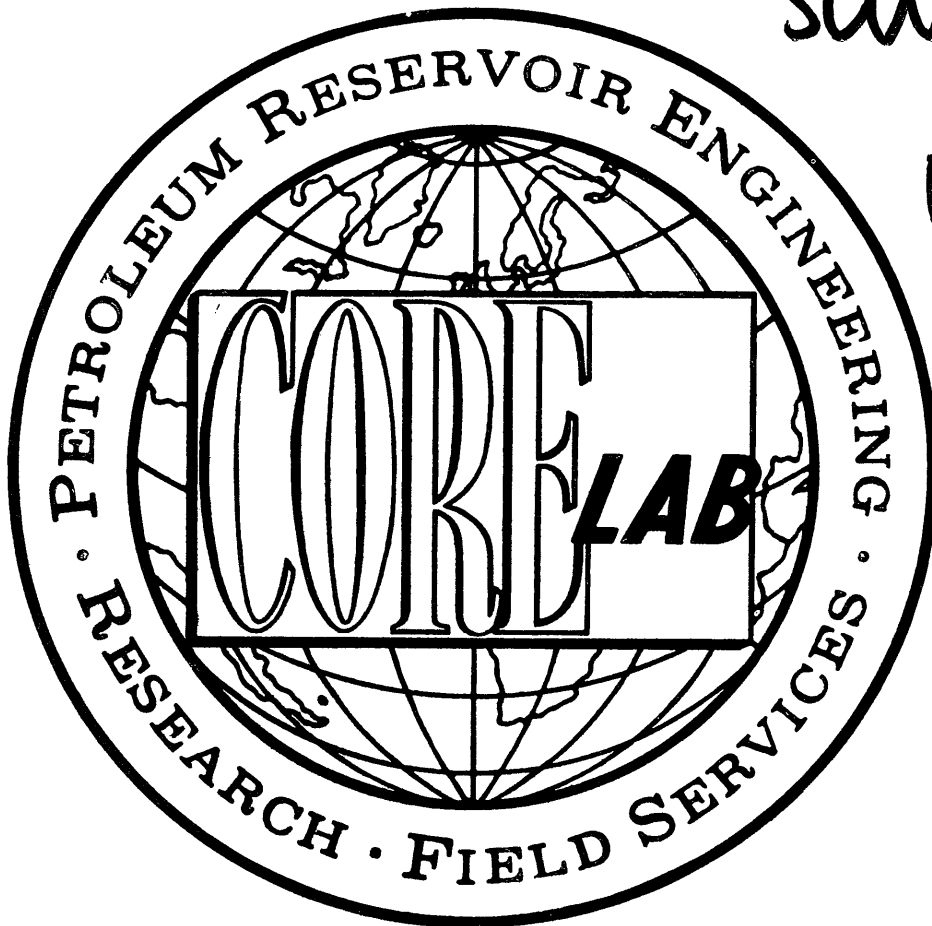


ATTACHMENT TO

WCR VOL 1

SUNFISH-2

W833



W 833

FINAL WELL REPORT 0 9 MAY 1984

SUNFISH NO. 2

EXTENDED SERVICE PACKAGE

OIL and GAS DIVISION

CORE LABORATORIES AUSTRALIA (QLD.) LTD.

Petroleum Reservoir Engineering
AUSTRALIA

BRISBANE OFFICE:
1173 KINGSFORD SMITH DRIVE
PINKENBA, Q. 4008.
P.O. BOX 456
HAMILTON CENTRAL, Q. 4007
AUSTRALIA.

CABLE ADDRESS: CORELAB BRISBANE
TELEX No. COREBN AA42513
TELEPHONE: 260 1722
260 1723

21st October 1983

Mr. S. Twartz
ESSO AUSTRALIA LTD.,
(Geology Department)
ESSO House
127, Kent Street,
Sydney
N.S.W. 2001

Dear Mr. Twartz,

Please find enclosed the original well report plus five (5)
copies, for the well SUNFISH NO. 2.

If you have any enquiries, please do not hesitate to contact
us.

Yours very truly,
CORE LABORATORIES AUSTRALIA (QLD.) LTD.

T. Charles
for
M. MOWATT
UNIT SUPERVISOR

MM/ARC/pc

INDEX

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

COMPUTER DATA LISTINGS :

BIT RECORD AND INITIALIZATION DATA
HYDRAULIC ANALYSES
DATA LIST A
DATA LIST B
DATA LIST C
DATA LIST D

APPENDED PLOTS :

DRILL DATA PLOT
TEMPERATURE PLOT
PRESSURE PLOT
GEOPLQT
GRAPHOLOG

INTRODUCTION

SUNFISH NO. 2 was drilled by ESSO AUSTRALIA LTD. in the Bass Strait, Australia.

Well co-ordinates were:

Latitude : 38^o 08' 23.49" S
Longitude : 148^o 14' 40.31" 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 802.

SUNFISH NO. 2 was spudded on 23rd Spetember 1983 and reached a total depth of 2647 metres on 8th October 1983, a total drilling time of 16 days. The main objectives of the well were:

1. To test the hydrocarbon potential of traps formed by truncation of Latrobe Group beds against the erosional top of the Latrobe Group surface.
2. To test the hydrocarbon potential of the western culmination of an erosional closure at the top of the Latrobe Group.
3. To assess the up-dip potential of oil and gas zones intersected in SUNFISH NO. 1.

Elevations were:

Kelly bushings to mean sea level 21m
Water depth 59m
Kelly bushings to mean sea bed 80m

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 SUNFISH NO. 2 were as follows:

M. MOWATT	-	Unit Supervisor
T. CHARLES	-	Pressure Engineer
B. GIFTSON	-	Logging Crew Chief
B. PAULET	-	Well Logger
P. DENTON	-	Well Logger
E. DIESPOSTI	-	Well Logger
M. KISSANE	-	Well Logger

2. RIG SPECIFICATIONS

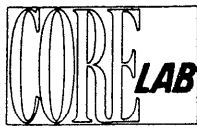


RIG INFORMATION SHEET

COMPANY ESSU AUSTRALIA LTD.WELL SUNFISH NO. 2

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N ^o 107)
TYPE	SEMI-SUBMERSIBLE , TWIN HULLED.
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPACITY OF 1 000 000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS.
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS.
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNER	DRILLCO 5 $\frac{1}{4}$ " x 50' HEX KELLY
ROTARY TABLE	OILWELL A 37 $\frac{1}{2}$ SINGLE ELECTRIC MOTOR
ROTARY SLIPS	VARCO DCS-L
MUD PUMPS	TWO OILWELL A 170OPT. RATED AT 1600HP
MUD SYSTEM	FOUR MUD TANKS HAVING A TOTAL CAPACITY OF 1200 BBL, AND ONE PILL TANK HAVING A CAPACITY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6x8" CENTRIFUGAL BY TWO 100 HP ELECTRIC MOTORS. DESANDER : 1 DEMCO 4 CONE 12" MODEL N ^o 124 DESILTER : 1 DEMCO 4"-16H 16 CONE DEGASSER : 1 SWACO MODEL N ^o 36 SHALE SHAKERS : 2 BRANOT DUAL UNIT TANDEM - GHI DUAL UNIT.
BLOW OUT PREVENTORS	THREE SHAFFER L.W.S. 18 $\frac{3}{4}$ " - 10 000 psi TWO HYDRIL G.L. 18 $\frac{3}{4}$ " - 5000 psi
WELL CONTROL EQUIP.	FOUR VALV CON ACCUMULATORS. 2" - 10 000psi. CHOKES: 2 C.I.W. ABJ H2 2 1/16" - 10 000 psi, 1 SWACO SUPER CHOKE
TUBULAR DRILLING EQUIPMENT	DC : 6 $\frac{1}{4}$ " x 2 13/16" (4" IF T J) 8 " x 2 13/16" (6 5/8" H90 T J) 9 $\frac{3}{4}$ " x 3" (7 5/8" H90 Y J) HWDP : 5" 50lb/ft GRADE G (6 $\frac{1}{2}$ " OD 4 $\frac{1}{2}$ " IF T J) DP : 5" 19 $\frac{1}{2}$ lb/ft GRADE G&E (6 3/8" OD 4 $\frac{1}{2}$ " IF T J)
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 12 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: 3x1570cu ft. RISER TENSIONER: 6 WESTERN GEAR, 50" STROKE, 80 000lbs. MUD BULK TANKS: 3x1570cu ft. GUIDE LINE TENSIONERS : 4 WESTERN GEAR 16 000 lbs, 40" STROKE	

3. WELL INFORMATION, PROGRESS AND HISTORY



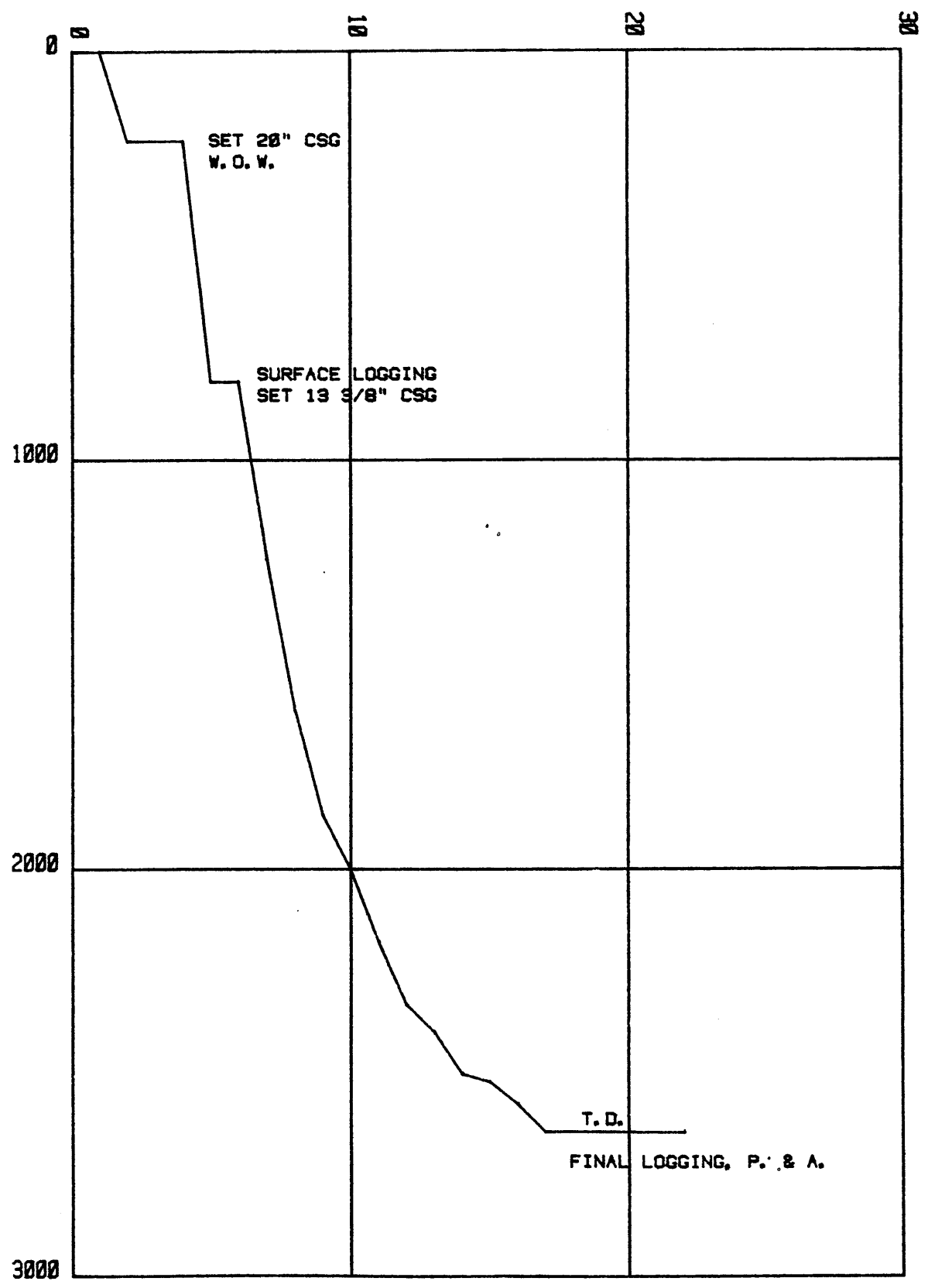
WELL INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
 WELL SUNFISH NO. 2

Sheet No. 1

WELL NAME	SUNFISH NO. 2										
OPERATOR	ESSO AUSTRALIA LTD.										
PARTNERS	B.H.P.										
RIG	OWNER	SANTA FE (SSDC)									
	NAME OR NUMBER	SOUTHERN CROSS									
	TYPE	SEMI-SUBMERSIBLE									
LOCATION	LATITUDE (X)	38° 08' 23.49" S			LONGITUDE (Y)	148° 14' 40.31" E					
	FIELD	GIPPSLAND BASIN			AREA	BASS STRAIT					
	COUNTRY				STATE	VICTORIA					
	COUNTRY	AUSTRALIA									
	DESCRIPTION	EXPLORATION APPRAISAL									
DATUM POINTS	Ground Elevation	-			RKB to Ground Level	-					
	Mean Water Depth	59M			RKB to Water Level	21M					
DATES	SPUD	23RD SEPTEMBER 1983			TOTAL DEPTH	8TH OCTOBER 1983					
HOLE SIZES	Depth From	Depth To	Bit Size"	No. of Bits	No. of Reamers	Date From	Date To	Cased	Logged		
	80	218	26	1	0	23/09/83	24/09/83	Y	N		
	218	809.2	17½	1	0	26/09/83	26/09/83	Y	Y		
	809.2	2647	12¼	6	0	28/09/83	8/10/83	N	Y		
DRILLING FLUID	Depth From	Depth To	Weights		Type						
	80	218	8.6 TO 8.6		SEAWATER						
	218	809.2	8.6 TO 8.8		SEAWATER GEL						
	809.2	2647	8.6 TO 9.8		SEAWATER GEL						
			TO								
			TO								
WIRELINE LOGGING	Depth From	Depth To	Hole Size'	Date Run	Logs Run						
	806	80	12¼	27/09/83	BHC-GR-CAL						
	2647	794	12¼	8-9/10/83	DLL-MSFL-GR						
	2647	794	12¼	9/10/83	LDT-CNL-GR						
	2647	794	12¼	9/10/83	BHC-GR						
	2647	794	12¼	9/10/83	HDT						
	-	-	12¼	9-10/10/83	RFT'S 1, 2						
	2647	1550	12¼	10/10/83	SHDT						
-	-	12¼	10/10/83	WST							
RISER, CASING & LINER	Depth From	Depth To	OD "	ID "	Weight	Grade	Threads	Date Run	Cement	Stages	Excess
	0	80	22	21	-	-	RISER	-	-	-	-
	80	201	20	19.124	94.4	X52	JV BOX	25/09/83	BC101	1	-
	80	794	13.375	12.615	54.5	54.5	K55	27/09/83	BC101	1	-

OCT



WELL HISTORY

22th September 1983. Towed to new location and started to run the anchors.

23rd September 1983. Finished running the anchors. The guide base was run and the hole was spudded at 1315 hours with a rerun bit (OSC 3AJ plus a 26" hole-opener). Drilled down to 218m. Cleaned the hole by displacing it with Hi-vis mud. POOH.

24th September 1983. Attempted to run the 20" casing but it got hung up about 5m below the guide base, so the casing was pulled back to surface. Reamed to T.D. and circulated the hole clean. (A bridge had developed at the top of the hole). Due to bad weather a wiper trip was made.

25th September 1983. POOH. Ran, and set the 20" casing at 201m. Ran the stack and riser.

26th September 1983. RIH with NB 1 (HTC OSC 3AJ, 17½"), and drilled cement from 189-218m. Drilled new hole down to 809m. BG rose gradually to 10 units (from 0 units at 340m). Maximum gas was 24 units (715m). Circulated bottoms-up, then conducted a wiper trip.

27th September 1983. Trip gas was 5-7-4 units. POOH, then Schlumberger made one logging run (BHC-GR-CAL). The 13-3/8" casing was then set at 794m. Tested the stack.

28th September 1983. RIH with NB No. 2 (HTC J1, 12¼") and drilled cement from 769m. 6m of new formation was drilled (809-815m) before making a PIT at 815m. (17.3 ppg E.M.W., no leak-off). Drilled ahead to 1242m. Maximum gas was 9 units (1222m) over a background of 4-6 units.

29th September 1983. Continued drilling through the Lakes Entrance formation. The mud was weighted up to 9.3 ppg at 1400m in anticipation of the Latrobe Group. ROP's were generally 20-40m/hr, but they dropped below 20m/hr at 1608m. Bottoms-up were circulated from 1611m. Since this sample contained sand the bit was considered unsuitable, and so it was pulled. On the trip out, the hole was found to be tight: 20 Kips overpull was required between 1320-1200m; and 50 Kips between 900-930m. RIH with Bit No. 3 (HTC J22, 12¼"). Reamed from 876-940m.

30th September 1983. Continued reaming/washing to T.D. Trip gas was 3-39-2 units. Drilled to 1867m. Flow-checks were made, and bottoms-up were circulated at the following drill-breaks:

1619m no flow, 18 units gas, no show,
1629m no flow, 2 units gas, no show,

A further flow-check was carried out, at 1862m, in response to a small pit gain of 4 bbls (no flow). Maximum gas for the day was 47 units (Coal, 1775m) and the background was 2-4 units.

1st October 1983. Drilled ahead to 2000m, where it was decided to pull the bit due to low rates of penetration. Swabbed the hole on the first 2 stands out, so the string was ran back in the hole. Circulated bottoms-up: 1-12-2 units. POOH, experiencing severe overpull (maximum 150 Kips) on the first 20 stands. RIH with bit No. 4 (J22, 12 $\frac{1}{4}$ ").

2nd October 1983. Reamed tight spots down to T.D. Trip gas was 0-1.2-Tr units, and the maximum reaming gas was 41 units. Drilled ahead to 2178m. Maximum gas was 8 units (2060m, Coal) over a background of 0-2 units.

3rd October 1983. Drilled 12 $\frac{1}{4}$ " hole to 2259m. At this point a precautionary wiper trip was made, of 22 stands. Wiper trip gas was 1-190-6 units. Drilled ahead to 2333m, encountering volcanic rocks at 2308m. Maximum gas for the day was 11 units (Coal, 2261m), and the B.G. was 0-1 units.

4th October 1983 Drilled ahead to 2335m. Due to low rates of penetration the bit was pulled (graded at 8-6- $\frac{1}{4}$). Survey was 3⁰. RIH with Bit No. 5 (J33, 12 $\frac{1}{4}$ ") and drilled to 2399m. Penetration rates were slow in the volcanic section of the Latrobe Group (2-9m/hr). Gas levels remained very low, around 1 unit for today's drilled interval.

5th October 1983. Drilled to 2505m. Conducted flow-checks at the following drill-breaks: 2449m, 2494m (both negative). The kelly-sub saver washed out at 2419m, causing a loss in pump pressure. It was removed, but not replaced. Gas values were low in this section of the Latrobe Group, remaining below 2 units throughout the day.

6th October 1983. Drilled less than a metre, before deciding to pull the bit due to very low ROP's (less than 2m/hr). Only 9m had been drilled in the previous 5 hours. Tested the stack. Ran back in the hole with a medium-soft formation insert bit (J22, 12 $\frac{1}{2}$ "). Reamed the last three joints to bottom and drilled to 2524m. Trip gas was 0-11-1 units. Maximum gas was 3 units (2522m), and the background gas was below 1 unit.

7th October 1983. Drilled ahead to 2578m, at which point the bit was pulled due to very low penetration rates - the J22 bit appeared to be unsuited to the lithology of quartzitic sandstone, chert and dolomite. (A hard formation bit is required). Flow-checks were made at 2528 and 2537 2537m (both negative). Maximum gas for the drilled interval was 18 units (from Coal and Sand at 2528m) and the B.G. was 0-1 units.

8th October 1983. RIH with a medium-hard formation bit (J44, 12 $\frac{1}{4}$ " , NB No. 7). Drilled to 2647m. A decision was made to run intermediate logs at this point, so after an 8 stand wiper trip (T.G. 1 unit) the bit was pulled. The Strzelecki Group was encountered around 2635-2640m, the sandstones giving way to interbeds of siltstone and sandstone. Flow-checks were made at 2590, 2594 and 2632m (all negative). Maximum gas in the drilled interval was 4.4 units over a B.G. of 1 unit. Schlumberger commenced logging:

DLL-MSFL-GR

9th October 1983. Schlumberger made the following logging runs:

DLL-MSFL-GR (continued)
LDT-CNL-GR
BHC-GR
HDT
RFT No. 1

2647m was finalised as T.D. for SUNFISH NO. 2.

10th October 1983. Schlumberger continued logging:

RFT No. 1 (pretests only)
RFT No. 2 (sampled at 1616.8m)
SHDT (stratigraphic dipmeter)
WST (velocity survey).

11th October 1983. Schlumberger shot sidewall cores (3 runs).
Commenced P & A program.

12th-14th October 1983. P & A program.

4. LITHOLOGY AND CORE-O-GRAPHS

LITHOLOGY SUMMARY

Gippsland Limestone

The top of the Gippsland Limestone consisted of Calcarenite; light grey in colour, firm to moderately friable, a coarse granular texture with minor clay matrix. Biogenic fragments were common including Bryozoa, Forams, Ostracods and shell fragments.

In the lower region of the Gippsland Limestone the presence of Claystone (20 - 50%) was found being light grey, very soft, very calcareous and dispersive. The Calcarenite in this region showed an increase in hardness and a development of a fine grained to crystalline structure, with biogenic fragments rarer and traces of glauconite.

Gas throughout the formation was typically 5 - 10 units of C_1 .

Lakes Entrance Formation

The Lakes Entrance formation consisted of a homogeneous Claystone/ Calcisiltite: medium grey in colour, grading soft-firm to hard with depth, very calcareous, texture varied between calcareous claystone and argillaceous calcisiltite. Traces of biogenic fragments and glauconite were found throughout.

Gas was 5 units of C_1 in the upper section of the formation (950 - 1320m). In the lower section the gas averaged 1 unit of C_1 .

Latrobe Group

The top of the Latrobe Group consisted of Sandstone, Siltstone and Coal.

The Sandstone was of two types, predominantly loose quartz grains, clear to frosty, medium to granular in size, subangular to dominantly subrounded, moderately to well sorted with traces of pyrite. Good visible porosity was inferred but no shows. The second type of Sandstone was white to light grey in colour, medium to coarse grained aggregates, subrounded, hard to brittle, well cemented with calcite and siliceous cement with very poor visible porosity and no shows. The Siltstone was brown to brown-grey, soft to firm, blocky to platy, argillaceous and carbonaceous. The Coal was black to brown-black, firm to hard, silty grading to carbonaceous Siltstone in texture.

The Coal/Carbonaceous Siltstone gave an instant blooming bright cream yellow fluorescent cut.

A gas peak of 17 units $C_1 - C_5$ was found on entering the top of the Latrobe Group. Peaks of C_1 gas (15 - 20 units) were then encountered on drilling the Coal/Siltstone beds consisting of $C_1 - C_4$. The pure Sandstone regions averaged 1 unit $C_1 - C_3$ of gas.

The lower Latrobe Group consisted of interbedded Sandstone, Siltstone, Coal and Volcanics.

The Sandstone being loose quartz, translucent to transparent, fine to very coarse grained, angular to sub-angular, moderately sorted. Traces of aggregates of fine Sandstone and pyrite were found throughout. Good visible porosity was displayed. The Siltstone was brown-grey in colour, soft to firm, blocky to sub-fissile, very argillaceous grading to shale and very carbonaceous. The Coal was black in colour, hard, angular with concoidal fracturing present. Volcanics were encountered in the lower Latrobe from 2310m. They had appeared to have undergone weathering as they were found in a clay matrix. The colours ranged from pale green to buff to red brown to grey to white. Individual grains were found to be hard and some micro-crystalline texture was observed. A minor amount of Chert was found in the lower section being grey in colour, very hard and of an angular shape.

Gas throughout the lower Latrobe was typically 2 - 5 units of $C_1 - C_3$ with C_4 present in the larger peaks associated with Coal/Siltstone⁴ beds. In the Volcanic region the gas was below 1 unit.

Shows were found to be present in the sands beneath the Volcanics at 2530m. These produced a bright cream white fluorescence with a slow diffuse cream white cut.

Strzelecki Group

The Strzelecki Group was thought to be encountered at 2635m. It consisted of Siltstone and Sandstone.

The Siltstone was light brown to light brown grey in colour, soft to firm, argillaceous in texture, with carbonaceous flecks. The Sandstone was brown to brown grey, moderately friable with fine to coarse grains, sub-angular to sub-rounded. The grains were poorly sorted in a brown silty argillaceous matrix with carbonaceous flecks present.

The gas in this region was 1 - 5 units of $C_1 - C_3$.

5. EXTENDED SERVICE PACKAGE

INTERMEDIATE EXTENDED SERVICE INTRODUCTION

The Core Laboratories Intermediate 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 I.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 I.E.S. logs include the following :

I.E.S. PRESSURE LOG

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

CORE LAB DRILL DATA PLOT

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

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

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

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

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

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

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

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

I.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.

I.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 I.E.S. drill log. Continuous observation of flowline temperature may indicate an increase in geothermal gradient. Factors affecting temperature are noted on the log, such as new bit runs, changes in the circulation rates, circulating cuttings out and the addition of water and chemicals to the active mud system. Since the goal of the end-to-end plot is to provide a representation of the geothermal gradient, all surface changes which would cause artificial changes in the flowline temperature are disregarded.

ELECTRIC LOG PLOT

A plot of shale resistivity (ohm-metres squared/metre), sonic travel time (microseconds per foot), bulk density (gm/cc) and neutron porosity (%), is 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, and R.F.T. and well test data where appropriate.

CORE LABORATORIES EQUIPMENT

Core Laboratories Field Laboratory 802 monitoring equipment includes the following :

A. MUD LOGGING

1. T.H.M. total gas detector and recorder.
2. Hot Wire total gas detector and recorder.
3. F.I.D. (Flame Ionization Detector) chromatograph and recorder.
4. Gas trap and support equipment for the above.
5. Rate of penetration, recorder and digital display.
6. Pit volume totalizer, recorder and digital display.
7. Digital depth counter.
8. Two integrated pump stroke counters, with digital display.
9. Ultra-violet fluoroscope.
10. Binocular microscope.

B. INTERMEDIATE 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 tacho-generator 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. Rotary torque sensor and recorder.
12. Shale density apparatus.
13. Hydrogen sulphide gas detector.
14. Carbon dioxide gas detector.

CORE LABORATORIES MONITORING EQUIPMENT

DEPTH

Depth registered every 0.2 metres and rate of penetration calculated each metre (or every 0.2m while coring), ROP displayed on digital panel and chart.

WEIGHT-ON-BIT

A Tyco 0-1000 psi, solid state pressure transducer is connected to the rig's deadline anchor. The weight-on-bit is calculated in the Rig Functions Panel, and displayed (with hookload) on a digital meter and recorder chart.

ROTARY SPEED

This is a DC generator for which 1 volt = 100 rpm, and which is belt-driven from the rotary drive shaft. The value is displayed on a digital meter and recorder chart.

PUMP PRESSURE

This is a Tyco 0-5000 psi transducer mounted on the stand-pipe manifold. The pressure is displayed on a digital panel meter and recorder chart.

PIT VOLUME

Six individual pits can be displayed on the meter. The pit volume total is calculated in the PVT panel and displayed on a digital meter. The sensors are vertical floats driving potentiometers accurate to +/- 1 barrel. Each sensor is equipped with a wave compensating device. 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 Pulse Data Box can monitor one or two pumps individually or integrate the total number of strokes from both pumps. The pump rate per minute is displayed on a recorder chart.

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 a digital panel meter and recorder chart.

MUD TEMPERATURE

This is a platinum probe resistance thermometer, calibrated 0-100 deg. C. Temperature in and out is displayed on a digital panel meter and chart 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.

All the sensors are 5 to 24V 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. Dry samples were washed, dried and boxed. Wet samples were washed, sacked and boxed. 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. Hot Wire gas detector (Wheatstone Bridge type).
A back-up system for total gas detection.

SHALE DENSITY

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

6. ESP PLOT DISCUSSIONS AND CONCLUSIONS

ESP PLOT DESCRIPTIONS AND CONCLUSIONS

SUNFISH NO. 2 was drilled in the Gippsland Basin, Bass Strait. Overpressure had been indicated during the drilling of SUNFISH NO. 1, well into the Strzelecki Group, and the same geopressure regime was expected for the No. 2 well. However, the equivalent depth of overpressure was not in fact encountered in SUNFISH NO. 2 due to a revision of the programmed T.D. Subsequently, the following discussion relates to supposed normal pressure zones in the well.

Core Laboratories Field Laboratory 802 continuously monitored and calculated various pressure detection parameters, the principle factors being plotted on the "Drill Data Plot" (See appended plots).

The "Drill Data Plot" shows, amongst others, the trend of the corrected 'd' exponent. This appears fairly scattered from the sea-bed down to a depth of 1270m. This pattern is typical of the poorly consolidated limestone encountered in this area, where drilling is achieved more by extrusion due to the jetting action, rather than rotation, of the bit. A normal trend is established between 1270 and 1610 metres, below which a scattered trend exists down to T.D. This scattering is generally "normal" throughout, although it is exaggerated at the top of the Latrobe (1610 - 1690m) due to a change in lithology from calcareous siltstone/claystone to sandstone.

At 1610m, there is also an increase in background gas and a drill-off trend. Although this was assumed to have been caused solely by the change in lithology, Schlumberger's RFT data indicated that the pore pressure had increased from 8.4 to 8.5 ppg in this zone, as well.

Below the volcanic section, another drill-off trend exists, (naturally enough), and it was associated with a minor increase in B.G. Without connection gas appearing however, this was thought to be caused by lithological characteristics, but RFT data again indicated an increase in pore pressure, from 8.5 ppg, gradationally up to a maximum of 8.8 ppg at 2420 metres. Below that depth the pore pressure decreases to around 8.5/8.6 ppg, and remains at that level down to T.D.

No connection gas was detected during the entire well, and trip gas peaks showed no abnormal trends; hence it was concluded that SUNFISH NO. 2 had been drilled suitably overbalanced.

A curve representing formation pressure was drawn, fashioned by the pretest data from the Repeat Formation Tests, and the curve can be seen on both the Geoplot and Pressure Plot (see the appendices at the end of this well report).

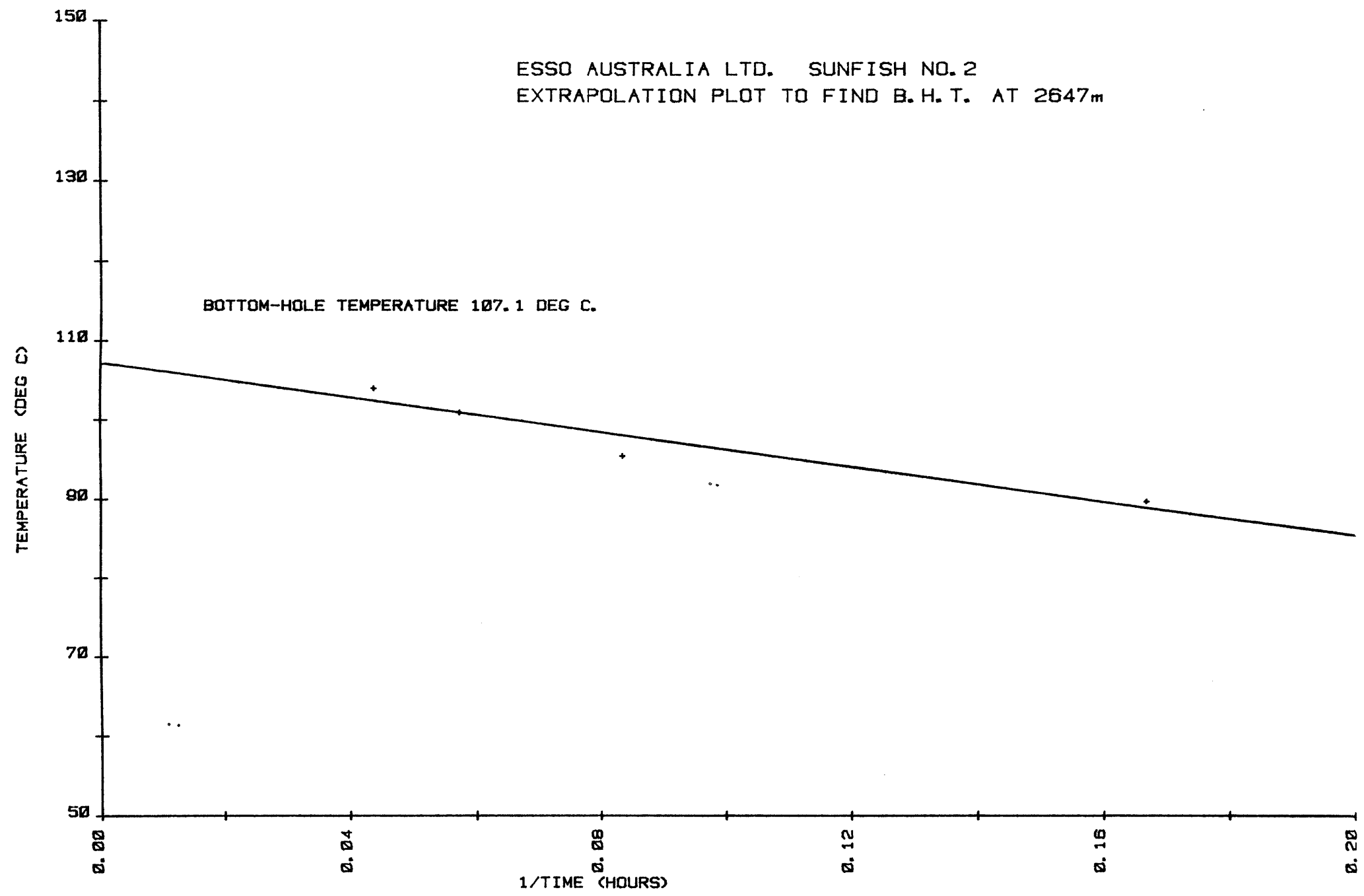
No reliable conclusions can be drawn from the Temperature Plot due to the periodic treatment of the mud system masking any temperature changes which might be attributed to geothermal trends. The thermal gradient of SUNFISH NO. 2 was calculated to be 1.25°C/feet, and the bottomhole temperature at 2647m was extrapolated to 107.1°C.

Overburden gradient calculations and a plot of the gradient are included in the report. It was not possible to derive a true fracture gradient as no L.O.T.'s were performed. One P.I.T. was made, just below the 13-3/8" casing shoe (17.3 ppg E.M.W. at 815m). Based on this information, the fracture gradient on the Pressure Plot was drawn, the shape of which in turn was based on data from wells in the U.S. Gulf Coast Basin. The curve was then offset to match local data. A true fracture gradient for the Gippsland Basin cannot be drawn until abundant leak-off data is available.

7. B.H.T. ESTIMATION



ESSO AUSTRALIA LTD. SUNFISH NO. 2
EXTRAPOLATION PLOT TO FIND B. H. T. AT 2647m



CORE LAB

STRAIGHT LINE LEAST SQUARES BEST FIT

TIME ON A LINEAR SCALE AGAINST
TEMP ON A LINEAR SCALE

ENTERED DATA:

DATA SET #	TIME	TEMP
1	0.1667	89.7
2	0.0833	95.5
3	0.0571	101.0
4	0.0435	104.0

COEFFICIENT & CONSTANT:

$Y = m.X + c$ where $m = -1.0948106E 02$ and $c = 1.0714601E 02$

INTERPOLATED DATA:

TIME	TEMP
0.0000	107.1

8. OVERBURDEN GRADIENT CALCULATIONS AND PLOT

OVERBURDEN GRADIENT CALCULATIONS

DEPTHmetres

BULK DENSITYgm/cc

OVERBURDEN PRESSURE INCREMENT. .psi

CUMULATIVE OVERBURDEN PRESSURE .psi

OVERBURDEN PRESSURE GRADIENT . .psi/ft

OVERBURDEN EQUIVALENT DENSITY. .Pounds per gallon

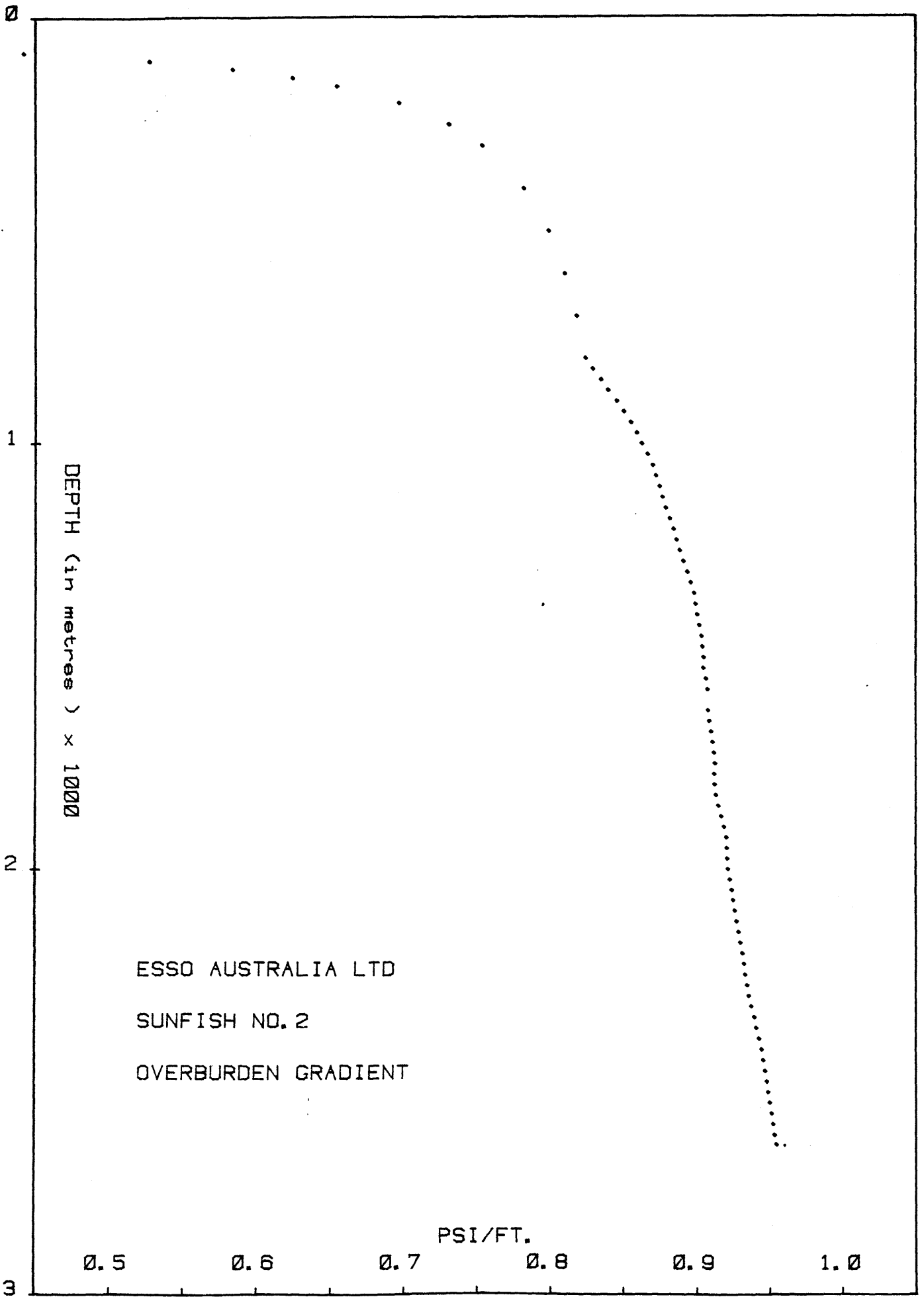
BULK DENSITY TAKEN FROM AVERAGED F.D.C. LOG, OR FROM SONIC
LOG FOR SECTIONS WHERE THE F.D.C. LOG IS NOT AVAILABLE.

OVERBURDEN GRADIENT CALCULATIONS

=====

DEPTH from	DEPTH to	AVR. BULK DENSITY	O/BURDEN INC.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
metres	metres	gm/cc	psi	psi	psi/ft	ppg
0	80	1.02	115.92	115.92	0.442	8.49
80	100	2.00	56.82	172.74	0.527	10.13
100	120	2.00	56.82	229.57	0.583	11.21
120	140	2.00	56.82	286.39	0.624	11.99
140	160	2.00	56.82	343.22	0.654	12.57
160	200	2.00	113.65	456.86	0.696	13.39
200	250	2.00	142.06	598.92	0.730	14.04
250	300	2.00	142.06	740.98	0.753	14.48
300	400	2.00	284.12	1025.10	0.781	15.02
400	500	2.00	284.12	1309.22	0.798	15.35
500	600	2.00	284.12	1593.34	0.809	15.57
600	700	2.00	284.12	1877.46	0.818	15.72
700	800	2.00	284.12	2161.58	0.824	15.84
800	825	2.27	80.62	2242.20	0.828	15.93
825	850	2.34	83.11	2325.31	0.834	16.04
850	875	2.33	82.75	2408.06	0.839	16.13
875	900	2.42	85.95	2494.00	0.845	16.24
900	925	2.38	84.53	2578.53	0.850	16.34
925	950	2.38	84.53	2663.06	0.854	16.43
950	975	2.33	82.75	2745.81	0.858	16.51
975	1000	2.32	82.39	2828.20	0.862	16.58
1000	1025	2.35	83.46	2911.66	0.866	16.65
1025	1050	2.33	82.75	2994.41	0.869	16.72
1050	1075	2.23	79.20	3073.61	0.871	16.76
1075	1100	2.25	79.91	3153.52	0.874	16.80
1100	1125	2.24	79.55	3233.07	0.876	16.85
1125	1150	2.25	79.91	3312.98	0.878	16.89
1150	1175	2.34	83.11	3396.08	0.881	16.94
1175	1200	2.31	82.04	3478.12	0.883	16.99
1200	1225	2.26	80.26	3558.39	0.885	17.03
1225	1250	2.31	82.04	3640.43	0.888	17.07
1250	1275	2.32	82.39	3722.82	0.890	17.11
1275	1300	2.36	83.82	3806.64	0.893	17.16
1300	1325	2.36	83.82	3890.45	0.895	17.21
1325	1350	2.34	83.11	3973.56	0.897	17.25
1350	1375	2.19	77.78	4051.34	0.898	17.27
1375	1400	2.24	79.55	4130.89	0.899	17.30
1400	1425	2.26	80.26	4211.15	0.901	17.32
1425	1450	2.30	81.68	4292.84	0.902	17.35
1450	1475	2.17	77.07	4369.91	0.903	17.37
1475	1500	2.18	77.42	4447.33	0.904	17.38
1500	1525	2.09	74.23	4521.55	0.904	17.38
1525	1550	2.33	82.75	4604.30	0.905	17.41
1550	1575	2.26	80.26	4684.57	0.907	17.43
1575	1600	2.04	72.45	4757.02	0.906	17.43

DEPTH from	DEPTH to	AVR. BULK DENSITY	O/BURDEN INC.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
metres	metres	gm/cc	psi	psi	psi/ft	ppg
1600	1625	2.18	77.42	4834.44	0.907	17.44
1625	1650	2.24	79.55	4914.00	0.908	17.46
1650	1675	2.27	80.62	4994.61	0.909	17.48
1675	1700	2.25	79.91	5074.52	0.910	17.50
1700	1725	2.28	80.97	5155.50	0.911	17.52
1725	1750	2.18	77.42	5232.92	0.911	17.53
1750	1775	2.05	72.81	5305.73	0.911	17.52
1775	1800	2.14	76.00	5381.73	0.911	17.53
1800	1825	2.24	79.55	5461.28	0.912	17.54
1825	1850	2.40	85.24	5546.52	0.914	17.57
1850	1875	2.45	87.01	5633.53	0.916	17.61
1875	1900	2.45	87.01	5720.54	0.918	17.65
1900	1925	2.43	86.30	5806.84	0.919	17.68
1925	1950	2.15	76.36	5883.20	0.920	17.68
1950	1975	2.20	78.13	5961.33	0.920	17.69
1975	2000	2.21	78.49	6039.82	0.920	17.70
2000	2025	2.36	83.82	6123.64	0.922	17.73
2025	2050	2.41	85.59	6209.23	0.923	17.75
2050	2075	2.30	81.68	6290.91	0.924	17.77
2075	2100	2.37	84.17	6375.08	0.925	17.79
2100	2125	2.36	83.82	6458.90	0.926	17.82
2125	2150	2.38	84.53	6543.42	0.928	17.84
2150	2175	2.41	85.59	6629.01	0.929	17.86
2175	2200	2.40	85.24	6714.25	0.930	17.89
2200	2225	2.36	83.82	6798.07	0.931	17.91
2225	2250	2.35	83.46	6881.53	0.932	17.93
2250	2275	2.42	85.95	6967.47	0.933	17.95
2275	2300	2.40	85.24	7052.71	0.935	17.97
2300	2325	2.51	89.14	7141.85	0.936	18.01
2325	2350	2.60	92.34	7234.19	0.938	18.04
2350	2375	2.50	88.79	7322.98	0.940	18.07
2375	2400	2.56	90.92	7413.90	0.942	18.11
2400	2425	2.60	92.34	7506.23	0.943	18.14
2425	2450	2.40	85.24	7591.47	0.944	18.16
2450	2475	2.44	86.66	7678.13	0.946	18.18
2475	2500	2.51	89.14	7767.27	0.947	18.21
2500	2525	2.36	83.82	7851.08	0.948	18.23
2525	2550	2.45	87.01	7938.10	0.949	18.25
2550	2575	2.50	88.79	8026.88	0.950	18.27
2575	2600	2.42	85.95	8112.83	0.951	18.29
2600	2625	2.46	87.37	8200.20	0.952	18.31
2625	2647	2.50	78.13	8278.33	0.953	18.33



9. GAS ANALYSES

10. CORELAB DATA SHEETS

COMPANY : ESSO AUSTRALIA WELL : SUNFISH NO. 2
LTD.

RUN No. : 2

PRESSURE GAUGE TYPE : HP



CHAMBER No.	1	2
CHAMBER CAPACITY (LITRES)	22.7	10.4
CHOKE SIZE (INCHES)	.030	.030
SEAT No.	2/39	2/40
DEPTH (M) (from RKB)	1616.8	1616.8
A RECORDING TIMES		
TOOL SET	09:34:45	
PRETEST OPEN	09:35:00	
TIME OPEN	01:00	
CHAMBER OPEN	09:36:10	10:00:00
CHAMBER FULL	09:46:35	
FILL TIME	10:25	
START BUILD UP	09:46:35	
FINISH BUILD UP	09:58:30	
BUILD UP TIME	11:55	
SEAL CHAMBER	09:58:30	
TOOL RETRACT		10:24:00
TOTAL TIME	23:45	24:00
B SAMPLE PRESSURES		
IHP (PSIG)	2641	
ISIP (PSIA)	2320.4	2320.0
IFP (PSIA)	403.9	
FFP (PSIA)	1324.3	
FSIP (PSIA)	2316.2	
FHP ()		2642.0
TEMP. CORR. ()		
COMMENTS		
C TEMPERATURE		
DEPTH TOOL REACHED(M)	1650	
MAX. REC. TEMP. (°F)	174	
TIME CIRC. STOPPED	17:20:8/10/83	
TIME SINCE CIRC.	39:10	
D SAMPLE RECOVERY		
SURFACE PRESSURE(PSIG)	1180	
VOL. GAS (CUFT)	40.45	
VOL. OIL (LIT.)	10.25	
VOL. WATER (LIT.)	4.75	
VOL. FILTRATE ()		
VOL. CONDENSATE ()		
VOL. OTHER EMULS (LIT.)	0.50	
E SAMPLE PROPERTIES		
(a) G	c1 (PPM)	131834
A	c2 (PPM)	105553
S	c3 (PPM)	3317
	c4 (PPM)	923
C	c5 (PPM)	234
O	c6+ (PPM)	261+
M	CO ₂ (%)	0.8
P	H ₂ S (PPM)	0
(b) OIL PROPERTIES		
DENSITY: (API)	HYDROMETER	48.5
	REFRACTOMETER	
REFRACTIVE INDEX		
COLOUR		GREEN-BLK
FLUORESCENCE		CRM TO BL-WH
G.O.R. (SCF/STB)		628.9
OIL PROPERTIES CONT.		
ODOUR		
POUR POINT (°)		
COMMENTS		
(c) WATER PROPERTIES		
RESISTIVITY ()		
Cl (frm. resis.) ()		
Cl (frm. titrat) (PPM)	18,000	
NO ₃ (PPM)	110	
pH	7	
OTHER TRACERS ()		
DENSITY ()		
FLUORESCENCE		
COLOUR		
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		
F MUD PROPERTIES		
TYPE		SEAWATER GEJ.
RESISTIVITY (M)		.226 @ 17.8°C
Cl (frm. resis.) (PPM)		29,000
Cl (frm. titrat) ()		
NO ₃ Drld/1st. circ ()		
pH		
OTHER TRACERS ()		
DENSITY (PPG)		9.4
G GENERAL COMMENTS		
CHAMBER 1 HAD A SLOW LEAK ON THE PACKER.		
CHAMBER 2 - THE MARTINEAU PROBE USED WOULD NOT OPEN.		

PORE PRESSURE DATA SHEET

COMPANY : ESSO AUSTRALIA LTD

DATA FROM RFT'S

WELL : SUNFISH NO.2

DEPTH (FROM RKB)	DEPTH (FROM MSL)	PORE PRESS	PORE PRESS GRADIENT E.M.W. (MSL)	PORE PRESS GRADIENT
METRES	TVD. METRES	PSIA	PPG	PSI/M
2632.5	2610.8	3848.50	8.640	1.474
2605.5	2583.8	3748.00	8.503	1.451
2596.3	2574.6	3736.80	8.508	1.451
2588.8	2567.1	3725.80	8.507	1.451
2559.5	2537.8	3685.90	8.513	1.452
2527.0	2505.4	3647.60	8.534	1.456
2532.2	2510.6	3647.90	8.517	1.453
2495.0	2473.4	3641.20	8.629	1.472
2449.0	2427.4	3639.80	8.789	1.499
2440.0	2418.5	3627.50	8.792	1.500
2427.0	2405.5	3609.30	8.795	1.500
2281.0	2259.6	3292.00	8.540	1.457
2236.5	2215.1	3223.80	8.531	1.455
2198.0	2176.7	3158.70	8.506	1.451
2188.0	2166.7	3146.00	8.511	1.452
2130.0	2108.7	3064.90	8.520	1.453
2119.0	2097.7	3049.40	8.521	1.454
2070.5	2049.3	2975.40	8.511	1.452
2041.5	2020.3	2931.00	8.504	1.451
2007.0	1985.8	2885.20	8.516	1.453
1973.0	1951.8	2835.80	8.516	1.453
1907.5	1886.4	2746.60	8.535	1.456
1875.0	1853.9	2674.00	8.455	1.442
1804.0	1782.9	2583.90	8.495	1.449
1744.5	1723.4	2498.90	8.499	1.450
1717.0	1695.9	2459.80	8.502	1.450
1685.0	1663.9	2414.40	8.505	1.451
1630.0	1608.9	2336.20	8.511	1.452
1617.0	1595.9	2318.70	8.516	1.453
1616.8	1595.7	2320.40	8.524	1.454

BIT RECORD

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



COMPANY ESSO AUSTRALIA LTD.
 WELL SUNFISH NO. 2

BIT RECORD

Sheet No. 1

S/NO

	Bit No.	Make	Type	IADC Code	Size"	Jets	Depth In	Hole Made	Drilling Time	On Bottom Hours	TurnsK	Condition T B G	Remarks
042 XR	RR 1	HTC	OSC 3AJ +26" H/O	111	26	18/18/18	80	138	3-3/4	1.48	8.5	2-3-I	PULLED TO RUN 20" CASING.
040 XR	1	HTC	OSC 3AJ	111	17 1/2	18/18/18	218	591.2	15 1/2	8.95	80.6	2-2-I	PULLED TO SET 13-3/8" CASING.
485 LS	2	HTC	J1	116	12 1/4	18/18/18	809.2	801.9	34 1/4	25.03	158.2	3-4-1/8	PULLED DUE TO LOW ROP'S.
141 WK	3	HTC	J22	517	12 1/4	18/18/16	1611.1	388.9	36-3/4	23.29	101.9	3-4-I	PULLED DUE TO LOW ROP'S.
152 WK	4	HTC	J22	517	12 1/4	18/16/16	2000	335	44	34.26	123.4	8-6-1/8	PULLED DUE TO LOW ROP'S.
762 RL	5	HTC	J33	537	12 1/4	16/16/18	2335	170	38 1/4	27.93	94.4	4-6-1/8	PULLED DUE TO LOW ROP'S.
187 HK	6	HTC	J22	517	12 1/4	16/16/18	2504	74	27 1/4	23.25	73.6	8-4-I	PULLED DUE TO VERY LOW ROP'S.
069 NK	7	HTC	J44	617	12 1/4	16/16/16	2578	69	10	8.13	26.6	1-1-1/8	PULLED TO RUN INTERMEDIATE
													LOGS.



COMPANY ESSO AUSTRALIA LTD.
 WELL SUNFISH NO. 2

BIT RECORD

Sheet No. 1

S/NO.
 042 XR
 040 XR
 485 LS
 141 WK
 152 WK
 762 RL
 187 HK
 069 NK

Bit No.	Make	Type	IADC Code	Size "	Cost	Jets	Depth In	Depth Out	Hole Made	Drilling Time	On Bottom Hours	Turns	Average ROP	Average Cost/	Condition T B G
RR 1	HTC	OSC 3AJ +26"H/O	111	26	-	18/18/18	80	218	138	3-3/4	1.48	8.5	93.2	119.24	2-3-0
1	HTC	OSC 3AJ	111	17½	4857	18/18/18	218	809.2	591.2	15½	8.95	80.6	66.1	86.36	2-2-0
2	HTC	J1	116	12¼	2694	18/18/18	809.2	1611.1	801.9	34¼	25.03	158.2	32.0	142.36	3-4-1/8
3	HTC	J22	517	12¼	8516	18/18/16	1611.1	2000.0	388.9	36-3/4	23.29	101.9	16.7	298.83	3-4-I
4	HTC	J22	517	12¼	8516	16/16/18	2000.0	2335	335	44	34.26	123.4	9.8	475.22	8-6-1/8
5	HTC	J33	537	12¼	7774	16/16/18	2335	2504	169	38¼	27.93	94.4	6.1	807.30	4-6-1/8
6	HTC	J22	517	12¼	8516	16/16/18	2504	2578	74	27¼	23.25	73.6	3.2	1632.64	8-4-I
7	HTC	J44	617	12¼	6844	16/16/16	2578	2647	69	10	8.13	26.6	8.5	931.48	1-1-1/8

MUD INFORMATION SHEETS

DEPTH Metres

MUD WEIGHT Pounds per gallon

FUNNEL VISCOSITY A.P.I.seconds

PLASTIC VISCOSITY. . . . Centipoise

YIELD POINT. Pounds/100 square feet

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

FILTRATE A.P.I. c.c.

CAKE THICKNESS Thirty-seconds of an inch

SALINITY : Ca/Cl ppm

SOLIDS/SAND/OIL. . . . Percentage



MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
 WELL SUNFISH NO. 2

Sheet No. 1

DEPTH		730	1186	1581	1850	1985	2165
DATE	23/09/83	26/09/83	28/09/83	29/09/83	30/09/83	1/10/83	2/10/83
TIME		18:00	22:00	11:30	23:00	11:00	22:00
WEIGHT		8.9	8.8	9.3	9.4	9.5	9.4
FUNNEL VISCOSITY	S	34	36	36	51	52	47
PV/YP	E	3/15	5/21	7/18	5/23	4/20	13/22
N/K		.22/4.5	.25/5.35	.36/2.72	.24/6.39	.22/6.0	.46/2.04
GEL: INITIAL/10 MIN	A	2/5	7/12	9/21	1/12	9/13	12/28
pH	W	9.5	10.7	10.6	10.0	10.5	10.2
FILTRATE: API/API HTHP	A			10.2/24.1	11.3/-	7.8/18.8	7.2/17.4
CAKE				2	2	1	1
SALINITY	T	20,000	18,000	18,000	19,500	19,000	22,000
SAND	E	TR	TR	TR	0.25	TR	TR
SOLIDS	R	3	2	5	5	7.5	6.5
OIL		-	-	-	0	0	0
NITRATES (PPM)				100	200	240	200

REMARKS:

SPUDED DRILLED
 IN 17½"
 HOLE DRILLED 12½" HOLE

DEPTH	2328	2393	2501	2521	2535	2580	2647
DATE	3/10/83	4/10/83	5/10/83	6/10/83	7/10/83	8/10/83	9/10/83
TIME	22:00	22:00	22:00	22:00	04:00	04:00	22:30
WEIGHT	9.5	9.5	9.4	9.4	9.4	9.4+	9.4
FUNNEL VISCOSITY	58	50	62	50	48	53	56
PV/YP	12/31	11/25	12/34	11/23	12/18	11/22	10/20
N/K	.35/4.70	.38/3.27	.33/5.72	.40/2.73	.49/1.46	.41/2.48	.41/2.26
GEL: INITIAL/10 MIN	16/44	13/36	20/40	12/29	10/26	13/29	15/34
pH	10.2	10.3	10.6	10.3	10.3	10.5	10.1
FILTRATE: API/API HTHP	7.6/18.8	7.6/19.2	6.6/18.0	7.4/19.8	8.0/20.4	8.2/20.8	8.6/21.6
CAKE	1	1	1	1	1	1	1
SALINITY	20,000	20,000	20,000	20,000	20,000	21,000	21,000
SAND	TR	TR	TR	½	½	TR	TR
SOLIDS	7.5	7	8	8	8	8	8
OIL	0	0	0	0	0	0	0
NITRATES	200	200	200	200	200	200	200

REMARKS:

DRILLED 12½" HOLE

RAN
LOGS
AT
T.D.



MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL SUNFISH NO. 2

Sheet No. 2

DEPTH	2647	2647					
DATE	10/10/83	11/10/83					
TIME	15:00	23:00					
WEIGHT	9.4	9.4+					
FUNNEL VISCOSITY	58	48					
PV/YP	11/20	11/19					
N/K	.44/2.02	.45/1.81					
GEL: INITIAL/10 MIN	16/35	16/32					
pH	10.1	10.3					
FILTRATE: API/API HTHP	8.8/22.0	9.2/23.4					
CAKE	1	1					
SALINITY	21,000	21,000					
SAND	TR	TR					
SOLIDS	8	8					
OIL	0	0					
NITRATES	200	200					

REMARKS:

LOGGING P & A

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

REMARKS:

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, the 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: SUNFISH No.2

BIT RECORD

BIT IADC		SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP		CCOST	TOTAL TURNS	CONDITION T B G
No.	CODE MAKE & TYPE								AROP	TIME			
1	111 HTC OSC3AJ&26"HD	26.000	0.00	18 18 18	80.0	218.0	138.0	1.48	93.2	2.4	119.24	8533	2 3 0.000
1	111 HTC OSC3AJ	17.500	4857.00	18 18 18	218.0	809.2	591.2	8.95	66.1	3.7	86.36	80581	2 2 0.000
2	116 HTC J1	12.250	2694.00	18 18 18	809.2	1611.1	801.9	25.03	32.0	5.5	142.40	158183	3 4 0.125
3	517 HTC J22	12.250	8516.00	18 18 16	1611.1	2000.0	388.9	23.29	16.7	6.2	298.83	101926	3 4 0.000
4	517 HTC J22	12.250	8516.00	18 16 16	2000.0	2335.0	335.0	34.26	9.8	7.0	475.22	123394	8 6 0.125
5	537 HTC J33	12.250	7774.00	18 16 16	2335.0	2504.0	169.0	27.93	6.1	7.3	807.30	94416	4 6 0.125

WELL: SUNFISH NO.2

BIT RECORD

BIT IADC		SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP		CCOST	TOTAL TURNS	CONDITION T B G
No.	CODE MAKE & TYPE								AROP	TIME			
6	517 HTC J22	12.250	8516.00	16 16 18	2504.0	2578.0	74.0	23.25	3.2	7.5	1632.64	73623	8 4 0.000
7	617 HTC J44	12.250	6844.00	16 16 16	2578.0	2647.0	69.0	8.13	8.5	7.6	931.48	26613	1 1 0.125

BIT NUMBER: 1				IADC CODE 111				HTC OSC3AJ&26"HO			
STARTING DEPTH.....	80.0										
BIT COST, RIG COST/HOUR.....	0.00	4241.00									
TRIP TIME.....	2.4										
BIT DIAMETER.....	26.000										
NOZZLES.....	18	18							18		
HW DRILL COLLAR LENGTH, OD, ID....	22.59	9.750							3.062		
DRILL COLLAR LENGTH, OD, ID.....	39.77	8.000							2.813		
HW DRILL PIPE LENGTH, OD, ID.....	111.02	5.000							3.125		
DRILL PIPE OD, ID.....		5.000							4.276		
CASING DEPTH, ID.....	0.00	0.000									
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.....	0.43										
"d" EXPONENT CORRECTION FACTOR....	10.0										
CUTTINGS DIAMETER, DENSITY.....	4.0	2.00									
FINISHING DEPTH.....	218.0										
CUMULATIVE HOURS, TURNS.....	1.48	8533									
BIT CONDITION OUT.....	T 2	B 3							G 0.000		

BIT NUMBER: 1				IADC CODE 111				HTC OSC3AJ			
STARTING DEPTH.....	218.0										
BIT COST, RIG COST/HOUR.....	4857.00	3652.00									
TRIP TIME.....	3.7										
BIT DIAMETER.....	17.500										
NOZZLES.....	18	18							18		
DRILL COLLAR LENGTH, OD, ID.....	113.60	8.000							2.813		
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000							3.125		
DRILL PIPE OD, ID.....		5.000							4.276		
CASING DEPTH, ID.....	201.32	19.124									
RISER LENGTH, ID.....	80.00	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.....	0.43										
"d" EXPONENT CORRECTION FACTOR....	10.0										
CUTTINGS DIAMETER, DENSITY.....	4.0	2.00									
FINISHING DEPTH.....	809.2										
CUMULATIVE HOURS, TURNS.....	8.95	80581									
BIT CONDITION OUT.....	T 2	B 2							G 0.000		

BIT NUMBER: 2 IADC CODE 116 HTC J1

STARTING DEPTH.....	809.2		
BIT COST, RIG COST/HOUR.....	2694.00	3652.00	
TRIP TIME.....	5.5		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	168.22	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	794.00	12.615	
RISER LENGTH, ID.....	80.00	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.....	0.43		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.20	
FINISHING DEPTH.....	1611.1		
CUMULATIVE HOURS, TURNS.....	25.03	158183	
BIT CONDITION OUT.....	T 3	B 4	G 0.125

BIT NUMBER: 3 IADC CODE 517 HTC J22

STARTING DEPTH.....	1611.1		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	6.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	16
DRILL COLLAR LENGTH, OD, ID.....	174.85	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	794.00	12.615	
RISER LENGTH, ID.....	80.00	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.....	0.45		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	2000.0		
CUMULATIVE HOURS, TURNS.....	23.29	101926	
BIT CONDITION OUT.....	T 3	B 4	G 0.000

BIT NUMBER: 4 IADC CODE 517 HTC J22

STARTING DEPTH.....	2000.0		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	7.0		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	16	16
DRILL COLLAR LENGTH, OD, ID.....	174.85	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	794.00	12.615	
RISER LENGTH, ID.....	80.00	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.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	2335.0		
CUMULATIVE HOURS, TURNS.....	34.26	123394	
BIT CONDITION OUT.....	T 8	B 6	G 0.125

:

BIT NUMBER: 5 IADC CODE 537 HTC J33

STARTING DEPTH.....	2335.0		
BIT COST, RIG COST/HOUR.....	7774.00	3652.00	
TRIP TIME.....	7.3		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	16	16
DRILL COLLAR LENGTH, OD, ID.....	175.00	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	794.00	12.615	
RISER LENGTH, ID.....	80.00	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.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	2504.0		
CUMULATIVE HOURS, TURNS.....	27.93	94416	
BIT CONDITION OUT.....	T 4	B 6	G 0.125

:

BIT NUMBER: 6 IADC CODE 517 HTC J22

STARTING DEPTH.....	2504.0		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	7.5		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	18
DRILL COLLAR LENGTH, OD, ID.....	174.85	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	794.00	12.615	
RISER LENGTH, ID.....	80.00	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.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	2578.0		
CUMULATIVE HOURS, TURNS.....	23.25	73623	
BIT CONDITION OUT.....	T 8	B 4	G 0.000

BIT NUMBER: 7 IADC CODE 617 HTC J44

STARTING DEPTH.....	2578.0		
BIT COST, RIG COST/HOUR.....	6844.00	3652.00	
TRIP TIME.....	7.6		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	175.52	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.09	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	794.00	12.615	
RISER LENGTH, ID.....	80.00	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.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	2647.0		
CUMULATIVE HOURS, TURNS.....	8.13	26613	
BIT CONDITION OUT.....	T 1	B 1	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

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 100.0 AND TVD 100.0

SPM 1 94 SPM 2 97 FLOW RATE 955

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	1.851	42	12	0	TURBULENT			0.0
DC/OH	1.950	78	12	0	TURBULENT			0.0
HWDP/OH	2.074	78	11	0	TURBULENT			0.0
TOTAL VOLUME		197			TOTAL PRESSURE DROP			0.0

LAG: 8.7 MINUTES 815 STROKES #1 AND 844 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1300.7	HHP	725	IMPACT FORCE	1749
% SURFACE PRESSURE	109.7	HHP/sqin	1.37	JET VELOCITY	125

PRESSURE BREAKDOWN:

SURFACE	53.0		
STRING	176.9		
BIT	1300.7		
ANNULUS	0.0		
TOTAL	1530.7	PUMP PRESSURE	1185.9
		% DIFFERENCE	29.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 146.7
CIRCULATING:	ECD 8.60	CIRCULATING PRESSURE 146.7
PULLING OUT:	TRIP MARGIN 0.00	ESTIMATED SWAB 0.0
	EFFECTIVE MUD WEIGHT 8.60	BOTTOM HOLE PRESSURE 146.7

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 200.0 AND TVD 200.0

SPM 1 96 SPM 2 99 FLOW RATE 975

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	1.951	42	13	0	TURBULENT			0.0
DC/OH	1.950	78	12	0	TURBULENT			0.0
HWDP/OH	2.074	230	11	0	TURBULENT			0.0
DP/OH	2.074	55	11	0	TURBULENT			0.0
TOTAL VOLUME		405			TOTAL PRESSURE DROP			0.0

LAG: 17.4 MINUTES 1670 STROKES #1 AND 1731 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1355.1 HHP 771 IMPACT FORCE 1822
 % SURFACE PRESSURE 102.9 HHP/sqin 1.45 JET VELOCITY 128

PRESSURE BREAKDOWN:

SURFACE 55.0
 STRING 296.9
 BIT 1355.1
 ANNULUS 0.0
 TOTAL 1707.0 PUMP PRESSURE 1316.7 % DIFFERENCE 29.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 293.4
CIRCULATING:	ECD 8.60	CIRCULATING PRESSURE 293.5
PULLING OUT:	TRIP MARGIN 0.00	ESTIMATED SWAB 0.0
	EFFECTIVE MUD WEIGHT 8.60	BOTTOM HOLE PRESSURE 293.4

CORE LAB
 =====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 107 SPM 2 102 FLOW RATE 1046

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.772	76	32	85	LAMINAR	1	32	0.6
DC/CSG	0.961	14	26	85	LAMINAR	0	25	0.1
HWD/CSG	1.085	115	23	84	LAMINAR	0	23	0.4
HWD/RIS	1.325	6	19	83	LAMINAR	0	19	0.0
DP/RIS	1.325	100	19	83	LAMINAR	0	19	0.2
TOTAL VOLUME		312			TOTAL PRESSURE DROP		1.3	

LAG: 12.5 MINUTES 1340 STROKES #1 AND 1282 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1559.6 HHP 952 IMPACT FORCE 2097
 % SURFACE PRESSURE 55.0 HHP/sqin 3.96 JET VELOCITY 137

PRESSURE BREAKDOWN:

SURFACE 71.8
 STRING 588.8
 BIT 1559.6
 ANNULUS 1.3
 TOTAL 2221.4 PUMP PRESSURE 2835.4 % DIFFERENCE 21.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	8.60	HYDROSTATIC PRESSURE 440.2
CIRCULATING: ECD	8.63	CIRCULATING PRESSURE 441.4
PULLING OUT: TRIP MARGIN	0.05	ESTIMATED SWAB 2.6
EFFECTIVE MUD WEIGHT	8.55	BOTTOM HOLE PRESSURE 437.6

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 109 SPM 2 103 FLOW RATE 1058

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.772	88	33	85	LAMINAR	1	32	0.7
HWDP/OH	0.896	76	28	84	LAMINAR	0	28	0.4
HWDP/CSG	1.085	28	23	84	LAMINAR	0	23	0.1
DP/CSG	1.085	103	23	84	LAMINAR	0	23	0.3
DP/RIS	1.325	106	19	83	LAMINAR	0	19	0.2
TOTAL VOLUME		402			TOTAL PRESSURE DROP			1.7

LAG: 15.9 MINUTES 1737 STROKES #1 AND 1637 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1595.7	HHP	985	IMPACT FORCE	2146
% SURFACE PRESSURE	54.3	HHP/sqin	4.10	JET VELOCITY	138

PRESSURE BREAKDOWN:

SURFACE	73.2		
STRING	643.3		
BIT	1595.7		
ANNULUS	1.7		
TOTAL	2314.0	PUMP PRESSURE	2940.0
		% DIFFERENCE	21.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 586.9
CIRCULATING:	ECD 8.63	CIRCULATING PRESSURE 588.6
PULLING OUT:	TRIP MARGIN 0.05	ESTIMATED SWAB 3.5
	EFFECTIVE MUD WEIGHT 8.55	BOTTOM HOLE PRESSURE 583.4

CORE LAB
=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 113 SPM 2 107 FLOW RATE 1101

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP	
DC/OH	0.772	88	34	85	LAMINAR	1	33	0.7	
HWDP/OH	0.896	100	29	84	LAMINAR	0	29	0.5	
DP/OH	0.896	66	29	84	LAMINAR	0	29	0.3	
DP/CSG	1.085	132	24	84	LAMINAR	0	24	0.4	
DP/RIS	1.325	106	20	83	LAMINAR	0	20	0.2	
TOTAL VOLUME		491	TOTAL PRESSURE DROP				2.2		

LAG: 18.7 MINUTES 2115 STROKES #1 AND 2013 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1728.4	HHP	1111	IMPACT FORCE	2324
% SURFACE PRESSURE	56.8	HHP/sqin	4.62	JET VELOCITY	144

PRESSURE BREAKDOWN:

SURFACE	78.7		
STRING	736.6		
BIT	1728.4		
ANNULUS	2.2		
TOTAL	2545.9	PUMP PRESSURE	3041.6
		% DIFFERENCE	16.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 733.6
CIRCULATING:	ECD 8.63	CIRCULATING PRESSURE 735.8
PULLING OUT:	TRIP MARGIN 0.05	ESTIMATED SWAB 4.4
	EFFECTIVE MUD WEIGHT 8.55	BOTTOM HOLE PRESSURE 729.2

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 104 SPM 2 102 FLOW RATE 1032

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.772	88	32	85	LAMINAR	1	31	0.7
HWDP/OH	0.896	100	27	84	LAMINAR	0	27	0.5
DP/OH	0.896	156	27	84	LAMINAR	0	27	0.7
DP/CSG	1.085	132	23	84	LAMINAR	0	22	0.4
DP/RIS	1.325	106	19	83	LAMINAR	0	18	0.2
TOTAL VOLUME		581			TOTAL PRESSURE DROP		2.6	

LAG: 23.6 MINUTES 2465 STROKES #1 AND 2416 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1516.5 HHP 913 IMPACT FORCE 2039
 % SURFACE PRESSURE 54.8 HHP/sqin 3.79 JET VELOCITY 135

PRESSURE BREAKDOWN:

SURFACE 70.0
 STRING 695.1
 BIT 1516.5
 ANNULUS 2.6
 TOTAL 2284.2 PUMP PRESSURE 2766.7 % DIFFERENCE 17.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 880.3
CIRCULATING:	ECD 8.63	CIRCULATING PRESSURE 882.9
PULLING OUT:	TRIP MARGIN 0.05	ESTIMATED SWAB 5.2
	EFFECTIVE MUD WEIGHT 8.55	BOTTOM HOLE PRESSURE 875.2

CORE LAB
 =====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 104 SPM 2 107 FLOW RATE 1056

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL / UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.772	88	33	84	LAMINAR	1	32	0.7
HWDP/OH	0.896	100	28	83	LAMINAR	0	28	0.5
DP/OH	0.896	245	28	83	LAMINAR	0	28	1.2
DP/CSG	1.085	132	23	83	LAMINAR	0	23	0.4
DP/RIS	1.325	106	19	82	LAMINAR	0	19	0.2
TOTAL VOLUME		670			TOTAL PRESSURE DROP			3.0

LAG: 26.7 MINUTES 2776 STROKES #1 AND 2857 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1625.3 HHP 1001 IMPACT FORCE 2186
 % SURFACE PRESSURE 54.3 HHP/sqin 4.16 JET VELOCITY 138

PRESSURE BREAKDOWN:

SURFACE 74.3
 STRING 781.0
 BIT 1625.3
 ANNULUS 3.0
 TOTAL 2483.6 PUMP PRESSURE 2995.6 % DIFFERENCE 17.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.80	HYDROSTATIC PRESSURE 1050.9
CIRCULATING:	ECD 8.83	CIRCULATING PRESSURE 1053.9
PULLING OUT:	TRIP MARGIN 0.05	ESTIMATED SWAB 6.0
	EFFECTIVE MUD WEIGHT 8.75	BOTTOM HOLE PRESSURE 1044.9

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 101 SPM 2 100 FLOW RATE 1008

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.772	88	31	131	LAMINAR	0	31	1.7
HWDP/OH	0.896	100	27	130	LAMINAR	0	27	1.1
DP/OH	0.896	335	27	130	LAMINAR	0	27	3.8
DP/CSG	1.085	132	22	130	LAMINAR	0	22	1.0
DP/RIS	1.325	106	18	130	LAMINAR	0	18	0.5
TOTAL VOLUME		760	TOTAL PRESSURE DROP			8.1		

LAG: 31.7 MINUTES 3208 STROKES #1 AND 3179 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1483.0 HHP 873 IMPACT FORCE 1994
 % SURFACE PRESSURE 51.1 HHP/sqin 3.63 JET VELOCITY 132

PRESSURE BREAKDOWN:

SURFACE 78.6
 STRING 871.4
 BIT 1483.0
 ANNULUS 8.1
 TOTAL 2441.0 PUMP PRESSURE 2904.6 % DIFFERENCE 16.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.80	HYDROSTATIC PRESSURE 1201.0
CIRCULATING:	ECD 8.86	CIRCULATING PRESSURE 1209.1
PULLING OUT:	TRIP MARGIN 0.12	ESTIMATED SWAB 16.2
	EFFECTIVE MUD WEIGHT 8.68	BOTTOM HOLE PRESSURE 1184.9

CORE LAB
 =====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 96 SPM 2 97 FLOW RATE 964

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	29	84	90	LAMINAR	1	82	2.9
DC/CSG	0.303	19	76	89	LAMINAR	1	75	1.5
HWDP/CSG	0.427	47	54	83	LAMINAR	1	53	1.1
DP/CSG	0.427	231	54	83	LAMINAR	1	53	5.4
DP/RIS	1.325	106	17	74	LAMINAR	0	17	0.2
TOTAL VOLUME		432			TOTAL PRESSURE DROP		11.1	

LAG: 18.8 MINUTES 1800 STROKES #1 AND 1834 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1324.9 HHP 745 IMPACT FORCE 1782
 % SURFACE PRESSURE 44.2 HHP/sqin 6.32 JET VELOCITY 126

PRESSURE BREAKDOWN:

SURFACE 74.4
 STRING 1019.5
 BIT 1324.9
 ANNULUS 11.1
 TOTAL 2429.9 PUMP PRESSURE 2998.1 % DIFFERENCE 19.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.60	HYDROSTATIC PRESSURE 1320.4
CIRCULATING:	ECD 8.67	CIRCULATING PRESSURE 1331.6
PULLING OUT:	TRIP MARGIN 0.15	ESTIMATED SWAB 22.3
	EFFECTIVE MUD WEIGHT 8.45	BOTTOM HOLE PRESSURE 1298.2

CORE LAB
=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 96 SPM 2 96 FLOW RATE 956

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	83	89	LAMINAR	1	82	4.6
HWDP/OH	0.398	15	57	82	LAMINAR	1	57	0.4
HWDP/CSG	0.427	31	53	81	LAMINAR	1	53	0.7
DP/CSG	0.427	274	53	81	LAMINAR	1	53	6.4
DP/RIS	1.325	106	17	72	LAMINAR	0	17	0.2
TOTAL VOLUME		472	TOTAL PRESSURE DROP					12.4

LAG: 20.7 MINUTES 1981 STROKES #1 AND 1987 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1348.2 HHP 752 IMPACT FORCE 1813
% SURFACE PRESSURE 45.9 HHP/sqin 6.38 JET VELOCITY 125

PRESSURE BREAKDOWN:

SURFACE 75.3
STRING 1075.5
BIT 1348.2
ANNULUS 12.4
TOTAL 2511.5 PUMP PRESSURE 2940.4 % DIFFERENCE 14.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.90	HYDROSTATIC PRESSURE 1518.3
CIRCULATING:	ECD 8.97	CIRCULATING PRESSURE 1530.7
PULLING OUT:	TRIP MARGIN 0.15	ESTIMATED SWAB 24.8
	EFFECTIVE MUD WEIGHT 8.75	BOTTOM HOLE PRESSURE 1493.5

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 93 SPM 2 95 FLOW RATE 939

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	82	79	TURBULENT			3.8
HWDP/OH	0.398	44	56	73	LAMINAR	1	55	1.0
DP/OH	0.398	11	56	73	LAMINAR	1	55	0.2
DP/CSG	0.427	305	52	72	LAMINAR	1	52	5.7
DP/RIS	1.325	106	17	64	LAMINAR	0	17	0.1
TOTAL VOLUME		512			TOTAL PRESSURE DROP		10.9	

LAG: 22.9 MINUTES 2127 STROKES #1 AND 2177 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1272.0 HHP 697 IMPACT FORCE 1710
 % SURFACE PRESSURE 42.7 HHP/sqin 5.91 JET VELOCITY 123

PRESSURE BREAKDOWN:

SURFACE 68.5
 STRING 1017.8
 BIT 1272.0
 ANNULUS 10.9
 TOTAL 2369.2 PUMP PRESSURE 2976.3 % DIFFERENCE 20.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.70	HYDROSTATIC PRESSURE 1632.6
CIRCULATING:	ECD 8.76	CIRCULATING PRESSURE 1643.5
PULLING OUT:	TRIP MARGIN 0.12	ESTIMATED SWAB 21.8
	EFFECTIVE MUD WEIGHT 8.58	BOTTOM HOLE PRESSURE 1610.8

CORE LAB
 =====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1199.9

SPM 1 92 SPM 2 89 FLOW RATE 908

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	79	79	LAMINAR	2	77	3.6
HWDP/OH	0.398	44	54	73	LAMINAR	1	54	1.0
DP/OH	0.398	50	54	73	LAMINAR	1	54	1.1
DP/CSG	0.427	305	51	72	LAMINAR	1	50	5.6
DP/RIS	1.325	106	16	64	LAMINAR	0	16	0.1
TOTAL VOLUME		552			TOTAL PRESSURE DROP		11.4	

LAG: 25.5 MINUTES 2357 STROKES #1 AND 2281 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1188.6 HHP 630 IMPACT FORCE 1598
 % SURFACE PRESSURE 40.1 HHP/sqin 5.34 JET VELOCITY 119

PRESSURE BREAKDOWN:

SURFACE 64.5
 STRING 994.7
 BIT 1188.6
 ANNULUS 11.4
 TOTAL 2259.2 PUMP PRESSURE 2961.6 % DIFFERENCE 23.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.70	HYDROSTATIC PRESSURE 1781.0
CIRCULATING:	ECD 8.76	CIRCULATING PRESSURE 1792.4
PULLING OUT:	TRIP MARGIN 0.11	ESTIMATED SWAB 22.9
	EFFECTIVE MUD WEIGHT 8.59	BOTTOM HOLE PRESSURE 1758.1

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1299.9

SPM 1 92 SPM 2 89 FLOW RATE 909

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	79	144	LAMINAR	1	78	9.7
HWDP/OH	0.398	44	54	142	LAMINAR	0	54	3.0
DP/OH	0.398	90	54	142	LAMINAR	0	54	6.1
DP/CSG	0.427	305	51	142	LAMINAR	0	50	17.8
DP/RIS	1.325	106	16	138	LAMINAR	0	16	0.6
TOTAL VOLUME		592			TOTAL PRESSURE DROP		37.2	

LAG: 27.4 MINUTES 2530 STROKES #1 AND 2444 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1204.0 HHP 638 IMPACT FORCE 1619
 % SURFACE PRESSURE 39.5 HHP/sqin 5.42 JET VELOCITY 119

PRESSURE BREAKDOWN:

SURFACE 68.1
 STRING 1090.3
 BIT 1204.0
 ANNULUS 37.2
 TOTAL 2399.7 PUMP PRESSURE 3049.1 % DIFFERENCE 21.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.80	HYDROSTATIC PRESSURE 1951.6
CIRCULATING:	ECD 8.97	CIRCULATING PRESSURE 1988.8
PULLING OUT:	TRIP MARGIN 0.34	ESTIMATED SWAB 74.5
	EFFECTIVE MUD WEIGHT 8.46	BOTTOM HOLE PRESSURE 1877.1

CORE LAB
=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1399.9

SPM 1 88 SPM 2 88 FLOW RATE 878

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	76	144	LAMINAR	1	76	9.7
HWDP/OH	0.398	44	52	141	LAMINAR	0	52	3.0
DP/OH	0.398	130	52	141	LAMINAR	0	52	8.7
DP/CSG	0.427	305	49	141	LAMINAR	0	49	17.6
DP/RIS	1.325	106	16	137	LAMINAR	0	16	0.6
TOTAL VOLUME		632	TOTAL PRESSURE DROP			39.6		

LAG: 30.2 MINUTES 2660 STROKES #1 AND 2648 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1136.2	HHP	582	IMPACT FORCE	1528
% SURFACE PRESSURE	38.5	HHP/sqin	4.94	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	64.6		
STRING	1070.9		
BIT	1136.2		
ANNULUS	39.6		
TOTAL	2311.3	PUMP PRESSURE	2952.9
		% DIFFERENCE	21.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.90	HYDROSTATIC PRESSURE 2125.6
CIRCULATING:	ECD 9.07	CIRCULATING PRESSURE 2165.2
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 79.2
	EFFECTIVE MUD WEIGHT 8.57	BOTTOM HOLE PRESSURE 2046.4

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1499.9

SPM 1 87 SPM 2 86 FLOW RATE 862

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	75	114	LAMINAR	1	74	6.8
HWDP/OH	0.398	44	52	109	LAMINAR	0	51	2.0
DP/OH	0.398	170	52	109	LAMINAR	0	51	7.5
DP/CSG	0.427	305	48	108	LAMINAR	0	48	11.5
DP/RIS	1.325	106	15	102	LAMINAR	0	15	0.3
TOTAL VOLUME		672	TOTAL PRESSURE DROP					28.0

LAG: 32.7 MINUTES 2845 STROKES #1 AND 2798 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1146.3 HHP 577 IMPACT FORCE 1541
 % SURFACE PRESSURE 37.6 HHP/sqin 4.89 JET VELOCITY 113

PRESSURE BREAKDOWN:

SURFACE 64.8
 STRING 1112.1
 BIT 1146.3
 ANNULUS 28.0
 TOTAL 2351.3 PUMP PRESSURE 3046.5 % DIFFERENCE 22.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.30	HYDROSTATIC PRESSURE 2379.7
CIRCULATING:	ECD 9.41	CIRCULATING PRESSURE 2407.8
PULLING OUT:	TRIP MARGIN 0.22	ESTIMATED SWAB 56.1
	EFFECTIVE MUD WEIGHT 9.08	BOTTOM HOLE PRESSURE 2323.7

CORE LAB
=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1599.9

SPM 1 87 SPM 2 80 FLOW RATE 836

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP	
DC/OH	0.274	46	73	114	LAMINAR	1	72	6.7	
HWDP/OH	0.398	44	50	109	LAMINAR	0	50	1.9	
DP/OH	0.398	210	50	109	LAMINAR	0	50	9.2	
DP/CSG	0.427	305	47	108	LAMINAR	0	46	11.4	
DP/RIS	1.325	106	15	102	LAMINAR	0	15	0.3	
TOTAL VOLUME		711	TOTAL PRESSURE DROP						29.5

LAG: 35.7 MINUTES 3107 STROKES #1 AND 2871 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1078.0	HHP	526	IMPACT FORCE	1450
% SURFACE PRESSURE	35.9	HHP/sqin	4.46	JET VELOCITY	109

PRESSURE BREAKDOWN:

SURFACE	61.3		
STRING	1087.7		
BIT	1078.0		
ANNULUS	29.5		
TOTAL	2256.5	PUMP PRESSURE	3003.8
		% DIFFERENCE	24.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.30	HYDROSTATIC PRESSURE 2538.4
CIRCULATING:	ECD 9.41	CIRCULATING PRESSURE 2567.9
PULLING OUT:	TRIP MARGIN 0.22	ESTIMATED SWAB 59.0
	EFFECTIVE MUD WEIGHT 9.08	BOTTOM HOLE PRESSURE 2479.4

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1699.9

SPM 1 79 SPM 2 82 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	48	70	113	LAMINAR	1	69	6.9
HWDP/OH	0.398	44	48	108	LAMINAR	0	48	1.9
DP/OH	0.398	247	48	108	LAMINAR	0	48	10.7
DP/CSG	0.427	305	45	108	LAMINAR	0	45	11.3
DP/RIS	1.325	106	14	101	LAMINAR	0	14	0.3

TOTAL VOLUME 750 TOTAL PRESSURE DROP 31.0

LAG: 39.1 MINUTES 3107 STROKES #1 AND 3198 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1170.2 HHP 550 IMPACT FORCE 1464
 % SURFACE PRESSURE 39.2 HHP/sqin 4.67 JET VELOCITY 113

PRESSURE BREAKDOWN:

SURFACE 57.9
 STRING 1074.3
 BIT 1170.2
 ANNULUS 31.0
 TOTAL 2333.4 PUMP PRESSURE 2983.8 % DIFFERENCE 21.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.40	HYDROSTATIC PRESSURE 2726.1
CIRCULATING: ECD	9.51	CIRCULATING PRESSURE 2757.1
PULLING OUT: TRIP MARGIN	0.21	ESTIMATED SWAB 62.0
EFFECTIVE MUD WEIGHT	9.19	BOTTOM HOLE PRESSURE 2664.0

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1799.9

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	48	70	113	LAMINAR	1	69	6.9
HWDP/OH	0.398	44	48	108	LAMINAR	0	48	1.9
DP/OH	0.398	287	48	108	LAMINAR	0	48	12.4
DP/CSG	0.427	305	45	108	LAMINAR	0	45	11.2
DP/RIS	1.325	106	14	101	LAMINAR	0	14	0.3
TOTAL VOLUME		790			TOTAL PRESSURE DROP		32.7	

LAG: 41.2 MINUTES 3203 STROKES #1 AND 3437 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1168.2 HHP 549 IMPACT FORCE 1461
 % SURFACE PRESSURE 39.5 HHP/sqin 4.66 JET VELOCITY 113

PRESSURE BREAKDOWN:

SURFACE 57.8
 STRING 1105.9
 BIT 1168.2
 ANNULUS 32.7
 TOTAL 2364.7 PUMP PRESSURE 2959.8 % DIFFERENCE 20.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.40	HYDROSTATIC PRESSURE 2886.4
CIRCULATING:	ECD 9.51	CIRCULATING PRESSURE 2919.1
PULLING OUT:	TRIP MARGIN 0.21	ESTIMATED SWAB 65.5
	EFFECTIVE MUD WEIGHT 9.19	BOTTOM HOLE PRESSURE 2820.9

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1899.9

SPM 1 77 SPM 2 81 FLOW RATE 790

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	69	142	LAMINAR	0	68	9.9
HWDP/OH	0.398	44	47	141	LAMINAR	0	47	3.0
DP/OH	0.398	327	47	141	LAMINAR	0	47	22.4
DP/CSG	0.427	305	44	141	LAMINAR	0	44	18.1
DP/RIS	1.325	106	14	140	LAMINAR	0	14	0.6
TOTAL VOLUME		830			TOTAL PRESSURE DROP		54.2	

LAG: 44.1 MINUTES 3399 STROKES #1 AND 3576 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1136.7	HHP	524	IMPACT FORCE	1422
% SURFACE PRESSURE	37.8	HHP/sqin	4.45	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	53.9		
STRING	1061.9		
BIT	1136.7		
ANNULUS	54.2		
TOTAL	2306.6	PUMP PRESSURE	3009.3
		% DIFFERENCE	23.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 3079.2
CIRCULATING:	ECD 9.67	CIRCULATING PRESSURE 3133.3
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 108.3
	EFFECTIVE MUD WEIGHT 9.17	BOTTOM HOLE PRESSURE 2970.8

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 1999.8

SPM 1 78 SPM 2 79 FLOW RATE 782

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	68	141	LAMINAR	0	67	9.9
HWDP/OH	0.398	44	47	140	LAMINAR	0	47	3.0
DP/OH	0.398	367	47	140	LAMINAR	0	47	25.1
DP/CSG	0.427	305	44	140	LAMINAR	0	43	18.1
DP/RIS	1.325	106	14	139	LAMINAR	0	14	0.6
TOTAL VOLUME		870			TOTAL PRESSURE DROP		56.8	

LAG: 46.7 MINUTES 3627 STROKES #1 AND 3683 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1123.6	HHP	512	IMPACT FORCE	1405
% SURFACE PRESSURE	38.1	HHP/sqin	4.35	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	53.3		
STRING	1080.4		
BIT	1123.6		
ANNULUS	56.8		
TOTAL	2314.0	PUMP PRESSURE	2949.4
		% DIFFERENCE	21.5

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.60	HYDROSTATIC PRESSURE 3275.3
CIRCULATING:	ECD 9.77	CIRCULATING PRESSURE 3332.1
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 113.5
	EFFECTIVE MUD WEIGHT 9.27	BOTTOM HOLE PRESSURE 3161.8

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2099.8

SPM 1 73 SPM 2 77 FLOW RATE 749

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	65	131	LAMINAR	0	65	8.9
HWDP/OH	0.398	44	45	125	LAMINAR	0	45	2.5
DP/OH	0.398	406	45	125	LAMINAR	0	45	22.5
DP/CSG	0.427	305	42	124	LAMINAR	0	42	14.4
DP/RIS	1.325	106	13	116	LAMINAR	0	13	0.4
TOTAL VOLUME		910	TOTAL PRESSURE DROP			48.7		

LAG: 51.0 MINUTES 3728 STROKES #1 AND 3917 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1193.3	HHP	521	IMPACT FORCE	1380
% SURFACE PRESSURE	39.8	HHP/sqin	4.42	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	54.7		
STRING	1140.9		
BIT	1193.3		
ANNULUS	48.7		
TOTAL	2437.6	PUMP PRESSURE	2996.7
		% DIFFERENCE	18.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 3403.1
CIRCULATING:	ECD 9.64	CIRCULATING PRESSURE 3451.9
PULLING OUT:	TRIP MARGIN 0.27	ESTIMATED SWAB 97.5
	EFFECTIVE MUD WEIGHT 9.23	BOTTOM HOLE PRESSURE 3305.6

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2199.7

SPM 1 73 SPM 2 77 FLOW RATE 749

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	65	134	LAMINAR	0	65	9.5
HWDP/OH	0.398	44	45	121	LAMINAR	0	45	2.3
DP/OH	0.398	446	45	121	LAMINAR	0	45	23.6
DP/CSG	0.427	305	42	120	LAMINAR	0	42	13.6
DP/RIS	1.325	106	13	104	LAMINAR	0	13	0.3
TOTAL VOLUME		950			TOTAL PRESSURE DROP		49.3	

LAG: 53.3 MINUTES 3884 STROKES #1 AND 4096 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1180.5	HHP	516	IMPACT FORCE	1365
% SURFACE PRESSURE	39.8	HHP/sqin	4.38	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	61.4		
STRING	1315.5		
BIT	1180.5		
ANNULUS	49.3		
TOTAL	2606.8	PUMP PRESSURE	2968.0 % DIFFERENCE 12.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.40	HYDROSTATIC PRESSURE 3527.6
CIRCULATING:	ECD	9.53	CIRCULATING PRESSURE 3576.9
PULLING OUT:	TRIP MARGIN	0.26	ESTIMATED SWAB 98.6
	EFFECTIVE MUD WEIGHT	9.14	BOTTOM HOLE PRESSURE 3429.1

CORE LAB
=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2299.7

SPM 1 72 SPM 2 74 FLOW RATE 728

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	63	133	LAMINAR	0	63	9.4
HMDP/OH	0.398	44	44	121	LAMINAR	0	43	2.3
DP/OH	0.398	486	44	121	LAMINAR	0	43	25.4
DP/CSG	0.427	305	41	119	LAMINAR	0	40	13.4
DP/RIS	1.325	106	13	104	LAMINAR	0	13	0.3
TOTAL VOLUME		989			TOTAL PRESSURE DROP			50.8

LAG: 57.1 MINUTES 4094 STROKES #1 AND 4220 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1128.7	HHP	480	IMPACT FORCE	1305
% SURFACE PRESSURE	38.3	HHP/sqin	4.07	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	58.9		
STRING	1296.0		
BIT	1128.7		
ANNULUS	50.8		
TOTAL	2534.4	PUMP PRESSURE	2944.1
		% DIFFERENCE	13.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 3727.1
CIRCULATING:	ECD 9.63	CIRCULATING PRESSURE 3777.9
PULLING OUT:	TRIP MARGIN 0.26	ESTIMATED SWAB 101.5
	EFFECTIVE MUD WEIGHT 9.24	BOTTOM HOLE PRESSURE 3625.6

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2399.5

SPM 1 75 SPM 2 74 FLOW RATE 746

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	65	147	LAMINAR	0	64	10.9
HWDP/OH	0.398	44	45	137	LAMINAR	0	44	2.9
DP/OH	0.398	526	45	137	LAMINAR	0	44	34.1
DP/CSG	0.427	305	42	136	LAMINAR	0	41	16.8
DP/RIS	1.325	106	13	123	LAMINAR	0	13	0.4
TOTAL VOLUME		1029	TOTAL PRESSURE DROP			65.2		

LAG: 57.9 MINUTES 4342 STROKES #1 AND 4307 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1171.9	HHP	510	IMPACT FORCE	1355
% SURFACE PRESSURE	40.2	HHP/sqin	4.33	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	59.0		
STRING	1332.2		
BIT	1171.9		
ANNULUS	65.2		
TOTAL	2628.3	PUMP PRESSURE	2914.4
		% DIFFERENCE	9.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.40	HYDROSTATIC PRESSURE 3848.0
CIRCULATING:	ECD 9.56	CIRCULATING PRESSURE 3913.2
PULLING OUT:	TRIP MARGIN 0.32	ESTIMATED SWAB 130.4
	EFFECTIVE MUD WEIGHT 9.08	BOTTOM HOLE PRESSURE 3717.6

CORE LAB
 =====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2499.4

SPM 1 73 SPM 2 74 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	48	64	147	LAMINAR	0	64	10.9
HWDP/OH	0.398	44	44	137	LAMINAR	0	44	2.9
DP/OH	0.398	566	44	137	LAMINAR	0	44	36.6
DP/CSG	0.427	305	41	136	LAMINAR	0	41	16.7
DP/RIS	1.325	106	13	123	LAMINAR	0	13	0.4
TOTAL VOLUME		1069			TOTAL PRESSURE DROP		67.5	

LAG: 60.8 MINUTES 4458 STROKES #1 AND 4526 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1147.7 HHP 494 IMPACT FORCE 1327
 % SURFACE PRESSURE 39.1 HHP/sqin 4.19 JET VELOCITY 112

PRESSURE BREAKDOWN:

SURFACE 57.9
 STRING 1340.7
 BIT 1147.7
 ANNULUS 67.5
 TOTAL 2613.8 PUMP PRESSURE 2935.9 % DIFFERENCE 11.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.40	HYDROSTATIC PRESSURE 4008.2
CIRCULATING:	ECD 9.56	CIRCULATING PRESSURE 4075.7
PULLING OUT:	TRIP MARGIN 0.32	ESTIMATED SWAB 135.0
	EFFECTIVE MUD WEIGHT 9.08	BOTTOM HOLE PRESSURE 3873.1

CORE LAB

=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2550.0 AND TVD 2549.4

SPM 1 74 SPM 2 73 FLOW RATE 735

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	64	139	LAMINAR	0	63	10.0
HWDP/OH	0.398	44	44	129	LAMINAR	0	44	2.6
DP/OH	0.398	586	44	129	LAMINAR	0	44	34.0
DP/CSG	0.427	305	41	128	LAMINAR	0	41	15.0
DP/RIS	1.325	106	13	115	LAMINAR	0	13	0.4
TOTAL VOLUME		1089	TOTAL PRESSURE DROP					61.6

LAG: 62.3 MINUTES 4607 STROKES #1 AND 4545 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1136.6 HHP 487 IMPACT FORCE 1315
 % SURFACE PRESSURE 38.9 HHP/sqin 4.13 JET VELOCITY 112

PRESSURE BREAKDOWN:

SURFACE 57.4
 STRING 1345.3
 BIT 1136.6
 ANNULUS 61.8
 TOTAL 2601.1 PUMP PRESSURE 2921.0 % DIFFERENCE 11.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.40	HYDROSTATIC PRESSURE 4088.4
CIRCULATING: ECD	9.54	CIRCULATING PRESSURE 4150.2
PULLING OUT: TRIP MARGIN	0.28	ESTIMATED SWAB 123.7
EFFECTIVE MUD WEIGHT	9.12	BOTTOM HOLE PRESSURE 3964.7

CORE LAB
=====

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2599.3

SPM 1 72 SPM 2 70 FLOW RATE 708

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	61	127	LAMINAR	0	61	8.4
HWDP/OH	0.398	44	42	114	LAMINAR	0	42	2.1
DP/OH	0.398	605	42	114	LAMINAR	0	42	28.2
DP/CSG	0.427	305	39	113	LAMINAR	0	39	12.0
DP/RIS	1.325	106	13	98	LAMINAR	0	13	0.3

TOTAL VOLUME 1109 TOTAL PRESSURE DROP 51.0

LAG: 65.8 MINUTES 4717 STROKES #1 AND 4601 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1249.1 HHP 516 IMPACT FORCE 1327
% SURFACE PRESSURE 43.1 HHP/sqin 4.38 JET VELOCITY 117

PRESSURE BREAKDOWN:

SURFACE 54.5
STRING 1296.3
BIT 1249.1
ANNULUS 51.0
TOTAL 2650.9 PUMP PRESSURE 2898.6 % DIFFERENCE 8.5

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.40	HYDROSTATIC PRESSURE 4168.4
CIRCULATING: ECD	9.51	CIRCULATING PRESSURE 4219.4
PULLING OUT: TRIP MARGIN	0.23	ESTIMATED SWAB 102.0
EFFECTIVE MUD WEIGHT	9.17	BOTTOM HOLE PRESSURE 4066.4

(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.

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

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

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

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

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

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

BIT NUMBER	1	IADC CODE	111	INTERVAL	80.0-	218.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	18 18 18	
COST	0.00	TRIP TIME	2.4	BIT RUN		138.0
TOTAL HOURS	1.48	TOTAL TURNS	8533	CONDITION	T2 B3 G0.000	

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
85.0	129.6	5.0	90	8.6	0.49	0.04	208	33	2068	8.4	14.6
90.0	133.2	5.0	88	8.6	0.48	0.08	407	32	1050	8.4	14.6
95.0	100.0	5.0	100	8.6	0.56	0.13	707	42.41	714.22	8.4	14.6
100.0	65.2	8.0	99	8.6	0.69	0.20	1164	65.03	551.92	8.4	14.7
105.0	114.6	8.0	98	8.6	0.57	0.25	1420	36.99	448.93	8.4	14.7
115.0	73.0	8.0	94	8.6	0.66	0.38	2195	58.08	337.26	8.4	14.7
120.0	102.3	8.0	97	8.6	0.59	0.43	2481	41.47	300.29	8.4	14.8
125.0	103.4	8.0	93	8.6	0.58	0.48	2751	41.00	271.48	8.4	14.8
130.0	139.5	8.0	95	8.6	0.52	0.52	2955	30.39	247.37	8.4	14.8
135.0	109.1	5.0	94	8.6	0.53	0.56	3214	38.88	228.41	8.4	14.8
140.0	98.9	5.0	96	8.6	0.55	0.61	3505	42.88	212.95	8.4	14.8
145.0	106.5	5.0	96	8.6	0.54	0.66	3777	39.82	199.64	8.4	14.9
155.0	114.3	5.0	93	8.6	0.52	0.75	4263	37.11	177.96	8.4	14.9
160.0	106.5	5.0	93	8.6	0.53	0.79	4524	39.82	169.33	8.4	14.9
165.0	120.8	5.0	96	8.6	0.51	0.84	4762	35.11	161.44	8.4	15.0
170.0	78.9	5.0	93	8.6	0.59	0.90	5115	53.72	155.45	8.4	15.0
175.0	65.5	5.0	98	8.6	0.63	0.98	5564	64.79	150.68	8.4	15.0
180.0	85.7	5.0	96	8.6	0.58	1.03	5900	49.48	145.62	8.4	15.0
185.0	87.0	5.0	97	8.6	0.58	1.09	6235	48.77	141.01	8.4	15.0
190.0	83.7	5.0	95	8.6	0.58	1.15	6576	50.66	136.90	8.4	15.1
195.0	76.3	5.0	103	8.6	0.61	1.22	6981	55.60	133.37	8.4	15.1
200.0	90.0	5.0	98	8.6	0.57	1.27	7308	47.12	129.77	8.4	15.1
205.0	84.5	5.0	99	8.6	0.59	1.33	7660	50.19	126.59	8.4	15.1
210.0	97.3	5.0	97	8.6	0.56	1.38	7959	43.59	123.40	8.4	15.1
215.0	81.8	5.0	98	8.6	0.59	1.44	8318	51.83	120.75	8.4	15.2
218.0	82.3	5.0	98	8.6	0.59	1.48	8533	51.53	119.24	8.4	15.2

BIT NUMBER	1	IADC CODE	111	INTERVAL	218.0-	809.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18	
COST	4857.00	TRIP TIME	3.7	BIT RUN		591.2
TOTAL HOURS	8.95	TOTAL TURNS	80581	CONDITION	T2 R2 G0.000	

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
220.0	420.0	4.5	150	8.6	0.38	0.00	43	9	9193	8.4	15.2
225.0	202.2	5.1	150	8.6	0.54	0.03	265	18	2640	8.4	15.2
230.0	211.8	5.5	150	8.6	0.53	0.05	478	17	1547	8.4	15.2
235.0	202.2	8.6	150	8.6	0.59	0.08	700	18	1097	8.4	15.3
240.0	178.2	8.2	150	8.6	0.61	0.11	953	20.49	852.55	8.4	15.3
245.0	162.2	4.9	150	8.6	0.58	0.14	1230	22.52	698.84	8.4	15.3
250.0	113.9	5.0	150	8.6	0.65	0.18	1625	32.06	594.65	8.4	15.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
255.0	181.8	5.0	150	8.6	0.56	0.21	1873	20.09	517.01	8.4	15.3
260.0	227.8	5.0	150	8.6	0.51	0.23	2070	16.03	457.37	8.4	15.4
265.0	116.1	5.0	150	8.6	0.65	0.27	2458	31.45	412.06	8.4	15.4
270.0	248.8	9.8	150	8.6	0.56	0.29	2639	14.68	373.85	8.4	15.4
275.0	219.5	11.4	150	8.6	0.61	0.32	2844	16.64	342.51	8.4	15.4
280.0	295.1	8.2	150	8.6	0.50	0.33	2996	12.38	315.89	8.4	15.4
285.0	362.4	12.6	150	8.6	0.50	0.35	3120	10.08	293.07	8.4	15.5
290.0	260.9	10.2	150	8.6	0.55	0.37	3293	14.00	273.69	8.4	15.5
295.0	270.7	12.1	150	8.6	0.56	0.38	3459	13.49	256.79	8.4	15.5
300.0	290.3	15.9	150	8.6	0.58	0.40	3614	12.58	241.90	8.4	15.5
305.0	290.3	13.7	150	8.6	0.56	0.42	3769	12.58	228.72	8.4	15.5
310.0	257.1	15.5	150	8.6	0.61	0.44	3944	14.20	217.06	8.4	15.6
315.0	285.7	12.3	150	8.6	0.55	0.46	4102	12.78	206.53	8.4	15.6
320.0	295.1	16.9	150	8.6	0.58	0.47	4254	12.38	197.02	8.4	15.6
325.0	197.8	8.7	150	8.6	0.60	0.50	4482	18.46	188.67	8.4	15.6
330.0	253.5	7.1	150	8.6	0.52	0.52	4659	14.41	180.89	8.4	15.6
335.0	187.5	4.7	150	8.6	0.54	0.54	4899	19.48	173.99	8.4	15.7
340.0	219.5	7.8	150	8.6	0.56	0.57	5104	16.64	167.55	8.4	15.7
345.0	144.0	10.4	150	8.6	0.69	0.60	5417	25.36	161.95	8.4	15.7
350.0	99.4	11.8	150	8.6	0.80	0.65	5869	36.72	157.20	8.4	15.7
355.0	89.6	11.3	150	8.6	0.82	0.71	6372	40.78	152.96	8.4	15.7
360.0	189.5	10.3	150	8.6	0.63	0.73	6609	19.27	148.25	8.4	15.7
365.0	159.3	9.8	150	8.6	0.66	0.77	6892	22.93	143.99	8.4	15.8
370.0	202.2	10.5	150	8.6	0.61	0.79	7114	18.06	139.84	8.4	15.8
375.0	171.4	9.1	150	8.6	0.63	0.82	7377	21.30	136.07	8.4	15.8
380.0	169.8	8.1	150	8.6	0.62	0.85	7642	21.51	132.53	8.4	15.8
385.0	185.6	9.0	150	8.6	0.62	0.88	7884	19.68	129.15	8.4	15.8
390.0	187.5	9.2	150	8.6	0.62	0.90	8124	19.48	125.97	8.4	15.9
395.0	168.2	13.9	150	8.6	0.70	0.93	8392	21.71	123.02	8.4	15.9
400.0	169.8	9.2	150	8.6	0.64	0.96	8657	21.51	120.23	8.4	15.9
405.0	202.2	9.8	150	8.6	0.61	0.99	8879	18.06	117.50	8.4	15.9
410.0	201.1	11.3	150	8.6	0.62	1.01	9103	18.16	114.91	8.4	15.9
415.0	183.7	11.5	150	8.6	0.65	1.04	9348	19.88	112.50	8.4	16.0
420.0	169.8	11.7	150	8.6	0.67	1.07	9613	21.51	110.25	8.4	16.0
425.0	166.7	10.8	150	8.6	0.66	1.10	9883	21.91	108.11	8.4	16.0
430.0	135.3	12.1	150	8.6	0.73	1.14	10215	26.98	106.20	8.4	16.0
435.0	155.2	9.7	150	8.6	0.67	1.17	10505	23.54	104.30	8.4	16.0
440.0	141.7	10.2	150	8.6	0.69	1.20	10823	25.77	102.53	8.4	16.0
445.0	152.5	10.1	150	8.6	0.68	1.24	11118	23.94	100.80	8.4	16.1
450.0	157.9	10.5	150	8.6	0.67	1.27	11403	23.13	99.12	8.4	16.1
455.0	170.3	3.3	150	8.6	0.53	1.30	11667	21.45	97.48	8.4	16.1
460.0	168.2	3.8	150	8.6	0.55	1.33	11935	21.71	95.92	8.4	16.1
465.0	146.3	3.7	150	8.6	0.57	1.36	12242	24.96	94.48	8.4	16.1
470.0	141.7	10.6	150	8.6	0.70	1.40	12560	25.77	93.12	8.4	16.2
475.0	153.8	12.0	150	8.6	0.70	1.43	12852	23.74	91.77	8.4	16.2
480.0	134.3	6.0	150	8.6	0.64	1.47	13187	27.19	90.54	8.4	16.2
485.0	132.4	7.8	150	8.6	0.67	1.50	13527	27.59	89.36	8.4	16.2
490.0	129.5	6.4	150	8.6	0.65	1.54	13875	28.20	88.23	8.4	16.2
495.0	136.4	6.0	150	8.6	0.64	1.58	14205	26.78	87.12	8.4	16.2
500.0	155.2	7.5	150	8.6	0.63	1.61	14495	23.54	86.00	8.4	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
505.0	82.1	6.8	150	8.6	0.76	1.67	15043	44.50	85.27	8.4	16.3
510.0	107.8	10.3	150	8.6	0.76	1.72	15460	33.88	84.39	8.4	16.3
515.0	144.0	12.4	150	8.6	0.72	1.75	15773	25.36	83.40	8.4	16.3
520.0	133.3	11.6	150	8.6	0.73	1.79	16110	27.39	82.47	8.4	16.3
525.0	111.7	19.2	150	8.6	0.86	1.83	16513	32.69	81.66	8.4	16.3
530.0	124.1	18.2	150	8.6	0.82	1.88	16876	29.42	80.82	8.4	16.4
535.0	116.1	19.9	150	8.6	0.86	1.92	17263	31.45	80.05	8.4	16.4
540.0	102.9	20.0	150	8.6	0.89	1.97	17701	35.51	79.35	8.4	16.4
545.0	90.0	18.2	150	8.6	0.91	2.02	18201	40.58	78.76	8.4	16.4
550.0	130.4	18.4	150	8.6	0.81	2.06	18546	28.00	78.00	8.4	16.4
555.0	157.9	19.1	150	8.6	0.77	2.09	18831	23.13	77.18	8.4	16.5
560.0	138.5	21.2	150	8.6	0.82	2.13	19156	26.38	76.44	8.4	16.5
565.0	96.8	24.6	150	8.6	0.95	2.18	19621	37.74	75.88	8.4	16.5
570.0	84.5	24.8	150	8.6	0.99	2.24	20153	43.22	75.42	8.4	16.5
575.0	45.0	19.6	150	8.6	1.11	2.35	21153	81.16	75.50	8.4	16.5
580.0	54.9	18.7	150	8.6	1.04	2.44	21973	66.55	75.37	8.4	16.5
585.0	47.5	24.0	150	8.6	1.15	2.55	22921	76.89	75.40	8.4	16.6
590.0	70.3	30.0	150	8.6	1.10	2.62	23561	51.94	75.08	8.4	16.6
595.0	54.5	30.0	150	8.6	1.17	2.71	24386	66.95	74.97	8.4	16.6
600.0	44.8	30.0	150	8.6	1.23	2.82	25391	81.56	75.06	8.4	16.6
605.0	84.1	31.1	150	8.6	1.05	2.88	25926	43.42	74.65	8.4	16.6
610.0	82.6	32.3	150	8.6	1.07	2.94	26471	44.23	74.26	8.4	16.6
615.0	96.3	32.9	150	8.6	1.03	2.99	26938	37.94	73.80	8.4	16.7
620.0	77.6	32.8	150	8.6	1.09	3.06	27518	47.07	73.47	8.4	16.7
625.0	72.3	31.1	150	8.6	1.10	3.13	28141	50.52	73.19	8.4	16.7
630.0	73.2	29.9	150	8.6	1.08	3.20	28756	49.91	72.91	8.4	16.7
635.0	37.2	32.1	150	8.6	1.31	3.33	29966	98.20	73.21	8.4	16.7
640.0	34.2	31.8	150	8.6	1.33	3.48	31281	106.72	73.61	8.4	16.7
645.0	23.1	32.6	150	8.6	1.46	3.69	33231	158.25	74.60	8.4	16.7
650.0	28.7	31.0	150	8.6	1.38	3.87	34798	127.21	75.21	8.4	16.8
655.0	48.4	31.5	150	8.6	1.22	3.97	35728	75.47	75.21	8.4	16.8
660.0	49.7	34.5	150	8.6	1.25	4.07	36633	73.45	75.19	8.4	16.8
665.0	37.1	35.3	150	8.8	1.31	4.21	37846	98.40	75.45	8.4	16.8
670.0	46.4	32.7	150	8.8	1.22	4.31	38816	78.72	75.49	8.4	16.8
675.0	56.4	33.6	150	8.8	1.17	4.40	39613	64.72	75.37	8.4	16.8
680.0	37.3	30.9	150	8.8	1.27	4.54	40818	97.79	75.61	8.4	16.9
685.0	45.9	30.4	150	8.8	1.20	4.64	41798	79.53	75.65	8.4	16.9
690.0	41.4	30.7	150	8.8	1.23	4.77	42886	88.26	75.79	8.4	16.9
695.0	35.2	31.5	150	8.8	1.29	4.91	44163	103.68	76.08	8.4	16.9
700.0	41.0	29.3	150	8.8	1.22	5.03	45261	89.07	76.21	8.4	16.9
705.0	38.5	29.7	150	8.8	1.24	5.16	46428	94.75	76.40	8.4	16.9
710.0	34.7	29.3	150	8.8	1.27	5.30	47726	105.30	76.70	8.4	17.0
715.0	53.6	27.4	150	8.8	1.13	5.40	48566	68.17	76.61	8.4	17.0
720.0	39.0	30.0	150	8.8	1.24	5.52	49718	93.53	76.78	8.4	17.0
725.0	28.2	28.3	150	8.8	1.32	5.70	51316	129.65	77.30	8.4	17.0
730.0	26.6	30.0	150	8.8	1.36	5.89	53008	137.36	77.89	8.4	17.0
735.0	30.7	30.6	150	8.8	1.32	6.05	54476	119.10	78.29	8.4	17.0
740.0	28.3	25.6	150	8.8	1.29	6.23	56068	129.24	78.78	8.4	17.0
745.0	44.3	26.4	150	8.8	1.17	6.34	57083	82.37	78.81	8.4	17.1
750.0	25.0	24.6	150	8.8	1.31	6.54	58886	146.28	79.44	8.4	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
755.0	19.0	26.2	150	8.8	1.41	6.81	61251	191.93	80.49	8.4	17.1
760.0	19.2	27.1	150	8.8	1.41	7.07	63593	190.11	81.50	8.4	17.1
765.0	27.8	30.0	150	8.8	1.34	7.25	65213	131.47	81.96	8.4	17.1
770.0	22.6	28.7	150	8.8	1.39	7.47	67206	161.70	82.68	8.4	17.1
775.0	25.9	29.8	150	8.8	1.36	7.66	68943	141.01	83.20	8.4	17.2
780.0	26.6	31.3	150	8.8	1.37	7.85	70633	137.15	83.68	8.4	17.2
785.0	24.0	33.0	150	8.8	1.42	8.06	72506	151.96	84.29	8.4	17.2
790.0	24.1	33.0	150	8.8	1.42	8.26	74373	151.56	84.87	8.4	17.2
795.0	22.8	29.3	150	8.8	1.39	8.48	76351	160.49	85.53	8.4	17.2
800.0	28.3	28.9	150	8.8	1.33	8.66	77943	129.24	85.91	8.4	17.2
805.0	37.3	31.3	150	8.8	1.27	8.79	79151	98.00	86.01	8.4	17.2
809.2	25.1	28.5	150	8.8	1.36	8.96	80656	145.40	86.43	8.4	17.3

BIT NUMBER	2	TADC CODE	116	INTERVAL	809.2- 1611.1
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.5	BIT RUN	801.9
TOTAL HOURS	25.03	TOTAL TURNS	158183	CONDITION	T3 B4 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
810.0	28.0	3.9	100	8.6	0.87	0.03	171	130	28605	8.4	17.3
811.0	23.8	4.2	100	8.6	0.92	0.07	423	153	12799	8.4	17.3
812.0	19.7	12.8	75	8.6	1.13	0.12	652	186	8294	8.4	17.3
813.0	28.1	16.6	75	8.9	1.06	0.16	812	130	6146	8.4	17.3
814.0	23.2	16.2	75	8.9	1.11	0.20	1006	157	4898	8.4	17.3
815.0	22.2	16.3	100	8.9	1.20	0.24	1276	164	4082	8.4	17.3
816.0	25.7	13.6	100	8.9	1.11	0.28	1509	142	3502	8.4	17.3
817.0	43.4	23.0	100	8.9	1.11	0.31	1647	84	3064	8.4	17.3
818.0	50.0	24.3	100	8.6	1.12	0.33	1767	73	2724	8.4	17.3
819.0	52.9	23.4	100	8.6	1.09	0.35	1881	69	2453	8.4	17.3
820.0	48.6	16.2	100	8.6	1.02	0.37	2004	75	2233	8.4	17.3
821.0	46.2	14.3	100	8.6	1.00	0.39	2134	79	2051	8.4	17.3
822.0	64.3	8.2	100	8.6	0.81	0.40	2227	57	1895	8.4	17.3
823.0	49.3	10.8	100	8.6	0.92	0.42	2349	74	1763	8.4	17.3
824.0	56.2	11.1	100	8.6	0.90	0.44	2456	65	1648	8.4	17.3
825.0	31.9	11.1	100	8.6	1.04	0.47	2644	115	1551	8.4	17.3
826.0	43.4	9.4	100	8.6	0.93	0.50	2782	84	1464	8.4	17.3
827.0	31.0	10.6	100	8.6	1.04	0.53	2976	118	1388	8.4	17.3
828.0	44.4	12.0	100	8.6	0.97	0.55	3111	82	1319	8.4	17.3
829.0	52.9	13.9	100	8.6	0.96	0.57	3224	69	1256	8.4	17.3
830.0	47.4	15.2	100	8.6	1.01	0.59	3351	77	1199	8.4	17.3
831.0	49.3	14.9	100	8.6	0.99	0.61	3472	74	1147	8.4	17.3
832.0	36.7	13.9	100	8.6	1.06	0.64	3636	99	1101	8.4	17.3
833.0	40.4	13.8	100	8.6	1.03	0.66	3784	90	1059	8.4	17.3
834.0	41.9	13.5	100	8.6	1.02	0.69	3927	87	1020	8.4	17.3
835.0	31.9	14.0	100	8.6	1.10	0.72	4116	114.63	984.62	8.4	17.3
836.0	27.5	11.6	100	8.6	1.09	0.75	4334	132.89	952.84	8.4	17.3
837.0	37.5	12.9	100	8.6	1.03	0.78	4494	97.39	922.07	8.4	17.3
838.0	55.4	12.1	100	8.6	0.92	0.80	4602	65.94	892.34	8.4	17.3
839.0	43.4	13.0	100	8.6	1.00	0.82	4741	84.20	865.22	8.4	17.3
840.0	40.0	12.4	100	8.6	1.01	0.85	4891	91.30	840.09	8.4	17.3
841.0	58.1	12.5	100	8.6	0.91	0.86	4994	62.90	815.65	8.4	17.3
842.0	49.3	12.2	100	8.6	0.95	0.88	5116	74.05	793.04	8.4	17.3
843.0	40.4	12.6	100	8.6	1.01	0.91	5264	90.29	772.25	8.4	17.3
844.0	36.7	12.4	100	8.6	1.03	0.94	5427	99.42	752.92	8.4	17.4
845.0	23.1	11.4	100	8.6	1.13	0.98	5687	158.25	736.31	8.4	17.4
846.0	39.6	9.6	100	8.6	0.95	1.01	5839	92.31	718.81	8.4	17.4
847.0	27.9	10.0	100	8.6	1.05	1.04	6054	130.86	703.25	8.4	17.4
848.0	32.4	10.1	100	8.6	1.02	1.07	6239	112.60	688.03	8.4	17.4
849.0	42.4	12.0	100	8.6	0.99	1.10	6381	86.23	672.91	8.4	17.4
850.0	60.0	14.1	100	8.6	0.93	1.11	6481	60.87	657.91	8.4	17.4
851.0	31.9	14.4	100	8.6	1.10	1.14	6669	114.63	644.91	8.4	17.4
852.0	42.4	14.2	100	8.6	1.02	1.17	6811	86.23	631.86	8.4	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
853.0	50.0	13.9	100	8.6	0.97	1.19	6931	73.04	619.10	8.4	17.4
854.0	42.9	14.0	100	8.6	1.02	1.21	7071	85.21	607.18	8.4	17.4
855.0	35.0	14.6	100	8.6	1.08	1.24	7242	104.49	596.21	8.4	17.4
856.0	36.0	16.4	100	8.6	1.11	1.27	7409	101.44	585.64	8.4	17.4
857.0	44.4	16.2	100	8.6	1.04	1.29	7544	82.17	575.10	8.4	17.4
858.0	34.0	16.1	100	8.6	1.12	1.32	7721	107.53	565.52	8.4	17.4
859.0	57.1	16.0	100	8.6	0.97	1.34	7826	63.91	555.45	8.4	17.4
860.0	66.7	14.8	100	8.6	0.91	1.35	7916	54.78	545.59	8.4	17.4
861.0	47.4	14.6	100	8.6	1.00	1.37	8042	77.10	536.55	8.4	17.4
862.0	52.2	13.5	100	8.6	0.96	1.39	8157	70.00	527.71	8.4	17.4
863.0	39.1	12.2	100	8.6	1.01	1.42	8311	93.33	519.64	8.4	17.4
864.0	23.1	12.6	100	8.6	1.16	1.46	8571	158.25	513.04	8.4	17.4
865.0	43.9	13.4	100	8.6	1.00	1.48	8707	83.18	505.34	8.4	17.4
866.0	36.4	11.3	100	8.6	1.01	1.51	8872	100.43	498.21	8.4	17.4
867.0	26.9	9.0	100	8.6	1.04	1.55	9096	135.94	491.94	8.4	17.4
868.0	61.0	10.7	100	8.6	0.87	1.56	9194	59.85	484.60	8.4	17.4
869.0	49.3	10.8	100	8.6	0.92	1.58	9316	74.05	477.73	8.4	17.4
870.0	39.6	10.7	100	8.6	0.98	1.61	9467	92.31	471.39	8.4	17.4
871.0	70.6	11.1	100	8.6	0.84	1.62	9552	51.74	464.60	8.4	17.4
872.0	42.4	11.2	100	8.6	0.97	1.65	9694	86.23	458.58	8.4	17.4
873.0	94.7	11.0	100	8.6	0.76	1.66	9757	38.55	451.99	8.4	17.4
874.0	36.7	10.2	100	8.6	0.99	1.69	9921	99.42	446.55	8.4	17.4
875.0	23.4	10.7	100	8.6	1.11	1.73	10177	156.22	442.14	8.4	17.4
876.0	37.1	19.4	100	8.6	1.14	1.76	10339	98.40	436.99	8.4	17.4
877.0	19.4	21.6	100	8.6	1.37	1.81	10649	188.69	433.33	8.4	17.4
878.0	23.4	21.6	100	8.6	1.32	1.85	10906	156.22	429.30	8.4	17.4
879.0	32.1	22.0	100	8.6	1.22	1.88	11092	113.62	424.78	8.4	17.4
880.0	28.1	22.5	100	8.6	1.27	1.92	11306	129.85	420.61	8.4	17.5
881.0	31.6	26.5	100	8.6	1.29	1.95	11496	115.65	416.37	8.4	17.5
882.0	33.0	26.7	100	8.6	1.28	1.98	11677	110.57	412.17	8.4	17.5
883.0	30.3	25.2	100	8.6	1.29	2.01	11876	120.72	408.22	8.4	17.5
884.0	31.6	23.2	100	8.6	1.25	2.04	12066	115.65	404.31	8.4	17.5
885.0	29.3	25.7	100	8.6	1.31	2.08	12271	124.78	400.62	8.4	17.5
886.0	28.6	26.6	100	8.6	1.33	2.11	12481	127.82	397.07	8.4	17.5
887.0	36.4	26.4	100	8.6	1.25	2.14	12646	100.43	393.25	8.4	17.5
888.0	47.4	24.7	100	8.6	1.14	2.16	12772	77.10	389.24	8.4	17.5
889.0	55.4	25.8	100	8.6	1.11	2.18	12881	65.94	385.19	8.4	17.5
890.0	54.5	26.0	100	8.6	1.11	2.20	12991	66.95	381.25	8.4	17.5
891.0	63.2	26.3	100	8.6	1.07	2.21	13086	57.82	377.30	8.4	17.5
892.0	55.4	27.6	100	8.6	1.13	2.23	13194	65.94	373.54	8.4	17.5
893.0	46.2	26.9	100	8.6	1.18	2.25	13324	79.13	370.02	8.4	17.5
894.0	65.5	29.1	100	8.6	1.09	2.27	13416	55.79	366.32	8.4	17.5
895.0	120.0	29.3	100	8.6	0.89	2.28	13466	30.43	362.40	8.4	17.5
896.0	37.5	28.2	100	8.6	1.26	2.30	13626	97.39	359.35	8.4	17.5
897.0	25.7	28.8	100	8.6	1.39	2.34	13859	142.02	356.88	8.4	17.5
898.0	32.1	29.8	100	8.6	1.33	2.37	14046	113.62	354.14	8.4	17.5
899.0	28.1	30.3	100	8.6	1.38	2.41	14259	129.85	351.64	8.4	17.5
900.0	29.8	29.3	100	8.6	1.35	2.44	14461	122.75	349.12	8.4	17.5
901.0	46.8	30.2	100	8.6	1.21	2.46	14589	78.11	346.17	8.4	17.5
902.0	28.1	30.0	100	8.6	1.38	2.50	14802	129.85	343.83	8.4	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
903.0	30.0	27.0	100	8.6	1.32	2.53	15002	121.73	341.47	8.4	17.5
904.0	36.7	26.8	100	8.6	1.25	2.56	15166	99.42	338.91	8.4	17.5
905.0	57.1	26.3	100	8.6	1.10	2.58	15271	63.91	336.04	8.4	17.5
906.0	45.6	27.6	100	8.6	1.19	2.60	15402	80.14	333.40	8.4	17.5
907.0	78.3	26.9	100	8.6	1.01	2.61	15479	46.66	330.47	8.4	17.5
908.0	39.6	27.9	100	8.6	1.24	2.64	15631	92.31	328.06	8.4	17.5
909.0	41.4	27.6	100	8.6	1.22	2.66	15776	88.26	325.65	8.4	17.5
910.0	27.9	27.5	100	8.6	1.35	2.70	15991	130.86	323.72	8.4	17.5
911.0	29.8	26.6	100	8.6	1.31	2.73	16192	122.75	321.75	8.4	17.5
912.0	32.7	27.7	100	8.6	1.30	2.76	16376	111.59	319.70	8.4	17.5
913.0	73.5	29.1	100	8.6	1.05	2.78	16457	49.71	317.10	8.4	17.5
914.0	53.7	28.2	100	8.6	1.14	2.79	16569	67.97	314.72	8.4	17.5
915.0	45.0	28.4	100	8.6	1.20	2.82	16702	81.16	312.52	8.4	17.5
916.0	81.8	28.4	100	8.6	1.01	2.83	16776	44.64	310.01	8.4	17.6
917.0	37.5	28.4	100	8.6	1.26	2.85	16936	97.39	308.04	8.4	17.6
918.0	37.9	28.2	100	8.6	1.26	2.88	17094	96.37	306.09	8.4	17.6
919.0	46.8	28.2	100	8.6	1.19	2.90	17222	78.11	304.01	8.4	17.6
920.0	35.6	28.7	100	8.6	1.28	2.93	17391	102.46	302.20	8.4	17.6
921.0	43.9	29.1	100	8.6	1.22	2.95	17527	83.18	300.24	8.4	17.6
922.0	31.3	30.1	100	8.6	1.34	2.99	17719	116.66	298.61	8.4	17.6
923.0	34.0	29.8	100	8.6	1.31	3.01	17896	107.53	296.93	8.4	17.6
924.0	39.6	28.6	100	8.6	1.25	3.04	18047	92.31	295.15	8.4	17.6
925.0	23.5	30.1	100	8.6	1.44	3.08	18302	155.21	293.94	8.4	17.6
926.0	30.0	30.3	100	8.6	1.36	3.12	18502	121.73	292.46	8.4	17.6
927.0	37.1	29.7	100	8.6	1.28	3.14	18664	98.40	290.82	8.4	17.6
928.0	32.1	28.9	100	8.6	1.32	3.17	18851	113.62	289.33	8.4	17.6
929.0	33.3	29.6	100	8.6	1.31	3.20	19031	109.56	287.83	8.4	17.6
930.0	43.4	29.3	100	8.6	1.23	3.23	19169	84.20	286.14	8.4	17.6
931.0	55.4	29.8	100	8.6	1.15	3.25	19277	65.94	284.33	8.4	17.6
932.0	44.4	30.6	100	8.6	1.23	3.27	19412	82.17	282.69	8.4	17.6
933.0	42.9	30.5	100	8.6	1.24	3.29	19552	85.21	281.09	8.4	17.6
934.0	47.4	30.1	100	8.6	1.21	3.31	19679	77.10	279.46	8.4	17.6
935.0	55.4	29.5	100	8.6	1.15	3.33	19787	65.94	277.76	8.4	17.6
936.0	61.0	29.6	100	8.6	1.12	3.35	19886	59.85	276.04	8.4	17.6
937.0	32.4	29.3	100	8.6	1.32	3.38	20071	112.60	274.76	8.4	17.6
938.0	43.9	29.1	100	8.6	1.22	3.40	20207	83.18	273.27	8.4	17.6
939.0	34.6	29.9	100	8.6	1.31	3.43	20381	105.50	271.98	8.4	17.6
940.0	29.5	24.7	100	8.6	1.29	3.46	20584	123.76	270.85	8.4	17.6
941.0	35.0	26.5	100	8.6	1.26	3.49	20756	104.49	269.59	8.4	17.6
942.0	40.4	25.2	100	8.6	1.20	3.52	20904	90.29	268.24	8.4	17.6
943.0	58.1	26.8	100	8.6	1.10	3.53	21007	62.90	266.70	8.4	17.6
944.0	34.6	24.9	100	8.6	1.24	3.56	21181	105.50	265.51	8.4	17.6
945.0	65.5	24.2	100	8.6	1.04	3.58	21272	55.79	263.96	8.4	17.6
946.0	63.2	25.0	100	8.6	1.06	3.59	21367	57.82	262.45	8.4	17.6
947.0	61.0	24.0	100	8.6	1.05	3.61	21466	59.85	260.98	8.4	17.6
948.0	61.0	23.7	100	8.6	1.05	3.63	21564	59.85	259.53	8.4	17.6
949.0	42.9	22.8	100	8.6	1.15	3.65	21704	85.21	258.29	8.4	17.6
950.0	46.8	21.6	100	8.6	1.11	3.67	21832	78.11	257.01	8.4	17.6
951.0	58.1	22.0	100	8.6	1.05	3.69	21936	62.90	255.64	8.4	17.6
952.0	39.6	22.8	100	8.6	1.17	3.71	22087	92.31	254.50	8.4	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
953.0	38.7	23.3	100	8.6	1.19	3.74	22242	94.34	253.38	8.4	17.7
954.0	48.6	23.5	100	8.6	1.12	3.76	22366	75.07	252.15	8.4	17.7
955.0	67.9	24.1	100	8.6	1.02	3.77	22454	53.77	250.79	8.4	17.7
956.0	56.2	24.4	100	8.6	1.08	3.79	22561	64.92	249.52	8.4	17.7
957.0	52.9	23.7	100	8.6	1.10	3.81	22674	68.98	248.30	8.4	17.7
958.0	37.9	22.9	100	8.6	1.19	3.84	22832	96.37	247.28	8.4	17.7
959.0	52.9	23.9	100	8.6	1.10	3.86	22946	68.98	246.09	8.4	17.7
960.0	58.1	24.1	100	8.6	1.07	3.87	23049	62.90	244.88	8.4	17.7
961.0	54.5	23.8	100	8.6	1.09	3.89	23159	66.95	243.70	8.4	17.7
962.0	59.0	23.9	100	8.6	1.06	3.91	23261	61.88	242.51	8.4	17.7
963.0	51.4	24.1	100	8.6	1.11	3.93	23377	71.01	241.40	8.4	17.7
964.0	41.9	23.7	100	8.6	1.17	3.95	23521	87.24	240.40	8.4	17.7
965.0	37.5	23.8	100	8.6	1.20	3.98	23681	97.39	239.49	8.4	17.7
966.0	36.0	23.7	100	8.6	1.21	4.01	23847	101.44	238.60	8.4	17.7
967.0	41.1	21.6	100	8.9	1.11	4.03	23993	88.76	237.66	8.4	17.7
968.0	59.0	22.7	100	8.9	1.01	4.05	24095	61.88	236.55	8.4	17.7
969.0	56.2	23.3	100	8.9	1.04	4.07	24201	64.92	235.47	8.4	17.7
970.0	61.0	23.4	100	8.9	1.01	4.08	24300	59.85	234.38	8.4	17.7
971.0	53.7	23.3	100	8.9	1.05	4.10	24411	67.97	233.35	8.4	17.7
972.0	39.6	22.7	100	8.9	1.13	4.13	24563	92.31	232.49	8.4	17.7
973.0	51.4	22.4	100	8.9	1.05	4.15	24680	71.01	231.50	8.4	17.7
974.0	50.0	22.8	115	8.9	1.11	4.17	24818	73.04	230.54	8.4	17.7
975.0	46.8	24.1	115	8.9	1.14	4.19	24965	78.11	229.62	8.4	17.7
976.0	90.2	20.0	115	8.9	0.90	4.20	25042	40.49	228.49	8.4	17.7
977.0	94.2	20.0	115	8.8	0.90	4.21	25115	38.77	227.36	8.4	17.7
978.0	95.6	20.0	115	8.9	0.88	4.22	25187	38.21	226.24	8.4	17.7
979.0	70.6	20.4	115	8.9	0.97	4.23	25285	51.74	225.21	8.4	17.7
980.0	62.1	23.2	115	8.9	1.05	4.25	25396	58.84	224.23	8.4	17.7
981.0	58.1	24.2	115	8.9	1.08	4.27	25515	62.90	223.29	8.4	17.7
982.0	61.0	23.7	115	8.9	1.06	4.28	25628	59.85	222.35	8.4	17.7
983.0	62.1	25.3	115	8.9	1.07	4.30	25739	58.84	221.41	8.4	17.7
984.0	59.0	25.1	115	8.9	1.08	4.32	25856	61.88	220.50	8.4	17.7
985.0	50.0	24.9	115	8.9	1.13	4.34	25994	73.04	219.66	8.4	17.7
986.0	31.3	24.3	115	8.9	1.26	4.37	26215	116.66	219.07	8.4	17.7
987.0	35.6	24.5	115	8.9	1.23	4.40	26408	102.46	218.42	8.4	17.7
988.0	26.5	25.0	115	8.9	1.33	4.43	26669	137.96	217.97	8.4	17.7
989.0	36.7	25.7	115	8.9	1.23	4.46	26857	99.42	217.31	8.4	17.7
990.0	34.0	25.0	115	8.9	1.25	4.49	27060	107.53	216.70	8.4	17.7
991.0	50.7	24.9	115	8.9	1.13	4.51	27196	72.03	215.91	8.4	17.8
992.0	54.5	24.8	115	8.9	1.10	4.53	27322	66.95	215.09	8.4	17.8
993.0	54.5	25.3	115	8.9	1.11	4.55	27449	66.95	214.29	8.4	17.8
994.0	53.7	26.0	115	8.9	1.12	4.57	27577	67.97	213.49	8.4	17.8
995.0	36.7	25.0	115	8.9	1.23	4.59	27765	99.51	212.88	8.4	17.8
996.0	54.1	22.1	115	8.9	1.07	4.61	27893	67.46	212.10	8.4	17.8
997.0	36.0	23.4	115	8.9	1.21	4.64	28085	101.44	211.51	8.4	17.8
998.0	41.4	22.6	115	8.9	1.16	4.66	28251	88.26	210.86	8.4	17.8
999.0	39.1	23.0	115	8.9	1.18	4.69	28428	93.33	210.24	8.4	17.8
1000.0	36.4	23.2	115	8.9	1.20	4.72	28617	100.43	209.66	8.4	17.8
1001.0	40.9	24.0	115	8.9	1.18	4.74	28786	89.27	209.04	8.4	17.8
1002.0	52.9	22.9	115	8.9	1.09	4.76	28916	68.98	208.31	8.4	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1003.0	52.2	23.5	115	8.9	1.10	4.78	29049	70.00	207.60	8.4	17.8
1004.0	64.3	23.9	115	8.9	1.04	4.79	29156	56.81	206.82	8.4	17.8
1005.0	58.1	19.2	115	8.9	1.01	4.81	29275	62.90	206.09	8.4	17.8
1006.0	21.7	25.4	115	8.9	1.39	4.86	29593	168.40	205.90	8.4	17.8
1007.0	29.5	23.5	115	8.9	1.27	4.89	29827	123.76	205.48	8.4	17.8
1008.0	34.6	22.2	115	8.9	1.21	4.92	30026	105.50	204.98	8.4	17.8
1009.0	27.5	24.6	115	8.9	1.31	4.96	30277	132.89	204.62	8.4	17.8
1010.0	29.8	24.2	115	8.9	1.28	4.99	30509	122.75	204.21	8.4	17.8
1011.0	46.8	23.7	115	8.9	1.14	5.01	30657	78.11	203.58	8.4	17.8
1012.0	42.4	25.2	115	8.9	1.19	5.04	30820	86.23	203.01	8.4	17.8
1013.0	32.7	23.9	115	8.9	1.25	5.07	31030	111.59	202.56	8.4	17.8
1014.0	29.0	24.1	115	8.9	1.28	5.10	31268	125.79	202.18	8.4	17.8
1015.0	37.5	24.2	115	8.9	1.21	5.13	31452	97.39	201.67	8.4	17.8
1016.0	76.4	25.0	115	8.9	1.00	5.14	31542	47.82	200.93	8.4	17.8
1017.0	33.6	25.0	115	8.9	1.25	5.17	31748	108.55	200.48	8.4	17.8
1018.0	42.9	25.0	115	8.9	1.18	5.19	31909	85.21	199.93	8.4	17.8
1019.0	39.6	25.0	115	8.9	1.20	5.22	32083	92.31	199.42	8.4	17.8
1020.0	39.1	25.0	115	8.9	1.21	5.24	32259	93.33	198.92	8.4	17.8
1021.0	40.4	25.0	115	8.9	1.20	5.27	32430	90.29	198.40	8.4	17.8
1022.0	33.0	25.0	115	8.9	1.26	5.30	32639	110.57	197.99	8.4	17.8
1023.0	26.5	25.0	115	8.9	1.33	5.34	32899	137.96	197.71	8.4	17.8
1024.0	32.1	25.0	115	8.9	1.27	5.37	33114	113.62	197.32	8.4	17.8
1025.0	35.6	25.0	115	8.9	1.24	5.40	33308	102.46	196.88	8.4	17.8
1026.0	25.2	25.0	115	8.9	1.34	5.44	33582	145.07	196.64	8.4	17.8
1027.0	30.5	25.0	115	8.9	1.28	5.47	33808	119.70	196.29	8.4	17.8
1028.0	33.0	25.0	115	8.9	1.26	5.50	34017	110.57	195.90	8.4	17.8
1029.0	35.6	25.0	115	8.9	1.24	5.53	34210	102.46	195.47	8.4	17.8
1030.0	30.3	25.0	115	8.9	1.28	5.56	34439	120.72	195.13	8.4	17.9
1031.0	33.0	25.0	115	8.9	1.26	5.59	34647	110.57	194.75	8.4	17.9
1032.0	30.0	26.7	115	8.9	1.31	5.62	34877	121.73	194.42	8.4	17.9
1033.0	30.8	27.8	115	8.9	1.32	5.66	35102	118.69	194.08	8.4	17.9
1034.0	24.5	25.2	115	8.9	1.35	5.70	35383	149.12	193.88	8.4	17.9
1035.0	26.1	24.3	115	8.9	1.32	5.74	35648	139.99	193.65	8.4	17.9
1036.0	25.2	23.2	115	8.9	1.31	5.77	35922	145.07	193.43	8.4	17.9
1037.0	24.2	24.1	115	8.9	1.34	5.82	36208	151.15	193.25	8.4	17.9
1038.0	37.5	23.8	115	8.9	1.20	5.84	36392	97.39	192.83	8.4	17.9
1039.0	37.9	24.9	115	8.9	1.22	5.87	36574	96.37	192.41	8.4	17.9
1040.0	34.6	24.0	115	8.9	1.23	5.90	36773	105.50	192.03	8.4	17.9
1041.0	24.7	23.7	115	8.9	1.33	5.94	37053	148.11	191.84	8.4	17.9
1042.0	24.0	24.2	115	8.9	1.34	5.98	37340	152.17	191.67	8.4	17.9
1043.0	14.0	24.1	115	8.9	1.50	6.05	37833	260.71	191.97	8.4	17.9
1044.0	20.1	23.9	115	8.9	1.39	6.10	38176	181.59	191.92	8.4	17.9
1045.0	18.1	24.6	115	8.9	1.43	6.16	38557	201.87	191.96	8.4	17.9
1046.0	14.7	22.9	115	8.9	1.47	6.22	39027	248.54	192.20	8.4	17.9
1047.0	20.3	23.0	115	8.9	1.37	6.27	39366	179.56	192.15	8.4	17.9
1048.0	8.5	22.5	115	8.7	1.66	6.39	40177	429.11	193.14	8.4	17.9
1049.0	8.9	21.3	115	8.7	1.62	6.50	40949	408.82	194.04	8.4	17.9
1050.0	23.8	23.6	115	8.7	1.37	6.55	41239	153.18	193.87	8.4	17.9
1051.0	18.9	23.8	115	8.7	1.44	6.60	41603	192.74	193.87	8.4	17.9
1052.0	24.0	23.4	115	8.7	1.36	6.64	41891	152.17	193.70	8.4	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1053.0	21.3	24.4	115	8.7	1.41	6.69	42214	171.44	193.60	8.4	17.9
1054.0	27.5	29.9	115	8.7	1.41	6.72	42466	132.89	193.36	8.4	17.9
1055.0	12.0	26.5	115	8.7	1.63	6.81	43042	305.35	193.81	8.4	17.9
1056.0	16.2	26.1	115	8.7	1.52	6.87	43468	225.21	193.94	8.4	17.9
1057.0	14.4	27.0	115	8.7	1.58	6.94	43947	253.61	194.18	8.4	17.9
1058.0	14.2	26.1	115	8.7	1.57	7.01	44432	256.65	194.43	8.4	17.9
1059.0	14.5	26.0	115	8.7	1.56	7.08	44909	252.60	194.66	8.4	17.9
1060.0	15.8	26.0	115	8.7	1.53	7.14	45346	231.29	194.81	8.4	17.9
1061.0	16.1	25.1	115	8.7	1.51	7.20	45774	226.22	194.93	8.4	17.9
1062.0	24.5	24.7	115	8.7	1.38	7.24	46055	149.12	194.75	8.4	17.9
1063.0	20.6	25.1	115	8.7	1.43	7.29	46391	177.53	194.69	8.4	17.9
1064.0	32.7	26.1	115	8.7	1.30	7.32	46602	111.59	194.36	8.4	17.9
1065.0	23.2	26.1	115	8.7	1.41	7.37	46899	157.24	194.21	8.4	17.9
1066.0	14.6	25.4	115	8.7	1.55	7.43	47372	250.57	194.43	8.4	17.9
1067.0	15.3	25.6	115	8.7	1.54	7.50	47825	239.41	194.61	8.4	17.9
1068.0	8.8	21.3	115	8.7	1.63	7.61	48607	413.89	195.46	8.4	17.9
1069.0	32.4	27.3	115	8.7	1.32	7.64	48819	112.60	195.14	8.4	17.9
1070.0	38.3	28.7	115	8.7	1.29	7.67	48999	95.36	194.75	8.4	18.0
1071.0	27.3	35.1	115	8.7	1.48	7.71	49252	133.91	194.52	8.4	18.0
1072.0	18.0	35.7	115	8.7	1.63	7.76	49636	202.89	194.55	8.4	18.0
1073.0	20.9	36.3	115	8.7	1.59	7.81	49965	174.48	194.48	8.4	18.0
1074.0	27.3	34.1	100	8.7	1.42	7.85	50185	133.91	194.25	8.4	18.0
1075.0	24.3	31.2	100	8.7	1.42	7.89	50432	150.14	194.08	8.4	18.0
1076.0	30.5	29.5	100	8.7	1.33	7.92	50629	119.70	193.80	8.4	18.0
1077.0	25.5	28.8	100	8.7	1.38	7.96	50864	143.04	193.61	8.4	18.0
1078.0	34.6	28.4	100	8.7	1.27	7.99	51037	105.50	193.29	8.4	18.0
1079.0	41.4	27.8	100	8.7	1.21	8.01	51182	88.26	192.90	8.4	18.0
1080.0	40.0	27.1	100	8.7	1.21	8.04	51332	91.30	192.52	8.4	18.0
1081.0	25.7	27.5	100	8.7	1.36	8.08	51565	142.02	192.34	8.4	18.0
1082.0	33.0	27.5	100	8.7	1.28	8.11	51747	110.57	192.04	8.4	18.0
1083.0	27.3	27.2	100	8.7	1.33	8.14	51967	133.91	191.82	8.4	18.0
1084.0	33.6	31.7	100	8.7	1.32	8.17	52145	108.55	191.52	8.4	18.0
1085.0	18.5	26.9	100	8.7	1.45	8.23	52470	197.82	191.54	8.4	18.0
1086.0	15.5	25.4	100	8.7	1.49	8.29	52859	236.37	191.71	8.4	18.0
1087.0	17.6	24.2	100	8.7	1.43	8.35	53200	207.96	191.76	8.4	18.0
1088.0	30.3	26.7	100	8.7	1.29	8.38	53399	120.72	191.51	8.4	18.0
1089.0	25.9	26.8	100	8.7	1.34	8.42	53630	141.01	191.33	8.4	18.0
1090.0	31.6	26.1	100	8.7	1.27	8.45	53820	115.65	191.06	8.4	18.0
1091.0	23.2	26.7	100	8.7	1.38	8.50	54079	157.24	190.94	8.4	18.0
1092.0	33.3	25.4	100	8.7	1.25	8.53	54259	109.56	190.65	8.4	18.0
1093.0	34.0	25.8	100	8.7	1.25	8.56	54435	107.53	190.36	8.4	18.0
1094.0	34.3	26.2	100	8.7	1.25	8.58	54610	106.52	190.06	8.4	18.0
1095.0	27.3	25.6	100	8.7	1.31	8.62	54830	133.91	189.87	8.4	18.0
1096.0	40.9	24.4	100	8.7	1.17	8.65	54977	89.27	189.52	8.4	18.0
1097.0	24.7	28.3	100	8.7	1.38	8.69	55220	148.11	189.37	8.4	18.0
1098.0	22.6	27.7	100	8.7	1.40	8.73	55485	161.30	189.28	8.4	18.0
1099.0	20.7	27.5	100	8.7	1.42	8.78	55775	176.51	189.23	8.4	18.0
1100.0	36.4	26.8	100	8.7	1.24	8.81	55940	100.43	188.93	8.4	18.0
1101.0	27.5	25.6	100	8.7	1.31	8.84	56159	132.89	188.73	8.4	18.0
1102.0	30.3	25.3	100	8.7	1.28	8.88	56357	120.72	188.50	8.4	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1103.0	40.0	24.0	100	8.7	1.17	8.90	56507	91.30	188.17	8.4	18.0
1104.0	29.3	24.2	100	8.7	1.27	8.93	56712	124.78	187.96	8.4	18.0
1105.0	32.4	24.0	100	8.7	1.24	8.97	56897	112.60	187.70	8.4	18.0
1106.0	29.0	23.6	100	8.7	1.26	9.00	57104	125.79	187.49	8.4	18.0
1107.0	36.7	24.0	100	8.7	1.20	9.03	57267	99.42	187.20	8.4	18.0
1108.0	44.4	24.7	100	8.7	1.15	9.05	57402	82.17	186.85	8.4	18.0
1109.0	46.2	23.2	100	8.7	1.12	9.07	57532	79.13	186.49	8.4	18.0
1110.0	37.5	24.1	100	8.7	1.19	9.10	57692	97.39	186.19	8.4	18.0
1111.0	40.4	24.6	100	8.7	1.18	9.12	57840	90.29	185.87	8.4	18.1
1112.0	32.1	24.4	100	8.8	1.23	9.15	58027	113.62	185.63	8.4	18.1
1113.0	40.4	27.7	100	8.8	1.20	9.18	58175	90.29	185.32	8.4	18.1
1114.0	35.0	33.3	100	8.8	1.31	9.21	58347	104.49	185.05	8.4	18.1
1115.0	47.4	32.6	100	8.8	1.21	9.23	58474	77.10	184.70	8.4	18.1
1116.0	32.4	33.2	100	8.8	1.34	9.26	58659	112.60	184.47	8.4	18.1
1117.0	26.9	33.3	100	8.8	1.40	9.30	58882	135.94	184.31	8.4	18.1
1118.0	30.0	33.5	100	8.8	1.37	9.33	59082	121.73	184.11	8.4	18.1
1119.0	30.8	33.2	100	8.8	1.35	9.36	59277	118.69	183.90	8.4	18.1
1120.0	28.6	33.0	100	8.8	1.38	9.40	59487	127.82	183.71	8.4	18.1
1121.0	20.1	33.1	100	8.8	1.50	9.45	59785	181.59	183.71	8.4	18.1
1122.0	18.6	33.3	100	8.8	1.52	9.50	60109	196.80	183.75	8.4	18.1
1123.0	38.7	33.4	100	8.8	1.28	9.53	60264	94.34	183.46	8.4	18.1
1124.0	37.1	33.4	100	8.8	1.30	9.55	60425	98.40	183.19	8.4	18.1
1125.0	36.7	34.0	100	8.8	1.31	9.58	60589	99.42	182.93	8.4	18.1
1126.0	32.7	33.2	100	8.8	1.33	9.61	60772	111.59	182.70	8.4	18.1
1127.0	12.1	34.0	100	8.8	1.68	9.69	61267	301.29	183.08	8.4	18.1
1128.0	23.7	33.3	100	8.8	1.44	9.74	61520	154.20	182.99	8.4	18.1
1129.0	32.1	32.8	100	8.8	1.34	9.77	61707	113.62	182.77	8.4	18.1
1130.0	14.6	31.3	100	8.8	1.57	9.84	62117	249.55	182.98	8.4	18.1
1131.0	18.9	29.3	100	8.8	1.46	9.89	62434	192.74	183.01	8.4	18.1
1132.0	18.6	27.3	100	8.8	1.44	9.94	62757	196.80	183.05	8.4	18.1
1133.0	26.7	27.7	100	8.8	1.33	9.98	62982	136.95	182.91	8.4	18.1
1134.0	17.9	29.4	100	8.8	1.48	10.04	63317	203.90	182.97	8.4	18.1
1135.0	14.3	29.6	100	8.8	1.56	10.11	63737	255.64	183.20	8.4	18.1
1136.0	16.2	30.3	100	8.8	1.53	10.17	64107	225.21	183.32	8.4	18.1
1137.0	19.1	30.0	100	8.8	1.47	10.22	64420	190.72	183.35	8.4	18.1
1138.0	18.2	30.0	100	8.8	1.49	10.27	64750	200.86	183.40	8.4	18.1
1139.0	24.7	30.7	100	8.8	1.40	10.31	64994	148.11	183.29	8.4	18.1
1140.0	17.6	33.1	100	8.8	1.54	10.37	65334	206.95	183.37	8.4	18.1
1141.0	20.3	29.7	100	8.8	1.45	10.42	65629	179.56	183.35	8.4	18.1
1142.0	28.1	35.0	100	8.8	1.41	10.46	65842	129.85	183.19	8.4	18.1
1143.0	29.5	35.1	100	8.8	1.39	10.49	66045	123.76	183.01	8.4	18.1
1144.0	23.5	35.6	100	8.8	1.47	10.53	66300	155.21	182.93	8.4	18.1
1145.0	30.8	35.6	100	8.8	1.38	10.57	66495	118.69	182.74	8.4	18.1
1146.0	26.1	35.8	100	8.8	1.44	10.60	66725	139.99	182.61	8.4	18.1
1147.0	22.8	31.3	100	8.8	1.43	10.65	66989	160.28	182.55	8.4	18.1
1148.0	40.0	31.3	100	8.8	1.25	10.67	67139	91.30	182.28	8.4	18.1
1149.0	36.0	32.0	100	8.8	1.29	10.70	67305	101.44	182.04	8.4	18.1
1150.0	47.4	36.4	100	8.8	1.25	10.72	67432	77.10	181.73	8.4	18.1
1151.0	26.9	36.7	100	8.8	1.44	10.76	67655	135.94	181.60	8.4	18.1
1152.0	30.8	36.3	100	8.8	1.39	10.79	67850	118.69	181.41	8.4	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1153.0	34.6	35.8	100	8.8	1.35	10.82	68024	105.50	181.19	8.4	18.2
1154.0	35.0	35.9	100	8.8	1.34	10.85	68195	104.49	180.97	8.4	18.2
1155.0	22.5	35.6	100	8.8	1.49	10.89	68462	162.31	180.92	8.4	18.2
1156.0	31.6	35.6	100	8.8	1.37	10.92	68652	115.65	180.73	8.4	18.2
1157.0	31.9	35.7	100	8.8	1.37	10.96	68840	114.63	180.54	8.4	18.2
1158.0	38.7	36.3	100	8.8	1.31	10.98	68995	94.34	180.29	8.4	18.2
1159.0	32.7	37.4	100	8.8	1.38	11.01	69179	111.59	180.10	8.4	18.2
1160.0	30.5	38.0	100	8.8	1.41	11.05	69375	119.70	179.92	8.4	18.2
1161.0	31.0	36.7	100	8.8	1.39	11.08	69569	117.68	179.75	8.4	18.2
1162.0	30.0	37.7	100	8.7	1.43	11.11	69769	121.73	179.58	8.4	18.2
1163.0	30.3	37.8	100	8.7	1.43	11.14	69967	120.72	179.42	8.4	18.2
1164.0	29.8	37.4	100	8.7	1.43	11.18	70169	122.75	179.26	8.4	18.2
1165.0	36.0	38.2	100	8.7	1.37	11.21	70335	101.44	179.04	8.4	18.2
1166.0	27.5	38.1	100	8.7	1.47	11.24	70554	132.89	178.91	8.4	18.2
1167.0	26.5	33.5	100	8.7	1.43	11.28	70780	137.96	178.79	8.4	18.2
1168.0	26.7	31.0	100	8.7	1.39	11.32	71005	136.95	178.68	8.4	18.2
1169.0	38.3	30.7	100	8.7	1.27	11.34	71162	95.36	178.45	8.4	18.2
1170.0	36.7	30.1	100	8.7	1.27	11.37	71325	99.42	178.23	8.4	18.2
1171.0	41.9	30.3	100	8.7	1.23	11.39	71469	87.24	177.98	8.4	18.2
1172.0	40.9	30.8	100	8.7	1.25	11.42	71615	89.27	177.73	8.4	18.2
1173.0	48.6	30.1	100	8.7	1.18	11.44	71739	75.07	177.45	8.4	18.2
1174.0	41.4	30.3	100	8.7	1.24	11.46	71884	88.26	177.20	8.4	18.2
1175.0	46.8	29.3	100	8.7	1.19	11.48	72012	78.11	176.93	8.4	18.2
1176.0	40.9	29.6	100	8.7	1.23	11.51	72159	89.27	176.69	8.4	18.2
1177.0	34.6	29.1	100	8.7	1.28	11.54	72332	105.50	176.50	8.4	18.2
1178.0	40.9	30.1	100	8.7	1.24	11.56	72479	89.27	176.26	8.4	18.2
1179.0	36.4	30.7	100	8.7	1.28	11.59	72644	100.43	176.06	8.4	18.2
1180.0	41.4	31.3	100	8.7	1.25	11.61	72789	88.26	175.82	8.4	18.2
1181.0	33.3	31.3	100	8.7	1.32	11.64	72969	109.56	175.64	8.4	18.2
1182.0	35.3	30.5	100	8.7	1.29	11.67	73139	103.47	175.45	8.4	18.2
1183.0	29.0	30.5	100	8.7	1.36	11.71	73345	125.79	175.32	8.4	18.2
1184.0	35.0	31.3	100	8.7	1.31	11.74	73517	104.49	175.13	8.4	18.2
1185.0	33.0	30.9	100	8.7	1.32	11.77	73699	110.57	174.96	8.4	18.2
1186.0	29.3	28.6	100	8.7	1.33	11.80	73904	124.78	174.82	8.4	18.2
1187.0	40.9	20.8	100	8.7	1.12	11.82	74050	89.27	174.60	8.4	18.2
1188.0	40.4	22.3	100	8.7	1.15	11.85	74199	90.29	174.37	8.4	18.2
1189.0	23.1	23.4	100	8.7	1.33	11.89	74459	158.25	174.33	8.4	18.2
1190.0	36.4	24.1	100	8.7	1.20	11.92	74624	100.43	174.14	8.4	18.2
1191.0	34.6	24.3	100	8.7	1.22	11.95	74797	105.50	173.96	8.4	18.2
1192.0	42.4	23.8	100	8.7	1.15	11.97	74939	86.23	173.73	8.4	18.2
1193.0	43.4	23.2	100	8.7	1.14	12.00	75077	84.20	173.50	8.4	18.2
1194.0	56.2	23.7	100	8.7	1.06	12.01	75184	64.92	173.21	8.4	18.2
1195.0	48.6	23.8	100	8.7	1.11	12.03	75307	75.07	172.96	8.4	18.2
1196.0	34.6	28.0	100	8.7	1.27	12.06	75480	105.50	172.78	8.4	18.3
1197.0	41.9	28.5	100	8.7	1.21	12.09	75624	87.24	172.56	8.4	18.3
1198.0	37.9	29.3	100	8.7	1.26	12.11	75782	96.37	172.37	8.4	18.3
1199.0	45.0	30.4	100	8.7	1.21	12.14	75915	81.16	172.13	8.4	18.3
1200.0	39.1	30.6	100	8.7	1.26	12.16	76069	93.33	171.93	8.4	18.3
1201.0	40.9	31.6	100	8.7	1.26	12.19	76215	89.27	171.72	8.4	18.3
1202.0	35.6	31.3	100	8.7	1.30	12.21	76384	102.46	171.55	8.4	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1203.0	33.6	31.1	100	8.7	1.32	12.24	76562	108.55	171.39	8.4	18.3
1204.0	34.6	30.7	100	8.7	1.30	12.27	76735	105.50	171.22	8.4	18.3
1205.0	39.6	33.7	100	8.7	1.29	12.30	76887	92.31	171.02	8.4	18.3
1206.0	26.3	29.1	100	8.7	1.37	12.34	77115	138.98	170.94	8.4	18.3
1207.0	32.4	29.2	100	8.7	1.30	12.37	77300	112.60	170.79	8.4	18.3
1208.0	32.4	29.9	100	8.7	1.31	12.40	77485	112.60	170.65	8.4	18.3
1209.0	35.3	29.6	100	8.7	1.28	12.43	77655	103.47	170.48	8.4	18.3
1210.0	32.7	29.8	100	8.7	1.31	12.46	77839	111.59	170.33	8.4	18.3
1211.0	31.9	28.0	100	8.7	1.30	12.49	78027	114.63	170.19	8.4	18.3
1212.0	37.9	27.6	100	8.7	1.23	12.51	78185	96.37	170.01	8.4	18.3
1213.0	36.7	27.7	100	8.7	1.25	12.54	78349	99.42	169.83	8.4	18.3
1214.0	34.0	23.0	100	8.7	1.21	12.57	78525	107.53	169.68	8.4	18.3
1215.0	44.4	27.3	100	8.7	1.18	12.59	78660	82.17	169.46	8.4	18.3
1216.0	47.4	28.2	100	8.7	1.17	12.61	78787	77.10	169.24	8.4	18.3
1217.0	40.4	27.5	100	8.7	1.21	12.64	78935	90.29	169.04	8.4	18.3
1218.0	39.1	27.5	100	8.7	1.22	12.66	79089	93.33	168.86	8.4	18.3
1219.0	35.3	28.7	100	8.7	1.27	12.69	79259	103.47	168.70	8.4	18.3
1220.0	46.8	29.1	100	8.7	1.18	12.71	79387	78.11	168.48	8.4	18.3
1221.0	40.0	28.9	100	8.7	1.23	12.74	79537	91.30	168.29	8.4	18.3
1222.0	44.4	28.7	100	8.7	1.20	12.76	79672	82.17	168.08	8.4	18.3
1223.0	36.7	28.0	100	8.7	1.25	12.79	79835	99.42	167.92	8.4	18.3
1224.0	33.3	26.1	100	8.7	1.26	12.82	80015	109.56	167.78	8.4	18.3
1225.0	44.4	28.5	100	8.7	1.19	12.84	80150	82.17	167.57	8.4	18.3
1226.0	38.3	28.1	100	8.7	1.24	12.87	80307	95.36	167.40	8.4	18.3
1227.0	42.9	28.8	100	8.8	1.20	12.89	80447	85.21	167.20	8.4	18.3
1228.0	39.1	29.6	100	8.8	1.23	12.92	80600	93.33	167.02	8.4	18.3
1229.0	43.4	27.8	100	8.8	1.18	12.94	80739	84.20	166.83	8.4	18.3
1230.0	35.0	28.1	100	8.8	1.25	12.97	80910	104.49	166.68	8.4	18.3
1231.0	46.2	27.4	100	8.8	1.16	12.99	81040	79.13	166.47	8.4	18.3
1232.0	41.4	28.6	100	8.8	1.20	13.01	81185	88.26	166.29	8.4	18.3
1233.0	38.3	25.0	100	8.8	1.18	13.04	81342	95.36	166.12	8.4	18.3
1234.0	46.8	25.0	100	8.8	1.12	13.06	81470	78.11	165.91	8.4	18.3
1235.0	43.9	25.0	100	8.8	1.14	13.08	81607	83.18	165.72	8.4	18.3
1236.0	52.2	25.0	100	8.8	1.09	13.10	81722	70.00	165.49	8.4	18.3
1237.0	43.9	25.0	100	8.8	1.14	13.13	81859	83.18	165.30	8.4	18.3
1238.0	51.4	25.0	100	8.8	1.09	13.15	81975	71.01	165.08	8.4	18.3
1239.0	40.9	25.0	100	8.8	1.16	13.17	82122	89.27	164.90	8.4	18.3
1240.0	46.8	25.0	100	8.8	1.12	13.19	82250	78.11	164.70	8.4	18.4
1241.0	38.7	25.0	100	8.8	1.18	13.22	82405	94.34	164.54	8.4	18.4
1242.0	46.2	25.0	100	8.8	1.13	13.24	82535	79.13	164.34	8.4	18.4
1243.0	53.7	27.3	100	8.8	1.11	13.26	82647	67.97	164.12	8.4	18.4
1244.0	59.0	27.7	100	8.8	1.08	13.27	82749	61.88	163.88	8.4	18.4
1245.0	50.7	27.5	100	8.8	1.13	13.29	82867	72.03	163.67	8.4	18.4
1246.0	61.0	28.2	100	8.8	1.08	13.31	82965	59.85	163.44	8.4	18.4
1247.0	52.2	28.0	100	8.8	1.12	13.33	83080	70.00	163.22	8.4	18.4
1248.0	52.2	27.3	100	8.8	1.12	13.35	83195	70.00	163.01	8.4	18.4
1249.0	37.5	27.8	100	8.8	1.23	13.38	83355	97.39	162.86	8.4	18.4
1250.0	49.3	28.1	100	8.8	1.14	13.40	83477	74.05	162.66	8.4	18.4
1251.0	39.1	29.0	100	8.8	1.23	13.42	83630	93.33	162.50	8.4	18.4
1252.0	48.0	28.6	100	8.8	1.16	13.44	83755	76.08	162.31	8.4	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1253.0	59.0	28.7	100	8.8	1.09	13.46	83857	61.88	162.08	8.4	18.4
1254.0	51.4	29.8	100	8.8	1.15	13.48	83974	71.01	161.88	8.4	18.4
1255.0	56.2	29.4	100	8.8	1.12	13.50	84080	64.92	161.66	8.4	18.4
1256.0	47.4	30.2	100	8.8	1.18	13.52	84207	77.10	161.47	8.4	18.4
1257.0	55.4	30.3	100	8.8	1.13	13.54	84315	65.94	161.26	8.4	18.4
1258.0	51.4	29.8	100	8.8	1.15	13.55	84432	71.01	161.06	8.4	18.4
1259.0	63.2	29.0	100	8.8	1.07	13.57	84527	57.82	160.83	8.4	18.4
1260.0	44.4	28.1	100	8.8	1.18	13.59	84662	82.17	160.65	8.4	18.4
1261.0	50.7	32.7	100	8.8	1.18	13.61	84780	72.03	160.46	8.4	18.4
1262.0	52.2	31.3	100	8.8	1.16	13.63	84895	70.00	160.26	8.4	18.4
1263.0	57.1	31.8	100	8.8	1.14	13.65	85000	63.91	160.04	8.4	18.4
1264.0	53.7	31.9	100	8.8	1.16	13.67	85112	67.97	159.84	8.4	18.4
1265.0	41.4	31.9	100	8.8	1.24	13.69	85257	88.26	159.68	8.4	18.4
1266.0	51.4	31.9	100	8.8	1.17	13.71	85374	71.01	159.49	8.4	18.4
1267.0	50.7	32.4	100	8.8	1.18	13.73	85492	72.03	159.30	8.4	18.4
1268.0	52.2	31.3	100	8.8	1.16	13.75	85607	70.00	159.10	8.4	18.4
1269.0	45.0	22.0	100	8.8	1.10	13.77	85740	81.16	158.93	8.4	18.4
1270.0	40.0	31.0	100	8.8	1.24	13.80	85890	91.30	158.79	8.4	18.4
1271.0	40.0	26.4	100	8.8	1.19	13.82	86040	91.30	158.64	8.4	18.4
1272.0	50.0	25.4	100	8.8	1.11	13.84	86160	73.04	158.46	8.4	18.4
1273.0	52.9	25.7	100	8.8	1.09	13.86	86274	68.98	158.26	8.4	18.4
1274.0	53.7	25.2	100	8.8	1.08	13.88	86385	67.97	158.07	8.4	18.4
1275.0	60.0	25.8	100	8.8	1.06	13.90	86485	60.87	157.86	8.4	18.4
1276.0	55.4	26.5	100	8.8	1.09	13.91	86594	65.94	157.66	8.4	18.4
1277.0	57.1	24.4	100	8.8	1.05	13.93	86699	63.91	157.46	8.4	18.4
1278.0	52.2	26.1	100	8.8	1.10	13.95	86814	70.00	157.28	8.4	18.4
1279.0	54.5	24.8	100	8.8	1.07	13.97	86924	66.95	157.08	8.4	18.4
1280.0	36.4	26.2	100	8.8	1.22	14.00	87089	100.43	156.96	8.4	18.4
1281.0	41.9	22.4	100	8.8	1.12	14.02	87232	87.24	156.82	8.4	18.4
1282.0	45.6	24.2	100	8.8	1.12	14.04	87364	80.14	156.65	8.4	18.4
1283.0	40.4	22.5	100	8.8	1.14	14.07	87512	90.29	156.51	8.4	18.4
1284.0	32.1	23.0	100	8.8	1.21	14.10	87699	113.62	156.42	8.4	18.4
1285.0	44.4	22.9	100	8.8	1.11	14.12	87834	82.17	156.27	8.4	18.4
1286.0	50.0	21.9	100	8.8	1.07	14.14	87954	73.04	156.09	8.4	18.5
1287.0	54.5	21.5	100	8.8	1.03	14.16	88064	66.95	155.91	8.4	18.5
1288.0	43.9	23.5	100	8.8	1.12	14.18	88200	83.18	155.75	8.4	18.5
1289.0	34.3	23.4	100	8.8	1.20	14.21	88375	106.52	155.65	8.4	18.5
1290.0	54.5	20.1	100	8.8	1.02	14.23	88485	66.95	155.47	8.4	18.5
1291.0	52.2	21.3	100	8.8	1.04	14.25	88600	70.00	155.29	8.4	18.5
1292.0	61.0	23.0	100	8.8	1.02	14.27	88699	59.85	155.09	8.4	18.5
1293.0	30.5	22.9	100	8.8	1.23	14.30	88895	119.70	155.02	8.4	18.5
1294.0	6.3	23.5	100	8.8	1.71	14.46	89850	581.28	155.90	8.4	18.5
1295.0	18.6	24.4	100	8.8	1.40	14.51	90174	196.80	155.98	8.4	18.5
1296.0	19.5	25.5	100	8.8	1.40	14.56	90482	187.67	156.05	8.4	18.5
1297.0	20.0	25.3	100	8.8	1.39	14.61	90782	182.60	156.10	8.4	18.5
1298.0	27.3	21.5	100	8.8	1.24	14.65	91002	133.91	156.06	8.4	18.5
1299.0	53.7	25.4	100	8.8	1.09	14.67	91114	67.97	155.88	8.4	18.5
1300.0	49.3	28.2	100	8.8	1.14	14.69	91235	74.05	155.71	8.4	18.5
1301.0	48.6	26.7	100	8.8	1.13	14.71	91359	75.07	155.55	8.4	18.5
1302.0	53.7	26.9	100	8.8	1.10	14.73	91470	67.97	155.37	8.4	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1303.0	48.6	26.8	100	8.8	1.13	14.75	91594	75.07	155.21	8.4	18.5
1304.0	48.6	27.6	100	8.8	1.14	14.77	91717	75.07	155.04	8.4	18.5
1305.0	46.8	26.8	100	8.8	1.14	14.79	91845	78.11	154.89	8.4	18.5
1306.0	55.4	27.4	100	8.8	1.10	14.81	91954	65.94	154.71	8.4	18.5
1307.0	45.0	28.7	100	8.8	1.18	14.83	92087	81.16	154.56	8.4	18.5
1308.0	51.4	29.0	100	8.8	1.14	14.85	92204	71.01	154.39	8.4	18.5
1309.0	40.0	29.5	100	8.8	1.23	14.87	92354	91.30	154.27	8.4	18.5
1310.0	55.4	31.7	100	8.8	1.14	14.89	92462	65.94	154.09	8.4	18.5
1311.0	50.0	30.3	100	8.8	1.16	14.91	92582	73.04	153.93	8.4	18.5
1312.0	52.9	30.5	100	8.8	1.15	14.93	92695	68.98	153.76	8.4	18.5
1313.0	47.4	30.0	100	8.8	1.18	14.95	92822	77.10	153.61	8.4	18.5
1314.0	26.5	30.0	100	8.8	1.36	14.99	93049	137.96	153.58	8.4	18.5
1315.0	20.7	30.0	100	8.8	1.44	15.04	93339	176.51	153.62	8.4	18.5
1316.0	35.3	30.0	100	8.8	1.27	15.07	93509	103.47	153.52	8.4	18.5
1317.0	35.6	30.0	100	8.8	1.27	15.10	93677	102.46	153.42	8.4	18.5
1318.0	33.6	30.0	100	8.8	1.29	15.13	93855	108.55	153.34	8.4	18.5
1319.0	36.0	30.0	100	8.8	1.27	15.15	94022	101.44	153.23	8.4	18.5
1320.0	44.4	30.0	100	8.8	1.20	15.18	94157	82.17	153.10	8.4	18.5
1321.0	42.9	30.0	100	8.8	1.21	15.20	94297	85.21	152.96	8.4	18.5
1322.0	42.4	30.0	100	8.8	1.21	15.22	94439	86.23	152.83	8.4	18.5
1323.0	39.6	30.0	100	8.8	1.24	15.25	94590	92.31	152.71	8.4	18.5
1324.0	40.9	30.0	100	8.8	1.22	15.27	94737	89.27	152.59	8.4	18.5
1325.0	40.0	30.0	100	8.8	1.23	15.30	94887	91.30	152.47	8.4	18.5
1326.0	46.8	30.0	100	8.8	1.18	15.32	95015	78.11	152.33	8.4	18.5
1327.0	35.0	30.0	100	8.8	1.27	15.35	95187	104.49	152.24	8.4	18.5
1328.0	34.0	30.0	100	8.8	1.28	15.38	95364	107.53	152.15	8.4	18.5
1329.0	41.4	30.0	100	8.8	1.22	15.40	95509	88.26	152.03	8.4	18.5
1330.0	53.7	30.0	100	8.8	1.14	15.42	95620	67.97	151.87	8.4	18.5
1331.0	44.4	28.8	100	8.8	1.18	15.44	95755	82.17	151.73	8.4	18.5
1332.0	50.0	29.3	100	8.8	1.15	15.46	95875	73.04	151.58	8.4	18.6
1333.0	48.0	28.9	100	8.8	1.16	15.48	96000	76.08	151.44	8.4	18.6
1334.0	46.2	29.6	100	8.8	1.18	15.50	96130	79.13	151.30	8.4	18.6
1335.0	45.0	29.6	100	8.8	1.19	15.53	96264	81.16	151.17	8.4	18.6
1336.0	37.1	29.5	100	8.8	1.25	15.55	96425	98.40	151.07	8.4	18.6
1337.0	43.4	28.7	100	8.8	1.19	15.58	96564	84.20	150.94	8.4	18.6
1338.0	41.4	30.4	100	8.8	1.22	15.60	96709	88.26	150.82	8.4	18.6
1339.0	50.0	34.4	100	8.8	1.21	15.62	96829	73.04	150.67	8.4	18.6
1340.0	40.9	33.1	100	8.8	1.26	15.65	96975	89.27	150.56	8.4	18.6
1341.0	41.9	31.7	100	8.8	1.24	15.67	97119	87.24	150.44	8.4	18.6
1342.0	40.4	33.6	100	8.8	1.27	15.69	97267	90.29	150.33	8.4	18.6
1343.0	45.6	34.1	100	8.8	1.23	15.72	97399	80.14	150.20	8.4	18.6
1344.0	15.4	33.6	100	8.8	1.59	15.78	97789	237.38	150.36	8.4	18.6
1345.0	11.3	34.1	100	8.8	1.70	15.87	98320	323.61	150.68	8.4	18.6
1346.0	25.2	34.3	100	8.8	1.43	15.91	98559	145.07	150.67	8.4	18.6
1347.0	36.4	34.4	100	8.8	1.31	15.94	98724	100.43	150.58	8.4	18.6
1348.0	26.9	29.3	100	8.8	1.35	15.97	98947	135.94	150.55	8.4	18.6
1349.0	24.0	27.9	100	8.8	1.37	16.02	99197	152.17	150.55	8.4	18.6
1350.0	25.7	28.5	100	8.8	1.35	16.05	99430	142.02	150.54	8.4	18.6
1351.0	32.1	27.2	100	8.8	1.27	16.09	99617	113.62	150.47	8.4	18.6
1352.0	32.7	28.0	100	8.8	1.27	16.12	99800	111.59	150.40	8.4	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1353.0	33.6	27.4	100	8.8	1.26	16.15	99979	108.55	150.32	8.4	18.6
1354.0	27.5	27.4	100	8.9	1.30	16.18	100197	132.89	150.29	8.4	18.6
1355.0	27.9	27.7	100	8.9	1.30	16.22	100412	130.86	150.25	8.4	18.6
1356.0	21.3	27.1	100	8.9	1.38	16.26	100694	171.44	150.29	8.4	18.6
1357.0	35.3	30.0	100	8.9	1.26	16.29	100864	103.47	150.21	8.4	18.6
1358.0	37.1	30.0	100	8.9	1.24	16.32	101025	98.40	150.11	8.4	18.6
1359.0	38.3	30.0	100	8.9	1.23	16.35	101182	95.36	150.01	8.4	18.6
1360.0	37.9	30.0	100	8.9	1.23	16.37	101340	96.37	149.92	8.4	18.6
1361.0	33.3	30.0	100	8.9	1.28	16.40	101520	109.56	149.84	8.4	18.6
1362.0	40.0	30.0	100	8.9	1.22	16.43	101670	91.30	149.74	8.4	18.6
1363.0	9.5	30.0	100	8.9	1.68	16.53	102302	384.47	150.16	8.4	18.6
1364.0	7.5	30.0	100	8.9	1.75	16.67	103105	488.96	150.77	8.4	18.6
1365.0	16.4	30.0	100	8.9	1.50	16.73	103470	222.16	150.90	8.4	18.6
1366.0	40.4	30.0	100	8.9	1.21	16.75	103619	90.29	150.79	8.4	18.6
1367.0	40.9	30.0	100	8.9	1.21	16.78	103765	89.27	150.68	8.4	18.6
1368.0	39.6	30.0	100	8.9	1.22	16.80	103917	92.31	150.58	8.4	18.6
1369.0	42.4	30.0	100	8.9	1.20	16.83	104059	86.23	150.46	8.4	18.6
1370.0	36.0	30.0	110	8.9	1.28	16.85	104242	101.44	150.37	8.4	18.6
1371.0	38.7	30.0	110	8.9	1.26	16.88	104413	94.34	150.27	8.4	18.6
1372.0	39.1	30.0	110	8.9	1.26	16.90	104581	93.33	150.17	8.4	18.6
1373.0	35.3	30.0	110	8.9	1.29	16.93	104768	103.47	150.09	8.4	18.6
1374.0	40.0	30.0	110	8.9	1.25	16.96	104933	91.30	149.99	8.4	18.6
1375.0	30.0	28.2	110	8.9	1.32	16.99	105153	121.73	149.94	8.4	18.6
1376.0	37.5	30.1	110	8.9	1.27	17.02	105329	97.39	149.84	8.4	18.6
1377.0	35.0	30.3	110	8.9	1.29	17.05	105518	104.49	149.76	8.4	18.6
1378.0	37.9	29.0	110	8.9	1.25	17.07	105692	96.37	149.67	8.4	18.6
1379.0	39.1	28.2	110	8.9	1.23	17.10	105861	93.33	149.57	8.4	18.6
1380.0	37.5	28.7	110	8.9	1.25	17.13	106037	97.39	149.48	8.4	18.7
1381.0	37.1	29.4	110	8.9	1.26	17.15	106215	98.40	149.39	8.4	18.7
1382.0	41.4	29.7	110	8.9	1.23	17.18	106374	88.26	149.28	8.4	18.7
1383.0	40.9	30.0	110	8.9	1.24	17.20	106536	89.27	149.18	8.4	18.7
1384.0	40.4	30.5	110	8.9	1.25	17.23	106699	90.29	149.08	8.4	18.7
1385.0	24.0	31.4	110	8.9	1.43	17.27	106974	152.17	149.08	8.4	18.7
1386.0	44.4	31.9	110	8.9	1.24	17.29	107122	82.17	148.96	8.4	18.7
1387.0	40.9	31.9	110	8.9	1.26	17.31	107284	89.27	148.86	8.4	18.7
1388.0	38.3	31.6	110	8.9	1.28	17.34	107456	95.36	148.77	8.4	18.7
1389.0	32.7	31.8	110	8.9	1.33	17.37	107658	111.59	148.71	8.4	18.7
1390.0	44.4	31.6	110	8.9	1.23	17.39	107806	82.17	148.59	8.4	18.7
1391.0	36.7	31.4	110	8.9	1.29	17.42	107986	99.42	148.51	8.4	18.7
1392.0	52.9	31.2	110	8.9	1.17	17.44	108110	68.98	148.37	8.4	18.7
1393.0	29.3	31.5	110	8.9	1.37	17.47	108336	124.78	148.33	8.4	18.7
1394.0	39.1	30.6	110	8.9	1.26	17.50	108505	93.33	148.24	8.4	18.7
1395.0	31.3	31.6	110	8.9	1.35	17.53	108715	116.66	148.18	8.4	18.7
1396.0	43.4	30.4	110	8.9	1.23	17.55	108868	84.20	148.07	8.4	18.7
1397.0	33.6	29.1	110	8.9	1.29	17.58	109064	108.55	148.00	8.4	18.7
1398.0	40.9	29.7	110	8.9	1.24	17.61	109225	89.27	147.91	8.4	18.7
1399.0	37.9	29.9	110	8.9	1.26	17.63	109399	96.37	147.82	8.4	18.7
1400.0	47.4	29.9	110	8.9	1.19	17.66	109539	77.10	147.70	8.4	18.7
1401.0	42.4	30.3	110	8.9	1.23	17.68	109694	86.23	147.59	8.4	18.7
1402.0	43.4	29.4	110	8.9	1.22	17.70	109847	84.20	147.49	8.4	18.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1403.0	40.4	29.6	110	8.9	1.24	17.73	110010	90.29	147.39	8.4	18.7
1404.0	38.7	29.4	110	8.9	1.25	17.75	110180	94.34	147.30	8.4	18.7
1405.0	40.9	29.7	110	8.9	1.24	17.78	110342	89.27	147.20	8.4	18.7
1406.0	46.2	29.1	110	8.9	1.19	17.80	110485	79.13	147.09	8.4	18.7
1407.0	39.6	29.6	110	8.9	1.25	17.82	110651	92.31	147.00	8.4	18.7
1408.0	40.4	28.4	110	8.9	1.23	17.85	110815	90.29	146.90	8.4	18.7
1409.0	36.0	29.8	110	8.9	1.28	17.88	110998	101.44	146.83	8.4	18.7
1410.0	46.2	30.5	110	8.9	1.21	17.90	111141	79.13	146.72	8.4	18.7
1411.0	38.3	30.1	110	8.9	1.26	17.92	111313	95.36	146.63	8.4	18.7
1412.0	49.3	29.9	110	8.9	1.18	17.95	111447	74.05	146.51	8.4	18.7
1413.0	30.8	30.1	110	8.9	1.33	17.98	111662	118.69	146.46	8.4	18.7
1414.0	36.0	30.9	110	8.9	1.29	18.01	111845	101.44	146.39	8.4	18.7
1415.0	42.4	30.5	110	8.9	1.24	18.03	112001	86.23	146.29	8.4	18.7
1416.0	46.2	31.1	110	8.9	1.22	18.05	112144	79.13	146.18	8.4	18.7
1417.0	36.0	34.5	110	8.9	1.33	18.08	112327	101.44	146.11	8.4	18.7
1418.0	35.0	35.1	110	8.9	1.35	18.11	112516	104.49	146.04	8.4	18.7
1419.0	43.4	34.0	110	8.9	1.27	18.13	112668	84.20	145.94	8.4	18.7
1420.0	40.0	33.2	110	8.9	1.29	18.16	112833	91.30	145.85	8.4	18.7
1421.0	43.4	32.8	110	8.9	1.25	18.18	112985	84.20	145.75	8.4	18.7
1422.0	36.4	32.9	110	8.9	1.31	18.21	113167	100.43	145.67	8.4	18.7
1423.0	39.0	33.8	110	8.9	1.30	18.23	113336	93.55	145.59	8.4	18.7
1424.0	41.4	32.5	110	8.9	1.27	18.26	113495	88.26	145.49	8.4	18.7
1425.0	39.1	31.2	110	8.9	1.27	18.28	113664	93.33	145.41	8.4	18.7
1426.0	37.9	31.5	110	8.9	1.28	18.31	113838	96.37	145.33	8.4	18.7
1427.0	41.4	32.6	110	8.9	1.27	18.33	113998	88.26	145.24	8.4	18.7
1428.0	43.4	32.8	110	8.9	1.25	18.35	114150	84.20	145.14	8.4	18.7
1429.0	48.0	31.3	110	8.9	1.20	18.38	114287	76.08	145.03	8.4	18.8
1430.0	41.4	31.1	110	8.9	1.25	18.40	114447	88.26	144.94	8.4	18.8
1431.0	49.3	31.7	110	8.9	1.20	18.42	114581	74.05	144.82	8.4	18.8
1432.0	25.5	30.8	110	8.9	1.40	18.46	114839	143.04	144.82	8.4	18.8
1433.0	24.8	28.5	110	9.2	1.33	18.50	115105	147.09	144.82	8.4	18.8
1434.0	21.6	29.0	110	9.2	1.38	18.55	115411	169.41	144.86	8.4	18.8
1435.0	28.3	29.1	110	9.2	1.30	18.58	115644	128.83	144.84	8.4	18.8
1436.0	30.3	28.1	110	9.2	1.27	18.61	115862	120.72	144.80	8.4	18.8
1437.0	24.2	29.7	110	9.2	1.36	18.66	116135	151.15	144.81	8.4	18.8
1438.0	19.4	28.5	110	9.2	1.41	18.71	116476	188.69	144.88	8.4	18.8
1439.0	25.4	27.7	110	9.2	1.32	18.75	116737	144.05	144.88	8.4	18.8
1440.0	23.1	28.1	110	9.2	1.35	18.79	117023	158.25	144.90	8.4	18.8
1441.0	17.6	28.5	110	9.3	1.42	18.85	117399	207.96	145.00	8.4	18.8
1442.0	27.3	33.2	110	9.3	1.35	18.88	117641	133.91	144.98	8.4	18.8
1443.0	25.0	32.6	110	9.3	1.37	18.92	117905	146.08	144.98	8.4	18.8
1444.0	34.0	33.0	110	9.3	1.28	18.95	118099	107.53	144.92	8.4	18.8
1445.0	29.8	32.4	110	9.3	1.31	18.99	118321	122.75	144.89	8.4	18.8
1446.0	29.0	32.3	110	9.3	1.32	19.02	118548	125.79	144.86	8.4	18.8
1447.0	30.3	34.3	110	9.3	1.33	19.05	118766	120.72	144.82	8.4	18.8
1448.0	27.3	36.2	110	9.3	1.38	19.09	119008	133.91	144.80	8.4	18.8
1449.0	25.7	34.8	110	9.3	1.39	19.13	119265	142.02	144.80	8.4	18.8
1450.0	32.1	34.0	110	9.3	1.31	19.16	119470	113.62	144.75	8.4	18.8
1451.0	27.1	32.7	110	9.3	1.35	19.20	119714	134.92	144.73	8.4	18.8
1452.0	25.2	29.4	110	9.3	1.33	19.24	119976	145.07	144.73	8.4	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1453.0	28.1	28.1	110	9.3	1.28	19.27	120211	129.85	144.71	8.4	18.8
1454.0	27.7	27.5	110	9.3	1.27	19.31	120449	131.88	144.69	8.4	18.8
1455.0	31.6	27.8	110	9.3	1.24	19.34	120658	115.65	144.65	8.4	18.8
1456.0	24.5	28.7	110	9.3	1.33	19.38	120928	149.12	144.65	8.4	18.8
1457.0	30.5	29.3	110	9.3	1.27	19.41	121144	119.70	144.62	8.4	18.8
1458.0	24.3	28.9	110	9.3	1.33	19.46	121415	150.14	144.62	8.4	18.8
1459.0	30.3	29.5	110	9.3	1.27	19.49	121634	120.72	144.59	8.4	18.8
1460.0	22.8	29.3	110	9.3	1.36	19.53	121923	160.28	144.61	8.4	18.8
1461.0	40.0	31.3	110	9.3	1.21	19.56	122088	91.30	144.53	8.4	18.8
1462.0	37.9	35.7	110	9.3	1.27	19.58	122262	96.37	144.46	8.4	18.8
1463.0	27.1	35.7	110	9.3	1.38	19.62	122506	134.92	144.44	8.4	18.8
1464.0	29.0	35.0	110	9.3	1.35	19.66	122734	125.79	144.41	8.4	18.8
1465.0	35.6	33.7	110	9.3	1.27	19.68	122919	102.46	144.35	8.4	18.8
1466.0	35.3	33.4	110	9.3	1.27	19.71	123106	103.47	144.29	8.4	18.8
1467.0	42.9	32.9	110	9.3	1.20	19.74	123260	85.21	144.20	8.4	18.8
1468.0	44.4	32.9	110	9.3	1.19	19.76	123408	82.17	144.10	8.4	18.8
1469.0	43.9	33.7	110	9.3	1.21	19.78	123559	83.18	144.01	8.4	18.8
1470.0	50.0	33.4	110	9.3	1.16	19.80	123691	73.04	143.90	8.4	18.8
1471.0	37.1	33.8	110	9.3	1.26	19.83	123868	98.40	143.83	8.4	18.8
1472.0	48.0	32.7	110	9.3	1.17	19.85	124006	76.08	143.73	8.4	18.8
1473.0	42.9	33.9	110	9.3	1.22	19.87	124160	85.21	143.64	8.4	18.8
1474.0	42.9	34.8	110	9.3	1.22	19.89	124314	85.21	143.56	8.4	18.8
1475.0	40.0	33.6	110	9.3	1.23	19.92	124479	91.30	143.48	8.4	18.8
1476.0	44.4	32.6	110	9.3	1.19	19.94	124627	82.17	143.38	8.4	18.8
1477.0	39.1	32.6	110	9.3	1.23	19.97	124796	93.33	143.31	8.4	18.8
1478.0	46.8	32.5	110	9.3	1.17	19.99	124937	78.11	143.21	8.4	18.8
1479.0	31.9	31.6	110	9.3	1.28	20.02	125144	114.63	143.17	8.4	18.8
1480.0	25.7	31.2	110	9.3	1.34	20.06	125401	142.02	143.17	8.4	18.9
1481.0	30.3	30.0	110	9.3	1.28	20.09	125619	120.72	143.13	8.4	18.9
1482.0	36.0	31.3	110	9.3	1.24	20.12	125803	101.44	143.07	8.4	18.9
1483.0	30.8	31.8	110	9.3	1.30	20.15	126017	118.69	143.04	8.4	18.9
1484.0	28.1	30.7	110	9.3	1.31	20.19	126252	129.85	143.02	8.4	18.9
1485.0	36.0	31.5	110	9.3	1.24	20.22	126435	101.44	142.96	8.4	18.9
1486.0	37.5	31.1	110	9.3	1.23	20.24	126611	97.39	142.89	8.4	18.9
1487.0	31.9	31.1	110	9.3	1.28	20.27	126818	114.63	142.85	8.4	18.9
1488.0	21.7	31.7	110	9.3	1.40	20.32	127123	168.40	142.88	8.4	18.9
1489.0	23.5	31.1	110	9.3	1.37	20.36	127403	155.21	142.90	8.4	18.9
1490.0	26.1	31.7	110	9.3	1.35	20.40	127656	139.99	142.90	8.4	18.9
1491.0	42.4	34.6	110	9.3	1.23	20.42	127812	86.23	142.81	8.4	18.9
1492.0	37.9	32.8	110	9.3	1.24	20.45	127986	96.37	142.75	8.4	18.9
1493.0	32.1	32.5	110	9.3	1.29	20.48	128191	113.62	142.70	8.4	18.9
1494.0	44.4	33.9	110	9.3	1.20	20.50	128340	82.17	142.62	8.4	18.9
1495.0	41.4	33.0	110	9.3	1.22	20.53	128499	88.26	142.54	8.4	18.9
1496.0	37.1	32.8	110	9.3	1.25	20.56	128677	98.40	142.47	8.4	18.9
1497.0	40.9	33.5	110	9.3	1.23	20.58	128839	89.27	142.40	8.4	18.9
1498.0	33.0	32.9	110	9.3	1.29	20.61	129038	110.57	142.35	8.4	18.9
1499.0	34.6	35.0	110	9.3	1.29	20.64	129229	105.50	142.30	8.4	18.9
1500.0	45.0	34.1	110	9.3	1.20	20.66	129376	81.16	142.21	8.4	18.9
1501.0	45.0	33.1	110	9.3	1.19	20.68	129522	81.16	142.12	8.4	18.9
1502.0	39.6	33.6	110	9.3	1.24	20.71	129689	92.31	142.05	8.4	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1503.0	43.4	34.5	110	9.3	1.22	20.73	129841	84.20	141.96	8.4	18.9
1504.0	35.3	34.8	110	9.3	1.29	20.76	130028	103.47	141.91	8.4	18.9
1505.0	36.0	35.6	110	9.3	1.29	20.79	130212	101.44	141.85	8.4	18.9
1506.0	41.9	34.8	110	9.3	1.23	20.81	130369	87.24	141.77	8.4	18.9
1507.0	35.6	35.3	110	9.3	1.29	20.84	130555	102.46	141.72	8.4	18.9
1508.0	39.1	38.4	110	9.3	1.29	20.87	130723	93.33	141.65	8.4	18.9
1509.0	46.2	35.6	110	9.3	1.21	20.89	130866	79.13	141.56	8.4	18.9
1510.0	43.4	35.1	110	9.3	1.22	20.91	131018	84.20	141.47	8.4	18.9
1511.0	43.4	34.2	110	9.3	1.21	20.93	131171	84.20	141.39	8.4	18.9
1512.0	39.6	34.6	110	9.3	1.25	20.96	131337	92.31	141.32	8.4	18.9
1513.0	46.8	35.1	110	9.3	1.20	20.98	131479	78.11	141.23	8.4	18.9
1514.0	36.0	34.5	110	9.3	1.28	21.01	131662	101.44	141.18	8.4	18.9
1515.0	45.0	34.2	110	9.3	1.20	21.03	131809	81.16	141.09	8.4	18.9
1516.0	46.2	34.4	110	9.3	1.20	21.05	131952	79.13	141.00	8.4	18.9
1517.0	39.1	34.4	110	9.3	1.25	21.08	132120	93.33	140.94	8.4	18.9
1518.0	40.4	37.0	110	9.3	1.27	21.10	132283	90.29	140.87	8.4	18.9
1519.0	34.0	34.7	110	9.3	1.30	21.13	132478	107.53	140.82	8.4	18.9
1520.0	50.0	34.9	110	9.3	1.18	21.15	132610	73.04	140.72	8.4	18.9
1521.0	47.4	34.5	110	9.3	1.19	21.17	132749	77.10	140.63	8.4	18.9
1522.0	44.4	34.7	110	9.3	1.21	21.20	132898	82.17	140.55	8.4	18.9
1523.0	51.4	33.4	110	9.3	1.15	21.21	133026	71.01	140.45	8.4	18.9
1524.0	38.7	34.7	110	9.3	1.26	21.24	133196	94.34	140.39	8.4	18.9
1525.0	45.6	34.0	110	9.3	1.20	21.26	133341	80.14	140.31	8.4	18.9
1526.0	32.7	35.2	110	9.3	1.31	21.29	133543	111.59	140.27	8.4	18.9
1527.0	43.9	38.6	110	9.3	1.26	21.32	133693	83.18	140.19	8.4	18.9
1528.0	49.3	35.0	110	9.3	1.18	21.34	133827	74.05	140.09	8.4	18.9
1529.0	46.8	35.1	110	9.3	1.20	21.36	133968	78.11	140.01	8.4	18.9
1530.0	42.4	34.8	110	9.3	1.23	21.38	134124	86.23	139.93	8.4	18.9
1531.0	35.0	35.4	110	9.3	1.30	21.41	134313	104.49	139.88	8.4	18.9
1532.0	34.3	35.8	110	9.3	1.31	21.44	134505	106.52	139.84	8.4	19.0
1533.0	33.0	35.6	110	9.3	1.32	21.47	134705	110.57	139.80	8.4	19.0
1534.0	45.6	36.1	110	9.3	1.22	21.49	134850	80.14	139.72	8.4	19.0
1535.0	29.3	35.6	110	9.3	1.35	21.53	135076	124.78	139.69	8.4	19.0
1536.0	19.6	27.3	110	9.3	1.38	21.58	135413	186.66	139.76	8.4	19.0
1537.0	34.0	28.7	110	9.3	1.23	21.61	135607	107.53	139.72	8.4	19.0
1538.0	17.2	26.8	110	9.3	1.41	21.66	135990	212.02	139.81	8.4	19.0
1539.0	24.8	26.4	110	9.3	1.29	21.70	136256	147.09	139.82	8.4	19.0
1540.0	28.6	20.4	110	9.3	1.17	21.74	136487	127.82	139.81	8.4	19.0
1541.0	40.9	26.6	110	9.3	1.15	21.76	136649	89.27	139.74	8.4	19.0
1542.0	26.3	25.9	110	9.3	1.27	21.80	136900	138.98	139.74	8.4	19.0
1543.0	38.3	25.8	110	9.3	1.16	21.83	137072	95.36	139.68	8.4	19.0
1544.0	28.1	26.2	110	9.3	1.25	21.86	137307	129.85	139.66	8.4	19.0
1545.0	28.1	26.1	110	9.3	1.25	21.90	137541	129.85	139.65	8.4	19.0
1546.0	11.7	20.5	110	9.3	1.42	21.98	138106	312.45	139.89	8.4	19.0
1547.0	18.8	24.9	110	9.3	1.35	22.04	138456	193.76	139.96	8.4	19.0
1548.0	17.7	25.5	110	9.3	1.38	22.09	138828	205.93	140.05	8.4	19.0
1549.0	13.6	27.8	110	9.3	1.49	22.17	139314	268.83	140.22	8.4	19.0
1550.0	16.2	28.1	110	9.3	1.44	22.23	139721	225.21	140.34	8.4	19.0
1551.0	11.1	28.9	110	9.3	1.57	22.32	140315	328.68	140.59	8.4	19.0
1552.0	11.8	30.2	110	9.3	1.57	22.40	140876	310.42	140.82	8.4	19.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1553.0	11.9	33.2	110	9.3	1.61	22.49	141430	306.36	141.04	8.4	19.0
1554.0	10.3	33.8	110	9.3	1.66	22.58	142068	353.03	141.33	8.4	19.0
1555.0	21.2	29.7	110	9.3	1.38	22.63	142380	172.46	141.37	8.4	19.0
1556.0	18.5	29.3	110	9.3	1.42	22.69	142737	197.82	141.44	8.4	19.0
1557.0	30.5	29.9	110	9.3	1.28	22.72	142953	119.70	141.41	8.4	19.0
1558.0	27.5	29.6	110	9.3	1.30	22.76	143194	132.89	141.40	8.4	19.0
1559.0	30.0	30.9	110	9.3	1.29	22.79	143414	121.73	141.38	8.4	19.0
1560.0	23.2	30.4	110	9.3	1.37	22.83	143698	157.24	141.40	8.4	19.0
1561.0	32.4	31.5	110	9.3	1.28	22.86	143901	112.60	141.36	8.4	19.0
1562.0	22.6	30.0	110	9.3	1.37	22.91	144193	161.30	141.39	8.4	19.
1563.0	16.4	29.7	110	9.3	1.46	22.97	144596	223.18	141.49	8.4	19.0
1564.0	33.0	27.5	110	9.3	1.22	23.00	144796	110.57	141.45	8.4	19.0
1565.0	18.9	24.0	110	9.3	1.34	23.05	145144	192.74	141.52	8.4	19.0
1566.0	32.7	28.9	110	9.3	1.24	23.08	145346	111.59	141.48	8.4	19.0
1567.0	25.2	30.0	110	9.3	1.34	23.12	145608	145.07	141.49	8.4	19.0
1568.0	29.3	29.0	110	9.3	1.28	23.16	145834	124.78	141.46	8.4	19.0
1569.0	25.5	29.5	110	9.3	1.32	23.19	146092	143.04	141.47	8.4	19.0
1570.0	19.5	30.9	110	9.3	1.43	23.25	146431	187.67	141.53	8.4	19.0
1571.0	22.0	30.5	110	9.3	1.38	23.29	146732	166.37	141.56	8.4	19.0
1572.0	23.1	30.6	110	9.3	1.37	23.33	147018	158.25	141.58	8.4	19.0
1573.0	18.8	30.2	110	9.3	1.43	23.39	147370	194.77	141.65	8.4	19.0
1574.0	33.0	29.7	110	9.3	1.25	23.42	147570	110.57	141.61	8.4	19.0
1575.0	21.3	29.6	110	9.3	1.38	23.47	147880	171.44	141.65	8.4	19.0
1576.0	28.8	30.6	110	9.3	1.30	23.50	148109	126.81	141.63	8.4	19.0
1577.0	34.6	30.4	110	9.3	1.24	23.53	148299	105.50	141.58	8.4	19.0
1578.0	27.7	30.1	110	9.3	1.31	23.57	148538	131.88	141.57	8.4	19.0
1579.0	35.3	30.1	110	9.3	1.23	23.59	148725	103.47	141.52	8.4	19.0
1580.0	21.1	29.8	110	9.3	1.39	23.64	149038	173.47	141.56	8.4	19.0
1581.0	32.4	27.5	110	9.3	1.23	23.67	149242	112.60	141.53	8.4	19.0
1582.0	29.0	29.4	110	9.3	1.28	23.71	149469	125.79	141.50	8.4	19.0
1583.0	40.0	28.6	110	9.3	1.18	23.73	149634	91.30	141.44	8.4	19.0
1584.0	18.3	31.6	110	9.3	1.45	23.79	149995	199.85	141.52	8.4	19.0
1585.0	41.4	32.0	110	9.3	1.21	23.81	150155	88.26	141.45	8.4	19.1
1586.0	35.0	30.8	110	9.3	1.24	23.84	150344	104.49	141.40	8.4	19.1
1587.0	33.3	30.2	110	9.3	1.25	23.87	150542	109.56	141.36	8.4	19.1
1588.0	31.9	30.6	110	9.3	1.27	23.90	150749	114.63	141.32	8.4	19.1
1589.0	22.6	29.8	110	9.3	1.37	23.94	151040	161.30	141.35	8.4	19.1
1590.0	31.6	31.0	110	9.3	1.28	23.98	151249	115.65	141.32	8.4	19.1
1591.0	30.0	30.3	110	9.3	1.29	24.01	151469	121.73	141.29	8.4	19.1
1592.0	24.8	30.8	110	9.3	1.35	24.05	151735	147.09	141.30	8.4	19.1
1593.0	31.3	30.5	110	9.3	1.28	24.08	151946	116.66	141.27	8.4	19.1
1594.0	31.6	30.3	110	9.3	1.27	24.11	152155	115.65	141.23	8.4	19.1
1595.0	24.7	30.9	110	9.3	1.35	24.15	152423	148.11	141.24	8.4	19.1
1596.0	35.6	30.9	110	9.3	1.24	24.18	152608	102.46	141.19	8.4	19.1
1597.0	24.8	31.1	110	9.3	1.35	24.22	152874	147.09	141.20	8.4	19.1
1598.0	27.5	31.8	110	9.3	1.33	24.26	153114	132.89	141.19	8.4	19.1
1599.0	25.7	31.6	110	9.3	1.35	24.30	153370	142.02	141.19	8.4	19.1
1600.0	28.8	31.7	110	9.3	1.31	24.33	153600	126.81	141.17	8.4	19.1
1601.0	22.9	31.6	110	9.3	1.38	24.38	153887	159.27	141.20	8.4	19.1
1602.0	26.9	32.6	110	9.3	1.35	24.41	154133	135.94	141.19	8.4	19.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1603.0	24.0	32.5	110	9.3	1.38	24.45	154408	152.17	141.20	8.4	19.1
1604.0	27.3	31.7	110	9.3	1.33	24.49	154650	133.91	141.19	8.4	19.1
1605.0	20.8	31.6	110	9.3	1.41	24.54	154967	175.50	141.24	8.4	19.1
1606.0	22.8	32.5	110	9.3	1.40	24.58	155257	160.28	141.26	8.4	19.1
1607.0	20.5	32.8	110	9.3	1.43	24.63	155580	178.54	141.31	8.4	19.1
1608.0	22.8	33.8	110	9.3	1.41	24.68	155869	160.28	141.33	8.4	19.1
1609.0	13.7	34.6	110	9.3	1.58	24.75	156350	265.78	141.49	8.4	19.1
1610.0	11.5	33.9	110	9.3	1.63	24.84	156925	318.54	141.71	8.4	19.1
1611.0	8.3	31.0	110	9.3	1.69	24.96	157725	442.30	142.08	8.4	19.1
1611.1	1.4	29.4	110	9.3	2.20	25.03	158183	2536	142	8.4	19.1

BIT NUMBER	3	IADC CODE	517	INTERVAL	1611.1- 2000.0
HTC J22		SIZE	12.250	NOZZLES	18 18 16
COST	8516.00	TRIP TIME	6.2	BIT RUN	388.9
TOTAL HOURS	23.29	TOTAL TURNS	101926	CONDITION	T3 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1612.0	4.8	14.1	71	9.3	1.41	0.19	799	764	35385	8.4	19.1
1613.0	8.1	37.5	76	9.3	1.67	0.31	1358	450	16998	8.4	19.1
1614.0	6.0	37.0	75	9.3	1.76	0.48	2104	606	11346	8.5	19.1
1615.0	7.3	37.0	77	9.3	1.71	0.61	2739	502	8565	8.5	19.1
1616.0	5.6	39.6	77	9.3	1.83	0.79	3556	648	6950	8.5	19.1
1617.0	29.8	38.5	75	9.3	1.26	0.83	3708	123	5792	8.5	19.1
1618.0	26.3	27.1	49	9.3	1.05	0.86	3820	139	4973	8.5	19.1
1619.0	48.6	16.5	68	9.3	0.84	0.88	3904	75	4353	8.5	19.1
1620.0	34.0	11.9	71	9.3	0.88	0.91	4029	108	3876	8.5	19.1
1621.0	46.8	7.8	72	9.3	0.74	0.94	4122	78	3492	8.5	19.1
1622.0	19.7	3.4	53	9.3	0.73	0.99	4282	186	3189	8.5	19.1
1623.0	35.3	4.2	76	9.3	0.72	1.01	4411	103	2930	8.5	19.1
1624.0	31.3	9.8	76	9.3	0.88	1.05	4557	117	2712	8.5	19.1
1625.0	52.2	9.4	77	9.3	0.76	1.07	4645	70	2522	8.5	19.1
1626.0	62.1	4.3	65	9.3	0.58	1.08	4707	59	2356	8.5	19.1
1627.0	56.2	5.0	71	9.3	0.63	1.10	4783	65	2212	8.5	19.1
1628.0	105.9	5.0	73	9.3	0.51	1.11	4824	34	2083	8.5	19.1
1629.0	124.1	4.0	73	9.3	0.46	1.12	4859	29	1969	8.5	19.1
1630.0	81.8	3.2	73	9.3	0.52	1.13	4913	45	1867	8.5	19.1
1631.0	105.9	2.4	76	9.3	0.46	1.14	4956	34	1775	8.5	19.1
1632.0	83.7	3.0	76	9.3	0.52	1.15	5011	44	1692	8.5	19.1
1633.0	150.0	3.2	77	9.3	0.42	1.16	5041	24	1616	8.5	19.1
1634.0	72.0	2.7	76	9.3	0.54	1.17	5105	51	1547	8.5	19.1
1635.0	112.5	3.2	76	9.3	0.47	1.18	5145	32	1484	8.5	19.1
1636.0	94.7	3.0	76	9.3	0.50	1.19	5194	39	1426	8.5	19.1
1637.0	87.8	4.3	70	9.3	0.52	1.20	5241	42	1373	8.5	19.1
1638.0	144.0	5.9	75	9.3	0.47	1.21	5273	25	1322	8.5	19.1
1639.0	128.6	4.6	77	9.3	0.48	1.22	5309	28	1276	8.5	19.1
1640.0	116.1	4.1	78	9.3	0.49	1.23	5349	31	1233	8.5	19.1
1641.0	105.9	4.9	78	9.3	0.52	1.23	5393	34	1193	8.5	19.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1642.0	102.9	6.4	78	9.3	0.56	1.24	5439	36	1155	8.5	19.1
1643.0	120.0	5.4	78	9.3	0.51	1.25	5478	30	1120	8.5	19.1
1644.0	80.0	5.6	78	9.3	0.59	1.27	5536	46	1088	8.5	19.1
1645.0	97.3	6.0	78	9.3	0.56	1.28	5584	38	1057	8.5	19.1
1646.0	144.0	2.9	63	9.3	0.38	1.28	5610	25	1027	8.5	19.1
1647.0	144.0	6.8	71	9.3	0.47	1.29	5640	25.36	999.12	8.5	19.1
1648.0	124.1	4.1	75	9.3	0.47	1.30	5676	29.42	972.84	8.5	19.1
1649.0	120.0	2.1	78	9.3	0.43	1.31	5715	30.43	947.98	8.5	19.1
1650.0	92.3	4.4	79	9.3	0.54	1.32	5766	39.56	924.62	8.5	19.2
1651.0	81.8	5.2	78	9.3	0.58	1.33	5823	44.64	902.57	8.5	19.2
1652.0	100.0	5.3	76	9.3	0.54	1.34	5869	36.52	881.39	8.5	19.2
1653.0	64.3	5.3	77	9.4	0.62	1.35	5941	56.81	861.71	8.5	19.2
1654.0	94.7	3.3	77	9.4	0.50	1.37	5990	38.55	842.53	8.5	19.2
1655.0	87.8	4.0	78	9.4	0.54	1.38	6043	41.59	824.28	8.5	19.2
1656.0	64.3	5.7	66	9.4	0.60	1.39	6104	56.81	807.19	8.5	19.2
1657.0	64.3	8.6	77	9.4	0.69	1.41	6176	56.81	790.84	8.5	19.2
1658.0	87.8	8.4	79	9.4	0.62	1.42	6230	41.59	774.87	8.5	19.2
1659.0	94.7	7.3	79	9.4	0.59	1.43	6280	38.55	759.49	8.5	19.2
1660.0	102.9	6.3	79	9.4	0.55	1.44	6326	35.51	744.69	8.5	19.2
1661.0	87.8	7.4	78	9.4	0.60	1.45	6379	41.59	730.60	8.5	19.2
1662.0	109.1	8.1	79	9.4	0.57	1.46	6423	33.48	716.90	8.5	19.2
1663.0	92.3	8.3	79	9.4	0.61	1.47	6474	39.56	703.85	8.5	19.2
1664.0	90.0	7.6	79	9.4	0.60	1.48	6526	40.58	691.31	8.5	19.2
1665.0	72.0	6.4	73	9.4	0.61	1.50	6587	50.72	679.43	8.5	19.2
1666.0	88.0	6.0	74	9.4	0.57	1.51	6638	41.50	667.81	8.5	19.2
1667.0	91.0	5.2	73	9.4	0.54	1.52	6686	40.13	656.58	8.5	19.2
1668.0	109.1	3.8	74	9.4	0.48	1.53	6727	33.48	645.63	8.5	19.2
1669.0	112.5	5.2	76	9.4	0.51	1.54	6767	32.46	635.04	8.5	19.2
1670.0	87.8	4.4	76	9.4	0.54	1.55	6819	41.59	624.96	8.5	19.2
1671.0	78.3	6.3	75	9.4	0.60	1.56	6877	46.66	615.31	8.5	19.2
1672.0	97.3	5.5	76	9.4	0.54	1.57	6923	37.53	605.82	8.5	19.2
1673.0	100.0	5.4	76	9.4	0.53	1.58	6969	36.52	596.62	8.5	19.2
1674.0	81.8	5.4	67	9.4	0.55	1.59	7018	44.64	587.85	8.5	19.2
1675.0	102.9	6.0	72	9.4	0.53	1.60	7060	35.51	579.21	8.5	19.2
1676.0	85.7	5.1	77	9.4	0.56	1.61	7114	42.61	570.94	8.5	19.2
1677.0	73.5	3.5	79	9.4	0.56	1.63	7179	49.71	563.03	8.5	19.2
1678.0	97.3	5.3	80	9.4	0.55	1.64	7228	37.53	555.17	8.5	19.2
1679.0	81.8	4.9	80	9.4	0.57	1.65	7287	44.64	547.65	8.5	19.2
1680.0	90.0	6.0	79	9.4	0.58	1.66	7339	40.58	540.29	8.5	19.2
1681.0	92.3	5.9	79	9.4	0.57	1.67	7391	39.56	533.13	8.5	19.2
1682.0	87.8	6.1	79	9.4	0.58	1.68	7445	41.59	526.20	8.5	19.2
1683.0	65.5	7.8	76	9.4	0.67	1.70	7514	55.79	519.66	8.5	19.2
1684.0	80.0	7.8	69	9.4	0.60	1.71	7566	45.65	513.15	8.5	19.2
1685.0	72.0	7.0	77	9.4	0.63	1.73	7630	50.72	506.90	8.5	19.2
1686.0	90.0	6.3	78	9.4	0.58	1.74	7682	40.58	500.67	8.5	19.2
1687.0	78.3	8.0	78	9.4	0.64	1.75	7742	46.66	494.69	8.5	19.2
1688.0	90.0	7.8	78	9.4	0.60	1.76	7794	40.58	488.78	8.5	19.2
1689.0	105.9	7.3	78	9.4	0.56	1.77	7838	34.49	482.95	8.5	19.2
1690.0	18.7	8.3	78	9.4	0.96	1.82	8090	195.79	479.31	8.5	19.2
1691.0	14.1	14.3	78	9.4	1.15	1.89	8420	258.68	476.55	8.5	19.2

DEPTH	ROP	WOB	RPM	MW	"d" "c	HOURS	TURNS	ICOST	CCOST	PP	FG
1692.0	18.7	25.1	76	9.4	1.24	1.95	8666	195.79	473.08	8.5	19.2
1693.0	23.5	25.7	76	9.4	1.18	1.99	8858	155.21	469.20	8.5	19.2
1694.0	33.0	19.2	72	9.4	0.99	2.02	8990	110.57	464.87	8.5	19.2
1695.0	40.9	17.0	53	9.4	0.82	2.05	9067	89.27	460.40	8.5	19.2
1696.0	63.2	9.9	76	9.4	0.71	2.06	9140	57.82	455.65	8.5	19.2
1697.0	14.9	25.1	76	9.4	1.30	2.13	9445	244.48	453.20	8.5	19.2
1698.0	49.3	29.5	79	9.4	1.01	2.15	9541	74.05	448.83	8.5	19.2
1699.0	12.5	30.0	80	9.4	1.44	2.23	9924	293.17	447.06	8.5	19.2
1700.0	9.7	31.2	79	9.4	1.53	2.33	10415	376.36	446.27	8.5	19.2
1701.0	10.9	31.7	80	9.4	1.50	2.42	10854	334.77	445.03	8.5	19.2
1702.0	7.7	31.3	80	9.4	1.60	2.55	11477	474.76	445.35	8.5	19.2
1703.0	11.8	32.1	80	9.4	1.48	2.64	11885	310.42	443.89	8.5	19.2
1704.0	31.0	23.5	79	9.4	1.08	2.67	12038	117.68	440.37	8.5	19.2
1705.0	13.8	28.0	79	9.4	1.38	2.74	12382	263.76	438.49	8.5	19.2
1706.0	12.5	36.4	79	9.4	1.51	2.82	12760	292.16	436.95	8.5	19.2
1707.0	10.2	36.8	79	9.4	1.59	2.92	13226	358.10	436.13	8.5	19.3
1708.0	12.2	39.4	79	9.4	1.56	3.00	13612	298.25	434.71	8.5	19.3
1709.0	16.0	40.8	78	9.4	1.49	3.06	13906	228.25	432.60	8.5	19.3
1710.0	14.1	39.0	78	9.4	1.51	3.14	14238	258.68	430.84	8.5	19.3
1711.0	24.8	42.5	77	9.4	1.35	3.18	14426	147.09	428.00	8.5	19.3
1712.0	45.0	40.0	75	9.4	1.12	3.20	14526	81.16	424.56	8.5	19.3
1713.0	61.0	24.1	74	9.4	0.88	3.21	14599	59.85	420.98	8.5	19.3
1714.0	32.1	20.1	78	9.4	1.03	3.25	14744	113.62	417.99	8.5	19.3
1715.0	34.0	18.0	72	9.4	0.96	3.28	14870	107.53	415.01	8.5	19.3
1716.0	48.0	9.5	71	9.4	0.75	3.30	14959	76.08	411.78	8.5	19.3
1717.0	26.9	8.1	66	9.4	0.84	3.33	15106	135.94	409.17	8.5	19.3
1718.0	18.6	7.0	68	9.4	0.90	3.39	15326	196.80	407.18	8.5	19.3
1719.0	10.3	4.4	70	9.4	0.94	3.48	15733	355.06	406.70	8.5	19.3
1720.0	15.5	1.7	78	9.4	0.75	3.55	16036	235.35	405.13	8.5	19.3
1721.0	10.3	21.1	79	9.4	1.35	3.65	16493	354.04	404.66	8.5	19.3
1722.0	15.2	22.6	72	9.4	1.25	3.71	16779	240.42	403.18	8.5	19.3
1723.0	29.8	34.3	78	9.4	1.21	3.75	16935	122.75	400.68	8.5	19.3
1724.0	80.0	32.7	78	9.4	0.89	3.76	16993	45.65	397.53	8.5	19.3
1725.0	57.1	34.3	77	9.4	1.00	3.78	17074	63.91	394.60	8.5	19.3
1726.0	7.5	35.5	78	9.4	1.66	3.91	17699	485.92	395.40	8.5	19.3
1727.0	27.9	37.1	78	9.4	1.26	3.94	17868	130.86	393.11	8.5	19.3
1728.0	34.6	38.0	79	9.4	1.20	3.97	18004	105.50	390.65	8.5	19.3
1729.0	20.5	37.1	79	9.4	1.37	4.02	18234	178.54	388.85	8.5	19.3
1730.0	25.0	42.0	79	9.4	1.35	4.06	18423	146.08	386.81	8.5	19.3
1731.0	26.5	45.7	78	9.4	1.37	4.10	18600	137.96	384.74	8.5	19.3
1732.0	11.1	45.4	79	9.4	1.66	4.19	19026	329.69	384.28	8.5	19.3
1733.0	57.1	42.2	78	9.4	1.08	4.21	19108	63.91	381.65	8.5	19.3
1734.0	15.3	42.9	78	9.4	1.52	4.27	19416	239.41	380.50	8.5	19.3
1735.0	17.0	42.7	78	9.4	1.49	4.33	19693	215.06	379.16	8.5	19.3
1736.0	21.1	42.0	78	9.4	1.41	4.38	19917	173.47	377.51	8.5	19.3
1737.0	62.1	42.6	78	9.4	1.05	4.40	19992	58.84	374.98	8.5	19.3
1738.0	17.1	41.6	78	9.4	1.47	4.45	20268	214.05	373.72	8.5	19.3
1739.0	15.8	42.8	78	9.4	1.51	4.52	20566	231.29	372.60	8.5	19.3
1740.0	30.3	41.9	78	9.4	1.28	4.55	20721	120.72	370.65	8.5	19.3
1741.0	25.5	41.0	78	9.4	1.33	4.59	20905	143.04	368.90	8.5	19.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1742.0	17.7	40.7	71	9.4	1.42	4.65	21145	205.93	367.65	8.5	19.3
1743.0	52.2	40.9	78	9.4	1.09	4.67	21234	70.00	365.39	8.5	19.3
1744.0	36.4	41.4	66	9.4	1.16	4.69	21343	100.43	363.40	8.5	19.3
1745.0	59.0	40.6	73	9.4	1.03	4.71	21417	61.88	361.15	8.5	19.3
1746.0	23.4	32.0	65	9.4	1.21	4.75	21585	156.22	359.63	8.5	19.3
1747.0	27.3	18.6	77	9.4	1.05	4.79	21753	133.91	357.97	8.5	19.3
1748.0	10.1	16.1	78	9.4	1.27	4.89	22221	363.17	358.01	8.5	19.3
1749.0	10.3	33.9	78	9.4	1.54	4.99	22676	353.03	357.97	8.5	19.3
1750.0	8.8	39.6	77	9.4	1.66	5.10	23205	416.94	358.39	8.5	19.3
1751.0	10.5	42.3	77	9.4	1.64	5.19	23645	348.97	358.33	8.5	19.3
1752.0	9.2	43.0	77	9.4	1.69	5.30	24151	397.66	358.61	8.5	19.3
1753.0	6.9	41.6	77	9.4	1.77	5.45	24824	529.54	359.81	8.5	19.3
1754.0	9.4	41.3	78	9.4	1.66	5.55	25318	387.52	360.01	8.5	19.3
1755.0	10.7	43.7	78	9.4	1.65	5.65	25754	339.84	359.86	8.5	19.3
1756.0	8.8	44.1	78	9.4	1.72	5.76	26286	412.88	360.23	8.5	19.3
1757.0	10.8	43.9	78	9.4	1.65	5.85	26721	337.81	360.08	8.5	19.3
1758.0	11.8	45.7	78	9.4	1.64	5.94	27116	308.39	359.73	8.5	19.3
1759.0	25.7	45.8	78	9.4	1.37	5.98	27297	142.02	358.25	8.5	19.3
1760.0	14.6	46.1	77	9.4	1.57	6.05	27615	250.57	357.53	8.5	19.3
1761.0	15.7	45.4	78	9.4	1.54	6.11	27913	233.32	356.70	8.5	19.3
1762.0	15.8	45.7	78	9.4	1.54	6.17	28209	231.29	355.87	8.5	19.3
1763.0	34.3	45.4	78	9.4	1.27	6.20	28346	106.52	354.23	8.5	19.3
1764.0	12.6	45.2	78	9.4	1.61	6.28	28715	289.12	353.80	8.5	19.3
1765.0	23.8	44.5	76	9.4	1.38	6.32	28908	153.18	352.50	8.5	19.3
1766.0	25.5	43.9	77	9.4	1.36	6.36	29090	143.04	351.15	8.5	19.4
1767.0	12.6	44.7	77	9.4	1.60	6.44	29455	289.12	350.75	8.5	19.4
1768.0	10.4	44.8	77	9.4	1.67	6.54	29900	352.01	350.76	8.5	19.4
1769.0	11.0	45.6	75	9.4	1.65	6.63	30308	332.74	350.64	8.5	19.4
1770.0	19.3	44.8	78	9.4	1.46	6.68	30550	189.70	349.63	8.5	19.4
1771.0	20.6	44.8	78	9.4	1.44	6.73	30777	177.53	348.55	8.5	19.4
1772.0	18.3	45.5	78	9.4	1.49	6.78	31032	199.85	347.63	8.5	19.4
1773.0	20.0	46.2	75	9.4	1.45	6.83	31258	182.60	346.61	8.5	19.4
1774.0	20.9	45.7	73	9.4	1.42	6.88	31468	174.48	345.55	8.5	19.4
1775.0	36.7	45.7	78	9.4	1.25	6.91	31595	99.42	344.05	8.5	19.4
1776.0	13.6	44.8	75	9.4	1.57	6.98	31927	267.81	343.59	8.5	19.4
1777.0	11.2	45.1	71	9.4	1.62	7.07	32308	326.65	343.49	8.5	19.4
1778.0	15.1	44.2	70	9.4	1.50	7.14	32586	241.44	342.88	8.5	19.4
1779.0	35.0	43.5	78	9.4	1.25	7.17	32719	104.49	341.46	8.5	19.4
1780.0	14.1	46.2	76	9.4	1.58	7.24	33043	258.68	340.97	8.5	19.4
1781.0	39.1	44.1	78	9.4	1.22	7.26	33163	93.33	339.51	8.5	19.4
1782.0	6.9	45.2	78	9.4	1.82	7.41	33833	525.48	340.60	8.5	19.4
1783.0	9.5	45.9	77	9.4	1.71	7.51	34316	382.45	340.84	8.5	19.4
1784.0	8.9	45.0	77	9.4	1.73	7.62	34834	410.85	341.25	8.5	19.4
1785.0	11.1	44.9	78	9.4	1.65	7.71	35254	327.67	341.17	8.5	19.4
1786.0	16.8	44.6	79	9.4	1.51	7.77	35534	217.09	340.46	8.5	19.4
1787.0	15.5	45.0	77	9.4	1.54	7.84	35833	235.35	339.86	8.5	19.4
1788.0	17.0	45.1	78	9.4	1.51	7.90	36108	214.82	339.15	8.5	19.4
1789.0	21.4	45.0	78	9.4	1.43	7.94	36325	170.43	338.21	8.5	19.4
1790.0	80.0	42.8	78	9.4	0.97	7.96	36384	45.65	336.57	8.5	19.4
1791.0	43.4	43.2	77	9.4	1.17	7.98	36491	84.20	335.17	8.5	19.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1792.0	37.9	44.2	77	9.4	1.23	8.01	36613	96.37	333.85	8.5	19.4
1793.0	30.0	44.1	77	9.4	1.30	8.04	36767	121.73	332.68	8.5	19.4
1794.0	35.0	32.4	68	9.4	1.10	8.07	36884	104.49	331.43	8.5	19.4
1795.0	40.0	26.8	76	9.4	1.04	8.09	36998	91.30	330.13	8.5	19.4
1796.0	14.3	34.1	77	9.4	1.44	8.16	37321	254.63	329.72	8.5	19.4
1797.0	9.7	38.5	78	9.4	1.62	8.26	37804	376.36	329.97	8.5	19.4
1798.0	26.5	32.1	65	9.4	1.17	8.30	37951	137.96	328.94	8.5	19.4
1799.0	11.0	25.2	73	9.4	1.38	8.39	38350	331.72	328.96	8.5	19.4
1800.0	10.2	41.6	78	9.4	1.64	8.49	38811	359.11	329.12	8.5	19.4
1801.0	15.4	35.7	69	9.4	1.40	8.56	39081	237.38	328.63	8.5	19.4
1802.0	11.4	43.6	78	9.4	1.63	8.64	39491	321.58	328.60	8.5	19.4
1803.0	18.8	40.4	71	9.4	1.40	8.70	39718	193.76	327.89	8.5	19.4
1804.0	21.6	16.3	68	9.4	1.04	8.74	39906	169.41	327.07	8.5	19.4
1805.0	26.5	9.2	77	9.4	0.90	8.78	40081	137.96	326.10	8.5	19.4
1806.0	14.6	5.0	71	9.4	0.90	8.85	40371	249.55	325.70	8.5	19.4
1807.0	13.2	6.0	78	9.4	0.97	8.93	40725	275.93	325.45	8.5	19.4
1808.0	15.9	20.0	77	9.4	1.21	8.99	41017	230.28	324.97	8.5	19.4
1809.0	11.7	34.0	78	9.4	1.50	9.07	41419	313.46	324.91	8.5	19.4
1810.0	12.5	35.3	78	9.4	1.50	9.15	41793	291.15	324.74	8.5	19.4
1811.0	21.6	36.8	78	9.4	1.34	9.20	42011	169.41	323.96	8.5	19.4
1812.0	13.3	36.6	78	9.4	1.50	9.28	42364	273.90	323.71	8.5	19.4
1813.0	14.7	36.9	78	9.4	1.47	9.34	42683	248.54	323.34	8.5	19.4
1814.0	9.5	38.0	78	9.4	1.62	9.45	43171	382.45	323.63	8.5	19.4
1815.0	9.0	40.2	74	9.4	1.65	9.56	43663	406.79	324.04	8.5	19.4
1816.0	6.3	41.0	63	9.4	1.73	9.72	44273	584.32	325.31	8.5	19.4
1817.0	15.9	39.1	68	9.4	1.42	9.78	44531	230.28	324.85	8.5	19.4
1818.0	10.9	39.1	78	9.4	1.59	9.87	44961	334.77	324.90	8.5	19.4
1819.0	10.4	39.1	79	9.4	1.61	9.97	45415	351.00	325.02	8.5	19.4
1820.0	10.8	40.7	79	9.4	1.61	10.06	45851	337.81	325.08	8.5	19.4
1821.0	10.3	40.4	79	9.4	1.63	10.16	46307	353.03	325.22	8.5	19.4
1822.0	20.9	40.5	79	9.4	1.39	10.21	46533	174.48	324.50	8.5	19.4
1823.0	30.3	42.3	78	9.4	1.29	10.24	46688	120.72	323.54	8.5	19.4
1824.0	35.3	41.1	78	9.4	1.23	10.27	46822	103.47	322.51	8.5	19.4
1825.0	33.6	41.2	76	9.4	1.23	10.30	46957	108.55	321.51	8.5	19.4
1826.0	42.4	40.3	67	9.4	1.11	10.32	47052	86.23	320.41	8.5	19.4
1827.0	19.0	41.2	75	9.4	1.42	10.38	47287	191.73	319.82	8.5	19.5
1828.0	11.4	43.2	76	9.4	1.62	10.46	47688	319.55	319.81	8.5	19.5
1829.0	8.0	43.4	76	9.4	1.74	10.59	48256	454.47	320.43	8.5	19.5
1830.0	12.5	42.4	77	9.4	1.58	10.67	48627	292.16	320.30	8.5	19.5
1831.0	23.5	44.1	76	9.4	1.38	10.71	48820	155.21	319.55	8.5	19.5
1832.0	29.3	44.5	75	9.4	1.30	10.74	48973	124.78	318.67	8.5	19.5
1833.0	34.3	44.9	78	9.4	1.27	10.77	49109	106.52	317.71	8.5	19.5
1834.0	11.5	46.0	76	9.4	1.65	10.86	49507	317.52	317.71	8.5	19.5
1835.0	9.3	44.7	77	9.4	1.71	10.97	50007	393.60	318.05	8.5	19.5
1836.0	7.5	43.5	78	9.4	1.77	11.10	50625	484.90	318.79	8.5	19.5
1837.0	11.4	44.0	78	9.4	1.63	11.19	51036	319.55	318.80	8.5	19.5
1838.0	11.1	44.3	78	9.4	1.65	11.28	51458	327.67	318.84	8.5	19.5
1839.0	18.2	44.5	78	9.4	1.48	11.33	51716	200.86	318.32	8.5	19.5
1840.0	11.0	45.0	78	9.4	1.66	11.42	52142	331.72	318.38	8.5	19.5
1841.0	10.8	45.0	78	9.4	1.66	11.52	52573	336.80	318.46	8.5	19.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1842.0	10.3	45.0	78	9.4	1.68	11.61	53026	354.04	318.61	8.5	19.5
1843.0	25.0	45.0	78	9.4	1.38	11.65	53212	146.08	317.87	8.5	19.5
1844.0	15.2	45.0	78	9.4	1.55	11.72	53518	240.42	317.54	8.5	19.5
1845.0	27.7	45.0	77	9.4	1.34	11.75	53686	131.88	316.74	8.5	19.5
1846.0	15.5	45.0	78	9.4	1.54	11.82	53987	235.35	316.40	8.5	19.5
1847.0	16.1	45.0	78	9.4	1.53	11.88	54277	226.22	316.01	8.5	19.5
1848.0	12.8	45.4	79	9.4	1.61	11.96	54647	286.07	315.89	8.5	19.5
1849.0	17.9	45.0	79	9.4	1.49	12.02	54910	203.90	315.42	8.5	19.5
1850.0	13.9	45.0	78	9.4	1.58	12.09	55248	262.74	315.20	8.5	19.5
1851.0	11.4	45.0	78	9.4	1.65	12.18	55661	321.58	315.22	8.5	19.5
1852.0	9.5	45.0	72	9.4	1.68	12.28	56116	385.49	315.51	8.5	19.5
1853.0	10.9	45.0	71	9.4	1.63	12.37	56508	335.78	315.60	8.5	19.5
1854.0	14.8	45.0	67	9.4	1.51	12.44	56781	247.52	315.32	8.5	19.5
1855.0	15.7	45.0	69	9.4	1.49	12.50	57044	232.31	314.98	8.5	19.5
1856.0	9.2	45.0	69	9.4	1.68	12.61	57493	396.65	315.31	8.5	19.5
1857.0	13.5	44.6	69	9.4	1.54	12.69	57800	270.86	315.13	8.5	19.5
1858.0	17.0	44.5	69	9.4	1.46	12.75	58044	215.06	314.72	8.5	19.5
1859.0	20.2	44.4	69	9.4	1.40	12.80	58249	180.57	314.18	8.5	19.5
1860.0	16.9	45.7	69	9.4	1.48	12.85	58493	216.08	313.79	8.5	19.5
1861.0	16.0	46.0	69	9.4	1.50	12.92	58752	228.25	313.45	8.5	19.5
1862.0	10.7	45.5	69	9.4	1.63	13.01	59141	342.88	313.56	8.5	19.5
1863.0	12.1	43.4	61	9.4	1.52	13.09	59444	301.29	313.52	8.5	19.5
1864.0	11.6	43.1	70	9.4	1.58	13.18	59807	315.49	313.52	8.5	19.5
1865.0	10.8	44.1	73	9.4	1.63	13.27	60212	337.81	313.62	8.5	19.5
1866.0	14.3	43.6	73	9.4	1.53	13.34	60519	254.63	313.39	8.5	19.5
1867.0	12.1	43.9	73	9.4	1.59	13.42	60881	301.29	313.34	8.5	19.5
1868.0	12.9	44.7	73	9.4	1.58	13.50	61221	282.02	313.22	8.5	19.5
1869.0	12.4	45.3	73	9.4	1.60	13.58	61575	294.19	313.14	8.5	19.5
1870.0	28.3	44.6	73	9.4	1.31	13.62	61731	128.83	312.43	8.5	19.5
1871.0	20.7	43.9	73	9.4	1.41	13.67	61944	176.51	311.91	8.5	19.5
1872.0	31.6	44.3	73	9.4	1.27	13.70	62083	115.65	311.16	8.5	19.5
1873.0	48.6	43.3	73	9.4	1.12	13.72	62173	75.07	310.26	8.5	19.5
1874.0	30.3	41.3	71	9.4	1.24	13.75	62313	120.72	309.53	8.5	19.5
1875.0	57.1	41.1	72	9.4	1.04	13.77	62389	63.91	308.60	8.5	19.5
1876.0	14.6	40.6	73	9.4	1.49	13.84	62689	250.57	308.38	8.5	19.5
1877.0	12.9	42.7	73	9.4	1.55	13.91	63026	282.02	308.29	8.5	19.5
1878.0	12.9	43.4	73	9.4	1.56	13.99	63365	283.03	308.19	8.5	19.5
1879.0	14.3	43.4	73	9.4	1.53	14.06	63670	255.64	307.99	8.5	19.5
1880.0	16.4	44.0	73	9.4	1.49	14.12	63935	222.16	307.68	8.5	19.5
1881.0	10.7	46.0	73	9.4	1.65	14.22	64342	340.85	307.80	8.5	19.5
1882.0	18.7	47.0	72	9.4	1.47	14.27	64574	195.79	307.39	8.5	19.5
1883.0	22.0	43.7	71	9.4	1.38	14.32	64769	166.37	306.87	8.5	19.5
1884.0	13.6	44.5	72	9.4	1.55	14.39	65087	267.81	306.72	8.5	19.5
1885.0	14.0	44.5	72	9.4	1.54	14.46	65396	261.73	306.56	8.5	19.5
1886.0	14.2	45.1	72	9.4	1.54	14.53	65699	257.67	306.38	8.5	19.5
1887.0	16.6	45.2	72	9.4	1.49	14.59	65959	220.13	306.07	8.5	19.5
1888.0	12.0	45.4	72	9.4	1.60	14.67	66318	304.33	306.06	8.5	19.5
1889.0	15.9	44.9	72	9.5	1.49	14.74	66588	229.26	305.79	8.5	19.6
1890.0	10.8	44.9	72	9.5	1.62	14.83	66988	338.82	305.90	8.5	19.6
1891.0	22.4	44.2	72	9.5	1.37	14.87	67181	163.33	305.40	8.5	19.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1892.0	23.1	44.5	72	9.5	1.36	14.92	67368	158.25	304.87	8.5	19.6
1893.0	15.7	44.0	71	9.5	1.48	14.98	67637	232.31	304.61	8.5	19.6
1894.0	13.5	44.3	71	9.5	1.53	15.06	67952	270.86	304.49	8.5	19.6
1895.0	28.8	44.6	71	9.5	1.28	15.09	68099	126.81	303.87	8.5	19.6
1896.0	25.5	44.3	71	9.5	1.32	15.13	68265	143.04	303.30	8.5	19.6
1897.0	22.8	43.7	71	9.5	1.35	15.17	68451	160.28	302.80	8.5	19.6
1898.0	13.3	43.3	71	9.5	1.53	15.25	68770	274.91	302.71	8.5	19.6
1899.0	15.7	43.7	71	9.5	1.47	15.31	69039	232.31	302.46	8.5	19.6
1900.0	19.9	45.0	70	9.5	1.41	15.36	69252	183.61	302.05	8.5	19.6
1901.0	27.7	45.0	69	9.5	1.29	15.40	69402	131.88	301.46	8.5	19.6
1902.0	18.2	45.0	70	9.5	1.43	15.45	69632	200.86	301.12	8.5	19.6
1903.0	13.5	45.0	70	9.5	1.53	15.53	69942	269.84	301.01	8.5	19.6
1904.0	16.4	45.0	70	9.5	1.47	15.59	70199	223.18	300.75	8.5	19.6
1905.0	16.1	45.0	70	9.5	1.48	15.65	70460	227.24	300.50	8.5	19.6
1906.0	44.4	45.0	70	9.5	1.13	15.67	70554	82.17	299.75	8.5	19.6
1907.0	49.3	45.0	69	9.5	1.10	15.69	70638	74.05	298.99	8.5	19.6
1908.0	49.3	45.0	70	9.5	1.10	15.71	70723	74.05	298.23	8.5	19.6
1909.0	36.4	45.0	70	9.5	1.20	15.74	70838	100.43	297.57	8.5	19.6
1910.0	36.9	45.0	69	9.5	1.19	15.77	70951	98.91	296.91	8.5	19.6
1911.0	23.5	45.0	67	9.5	1.33	15.81	71121	155.21	296.43	8.5	19.6
1912.0	13.3	45.0	71	9.5	1.54	15.89	71441	274.91	296.36	8.5	19.6
1913.0	10.4	45.0	71	9.5	1.63	15.98	71852	352.01	296.55	8.5	19.6
1914.0	12.8	45.0	69	9.5	1.55	16.06	72175	286.07	296.51	8.5	19.6
1915.0	10.9	45.0	69	9.5	1.61	16.15	72558	335.78	296.64	8.5	19.6
1916.0	11.8	45.0	70	9.5	1.58	16.24	72915	309.41	296.68	8.5	19.6
1917.0	10.7	45.0	70	9.5	1.62	16.33	73309	341.87	296.83	8.5	19.6
1918.0	17.0	45.0	70	9.5	1.46	16.39	73558	215.06	296.56	8.5	19.6
1919.0	20.8	45.0	70	9.5	1.39	16.44	73760	175.50	296.17	8.5	19.6
1920.0	17.5	45.0	70	9.5	1.45	16.50	74000	208.98	295.89	8.5	19.6
1921.0	20.3	45.0	69	9.5	1.39	16.54	74203	179.56	295.51	8.5	19.6
1922.0	23.8	45.0	70	9.5	1.34	16.59	74379	153.18	295.06	8.5	19.6
1923.0	27.1	45.0	70	9.5	1.30	16.62	74534	134.92	294.54	8.5	19.6
1924.0	13.4	45.0	70	9.6	1.52	16.70	74846	271.87	294.47	8.5	19.6
1925.0	10.8	45.0	70	9.6	1.59	16.79	75233	336.80	294.60	8.5	19.6
1926.0	15.5	45.0	70	9.6	1.47	16.85	75504	235.35	294.42	8.5	19.6
1927.0	23.7	45.0	70	9.6	1.33	16.90	75682	154.20	293.97	8.5	19.6
1928.0	13.7	45.0	70	9.6	1.51	16.97	75989	266.80	293.89	8.5	19.6
1929.0	13.5	45.0	70	9.6	1.52	17.04	76301	270.86	293.81	8.5	19.6
1930.0	8.6	45.0	69	9.6	1.66	17.16	76779	423.02	294.22	8.5	19.6
1931.0	35.0	45.0	71	9.6	1.20	17.19	76900	104.49	293.63	8.5	19.6
1932.0	23.4	45.0	71	9.6	1.34	17.23	77084	156.22	293.20	8.5	19.6
1933.0	17.9	45.0	72	9.6	1.43	17.29	77324	203.90	292.92	8.5	19.6
1934.0	17.2	45.0	72	9.6	1.45	17.35	77573	212.02	292.67	8.5	19.6
1935.0	25.5	45.0	71	9.6	1.31	17.38	77740	143.04	292.21	8.5	19.6
1936.0	19.4	45.0	71	9.6	1.40	17.44	77961	188.69	291.89	8.5	19.6
1937.0	23.1	45.0	71	9.6	1.35	17.48	78146	158.25	291.48	8.5	19.6
1938.0	15.5	45.0	71	9.6	1.48	17.54	78424	236.37	291.31	8.5	19.6
1939.0	21.4	45.0	59	9.6	1.31	17.59	78589	170.43	290.94	8.5	19.6
1940.0	27.7	45.0	69	9.6	1.27	17.63	78738	131.88	290.46	8.5	19.6
1941.0	36.4	45.0	69	9.6	1.18	17.65	78852	100.43	289.88	8.5	19.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1942.0	20.5	45.0	69	9.6	1.38	17.70	79054	178.54	289.55	8.5	19.6
1943.0	13.3	45.0	69	9.6	1.52	17.78	79366	273.90	289.50	8.5	19.6
1944.0	12.1	45.0	69	9.6	1.55	17.86	79708	301.29	289.53	8.5	19.6
1945.0	11.8	45.0	69	9.6	1.56	17.95	80059	308.39	289.59	8.5	19.6
1946.0	10.8	45.0	69	9.6	1.59	18.04	80444	337.81	289.73	8.5	19.6
1947.0	11.0	45.0	69	9.6	1.58	18.13	80822	331.72	289.86	8.5	19.6
1948.0	12.1	45.0	69	9.6	1.55	18.21	81167	302.30	289.90	8.5	19.6
1949.0	10.9	45.0	70	9.6	1.59	18.30	81555	334.77	290.03	8.5	19.6
1950.0	13.1	45.0	71	9.6	1.53	18.38	81877	277.96	289.99	8.5	19.6
1951.0	13.6	45.0	71	9.6	1.52	18.45	82192	268.83	289.93	8.5	19.6
1952.0	16.1	45.0	71	9.6	1.46	18.51	82454	226.22	289.74	8.5	19.6
1953.0	9.5	45.0	70	9.6	1.63	18.62	82894	383.46	290.02	8.5	19.7
1954.0	25.9	45.0	70	9.6	1.30	18.66	83058	141.01	289.58	8.5	19.7
1955.0	13.6	45.0	70	9.6	1.52	18.73	83368	267.81	289.52	8.5	19.7
1956.0	23.2	45.0	70	9.6	1.34	18.77	83550	157.24	289.14	8.5	19.7
1957.0	23.2	45.0	71	9.6	1.34	18.82	83732	157.24	288.76	8.5	19.7
1958.0	12.9	45.0	70	9.6	1.54	18.90	84060	284.04	288.74	8.5	19.7
1959.0	20.6	45.0	72	9.6	1.39	18.94	84269	177.53	288.42	8.5	19.7
1960.0	13.8	45.0	72	9.6	1.52	19.02	84579	263.76	288.35	8.5	19.7
1961.0	9.4	45.0	71	9.6	1.64	19.12	85033	388.53	288.64	8.5	19.7
1962.0	13.5	45.0	72	9.6	1.53	19.20	85352	270.86	288.59	8.5	19.7
1963.0	8.1	45.0	72	9.6	1.70	19.32	85891	453.46	289.06	8.5	19.7
1964.0	6.9	45.0	70	9.6	1.74	19.47	86501	531.57	289.74	8.5	19.7
1965.0	6.6	45.0	71	9.6	1.76	19.62	87144	553.89	290.49	8.5	19.7
1966.0	11.0	45.0	70	9.6	1.59	19.71	87526	332.74	290.61	8.5	19.7
1967.0	20.5	45.0	70	9.6	1.38	19.76	87732	178.54	290.29	8.5	19.7
1968.0	25.0	45.0	71	9.6	1.32	19.80	87902	146.08	289.89	8.5	19.7
1969.0	27.5	45.0	70	9.6	1.28	19.83	88056	132.89	289.45	8.5	19.7
1970.0	20.7	45.0	61	9.6	1.33	19.88	88232	176.51	289.14	8.5	19.7
1971.0	18.3	45.0	66	9.6	1.40	19.94	88450	199.85	288.89	8.5	19.7
1972.0	12.7	45.0	59	9.6	1.48	20.02	88727	287.09	288.88	8.5	19.7
1973.0	6.6	45.0	67	9.6	1.74	20.17	89332	551.86	289.61	8.5	19.7
1974.0	6.9	45.0	71	9.6	1.74	20.31	89942	525.48	290.26	8.5	19.7
1975.0	5.8	45.0	69	9.6	1.80	20.48	90660	628.96	291.19	8.5	19.7
1976.0	6.0	45.0	71	9.6	1.80	20.65	91372	607.65	292.06	8.5	19.7
1977.0	8.8	40.0	74	9.6	1.62	20.76	91876	416.94	292.40	8.5	19.7
1978.0	10.2	40.0	67	9.6	1.54	20.86	92274	359.11	292.58	8.5	19.7
1979.0	7.1	45.0	76	9.6	1.76	21.00	92915	513.31	293.18	8.5	19.7
1980.0	7.3	45.0	76	9.6	1.75	21.14	93539	498.09	293.74	8.5	19.7
1981.0	7.3	45.0	76	9.6	1.75	21.28	94159	499.11	294.29	8.5	19.7
1982.0	8.8	45.0	75	9.6	1.69	21.39	94674	415.92	294.62	8.5	19.7
1983.0	7.7	45.0	73	9.6	1.72	21.52	95243	471.72	295.10	8.5	19.7
1984.0	9.4	45.0	73	9.6	1.65	21.63	95709	387.52	295.34	8.5	19.7
1985.0	10.2	55.0	69	9.6	1.72	21.72	96117	359.11	295.51	8.5	19.7
1986.0	9.6	55.0	65	9.6	1.72	21.83	96524	381.43	295.74	8.5	19.7
1987.0	14.0	55.0	64	9.6	1.58	21.90	96801	261.73	295.65	8.5	19.7
1988.0	27.5	55.0	63	9.6	1.33	21.94	96939	132.89	295.22	8.5	19.7
1989.0	18.4	55.0	65	9.6	1.49	21.99	97151	198.83	294.97	8.5	19.7
1990.0	7.8	55.0	64	9.6	1.79	22.12	97646	467.66	295.42	8.5	19.7
1991.0	13.1	55.0	64	9.6	1.60	22.19	97940	277.96	295.38	8.5	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1992.0	12.9	55.0	65	9.6	1.61	22.27	98241	282.02	295.34	8.5	19.7
1993.0	8.6	55.0	65	9.6	1.76	22.39	98696	427.08	295.69	8.5	19.7
1994.0	9.2	55.0	63	9.6	1.72	22.50	99109	397.66	295.95	8.5	19.7
1995.0	5.6	55.0	58	9.6	1.87	22.68	99725	651.27	296.88	8.5	19.7
1996.0	9.2	55.0	60	9.6	1.70	22.78	100114	395.63	297.13	8.5	19.7
1997.0	6.2	55.0	60	9.6	1.85	22.95	100697	593.45	297.90	8.5	19.7
1998.0	7.9	55.0	60	9.6	1.76	23.07	101149	459.54	298.32	8.5	19.7
1999.0	6.1	55.0	60	9.6	1.85	23.24	101742	600.55	299.10	8.5	19.7
2000.0	19.6	55.0	60	9.6	1.44	23.29	101926	186.66	298.81	8.5	19.7

BIT NUMBER	4	IADC CODE	517	INTERVAL	2000.0-	2335.0
HTC J22		SIZE	12.250	NOZZLES	18	16 16
COST	8516.00	TRIP TIME	7.0	BIT RUN		335.0
TOTAL HOURS	34.26	TOTAL TURNS	123394	CONDITION	T8	B6 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2001.0	7.1	15.0	72	9.8	1.26	0.14	608	513	34593	8.5	19.7
2002.0	8.7	32.0	72	9.8	1.48	0.26	1105	421	17507	8.5	19.7
2003.0	15.3	32.0	72	9.8	1.31	0.32	1386	239	11751	8.5	19.7
2004.0	11.1	40.0	72	9.8	1.50	0.41	1775	330	8896	8.5	19.7
2005.0	35.3	40.0	71	9.8	1.14	0.44	1896	103	7137	8.5	19.7
2006.0	31.0	40.0	70	9.8	1.17	0.47	2032	118	5967	8.5	19.7
2007.0	30.3	40.0	70	9.8	1.18	0.51	2171	121	5132	8.5	19.7
2008.0	34.3	40.0	70	9.8	1.14	0.53	2294	107	4504	8.5	19.7
2009.0	31.3	40.0	70	9.8	1.17	0.57	2429	117	4016	8.5	19.7
2010.0	34.6	40.0	70	9.8	1.14	0.60	2551	106	3625	8.5	19.7
2011.0	11.4	40.0	70	9.7	1.51	0.68	2923	322	3325	8.5	19.7
2012.0	8.4	40.0	70	9.7	1.60	0.80	3423	433	3084	8.5	19.7
2013.0	7.5	45.0	64	9.7	1.67	0.94	3935	488	2884	8.5	19.7
2014.0	5.9	45.0	67	9.6	1.78	1.10	4613	619	2723	8.5	19.7
2015.0	8.4	45.0	67	9.6	1.66	1.22	5090	433	2570	8.5	19.7
2016.0	6.3	45.0	66	9.6	1.76	1.38	5723	584	2446	8.5	19.7
2017.0	9.5	45.0	66	9.7	1.60	1.49	6138	383	2324	8.5	19.7
2018.0	5.8	45.0	69	9.7	1.78	1.66	6851	632	2230	8.5	19.7
2019.0	5.8	45.0	69	9.7	1.78	1.83	7565	633	2146	8.5	19.7
2020.0	7.0	45.0	68	9.7	1.71	1.98	8154	524	2065	8.5	19.8
2021.0	7.5	45.0	66	9.7	1.68	2.11	8684	486	1990	8.5	19.8
2022.0	6.6	45.0	63	9.7	1.70	2.26	9252	553	1925	8.5	19.8
2023.0	6.0	45.0	58	9.7	1.71	2.43	9830	605	1867	8.5	19.8
2024.0	5.3	45.0	58	9.7	1.75	2.62	10491	692	1818	8.5	19.8
2025.0	5.1	45.0	60	9.6	1.79	2.81	11195	719	1774	8.5	19.8
2026.0	5.7	45.0	64	9.6	1.77	2.99	11860	636	1731	8.5	19.8
2027.0	7.7	45.0	64	9.6	1.68	3.12	12365	477	1684	8.5	19.8
2028.0	9.1	42.0	64	9.6	1.58	3.23	12786	401	1638	8.5	19.8
2029.0	28.8	42.0	64	9.6	1.21	3.26	12918	127	1586	8.5	19.8
2030.0	19.9	42.0	64	9.6	1.33	3.31	13110	184	1539	8.5	19.8
2031.0	6.6	42.0	61	9.6	1.68	3.47	13666	557	1508	8.5	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2032.0	8.0	42.0	66	9.6	1.64	3.59	14158	457	1475	8.5	19.8
2033.0	6.6	50.0	62	9.6	1.78	3.74	14721	552	1447	8.5	19.8
2034.0	6.7	50.0	64	9.6	1.78	3.89	15288	542	1420	8.5	19.8
2035.0	6.8	40.0	67	9.6	1.67	4.04	15875	538	1395	8.5	19.8
2036.0	6.2	40.0	62	9.6	1.67	4.20	16473	588	1373	8.5	19.8
2037.0	8.1	50.0	63	9.6	1.71	4.32	16941	451	1348	8.5	19.8
2038.0	15.0	50.0	63	9.6	1.50	4.39	17193	243	1319	8.5	19.8
2039.0	30.0	50.0	63	9.6	1.26	4.42	17318	122	1288	8.5	19.8
2040.0	33.0	50.0	63	9.6	1.22	4.45	17432	111	1259	8.5	19.8
2041.0	39.6	50.0	62	9.6	1.16	4.48	17527	92	1230	8.5	19.8
2042.0	36.4	50.0	62	9.6	1.19	4.51	17630	100	1203	8.5	19.8
2043.0	36.4	50.0	61	9.6	1.18	4.53	17731	100	1178	8.5	19.8
2044.0	12.5	50.0	64	9.6	1.57	4.61	18037	293	1158	8.5	19.8
2045.0	6.1	50.0	64	9.6	1.81	4.78	18664	598	1145	8.5	19.8
2046.0	8.1	50.0	63	9.6	1.71	4.90	19128	451	1130	8.5	19.8
2047.0	8.5	50.0	64	9.6	1.70	5.02	19579	430	1115	8.5	19.8
2048.0	10.0	50.0	63	9.6	1.64	5.12	19957	366	1099	8.5	19.8
2049.0	5.0	50.0	63	9.6	1.88	5.32	20724	738	1092	8.5	19.8
2050.0	5.8	49.7	60	9.6	1.80	5.49	21339	627	1083	8.5	19.8
2051.0	4.6	48.9	59	9.6	1.87	5.71	22115	801	1077	8.5	19.8
2052.0	6.7	50.5	56	9.6	1.74	5.86	22617	543	1067	8.5	19.8
2053.0	6.6	52.9	57	9.6	1.78	6.01	23133	554	1057	8.5	19.8
2054.0	13.2	49.6	59	9.6	1.51	6.09	23399	276	1043	8.5	19.8
2055.0	15.7	48.9	63	9.6	1.47	6.15	23640	233	1028	8.5	19.8
2056.0	16.8	50.2	62	9.6	1.46	6.21	23862	217	1014	8.5	19.8
2057.0	12.2	49.3	62	9.6	1.56	6.29	24170	300	1001	8.5	19.8
2058.0	17.7	49.4	62	9.6	1.43	6.35	24381	205.93	987.43	8.5	19.8
2059.0	21.4	49.0	62	9.6	1.36	6.40	24555	170.43	973.58	8.5	19.8
2060.0	42.4	48.3	64	9.6	1.14	6.42	24647	86.23	958.79	8.5	19.8
2061.0	32.1	47.5	65	9.6	1.23	6.45	24769	113.62	944.94	8.5	19.8
2062.0	40.0	46.5	66	9.6	1.15	6.48	24867	91.30	931.17	8.5	19.8
2063.0	29.3	43.4	63	9.6	1.21	6.51	24997	124.78	918.37	8.5	19.8
2064.0	34.6	43.8	66	9.6	1.18	6.54	25111	105.50	905.67	8.5	19.8
2065.0	36.0	43.8	66	9.6	1.16	6.57	25222	101.44	893.29	8.5	19.8
2066.0	42.9	43.8	66	9.6	1.11	6.59	25315	85.21	881.05	8.5	19.8
2067.0	39.6	40.5	66	9.6	1.11	6.62	25416	92.31	869.28	8.5	19.8
2068.0	42.9	40.2	67	9.6	1.08	6.64	25509	85.21	857.75	8.5	19.8
2069.0	29.0	41.2	66	9.6	1.21	6.67	25646	125.79	847.14	8.5	19.8
2070.0	16.4	42.6	63	9.6	1.40	6.73	25879	223.18	838.23	8.5	19.8
2071.0	15.4	40.9	61	9.6	1.39	6.80	26118	237.38	829.76	8.5	19.8
2072.0	13.8	42.9	62	9.6	1.45	6.87	26387	263.76	821.90	8.5	19.8
2073.0	28.1	42.9	64	9.6	1.22	6.91	26523	129.85	812.42	8.5	19.8
2074.0	33.3	41.9	64	9.6	1.16	6.94	26638	109.56	802.92	8.5	19.8
2075.0	22.8	41.0	63	9.6	1.27	6.98	26804	160.28	794.35	8.5	19.8
2076.0	11.4	41.9	65	9.6	1.52	7.07	27147	321.58	788.13	8.5	19.8
2077.0	7.2	43.0	65	9.6	1.68	7.21	27685	504.18	784.45	8.5	19.8
2078.0	6.5	43.3	64	9.6	1.71	7.36	28278	565.05	781.63	8.5	19.8
2079.0	8.8	41.3	64	9.6	1.59	7.48	28717	413.89	776.98	8.5	19.8
2080.0	16.7	41.1	64	9.6	1.38	7.54	28948	219.12	770.01	8.5	19.8
2081.0	9.3	43.5	62	9.6	1.59	7.64	29349	391.58	765.33	8.5	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2082.0	12.1	44.7	64	9.6	1.52	7.73	29667	301.29	759.67	8.5	19.8
2083.0	27.5	44.3	64	9.6	1.25	7.76	29807	132.89	752.12	8.5	19.8
2084.0	21.2	44.1	64	9.6	1.33	7.81	29989	172.46	745.22	8.5	19.8
2085.0	6.2	44.2	64	9.6	1.74	7.97	30600	585.33	743.34	8.5	19.8
2086.0	6.4	44.3	64	9.6	1.73	8.13	31194	569.10	741.31	8.5	19.8
2087.0	12.9	43.2	65	9.6	1.49	8.20	31495	284.04	736.06	8.5	19.9
2088.0	6.3	44.0	64	9.5	1.75	8.36	32100	575.19	734.23	8.5	19.9
2089.0	7.8	43.2	65	9.5	1.67	8.49	32598	468.67	731.25	8.5	19.9
2090.0	9.1	43.6	64	9.5	1.62	8.60	33020	400.71	727.57	8.5	19.9
2091.0	9.5	44.9	64	9.5	1.62	8.70	33421	382.45	723.78	8.5	19.9
2092.0	10.4	43.9	64	9.5	1.58	8.80	33790	349.98	719.72	8.5	19.9
2093.0	15.3	43.5	64	9.5	1.45	8.86	34040	238.39	714.54	8.5	19.9
2094.0	9.7	43.5	64	9.5	1.60	8.97	34439	378.39	710.97	8.5	19.9
2095.0	11.0	45.1	64	9.5	1.58	9.06	34789	332.74	706.99	8.5	19.9
2096.0	18.0	44.2	64	9.5	1.40	9.11	35002	202.89	701.73	8.5	19.9
2097.0	15.9	44.3	64	9.5	1.44	9.18	35244	230.28	696.87	8.5	19.9
2098.0	18.4	45.1	64	9.5	1.40	9.23	35453	198.83	691.79	8.5	19.9
2099.0	32.7	43.6	63	9.5	1.19	9.26	35570	111.59	685.93	8.5	19.9
2100.0	33.0	44.8	61	9.5	1.18	9.29	35680	110.57	680.18	8.5	19.9
2101.0	11.9	46.0	64	9.5	1.56	9.38	36001	306.36	676.48	8.5	19.9
2102.0	8.3	46.0	64	9.5	1.68	9.50	36464	440.27	674.16	8.5	19.9
2103.0	8.9	45.9	64	9.5	1.66	9.61	36897	411.86	671.61	8.5	19.9
2104.0	9.1	44.9	64	9.5	1.64	9.72	37320	401.72	669.02	8.5	19.9
2105.0	5.1	44.9	62	9.5	1.83	9.92	38057	719.24	669.50	8.5	19.9
2106.0	10.8	44.2	63	9.5	1.57	10.01	38409	337.81	666.37	8.5	19.9
2107.0	6.6	44.7	61	9.5	1.73	10.16	38962	549.83	665.28	8.5	19.9
2108.0	18.1	44.5	64	9.5	1.40	10.22	39173	201.87	660.99	8.5	19.9
2109.0	11.4	43.4	60	9.5	1.52	10.30	39488	319.55	657.86	8.5	19.9
2110.0	9.3	42.7	63	9.5	1.60	10.41	39895	393.60	655.45	8.5	19.9
2111.0	6.4	44.4	63	9.5	1.74	10.57	40486	574.18	654.72	8.5	19.9
2112.0	7.5	45.7	64	9.4	1.73	10.70	40995	485.92	653.21	8.5	19.9
2113.0	12.5	47.1	65	9.4	1.58	10.78	41308	292.16	650.02	8.5	19.9
2114.0	5.7	47.7	63	9.4	1.84	10.96	41967	636.06	649.90	8.5	19.9
2115.0	23.7	44.6	65	9.4	1.33	11.00	42132	154.20	645.59	8.5	19.9
2116.0	7.1	45.2	64	9.4	1.74	11.14	42674	512.29	644.44	8.5	19.9
2117.0	8.9	43.4	63	9.4	1.64	11.25	43097	409.84	642.43	8.5	19.9
2118.0	17.6	42.0	63	9.4	1.40	11.31	43313	206.95	638.74	8.5	19.9
2119.0	23.1	42.1	63	9.4	1.31	11.35	43477	158.25	634.70	8.5	19.9
2120.0	30.8	39.0	61	9.4	1.17	11.38	43596	118.69	630.40	8.5	19.9
2121.0	24.5	40.0	64	9.4	1.27	11.42	43753	149.12	626.43	8.5	19.9
2122.0	26.3	40.0	64	9.4	1.25	11.46	43900	138.98	622.43	8.5	19.9
2123.0	22.6	38.2	65	9.4	1.28	11.51	44071	161.30	618.68	8.5	19.9
2124.0	20.5	38.9	64	9.4	1.32	11.55	44260	178.54	615.13	8.5	19.9
2125.0	17.1	40.4	64	9.4	1.39	11.61	44486	213.03	611.92	8.5	19.9
2126.0	16.1	41.3	64	9.4	1.42	11.67	44725	226.22	608.85	8.5	19.9
2127.0	21.4	41.6	64	9.4	1.33	11.72	44905	170.43	605.40	8.5	19.9
2128.0	40.9	40.3	64	9.4	1.10	11.75	44999	89.27	601.37	8.5	19.9
2129.0	26.7	37.3	55	9.4	1.17	11.78	45123	136.95	597.77	8.5	19.9
2130.0	30.5	37.8	64	9.4	1.18	11.82	45249	119.70	594.09	8.5	19.9
2131.0	14.9	40.9	63	9.4	1.44	11.88	45504	245.50	591.43	8.5	19.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2132.0	23.5	40.8	64	9.4	1.29	11.93	45667	155.21	588.13	8.5	19.9
2133.0	18.1	29.0	60	9.4	1.22	11.98	45865	201.87	585.22	8.5	19.9
2134.0	11.2	41.3	64	9.4	1.54	12.07	46206	325.64	583.29	8.5	19.9
2135.0	4.3	40.2	64	9.4	1.85	12.31	47106	858.22	585.32	8.5	19.9
2136.0	5.0	40.8	64	9.5	1.78	12.50	47864	724.31	586.34	8.5	19.9
2137.0	8.1	40.0	62	9.5	1.60	12.63	48322	452.44	585.37	8.5	19.9
2138.0	5.0	42.1	63	9.5	1.79	12.83	49074	723.30	586.37	8.5	19.9
2139.0	5.6	42.6	63	9.5	1.77	13.00	49752	655.33	586.86	8.5	19.9
2140.0	7.3	41.8	61	9.5	1.66	13.14	50252	497.08	586.22	8.5	19.9
2141.0	9.7	41.6	60	9.4	1.57	13.24	50625	377.37	584.74	8.5	19.9
2142.0	12.9	40.1	63	9.4	1.48	13.32	50917	284.04	582.62	8.5	19.9
2143.0	12.3	39.8	64	9.4	1.49	13.40	51227	296.22	580.62	8.5	19.9
2144.0	21.3	39.4	64	9.4	1.31	13.45	51408	171.44	577.78	8.5	19.9
2145.0	23.1	39.7	64	9.4	1.29	13.49	51575	158.25	574.88	8.5	19.9
2146.0	8.3	39.7	61	9.4	1.60	13.61	52014	439.25	573.96	8.5	19.9
2147.0	4.6	39.5	63	9.4	1.81	13.83	52839	800.40	575.50	8.5	19.9
2148.0	6.2	39.0	62	9.4	1.69	13.99	53434	588.38	575.58	8.5	19.9
2149.0	4.1	41.6	63	9.4	1.87	14.24	54355	883.58	577.65	8.5	19.9
2150.0	6.4	38.7	63	9.4	1.69	14.39	54952	573.16	577.62	8.5	19.9
2151.0	15.0	44.5	64	9.4	1.48	14.46	55206	243.47	575.41	8.5	19.9
2152.0	18.1	46.2	62	9.4	1.42	14.51	55413	201.87	572.95	8.5	19.9
2153.0	24.8	49.2	55	9.4	1.30	14.56	55545	147.09	570.17	8.5	19.9
2154.0	24.5	49.1	53	9.4	1.29	14.60	55676	149.12	567.43	8.5	19.9
2155.0	26.7	49.6	53	9.4	1.27	14.63	55796	136.95	564.65	8.5	19.9
2156.0	29.8	49.6	53	9.4	1.23	14.67	55903	122.75	561.82	8.5	19.9
2157.0	19.1	49.3	52	9.4	1.37	14.72	56066	190.72	559.46	8.5	20.0
2158.0	30.0	48.7	53	9.4	1.21	14.75	56171	121.73	556.69	8.5	20.0
2159.0	32.1	43.9	55	9.4	1.16	14.78	56273	113.62	553.90	8.5	20.0
2160.0	22.5	33.6	58	9.4	1.20	14.83	56427	162.31	551.45	8.5	20.0
2161.0	7.8	44.8	64	9.4	1.71	14.96	56918	465.63	550.92	8.5	20.0
2162.0	10.0	45.3	58	9.4	1.59	15.06	57266	365.20	549.77	8.5	20.0
2163.0	4.9	51.7	54	9.4	1.89	15.26	57921	740.54	550.94	8.5	20.0
2164.0	5.7	51.9	53	9.4	1.84	15.44	58482	645.19	551.52	8.5	20.0
2165.0	8.6	51.3	53	9.4	1.68	15.55	58850	425.05	550.75	8.5	20.0
2166.0	13.5	51.9	48	9.4	1.49	15.63	59063	269.84	549.06	8.5	20.0
2167.0	22.2	48.4	52	9.4	1.31	15.67	59204	164.34	546.76	8.5	20.0
2168.0	24.7	48.2	52	9.4	1.27	15.71	59330	148.11	544.38	8.5	20.0
2169.0	25.0	47.7	52	9.4	1.26	15.75	59456	146.08	542.03	8.5	20.0
2170.0	33.0	48.2	52	9.4	1.17	15.78	59550	110.57	539.49	8.5	20.0
2171.0	9.8	50.7	52	9.4	1.62	15.88	59872	372.30	538.51	8.5	20.0
2172.0	8.7	50.3	53	9.4	1.66	16.00	60234	418.97	537.82	8.5	20.0
2173.0	8.4	50.4	53	9.4	1.68	16.12	60612	436.21	537.23	8.5	20.0
2174.0	10.4	49.8	53	9.4	1.59	16.21	60914	349.98	536.15	8.5	20.0
2175.0	8.6	50.6	53	9.4	1.67	16.33	61285	427.08	535.53	8.5	20.0
2176.0	9.7	50.2	52	9.4	1.62	16.43	61606	375.34	534.62	8.5	20.0
2177.0	7.2	54.0	52	9.4	1.77	16.57	62037	506.21	534.46	8.5	20.0
2178.0	3.1	53.4	54	9.4	2.07	16.89	63074	1162	538	8.5	20.0
2179.0	4.7	53.6	55	9.4	1.93	17.10	63767	769.96	539.28	8.5	20.0
2180.0	4.8	54.0	54	9.4	1.93	17.31	64450	765.91	540.54	8.5	20.0
2181.0	4.4	54.2	53	9.4	1.95	17.54	65172	827.79	542.12	8.5	20.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2182.0	5.5	54.4	53	9.4	1.87	17.72	65747	660.40	542.77	8.5	20.0
2183.0	5.5	54.3	53	9.4	1.88	17.90	66329	669.53	543.47	8.5	20.0
2184.0	4.2	55.2	53	9.4	1.99	18.14	67092	878.51	545.29	8.5	20.0
2185.0	8.3	53.4	52	9.4	1.71	18.26	67470	438.24	544.71	8.5	20.0
2186.0	15.0	42.4	53	9.4	1.39	18.33	67681	243.47	543.09	8.5	20.0
2187.0	29.8	40.8	56	9.4	1.17	18.36	67794	122.75	540.84	8.5	20.0
2188.0	32.1	40.6	56	9.4	1.14	18.39	67898	113.62	538.57	8.5	20.0
2189.0	28.1	40.7	56	9.4	1.19	18.43	68018	129.85	536.41	8.5	20.0
2190.0	35.3	39.8	57	9.4	1.11	18.46	68116	103.47	534.13	8.5	20.0
2191.0	25.4	40.9	59	9.4	1.24	18.50	68254	144.05	532.09	8.5	20.0
2192.0	29.5	40.8	58	9.4	1.19	18.53	68373	123.76	529.96	8.5	20.0
2193.0	28.3	40.4	58	9.4	1.20	18.57	68497	128.83	527.88	8.5	20.0
2194.0	9.0	47.1	57	9.4	1.64	18.68	68877	407.81	527.26	8.5	20.0
2195.0	22.2	40.8	55	9.4	1.26	18.72	69024	164.34	525.40	8.5	20.0
2196.0	36.0	41.0	54	9.4	1.10	18.75	69115	101.44	523.24	8.5	20.0
2197.0	28.6	39.9	55	9.4	1.17	18.78	69230	127.82	521.23	8.5	20.0
2198.0	24.0	39.9	55	9.4	1.22	18.83	69366	152.17	519.37	8.5	20.0
2199.0	30.5	40.6	55	9.4	1.15	18.86	69473	119.70	517.36	8.5	20.0
2200.0	35.3	40.1	55	9.4	1.10	18.89	69566	103.47	515.29	8.5	20.0
2201.0	6.4	41.1	55	9.4	1.68	19.04	70085	572.15	515.57	8.5	20.0
2202.0	6.9	42.2	55	9.4	1.67	19.19	70568	531.57	515.65	8.5	20.0
2203.0	6.7	42.2	55	9.4	1.68	19.34	71067	548.81	515.81	8.5	20.0
2204.0	35.6	39.5	56	9.4	1.10	19.37	71162	102.46	513.79	8.5	20.0
2205.0	35.6	39.8	56	9.4	1.10	19.40	71257	102.46	511.78	8.5	20.0
2206.0	21.6	39.5	57	9.4	1.27	19.44	71414	169.41	510.12	8.5	20.0
2207.0	6.8	41.5	59	9.4	1.68	19.59	71928	533.60	510.23	8.5	20.0
2208.0	6.9	40.7	63	9.4	1.69	19.73	72470	526.50	510.31	8.5	20.0
2209.0	8.3	39.7	63	9.4	1.61	19.85	72921	438.24	509.97	8.5	20.0
2210.0	8.7	39.3	63	9.4	1.59	19.97	73351	417.95	509.53	8.5	20.0
2211.0	15.1	38.8	63	9.4	1.41	20.03	73600	242.45	508.26	8.5	20.0
2212.0	13.6	38.7	63	9.4	1.44	20.11	73877	268.83	507.13	8.5	20.0
2213.0	10.4	45.0	60	9.4	1.59	20.20	74223	352.01	506.40	8.5	20.0
2214.0	21.3	45.0	59	9.4	1.34	20.25	74389	171.44	504.84	8.5	20.0
2215.0	9.4	45.0	63	9.4	1.64	20.36	74791	387.52	504.29	8.5	20.0
2216.0	16.4	45.0	63	9.4	1.45	20.42	75023	223.18	502.99	8.5	20.0
2217.0	11.0	45.0	63	9.4	1.59	20.51	75369	331.72	502.20	8.5	20.0
2218.0	14.6	45.0	64	9.4	1.49	20.58	75629	249.55	501.04	8.5	20.0
2219.0	8.6	45.0	63	9.4	1.67	20.69	76075	427.08	500.71	8.5	20.0
2220.0	12.6	45.0	63	9.4	1.54	20.77	76376	289.12	499.74	8.5	20.0
2221.0	18.8	45.0	63	9.4	1.40	20.83	76578	193.76	498.36	8.5	20.0
2222.0	15.0	45.0	61	9.4	1.47	20.89	76823	243.47	497.21	8.5	20.0
2223.0	10.1	45.0	58	9.4	1.58	20.99	77163	360.13	496.60	8.5	20.0
2224.0	12.1	45.0	58	9.4	1.52	21.07	77450	302.30	495.73	8.5	20.0
2225.0	18.1	45.0	58	9.4	1.39	21.13	77641	201.87	494.42	8.5	20.0
2226.0	16.8	45.0	58	9.4	1.41	21.19	77847	217.09	493.20	8.5	20.0
2227.0	14.6	45.0	58	9.4	1.46	21.26	78083	249.55	492.12	8.5	20.0
2228.0	24.5	45.0	57	9.4	1.28	21.30	78224	149.12	490.62	8.5	20.0
2229.0	6.3	45.0	58	9.4	1.75	21.46	78775	580.26	491.01	8.5	20.1
2230.0	6.8	45.0	58	9.4	1.72	21.60	79287	538.67	491.22	8.5	20.1
2231.0	8.0	45.0	60	9.4	1.68	21.73	79738	454.47	491.06	8.5	20.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2232.0	9.1	45.0	61	9.4	1.64	21.84	80141	400.71	490.67	8.5	20.1
2233.0	9.4	45.0	62	9.4	1.64	21.95	80540	389.55	490.23	8.5	20.1
2234.0	20.7	45.0	63	9.4	1.37	21.99	80722	176.51	488.89	8.5	20.1
2235.0	34.0	45.0	66	9.4	1.22	22.02	80838	107.53	487.27	8.5	20.1
2236.0	31.0	45.0	66	9.4	1.25	22.06	80966	117.68	485.71	8.5	20.1
2237.0	31.6	45.0	66	9.4	1.24	22.09	81092	115.65	484.14	8.5	20.1
2238.0	10.7	45.0	65	9.4	1.60	22.18	81455	341.87	483.55	8.5	20.1
2239.0	23.7	45.0	58	9.4	1.30	22.22	81602	154.20	482.17	8.5	20.1
2240.0	16.2	45.0	58	9.4	1.43	22.28	81819	225.21	481.10	8.5	20.1
2241.0	8.2	45.0	59	9.4	1.66	22.41	82246	443.31	480.94	8.5	20.1
2242.0	7.4	45.0	56	9.4	1.68	22.54	82702	493.02	480.99	8.5	20.1
2243.0	16.5	45.0	55	9.4	1.40	22.60	82903	221.15	479.92	8.5	20.1
2244.0	24.2	45.0	55	9.4	1.27	22.64	83041	151.15	478.57	8.5	20.1
2245.0	19.9	45.0	59	9.4	1.36	22.69	83218	183.61	477.37	8.5	20.1
2246.0	5.0	45.0	57	9.4	1.82	22.90	83911	737.50	478.43	8.5	20.1
2247.0	8.7	49.0	57	9.4	1.68	23.01	84303	419.98	478.19	8.5	20.1
2248.0	10.5	49.0	56	9.4	1.61	23.11	84624	347.95	477.67	8.5	20.1
2249.0	13.6	49.0	56	9.4	1.52	23.18	84873	268.83	476.83	8.5	20.1
2250.0	23.2	49.0	56	9.4	1.33	23.22	85018	157.24	475.55	8.5	20.1
2251.0	30.0	49.0	54	9.4	1.23	23.26	85127	121.73	474.14	8.5	20.1
2252.0	7.5	49.0	56	9.4	1.73	23.39	85579	487.95	474.19	8.5	20.1
2253.0	9.4	50.0	56	9.4	1.66	23.50	85941	390.56	473.86	8.5	20.1
2254.0	7.0	50.0	57	9.4	1.76	23.64	86425	521.42	474.05	8.5	20.1
2255.0	8.1	50.0	57	9.4	1.71	23.76	86842	448.38	473.95	8.5	20.1
2256.0	5.8	50.0	57	9.4	1.83	23.94	87431	635.04	474.58	8.5	20.1
2257.0	7.8	50.0	57	9.4	1.72	24.06	87868	469.69	474.56	8.5	20.1
2258.0	6.0	50.0	57	9.4	1.81	24.23	88431	605.62	475.07	8.5	20.1
2259.0	7.3	50.0	57	9.4	1.75	24.37	88894	498.09	475.16	8.5	20.1
2260.0	7.5	55.0	55	9.4	1.78	24.50	89333	486.93	475.20	8.5	20.1
2261.0	11.2	55.0	57	9.4	1.65	24.59	89637	325.75	474.63	8.5	20.1
2262.0	9.9	55.0	57	9.4	1.69	24.69	89979	367.23	474.22	8.5	20.1
2263.0	15.5	55.0	57	9.4	1.53	24.75	90199	236.37	473.32	8.5	20.1
2264.0	32.7	55.0	56	9.4	1.26	24.78	90302	111.59	471.94	8.5	20.1
2265.0	10.7	54.3	57	9.4	1.66	24.88	90621	342.88	471.46	8.5	20.1
2266.0	9.1	55.8	57	9.4	1.73	24.99	90996	399.69	471.19	8.5	20.1
2267.0	8.8	55.0	57	9.4	1.74	25.10	91385	412.88	470.97	8.5	20.1
2268.0	7.2	55.2	59	9.4	1.83	25.24	91882	509.25	471.11	8.5	20.1
2269.0	6.5	59.8	61	9.4	1.93	25.39	92439	559.97	471.44	8.5	20.1
2270.0	8.3	55.4	58	9.4	1.77	25.51	92856	440.27	471.33	8.5	20.1
2271.0	20.6	56.1	58	9.4	1.44	25.56	93024	177.53	470.24	8.5	20.1
2272.0	12.3	57.8	58	9.4	1.65	25.64	93306	297.23	469.61	8.5	20.1
2273.0	5.8	59.9	58	9.4	1.95	25.82	93904	626.93	470.18	8.5	20.1
2274.0	9.4	59.3	57	9.4	1.76	25.92	94263	386.50	469.88	8.5	20.1
2275.0	6.7	59.7	57	9.4	1.89	26.07	94773	544.76	470.15	8.5	20.1
2276.0	19.6	59.7	56	9.4	1.49	26.12	94946	186.66	469.12	8.5	20.1
2277.0	33.0	61.6	56	9.4	1.30	26.15	95048	110.57	467.83	8.5	20.1
2278.0	18.5	60.3	56	9.4	1.51	26.21	95231	197.82	466.86	8.5	20.1
2279.0	20.8	60.2	56	9.4	1.46	26.25	95393	175.50	465.81	8.5	20.1
2280.0	20.5	53.0	57	9.4	1.41	26.30	95560	178.54	464.79	8.5	20.1
2281.0	25.0	54.8	59	9.4	1.37	26.34	95702	146.08	463.65	8.5	20.1

DEPTH	ROP	WOB	RPM	MW	"d" "c	HOURS	TURNS	ICOST	CCOST	PP	FG
2282.0	18.6	53.2	58	9.4	1.46	26.40	95890	196.80	462.71	8.5	20.1
2283.0	6.7	55.1	61	9.4	1.86	26.55	96435	544.76	463.00	8.5	20.1
2284.0	6.2	55.8	62	9.4	1.91	26.71	97039	593.45	463.46	8.5	20.1
2285.0	8.0	57.0	62	9.4	1.83	26.83	97502	454.47	463.42	8.5	20.1
2286.0	10.0	56.7	62	9.4	1.74	26.93	97875	366.21	463.08	8.5	20.1
2287.0	37.5	55.6	62	9.4	1.24	26.96	97974	97.39	461.81	8.5	20.1
2288.0	23.4	54.2	61	9.4	1.40	27.00	98131	156.22	460.75	8.5	20.1
2289.0	17.6	51.9	58	9.4	1.47	27.06	98329	207.96	459.87	8.5	20.1
2290.0	11.8	49.6	60	9.4	1.59	27.14	98633	309.41	459.36	8.5	20.1
2291.0	7.5	49.3	62	9.4	1.76	27.28	99133	489.98	459.46	8.5	20.1
2292.0	7.8	51.4	63	9.4	1.78	27.41	99618	467.66	459.49	8.5	20.1
2293.0	13.9	53.8	63	9.4	1.60	27.48	99890	262.74	458.82	8.6	20.1
2294.0	14.9	52.9	63	9.4	1.56	27.55	100142	244.48	458.09	8.6	20.1
2295.0	9.6	54.5	63	9.4	1.74	27.65	100534	379.40	457.82	8.6	20.1
2296.0	8.2	54.2	63	9.5	1.77	27.77	100996	444.33	457.78	8.6	20.1
2297.0	23.4	54.6	63	9.5	1.40	27.81	101157	156.22	456.76	8.6	20.1
2298.0	21.1	55.9	63	9.5	1.45	27.86	101335	173.47	455.81	8.6	20.1
2299.0	36.4	52.8	59	9.5	1.20	27.89	101432	100.43	454.62	8.6	20.1
2300.0	7.4	53.7	62	9.5	1.80	28.03	101935	496.06	454.76	8.6	20.1
2301.0	9.1	54.1	60	9.5	1.72	28.14	102331	402.73	454.59	8.6	20.1
2302.0	8.5	56.1	61	9.5	1.77	28.25	102764	432.15	454.51	8.6	20.1
2303.0	8.3	52.5	56	9.5	1.71	28.37	103166	438.24	454.46	8.6	20.1
2304.0	6.9	54.3	62	9.5	1.83	28.52	103703	531.57	454.71	8.6	20.1
2305.0	10.6	54.7	61	9.5	1.67	28.61	104046	343.90	454.35	8.6	20.1
2306.0	14.1	54.0	60	9.5	1.56	28.68	104303	259.70	453.71	8.6	20.1
2307.0	15.3	55.0	61	9.5	1.54	28.75	104542	239.41	453.02	8.6	20.1
2308.0	5.1	54.4	61	9.5	1.93	28.95	105261	718.23	453.88	8.6	20.1
2309.0	2.8	56.8	48	9.5	2.10	29.31	106318	1328	457	8.6	20.1
2310.0	4.6	58.0	49	9.5	1.94	29.53	106970	802.43	457.82	8.6	20.1
2311.0	7.0	57.7	51	9.5	1.79	29.67	107409	522.44	458.03	8.6	20.1
2312.0	8.3	57.5	61	9.5	1.79	29.79	107851	439.25	457.97	8.6	20.1
2313.0	10.2	57.9	61	9.5	1.72	29.89	108207	357.08	457.65	8.6	20.1
2314.0	5.8	57.9	61	9.5	1.93	30.06	108835	625.91	458.18	8.6	20.1
2315.0	8.1	58.7	61	9.5	1.82	30.19	109291	452.44	458.16	8.6	20.1
2316.0	6.7	59.4	61	9.5	1.89	30.34	109840	548.81	458.45	8.6	20.1
2317.0	9.0	58.9	60	9.5	1.77	30.45	110237	405.78	458.28	8.6	20.1
2318.0	9.9	60.7	57	9.5	1.74	30.55	110584	370.27	458.01	8.6	20.1
2319.0	11.7	57.6	60	9.5	1.66	30.63	110892	311.43	457.55	8.6	20.1
2320.0	11.9	53.6	60	9.5	1.62	30.72	111196	307.38	457.08	8.6	20.2
2321.0	12.2	54.7	60	9.5	1.62	30.80	111491	298.25	456.58	8.6	20.2
2322.0	11.8	54.6	60	9.5	1.63	30.89	111797	310.42	456.13	8.6	20.2
2323.0	10.4	54.8	60	9.5	1.68	30.98	112142	351.00	455.80	8.6	20.2
2324.0	6.9	55.3	60	9.5	1.83	31.13	112659	527.51	456.03	8.6	20.2
2325.0	9.5	55.9	59	9.5	1.71	31.23	113031	383.46	455.80	8.6	20.2
2326.0	6.2	56.1	60	9.5	1.88	31.39	113609	586.35	456.20	8.6	20.2
2327.0	8.9	56.2	60	9.5	1.75	31.50	114013	409.84	456.06	8.6	20.2
2328.0	9.2	55.9	60	9.5	1.74	31.61	114409	398.68	455.89	8.6	20.2
2329.0	6.3	52.7	60	9.5	1.83	31.77	114982	578.23	456.26	8.6	20.2
2330.0	3.3	52.8	60	9.5	2.06	32.07	116056	1095	458	8.6	20.2
2331.0	1.8	54.6	58	9.5	2.30	32.64	118031	2067	463	8.6	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2332.0	3.6	57.6	51	9.5	2.03	32.91	118880	1013	465	8.6	20.2
2333.0	5.5	55.9	50	9.5	1.85	33.10	119427	668.52	465.32	8.6	20.2
2334.0	2.8	52.8	59	9.5	2.11	33.45	120665	1286	468	8.6	20.2
2335.0	1.2	55.3	56	9.5	2.43	34.26	123394	2973	475	8.6	20.2

BIT NUMBER	5	IADC CODE	537	INTERVAL	2335.0- 2504.0
HTC J33		SIZE	12.250	NOZZLES	18 16 16
COST	7774.00	TRIP TIME	7.3	BIT RUN	169.0
TOTAL HOURS	27.93	TOTAL TURNS	94416	CONDITION	T4 R6 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2336.0	2.7	22.3	56	9.5	1.64	0.37	1248	1363	35796	8.6	20.2
2337.0	7.9	26.5	44	9.5	1.33	0.50	1580	464	18130	8.6	20.2
2338.0	8.2	35.1	53	9.5	1.49	0.62	1970	447	12236	8.6	20.2
2339.0	4.7	38.1	57	9.5	1.73	0.83	2694	770	9369	8.6	20.2
2340.0	5.5	38.6	60	9.5	1.71	1.02	3355	668	7629	8.6	20.2
2341.0	10.5	39.6	64	9.5	1.53	1.11	3720	348	6415	8.6	20.2
2342.0	6.4	40.1	64	9.5	1.69	1.27	4318	569	5580	8.6	20.2
2343.0	5.3	45.0	64	9.5	1.82	1.46	5047	689	4969	8.6	20.2
2344.0	3.8	45.0	50	9.5	1.85	1.72	5842	965	4524	8.6	20.2
2345.0	6.4	45.0	46	9.5	1.65	1.88	6275	568	4128	8.6	20.2
2346.0	5.1	45.0	51	9.6	1.74	2.07	6871	712	3818	8.6	20.2
2347.0	5.1	40.4	51	9.6	1.68	2.27	7471	720	3560	8.6	20.2
2348.0	6.0	42.9	53	9.6	1.67	2.44	8008	613	3333	8.6	20.2
2349.0	3.8	41.9	54	9.6	1.81	2.70	8862	971	3164	8.6	20.2
2350.0	5.2	40.4	59	9.6	1.72	2.89	9541	700	3000	8.6	20.2
2351.0	8.5	45.0	50	9.6	1.56	3.01	9896	429	2839	8.6	20.2
2352.0	9.6	45.0	60	9.6	1.58	3.12	10272	381	2695	8.6	20.2
2353.0	8.8	45.0	60	9.6	1.61	3.23	10684	416	2568	8.6	20.2
2354.0	11.8	45.0	60	9.6	1.51	3.31	10991	309	2449	8.6	20.2
2355.0	11.4	45.0	60	9.6	1.53	3.40	11309	321	2343	8.6	20.2
2356.0	10.1	45.0	60	9.6	1.56	3.50	11662	361	2248	8.6	20.2
2357.0	8.4	45.0	60	9.6	1.62	3.62	12088	435	2166	8.6	20.2
2358.0	10.6	45.0	61	9.6	1.56	3.71	12438	346	2087	8.6	20.2
2359.0	9.4	45.0	61	9.6	1.59	3.82	12828	387	2016	8.6	20.2
2360.0	9.7	45.0	61	9.6	1.59	3.92	13209	377	1950	8.6	20.2
2361.0	10.2	45.2	61	9.6	1.57	4.02	13569	358	1889	8.6	20.2
2362.0	11.6	45.2	61	9.6	1.53	4.11	13886	314	1831	8.6	20.2
2363.0	11.5	45.2	61	9.6	1.53	4.19	14205	318	1777	8.6	20.2
2364.0	8.1	45.8	46	9.6	1.56	4.32	14544	449	1731	8.6	20.2
2365.0	3.9	46.6	42	9.6	1.78	4.57	15183	925	1704	8.6	20.2
2366.0	4.7	41.4	46	9.6	1.69	4.79	15779	784	1675	8.6	20.2
2367.0	4.6	42.6	44	9.6	1.69	5.00	16351	797	1647	8.6	20.2
2368.0	3.5	43.4	47	9.6	1.82	5.29	17159	1042	1629	8.6	20.2
2369.0	6.9	45.1	55	9.6	1.66	5.43	17638	529	1596	8.6	20.2
2370.0	4.8	45.3	55	9.5	1.81	5.64	18326	757	1572	8.6	20.2
2371.0	6.3	42.5	55	9.5	1.68	5.80	18853	579	1545	8.6	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2372.0	4.8	42.6	56	9.5	1.78	6.01	19561	767	1524	8.6	20.2
2373.0	6.8	44.1	56	9.5	1.68	6.16	20056	536	1498	8.6	20.2
2374.0	5.7	43.6	56	9.5	1.73	6.33	20646	638	1476	8.6	20.2
2375.0	7.5	43.0	52	9.5	1.61	6.46	21064	486	1451	8.6	20.2
2376.0	4.3	44.5	57	9.5	1.84	6.70	21855	843	1436	8.6	20.2
2377.0	5.3	43.8	55	9.5	1.75	6.88	22477	688	1418	8.6	20.2
2378.0	8.2	44.0	56	9.5	1.61	7.01	22885	446	1396	8.6	20.2
2379.0	6.6	44.5	56	9.5	1.70	7.16	23397	553	1377	8.6	20.2
2380.0	4.7	43.3	57	9.5	1.80	7.37	24121	779	1363	8.6	20.2
2381.0	4.7	44.8	57	9.5	1.81	7.58	24837	771	1350	8.6	20.2
2382.0	4.6	45.0	54	9.5	1.81	7.80	25535	793	1339	8.6	20.2
2383.0	3.6	44.2	53	9.5	1.88	8.08	26416	1021	1332	8.6	20.2
2384.0	4.5	43.5	53	9.5	1.79	8.30	27119	806	1321	8.6	20.2
2385.0	5.8	40.0	55	9.5	1.67	8.47	27683	625	1307	8.6	20.2
2386.0	7.9	41.6	55	9.5	1.59	8.60	28100	464	1291	8.6	20.2
2387.0	8.7	41.5	57	9.5	1.58	8.71	28496	421	1274	8.6	20.2
2388.0	5.9	41.5	63	9.5	1.73	8.88	29134	615	1262	8.6	20.2
2389.0	19.3	44.3	63	9.5	1.37	8.93	29329	190	1242	8.6	20.2
2390.0	4.8	45.9	63	9.5	1.86	9.14	30129	768	1233	8.6	20.2
2391.0	6.8	48.0	58	9.5	1.74	9.29	30637	534	1221	8.6	20.2
2392.0	2.3	49.1	56	9.5	2.11	9.72	32076	1566	1227	8.6	20.2
2393.0	4.8	44.6	56	9.5	1.80	9.93	32778	766	1219	8.6	20.2
2394.0	5.8	31.6	47	9.5	1.52	10.10	33266	628	1209	8.6	20.2
2395.0	6.5	38.8	57	9.5	1.63	10.25	33788	560	1198	8.6	20.2
2396.0	7.1	35.9	49	9.5	1.52	10.39	34199	513	1187	8.6	20.3
2397.0	4.9	35.2	58	9.5	1.68	10.60	34914	749	1180	8.6	20.3
2398.0	3.0	42.5	59	9.5	1.95	10.93	36086	1215	1180	8.6	20.3
2399.0	8.3	32.0	55	9.5	1.46	11.05	36481	440	1169	8.6	20.3
2400.0	4.9	28.3	57	9.4	1.59	11.26	37181	745	1162	8.6	20.3
2401.0	7.1	23.0	59	9.4	1.41	11.40	37682	513	1152	8.6	20.3
2402.0	4.1	18.5	67	9.4	1.51	11.64	38661	891	1148	8.6	20.3
2403.0	4.2	29.7	65	9.4	1.70	11.88	39583	869	1144	8.6	20.3
2404.0	4.6	40.0	60	9.4	1.80	12.09	40360	789	1139	8.6	20.3
2405.0	3.3	40.0	60	9.4	1.91	12.40	41465	1122	1139	8.6	20.3
2406.0	3.0	40.0	60	9.4	1.94	12.73	42665	1217	1140	8.6	20.3
2407.0	2.7	40.0	60	9.4	1.98	13.11	44017	1368	1143	8.6	20.3
2408.0	3.8	40.0	60	9.4	1.86	13.37	44968	968	1141	8.6	20.3
2409.0	3.0	40.0	51	9.4	1.88	13.71	45988	1220	1142	8.6	20.3
2410.0	5.1	40.0	48	9.4	1.69	13.91	46553	718	1136	8.7	20.2
2411.0	5.1	40.0	48	9.4	1.69	14.10	47119	722	1131	8.7	20.2
2412.0	10.6	58.0	56	9.4	1.70	14.20	47437	345	1121	8.7	20.2
2413.0	8.1	58.0	51	9.4	1.76	14.32	47817	450	1112	8.7	20.2
2414.0	8.7	58.0	48	9.4	1.71	14.44	48151	421	1103	8.7	20.2
2415.0	17.5	58.0	63	9.4	1.55	14.49	48366	209	1092	8.7	20.3
2416.0	7.8	28.0	57	9.4	1.44	14.62	48799	466	1084	8.7	20.3
2417.0	8.0	28.0	53	9.4	1.42	14.75	49196	458	1077	8.7	20.3
2418.0	4.2	28.0	56	9.4	1.63	14.98	50000	869	1074	8.7	20.3
2419.0	3.4	28.0	56	9.4	1.69	15.28	50997	1074	1074	8.7	20.3
2420.0	8.6	28.0	53	9.4	1.39	15.39	51362	423	1067	8.8	20.2
2421.0	7.6	28.0	54	9.4	1.44	15.53	51790	480	1060	8.8	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2422.0	8.8	28.0	56	9.4	1.41	15.64	52174	416	1052	8.8	20.2
2423.0	10.2	50.0	55	9.4	1.62	15.74	52499	358	1044	8.8	20.2
2424.0	22.2	50.0	54	9.4	1.34	15.78	52645	164	1035	8.8	20.2
2425.0	10.8	50.0	55	9.4	1.60	15.88	52952	338	1027	8.8	20.2
2426.0	17.2	50.0	54	9.4	1.43	15.93	53141	212	1018	8.8	20.2
2427.0	12.5	50.0	54	9.4	1.54	16.01	53401	291	1010	8.8	20.2
2428.0	11.1	50.0	44	9.4	1.51	16.10	53638	329	1003	8.8	20.2
2429.0	10.0	50.0	45	9.4	1.56	16.20	53908	365.20	995.81	8.8	20.2
2430.0	9.0	50.0	48	9.4	1.62	16.31	54229	406.29	989.61	8.8	20.2
2431.0	4.0	50.0	57	9.4	1.96	16.57	55090	918.07	988.86	8.8	20.2
2432.0	3.9	50.0	55	9.4	1.96	16.82	55937	942.42	988.38	8.8	20.2
2433.0	3.8	40.0	52	9.4	1.82	17.09	56764	965.75	988.15	8.8	20.2
2434.0	3.0	40.0	47	9.4	1.86	17.42	57719	1228	991	8.8	20.2
2435.0	7.6	40.0	54	9.4	1.60	17.56	58142	479.83	985.47	8.8	20.3
2436.0	10.6	40.0	60	9.4	1.52	17.65	58481	343.90	979.12	8.8	20.3
2437.0	6.8	40.0	62	9.4	1.68	17.80	59036	540.70	974.82	8.8	20.3
2438.0	4.7	40.0	63	9.4	1.81	18.01	59852	782.14	972.95	8.8	20.3
2439.0	12.4	40.0	63	9.4	1.49	18.09	60156	295.20	966.44	8.8	20.3
2440.0	23.8	40.0	59	9.4	1.25	18.13	60304	153.18	958.69	8.8	20.3
2441.0	13.6	40.0	61	9.4	1.45	18.21	60571	268.83	952.18	8.8	20.3
2442.0	20.9	40.0	59	9.4	1.30	18.26	60741	174.48	944.91	8.8	20.3
2443.0	26.1	40.0	57	9.4	1.21	18.29	60874	139.99	937.46	8.8	20.3
2444.0	26.7	40.0	58	9.4	1.21	18.33	61003	136.95	930.12	8.8	20.3
2445.0	27.9	46.0	43	9.4	1.15	18.37	61096	130.86	922.85	8.8	20.3
2446.0	16.6	46.0	68	9.4	1.48	18.43	61342	220.13	916.52	8.8	20.3
2447.0	22.4	46.0	51	9.4	1.28	18.47	61479	163.33	909.79	8.8	20.3
2448.0	31.3	46.0	66	9.4	1.26	18.50	61606	116.66	902.78	8.8	20.3
2449.0	29.3	46.0	44	9.4	1.14	18.54	61696	124.78	895.95	8.8	20.3
2450.0	6.3	46.0	54	9.4	1.73	18.70	62209	576.20	893.17	8.8	20.3
2451.0	3.8	46.0	52	9.4	1.90	18.96	63033	958.65	893.74	8.8	20.3
2452.0	2.9	36.1	64	9.4	1.91	19.30	64345	1256	897	8.8	20.3
2453.0	12.6	29.0	65	9.4	1.36	19.38	64653	290.13	891.69	8.8	20.3
2454.0	13.1	40.0	64	9.4	1.48	19.46	64946	278.78	886.54	8.8	20.3
2455.0	13.8	38.1	63	9.4	1.43	19.53	65218	264.77	881.36	8.8	20.3
2456.0	16.1	44.0	54	9.4	1.39	19.59	65420	226.22	875.94	8.8	20.3
2457.0	6.9	44.0	55	9.4	1.69	19.74	65906	532.58	873.13	8.8	20.3
2458.0	3.0	44.9	55	9.4	1.99	20.08	67024	1228	876	8.8	20.3
2459.0	7.9	40.1	56	9.4	1.60	20.20	67449	459.54	872.66	8.7	20.3
2460.0	3.9	41.8	57	9.4	1.86	20.46	68333	948.51	873.27	8.7	20.3
2461.0	8.6	41.1	57	9.4	1.59	20.58	68728	423.02	869.69	8.7	20.3
2462.0	21.3	41.1	56	9.4	1.29	20.62	68886	171.44	864.19	8.7	20.3
2463.0	14.7	41.1	56	9.4	1.40	20.69	69114	248.54	859.38	8.7	20.3
2464.0	9.9	52.3	56	9.4	1.66	20.79	69453	367.23	855.57	8.7	20.3
2465.0	15.5	51.6	68	9.4	1.56	20.86	69717	235.35	850.80	8.7	20.3
2466.0	22.8	42.2	66	9.4	1.33	20.90	69892	160.28	845.53	8.7	20.3
2467.0	13.7	32.5	82	9.4	1.45	20.97	70252	266.80	841.14	8.7	20.3
2468.0	7.0	37.2	57	9.4	1.61	21.12	70738	519.40	838.72	8.7	20.3
2469.0	19.8	38.1	57	9.4	1.28	21.17	70912	184.63	833.84	8.7	20.3
2470.0	14.0	33.1	56	9.4	1.33	21.24	71154	261.73	829.60	8.7	20.3
2471.0	6.0	31.3	65	9.4	1.61	21.40	71806	606.64	827.97	8.7	20.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2472.0	7.3	37.0	66	9.4	1.64	21.54	72347	497.08	825.55	8.7	20.3
2473.0	5.2	41.5	65	9.4	1.80	21.73	73097	703.01	824.66	8.7	20.3
2474.0	19.5	29.3	64	9.4	1.22	21.78	73293	187.67	820.08	8.7	20.3
2475.0	27.3	39.7	84	9.4	1.32	21.82	73477	133.91	815.18	8.7	20.3
2476.0	11.5	42.3	72	9.4	1.58	21.91	73854	316.51	811.64	8.7	20.3
2477.0	2.7	44.0	62	9.4	2.04	22.27	75216	1332	815	8.7	20.3
2478.0	4.2	46.2	44	9.4	1.80	22.51	75841	861.26	815.63	8.7	20.3
2479.0	20.7	40.3	70	9.4	1.36	22.56	76043	176.51	811.19	8.7	20.3
2480.0	3.4	45.0	80	9.4	2.07	22.85	77464	1084	813	8.7	20.3
2481.0	4.1	45.0	54	9.4	1.87	23.10	78249	888.65	813.59	8.7	20.3
2482.0	3.6	45.0	56	9.4	1.93	23.38	79187	1017	815	8.7	20.3
2483.0	3.1	42.2	49	9.4	1.89	23.70	80137	1178	817	8.7	20.3
2484.0	8.2	40.1	56	9.4	1.59	23.82	80547	444.79	814.93	8.7	20.3
2485.0	8.7	29.8	63	9.4	1.47	23.94	80983	422.01	812.31	8.7	20.3
2486.0	5.4	35.8	71	9.4	1.74	24.12	81776	680.69	811.44	8.7	20.3
2487.0	7.8	40.2	68	9.4	1.67	24.25	82300	470.70	809.20	8.6	20.4
2488.0	4.2	41.4	68	9.4	1.89	24.49	83276	872.42	809.61	8.6	20.4
2489.0	4.7	42.3	68	9.4	1.86	24.70	84143	771.99	809.37	8.6	20.4
2490.0	3.7	43.9	59	9.4	1.92	24.97	85095	975.90	810.44	8.6	20.4
2491.0	8.7	44.3	53	9.4	1.59	25.08	85457	418.97	807.93	8.6	20.4
2492.0	3.1	44.0	53	9.4	1.94	25.40	86464	1166	810	8.6	20.4
2493.0	7.8	41.9	50	9.4	1.58	25.53	86844	465.63	808.03	8.6	20.4
2494.0	26.3	40.9	51	9.4	1.18	25.57	86960	138.98	803.82	8.6	20.4
2495.0	28.1	34.7	49	9.4	1.09	25.60	87065	129.85	799.61	8.6	20.4
2496.0	15.5	40.2	48	9.4	1.33	25.67	87251	235.35	796.10	8.6	20.4
2497.0	6.7	41.4	49	9.4	1.63	25.82	87693	543.74	794.55	8.6	20.4
2498.0	10.2	44.1	49	9.4	1.51	25.91	87981	358.10	791.87	8.6	20.4
2499.0	6.5	44.7	55	9.4	1.72	26.07	88495	564.03	790.48	8.6	20.4
2500.0	4.9	45.3	55	9.4	1.82	26.27	89173	744.60	790.20	8.6	20.4
2501.0	5.3	45.2	53	9.4	1.77	26.46	89769	686.78	789.58	8.6	20.4
2502.0	1.9	44.9	59	9.4	2.15	26.98	91581	1884	796	8.6	20.4
2503.0	1.9	46.8	46	9.4	2.10	27.50	93023	1913	803	8.6	20.4
2504.0	2.3	41.7	54	9.4	2.01	27.93	94416	1569	807	8.6	20.4

BIT NUMBER	6	IADC CODE	517	INTERVAL	2504.0- 2578.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	8516.00	TRIP TIME	7.5	BIT RUN	74.0
TOTAL HOURS	23.25	TOTAL TURNS	73623	CONDITION	T8 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2510.0	74	70	719	62		43		43	40	13
2520.0	75	71	728	63		43		43	41	13
2530.0	74	73	735	64		44		44	41	13
2540.0	76	73	743	65		44		44	41	13
2550.0	74	73	735	64		44		44	41	13
2560.0	72	76	739	64		44		44	41	13
2570.0	73	74	738	64		44		44	41	13
2578.0	76	71	733	64		44		44	41	13

BIT NUMBER	7	IADC CODE	617	INTERVAL	2578.0- 2647.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6844.00	TRIP TIME	7.6	BIT RUN	69.0
TOTAL HOURS	8.13	TOTAL TURNS	26613	CONDITION	T1 B1 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2580.0	73	68	703	61		42		42	39	13
2590.0	72	71	715	62		43		43	40	13
2600.0	72	70	708	61		42		42	39	13
2610.0	73	69	708	61		42		42	39	13
2620.0	71	72	715	62		43		43	40	13
2630.0	71	71	711	62		43		43	40	13
2640.0	71	73	717	62		43		43	40	13
2647.0	71	73	717	62		43		43	40	13

BIT NUMBER	5	IADC CODE	537	INTERVAL	2335.0- 2504.0
HTC J33		SIZE	12.250	NOZZLES	18 16 16
COST	7774.00	TRIP TIME	7.3	BIT RUN	169.0
TOTAL HOURS	27.93	TOTAL TURNS	94416	CONDITION	T4 B6 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2340.0	72	76	740	64		44		44	41	13
2350.0	72	74	731	63		44		44	41	13
2360.0	72	73	721	63		43		43	40	13
2370.0	73	73	732	64		44		44	41	13
2380.0	72	74	726	63		43		43	40	13
2390.0	71	75	731	64		44		44	41	13
2400.0	75	74	746	65		45		45	42	13
2410.0	76	73	748	65		45		45	42	13
2420.0	70	76	727	63		43		43	41	13
2430.0	68	77	722	63		43		43	40	13
2440.0	71	75	731	64		44		44	41	13
2450.0	73	72	727	63		43		43	41	13
2460.0	82	67	742	64		44		44	41	13
2470.0	82	69	753	65		45		45	42	14
2480.0	74	75	746	65		45		45	42	13
2490.0	73	73	728	63		44		44	41	13
2500.0	73	74	738	64		44		44	41	13
2504.0	73	75	740	64		44		44	41	13

BIT NUMBER	4	IADC CODE	517	INTERVAL	2000.0- 2335.0
HTC J22		SIZE	12.250	NOZZLES	18 16 16
COST	.8516.00	TRIP TIME	7.0	BIT RUN	335.0
TOTAL HOURS	34.26	TOTAL TURNS	123394	CONDITION	T8 B6 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2010.0	67	79	731	64		44		44	41	13
2020.0	66	80	730	63		44		44	41	13
2030.0	73	76	748	65		45		45	42	13
2040.0	73	77	753	65		45		45	42	14
2050.0	73	76	743	65		44		44	41	13
2060.0	74	78	758	66		45		45	42	14
2070.0	74	78	760	66		45		45	42	14
2080.0	73	77	750	65		45		45	42	13
2090.0	74	77	754	66		45		45	42	14
2100.0	73	77	749	65		45		45	42	13
2110.0	73	78	755	66		45		45	42	14
2120.0	75	77	756	66		45		45	42	14
2130.0	73	78	756	66		45		45	42	14
2140.0	74	78	758	66		45		45	42	14
2150.0	74	77	754	66		45		45	42	14
2160.0	73	78	754	65		45		45	42	14
2170.0	73	76	748	65		45		45	42	13
2180.0	73	77	752	65		45		45	42	14
2190.0	73	78	754	65		45		45	42	14
2200.0	73	77	749	65		45		45	42	13
2210.0	73	77	753	65		45		45	42	14
2220.0	73	78	755	66		45		45	42	14
2230.0	73	77	749	65		45		45	42	13
2240.0	73	77	752	65		45		45	42	14
2250.0	74	77	753	65		45		45	42	14
2260.0	72	72	720	63		43		43	40	13
2270.0	69	74	716	62		43		43	40	13
2280.0	71	73	716	62		43		43	40	13
2290.0	72	74	729	63		44		44	41	13
2300.0	72	74	728	63		44		44	41	13
2310.0	71	73	720	62		43		43	40	13
2320.0	71	74	725	63		43		43	40	13
2330.0	71	73	716	62		43		43	40	13
2335.0	72	73	724	63		43		43	40	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1710.0	79	82	808	70		48		48	45	15
1720.0	80	82	811	70		48		48	45	15
1730.0	80	82	813	71		49		49	45	15
1740.0	80	82	813	71		49		49	45	15
1750.0	80	82	810	70		48		48	45	15
1760.0	79	83	806	70		48		48	45	14
1770.0	78	83	804	70		48		48	45	14
1780.0	78	83	803	70		48		48	45	14
1790.0	73	84	786	68		47		47	44	14
1800.0	78	83	805	70		48		48	45	14
1810.0	78	83	804	70		48		48	45	14
1820.0	78	83	803	70		48		48	45	14
1830.0	78	83	804	70		48		48	45	14
1840.0	78	82	799	69		48		48	45	14
1850.0	77	82	796	69		48		48	44	14
1860.0	77	82	796	69		48		48	44	14
1870.0	76	81	785	68		47		47	44	14
1880.0	77	82	794	69		47		47	44	14
1890.0	76	82	791	69		47		47	44	14
1900.0	77	81	790	69		47		47	44	14
1910.0	77	82	793	69		47		47	44	14
1920.0	77	81	790	69		47		47	44	14
1930.0	77	81	791	69		47		47	44	14
1940.0	77	81	792	69		47		47	44	14
1950.0	76	82	791	69		47		47	44	14
1960.0	77	80	785	68		47		47	44	14
1970.0	108	0	542	47		32		32	30	10
1980.0	76	82	792	69		47		47	44	14
1990.0	78	81	794	69		47		47	44	14
2000.0	78	79	782	68		47		47	44	14

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1320.0	91	82	862	75		52		52	48	15
1330.0	90	90	898	78		54		54	50	16
1340.0	88	89	883	77		53		53	49	16
1350.0	91	89	896	78		54		54	50	16
1360.0	89	89	889	77		53		53	50	16
1370.0	91	88	892	77		53		53	50	16
1380.0	92	85	885	77		53		53	49	16
1390.0	92	87	896	78		54		54	50	16
1400.0	88	88	878	76		52		52	49	16
1410.0	88	87	878	76		52		52	49	16
1420.0	88	87	875	76		52		52	49	16
1430.0	87	86	867	75		52		52	48	16
1440.0	86	87	865	75		52		52	48	16
1450.0	0	111	554	48		33		33	31	10
1460.0	7	110	582	51		35		35	32	10
1470.0	84	88	860	75		51		51	48	15
1480.0	87	86	866	75		52		52	48	16
1490.0	87	87	868	75		52		52	48	16
1500.0	87	86	862	75		52		52	48	15
1510.0	87	86	864	75		52		52	48	16
1520.0	88	86	869	75		52		52	48	16
1530.0	88	85	861	75		51		51	48	15
1540.0	87	82	846	73		51		51	47	15
1550.0	85	84	844	73		50		50	47	15
1560.0	86	81	834	72		50		50	46	15
1570.0	86	81	838	73		50		50	47	15
1580.0	87	81	842	73		50		50	47	15
1590.0	87	81	837	73		50		50	47	15
1600.0	87	80	836	73		50		50	47	15
1610.0	87	81	836	73		50		50	47	15
1611.1	87	81	838	73		50		50	47	15

BIT NUMBER	3	IADC CODE	517	INTERVAL	1611.1- 2000.0
HTC J22		SIZE	12.250	NOZZLES	18 18 16
COST	8516.00	TRIP TIME	6.2	BIT RUN	388.9
TOTAL HOURS	23.29	TOTAL TURNS	101926	CONDITION	T3 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1620.0	80	79	794	69		47		47	44	14
1630.0	79	81	801	70		48		48	45	14
1640.0	80	83	813	71		49		49	45	15
1650.0	78	82	798	69		48		48	44	14
1660.0	79	80	798	69		48		48	44	14
1670.0	78	81	798	69		48		48	44	14
1680.0	80	82	810	70		48		48	45	15
1690.0	80	82	807	70		48		48	45	15
1700.0	79	82	806	70		48		48	45	14

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
820.0	94	99	963	84	76		54		54	17
830.0	94	100	969	84	76		54		54	17
840.0	95	100	976	85	77		54		54	18
850.0	97	98	976	85	77		54		54	18
860.0	95	98	966	84	76		54		54	17
870.0	96	99	974	85	77		54		54	18
880.0	94	99	965	84	76		54		54	17
890.0	98	98	979	85	77		55		55	18
900.0	96	97	964	84	76		54		54	17
910.0	95	99	966	84	76		54		54	17
920.0	96	98	969	84	76		54		54	17
930.0	94	98	959	83	75		53		53	17
940.0	96	96	960	83	75		53		53	17
950.0	95	97	959	83	75		53		53	17
960.0	94	96	946	82	74		53		53	17
970.0	95	96	956	83		57	53		53	17
980.0	95	98	960	83		57	54		54	17
990.0	93	96	945	82		57	53		53	17
1000.0	96	96	956	83		57	53		53	17
1010.0	96	96	960	83		57	53		53	17
1020.0	93	95	941	82		56	52		52	17
1030.0	93	96	942	82		56	53		53	17
1040.0	93	95	940	82		56	52		52	17
1050.0	93	96	944	82		56	53		53	17
1060.0	93	96	944	82		56	53		53	17
1070.0	92	95	935	81		56	52		52	17
1080.0	92	96	940	82		56		56	52	17
1090.0	93	94	937	81		56		56	52	17
1100.0	93	95	939	82		56		56	52	17
1110.0	92	96	940	82		56		56	52	17
1120.0	91	94	925	80		55		55	52	17
1130.0	92	94	929	81		56		56	52	17
1140.0	93	91	917	80		55		55	51	16
1150.0	92	91	913	79		55		55	51	16
1160.0	91	91	910	79		54		54	51	16
1170.0	94	89	914	79		55		55	51	16
1180.0	92	91	916	80		55		55	51	16
1190.0	93	90	915	79		55		55	51	16
1200.0	92	89	908	79		54		54	51	16
1210.0	91	90	903	78		54		54	50	16
1220.0	90	91	905	79		54		54	50	16
1230.0	92	90	907	79		54		54	51	16
1240.0	92	90	908	79		54		54	51	16
1250.0	91	89	903	78		54		54	50	16
1260.0	91	90	906	79		54		54	50	16
1270.0	92	90	910	79		54		54	51	16
1280.0	92	90	909	79		54		54	51	16
1290.0	91	90	903	78		54		54	50	16
1300.0	92	89	909	79		54		54	51	16
1310.0	91	89	902	78		54		54	50	16

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
430.0	111	104	1074	33		29		29	24	19
440.0	109	104	1067	33		28		28	23	19
450.0	118	104	1109	34		29		29	24	20
460.0	113	101	1070	33		28		28	23	19
470.0	111	102	1061	33		28		28	23	19
480.0	111	104	1077	33		29		29	24	19
490.0	110	105	1074	33		29		29	24	19
500.0	113	107	1101	34		29		29	24	20
510.0	108	103	1055	33		28		28	23	19
520.0	108	104	1060	33		28		28	23	19
530.0	107	105	1063	33		28		28	23	19
540.0	108	106	1067	33		28		28	23	19
550.0	107	107	1066	33		28		28	23	19
560.0	108	106	1070	33		28		28	23	19
570.0	109	107	1080	33		29		29	24	19
580.0	101	86	936	29		25		25	21	17
590.0	105	58	815	25		22		22	18	15
600.0	104	102	1032	32		27		27	23	19
610.0	103	97	997	31		27		27	22	18
620.0	102	100	1010	31		27		27	22	18
630.0	103	101	1016	31		27		27	22	18
640.0	102	101	1013	31		27		27	22	18
650.0	103	101	1018	31		27		27	22	18
660.0	108	107	1072	33		29		29	24	19
670.0	102	107	1042	32		28		28	23	19
680.0	101	107	1040	32		28		28	23	19
690.0	103	108	1056	33		28		28	23	19
700.0	104	107	1056	33		28		28	23	19
710.0	103	106	1044	32		28		28	23	19
720.0	104	102	1034	32		27		27	23	19
730.0	104	104	1037	32		28		28	23	19
740.0	103	102	1023	32		27		27	22	18
750.0	102	101	1017	31		27		27	22	18
760.0	102	102	1019	31		27		27	22	18
770.0	103	101	1018	31		27		27	22	18
780.0	103	100	1015	31		27		27	22	18
790.0	102	102	1019	31		27		27	22	18
800.0	101	100	1008	31		27		27	22	18
809.2	102	101	1015	31		27		27	22	18

BIT NUMBER	2	IADC CODE	116	INTERVAL	809.2- 1611.1
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.5	BIT RUN	801.9
TOTAL HOURS	25.03	TOTAL TURNS	158183	CONDITION	T3 B4 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
810.0	96	99	974	85	76		54		54	17

BIT NUMBER	1	IADC CODE	111	INTERVAL	80.0- 218.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	18 18 18
COST	0.00	TRIP TIME	2.4	BIT RUN	138.0
TOTAL HOURS	1.48	TOTAL TURNS	8533	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
90.0	50	46	481	6		6				
100.0	94	97	955	12		11				
120.0	94	98	960	12		11				
130.0	93	98	958	12		11				
140.0	94	98	960	12		11				
160.0	94	98	964	12		11				
170.0	94	99	965	12		11				
180.0	95	98	965	12		11		11		
190.0	94	99	966	12		11		11		
200.0	96	99	975	12		11		11		
210.0	94	99	961	12		11		11		
218.0	94	99	965	12		11		11		

BIT NUMBER	1	IADC CODE	111	INTERVAL	218.0- 809.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN	591.2
TOTAL HOURS	8.95	TOTAL TURNS	80581	CONDITION	T2 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
220.0	108	103	1053	32	26		23			
230.0	108	103	1054	33	26		23			19
240.0	110	105	1076	33	27		24			19
250.0	108	104	1062	33	26		23			19
260.0	97	101	988	30	24		22			18
270.0	106	103	1045	32	26		23			19
280.0	108	100	1037	32	26		23			19
290.0	109	102	1055	33	26		23			19
300.0	107	102	1046	32	26		23			19
310.0	108	100	1040	32	26		23		23	19
320.0	108	99	1035	32		28	23		23	19
330.0	108	101	1047	32		28	23		23	19
340.0	111	103	1072	33		28	24		24	19
350.0	108	103	1056	33		28	23		23	19
360.0	109	104	1063	33		28	23		23	19
370.0	111	104	1075	33		29	24		24	19
380.0	109	104	1061	33		28	23		23	19
390.0	109	103	1057	33		28	23		23	19
400.0	109	103	1058	33		28	23		23	19
410.0	110	102	1060	33		28	23		23	19
420.0	110	103	1065	33		28	23		23	19

(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.

IT NUMBER	6	IADC CODE	517	INTERVAL	2504.0- 2578.0
TC J22		SIZE	12.250	NOZZLES	16 16 18
OST	8516.00	TRIP TIME	7.5	BIT RUN	74.0
OTAL HOURS	23.25	TOTAL TURNS	73623	CONDITION	T8 R4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2510.0	719	2793.5	1088.6	39.0	457	3.87	1259	109
2520.0	728	2816.4	1114.7	39.6	473	4.01	1289	111
2530.0	735	2844.0	1138.9	40.0	489	4.15	1317	112
2540.0	743	2913.8	1163.6	39.9	505	4.28	1346	113
2550.0	735	2921.0	1136.6	38.9	487	4.13	1315	112
2560.0	739	2908.2	1148.6	39.5	495	4.20	1328	112
2570.0	738	2930.3	1146.8	39.1	494	4.19	1326	112
2578.0	733	2844.6	1132.6	39.8	485	4.11	1310	112

IT NUMBER	7	IADC CODE	617	INTERVAL	2578.0- 2647.0
TC J44		SIZE	12.250	NOZZLES	16 16 16
OST	6844.00	TRIP TIME	7.6	BIT RUN	69.0
OTAL HOURS	8.13	TOTAL TURNS	26613	CONDITION	T1 B1 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2580.0	703	2943.6	1231.6	41.8	505	4.28	1309	116
2590.0	715	2985.0	1274.2	42.7	531	4.51	1354	118
2600.0	708	2898.6	1249.1	43.1	516	4.38	1327	117
2610.0	708	2977.0	1250.8	42.0	517	4.38	1329	117
2620.0	715	3031.6	1275.2	42.1	532	4.51	1355	118
2630.0	711	3027.7	1262.2	41.7	524	4.44	1341	118
2640.0	717	3075.3	1282.3	41.7	536	4.55	1362	119
2647.0	717	3047.8	1283.8	42.1	537	4.56	1364	119

IT NUMBER	5	IADC CODE	537	INTERVAL	2335.0- 2504.0
IC J33		SIZE	12.250	NOZZLES	18 16 16
JST	7774.00	TRIP TIME	7.3	BIT RUN	169.0
TOTAL HOURS	27.93	TOTAL TURNS	94416	CONDITION	T4 B6 G0.125

DEPTH	FLOW RATE	PSP	PRIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2340.0	740	3002.4	1165.5	38.8	503	4.27	1348	113
2350.0	731	2933.9	1148.4	39.1	490	4.15	1328	111
2360.0	721	2882.0	1118.1	38.8	470	3.99	1293	110
2370.0	732	2905.4	1138.7	39.2	486	4.12	1317	111
2380.0	726	2855.3	1121.4	39.3	475	4.03	1297	110
2390.0	731	2858.2	1138.0	39.8	485	4.12	1316	111
2400.0	746	2914.4	1171.9	40.2	510	4.33	1355	113
2410.0	748	2959.4	1176.8	39.8	513	4.36	1361	114
2420.0	727	2787.8	1114.1	40.0	473	4.01	1288	111
2430.0	722	2782.8	1096.3	39.4	462	3.92	1268	110
2440.0	731	2840.7	1126.5	39.7	481	4.08	1303	111
2450.0	727	2845.3	1113.5	39.1	472	4.01	1288	111
2460.0	742	2958.0	1159.2	39.2	502	4.26	1341	113
2470.0	753	3039.0	1194.3	39.3	525	4.45	1381	115
2480.0	746	2954.9	1172.0	39.7	510	4.33	1355	113
2490.0	728	2846.7	1116.5	39.2	474	4.02	1291	111
2500.0	738	2935.9	1147.7	39.1	494	4.19	1327	112
2504.0	740	2932.5	1151.9	39.3	497	4.22	1332	113

BIT NUMBER	4	IADC CODE	517	INTERVAL	2000.0- 2335.0
HTC J22		SIZE	12.250	NOZZLES	18 16 16
COST	8516.00	TRIP TIME	7.0	BIT RUN	335.0
TOTAL HOURS	34.26	TOTAL TURNS	123394	CONDITION	T8 B6 G0.125

DEPTH	FLOW RATE	PSP	PRIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2010.0	731	2888.1	1174.6	40.7	501	4.25	1359	111
2020.0	730	2840.4	1157.2	40.7	493	4.18	1338	111
2030.0	748	2944.7	1202.5	40.8	525	4.45	1391	114
2040.0	753	2940.9	1219.2	41.5	536	4.54	1410	115
2050.0	743	2965.7	1187.3	40.0	515	4.37	1373	113
2060.0	758	3009.4	1235.9	41.1	547	4.64	1429	115
2070.0	760	2990.0	1242.0	41.5	551	4.67	1436	116
2080.0	750	2947.0	1210.2	41.1	530	4.49	1400	114
2090.0	754	2974.9	1211.4	40.7	533	4.52	1401	115
2100.0	749	2996.7	1193.3	39.8	521	4.42	1380	114
2110.0	755	2951.7	1213.2	41.1	534	4.53	1403	115
2120.0	756	2970.8	1203.1	40.5	531	4.50	1391	115
2130.0	756	2984.4	1202.4	40.3	530	4.50	1391	115
2140.0	758	2976.6	1221.2	41.0	540	4.58	1412	115
2150.0	754	2975.0	1198.0	40.3	527	4.47	1386	115
2160.0	754	2982.2	1197.1	40.1	527	4.47	1385	115
2170.0	748	2957.0	1177.3	39.8	514	4.36	1362	114
2180.0	752	2973.3	1192.1	40.1	523	4.44	1379	114
2190.0	754	2951.5	1195.9	40.5	526	4.46	1383	115
2200.0	749	2968.0	1180.5	39.8	516	4.38	1365	114
2210.0	753	2966.1	1193.8	40.2	524	4.45	1381	115
2220.0	755	2987.5	1200.9	40.2	529	4.49	1389	115
2230.0	749	2977.2	1182.5	39.7	517	4.39	1368	114
2240.0	752	3003.6	1190.2	39.6	522	4.43	1377	114
2250.0	753	2983.8	1194.0	40.0	525	4.45	1381	115
2260.0	720	2918.0	1090.7	37.4	458	3.89	1261	109
2270.0	716	2865.1	1080.6	37.7	452	3.83	1250	109
2280.0	716	2854.1	1079.1	37.8	451	3.82	1248	109
2290.0	729	2922.6	1120.2	38.3	477	4.04	1296	111
2300.0	728	2944.1	1128.7	38.3	480	4.07	1305	111
2310.0	720	2875.0	1102.2	38.3	463	3.93	1275	109
2320.0	725	2874.7	1117.4	38.9	472	4.01	1292	110
2330.0	716	2849.2	1092.1	38.3	456	3.87	1263	109
2335.0	724	2866.9	1114.3	38.9	470	3.99	1289	110

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1710.0	808	3000.4	1176.8	39.2	555	4.71	1472	114
1720.0	811	2987.0	1185.4	39.7	561	4.76	1482	114
1730.0	813	2985.7	1189.6	39.8	564	4.79	1488	114
1740.0	813	3011.8	1191.1	39.5	565	4.80	1490	114
1750.0	810	3000.7	1181.6	39.4	558	4.74	1478	114
1760.0	806	2951.9	1170.7	39.7	551	4.67	1464	113
1770.0	804	2945.8	1164.2	39.5	546	4.63	1456	113
1780.0	803	2955.8	1161.8	39.3	544	4.62	1453	113
1790.0	786	2969.3	1111.9	37.4	510	4.33	1391	111
1800.0	805	2959.8	1168.2	39.5	549	4.66	1461	113
1810.0	804	2948.3	1164.3	39.5	546	4.63	1456	113
1820.0	803	2940.1	1160.2	39.5	543	4.61	1451	113
1830.0	804	2950.1	1164.4	39.5	546	4.64	1456	113
1840.0	799	2957.6	1148.9	38.8	535	4.54	1437	112
1850.0	796	2933.4	1141.5	38.9	530	4.50	1428	112
1860.0	796	2958.7	1142.3	38.6	531	4.50	1429	112
1870.0	785	2914.9	1109.1	38.1	508	4.31	1387	110
1880.0	794	2967.9	1135.6	38.3	526	4.46	1420	112
1890.0	791	2942.6	1138.3	38.7	525	4.46	1424	111
1900.0	790	3009.3	1136.7	37.8	524	4.45	1422	111
1910.0	793	2974.2	1144.1	38.5	529	4.49	1431	112
1920.0	790	3021.4	1134.7	37.6	523	4.44	1419	111
1930.0	791	2999.7	1150.1	38.3	531	4.50	1438	111
1940.0	792	2972.4	1154.9	38.9	534	4.53	1444	111
1950.0	791	3009.4	1149.8	38.2	530	4.50	1438	111
1960.0	785	3032.0	1133.8	37.4	519	4.41	1418	110
1970.0	542	1486.7	539.3	36.3	170	1.45	674	76
1980.0	792	2981.0	1153.8	38.7	533	4.52	1443	111
1990.0	794	3028.5	1159.8	38.3	537	4.56	1450	112
2000.0	782	2949.4	1123.6	38.1	512	4.35	1405	110

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
1320.0	862	2891.1	1083.8	37.5	545	4.63	1457	113
1330.0	898	3003.9	1175.7	39.1	616	5.23	1581	117
1340.0	883	2969.2	1137.8	38.3	586	4.98	1530	116
1350.0	896	3022.2	1171.4	38.8	613	5.20	1575	117
1360.0	889	3036.3	1166.4	38.4	605	5.14	1568	116
1370.0	892	3026.0	1173.5	38.8	611	5.18	1578	117
1380.0	885	3060.6	1155.0	37.7	596	5.06	1553	116
1390.0	896	3042.7	1184.5	38.9	619	5.25	1593	117
1400.0	878	2952.9	1136.2	38.5	582	4.94	1528	115
1410.0	878	2971.2	1136.2	38.2	582	4.94	1528	115
1420.0	875	2973.8	1128.2	37.9	576	4.88	1517	114
1430.0	867	3021.7	1108.3	36.7	561	4.76	1490	113
1440.0	865	2998.6	1140.3	38.0	575	4.88	1533	113
1450.0	554	1323.5	472.5	35.7	153	1.30	635	72
1460.0	582	1409.9	522.2	37.0	177	1.50	702	76
1470.0	860	2994.7	1139.6	38.1	572	4.85	1532	113
1480.0	866	3038.3	1156.0	38.0	584	4.96	1554	113
1490.0	868	3030.6	1161.1	38.3	588	4.99	1561	114
1500.0	862	3046.5	1146.3	37.6	577	4.89	1541	113
1510.0	864	3051.9	1150.5	37.7	580	4.92	1547	113
1520.0	869	3056.4	1164.0	38.1	590	5.01	1565	114
1530.0	861	3085.0	1141.8	37.0	573	4.87	1535	113
1540.0	846	3051.5	1102.0	36.1	544	4.61	1482	111
1550.0	844	2991.5	1098.0	36.7	541	4.59	1476	110
1560.0	834	2991.3	1072.9	35.9	522	4.43	1443	109
1570.0	838	2986.0	1083.0	36.3	530	4.49	1456	110
1580.0	842	2988.5	1091.4	36.5	536	4.55	1468	110
1590.0	837	2991.0	1079.8	36.1	527	4.47	1452	110
1600.0	836	3003.8	1078.0	35.9	526	4.46	1450	109
1610.0	836	2988.4	1077.9	36.1	526	4.46	1449	109
1611.1	838	2989.4	1083.0	36.2	530	4.49	1456	110

BIT NUMBER	3	IADC CODE	517	INTERVAL	1611.1- 2000.0
HTC J22		SIZE	12.250	NOZZLES	18 18 16
COST	8516.00	TRIP TIME	6.2	BIT RUN	388.9
TOTAL HOURS	23.29	TOTAL TURNS	101926	CONDITION	T3 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
1620.0	794	2979.9	1122.3	37.7	520	4.41	1404	112
1630.0	801	2934.3	1144.2	39.0	535	4.54	1431	113
1640.0	813	2979.3	1176.4	39.5	558	4.73	1471	114
1650.0	798	2952.2	1135.7	38.5	529	4.49	1420	112
1660.0	798	2993.9	1147.1	38.3	534	4.53	1435	112
1670.0	798	2987.8	1146.7	38.4	534	4.53	1434	112
1680.0	810	2985.4	1182.4	39.6	559	4.74	1479	114
1690.0	807	3021.7	1174.0	38.9	553	4.69	1468	114
1700.0	806	2983.8	1170.2	39.2	550	4.67	1464	113

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
820.0	963	2972.2	1321.2	44.5	742	6.30	1777	126
830.0	969	2954.2	1338.3	45.3	757	6.42	1800	127
840.0	976	2950.1	1358.9	46.1	774	6.57	1827	128
850.0	976	2999.4	1357.1	45.2	773	6.56	1825	128
860.0	966	2969.2	1329.6	44.8	749	6.36	1788	126
870.0	974	2978.9	1352.9	45.4	769	6.53	1819	127
880.0	965	2976.1	1327.1	44.6	747	6.34	1785	126
890.0	979	3023.3	1364.8	45.1	779	6.61	1835	128
900.0	964	2998.1	1324.9	44.2	745	6.32	1782	126
910.0	966	2994.2	1330.4	44.4	750	6.36	1789	126
920.0	969	2964.3	1337.5	45.1	756	6.41	1798	127
930.0	959	2979.2	1311.6	44.0	734	6.23	1764	126
940.0	960	2951.9	1312.2	44.5	735	6.23	1765	126
950.0	959	3024.1	1311.4	43.4	734	6.23	1763	126
960.0	946	2966.9	1274.6	43.0	703	5.97	1714	124
970.0	956	3001.2	1348.0	44.9	752	6.38	1813	125
980.0	960	3022.6	1359.8	45.0	762	6.46	1829	126
990.0	945	2926.6	1318.3	45.0	727	6.17	1773	124
1000.0	956	2940.4	1348.2	45.9	752	6.38	1813	125
1010.0	960	3040.2	1358.1	44.7	760	6.45	1826	126
1020.0	941	2956.7	1306.9	44.2	718	6.09	1757	123
1030.0	942	2952.8	1309.4	44.3	720	6.11	1761	123
1040.0	940	2938.5	1301.8	44.3	714	6.05	1751	123
1050.0	944	2947.5	1285.9	43.6	709	6.01	1729	124
1060.0	944	2927.2	1284.7	43.9	708	6.00	1728	124
1070.0	935	2964.0	1260.0	42.5	687	5.83	1694	122
1080.0	940	2982.1	1272.8	42.7	698	5.92	1712	123
1090.0	937	2979.7	1265.8	42.5	692	5.87	1702	123
1100.0	939	2976.3	1272.0	42.7	697	5.91	1710	123
1110.0	940	3007.3	1273.0	42.3	698	5.92	1712	123
1120.0	925	2979.2	1248.6	41.9	674	5.72	1679	121
1130.0	929	2994.4	1259.6	42.1	683	5.80	1694	122
1140.0	917	2923.1	1226.5	42.0	656	5.57	1649	120
1150.0	913	2931.0	1216.1	41.5	648	5.50	1635	119
1160.0	910	2922.1	1208.6	41.4	642	5.45	1625	119
1170.0	914	2962.6	1203.2	40.6	641	5.44	1618	120
1180.0	916	2947.6	1210.7	41.1	647	5.49	1628	120
1190.0	915	2966.2	1207.3	40.7	645	5.47	1624	120
1200.0	908	2961.6	1188.6	40.1	630	5.34	1598	119
1210.0	903	2966.3	1174.7	39.6	619	5.25	1580	118
1220.0	905	2954.1	1181.3	40.0	624	5.29	1589	118
1230.0	907	2985.7	1199.4	40.2	635	5.38	1613	119
1240.0	908	2993.8	1201.4	40.1	636	5.40	1616	119
1250.0	903	2960.9	1188.3	40.1	626	5.31	1598	118
1260.0	906	2981.6	1196.6	40.1	632	5.37	1609	119
1270.0	910	3042.0	1206.6	39.7	640	5.43	1622	119
1280.0	909	3015.6	1204.4	39.9	639	5.42	1620	119
1290.0	903	3030.3	1190.0	39.3	627	5.32	1600	118
1300.0	909	3049.1	1204.0	39.5	638	5.42	1619	119
1310.0	902	2991.8	1186.3	39.7	624	5.30	1595	118

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
430.0	1074	2983.3	1644.1	55.1	1030	4.28	2211	141
440.0	1067	2925.3	1622.0	55.4	1010	4.20	2181	140
450.0	1109	3006.1	1751.4	58.3	1133	4.71	2355	145
460.0	1070	2997.9	1630.3	54.4	1017	4.23	2192	140
470.0	1061	3041.7	1605.7	52.8	994	4.13	2159	139
480.0	1077	3030.9	1653.7	54.6	1039	4.32	2224	141
490.0	1074	3035.8	1644.4	54.2	1031	4.28	2211	141
500.0	1101	3041.6	1728.4	56.8	1111	4.62	2324	144
510.0	1055	2982.5	1584.9	53.1	975	4.05	2131	138
520.0	1060	2979.3	1599.9	53.7	989	4.11	2151	139
530.0	1063	2889.5	1610.4	55.7	999	4.15	2165	139
540.0	1067	2882.3	1623.3	56.3	1011	4.20	2183	140
550.0	1066	2912.9	1620.6	55.6	1008	4.19	2179	140
560.0	1070	2903.2	1630.3	56.2	1017	4.23	2192	140
570.0	1080	2833.0	1661.3	58.6	1047	4.35	2234	141
580.0	936	2412.4	1249.6	51.8	683	2.84	1680	123
590.0	815	1895.6	947.2	50.0	451	1.87	1274	107
600.0	1032	2766.7	1516.5	54.8	913	3.79	2039	135
610.0	997	2720.4	1417.6	52.1	825	3.43	1906	130
620.0	1010	2851.1	1453.1	51.0	856	3.56	1954	132
630.0	1016	2724.9	1471.8	54.0	873	3.63	1979	133
640.0	1013	2889.6	1463.0	50.6	865	3.60	1967	133
650.0	1018	2856.5	1475.7	51.7	876	3.64	1984	133
660.0	1072	2840.3	1639.2	57.7	1026	4.26	2204	140
670.0	1042	2848.2	1584.3	55.6	963	4.01	2130	136
680.0	1040	2889.9	1578.2	54.6	958	3.98	2122	136
690.0	1056	2957.8	1625.0	54.9	1001	4.16	2185	138
700.0	1056	2995.6	1625.3	54.3	1001	4.16	2186	138
710.0	1044	2928.9	1589.3	54.3	968	4.02	2137	137
720.0	1034	2909.7	1558.4	53.6	940	3.91	2096	135
730.0	1037	2933.2	1568.1	53.5	949	3.94	2109	136
740.0	1023	2888.0	1524.6	52.8	910	3.78	2050	134
750.0	1017	2902.2	1507.7	51.9	894	3.72	2027	133
760.0	1019	3002.2	1513.5	50.4	900	3.74	2035	133
770.0	1018	2927.1	1511.2	51.6	898	3.73	2032	133
780.0	1015	2956.0	1501.6	50.8	889	3.70	2019	133
790.0	1019	2934.6	1514.4	51.6	900	3.74	2036	133
800.0	1008	2904.6	1483.0	51.1	873	3.63	1994	132
809.2	1015	2950.0	1501.1	50.9	889	3.69	2019	133

BIT NUMBER	2	IADC CODE	116	INTERVAL	809.2- 1611.1
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.5	BIT RUN	801.9
TOTAL HOURS	25.03	TOTAL TURNS	158183	CONDITION	T3 B4 G0.125

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
810.0	974	2929.8	1350.9	46.1	767	6.51	1816	127

BIT NUMBER	1	IADC CODE	111	INTERVAL	80.0- 218.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	18 18 18
COST	0.00	TRIP TIME	2.4	BIT RUN	138.0
TOTAL HOURS	1.48	TOTAL TURNS	8533	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
90.0	481	294.0	329.3	112.0	92	0.17	443	63
100.0	955	1185.9	1300.7	109.7	725	1.37	1749	125
120.0	960	1022.2	1313.1	128.5	735	1.39	1766	126
130.0	958	1059.0	1307.7	123.5	731	1.38	1759	125
140.0	960	1110.6	1314.5	118.4	737	1.39	1768	126
160.0	964	1194.8	1323.1	110.7	744	1.40	1779	126
170.0	965	1229.8	1325.9	107.8	746	1.41	1783	126
180.0	965	1289.6	1326.3	102.8	747	1.41	1784	126
190.0	966	1296.9	1331.0	102.6	750	1.41	1790	126
200.0	975	1316.7	1355.1	102.9	771	1.45	1822	128
210.0	961	1300.3	1317.3	101.3	739	1.39	1771	126
218.0	965	1309.0	1326.0	101.3	746	1.41	1783	126

BIT NUMBER	1	IADC CODE	111	INTERVAL	218.0- 809.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN	591.2
TOTAL HOURS	8.95	TOTAL TURNS	80581	CONDITION	T2 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
220.0	1053	2629.0	1579.9	60.1	971	4.03	2124	138
230.0	1054	2785.3	1583.9	56.9	974	4.05	2130	138
240.0	1076	2809.0	1649.9	58.7	1036	4.31	2219	141
250.0	1062	2804.8	1606.8	57.3	995	4.14	2161	139
260.0	988	2457.7	1390.7	56.6	802	3.33	1870	129
270.0	1045	2795.9	1556.5	55.7	949	3.95	2093	137
280.0	1037	2819.5	1532.4	54.3	927	3.85	2061	136
290.0	1055	2805.1	1584.9	56.5	975	4.05	2131	138
300.0	1046	2835.4	1559.6	55.0	952	3.96	2097	137
310.0	1040	2761.5	1540.1	55.8	934	3.88	2071	136
320.0	1035	2760.9	1527.8	55.3	923	3.84	2054	135
330.0	1047	2826.8	1562.0	55.3	954	3.97	2100	137
340.0	1072	2964.7	1637.4	55.2	1024	4.26	2202	140
350.0	1056	2934.7	1590.2	54.2	980	4.07	2138	138
360.0	1063	2944.1	1609.7	54.7	998	4.15	2165	139
370.0	1075	3026.2	1648.1	54.5	1034	4.30	2216	141
380.0	1061	2948.0	1605.7	54.5	994	4.13	2159	139
390.0	1057	2961.3	1592.4	53.8	982	4.08	2141	138
400.0	1058	2940.0	1595.7	54.3	985	4.10	2146	138
410.0	1060	2975.0	1599.9	53.8	989	4.11	2151	139
420.0	1065	2992.9	1615.1	54.0	1003	4.17	2172	139

(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.

XPSF 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	6	IADC CODE	517	INTERVAL	2504.0- 2578.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	8516.00	TRIP TIME	7.5	BIT RUN	74.0
TOTAL HOURS	23.25	TOTAL TURNS	73623	CONDITION	T8 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2510.0	4.9	6.0	1.24	4179	40417.26	752	6736	-
2520.0	3.1	16.0	4.49	15046	52291.67	1187	3268	-
2530.0	2.0	26.0	9.58	30680	70902.47	1861	2727	-
2540.0	4.4	36.0	11.86	37399	79233.59	833	2201	-
2550.0	6.0	46.0	13.53	42444	85328.73	610	1855	-
2560.0	4.8	56.0	15.62	49140	92945.68	762	1660	-
2570.0	3.5	66.0	18.50	57946	103474.60	1053	1568	-
2578.0	1.7	74.0	23.25	73623	120825.66	2169	1633	+

BIT NUMBER	7	IADC CODE	617	INTERVAL	2578.0- 2647.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6844.00	TRIP TIME	7.6	BIT RUN	69.0
TOTAL HOURS	8.13	TOTAL TURNS	26613	CONDITION	T1 B1 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2580.0	7.1	2.0	0.28	928	35634.38	518	17817	-
2590.0	12.8	12.0	1.06	3560	38483.96	285	3207	-
2600.0	13.8	22.0	1.79	6030	41125.57	264	1869	-
2610.0	13.0	32.0	2.56	8632	43932.54	281	1373	-
2620.0	7.8	42.0	3.83	12736	48601.01	467	1157	-
2630.0	7.9	52.0	5.11	17338	53245.14	464	1024	-
2640.0	6.6	62.0	6.63	22196	58808.35	556.32	948.52	-
2647.0	4.7	69.0	8.13	26613	64272.15	780.54	931.48	-

BIT NUMBER	5	IADC CODE	537	INTERVAL	2335.0- 2504.0
HTC J33		SIZE	12.250	NOZZLES	18 16 16
COST	7774.00	TRIP TIME	7.3	BIT RUN	169.0
TOTAL HOURS	27.93	TOTAL TURNS	94416	CONDITION	T4 R6 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2340.0	4.9	5.0	1.02	3355	38144.78	742	7629	-
2350.0	5.3	15.0	2.89	9541	44999.38	685	3000	-
2360.0	9.7	25.0	3.92	13209	48761.95	376	1950	-
2370.0	5.8	35.0	5.64	18326	55035.28	627	1572	-
2380.0	5.8	45.0	7.37	24121	61350.19	631	1363	-
2390.0	5.6	55.0	9.14	30129	67823.36	647	1233	-
2400.0	4.7	65.0	11.26	37181	75539.23	772	1162	-
2410.0	3.8	75.0	13.91	46553	85216.01	968	1136	-
2420.0	6.7	85.0	15.39	51362	90653.43	544	1067	-
2430.0	10.9	95.0	16.31	54229	94012.77	335.93	989.61	-
2440.0	5.5	105.0	18.13	60304	100662.45	664.97	958.69	-
2450.0	17.8	115.0	18.70	62209	102714.67	205.22	893.17	-
2460.0	5.7	125.0	20.46	68333	109158.23	644.36	873.27	-
2470.0	12.9	135.0	21.24	71154	111996.65	283.84	829.60	-
2480.0	6.2	145.0	22.85	77464	117895.64	589.90	813.07	-
2490.0	4.7	155.0	24.97	85095	125618.35	772.27	810.44	-
2500.0	7.7	165.0	26.27	89173	130383.20	476.48	790.20	-
2504.0	2.4	169.0	27.93	94416	136436.39	1513	807	+

BIT NUMBER	4	IADC CODE	517	INTERVAL	2000.0-	2335.0
HTC J22		SIZE	12.250	NOZZLES	18	16 16
COST	8516.00	TRIP TIME	7.0	BIT RUN		335.0
TOTAL HOURS	34.26	TOTAL TURNS	123394	CONDITION	T8	R6 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2010.0	16.8	10.0	0.60	2551	36253.50	217	3625	-
2020.0	7.2	20.0	1.98	8154	41305.44	505	2065	-
2030.0	7.5	30.0	3.31	13110	46183.90	488	1539	-
2040.0	8.8	40.0	4.45	17432	50344.14	416	1259	-
2050.0	9.6	50.0	5.49	21339	54140.19	380	1083	-
2060.0	10.8	60.0	6.42	24647	57527.42	338.72	958.79	-
2070.0	31.8	70.0	6.73	25879	58675.77	114.84	838.23	-
2080.0	12.5	80.0	7.54	28948	61600.41	292.46	770.01	-
2090.0	9.4	90.0	8.60	33020	65481.68	388.13	727.57	-
2100.0	14.4	100.0	9.29	35680	68017.79	253.61	680.18	-
2110.0	8.9	110.0	10.41	39895	72099.91	408.21	655.45	-
2120.0	10.3	120.0	11.38	43596	75648.44	354.85	630.40	-
2130.0	23.1	130.0	11.82	45249	77231.99	158.35	594.09	-
2140.0	7.5	140.0	13.14	50252	82070.89	483.89	586.22	-
2150.0	8.0	150.0	14.39	54952	86642.99	457.21	577.62	-
2160.0	23.0	160.0	14.83	56427	88232.62	158.96	551.45	-
2170.0	10.5	170.0	15.78	59550	91713.18	348.06	539.49	-
2180.0	6.5	180.0	17.31	64450	97296.68	558.35	540.54	+
2190.0	8.7	190.0	18.46	68116	101484.31	418.76	534.13	-
2200.0	23.2	200.0	18.89	69566	103057.71	157.34	515.29	-
2210.0	9.3	210.0	19.97	73351	107000.86	394.31	509.53	-
2220.0	12.4	220.0	20.77	76376	109943.76	294.29	499.74	-
2230.0	12.0	230.0	21.60	79287	112979.99	303.62	491.22	-
2240.0	14.7	240.0	22.28	81819	115463.35	248.34	481.10	-
2250.0	10.7	250.0	23.22	85018	118887.10	342.37	475.55	-
2260.0	7.8	260.0	24.50	89333	123552.53	466.54	475.20	-
2270.0	9.9	270.0	25.51	92856	127258.41	370.59	471.33	-
2280.0	12.7	280.0	26.30	95560	130140.45	288.20	464.79	-
2290.0	11.9	290.0	27.14	98633	133213.20	307.28	459.36	-
2300.0	11.4	300.0	28.03	101935	136427.98	321.48	454.76	-
2310.0	6.6	310.0	29.53	106970	141924.24	549.63	457.82	+
2320.0	8.4	320.0	30.72	111196	146265.04	434.08	457.08	-
2330.0	7.4	330.0	32.07	116056	151203.36	493.83	458.19	+
2335.0	2.3	335.0	34.26	123394	159212.40	1602	475	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1710.0	12.4	98.9	3.14	14238	42609.93	293.68	430.84	-
1720.0	24.2	108.9	3.55	16036	44118.40	150.85	405.13	-
1730.0	19.5	118.9	4.06	18423	45992.08	187.37	386.81	-
1740.0	20.5	128.9	4.55	20721	47776.49	178.44	370.65	-
1750.0	18.2	138.9	5.10	23205	49781.03	200.45	358.39	-
1760.0	10.6	148.9	6.05	27615	53236.23	345.52	357.53	-
1770.0	15.7	158.9	6.68	30550	55556.27	232.00	349.63	-
1780.0	18.0	168.9	7.24	33043	57589.21	203.29	340.97	-
1790.0	13.9	178.9	7.96	36384	60212.33	262.31	336.57	-
1800.0	18.7	188.9	8.49	38811	62170.20	195.79	329.12	-
1810.0	15.1	198.9	9.15	41793	64590.67	242.05	324.74	-
1820.0	11.0	208.9	10.06	45851	67909.93	331.93	325.08	+
1830.0	16.6	218.9	10.67	48627	70114.32	220.44	320.30	-
1840.0	13.2	228.9	11.42	52142	72876.65	276.23	318.38	-
1850.0	15.1	238.9	12.09	55248	75300.16	242.35	315.20	-
1860.0	13.0	248.9	12.85	58493	78102.05	280.19	313.79	-
1870.0	13.1	258.9	13.62	61731	80888.73	278.67	312.43	-
1880.0	19.8	268.9	14.12	63935	82734.01	184.53	307.68	-
1890.0	14.1	278.9	14.83	66988	85316.78	258.28	305.90	-
1900.0	18.8	288.9	15.36	69252	87262.49	194.57	302.05	-
1910.0	24.6	298.9	15.77	70951	88745.10	148.26	296.91	-
1920.0	13.8	308.9	16.50	74000	91399.90	265.48	295.89	-
1930.0	15.1	318.9	17.16	76779	93826.45	242.66	294.22	-
1940.0	21.4	328.9	17.63	78738	95531.73	170.53	290.46	-
1950.0	13.3	338.9	18.38	81877	98278.85	274.71	289.99	-
1960.0	15.7	348.9	19.02	84579	100605.98	232.71	288.35	-
1970.0	11.5	358.9	19.88	88232	103771.05	316.51	289.14	+
1980.0	8.0	368.9	21.14	93539	108359.38	458.83	293.74	+
1990.0	10.2	378.9	22.12	97646	111935.30	357.59	295.42	+
2000.0	8.5	388.9	23.29	101926	116207.12	427.18	298.81	+

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
1320.0	35.4	510.8	15.18	94157	78201.01	103.17	153.10	-
1330.0	41.0	520.8	15.42	95620	79091.70	89.07	151.87	-
1340.0	44.3	530.8	15.65	96975	79916.44	82.47	150.56	-
1350.0	24.4	540.8	16.05	99430	81410.72	149.43	150.54	-
1360.0	31.4	550.8	16.37	101340	82573.27	116.26	149.92	-
1370.0	20.8	560.8	16.85	104242	84329.27	175.60	150.37	+
1380.0	36.8	570.8	17.13	106037	85322.41	99.31	149.48	-
1390.0	37.3	580.8	17.39	107806	86301.35	97.89	148.59	-
1400.0	38.1	590.8	17.66	109539	87260.00	95.86	147.70	-
1410.0	41.2	600.8	17.90	111141	88146.63	88.66	146.72	-
1420.0	39.0	610.8	18.16	112833	89082.96	93.63	145.85	-
1430.0	40.9	620.8	18.40	114447	89975.90	89.29	144.94	-
1440.0	25.6	630.8	18.79	117023	91401.19	142.53	144.90	-
1450.0	27.0	640.8	19.16	119470	92755.47	135.43	144.75	-
1460.0	26.9	650.8	19.53	121923	94112.80	135.73	144.61	-
1470.0	37.3	660.8	19.80	123691	95090.73	97.79	143.90	-
1480.0	38.6	670.8	20.06	125401	96037.20	94.65	143.17	-
1490.0	29.3	680.8	20.40	127656	97284.97	124.78	142.90	-
1500.0	38.4	690.8	20.66	129376	98236.52	95.15	142.21	-
1510.0	40.2	700.8	20.91	131018	99145.46	90.89	141.47	-
1520.0	41.5	710.8	21.15	132610	100026.00	88.05	140.72	-
1530.0	43.6	720.8	21.38	134124	100863.93	83.79	139.93	-
1540.0	27.9	730.8	21.74	136487	102171.55	130.76	139.81	-
1550.0	20.4	740.8	22.23	139721	103961.03	178.95	140.34	+
1560.0	16.6	750.8	22.83	143698	106161.36	220.03	141.40	+
1570.0	24.1	760.8	23.25	146431	107673.89	151.25	141.53	+
1580.0	25.3	770.8	23.64	149038	109116.43	144.25	141.56	+
1590.0	29.9	780.8	23.98	151249	110339.85	122.34	141.32	-
1600.0	28.1	790.8	24.33	153600	111640.37	130.05	141.17	-
1610.0	19.8	800.8	24.84	156925	113480.57	184.02	141.71	+
1611.1	5.8	801.9	25.03	158183	114176.48	632.64	142.38	+

BIT NUMBER	3	IADC CODE	517	INTERVAL	1611.1- 2000.0
HTC J22		SIZE	12.250	NOZZLES	18 18 16
COST	8516.00	TRIP TIME	6.2	BIT RUN	388.9
TOTAL HOURS	23.29	TOTAL TURNS	101926	CONDITION	T3 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
1620.0	9.7	8.9	0.91	4029	34496.94	375	3876	-
1630.0	46.5	18.9	1.13	4913	35283.13	79	1867	-
1640.0	104.0	28.9	1.23	5349	35634.13	35	1233	-
1650.0	109.4	38.9	1.32	5766	35967.88	33.38	924.62	-
1660.0	81.6	48.9	1.44	6326	36415.25	44.74	744.69	-
1670.0	92.4	58.9	1.55	6819	36810.35	39.51	624.96	-
1680.0	87.8	68.9	1.66	7339	37226.27	41.59	540.29	-
1690.0	61.7	78.9	1.82	8090	37817.69	59.14	479.31	-
1700.0	19.7	88.9	2.33	10415	39673.11	185.54	446.27	-

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
820.0	29.6	10.8	0.37	2004	24117.91	123	2233	-
830.0	44.6	20.8	0.59	3351	24937.58	82	1199	-
840.0	39.0	30.8	0.85	4891	25874.93	93.73	840.09	-
850.0	37.7	40.8	1.11	6481	26842.71	96.78	657.91	-
860.0	41.8	50.8	1.35	7916	27716.14	87.34	545.59	-
870.0	38.7	60.8	1.61	9467	28660.59	94.44	471.39	-
880.0	32.6	70.8	1.92	11306	29779.52	111.89	420.61	-
890.0	35.6	80.8	2.20	12991	30805.13	102.56	381.25	-
900.0	40.8	90.8	2.44	14461	31699.87	89.47	349.12	-
910.0	39.2	100.8	2.70	15991	32631.13	93.13	323.72	-
920.0	42.9	110.8	2.93	17391	33483.26	85.21	302.20	-
930.0	33.7	120.8	3.23	19169	34565.67	108.24	286.14	-
940.0	42.4	130.8	3.46	20584	35426.93	86.13	270.85	-
950.0	48.1	140.8	3.67	21832	36186.75	75.98	257.01	-
960.0	49.3	150.8	3.87	23049	36927.30	74.05	244.88	-
970.0	48.0	160.8	4.08	24300	37688.64	76.13	234.38	-
980.0	59.8	170.8	4.25	25396	38299.12	61.05	224.23	-
990.0	41.5	180.8	4.49	27060	39179.66	88.05	216.70	-
1000.0	44.3	190.8	4.72	28617	40003.99	82.43	209.66	-
1010.0	36.5	200.8	4.99	30509	41005.25	100.13	204.21	-
1020.0	39.4	210.8	5.24	32259	41931.58	92.63	198.92	-
1030.0	31.7	220.8	5.56	34439	43085.01	115.34	195.13	-
1040.0	29.6	230.8	5.90	36773	44320.60	123.56	192.03	-
1050.0	15.5	240.8	6.55	41239	46684.25	236.37	193.87	+
1060.0	16.8	250.8	7.14	45346	48858.21	217.40	194.81	+
1070.0	18.9	260.8	7.67	48999	50791.74	193.35	194.75	-
1080.0	27.2	270.8	8.04	51332	52134.86	134.31	192.52	-
1090.0	24.1	280.8	8.45	53820	53649.43	151.46	191.06	-
1100.0	28.3	290.8	8.81	55940	54939.80	129.04	188.93	-
1110.0	34.3	300.8	9.10	57692	56005.98	106.62	186.19	-
1120.0	33.4	310.8	9.40	59487	57098.54	109.26	183.71	-
1130.0	22.8	320.8	9.84	62117	58699.33	160.08	182.98	-
1140.0	18.7	330.8	10.37	65334	60657.21	195.79	183.37	+
1150.0	28.6	340.8	10.72	67432	61934.40	127.72	181.73	-
1160.0	30.9	350.8	11.05	69375	63117.24	118.28	179.92	-
1170.0	30.8	360.8	11.37	71325	64304.14	118.69	178.23	-
1180.0	41.0	370.8	11.61	72789	65194.82	89.07	175.82	-
1190.0	32.7	380.8	11.92	74624	66311.73	111.69	174.14	-
1200.0	41.5	390.8	12.16	76069	67191.25	87.95	171.93	-
1210.0	33.9	400.8	12.46	77839	68268.59	107.73	170.33	-
1220.0	38.8	410.8	12.71	79387	69211.01	94.24	168.48	-
1230.0	39.4	420.8	12.97	80910	70138.21	92.72	166.68	-
1240.0	44.8	430.8	13.19	82250	70953.82	81.56	164.70	-
1250.0	48.9	440.8	13.40	83477	71700.45	74.66	162.66	-
1260.0	50.6	450.8	13.59	84662	72421.72	72.13	160.65	-
1270.0	48.8	460.8	13.80	85890	73169.37	74.76	158.79	-
1280.0	50.1	470.8	14.00	87089	73898.76	72.94	156.96	-
1290.0	43.0	480.8	14.23	88485	74748.86	85.01	155.47	-
1300.0	21.8	490.8	14.69	91235	76422.69	167.38	155.71	+
1310.0	48.9	500.8	14.89	92462	77169.32	74.66	154.09	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
430.0	149.4	212.0	1.14	10215	22514.56	24.45	106.20	-
440.0	148.1	222.0	1.20	10823	22761.07	24.65	102.53	-
450.0	155.2	232.0	1.27	11403	22996.43	23.54	99.12	-
460.0	169.2	242.0	1.33	11935	23212.21	21.58	95.92	-
470.0	144.0	252.0	1.40	12560	23465.82	25.36	93.12	-
480.0	143.4	262.0	1.47	13187	23720.45	25.46	90.54	-
490.0	130.9	272.0	1.54	13875	23999.42	27.90	88.23	-
500.0	145.2	282.0	1.61	14495	24251.00	25.16	86.00	-
510.0	93.2	292.0	1.72	15460	24642.92	39.19	84.39	-
520.0	138.5	302.0	1.79	16110	24906.67	26.38	82.47	-
530.0	117.6	312.0	1.88	16876	25217.21	31.05	80.82	-
540.0	109.1	322.0	1.97	17701	25551.97	33.48	79.35	-
550.0	106.5	332.0	2.06	18546	25894.85	34.29	78.00	-
560.0	147.5	342.0	2.13	19156	26142.38	24.75	76.44	-
570.0	90.2	352.0	2.24	20153	26547.14	40.48	75.42	-
580.0	49.5	362.0	2.44	21973	27285.66	73.85	75.37	-
590.0	56.7	372.0	2.62	23561	27929.83	64.42	75.08	-
600.0	49.2	382.0	2.82	25391	28672.40	74.26	75.06	-
610.0	83.3	392.0	2.94	26471	29110.64	43.82	74.26	-
620.0	85.9	402.0	3.06	27518	29535.70	42.51	73.47	-
630.0	72.7	412.0	3.20	28756	30037.85	50.22	72.91	-
640.0	35.6	422.0	3.48	31281	31062.43	102.46	73.61	+
650.0	25.6	432.0	3.87	34798	32489.76	142.73	75.21	+
660.0	49.0	442.0	4.07	36633	33234.36	74.46	75.19	-
670.0	41.2	452.0	4.31	38816	34119.97	88.56	75.49	+
680.0	44.9	462.0	4.54	40818	34932.54	81.26	75.61	+
690.0	43.5	472.0	4.77	42886	35771.49	83.89	75.79	+
700.0	37.9	482.0	5.03	45261	36735.21	96.37	76.21	+
710.0	36.5	492.0	5.30	47726	37735.45	100.02	76.70	+
720.0	45.2	502.0	5.52	49718	38543.96	80.85	76.78	+
730.0	27.4	512.0	5.89	53008	39878.97	133.50	77.89	+
740.0	29.4	522.0	6.23	56068	41120.65	124.17	78.78	-
750.0	31.9	532.0	6.54	58886	42263.93	114.33	79.44	+
760.0	19.1	542.0	7.07	63593	44174.13	191.02	81.50	+
770.0	24.9	552.0	7.47	67206	45640.00	146.59	82.68	+
780.0	26.3	562.0	7.85	70633	47030.80	139.08	83.68	+
790.0	24.1	572.0	8.26	74373	48548.41	151.76	84.87	+
800.0	25.2	582.0	8.66	77943	49997.04	144.86	85.91	+
809.2	30.5	591.2	8.96	80656	51097.71	119.64	86.43	+

BIT NUMBER	2	IADC CODE	116	INTERVAL	809.2- 1611.1
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.5	BIT RUN	801.9
TOTAL HOURS	25.03	TOTAL TURNS	158183	CONDITION	T3 B4 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
810.0	28.0	0.8	0.03	171	22884.34	130	28605	-

BIT NUMBER	1	IADC CODE	111	INTERVAL	80.0-	218.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	18	18 18
COST	0.00	TRIP TIME	2.4	BIT RUN		138.0
TOTAL HOURS	1.48	TOTAL TURNS	8533	CONDITION	T2	B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
90.0	131.4	10.0	0.08	407	10501.18	32	1050	-
100.0	78.9	20.0	0.20	1164	11038.37	53.72	551.92	-
120.0	87.2	40.0	0.43	2481	12011.45	48.65	300.29	-
130.0	118.8	50.0	0.52	2955	12368.40	35.70	247.37	-
140.0	103.7	60.0	0.61	3505	12777.18	40.88	212.95	-
160.0	110.3	80.0	0.79	4524	13546.46	38.46	169.33	-
170.0	95.5	90.0	0.90	5115	13990.58	44.41	155.45	-
180.0	74.2	100.0	1.03	5900	14561.94	57.14	145.62	-
190.0	85.3	110.0	1.15	6576	15059.08	49.71	136.90	-
200.0	82.6	120.0	1.27	7308	15572.71	51.36	129.77	-
210.0	90.5	130.0	1.38	7959	16041.58	46.89	123.40	-
218.0	82.0	138.0	1.48	8533	16455.34	51.72	119.24	-

BIT NUMBER	1	IADC CODE	111	INTERVAL	218.0-	809.2
HTC OSC3AJ		SIZE	17.500	NOZZLES	18	18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN		591.2
TOTAL HOURS	8.95	TOTAL TURNS	80581	CONDITION	T2	B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
220.0	420.0	2.0	0.00	43	18386.79	9	9193	-
230.0	206.9	12.0	0.05	478	18563.30	18	1547	-
240.0	189.5	22.0	0.11	953	18756.05	19.27	852.55	-
250.0	133.8	32.0	0.18	1625	19028.93	27.29	594.65	-
260.0	202.2	42.0	0.23	2070	19209.50	18.06	457.37	-
270.0	158.4	52.0	0.29	2639	19440.12	23.06	373.85	-
280.0	251.7	62.0	0.33	2996	19585.19	14.51	315.89	-
290.0	303.4	72.0	0.37	3293	19705.57	12.04	273.69	-
300.0	280.2	82.0	0.40	3614	19835.92	13.04	241.90	-
310.0	272.7	92.0	0.44	3944	19969.83	13.39	217.06	-
320.0	290.3	102.0	0.47	4254	20095.62	12.58	197.02	-
330.0	222.2	112.0	0.52	4659	20259.96	16.43	180.89	-
340.0	202.2	122.0	0.57	5104	20440.53	18.06	167.55	-
350.0	117.6	132.0	0.65	5869	20750.95	31.04	157.20	-
360.0	121.6	142.0	0.73	6609	21051.23	30.03	148.25	-
370.0	178.2	152.0	0.79	7114	21256.15	20.49	139.84	-
380.0	170.6	162.0	0.85	7642	21470.19	21.40	132.53	-
390.0	186.5	172.0	0.90	8124	21665.98	19.58	125.97	-
400.0	169.0	182.0	0.96	8657	21882.06	21.61	120.23	-
410.0	201.7	192.0	1.01	9103	22063.14	18.11	114.91	-
420.0	176.5	202.0	1.07	9613	22270.08	20.69	110.25	-

(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.

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2638.0	6.6	50.2	51	9.4	1.75	6.19	20895	556.93	953.27	8.6	20.6
2639.0	3.7	50.0	49	9.4	1.93	6.46	21685	983.00	953.76	8.6	20.6
2640.0	5.8	50.0	49	9.4	1.78	6.63	22196	628.96	948.52	8.6	20.6
2641.0	4.4	50.0	49	9.4	1.88	6.86	22872	831.84	946.67	8.6	20.6
2642.0	4.9	55.1	49	9.4	1.90	7.06	23471	740.54	943.45	8.6	20.6
2643.0	3.7	56.1	49	9.4	2.01	7.33	24264	981.98	944.04	8.6	20.6
2644.0	5.3	56.6	49	9.4	1.88	7.52	24815	683.74	940.10	8.6	20.6
2645.0	4.4	56.7	49	9.4	1.96	7.74	25483	826.77	938.41	8.6	20.6
2646.0	5.6	57.9	49	9.4	1.88	7.92	26007	649.24	934.15	8.6	20.6
2647.0	4.9	56.7	49	9.4	1.92	8.13	26613	749.67	931.48	8.6	20.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2588.0	20.3	52.6	57	9.4	1.41	0.98	3267	180	3816	8.5	20.5
2589.0	20.2	52.9	56	9.4	1.41	1.03	3433	181	3486	8.5	20.5
2590.0	26.1	53.8	55	9.4	1.32	1.06	3560	140	3207	8.5	20.5
2591.0	6.9	53.5	55	9.4	1.79	1.21	4033	525	3001	8.5	20.5
2592.0	13.2	45.8	47	9.4	1.43	1.28	4247	276	2806	8.5	20.5
2593.0	37.9	44.9	63	9.4	1.16	1.31	4347	96	2625	8.5	20.5
2594.0	28.6	47.6	65	9.4	1.29	1.34	4482	128	2469	8.5	20.5
2595.0	28.6	49.3	61	9.4	1.29	1.38	4610	128	2332	8.5	20.5
2596.0	20.8	52.6	61	9.4	1.43	1.43	4786	175	2212	8.5	20.5
2597.0	13.1	51.7	60	9.4	1.58	1.50	5062	279	2110	8.5	20.5
2598.0	5.4	52.6	57	9.4	1.89	1.69	5696	678	2038	8.5	20.5
2599.0	19.3	52.6	57	9.4	1.43	1.74	5874	190	1950	8.5	20.5
2600.0	22.0	51.6	57	9.4	1.38	1.79	6030	166	1869	8.5	20.5
2601.0	24.0	45.8	47	9.4	1.22	1.83	6146	152	1795	8.5	20.5
2602.0	8.4	51.6	57	9.4	1.72	1.95	6554	434	1738	8.5	20.5
2603.0	24.2	51.7	57	9.4	1.34	1.99	6695	151	1675	8.5	20.5
2604.0	22.5	51.0	56	9.3	1.37	2.03	6846	162	1616	8.5	20.5
2605.0	24.2	52.1	57	9.3	1.36	2.07	6987	151	1562	8.5	20.5
2606.0	27.5	51.8	56	9.3	1.31	2.11	7110	133	1511	8.5	20.5
2607.0	22.8	51.4	57	9.3	1.37	2.16	7259	160	1464	8.5	20.5
2608.0	7.9	51.4	57	9.3	1.76	2.28	7694	464	1431	8.5	20.5
2609.0	7.4	47.7	57	9.3	1.74	2.42	8158	494	1401	8.5	20.5
2610.0	7.2	51.2	57	9.4	1.77	2.56	8632	505	1373	8.5	20.5
2611.0	6.3	54.3	55	9.4	1.84	2.71	9153	580	1349	8.5	20.5
2612.0	5.7	60.0	52	9.4	1.92	2.89	9699	642	1328	8.5	20.5
2613.0	6.4	60.2	51	9.4	1.88	3.05	10183	574	1307	8.5	20.6
2614.0	6.6	60.2	51	9.4	1.86	3.20	10649	552	1286	8.5	20.6
2615.0	6.1	60.2	51	9.4	1.89	3.36	11152	599	1267	8.5	20.6
2616.0	15.7	60.2	51	9.4	1.54	3.43	11347	232	1240	8.5	20.6
2617.0	17.0	60.2	51	9.4	1.51	3.49	11527	215	1214	8.6	20.5
2618.0	11.8	50.0	54	9.4	1.56	3.57	11803	310	1191	8.6	20.5
2619.0	8.1	50.0	58	9.4	1.72	3.69	12230	449	1173	8.6	20.5
2620.0	7.1	50.0	60	9.4	1.78	3.83	12736	514	1157	8.6	20.5
2621.0	10.9	50.6	60	9.4	1.63	3.93	13067	336	1138	8.6	20.5
2622.0	15.3	50.0	60	9.4	1.51	3.99	13302	238	1118	8.6	20.5
2623.0	12.6	50.0	60	9.4	1.57	4.07	13586	289	1099	8.6	20.5
2624.0	4.6	50.0	60	9.4	1.93	4.29	14378	797	1093	8.6	20.5
2625.0	7.1	50.0	61	9.4	1.78	4.43	14891	514	1080	8.6	20.5
2626.0	5.8	50.0	61	9.4	1.86	4.60	15523	633	1071	8.6	20.5
2627.0	5.8	50.0	61	9.4	1.85	4.77	16147	626	1062	8.6	20.5
2628.0	9.2	48.7	57	9.4	1.65	4.88	16516	396	1049	8.6	20.5
2629.0	9.4	50.0	60	9.4	1.68	4.99	16900	390	1036	8.6	20.5
2630.0	8.6	50.0	63	9.4	1.73	5.11	17338	425	1024	8.6	20.5
2631.0	9.4	50.0	59	9.4	1.67	5.21	17714	391	1012	8.6	20.5
2632.0	27.9	50.0	56	9.4	1.27	5.25	17835	130.86	995.68	8.6	20.5
2633.0	9.3	50.0	54	9.4	1.65	5.36	18186	394.62	984.75	8.6	20.5
2634.0	27.1	49.8	53	9.4	1.26	5.39	18304	134.92	969.57	8.6	20.6
2635.0	5.0	49.8	55	9.4	1.87	5.59	18960	725.33	965.29	8.6	20.6
2636.0	5.8	49.8	55	9.4	1.82	5.76	19533	629.97	959.51	8.6	20.6
2637.0	3.7	50.2	55	9.4	1.98	6.04	20430	988.07	959.99	8.6	20.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2548.0	4.4	40.0	51	9.4	1.76	13.32	41741	835	1921	8.5	20.5
2549.0	8.6	40.0	54	9.4	1.55	13.43	42114	423	1888	8.5	20.5
2550.0	9.8	40.2	54	9.4	1.52	13.53	42444	373	1855	8.5	20.5
2551.0	6.4	40.0	54	9.4	1.66	13.69	42951	571	1828	8.5	20.5
2552.0	11.0	40.0	54	9.4	1.48	13.78	43249	333	1797	8.5	20.5
2553.0	4.4	40.0	57	9.4	1.80	14.01	44028	837	1777	8.5	20.5
2554.0	2.4	40.0	51	9.4	1.96	14.43	45325	1546	1772	8.5	20.5
2555.0	9.6	40.0	55	9.4	1.53	14.54	45668	380	1745	8.5	20.5
2556.0	14.1	40.0	55	9.4	1.40	14.61	45902	259	1716	8.5	20.5
2557.0	2.4	40.0	55	9.4	1.98	15.02	47268	1498	1712	8.5	20.5
2558.0	14.0	40.0	55	9.4	1.41	15.09	47505	261	1685	8.5	20.5
2559.0	5.5	40.0	52	9.4	1.69	15.27	48073	670	1667	8.5	20.5
2560.0	2.9	40.0	51	9.4	1.90	15.62	49140	1263	1660	8.5	20.5
2561.0	3.8	40.0	51	9.4	1.81	15.88	49944	954	1647	8.5	20.5
2562.0	5.4	40.0	56	9.4	1.72	16.06	50561	675	1631	8.5	20.5
2563.0	1.6	40.0	52	9.4	2.10	16.69	52512	2278	1642	8.5	20.5
2564.0	2.6	40.0	51	9.4	1.93	17.07	53675	1395	1637	8.5	20.5
2565.0	2.7	40.0	51	9.4	1.91	17.44	54791	1339	1633	8.5	20.5
2566.0	4.7	39.3	51	9.4	1.72	17.65	55435	772	1619	8.5	20.5
2567.0	5.2	39.3	51	9.4	1.69	17.84	56017	698	1604	8.5	20.5
2568.0	4.4	39.3	50	9.4	1.74	18.07	56702	833	1592	8.5	20.5
2569.0	3.4	40.2	48	9.4	1.83	18.36	57551	1079	1584	8.5	20.5
2570.0	7.2	40.2	48	9.4	1.58	18.50	57946	506	1568	8.5	20.5
2571.0	11.5	40.2	50	9.4	1.44	18.59	58207	317	1549	8.5	20.5
2572.0	1.4	40.9	54	9.4	2.16	19.29	60464	2547	1564	8.5	20.5
2573.0	3.2	40.9	54	9.4	1.90	19.60	61493	1154	1558	8.5	20.5
2574.0	2.0	40.1	62	9.4	2.08	20.10	63356	1830	1562	8.5	20.5
2575.0	4.9	39.9	62	9.4	1.79	20.31	64116	747	1550	8.5	20.5
2576.0	0.7	40.5	51	9.4	2.37	21.71	68395	5107	1600	8.5	20.5
2577.0	1.5	39.3	51	9.4	2.10	22.37	70412	2425	1611	8.5	20.5
2578.0	1.1	38.1	61	9.4	2.23	23.25	73623	3225	1633	8.5	20.5

BIT NUMBER	7	IADC CODE	617	INTERVAL	2578.0- 2647.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6844.00	TRIP TIME	7.6	BIT RUN	69.0
TOTAL HOURS	8.13	TOTAL TURNS	26613	CONDITION	T1 R1 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2579.0	6.5	23.5	54	9.4	1.41	0.15	496	562	35162	8.5	20.5
2580.0	7.7	34.9	56	9.4	1.54	0.28	928	473	17817	8.5	20.5
2581.0	8.3	49.7	55	9.4	1.69	0.40	1326	440	12025	8.5	20.5
2582.0	9.2	48.9	57	9.4	1.65	0.51	1694	396	9118	8.5	20.5
2583.0	7.7	49.5	57	9.4	1.72	0.64	2136	474	7389	8.5	20.5
2584.0	10.8	51.3	56	9.4	1.62	0.73	2449	338	6214	8.5	20.5
2585.0	14.5	50.2	57	9.4	1.51	0.80	2684	253	5362	8.5	20.5
2586.0	15.1	50.8	56	9.4	1.50	0.87	2908	242	4722	8.5	20.5
2587.0	17.6	50.8	56	9.4	1.44	0.93	3100	207	4220	8.5	20.5

BIT NUMBER	6	IADC CODE	517	INTERVAL	2504.0- 2578.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	8516.00	TRIP TIME	7.5	BIT RUN	74.1
TOTAL HOURS	23.25	TOTAL TURNS	73623	CONDITION	T8 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2505.0	3.1	28.7	55	9.4	1.72	0.32	1057	1178	37084	8.6	20.4
2506.0	4.5	30.1	55	9.4	1.63	0.54	1785	812	18948	8.6	20.4
2507.0	6.0	30.5	55	9.4	1.55	0.71	2331	609	12835	8.6	20.4
2508.0	5.2	36.2	55	9.4	1.68	0.90	2962	702	9802	8.6	20.4
2509.0	6.3	36.2	61	9.4	1.65	1.06	3544	580	7957	8.6	20.4
2510.0	5.8	36.6	61	9.4	1.68	1.24	4179	631	6736	8.6	20.4
2511.0	11.8	36.4	61	9.4	1.45	1.32	4490	309	5818	8.6	20.4
2512.0	3.4	37.2	61	9.4	1.86	1.62	5581	1084	5226	8.6	20.4
2513.0	5.2	39.6	61	9.4	1.76	1.81	6292	708	4724	8.6	20.4
2514.0	4.0	39.6	61	9.4	1.85	2.06	7220	922	4344	8.6	20.4
2515.0	4.4	38.9	62	9.4	1.81	2.29	8068	828	4024	8.6	20.4
2516.0	4.5	40.1	58	9.4	1.79	2.51	8836	810	3757	8.6	20.4
2517.0	2.7	42.5	60	9.4	2.00	2.88	10136	1330	3570	8.6	20.4
2518.0	2.5	42.5	59	9.4	2.03	3.28	11555	1468	3420	8.6	20.4
2519.0	2.3	41.5	53	9.4	2.00	3.70	12899	1555	3295	8.6	20.4
2520.0	1.3	40.7	46	9.4	2.14	4.49	15046	2860	3268	8.5	20.4
2521.0	1.7	37.3	56	9.4	2.06	5.07	17009	2127	3201	8.5	20.4
2522.0	1.2	40.3	54	9.4	2.20	5.88	19629	2955	3187	8.5	20.4
2523.0	2.7	40.2	53	9.4	1.94	6.26	20834	1377	3092	8.5	20.4
2524.0	2.7	40.9	53	9.4	1.95	6.63	22011	1361	3006	8.5	20.4
2525.0	1.2	37.7	50	9.4	2.14	7.46	24495	3043	3007	8.5	20.4
2526.0	2.3	38.2	50	9.4	1.94	7.90	25789	1588	2943	8.5	20.4
2527.0	11.3	39.8	50	9.4	1.44	7.98	26052	323	2829	8.5	20.4
2528.0	14.4	40.1	50	9.4	1.36	8.05	26261	254	2722	8.5	20.4
2529.0	1.5	40.6	49	9.4	2.11	8.72	28246	2449	2711	8.5	20.4
2530.0	1.2	39.9	47	9.4	2.17	9.58	30680	3134	2727	8.5	20.4
2531.0	1.4	37.7	48	9.4	2.07	10.28	32689	2559	2721	8.5	20.4
2532.0	16.5	38.9	45	9.4	1.27	10.34	32853	221	2632	8.5	20.4
2533.0	3.0	40.4	46	9.4	1.85	10.67	33755	1202	2582	8.5	20.5
2534.0	14.1	39.7	45	9.4	1.34	10.74	33948	260	2505	8.5	20.5
2535.0	2.0	38.6	47	9.4	1.97	11.24	35358	1826	2483	8.5	20.5
2536.0	11.4	38.0	51	9.4	1.42	11.33	35627	319	2415	8.5	20.5
2537.0	10.4	38.0	55	9.4	1.48	11.43	35945	350	2353	8.5	20.5
2538.0	4.0	38.0	55	9.4	1.78	11.68	36763	909	2310	8.5	20.5
2539.0	14.2	38.0	57	9.4	1.39	11.75	37001	257	2252	8.5	20.5
2540.0	8.5	38.0	57	9.4	1.55	11.86	37399	428	2201	8.5	20.5
2541.0	10.8	38.0	57	9.4	1.47	11.96	37713	338	2151	8.5	20.5
2542.0	6.5	38.0	56	9.4	1.64	12.11	38232	561	2109	8.5	20.5
2543.0	3.1	38.0	53	9.4	1.86	12.44	39270	1192	2085	8.5	20.5
2544.0	7.5	38.0	49	9.4	1.54	12.57	39660	486	2045	8.5	20.5
2545.0	8.0	38.0	44	9.4	1.49	12.70	39990	459	2007	8.5	20.5
2546.0	9.1	38.0	44	9.4	1.45	12.80	40278	401	1968	8.5	20.5
2547.0	3.6	38.0	45	9.4	1.76	13.09	41043	1029	1946	8.5	20.5

PE604636

This is an enclosure indicator page.
The enclosure PE604636 is enclosed within the
container PE904249 at this location in this
document.

The enclosure PE604636 has the following characteristics:

ITEM_BARCODE = PE604636
CONTAINER_BARCODE = PE904249
NAME = Drill Data Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Drill Data Log for Sunfish-2
REMARKS =
DATE_CREATED = 8/10/83
DATE_RECEIVED = 9/05/84
W_NO = W833
WELL_NAME = SUNFISH-2
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



DRILL DATA PLOT

PE 604636

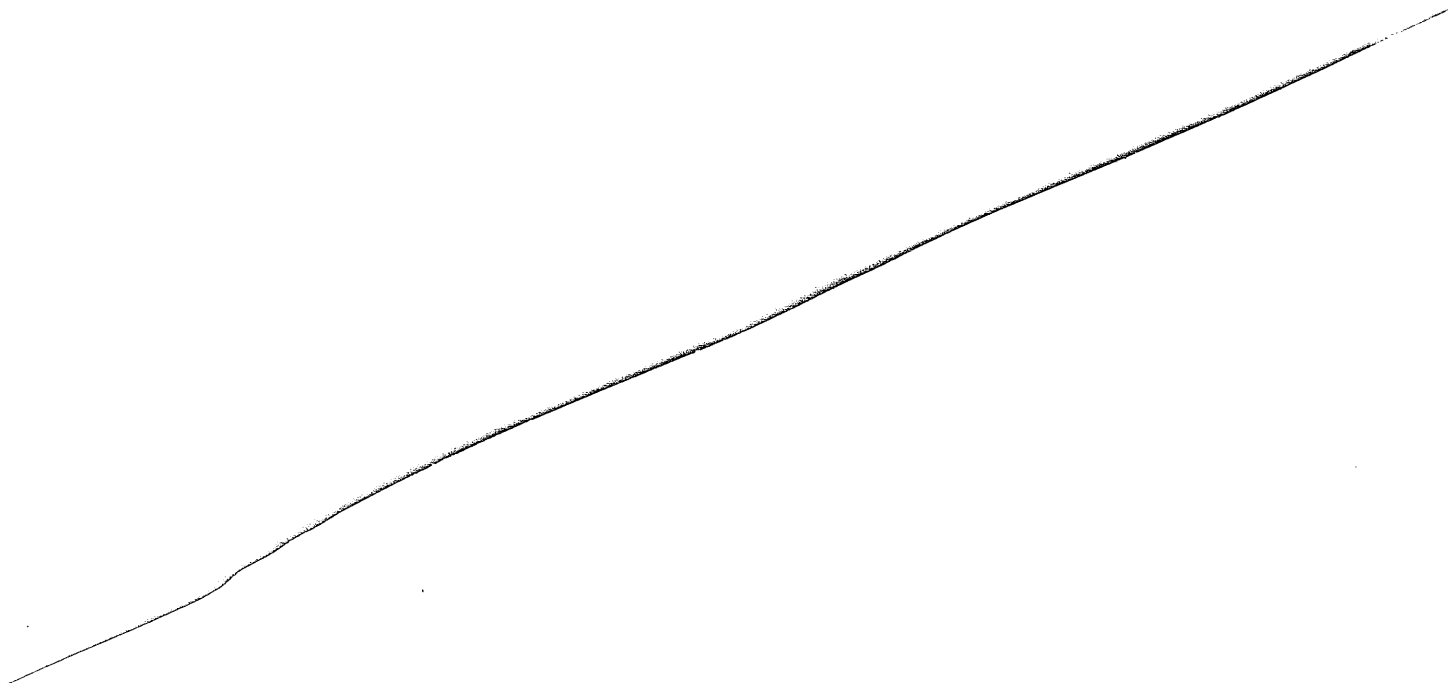
PE604637

This is an enclosure indicator page.
The enclosure PE604637 is enclosed within the
container PE904249 at this location in this
document.

The enclosure PE604637 has the following characteristics:

ITEM_BARCODE = PE604637
CONTAINER_BARCODE = PE904249
 NAME = Temperature Log
 BASIN = GIPPSLAND
 PERMIT = VIC/P1
 TYPE = WELL
 SUBTYPE = WELL_LOG
 DESCRIPTION = Temperature Log for Sunfish-2
 REMARKS =
 DATE_CREATED = 8/10/83
 DATE_RECEIVED = 9/05/84
 W_NO = W833
 WELL_NAME = SUNFISH-2
 CONTRACTOR = CORE LABORATORIES
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



TEMPERATURE PLOT

PE 604 637

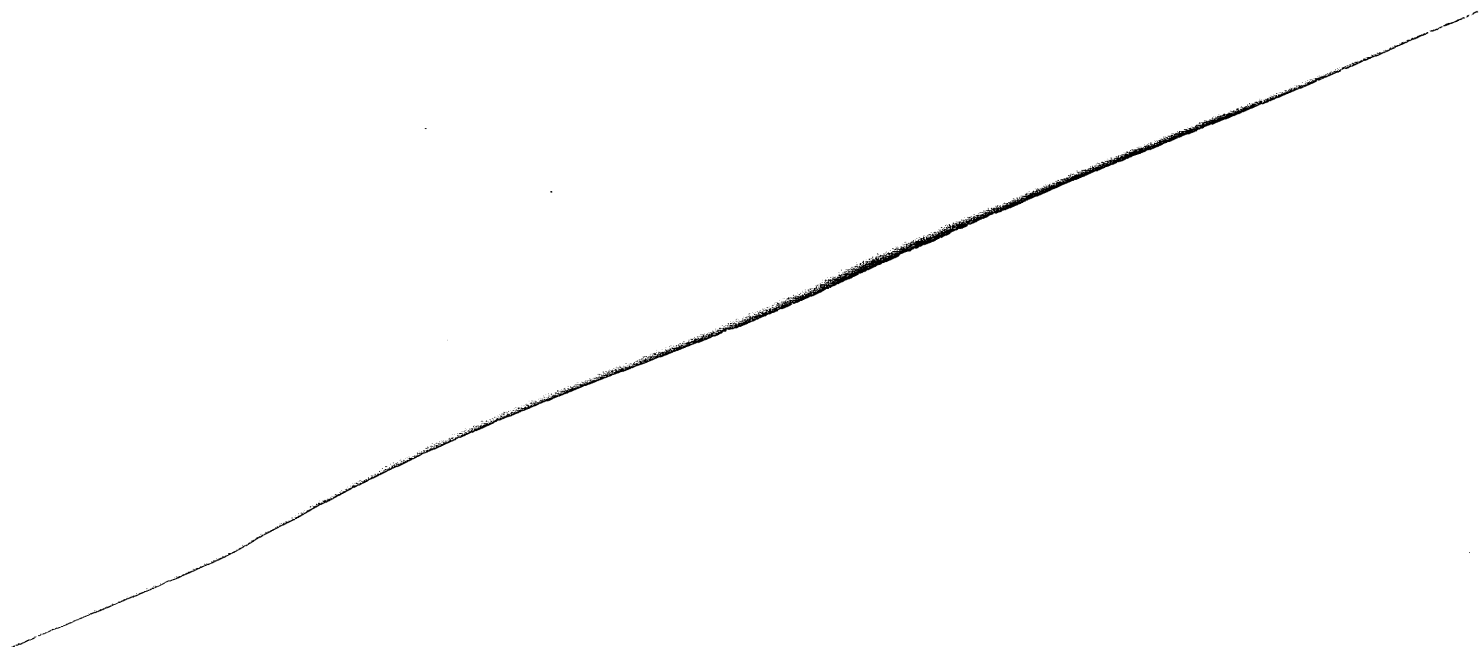
PE604638

This is an enclosure indicator page.
The enclosure PE604638 is enclosed within the
container PE904249 at this location in this
document.

The enclosure PE604638 has the following characteristics:

ITEM_BARCODE = PE604638
CONTAINER_BARCODE = PE904249
NAME = Pressure Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Pressure Log for Sunfish-2
REMARKS =
DATE_CREATED = 8/10/83
DATE_RECEIVED = 9/05/84
W_NO = W833
WELL_NAME = SUNFISH-2
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



PRESSURE PLOT

PE 604638

PE604639

This is an enclosure indicator page.
The enclosure PE604639 is enclosed within the
container PE904249 at this location in this
document.

The enclosure PE604639 has the following characteristics:

- ITEM_BARCODE = PE604639
- CONTAINER_BARCODE = PE904249
- NAME = Geoplot Log
- BASIN = GIPPSLAND
- PERMIT = VIC/P1
- TYPE = WELL
- SUBTYPE = WELL_LOG
- DESCRIPTION = Geoplot Log for Sunfish-2
- REMARKS =
- DATE_CREATED = 8/10/83
- DATE_RECEIVED = 9/05/84
- W_NO = W833
- WELL_NAME = SUNFISH-2
- CONTRACTOR = CORE LABORATORIES
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



GEOPLOT

PE 604639

PE604640

This is an enclosure indicator page.
The enclosure PE604640 is enclosed within the
container PE904249 at this location in this
document.

The enclosure PE604640 has the following characteristics:

ITEM_BARCODE = PE604640
CONTAINER_BARCODE = PE904249
NAME = Mud Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log (Grapholog) for Sunfish-2
REMARKS =
DATE_CREATED = 8/10/83
DATE_RECEIVED = 9/05/84
W_NO = W833
WELL_NAME = SUNFISH-2
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



Mud Log

PE 604640