0	97.3	18.1	101	9.0	0.74	6.81	39779	37.53	143.78	8.4	14.7
521.0	38.3	22.0	100	9.0	1.02	6.83	39935	95.36	143.62	8.4	14.7
522.0	55.4	18.3	97	9.0	0.88	6.85	40040	65.94	143.37	8.4	14.7
523.0	41.9	19.5	99	9.0	0.97	6.87	40181	87.24	143.18	8.4	14.7
524.0	40.9	19.5	99	9.0	0.98	6.90	40327	89.27	143.01	8.4	14.7
525.0	78.3	19.0	99	9.0	0.80	6.91	40403	46.66	142.70	8.4	14.7
526.0	56.2	18.2	99	9.0	0.88	6.93	40508	64.92	142.45	8.4	14.7
527.0	48.6	19.5	99	9.0	0.93	6.95	40631	75.07	142.23	8.4	14.7
528.0	56.2	19.1	99	9.0	0.89	6.97	40737	64.92	141.98	8.4	14.7
529.0	51.4	19.1	99	9.0	0.91	6.99	40852	71.01	141.76	8.4	14.7
530.0	62.1	17.7	100	9.0	0.85	7.00	40948	58.84	141.49	8.4	14.7
531.0	81.8	19.3	100	9.0	0.80	7.01	41021	44.64	141.18	8.4	14.7
532.0	54.5	18.1	83	9.0	0.84	7.03	41113	66.95	140.95	8.4	14.7
533.0	56.2	19.8	99	9.0	0.90	7.05	41219	64.92	140.71	8.4	14.7
534.0	43.9	20.4	99	9.0	0.97	7.07	41355	83.18	140.53	8.4	14.7
535.0	45.0	20.6	99	9.0	0.96	7.10	41487	81.16	140.34	8.4	14.7
536.0	80.0	20.6	99	9.0	0.81	7.11	41561	45.65	140.05	8.4	14.7
537.0	78.3	20.2	100	9.0	0.82	7.12	41638	46.66	139.76	8.4	14.7
538.0	57.1	19.9	99	9.0	0.90	7.14	41742	63.91	139.52	8.4	14.7
539.0	105.9	19.5	98	9.0	0.73	7.15	41798	34.49	139.19	8.4	14.7
540.0	94.7	20.0	99	9.0	0.77	7.16	41861	38.55	138.88	8.4	14.7
541.0	48.0	20.3	84	9.0	0.90	7.18	41965	76.08	138.69	8.4	14.7
542.0	26.5	21.1	97	9.0	1.10	7.22	42186	137.96	138.69	8.4	14.7
543.0	21.3	21.2	97	9.0	1.16	7.26	42459	171.44	138.79	8.4	14.7
544.0	31.9	21.0	97	9.0	1.05	7.30	42642	114.63	138.72	8.4	14.7
545.0	31.0	20.7	97	9.0	1.06	7.33	42831	117.68	138.65	8.4	14.8
546.0	14.5	21.3	96	9.0	1.26	7.40	43228	252.60	139.00	8.4	14.8
547.0	14.8	20.5	96	9.0	1.24	7.46	43616	246.51	139.32	8.4	14.8
548.0	15.5	19.4	95	9.0	1.21	7.53	43984	235.35	139.61	8.4	14.8
549.0	13.8	19.1	96	9.0	1.24	7.60	44398	263.76	139.98	8.4	14.8
550.0	25.9	19.4	97	9.0	1.09	7.64	44623	141.01	139.99	8.4	14.8
551.0	22.8	17.7	93	9.0	1.09	7.68	44867	160.28	140.05	8.4	14.8
552.0	30.3	17.9	98	9.0	1.03	7.72	45062	120.72	139.99	8.4	14.8
553.0	49.3	18.9	98	9.0	0.92	7.74	45181	74.05	139.79	8.4	14.8
554.0	57.1	19.8	98	9.0	0.89	7.75	45284	63.91	139.57	8.4	14.8
555.0	35.6	19.3	98	9.0	1.01	7.78	45449	102.46	139.46	8.4	14.8
556.0	42.9	21.1	98	9.0	0.98	7.81	45587	85.21	139.30	8.4	14.8
557.0	24.5	20.2	98	9.0	1.11	7.85	45827	149.12	139.33	8.4	14.8
558.0	30.5	20.2	98	9.0	1.06	7.88	46020	119.70	139.27	8.4	14.8
559.0	32.1	19.4	98	9.0	1.03	7.91	46202	113.62	139.20	8.4	14.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
560.0	25.9	18.4	83	9.0	1.03	7.95	46395	141.01	139.20	8.4	14.8
561.0	30.3	22.1	98	9.0	1.08	7.98	46588	120.72	139.15	8.4	14.8
562.0	25.9	23.4	97	9.0	1.14	8.02	46813	141.01	139.15	8.4	14.8
563.0	27.7	23.3	96	9.0	1.11	8.06	47021	131.88	139.13	8.4	14.8
564.0	33.0	22.4	95	9.0	1.06	8.09	47194	110.57	139.05	8.4	14.8
565.0	51.4	23.3	96	9.0	0.95	8.11	47306	71.01	138.86	8.4	14.8
566.0	37.9	22.1	95	9.0	1.01	8.13	47456	96.37	138.73	8.4	14.8
567.0	31.9	22.8	95	9.0	1.07	8.16	47635	114.63	138.67	8.4	14.8
568.0	30.5	22.7	95	9.0	1.08	8.20	47822	119.70	138.61	8.4	14.8
569.0	49.3	21.8	95	9.0	0.94	8.22	47937	74.05	138.43	8.4	14.8
570.0	51.4	16.8	97	9.0	0.88	8.24	48050	71.01	138.24	8.4	14.8
571.0	43.4	19.7	97	9.0	0.96	8.26	48184	84.20	138.09	8.4	14.8
572.0	36.7	18.8	96	9.0	0.99	8.29	48341	99.42	137.98	8.4	14.8
573.0	34.3	19.3	96	9.0	1.01	8.32	48509	106.52	137.89	8.4	14.8
574.0	22.5	19.9	96	9.0	1.13	8.36	48764	162.31	137.96	8.4	14.8
575.0	44.4	19.3	95	9.0	0.94	8.38	48893	82.17	137.80	8.4	14.8
576.0	37.9	19.8	95	9.0	0.99	8.41	49044	96.37	137.69	8.4	14.9
577.0	44.4	18.9	96	9.0	0.94	8.43	49173	82.17	137.53	8.4	14.9
578.0	30.8	20.1	96	9.0	1.05	8.46	49360	118.69	137.48	8.4	14.9
579.0	32.7	21.0	96	9.0	1.04	8.50	49536	111.59	137.41	8.4	14.9
580.0	42.0	20.0	97	9.1	0.96	8.52	49675	86.95	137.27	8.4	14.9
581.0	43.2	22.3	97	9.1	0.98	8.54	49809	84.54	137.13	8.4	14.9
582.0	42.2	19.8	97	9.1	0.96	8.57	49947	86.54	136.99	8.4	14.9
583.0	41.2	17.7	97	9.1	0.94	8.59	50089	88.64	136.86	8.4	14.9
584.0	38.2	18.5	97	9.1	0.97	8.62	50241	95.60	136.75	8.4	14.9
585.0	28.4	17.9	97	9.1	1.03	8.65	50446	128.59	136.72	8.4	14.9
586.0	41.2	16.5	97	9.1	0.92	8.68	50587	88.64	136.59	8.4	14.9
587.0	37.5	20.1	97	9.1	0.99	8.70	50742	97.39	136.49	8.4	14.9
588.0	40.0	20.0	97	9.1	0.97	8.73	50888	91.30	136.37	8.4	14.9
589.0	32.2	18.9	97	9.1	1.01	8.76	51069	113.42	136.30	8.4	14.9
590.0	43.4	19.3	99	9.0	0.96	8.78	51205	84.05	136.16	8.4	14.9
591.0	45.6	18.6	99	9.0	0.94	8.80	51335	80.14	136.02	8.4	14.9
592.0	55.4	18.5	99	9.0	0.89	8.82	51442	65.94	135.83	8.4	14.9
593.0	51.4	19.2	98	9.0	0.91	8.84	51556	71.01	135.66	8.4	14.9
594.0	43.9	19.5	98	9.0	0.96	8.86	51690	83.18	135.52	8.4	14.9
595.0	34.6	19.6	98	9.0	1.02	8.89	51861	105.50	135.44	8.4	14.9
596.0	55.4	19.6	98	9.0	0.90	8.91	51967	65.94	135.26	8.4	14.9
597.0	49.3	19.4	99	9.0	0.93	8.93	52087	74.05	135.10	8.4	14.9
598.0	52.9	20.2	98	9.0	0.92	8.95	52199	68.98	134.92	8.4	14.9
599.0	30.0	17.0	77	9.0	0.96	8.98	52352	121.73	134.89	8.4	14.9
600.0	51.4	13.6	98	9.0	0.85	9.00	52467	71.01	134.72	8.4	14.9
601.0	47.4	12.0	98	9.0	0.84	9.02	52591	77.10	134.57	8.4	14.9
602.0	54.5	13.6	98	9.0	0.83	9.04	52699	66.95	134.40	8.4	14.9
603.0	52.9	13.2	98	9.0	0.83	9.06	52811	68.98	134.23	8.4	14.9
604.0	48.6	12.8	98	9.0	0.85	9.08	52932	75.07	134.08	8.4	14.9
605.0	37.9	12.8	97	9.0	0.90	9.11	53086	96.37	133.98	8.4	14.9
606.0	53.7	13.1	97	9.0	0.82	9.13	53194	67.97	133.81	8.4	14.9
607.0	42.4	12.5	96	9.0	0.87	9.15	53330	86.23	133.69	8.4	14.9
608.0	33.3	12.5	96	9.0	0.92	9.18	53502	109.56	133.63	8.4	15.0
609.0	33.6	14.4	97	9.0	0.95	9.21	53674	108.55	133.56	8.4	15.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
610.0	52.2	17.7	108	9.0	0.92	9.23	53799	70.00	133.40	8.4	15.0
611.0	17.0	20.0	105	9.0	1.22	9.29	54169	215.06	133.61	8.4	15.0
612.0	36.0	20.0	110	9.0	1.04	9.32	54352	101.44	133.53	8.4	15.0
613.0	52.9	20.0	110	9.0	0.94	9.33	54477	66.98	133.36	8.4	15.0
614.0	30.8	20.0	109	9.0	1.08	9.37	54690	118.69	133.33	8.4	15.0
615.0	23.2	20.0	103	9.0	1.14	9.41	54957	157.24	133.39	8.4	15.0
616.0	54.5	20.0	103	9.0	0.92	9.43	55070	66.95	133.22	8.4	15.0
617.0	47.4	20.0	103	9.0	0.95	9.45	55200	77.10	133.08	8.4	15.0
618.0	24.8	19.6	93	9.0	1.09	9.49	55425	147.09	133.12	8.4	15.0
619.0	40.4	20.9	98	9.0	0.99	9.51	55571	90.29	133.01	8.4	15.0
620.0	50.7	19.4	98	9.0	0.92	9.53	55688	72.03	132.86	8.4	15.0
621.0	49.3	20.8	99	9.0	0.94	9.55	55807	74.05	132.71	8.4	15.0
622.0	47.4	22.1	99	9.0	0.97	9.58	55932	77.10	132.58	8.4	15.0
623.0	45.6	20.6	99	9.0	0.96	9.60	56062	80.14	132.45	8.4	15.0
624.0	29.3	20.1	99	9.0	1.07	9.63	56264	124.78	132.43	8.4	15.0
625.0	29.8	21.0	98	9.0	1.07	9.67	56463	122.75	132.41	8.4	15.0
626.0	36.7	21.5	99	9.0	1.03	9.69	56624	99.42	132.32	8.4	15.0
627.0	47.4	20.7	99	9.0	0.95	9.71	56749	77.10	132.19	8.4	15.0
628.0	36.7	10.0	87	9.0	0.84	9.74	56891	99.42	132.11	8.4	15.0
629.0	40.4	19.4	102	9.0	0.99	9.77	57043	90.29	132.01	8.4	15.0
630.0	35.3	19.5	102	9.0	1.02	9.79	57217	103.47	131.94	8.4	15.0
631.0	41.4	19.6	102	9.0	0.98	9.82	57364	88.26	131.84	8.4	15.0
632.0	48.6	20.0	102	9.0	0.94	9.84	57490	75.07	131.70	8.4	15.0
633.0	40.9	20.0	102	9.0	0.99	9.86	57640	89.27	131.60	8.4	15.0
634.0	31.6	20.4	101	9.0	1.06	9.89	57832	115.65	131.56	8.4	15.0
635.0	43.9	21.6	102	9.0	0.99	9.92	57971	83.18	131.44	8.4	15.0
636.0	39.6	20.9	101	9.0	1.01	9.94	58125	92.31	131.35	8.4	15.0
637.0	32.1	19.4	95	9.0	1.03	9.97	58302	113.62	131.31	8.4	15.0
638.0	28.8	23.2	100	9.0	1.12	10.01	58512	126.81	131.30	8.4	15.0
639.0	15.9	16.7	97	9.0	1.17	10.07	58878	230.28	131.53	8.4	15.0
640.0	18.4	21.4	98	9.0	1.20	10.13	59197	198.83	131.69	8.4	15.1
641.0	16.9	19.2	96	9.0	1.19	10.19	59539	216.08	131.89	8.4	15.1
642.0	18.1	21.1	97	9.0	1.20	10.24	59860	201.87	132.05	8.4	15.1
643.0	19.6	19.4	96	9.0	1.16	10.29	60153	186.66	132.18	8.4	15.1
644.0	21.4	21.2	96	9.0	1.16	10.34	60422	170.43	132.27	8.4	15.1
645.0	14.5	19.5	96	9.0	1.23	10.41	60819	252.60	132.55	8.4	15.1
646.0	20.9	20.9	96	9.0	1.16	10.46	61095	174.48	132.65	8.4	15.1
647.0	6.2	15.3	46	9.0	1.20	10.62	61541	592.44	133.72	8.4	15.1
648.0	23.5	23.3	98	9.0	1.16	10.66	61791	155.21	133.76	8.4	15.1
649.0	24.8	23.2	97	9.0	1.15	10.70	62025	147.09	133.80	8.4	15.1
650.0	24.7	23.7	97	9.0	1.15	10.74	62261	148.11	133.83	8.4	15.1
651.0	30.8	24.0	97	9.0	1.10	10.77	62450	118.69	133.79	8.4	15.1
652.0	17.5	23.8	96	9.0	1.25	10.83	62781	208.98	133.97	8.4	15.1
653.0	20.2	24.7	97	9.0	1.22	10.88	63069	180.57	134.07	8.4	15.1
654.0	29.0	24.6	97	9.0	1.12	10.91	63270	125.79	134.05	8.4	15.1
655.0	22.0	24.5	97	9.0	1.19	10.96	63535	166.37	134.13	8.4	15.1
656.0	20.6	23.3	96	9.0	1.19	11.01	63814	177.53	134.23	8.4	15.1
657.0	22.2	20.0	87	9.0	1.11	11.05	64050	164.34	134.29	8.4	15.1
658.0	25.5	19.8	97	9.0	1.10	11.09	64278	143.04	134.31	8.4	15.1
659.0	22.1	19.1	96	9.0	1.12	11.14	64540	165.35	134.38	8.4	15.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
660.0	31.3	18.1	97	9.0	1.02	11.17	64725	116.66	134.34	8.4	15.1
661.0	28.6	19.4	97	9.0	1.06	11.21	64929	127.82	134.33	8.4	15.1
662.0	28.3	18.6	97	9.0	1.05	11.24	65134	128.83	134.32	8.4	15.1
663.0	18.6	19.3	96	9.0	1.17	11.29	65445	196.80	134.46	8.4	15.1
664.0	22.8	17.9	96	9.0	1.10	11.34	65697	160.28	134.51	8.4	15.1
665.0	32.1	18.9	96	9.0	1.02	11.37	65876	113.62	134.47	8.4	15.1
666.0	34.3	15.9	88	9.0	0.95	11.40	66031	106.52	134.41	8.4	15.1
667.0	30.8	11.6	98	9.0	0.93	11.43	66222	118.69	134.37	8.4	15.1
668.0	18.6	17.3	97	9.0	1.14	11.48	66536	196.80	134.51	8.4	15.1
669.0	18.3	19.3	96	9.0	1.17	11.54	66853	199.85	134.65	8.4	15.1
670.0	15.4	19.0	95	9.0	1.21	11.60	67223	237.38	134.88	8.4	15.1
671.0	17.9	17.8	95	9.0	1.15	11.66	67543	203.90	135.03	8.4	15.1
672.0	19.5	17.7	95	9.0	1.13	11.71	67836	187.67	135.15	8.4	15.1
673.0	18.7	17.6	96	9.0	1.14	11.77	68145	195.79	135.28	8.4	15.2
674.0	29.8	18.5	97	9.0	1.04	11.80	68340	122.75	135.25	8.4	15.2
675.0	24.7	17.7	96	9.0	1.07	11.84	68573	148.11	135.28	8.4	15.2
676.0	33.3	22.2	88	9.0	1.03	11.87	68733	109.56	135.22	8.4	15.2
677.0	19.1	24.7	88	9.0	1.21	11.92	69010	190.72	135.34	8.4	15.2
678.0	28.6	25.3	96	9.0	1.13	11.96	69211	127.82	135.33	8.4	15.2
679.0	25.7	24.7	97	9.0	1.15	12.00	69438	142.02	135.34	8.4	15.2
680.0	23.2	24.6	97	9.0	1.18	12.04	69687	157.24	135.39	8.4	15.2
681.0	27.7	24.4	96	9.0	1.13	12.07	69896	131.88	135.38	8.4	15.2
682.0	22.2	25.0	96	9.0	1.19	12.12	70155	164.34	135.44	8.4	15.2
683.0	19.1	24.6	95	9.0	1.23	12.17	70454	190.72	135.56	8.4	15.2
684.0	19.7	24.0	95	9.0	1.21	12.22	70744	185.64	135.67	8.4	15.2
685.0	14.5	22.6	87	9.0	1.25	12.29	71104	251.58	135.92	8.4	15.2
686.0	26.5	20.1	97	9.0	1.09	12.33	71324	137.96	135.92	8.4	15.2
687.0	31.3	21.1	96	9.0	1.06	12.36	71508	116.66	135.88	8.4	15.2
688.0	33.6	21.1	96	9.0	1.04	12.39	71679	108.55	135.82	8.4	15.2
689.0	33.3	21.0	97	9.0	1.04	12.42	71853	109.56	135.77	8.4	15.2
690.0	34.0	20.9	99	9.0	1.04	12.45	72027	107.53	135.71	8.4	15.2
691.0	37.5	20.8	99	9.0	1.01	12.48	72185	97.39	135.63	8.4	15.2
692.0	34.6	20.7	98	9.0	1.03	12.51	72355	105.50	135.56	8.4	15.2
693.0	23.8	21.7	98	9.0	1.14	12.55	72603	153.18	135.60	8.4	15.2
694.0	22.9	21.1	98	9.0	1.14	12.59	72859	159.27	135.65	8.4	15.2
695.0	33.5	21.1	101	9.0	1.05	12.62	73039	109.05	135.59	8.4	15.2
696.0	30.0	20.1	99	9.0	1.06	12.65	73237	121.73	135.57	8.4	15.2
697.0	22.0	20.4	98	9.0	1.15	12.70	73504	166.37	135.63	8.4	15.2
698.0	27.9	22.8	98	9.0	1.11	12.74	73714	130.86	135.62	8.4	15.2
699.0	28.6	20.2	98	9.0	1.07	12.77	73920	127.82	135.60	8.4	15.2
700.0	25.2	21.5	97	9.0	1.12	12.81	74152	145.07	135.62	8.4	15.2
701.0	24.0	24.6	97	9.0	1.17	12.85	74395	152.17	135.66	8.4	15.2
702.0	22.6	32.3	98	9.0	1.27	12.90	74654	161.30	135.71	8.4	15.2
703.0	32.1	33.8	98	9.0	1.19	12.93	74837	113.62	135.66	8.4	15.2
704.0	26.5	34.7	98	9.0	1.25	12.97	75059	137.96	135.67	8.4	15.2
705.0	22.5	24.7	97	9.0	1.19	13.01	75317	162.31	135.72	8.4	15.2
706.0	28.3	25.2	96	9.0	1.13	13.05	75519	128.83	135.71	8.4	15.2
707.0	33.3	25.1	97	9.0	1.09	13.08	75693	109.56	135.66	8.4	15.3
708.0	37.9	25.3	97	9.0	1.05	13.10	75846	96.37	135.58	8.4	15.3
709.0	41.9	27.3	97	9.0	1.05	13.13	75985	87.24	135.48	8.4	15.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
710.0	35.6	30.1	97	9.0	1.12	13.15	76149	102.46	135.41	8.4	15.3
711.0	37.1	30.7	98	9.0	1.12	13.18	76307	98.40	135.34	8.4	15.3
712.0	29.8	28.4	97	9.0	1.15	13.21	76504	122.75	135.31	8.4	15.3
713.0	37.5	29.4	99	9.0	1.10	13.24	76661	97.39	135.24	8.4	15.3
714.0	31.0	28.7	89	9.0	1.12	13.27	76834	117.68	135.20	8.4	15.3
715.0	33.3	26.8	99	9.0	1.11	13.30	77012	109.56	135.15	8.4	15.3
716.0	35.3	26.3	98	9.0	1.09	13.33	77179	103.47	135.09	8.4	15.3
717.0	44.4	30.0	98	9.0	1.06	13.35	77310	82.17	134.98	8.4	15.3
718.0	36.6	27.9	97	9.0	1.09	13.38	77469	99.75	134.91	8.4	15.3
719.0	26.5	29.6	97	9.0	1.20	13.42	77689	137.96	134.92	8.4	15.3
720.0	26.9	29.0	96	9.0	1.19	13.46	77904	135.94	134.92	8.4	15.3
721.0	26.5	27.0	97	9.0	1.17	13.49	78123	137.96	134.92	8.4	15.3
722.0	22.6	27.9	97	9.0	1.22	13.54	78379	161.30	134.98	8.4	15.3
723.0	27.3	26.1	96	9.0	1.15	13.58	78591	133.91	134.97	8.4	15.3
724.0	36.0	25.0	97	9.1	1.05	13.60	78753	101.44	134.91	8.4	15.3
725.0	47.4	25.3	99	9.0	1.00	13.62	78878	77.10	134.79	8.4	15.3
726.0	42.9	23.2	98	9.0	1.00	13.65	79015	85.21	134.70	8.4	15.3
727.0	46.2	24.0	98	9.0	0.99	13.67	79142	79.13	134.59	8.4	15.3
728.0	39.6	21.7	97	9.0	1.00	13.69	79288	92.31	134.51	8.4	15.3
729.0	48.6	28.9	96	9.0	1.02	13.71	79407	75.07	134.39	8.4	15.3
730.0	45.6	27.0	96	9.0	1.02	13.74	79534	80.14	134.28	8.4	15.3
731.0	35.0	25.0	96	9.0	1.07	13.77	79698	104.49	134.23	8.4	15.3
732.0	34.3	26.1	96	9.0	1.09	13.79	79865	106.52	134.17	8.4	15.3
733.0	26.5	23.2	96	9.0	1.13	13.83	80083	137.96	134.18	8.4	15.3
734.0	23.8	19.9	92	9.0	1.10	13.87	80315	153.18	134.22	8.4	15.3
735.0	30.3	24.6	97	9.0	1.11	13.91	80507	120.72	134.19	8.4	15.3
736.0	39.1	26.1	96	9.0	1.05	13.93	80654	93.33	134.11	8.4	15.3
737.0	38.3	18.0	96	9.0	0.97	13.96	80805	95.36	134.04	8.4	15.3
738.0	21.2	18.0	97	9.0	1.12	14.01	81078	172.46	134.11	8.4	15.3
739.0	25.7	19.8	97	9.0	1.09	14.05	81304	142.02	134.13	8.4	15.3
740.0	27.7	18.0	97	9.0	1.05	14.08	81513	131.88	134.12	8.4	15.3
741.0	34.0	24.3	97	9.0	1.07	14.11	81684	107.53	134.07	8.4	15.4
742.0	39.6	25.9	96	9.0	1.05	14.14	81830	92.31	133.99	8.4	15.4
743.0	37.1	25.9	93	9.0	1.05	14.16	81981	98.40	133.92	8.4	15.4
744.0	36.0	22.4	93	9.0	1.02	14.19	82135	101.44	133.86	8.4	15.4
745.0	39.1	22.3	97	9.0	1.01	14.22	82284	93.33	133.79	8.4	15.4
746.0	43.9	22.4	97	9.0	0.98	14.24	82416	83.18	133.69	8.4	15.4
747.0	43.9	21.5	96	9.0	0.97	14.26	82548	83.18	133.60	8.4	15.4
748.0	52.2	23.6	96	9.0	0.95	14.28	82659	70.00	133.48	8.4	15.4
749.0	48.0	23.1	97	9.0	0.97	14.30	82780	76.08	133.37	8.4	15.4
750.0	46.2	23.1	97	9.0	0.98	14.32	82905	79.13	133.27	8.4	15.4
751.0	40.4	25.4	97	9.0	1.04	14.35	83049	90.29	133.19	8.4	15.4
752.0	37.1	25.8	97	9.0	1.06	14.38	83205	98.40	133.12	8.4	15.4
753.0	40.9	28.6	97	9.0	1.07	14.40	83348	89.27	133.04	8.4	15.4
754.0	40.4	27.3	97	9.0	1.06	14.42	83492	90.29	132.96	8.4	15.4
755.0	42.9	27.9	97	9.0	1.05	14.45	83628	85.21	132.87	8.4	15.4
756.0	36.0	26.8	97	9.0	1.08	14.48	83790	101.44	132.81	8.4	15.4
757.0	45.6	27.7	96	9.0	1.02	14.50	83917	80.14	132.72	8.4	15.4
758.0	48.0	27.2	96	9.0	1.01	14.52	84037	76.08	132.61	8.4	15.4
759.0	47.4	27.6	96	9.0	1.01	14.54	84159	77.10	132.51	8.4	15.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
760.0	38.3	28.2	96	9.0	1.08	14.57	84310	95.36	132.44	8.4	15.4
761.0	37.1	27.9	99	9.0	1.09	14.59	84470	98.40	132.38	8.4	15.4
762.0	40.9	27.8	98	9.0	1.06	14.62	84615	89.27	132.30	8.4	15.4
763.0	38.7	25.8	83	9.0	1.01	14.64	84743	94.34	132.23	8.4	15.4
764.0	51.4	26.4	98	9.0	0.98	14.66	84858	71.01	132.12	8.4	15.4
765.0	48.0	28.8	98	9.0	1.02	14.68	84980	76.08	132.02	8.4	15.4
766.0	46.8	28.3	98	9.0	1.03	14.70	85107	78.11	131.92	8.4	15.4
767.0	46.2	28.9	99	9.0	1.04	14.73	85235	79.13	131.82	8.4	15.4
768.0	42.9	28.1	99	9.0	1.05	14.75	85374	85.21	131.74	8.4	15.4
769.0	42.4	28.7	99	9.0	1.06	14.77	85515	86.23	131.66	8.4	15.4
770.0	42.4	28.8	100	9.0	1.07	14.80	85656	86.23	131.57	8.4	15.4
771.0	41.9	31.5	100	9.0	1.09	14.82	85799	87.24	131.49	8.4	15.4
772.0	37.5	27.6	91	9.0	1.06	14.85	85945	97.39	131.43	8.4	15.4
773.0	39.6	24.9	98	9.0	1.04	14.87	86094	92.31	131.36	8.4	15.4
774.0	31.9	26.7	99	9.0	1.12	14.90	86280	114.63	131.33	8.4	15.4
775.0	35.3	32.0	99	9.0	1.15	14.93	86449	103.47	131.28	8.4	15.4
776.0	41.4	31.9	99	9.0	1.10	14.96	86592	88.26	131.21	8.4	15.5
777.0	46.8	32.1	98	9.0	1.06	14.98	86718	78.11	131.11	8.4	15.5
778.0	49.3	31.3	98	9.0	1.04	15.00	86837	74.05	131.01	8.4	15.5
779.0	50.0	32.7	98	9.0	1.05	15.02	86954	73.04	130.91	8.4	15.5
780.0	50.7	32.3	98	9.0	1.04	15.04	87070	72.03	130.80	8.4	15.5
781.0	45.0	21.9	98	9.0	0.98	15.06	87201	81.16	130.72	8.4	15.5
782.0	43.4	16.3	83	9.0	0.88	15.08	87315	84.20	130.63	8.4	15.5
783.0	47.4	17.9	99	9.0	0.92	15.10	87440	77.10	130.54	8.4	15.5
784.0	50.0	19.9	99	9.0	0.93	15.12	87558	73.04	130.44	8.4	15.5
785.0	47.4	20.6	98	9.0	0.95	15.15	87683	77.10	130.34	8.4	15.5
786.0	47.4	20.7	98	9.0	0.95	15.17	87807	77.10	130.25	8.4	15.5
787.0	41.4	19.7	98	9.0	0.97	15.19	87949	88.26	130.18	8.4	15.5
788.0	42.9	20.2	98	9.0	0.97	15.21	88087	85.21	130.10	8.4	15.5
789.0	37.9	19.1	98	9.0	0.99	15.24	88242	96.37	130.04	8.4	15.5
790.0	40.4	20.9	98	9.0	0.99	15.26	88388	90.29	129.97	8.4	15.5
791.0	43.9	25.2	98	9.0	1.02	15.29	88522	83.18	129.89	8.4	15.5
792.0	40.4	22.1	93	9.0	0.99	15.31	88659	90.29	129.82	8.4	15.5
793.0	47.4	21.0	100	9.0	0.96	15.33	88785	77.10	129.73	8.4	15.5
794.0	36.7	21.6	100	9.0	1.03	15.36	88949	99.42	129.68	8.4	15.5
795.0	34.3	21.2	100	9.0	1.04	15.39	89123	106.52	129.64	8.4	15.5
796.0	40.9	20.2	100	9.0	0.99	15.41	89270	89.27	129.57	8.4	15.5
797.0	49.3	20.4	99	9.0	0.94	15.43	89391	74.05	129.47	8.4	15.5
798.0	50.7	21.4	99	9.0	0.94	15.45	89508	72.03	129.37	8.4	15.5
799.0	45.0	19.9	98	9.0	0.95	15.48	89639	81.16	129.29	8.4	15.5
800.0	45.6	19.3	99	9.0	0.95	15.50	89769	80.14	129.21	8.4	15.5
801.0	36.7	16.2	98	9.0	0.96	15.53	89929	99.42	129.15	8.4	15.5
802.0	35.6	9.6	86	9.0	0.84	15.55	90073	102.46	129.11	8.4	15.5
802.2	25.7	11.5	78	9.0	0.92	15.56	90109	142.02	129.11	8.4	15.5

BIT NUMBER	3	IADC CODE	136	INTERVAL	802.2- 1400.0
HTC J3		SIZE	12.250	NOZZLES	18 18 18
COST	1944.00	TRIP TIME	4.6	BIT RUN	597.8
TOTAL HOURS	18.77	TOTAL TURNS	117997	CONDITION	T5 B8 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
803.0	33.2	15.4	63	9.1	0.93	0.02	91	110	23539	8.4	15.5
804.0	34.3	17.1	64	9.1	0.95	0.05	203	107	10521	8.4	15.5
805.0	35.0	17.9	64	9.1	0.95	0.08	313	104	6801	8.4	15.5
806.0	30.8	19.2	67	9.1	1.02	0.11	444	119	5042	8.4	15.5
807.0	25.0	13.9	63	9.1	0.98	0.15	595	146	4022	8.4	15.5
808.0	7.3	18.8	73	9.1	1.43	0.29	1190	497	3415	8.4	15.5
809.0	35.3	19.5	74	9.1	1.01	0.32	1316	103	2928	8.4	15.5
810.0	38.7	18.2	74	9.1	0.97	0.34	1430	94	2564	8.4	15.5
811.0	33.6	18.9	75	9.1	1.02	0.37	1563	109	2285	8.4	15.5
812.0	30.3	19.0	74	9.1	1.05	0.41	1711	121	2064	8.4	15.6
813.0	31.9	19.4	75	9.1	1.04	0.44	1851	115	1884	8.4	15.6
814.0	34.0	18.6	74	9.1	1.01	0.47	1982	108	1733	8.4	15.6
815.0	41.9	18.7	74	9.1	0.95	0.49	2088	87	1605	8.4	15.6
816.0	40.0	19.4	74	9.1	0.98	0.52	2199	91	1495	8.4	15.6
817.0	40.4	18.8	74	9.1	0.97	0.54	2310	90	1400	8.4	15.6
818.0	36.0	21.2	74	9.1	1.03	0.57	2433	101	1318	8.4	15.6
819.0	35.0	19.9	73	9.1	1.02	0.60	2559	104	1246	8.4	15.6
820.0	34.6	20.6	74	9.1	1.03	0.63	2686	106	1182	8.4	15.6
821.0	34.3	20.1	74	9.1	1.03	0.66	2815	107	1124	8.4	15.6
822.0	31.9	21.1	74	9.1	1.06	0.69	2954	115	1073	8.4	15.6
823.0	35.6	21.3	74	9.1	1.03	0.72	3078	102	1027	8.4	15.6
824.0	39.1	20.9	74	9.1	1.00	0.74	3192	93.33	983.97	8.4	15.6
825.0	39.6	20.6	74	9.1	1.00	0.77	3305	92.31	944.86	8.4	15.6
826.0	41.9	22.1	74	9.1	1.00	0.79	3411	87.24	908.83	8.4	15.6
827.0	37.0	24.0	72	9.1	1.05	0.82	3528	98.70	876.16	8.4	15.6
828.0	37.5	23.5	68	9.1	1.02	0.84	3637	97.39	845.98	8.4	15.6
829.0	34.6	24.8	68	9.1	1.06	0.87	3756	105.50	818.35	8.4	15.6
830.0	34.3	22.7	69	9.1	1.04	0.90	3876	106.52	792.74	8.4	15.6
831.0	35.3	24.4	69	9.1	1.05	0.93	3993	103.47	768.81	8.4	15.6
832.0	37.5	24.0	69	9.1	1.03	0.96	4103	97.39	746.28	8.4	15.6
833.0	40.0	23.3	68	9.1	1.00	0.98	4205	91.30	725.01	8.4	15.6
834.0	36.0	24.2	68	9.1	1.04	1.01	4319	101.44	705.40	8.4	15.6
835.0	33.3	23.4	68	9.1	1.05	1.04	4442	109.56	687.24	8.4	15.6
836.0	38.3	23.6	68	9.1	1.02	1.07	4548	95.36	669.73	8.4	15.6
837.0	38.3	23.7	68	9.1	1.02	1.09	4654	95.36	653.22	8.4	15.6
838.0	34.3	26.5	68	9.1	1.08	1.12	4773	106.52	637.95	8.4	15.6
839.0	32.4	28.7	68	9.1	1.12	1.15	4900	112.60	623.68	8.4	15.6
840.0	35.6	21.3	71	9.1	1.02	1.18	5019	102.46	609.89	8.4	15.6
841.0	35.3	20.8	70	9.1	1.02	1.21	5138	103.47	596.84	8.4	15.6
842.0	30.5	22.7	71	9.1	1.08	1.24	5277	119.70	584.85	8.4	15.6
843.0	35.0	21.2	71	9.1	1.02	1.27	5399	104.49	573.07	8.4	15.6
844.0	33.3	19.0	71	9.1	1.01	1.30	5527	109.56	561.98	8.4	15.6
845.0	33.6	23.2	71	9.1	1.06	1.33	5653	108.55	551.39	8.4	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
846.0	32.1	21.9	71	9.1	1.06	1.36	5786	113.62	541.40	8.4	15.6
847.0	31.9	23.4	67	9.1	1.06	1.39	5911	114.63	531.87	8.4	15.6
848.0	37.9	19.8	75	9.1	1.00	1.42	6030	96.37	522.36	8.4	15.6
849.0	30.3	20.6	75	9.1	1.07	1.45	6178	120.72	513.78	8.4	15.7
850.0	26.7	21.4	75	9.1	1.12	1.49	6347	136.95	505.90	8.4	15.7
851.0	31.0	19.0	75	9.1	1.05	1.52	6492	117.68	497.94	8.4	15.7
852.0	29.0	21.0	75	9.1	1.09	1.56	6648	125.79	490.47	8.4	15.7
853.0	28.6	18.8	75	9.1	1.07	1.59	6806	127.82	483.33	8.4	15.7
854.0	31.9	21.3	75	9.1	1.07	1.62	6947	114.63	476.21	8.4	15.7
855.0	30.8	19.4	75	9.1	1.05	1.65	7094	118.69	469.44	8.4	15.7
856.0	23.8	22.6	72	9.1	1.16	1.70	7276	153.18	463.56	8.4	15.7
857.0	29.5	25.1	75	9.1	1.14	1.73	7429	123.76	457.36	8.4	15.7
858.0	37.5	24.9	75	9.1	1.06	1.76	7549	97.39	450.91	8.4	15.7
859.0	35.0	24.1	75	9.1	1.08	1.79	7678	104.49	444.81	8.4	15.7
860.0	33.6	24.6	75	9.1	1.09	1.82	7812	108.55	438.99	8.4	15.7
861.0	32.4	25.7	75	9.1	1.12	1.85	7950	112.60	433.44	8.4	15.7
862.0	37.9	24.6	75	9.1	1.06	1.87	8069	96.37	427.81	8.4	15.7
863.0	37.9	24.0	75	9.1	1.05	1.90	8188	96.37	422.35	8.4	15.7
864.0	37.5	29.1	75	9.1	1.11	1.93	8308	97.39	417.10	8.4	15.7
865.0	33.0	22.0	75	9.1	1.07	1.96	8444	110.67	412.22	8.4	15.7
866.0	32.7	19.1	72	9.1	1.02	1.99	8577	111.59	407.50	8.4	15.7
867.0	27.5	23.8	75	9.1	1.14	2.02	8740	132.89	403.27	8.4	15.7
868.0	29.0	24.4	75	9.1	1.13	2.06	8894	125.79	399.05	8.4	15.7
869.0	32.7	23.4	75	9.1	1.09	2.09	9031	111.59	394.75	8.4	15.7
870.0	31.6	22.1	75	9.1	1.08	2.12	9173	115.65	390.63	8.4	15.7
871.0	23.1	22.9	75	9.1	1.18	2.16	9367	158.25	387.25	8.4	15.7
872.0	14.3	22.1	74	9.1	1.31	2.23	9678	254.63	385.35	8.4	15.7
873.0	14.5	17.5	73	9.1	1.22	2.30	9979	252.60	383.48	8.4	15.7
874.0	15.8	11.5	73	9.1	1.09	2.37	10255	231.29	381.36	8.4	15.7
875.0	28.0	20.0	73	9.1	1.08	2.40	10411	130.43	377.91	8.4	15.7
876.0	27.7	5.3	73	9.1	0.81	2.44	10569	131.88	374.58	8.4	15.7
877.0	29.5	7.0	73	9.1	0.84	2.47	10719	123.76	371.22	8.4	15.7
878.0	30.8	14.7	73	9.1	0.98	2.50	10862	118.69	367.89	8.4	15.7
879.0	29.8	14.4	73	9.1	0.98	2.54	11010	122.75	364.70	8.4	15.7
880.0	30.5	13.4	73	9.1	0.96	2.57	11153	119.70	361.55	8.4	15.7
881.0	29.8	18.9	73	9.1	1.05	2.60	11301	122.75	358.52	8.4	15.7
882.0	28.8	17.7	73	9.1	1.04	2.64	11454	126.81	355.62	8.4	15.7
883.0	32.4	17.0	73	9.1	1.00	2.67	11588	112.60	352.61	8.4	15.7
884.0	26.3	16.1	72	9.1	1.04	2.71	11753	138.98	350.00	8.4	15.7
885.0	18.9	13.4	71	9.1	1.07	2.76	11977	192.74	348.10	8.4	15.7
886.0	36.7	18.7	80	9.1	1.01	2.79	12108	99.42	345.13	8.4	15.7
887.0	34.6	19.0	76	9.1	1.02	2.82	12239	105.50	342.30	8.4	15.8
888.0	35.3	18.8	76	9.1	1.01	2.84	12368	103.47	339.52	8.4	15.8
889.0	31.0	19.2	76	9.1	1.05	2.88	12514	117.68	336.97	8.4	15.8
890.0	30.3	16.7	75	9.1	1.02	2.91	12663	120.72	334.50	8.4	15.8
891.0	26.3	14.1	73	9.1	1.01	2.95	12831	138.98	332.30	8.4	15.8
892.0	40.9	20.4	76	9.1	0.99	2.97	12942	89.27	329.59	8.4	15.8
893.0	40.0	19.9	75	9.1	0.99	3.00	13055	91.30	326.97	8.4	15.8
894.0	35.3	17.7	75	9.1	0.99	3.03	13182	103.47	324.54	8.4	15.8
895.0	27.5	14.8	73	9.1	1.01	3.06	13342	132.89	322.47	8.4	15.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
896.0	23.1	16.6	68	9.1	1.06	3.11	13519	158.25	320.72	8.4	15.8
897.0	40.9	22.3	74	9.1	1.01	3.13	13628	89.27	318.28	8.4	15.8
898.0	36.4	20.4	75	9.1	1.02	3.16	13751	100.43	316.00	8.4	15.8
899.0	40.0	24.3	74	9.1	1.04	3.18	13862	91.30	313.68	8.4	15.8
900.0	36.7	21.9	74	9.1	1.03	3.21	13984	99.42	311.49	8.4	15.8
901.0	40.9	21.9	74	9.1	1.00	3.23	14093	89.27	309.24	8.4	15.8
902.0	41.0	28.0	77	9.1	1.08	3.26	14206	89.07	307.04	8.4	15.8
903.0	35.0	25.0	74	9.1	1.08	3.29	14333	104.34	305.03	8.4	15.8
904.0	45.2	22.0	77	9.1	0.98	3.31	14435	80.80	302.82	8.4	15.8
905.0	72.0	25.0	79	9.1	0.89	3.32	14500	50.72	300.37	8.4	15.8
906.0	42.9	26.0	77	9.1	1.05	3.35	14608	85.21	298.30	8.4	15.8
907.0	40.0	32.1	77	9.1	1.13	3.37	14724	91.30	296.32	8.4	15.8
908.0	40.4	29.3	77	9.1	1.10	3.40	14839	90.29	294.38	8.4	15.8
909.0	42.4	28.8	77	9.1	1.08	3.42	14948	86.23	292.43	8.4	15.8
910.0	41.4	29.7	77	9.1	1.10	3.44	15060	88.26	290.53	8.4	15.8
911.0	42.9	28.5	77	9.1	1.07	3.47	15169	85.21	288.65	8.4	15.8
912.0	42.9	29.2	77	9.1	1.08	3.49	15277	85.21	286.79	8.4	15.8
913.0	46.2	30.1	78	9.1	1.07	3.51	15378	79.13	284.92	8.4	15.8
914.0	45.0	30.2	78	9.1	1.08	3.53	15482	81.16	283.10	8.4	15.8
915.0	40.0	22.5	77	9.1	1.03	3.56	15597	91.30	281.40	8.4	15.8
916.0	39.1	25.2	79	9.1	1.07	3.58	15717	93.33	279.74	8.4	15.8
917.0	48.0	25.7	79	9.1	1.01	3.61	15815	76.08	277.97	8.4	15.8
918.0	43.9	26.4	79	9.1	1.05	3.63	15923	83.18	276.29	8.4	15.8
919.0	37.5	26.9	78	9.1	1.10	3.66	16048	97.39	274.76	8.4	15.8
920.0	37.5	26.8	78	9.1	1.10	3.68	16173	97.39	273.25	8.4	15.8
921.0	41.4	26.5	78	9.1	1.07	3.71	16286	88.26	271.69	8.4	15.8
922.0	42.4	26.3	78	9.1	1.06	3.73	16397	86.23	270.14	8.4	15.8
923.0	40.0	26.4	78	9.1	1.08	3.75	16515	91.30	268.66	8.4	15.8
924.0	34.0	26.6	78	9.1	1.13	3.78	16653	107.53	267.34	8.4	15.8
925.0	26.7	25.7	63	9.1	1.13	3.82	16796	136.95	266.28	8.4	15.9
926.0	35.0	27.1	78	9.1	1.12	3.85	16929	104.49	264.97	8.4	15.9
927.0	29.0	27.0	76	9.1	1.17	3.88	17086	125.79	263.86	8.4	15.9
928.0	33.6	26.9	76	9.1	1.12	3.91	17221	108.55	262.62	8.4	15.9
929.0	36.7	26.6	75	9.1	1.09	3.94	17344	99.42	261.34	8.4	15.9
930.0	41.9	26.8	75	9.1	1.05	3.97	17452	87.24	259.97	8.4	15.9
931.0	36.4	26.0	76	9.1	1.09	3.99	17576	100.43	258.73	8.4	15.9
932.0	31.3	26.3	76	9.1	1.14	4.02	17721	116.66	257.64	8.4	15.9
933.0	40.0	27.2	75	9.1	1.07	4.05	17833	91.30	256.37	8.4	15.9
934.0	34.6	26.8	76	9.1	1.11	4.08	17964	105.50	255.22	8.4	15.9
935.0	35.0	24.3	64	9.1	1.03	4.11	18075	104.49	254.09	8.4	15.9
936.0	38.7	23.8	77	9.1	1.05	4.13	18193	94.34	252.89	8.4	15.9
937.0	32.7	29.3	77	9.1	1.16	4.16	18334	111.59	251.85	8.4	15.9
938.0	33.3	27.2	77	9.1	1.13	4.19	18472	109.56	250.80	8.4	15.9
939.0	38.3	29.6	77	9.1	1.12	4.22	18592	95.36	249.66	8.4	15.9
940.0	36.4	29.3	76	9.1	1.13	4.25	18718	100.43	248.58	8.4	15.9
941.0	41.4	29.2	76	9.1	1.09	4.27	18828	88.26	247.42	8.4	15.9
942.0	37.5	29.5	76	9.1	1.12	4.30	18949	97.39	246.35	8.4	15.9
943.0	40.9	29.0	76	9.1	1.09	4.32	19061	89.27	245.24	8.4	15.9
944.0	23.2	41.0	77	9.1	1.40	4.37	19259	157.24	244.61	8.4	15.9
945.0	34.0	40.4	77	9.1	1.27	4.40	19396	107.53	243.65	8.4	15.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
946.0	38.7	39.4	77	9.1	1.22	4.42	19516	94.34	242.62	8.4	15.9
947.0	37.5	41.3	78	9.1	1.24	4.45	19640	97.39	241.61	8.4	15.9
948.0	40.4	40.5	77	9.1	1.21	4.47	19755	90.29	240.58	8.4	15.9
949.0	35.6	39.6	77	9.1	1.25	4.50	19885	102.46	239.63	8.4	15.9
950.0	37.9	39.7	77	9.1	1.23	4.53	20008	96.37	238.67	8.4	15.9
951.0	37.5	39.9	78	9.1	1.23	4.55	20132	97.39	237.72	8.4	15.9
952.0	34.6	38.0	77	9.1	1.24	4.58	20265	105.50	236.83	8.4	15.9
953.0	20.6	20.2	75	9.1	1.18	4.63	20484	177.53	236.44	8.4	15.9
954.0	5.9	14.8	39	9.1	1.24	4.80	20878	616.78	238.95	8.4	15.9
955.0	42.9	40.5	79	9.1	1.20	4.82	20989	85.21	237.94	8.4	15.9
956.0	40.4	34.5	80	9.1	1.16	4.85	21108	90.29	236.98	8.4	15.9
957.0	37.9	29.7	80	9.1	1.13	4.87	21234	96.37	236.07	8.4	15.9
958.0	43.9	28.7	80	9.1	1.08	4.90	21343	83.18	235.09	8.4	15.9
959.0	25.9	27.9	80	9.1	1.23	4.94	21528	141.01	234.49	8.4	15.9
960.0	40.0	27.1	80	9.1	1.09	4.96	21648	91.30	233.58	8.4	15.9
961.0	43.9	27.9	80	9.1	1.07	4.98	21757	83.18	232.64	8.4	15.9
962.0	41.4	28.0	80	9.1	1.09	5.01	21873	88.26	231.73	8.4	15.9
963.0	46.2	28.0	80	9.1	1.06	5.03	21977	79.13	230.78	8.4	15.9
964.0	30.5	25.9	68	9.1	1.11	5.06	22110	119.70	230.10	8.4	15.9
965.0	36.4	25.5	78	9.1	1.09	5.09	22238	100.43	229.30	8.4	16.0
966.0	29.8	25.1	78	9.1	1.15	5.12	22395	122.75	228.65	8.4	16.0
967.0	35.6	24.1	77	9.1	1.08	5.15	22525	102.46	227.88	8.4	16.0
968.0	44.4	25.3	78	9.1	1.03	5.17	22630	82.17	227.00	8.4	16.0
969.0	42.4	25.1	78	9.1	1.04	5.20	22739	86.23	226.16	8.4	16.0
970.0	37.9	24.1	77	9.1	1.06	5.22	22862	96.37	225.39	8.4	16.0
971.0	40.0	26.0	78	9.1	1.07	5.25	22979	91.30	224.59	8.4	16.0
972.0	27.3	24.0	77	9.1	1.16	5.29	23148	133.91	224.06	8.4	16.0
973.0	34.3	27.9	78	9.1	1.14	5.31	23285	106.52	223.37	8.4	16.0
974.0	30.5	27.7	78	9.1	1.17	5.35	23439	119.70	222.77	8.4	16.0
975.0	39.6	27.2	78	9.1	1.09	5.37	23558	92.31	222.01	8.4	16.0
976.0	37.9	26.3	78	9.1	1.09	5.40	23681	96.37	221.29	8.4	16.0
977.0	30.5	26.5	78	9.1	1.16	5.43	23835	119.70	220.71	8.4	16.0
978.0	25.4	23.8	78	9.1	1.18	5.47	24019	144.05	220.27	8.4	16.0
979.0	29.5	24.4	80	9.1	1.15	5.51	24181	123.76	219.73	8.4	16.0
980.0	28.3	24.2	97	9.1	1.21	5.54	24386	128.83	219.21	8.4	16.0
981.0	25.9	20.0	101	9.1	1.19	5.58	24619	141.01	218.78	8.4	16.0
982.0	15.0	20.1	94	9.1	1.33	5.65	24994	243.47	218.91	8.4	16.0
983.0	20.2	13.3	75	9.1	1.07	5.70	25216	180.57	218.70	8.4	16.0
984.0	26.3	10.3	79	9.1	0.96	5.73	25397	138.98	218.26	8.4	16.0
985.0	26.7	9.8	79	9.1	0.94	5.77	25574	136.95	217.82	8.4	16.0
986.0	30.8	10.1	79	9.1	0.92	5.80	25728	118.69	217.28	8.4	16.0
987.0	36.4	10.8	79	9.1	0.89	5.83	25858	100.43	216.65	8.4	16.0
988.0	37.9	10.9	79	9.1	0.88	5.86	25983	96.37	216.00	8.4	16.0
989.0	35.0	15.1	85	9.1	0.99	5.89	26129	104.49	215.40	8.4	16.0
990.0	37.5	19.7	83	9.1	1.03	5.91	26263	97.39	214.78	8.4	16.0
991.0	35.6	19.2	83	9.1	1.04	5.94	26402	102.46	214.18	8.4	16.0
992.0	26.1	17.3	79	9.1	1.08	5.98	26584	139.99	213.79	8.4	16.0
993.0	22.8	22.8	53	9.1	1.09	6.02	26725	160.28	213.51	8.4	16.0
994.0	22.1	25.2	78	9.1	1.24	6.07	26935	165.35	213.26	8.4	16.0
995.0	28.6	26.0	78	9.1	1.17	6.10	27099	127.82	212.81	8.4	16.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
996.0	28.8	26.7	78	9.1	1.18	6.14	27261	126.81	212.37	8.4	16.0
997.0	31.0	26.0	78	9.1	1.15	6.17	27412	117.68	211.88	8.4	16.0
998.0	33.6	26.4	78	9.1	1.13	6.20	27550	108.55	211.36	8.4	16.0
999.0	33.3	25.3	77	9.1	1.11	6.23	27689	109.56	210.84	8.4	16.0
1000.0	29.3	27.9	78	9.1	1.18	6.26	27848	124.78	210.40	8.4	16.0
1001.0	24.2	25.8	77	9.1	1.22	6.31	28040	151.15	210.11	8.4	16.0
1002.0	33.8	27.6	78	9.1	1.14	6.33	28180	108.21	209.60	8.4	16.0
1003.0	27.1	27.4	79	9.1	1.21	6.37	28354	134.92	209.22	8.4	16.0
1004.0	36.0	27.9	79	9.1	1.13	6.40	28485	101.44	208.69	8.4	16.0
1005.0	25.0	31.1	78	9.1	1.28	6.44	28674	146.08	208.38	8.4	16.0
1006.0	23.5	31.5	77	9.1	1.29	6.48	28870	155.21	208.12	8.4	16.1
1007.0	22.8	28.8	76	9.1	1.27	6.53	29069	160.28	207.89	8.4	16.1
1008.0	36.4	33.8	76	9.1	1.17	6.55	29194	100.43	207.37	8.4	16.1
1009.0	23.4	31.6	76	9.1	1.29	6.60	29390	156.22	207.12	8.4	16.1
1010.0	33.6	31.0	76	9.1	1.17	6.63	29526	108.55	206.64	8.4	16.1
1011.0	35.0	34.0	110	9.1	1.31	6.65	29714	104.34	206.15	8.4	16.1
1012.0	53.7	27.1	110	9.1	1.10	6.67	29838	67.97	205.49	8.4	16.1
1013.0	41.1	34.6	110	9.1	1.26	6.70	29998	88.76	204.94	8.4	16.1
1014.0	43.9	34.1	110	9.1	1.24	6.72	30149	83.18	204.37	8.4	16.1
1015.0	36.7	31.7	110	9.1	1.27	6.75	30329	99.42	203.87	8.4	16.1
1016.0	49.3	33.9	115	9.1	1.21	6.77	30469	74.05	203.27	8.4	16.1
1017.0	40.0	35.3	118	9.1	1.30	6.79	30647	91.30	202.74	8.4	16.1
1018.0	54.5	34.8	117	9.1	1.19	6.81	30776	66.95	202.12	8.4	16.1
1019.0	53.7	34.0	117	9.1	1.19	6.83	30907	67.97	201.50	8.4	16.1
1020.0	42.9	33.5	117	9.1	1.26	6.85	31071	85.21	200.96	8.4	16.1
1021.0	40.0	27.9	117	9.1	1.22	6.88	31246	91.30	200.46	8.4	16.1
1022.0	57.1	28.5	116	9.1	1.11	6.90	31369	63.91	199.84	8.4	16.1
1023.0	54.0	28.4	116	9.1	1.13	6.91	31498	67.63	199.24	8.4	16.1
1024.0	62.1	29.9	117	9.1	1.10	6.93	31610	58.84	198.61	8.4	16.1
1025.0	45.0	29.5	116	9.1	1.20	6.95	31766	81.16	198.08	8.4	16.1
1026.0	41.5	28.0	116	9.1	1.20	6.98	31933	87.92	197.59	8.4	16.1
1027.0	52.9	28.7	117	9.1	1.14	7.00	32065	68.98	197.02	8.4	16.1
1028.0	48.6	30.3	116	9.1	1.18	7.02	32209	75.07	196.48	8.4	16.1
1029.0	48.6	28.2	116	9.1	1.16	7.04	32352	75.07	195.94	8.4	16.1
1030.0	39.1	27.9	100	9.1	1.17	7.06	32505	93.33	195.49	8.4	16.1
1031.0	65.5	29.7	116	9.1	1.08	7.08	32612	55.79	194.88	8.4	16.1
1032.0	56.2	30.3	116	9.1	1.14	7.09	32736	64.92	194.32	8.4	16.1
1033.0	46.8	28.8	116	9.1	1.17	7.12	32884	78.11	193.81	8.4	16.1
1034.0	41.9	27.2	115	9.1	1.19	7.14	33050	87.24	193.35	8.4	16.1
1035.0	29.0	25.5	115	9.1	1.28	7.17	33288	125.79	193.06	8.4	16.1
1036.0	35.0	30.4	116	9.1	1.28	7.20	33487	104.49	192.68	8.4	16.1
1037.0	33.3	28.8	116	9.1	1.28	7.23	33696	109.56	192.33	8.4	16.1
1038.0	32.7	30.0	116	9.1	1.30	7.26	33908	111.59	191.99	8.4	16.1
1039.0	36.0	29.9	116	9.1	1.27	7.29	34102	101.44	191.60	8.4	16.1
1040.0	24.0	29.4	110	9.1	1.37	7.33	34375	152.17	191.44	8.4	16.1
1041.0	30.6	32.3	116	9.1	1.35	7.37	34603	119.20	191.14	8.4	16.1
1042.0	44.4	31.9	116	9.1	1.23	7.39	34760	82.17	190.68	8.4	16.1
1043.0	32.7	31.3	116	9.1	1.32	7.42	34972	111.59	190.35	8.4	16.1
1044.0	37.1	31.2	116	9.1	1.28	7.45	35160	98.40	189.97	8.4	16.1
1045.0	32.4	31.6	117	9.1	1.32	7.48	35376	112.60	189.65	8.4	16.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1046.0	29.0	31.0	117	9.1	1.35	7.51	35617	125.79	189.39	8.4	16.1
1047.0	32.1	34.8	117	9.1	1.37	7.54	35835	113.62	189.08	8.4	16.2
1048.0	38.3	37.8	117	9.1	1.34	7.57	36018	95.36	188.70	8.4	16.2
1049.0	33.0	35.5	117	9.1	1.36	7.60	36231	110.57	188.38	8.4	16.2
1050.0	51.4	30.8	116	9.1	1.17	7.62	36366	71.01	187.91	8.4	16.2
1051.0	44.4	30.8	116	9.1	1.21	7.64	36523	82.17	187.49	8.4	16.2
1052.0	45.0	29.9	116	9.1	1.20	7.66	36677	81.16	187.06	8.4	16.2
1053.0	45.0	30.0	116	9.1	1.20	7.68	36831	81.16	186.64	8.4	16.2
1054.0	45.0	29.6	117	9.1	1.20	7.71	36987	81.16	186.22	8.4	16.2
1055.0	41.4	30.1	116	9.1	1.23	7.73	37155	88.26	185.83	8.4	16.2
1056.0	37.1	29.3	116	9.1	1.25	7.76	37343	98.40	185.49	8.4	16.2
1057.0	42.9	28.5	116	9.1	1.20	7.78	37506	85.21	185.09	8.4	16.2
1058.0	39.6	28.4	116	9.1	1.22	7.81	37682	92.31	184.73	8.4	16.2
1059.0	42.4	29.3	117	9.1	1.21	7.83	37848	86.23	184.35	8.4	16.2
1060.0	36.9	31.3	116	9.1	1.28	7.86	38035	98.91	184.02	8.4	16.2
1061.0	35.0	29.8	115	9.1	1.27	7.89	38233	104.49	183.71	8.4	16.2
1062.0	27.9	28.0	115	9.1	1.32	7.92	38481	130.86	183.51	8.4	16.2
1063.0	31.3	27.4	116	9.1	1.28	7.95	38703	116.66	183.25	8.4	16.2
1064.0	40.4	27.7	116	9.1	1.21	7.98	38876	90.29	182.89	8.4	16.2
1065.0	48.0	27.2	116	9.1	1.15	8.00	39021	76.08	182.49	8.4	16.2
1066.0	41.4	26.4	116	9.1	1.18	8.02	39190	88.26	182.13	8.4	16.2
1067.0	40.4	26.2	115	9.1	1.19	8.05	39361	90.29	181.78	8.4	16.2
1068.0	44.4	26.3	115	9.1	1.16	8.07	39516	82.17	181.41	8.4	16.2
1069.0	48.0	25.7	114	9.1	1.13	8.09	39658	76.08	181.01	8.4	16.2
1070.0	45.6	22.3	102	9.1	1.07	8.11	39792	80.14	180.64	8.4	16.2
1071.0	55.4	20.3	116	9.1	1.02	8.13	39919	65.94	180.21	8.4	16.2
1072.0	52.2	24.4	116	9.1	1.09	8.15	40052	70.00	179.80	8.4	16.2
1073.0	53.7	28.9	118	9.1	1.14	8.17	40184	67.97	179.39	8.4	16.2
1074.0	54.5	34.2	118	9.1	1.19	8.19	40314	66.95	178.98	8.4	16.2
1075.0	53.7	33.4	119	9.1	1.19	8.21	40447	67.97	178.57	8.4	16.2
1076.0	50.7	34.0	119	9.1	1.21	8.23	40587	72.03	178.18	8.4	16.2
1077.0	46.2	32.5	118	9.1	1.23	8.25	40741	79.13	177.82	8.4	16.2
1078.0	49.3	30.3	118	9.1	1.18	8.27	40885	74.05	177.44	8.4	16.2
1079.0	49.0	30.0	118	9.1	1.18	8.29	41029	74.53	177.07	8.4	16.2
1080.0	49.3	25.4	117	9.1	1.12	8.31	41172	74.05	176.70	8.4	16.2
1081.0	48.0	25.6	117	9.1	1.13	8.33	41318	76.08	176.34	8.4	16.2
1082.0	48.6	29.8	117	9.1	1.18	8.35	41463	75.07	175.98	8.4	16.2
1083.0	46.2	28.8	117	9.1	1.18	8.37	41615	79.13	175.63	8.4	16.2
1084.0	51.4	30.6	118	9.1	1.17	8.39	41753	71.01	175.26	8.4	16.2
1085.0	42.4	30.2	117	9.1	1.22	8.41	41919	86.23	174.95	8.4	16.2
1086.0	46.8	29.0	118	9.1	1.18	8.44	42069	78.11	174.60	8.4	16.2
1087.0	43.9	30.1	117	9.1	1.21	8.46	42230	83.18	174.28	8.4	16.2
1088.0	51.4	28.7	116	9.1	1.15	8.48	42366	71.01	173.92	8.4	16.2
1089.0	51.4	28.0	120	9.1	1.15	8.50	42506	71.01	173.56	8.4	16.2
1090.0	47.4	27.1	118	9.1	1.16	8.52	42655	77.10	173.23	8.4	16.3
1091.0	48.6	29.0	118	9.1	1.17	8.54	42801	75.07	172.89	8.4	16.3
1092.0	50.0	28.0	118	9.1	1.15	8.56	42942	73.04	172.54	8.4	16.3
1093.0	50.0	27.4	118	9.1	1.14	8.58	43083	73.04	172.20	8.4	16.3
1094.0	51.4	26.7	117	9.1	1.12	8.60	43220	71.01	171.86	8.4	16.3
1095.0	51.4	26.5	117	9.1	1.12	8.62	43356	71.01	171.51	8.4	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1096.0	43.9	25.1	116	9.1	1.15	8.64	43515	83.18	171.21	8.4	16.3
1097.0	42.9	23.0	118	9.1	1.13	8.66	43680	85.21	170.92	8.4	16.3
1098.0	59.0	26.8	128	9.1	1.11	8.68	43810	61.88	170.55	8.4	16.3
1099.0	44.4	22.8	106	9.1	1.09	8.70	43952	82.17	170.25	8.4	16.3
1100.0	54.5	26.9	132	9.1	1.15	8.72	44097	66.95	169.91	8.4	16.3
1101.0	46.2	29.8	129	9.1	1.22	8.74	44265	79.13	169.60	8.4	16.3
1102.0	49.3	30.8	130	9.1	1.22	8.76	44424	74.05	169.28	8.4	16.3
1103.0	52.9	35.1	132	9.1	1.25	8.78	44573	68.98	168.95	8.4	16.3
1104.0	51.4	33.6	131	9.1	1.24	8.80	44726	71.01	168.62	8.4	16.3
1105.0	44.4	31.2	129	9.1	1.25	8.83	44900	82.17	168.34	8.4	16.3
1106.0	52.9	29.8	129	9.1	1.18	8.84	45046	68.98	168.01	8.4	16.3
1107.0	48.0	30.4	129	9.1	1.22	8.86	45208	76.08	167.71	8.4	16.3
1108.0	32.0	32.0	129	9.1	1.36	8.90	45450	114.13	167.54	8.4	16.3
1109.0	27.1	9.9	64	9.1	0.89	8.93	45591	134.92	167.43	8.4	16.3
1110.0	44.4	23.3	131	9.1	1.16	8.96	45768	82.17	167.15	8.4	16.3
1111.0	45.0	20.5	129	9.1	1.11	8.98	45940	81.16	166.87	8.4	16.3
1112.0	56.2	25.0	130	9.1	1.11	9.00	46079	64.92	166.54	8.4	16.3
1113.0	50.7	23.1	129	9.1	1.11	9.02	46232	72.03	166.24	8.4	16.3
1114.0	49.3	22.1	129	9.1	1.11	9.04	46390	74.05	165.94	8.4	16.3
1115.0	54.5	24.0	130	9.1	1.10	9.05	46532	66.95	165.63	8.4	16.3
1116.0	47.4	24.1	130	9.1	1.15	9.08	46696	77.10	165.35	8.4	16.3
1117.0	52.9	21.7	129	9.1	1.08	9.09	46843	68.98	165.04	8.4	16.3
1118.0	36.0	12.5	130	9.1	1.05	9.12	47060	101.44	164.84	8.4	16.3
1119.0	50.0	10.7	130	9.1	0.93	9.14	47215	73.04	164.55	8.4	16.3
1120.0	56.2	10.4	129	9.1	0.90	9.16	47353	64.92	164.24	8.4	16.3
1121.0	51.4	12.1	129	9.1	0.95	9.18	47504	71.01	163.94	8.4	16.3
1122.0	44.4	8.8	129	9.1	0.92	9.20	47678	82.17	163.69	8.4	16.3
1123.0	47.4	15.5	130	9.1	1.03	9.22	47842	77.10	163.42	8.4	16.3
1124.0	51.4	28.9	130	9.1	1.18	9.24	47994	71.01	163.13	8.4	16.3
1125.0	50.0	25.4	129	9.1	1.15	9.26	48149	73.04	162.85	8.4	16.3
1126.0	58.1	21.7	128	9.1	1.06	9.28	48282	62.90	162.54	8.4	16.3
1127.0	44.4	20.1	129	9.2	1.10	9.30	48456	82.17	162.29	8.4	16.3
1128.0	60.0	11.3	129	9.3	0.88	9.32	48585	60.87	161.98	8.4	16.3
1129.0	50.0	10.9	129	9.3	0.91	9.34	48740	73.04	161.71	8.4	16.3
1130.0	48.6	10.8	131	9.3	0.92	9.36	48901	75.07	161.45	8.4	16.3
1131.0	46.8	10.5	131	9.3	0.92	9.38	49069	78.11	161.19	8.4	16.3
1132.0	58.1	9.2	131	9.3	0.85	9.40	49204	62.90	160.90	8.4	16.3
1133.0	49.3	8.6	131	9.3	0.87	9.42	49363	74.05	160.63	8.4	16.3
1134.0	55.4	10.9	130	9.3	0.89	9.44	49504	65.94	160.35	8.4	16.4
1135.0	55.4	18.0	131	9.3	1.00	9.45	49646	65.94	160.06	8.4	16.4
1136.0	51.4	19.2	131	9.3	1.04	9.47	49798	71.01	159.80	8.4	16.4
1137.0	32.7	16.3	131	9.3	1.12	9.50	50038	111.59	159.65	8.4	16.4
1138.0	35.0	20.0	131	9.3	1.16	9.53	50263	104.34	159.49	8.4	16.4
1139.0	48.0	29.8	128	9.3	1.18	9.55	50422	76.08	159.24	8.4	16.4
1140.0	46.2	31.6	128	9.3	1.21	9.58	50589	79.13	159.00	8.4	16.4
1141.0	50.0	30.8	129	9.3	1.18	9.60	50743	73.04	158.75	8.4	16.4
1142.0	46.2	29.9	129	9.3	1.20	9.62	50911	79.13	158.52	8.4	16.4
1143.0	58.1	29.7	128	9.3	1.12	9.63	51043	62.90	158.23	8.4	16.4
1144.0	48.6	29.1	129	9.3	1.17	9.65	51202	75.07	157.99	8.4	16.4
1145.0	47.4	32.0	129	9.3	1.21	9.68	51366	77.10	157.76	8.4	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
1146.0	40.9	32.8	129	9.3	1.27	9.70	51556	89.27	157.56	8.4	16.4
1147.0	42.9	30.7	129	9.3	1.23	9.72	51736	85.21	157.35	8.4	16.4
1148.0	40.9	26.0	120	9.3	1.17	9.75	51912	89.27	157.15	8.4	16.4
1149.0	45.0	24.6	129	9.3	1.14	9.77	52084	81.16	156.93	8.4	16.4
1150.0	48.6	24.6	129	9.3	1.12	9.79	52243	75.07	156.70	8.4	16.4
1151.0	40.9	23.9	129	9.3	1.16	9.82	52433	89.27	156.50	8.4	16.4
1152.0	43.4	23.7	129	9.3	1.14	9.84	52612	84.20	156.30	8.4	16.4
1153.0	45.6	25.7	130	9.3	1.15	9.86	52783	80.14	156.08	8.4	16.4
1154.0	41.4	26.9	130	9.3	1.20	9.88	52971	88.26	155.89	8.4	16.4
1155.0	45.0	26.1	130	9.3	1.16	9.91	53144	81.16	155.67	8.4	16.4
1156.0	44.4	25.8	130	9.3	1.16	9.93	53320	82.17	155.47	8.4	16.4
1157.0	43.6	22.3	129	9.3	1.12	9.95	53497	83.69	155.26	8.4	16.4
1158.0	47.4	22.0	129	9.3	1.09	9.97	53660	77.10	155.04	8.4	16.4
1159.0	40.4	22.7	129	9.3	1.15	10.00	53852	90.29	154.86	8.4	16.4
1160.0	32.4	23.1	129	9.3	1.22	10.03	54090	112.60	154.74	8.4	16.4
1161.0	40.9	22.5	129	9.3	1.14	10.05	54280	89.27	154.56	8.4	16.4
1162.0	39.6	23.0	129	9.3	1.16	10.08	54476	92.31	154.39	8.4	16.4
1163.0	38.7	22.5	129	9.3	1.16	10.10	54676	94.34	154.22	8.4	16.4
1164.0	40.9	22.6	130	9.3	1.15	10.13	54867	89.27	154.04	8.4	16.4
1165.0	39.6	22.2	130	9.3	1.15	10.15	55064	92.31	153.87	8.4	16.4
1166.0	34.3	19.3	120	9.5	1.11	10.18	55274	106.52	153.74	8.4	16.4
1167.0	20.6	15.4	130	9.5	1.19	10.23	55653	177.53	153.81	8.4	16.4
1168.0	21.3	25.4	129	9.5	1.34	10.28	56016	171.44	153.86	8.4	16.4
1169.0	21.3	27.8	129	9.7	1.35	10.33	56379	171.44	153.90	8.4	16.4
1170.0	18.9	27.2	130	9.7	1.37	10.38	56790	192.74	154.01	8.4	16.4
1171.0	22.6	28.2	119	9.7	1.31	10.42	57105	161.30	154.03	8.4	16.4
1172.0	32.1	28.7	130	9.7	1.24	10.45	57347	113.62	153.92	8.4	16.4
1173.0	36.0	29.6	131	9.7	1.22	10.48	57565	101.44	153.78	8.4	16.4
1174.0	35.0	29.3	131	9.7	1.23	10.51	57789	104.49	153.65	8.4	16.4
1175.0	32.7	30.2	131	9.7	1.26	10.54	58029	111.59	153.53	8.4	16.4
1176.0	19.3	26.9	129	9.9	1.34	10.59	58430	189.36	153.63	8.4	16.4
1177.0	22.6	27.3	128	9.9	1.30	10.64	58769	161.30	153.65	8.4	16.4
1178.0	22.8	27.2	129	9.9	1.30	10.68	59109	160.28	153.67	8.4	16.4
1179.0	21.2	27.2	129	9.9	1.32	10.73	59475	172.46	153.72	8.4	16.5
1180.0	22.8	26.7	129	9.9	1.29	10.77	59815	160.28	153.73	8.4	16.5
1181.0	20.8	26.3	129	9.9	1.31	10.82	60187	175.50	153.79	8.4	16.5
1182.0	20.5	24.9	129	10.1	1.27	10.87	60564	178.54	153.86	8.4	16.5
1183.0	23.1	26.0	130	10.1	1.26	10.91	60902	158.25	153.87	8.4	16.5
1184.0	21.2	26.4	130	10.1	1.29	10.96	61270	172.46	153.92	8.4	16.5
1185.0	21.7	26.9	124	10.1	1.27	11.01	61614	168.40	153.95	8.4	16.5
1186.0	23.2	27.2	130	10.1	1.27	11.05	61948	157.24	153.96	8.4	16.5
1187.0	25.5	27.4	129	10.1	1.25	11.09	62252	143.04	153.94	8.4	16.5
1188.0	24.5	28.1	129	10.1	1.27	11.13	62569	149.12	153.92	8.4	16.5
1189.0	22.5	26.4	129	10.1	1.27	11.17	62913	162.31	153.94	8.4	16.5
1190.0	20.9	25.5	129	10.1	1.27	11.22	63282	174.48	154.00	8.4	16.5
1191.0	27.1	28.1	130	10.1	1.24	11.26	63570	134.92	153.95	8.4	16.5
1192.0	24.5	27.4	129	10.1	1.26	11.30	63887	149.12	153.94	8.4	16.5
1193.0	24.5	28.4	130	10.1	1.27	11.34	64204	149.12	153.92	8.4	16.5
1194.0	23.1	29.4	130	10.1	1.30	11.38	64541	158.25	153.93	8.4	16.5
1195.0	360.0	45.5	137	10.1	0.62	11.39	64564	10.14	153.57	8.4	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1196.0	15.0	44.0	135	10.1	1.61	11.45	65102	243.47	153.80	8.4	16.5
1197.0	20.8	42.5	128	10.1	1.48	11.50	65472	175.50	153.85	8.4	16.5
1198.0	17.0	40.8	129	10.1	1.52	11.56	65927	215.06	154.01	8.4	16.5
1199.0	18.4	40.1	130	10.1	1.49	11.61	66352	198.83	154.12	8.4	16.5
1200.0	23.5	37.0	127	10.1	1.38	11.66	66675	155.21	154.12	8.4	16.5
1201.0	33.3	33.9	132	10.1	1.25	11.69	66912	109.56	154.01	8.4	16.5
1202.0	29.8	33.9	132	10.1	1.28	11.72	67179	122.75	153.93	8.4	16.5
1203.0	28.1	31.9	130	10.1	1.27	11.75	67457	129.85	153.87	8.4	16.5
1204.0	31.9	31.7	130	10.1	1.23	11.79	67701	114.63	153.77	8.4	16.5
1205.0	27.3	28.4	128	10.1	1.24	11.82	67982	133.91	153.73	8.4	16.5
1206.0	41.9	26.4	131	10.1	1.10	11.85	68169	87.24	153.56	8.4	16.5
1207.0	32.1	27.8	128	10.1	1.18	11.88	68409	113.62	153.46	8.4	16.5
1208.0	37.1	25.6	128	10.1	1.12	11.90	68615	98.40	153.33	8.4	16.5
1209.0	35.0	26.1	128	10.1	1.14	11.93	68835	104.49	153.21	8.4	16.5
1210.0	33.6	26.9	128	10.1	1.16	11.96	69063	108.55	153.10	8.4	16.5
1211.0	35.3	27.3	128	10.1	1.15	11.99	69281	103.47	152.98	8.4	16.5
1212.0	32.7	25.6	128	10.1	1.15	12.02	69515	111.59	152.87	8.4	16.5
1213.0	33.6	26.2	128	10.1	1.15	12.05	69743	108.55	152.77	8.4	16.5
1214.0	39.1	26.4	128	10.1	1.11	12.08	69940	93.33	152.62	8.4	16.5
1215.0	29.3	27.7	121	10.1	1.19	12.11	70189	124.78	152.55	8.4	16.5
1216.0	31.6	31.9	128	10.1	1.24	12.14	70433	115.65	152.47	8.4	16.5
1217.0	38.3	31.0	128	10.1	1.17	12.17	70634	95.36	152.33	8.4	16.5
1218.0	32.7	31.8	128	10.1	1.23	12.20	70869	111.59	152.23	8.4	16.5
1219.0	39.6	31.8	128	10.1	1.17	12.23	71064	92.31	152.09	8.4	16.5
1220.0	33.0	30.5	128	10.1	1.21	12.26	71296	110.57	151.99	8.4	16.5
1221.0	33.3	31.8	128	10.1	1.22	12.29	71528	109.56	151.89	8.4	16.5
1222.0	35.3	30.7	128	10.1	1.19	12.31	71746	103.47	151.77	8.4	16.5
1223.0	32.7	32.4	128	10.1	1.23	12.34	71981	111.59	151.67	8.4	16.5
1224.0	21.6	23.7	86	10.1	1.14	12.39	72221	169.41	151.72	8.4	16.5
1225.0	36.0	27.9	131	10.1	1.16	12.42	72438	101.44	151.60	8.4	16.5
1226.0	34.0	27.9	128	10.1	1.17	12.45	72665	107.53	151.49	8.4	16.6
1227.0	37.1	27.7	128	10.1	1.14	12.47	72872	98.40	151.37	8.4	16.6
1228.0	35.0	26.4	128	10.1	1.14	12.50	73093	104.49	151.26	8.4	16.6
1229.0	34.0	27.5	128	10.1	1.17	12.53	73319	107.53	151.16	8.4	16.6
1230.0	31.6	28.0	129	10.1	1.19	12.56	73564	115.65	151.07	8.4	16.6
1231.0	27.9	28.0	129	10.1	1.23	12.60	73840	130.86	151.03	8.4	16.6
1232.0	32.7	28.5	129	10.1	1.19	12.63	74076	111.59	150.93	8.4	16.6
1233.0	26.7	29.2	128	10.1	1.25	12.67	74365	136.95	150.90	8.4	16.6
1234.0	25.0	31.9	121	10.1	1.29	12.71	74656	146.08	150.89	8.4	16.6
1235.0	34.0	36.2	128	10.1	1.26	12.74	74881	107.53	150.79	8.4	16.6
1236.0	30.5	35.6	128	10.1	1.29	12.77	75132	119.70	150.72	8.4	16.6
1237.0	29.8	37.2	128	10.1	1.31	12.80	75391	122.75	150.65	8.4	16.6
1238.0	23.4	36.9	128	10.1	1.38	12.85	75719	156.22	150.67	8.4	16.6
1239.0	29.8	37.2	128	10.1	1.31	12.88	75978	122.75	150.60	8.4	16.6
1240.0	24.8	37.6	129	10.1	1.36	12.92	76288	147.09	150.60	8.4	16.6
1241.0	35.3	39.0	129	10.1	1.27	12.95	76507	103.47	150.49	8.4	16.6
1242.0	28.3	39.4	129	10.1	1.34	12.98	76780	128.83	150.44	8.4	16.6
1243.0	31.9	25.2	113	10.1	1.12	13.02	76993	114.63	150.36	8.4	16.6
1244.0	35.6	18.6	113	10.1	1.00	13.04	77183	102.46	150.25	8.4	16.6
1245.0	33.3	23.3	128	10.1	1.11	13.07	77412	109.56	150.16	8.4	16.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1246.0	35.6	23.0	128	10.1	1.09	13.10	77628	102.46	150.05	8.4	16.6
1247.0	37.1	24.4	128	10.1	1.10	13.13	77835	98.40	149.93	8.4	16.6
1248.0	32.0	23.0	128	10.1	1.12	13.16	78075	114.13	149.85	8.4	16.6
1249.0	30.0	23.3	128	10.1	1.14	13.19	78332	121.73	149.79	8.4	16.6
1250.0	34.6	24.1	128	10.1	1.11	13.22	78554	105.50	149.69	8.4	16.6
1251.0	34.3	23.7	128	10.1	1.11	13.25	78779	106.52	149.60	8.4	16.6
1252.0	35.0	23.5	129	10.1	1.11	13.28	79000	104.49	149.49	8.4	16.6
1253.0	18.0	1.2	126	10.1	0.71	13.34	79420	202.89	149.61	8.4	16.6
1254.0	20.0	24.2	126	10.1	1.26	13.39	79799	182.60	149.69	8.4	16.6
1255.0	19.5	25.2	127	10.1	1.28	13.44	80190	187.67	149.77	8.4	16.6
1256.0	15.4	26.2	127	10.1	1.36	13.50	80685	237.38	149.96	8.4	16.6
1257.0	10.4	27.2	77	10.1	1.34	13.60	81128	352.01	150.41	8.4	16.6
1258.0	7.7	33.6	46	10.1	1.36	13.73	81487	474.76	151.12	8.4	16.6
1259.0	23.5	26.2	126	10.1	1.24	13.77	81808	155.21	151.13	8.4	16.6
1260.0	16.4	25.5	127	10.1	1.33	13.83	82270	222.16	151.28	8.4	16.6
1261.0	18.6	25.6	113	10.1	1.27	13.89	82636	196.80	151.38	8.4	16.6
1262.0	17.3	25.5	112	10.1	1.28	13.94	83025	211.00	151.51	8.4	16.6
1263.0	20.0	29.6	105	10.1	1.28	13.99	83338	182.60	151.58	8.4	16.6
1264.0	18.3	29.2	105	10.1	1.30	14.05	83682	199.85	151.68	8.4	16.6
1265.0	21.2	31.3	105	10.1	1.28	14.10	83978	172.46	151.73	8.4	16.6
1266.0	16.1	31.3	105	10.1	1.36	14.16	84367	226.22	151.89	8.4	16.6
1267.0	18.2	31.3	105	10.1	1.32	14.21	84712	200.86	151.99	8.4	16.6
1268.0	15.9	23.8	104	10.1	1.26	14.28	85105	229.26	152.16	8.4	16.6
1269.0	28.8	23.2	104	10.1	1.10	14.31	85321	126.81	152.11	8.4	16.6
1270.0	18.8	24.8	104	10.1	1.23	14.36	85654	194.77	152.20	8.4	16.6
1271.0	16.7	24.3	104	10.1	1.25	14.42	86028	218.11	152.34	8.4	16.6
1272.0	24.7	24.8	104	10.1	1.16	14.46	86280	148.11	152.33	8.4	16.6
1273.0	22.6	23.9	123	10.1	1.21	14.51	86606	161.30	152.35	8.4	16.6
1274.0	22.0	25.0	124	10.1	1.24	14.55	86945	166.37	152.38	8.4	16.7
1275.0	22.0	25.5	124	10.1	1.25	14.60	87285	166.37	152.41	8.4	16.7
1276.0	20.9	25.5	124	10.1	1.26	14.65	87641	174.48	152.45	8.4	16.7
1277.0	22.0	26.0	124	10.1	1.25	14.69	87980	166.37	152.48	8.4	16.7
1278.0	15.6	26.5	124	10.1	1.35	14.76	88458	234.34	152.66	8.4	16.7
1279.0	10.9	26.9	124	10.1	1.45	14.85	89141	334.77	153.04	8.4	16.7
1280.0	11.8	27.3	124	10.1	1.44	14.93	89773	309.41	153.36	8.4	16.7
1281.0	11.3	27.3	124	10.1	1.45	15.02	90430	322.59	153.72	8.4	16.7
1282.0	13.8	27.4	123	10.1	1.39	15.09	90963	263.76	153.95	8.4	16.7
1283.0	18.8	29.7	127	10.1	1.35	15.15	91369	194.77	154.03	8.4	16.7
1284.0	13.8	31.3	128	10.2	1.44	15.22	91925	264.77	154.26	8.4	16.7
1285.0	15.2	34.2	128	10.2	1.45	15.28	92431	240.42	154.44	8.4	16.7
1286.0	16.3	34.7	128	10.2	1.44	15.35	92902	224.19	154.58	8.4	16.7
1287.0	17.5	35.4	129	10.2	1.43	15.40	93344	208.98	154.70	8.4	16.7
1288.0	13.5	35.6	129	10.2	1.51	15.48	93916	269.84	154.93	8.4	16.7
1289.0	13.8	34.8	129	10.2	1.49	15.55	94477	264.77	155.16	8.4	16.7
1290.0	13.4	35.0	130	10.2	1.50	15.62	95057	271.87	155.40	8.4	16.7
1291.0	12.9	35.0	130	10.2	1.51	15.70	95658	282.02	155.66	8.4	16.7
1292.0	15.4	40.1	128	10.2	1.52	15.77	96157	237.67	155.83	8.4	16.7
1293.0	15.5	37.4	128	10.2	1.49	15.83	96653	236.37	155.99	8.4	16.7
1294.0	8.8	28.9	127	10.2	1.53	15.94	97519	413.89	156.51	8.4	16.7
1295.0	14.3	29.1	128	10.2	1.41	16.01	98058	255.64	156.72	8.4	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1296.0	16.2	29.3	129	10.2	1.37	16.08	98534	225.21	156.85	8.4	16.7
1297.0	21.4	29.3	129	10.2	1.30	16.12	98894	170.43	156.88	8.4	16.7
1298.0	50.0	28.6	129	10.2	1.06	16.14	99048	73.04	156.71	8.4	16.7
1299.0	41.9	27.7	129	10.2	1.10	16.17	99233	87.24	156.57	8.4	16.7
1300.0	60.0	26.1	96	10.2	0.90	16.18	99329	60.87	156.38	8.4	16.7
1301.0	73.5	27.8	127	10.2	0.94	16.20	99433	49.71	156.17	8.4	16.7
1302.0	52.2	23.9	112	10.2	0.96	16.22	99562	70.00	155.99	8.4	16.7
1303.0	60.0	28.7	128	10.2	1.01	16.23	99690	60.87	155.80	8.4	16.7
1304.0	62.1	29.4	127	10.2	1.00	16.25	99814	58.84	155.61	8.4	16.7
1305.0	59.0	28.8	128	10.2	1.01	16.27	99943	61.88	155.42	8.4	16.7
1306.0	60.0	28.5	127	10.2	1.00	16.28	100071	60.87	155.24	8.4	16.7
1307.0	65.5	28.5	127	10.2	0.98	16.30	100188	55.79	155.04	8.4	16.7
1308.0	78.3	28.8	127	10.2	0.93	16.31	100285	46.66	154.83	8.4	16.7
1309.0	57.1	27.9	127	10.2	1.01	16.33	100419	63.91	154.65	8.4	16.7
1310.0	47.4	27.4	95	10.2	0.97	16.35	100538	77.10	154.49	8.4	16.7
1311.0	73.5	35.5	128	10.2	1.01	16.36	100643	49.71	154.29	8.4	16.7
1312.0	81.8	37.1	128	10.2	0.99	16.38	100737	44.64	154.07	8.4	16.7
1313.0	62.1	37.5	126	10.2	1.07	16.39	100859	58.84	153.89	8.4	16.7
1314.0	61.0	37.5	127	10.2	1.08	16.41	100984	59.85	153.70	8.4	16.7
1315.0	62.1	36.7	127	10.2	1.07	16.42	101107	58.84	153.52	8.4	16.7
1316.0	70.6	36.8	127	10.2	1.03	16.44	101215	51.74	153.32	8.4	16.7
1317.0	35.0	34.0	127	10.2	1.21	16.47	101434	104.49	153.22	8.4	16.7
1318.0	42.4	29.7	127	10.2	1.11	16.49	101614	86.23	153.09	8.4	16.7
1319.0	53.7	28.5	127	10.2	1.03	16.51	101756	67.97	152.93	8.4	16.7
1320.0	25.7	6.3	92	10.2	0.81	16.55	101972	142.02	152.91	8.4	16.7
1321.0	33.0	20.9	114	10.2	1.05	16.58	102180	110.57	152.83	8.4	16.7
1322.0	55.4	29.3	125	10.2	1.03	16.60	102315	65.94	152.66	8.4	16.7
1323.0	59.0	29.6	125	10.2	1.01	16.61	102443	61.88	152.49	8.4	16.8
1324.0	62.1	30.7	126	10.2	1.01	16.63	102564	58.84	152.31	8.4	16.8
1325.0	63.2	30.6	126	10.2	1.00	16.65	102684	57.82	152.13	8.4	16.8
1326.0	41.4	29.3	125	10.2	1.11	16.67	102865	88.26	152.00	8.4	16.8
1327.0	53.7	29.9	127	10.2	1.05	16.69	103007	67.97	151.84	8.4	16.8
1328.0	62.1	30.2	130	10.2	1.01	16.70	103132	58.84	151.67	8.4	16.8
1329.0	90.0	30.7	130	10.2	0.92	16.72	103219	40.58	151.46	8.4	16.8
1330.0	40.9	26.9	94	10.2	1.01	16.74	103357	89.27	151.34	8.4	16.8
1331.0	80.0	20.0	115	10.2	0.81	16.75	103443	45.65	151.14	8.4	16.8
1332.0	57.1	20.5	115	10.2	0.90	16.77	103564	63.91	150.97	8.4	16.8
1333.0	48.0	20.9	115	10.2	0.95	16.79	103708	76.08	150.83	8.4	16.8
1334.0	48.6	20.2	115	10.2	0.94	16.81	103849	75.07	150.69	8.4	16.8
1335.0	90.0	20.3	114	10.2	0.79	16.82	103926	40.58	150.48	8.4	16.8
1336.0	45.0	22.0	114	10.2	0.98	16.84	104078	81.16	150.35	8.4	16.8
1337.0	36.0	23.4	140	10.2	1.11	16.87	104311	101.44	150.26	8.4	16.8
1338.0	52.2	22.1	139	10.2	0.99	16.89	104471	70.00	150.11	8.4	16.8
1339.0	42.9	23.0	120	10.2	1.02	16.91	104638	85.21	149.99	8.4	16.8
1340.0	40.9	19.8	116	10.2	0.98	16.94	104808	89.27	149.88	8.4	16.8
1341.0	38.3	18.1	114	10.2	0.97	16.97	104986	95.36	149.78	8.4	16.8
1342.0	27.5	22.0	114	10.2	1.11	17.00	105235	132.89	149.75	8.4	16.8
1343.0	56.2	21.6	115	10.2	0.92	17.02	105358	64.92	149.59	8.4	16.8
1344.0	31.3	15.8	113	10.2	0.98	17.05	105574	116.66	149.53	8.4	16.8
1345.0	45.0	33.8	115	10.2	1.10	17.07	105727	81.16	149.40	8.4	16.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1346.0	50.7	32.2	114	10.2	1.06	17.09	105862	72.03	149.26	8.4	16.8
1347.0	53.7	31.3	114	10.2	1.03	17.11	105989	67.97	149.11	8.4	16.8
1348.0	57.1	32.6	114	10.2	1.02	17.13	106109	63.91	148.95	8.4	16.8
1349.0	59.0	28.6	107	10.2	0.96	17.15	106218	61.88	148.79	8.4	16.8
1350.0	58.1	21.4	116	10.2	0.91	17.16	106337	62.90	148.64	8.4	16.8
1351.0	67.9	21.4	116	10.2	0.87	17.18	106439	53.77	148.47	8.4	16.8
1352.0	81.8	20.8	115	10.2	0.82	17.19	106524	44.64	148.28	8.4	16.8
1353.0	90.0	19.6	115	10.2	0.78	17.20	106600	40.58	148.08	8.4	16.8
1354.0	72.0	21.7	115	10.2	0.86	17.22	106697	50.72	147.90	8.4	16.8
1355.0	28.6	22.1	116	10.2	1.10	17.25	106939	127.82	147.87	8.4	16.8
1356.0	10.8	23.1	114	10.2	1.36	17.34	107570	337.81	148.21	8.4	16.8
1357.0	21.6	24.5	119	10.2	1.21	17.39	107901	169.41	148.25	8.4	16.8
1358.0	21.8	25.0	126	10.2	1.23	17.44	108247	167.38	148.28	8.4	16.8
1359.0	17.1	24.5	122	10.2	1.28	17.49	108676	214.05	148.40	8.4	16.8
1360.0	59.0	24.3	125	10.2	0.96	17.51	108803	61.88	148.25	8.4	16.8
1361.0	51.4	25.5	126	10.2	1.01	17.53	108950	71.01	148.11	8.4	16.8
1362.0	23.5	26.7	126	10.2	1.23	17.57	109271	155.21	148.12	8.4	16.8
1363.0	38.3	25.5	126	10.2	1.09	17.60	109468	95.36	148.03	8.4	16.8
1364.0	41.4	25.8	127	10.2	1.07	17.62	109651	88.26	147.92	8.4	16.8
1365.0	24.1	25.4	127	10.2	1.19	17.66	109942	139.99	147.91	8.4	16.8
1366.0	30.0	24.5	126	10.3	1.13	17.69	110195	121.73	147.86	8.4	16.8
1367.0	30.5	24.9	127	10.3	1.13	17.73	110444	119.70	147.81	8.4	16.8
1368.0	14.1	28.8	122	10.3	1.38	17.80	110967	259.70	148.01	8.4	16.8
1369.0	28.1	31.1	127	10.3	1.23	17.83	111239	129.85	147.98	8.4	16.8
1370.0	24.2	30.3	127	10.3	1.26	17.88	111554	151.15	147.98	8.4	16.8
1371.0	26.1	30.0	126	10.3	1.23	17.91	111845	139.99	147.97	8.4	16.8
1372.0	36.7	29.9	126	10.3	1.14	17.94	112051	99.42	147.88	8.4	16.8
1373.0	39.6	28.8	126	10.3	1.10	17.97	112241	92.31	147.79	8.4	16.8
1374.0	50.0	29.1	124	10.3	1.04	17.99	112390	73.04	147.65	8.4	16.9
1375.0	28.6	29.1	124	10.3	1.19	18.02	112650	127.82	147.62	8.4	16.9
1376.0	39.6	28.7	129	10.3	1.11	18.05	112846	92.31	147.52	8.4	16.9
1377.0	40.0	22.0	118	10.3	1.01	18.07	113023	91.30	147.43	8.4	16.9
1378.0	45.0	20.9	118	10.3	0.97	18.09	113180	81.16	147.31	8.4	16.9
1379.0	34.0	22.2	114	10.3	1.05	18.12	113382	107.53	147.24	8.4	16.9
1380.0	29.3	23.1	113	10.3	1.09	18.16	113614	124.78	147.20	8.4	16.9
1381.0	17.6	24.3	113	10.3	1.24	18.21	114002	207.96	147.31	8.4	16.9
1382.0	22.2	26.2	112	10.3	1.20	18.26	114304	164.34	147.34	8.4	16.9
1383.0	44.4	26.7	116	10.3	1.03	18.28	114461	82.17	147.22	8.4	16.9
1384.0	46.8	26.1	129	10.3	1.04	18.30	114626	78.11	147.11	8.4	16.9
1385.0	27.9	27.7	101	10.3	1.13	18.34	114843	130.86	147.08	8.4	16.9
1386.0	36.0	27.4	117	10.3	1.10	18.37	115038	101.44	147.00	8.4	16.9
1387.0	32.7	26.1	112	10.3	1.10	18.40	115244	111.59	146.94	8.4	16.9
1388.0	22.6	33.8	115	10.3	1.29	18.44	115550	161.30	146.96	8.4	16.9
1389.0	28.6	36.8	126	10.3	1.28	18.48	115813	127.82	146.93	8.4	16.9
1390.0	43.9	35.2	127	10.3	1.14	18.50	115986	83.18	146.82	8.4	16.9
1391.0	44.4	36.4	129	10.3	1.16	18.52	116160	82.17	146.71	8.4	16.9
1392.0	40.4	36.1	128	10.3	1.18	18.55	116350	90.29	146.62	8.4	16.9
1393.0	43.9	35.5	126	10.3	1.15	18.57	116522	83.18	146.51	8.4	16.9
1394.0	37.9	36.8	128	10.3	1.20	18.60	116724	96.37	146.43	8.4	16.9
1395.0	31.9	37.2	129	10.3	1.26	18.63	116967	114.63	146.37	8.4	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1396.0	27.7	36.8	130	10.3	1.30	18.66	117249	131.88	146.35	8.4	16.9
1397.0	39.1	36.1	132	10.3	1.20	18.69	117452	93.33	146.26	8.4	16.9
1398.0	36.7	30.6	97	10.3	1.07	18.72	117611	99.42	146.18	8.4	16.9
1399.0	41.4	29.3	129	10.3	1.11	18.74	117798	88.26	146.08	8.4	16.9
1400.0	39.1	29.1	130	10.3	1.12	18.77	117997	93.33	145.99	8.4	16.9

BIT NUMBER	3	IADC CODE	4	INTERVAL	1400.0- 1409.4
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	22000.00	TRIP TIME	5.0	BIT RUN	9.4
TOTAL HOURS	2.30	TOTAL TURNS	13529	CONDITION	T0 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1400.2	2.9	7.0	99	10.3	1.31	0.07	406	1248	202548	8.4	16.9
1400.4	2.1	12.7	99	10.3	1.58	0.17	983	1775	102162	8.4	16.9
1400.6	2.1	19.0	99	10.3	1.75	0.26	1561	1775	68699	8.4	16.9
1400.8	1.6	27.2	98	10.3	2.00	0.39	2309	2313	52103	8.4	16.9
1401.0	0.7	11.3	82	10.3	1.72	0.66	3623	4874	42657	8.4	16.9
1401.2	2.1	10.8	92	10.3	1.50	0.75	4148	1735	35837	8.4	16.9
1401.4	1.6	10.0	93	10.3	1.53	0.87	4827	2222	31035	8.4	16.9
1401.6	2.1	9.9	93	10.3	1.47	0.97	5348	1704	27368	8.4	16.9
1401.8	1.9	11.1	94	10.3	1.53	1.07	5933	1902	24539	8.4	16.9
1402.0	3.0	10.3	93	10.3	1.41	1.14	6312	1238	22209	8.4	16.9
1402.2	3.7	10.0	94	10.3	1.35	1.19	6617	984	20279	8.4	16.9
1402.4	4.4	10.0	95	10.3	1.32	1.24	6878	837	18659	8.4	16.9
1402.6	6.2	8.6	94	10.3	1.20	1.27	7061	593	17269	8.4	16.9
1402.8	14.1	7.9	92	10.3	1.00	1.28	7139	259	16054	8.4	16.9
1403.0	24.0	7.5	89	10.3	0.87	1.29	7184	152	14994	8.4	16.9
1403.2	18.0	7.1	63	10.3	0.85	1.30	7226	203	14070	8.4	16.9
1403.4	7.7	11.1	106	10.3	1.25	1.33	7389	472	13270	8.4	16.9
1403.6	6.5	12.0	106	10.3	1.31	1.36	7585	563	12564	8.4	16.9
1403.8	4.8	11.6	106	10.3	1.37	1.40	7850	761	11943	8.4	16.9
1404.0	26.7	11.9	104	10.3	0.98	1.41	7896	137	11352	8.4	16.9
1404.2	23.2	12.6	99	10.3	1.01	1.42	7948	157	10819	8.4	16.9
1404.6	65.5	11.9	98	10.3	0.76	1.42	7983	56	9883	8.4	16.9
1405.0	33.5	11.3	102	10.3	0.91	1.44	8057	109	9101	8.4	16.9
1405.2	11.8	12.0	106	10.3	1.17	1.45	8164	309	8763	8.4	16.9
1405.4	25.7	12.3	105	10.3	1.00	1.46	8213	142	8444	8.4	16.9
1405.6	15.3	13.0	102	10.3	1.12	1.47	8293	238	8151	8.4	16.9
1405.8	13.6	11.9	105	10.3	1.13	1.49	8385	269	7879	8.4	16.9
1406.0	6.1	11.9	106	10.3	1.32	1.52	8595	604	7637	8.4	16.9
1406.2	3.5	10.9	105	10.3	1.42	1.58	8961	1055	7424	8.4	16.9
1406.4	2.8	10.4	105	10.3	1.45	1.65	9405	1283	7232	8.4	16.9
1406.6	2.8	12.1	106	10.3	1.50	1.72	9857	1304	7053	8.4	16.9
1406.8	2.5	11.6	106	10.3	1.51	1.80	10358	1435	6887	8.4	16.9
1407.0	3.6	14.6	106	10.3	1.52	1.86	10712	1014	6720	8.4	16.9
1407.2	16.7	15.8	108	10.3	1.17	1.87	10790	218	6539	8.4	16.9
1407.4	18.9	15.0	107	10.3	1.13	1.88	10858	193	6368	8.4	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1416.2	26.7	24.2	92	10.3	1.14	0.81	4904	137	3119	8.4	16.9
1416.4	20.6	23.9	99	10.3	1.23	0.82	4962	178	3035	8.4	16.9
1416.6	7.3	24.7	102	10.3	1.53	0.84	5129	497	2964	8.4	16.9
1416.8	23.2	24.8	104	10.3	1.22	0.85	5182	157	2889	8.4	16.9
1417.0	9.2	23.7	102	10.3	1.45	0.87	5315	396	2823	8.4	16.9
1417.2	2.5	24.3	101	10.3	1.82	0.96	5804	1466	2788	8.4	16.9
1417.4	2.6	31.8	102	10.3	1.96	1.03	6269	1395	2753	8.4	16.9
1417.6	2.4	32.9	102	10.3	2.01	1.12	6782	1537	2724	8.4	16.9
1417.8	1.7	31.2	101	10.3	2.08	1.24	7509	2186	2711	8.4	16.9
1418.0	1.7	30.6	101	10.3	2.07	1.36	8238	2191	2699	8.4	16.9
1418.2	1.9	30.0	101	10.3	2.02	1.46	8881	1938	2681	8.4	16.9
1418.4	1.8	30.3	101	10.3	2.05	1.57	9569	2069	2668	8.4	16.9
1418.6	4.3	29.8	102	10.3	1.78	1.62	9856	857	2629	8.4	16.9
1418.8	17.1	29.0	104	10.3	1.37	1.63	9929	213	2577	8.4	16.9
1418.9	3.7	27.5	81	10.3	1.71	1.66	10059	984	2560	8.4	16.9

BIT NUMBER	4	IADC CODE	517	INTERVAL	1418.9- 1727.8
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	7.5	BIT RUN	308.9
TOTAL HOURS	18.08	TOTAL TURNS	76827	CONDITION	T2 B2 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1419.0	36.0	0.1	72	10.3	0.36	0.00	12	101	359201	8.4	16.9
1420.0	15.1	5.2	69	10.3	0.81	0.07	284	241	32874	8.4	16.9
1421.0	15.4	19.2	76	10.3	1.10	0.13	581	237	17333	8.4	16.9
1422.0	20.0	24.1	76	10.3	1.10	0.18	809	183	11801	8.4	16.9
1423.0	20.0	24.1	78	10.3	1.10	0.23	1043	183	8967	8.4	16.9
1424.0	14.4	21.9	80	10.3	1.17	0.30	1375	254	7258	8.4	16.9
1425.0	15.5	27.3	80	10.3	1.22	0.37	1684	236	6107	8.4	16.9
1426.0	11.0	27.4	79	10.3	1.31	0.46	2115	331	5294	8.4	17.0
1427.0	9.4	29.4	74	10.3	1.36	0.56	2585	387	4688	8.4	17.0
1428.0	10.2	30.9	79	10.3	1.37	0.66	3048	358	4212	8.4	17.0
1429.0	29.8	29.1	78	10.3	1.06	0.70	3206	123	3807	8.4	17.0
1430.0	18.1	25.5	78	10.3	1.15	0.75	3464	202	3482	8.4	17.0
1431.0	16.5	27.9	78	10.3	1.20	0.81	3746	221	3213	8.4	17.0
1432.0	20.7	28.1	78	10.3	1.14	0.86	3972	177	2981	8.4	17.0
1433.0	22.4	28.5	78	10.3	1.13	0.90	4180	163	2781	8.4	17.0
1434.0	76.6	24.6	78	10.3	0.76	0.92	4241	48	2600	8.4	17.0
1435.0	90.0	19.6	74	10.3	0.66	0.93	4290	41	2441	8.4	17.0
1436.0	41.4	25.5	65	10.3	0.88	0.95	4384	88	2304	8.4	17.0
1437.0	39.1	27.1	77	10.3	0.96	0.98	4502	93	2181	8.4	17.0
1438.0	17.4	29.1	77	10.3	1.20	1.04	4766	210	2078	8.4	17.0
1439.0	4.9	29.5	67	10.3	1.51	1.24	5591	752	2012	8.4	17.0
1440.0	20.1	28.3	77	10.3	1.15	1.29	5820	182	1926	8.4	17.0
1441.0	8.7	28.7	77	10.3	1.38	1.41	6346	418	1857	8.4	17.0
1442.0	11.2	27.3	77	10.3	1.29	1.50	6756	326	1791	8.4	17.0
1443.0	40.0	23.1	77	10.3	0.91	1.52	6872	91	1720	8.4	17.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1444.0	39.1	25.6	77	10.3	0.94	1.55	6990	93	1656	8.4	17.0
1445.0	17.4	25.4	77	10.3	1.16	1.60	7255	210	1600	8.4	17.0
1446.0	4.8	33.1	73	10.3	1.59	1.81	8166	760	1569	8.4	17.0
1447.0	28.6	32.5	75	10.3	1.09	1.85	8322	128	1518	8.4	17.0
1448.0	55.4	33.0	75	10.3	0.91	1.86	8404	66	1468	8.4	17.0
1449.0	42.9	27.9	74	10.3	0.93	1.89	8508	85	1422	8.4	17.0
1450.0	41.9	28.7	75	10.3	0.95	1.91	8615	87	1379	8.4	17.0
1451.0	31.0	29.0	75	10.3	1.03	1.94	8759	118	1340	8.4	17.0
1452.0	44.4	29.3	75	10.3	0.94	1.97	8860	82	1302	8.4	17.0
1453.0	42.9	27.2	74	10.3	0.93	1.99	8964	85	1266	8.4	17.0
1454.0	32.7	29.1	74	10.3	1.02	2.02	9100	112	1233	8.4	17.0
1455.0	12.1	29.7	73	10.3	1.29	2.10	9463	302	1208	8.4	17.0
1456.0	6.3	30.2	80	10.3	1.50	2.26	10218	576	1191	8.4	17.0
1457.0	13.2	28.2	80	10.3	1.27	2.34	10583	277	1167	8.4	17.0
1458.0	12.6	30.0	80	10.3	1.31	2.42	10962	289	1144	8.4	17.0
1459.0	109.1	25.8	80	10.3	0.69	2.43	11006	33	1116	8.4	17.0
1460.0	128.6	29.1	80	10.3	0.66	2.43	11044	28	1090	8.4	17.0
1461.0	97.3	25.2	80	10.3	0.71	2.44	11093	38	1065	8.4	17.0
1462.0	113.7	27.0	82	10.3	0.69	2.45	11137	32	1041	8.4	17.0
1463.0	156.5	25.0	89	10.3	0.61	2.46	11171	23	1018	8.4	17.0
1464.0	128.0	25.0	90	10.3	0.67	2.47	11213	28.53	995.94	8.4	17.0
1465.0	9.9	32.7	76	10.3	1.39	2.57	11673	367.23	982.31	8.4	17.0
1466.0	16.4	33.3	77	10.3	1.26	2.63	11956	223.18	966.19	8.4	17.0
1467.0	8.4	35.0	74	10.3	1.46	2.75	12481	434.18	955.13	8.4	17.0
1468.0	6.1	32.4	73	10.3	1.52	2.91	13204	600.55	947.91	8.4	17.0
1469.0	6.1	34.6	73	10.3	1.54	3.07	13916	597.51	940.91	8.4	17.0
1470.0	17.0	38.0	65	10.3	1.26	3.13	14148	215.06	926.71	8.4	17.0
1471.0	25.2	37.3	61	10.3	1.11	3.17	14292	145.07	911.70	8.4	17.0
1472.0	43.4	39.1	60	10.3	0.96	3.20	14375	84.20	896.12	8.4	17.0
1473.0	51.4	39.1	60	10.3	0.91	3.22	14445	71.01	880.87	8.4	17.0
1474.0	12.9	38.3	62	10.3	1.32	3.29	14734	284.04	870.04	8.4	17.0
1475.0	24.3	30.1	64	10.3	1.07	3.33	14891	150.14	857.21	8.4	17.0
1476.0	12.7	36.9	63	10.3	1.33	3.41	15191	288.10	847.24	8.4	17.0
1477.0	16.3	35.8	64	10.3	1.24	3.48	15425	224.19	836.51	8.4	17.0
1478.0	43.9	33.8	64	10.3	0.94	3.50	15513	83.18	823.77	8.4	17.0
1479.0	12.1	36.9	64	10.3	1.35	3.58	15832	302.30	815.09	8.4	17.0
1480.0	12.5	38.1	62	10.3	1.34	3.66	16127	291.15	806.52	8.4	17.1
1481.0	8.1	37.9	63	10.3	1.47	3.78	16594	453.46	800.83	8.4	17.1
1482.0	6.6	37.8	63	10.2	1.53	3.94	17163	549.83	796.85	8.4	17.1
1483.0	7.1	38.4	63	10.2	1.52	4.08	17692	513.31	792.43	8.4	17.1
1484.0	37.5	37.8	62	10.2	1.01	4.10	17791	97.39	781.75	8.4	17.1
1485.0	23.2	36.9	63	10.2	1.15	4.15	17954	157.24	772.30	8.4	17.1
1486.0	39.6	35.6	74	10.2	1.03	4.17	18066	92.31	762.17	8.4	17.1
1487.0	63.2	34.3	73	10.2	0.88	4.19	18135	57.82	751.83	8.4	17.1
1488.0	20.9	37.8	70	10.2	1.22	4.23	18337	174.48	743.47	8.4	17.1
1489.0	33.3	37.2	71	10.2	1.08	4.26	18465	109.56	734.43	8.4	17.1
1490.0	90.0	32.5	71	10.2	0.76	4.28	18512	40.58	724.67	8.4	17.1
1491.0	11.7	39.0	68	10.2	1.40	4.36	18858	311.43	718.94	8.4	17.1
1492.0	15.5	36.1	67	10.2	1.28	4.43	19119	236.37	712.34	8.4	17.1
1493.0	11.7	34.6	63	10.2	1.33	4.51	19444	312.45	706.94	8.4	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1494.0	9.9	37.3	64	10.2	1.42	4.61	19835	369.26	702.45	8.4	17.1
1495.0	9.8	36.1	64	10.2	1.40	4.71	20225	371.29	698.09	8.4	17.1
1496.0	9.6	37.1	63	10.2	1.42	4.82	20622	380.42	693.97	8.4	17.1
1497.0	10.1	35.6	64	10.2	1.39	4.92	21004	362.16	689.72	8.4	17.1
1498.0	18.0	33.6	64	10.2	1.20	4.97	21218	202.89	683.57	8.4	17.1
1499.0	15.0	38.5	63	10.2	1.30	5.04	21470	243.47	678.08	8.4	17.1
1500.0	28.8	37.5	63	10.2	1.09	5.07	21601	126.81	671.28	8.4	17.1
1501.0	56.2	37.1	60	10.2	0.88	5.09	21664	64.92	663.89	8.4	17.1
1502.0	17.4	27.6	49	10.2	1.07	5.15	21834	209.99	658.43	8.4	17.1
1503.0	30.0	8.1	92	10.2	0.82	5.18	22019	121.73	652.05	8.4	17.1
1504.0	83.7	15.2	94	10.2	0.70	5.19	22086	43.62	644.90	8.4	17.1
1505.0	67.9	14.2	94	10.2	0.74	5.21	22169	53.77	638.03	8.4	17.1
1506.0	61.0	12.0	77	10.2	0.69	5.23	22244	59.85	631.40	8.4	17.1
1507.0	11.5	34.1	64	10.2	1.33	5.31	22579	318.54	627.84	8.4	17.1
1508.0	9.4	30.9	73	10.2	1.39	5.42	23048	389.55	625.17	8.4	17.1
1509.0	9.4	33.9	67	10.2	1.40	5.53	23477	390.56	622.57	8.4	17.1
1510.0	11.4	29.2	77	10.2	1.33	5.61	23879	319.55	619.24	8.4	17.1
1511.0	25.0	13.9	59	10.2	0.86	5.65	24021	146.08	614.10	8.4	17.1
1512.0	5.7	5.0	75	10.2	1.01	5.83	24809	639.10	614.37	8.4	17.1
1513.0	20.6	5.6	65	10.2	0.76	5.88	24998	177.53	609.73	8.4	17.1
1514.0	83.7	8.7	107	10.2	0.65	5.89	25074	43.62	603.78	8.4	17.1
1515.0	85.7	3.2	106	10.2	0.53	5.90	25149	42.61	597.94	8.4	17.1
1516.0	156.5	5.4	106	10.2	0.47	5.91	25189	23.33	592.02	8.4	17.1
1517.0	128.0	6.0	106	10.2	0.52	5.92	25239	28.53	586.27	8.4	17.1
1518.0	135.0	1.9	105	10.2	0.42	5.92	25286	27.05	580.63	8.4	17.1
1519.0	80.0	14.1	79	10.2	0.66	5.94	25345	45.65	575.29	8.4	17.1
1520.0	60.0	14.8	75	10.2	0.72	5.95	25419	60.87	570.20	8.4	17.1
1521.0	33.0	15.5	75	10.2	0.87	5.98	25555	110.57	565.70	8.4	17.1
1522.0	37.9	22.5	80	10.2	0.94	6.01	25682	96.37	561.14	8.4	17.1
1523.0	59.0	22.3	79	10.2	0.82	6.03	25762	61.88	556.35	8.4	17.1
1524.0	83.7	23.1	79	10.2	0.74	6.04	25819	43.62	551.47	8.4	17.1
1525.0	72.0	25.3	79	10.2	0.80	6.05	25885	50.72	546.75	8.4	17.1
1526.0	33.3	20.6	79	10.2	0.95	6.08	26027	109.56	542.67	8.4	17.1
1527.0	33.6	25.8	79	10.2	1.01	6.11	26169	108.55	538.65	8.4	17.1
1528.0	47.4	25.0	79	10.2	0.91	6.13	26269	77.10	534.42	8.4	17.1
1529.0	38.7	25.3	79	10.2	0.96	6.16	26391	94.34	530.43	8.4	17.1
1530.0	48.6	28.7	80	10.2	0.94	6.18	26490	75.07	526.33	8.4	17.1
1531.0	30.0	29.1	74	10.2	1.06	6.21	26638	121.73	522.72	8.4	17.1
1532.0	18.5	26.8	74	10.2	1.16	6.27	26880	197.82	519.84	8.4	17.1
1533.0	26.7	27.5	74	10.2	1.07	6.30	27047	136.95	516.49	8.4	17.1
1534.0	17.4	28.5	74	10.2	1.20	6.36	27303	209.99	513.83	8.4	17.1
1535.0	19.8	28.9	74	10.2	1.17	6.41	27528	184.63	510.99	8.4	17.1
1536.0	18.2	29.4	76	10.2	1.20	6.47	27777	200.86	508.34	8.4	17.2
1537.0	14.5	31.2	76	10.2	1.29	6.54	28092	251.58	506.17	8.4	17.2
1538.0	9.4	29.5	75	10.2	1.39	6.64	28573	388.53	505.18	8.4	17.2
1539.0	11.8	31.6	74	10.2	1.34	6.73	28950	309.41	503.55	8.4	17.2
1540.0	102.9	28.2	62	10.2	0.66	6.74	28986	35.51	499.69	8.4	17.2
1541.0	60.0	27.9	68	10.2	0.83	6.75	29054	60.87	496.09	8.4	17.2
1542.0	78.3	24.6	75	10.2	0.76	6.77	29112	46.66	492.44	8.4	17.2
1543.0	53.7	27.7	76	10.2	0.89	6.78	29197	67.97	489.02	8.4	17.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1544.0	41.9	27.6	76	10.2	0.96	6.81	29306	87.24	485.81	8.4	17.2
1545.0	36.7	26.6	76	10.2	0.98	6.84	29430	99.42	482.74	8.4	17.2
1546.0	12.0	30.6	77	10.2	1.34	6.92	29816	303.32	481.33	8.4	17.2
1547.0	45.6	26.8	76	10.2	0.93	6.94	29916	80.14	478.20	8.4	17.2
1548.0	35.0	28.5	77	10.2	1.02	6.97	30048	104.49	475.31	8.4	17.2
1549.0	20.8	28.0	76	10.2	1.15	7.02	30268	175.50	473.00	8.4	17.2
1550.0	90.0	25.3	75	10.2	0.72	7.03	30317	40.58	469.70	8.4	17.2
1551.0	46.2	30.9	72	10.2	0.95	7.05	30411	79.13	466.75	8.4	17.2
1552.0	37.5	29.6	75	10.2	1.00	7.08	30532	97.39	463.97	8.4	17.2
1553.0	37.1	28.2	72	10.2	0.98	7.10	30649	98.40	461.25	8.4	17.2
1554.0	46.8	29.4	77	10.2	0.94	7.13	30747	78.11	458.41	8.4	17.2
1555.0	64.3	36.8	74	10.2	0.90	7.14	30817	56.81	455.46	8.4	17.2
1556.0	75.0	38.8	75	10.2	0.87	7.15	30876	48.69	452.49	8.4	17.2
1557.0	72.0	39.1	75	10.2	0.89	7.17	30939	50.72	449.58	8.4	17.2
1558.0	61.0	38.9	76	10.2	0.94	7.18	31013	59.85	446.78	8.4	17.2
1559.0	59.0	38.8	76	10.2	0.95	7.20	31090	61.88	444.03	8.4	17.2
1560.0	43.4	39.0	69	10.2	1.02	7.22	31186	84.20	441.48	8.4	17.2
1561.0	51.4	37.3	75	10.2	0.98	7.24	31274	71.01	438.88	8.4	17.2
1562.0	53.7	37.6	75	10.2	0.97	7.26	31357	67.97	436.28	8.4	17.2
1563.0	33.0	34.4	74	10.2	1.08	7.29	31491	110.57	434.02	8.4	17.2
1564.0	11.0	39.0	74	10.2	1.45	7.38	31893	330.71	433.31	8.4	17.2
1565.0	7.7	41.0	72	10.2	1.58	7.51	32456	476.79	433.61	8.4	17.2
1566.0	7.4	41.0	64	10.2	1.55	7.65	32977	494.54	434.02	8.4	17.2
1567.0	11.2	41.7	63	10.2	1.43	7.74	33317	326.65	433.30	8.4	17.2
1568.0	60.0	33.4	65	10.2	0.86	7.76	33382	60.87	430.80	8.4	17.2
1569.0	90.0	18.4	73	10.2	0.66	7.77	33431	40.58	428.20	8.4	17.2
1570.0	67.9	36.3	75	10.2	0.89	7.78	33496	53.77	425.72	8.4	17.2
1571.0	58.1	35.7	73	10.2	0.92	7.80	33572	62.90	423.34	8.4	17.2
1572.0	57.1	33.9	83	10.2	0.95	7.82	33659	63.91	420.99	8.4	17.2
1573.0	8.3	45.3	82	10.2	1.65	7.94	34256	441.28	421.12	8.4	17.2
1574.0	33.3	42.6	83	10.2	1.18	7.97	34405	109.56	419.11	8.4	17.2
1575.0	12.2	43.9	82	10.2	1.51	8.05	34807	298.25	418.34	8.4	17.2
1576.0	8.1	43.2	84	10.2	1.63	8.17	35424	449.40	418.54	8.4	17.2
1577.0	18.6	41.7	85	10.2	1.37	8.23	35700	196.80	417.13	8.4	17.2
1578.0	33.0	41.0	51	10.2	1.03	8.26	35793	110.57	415.21	8.4	17.2
1579.0	60.0	31.2	74	10.2	0.88	8.27	35867	60.87	412.99	8.4	17.2
1580.0	57.1	39.4	74	10.2	0.96	8.29	35945	63.91	410.83	8.4	17.2
1581.0	52.9	34.6	73	10.2	0.94	8.31	36028	68.98	408.72	8.4	17.2
1582.0	60.0	35.1	76	10.2	0.92	8.33	36103	60.87	406.58	8.4	17.2
1583.0	48.6	36.5	75	10.2	0.99	8.35	36196	75.07	404.56	8.4	17.2
1584.0	35.3	36.1	75	10.2	1.08	8.37	36323	103.47	402.74	8.4	17.2
1585.0	42.4	35.7	75	10.2	1.02	8.40	36429	86.23	400.84	8.4	17.2
1586.0	44.4	37.1	75	10.2	1.02	8.42	36530	82.17	398.93	8.4	17.2
1587.0	66.7	35.5	75	10.2	0.89	8.44	36597	54.78	396.88	8.4	17.2
1588.0	46.2	37.7	75	10.2	1.01	8.46	36694	79.13	395.00	8.4	17.2
1589.0	45.0	36.0	75	10.2	1.00	8.48	36794	81.16	393.16	8.4	17.2
1590.0	51.4	41.5	76	10.2	1.02	8.50	36883	71.01	391.27	8.4	17.2
1591.0	38.3	38.6	75	10.2	1.08	8.52	37001	95.36	389.55	8.4	17.2
1592.0	63.2	40.0	76	10.2	0.94	8.54	37074	57.82	387.64	8.4	17.2
1593.0	52.2	39.4	76	10.2	0.99	8.56	37161	70.00	385.81	8.4	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1594.0	34.0	37.8	75	10.2	1.10	8.59	37293	107.53	384.22	8.4	17.3
1595.0	49.3	40.1	76	10.2	1.02	8.61	37386	74.05	382.46	8.4	17.3
1596.0	39.1	37.4	75	10.2	1.06	8.64	37501	93.33	380.83	8.4	17.3
1597.0	31.3	42.0	75	10.2	1.17	8.67	37644	116.66	379.35	8.4	17.3
1598.0	32.0	40.0	75	10.2	1.14	8.70	37785	114.13	377.87	8.4	17.3
1599.0	52.0	43.0	75	10.2	1.01	8.72	37872	70.23	376.16	8.4	17.3
1600.0	70.4	39.9	78	10.2	0.91	8.73	37938	51.85	374.37	8.4	17.3
1601.0	66.1	45.3	78	10.2	0.97	8.75	38009	55.23	372.62	8.4	17.3
1602.0	38.6	41.2	78	10.2	1.11	8.77	38130	94.68	371.10	8.4	17.3
1603.0	48.6	41.7	79	10.2	1.04	8.79	38227	75.07	369.49	8.4	17.3
1604.0	43.9	41.0	78	10.2	1.07	8.82	38334	83.18	367.94	8.4	17.3
1605.0	41.9	44.1	79	10.2	1.11	8.84	38446	87.24	366.43	8.4	17.3
1606.0	52.9	42.1	77	10.2	1.02	8.86	38534	68.98	364.84	8.4	17.3
1607.0	19.7	38.8	66	10.2	1.24	8.91	38735	165.64	363.89	8.4	17.3
1608.0	23.8	44.2	63	10.2	1.22	8.95	38895	153.18	362.78	8.4	17.3
1609.0	19.8	37.0	78	10.2	1.27	9.00	39130	184.63	361.84	8.4	17.3
1610.0	21.8	35.1	78	10.2	1.22	9.05	39344	167.38	360.82	8.4	17.3
1611.0	21.8	35.5	78	10.2	1.23	9.09	39558	167.38	359.82	8.4	17.3
1612.0	22.4	34.8	78	10.2	1.21	9.14	39766	163.33	358.80	8.4	17.3
1613.0	19.6	33.5	77	10.2	1.23	9.19	40004	186.66	357.91	8.4	17.3
1614.0	21.4	32.2	77	10.2	1.19	9.24	40219	170.43	356.95	8.4	17.3
1615.0	20.2	35.0	77	10.2	1.24	9.29	40447	180.57	356.05	8.4	17.3
1616.0	27.3	35.9	78	10.2	1.16	9.32	40618	133.91	354.92	8.4	17.3
1617.0	21.8	34.3	78	10.2	1.21	9.37	40832	167.38	353.98	8.4	17.3
1618.0	21.2	33.1	73	10.2	1.19	9.42	41039	172.46	353.07	8.4	17.3
1619.0	37.9	31.8	74	10.2	1.01	9.44	41156	96.37	351.78	8.4	17.3
1620.0	46.8	35.0	74	10.2	0.98	9.46	41251	78.11	350.42	8.4	17.3
1621.0	33.6	35.8	74	10.2	1.09	9.49	41383	108.55	349.22	8.4	17.3
1622.0	13.8	35.3	74	10.2	1.34	9.57	41704	263.76	348.80	8.4	17.3
1623.0	6.7	42.0	72	10.2	1.63	9.71	42342	541.71	349.75	8.4	17.3
1624.0	15.8	38.6	71	10.2	1.32	9.78	42610	231.29	349.17	8.4	17.3
1625.0	23.5	37.7	71	10.2	1.20	9.82	42791	155.21	348.23	8.4	17.3
1626.0	21.8	36.1	71	10.2	1.20	9.87	42986	167.38	347.36	8.4	17.3
1627.0	22.4	33.8	71	10.2	1.17	9.91	43176	163.33	346.47	8.4	17.3
1628.0	26.9	32.6	51	10.2	1.02	9.95	43291	135.94	345.47	8.4	17.3
1629.0	28.3	33.6	61	10.2	1.06	9.98	43420	128.83	344.43	8.4	17.3
1630.0	52.2	33.7	78	10.2	0.95	10.00	43510	70.00	343.13	8.4	17.3
1631.0	42.4	30.8	77	10.2	0.99	10.03	43620	86.23	341.92	8.4	17.3
1632.0	46.2	35.6	78	10.2	1.01	10.05	43721	79.13	340.69	8.4	17.3
1633.0	70.6	33.5	78	10.2	0.86	10.06	43787	51.74	339.34	8.4	17.3
1634.0	57.1	31.4	77	10.2	0.91	10.08	43868	63.91	338.06	8.4	17.3
1635.0	37.5	25.4	75	10.2	0.96	10.11	43988	97.39	336.95	8.4	17.3
1636.0	60.0	36.6	77	10.2	0.94	10.12	44066	60.87	335.67	8.4	17.3
1637.0	90.0	36.1	76	10.2	0.81	10.13	44116	40.58	334.32	8.4	17.3
1638.0	48.0	33.5	76	10.2	0.97	10.15	44211	76.08	333.14	8.4	17.3
1639.0	9.4	36.0	68	10.2	1.44	10.26	44647	390.56	333.40	8.4	17.3
1640.0	8.2	38.3	66	10.2	1.50	10.38	45132	447.37	333.92	8.4	17.3
1641.0	6.4	36.0	72	10.2	1.57	10.54	45807	567.07	334.97	8.4	17.3
1642.0	6.9	32.5	80	10.2	1.53	10.68	46502	529.54	335.84	8.4	17.3
1643.0	9.5	35.2	78	10.2	1.46	10.79	46990	382.45	336.05	8.4	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1644.0	22.2	31.1	85	10.2	1.20	10.83	47219	164.34	335.29	8.4	17.3
1645.0	7.8	37.9	75	10.2	1.55	10.96	47794	465.63	335.86	8.4	17.3
1646.0	4.3	37.9	59	10.2	1.66	11.19	48625	854.16	338.15	8.4	17.3
1647.0	5.8	38.2	59	10.2	1.57	11.37	49235	634.03	339.44	8.4	17.3
1648.0	11.3	36.6	66	10.2	1.38	11.46	49585	323.61	339.37	8.4	17.3
1649.0	13.0	33.0	74	10.2	1.33	11.53	49924	279.99	339.12	8.4	17.3
1650.0	24.0	33.7	76	10.2	1.17	11.58	50115	152.17	338.31	8.4	17.3
1651.0	62.1	28.1	74	10.2	0.84	11.59	50186	58.84	337.10	8.4	17.3
1652.0	84.7	36.1	71	10.2	0.80	11.60	50236	43.11	335.84	8.4	17.4
1653.0	43.9	36.7	76	10.2	1.02	11.63	50340	83.18	334.76	8.4	17.4
1654.0	45.6	33.4	76	10.2	0.99	11.65	50441	80.14	333.68	8.4	17.4
1655.0	45.0	29.8	80	10.2	0.97	11.67	50547	81.16	332.61	8.4	17.4
1656.0	63.2	34.7	90	10.2	0.95	11.69	50633	57.82	331.45	8.4	17.4
1657.0	49.3	32.3	80	10.2	0.97	11.71	50730	74.05	330.37	8.4	17.4
1658.0	54.5	35.2	77	10.2	0.95	11.72	50815	66.95	329.27	8.4	17.4
1659.0	70.6	31.0	76	10.2	0.84	11.74	50879	51.74	328.11	8.4	17.4
1660.0	57.1	29.5	77	10.2	0.89	11.76	50960	63.91	327.02	8.4	17.4
1661.0	34.0	28.7	77	10.2	1.03	11.79	51095	107.53	326.11	8.4	17.4
1662.0	40.0	30.3	77	10.2	1.00	11.81	51210	91.30	325.14	8.4	17.4
1663.0	52.9	33.2	77	10.2	0.94	11.83	51297	68.98	324.09	8.4	17.4
1664.0	20.3	30.7	76	10.2	1.19	11.88	51521	179.56	323.50	8.4	17.4
1665.0	4.7	34.2	70	10.2	1.63	12.09	52413	779.09	325.36	8.4	17.4
1666.0	4.8	35.1	71	10.2	1.64	12.30	53300	756.78	327.10	8.4	17.4
1667.0	5.7	36.1	73	10.2	1.61	12.48	54071	646.20	328.39	8.4	17.4
1668.0	5.6	37.7	60	10.2	1.58	12.66	54721	655.33	329.70	8.4	17.4
1669.0	7.0	38.2	58	10.2	1.51	12.80	55217	519.40	330.46	8.4	17.4
1670.0	21.8	33.9	58	10.2	1.12	12.84	55377	167.38	329.81	8.4	17.4
1671.0	25.2	35.6	59	10.2	1.10	12.88	55517	145.07	329.08	8.4	17.4
1672.0	10.8	38.0	58	10.2	1.37	12.98	55840	336.80	329.11	8.4	17.4
1673.0	19.1	37.7	58	10.2	1.20	13.03	56022	190.72	328.56	8.4	17.4
1674.0	21.7	32.5	59	10.2	1.11	13.07	56184	168.40	327.93	8.4	17.4
1675.0	24.7	32.1	59	10.2	1.07	13.11	56327	148.11	327.23	8.4	17.4
1676.0	19.8	34.4	71	10.2	1.21	13.17	56541	184.63	326.68	8.4	17.4
1677.0	23.7	33.3	74	10.2	1.16	13.21	56728	154.20	326.01	8.4	17.4
1678.0	24.5	33.9	73	10.2	1.16	13.25	56908	149.12	325.33	8.4	17.4
1679.0	9.6	36.6	74	10.2	1.47	13.35	57371	379.40	325.53	8.4	17.4
1680.0	15.0	37.6	75	10.2	1.35	13.42	57670	243.47	325.22	8.4	17.4
1681.0	13.2	37.3	83	10.2	1.41	13.49	58050	276.94	325.04	8.4	17.4
1682.0	25.0	37.0	88	10.2	1.23	13.53	58261	146.08	324.36	8.4	17.4
1683.0	20.8	37.6	85	10.2	1.28	13.58	58506	175.50	323.79	8.4	17.4
1684.0	9.2	38.7	53	10.2	1.40	13.69	58856	398.68	324.07	8.4	17.4
1685.0	9.5	36.5	69	10.2	1.44	13.80	59295	384.47	324.30	8.4	17.4
1686.0	12.1	38.1	74	10.2	1.41	13.88	59661	302.30	324.22	8.4	17.4
1687.0	10.0	35.9	73	10.2	1.43	13.98	60102	366.21	324.38	8.4	17.4
1688.0	9.3	37.3	74	10.2	1.48	14.09	60578	393.60	324.63	8.4	17.4
1689.0	10.6	36.0	73	10.2	1.42	14.18	60992	343.90	324.70	8.4	17.4
1690.0	13.8	35.5	73	10.2	1.33	14.25	61310	264.77	324.48	8.4	17.4
1691.0	4.4	37.6	50	10.2	1.58	14.48	61992	829.82	326.34	8.4	17.4
1692.0	9.0	35.9	71	10.2	1.46	14.59	62465	403.75	326.62	8.4	17.4
1693.0	19.0	36.1	72	10.2	1.24	14.64	62691	191.73	326.13	8.4	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1694.0	5.8	38.3	69	10.2	1.61	14.82	63408	635.04	327.25	8.4	17.4
1695.0	13.2	39.0	77	10.2	1.40	14.89	63758	275.93	327.07	8.4	17.4
1696.0	18.2	38.6	77	10.2	1.30	14.95	64012	200.86	326.61	8.4	17.4
1697.0	9.6	37.9	57	10.2	1.40	15.05	64369	381.43	326.81	8.4	17.4
1698.0	14.0	34.5	55	10.2	1.24	15.13	64605	261.73	326.58	8.4	17.4
1699.0	14.0	35.6	55	10.2	1.25	15.20	64840	260.71	326.34	8.4	17.4
1700.0	12.4	36.2	70	10.2	1.36	15.28	65178	294.19	326.23	8.4	17.4
1701.0	6.7	38.6	73	10.2	1.59	15.43	65836	547.80	327.01	8.4	17.4
1702.0	22.2	37.4	76	10.2	1.23	15.47	66041	164.34	326.44	8.4	17.4
1703.0	25.0	39.0	78	10.2	1.21	15.51	66228	146.08	325.80	8.4	17.4
1704.0	8.9	35.2	71	10.2	1.45	15.62	66705	408.82	326.09	8.4	17.4
1705.0	11.0	35.7	75	10.2	1.41	15.72	67111	331.72	326.11	8.4	17.4
1706.0	10.8	37.5	75	10.2	1.44	15.81	67529	338.82	326.16	8.4	17.4
1707.0	16.8	37.2	75	10.2	1.30	15.87	67796	217.09	325.78	8.4	17.4
1708.0	15.5	37.1	75	10.2	1.33	15.93	68087	235.35	325.47	8.4	17.4
1709.0	8.1	38.7	75	10.2	1.54	16.06	68641	450.41	325.90	8.4	17.4
1710.0	15.9	35.9	75	10.2	1.31	16.12	68924	230.28	325.57	8.4	17.4
1711.0	15.1	39.1	76	10.2	1.36	16.18	69225	242.45	325.29	8.4	17.4
1712.0	7.7	39.5	75	10.2	1.57	16.32	69816	476.79	325.80	8.4	17.4
1713.0	27.9	38.7	76	10.2	1.17	16.35	69980	130.86	325.14	8.4	17.5
1714.0	13.8	34.2	81	10.2	1.35	16.42	70333	263.76	324.93	8.4	17.5
1715.0	22.5	38.0	78	10.2	1.23	16.47	70540	162.31	324.38	8.4	17.5
1716.0	35.0	38.4	76	10.2	1.10	16.50	70671	104.49	323.64	8.4	17.5
1717.0	10.7	40.9	75	10.2	1.48	16.59	71094	342.88	323.71	8.4	17.5
1718.0	6.6	43.0	71	10.2	1.63	16.74	71739	556.93	324.49	8.4	17.5
1719.0	6.2	44.3	63	10.2	1.63	16.90	72343	587.36	325.36	8.4	17.5
1720.0	6.5	45.7	63	10.2	1.63	17.06	72925	566.06	326.16	8.4	17.5
1721.0	7.8	45.4	63	10.2	1.57	17.19	73403	465.63	326.62	8.4	17.5
1722.0	11.8	46.4	63	10.2	1.45	17.27	73721	309.41	326.57	8.4	17.5
1723.0	12.2	45.1	63	10.2	1.43	17.35	74031	299.26	326.48	8.4	17.5
1724.0	10.2	46.9	74	10.2	1.56	17.45	74467	357.08	326.58	8.4	17.5
1725.0	9.9	47.2	65	10.2	1.53	17.55	74860	367.23	326.71	8.4	17.5
1726.0	5.1	46.9	63	10.2	1.72	17.75	75599	714.17	327.97	8.4	17.5
1727.0	8.2	46.5	64	10.2	1.57	17.87	76064	444.33	328.35	8.4	17.5
1727.8	3.8	48.4	61	10.2	1.82	18.08	76827	956.11	329.97	8.4	17.5

BIT NUMBER	5	IADC CODE	517	INTERVAL	1727.8- 2229.3
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	3.8	BIT RUN	501.5
TOTAL HOURS	64.08	TOTAL TURNS	241658	CONDITION	T6 B6 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1728.0	2.4	37.9	56	10.2	1.81	0.08	282	1522	113510	8.4	17.5
1729.0	4.9	43.8	62	10.2	1.70	0.29	1046	747	19540	8.4	17.5
1730.0	5.2	46.9	58	10.2	1.69	0.48	1710	696	10975	8.4	17.5
1731.0	5.9	48.5	59	10.2	1.67	0.65	2305	617	7738	8.4	17.5
1732.0	5.8	48.1	59	10.2	1.68	0.82	2923	633	6046	8.4	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1733.0	22.5	34.9	56	10.2	1.11	0.86	3072	162	4915	8.4	17.5
1734.0	10.6	48.2	58	10.2	1.48	0.96	3397	344	4177	8.4	17.5
1735.0	17.3	50.7	59	10.2	1.35	1.02	3601	211	3627	8.4	17.5
1736.0	25.4	50.5	58	10.2	1.22	1.06	3738	144	3202	8.4	17.5
1737.0	8.0	51.3	59	10.2	1.61	1.18	4182	459	2904	8.4	17.5
1738.0	13.3	50.7	59	10.2	1.44	1.26	4449	274	2646	8.4	17.5
1739.0	15.5	50.0	59	10.2	1.38	1.32	4678	235	2431	8.4	17.5
1740.0	12.4	50.8	60	10.2	1.46	1.40	4966	294	2256	8.4	17.5
1741.0	10.7	49.6	59	10.2	1.50	1.50	5298	342	2111	8.4	17.5
1742.0	16.4	48.4	59	10.2	1.34	1.56	5512	222	1978	8.4	17.5
1743.0	19.5	48.0	59	10.2	1.29	1.61	5695	188	1860	8.4	17.5
1744.0	5.9	44.4	60	10.2	1.63	1.78	6302	618	1783	8.4	17.5
1745.0	13.2	48.5	60	10.2	1.42	1.85	6574	276	1696	8.4	17.5
1746.0	16.6	46.0	60	10.2	1.32	1.91	6790	220	1614	8.4	17.5
1747.0	7.4	47.6	60	10.2	1.60	2.05	7274	491	1556	8.4	17.5
1748.0	4.4	49.2	56	10.2	1.76	2.27	8035	825	1520	8.4	17.5
1749.0	5.3	48.9	56	10.2	1.70	2.46	8664	684	1480	8.4	17.5
1750.0	7.4	48.0	56	10.2	1.58	2.60	9116	492	1436	8.4	17.5
1751.0	13.2	46.9	56	10.2	1.38	2.67	9371	276	1386	8.4	17.5
1752.0	20.7	47.5	55	10.2	1.24	2.72	9532	177	1336	8.4	17.5
1753.0	20.2	45.6	57	10.2	1.24	2.77	9701	181	1290	8.4	17.5
1754.0	21.3	50.9	64	10.2	1.31	2.82	9882	171	1247	8.4	17.5
1755.0	35.3	49.3	60	10.2	1.11	2.84	9984	103	1205	8.4	17.5
1756.0	45.6	51.3	61	10.2	1.05	2.87	10064	80	1165	8.4	17.5
1757.0	31.3	49.5	62	10.2	1.16	2.90	10183	117	1129	8.4	17.5
1758.0	29.0	49.9	62	10.2	1.19	2.93	10312	126	1096	8.4	17.5
1759.0	6.7	53.8	62	10.2	1.71	3.08	10872	548	1079	8.4	17.5
1760.0	5.1	52.7	62	10.2	1.79	3.28	11611	720	1067	8.4	17.5
1761.0	5.8	52.7	63	10.2	1.75	3.45	12260	632	1054	8.4	17.5
1762.0	15.3	52.3	57	10.2	1.39	3.52	12484	239	1031	8.4	17.5
1763.0	11.2	52.4	60	10.2	1.52	3.61	12807	327	1011	8.4	17.5
1764.0	6.0	53.2	61	10.2	1.74	3.77	13420	609.68	999.48	8.4	17.5
1765.0	6.3	54.2	61	10.2	1.73	3.93	14007	581.28	988.24	8.4	17.5
1766.0	5.3	55.4	62	10.2	1.80	4.12	14698	682.72	980.24	8.4	17.5
1767.0	5.5	54.7	62	10.2	1.78	4.30	15367	659.39	972.06	8.4	17.5
1768.0	6.0	52.0	65	10.2	1.74	4.47	16017	608.67	963.02	8.4	17.5
1769.0	9.0	53.0	65	10.2	1.62	4.58	16450	405.78	949.49	8.4	17.5
1770.0	6.5	51.0	68	10.2	1.72	4.73	17078	561.85	940.31	8.4	17.5
1771.0	12.5	53.0	68	10.2	1.52	4.81	17405	292.16	925.30	8.4	17.5
1772.0	4.6	52.0	67	10.2	1.84	5.03	18278	787.89	922.19	8.4	17.5
1773.0	11.8	50.7	68	10.2	1.52	5.11	18622	309.41	908.64	8.4	17.5
1774.0	30.3	49.1	67	10.2	1.20	5.15	18755	120.72	891.58	8.4	17.5
1775.0	6.8	51.1	68	10.2	1.70	5.29	19354	537.66	884.08	8.4	17.5
1776.0	5.6	51.7	68	10.2	1.77	5.47	20078	648.23	879.19	8.4	17.5
1777.0	5.3	52.6	68	10.2	1.80	5.66	20844	685.76	875.26	8.4	17.6
1778.0	5.0	52.5	64	10.2	1.80	5.86	21616	733.44	872.43	8.4	17.6
1779.0	9.2	51.9	67	10.2	1.61	5.97	22050	396.65	863.14	8.4	17.6
1780.0	9.8	51.4	67	10.2	1.58	6.07	22457	372.30	853.74	8.4	17.6
1781.0	8.6	51.4	67	10.2	1.62	6.19	22920	423.02	845.64	8.4	17.6
1782.0	5.9	52.4	63	10.2	1.74	6.35	23554	615.77	841.40	8.4	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1833.0	8.7	49.3	53	10.2	1.53	11.72	42916	418.97	619.78	8.4	17.6
1834.0	6.6	50.0	55	10.2	1.64	11.87	43421	552.87	619.15	8.4	17.6
1835.0	8.1	50.1	63	10.2	1.62	12.00	43890	453.46	617.60	8.4	17.6
1836.0	15.1	46.6	61	10.2	1.37	12.06	44133	242.45	614.14	8.4	17.6
1837.0	14.1	45.7	61	10.2	1.38	12.13	44395	258.68	610.88	8.4	17.6
1838.0	7.9	49.6	62	10.2	1.61	12.26	44866	464.62	609.56	8.4	17.6
1839.0	6.8	43.3	58	10.2	1.57	12.41	45377	535.63	608.89	8.4	17.6
1840.0	14.4	25.2	81	10.2	1.23	12.48	45715	253.61	605.72	8.4	17.6
1841.0	23.4	25.4	79	10.2	1.10	12.52	45918	156.22	601.75	8.4	17.6
1842.0	29.5	27.0	77	10.2	1.04	12.55	46074	123.76	597.57	8.4	17.7
1843.0	29.3	28.2	77	10.2	1.06	12.59	46232	124.78	593.46	8.4	17.7
1844.0	34.6	24.9	76	10.2	0.98	12.62	46364	105.50	589.26	8.4	17.7
1845.0	26.7	21.6	76	10.2	1.00	12.65	46534	136.95	585.40	8.4	17.7
1846.0	24.8	23.6	76	10.2	1.05	12.69	46718	147.09	581.70	8.4	17.7
1847.0	13.1	33.3	71	10.2	1.32	12.77	47042	277.96	579.15	8.4	17.7
1848.0	9.2	43.1	63	10.2	1.50	12.88	47451	395.63	577.62	8.4	17.7
1849.0	16.7	49.7	62	10.2	1.37	12.94	47672	218.11	574.66	8.4	17.7
1850.0	8.1	47.2	62	10.2	1.57	13.06	48129	449.40	573.63	8.4	17.7
1851.0	6.3	47.0	61	10.2	1.65	13.22	48716	583.31	573.71	8.4	17.7
1852.0	8.1	46.8	62	10.2	1.57	13.34	49174	451.43	572.72	8.4	17.7
1853.0	19.4	47.6	61	10.2	1.30	13.40	49364	188.69	569.66	8.4	17.7
1854.0	13.7	48.1	62	10.2	1.41	13.47	49633	265.78	567.25	8.4	17.7
1855.0	6.9	48.3	62	10.2	1.64	13.61	50166	526.50	566.93	8.4	17.7
1856.0	5.5	47.9	62	10.2	1.71	13.80	50848	668.52	567.72	8.4	17.7
1857.0	5.9	49.0	62	10.2	1.70	13.97	51482	622.87	568.15	8.4	17.7
1858.0	8.0	50.1	60	10.2	1.60	14.09	51937	458.53	567.31	8.4	17.7
1859.0	7.7	47.2	61	10.2	1.59	14.22	52419	476.79	566.62	8.4	17.7
1860.0	5.7	47.7	61	10.2	1.69	14.40	53058	642.14	567.19	8.4	17.7
1861.0	5.1	48.7	61	10.2	1.73	14.59	53767	710.11	568.26	8.4	17.7
1862.0	5.4	46.7	61	10.1	1.71	14.78	54451	681.71	569.11	8.4	17.7
1863.0	5.4	46.8	61	10.0	1.73	14.97	55131	678.66	569.92	8.4	17.7
1864.0	6.5	48.1	61	10.0	1.68	15.12	55694	563.02	569.87	8.4	17.7
1865.0	6.2	48.7	61	10.0	1.71	15.28	56286	588.38	570.00	8.4	17.7
1866.0	7.6	47.0	61	10.0	1.62	15.41	56765	477.80	569.33	8.4	17.7
1867.0	8.7	46.8	61	10.0	1.58	15.53	57187	418.97	568.25	8.4	17.7
1868.0	10.2	47.5	61	10.0	1.53	15.62	57547	359.11	566.76	8.4	17.7
1869.0	7.1	43.6	60	10.0	1.60	15.76	58055	511.28	566.37	8.4	17.7
1870.0	15.7	50.1	65	10.0	1.44	15.83	58305	233.32	564.03	8.4	17.7
1871.0	4.8	48.7	65	10.0	1.81	16.04	59119	758.80	565.39	8.4	17.7
1872.0	3.7	49.1	65	10.0	1.90	16.31	60177	984.01	568.29	8.4	17.7
1873.0	4.0	47.6	66	10.0	1.86	16.56	61169	921.12	570.72	8.4	17.7
1874.0	4.4	48.5	66	10.0	1.84	16.79	62072	834.89	572.53	8.4	17.7
1875.0	4.4	47.2	66	10.0	1.83	17.02	62976	835.90	574.32	8.4	17.7
1876.0	5.8	47.9	64	10.0	1.73	17.19	63638	629.97	574.69	8.4	17.7
1877.0	5.3	48.2	63	10.0	1.76	17.38	64352	686.78	575.44	8.4	17.7
1878.0	7.8	46.1	63	10.0	1.61	17.50	64835	469.69	574.74	8.4	17.7
1879.0	6.7	49.2	66	10.0	1.72	17.65	65433	547.80	574.56	8.4	17.7
1880.0	7.4	48.7	64	10.0	1.66	17.79	65949	493.02	574.02	8.4	17.7
1881.0	13.0	48.6	63	10.0	1.47	17.87	66237	279.99	572.11	8.4	17.7
1882.0	21.7	48.9	62	10.0	1.30	17.91	66410	168.40	569.49	8.4	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1883.0	14.6	47.9	56	10.0	1.39	17.98	66642	250.57	567.43	8.4	17.7
1884.0	20.7	48.4	62	10.0	1.31	18.03	66821	176.51	564.93	8.4	17.7
1885.0	7.5	50.6	62	10.0	1.67	18.16	67321	487.95	564.44	8.4	17.7
1886.0	6.5	50.3	62	10.0	1.71	18.32	67893	557.94	564.40	8.4	17.7
1887.0	6.4	48.9	62	10.0	1.71	18.47	68479	573.16	564.45	8.4	17.7
1888.0	4.9	45.9	61	10.0	1.75	18.68	69223	739.53	565.55	8.4	17.7
1889.0	6.4	51.5	63	10.0	1.74	18.83	69815	569.10	565.57	8.4	17.7
1890.0	8.6	50.7	63	10.0	1.63	18.95	70255	423.02	564.69	8.4	17.7
1891.0	17.5	48.5	64	10.0	1.38	19.00	70473	208.98	562.51	8.4	17.7
1892.0	3.7	50.4	64	10.0	1.91	19.28	71510	989.08	565.11	8.4	17.7
1893.0	4.6	50.8	61	10.0	1.83	19.49	72302	790.25	566.47	8.4	17.7
1894.0	14.0	49.1	59	10.0	1.43	19.56	72557	261.73	564.64	8.4	17.7
1895.0	15.7	49.1	59	10.0	1.40	19.63	72784	232.31	562.65	8.4	17.7
1896.0	18.3	49.9	59	10.0	1.35	19.68	72979	199.85	560.49	8.4	17.7
1897.0	18.2	48.6	59	10.0	1.34	19.74	73174	200.86	558.37	8.4	17.7
1898.0	18.4	45.3	54	10.0	1.28	19.79	73350	198.83	556.25	8.4	17.7
1899.0	22.1	47.7	61	10.0	1.28	19.84	73514	165.35	553.97	8.4	17.7
1900.0	19.5	48.2	61	10.0	1.32	19.89	73702	187.67	551.84	8.4	17.7
1901.0	17.5	50.5	61	10.0	1.38	19.94	73910	208.98	549.86	8.4	17.7
1902.0	5.0	51.4	61	10.0	1.81	20.15	74639	732.43	550.91	8.4	17.7
1903.0	4.2	50.3	61	10.0	1.86	20.39	75513	876.48	552.77	8.4	17.7
1904.0	3.8	51.2	61	10.0	1.90	20.65	76474	959.66	555.08	8.4	17.7
1905.0	4.7	50.2	61	10.0	1.81	20.86	77248	770.98	556.30	8.4	17.7
1906.0	4.4	50.4	61	10.0	1.84	21.09	78081	831.84	557.85	8.4	17.7
1907.0	4.0	50.3	64	10.0	1.89	21.34	79055	923.14	559.88	8.4	17.7
1908.0	5.4	48.5	64	10.0	1.77	21.53	79766	677.65	560.54	8.4	17.7
1909.0	4.7	47.8	63	10.0	1.80	21.74	80577	784.17	561.77	8.4	17.8
1910.0	5.1	47.8	62	10.0	1.77	21.94	81309	717.21	562.62	8.4	17.8
1911.0	5.6	50.0	62	10.0	1.76	22.11	81970	647.22	563.09	8.4	17.8
1912.0	13.4	49.9	62	10.0	1.47	22.19	82249	272.89	561.51	8.4	17.8
1913.0	5.8	49.9	63	10.0	1.75	22.36	82895	624.90	561.85	8.4	17.8
1914.0	4.4	49.3	63	10.0	1.83	22.59	83745	823.39	563.26	8.4	17.8
1915.0	7.9	49.6	63	10.0	1.64	22.71	84220	461.57	562.71	8.4	17.8
1916.0	6.0	49.7	62	10.0	1.74	22.88	84846	609.68	562.96	8.4	17.8
1917.0	5.6	53.5	61	10.0	1.79	23.06	85496	651.27	563.43	8.4	17.8
1918.0	4.8	54.5	64	10.0	1.87	23.27	86293	763.88	564.48	8.4	17.8
1919.0	4.7	54.6	64	10.0	1.88	23.48	87099	768.95	565.55	8.4	17.8
1920.0	5.4	52.5	64	10.0	1.81	23.66	87802	672.58	566.11	8.4	17.8
1921.0	6.6	51.1	64	10.0	1.73	23.81	88378	549.83	566.03	8.4	17.8
1922.0	13.1	51.1	63	10.0	1.50	23.89	88668	277.96	564.54	8.4	17.8
1923.0	10.6	54.8	64	10.0	1.61	23.98	89027	343.90	563.41	8.4	17.8
1924.0	11.4	55.6	63	10.0	1.58	24.07	89357	320.56	562.17	8.4	17.8
1925.0	5.1	56.3	64	10.0	1.88	24.27	90111	718.23	562.97	8.4	17.8
1926.0	3.6	53.3	64	10.0	1.96	24.54	91177	1008	565	8.4	17.8
1927.0	4.5	50.8	64	10.0	1.85	24.76	92019	805.47	566.42	8.4	17.8
1928.0	3.8	51.1	48	10.0	1.82	25.03	92779	968.79	568.43	8.4	17.8
1929.0	6.0	50.7	59	10.0	1.73	25.20	93376	611.71	568.64	8.4	17.8
1930.0	6.6	50.7	65	10.0	1.73	25.35	93961	551.86	568.56	8.4	17.8
1931.0	4.4	52.1	65	10.0	1.88	25.57	94852	832.86	569.86	8.4	17.8
1932.0	4.7	52.5	66	10.0	1.87	25.79	95708	785.18	570.92	8.4	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1933.0	12.2	51.4	62	10.0	1.52	25.87	96012	300.28	569.60	8.4	17.8
1934.0	4.8	53.1	56	9.8	1.85	26.08	96716	758.80	570.52	8.4	17.8
1935.0	30.0	54.7	63	9.8	1.27	26.11	96841	121.73	568.35	8.4	17.8
1936.0	9.9	54.0	65	9.8	1.66	26.21	97237	368.24	567.39	8.4	17.8
1937.0	14.3	53.2	66	9.8	1.53	26.28	97512	255.64	565.90	8.4	17.8
1938.0	5.2	53.9	66	9.8	1.89	26.48	98274	702.00	566.55	8.4	17.8
1939.0	4.6	53.6	66	9.8	1.93	26.69	99130	788.22	567.60	8.4	17.8
1940.0	12.7	53.5	66	9.8	1.58	26.77	99442	288.10	566.28	8.4	17.8
1941.0	22.6	53.1	66	9.8	1.37	26.81	99616	161.30	564.38	8.4	17.8
1942.0	24.0	51.6	66	9.8	1.34	26.86	99780	152.17	562.45	8.4	17.8
1943.0	25.0	52.8	66	9.8	1.33	26.90	99938	146.08	560.52	8.4	17.8
1944.0	26.3	51.3	65	9.8	1.30	26.93	100087	138.98	558.57	8.4	17.8
1945.0	40.4	52.2	66	9.8	1.16	26.96	100184	90.29	556.41	8.4	17.8
1946.0	22.5	50.4	62	9.8	1.33	27.00	100350	162.31	554.61	8.4	17.8
1947.0	30.3	48.8	64	9.8	1.23	27.04	100477	120.72	552.63	8.4	17.8
1948.0	36.4	48.0	53	9.8	1.09	27.06	100564	100.43	550.57	8.4	17.8
1949.0	24.7	47.3	56	9.8	1.24	27.10	100700	148.11	548.75	8.4	17.8
1950.0	6.8	52.5	67	9.8	1.79	27.25	101292	536.64	548.70	8.4	17.8
1951.0	4.1	51.6	66	9.8	1.94	27.49	102253	880.54	550.19	8.4	17.8
1952.0	6.0	51.7	67	9.8	1.82	27.66	102920	605.62	550.43	8.4	17.8
1953.0	4.4	53.3	68	9.8	1.95	27.89	103839	826.77	551.66	8.4	17.8
1954.0	5.5	53.5	70	9.8	1.89	28.07	104603	667.50	552.17	8.4	17.8
1955.0	7.5	54.5	70	9.8	1.79	28.20	105158	484.90	551.88	8.4	17.8
1956.0	5.5	53.8	70	9.8	1.89	28.38	105923	666.49	552.38	8.4	17.8
1957.0	7.8	52.1	70	9.8	1.75	28.51	106459	466.64	552.01	8.4	17.8
1958.0	4.9	52.2	70	9.8	1.91	28.71	107307	739.53	552.82	8.4	17.8
1959.0	6.0	51.3	70	9.8	1.83	28.88	108003	605.62	553.05	8.4	17.8
1960.0	23.1	49.5	69	9.8	1.35	28.92	108183	158.25	551.35	8.4	17.8
1961.0	9.2	49.9	65	9.8	1.64	29.03	108608	397.66	550.69	8.4	17.8
1962.0	4.9	51.5	63	9.8	1.87	29.24	109389	750.69	551.54	8.4	17.8
1963.0	4.5	52.7	63	9.8	1.91	29.46	110230	807.50	552.63	8.4	17.8
1964.0	4.0	51.7	63	9.8	1.94	29.71	111187	919.09	554.18	8.4	17.8
1965.0	5.5	52.4	63	9.8	1.84	29.89	111879	665.48	554.65	8.4	17.8
1966.0	5.8	52.7	61	9.8	1.81	30.06	112509	624.90	554.95	8.4	17.8
1967.0	4.5	48.5	66	9.8	1.87	30.28	113384	807.50	556.00	8.4	17.8
1968.0	5.8	49.5	65	9.8	1.80	30.46	114058	632.00	556.32	8.4	17.8
1969.0	8.2	51.1	59	9.8	1.66	30.58	114492	447.37	555.87	8.4	17.8
1970.0	12.4	51.3	59	9.8	1.52	30.66	114776	294.19	554.79	8.4	17.8
1971.0	7.3	49.1	59	9.8	1.68	30.80	115264	503.16	554.57	8.4	17.8
1972.0	18.3	49.2	59	9.8	1.37	30.85	115457	199.85	553.12	8.4	17.8
1973.0	11.6	51.3	60	9.8	1.55	30.94	115765	314.48	552.15	8.4	17.8
1974.0	11.1	47.7	61	9.8	1.53	31.03	116092	327.67	551.24	8.4	17.8
1975.0	8.9	47.0	62	9.8	1.61	31.14	116513	410.85	550.67	8.4	17.8
1976.0	6.2	49.4	62	9.8	1.75	31.30	117112	585.33	550.81	8.4	17.8
1977.0	8.1	47.0	63	9.8	1.65	31.43	117580	453.46	550.42	8.4	17.8
1978.0	6.1	52.2	63	9.8	1.80	31.59	118205	600.55	550.62	8.4	17.8
1979.0	14.5	51.6	63	9.8	1.50	31.66	118467	251.58	549.43	8.4	17.9
1980.0	20.7	50.4	63	9.8	1.36	31.71	118650	176.51	547.95	8.4	17.9
1981.0	17.4	48.8	63	9.8	1.41	31.76	118868	209.99	546.61	8.4	17.9
1982.0	22.0	49.7	64	9.8	1.34	31.81	119043	166.37	545.12	8.4	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1983.0	9.7	50.9	62	9.8	1.62	31.91	119424	376.36	544.46	8.4	17.9
1984.0	7.5	52.2	65	9.8	1.74	32.05	119943	487.95	544.24	8.4	17.9
1985.0	6.0	50.4	65	9.8	1.79	32.21	120587	605.62	544.48	8.4	17.9
1986.0	8.8	50.1	65	9.8	1.66	32.33	121029	415.92	543.98	8.4	17.9
1987.0	9.3	49.6	65	9.8	1.64	32.43	121449	391.58	543.39	8.4	17.9
1988.0	5.7	50.1	66	9.8	1.81	32.61	122145	645.19	543.78	8.4	17.9
1989.0	5.1	50.3	65	9.8	1.85	32.81	122919	720.26	544.46	8.4	17.9
1990.0	8.8	49.9	65	9.8	1.66	32.92	123363	413.89	543.96	8.4	17.9
1991.0	9.5	50.7	65	9.8	1.64	33.03	123774	382.45	543.35	8.4	17.9
1992.0	24.0	50.4	65	9.8	1.32	33.07	123937	152.17	541.86	8.4	17.9
1993.0	14.9	49.2	53	9.8	1.41	33.13	124150	245.50	540.75	8.4	17.9
1994.0	16.0	53.3	63	9.8	1.48	33.20	124386	228.25	539.57	8.4	17.9
1995.0	17.0	54.3	63	9.8	1.47	33.26	124608	215.06	538.36	8.4	17.9
1996.0	10.5	53.0	63	9.8	1.62	33.35	124971	348.97	537.65	8.4	17.9
1997.0	13.5	54.1	64	9.8	1.55	33.43	125254	270.86	536.66	8.4	17.9
1998.0	4.6	53.4	64	9.8	1.92	33.64	126090	797.35	537.63	8.4	17.9
1999.0	15.0	50.4	64	9.8	1.48	33.71	126345	243.47	536.54	8.4	17.9
2000.0	14.0	51.0	62	9.8	1.50	33.78	126610	240.86	535.53	8.4	17.9
2001.0	6.0	51.5	64	9.8	1.80	33.95	127246	604.61	535.78	8.4	17.9
2002.0	7.5	51.2	64	9.8	1.72	34.08	127759	489.98	535.61	8.4	17.9
2003.0	7.2	49.6	62	9.8	1.71	34.22	128282	509.25	535.52	8.4	17.9
2004.0	9.4	47.4	63	9.8	1.60	34.33	128687	389.55	534.99	8.4	17.9
2005.0	13.4	48.3	50	9.8	1.41	34.40	128909	271.87	534.04	8.4	17.9
2006.0	7.8	48.4	55	9.8	1.62	34.53	129328	467.66	533.80	8.4	17.9
2007.0	8.8	44.8	54	9.8	1.54	34.64	129699	416.94	533.38	8.4	17.9
2008.0	12.8	45.2	54	9.8	1.42	34.72	129952	285.06	532.50	8.4	17.9
2009.0	10.4	46.4	54	9.8	1.50	34.82	130264	351.00	531.85	8.4	17.9
2010.0	25.0	46.4	54	9.8	1.22	34.86	130394	146.08	530.49	8.4	17.9
2011.0	17.1	48.4	54	9.8	1.36	34.92	130585	213.03	529.36	8.4	17.9
2012.0	5.0	49.2	54	9.8	1.78	35.12	131244	737.50	530.10	8.4	17.9
2013.0	8.1	48.9	54	9.8	1.61	35.24	131646	450.41	529.82	8.4	17.9
2014.0	10.5	49.2	61	9.8	1.57	35.34	131996	347.95	529.18	8.4	17.9
2015.0	4.5	51.2	59	9.8	1.87	35.56	132780	807.50	530.15	8.4	17.9
2016.0	4.9	50.2	59	9.8	1.83	35.76	133497	744.60	530.89	8.4	17.9
2017.0	9.1	50.8	59	9.8	1.62	35.87	133884	400.71	530.44	8.4	17.9
2018.0	20.0	47.5	58	9.8	1.32	35.92	134059	182.60	529.25	8.4	17.9
2019.0	14.9	54.4	59	9.8	1.49	35.99	134296	245.50	528.27	8.4	17.9
2020.0	12.5	39.1	61	9.8	1.41	36.07	134590	291.15	527.46	8.4	17.9
2021.0	5.7	51.7	61	9.8	1.81	36.25	135234	643.16	527.85	8.4	17.9
2022.0	4.4	50.7	62	9.8	1.89	36.47	136083	834.89	528.90	8.4	17.9
2023.0	8.0	49.3	63	9.8	1.67	36.60	136551	453.96	528.64	8.4	17.9
2024.0	4.7	50.7	63	9.8	1.88	36.81	137368	785.18	529.51	8.4	17.9
2025.0	6.6	51.6	63	9.8	1.76	36.96	137941	551.86	529.59	8.4	17.9
2026.0	12.5	50.7	63	9.8	1.54	37.04	138245	292.16	528.79	8.4	17.9
2027.0	14.6	49.7	62	9.8	1.47	37.11	138500	249.55	527.86	8.4	17.9
2028.0	5.8	50.7	63	9.8	1.80	37.29	139156	633.01	528.21	8.4	17.9
2029.0	7.2	52.2	63	9.8	1.74	37.43	139683	507.22	528.14	8.4	17.9
2030.0	10.4	52.5	64	9.8	1.62	37.52	140052	352.01	527.55	8.4	17.9
2031.0	21.1	52.8	64	9.8	1.38	37.57	140233	173.47	526.39	8.4	17.9
2032.0	16.4	52.2	61	9.8	1.45	37.63	140458	222.16	525.39	8.4	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2033.0	9.2	51.9	63	9.8	1.65	37.74	140869	395.63	524.96	8.4	17.9
2034.0	12.9	52.0	63	9.8	1.54	37.82	141159	282.02	524.17	8.4	17.9
2035.0	7.7	54.1	62	9.8	1.74	37.95	141647	476.79	524.01	8.4	17.9
2036.0	6.5	52.4	63	9.8	1.78	38.10	142229	564.03	524.14	8.4	17.9
2037.0	8.5	53.2	62	9.8	1.69	38.22	142669	431.14	523.84	8.4	17.9
2038.0	6.9	52.7	61	9.8	1.75	38.36	143202	532.58	523.87	8.4	17.9
2039.0	9.7	52.8	61	9.8	1.64	38.47	143582	378.39	523.40	8.4	17.9
2040.0	7.9	54.2	62	9.8	1.73	38.59	144052	460.56	523.20	8.4	17.9
2041.0	8.5	53.5	60	9.8	1.68	38.71	144474	427.19	522.90	8.4	17.9
2042.0	9.0	50.0	60	9.8	1.62	38.82	144874	405.78	522.52	8.4	17.9
2043.0	8.6	51.0	62	9.8	1.66	38.94	145306	424.65	522.21	8.4	17.9
2044.0	12.2	48.0	62	9.8	1.51	39.02	145611	299.34	521.51	8.4	17.9
2045.0	13.8	17.9	104	9.8	1.24	39.09	146062	263.76	520.69	8.4	17.9
2046.0	17.0	22.5	103	9.8	1.26	39.15	146424	215.06	519.73	8.4	17.9
2047.0	10.1	26.6	92	9.8	1.43	39.25	146972	361.14	519.24	8.4	17.9
2048.0	8.8	30.5	77	9.8	1.48	39.36	147497	412.88	518.91	8.4	17.9
2049.0	8.0	44.0	65	9.8	1.62	39.49	147986	454.47	518.70	8.4	17.9
2050.0	8.4	49.1	64	9.8	1.66	39.61	148445	435.20	518.45	8.4	18.0
2051.0	7.9	48.3	64	9.8	1.67	39.73	148933	462.59	518.27	8.4	18.0
2052.0	8.0	50.0	60	9.8	1.66	39.86	149383	456.50	518.08	8.4	18.0
2053.0	8.2	50.0	60	9.8	1.66	39.98	149822	445.37	517.86	8.4	18.0
2054.0	9.5	52.0	60	9.8	1.63	40.09	150200	382.95	517.44	8.4	18.0
2055.0	6.4	52.2	60	9.8	1.77	40.24	150764	573.16	517.62	8.4	18.0
2056.0	8.1	51.7	60	9.8	1.68	40.37	151210	450.41	517.41	8.4	18.0
2057.0	11.5	51.3	61	9.8	1.56	40.45	151526	316.51	516.80	8.4	18.0
2058.0	7.6	51.6	60	9.8	1.70	40.58	151998	478.82	516.69	8.4	18.0
2059.0	6.2	51.5	60	9.8	1.77	40.75	152575	589.39	516.90	8.4	18.0
2060.0	5.2	52.0	59	9.8	1.83	40.94	153252	695.91	517.44	8.4	18.0
2061.0	5.0	50.6	60	9.8	1.83	41.14	153968	731.41	518.09	8.4	18.0
2062.0	6.1	53.6	59	9.8	1.79	41.30	154548	596.49	518.32	8.4	18.0
2063.0	14.0	51.5	59	9.8	1.49	41.37	154802	261.73	517.55	8.4	18.0
2064.0	3.9	52.5	59	9.8	1.93	41.63	155700	929.91	518.78	8.4	18.0
2065.0	4.9	47.5	59	9.8	1.80	41.83	156427	750.69	519.47	8.4	18.0
2066.0	6.0	48.7	61	9.8	1.75	42.00	157039	612.72	519.74	8.4	18.0
2067.0	5.5	48.4	61	9.8	1.78	42.18	157705	660.40	520.16	8.4	18.0
2068.0	9.5	46.6	62	9.8	1.58	42.29	158096	385.49	519.76	8.4	18.0
2069.0	5.8	47.7	62	9.8	1.75	42.46	158732	627.94	520.08	8.4	18.0
2070.0	4.9	48.5	62	9.8	1.82	42.66	159490	746.63	520.74	8.4	18.0
2071.0	5.5	49.9	65	9.8	1.82	42.84	160197	661.93	521.15	8.4	18.0
2072.0	6.5	48.8	66	9.8	1.75	43.00	160809	566.06	521.28	8.4	18.0
2073.0	5.8	48.6	66	9.8	1.79	43.17	161494	633.01	521.61	8.4	18.0
2074.0	6.4	49.3	66	9.8	1.76	43.33	162112	570.12	521.75	8.4	18.0
2075.0	5.4	47.8	66	9.8	1.80	43.51	162836	670.55	522.18	8.4	18.0
2076.0	9.5	46.0	66	9.8	1.59	43.62	163253	385.49	521.78	8.4	18.0
2077.0	14.2	46.2	66	9.8	1.46	43.69	163531	257.67	521.03	8.4	18.0
2078.0	10.2	46.0	66	9.8	1.57	43.78	163916	357.08	520.56	8.4	18.0
2079.0	14.9	45.9	66	9.8	1.44	43.85	164181	245.50	519.78	8.4	18.0
2080.0	18.0	46.6	66	9.8	1.39	43.91	164400	202.89	518.88	8.4	18.0
2081.0	13.5	47.5	64	9.8	1.48	43.98	164683	269.84	518.17	8.4	18.0
2082.0	12.3	49.0	66	9.8	1.54	44.06	165006	297.23	517.55	8.4	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2083.0	8.6	49.4	65	9.8	1.66	44.18	165464	427.08	517.29	8.4	18.0
2084.0	12.5	49.4	66	9.8	1.54	44.26	165779	291.15	516.66	8.4	18.0
2085.0	17.6	48.9	66	9.8	1.42	44.32	166003	206.95	515.79	8.4	18.0
2086.0	7.8	49.1	66	9.8	1.69	44.44	166509	467.66	515.66	8.4	18.0
2087.0	9.5	50.2	66	9.8	1.64	44.55	166925	383.46	515.29	8.4	18.0
2088.0	6.4	51.1	66	9.8	1.78	44.70	167542	568.09	515.44	8.4	18.0
2089.0	7.2	50.9	66	9.8	1.74	44.84	168092	506.21	515.41	8.4	18.0
2090.0	3.6	40.1	54	9.8	1.77	45.12	168998	1014	517	8.4	18.0
2091.0	8.7	42.7	63	9.8	1.57	45.24	169436	419.98	516.52	8.4	18.0
2092.0	19.1	45.4	64	9.8	1.35	45.29	169635	190.72	515.63	8.4	18.0
2093.0	8.2	45.7	64	9.8	1.63	45.41	170106	445.34	515.43	8.4	18.0
2094.0	14.9	43.2	65	9.8	1.41	45.48	170367	244.48	514.69	8.4	18.0
2096.0	16.1	26.3	75	9.8	1.24	45.60	170923	226.56	513.13	8.4	18.0
2097.0	7.4	45.2	66	9.8	1.67	45.74	171458	490.99	513.07	8.4	18.0
2098.0	6.5	46.4	66	9.8	1.72	45.89	172064	557.94	513.19	8.4	18.0
2099.0	5.9	46.8	67	9.8	1.76	46.06	172740	616.78	513.47	8.4	18.0
2100.0	6.1	47.4	66	9.8	1.76	46.22	173393	599.54	513.70	8.4	18.0
2101.0	13.7	46.6	68	9.8	1.49	46.29	173691	265.78	513.04	8.4	18.0
2102.0	22.0	46.3	68	9.8	1.33	46.34	173876	166.37	512.11	8.4	18.0
2103.0	20.5	46.2	68	9.8	1.35	46.39	174076	178.54	511.22	8.4	18.0
2104.0	19.6	46.2	68	9.8	1.37	46.44	174284	186.66	510.36	8.4	18.0
2105.0	13.2	46.3	68	9.8	1.50	46.52	174592	275.93	509.74	8.4	18.0
2106.0	12.9	46.2	68	9.8	1.51	46.59	174907	283.03	509.14	8.4	18.0
2107.0	16.7	46.3	68	9.8	1.42	46.65	175153	219.12	508.37	8.4	18.0
2108.0	10.5	46.8	68	9.8	1.58	46.75	175543	347.95	507.95	8.4	18.0
2109.0	10.3	47.8	68	9.8	1.60	46.85	175939	354.04	507.55	8.4	18.0
2110.0	9.3	50.5	68	9.8	1.66	46.95	176379	392.59	507.25	8.4	18.0
2111.0	9.8	45.5	62	9.8	1.56	47.05	176760	372.30	506.89	8.4	18.0
2112.0	5.5	46.0	64	9.8	1.76	47.24	177455	660.40	507.29	8.4	18.0
2113.0	8.2	45.7	65	9.8	1.64	47.36	177932	447.37	507.14	8.4	18.0
2114.0	15.1	45.7	65	9.8	1.43	47.42	178190	242.45	506.45	8.4	18.0
2115.0	9.5	46.6	65	9.8	1.59	47.53	178598	382.45	506.13	8.4	18.0
2116.0	5.9	46.7	65	9.8	1.75	47.70	179255	615.77	506.41	8.4	18.0
2117.0	8.4	48.6	65	9.8	1.66	47.82	179716	433.17	506.23	8.4	18.0
2118.0	4.6	48.3	65	9.8	1.86	48.03	180559	790.25	506.95	8.4	18.0
2119.0	3.7	48.0	66	9.8	1.93	48.30	181614	976.91	508.16	8.4	18.0
2120.0	8.6	50.0	69	9.8	1.69	48.42	182093	425.05	507.94	8.4	18.0
2121.0	6.9	50.1	69	9.8	1.76	48.56	182688	526.50	507.99	8.4	18.0
2122.0	6.2	50.2	69	9.8	1.80	48.72	183360	593.45	508.21	8.4	18.0
2123.0	12.5	48.7	69	9.8	1.55	48.80	183690	291.15	507.66	8.4	18.0
2124.0	6.5	50.2	69	9.8	1.79	48.96	184328	562.00	507.80	8.4	18.1
2125.0	16.6	48.6	69	9.8	1.45	49.02	184579	220.13	507.07	8.4	18.1
2126.0	6.5	50.2	69	9.8	1.79	49.17	185221	566.06	507.22	8.4	18.1
2127.0	5.2	49.5	66	9.8	1.84	49.37	185986	709.10	507.73	8.4	18.1
2128.0	5.8	51.1	63	9.8	1.80	49.54	186627	624.90	508.02	8.4	18.1
2129.0	11.3	52.7	63	9.8	1.59	49.63	186960	322.09	507.55	8.4	18.1
2130.0	4.6	52.9	62	9.8	1.89	49.84	187758	787.21	508.25	8.4	18.1
2131.0	14.8	47.5	62	9.8	1.44	49.91	188008	246.51	507.60	8.4	18.1
2132.0	5.9	51.2	62	9.8	1.79	50.08	188638	620.84	507.88	8.4	18.1
2133.0	4.3	51.5	62	9.8	1.91	50.31	189510	859.23	508.75	8.4	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2184.0	6.6	50.4	66	9.8	1.77	58.47	219658	556.93	517.19	8.4	18.1
2185.0	6.5	49.8	67	9.8	1.76	58.63	220268	557.94	517.28	8.4	18.1
2186.0	60.0	40.2	69	9.8	0.96	58.64	220337	60.87	516.29	8.4	18.1
2187.0	5.3	50.2	68	9.8	1.85	58.83	221109	688.81	516.66	8.4	18.1
2188.0	6.0	49.6	68	9.8	1.80	59.00	221796	611.71	516.87	8.4	18.1
2189.0	12.6	49.8	69	9.8	1.55	59.08	222122	289.12	516.37	8.4	18.1
2190.0	19.8	48.3	70	9.8	1.39	59.13	222333	184.63	515.66	8.4	18.1
2191.0	7.3	49.1	70	9.8	1.74	59.27	222909	502.15	515.63	8.4	18.1
2192.0	9.2	47.9	70	9.8	1.65	59.38	223364	396.65	515.37	8.4	18.1
2193.0	9.8	46.7	70	9.8	1.61	59.48	223796	373.32	515.07	8.4	18.1
2194.0	9.7	47.5	70	9.8	1.63	59.58	224232	376.39	514.77	8.4	18.1
2195.0	6.7	47.8	71	9.8	1.76	59.73	224875	548.81	514.85	8.4	18.1
2196.0	6.3	50.9	65	9.8	1.79	59.89	225500	581.61	514.99	8.4	18.1
2197.0	8.5	49.0	66	9.8	1.66	60.01	225963	428.10	514.80	8.4	18.1
2198.0	9.8	49.4	66	9.8	1.62	60.11	226366	372.30	514.50	8.4	18.1
2199.0	10.7	49.2	66	9.8	1.59	60.20	226735	339.84	514.13	8.4	18.1
2200.0	5.1	49.8	67	9.8	1.85	60.40	227518	716.20	514.56	8.4	18.2
2201.0	5.2	48.5	67	9.8	1.83	60.59	228282	695.91	514.94	8.4	18.2
2202.0	5.2	47.7	67	9.8	1.82	60.78	229063	706.05	515.34	8.4	18.2
2203.0	6.9	48.6	68	9.8	1.74	60.93	229657	532.58	515.38	8.4	18.2
2204.0	8.0	50.0	68	9.8	1.71	61.05	230166	456.50	515.26	8.4	18.2
2205.0	5.4	52.8	68	9.8	1.87	61.24	230918	676.63	515.59	8.4	18.2
2206.0	6.0	48.5	68	9.8	1.78	61.40	231594	606.64	515.78	8.4	18.2
2207.0	9.6	47.9	68	9.8	1.63	61.51	232023	381.43	515.50	8.4	18.2
2208.0	6.2	47.8	68	9.8	1.77	61.67	232683	590.41	515.66	8.4	18.2
2209.0	6.1	48.6	68	9.8	1.78	61.84	233354	600.55	515.84	8.4	18.2
2210.0	8.4	48.9	69	9.8	1.68	61.95	233841	433.17	515.67	8.4	18.2
2211.0	13.0	49.5	68	9.8	1.54	62.03	234156	281.00	515.18	8.4	18.2
2212.0	15.2	49.9	68	9.8	1.49	62.10	234425	240.42	514.61	8.4	18.2
2213.0	11.3	51.1	69	9.8	1.60	62.19	234789	322.59	514.22	8.4	18.2
2214.0	11.1	52.3	60	9.8	1.57	62.28	235110	328.68	513.83	8.4	18.2
2215.0	8.5	48.9	61	9.8	1.64	62.39	235541	432.15	513.67	8.4	18.2
2216.0	14.3	47.4	61	9.8	1.45	62.46	235799	254.63	513.14	8.4	18.2
2217.0	7.3	47.9	61	9.8	1.68	62.60	236302	503.16	513.12	8.4	18.2
2218.0	4.8	50.8	61	9.8	1.85	62.81	237061	755.76	513.61	8.4	18.2
2219.0	5.5	50.5	61	9.8	1.81	62.99	237732	664.46	513.92	8.4	18.2
2220.0	9.4	48.0	62	9.8	1.60	63.10	238126	388.53	513.66	8.4	18.2
2221.0	14.6	46.5	62	9.8	1.44	63.16	238379	249.55	513.13	8.4	18.2
2222.0	16.3	46.1	61	9.8	1.39	63.23	238605	224.19	512.54	8.4	18.2
2223.0	8.8	47.3	61	9.8	1.61	63.34	239021	412.88	512.34	8.4	18.2
2224.0	6.6	48.9	59	9.8	1.71	63.49	239557	556.93	512.43	8.4	18.2
2225.0	7.0	49.5	58	9.8	1.69	63.63	240049	518.38	512.44	8.4	18.2
2226.0	10.0	48.6	60	9.8	1.57	63.73	240409	365.20	512.15	8.4	18.2
2227.0	14.3	46.2	60	9.8	1.43	63.80	240660	256.15	511.64	8.4	18.2
2228.0	17.7	45.1	60	9.8	1.35	63.86	240864	205.93	511.02	8.4	18.2
2229.0	6.9	49.6	62	9.8	1.72	64.00	241397	526.50	511.06	8.4	18.2
2229.3	3.7	48.1	54	9.8	1.86	64.08	241658	984.01	511.34	8.4	18.2

BIT NUMBER	6	IADC CODE	517	INTERVAL	2229.3- 2521.0
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	5.0	BIT RUN	291.7
TOTAL HOURS	45.36	TOTAL TURNS	153199	CONDITION	T5 B4 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2230.0	9.5	50.0	45	9.8	1.51	0.07	199	384	38642	8.4	18.2
2231.0	6.6	49.5	44	9.8	1.62	0.23	601	556	16238	8.4	18.2
2232.0	3.6	51.6	44	9.8	1.85	0.50	1329	1008	10597	8.4	18.2
2235.0	9.5	50.5	61	9.8	1.62	0.82	2493	385	5223	8.4	18.2
2236.0	3.6	53.0	48	9.8	1.89	1.09	3284	1004	4593	8.4	18.2
2237.0	5.8	54.3	44	9.8	1.71	1.27	3735	628	4078	8.4	18.2
2238.0	3.5	53.4	43	9.8	1.87	1.55	4470	1036	3728	8.4	18.2
2239.0	4.6	52.6	37	9.8	1.72	1.77	4956	794	3426	8.4	18.2
2240.0	14.9	51.6	44	9.8	1.36	1.83	5134	245	3129	8.4	18.2
2241.0	8.6	51.9	45	9.8	1.56	1.95	5447	423	2897	8.4	18.2
2242.0	2.9	53.9	45	9.8	1.97	2.30	6395	1276	2770	8.4	18.2
2243.0	4.5	51.7	45	9.8	1.78	2.52	6999	817	2627	8.4	18.2
2244.0	8.7	50.6	48	9.8	1.57	2.64	7331	422	2477	8.4	18.2
2245.0	6.0	48.3	52	9.8	1.70	2.81	7854	612	2358	8.4	18.2
2246.0	6.3	48.5	52	9.8	1.68	2.96	8350	577	2252	8.4	18.2
2247.0	5.4	48.8	52	9.8	1.74	3.15	8938	682	2163	8.4	18.2
2248.0	5.3	49.3	53	9.8	1.75	3.34	9539	691	2084	8.4	18.2
2249.0	5.5	50.6	53	9.8	1.76	3.52	10117	661	2012	8.4	18.2
2250.0	7.6	48.0	48	9.8	1.58	3.65	10496	482	1938	8.4	18.2
2251.0	11.1	49.0	64	9.8	1.56	3.74	10841	329	1864	8.4	18.2
2252.0	12.3	49.6	64	9.8	1.53	3.82	11150	296	1795	8.4	18.2
2253.0	10.1	49.0	55	9.8	1.55	3.92	11479	361	1734	8.4	18.2
2254.0	4.1	49.9	59	9.8	1.89	4.17	12351	897	1700	8.4	18.2
2255.0	3.9	50.3	59	9.8	1.90	4.42	13249	934	1671	8.4	18.2
2256.0	5.3	49.8	58	9.8	1.79	4.61	13905	692	1634	8.4	18.2
2257.0	3.9	48.8	57	9.8	1.88	4.87	14783	939	1609	8.4	18.2
2258.0	4.8	48.7	56	9.8	1.80	5.08	15489	766	1580	8.4	18.2
2259.0	10.7	53.6	55	9.8	1.58	5.17	15801	343	1538	8.4	18.2
2260.0	10.9	50.1	56	9.8	1.53	5.27	16106	334	1499	8.4	18.2
2261.0	7.5	50.1	58	9.8	1.68	5.40	16570	487	1467	8.4	18.2
2262.0	6.6	49.3	58	9.8	1.71	5.55	17100	555	1439	8.4	18.2
2263.0	8.8	49.5	58	9.8	1.61	5.66	17491	414	1408	8.4	18.2
2264.0	6.0	46.6	53	9.8	1.68	5.83	18020	610	1385	8.4	18.2
2265.0	4.6	46.0	52	9.8	1.75	6.05	18686	786	1369	8.4	18.2
2266.0	7.8	45.6	51	9.8	1.57	6.17	19079	467	1344	8.4	18.2
2267.0	8.6	44.6	52	9.8	1.53	6.29	19439	426	1320	8.4	18.2
2268.0	7.5	46.8	53	9.8	1.61	6.42	19859	486	1298	8.4	18.2
2269.0	11.1	45.9	54	9.8	1.48	6.51	20151	330	1274	8.4	18.2
2270.0	4.6	46.6	55	9.8	1.78	6.73	20866	791	1262	8.4	18.2
2271.0	5.7	47.0	55	9.8	1.71	6.91	21437	637	1247	8.4	18.2
2272.0	4.6	48.9	54	9.8	1.81	7.12	22149	801	1237	8.4	18.2
2273.0	4.8	51.0	53	9.8	1.81	7.33	22815	763	1226	8.4	18.2
2274.0	3.9	51.9	57	9.8	1.91	7.59	23691	940	1219	8.4	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2275.0	5.1	52.9	55	9.8	1.83	7.79	24346	720	1208	8.4	18.2
2276.0	8.8	51.6	50	9.8	1.59	7.90	24689	417	1191	8.4	18.2
2277.0	8.9	51.3	50	9.8	1.58	8.02	25029	412	1175	8.4	18.2
2278.0	9.3	50.1	47	9.8	1.53	8.12	25334	395	1159	8.4	18.3
2279.0	5.8	49.5	45	9.8	1.67	8.30	25800	628	1148	8.4	18.3
2280.0	5.7	51.1	45	9.8	1.70	8.47	26276	643	1138	8.4	18.3
2281.0	6.8	51.0	46	9.8	1.64	8.62	26685	541	1127	8.4	18.3
2282.0	13.2	50.5	46	9.8	1.41	8.70	26897	277	1111	8.4	18.3
2283.0	5.8	51.1	45	9.8	1.69	8.87	27359	626	1102	8.4	18.3
2284.0	7.0	49.6	45	9.8	1.61	9.01	27746	523	1091	8.4	18.3
2285.0	9.2	50.3	45	9.8	1.52	9.12	28040	398	1079	8.4	18.3
2286.0	8.3	50.4	45	9.8	1.56	9.24	28366	439	1067	8.4	18.3
2287.0	4.4	51.7	46	9.8	1.80	9.47	28992	837	1063	8.4	18.3
2288.0	2.9	50.1	46	9.8	1.92	9.82	29950	1267	1067	8.4	18.3
2289.0	3.9	50.7	46	9.8	1.83	10.07	30657	941	1065	8.4	18.3
2290.0	6.4	50.8	46	9.8	1.66	10.23	31090	570	1057	8.4	18.3
2291.0	13.0	51.2	47	9.8	1.43	10.31	31307	281	1044	8.4	18.3
2292.0	13.7	50.1	47	9.8	1.40	10.38	31511	266	1032	8.4	18.3
2293.0	11.0	50.0	52	9.8	1.51	10.47	31792	331	1021	8.4	18.3
2294.0	16.8	50.3	57	9.8	1.40	10.53	31994	217	1008	8.4	18.3
2295.0	17.8	49.1	57	9.8	1.37	10.59	32186	204.92	995.99	8.4	18.3
2296.0	11.8	51.1	57	9.8	1.52	10.67	32473	308.39	985.68	8.4	18.3
2297.0	14.2	50.4	57	9.8	1.46	10.74	32714	257.67	974.93	8.4	18.3
2298.0	5.9	51.2	57	9.8	1.76	10.91	33292	618.81	969.75	8.4	18.3
2299.0	4.9	49.5	46	9.8	1.73	11.11	33851	738.52	966.43	8.4	18.3
2300.0	9.0	51.0	46	9.8	1.54	11.22	34156	403.75	958.47	8.4	18.3
2301.0	12.2	50.0	46	9.8	1.43	11.30	34383	299.26	949.28	8.4	18.3
2302.0	15.3	49.2	44	9.8	1.33	11.37	34556	238.39	939.50	8.4	18.3
2303.0	7.8	51.2	47	9.8	1.60	11.50	34917	466.64	933.08	8.4	18.3
2304.0	3.7	52.6	48	9.8	1.88	11.77	35686	980.97	933.72	8.4	18.3
2305.0	4.8	51.0	48	9.8	1.78	11.98	36289	764.89	931.49	8.4	18.3
2306.0	7.1	50.1	49	9.8	1.64	12.12	36702	515.34	926.07	8.4	18.3
2307.0	7.7	49.9	48	9.8	1.60	12.25	37078	472.73	920.23	8.4	18.3
2308.0	14.5	50.4	49	9.8	1.40	12.31	37280	251.58	911.74	8.4	18.3
2309.0	13.8	49.1	49	9.8	1.40	12.39	37492	264.77	903.62	8.4	18.3
2310.0	7.7	51.7	48	9.8	1.62	12.52	37869	473.75	898.29	8.4	18.3
2311.0	6.6	51.4	50	9.8	1.69	12.67	38327	556.93	894.11	8.4	18.3
2312.0	8.1	50.8	52	9.8	1.62	12.79	38711	451.43	888.76	8.4	18.3
2313.0	12.1	47.6	37	9.8	1.34	12.88	38894	301.29	881.74	8.4	18.3
2314.0	6.5	51.3	52	9.8	1.70	13.03	39375	565.05	878.00	8.4	18.3
2315.0	5.5	52.6	52	9.8	1.78	13.21	39950	669.53	875.57	8.4	18.3
2316.0	5.3	53.5	53	9.8	1.80	13.40	40548	687.79	873.40	8.4	18.3
2317.0	11.5	53.7	52	9.8	1.53	13.49	40821	318.54	867.08	8.4	18.3
2318.0	9.3	52.8	53	9.8	1.60	13.60	41162	394.62	861.75	8.4	18.3
2319.0	6.5	51.4	53	9.8	1.71	13.75	41654	562.00	858.41	8.4	18.3
2320.0	5.3	51.5	54	9.8	1.78	13.94	42260	683.74	856.48	8.4	18.3
2321.0	6.7	50.2	49	9.8	1.66	14.09	42698	548.81	853.13	8.4	18.3
2322.0	14.2	49.8	50	9.8	1.41	14.16	42908	256.65	846.69	8.4	18.3
2323.0	7.5	51.5	50	9.8	1.64	14.29	43312	489.98	842.89	8.4	18.3
2324.0	6.8	50.6	51	9.8	1.67	14.44	43760	537.66	839.66	8.4	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2325.0	6.1	51.1	51	9.8	1.72	14.60	44267	599.54	837.15	8.4	18.3
2326.0	7.3	51.2	52	9.8	1.66	14.74	44692	498.09	833.65	8.4	18.3
2327.0	5.8	51.5	52	9.8	1.74	14.91	45227	628.96	831.55	8.4	18.3
2328.0	8.7	51.6	52	9.8	1.60	15.03	45585	417.95	827.36	8.4	18.3
2329.0	6.5	51.7	52	9.8	1.71	15.18	46070	563.02	824.71	8.4	18.3
2330.0	4.6	50.2	53	9.8	1.81	15.40	46764	792.28	824.39	8.4	18.3
2331.0	5.8	50.3	54	9.8	1.74	15.57	47324	633.01	822.51	8.4	18.3
2332.0	9.6	50.6	58	9.8	1.60	15.68	47688	380.42	818.20	8.4	18.3
2333.0	8.7	51.6	59	9.8	1.64	15.79	48091	417.95	814.34	8.4	18.3
2334.0	11.1	51.0	59	9.8	1.56	15.88	48411	328.68	809.70	8.4	18.3
2335.0	8.6	51.8	59	9.8	1.65	16.00	48821	423.02	806.05	8.4	18.3
2336.0	8.1	53.0	60	9.8	1.69	16.12	49262	448.38	802.69	8.4	18.3
2337.0	21.8	50.4	61	9.8	1.33	16.17	49429	167.38	796.80	8.4	18.3
2338.0	13.4	51.4	55	9.8	1.48	16.24	49677	272.89	791.98	8.4	18.3
2339.0	7.3	52.2	54	9.8	1.68	16.38	50119	500.12	789.31	8.4	18.3
2340.0	4.5	50.8	56	9.8	1.85	16.60	50866	806.48	789.47	8.4	18.3
2341.0	7.0	50.7	51	9.8	1.66	16.74	51302	521.42	787.07	8.4	18.3
2342.0	19.4	48.7	58	9.8	1.34	16.79	51480	188.69	781.76	8.4	18.3
2343.0	7.5	52.5	61	9.8	1.72	16.92	51969	483.89	779.14	8.4	18.3
2344.0	9.6	50.6	52	9.8	1.56	17.03	52293	380.42	775.66	8.4	18.3
2345.0	9.7	51.7	50	9.8	1.55	17.13	52601	375.34	772.20	8.4	18.3
2346.0	6.9	51.8	56	9.8	1.71	17.28	53087	529.54	770.13	8.4	18.3
2347.0	4.6	52.0	62	9.8	1.88	17.49	53887	791.27	770.31	8.4	18.3
2348.0	4.5	51.7	58	9.8	1.87	17.71	54661	805.47	770.60	8.4	18.3
2349.0	12.5	51.3	55	9.8	1.50	17.79	54924	293.17	766.61	8.4	18.3
2350.0	6.3	50.9	49	9.8	1.68	17.95	55386	577.22	765.04	8.4	18.3
2351.0	3.7	50.1	48	9.8	1.85	18.22	56161	991.11	766.90	8.4	18.3
2352.0	3.7	50.6	53	9.8	1.89	18.49	57014	976.91	768.61	8.4	18.3
2353.0	4.0	50.1	55	9.8	1.87	18.74	57831	908.94	769.75	8.4	18.3
2354.0	6.2	51.2	56	9.8	1.75	18.90	58379	591.42	768.32	8.4	18.3
2355.0	7.7	50.7	58	9.8	1.67	19.03	58829	475.77	765.99	8.4	18.3
2356.0	3.8	50.2	62	9.8	1.93	19.30	59816	964.74	767.56	8.4	18.3
2357.0	5.0	50.8	55	9.8	1.80	19.49	60467	723.30	767.21	8.4	18.3
2358.0	6.4	51.4	59	9.8	1.75	19.65	61024	572.15	765.70	8.4	18.3
2359.0	12.4	51.0	60	9.8	1.53	19.73	61317	295.20	762.07	8.4	18.4
2360.0	13.7	51.5	59	9.8	1.49	19.80	61577	265.78	758.27	8.4	18.4
2361.0	12.3	49.3	57	9.8	1.50	19.89	61856	296.22	754.76	8.4	18.4
2362.0	19.0	48.7	67	9.8	1.40	19.94	62066	191.73	750.52	8.4	18.4
2363.0	24.0	46.8	59	9.8	1.26	19.98	62212	152.17	746.04	8.4	18.4
2364.0	22.2	48.3	60	9.8	1.30	20.02	62375	164.34	741.73	8.4	18.4
2365.0	24.5	48.2	61	9.8	1.28	20.07	62524	149.12	737.36	8.4	18.4
2366.0	5.1	51.4	54	9.8	1.80	20.26	63165	717.21	737.21	8.4	18.4
2367.0	3.9	51.8	46	9.8	1.84	20.52	63867	929.23	738.61	8.4	18.4
2368.0	8.7	51.0	62	9.8	1.66	20.63	64293	420.99	736.32	8.4	18.4
2369.0	6.7	51.7	67	9.8	1.78	20.78	64891	541.71	734.92	8.4	18.4
2370.0	7.1	50.3	62	9.8	1.72	20.92	65414	512.29	733.34	8.4	18.4
2371.0	5.3	51.2	60	9.8	1.82	21.11	66095	686.78	733.01	8.4	18.4
2372.0	4.0	51.6	54	9.8	1.88	21.36	66901	909.96	734.25	8.4	18.4
2373.0	6.4	51.1	67	9.8	1.79	21.51	67532	572.15	733.12	8.4	18.4
2374.0	7.4	51.0	59	9.8	1.70	21.65	68015	494.03	731.47	8.4	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2375.0	6.3	50.8	57	9.8	1.74	21.81	68558	579.25	730.43	8.4	18.4
2376.0	7.0	52.7	58	9.8	1.73	21.95	69050	518.38	728.98	8.4	18.4
2377.0	4.9	53.4	67	9.8	1.91	22.16	69878	751.70	729.14	8.4	18.4
2378.0	8.4	52.8	60	9.8	1.68	22.27	70304	434.18	727.15	8.4	18.4
2379.0	6.1	52.8	57	9.8	1.77	22.44	70867	599.54	726.30	8.4	18.4
2380.0	6.9	54.0	61	9.8	1.76	22.58	71391	525.82	724.97	8.4	18.4
2381.0	4.3	51.2	59	9.8	1.89	22.82	72228	858.22	725.85	8.4	18.4
2382.0	4.3	50.9	52	9.8	1.83	23.05	72945	843.00	726.62	8.4	18.4
2383.0	3.6	51.3	51	9.8	1.90	23.33	73813	1028	729	8.4	18.4
2384.0	4.9	49.1	57	9.8	1.80	23.53	74507	739.53	728.64	8.4	18.4
2385.0	18.9	49.2	51	9.8	1.31	23.59	74669	192.74	725.20	8.4	18.4
2386.0	4.1	49.4	51	9.8	1.83	23.83	75415	889.67	726.25	8.4	18.4
2387.0	8.8	49.3	53	9.8	1.58	23.94	75778	413.89	724.27	8.4	18.4
2388.0	5.8	49.4	47	9.8	1.69	24.11	76266	626.93	723.66	8.4	18.4
2389.0	6.0	49.1	51	9.8	1.70	24.28	76779	608.67	722.94	8.4	18.4
2390.0	7.4	49.8	59	9.8	1.69	24.42	77261	494.03	721.51	8.4	18.4
2391.0	6.4	51.2	73	9.8	1.82	24.57	77946	569.10	720.57	8.4	18.4
2392.0	5.1	52.2	72	9.8	1.91	24.77	78795	715.18	720.54	8.4	18.4
2393.0	5.6	51.3	59	9.8	1.80	24.95	79428	652.29	720.12	8.4	18.4
2394.0	6.5	50.8	64	9.8	1.76	25.10	80011	557.94	719.14	8.4	18.4
2395.0	4.5	50.5	65	9.8	1.89	25.32	80880	819.67	719.74	8.4	18.4
2396.0	6.9	50.9	63	9.8	1.74	25.47	81428	530.55	718.61	8.4	18.4
2397.0	6.9	49.8	63	9.8	1.73	25.61	81974	526.06	717.46	8.4	18.4
2399.0	3.8	53.4	62	9.8	1.97	26.14	83926	955.03	720.26	8.4	18.4
2400.0	3.4	51.8	54	9.8	1.94	26.43	84868	1065	722	8.4	18.4
2401.0	18.2	49.1	52	9.8	1.33	26.48	85039	200.86	719.24	8.4	18.4
2402.0	7.8	50.2	67	9.8	1.71	26.61	85549	465.63	717.78	8.4	18.4
2403.0	9.4	48.7	57	9.8	1.58	26.72	85915	388.53	715.88	8.4	18.4
2404.0	9.2	48.9	58	9.8	1.60	26.83	86296	397.66	714.06	8.4	18.4
2405.0	8.3	49.0	64	9.8	1.67	26.95	86761	441.28	712.51	8.4	18.4
2406.0	7.3	48.2	62	9.8	1.69	27.08	87273	502.15	711.32	8.4	18.4
2407.0	5.7	50.3	65	9.8	1.81	27.26	87957	642.14	710.93	8.4	18.4
2408.0	9.3	48.6	64	9.8	1.62	27.37	88371	393.60	709.15	8.4	18.4
2409.0	5.6	53.1	63	9.8	1.84	27.55	89051	652.29	708.83	8.4	18.4
2410.0	7.9	51.4	61	9.8	1.69	27.67	89515	464.62	707.48	8.4	18.4
2411.0	10.0	51.6	70	9.8	1.66	27.77	89936	366.21	705.60	8.4	18.4
2412.0	9.0	51.4	62	9.8	1.65	27.88	90349	403.75	703.95	8.4	18.4
2413.0	8.4	50.0	62	9.8	1.66	28.00	90789	434.18	702.48	8.4	18.4
2414.0	14.5	49.8	70	9.8	1.52	28.07	91079	251.58	700.04	8.4	18.4
2415.0	11.7	47.5	64	9.8	1.53	28.16	91410	312.45	697.95	8.4	18.4
2416.0	12.0	48.7	64	9.8	1.54	28.24	91730	304.33	695.85	8.4	18.4
2417.0	10.2	49.5	58	9.8	1.57	28.34	92071	357.08	694.04	8.4	18.4
2418.0	11.8	52.1	71	9.8	1.61	28.42	92433	309.41	692.00	8.4	18.4
2419.0	11.2	50.6	67	9.8	1.60	28.51	92794	325.64	690.07	8.4	18.4
2420.0	10.2	52.0	63	9.8	1.62	28.61	93164	357.08	688.33	8.4	18.4
2421.0	7.5	51.7	61	9.8	1.71	28.74	93651	484.90	687.26	8.4	18.4
2422.0	9.2	51.4	72	9.8	1.70	28.85	94123	398.68	685.77	8.4	18.4
2423.0	7.1	52.0	63	9.8	1.75	28.99	94657	517.37	684.90	8.4	18.4
2424.0	5.9	52.3	67	9.8	1.84	29.16	95345	620.84	684.57	8.4	18.4
2425.0	18.4	50.0	62	9.8	1.39	29.22	95548	198.83	682.09	8.4	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2426.0	23.7	51.8	64	9.8	1.34	29.26	95710	154.20	679.40	8.4	18.4
2427.0	11.5	48.3	50	9.8	1.46	29.35	95972	316.51	677.57	8.4	18.4
2428.0	12.0	51.8	69	9.8	1.59	29.43	96316	304.33	675.69	8.4	18.4
2429.0	6.9	52.1	67	9.8	1.78	29.58	96899	531.57	674.97	8.4	18.4
2430.0	6.3	51.4	67	9.8	1.80	29.74	97544	583.31	674.51	8.4	18.4
2431.0	4.7	51.2	66	9.8	1.89	29.95	98385	777.06	675.02	8.4	18.4
2432.0	4.5	51.2	65	9.8	1.91	30.17	99262	816.63	675.72	8.4	18.4
2433.0	4.5	51.5	67	9.8	1.91	30.39	100151	811.56	676.38	8.4	18.4
2434.0	6.0	50.8	66	9.8	1.80	30.56	100808	607.65	676.05	8.4	18.4
2435.0	3.9	51.4	65	9.8	1.95	30.82	101809	936.33	677.31	8.4	18.4
2436.0	12.1	51.1	63	9.8	1.55	30.90	102120	302.30	675.50	8.4	18.4
2437.0	11.0	48.1	64	9.8	1.56	30.99	102466	330.71	673.84	8.4	18.4
2438.0	10.3	47.3	59	9.8	1.55	31.09	102810	353.03	672.30	8.4	18.4
2439.0	8.3	48.6	61	9.8	1.65	31.21	103256	442.30	671.21	8.4	18.4
2440.0	8.2	47.6	63	9.8	1.65	31.33	103716	446.36	670.14	8.4	18.4
2441.0	8.2	48.5	52	9.8	1.59	31.45	104097	445.34	669.08	8.4	18.5
2442.0	6.4	49.7	57	9.8	1.72	31.61	104633	570.12	668.61	8.4	18.5
2443.0	3.2	49.7	55	9.8	1.94	31.92	105659	1145	671	8.4	18.5
2444.0	5.1	50.5	61	9.8	1.83	32.12	106385	721.27	671.09	8.4	18.5
2445.0	6.7	50.7	60	9.8	1.74	32.27	106927	546.79	670.50	8.4	18.5
2446.0	5.4	50.1	59	9.8	1.80	32.46	107588	681.71	670.55	8.4	18.5
2447.0	4.9	49.9	59	9.8	1.82	32.66	108312	747.65	670.91	8.4	18.5
2448.0	4.5	50.2	62	9.8	1.87	32.88	109134	807.50	671.53	8.4	18.5
2449.0	6.1	49.5	62	9.8	1.76	33.05	109747	599.54	671.20	8.4	18.5
2450.0	28.3	49.7	59	9.8	1.23	33.08	109872	128.83	668.75	8.4	18.5
2451.0	5.9	50.3	63	9.8	1.78	33.25	110506	616.78	668.51	8.4	18.5
2452.0	11.7	48.7	59	9.8	1.52	33.34	110808	313.46	666.92	8.4	18.5
2453.0	3.8	51.2	60	9.8	1.93	33.60	111760	967.78	668.26	8.4	18.5
2454.0	4.2	51.9	61	9.8	1.91	33.84	112636	879.52	669.20	8.4	18.5
2455.0	7.1	50.5	61	9.8	1.72	33.98	113155	517.37	668.53	8.4	18.5
2457.0	3.6	50.7	64	9.8	1.96	34.54	115277	1013	672	8.4	18.5
2458.0	3.4	52.0	63	9.8	1.99	34.83	116379	1059	673	8.4	18.5
2459.0	4.2	50.7	60	9.8	1.90	35.07	117247	872.42	674.12	8.4	18.5
2460.0	4.1	51.8	62	9.8	1.92	35.31	118151	885.47	675.03	8.4	18.5
2461.0	4.4	50.9	65	9.8	1.90	35.53	119030	821.70	675.67	8.4	18.5
2462.0	3.8	51.0	62	9.8	1.94	35.80	120023	967.78	676.92	8.4	18.5
2463.0	4.1	51.0	64	9.8	1.93	36.05	120971	900.83	677.88	8.4	18.5
2464.0	5.9	52.1	59	9.8	1.79	36.22	121569	617.80	677.62	8.4	18.5
2465.0	6.1	50.8	51	9.8	1.71	36.38	122069	594.46	677.27	8.4	18.5
2466.0	5.8	51.2	58	9.8	1.77	36.55	122666	624.90	677.05	8.4	18.5
2467.0	3.4	51.7	58	9.8	1.96	36.84	123673	1059	679	8.4	18.5
2468.0	3.0	51.1	59	9.8	2.01	37.18	124857	1230	681	8.4	18.5
2469.0	3.2	51.0	58	9.8	1.98	37.49	125942	1131	683	8.4	18.5
2470.0	4.6	51.0	59	9.8	1.85	37.70	126701	789.24	683.28	8.4	18.5
2471.0	10.1	50.2	56	9.8	1.56	37.80	127034	362.16	681.96	8.4	18.5
2472.0	9.5	50.4	60	9.8	1.61	37.91	127416	385.49	680.73	8.4	18.5
2473.0	13.1	49.7	57	9.8	1.48	37.98	127675	277.96	679.08	8.4	18.5
2474.0	13.0	50.3	61	9.8	1.51	38.06	127955	279.99	677.45	8.4	18.5
2475.0	13.4	50.7	56	9.8	1.47	38.13	128207	271.87	675.80	8.4	18.5
2476.0	11.5	50.3	54	9.8	1.51	38.22	128487	317.52	674.35	8.4	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2477.0	6.4	52.5	56	9.8	1.75	38.38	129015	570.12	673.93	8.4	18.5
2478.0	4.2	51.6	56	9.8	1.88	38.62	129816	874.45	674.73	8.4	18.5
2479.0	13.2	50.4	54	9.8	1.47	38.69	130062	275.93	673.14	8.4	18.5
2480.0	13.4	49.5	60	9.8	1.49	38.77	130331	271.87	671.54	8.4	18.5
2482.0	14.1	48.7	54	9.8	1.42	38.91	130789	259.25	668.27	8.4	18.5
2483.0	11.7	49.6	53	9.8	1.49	38.99	131059	311.43	666.87	8.4	18.5
2484.0	7.0	51.7	56	9.8	1.70	39.14	131536	521.42	666.29	8.4	18.5
2485.0	3.7	51.6	56	9.8	1.92	39.40	132429	977.92	667.51	8.4	18.5
2486.0	5.0	51.4	55	9.8	1.81	39.60	133091	731.41	667.76	8.4	18.5
2487.0	8.0	50.7	59	9.8	1.67	39.73	133537	457.51	666.95	8.4	18.5
2488.0	4.9	51.1	59	9.8	1.83	39.93	134251	740.54	667.23	8.4	18.5
2489.0	4.6	51.1	58	9.8	1.85	40.15	134998	788.22	667.70	8.4	18.5
2490.0	3.7	51.3	58	9.8	1.93	40.42	135935	976.91	668.88	8.4	18.5
2491.0	3.9	52.7	58	9.8	1.93	40.67	136828	936.33	669.90	8.4	18.5
2492.0	3.6	52.4	60	9.8	1.96	40.95	137822	1003	671	8.4	18.5
2493.0	3.9	52.6	62	9.8	1.95	41.20	138763	927.20	672.14	8.4	18.5
2494.0	4.8	52.6	63	9.8	1.88	41.41	139544	756.78	672.46	8.4	18.5
2495.0	3.5	53.5	62	9.8	2.00	41.70	140616	1053	674	8.4	18.5
2496.0	4.4	51.9	61	9.8	1.90	41.92	141456	834.89	674.50	8.4	18.5
2497.0	5.0	52.7	59	9.8	1.84	42.12	142153	724.31	674.69	8.4	18.5
2498.0	9.4	51.8	59	9.8	1.63	42.23	142531	390.56	673.63	8.4	18.5
2499.0	12.2	52.3	57	9.8	1.53	42.31	142812	298.25	672.24	8.4	18.5
2500.0	12.9	52.6	58	9.8	1.51	42.39	143078	282.02	670.80	8.4	18.5
2501.0	10.6	51.5	58	9.8	1.57	42.48	143407	345.93	669.60	8.4	18.5
2502.0	17.1	51.9	60	9.8	1.42	42.54	143616	214.05	667.93	8.4	18.5
2503.0	5.7	54.5	59	9.8	1.82	42.72	144231	638.09	667.82	8.4	18.5
2504.0	3.1	53.8	59	9.8	2.03	43.04	145377	1189	670	8.4	18.5
2505.0	4.3	52.0	59	9.8	1.90	43.28	146205	852.13	670.38	8.4	18.5
2506.0	5.5	51.6	60	9.8	1.81	43.46	146864	665.48	670.36	8.4	18.5
2507.0	11.6	49.6	60	9.8	1.53	43.54	147174	315.49	669.08	8.4	18.5
2508.0	14.7	50.5	60	9.8	1.47	43.61	147420	248.54	667.57	8.4	18.5
2509.0	10.8	49.6	59	9.8	1.55	43.71	147746	337.81	666.40	8.4	18.5
2510.0	11.6	49.8	46	9.8	1.45	43.79	147982	315.49	665.15	8.4	18.5
2511.0	12.1	50.0	55	9.8	1.49	43.87	148252	301.29	663.85	8.4	18.5
2512.0	12.2	49.3	56	9.8	1.49	43.96	148526	299.26	662.56	8.4	18.5
2513.0	12.3	49.2	55	9.8	1.48	44.04	148795	297.23	661.28	8.4	18.5
2514.0	6.8	49.7	56	9.8	1.69	44.18	149282	534.61	660.83	8.4	18.5
2515.0	6.7	51.2	55	9.8	1.71	44.33	149774	546.79	660.43	8.4	18.5
2516.0	11.9	50.7	57	9.8	1.52	44.42	150061	307.38	659.20	8.4	18.5
2517.0	5.2	51.0	56	9.8	1.80	44.61	150704	698.95	659.34	8.4	18.5
2518.0	2.6	51.5	56	9.8	2.04	44.99	151978	1384	662	8.4	18.5
2519.0	5.8	50.7	56	9.8	1.76	45.16	152565	635.04	661.76	8.4	18.5
2520.0	10.2	49.8	55	9.8	1.55	45.26	152892	359.11	660.71	8.4	18.5
2521.0	9.7	48.7	49	9.8	1.52	45.36	153199	378.39	659.75	8.4	18.5

BIT NUMBER	7	IADC CODE	517	INTERVAL	2521.0- 2774.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.4	BIT RUN	253.0
TOTAL HOURS	47.95	TOTAL TURNS	174772	CONDITION	T8 B4 G0.250

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2522.0	3.6	48.2	58	9.8	1.90	0.28	960	1011	36556	8.4	18.5
2524.0	5.5	50.1	61	9.8	1.80	0.64	2294	670	12632	8.4	18.5
2525.0	6.5	50.6	57	9.8	1.73	0.80	2824	566	9615	8.4	18.6
2526.0	3.6	50.6	61	9.8	1.94	1.07	3829	1008	7894	8.4	18.6
2527.0	4.4	49.7	63	9.8	1.88	1.30	4687	829	6716	8.4	18.6
2528.0	12.5	50.8	64	9.8	1.55	1.38	4997	293	5799	8.4	18.6
2529.0	9.0	50.6	60	9.8	1.63	1.49	5398	408	5125	8.4	18.6
2530.0	19.1	46.9	60	9.8	1.34	1.55	5586	191	4577	8.4	18.6
2531.0	14.8	49.4	63	9.8	1.46	1.61	5841	248	4144	8.4	18.6
2532.0	7.8	50.5	62	9.8	1.69	1.74	6318	469	3810	8.4	18.6
2533.0	9.7	49.3	62	9.8	1.60	1.84	6703	375	3523	8.4	18.6
2534.0	8.6	56.6	58	9.8	1.69	1.96	7108	427	3285	8.4	18.6
2535.0	6.9	57.1	60	9.8	1.79	2.11	7628	530	3088	8.4	18.6
2536.0	6.7	53.1	60	9.8	1.76	2.26	8164	545	2919	8.4	18.6
2537.0	8.5	50.3	61	9.8	1.65	2.37	8594	429	2763	8.4	18.6
2538.0	4.4	50.5	61	9.8	1.88	2.60	9432	838	2650	8.4	18.6
2539.0	6.3	52.5	61	9.8	1.78	2.76	10007	576	2535	8.4	18.6
2540.0	7.8	50.2	61	9.8	1.68	2.89	10476	466	2426	8.4	18.6
2541.0	14.0	50.3	61	9.8	1.49	2.96	10739	262	2318	8.4	18.6
2542.0	22.6	51.6	60	9.8	1.33	3.00	10899	161	2215	8.4	18.6
2543.0	15.0	50.1	63	9.8	1.47	3.07	11152	243	2125	8.4	18.6
2544.0	8.0	49.7	61	9.8	1.67	3.20	11611	457	2053	8.4	18.6
2545.0	6.9	48.1	60	9.8	1.70	3.34	12137	531	1989	8.4	18.6
2546.0	7.1	54.6	61	9.8	1.76	3.48	12648	511	1930	8.4	18.6
2547.0	15.8	49.5	62	9.8	1.44	3.54	12884	231	1865	8.4	18.6
2548.0	18.6	49.9	60	9.8	1.38	3.60	13077	197	1803	8.4	18.6
2549.0	17.4	49.7	63	9.8	1.41	3.66	13294	210	1746	8.4	18.6
2550.0	25.0	49.8	60	9.8	1.28	3.70	13437	146	1691	8.4	18.6
2551.0	24.8	49.3	61	9.8	1.28	3.74	13583	147	1640	8.4	18.6
2552.0	24.5	50.2	64	9.8	1.31	3.78	13740	149	1592	8.4	18.6
2553.0	12.3	50.2	61	9.8	1.53	3.86	14038	298	1551	8.4	18.6
2554.0	14.2	51.5	64	9.8	1.51	3.93	14308	258	1512	8.4	18.6
2555.0	15.4	50.9	60	9.8	1.45	3.99	14542	237	1474	8.4	18.6
2556.0	6.7	52.3	61	9.8	1.76	4.14	15089	543	1448	8.4	18.6
2557.0	6.8	53.4	61	9.8	1.76	4.29	15625	535	1422	8.4	18.6
2558.0	7.6	54.1	61	9.8	1.73	4.42	16107	479	1397	8.4	18.6
2559.0	6.3	54.7	60	9.8	1.80	4.58	16686	584	1376	8.4	18.6
2560.0	6.4	49.4	60	9.8	1.74	4.74	17251	571	1355	8.4	18.6
2561.0	9.4	50.2	62	9.8	1.62	4.84	17646	388	1331	8.4	18.6
2562.0	11.0	49.9	63	9.8	1.57	4.93	17988	333	1306	8.4	18.6
2563.0	13.1	48.7	56	9.8	1.46	5.01	18243	278	1282	8.4	18.6
2564.0	19.4	48.3	60	9.8	1.35	5.06	18429	189	1256	8.4	18.6
2565.0	17.7	48.4	61	9.8	1.39	5.12	18635	206	1233	8.4	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2566.0	14.4	49.2	61	9.8	1.46	5.19	18889	254	1211	8.4	18.6
2567.0	16.3	48.1	60	9.8	1.40	5.25	19109	224	1189	8.4	18.6
2568.0	15.8	49.6	62	9.8	1.44	5.31	19342	231	1169	8.4	18.6
2569.0	19.7	50.3	59	9.8	1.36	5.36	19524	186	1149	8.4	18.6
2570.0	10.5	50.6	61	9.8	1.58	5.46	19870	347	1132	8.4	18.6
2571.0	10.7	51.5	61	9.8	1.59	5.55	20214	343	1116	8.4	18.6
2572.0	4.4	51.7	59	9.8	1.88	5.78	21024	833	1111	8.4	18.6
2573.0	4.8	49.7	60	9.8	1.83	5.99	21767	759	1104	8.4	18.6
2574.0	6.0	48.6	60	9.8	1.74	6.15	22360	607	1095	8.4	18.6
2575.0	4.4	51.0	60	9.8	1.88	6.38	23188	839	1090	8.4	18.6
2576.0	4.5	50.3	60	9.8	1.86	6.60	23990	807	1085	8.4	18.6
2577.0	8.7	49.7	60	9.8	1.63	6.72	24405	422	1073	8.4	18.6
2578.0	11.8	49.5	59	9.8	1.52	6.80	24705	309	1060	8.4	18.6
2579.0	5.9	50.6	61	9.8	1.78	6.97	25320	619	1052	8.4	18.6
2580.0	5.6	51.6	60	9.8	1.80	7.15	25958	651	1045	8.4	18.6
2581.0	12.5	51.0	59	9.8	1.52	7.23	26243	292	1033	8.4	18.6
2582.0	11.0	49.5	58	9.8	1.54	7.32	26556	331	1021	8.4	18.6
2583.0	11.8	50.2	62	9.8	1.55	7.41	26872	308	1010	8.4	18.6
2584.0	11.7	50.4	61	9.8	1.55	7.49	27186	311.43	998.53	8.4	18.6
2585.0	17.4	52.1	61	9.8	1.43	7.55	27398	209.99	986.21	8.4	18.6
2586.0	16.6	51.2	61	9.8	1.43	7.61	27618	220.13	974.42	8.4	18.6
2587.0	16.9	50.8	65	9.8	1.45	7.67	27849	216.08	962.93	8.4	18.6
2588.0	17.5	50.5	62	9.8	1.42	7.73	28062	208.98	951.68	8.4	18.6
2589.0	15.7	50.3	64	9.8	1.46	7.79	28307	232.31	941.10	8.5	18.6
2590.0	22.8	51.9	62	9.8	1.34	7.83	28469	160.28	929.79	8.5	18.6
2591.0	13.8	49.6	62	9.8	1.49	7.91	28737	263.76	920.27	8.5	18.6
2592.0	18.4	49.3	60	9.8	1.38	7.96	28933	198.83	910.11	8.5	18.6
2593.0	18.9	48.5	61	9.8	1.37	8.01	29127	192.74	900.15	8.5	18.6
2594.0	5.4	50.3	60	9.8	1.80	8.20	29798	677.65	897.10	8.5	18.6
2595.0	4.9	51.7	60	9.8	1.85	8.40	30538	745.62	895.05	8.5	18.6
2596.0	5.6	50.7	61	9.8	1.80	8.58	31190	654.32	891.84	8.5	18.6
2597.0	6.2	50.5	60	9.8	1.76	8.75	31777	593.45	887.92	8.5	18.6
2598.0	6.6	49.9	61	9.8	1.74	8.90	32334	556.93	883.62	8.5	18.6
2599.0	7.9	51.1	60	9.8	1.68	9.02	32791	460.56	878.19	8.5	18.6
2600.0	13.7	50.7	61	9.8	1.49	9.10	33056	265.78	870.44	8.5	18.6
2601.0	11.4	50.1	61	9.8	1.55	9.18	33376	319.55	863.55	8.5	18.6
2602.0	9.9	50.5	63	9.8	1.61	9.29	33756	369.26	857.45	8.5	18.6
2603.0	10.0	50.8	62	9.8	1.61	9.39	34127	366.21	851.46	8.5	18.6
2604.0	10.9	50.6	63	9.8	1.58	9.48	34475	333.75	845.22	8.5	18.6
2605.0	13.6	50.5	63	9.8	1.50	9.55	34751	267.81	838.35	8.5	18.6
2606.0	16.4	50.4	61	9.8	1.43	9.61	34975	223.18	831.11	8.5	18.6
2607.0	15.4	50.9	62	9.8	1.47	9.68	35218	237.38	824.21	8.5	18.6
2608.0	14.2	50.9	62	9.8	1.49	9.75	35480	256.65	817.69	8.5	18.6
2609.0	11.6	49.8	62	9.8	1.55	9.83	35799	315.49	811.98	8.5	18.6
2610.0	11.3	51.4	63	9.8	1.58	9.92	36133	322.59	806.48	8.5	18.6
2611.0	17.3	49.9	53	9.8	1.36	9.98	36317	211.00	799.86	8.5	18.6
2612.0	7.7	48.6	63	9.8	1.67	10.11	36802	471.72	796.26	8.5	18.6
2613.0	7.0	49.7	63	9.8	1.72	10.25	37337	519.40	793.25	8.5	18.6
2614.0	5.8	50.9	63	9.8	1.80	10.42	37989	633.01	791.53	8.5	18.6
2615.0	17.8	49.9	62	9.8	1.40	10.48	38198	204.92	785.28	8.5	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2616.0	8.6	53.0	62	9.8	1.69	10.60	38634	426.07	781.50	8.5	18.6
2617.0	5.7	53.7	63	9.8	1.84	10.77	39289	637.07	780.00	8.5	18.7
2618.0	7.8	53.0	63	9.8	1.73	10.90	39780	470.70	776.81	8.5	18.7
2619.0	13.2	53.2	63	9.8	1.54	10.98	40064	275.93	771.70	8.5	18.7
2620.0	17.0	49.5	62	9.8	1.42	11.03	40282	215.06	766.08	8.5	18.7
2621.0	18.9	52.4	64	9.8	1.42	11.09	40486	192.74	760.34	8.5	18.7
2622.0	13.8	52.9	64	9.8	1.53	11.16	40767	264.77	755.44	8.5	18.7
2623.0	4.5	53.2	64	9.8	1.93	11.38	41632	818.66	756.06	8.5	18.7
2624.0	7.0	52.2	64	9.8	1.76	11.53	42182	522.44	753.79	8.5	18.7
2625.0	4.8	51.9	65	9.8	1.88	11.73	42983	754.75	753.80	8.5	18.7
2626.0	6.9	51.3	65	9.8	1.76	11.88	43546	530.55	751.67	8.5	18.7
2630.0	5.6	53.5	63	9.8	1.84	12.60	46244	654.32	748.10	8.5	18.7
2631.0	6.1	52.2	63	9.8	1.80	12.76	46863	598.52	746.74	8.5	18.7
2632.0	5.8	52.4	64	9.8	1.82	12.93	47526	632.00	745.71	8.5	18.7
2633.0	4.2	50.7	63	9.8	1.91	13.17	48429	867.35	746.79	8.5	18.7
2634.0	5.7	49.0	63	9.8	1.78	13.34	49092	638.09	745.83	8.5	18.7
2635.0	10.3	48.8	64	9.8	1.59	13.44	49466	355.06	742.40	8.5	18.7
2636.0	17.1	48.6	64	9.8	1.42	13.50	49690	213.03	737.80	8.5	18.7
2637.0	14.5	47.8	63	9.8	1.46	13.57	49951	251.58	733.61	8.5	18.7
2638.0	19.0	48.5	65	9.8	1.38	13.62	50155	191.73	728.98	8.5	18.7
2639.0	12.6	47.3	64	9.8	1.50	13.70	50459	290.13	725.26	8.5	18.7
2640.0	5.7	50.7	62	9.8	1.80	13.88	51105	638.09	724.52	8.5	18.7
2641.0	4.8	52.3	64	9.8	1.88	14.08	51900	757.79	724.80	8.5	18.7
2642.0	3.9	50.6	66	9.8	1.94	14.34	52907	928.22	726.48	8.5	18.7
2643.0	5.0	49.9	67	9.8	1.86	14.54	53713	735.47	726.56	8.5	18.7
2644.0	4.2	50.5	66	9.8	1.92	14.78	54657	866.34	727.69	8.5	18.7
2645.0	4.5	50.1	66	9.8	1.90	15.00	55549	817.64	728.42	8.5	18.7
2646.0	5.9	47.6	67	9.8	1.77	15.17	56221	614.75	727.51	8.5	18.7
2647.0	4.7	52.4	66	9.8	1.91	15.38	57070	779.09	727.92	8.5	18.7
2648.0	4.3	51.0	67	9.8	1.93	15.62	58010	856.19	728.93	8.5	18.7
2649.0	4.9	48.9	65	9.8	1.85	15.82	58815	749.67	729.09	8.5	18.7
2650.0	4.8	51.2	65	9.8	1.88	16.03	59621	753.73	729.28	8.5	18.7
2651.0	7.3	49.3	65	9.8	1.72	16.17	60159	502.15	727.53	8.5	18.7
2652.0	4.7	53.9	65	9.8	1.92	16.38	60985	773.01	727.88	8.5	18.7
2653.0	3.8	54.8	65	9.8	2.01	16.64	62014	959.66	729.64	8.5	18.7
2654.0	6.7	49.0	65	9.8	1.74	16.79	62596	542.73	728.23	8.5	18.7
2655.0	5.1	49.3	65	9.8	1.84	16.99	63370	721.27	728.18	8.5	18.7
2656.0	4.2	50.9	66	9.8	1.92	17.22	64300	860.25	729.16	8.5	18.7
2657.0	6.0	51.2	66	9.8	1.81	17.39	64957	604.61	728.24	8.5	18.7
2658.0	7.1	49.8	64	9.8	1.72	17.53	65496	513.31	726.67	8.5	18.7
2659.0	5.2	50.7	66	9.8	1.85	17.72	66253	703.35	726.50	8.5	18.7
2660.0	6.2	49.6	66	9.8	1.78	17.88	66888	585.33	725.49	8.5	18.7
2661.0	4.2	52.3	61	9.8	1.92	18.12	67762	871.41	726.53	8.5	18.7
2662.0	7.2	54.2	62	9.8	1.75	18.26	68271	504.18	724.95	8.5	18.7
2663.0	8.1	51.7	61	9.8	1.69	18.38	68726	453.46	723.04	8.5	18.7
2664.0	5.3	53.0	61	9.8	1.84	18.57	69415	688.81	722.80	8.5	18.7
2665.0	6.1	52.6	61	9.8	1.79	18.73	70013	595.48	721.92	8.5	18.7
2666.0	5.6	52.5	61	9.8	1.82	18.91	70660	649.24	721.42	8.5	18.7
2667.0	3.8	52.7	61	9.8	1.95	19.17	71611	951.55	722.99	8.5	18.7
2668.0	3.5	53.2	61	9.8	1.99	19.46	72651	1041	725	8.5	18.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2669.0	4.5	51.0	62	9.8	1.89	19.68	73484	815.61	725.77	8.5	18.7
2670.0	3.3	52.6	62	9.8	2.01	19.99	74626	1117	728	8.5	18.7
2671.0	3.3	52.1	62	9.8	2.00	20.29	75753	1104	731	8.5	18.7
2672.0	5.2	50.8	62	9.8	1.83	20.48	76466	696.92	730.67	8.5	18.7
2673.0	3.5	52.2	62	9.8	1.99	20.77	77543	1054	733	8.5	18.7
2674.0	4.3	52.7	62	9.8	1.92	21.00	78421	856.19	733.60	8.5	18.7
2675.0	4.8	53.2	63	9.8	1.89	21.21	79199	755.76	733.75	8.5	18.7
2676.0	7.2	52.6	62	9.8	1.74	21.35	79718	506.21	732.28	8.5	18.7
2677.0	12.0	51.4	62	9.8	1.55	21.43	80029	303.32	729.53	8.5	18.7
2678.0	12.0	51.5	63	9.8	1.56	21.51	80341	304.33	726.82	8.5	18.7
2679.0	14.0	54.0	56	9.8	1.49	21.58	80580	261.73	723.88	8.5	18.7
2680.0	7.5	53.9	60	9.8	1.73	21.72	81060	483.89	722.37	8.5	18.7
2681.0	4.1	53.7	61	9.8	1.95	21.96	81961	898.80	723.47	8.5	18.7
2682.0	4.1	53.8	61	9.8	1.95	22.21	82861	895.75	724.54	8.5	18.7
2683.0	3.2	53.7	62	9.8	2.03	22.52	84001	1124	727	8.5	18.7
2684.0	4.0	53.6	62	9.8	1.96	22.77	84940	924.16	728.22	8.5	18.7
2685.0	4.3	52.8	62	9.8	1.92	23.00	85804	846.05	728.93	8.5	18.7
2686.0	4.9	52.6	62	9.8	1.87	23.20	86559	741.56	729.01	8.5	18.7
2687.0	4.2	54.3	62	9.8	1.95	23.44	87445	868.36	729.85	8.5	18.7
2688.0	4.6	54.8	61	9.8	1.91	23.66	88234	789.24	730.21	8.5	18.7
2689.0	3.9	51.6	61	9.8	1.94	23.92	89178	939.38	731.45	8.5	18.7
2690.0	6.8	50.0	61	9.8	1.73	24.06	89717	536.64	730.30	8.5	18.7
2691.0	8.7	51.4	61	9.8	1.66	24.18	90139	420.99	728.48	8.5	18.7
2692.0	3.5	53.1	60	9.8	1.98	24.46	91157	1037	730	8.5	18.7
2693.0	2.9	54.5	62	9.8	2.07	24.80	92417	1241	733	8.5	18.7
2694.0	4.0	50.4	62	9.8	1.91	25.05	93343	906.91	734.25	8.5	18.7
2695.0	3.7	51.3	62	9.8	1.95	25.32	94343	978.94	735.66	8.5	18.7
2696.0	8.2	50.0	62	9.8	1.67	25.44	94799	447.37	734.01	8.5	18.7
2697.0	10.9	49.9	62	9.8	1.57	25.53	95140	335.78	731.75	8.5	18.7
2698.0	12.0	43.7	61	9.8	1.47	25.62	95444	304.33	729.33	8.5	18.7
2699.0	16.4	53.1	62	9.8	1.46	25.68	95672	222.16	726.48	8.5	18.7
2700.0	14.0	48.3	63	9.8	1.48	25.75	95943	261.73	723.89	8.5	18.7
2701.0	14.6	49.4	61	9.8	1.46	25.82	96192	249.55	721.25	8.5	18.7
2702.0	17.5	48.3	60	9.8	1.39	25.87	96400	208.98	718.42	8.5	18.7
2703.0	12.8	48.1	61	9.8	1.49	25.95	96685	286.07	716.05	8.5	18.7
2704.0	15.7	47.8	61	9.8	1.42	26.02	96917	232.31	713.40	8.5	18.7
2705.0	20.7	48.4	61	9.8	1.33	26.06	97093	176.51	710.49	8.5	18.7
2706.0	8.5	48.5	61	9.8	1.63	26.18	97525	429.11	708.97	8.5	18.8
2707.0	4.3	52.6	61	9.8	1.91	26.41	98373	840.97	709.67	8.5	18.8
2708.0	3.1	50.8	63	9.8	2.01	26.73	99579	1171	712	8.5	18.8
2709.0	4.2	48.8	63	9.8	1.88	26.97	100473	861.26	712.93	8.5	18.8
2710.0	3.7	50.5	63	9.8	1.95	27.24	101495	985.03	714.37	8.5	18.8
2711.0	3.1	49.1	63	9.8	1.99	27.56	102698	1160	717	8.5	18.8
2712.0	3.3	49.7	63	9.8	1.98	27.86	103856	1116	719	8.5	18.8
2713.0	3.1	49.9	63	9.8	2.00	28.18	105083	1183	721	8.5	18.8
2714.0	4.1	49.8	63	9.8	1.90	28.43	106004	892.71	722.11	8.5	18.8
2715.0	3.4	50.1	63	9.8	1.97	28.72	107106	1064	724	8.5	18.8
2716.0	3.9	48.3	63	9.8	1.90	28.98	108077	942.42	724.99	8.5	18.8
2717.0	3.5	50.8	62	9.8	1.96	29.26	109135	1037	727	8.5	18.8
2718.0	2.9	50.8	62	9.8	2.03	29.61	110432	1273	729	8.5	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2719.0	3.2	50.1	62	9.8	1.98	29.92	111588	1128	731	8.5	18.8
2720.0	3.9	50.1	62	9.8	1.92	30.18	112543	938.36	732.41	8.5	18.8
2721.0	5.1	50.2	62	9.8	1.83	30.37	113271	715.18	732.33	8.5	18.8
2722.0	3.5	51.2	59	9.8	1.95	30.66	114269	1034	734	8.5	18.8
2723.0	3.6	50.7	60	9.8	1.95	30.93	115274	1017	735	8.5	18.8
2724.0	4.2	49.1	61	9.8	1.88	31.17	116147	877.49	735.93	8.5	18.8
2725.0	3.8	48.7	58	9.8	1.89	31.44	117058	959.66	737.03	8.5	18.8
2726.0	2.7	49.4	57	9.8	2.01	31.81	118337	1357	740	8.5	18.8
2727.0	3.9	49.2	62	9.8	1.92	32.07	119309	947.49	741.06	8.5	18.8
2728.0	4.2	49.2	59	9.8	1.87	32.31	120153	874.45	741.71	8.5	18.8
2729.0	3.4	50.1	59	9.8	1.95	32.60	121193	1070	743	8.5	18.8
2730.0	3.6	44.7	59	9.8	1.87	32.88	122193	1026	745	8.5	18.8
2731.0	3.4	43.0	59	9.8	1.86	33.18	123250	1086	746	8.5	18.8
2732.0	3.3	46.3	59	9.8	1.91	33.48	124325	1105	748	8.5	18.8
2733.0	2.9	49.3	59	9.8	1.99	33.82	125536	1244	750	8.5	18.8
2734.0	2.8	49.1	59	9.8	2.01	34.19	126827	1326	753	8.5	18.8
2735.0	3.2	48.5	59	9.8	1.95	34.49	127928	1128	755	8.5	18.8
2736.0	3.9	48.6	60	9.8	1.89	34.75	128846	938.36	755.61	8.5	18.8
2737.0	4.6	47.8	59	9.8	1.82	34.97	129616	798.37	755.81	8.5	18.8
2738.0	3.8	50.5	60	9.8	1.92	35.23	130550	955.61	756.73	8.5	18.8
2739.0	3.9	49.2	60	9.8	1.90	35.49	131478	945.46	757.59	8.5	18.8
2740.0	3.4	51.7	60	9.8	1.97	35.79	132531	1077	759	8.5	18.8
2741.0	3.8	50.6	60	9.8	1.92	36.05	133467	955.61	759.95	8.5	18.8
2742.0	5.0	49.8	60	9.8	1.82	36.25	134185	729.39	759.61	8.5	18.8
2743.0	3.6	50.5	60	9.8	1.94	36.53	135190	1023	761	8.5	18.8
2744.0	3.8	52.2	60	9.8	1.94	36.79	136129	950.53	761.84	8.5	18.8
2745.0	4.3	52.5	64	9.8	1.93	37.02	137025	846.05	762.22	8.5	18.8
2746.0	3.6	48.1	62	9.8	1.92	37.29	138050	1003	763	8.5	18.8
2747.0	4.1	50.6	64	9.8	1.92	37.54	138987	888.65	763.85	8.5	18.8
2748.0	5.7	49.9	63	9.8	1.80	37.71	139651	644.17	763.32	8.5	18.8
2749.0	4.7	50.3	63	9.8	1.86	37.92	140447	769.96	763.35	8.5	18.8
2750.0	3.9	50.7	63	9.8	1.94	38.18	141424	942.42	764.13	8.5	18.8
2751.0	2.8	52.2	63	9.8	2.07	38.54	142785	1309	766	8.5	18.8
2752.0	2.9	50.1	59	9.8	2.00	38.88	144007	1256	769	8.5	18.8
2753.0	4.7	50.1	59	9.8	1.84	39.10	144751	773.01	768.63	8.6	18.8
2754.0	3.1	50.7	59	9.8	1.98	39.41	145867	1161	770	8.6	18.8
2755.0	3.8	51.9	57	9.8	1.92	39.68	146766	968.79	771.16	8.6	18.8
2756.0	4.5	51.3	57	9.8	1.86	39.90	147538	818.32	771.36	8.6	18.8
2757.0	3.8	50.8	57	9.8	1.91	40.17	148446	966.77	772.19	8.6	18.8
2758.0	3.5	51.3	57	9.8	1.95	40.45	149432	1048	773	8.6	18.8
2759.0	2.0	52.9	57	9.8	2.16	40.95	151147	1817	778	8.6	18.8
2760.0	2.7	51.4	57	9.8	2.04	41.33	152438	1367	780	8.6	18.8
2761.0	3.0	51.0	58	9.8	1.99	41.65	153570	1198	782	8.6	18.8
2762.0	5.5	50.8	58	9.8	1.79	41.84	154203	664.00	781.46	8.6	18.8
2763.0	5.4	50.4	59	9.8	1.80	42.02	154859	676.30	781.03	8.6	18.8
2764.0	5.4	50.2	60	9.8	1.80	42.21	155525	676.30	780.59	8.6	18.8
2765.0	2.8	51.3	59	9.8	2.03	42.56	156790	1304	783	8.6	18.8
2766.0	4.0	49.8	60	9.8	1.90	42.81	157690	913.00	783.27	8.6	18.8
2767.0	3.3	50.5	58	9.8	1.96	43.12	158744	1107	785	8.6	18.8
2768.0	3.1	49.8	60	9.8	1.98	43.44	159905	1178	786	8.6	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2770.0	2.0	50.2	54	9.8	2.10	44.43	163149	1814	794	8.6	18.8
2771.0	3.1	50.2	54	9.8	1.95	44.75	164193	1166	796	8.6	18.8
2772.0	1.8	52.4	55	9.8	2.16	45.30	165979	1986	801	8.6	18.8
2773.0	1.9	51.3	55	9.8	2.13	45.82	167681	1897	805	8.6	18.8
2774.0	1.9	50.8	54	9.8	2.12	46.34	169369	1905	809	8.6	18.8

BIT NUMBER	8	IADC CODE	537	INTERVAL	2774.0- 2782.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	8.0
TOTAL HOURS	1.68	TOTAL TURNS	5933	CONDITION	T0 B0 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2775.0	5.0	47.7	58	9.8	1.79	0.20	701	730	37847	8.6	18.8
2776.0	9.0	48.5	59	9.8	1.60	0.31	1094	406	19126	8.6	18.8
2777.0	3.1	49.0	59	9.8	1.97	0.63	2236	1178	13144	8.6	18.8
2778.0	3.5	49.0	59	9.8	1.93	0.92	3247	1043	10119	8.6	18.8
2779.0	3.1	48.9	59	9.8	1.96	1.24	4387	1178	8331	8.6	18.8
2780.0	3.7	48.0	58	9.8	1.89	1.51	5329	987	7107	8.6	18.8
2781.0	10.8	48.6	58	9.8	1.54	1.60	5652	338	6140	8.6	18.8
2782.0	12.6	48.3	59	9.8	1.49	1.68	5933	290	5408	8.6	18.8

BIT NUMBER	8	IADC CODE	4	INTERVAL	2782.0- 2788.3
CHRIS C201		SIZE	9.875	NOZZLES	14 14 14
COST	21000.00	TRIP TIME	7.9	BIT RUN	6.3
TOTAL HOURS	4.20	TOTAL TURNS	12508	CONDITION	T0 B0 G5.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2782.2	7.7	7.2	38	9.8	0.97	0.03	58	472	249726	8.6	18.8
2782.4	8.3	8.3	53	9.8	1.05	0.05	135	441	125084	8.6	18.8
2782.6	1.5	13.1	76	9.8	1.68	0.18	736	2394	84187	8.6	18.8
2782.8	4.0	15.4	77	9.8	1.51	0.23	969	923	63371	8.6	18.8
2783.0	1.6	18.2	76	9.8	1.80	0.35	1527	2242	51145	8.6	18.8
2783.2	1.6	18.9	74	9.8	1.82	0.48	2085	2298	43004	8.6	18.8
2783.4	1.9	21.6	55	9.8	1.75	0.58	2427	1892	37131	8.6	18.8
2783.6	3.8	23.0	56	9.8	1.60	0.64	2606	974	32611	8.6	18.8
2783.8	1.3	25.2	48	9.8	1.92	0.80	3064	2896	29310	8.6	18.8
2784.0	3.8	20.3	43	9.8	1.47	0.85	3198	959	26474	8.6	18.8
2784.2	2.0	17.1	50	9.8	1.61	0.95	3494	1790	24230	8.6	18.8
2784.4	7.3	17.0	51	9.8	1.28	0.97	3578	497	22253	8.6	18.8
2784.6	10.4	16.5	51	9.8	1.17	0.99	3636	350	20568	8.6	18.8
2784.8	10.9	16.4	51	9.8	1.16	1.01	3692	335	19123	8.6	18.8
2785.0	6.5	17.2	51	9.8	1.31	1.04	3786	563	17885	8.6	18.8
2785.2	7.6	17.7	49	9.8	1.27	1.07	3864	482	16798	8.6	18.8
2785.4	13.3	13.8	52	9.8	1.06	1.08	3911	274	15826	8.6	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2785.6	4.4	14.9	51	9.8	1.36	1.13	4049	827	14992	8.6	18.8
2785.8	1.4	19.5	51	9.8	1.78	1.27	4493	2638	14342	8.6	18.8
2786.0	1.0	22.0	51	9.8	1.94	1.48	5134	3794	13815	8.6	18.8
2786.2	0.8	24.3	51	9.8	2.04	1.72	5874	4398	13366	8.6	18.8
2786.4	1.5	25.4	46	9.8	1.86	1.86	6249	2455	12870	8.6	18.8
2786.6	1.8	20.8	40	9.8	1.67	1.97	6518	2044	12400	8.6	18.8
2786.8	0.6	20.9	54	9.8	2.07	2.31	7635	6295	12145	8.6	18.8
2787.0	0.9	21.4	68	9.8	2.01	2.53	8498	3890	11815	8.6	18.8
2787.2	1.4	23.2	88	9.8	2.01	2.67	9238	2551	11459	8.6	18.8
2787.4	1.1	23.8	87	9.8	2.09	2.84	10171	3272	11156	8.6	18.8
2787.6	0.9	23.8	86	9.8	2.17	3.08	11386	4286	10910	8.6	18.8
2787.8	1.6	23.4	89	9.8	1.99	3.21	12072	2333	10614	8.6	18.8
2788.0	1.6	20.7	57	9.8	1.80	3.34	12508	2343	10339	8.6	18.8
2788.3	0.8	23.4	46	9.8	2.00	3.71	13547	4606	10066	8.6	18.8

BIT NUMBER	8	IADC CODE	537	INTERVAL	2788.3- 2990.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	201.7
TOTAL HOURS	59.74	TOTAL TURNS	218884	CONDITION	T4 B7 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2789.0	5.7	30.6	50	9.8	1.48	1.80	6301	645	5023	8.6	18.8
2790.0	3.8	42.5	62	9.8	1.83	2.07	7283	960	4604	8.6	18.8
2791.0	6.6	47.1	61	9.8	1.71	2.22	7844	555	4226	8.6	18.8
2792.0	4.1	50.8	63	9.8	1.92	2.46	8781	900	3942	8.6	18.8
2793.0	2.8	50.5	64	9.8	2.04	2.82	10136	1288	3733	8.6	18.8
2794.0	4.4	50.1	61	9.8	1.87	3.04	10959	824	3520	8.6	18.8
2795.0	3.2	51.3	61	9.8	2.00	3.36	12111	1156	3360	8.6	18.8
2796.0	4.0	50.4	61	9.8	1.90	3.61	13011	902	3203	8.6	18.8
2797.0	3.9	50.7	61	9.8	1.92	3.86	13944	929	3067	8.6	18.8
2798.0	2.7	50.9	61	9.8	2.04	4.23	15278	1331	2969	8.6	18.8
2799.0	3.3	51.4	61	9.8	1.99	4.53	16400	1117	2870	8.6	18.8
2800.0	3.0	51.2	61	9.8	2.02	4.87	17626	1218	2786	8.6	18.8
2801.0	4.1	51.0	61	9.8	1.91	5.11	18523	891	2694	8.6	18.8
2802.0	4.6	51.3	61	9.8	1.87	5.33	19320	790	2607	8.6	18.8
2803.0	3.3	51.4	61	9.8	1.99	5.63	20431	1102	2540	8.6	18.9
2804.0	2.4	52.0	60	9.8	2.11	6.05	21965	1545	2498	8.6	18.9
2805.0	3.2	51.9	60	9.8	2.00	6.36	23077	1135	2443	8.6	18.9
2806.0	4.0	52.0	60	9.8	1.92	6.61	23963	903	2383	8.6	18.9
2807.0	4.0	52.5	60	9.8	1.93	6.86	24858	907	2328	8.6	18.9
2808.0	3.8	51.2	60	9.8	1.93	7.12	25791	954	2278	8.6	18.9
2809.0	3.5	50.3	60	9.8	1.95	7.40	26814	1043	2235	8.6	18.9
2810.0	4.4	50.0	60	9.8	1.87	7.63	27636	838	2188	8.6	18.9
2811.0	4.7	50.6	60	9.8	1.85	7.85	28409	785	2143	8.6	18.9
2812.0	4.8	50.4	60	9.8	1.84	8.06	29155	760	2099	8.6	18.9
2813.0	4.4	50.2	60	9.8	1.87	8.28	29970	827	2060	8.6	18.9
2814.0	3.8	50.7	59	9.8	1.92	8.54	30894	951	2027	8.6	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2815.0	7.4	50.5	60	9.8	1.70	8.68	31386	496	1983	8.6	18.9
2816.0	7.5	50.4	60	9.8	1.69	8.81	31871	490	1941	8.6	18.9
2817.0	3.7	50.6	60	9.8	1.94	9.09	32862	998	1915	8.6	18.9
2818.0	3.8	51.0	60	9.8	1.93	9.35	33811	956	1890	8.6	18.9
2819.0	3.2	50.6	61	9.8	1.99	9.66	34946	1138	1871	8.6	18.9
2820.0	3.6	51.3	61	9.8	1.95	9.94	35956	1008	1849	8.6	18.9
2821.0	6.3	49.8	61	9.8	1.75	10.09	36534	576	1818	8.6	18.9
2822.0	4.1	52.8	61	9.8	1.93	10.33	37415	882	1795	8.6	18.9
2823.0	3.4	52.4	61	9.8	1.99	10.63	38485	1063	1778	8.6	18.9
2824.0	3.8	49.6	59	9.8	1.91	10.89	39432	970	1760	8.6	18.9
2825.0	4.7	51.7	60	9.8	1.87	11.10	40206	781	1738	8.6	18.9
2826.0	4.9	53.6	60	9.8	1.88	11.31	40945	745	1716	8.6	18.9
2827.0	2.5	51.2	63	9.8	2.10	11.71	42480	1474	1711	8.6	18.9
2828.0	4.2	51.2	64	9.8	1.92	11.95	43386	864	1693	8.6	18.9
2829.0	3.4	54.1	62	9.8	2.02	12.24	44477	1077	1680	8.6	18.9
2830.0	2.9	50.3	62	9.8	2.03	12.59	45772	1268	1672	8.6	18.9
2831.0	4.5	49.8	62	9.8	1.87	12.81	46604	815	1655	8.6	18.9
2832.0	3.3	49.7	62	9.8	1.97	13.12	47728	1102	1644	8.6	18.9
2833.0	3.2	48.6	60	9.8	1.96	13.43	48869	1151	1635	8.6	18.9
2834.0	2.9	49.7	60	9.8	2.00	13.77	50095	1239	1628	8.6	18.9
2835.0	2.5	50.2	61	9.8	2.07	14.17	51554	1457	1625	8.6	18.9
2836.0	4.0	49.4	61	9.8	1.90	14.42	52465	903	1612	8.6	18.9
2837.0	5.4	49.3	61	9.8	1.79	14.60	53140	673	1595	8.6	18.9
2838.0	6.6	51.9	61	9.8	1.76	14.75	53694	554	1577	8.6	18.9
2839.0	9.3	50.0	61	9.8	1.62	14.86	54086	395	1557	8.6	18.9
2840.0	6.8	50.5	61	9.8	1.73	15.01	54624	541	1540	8.6	18.9
2841.0	2.6	51.1	61	9.8	2.07	15.40	56047	1421	1538	8.6	18.9
2842.0	4.9	51.9	61	9.8	1.86	15.60	56789	743	1525	8.6	18.9
2843.0	3.1	51.6	60	9.8	2.01	15.93	57955	1187	1520	8.6	18.9
2844.0	2.8	50.2	60	9.8	2.03	16.29	59270	1328	1517	8.6	18.9
2845.0	4.7	50.5	60	9.8	1.85	16.50	60036	775	1505	8.6	18.9
2846.0	4.0	50.3	60	9.8	1.90	16.75	60933	909	1496	8.6	18.9
2847.0	3.1	51.8	60	9.8	2.01	17.07	62088	1168	1491	8.6	18.9
2848.0	2.7	52.2	59	9.8	2.06	17.45	63415	1373	1489	8.6	18.9
2849.0	2.7	50.3	60	9.8	2.04	17.82	64784	1378	1488	8.6	18.9
2850.0	3.2	50.2	60	9.8	1.98	18.13	65908	1133	1483	8.6	18.9
2851.0	3.4	47.0	60	9.8	1.91	18.43	66966	1065	1477	8.6	18.9
2852.0	3.2	48.7	60	9.8	1.96	18.74	68104	1145	1472	8.6	18.9
2853.0	3.3	50.4	62	9.8	1.98	19.05	69240	1119	1467	8.6	18.9
2854.0	3.9	50.0	62	9.8	1.92	19.30	70202	940	1460	8.6	18.9
2855.0	3.6	51.6	63	9.8	1.97	19.58	71255	1022	1454	8.6	18.9
2856.0	3.8	50.7	63	9.8	1.94	19.85	72248	962	1448	8.6	18.9
2857.0	3.9	50.6	63	9.8	1.93	20.10	73216	934	1441	8.6	18.9
2858.0	3.5	50.4	63	9.8	1.97	20.39	74313	1055	1436	8.6	18.9
2859.0	6.7	49.9	63	9.8	1.74	20.54	74880	544	1425	8.6	18.9
2860.0	8.5	50.3	63	9.8	1.67	20.66	75330	432	1412	8.6	18.9
2861.0	5.3	50.2	62	9.8	1.81	20.84	76027	683	1403	8.6	18.9
2862.0	9.4	50.0	60	9.8	1.61	20.95	76411	387	1391	8.6	18.9
2863.0	3.9	51.2	61	9.8	1.92	21.21	77337	931	1385	8.6	18.9
2864.0	2.7	53.1	61	9.8	2.08	21.57	78681	1347	1385	8.6	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
2865.0	4.1	51.4	61	9.8	1.91	21.82	79575	896	1379	8.6	18.9
2866.0	7.0	52.0	60	9.8	1.74	21.96	80096	524	1369	8.6	18.9
2867.0	7.6	52.4	60	9.8	1.71	22.10	80572	481	1359	8.6	18.9
2868.0	6.7	53.5	59	9.8	1.76	22.24	81104	545	1350	8.6	18.9
2869.0	3.8	54.0	61	9.8	1.97	22.51	82067	967	1345	8.6	18.9
2870.0	3.2	51.7	61	9.8	2.00	22.82	83215	1152	1343	8.6	18.9
2871.0	4.2	51.2	61	9.8	1.90	23.06	84080	861	1338	8.6	18.9
2872.0	6.3	50.3	61	9.8	1.76	23.22	84664	583	1330	8.6	18.9
2873.0	11.3	50.0	61	9.8	1.55	23.31	84987	325	1319	8.6	18.9
2874.0	9.9	50.8	60	9.8	1.60	23.41	85352	368	1309	8.6	18.9
2875.0	3.6	52.4	61	9.8	1.97	23.69	86361	1008	1305	8.6	18.9
2876.0	2.8	52.6	61	9.8	2.06	24.04	87652	1287	1305	8.6	18.9
2877.0	2.7	51.8	61	9.8	2.06	24.41	88997	1340	1306	8.6	18.9
2878.0	3.4	51.9	61	9.8	1.99	24.70	90077	1074	1303	8.6	18.9
2879.0	3.6	50.6	62	9.8	1.95	24.98	91112	1025	1300	8.6	18.9
2880.0	2.8	52.1	62	9.8	2.06	25.33	92426	1291	1300	8.6	18.9
2881.0	5.4	51.1	61	9.8	1.81	25.52	93100	677	1294	8.6	18.9
2882.0	4.0	51.4	61	9.8	1.92	25.77	94022	913	1290	8.6	18.9
2883.0	13.0	49.8	61	9.8	1.50	25.85	94302	281	1280	8.6	18.9
2884.0	5.5	49.9	61	9.8	1.79	26.03	94963	659	1274	8.6	18.9
2885.0	7.1	51.1	61	9.8	1.72	26.17	95475	512	1267	8.6	18.9
2886.0	8.1	51.0	61	9.8	1.68	26.29	95924	450	1259	8.6	18.9
2887.0	8.0	51.1	61	9.8	1.68	26.41	96380	454	1252	8.6	18.9
2888.0	3.2	51.7	62	9.8	2.01	26.73	97542	1149	1251	8.6	18.9
2889.0	4.9	52.1	62	9.8	1.87	26.93	98301	751	1246	8.6	18.9
2890.0	5.1	51.8	62	9.8	1.85	27.13	99030	720	1242	8.6	18.9
2891.0	5.7	51.9	62	9.8	1.81	27.31	99676	638	1236	8.6	18.9
2892.0	3.7	50.1	68	9.8	1.97	27.58	100785	989	1234	8.6	18.9
2893.0	3.3	50.5	68	9.8	2.01	27.88	102010	1092	1233	8.6	18.9
2894.0	5.7	49.7	68	9.8	1.82	28.05	102724	637	1227	8.6	18.9
2895.0	4.2	52.0	65	9.8	1.93	28.29	103650	868	1224	8.6	18.9
2896.0	3.3	52.4	60	9.8	1.99	28.59	104732	1100	1223	8.6	19.0
2897.0	2.6	54.3	60	9.8	2.10	28.98	106122	1410	1225	8.6	19.0
2898.0	2.1	53.5	60	9.8	2.17	29.46	107852	1763	1229	8.6	19.0
2899.0	2.3	53.0	60	9.8	2.13	29.90	109429	1605	1233	8.6	19.0
2900.0	2.2	53.5	60	9.8	2.15	30.35	111047	1647	1236	8.6	19.0
2901.0	2.6	52.9	59	9.8	2.08	30.74	112423	1410	1237	8.6	19.0
2902.0	4.2	50.1	60	9.8	1.88	30.97	113273	865	1234	8.6	19.0
2903.0	2.7	49.5	60	9.8	2.03	31.34	114604	1357	1235	8.6	19.0
2904.0	2.1	48.8	60	9.8	2.10	31.82	116323	1747	1240	8.6	19.0
2905.0	4.0	48.3	60	9.8	1.88	32.07	117215	910	1237	8.6	19.0
2906.0	4.7	49.3	59	9.8	1.83	32.28	117970	772	1233	8.6	19.0
2907.0	4.6	49.2	59	9.8	1.84	32.50	118751	799	1230	8.6	19.0
2908.0	5.0	50.7	59	9.8	1.83	32.70	119457	724	1226	8.6	19.0
2909.0	2.9	52.6	59	9.8	2.04	33.05	120687	1263	1226	8.6	19.0
2910.0	2.8	50.5	59	9.8	2.02	33.40	121936	1283	1227	8.6	19.0
2911.0	2.8	49.9	60	9.8	2.02	33.75	123209	1290	1227	8.6	19.0
2912.0	2.7	49.4	61	9.8	2.03	34.13	124587	1372	1228	8.6	19.0
2913.0	2.4	49.7	62	9.8	2.08	34.55	126155	1551	1231	8.6	19.0
2914.0	2.3	49.1	62	9.8	2.09	34.99	127795	1614	1233	8.6	19.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2915.0	3.6	47.7	62	9.8	1.91	35.27	128822	1011	1232	8.6	19.0
2916.0	2.9	48.2	62	9.8	1.99	35.61	130095	1258	1232	8.6	19.0
2917.0	3.0	50.1	62	9.8	2.01	35.95	131338	1216	1232	8.6	19.0
2918.0	3.1	49.7	62	9.8	2.00	36.27	132559	1196	1232	8.6	19.0
2919.0	3.5	49.5	62	9.8	1.95	36.56	133630	1056	1230	8.6	19.0
2920.0	3.5	49.5	61	9.8	1.95	36.85	134681	1053	1229	8.6	19.0
2921.0	3.5	50.1	61	9.8	1.95	37.14	135726	1048	1228	8.6	19.0
2922.0	2.7	51.1	61	9.8	2.05	37.51	137063	1340	1229	8.6	19.0
2923.0	2.4	49.7	61	9.8	2.07	37.92	138578	1514	1231	8.6	19.0
2924.0	3.2	49.0	61	9.8	1.96	38.23	139708	1127	1230	8.6	19.0
2925.0	3.2	47.0	61	9.8	1.94	38.54	140846	1135	1229	8.6	19.0
2926.0	2.9	47.6	61	9.8	1.99	38.89	142129	1276	1230	8.6	19.0
2927.0	4.0	48.4	61	9.8	1.89	39.14	143052	920	1227	8.6	19.0
2928.0	5.1	51.3	61	9.8	1.84	39.34	143778	718	1224	8.6	19.0
2929.0	3.4	50.0	62	9.8	1.96	39.63	144865	1064	1223	8.6	19.0
2930.0	4.2	49.5	59	9.8	1.87	39.87	145713	873	1221	8.6	19.0
2931.0	2.9	50.5	60	9.8	2.02	40.22	146965	1268	1221	8.6	19.0
2932.0	3.3	50.0	59	9.8	1.96	40.52	148047	1108	1220	8.6	19.0
2933.0	3.4	49.6	60	9.8	1.95	40.82	149107	1083	1219	8.6	19.0
2934.0	3.2	49.5	60	9.8	1.96	41.13	150212	1129	1219	8.6	19.0
2935.0	3.1	49.0	59	9.8	1.97	41.45	151369	1196	1218	8.6	19.0
2936.0	3.7	49.4	59	9.8	1.91	41.72	152322	980	1217	8.6	19.0
2937.0	2.7	52.4	60	9.8	2.07	42.09	153660	1359	1218	8.6	19.0
2938.0	3.8	53.2	61	9.8	1.96	42.36	154628	973	1216	8.6	19.0
2939.0	3.7	55.9	61	9.8	2.01	42.63	155628	1000	1215	8.6	19.0
2940.0	2.2	50.1	62	9.8	2.11	43.08	157293	1643	1218	8.6	19.0
2941.0	2.7	49.7	62	9.8	2.03	43.45	158640	1331	1218	8.6	19.0
2942.0	3.7	49.1	61	9.8	1.92	43.72	159639	991	1217	8.6	19.0
2943.0	3.9	50.7	62	9.8	1.93	43.98	160594	937	1215	8.6	19.0
2944.0	3.5	50.1	62	9.8	1.96	44.26	161664	1045	1214	8.6	19.0
2945.0	4.3	50.1	63	9.8	1.89	44.49	162530	842	1212	8.6	19.0
2946.0	6.3	49.6	62	9.8	1.75	44.65	163113	576	1208	8.6	19.0
2947.0	5.2	51.8	61	9.8	1.84	44.84	163821	702	1205	8.6	19.0
2948.0	3.5	50.8	61	9.8	1.96	45.13	164877	1056	1204	8.6	19.0
2949.0	3.6	49.0	61	9.8	1.93	45.41	165903	1027	1203	8.6	19.0
2950.0	4.1	50.1	61	9.8	1.89	45.65	166779	881	1201	8.6	19.0
2951.0	3.5	50.6	61	9.8	1.96	45.94	167823	1050	1200	8.6	19.0
2952.0	3.6	49.7	61	9.8	1.94	46.22	168837	1016	1199	8.6	19.0
2953.0	5.5	49.9	60	9.8	1.79	46.40	169489	664	1196	8.6	19.0
2954.0	3.9	52.0	61	9.8	1.94	46.66	170425	937	1195	8.6	19.0
2955.0	3.4	50.2	59	9.8	1.95	46.95	171459	1072	1194	8.6	19.0
2956.0	3.5	50.9	63	9.8	1.97	47.24	172527	1039	1193	8.6	19.0
2957.0	3.9	51.7	63	9.8	1.95	47.49	173499	939	1192	8.6	19.0
2958.0	3.8	50.7	64	9.8	1.95	47.76	174509	967	1190	8.6	19.0
2959.0	3.1	48.6	66	9.8	2.00	48.08	175783	1179	1190	8.6	19.0
2960.0	3.3	50.6	65	9.8	2.00	48.38	176966	1101	1190	8.6	19.0
2961.0	3.4	51.8	65	9.8	2.00	48.68	178109	1071	1189	8.6	19.0
2962.0	4.8	50.7	64	9.8	1.87	48.88	178903	755	1187	8.6	19.0
2963.0	2.9	50.5	62	9.8	2.02	49.23	180179	1258	1187	8.6	19.0
2964.0	6.9	51.3	62	9.8	1.74	49.37	180717	532	1184	8.6	19.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2965.0	12.2	49.3	62	9.8	1.53	49.45	181022	300	1179	8.6	19.0
2966.0	4.7	52.6	63	9.8	1.89	49.67	181823	776	1177	8.6	19.0
2967.0	1.7	54.1	60	9.8	2.25	50.26	183969	2163	1182	8.6	19.0
2968.0	4.8	50.1	65	9.8	1.86	50.47	184778	756	1180	8.6	19.0
2969.0	3.0	50.4	62	9.8	2.02	50.80	186036	1226	1180	8.6	19.0
2970.0	3.8	50.3	61	9.8	1.93	51.06	186997	953	1179	8.6	19.0
2971.0	3.7	53.3	62	9.8	1.98	51.33	187994	975	1178	8.6	19.0
2972.0	4.3	49.4	60	9.8	1.87	51.56	188840	852	1176	8.6	19.0
2973.0	3.1	49.9	60	9.8	1.98	51.88	189993	1162	1176	8.6	19.0
2974.0	2.0	51.9	61	9.8	2.16	52.38	191814	1810	1179	8.6	19.0
2975.0	2.2	52.2	61	9.8	2.14	52.83	193490	1665	1182	8.6	19.0
2976.0	2.1	50.0	52	9.8	2.07	53.31	194986	1758	1185	8.6	19.0
2977.0	4.0	49.0	60	9.8	1.89	53.57	195897	917	1183	8.6	19.0
2978.0	2.5	48.0	59	9.8	2.03	53.97	197322	1471	1185	8.6	19.0
2979.0	1.4	50.1	62	9.8	2.26	54.66	199898	2523	1191	8.6	19.0
2980.0	1.5	50.4	63	9.8	2.26	55.33	202431	2449	1198	8.6	19.0
2981.0	1.8	47.7	63	9.8	2.15	55.88	204497	2003	1202	8.6	19.0
2982.0	2.5	45.4	63	9.8	2.01	56.28	205996	1452	1203	8.6	19.0
2983.0	1.9	49.9	62	9.8	2.16	56.81	207973	1939	1207	8.6	19.0
2984.0	1.9	49.5	62	9.8	2.15	57.33	209911	1908	1210	8.6	19.0
2985.0	1.6	50.7	62	9.8	2.23	57.95	212201	2253	1215	8.6	19.0
2986.0	1.5	52.4	62	9.8	2.27	58.60	214637	2392	1221	8.6	19.0
2987.0	2.5	46.2	60	9.8	2.00	59.00	216070	1450	1222	8.6	19.0
2988.0	5.7	48.6	62	9.8	1.77	59.17	216724	639	1219	8.6	19.0
2989.0	3.6	47.9	63	9.8	1.92	59.45	217763	1007	1218	8.6	19.1
2990.0	3.4	50.9	63	9.8	1.98	59.74	218884	1074	1217	8.6	19.1

(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	2	IADC CODE	111	INTERVAL	216.0- 802.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4978.00	TRIP TIME	3.8	BIT RUN	586.2
TOTAL HOURS	15.56	TOTAL TURNS	90109	CONDITION	T3 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
220.0	56.0	4.0	0.07	295	19116.31	65	4779	-
230.0	79.3	14.0	0.20	775	19576.87	46	1398	-
240.0	83.9	24.0	0.32	1319	20012.07	43.52	833.84	-
250.0	138.4	34.0	0.39	1748	20275.96	26.39	596.35	-
260.0	76.6	44.0	0.52	2523	20752.89	47.69	471.66	-
270.0	123.7	54.0	0.60	3016	21048.09	29.52	389.78	-
280.0	55.8	64.0	0.78	4086	21702.07	65.40	339.09	-
290.0	30.0	74.0	1.11	5981	22919.51	121.74	309.72	-
300.0	140.6	84.0	1.18	6420	23179.21	25.97	275.94	-
310.0	102.9	94.0	1.28	6993	23534.26	35.51	250.36	-
320.0	35.1	104.0	1.57	8736	24575.08	104.08	236.30	-
330.0	40.4	114.0	1.81	10215	25477.94	90.29	223.49	-
340.0	42.1	124.0	2.05	11630	26345.29	86.74	212.46	-
350.0	40.4	134.0	2.30	13139	27248.65	90.34	203.35	-
360.0	36.9	144.0	2.57	14780	28237.73	98.91	196.10	-
370.0	34.3	154.0	2.86	16551	29301.89	106.42	190.27	-
380.0	40.3	164.0	3.11	18079	30209.14	90.73	184.20	-
390.0	45.7	174.0	3.33	19399	31008.52	79.94	178.21	-
400.0	37.8	184.0	3.59	20997	31973.40	96.49	173.77	-
410.0	28.1	194.0	3.95	23100	33273.58	130.02	171.51	-
420.0	63.9	204.0	4.10	24058	33844.71	57.11	165.91	-
430.0	60.9	214.0	4.27	25054	34444.24	59.95	160.95	-
440.0	50.5	224.0	4.47	26269	35167.54	72.33	157.00	-
450.0	44.2	234.0	4.69	27572	35994.32	82.68	153.82	-
460.0	15.8	244.0	5.33	31261	38312.32	231.80	157.02	
470.0	36.5	254.0	5.60	32829	39313.58	100.13	154.78	-
480.0	35.5	264.0	5.88	34441	40341.21	102.76	152.81	-
490.0	38.3	274.0	6.14	35956	41295.80	95.46	150.71	-
500.0	40.9	284.0	6.39	37368	42188.51	89.27	148.55	-
510.0	40.1	294.0	6.64	38800	43098.47	91.00	146.59	-
520.0	59.8	304.0	6.81	39779	43709.17	61.07	143.78	-
530.0	50.8	314.0	7.00	40948	44428.41	71.92	141.49	-
540.0	64.1	324.0	7.16	41861	44998.52	57.01	138.88	-
550.0	20.8	334.0	7.64	44623	46755.54	175.70	139.99	+
560.0	32.3	344.0	7.95	46395	47885.63	113.01	139.20	-
570.0	34.7	354.0	8.24	48050	48936.60	105.10	138.24	-
580.0	35.4	364.0	8.52	49675	49966.98	103.04	137.27	-
590.0	38.1	374.0	8.78	51205	50925.69	95.87	136.16	-
600.0	45.2	384.0	9.00	52467	51733.19	80.75	134.72	-
610.0	44.2	394.0	9.23	53799	52559.96	82.68	133.40	-
620.0	32.8	404.0	9.53	55688	53674.84	111.49	132.86	-
630.0	38.5	414.0	9.79	57217	54623.34	94.85	131.94	-
640.0	30.1	424.0	10.13	59197	55836.62	121.33	131.69	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
650.0	16.3	434.0	10.74	62261	58081.58	224.50	133.83	+
660.0	23.3	444.0	11.17	64725	59648.90	156.73	134.34	+
670.0	23.0	454.0	11.60	67223	61235.49	158.66	134.88	+
680.0	23.0	464.0	12.04	69687	62821.07	158.56	135.39	+
690.0	24.3	474.0	12.45	72027	64325.49	150.44	135.71	+
700.0	27.7	484.0	12.81	74152	65641.73	131.62	135.62	-
710.0	29.2	494.0	13.15	76149	66893.56	125.18	135.41	-
720.0	33.0	504.0	13.46	77904	67998.62	110.51	134.92	-
730.0	35.7	514.0	13.74	79534	69022.20	102.36	134.28	-
740.0	29.0	524.0	14.08	81513	70280.11	125.79	134.12	-
750.0	41.3	534.0	14.32	82905	71164.70	88.46	133.27	-
760.0	41.3	544.0	14.57	84310	72048.29	88.36	132.44	-
770.0	43.3	554.0	14.80	85656	72892.30	84.40	131.57	-
780.0	41.5	564.0	15.04	87070	73772.84	88.05	130.80	-
790.0	44.0	574.0	15.26	88388	74602.66	82.98	129.97	-
800.0	42.8	584.0	15.50	89769	75455.80	85.31	129.21	-
802.2	34.9	586.2	15.56	90109	75686.08	104.67	129.11	-

BIT NUMBER	3	IADC CODE	136	INTERVAL	802.2- 1400.0
HTC J3		SIZE	12.250	NOZZLES	18 18 18
COST	1944.00	TRIP TIME	4.6	BIT RUN	597.8
TOTAL HOURS	18.77	TOTAL TURNS	117997	CONDITION	T5 B8 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
810.0	22.6	7.8	0.34	1430	20001.98	161	2564	-
820.0	35.4	17.8	0.63	2686	21033.67	103	1182	-
830.0	36.4	27.8	0.90	3876	22038.27	100.46	792.74	-
840.0	36.0	37.8	1.18	5019	23053.73	101.55	609.89	-
850.0	32.4	47.8	1.49	6347	24181.79	112.81	505.90	-
860.0	30.6	57.8	1.82	7812	25373.77	119.20	438.99	-
870.0	32.9	67.8	2.12	9173	26484.67	111.09	390.63	-
880.0	22.2	77.8	2.57	11153	28128.65	164.40	361.55	-
890.0	29.4	87.8	2.91	12663	29369.32	124.07	334.50	-
900.0	33.4	97.8	3.21	13984	30463.91	109.46	311.49	-
910.0	42.7	107.8	3.44	15060	31319.39	85.55	290.53	-
920.0	42.0	117.8	3.68	16173	32188.77	86.94	273.25	-
930.0	35.3	127.8	3.97	17452	33224.52	103.57	259.97	-
940.0	35.5	137.8	4.25	18718	34254.18	102.97	248.58	-
950.0	35.8	147.8	4.53	20008	35274.71	102.05	238.67	-
960.0	23.0	157.8	4.96	21648	36859.28	158.46	233.58	-
970.0	38.0	167.8	5.22	22862	37819.95	96.07	225.39	
980.0	31.6	177.8	5.54	24386	38976.42	115.65	219.21	-
990.0	26.9	187.8	5.91	26263	40334.76	135.83	214.78	-
1000.0	28.5	197.8	6.26	27848	41618.03	128.33	210.40	-
1010.0	27.6	207.8	6.63	29526	42940.53	132.25	206.64	-
1020.0	44.0	217.8	6.85	31071	43769.70	82.92	200.96	-
1030.0	47.9	227.8	7.06	32505	44532.90	76.32	195.49	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1040.0	36.8	237.8	7.33	34375	45524.01	99.11	191.44	-
1050.0	35.1	247.8	7.62	36366	46564.32	104.03	187.91	-
1060.0	41.7	257.8	7.86	38035	47439.28	87.50	184.02	-
1070.0	39.0	267.8	8.11	39792	48374.60	93.53	180.64	-
1080.0	51.2	277.8	8.31	41172	49087.21	71.26	176.70	-
1090.0	47.6	287.8	8.52	42655	49855.15	76.79	173.23	-
1100.0	49.2	297.8	8.72	44097	50597.72	74.26	169.91	-
1110.0	42.9	307.8	8.96	45768	51449.35	85.16	167.15	-
1120.0	49.0	317.8	9.16	47353	52193.95	74.46	164.24	-
1130.0	50.1	327.8	9.36	48901	52922.32	72.84	161.45	-
1140.0	46.3	337.8	9.58	50589	53711.41	78.91	159.00	-
1150.0	46.4	347.8	9.79	52243	54498.62	78.72	156.70	-
1160.0	42.0	357.8	10.03	54090	55367.49	86.89	154.74	-
1170.0	28.6	367.8	10.38	56790	56644.68	127.72	154.01	-
1180.0	25.4	377.8	10.77	59815	58080.79	143.61	153.73	-
1190.0	22.3	387.8	11.22	63282	59720.14	163.93	154.00	+
1200.0	23.0	397.8	11.66	66675	61309.77	158.96	154.12	+
1210.0	32.5	407.8	11.96	69063	62432.76	112.30	153.10	-
1220.0	34.2	417.8	12.26	71296	63499.96	106.72	151.99	-
1230.0	32.3	427.8	12.56	73564	64629.03	112.91	151.07	-
1240.0	28.1	437.8	12.92	76288	65930.57	130.15	150.60	
1250.0	33.2	447.8	13.22	78554	67031.74	110.12	149.69	-
1260.0	16.4	457.8	13.83	82270	69257.44	222.57	151.28	+
1270.0	18.8	467.8	14.36	85654	71198.07	194.06	152.20	+
1280.0	17.6	477.8	14.93	89773	73277.68	207.96	153.36	+
1290.0	14.5	487.8	15.62	95057	75803.65	252.60	155.40	+
1300.0	17.9	497.8	16.18	99329	77846.01	204.24	156.38	+
1310.0	60.3	507.8	16.35	100538	78451.64	60.56	154.49	-
1320.0	50.4	517.8	16.55	101972	79175.95	72.43	152.91	-
1330.0	52.2	527.8	16.74	103357	79875.92	70.00	151.34	-
1340.0	50.1	537.8	16.94	104808	80604.29	72.84	149.88	-
1350.0	44.6	547.8	17.16	106337	81423.96	81.97	148.64	-
1360.0	28.8	557.8	17.51	108803	82692.01	126.81	148.25	-
1370.0	27.4	567.8	17.88	111554	84023.98	133.20	147.98	-
1380.0	35.5	577.8	18.16	113614	85053.64	102.97	147.20	-
1390.0	29.2	587.8	18.50	115986	86302.42	124.88	146.82	-
1400.0	37.5	597.8	18.77	117997	87275.27	97.29	145.99	-

BIT NUMBER	3	IADC CODE	4	INTERVAL	1400.0- 1409.4
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	22000.00	TRIP TIME	5.0	BIT RUN	9.4
TOTAL HOURS	2.30	TOTAL TURNS	13529	CONDITION	T0 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1409.4	4.1	9.4	2.30	13529	48641.34	892	5175	-

BIT NUMBER	3	IADC CODE	4	INTERVAL	1409.4- 1418.9
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	0.00	TRIP TIME	5.0	BIT RUN	9.5
TOTAL HOURS	1.66	TOTAL TURNS	10059	CONDITION	T0 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1410.0	14.4	0.6	0.04	251	18412.17	254	30687	-
1418.9	5.5	9.5	1.66	10059	24323.33	664	2560	-

BIT NUMBER	4	IADC CODE	517	INTERVAL	1418.9- 1727.8
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	7.5	BIT RUN	308.9
TOTAL HOURS	18.08	TOTAL TURNS	76827	CONDITION	T2 B2 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1420.0	16.0	1.1	0.07	284	36161.58	229	32874	-
1430.0	14.7	11.1	0.75	3464	38654.07	249	3482	-
1440.0	18.5	21.1	1.29	5820	40628.18	197	1926	-
1450.0	16.1	31.1	1.91	8615	42892.42	226	1379	-
1460.0	19.2	41.1	2.43	11044	44795.52	190	1090	-
1470.0	14.3	51.1	3.13	14148	47354.75	255.92	926.71	-
1480.0	19.0	61.1	3.66	16127	49278.14	192.34	806.52	-
1490.0	16.3	71.1	4.28	18512	51524.12	224.60	724.67	-
1500.0	12.5	81.1	5.07	21601	54440.65	291.65	671.28	-
1510.0	18.5	91.1	5.61	23879	56412.73	197.21	619.24	-
1520.0	29.6	101.1	5.95	25419	57647.09	123.44	570.20	-
1530.0	44.1	111.1	6.18	26490	58474.88	82.78	526.33	-
1540.0	17.9	121.1	6.74	28986	60511.88	203.70	499.69	-
1550.0	34.3	131.1	7.03	30317	61578.07	106.62	469.70	-
1560.0	51.1	141.1	7.22	31186	62293.25	71.52	441.48	-
1570.0	18.0	151.1	7.78	33496	64326.70	203.35	425.72	-
1580.0	19.7	161.1	8.29	35945	66184.15	185.74	410.83	-
1590.0	47.9	171.1	8.50	36883	66947.01	76.29	391.27	-
1600.0	42.9	181.1	8.73	37938	67797.97	85.10	374.37	-
1610.0	31.6	191.1	9.05	39344	68953.20	115.52	360.82	-
1620.0	24.1	201.1	9.46	41251	70469.79	151.66	350.42	-
1630.0	18.6	211.1	10.00	43510	72435.79	196.60	343.13	-
1640.0	26.2	221.1	10.38	45132	73829.63	139.38	333.92	-
1650.0	8.4	231.1	11.58	50115	78182.61	435.30	338.31	+
1660.0	55.3	241.1	11.76	50960	78843.52	66.09	327.02	-
1670.0	9.2	251.1	12.84	55377	82815.07	397.16	329.81	+
1680.0	17.4	261.1	13.42	57670	84914.97	209.99	325.22	-
1690.0	12.0	271.1	14.25	61310	87967.44	305.25	324.48	-
1700.0	9.8	281.1	15.28	65178	91702.62	373.52	326.23	+
1710.0	11.9	291.1	16.12	68924	94773.34	307.07	325.57	-
1720.0	10.6	301.1	17.06	72925	98207.24	343.39	326.16	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1727.8	7.7	308.9	18.08	76827	101929.24	477.18	329.97	+

BIT NUMBER	5	IADC CODE	517	INTERVAL	1727.8- 2229.3
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	3.8	BIT RUN	501.5
TOTAL HOURS	64.08	TOTAL TURNS	241658	CONDITION	T6 B6 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1730.0	4.6	2.2	0.48	1710	24144.47	794	10975	-
1740.0	10.8	12.2	1.40	4966	27517.84	337	2256	-
1750.0	8.4	22.2	2.60	9116	31874.88	436	1436	-
1760.0	14.6	32.2	3.28	11611	34373.45	250	1067	-
1770.0	6.9	42.2	4.73	17078	39680.87	530.74	940.31	-
1780.0	7.5	52.2	6.07	22457	44565.08	488.42	853.74	-
1790.0	9.9	62.2	7.08	26245	48264.76	369.97	775.96	-
1800.0	11.3	72.2	7.96	29720	51485.62	322.09	713.10	-
1810.0	5.6	82.2	9.76	36285	58057.20	657.16	706.29	-
1820.0	7.6	92.2	11.09	40631	62888.99	483.18	682.09	-
1830.0	22.2	102.2	11.54	42292	64534.42	164.54	631.45	-
1840.0	10.7	112.2	12.48	45715	67962.23	342.78	605.72	-
1850.0	17.1	122.2	13.06	48129	70097.64	213.54	573.63	-
1860.0	7.5	132.2	14.40	53058	74982.19	488.46	567.19	-
1870.0	7.0	142.2	15.83	58305	80204.55	522.24	564.03	-
1880.0	5.1	152.2	17.79	65949	87366.52	716.20	574.02	+
1890.0	8.6	162.2	18.95	70255	91592.70	422.62	564.69	-
1900.0	10.6	172.2	19.89	73702	95027.61	343.49	551.84	-
1910.0	4.9	182.2	21.94	81309	102510.15	748.25	562.62	+
1920.0	5.8	192.2	23.66	87802	108806.47	629.63	566.11	+
1930.0	5.9	202.2	25.35	93961	114963.13	615.67	568.56	+
1940.0	7.0	212.2	26.77	99442	120164.19	520.11	566.28	-
1950.0	20.8	222.2	27.25	101292	121921.21	175.70	548.70	-
1960.0	6.0	232.2	28.92	108183	128023.09	610.19	551.35	+
1970.0	5.8	242.2	30.66	114776	134369.45	634.64	554.79	+
1980.0	9.6	252.2	31.71	118650	138192.90	382.34	547.95	-
1990.0	8.2	262.2	32.92	123363	142626.02	443.31	543.96	-
2000.0	11.6	272.2	33.78	126610	145770.94	314.49	535.53	-
2010.0	9.3	282.2	34.86	130394	149702.93	393.20	530.49	-
2020.0	8.3	292.2	36.07	134590	154123.88	442.09	527.46	-
2030.0	6.9	302.2	37.52	140052	159426.88	530.30	527.55	+
2040.0	9.3	312.2	38.59	144052	163343.65	391.68	523.20	-
2050.0	9.9	322.2	39.61	148445	167043.13	369.95	518.45	-
2060.0	7.5	332.2	40.94	153252	171894.73	485.16	517.44	-
2070.0	5.8	342.2	42.66	159490	178198.15	630.34	520.74	+
2080.0	8.0	352.2	43.91	164400	182748.44	455.03	518.88	-
2090.0	8.2	362.2	45.12	168998	187180.55	443.21	516.79	-
2100.0	9.1	372.2	46.22	173393	191199.44	401.89	513.70	-
2110.0	13.7	382.2	46.95	176379	193869.46	267.00	507.25	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2120.0	6.8	392.2	48.42	182093	199215.58	534.61	507.94	+
2130.0	7.0	402.2	49.84	187758	204418.16	520.26	508.25	+
2140.0	6.0	412.2	51.51	193917	210524.10	610.59	510.73	+
2150.0	6.5	422.2	53.06	199304	216159.34	563.52	511.98	+
2160.0	6.6	432.2	54.58	204983	221723.57	556.42	513.01	+
2170.0	6.5	442.2	56.11	210628	227307.07	558.35	514.04	+
2180.0	6.2	452.2	57.73	216726	233231.76	592.47	515.77	+
2190.0	7.2	462.2	59.13	222333	238336.45	510.47	515.66	-
2200.0	7.9	472.2	60.40	227518	242973.81	463.74	514.56	-
2210.0	6.4	482.2	61.95	233841	248653.69	567.99	515.67	+
2220.0	8.8	492.2	63.10	238126	252825.08	417.14	513.66	-
2229.3	9.4	501.5	64.08	241658	256436.00	388.27	511.34	-

BIT NUMBER	6	IADC CODE	517	INTERVAL	2229.3- 2521.0
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	5.0	BIT RUN	291.7
TOTAL HOURS	45.36	TOTAL TURNS	153199	CONDITION	T5 B4 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2230.0	9.5	0.7	0.07	199	27049.09	384	38642	-
2240.0	5.7	10.7	1.83	5134	33476.95	643	3129	-
2250.0	5.5	20.7	3.65	10496	40119.54	664	1938	-
2260.0	6.2	30.7	5.27	16106	46010.08	589	1499	-
2270.0	6.8	40.7	6.73	20866	51361.27	535	1262	-
2280.0	5.7	50.7	8.47	26276	57717.78	636	1138	-
2290.0	5.7	60.7	10.23	31090	64137.18	642	1057	-
2300.0	10.1	70.7	11.22	34156	67763.82	362.66	958.47	-
2310.0	7.7	80.7	12.52	37869	72492.15	472.83	898.29	-
2320.0	7.0	90.7	13.94	42260	77683.06	519.09	856.48	-
2330.0	6.8	100.7	15.40	46764	83015.99	533.29	824.39	-
2340.0	8.3	110.7	16.60	50866	87394.34	437.83	789.47	-
2350.0	7.4	120.7	17.95	55386	92340.77	494.64	765.04	-
2360.0	5.4	130.7	19.80	61577	99106.10	676.53	758.27	-
2370.0	9.0	140.7	20.92	65414	103181.12	407.50	733.34	-
2380.0	6.0	150.7	22.58	71391	109252.91	607.18	724.97	-
2390.0	5.5	160.7	24.42	77261	115947.23	669.43	721.51	-
2400.0	5.0	170.7	26.43	84868	123293.26	734.60	722.28	+
2410.0	8.0	180.7	27.67	89515	127842.02	454.88	707.48	-
2420.0	10.7	190.7	28.61	93164	131263.75	342.17	688.33	-
2430.0	8.9	200.7	29.74	97544	135374.27	411.05	674.51	-
2440.0	6.3	210.7	31.33	103716	141198.20	582.39	670.14	-
2450.0	5.7	220.7	33.08	109872	147592.24	639.40	668.75	-
2460.0	4.5	230.7	35.31	118151	155730.41	813.82	675.03	+
2470.0	4.2	240.7	37.70	126701	164466.55	873.61	683.28	+
2480.0	9.4	250.7	38.77	130331	168353.90	388.74	671.54	-
2490.0	6.1	260.7	40.42	135935	174377.78	602.39	668.88	-
2500.0	5.1	270.7	42.39	143078	181584.40	720.66	670.80	+
2510.0	7.1	280.7	43.79	147982	186706.33	512.19	665.15	-
2520.0	6.8	290.7	45.26	152892	192069.69	536.34	660.71	-
2521.0	9.7	291.7	45.36	153199	192448.08	378.39	659.75	-

BIT NUMBER	7	IADC CODE	517	INTERVAL	2521.0- 2774.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.4	BIT RUN	253.0
TOTAL HOURS	47.95	TOTAL TURNS	174772	CONDITION	T8 B4 G0.250

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2530.0	5.8	9.0	1.55	5586	41189.85	627	4577	-
2540.0	7.5	19.0	2.89	10476	46091.64	490	2426	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2550.0	12.4	29.0	3.70	13437	49040.63	295	1691	
2560.0	9.6	39.0	4.74	17251	52841.08	380	1355	-
2570.0	13.9	49.0	5.46	19870	55475.59	263	1132	-
2580.0	5.9	59.0	7.15	25958	61664.72	619	1045	-
2590.0	14.7	69.0	7.83	28469	64155.18	249.05	929.79	-
2600.0	7.9	79.0	9.10	33056	68764.81	460.96	870.44	-
2610.0	12.1	89.0	9.92	36133	71776.70	301.19	806.48	-
2620.0	9.0	99.0	11.03	40282	75841.58	406.49	766.08	-
2630.0	6.4	109.0	12.60	46244	81542.75	570.12	748.10	-
2640.0	7.8	119.0	13.88	51105	86218.33	467.56	724.52	-
2650.0	4.6	129.0	16.03	59621	94077.23	785.89	729.28	+
2660.0	5.4	139.0	17.88	66888	100842.90	676.57	725.49	-
2670.0	4.8	149.0	19.99	74626	108530.36	768.75	728.39	+
2680.0	5.8	159.0	21.72	81060	114856.43	632.61	722.37	-
2690.0	4.3	169.0	24.06	89717	123420.37	856.39	730.30	+
2700.0	5.9	179.0	25.75	95943	129576.02	615.56	723.89	-
2710.0	6.7	189.0	27.24	101495	135016.49	544.05	714.37	-
2720.0	3.4	199.0	30.18	112543	145750.32	1073	732	+
2730.0	3.7	209.0	32.88	122193	155628.98	987.87	744.64	+
2740.0	3.4	219.0	35.79	132531	166232.97	1060	759	+
2750.0	4.2	229.0	38.18	141424	174985.60	875.26	764.13	+
2760.0	3.2	239.0	41.33	152438	186469.79	1148	780	+
2770.0	3.2	249.0	44.43	163149	197814.78	1134	794	+
2774.0	2.1	253.0	46.34	169369	204768.80	1739	809	+

BIT NUMBER	8	IADC CODE	537	INTERVAL	2774.0- 2782.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	8.0
TOTAL HOURS	1.68	TOTAL TURNS	5933	CONDITION	T0 B0 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2780.0	4.0	6.0	1.51	5329	42639.56	920	7107	-
2782.0	11.6	8.0	1.68	5933	43267.55	314	5408	-

BIT NUMBER	8	IADC CODE	4	INTERVAL	2782.0- 2788.3
CHRIS C201		SIZE	9.875	NOZZLES	14 14 14
COST	21000.00	TRIP TIME	7.9	BIT RUN	6.3
TOTAL HOURS	4.20	TOTAL TURNS	12508	CONDITION	T0 B0 G5.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2788.3	1.7	6.3	3.71	13547	63413.92	2153	10066	-

BIT NUMBER	8	IADC CODE	537	INTERVAL	2788.3- 2990.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	201.7
TOTAL HOURS	59.74	TOTAL TURNS	218884	CONDITION	T4 B7 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2790.0	4.4	9.7	2.07	7283	44663.46	830	4604	-
2800.0	3.6	19.7	4.87	17626	54884.49	1022	2786	-
2810.0	3.6	29.7	7.63	27636	64991.40	1011	2188	-
2820.0	4.3	39.7	9.94	35956	73400.13	841	1849	-
2830.0	3.8	49.7	12.59	45772	83100.25	970	1672	-
2840.0	4.1	59.7	15.01	54624	91927.94	883	1540	-
2850.0	3.2	69.7	18.13	65908	103341.46	1141	1483	-
2860.0	4.0	79.7	20.66	75330	112559.71	922	1412	-
2870.0	4.6	89.7	22.82	83215	120472.38	791	1343	-
2880.0	4.0	99.7	25.33	92426	129635.18	916	1300	-
2890.0	5.6	109.7	27.13	99030	136202.69	657	1242	-
2900.0	3.1	119.7	30.35	111047	147951.99	1175	1236	-
2910.0	3.3	129.7	33.40	121936	159083.49	1113	1227	-
2920.0	2.9	139.7	36.85	134681	171701.15	1262	1229	+
2930.0	3.3	149.7	39.87	145713	182717.00	1102	1221	-
2940.0	3.1	159.7	43.08	157293	194457.17	1174	1218	-
2950.0	3.9	169.7	45.65	166779	203844.84	939	1201	-
2960.0	3.7	179.7	48.38	176966	213809.72	996	1190	-
2970.0	3.7	189.7	51.06	186997	223599.11	979	1179	-
2980.0	2.3	199.7	55.33	202431	239179.96	1558	1198	+
2990.0	2.3	209.7	59.74	218884	255296.44	1612	1217	+

(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	2	IADC CODE	111	INTERVAL	216.0- 802.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4978.00	TRIP TIME	3.8	BIT RUN	586.2
TOTAL HOURS	15.56	TOTAL TURNS	90109	CONDITION	T3 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
220.0	1045	2573.3	1629.5	63.3	994	4.13	2191	137
230.0	1053	2813.5	1654.7	58.8	1017	4.23	2225	138
240.0	1054	2675.6	1657.6	62.0	1020	4.24	2229	138
250.0	1048	2649.7	1636.9	61.8	1001	4.16	2201	137
260.0	1049	2676.9	1640.1	61.3	1003	4.17	2205	137
270.0	1053	2751.0	1654.0	60.1	1016	4.23	2224	138
280.0	1048	2726.5	1638.7	60.1	1002	4.17	2204	137
290.0	1042	2753.0	1618.0	58.8	983	4.09	2176	136
300.0	1053	2759.8	1652.8	59.9	1015	4.22	2222	138
310.0	1054	2786.4	1657.8	59.5	1020	4.24	2229	138
320.0	1051	2784.6	1648.5	59.2	1011	4.20	2217	138
330.0	1047	2773.5	1635.8	59.0	1000	4.16	2200	137
340.0	1046	2762.4	1633.0	59.1	997	4.14	2196	137
350.0	1047	2784.2	1634.6	58.7	998	4.15	2198	137
360.0	1052	2829.3	1651.8	58.4	1014	4.22	2221	138
370.0	1050	2811.4	1642.7	58.4	1006	4.18	2209	137
380.0	1049	2809.3	1641.2	58.4	1004	4.18	2207	137
390.0	1055	2835.7	1660.0	58.5	1022	4.25	2232	138
400.0	1051	2830.6	1647.8	58.2	1011	4.20	2216	138
410.0	1058	2904.8	1670.4	57.5	1031	4.29	2246	138
420.0	1055	2861.7	1661.4	58.1	1023	4.25	2234	138
430.0	1051	2856.3	1647.9	57.7	1011	4.20	2216	138
440.0	1056	2869.6	1662.9	57.9	1024	4.26	2236	138
450.0	1047	2841.8	1636.3	57.6	1000	4.16	2200	137
460.0	1041	2792.5	1617.1	57.9	982	4.08	2174	136
470.0	1050	2815.0	1645.6	58.5	1008	4.19	2213	137
480.0	1049	2862.0	1642.3	57.4	1005	4.18	2208	137
490.0	1053	2880.3	1653.6	57.4	1016	4.22	2224	138
500.0	1056	2908.1	1663.0	57.2	1025	4.26	2236	138
510.0	1059	2947.9	1673.7	56.8	1034	4.30	2251	139
520.0	1045	2686.7	1629.3	60.6	994	4.13	2191	137
530.0	1058	2763.7	1669.1	60.4	1030	4.28	2245	138
540.0	1054	2771.6	1656.6	59.8	1019	4.23	2228	138
550.0	1055	2730.1	1658.7	60.8	1021	4.24	2230	138
560.0	1060	2801.2	1674.3	59.8	1035	4.30	2252	139
570.0	1039	2682.9	1611.1	60.0	977	4.06	2166	136
580.0	1055	2810.0	1677.0	59.7	1032	4.29	2255	138
590.0	1052	2753.5	1651.4	60.0	1014	4.21	2221	138
600.0	1059	2823.5	1673.7	59.3	1034	4.30	2251	139
610.0	1061	2842.0	1679.8	59.1	1040	4.32	2259	139
620.0	1054	2772.2	1657.7	59.8	1020	4.24	2229	138
630.0	1053	2785.8	1655.0	59.4	1017	4.23	2225	138
640.0	1060	2824.3	1676.0	59.3	1037	4.31	2254	139

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
650.0	1057	2803.7	1667.2	59.5	1028	4.28	2242	138
660.0	1054	2748.4	1655.8	60.2	1018	4.23	2227	138
670.0	1049	2726.2	1640.4	60.2	1004	4.17	2206	137
680.0	1052	2752.4	1652.0	60.0	1014	4.22	2221	138
690.0	1052	2741.4	1651.3	60.2	1014	4.21	2221	138
700.0	1058	2786.4	1669.2	59.9	1030	4.28	2245	138
710.0	1054	2777.1	1657.3	59.7	1019	4.24	2229	138
720.0	1060	2833.3	1674.7	59.1	1035	4.30	2252	139
730.0	1052	2807.1	1649.7	58.8	1012	4.21	2218	138
740.0	1049	2783.4	1641.9	59.0	1005	4.18	2208	137
750.0	1059	2905.3	1673.3	57.6	1034	4.30	2250	139
760.0	1058	2866.0	1668.9	58.2	1030	4.28	2244	138
770.0	1058	2886.3	1668.3	57.8	1029	4.28	2243	138
780.0	1055	2917.4	1660.7	56.9	1022	4.25	2233	138
790.0	1062	2996.6	1680.6	56.1	1041	4.33	2260	139
800.0	1062	3035.0	1681.6	55.4	1042	4.33	2261	139
802.2	1046	2929.7	1631.9	55.7	996	4.14	2194	137

BIT NUMBER	3	IADC CODE	136	INTERVAL	802.2- 1400.0
HTC J3		SIZE	12.250	NOZZLES	18 18 18
COST	1944.00	TRIP TIME	4.6	BIT RUN	597.8
TOTAL HOURS	18.77	TOTAL TURNS	117997	CONDITION	T5 B8 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
810.0	989	2680.7	1473.8	55.0	850	7.21	1982	129
820.0	991	2689.1	1480.3	55.0	856	7.26	1991	130
830.0	988	2681.3	1473.1	54.9	849	7.21	1981	129
840.0	994	2726.6	1488.5	54.6	863	7.32	2002	130
850.0	991	2783.8	1482.1	53.2	857	7.27	1993	130
860.0	997	2772.0	1498.4	54.1	871	7.39	2015	130
870.0	993	2686.4	1486.5	55.3	861	7.31	1999	130
880.0	1006	2955.1	1526.5	51.7	896	7.60	2053	132
890.0	997	2926.1	1499.8	51.3	873	7.40	2017	130
900.0	1011	2949.0	1542.2	52.3	910	7.72	2074	132
910.0	1005	2900.0	1524.1	52.6	894	7.59	2049	132
920.0	996	2952.9	1497.3	50.7	870	7.39	2013	130
930.0	992	2952.9	1485.1	50.3	860	7.30	1997	130
940.0	996	2971.6	1495.3	50.3	869	7.37	2011	130
950.0	995	2972.7	1493.8	50.3	867	7.36	2009	130
960.0	998	2997.4	1501.9	50.1	875	7.42	2020	131
970.0	986	2953.8	1465.3	49.6	843	7.15	1970	129
980.0	987	3035.2	1467.9	48.4	845	7.17	1974	129
990.0	977	2954.8	1438.9	48.7	820	6.96	1935	128
1000.0	993	3053.3	1487.2	48.7	862	7.31	2000	130
1010.0	989	3093.7	1474.3	47.7	851	7.22	1983	129
1020.0	970	3037.9	1417.9	46.7	802	6.81	1907	127
1030.0	956	2954.0	1378.8	46.7	769	6.53	1854	125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1040.0	955	2962.3	1375.7	46.4	767	6.50	1850	125
1050.0	952	2952.4	1366.4	46.3	759	6.44	1837	125
1060.0	959	3024.9	1387.6	45.9	777	6.59	1866	126
1070.0	957	3012.1	1379.6	45.8	770	6.53	1855	125
1080.0	958	3089.5	1384.3	44.8	774	6.57	1861	125
1090.0	961	3075.2	1392.3	45.3	781	6.62	1872	126
1100.0	945	2977.5	1346.4	45.2	742	6.30	1810	124
1110.0	962	3062.0	1395.5	45.6	783	6.65	1877	126
1120.0	951	3035.0	1364.5	45.0	757	6.43	1835	124
1130.0	939	2990.9	1359.9	45.5	745	6.32	1829	123
1140.0	934	3000.3	1345.1	44.8	733	6.22	1809	122
1150.0	923	2950.1	1312.8	44.5	707	6.00	1765	121
1160.0	921	2977.7	1306.5	43.9	702	5.96	1757	120
1170.0	450	773.5	326.0	42.1	86	0.73	438	59
1180.0	465	928.6	353.4	38.1	96	0.81	475	61
1190.0	506	1105.2	426.4	38.6	126	1.07	573	66
1200.0	709	2228.9	838.1	37.6	347	2.94	1127	93
1210.0	860	2849.8	1231.9	43.2	618	5.24	1657	113
1220.0	861	2847.2	1234.1	43.3	620	5.26	1659	113
1230.0	875	2944.3	1273.7	43.3	650	5.51	1713	114
1240.0	864	2905.6	1249.5	43.0	630	5.34	1680	113
1250.0	872	2986.8	1272.1	42.6	647	5.49	1711	114
1260.0	864	2896.3	1249.4	43.1	630	5.34	1680	113
1270.0	867	2941.6	1258.3	42.8	637	5.40	1692	113
1280.0	871	2935.2	1270.6	43.3	646	5.48	1709	114
1290.0	855	2918.0	1234.6	42.3	616	5.22	1660	112
1300.0	844	2931.3	1204.8	41.1	593	5.04	1620	110
1310.0	830	2873.2	1165.3	40.6	564	4.79	1567	109
1320.0	843	2940.8	1201.3	40.8	591	5.01	1615	110
1330.0	852	2933.7	1226.0	41.8	609	5.17	1649	111
1340.0	861	2982.4	1253.1	42.0	629	5.34	1685	113
1350.0	856	2986.1	1237.1	41.4	618	5.24	1664	112
1360.0	855	2966.0	1236.7	41.7	617	5.24	1663	112
1370.0	843	2865.4	1213.4	42.3	597	5.06	1632	110
1380.0	841	2836.7	1206.4	42.5	592	5.02	1622	110
1390.0	868	2941.3	1285.9	43.7	651	5.53	1729	114
1400.0	865	2931.6	1277.7	43.6	645	5.47	1718	113

BIT NUMBER	3	IADC CODE	4	INTERVAL	1400.0- 1409.4
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	22000.00	TRIP TIME	5.0	BIT RUN	9.4
TOTAL HOURS	2.30	TOTAL TURNS	13529	CONDITION	T0 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1409.4	229	637.2	203.2	31.9	27	0.35	182	45

BIT NUMBER	3	IADC CODE	4	INTERVAL	1409.4- 1418.9
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	0.00	TRIP TIME	5.0	BIT RUN	9.5
TOTAL HOURS	1.66	TOTAL TURNS	10059	CONDITION	T0 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1410.0	234	520.5	210.9	40.5	29	0.38	188	46
1418.9	260	604.8	260.6	43.1	39	0.52	233	51

BIT NUMBER	4	IADC CODE	517	INTERVAL	1418.9- 1727.8
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	7.5	BIT RUN	308.9
TOTAL HOURS	18.08	TOTAL TURNS	76827	CONDITION	T2 B2 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1420.0	852	2974.1	1431.8	48.1	712	6.04	1791	120
1430.0	844	2945.5	1406.2	47.7	693	5.88	1759	119
1440.0	840	2910.8	1393.2	47.9	683	5.80	1742	118
1450.0	848	2976.9	1419.6	47.7	703	5.96	1775	119
1460.0	844	2929.8	1406.7	48.0	693	5.88	1759	119
1470.0	846	2924.1	1412.8	48.3	697	5.92	1767	119
1480.0	847	2930.1	1408.5	48.1	696	5.91	1762	119
1490.0	842	2897.2	1386.3	47.8	681	5.78	1734	118
1500.0	848	2919.4	1404.4	48.1	695	5.89	1756	119
1510.0	847	2877.5	1400.6	48.7	692	5.87	1752	119
1520.0	846	2897.6	1397.6	48.2	690	5.85	1748	119
1530.0	849	2931.4	1400.3	47.8	693	5.88	1751	119
1540.0	854	2958.0	1417.6	47.9	706	5.99	1773	120
1550.0	834	2877.5	1353.0	47.0	658	5.59	1692	117
1560.0	843	2915.2	1381.1	47.4	679	5.76	1727	119
1570.0	854	2973.9	1419.4	47.7	708	6.00	1775	120
1580.0	851	2938.6	1407.7	47.9	699	5.93	1761	120
1590.0	849	2956.1	1400.3	47.4	693	5.88	1751	119
1600.0	850	2985.1	1405.3	47.1	697	5.91	1757	120
1610.0	850	2989.8	1404.2	47.0	696	5.91	1756	120
1620.0	842	2925.3	1378.1	47.1	677	5.74	1723	118
1630.0	832	2873.6	1347.2	46.9	654	5.55	1685	117
1640.0	842	2945.3	1377.0	46.8	676	5.74	1722	118
1650.0	832	2884.4	1345.5	46.6	653	5.54	1683	117
1660.0	841	2962.1	1375.3	46.4	675	5.73	1720	118
1670.0	842	2950.5	1377.8	46.7	677	5.74	1723	118
1680.0	846	2972.0	1393.1	46.9	688	5.84	1742	119
1690.0	835	2899.9	1362.7	47.0	664	5.63	1704	117
1700.0	837	2940.5	1369.8	46.6	669	5.68	1713	118
1710.0	835	2931.1	1362.5	46.5	664	5.63	1704	117
1720.0	824	2871.2	1325.7	46.2	637	5.41	1658	116

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1727.8	823	2910.9	1323.7	45.5	636	5.39	1655	116

BIT NUMBER	5	IADC CODE	517	INTERVAL	1727.8- 2229.3
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	3.8	BIT RUN	501.5
TOTAL HOURS	64.08	TOTAL TURNS	241658	CONDITION	T6 B6 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1730.0	814	2929.2	1294.3	44.2	615	5.21	1619	114
1740.0	812	2909.2	1289.9	44.3	611	5.19	1613	114
1750.0	819	2950.3	1309.5	44.4	625	5.31	1638	115
1760.0	827	2987.9	1336.6	44.7	645	5.47	1672	116
1770.0	795	2914.0	1234.0	42.3	572	4.85	1543	112
1780.0	807	2868.1	1273.7	44.4	600	5.09	1593	114
1790.0	805	2843.8	1267.0	44.6	595	5.05	1585	113
1800.0	811	2865.4	1286.4	44.9	609	5.17	1609	114
1810.0	810	2860.6	1282.6	44.8	606	5.14	1604	114
1820.0	812	2863.4	1288.1	45.0	610	5.18	1611	114
1830.0	812	2883.7	1288.5	44.7	610	5.18	1611	114
1840.0	813	2887.4	1292.2	44.8	613	5.20	1616	114
1850.0	794	2772.7	1230.7	44.4	570	4.84	1539	112
1860.0	810	2841.9	1282.9	45.1	606	5.15	1604	114
1870.0	793	2833.9	1205.6	42.5	558	4.73	1508	112
1880.0	814	2900.1	1268.6	43.7	602	5.11	1587	114
1890.0	625	1777.5	747.6	42.1	272	2.31	935	88
1900.0	562	1480.9	604.7	40.8	198	1.68	756	79
1910.0	817	2886.4	1279.9	44.3	610	5.18	1601	115
1920.0	815	2862.3	1272.4	44.5	605	5.13	1591	115
1930.0	522	2863.0	522.6	18.3	159	1.35	654	73
1940.0	818	2844.2	1257.8	44.2	601	5.10	1573	115
1950.0	815	2847.4	1246.3	43.8	592	5.03	1559	115
1960.0	813	2807.0	1242.2	44.3	590	5.00	1554	114
1970.0	815	2793.2	1248.3	44.7	594	5.04	1561	115
1980.0	822	2830.0	1268.7	44.8	608	5.16	1587	116
1990.0	826	2859.1	1281.5	44.8	618	5.24	1603	116
2000.0	820	2850.0	1261.4	44.3	603	5.12	1578	115
2010.0	818	2834.6	1255.2	44.3	599	5.08	1570	115
2020.0	828	2912.0	1287.9	44.2	622	5.28	1611	117
2030.0	827	2926.2	1282.7	43.8	619	5.25	1604	116
2040.0	813	2834.7	1240.1	43.7	588	4.99	1551	114
2050.0	826	2906.9	1280.6	44.1	617	5.24	1602	116
2060.0	837	2959.0	1314.7	44.4	642	5.45	1644	118
2070.0	826	2884.3	1279.6	44.4	616	5.23	1600	116
2080.0	818	2850.9	1256.4	44.1	600	5.09	1571	115
2090.0	813	2829.5	1240.1	43.8	588	4.99	1551	114
2100.0	814	2838.0	1243.7	43.8	591	5.01	1555	114
2110.0	820	2893.8	1261.8	43.6	604	5.12	1578	115

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2120.0	817	2878.1	1251.8	43.5	596	5.06	1566	115
2130.0	821	2945.5	1264.2	42.9	605	5.14	1581	115
2140.0	819	2942.6	1259.6	42.8	602	5.11	1575	115
2150.0	599	1661.2	674.2	40.6	236	2.00	843	84
2160.0	824	2923.9	1274.2	43.6	612	5.20	1594	116
2170.0	837	2980.4	1316.4	44.2	643	5.46	1646	118
2180.0	839	2970.8	1320.3	44.4	646	5.48	1651	118
2190.0	843	2947.3	1332.8	45.2	655	5.56	1667	119
2200.0	824	2837.1	1274.4	44.9	613	5.20	1594	116
2210.0	837	2947.7	1315.4	44.6	642	5.45	1645	118
2220.0	837	2964.5	1316.2	44.4	643	5.46	1646	118
2229.3	836	2937.6	1311.4	44.6	639	5.43	1640	118

BIT NUMBER	6	IADC CODE	517	INTERVAL	2229.3- 2521.0
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	5.0	BIT RUN	291.7
TOTAL HOURS	45.36	TOTAL TURNS	153199	CONDITION	T5 B4 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2230.0	769	2736.3	1110.8	40.6	499	4.23	1389	108
2240.0	810	2884.3	1232.7	42.7	583	4.94	1542	114
2250.0	822	2961.8	1267.7	42.8	608	5.16	1585	116
2260.0	811	2893.7	1234.8	42.7	584	4.96	1544	114
2270.0	810	2890.9	1233.2	42.7	583	4.95	1542	114
2280.0	812	2899.0	1236.5	42.7	585	4.97	1546	114
2290.0	806	2865.4	1219.8	42.6	574	4.87	1525	113
2300.0	805	2880.9	1216.7	42.2	571	4.85	1522	113
2310.0	809	2916.5	1227.7	42.1	579	4.91	1535	114
2320.0	805	2876.6	1217.7	42.3	572	4.85	1523	113
2330.0	807	2879.7	1223.4	42.5	576	4.89	1530	114
2340.0	806	2868.5	1220.1	42.5	574	4.87	1526	113
2350.0	808	2869.8	1224.2	42.7	577	4.89	1531	114
2360.0	812	2908.4	1239.0	42.6	587	4.98	1550	114
2370.0	701	2307.0	921.9	40.0	377	3.20	1153	99
2380.0	472	1130.3	418.5	37.0	115	0.98	523	66
2390.0	810	2948.0	1230.6	41.7	581	4.93	1539	114
2400.0	797	2875.0	1193.4	41.5	555	4.71	1493	112
2410.0	809	2959.4	1227.6	41.5	579	4.91	1535	114
2420.0	812	2980.2	1238.7	41.6	587	4.98	1549	114
2430.0	806	2964.1	1219.3	41.1	573	4.86	1525	113
2440.0	533	1413.5	532.9	37.7	166	1.41	666	75
2450.0	802	2919.2	1206.2	41.3	564	4.79	1509	113
2460.0	801	2899.1	1205.3	41.6	563	4.78	1507	113
2470.0	805	2936.6	1217.9	41.5	572	4.86	1523	113
2480.0	796	2867.1	1188.9	41.5	552	4.68	1487	112
2490.0	804	2881.2	1212.2	42.1	568	4.82	1516	113
2500.0	806	2912.2	1218.9	41.9	573	4.86	1524	113
2510.0	779	2944.4	1138.3	38.7	517	4.39	1424	110
2520.0	805	2941.0	1216.1	41.3	571	4.84	1521	113
2521.0	805	2939.7	1217.0	41.4	572	4.85	1522	113

BIT NUMBER	7	IADC CODE	517	INTERVAL	2521.0- 2774.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.4	BIT RUN	253.0
TOTAL HOURS	47.95	TOTAL TURNS	174772	CONDITION	T8 B4 G0.250

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2530.0	749	2967.8	1457.8	49.1	637	5.40	1549	124
2540.0	750	2967.9	1464.8	49.4	641	5.44	1556	124

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2550.0	755	3020.3	1482.4	49.1	653	5.54	1575	125
2560.0	753	2996.5	1473.4	49.2	647	5.49	1565	125
2570.0	747	2965.8	1453.4	49.0	634	5.38	1544	124
2580.0	753	2984.3	1473.7	49.4	647	5.49	1566	125
2590.0	745	2957.0	1442.4	48.8	627	5.32	1532	123
2600.0	745	2946.7	1445.4	49.1	629	5.33	1536	123
2610.0	742	2951.4	1433.0	48.6	621	5.27	1523	123
2620.0	739	2929.0	1420.5	48.5	612	5.20	1509	122
2630.0	743	2949.3	1437.1	48.7	623	5.29	1527	123
2640.0	736	2896.0	1409.4	48.7	605	5.14	1497	122
2650.0	748	2977.6	1456.8	48.9	636	5.40	1548	124
2660.0	744	2981.8	1438.7	48.2	624	5.30	1529	123
2670.0	746	2983.1	1449.0	48.6	631	5.35	1539	124
2680.0	742	2934.6	1431.6	48.8	620	5.26	1521	123
2690.0	748	2962.2	1454.1	49.1	634	5.38	1545	124
2700.0	747	2948.0	1450.4	49.2	632	5.36	1541	124
2710.0	750	2976.7	1462.3	49.1	640	5.43	1554	124
2720.0	745	2934.7	1442.1	49.1	626	5.32	1532	123
2730.0	751	2926.4	1465.2	50.1	642	5.44	1557	124
2740.0	759	2953.5	1499.5	50.8	664	5.64	1593	126
2750.0	748	2926.0	1455.8	49.8	635	5.39	1547	124
2760.0	749	2948.0	1457.5	49.4	637	5.40	1549	124
2770.0	677	2465.2	1190.5	48.3	470	3.99	1265	112
2774.0	673	2463.6	1177.2	47.8	462	3.92	1251	111

BIT NUMBER	8	IADC CODE	537	INTERVAL	2774.0- 2782.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	8.0
TOTAL HOURS	1.68	TOTAL TURNS	5933	CONDITION	T0 B0 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2780.0	726	2918.8	1370.3	46.9	580	4.92	1456	120
2782.0	730	2917.0	1385.1	47.5	590	5.00	1472	121

BIT NUMBER	8	IADC CODE	4	INTERVAL	2782.0- 2788.3
CHRIS C201		SIZE	9.875	NOZZLES	14 14 14
COST	21000.00	TRIP TIME	7.9	BIT RUN	6.3
TOTAL HOURS	4.20	TOTAL TURNS	12508	CONDITION	T0 B0 G5.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2788.3	319	986.5	451.2	45.7	84	1.10	367	69

BIT NUMBER	8	IADC CODE	537	INTERVAL	2788.3- 2990.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	201.7
TOTAL HOURS	59.74	TOTAL TURNS	218884	CONDITION	T4 B7 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2790.0	728	2931.2	1377.4	47.0	585	4.96	1463	120
2800.0	733	2958.8	1397.9	47.2	598	5.07	1485	121
2810.0	731	2925.6	1391.7	47.6	594	5.04	1479	121
2820.0	738	2866.4	1415.1	49.4	609	5.17	1504	122
2830.0	749	2851.7	1459.3	51.2	638	5.41	1551	124
2840.0	750	2834.7	1464.9	51.7	641	5.44	1556	124
2850.0	753	2777.5	1475.1	53.1	648	5.50	1567	125
2860.0	755	2867.5	1481.9	51.7	653	5.54	1575	125
2870.0	733	2908.8	1396.6	48.0	597	5.07	1484	121
2880.0	736	2866.3	1410.0	49.2	606	5.14	1498	122
2890.0	740	2935.5	1425.5	48.6	616	5.22	1515	123
2900.0	738	2893.1	1416.7	49.0	610	5.18	1505	122
2910.0	672	2545.7	1173.0	46.1	460	3.90	1246	111
2920.0	734	2902.0	1402.5	48.3	601	5.10	1490	122
2930.0	732	2912.6	1394.0	47.9	595	5.05	1481	121
2940.0	731	2936.1	1390.0	47.3	593	5.03	1477	121
2950.0	735	2969.9	1404.4	47.3	602	5.11	1492	122
2960.0	732	2955.2	1395.1	47.2	596	5.06	1482	121
2970.0	728	2944.8	1377.0	46.8	585	4.96	1463	120
2980.0	729	2954.7	1381.2	46.7	587	4.98	1468	121
2990.0	735	2996.6	1405.5	46.9	603	5.11	1493	122

(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	2	IADC CODE	111	INTERVAL	716.0- 802.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4978.00	TRIP TIME	3.8	BIT RUN	586.2
TOTAL HOURS	15.56	TOTAL TURNS	90109	CONDITION	T3 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
220.0	105	104	1045	32	26		23			19
230.0	106	104	1053	32	26		23			19
240.0	107	104	1054	33	26		23			19
250.0	106	103	1048	32	26		23			19
260.0	107	103	1049	32	26		23			19
270.0	107	104	1053	32	26		23			19
280.0	106	104	1048	32	26		23		23	19
290.0	105	103	1042	32	26		23		23	19
300.0	106	104	1053	32	26		23		23	19
310.0	107	104	1054	33	26		23		23	19
320.0	106	104	1051	32		28	23		23	19
330.0	106	103	1047	32		28	23		23	19
340.0	106	104	1046	32		28	23		23	19
350.0	106	103	1047	32		28	23		23	19
360.0	106	104	1052	32		28	23		23	19
370.0	107	103	1050	32		28	23		23	19
380.0	106	104	1049	32		28	23		23	19
390.0	107	104	1055	33		28	23		23	19
400.0	107	104	1051	32		28		28	23	19
410.0	106	106	1058	33		28		28	23	19
420.0	107	104	1055	33		28		28	23	19
430.0	107	104	1051	32		28		28	23	19
440.0	107	105	1056	33		28		28	23	19
450.0	106	104	1047	32		28		28	23	19
460.0	104	104	1041	32		28		28	23	19
470.0	107	104	1050	32		28		28	23	19
480.0	106	103	1049	32		28		28	23	19
490.0	107	104	1053	32		28		28	23	19
500.0	106	105	1056	33		28		28	23	19
510.0	107	105	1059	33		28		28	23	19
520.0	106	103	1045	32		28		28	23	19
530.0	107	105	1058	33		28		28	23	19
540.0	106	105	1054	33		28		28	23	19
550.0	106	105	1055	33		28		28	23	19
560.0	107	105	1060	33		28		28	23	19
570.0	106	102	1039	32		28		28	23	19
580.0	107	104	1055	33		28		28	23	19
590.0	107	104	1052	32		28		28	23	19
600.0	107	105	1059	33		28		28	23	19
610.0	106	106	1061	33		28		28	23	19
620.0	107	104	1054	33		28		28	23	19
630.0	105	105	1053	33		28		28	23	19
640.0	108	105	1060	33		28		28	23	19

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
650.0	107	105	1057	33		28		28	23	19
660.0	107	104	1054	33		28		28	23	19
670.0	107	102	1049	32		28		28	23	19
680.0	106	104	1052	32		28		28	23	19
690.0	107	104	1052	32		28		28	23	19
700.0	107	105	1058	33		28		28	23	19
710.0	107	104	1054	33		28		28	23	19
720.0	107	105	1060	33		28		28	23	19
730.0	107	104	1052	32		28		28	23	19
740.0	106	104	1049	32		28		28	23	19
750.0	107	105	1059	33		28		28	23	19
760.0	106	105	1058	33		28		28	23	19
770.0	107	105	1058	33		28		28	23	19
780.0	106	105	1055	33		28		28	23	19
790.0	107	106	1062	33		28		28	23	19
800.0	108	104	1062	33		28		28	23	19
802.2	106	103	1046	32		28		28	23	19

BIT NUMBER	3	IADC CODE	136	INTERVAL	802.2- 1400.0
HTC J3		SIZE	12.250	NOZZLES	18 18 18
COST	1944.00	TRIP TIME	4.6	BIT RUN	597.8
TOTAL HOURS	18.77	TOTAL TURNS	117997	CONDITION	T5 B8 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
810.0	99	99	989	86	78		55		55	18
820.0	99	99	991	86	78		55		55	18
830.0	99	99	988	86	78		55		55	18
840.0	99	99	994	86	78		55		55	18
850.0	99	99	991	86	78		55		55	18
860.0	100	99	997	87	78		56		56	18
870.0	98	101	993	86	78		55		55	18
880.0	102	100	1006	87	79		56		56	18
890.0	101	99	997	87	78		56		56	18
900.0	102	100	1011	88	79		56		56	18
910.0	102	99	1005	87	79		56		56	18
920.0	101	99	996	87	78		56		56	18
930.0	100	98	992	86	78		55		55	18
940.0	102	97	996	86	78		55		55	18
950.0	100	99	995	86	78		55		55	18
960.0	101	98	998	87		60	56		56	18
970.0	99	98	986	86		59	55		55	18
980.0	99	98	987	86		59	55		55	18
990.0	98	97	977	85		58	54		54	18
1000.0	101	98	993	86		59	55		55	18
1010.0	101	96	989	86		59	55		55	18
1020.0	96	98	970	84		58	54		54	17
1030.0	96	95	956	83		57	53		53	17

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1040.0	96	95	955	83		57	53		53	17
1050.0	96	94	952	83		57		57	53	17
1060.0	96	96	959	83		57		57	53	17
1070.0	97	95	957	83		57		57	53	17
1080.0	97	95	958	83		57		57	53	17
1090.0	97	95	961	83		57		57	54	17
1100.0	96	93	945	82		56		56	53	17
1110.0	97	96	962	84		57		57	54	17
1120.0	97	93	951	83		57		57	53	17
1130.0	97	91	939	82		56		56	52	17
1140.0	94	93	934	81		56		56	52	17
1150.0	95	90	923	80		55		55	51	17
1160.0	94	90	921	80		55		55	51	17
1170.0	2	88	458	39		27		27	25	8
1180.0	93	0	465	40		28		28	26	8
1190.0	101	0	506	44		30		30	28	9
1200.0	97	45	709	62		42		42	40	13
1210.0	89	83	860	75		51		51	48	15
1220.0	89	84	861	75		51		51	48	15
1230.0	90	85	875	76		52		52	49	16
1240.0	89	84	864	75		52		52	48	16
1250.0	90	85	872	76		52		52	49	16
1260.0	89	84	864	75		52		52	48	16
1270.0	89	84	867	75		52		52	48	16
1280.0	89	86	871	76		52		52	49	16
1290.0	86	85	855	74		51		51	48	15
1300.0	87	82	844	73		50		50	47	15
1310.0	87	79	830	72		50		50	46	15
1320.0	85	84	843	73		50		50	47	15
1330.0	86	84	852	74		51		51	47	15
1340.0	88	84	861	75		51		51	48	15
1350.0	88	84	856	74		51		51	48	15
1360.0	87	84	855	74		51		51	48	15
1370.0	89	80	843	73		50		50	47	15
1380.0	86	82	841	73		50		50	47	15
1390.0	86	87	868	75		52		52	48	16
1400.0	89	84	865	75		52		52	48	16

BIT NUMBER	3	IADC CODE	4	INTERVAL	1400.0- 1409.4
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	22000.00	TRIP TIME	5.0	BIT RUN	9.4
TOTAL HOURS	2.30	TOTAL TURNS	13529	CONDITION	T0 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1409.4	46	0	229	51		24		24	13	4

BIT NUMBER	3	IADC CODE	4	INTERVAL	1409.4- 1418.9
CHRIS RC444		SIZE	9.875	NOZZLES	14 15 15
COST	0.00	TRIP TIME	5.0	BIT RUN	9.5
TOTAL HOURS	1.66	TOTAL TURNS	10059	CONDITION	T0 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1410.0	47	0	234	52		24		24	13	4
1418.9	52	0	260	58		27		27	14	5

BIT NUMBER	4	IADC CODE	517	INTERVAL	1418.9- 1727.8
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	7.5	BIT RUN	308.9
TOTAL HOURS	18.08	TOTAL TURNS	76827	CONDITION	T2 B2 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1420.0	87	83	852	74		51		51	47	15
1430.0	85	84	844	73		50		50	47	15
1440.0	84	84	840	73		50		50	47	15
1450.0	85	84	848	74		51		51	47	15
1460.0	85	84	844	73		50		50	47	15
1470.0	84	85	846	73		51		51	47	15
1480.0	84	85	847	74		51		51	47	15
1490.0	84	84	842	73		50		50	47	15
1500.0	85	84	848	74		51		51	47	15
1510.0	85	85	847	74		51		51	47	15
1520.0	85	84	846	73		51		51	47	15
1530.0	86	84	849	74		51		51	47	15
1540.0	85	85	854	74		51		51	48	15
1550.0	85	82	834	72		50		50	46	15
1560.0	85	84	843	73		50		50	47	15
1570.0	85	86	854	74		51		51	48	15
1580.0	85	85	851	74		51		51	47	15
1590.0	84	86	849	74		51		51	47	15
1600.0	85	85	850	74		51		51	47	15
1610.0	85	85	850	74		51		51	47	15
1620.0	84	84	842	73		50		50	47	15
1630.0	84	82	832	72		50		50	46	15
1640.0	85	83	842	73		50		50	47	15
1650.0	83	84	832	72		50		50	46	15
1660.0	84	85	841	73		50		50	47	15
1670.0	84	84	842	73		50		50	47	15
1680.0	85	84	846	74		51		51	47	15
1690.0	84	83	835	73		50		50	47	15
1700.0	84	84	837	73		50		50	47	15
1710.0	84	83	835	73		50		50	47	15
1720.0	84	81	824	72		49		49	46	15

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1727.8	81	83	823	71		49		49	46	15

BIT NUMBER	5	IADC CODE	517	INTERVAL	1727.8- 2229.3
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	3.8	BIT RUN	501.5
TOTAL HOURS	64.08	TOTAL TURNS	241658	CONDITION	T6 B6 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1730.0	81	81	814	71		49		49	45	15
1740.0	81	81	812	71		49		49	45	15
1750.0	82	82	819	71		49		49	46	15
1760.0	83	83	827	72		49		49	46	15
1770.0	81	78	795	69		47		47	44	14
1780.0	82	79	807	70		48		48	45	15
1790.0	82	79	805	70		48		48	45	14
1800.0	80	82	811	70		48		48	45	15
1810.0	77	85	810	70		48		48	45	15
1820.0	78	85	812	71		49		49	45	15
1830.0	78	84	812	71		49		49	45	15
1840.0	80	82	813	71		49		49	45	15
1850.0	77	82	794	69		47		47	44	14
1860.0	81	81	810	70		48		48	45	15
1870.0	78	81	793	69		47		47	44	14
1880.0	79	84	814	71		49		49	45	15
1890.0	125	0	625	54		37		37	35	11
1900.0	0	112	562	49		34		34	31	10
1910.0	78	85	817	71		49		49	46	15
1920.0	81	82	815	71		49		49	45	15
1930.0	18	86	522	45		31		31	29	9
1940.0	79	85	818	71		49		49	46	15
1950.0	78	85	815	71		49		49	45	15
1960.0	79	84	813	71		49		49	45	15
1970.0	78	85	815	71		49		49	45	15
1980.0	80	85	822	71		49		49	46	15
1990.0	82	84	826	72		49		49	46	15
2000.0	79	85	820	71		49		49	46	15
2010.0	81	82	818	71		49		49	46	15
2020.0	82	84	828	72		49		49	46	15
2030.0	82	83	827	72		49		49	46	15
2040.0	81	81	813	71		49		49	45	15
2050.0	82	84	826	72		49		49	46	15
2060.0	83	84	837	73		50		50	47	15
2070.0	81	84	826	72		49		49	46	15
2080.0	79	84	818	71		49		49	46	15
2090.0	78	85	813	71		49		49	45	15
2100.0	78	85	814	71		49		49	45	15
2110.0	79	85	820	71		49		49	46	15

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2120.0	78	85	817	71		49		49	45	15
2130.0	82	82	821	71		49		49	46	15
2140.0	82	82	819	71		49		49	46	15
2150.0	107	13	599	52		36		36	33	11
2160.0	83	82	824	72		49		49	46	15
2170.0	84	83	837	73		50		50	47	15
2180.0	83	85	839	73		50		50	47	15
2190.0	83	85	843	73		50		50	47	15
2200.0	80	85	824	72		49		49	46	15
2210.0	83	84	837	73		50		50	47	15
2220.0	83	84	837	73		50		50	47	15
2229.3	83	84	836	73		50		50	47	15

BIT NUMBER	6	IADC CODE	517	INTERVAL	2229.3- 2521.0
HTC J22		SIZE	12.250	NOZZLES	16 18 18
COST	8520.00	TRIP TIME	5.0	BIT RUN	291.7
TOTAL HOURS	45.36	TOTAL TURNS	153199	CONDITION	T5 B4 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2230.0	76	78	769	67		46		46	43	14
2240.0	80	82	810	70		48		48	45	15
2250.0	81	83	822	71		49		49	46	15
2260.0	78	85	811	70		48		48	45	15
2270.0	78	84	810	70		48		48	45	15
2280.0	78	84	812	70		48		48	45	15
2290.0	78	83	806	70		48		48	45	14
2300.0	78	83	805	70		48		48	45	14
2310.0	82	80	809	70		48		48	45	15
2320.0	81	80	805	70		48		48	45	14
2330.0	81	80	807	70		48		48	45	15
2340.0	82	79	806	70		48		48	45	14
2350.0	82	80	808	70		48		48	45	15
2360.0	82	81	812	71		49		49	45	15
2370.0	93	47	701	61		42		42	39	13
2380.0	3	92	472	41		28		28	26	8
2390.0	82	80	810	70		48		48	45	15
2400.0	80	79	797	69		48		48	44	14
2410.0	82	80	809	70		48		48	45	15
2420.0	82	81	812	71		49		49	45	15
2430.0	82	80	806	70		48		48	45	14
2440.0	0	107	533	46		32		32	30	10
2450.0	79	81	802	70		48		48	45	14
2460.0	80	80	801	70		48		48	45	14
2470.0	81	81	805	70		48		48	45	14
2480.0	81	79	796	69		48		48	44	14
2490.0	81	80	804	70		48		48	45	14
2500.0	80	81	806	70		48		48	45	14
2510.0	75	81	779	68		47		47	43	14
2520.0	79	82	805	70		48		48	45	14
2521.0	79	82	805	70		48		48	45	14

BIT NUMBER	7	IADC CODE	517	INTERVAL	2521.0- 2774.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8520.00	TRIP TIME	7.4	BIT RUN	253.0
TOTAL HOURS	47.95	TOTAL TURNS	174772	CONDITION	T8 B4 G0.250

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2530.0	75	75	749	65		45		45	42	13
2540.0	75	75	750	65		45		45	42	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2550.0	75	76	755	66		45		45	42	14
2560.0	75	75	753	65		45		45	42	14
2570.0	75	75	747	65		45		45	42	13
2580.0	74	76	753	65		45		45	42	14
2590.0	74	75	745	65		45		45	41	13
2600.0	74	75	745	65		45		45	42	13
2610.0	73	75	742	64		44		44	41	13
2620.0	73	74	739	64		44		44	41	13
2630.0	74	75	743	65		44		44	41	13
2640.0	73	75	736	64		44		44	41	13
2650.0	75	75	748	65		45		45	42	13
2660.0	74	75	744	65		44		44	41	13
2670.0	74	75	746	65		45		45	42	13
2680.0	74	74	742	64		44		44	41	13
2690.0	75	74	748	65		45		45	42	13
2700.0	74	75	747	65		45		45	42	13
2710.0	73	77	750	65		45		45	42	13
2720.0	74	75	745	65		44		44	41	13
2730.0	76	75	751	65		45		45	42	13
2740.0	75	77	759	66		45		45	42	14
2750.0	75	75	748	65		45		45	42	13
2760.0	74	76	749	65		45		45	42	13
2770.0	66	69	677	59		40		40	38	12
2774.0	66	68	673	58		40		40	37	12

BIT NUMBER	8	IADC CODE	537	INTERVAL	2774.0- 2782.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	8.0
TOTAL HOURS	1.68	TOTAL TURNS	5933	CONDITION	T0 B0 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2780.0	71	75	726	63		43		43	40	13
2782.0	71	75	730	63		44		44	41	13

BIT NUMBER	8	IADC CODE	4	INTERVAL	2782.0- 2788.3
CHRIS C201		SIZE	9.875	NOZZLES	14 14 14
COST	21000.00	TRIP TIME	7.9	BIT RUN	6.3
TOTAL HOURS	4.20	TOTAL TURNS	12508	CONDITION	T0 B0 G5.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2788.3	64	0	319	71		33		33	18	6

BIT NUMBER	8	IADC CODE	537	INTERVAL	2788.3- 2990.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	201.7
TOTAL HOURS	59.74	TOTAL TURNS	218884	CONDITION	T4 B7 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2790.0	71	74	728	63		43		43	41	13
2800.0	72	74	733	64		44		44	41	13
2810.0	72	74	731	64		44		44	41	13
2820.0	73	75	738	64		44		44	41	13
2830.0	75	75	749	65		45		45	42	13
2840.0	75	75	750	65		45		45	42	13
2850.0	76	74	753	65		45		45	42	14
2860.0	77	74	755	66		45		45	42	14
2870.0	73	73	733	64		44		44	41	13
2880.0	74	74	736	64		44		44	41	13
2890.0	74	74	740	64		44		44	41	13
2900.0	74	73	738	64		44		44	41	13
2910.0	82	53	672	58		40		40	37	12
2920.0	74	73	734	64		44		44	41	13
2930.0	73	73	732	64		44		44	41	13
2940.0	73	73	731	63		44		44	41	13
2950.0	74	73	735	64		44		44	41	13
2960.0	73	73	732	64		44		44	41	13
2970.0	74	71	728	63		43		43	41	13
2980.0	73	73	729	63		44		44	41	13
2990.0	73	74	735	64		44		44	41	13

PE604567

This is an enclosure indicator page.
The enclosure PE604567 is enclosed within the container PE907032 at this location in this document.

The enclosure PE604567 has the following characteristics:

ITEM_BARCODE	= PE604567
CONTAINER_BARCODE	= PE907032
NAME	= Drill Data Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L10
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Drill Data Plot (enclosure from Final Well Report--attachment to WCR) for Snapper-5
REMARKS	=
DATE_CREATED	= 29/07/85
DATE_RECEIVED	= 23/12/85
W_NO	= W912
WELL_NAME	= SNAPPER-5
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LTD

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PE604567

Drill Data Plot

PE604568

This is an enclosure indicator page.
The enclosure PE604568 is enclosed within the container PE907032 at this location in this document.

The enclosure PE604568 has the following characteristics:

ITEM_BARCODE	= PE604568
CONTAINER_BARCODE	= PE907032
NAME	= Temperature Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L10
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Temperature Plot (enclosure from Final Well Report--attachment to WCR) for Snapper-5
REMARKS	=
DATE_CREATED	= 29/07/85
DATE_RECEIVED	= 23/12/85
W_NO	= W912
WELL_NAME	= SNAPPER-5
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LTD

(Inserted by DNRE - Vic Govt Mines Dept)

TEMPERATURE PLOT

PE604568

Temperature Plot

PE604569

This is an enclosure indicator page.
The enclosure PE604569 is enclosed within the container PE907032 at this location in this document.

The enclosure PE604569 has the following characteristics:

ITEM_BARCODE	= PE604569
CONTAINER_BARCODE	= PE907032
NAME	= Grapholog/Mud Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L10
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Grapholog/Mud Log (enclosure from Final Well Report--attachment to WCR) for Snapper-5
REMARKS	=
DATE_CREATED	= 29/07/85
DATE_RECEIVED	= 23/12/85
W_NO	= W912
WELL_NAME	= SNAPPER-5
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LTD

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PE604569

Grapholog

PE604570

This is an enclosure indicator page.
The enclosure PE604570 is enclosed within the container PE907032 at this location in this document.

The enclosure PE604570 has the following characteristics:

ITEM_BARCODE	= PE604570
CONTAINER_BARCODE	= PE907032
NAME	= Pressure Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L10
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Pressure Plot (enclosure from Final Well Report--attachment to WCR) for Snapper-5
REMARKS	=
DATE_CREATED	= 29/07/85
DATE_RECEIVED	= 23/12/85
W_NO	= W912
WELL_NAME	= SNAPPER-5
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LTD

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PE604570

Pressure Plot

PRESSURE PLOT

PE604571

This is an enclosure indicator page.
The enclosure PE604571 is enclosed within the container PE907032 at this location in this document.

The enclosure PE604571 has the following characteristics:

ITEM_BARCODE	= PE604571
CONTAINER_BARCODE	= PE907032
NAME	= Geo-Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L10
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Geo-Plot (enclosure from Final Well Report--attachment to WCR) for Snapper-5
REMARKS	=
DATE_CREATED	= 29/07/85
DATE_RECEIVED	= 23/12/85
W_NO	= W912
WELL_NAME	= SNAPPER-5
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LTD

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PE604571

Geoplot

PE604572

This is an enclosure indicator page.
The enclosure PE604572 is enclosed within the container PE907032 at this location in this document.

The enclosure PE604572 has the following characteristics:

ITEM_BARCODE	= PE604572
CONTAINER_BARCODE	= PE907032
NAME	= Tritium Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L10
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Tritium Plot (enclosure from Final Well Report--attachment to WCR) for Snapper-5
REMARKS	=
DATE_CREATED	= 29/07/85
DATE_RECEIVED	= 23/12/85
W_NO	= W912
WELL_NAME	= SNAPPER-5
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LTD

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PE604572

Tritium Plot