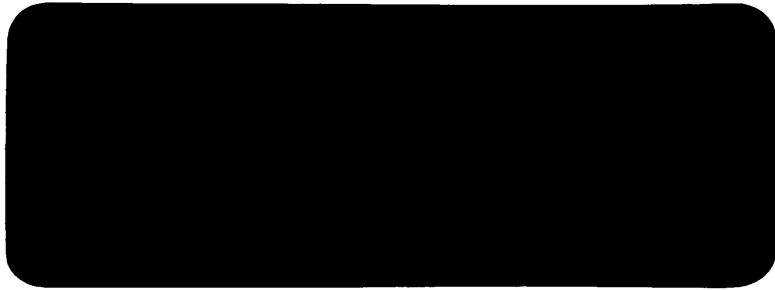
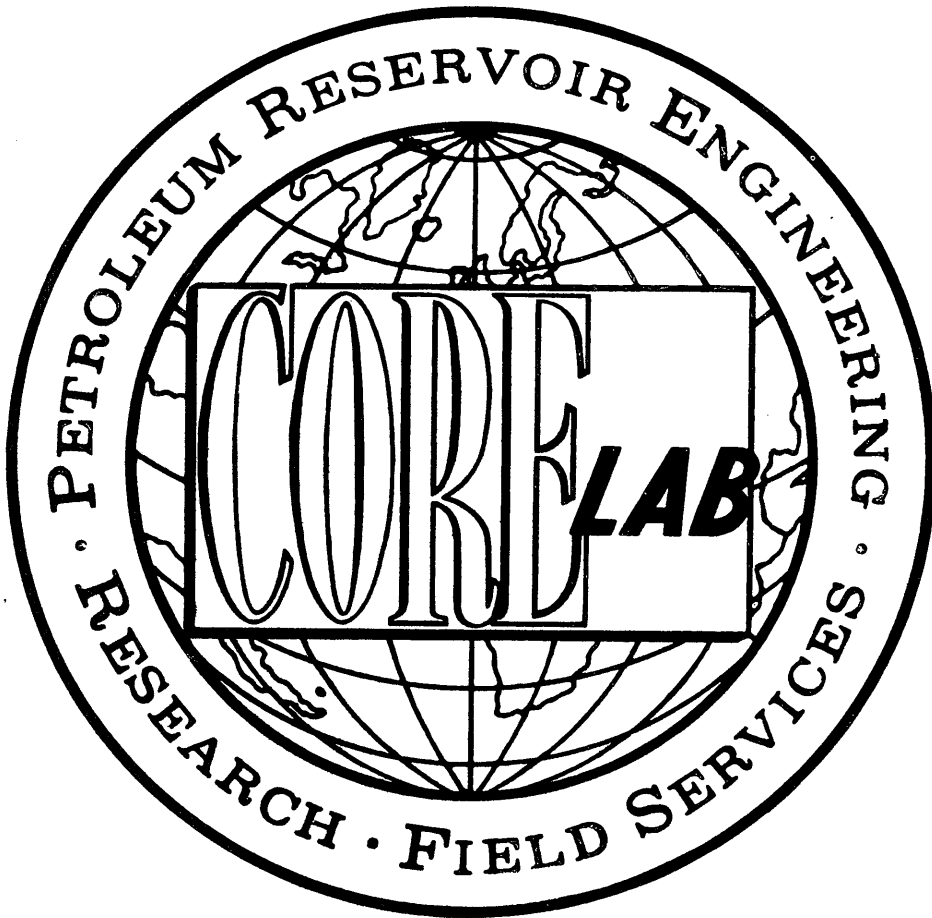


W857

DEPT. NAT. RES & ENV
PE905483



~~ATTACHMENT TO WCR~~
ATTACHMENT TO WCR
VELFIN - 1
(W857)



VEILFIN NO. 1
ESSO AUSTRALIA LTD.
FINAL WELL REPORT

OIL and GAS DIVISION

3 1 JUL 1984

CORE LABORATORIES AUSTRALIA (QLD.) LTD.



31ST MAY 1984

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 VEILFIN NO. 1.

If you have any enquiries concerning the report please do not
hesitate to contact us.

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

A handwritten signature in black ink that reads "Tony Charles". The signature is written in a cursive style and is underlined with a single horizontal stroke.

T. CHARLES
Unit Supervisor

ARC:pc

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INTRODUCTION

VEILFIN NO. 1 was drilled by Esso Australia Ltd. in the Bass Strait, Australia.

Well co-ordinates were:

Latitude : 38° 25' 2.48" S
Longitude : 148° 00' 8.31" 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 2007.

VEILFIN NO. 1 was spudded on 2nd March 1984 and reached a total depth of 3521 metres on 30th March 1984, a total drilling time of 29 days. The main objective of the well was to test the hydrocarbon potential of the Top of Latrobe and intra-Latrobe sections updip from the Salmon No. 1 well. The well was production tested in the zone 3185-3194 metres.

Elevations were:

Kelly bushings to mean sea level 21 metres
Water depth 65 metres
Kelly bushings to mean sea bed 86 metres

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

Core Laboratories personnel involved in the logging of VEILFIN NO. 1 were as follows:

TONY CHARLES	-	Unit Supervisor
BRYAN PAULET	-	Pressure Engineer
BOB GIFTSON	-	Logging Crew Chief
ERIC DIESPOSTI	-	Well Logger
DON MACKAY	-	Well Logger
PAUL LANDRY	-	Well Logger
ANDY HIGGS	-	Well Logger

2. RIG SPECIFICATIONS

RIG INFORMATION SHEET



COMPANY ESSO AUSTRALIA LTD.
WELL VEILFIN NO. 1

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N ^o 107)
TYPE	SEMI-SUBMERSIBLE, TWIN HULLED.
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPACITY OF 1 000 000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS.
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS.
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNEH	DRILLCO 5 $\frac{1}{2}$ " 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 1700PT. RATED AT 1600HP
MUD SYSTEM	FOUR MUD TANKS HAVING A TOTAL CAPACITY OF 1200 BBL, AND ONE PILL TANK HAVING A CAPACITY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 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 BRANDT 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 VALVCON 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 $\frac{1}{2}$ " x 2 13/16" (4" IF TJ) 8" x 2 13/16" (6 5/8" H90 TJ) 9 $\frac{3}{4}$ " x 3" (7 5/8" H90 YJ) HWDP: 5" 50lb/ft GRADE G (6 $\frac{1}{2}$ " OD 4 $\frac{1}{2}$ " IF TJ) DP: 5" 19 $\frac{1}{2}$ lb/ft GRADE G&E (6 3/8" OD 4 $\frac{1}{2}$ " IF TJ)
CEMENTING UNIT	HALLIBURTON HT-400 UNIT
MONITORING EQUIPMENT	MARTIN DECKER: MUD VOLUME TOTALIZER 6 CHANNEL DRILLING RECORDER 4 PRESSURE GAUGES FLOWSHOW INDICATOR
POWER SUPPLY	2 EMD MD 18 DIESEL ENGINES RATED AT 1950 HP EACH 1 EMD MD 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

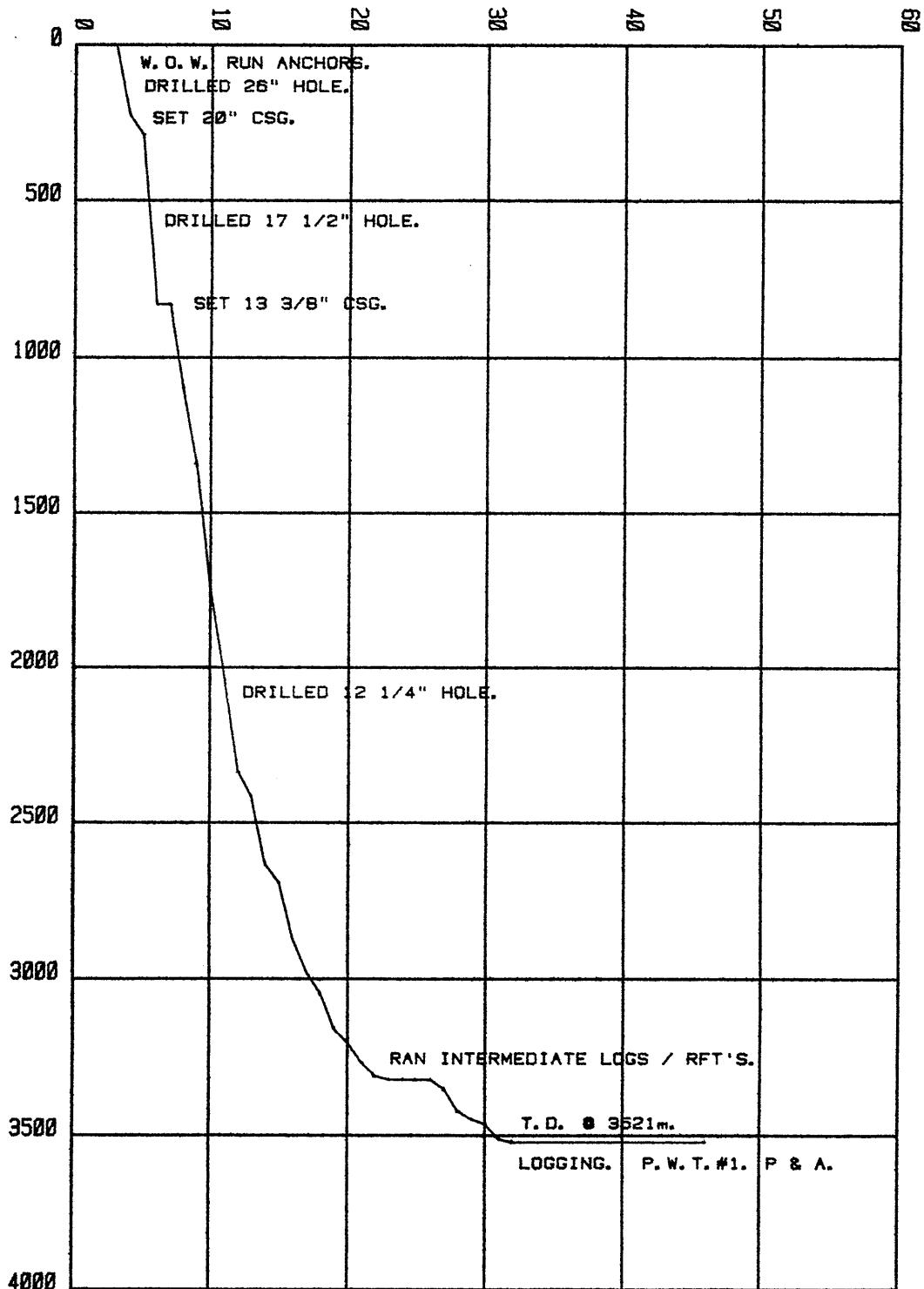
COMPANY ESSO AUSTRALIA LTD.
 WELL VEILFIN NO. 1

Sheet No. 1

WELL NAME	VEILFIN NO. 1										
OPERATOR	ESSO AUSTRALIA LTD.										
PARTNERS	B.H.P.										
RIG	OWNER	SOUTH SEAS DRILLING COMPANY (SANTA FE)									
	NAME OR NUMBER	"SOUTHERN CROSS"									
	TYPE	SEMI-SUBMERSIBLE									
LOCATION	LATITUDE (X)	38° 25' 2.46' S			LONGITUDE (Y)		148° 0' 8.38' E				
	FIELD	GIPPSLAND BASIN			AREA		BASS STRAIT				
	COUNTRY				STATE		VICTORIA				
	COUNTRY	AUSTRALIA									
	DESCRIPTION	EXPLORATION									
DATUM POINTS	Ground Elevation	-			RKB to Ground Level		-				
	Mean Water Depth	65 METRES			RKB to Water Level		21 METRES				
DATES	SPUD	2ND MARCH 1984			TOTAL DEPTH		30TH MARCH 1984				
HOLE SIZES	Depth From	Depth To	Bit Size "	No. Of Bits	No. of Reamers	Date From	Date To	Cased	Logged		
	86	225	26	1	0	02/03/84	02/03/84	Y	N		
	225	830	17½	1	0	03/03/84	04/03/84	Y	Y		
	830	3521	12¼	12	0	06/03/84	30/03/84	Y	Y		
DRILLING FLUID	Depth From	Depth To	Weights		Type						
	86	225	8.6 TO 8.6		SEAWATER						
	225	1900	8.7 TO 9.4		SEAWATER/DRILLED SOLIDS						
	1900	3521	9.2 TO 9.8		SEAWATER GEL						
			TO								
			TO								
			TO								
WIRELINE LOGGING	Depth From	Depth To	Hole Size "	Date Run	Logs Run						
	828	86	17½	05/03/84	BHC-CAL-GR						
	3318	815	12¼	21/03/84	DLT-MSFL-GR-CAL						
	3295	815	12¼	21/03/84	LDTA-CNTA-GR-CAL						
	3318	1900	12¼	22/03/84	LDTC-CNTH-DLTE-GR						
	-	-	12¼	22-25/03/84	RFT NOS. 1-7						
	3517	2900	12¼	30/03/84	DLTE-MSFL-GR-LTDC-CNTH-CAL						
	3520	2900	12¼	30/03/84	LDTA-CNTA-GR-CAL						
3520	815	12¼	31/03/84	BHC-GR							
RISER, CASING & LINER	Depth From	Depth To	OD "	ID "	Weight	Grade	Threads	Date Run	Cement	Stages	Excess
	0	86	22	21	-----	-----	----- RISER -----	-----	-----	-----	-----
	86	207	20	19.124	94.4	X52	JV BOX	02/03/84	Y	1	-
	86	815	13.3/8	12.615	54.5	K55	BUTT	05/03/84	Y	1	-
	86	3301	9-5/8	8.681	47.0	N80	BUTT	02/04/84	Y	1	-

PROGRESS LOG
 ESSO AUSTRALIA LTD. VEILFIN

	MAR		APR	
--	-----	--	-----	--



WELL HISTORY

28th February 1984. Towed to the location of VEILFIN NO. 1, from WIRRAH NO. 3. Had to wait on weather, so no anchors were run today.

29th February 1984. Waited on weather.

1st March 1984. Arrived location at 2030 hours and ran anchors, then ballasted down.

2nd March 1984. The temporary guide base was lowered and a water depth of 65 metres was calculated. The bottom hole assembly was then made up and the 26" hole was then drilled from 86 metres to 225 metres. A survey was run giving $\frac{1}{2}^{\circ}$ deviation at 225 metres. A wiper trip was run and the hole conditioned prior to running 20" casing. The 20" casing was run and set at 207 metres.

3rd March 1984. The BOP stack was landed and a new BHA was made up. The cement was tagged at 204 metres. New 17 $\frac{1}{2}$ " hole was drilled from 225 to 289 metres.

4th March 1984. Continued drilling 17 $\frac{1}{2}$ " hole to 830 metres where a survey was dropped ($\frac{1}{2}^{\circ}$). A wiper trip to the 20" casing shoe was carried out and the W.T.G. was 2-4-2 units. Maximum gas to 830 metres was 10.6 units from 790 metres. The drill string was then pulled prior to running logs and casing.

5th March 1984. A BHC-CAL-GR log was run over the interval. 828 to 86 metres. The 13-3/8" casing was run with the shoe cemented at 815 metres. A BOP test was then performed.

6th March 1984. New bit No. 2 (HTC X3A, 12 $\frac{1}{4}$ ", 3 x 18) was run into the hole and the cement drilled out. Four metres of new hole was drilled and a pressure integrity test was performed giving a fracture gradient of 16.2 ppg E.M.W. at the casing shoe. Drilling was then recommenced and a total depth of 1101 metres was reached at midnight. Trip gas 0.2-1-0.2 units from 830 metres was detected.

7th March 1984. Drilled 12 $\frac{1}{4}$ " hole to 1345 metres, where the bit was pulled due to dulling. Maximum gas was 13 units and the background gas decreased from 7-10 to 3-4 units with depth. R.I.H. with a J-1 bit.

8th March 1984. Ran to bottom with NB No. 3 and drilled 12 $\frac{1}{4}$ " hole to 1740 metres. Trip gas from 1345 metres was 6-51-6 units. Maximum gas was 8 units over a background of 2-4 units.

9th March 1984. Drilled 12 $\frac{1}{4}$ " hole to 1989 metres. Pulled the bit due to decreased rates of penetration. Ran back in the hole with a J22 and drilled on to 2014 metres. Trip gas from 1989 metres was 1-58-3 units; maximum drilled gas was 10 units over a background of 2-4 units.

10th March 1984. Drilled ahead to 2333 metres. Circulated bottoms-up for the geologist at 2021 metres (3 units gas; no show). Flow-checks were made at the following drill-breaks: 2019, 2050 metres

(No flow was seen in each case). Maximum drilled gas was 39 units (2252 metres, Coal) over a background of 2-4 units. No shows were found in the top of the Latrobe, as prognosed.

11th March 1984. Drilled to 2389 metres where the bit was pulled due to low rates of penetration. R.I.H. with another J22 bit and drilled ahead to 2415 metres. Maximum gas was 9 units, over a background of 1-2 units.

12th March 1984. Drilled 12 $\frac{1}{4}$ " hole to 2633 metres. Maximum gas was 6 units over a background of 1-2 units. The original T.D. of 2521 metres was extended to 3321 metres at the request of V.D.M.E./ESSO.

13th March 1984. Drilled down to 2667 metres, at which point the bit was pulled due to low rates of penetration. (The bit came out bald - T8, B3, and in gauge). RIH with another J22 and drilled ahead to 2692 metres. Maximum gas was 8 units over a background of 1-2 units. Trip gas was only 1-13-3 units, despite swabbing on the trip out of the hole.

14th March 1984. Drilled ahead to 2873 metres. Maximum gas was 50 units over a background of 3-6 units.

15th March 1984. Drilled ahead to 2913 metres where the bit was pulled due to low rates of penetration. A J22 was then run into the hole and drilled ahead to 2979 metres. Trip gas from 2913 metres was 7-36-4 units. Maximum gas was 63 units over a background of 6-20 units.

16th March 1984. Drilled ahead to 3043 metres where the bit was pulled, again due to low rates of penetration. A J33 was then run into the hole. On commencing drilling it was found that pump pressure was lost, indicating a washout. Pulled out of hole to find the washout.

17th March 1984. The washout was found in the 125th joint. Ran in the hole and continued drilling to 3160 metres. Trip gas from 3043 metres was 8-32-12 units.

18th March 1984. Drilled ahead to 3165 metres where the bit was pulled due to low rates of penetration. P.O.O.H. and ran in with new bit No. 9 (J33, 3 x 18). Trip gas from 3165 metres was 14-30-15 units. Drilled ahead to 3205 metres. Maximum gas was 67 units over a background of 6-10 units.

19th March 1984. Drilled ahead to 3267 metres where the bit was pulled. Maximum gas was 53 units over a background of 8-12 units.

20th March 1984. Ran in the hole with new bit No. 10 (J33, 3 x 18) and drilled ahead to 3310 metres. Trip gas from 3267 metres was 8-16-8 units. Maximum gas was 48 units over a background of 8-16 units.

21st March 1984. Drilled ahead to 3321 metres where a 25 stand wiper trip was made. Wiper trip gas was 15-30-5 units. P.O.O.H. Schlumberger ran logs at this revised T.D.

22nd March 1984. Schlumberger continued running logs.

23rd March 1984. Schlumberger ran R.F.T.'s.

24th March 1984. Conducted a wiper trip; then Schlumberger ran more R.F.T.'s.

25th March 1984. Completed the scheduled R.F.T.'s, then R.I.H. with NB No. 11 (J33, 12 $\frac{1}{4}$ "") to drill ahead. Drilled to 3351 metres. Trip gas from 3321 metres was 2-10-2 units. Maximum drill gas was 59 units (Coal, 3325 metres) over a B.G. of 6-8 units. No connection gas was detected, indicating overbalanced drilling conditions with 9.4 ppg mud. The T.D. had been extended by a further 200 metres.

26th March 1984. Drilled 12 $\frac{1}{4}$ " hole to 3421 metres. Maximum gas was 81 units (Coal, 3370 metres) over a background of 4-7 units. Only one show was found all day (3410 metres, Sandstone, trace white fluorescence, and weak cut). There were no indications of abnormal formation pressure.

27th March 1984. Drilled to 3447 metres, where the bit was pulled due to low R.O.P.'s. A drill-break was flow-checked at 3440 metres, but there was no flow. Maximum drilled gas was 31 units (from Coal at 3443 metres) over a background of 3-5 units. Tested the stack, then ran in the hole with a new bit (J22, 12 $\frac{1}{4}$ ", 3 x 18).

28th March 1984. Continued running in the hole. Drilled 12 $\frac{1}{4}$ " hole to 3453 metres. The bottom-up sample from this depth contained 90% Sandstone so it was decided to cut a stratigraphic core at this point. So the J22 was pulled, and the core barrel was R.I.H. Cut Core No. 1 from 3453.1-3462.8 metres.

29th March 1984. Recovered Core No. 1, R.I.H. with rerun bit No. 12; reamed the core rathole; then drilled 12 $\frac{1}{4}$ " hole down to 3511 metres. Drill-breaks were flow-checked at 3487 and 3497 metres (both O.K.). There were abundant gas peaks, associated with Coals, the highest being 188 units from 3471 metres. The background level was 10-15 units. No indications were detected of pore pressure above 8.6/8.7 ppg E.M.W., hence the 9.6 ppg mud yielded adequate overbalanced drilling conditions.

30th March 1984. Drilled to the proposed T.D. of 3521 metres. Maximum gas was 35 units over a background of 20 units. Made a wiper trip to the 13-3/8" shoe prior to P.O.O.H. Wiper trip was 18-149-22 units. Schlumberger commenced logging.

31st March 1984. Schlumberger continued logging.

1st April 1984. Schlumberger completed the logging run. Ran in the hole for wiper trip prior to running casing.

2nd April 1984. Circulated and conditioned mud. (Wiper trip gas was 18-1521-30 units). Pulled out of the hole to run casing. Ran 9-5/8" casing.

3rd April 1984. Continued to run 9-5/8" casing. The well was then circulated prior to cementing the 9-5/8" casing. The BOP stack was then tested.

4th April 1984. The casing scraper was run into the hole and the cement drilled out to 3173 metres. Schlumberger then ran a gauge ring and GR-CCL to 3279 metres.

5th April 1984. The packer was set at 3173 metres. The tubing was run and tested.

6th April 1984. The Otis and Schlumberger test equipment was rigged up. Perforated the interval 3185-3194 metres. Two Ameradas and 1 HP gauge were then run.

7th April 1984. Flowed the well for 16 hours, then shut it in at the choke manifold.

8th April 1984. Continued PWT No. 1 where the subsurface samplers were run and the well killed prior to removal of the test string. Gas during the circulation was 4-955-20 units.

9th April 1984. The testing string was layed down and a cement plug set across the perforated interval. Commenced the P and A program.

10th April 1984. P and A.

11th April 1984. P and A.

12th-13th April 1984. Force majeure (an industrial dispute).

14th April 1984. P and A.

4. LITHOLOGY AND CORE--O--GRAPHS

LITHOLOGICAL SUMMARY

Top Gippsland Limestone (225-355 metres)

CALCARENITE: light grey, occasionally light green, minor sand and silt content, abundant fossils.

Gippsland Limestone (355-1815 metres)

CALCARENITE/CALCISILTITE: medium grey, abundant fossils-bryozoan and forams, occasionally very fine grains of sand and silt, argillaceous matrix in part, minor heavy minerals, carbonaceous in part, very calcareous, predominantly soft to firm, glauconitic in part with depth.

Top Lakes Entrance (1815-1980 metres)

SHALE: medium grey, silty, firm to hard, sub-fissile, minor quartz grains, calcareous matrix in parts, trace glauconite, micro-carbonaceous flecks, trace pyrite.

MARL: light grey, soft-unconsolidated, sub-fissile in parts, traces of heavy minerals, glauconitic, very calcareous.

SILTSTONE: (trace) calcareous, light grey, glauconite inclusions, argillaceous matrix, trace quartz grains.

Top Latrobe Group - Gurnard Formation (1980-2015 metres)

SANDSTONE: off white to clear, loose grains, medium to coarse grains, moderate to well sorted, rounded to sub-rounded, common pyritic inclusions, slight mineral fluorescence, no shows, argillaceous matrix in parts.

COAL: Black, platy in conchoidal fractures, vitreous, hard to slightly brittle.

Top Latrobe - Coarse Clastics (2015-2300 metres)

SANDSTONE: clear to milky, loose grains, medium to coarse grained, moderately sorted, angular to rounded grains, traces of pyrite; medium light to dark grey in parts, very fine to medium grained, silty matrix, poor visual porosity. Trace to 5% bright yellow fluorescence in the clear fractions.

SILTSTONE: medium light to dark grey, firm to soft in parts, sub-angular to sub-rounded, moderately well sorted, grading to very fine sandstone, muddy to argillaceous matrix, micro-micaceous, carbonaceous flecks, occasionally hard and indurated.

COAL: black, firm to moderately hard, vitreous to dull, conchoidal fractures, blocky.

Lower M diversus seismic marker (2300-2480 metres)

SANDSTONE: off white-translucent-light grey, hard, very fine to medium grained, moderate sorting, sub-angular to sub-rounded grains, siliceous cement, argillaceous matrix in part, occasionally calcareous, poor general porosity, occasional trace to spotty

fluorescence.

SILTSTONE: medium to light grey to dark brown, soft to firm, angular cuttings, fissile in part, carbonaceous, micro-micaceous, non calcareous, argillaceous.

COAL: black, hard to brittle, sandy to silty in parts, vitreous to dull, blocky-fissile.

Lower L balmei seismic marker (2480 metres to T.D.)

SANDSTONE: (1) white to translucent, fine to medium grained, rounded to sub-rounded grains, moderate to well sorted, quartz aggregates, calcareous to siliceous cement, moderately friable to firm, slightly argillaceous matrix, poor to tight visual porosity, trace to 5% dull yellow fluorescence, slow-weak streaming cut, slow diffuse crush cut. (2) white-clear-translucent, loose-unconsolidated, quartzitic, medium to coarse grains, angular fragments, siliceous cement in part, sub-rounded in parts moderately well sorted, very poor visual porosity in consolidated portion, loose portion lacks fluorescence.

SILTSTONE: medium to light grey brown to dark grey/brown, firm to moderately hard, blocky, calcareous in parts, carbonaceous flecks, traces of pyrite, argillaceous, occasionally splintery to flakey, micro-micaceous traces.

SHALE: brownish grey to brown, firm to moderately hard, sub-fissile, slightly gritty texture, carbonaceous.

COAL: black, massive, moderately hard, brittle, dull to vitreous, sub-conchoidal fractures, laminated, silty in parts, blocky.

5. EXTENDED SERVICE PACKAGE

EXTENDED SERVICE INTRODUCTION

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

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

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

Core Laboratories E.S. logs include the following :

E.S. PRESSURE LOG

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

CORE LAB DRILL DATA PLOT

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

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

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

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

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

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

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

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

E.S. GEO-PLOT LOG

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

A Geo-plot is included in this report, at a scale of 1:5000.

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

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

ELECTRIC LOG PLOT

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

PROGRESS LOG

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

DATA RECORDING

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

MUD DATA SHEETS

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

DRILLING PARAMETER PLOT

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

HYDRAULIC ANALYSES

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

GAS COMPOSITION ANALYSIS

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

1. Log plot
2. Triangulation plot

Both plots are included in this report.

GRAPHOLOG

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

MISCELLANEOUS

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

CORE LABORATORIES EQUIPMENT

Core Laboratories Field Laboratory 2007 monitoring equipment includes the following :

A. MUD LOGGING

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

B. EXTENDED SERVICE PACKAGE

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

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

CORE LABORATORIES MONITORING EQUIPMENT

DEPTH

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

WEIGHT-ON-BIT

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

ROTARY SPEED

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

PUMP PRESSURE

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

CASING PRESSURE

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

PIT VOLUME

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

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

PUMP STROKES

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

ROTARY TORQUE

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

MUD TEMPERATURE

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

MUD CONDUCTIVITY

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

MUD DENSITY

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

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

CUTTINGS

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

GAS

1. Flame Ionization Total Hydrocarbon gas detector.
The T.H.M. accurately determines hydrocarbon concentrations up to 100% saturation.
2. Flame Ionization Detector chromatograph.
The F.I.D. is capable of accurate determination of hydrocarbon concentration from C1 to C6+.
3. Cuttings gas detector (Wheatstone Bridge type).
An auxiliary system for total gas detection.
4. Hydrogen Sulphide detector.
Two sensors are located at the shale-shakers and in the pit room, linked to a TAC 404B H2S monitor, to detect H2S emanating from the drilling fluid.
5. Carbon Dioxide detector.
An Infra-red gas analyzer determines the percentage of CO2 present in gas samples broken out of the mud by the gas trap.

SHALE DENSITY

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

6. ESP PLOT DISCUSSIONS AND CONCLUSIONS

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

A prime aim during the drilling of VEILFIN NO. 1 was utilization of data collected by Core Laboratories DL2007 to provide an estimation of formation pressures. This is described in detail below.

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

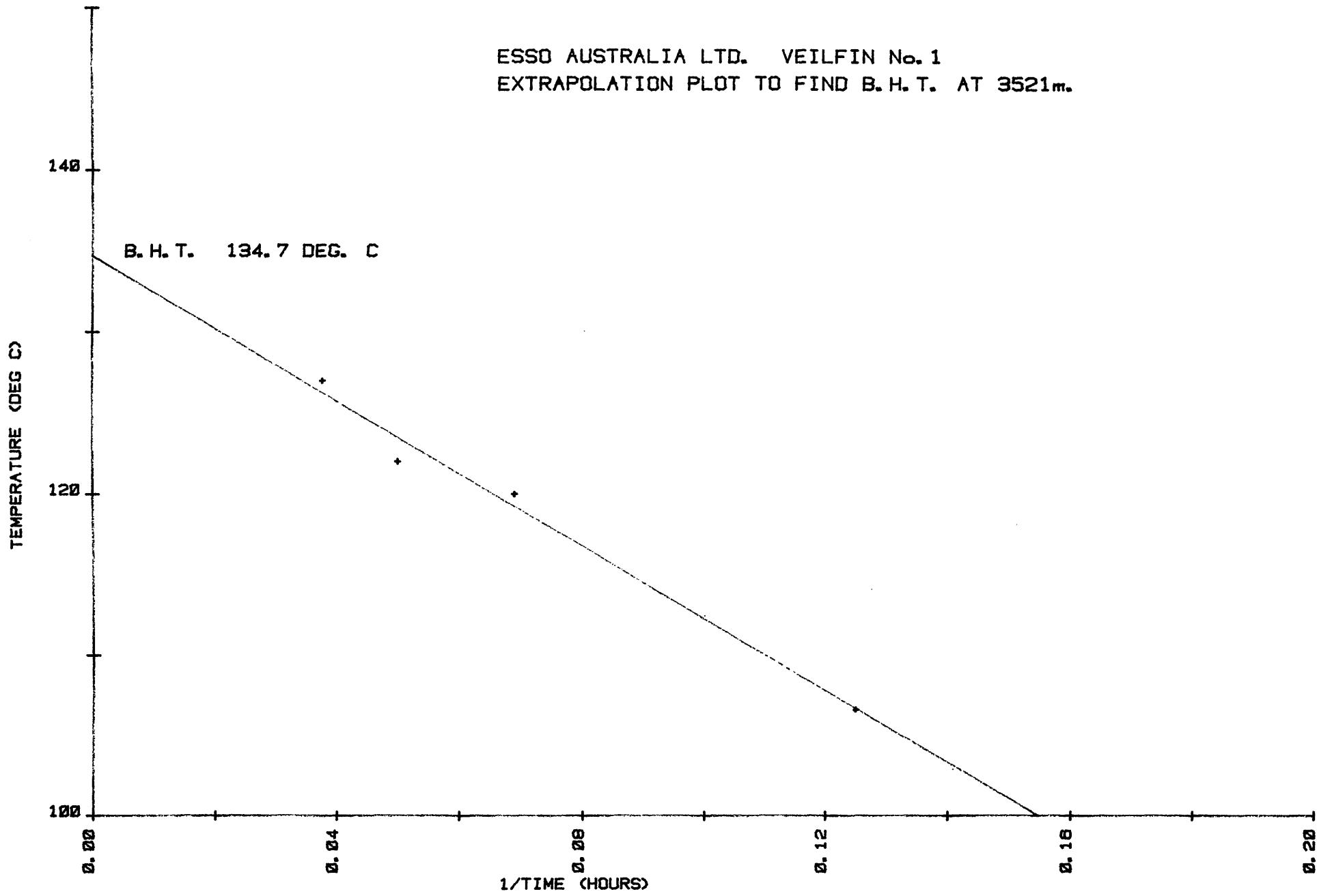
The "Drill Data Plot" (see attached plots inside back cover) shows the rate of penetration, corrected 'd' exponent and mud density plotted against lithology. This plot indicates a normal pressure profile throughout the well with any irregularities in rate of penetration, corrected 'd' exponent and gas levels being due to lithology changes. No connection gas was detected. Shale densities were not performed during the drilling of the well as no large beds of shale were encountered.

The "Temperature Plot" displays the flowline temperature in and out and their differential plotted against depth. The temperature plot of VEILFIN NO. 1 shows a temperature gradient of 2.73^oF/100 feet. It shows a normal trend with depth only differing from the expected gradient at points where the mud system was being treated to maintain specifications. The bottom hole temperature was extrapolated to 134.7^oC (279.3^oF) at 3521 metres from wireline logging data.

The "Pressure Plot" is a summary of the pressures found in the drilling of VEILFIN NO. 1. On this plot estimated pore pressure is plotted along with mud weight and the fracture gradient. The pore pressure of the well was estimated to be 8.5 - 8.6 ppg (E.M.W.) throughout. Drilling was undertaken with a 0.6-0.2 ppg overbalance at all times. The fracture gradient curve was based on information obtained from a pressure integrity test performed after drilling out the 13-3/8" casing shoe (815 metres, 16.2 ppg). As there is no available Overburden Gradient curve for the Gippsland Basin the shape of the curve is based on that of the U.S. Gulf Coast Basin curve and offset to match local data.

7. B.H.T. ESTIMATION

ESSO AUSTRALIA LTD. VEILFIN No. 1
EXTRAPOLATION PLOT TO FIND B. H. T. AT 3521m.



CORE LAB
=====

STRAIGHT LINE LEAST SQUARES BEST FIT

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

ENTERED DATA:

DATA SET #	1/TIME	TEMP
1	0.1250	106.6
2	0.0690	120.0
3	0.0500	122.0
4	0.0377	127.0

COEFFICIENT & CONSTANT:

$Y = m.X + c$ where $m = -2.2406368E 02$ and $c = 1.3467800E 02$

INTERPOLATED DATA:

1/TIME	TEMP
0.0000	134.7

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	86	1.02	124.61	124.61	0.442	8.49
86	100	2.00	39.78	164.39	0.501	9.64
100	200	2.05	291.22	455.61	0.694	13.35
200	400	2.10	596.65	1052.27	0.802	15.42
400	600	2.13	605.18	1657.44	0.842	16.19
600	800	2.16	613.70	2271.14	0.865	16.64
800	1000	2.19	622.22	2893.36	0.882	16.96
1000	1300	2.22	946.12	3839.48	0.900	17.31
1300	1600	2.24	954.64	4794.13	0.913	17.56
1600	1900	2.26	963.17	5757.29	0.924	17.76
1900	1925	2.28	80.97	5838.27	0.924	17.78
1925	1950	2.27	80.62	5918.88	0.925	17.79
1950	1975	2.35	83.46	6002.34	0.926	17.81
1975	2000	2.34	83.11	6085.45	0.927	17.84
2000	2025	2.36	83.82	6169.27	0.929	17.86
2025	2050	2.25	79.91	6249.17	0.929	17.87
2050	2075	2.26	80.26	6329.44	0.930	17.88
2075	2100	2.34	83.11	6412.54	0.931	17.90
2100	2125	2.25	79.91	6492.45	0.931	17.91
2125	2150	2.10	74.58	6567.03	0.931	17.90
2150	2175	2.15	76.36	6643.39	0.931	17.90
2175	2200	2.21	78.49	6721.88	0.931	17.91
2200	2225	2.00	71.03	6792.91	0.931	17.90
2225	2250	2.14	76.00	6868.91	0.931	17.89
2250	2275	2.09	74.23	6943.14	0.930	17.89
2275	2300	2.08	73.87	7017.01	0.930	17.88
2300	2325	2.24	79.55	7096.56	0.930	17.89
2325	2350	2.07	73.52	7170.08	0.930	17.88
2350	2375	2.12	75.29	7245.37	0.930	17.88
2375	2400	2.36	83.82	7329.18	0.931	17.90
2400	2425	2.31	82.04	7411.22	0.932	17.91
2425	2450	2.30	81.68	7492.91	0.932	17.93
2450	2475	2.29	81.33	7574.24	0.933	17.94
2475	2500	2.34	83.11	7657.34	0.934	17.95
2500	2525	2.43	86.30	7743.64	0.935	17.98
2525	2550	2.30	81.68	7825.33	0.935	17.99
2550	2575	2.28	80.97	7906.30	0.936	18.00
2575	2600	2.33	82.75	7989.05	0.937	18.01
2600	2625	2.35	83.46	8072.51	0.937	18.03
2625	2650	2.22	78.84	8151.36	0.938	18.03
2650	2675	2.24	79.55	8230.91	0.938	18.04
2675	2700	2.37	84.17	8315.08	0.939	18.05
2700	2725	2.40	85.24	8400.32	0.940	18.07
2725	2750	2.45	87.01	8487.33	0.941	18.09
2750	2775	2.41	85.59	8572.92	0.942	18.11

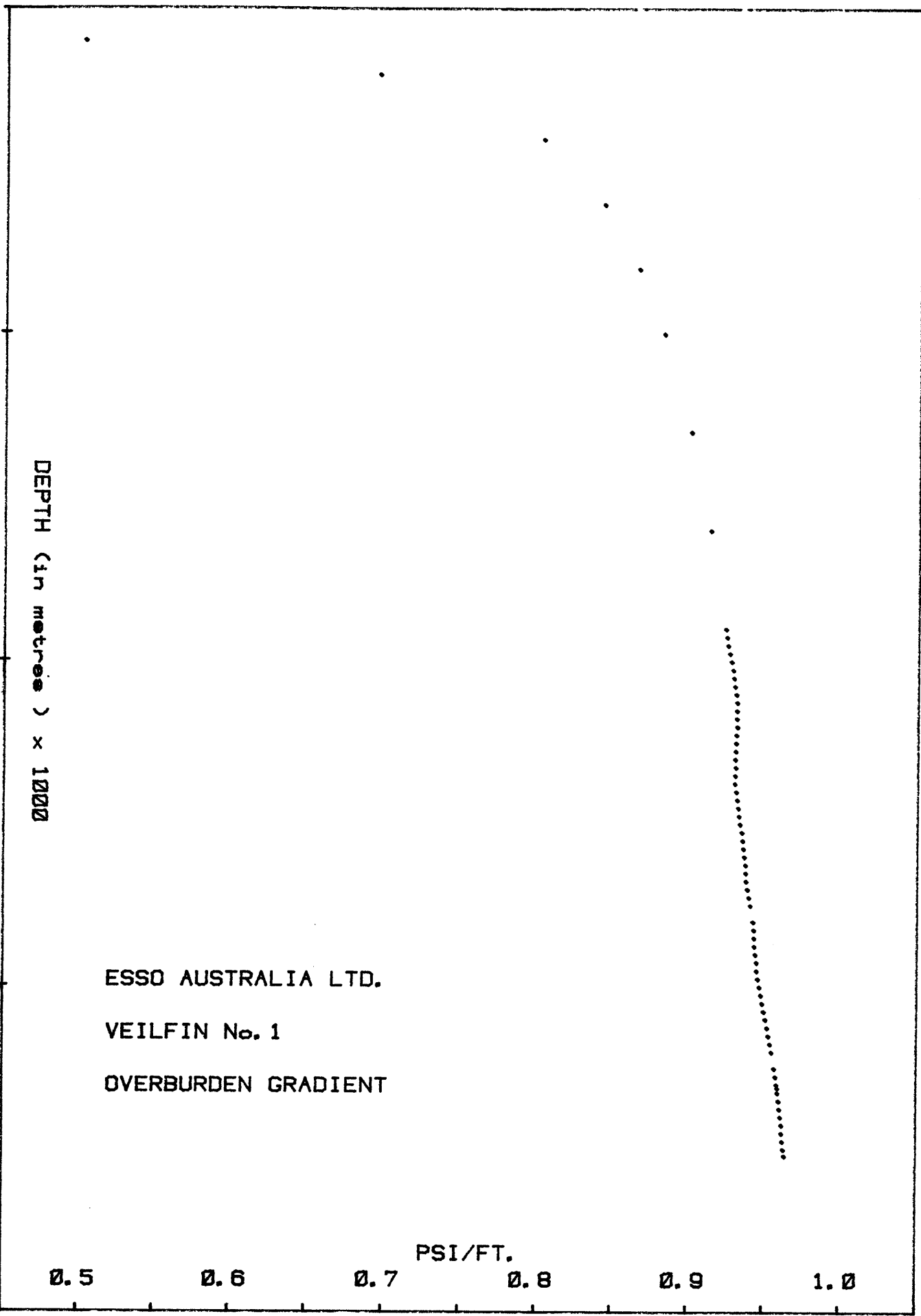
DEPTH from	DEPTH to	AVR. BULK DENSITY	O/BURDEN INC.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
metres	metres	gm/cc	psi	psi	psi/ft	ppg
2775	2800	2.40	85.24	8658.16	0.943	18.13
2800	2825	2.32	82.39	8740.55	0.943	18.14
2825	2850	2.20	78.13	8818.68	0.943	18.14
2850	2875	2.21	78.49	8897.17	0.943	18.14
2875	2900	2.40	85.24	8982.41	0.944	18.16
2900	2925	2.39	84.88	9067.29	0.945	18.17
2925	2950	2.22	78.84	9146.13	0.945	18.17
2950	2975	2.44	86.66	9232.79	0.946	18.19
2975	3000	2.45	87.01	9319.80	0.947	18.21
3000	3025	2.49	88.43	9408.23	0.948	18.23
3025	3050	2.44	86.66	9494.89	0.949	18.25
3050	3075	2.51	89.14	9584.03	0.950	18.27
3075	3100	2.52	89.50	9673.53	0.951	18.29
3100	3125	2.53	89.85	9763.38	0.952	18.31
3125	3150	2.48	88.08	9851.46	0.953	18.33
3150	3175	2.53	89.85	9941.31	0.954	18.35
3175	3200	2.50	88.79	10030.10	0.955	18.37
3200	3250	2.47	175.44	10205.54	0.957	18.41
3250	3275	2.48	88.08	10293.62	0.958	18.42
3275	3300	2.46	87.37	10380.99	0.959	18.44
3300	3311	2.60	40.63	10421.62	0.959	18.45
3311	3325	2.25	44.75	10466.37	0.959	18.45
3325	3350	2.44	86.66	10553.02	0.960	18.46
3350	3375	2.39	84.88	10637.90	0.961	18.48
3375	3400	2.42	85.95	10723.85	0.961	18.49
3400	3425	2.46	87.37	10811.22	0.962	18.50
3425	3450	2.20	78.13	10889.35	0.962	18.50
3450	3475	2.43	86.30	10975.65	0.963	18.51
3475	3500	2.45	87.01	11062.66	0.963	18.53
3500	3520	2.47	70.18	11132.84	0.964	18.54

DEPTH (in metres) x 1000

ESSO AUSTRALIA LTD.
VEILFIN No. 1
OVERBURDEN GRADIENT

PSI/FT.

0.5 0.6 0.7 0.8 0.9 1.0



9. GAS ANALYSES

GAS COMPOSITION ANALYSIS

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

LOG PLOT

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

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

The actual values of the gas/oil/water limits will vary from area to area.

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

TRIANGULATION PLOT

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

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

No gas composition analyses were made on Veilfin No.1 due to the lack of shows encountered whilst drilling.

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. _____

WELL VEILFIN NO. 1

NO	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
1		1.8	.43	1.43	12.9	1.44	1.70	Alt x1 range 10-11
2		2.52	.72	2.39	15.3	2.47	2.84	
3		1.98	.66	1.93	17.9	2.02	2.27	
4		1.44	.43	1.10	9.69	.90	1.13	
5		2.88	.62	1.49	13.45	1.46	1.70	
6		2.59	.62	1.32	10.06	1.57	1.64	
7		2.16	.62	.95	7.14	.83	1.13	
8	MISFIRE	-	-	-	-	-	-	
9	MISFIRE	-	-	-	-	-	-	
10		2.16	.60	1.10	8.46	.94	1.19	
11		2.16	.62	1.04	7.72	.87	1.02	
12		2.34	.66	1.10	8.41	1.012	1.13	
13		1.87	.52	.73	5.49	.79	1.19	
14		.72	.21	.63	5.3	.675	1.02	
15		3.6	1.24	2.94	12.08	3.26	4.54	
16		1.8	.41	.92	8.46	.95	1.13	
17	MISFIRE	-	-	-	-	-	-	
18		1.44	.312	.73	6.07	.78	1.13	
19		1.98	.416	.74	5.67	.90	1.13	
20		3.24	.83	1.47	10.98	1.80	2.84	
21		1.98	.52	1.25	8.78	1.35	2.27	
22		.17	TR	.27	1.70	.47	1.08	
23		.16	TR	.30	1.85	.50	1.11	
24		.72	.35	1.104	8.4	1.46	2.27	
25		.54	.20	1.19	8.82	1.57	2.55	
26		.54	.20	.55	4.86	1.25	.97	
27		1.08	.31	1.10	8.87	1.35	2.15	
28		1.09	.32	1.28	11.89	1.66	2.20	
29		1.04	.41	1.01	8.9	1.35	2.15	
30		.97	.39	1.28	11.57	1.57	2.15	
31		2.52	.62	1.84	15.0	2.25	3.40	
32	MISFIRE	-	-	-	-	-	-	
33	MISFIRE	-	-	-	-	-	-	
34	MISFIRE	-	-	-	-	-	-	
35	MISFIRE	-	-	-	-	-	-	

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. _____

WELL VEILFIN NO. 1

NO	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
36	MISFIRE	-	-	-	-	-	-	
37	MISFIRE	-	-	-	-	-	-	
38	MISFIRE	-	-	-	-	-	-	
39	MISFIRE	-	-	-	-	-	-	
40	MISFIRE	-	-	-	-	-	-	
41	MISFIRE	-	-	-	-	-	-	
42	MISFIRE	-	-	-	-	-	-	
43	MISFIRE	-	-	-	-	-	-	
44	MISFIRE	-	-	-	-	-	-	
45	MISFIRE	-	-	-	-	-	-	
46	MISFIRE	-	-	-	-	-	-	
47	MISFIRE	-	-	-	-	-	-	
48	MISFIRE	-	-	-	-	-	-	
49	MISFIRE	-	-	-	-	-	-	
50	MISFIRE	-	-	-	-	-	-	
51	MISFIRE	-	-	-	-	-	-	
52		4.5	1.14	3.49	20.6	4.05	4.82	
53		5.58	.83	1.28	10.6	1.12	1.13	
54		7.20	.83	1.56	13.54	1.35	1.36	
55	MISFIRE	-	-	-	-	-	-	
56		4.3	1.2	2.96	12.9	2.96	3.86	
57		19.4	2.1	2.20	12.5	1.80	2.27	
58		14.4	2.0	2.21	10.1	1.12	1.70	
59	MISFIRE	-	-	-	-	-	-	
60		14.8	1.70	1.81	11.7	1.12	1.70	
61		12.2	2.61	2.91	18.3	2.48	2.84	
62		11.2	1.50	2.20	17.6	2.25	2.27	
63	MISFIRE	-	-	-	-	-	-	
64		1.58	1.66	1.47	10.2	.9	1.13	
65		1.15	1.24	2.02	17.9	2.02	2.84	
66		20.6	8.90	10.01	9.20	1.35	2.27	
67		64.8	20.8	7.73	3.29	.9	1.36	
68		76.9	25.0	9.20	4.40	1.35	1.58	
69		123.8	23.7	13.60	5.86	1.58	2.84	
70		110.9	19.97	8.83	7.30	.9	1.13	

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. _____

WELL VEILFINE NO. 1

N2	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
71		141.1	29.12	14.00	19.03	2.25	2.84	
72		126.2	22.96	12.86	15.09	1.86	2.24	
73		139.7	28.28	11.78	18.66	1.57	2.69	
74		33.1	4.99	2.20	3.66	.45	1.96	
75	MISFIRE	-	-	-	-	-	-	
76		7.20	14.14	5.52	8.41	.90	1.13	
77		69.12	10.81	4.41	8.41	.67	1.06	
78		58.81	9.86	4.07	7.26	.56	.96	
79		60.48	6.65	3.68	6.95	.65	1.06	
80		62.61	8.96	5.36	7.96	.86	1.14	
81		77.76	9.98	5.89	8.05	.91	1.25	
82		57.60	7.90	2.80	8.05	.91	1.16	
83		84.96	14.50	6.99	12.81	1.35	1.70	
84		61.92	9.15	3.68	6.58	.56	.91	
85		57.60	8.00	3.68	6.95	.68	1.13	
86		52.84	7.07	3.68	6.58	.63	.90	
87		50.62	6.56	2.96	5.96	.53	.86	
88	MISFIRE	-	-	-	-	-	-	
89		25.92	2.49	1.47	2.92	.37	.56	
90		41.02	6.66	2.20	5.85	.67	1.14	
91		77.76	24.96	15.4	36.60	3.15	5.68	
92		67.68	10.82	13.9	16.19	1.8	2.27	
93	MISFIRE	-	-	-	-	-	-	
94	MISFIRE	-	-	-	-	-	-	
95		67.68	21.63	12.51	15.37	1.57	1.98	
96	MISFIRE	-	-	-	-	-	-	
97		23.04	4.99	3.31	5.49	1.12	1.70	
98		34.56	5.40	2.94	4.39	1.06	1.45	
99		14.40	3.32	2.20	3.29	.45	.56	
100		14.46	5.41	3.31	5.12	1.01	1.13	
101		10.08	2.91	2.02	6.03	.67	.5	
102		10.96	2.98	2.68	6.46	.76	.65	
103		12.24	3.74	2.58	7.32	.68	.51	
104		12.86	3.69	2.63	7.86	.71	.76	
105		12.04	3.26	2.46	7.30	.56	.43	

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. _____

WELL VEILFIN NO. 1

NO	DEPTH	C 1	C 2	C 3	C 4	C 5	C 6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
106		9.06	3.86	1.76	6.96	.61	TR	
107		8.64	3.74	1.84	6.58	.60	TR	
108		7.96	2.86	1.54	5.68	.33	TR	
109		12.60	3.97	2.94	12.00	1.35	1.42	
110		12.07	3.76	2.87	9.68	1.26	1.39	
111		20.01	6.24	3.68	6.58	.67	1.13	
112		13.68	4.58	2.58	4.02	.33	TR	
113		11.52	3.33	2.20	3.66	.11	TR	
114		10.08	3.12	1.84	3.66	.22	TR	
115		8.28	2.49	1.47	3.47	TR	TR	
116		10.44	3.12	2.02	4.76	.33	TR	
117		8.64	2.28	1.28	3.47	.22	TR	
118		7.56	2.08	1.19	3.66	.22	TR	
119		6.12	1.66	1.10	5.69	.12	TR	
120		7.92	2.49	1.47	8.03	.45	TR	
121		58.32	15.39	13.25	73.60	6.07	7.38	
122		7.96	3.46	1.50	8.61	.56	TR	
123		9.06	3.86	1.76	6.96	.61	TR	
124		3.26	1.67	1.56	3.76	.26	TR	
125		2.52	.42	.040	1.60	.26	TR	
126		1.06	.42	TR	TR	TR	TR	
127		0	-	-	-	-	-	
128		1.75	.43	-	-	-	-	
129		1.76	.56	-	-	-	-	
130		1.80	.57	-	-	-	-	
131		1.60	.38	-	-	-	-	
132		1.26	.36	-	-	-	-	
133		1.76	1.87	2.51	5.36	3.59	6.24	
134		1.66	1.78	2.46	5.27	3.36	6.06	
135		.91	.36	TR	TR	TR	TR	
136	MISFIRE	-	-	-	-	-	-	
137		.96	.37	.26	-	-	-	
138		.86	.27	-	-	-	-	
139		.87	.93	1.11	3.38	2.03	4.16	
140		.76	.90	1.06	3.26	1.97	3.96	

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. _____

WELL VEILFIN NO. 1

NO	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
141		.89	.96	1.26	3.46	2.16	4.76	
142		.96	1.06	1.37	3.59	2.26	4.89	
143		.99	1.36	1.56	3.79	2.56	4.96	
144		.86	.92	1.03	3.20	1.67	3.76	
145		1.31	1.25	1.67	6.97	3.59	8.32	
146		1.26	1.29	1.46	6.90	3.40	7.86	
147		1.30	1.36	1.56	6.70	3.56	6.02	
148		2.63	1.25	1.67	6.97	3.59	8.06	
149		1.06	.69	-	-	-	-	
150		TR	-	-	-	-	-	
151		TR	-	-	-	-	-	
152		TR	-	-	-	-	-	
153		TR	-	-	-	-	-	
154		TR	-	-	-	-	-	
155		TR	-	-	-	-	-	
156		TR	-	-	-	-	-	
157		1.69	.96	-	-	-	-	
158		.91	.36	-	-	-	-	
159		.86	.26	-	-	-	-	
160		.76	.26	.21	-	-	-	
161		-	-	-	-	-	-	
162		-	-	-	-	-	-	
163		TR	-	-	-	-	-	
164		TR	-	-	-	-	-	
165		1.06	.46	.31	1.86	TR	-	
166		1.75	.86	.51	2.06	TR	-	
167		1.06	.36	.21	2.86	TR	TR	
168		1.61	.96	.46	3.21	TR	TR	
169		TR	TR	TR	1.69	TR	TR	
170		TR	TR	TR	1.76	TR	TR	
171		1.75	.93	1.11	6.76	1.43	2.06	
172		1.86	.96	1.21	6.89	1.56	2.26	
173		1.67	.86	1.06	6.03	1.26	2.06	
174		1.96	.99	1.36	6.96	1.76	2.36	
175		1.75	.93	1.11	6.76	1.43	2.06	

COMPANY ESSO AUSTRALIA LTD

LOGGING SUITE NO _____

VEILFIN NO. 1

WELL _____

NO	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
176		1.75	.93	1.11	6.76	1.43	2.06	
177		2.19	.62	.56	4.51	1.25	2.08	
178		2.16	.54	.50	4.26	1.06	1.96	
179		1.75	.86	1.31	3.86	1.36	1.76	
180		1.75	.96	1.36	4.86	1.39	1.36	
181		1.31	.62	.55	3.97	1.46	2.08	
182		1.31	.58	.58	3.87	1.49	2.76	
183		1.75	.99	1.37	3.67	1.59	1.26	
184		1.86	1.02	1.49	3.86	1.69	1.96	
185		3.07	.94	1.39	5.92	1.43	3.12	
186		3.26	.96	1.46	5.96	1.67	3.26	
187		2.96	.87	1.36	4.62	1.32	2.96	
188		3.36	.99	1.46	5.86	1.96	3.46	
189		3.76	1.21	1.56	5.96	2.01	3.96	
190		7.46	2.50	3.90	25.09	5.02	8.32	
191		5.66	2.06	3.76	24.36	4.76	7.86	
192		6.79	2.36	3.89	24.63	4.66	7.65	
193		5.86	2.16	3.50	24.26	4.46	7.03	
194		7.46	2.67	3.96	25.16	5.10	8.36	
195		9.36	2.61	3.39	22.06	4.46	6.39	
196		9.22	2.50	3.34	21.43	4.30	6.24	
197		43.96	13.77	6.97	19.18	3.59	7.29	
198		39.51	13.14	6.97	16.63	2.51	5.20	
199		18.87	3.75	1.67	4.23	.72	2.00	
200		22.00	5.00	2.79	7.33	1.44	3.12	
201		21.95	4.86	2.61	7.06	1.39	3.06	
202		22.00	5.29	2.86	7.46	1.48	3.36	
203		13.17	2.50	1.39	3.95	1.07	1.56	
204		13.86	2.69	1.46	4.06	1.19	1.76	
205		29.26	10.00	5.96	18.06	2.06	5.06	
206		36.87	10.26	6.13	18.61	2.87	5.20	
207		23.11	5.32	2.79	9.80	1.07	2.08	
208		16.56	4.50	1.95	7.33	1.07	2.08	
209		12.64	2.81	1.67	6.20	.89	1.56	
210		27.90	6.88	3.90	11.28	1.43	3.12	

10. CORELAB DATA SHEETS

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 VEILFIN NO. 1

Sheet No. 1

S/NOS.

LJ 321

JE 259

XA 249

BM 888

WW 851

WZ 322

ZF 771

ZE 814

130 CL

791 BL

763 RI

764 BL

BX 214

83 B 0332

BX 214

Bit No.	Make	Type	IADC Code	Size "	Jets	Depth In	Hole Made	Drilling Time	On Bottom Hours	Turns K	Condition T B G	Remarks
RR 1	HTC	OSC 3AJ +26" H/O	111	26	20/20/20	86	139	6	3.08	11.8	1-2-I	20" CASING POINT.
1	HTC	OSC 3AJ	111	17 $\frac{1}{2}$	18/18/18	225	605.4	19 $\frac{1}{4}$	12.72	106.2	1-1-I	13-3/8" CASING POINT.
2	HTC	X3A	114	12 $\frac{1}{4}$	18/18/18	830.4	514.4	31-3/4	26.03	221.5	4-4-I	PULLED DUE TO DECREASED ROP'S.
3	HTC	J1	116	12 $\frac{1}{4}$	18/18/18	1344.8	644.4	36 $\frac{1}{2}$	29.80	267.6	3-1-I	PULLED DUE TO DECREASED ROP'S AT THE TOP OF THE LATROBE.
4	HTC	J22	517	12 $\frac{1}{4}$	18/18/18	1989.2	400.5	36-3/4	31.64	173.1	6-8-I	DECREASED ROP'S.
5	HTC	J22	517	12 $\frac{1}{4}$	18/18/18	2389.7	277.7	34 $\frac{1}{2}$	31.19	164.3	8-3-I	DECREASED ROP'S.
6	HTC	J22	517	12 $\frac{1}{4}$	18/18/18	2667.4	245.7	33-3/4	31.76	166.3	8-8-I	DECREASED ROP'S.
7	HTC	J22	517	12 $\frac{1}{4}$	18/18/18	2913.0	133.5	19 $\frac{1}{4}$	16.88	86.4	8-8-I	DECREASED TORQUE.
8	HTC	J33	537	12 $\frac{1}{4}$	18/18/18	3046.0	119.2	23 $\frac{1}{4}$	20.85	87.0	3-3-1/8	DECREASED ROP'S.
9	HTC	J33	537	12 $\frac{1}{4}$	18/18/18	3165.2	101.9	32-3/4	31.09	98.5	2-3-1/16	DECREASED ROP'S.
10	HTC	J33	537	12 $\frac{1}{4}$	18/18/18	3267.1	54.1	15-3/4	14.60	43.8	2-2-I	T.D.
11	HTC	J33	537	12 $\frac{1}{4}$	18/18/18	3321.2	125.8	42 $\frac{1}{2}$	40.33	123.1	2-4-1/16	DECREASED ROP'S.
12	HTC	J22	517	12 $\frac{1}{4}$	18/18/18	3447.0	6.1	1	0.63	2.2	1-1-I	PULLED TO CUT CORE NO. 1.
CB 1	CHRIS	RC4	4	9-7/8	14/15/15	3453.1	9.7	1 $\frac{1}{4}$	1.16	6.5	10% WORN	RECOVERED CORE NO. 1.
RR12	HTC	J22	517	12 $\frac{1}{4}$	18/18/18	3462.8	58.2	16	14.31	57.2	3-4-3/8	OUT AT T.D.

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 VEILFIN NO. 1

Sheet No. 1

DEPTH (M)	225	830	909	1066	1310	1656	1993
DATE	02/03/84	04/03/84	06/03/84	06/03/84	07/03/84	08/03/84	09/03/84
TIME	S	20:00	14:00	21:00	15:00	20:00	21:00
WEIGHT	E	8.8	8.9	9.0	9.1	9.3	9.5
FUNNEL VISCOSITY	A	35	48	32	32	35	45
PV/YP	W	3/17	5/23	3/12	5/15	8/19	8/21
N/K	A	.20/5.69	.24/6.39	.26/2.91	.32/2.69	.37/2.62	.35/3.24
GEL: INITIAL/10 MIN	T	11/37	7/30	2/15	8/22	10/27	11/30
pH	E	9.5	9.8	10.0	10.3	9.6	10.3
FILTRATE: API/API HTHP	R		-	-	NIL	NIL	8.6/23.1
CAKE			2	2	3	2	2
SALINITY (PPM)		17,000	16,000	16,000	16,000	16,000	17,000
SAND			TR	TR	TR	TR	TR
SOLIDS		4	4	5	5	6	7
OIL		0	0	0	0	0	0
NITRATES (PPM)		0	0	0	0	60	180

REMARKS:

SPUDDED
 IN DRILLED ----- DRILLED 12 $\frac{1}{4}$ " HOLE -----
 17 $\frac{1}{2}$ "
 HOLE

DEPTH (M)	2300	2399	2625	2684	2861	2958	3048
DATE	10/03/84	11/03/84	12/03/84	13/03/84	14/03/84	15/03/84	16/03/84
TIME	19:30	22:00	22:00	23:00	21:50	21:15	23:00
WEIGHT	9.5	9.5	9.5	9.6	9.6	9.5	9.3
FUNNEL VISCOSITY	52	56	55	62	60	60	45
PV/YP	10/23	11/31	12/28	13/35	11/27	12/33	10/26
N/K	.38/3.05	.34/5.19	.38/3.78	.35/5.56	.37/3.86	.34/5.37	.35/3.97
GEL: INITIAL/10 MIN	9/40	11/41	20/44	12/41	13/35	19/41	15/35
pH	10.5	10.5	10.2	10.2	10.4	10.5	10.5
FILTRATE: API/API HTHP	7.6/22.6	7.1/23.6	6.3/20.2	6.6/22.8	7.2/20.8	6.9/19.6	7.9/22.4
CAKE	2	2	2	2	2	2	2
SALINITY (PPM)	16,000	17,000	19,000	20,000	21,000	21,000	22,000
SAND	TR	TR	TR	TR	0.25	0.25	TR
SOLIDS	7	6	7	8	8	7	5
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	180	180	200	200	160	180	180

REMARKS:

----- DRILLED 12 $\frac{1}{4}$ " HOLE -----



MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
 WELL VEILFIN NO. 1

Sheet No. 2

DEPTH (M)	3151	3196	3263	3308	3321	3321	3321
DATE	17/03/84	18/03/84	19/03/84	20/03/84	21/03/84	22/03/84	23/03/84
TIME	21:00	21:00	18:30	23:00	05:00	19:30	17:00
WEIGHT	9.3	9.3	9.3	9.3	9.3	9.3	9.3
FUNNEL VISCOSITY	47	50	45	47	45	46	54
PV/YP	9/29	11/29	12/26	7/29	7/28	9/13	7/28
N/K	.31/5.62	.35/4.50	.40/3.22	.26/7.28	.26/6.79	.49/1.01	.26/6.79
GEL: INITIAL/10 MIN	14/31	15/37	20/40	15/20	15/23	14/20	20/27
pH	10.6	10.3	10.2	9.8	10.2	9.0	10.3
FILTRATE: API/API HTHP	7.1/19.0	7.3/21.6	7/18	9/17.4	8.1/18.4	13/20	8.5/-
CAKE	2	2	2	2	2	2	2
SALINITY (PPM)	22,500	23,000	24,000	25,000	24,000	24,000	24,000
SAND	TR	TR	TR	TR	TR	TR	TR
SOLIDS	5	5	5	6	6	6	6
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	160	160	140	160	150	160	160

REMARKS:

T.D.'ED
PROVISIONALLY

----- DRILLED 12 1/4" HOLE ----->

-- LOGGING --

DEPTH (M)	3321	3329	3367	3429	3459	3479	3521
DATE	24/03/84	25/03/84	26/03/84	27/03/84	28/03/84	29/03/84	30/03/84
TIME	11:00	17:00	04:00	04:00	20:00	16:30	09:00
WEIGHT	9.3	9.4	9.5	9.5	9.5	9.5	9.5
FUNNEL VISCOSITY	50	52	43	41	40	43	52
PV/YP	6/28	5/30	6/35	7/28	8/14	8/19	8/41
N/K	.23/7.89	.19/10.53	.20/12.01	.26/6.79	.45/1.35	.37/2.62	.22/12.58
GEL: INITIAL/10 MIN	18/22	17/18	20/22	20/23	12/17	13/16	30/36
pH	9.6	8.5	10.7	10.8	9.5	10.5	9.8
FILTRATE: API/API HTHP	8.6/17.6	13/24	8.7/17.9	7.2/16.0	10.4/17.8	9.6/18.0	9.6/18.0
CAKE	2	3	2	2	2	2	2
SALINITY (PPM)	22,000	23,000	20,000	19,000	19,000	18,000	18,000
SAND	TR	TR	TR	TR	TR	TR	TR
SOLIDS	6	7	7	8	8	8	8
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	130	100	120	120	100	80	120

REMARKS:

WIPER
TRIP
LOGGING

DRILLED AHEAD

CORE
NO. 1

DRILLED
TO THE
EXTENDED
T.D.

T.D.'ED
-
WIPER
TRIP
-
LOGGED



MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
 WELL VEILFIN NO. 1

Sheet No. 3

DEPTH (M)	3521	3521	3521	3521	3301	3301	3301
DATE	31/03/84	01/04/84	02/04/84	03/04/84	04/04/84	05/04/84	06/04/84
TIME	20:30	01:30	22:00	20:00	12:00	15:00	14:00
WEIGHT	9.6	9.5	9.6	9.5	9.5	9.6	9.5
FUNNEL VISCOSITY	67	43	53	52	50	48	48
PV/YP	7/34	7/27	9/28	10/28	7/31	7/24	8/24
N/K	.23/9.94	.27/6.32	.31/5.22	.34/4.65	.24/8.31	.29/4.97	.32/4.30
GEL: INITIAL/10 MIN	27/39	22/25	20/31	12/37	10/35	13/29	11/27
pH	9.5	9.4	9.9	10.7	11.6	11.3	10.8
FILTRATE: API/API HTHP	12/24	10/18	9/22	9/23	15/36	15/-	17/-
CAKE	2	2	2	2	2	3	3
SALINITY (PPM)	19,000	18,000	19,000	19,000	19,000	19,000	19,000
SAND	TR	TR	TR	TR	TR	TR	TR
SOLIDS	8	8	8	8	8	8	8
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	120	110	100	100	100	100	100

REMARKS:

LOGGING

PRODUCTION TEST

DEPTH (M)	3301	3301					
DATE	07/04/84	08/04/84					
TIME	16:00	11:00					
WEIGHT	9.5	9.5					
FUNNEL VISCOSITY	48	42					
PV/YP	7/23	9/21					
N/K	.30/4.55	.38/2.83					
GEL: INITIAL/10 MIN	15/31	8/20					
pH	10.7	10.6					
FILTRATE: API/API HTHP	14.4/-	14.8/-					
CAKE	3	2					
SALINITY (PPM)	19,000	19,000					
SAND	TR	TR					
SOLIDS	8	8					
OIL	0	0					
NITRATES (PPM)	100	80					

REMARKS:

R.F.T. DATA SHEETS

PORE PRESSURE DATA SHEET

COMPANY : ESSO AUSTRALIA LTD.

DATA FROM RFT'S

WELL : VEILFIN No.1

DEPTH (FROM RKB)	DEPTH (FROM MSL)	PORE PRESS	PORE PRESS GRADIENT E.M.W. (MSL)	PORE PRESS GRADIENT
METRES	TVD. METRES	PSIA	PPG	PSI/M
3227.5	3205.3	5029.10	9.197	1.569
3212.5	3190.4	4699.70	8.635	1.473
3191.8	3169.7	4642.90	8.586	1.465
3187.5	3165.4	4638.00	8.589	1.465
3149.0	3127.0	4521.40	8.475	1.446
3130.5	3108.6	4529.00	8.540	1.457
3095.5	3073.7	4500.70	8.583	1.464
3081.0	3059.2	4435.00	8.498	1.450
3062.5	3040.8	4456.30	8.590	1.466
3006.0	2984.3	4229.90	8.308	1.417
2050.0	2029.6	2881.20	8.321	1.420
3212.6	3190.5	4696.40	8.628	1.472
3212.6	3190.5	4679.90	8.598	1.467
3189.8	3167.7	4645.10	8.595	1.466
3187.5	3165.4	4639.40	8.591	1.466
3191.8	3169.7	4637.80	8.577	1.463
3149.5	3127.5	4516.50	8.465	1.444
3149.5	3127.5	4528.80	8.488	1.448



R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LTD.
 WELL VEILFIN NO. 1

Sheet No. 1

RUN No.	2	2	3	3	4	4
SEAT No.	43	43	45	45	54	53
CHAMBER CAPACITY (GAL)	6	2-3/4	6	2-3/4	2-3/4	12
DEPTH (metres)	3212.6	3212.6	3212.6	3212.6	3149.5	3191.8
RECOVERY VOLUMES						
GAS (Cu Ft)	1.59	0.92	1.79	0.8	0.14	0.77
OIL (cc)						
WATER/FILTRATE (cc)	20,250	9,100	19,800	7,750	9,000	17,500
OTHER (cc)						
SURFACE PRESSURE (PSI)	350	300	400	130	120	100
GAS COMPOSITION						
C1 (PPM)	286,720		286,742	387,072		112,614
C2 (PPM)	20,101	INSUFFICIENT SAMPLE	28,025	14,979	INSUFFICIENT SAMPLE	6,979
C3 (PPM)	7,014	INSUFFICIENT SAMPLE	10,552	4,548	INSUFFICIENT SAMPLE	3,279
C4 (PPM)	1,315	INSUFFICIENT SAMPLE	1,942	1,002	INSUFFICIENT SAMPLE	894
C5 (PPM)	199	INSUFFICIENT SAMPLE	306	204	INSUFFICIENT SAMPLE	186
C6 (PPM)	TR	INSUFFICIENT SAMPLE	TR	TR	INSUFFICIENT SAMPLE	0
CO2 (%)	0.3%	INSUFFICIENT SAMPLE	0.5%	0.6%	INSUFFICIENT SAMPLE	0
H2S (PPM)	0	INSUFFICIENT SAMPLE	0	0	INSUFFICIENT SAMPLE	0
OIL PROPERTIES						
DENSITY						
COLOUR						
FLUORESCENCE						
POUR POINT (°C)						
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.196 @ 21°C	0.196 @ 21°C	0.190 @ 22.2°C	0.20 @ 21.9°C		
C1 (frm resis) (PPM)	23,000	23,000	32,000	31,000	24,000	23,000
C1 (frm titrat) (PPM)	20,000	22,000	20,000	19,000		
NITRATES (PPM)	160+20	120+20	140	90	120	160
pH	7.7	7.5	7.4	7.3	8.3	8.3
COMMENTS	23RD MARCH 1984	-	23RD MARCH 1984	-	24TH MARCH 1984	-
SAMPLES SHIPPED (Include quantity and volume of containers).	1 x 4 LITRE WATER	1 x 4 LITRE WATER	1 x 4 LITRE WATER/ FILTRATE	1 x 4 LITRE WATER/ FILTRATE	1 x 4 LITRE WATER/ FILTRATE	1 x 4 LITRE WATER/ FILTRATE



R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LTD.
 WELL VELLEFIN NO. 1

Sheet No. 2

RUN No.	5	5	6	6	7	7
SEAT No.	55	55	56	56		
CHAMBER CAPACITY (GAL)	12	2-3/4	12	2-3/4		
DEPTH (metres)	3149.5	3149.5	2896	2896	-- MISS-RUN ----	
RECOVERY VOLUMES						
GAS (Cu Ft)	2.35	0.62	0	0.4		
OIL (cc)	SCUM	TR SCUM	0	0		
WATER/FILTRATE (cc)	41,800	9,220	36,700	9,600		
OTHER (cc)	TR OIL SCUM	-	TR MUD	TR MUD		
SURFACE PRESSURE (PSI)	300	350	0	100		
GAS COMPOSITION						
C1 (PPM)	304,128	304,128				
C2 (PPM)	27,220	19,027	INSUFFICIENT			
C3 (PPM)	16,056	11,039	SAMPLE			
C4 (PPM)	2,701	2,093	FOR	INSUFFICIENT		
C5 (PPM)	387	290	ANALYSIS			
C6 (PPM)	TR	TR				
CO2 (%)	3.5	3.5				
H2S (PPM)	0	0				
OIL PROPERTIES						
DENSITY						
COLOUR						
FLUORESCENCE						
POUR POINT (°C)						
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.192 @ 69°F	0.197 @ 69°F				
C1 (frm resis) (PPM)	31	30				
C1 (frm titrat) (PPM)						
NITRATES (PPM)						
pH						
COMMENTS	24TH MARCH 1984	-	25TH MARCH 1984		R.F.T. NO. 7 WAS A MISS-RUN	
SAMPLES SHIPPED (Include quantity and volume of containers).	1 x 4 LITRE WATER	1 x 4 LITRE WATER	1 x 4 LITRE PLASTIC CONTAINER OF WATER			

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: VEILFIN No.1

BIT RECORD

BIT IADC No.	CODE MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP AROP TIME	CCOST	TOTAL TURNS	CONDITION T B G
1	111 HTC OSC3AJ&26*HO	26.000	0.00	20 20 20	86.0	225.0	139.0	3.08	45.1 2.0	133.49	11808	1 2 0.000
1	111 HTC OSC3AJ	17.500	4857.00	18 18 18	225.0	830.4	605.4	12.72	47.6 3.7	107.07	106193	1 1 0.000
2	114 HTC X3A	12.250	2381.00	18 18 18	830.4	1344.8	514.4	26.03	19.8 4.9	224.22	221520	4 4 0.000
3	116 HTC J1	12.250	2694.00	18 18 18	1344.8	1989.2	644.4	29.80	21.6 6.2	208.20	267622	3 1 0.000
4	517 HTC J22	12.250	8516.00	18 18 18	1989.2	2389.7	400.5	31.64	12.7 7.1	374.52	173061	6 8 0.000
5	517 HTC J22	12.250	8516.00	18 18 18	2389.7	2667.4	277.7	31.19	8.9 7.7	542.10	164301	8 3 0.000

WELL: VEILFIN NO.1

BIT RECORD

BIT IADC No.	CODE MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP AROP TIME	CCOST	TOTAL TURNS	CONDITION T B G
6	517 HTC J22	12.250	8516.00	18 18 18	2667.4	2913.0	245.6	31.76	7.7 8.2	628.87	166345	8 8 0.000
7	517 HTC J22	12.250	8516.00	18 18 18	2913.0	3046.5	133.5	16.88	7.9 8.7	763.55	86402	8 8 0.000
8	517 HTC J33	12.250	8516.00	18 18 18	3046.0	3165.2	119.2	20.85	5.7 8.7	976.78	87015	3 3 0.125
9	537 HTC J33	12.250	7774.00	18 18 18	3165.2	3267.1	101.9	31.09	3.3 8.8	1505.91	98544	2 3 0.053
10	537 HTC J33	12.250	7774.00	18 18 18	3267.1	3321.2	54.1	14.62	3.7 8.7	1717.84	43857	2 2 0.000
11	537 HTC J33	12.250	7774.00	18 18 18	3321.2	3447.0	125.8	40.33	3.1 9.3	1502.57	123103	2 4 0.062
12	517 HTC J22	12.250	8516.00	18 18 18	3447.0	3453.1	6.1	0.63	9.7 9.3	7341.04	2208	1 1 0.000
12	4 CHRIS RCA	9.875	18000.00	14 15 15	3453.1	3462.8	9.7	1.16	8.4 9.3	5793.81	6548	0 0 0.100
12	517 HTC J22	12.250	0.00	18 18 18	3462.8	3521.0	58.2	14.94	4.1 9.5	1388.10	59427	3 4 0.375

BIT NUMBER: 1 IADC CODE 111 HTC OSC3AJ&26"HO

STARTING DEPTH.....	86.0		
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	2.0		
BIT DIAMETER.....	26.000		
NOZZLES.....	20	20	20
HW DRILL COLLAR LENGTH, OD, ID....	23.40	9.750	2.813
DRILL COLLAR LENGTH, OD, ID.....	55.70	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	9.45	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	4.0	2.00	
FINISHING DEPTH.....	225.0		
CUMULATIVE HOURS, TURNS.....	3.08	11808	
BIT CONDITION OUT.....	T 1	B 2	G 0.000

BIT NUMBER: 1 IADC CODE 111 HTC OSC3AJ

STARTING DEPTH.....	225.0		
BIT COST, RIG COST/HOUR.....	4857.00	3652.00	
TRIP TIME.....	3.7		
BIT DIAMETER.....	17.500		
NOZZLES.....	18	18	18
HW DRILL COLLAR LENGTH, OD, ID....	21.43	9.750	2.813
DRILL COLLAR LENGTH, OD, ID.....	120.07	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	55.68	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	207.00	19.124	
RISER LENGTH, ID.....	68.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.5	2.10	
FINISHING DEPTH.....	830.4		
CUMULATIVE HOURS, TURNS.....	12.72	106193	
BIT CONDITION OUT.....	T 1	B 1	G 0.000

BIT NUMBER: 2 IADC CODE 114 HTC X3A

STARTING DEPTH.....	830.4		
BIT COST, RIG COST/HOUR.....	2381.00	3652.00	
TRIP TIME.....	4.9		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	168.98	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.0	2.20	
FINISHING DEPTH.....	1344.8		
CUMULATIVE HOURS, TURNS.....	26.03	221520	
BIT CONDITION OUT.....	T 4	B 4	G 0.000

BIT NUMBER: 3 IADC CODE 116 HTC J1

STARTING DEPTH.....	1344.8		
BIT COST, RIG COST/HOUR.....	2694.00	3652.00	
TRIP TIME.....	6.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	168.98	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.30	
FINISHING DEPTH.....	1989.2		
CUMULATIVE HOURS, TURNS.....	29.80	267622	
BIT CONDITION OUT.....	T 3	B 1	G 0.000

BIT NUMBER: 4 IADC CODE 517 HTC J22

STARTING DEPTH.....	1989.2		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	7.1		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	168.98	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.40	
FINISHING DEPTH.....	2389.7		
CUMULATIVE HOURS, TURNS.....	31.64	173061	
BIT CONDITION OUT.....	T 6	B 8	G 0.000

BIT NUMBER: 5 IADC CODE 517 HTC J22

STARTING DEPTH.....	2389.7		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	7.7		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	173.09	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.45	
FINISHING DEPTH.....	2667.4		
CUMULATIVE HOURS, TURNS.....	31.19	164301	
BIT CONDITION OUT.....	T 8	B 3	G 0.000

BIT NUMBER: 6 IADC CODE 517 HTC J22

STARTING DEPTH.....	2667.4		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	8.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	173.09	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	2913.0		
CUMULATIVE HOURS, TURNS.....	31.76	166345	
BIT CONDITION OUT.....	T 8	B 8	G 0.000

BIT NUMBER: 7 IADC CODE 517 HTC J22

STARTING DEPTH.....	2913.0		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	8.7		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	173.09	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.614	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	3046.5		
CUMULATIVE HOURS, TURNS.....	16.88	86402	
BIT CONDITION OUT.....	T 8	B 8	G 0.000

BIT NUMBER: 8 IADC CODE 517 HTC J33

STARTING DEPTH.....	3046.0		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	8.7		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.96	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.60	
FINISHING DEPTH.....	3165.2		
CUMULATIVE HOURS, TURNS.....	20.85	87015	
BIT CONDITION OUT.....	T 3	B 3	G 0.125

BIT NUMBER: 9 IADC CODE 537 HTC J33

STARTING DEPTH.....	3165.2		
BIT COST, RIG COST/HOUR.....	7774.00	3652.00	
TRIP TIME.....	8.8		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.96	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.2	2.60	
FINISHING DEPTH.....	3267.1		
CUMULATIVE HOURS, TURNS.....	31.09	98544	
BIT CONDITION OUT.....	T 2	B 3	G 0.063

BIT NUMBER: 10 IADC CODE 537 HTC J33

STARTING DEPTH.....	3267.1		
BIT COST, RIG COST/HOUR.....	7774.00	3652.00	
TRIP TIME.....	8.7		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.96	7.750	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.2	2.60	
FINISHING DEPTH.....	3321.2		
CUMULATIVE HOURS, TURNS.....	14.62	43857	
BIT CONDITION OUT.....	T 2	B 2	G 0.000

BIT NUMBER: 11 IADC CODE 537 HTC J33

STARTING DEPTH.....	3321.2		
BIT COST, RIG COST/HOUR.....	7774.00	3652.00	
TRIP TIME.....	9.3		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.96	7.750	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.55	
FINISHING DEPTH.....	3447.0		
CUMULATIVE HOURS, TURNS.....	40.33	123103	
BIT CONDITION OUT.....	T 2	B 4	G 0.062

BIT NUMBER: 12 IADC CODE 517 HTC J22

STARTING DEPTH.....	3447.0		
BIT COST, RIG COST/HOUR.....	8516.00	3652.00	
TRIP TIME.....	9.3		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.96	7.750	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.60	
FINISHING DEPTH.....	3453.1		
CUMULATIVE HOURS, TURNS.....	0.63	2208	
BIT CONDITION OUT.....	T 1	B 1	G 0.000

BIT NUMBER: 12 IADC CODE 4 CHRIS RC4

STARTING DEPTH.....	3453.1		
BIT COST, RIG COST/HOUR.....	18000.00	3652.00	
TRIP TIME.....	9.3		
BIT DIAMETER.....	9.875		
NOZZLES.....	14	15	15
DRILL COLLAR LENGTH, OD, ID.....	159.24	7.750	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	3453.10	815.00	12.250
CASING ID.....	12.615		
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.60	
FINISHING DEPTH.....	3462.8		
CUMULATIVE HOURS, TURNS.....	1.16	6548	
BIT CONDITION OUT.....	T 0	B 0	G 0.100

BIT NUMBER: 12 IADC CODE 517 HTC J22

STARTING DEPTH.....	3462.8		
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	9.5		
PREVIOUS HOLE MADE.....	6.1		
PREVIOUS HOURS, TURNS.....	0.63	2208	
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.96	7.750	2.813
HW DRILL PIPE LENGTH, OD, ID.....	111.34	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	815.00	12.615	
RISER LENGTH, ID.....	86.00	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.....	0.35		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.60	
FINISHING DEPTH.....	3521.0		
CUMULATIVE HOURS, TURNS.....	14.94	59427	
BIT CONDITION OUT.....	T 3	B 4	G 0.375

(b). HYDRAULIC ANALYSIS

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

DEPTH. Metres

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

ANNULAR VOLUMES. . . . Barrels, Barrels/metre

ANNULAR VELOCITIES . . Metres/minute

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

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

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

PRESSURE UNITS Pounds per square inch

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

H.H.P. Hydraulic horsepower at the bit

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

DENSITY UNITS. Pounds per gallon

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 100.0 AND TVD 100.0

SPM 1 53 SPM 2 57 FLOW RATE 550

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP	
HWDC/OH	1.851	43	7	12	LAMINAR	1	6	0.0	
DC/OH	1.950	109	7	12	LAMINAR	1	6	0.0	
HWDP/OH	2.074	20	6	11	LAMINAR	0	6	0.0	
DP/OH	2.074	24	6	11	LAMINAR	0	6	0.0	
TOTAL VOLUME		195	TOTAL PRESSURE DROP						0.0

LAG: 14.9 MINUTES 791 STROKES #1 AND 850 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	282.8	HHP	91	IMPACT FORCE	469
% SURFACE PRESSURE	72.5	HHP/sq in	0.17	JET VELOCITY	58

PRESSURE BREAKDOWN:

SURFACE	19.6				
STRING	72.9				
BIT	282.8				
ANNULUS	0.0				
TOTAL	375.3	PUMP PRESSURE	390.0	% DIFFERENCE	3.8

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 200.0 AND TVD 200.0

SPM 1 101 SPM 2 97 FLOW RATE 989

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	1.851	43	13	12	TURBULENT			0.1
DC/OH	1.950	109	12	12	TURBULENT			0.1
HWDP/OH	2.074	20	11	11	TURBULENT			0.1
DP/OH	2.074	231	11	11	TURBULENT			0.1
TOTAL VOLUME		403				TOTAL PRESSURE DROP		0.1

LAG: 17.1 MINUTES 1720 STROKES #1 AND 1663 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	913.8	HHP	527	IMPACT FORCE	1517
% SURFACE PRESSURE	80.5	HHP/sqin	0.99	JET VELOCITY	105

PRESSURE BREAKDOWN:

SURFACE	56.4		
STRING	242.1		
BIT	913.8		
ANNULUS	0.0		
TOTAL	1212.3	PUMP PRESSURE	1135.1
		% DIFFERENCE	6.8

BOTTOM HOLE PRESSURES:

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 84 SPM 2 84 FLOW RATE 842

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	30	15	TURBULENT			0.0
DC/OH	0.772	55	26	14	TURBULENT			0.1
DC/CSG	0.961	47	21	14	TURBULENT			0.0
HWDP/CSG	1.085	60	18	13	TURBULENT			0.0
DP/CSG	1.085	38	18	13	TURBULENT			0.0
DP/RIS	1.325	90	15	12	TURBULENT			0.0
TOTAL VOLUME		305			TOTAL PRESSURE DROP		0.1	

LAG: 15.2 MINUTES 1282 STROKES #1 AND 1278 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1013.7	HHP	498	IMPACT FORCE	1363
% SURFACE PRESSURE	52.6	HHP/sq.in	2.07	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	42.4		
STRING	344.3		
BIT	1013.7		
ANNULUS	0.1		
TOTAL	1400.6	PUMP PRESSURE	1927.5
		% DIFFERENCE	27.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.63	HYDROSTATIC PRESSURE 441.9
CIRCULATING:	ECD 8.64	CIRCULATING PRESSURE 442.1
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.3
	EFFECTIVE MUD WEIGHT 8.63	BOTTOM HOLE PRESSURE 441.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 93 SPM 2 91 FLOW RATE 919

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP	
HWDC/OH	0.673	14	33	15	TURBULENT			0.0	
DC/OH	0.772	93	28	14	TURBULENT			0.1	
HWDP/OH	0.896	46	24	13	TURBULENT			0.0	
HWDP/CSG	1.085	5	20	13	TURBULENT			0.0	
DP/CSG	1.085	146	20	13	TURBULENT			0.0	
DP/RIS	1.325	90	17	12	TURBULENT			0.0	
TOTAL VOLUME		394	TOTAL PRESSURE DROP						0.2

LAG: 18.0 MINUTES 1680 STROKES #1 AND 1633 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1224.3	HHP	657	IMPACT FORCE	1646
% SURFACE PRESSURE	51.7	HHP/sqin	2.73	JET VELOCITY	120

PRESSURE BREAKDOWN:

SURFACE	50.2		
STRING	436.5		
BIT	1224.3		
ANNULUS	0.2		
TOTAL	1711.1	PUMP PRESSURE	2368.9
		% DIFFERENCE	27.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.74	HYDROSTATIC PRESSURE 596.7
CIRCULATING:	ECD 8.75	CIRCULATING PRESSURE 597.0
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.5
	EFFECTIVE MUD WEIGHT 8.74	BOTTOM HOLE PRESSURE 596.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 93 SPM 2 90 FLOW RATE 911

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	32	15	TURBULENT			0.0
DC/OH	0.772	93	28	14	TURBULENT			0.1
HWDP/OH	0.896	50	24	13	TURBULENT			0.0
DP/OH	0.896	86	24	13	TURBULENT			0.1
DP/CSG	1.085	151	20	13	TURBULENT			0.0
DP/RIS	1.325	90	16	12	TURBULENT			0.0
TOTAL VOLUME		484			TOTAL PRESSURE DROP			0.3

LAG: 22.3 MINUTES 2066 STROKES #1 AND 2000 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1206.6	HHP	641	IMPACT FORCE	1623
% SURFACE PRESSURE	50.1	HHP/sqin	2.67	JET VELOCITY	119

PRESSURE BREAKDOWN:

SURFACE	49.5		
STRING	459.1		
BIT	1206.6		
ANNULUS	0.3		
TOTAL	1715.5	PUMP PRESSURE	2407.3
		% DIFFERENCE	28.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.78	HYDROSTATIC PRESSURE 748.6
CIRCULATING:	ECD 8.78	CIRCULATING PRESSURE 748.9
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.6
	EFFECTIVE MUD WEIGHT 8.77	BOTTOM HOLE PRESSURE 748.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 99 SPM 2 97 FLOW RATE 978

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP	
HWDC/OH	0.673	14	35	15	TURBULENT			0.0	
DC/OH	0.772	93	30	14	TURBULENT			0.1	
HWDP/OH	0.896	50	26	13	TURBULENT			0.0	
DP/OH	0.896	175	26	13	TURBULENT			0.1	
DP/CSG	1.085	151	21	13	TURBULENT			0.1	
DP/RIS	1.325	90	18	12	TURBULENT			0.0	
TOTAL VOLUME		573	TOTAL PRESSURE DROP						0.4

LAG: 24.6 MINUTES 2430 STROKES #1 AND 2388 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1394.2	HHP	795	IMPACT FORCE	1875
% SURFACE PRESSURE	49.7	HHP/sqin	3.31	JET VELOCITY	128

PRESSURE BREAKDOWN:

SURFACE	56.3		
STRING	555.2		
BIT	1394.2		
ANNULUS	0.4		
TOTAL	2006.1	PUMP PRESSURE	2805.9
		% DIFFERENCE	28.5

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.80	HYDROSTATIC PRESSURE 901.2
CIRCULATING:	ECD 8.81	CIRCULATING PRESSURE 901.5
PULLING OUT:	TRIP MARGIN 0.01	ESTIMATED SWAB 0.8
	EFFECTIVE MUD WEIGHT 8.80	BOTTOM HOLE PRESSURE 900.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 98 SPM 2 97 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	0.673	14	34	68	LAMINAR	1	34	0.1
DC/OH	0.772	93	30	67	LAMINAR	1	29	0.5
HWDP/OH	0.896	50	26	66	LAMINAR	0	25	0.2
DP/OH	0.896	265	26	66	LAMINAR	0	25	0.8
DP/CSG	1.085	151	21	65	LAMINAR	0	21	0.3
DP/RIS	1.325	90	18	64	LAMINAR	0	17	0.1
TOTAL VOLUME		663			TOTAL PRESSURE DROP		2.0	

LAG: 28.6 MINUTES 2793 STROKES #1 AND 2778 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1369.4 HHP 779 IMPACT FORCE 1842
 % SURFACE PRESSURE 50.8 HHP/sqin 3.24 JET VELOCITY 128

PRESSURE BREAKDOWN:

SURFACE 63.8
 STRING 665.1
 BIT 1369.4
 ANNULUS 2.0
 TOTAL 2100.3 PUMP PRESSURE 2696.2 % DIFFERENCE 22.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	8.70	HYDROSTATIC PRESSURE 1038.8
CIRCULATING: ECD	8.72	CIRCULATING PRESSURE 1040.8
PULLING OUT: TRIP MARGTN	0.03	ESTIMATED SWAB 4.0
EFFECTIVE MUD WEIGHT	8.67	BOTTOM HOLE PRESSURE 1034.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 98 SPM 2 98 FLOW RATE 977

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	35	69	LAMINAR	1	34	0.1
DC/OH	0.772	93	30	68	LAMINAR	1	29	0.5
HWDP/OH	0.896	50	26	66	LAMINAR	0	25	0.2
DP/OH	0.896	355	26	66	LAMINAR	0	25	1.1
DP/CSG	1.085	151	21	65	LAMINAR	0	21	0.3
DP/RIS	1.325	90	18	65	LAMINAR	0	17	0.1
TOTAL VOLUME		753			TOTAL PRESSURE DROP		2.3	

LAG: 32.4 MINUTES 3155 STROKES #1 AND 3169 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1364.6	HHP	778	IMPACT FORCE	1835
% SURFACE PRESSURE	49.7	HHP/sqin	3.23	JET VELOCITY	128

PRESSURE BREAKDOWN:

SURFACE	63.6		
STRING	700.2		
BIT	1364.6		
ANNULUS	2.3		
TOTAL	2130.7	PUMP PRESSURE	2744.9
		% DIFFERENCE	22.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.63	HYDROSTATIC PRESSURE 1177.7
CIRCULATING:	ECD 8.65	CIRCULATING PRESSURE 1180.0
PULLING OUT:	TRIP MARGIN 0.03	ESTIMATED SWAB 4.6
	EFFECTIVE MUD WEIGHT 8.60	BOTTOM HOLE PRESSURE 1173.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 97 SPM 2 92 FLOW RATE 948

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	23	82	143	LAMINAR	1	81	4.8
DC/CSG	0.303	25	74	143	LAMINAR	1	74	4.2
HWDP/CSG	0.427	48	53	142	LAMINAR	0	52	2.8
DP/CSG	0.427	228	53	142	LAMINAR	0	52	13.3
DP/RIS	1.325	114	17	141	LAMINAR	0	17	0.7

TOTAL VOLUME 438 TOTAL PRESSURE DROP 25.7

LAG: 19.4 MINUTES 1889 STROKES #1 AND 1795 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1300.5	HHP	719	IMPACT FORCE	1749
% SURFACE PRESSURE	46.5	HHP/sqin	6.10	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	69.9				
STRING	959.7				
BIT	1300.5				
ANNULUS	25.7				
TOTAL	2355.7	PUMP PRESSURE	2798.9	% DIFFERENCE	15.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.73	HYDROSTATIC PRESSURE 1341.1
CIRCULATING:	ECD 8.90	CIRCULATING PRESSURE 1366.8
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 51.3
	EFFECTIVE MUD WEIGHT 8.40	BOTTOM HOLE PRESSURE 1289.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 999.9

SPM 1 97 SPM 2 92 FLOW RATE 945

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DRO
DC/OH	0.274	46	82	142	LAMINAR	1	81	9.5
HWDP/OH	0.398	6	56	141	LAMINAR	0	56	0.4
HWDP/CSG	0.427	41	53	141	LAMINAR	0	52	2.4
DP/CSG	0.427	271	53	141	LAMINAR	0	52	15.8
DP/RIS	1.325	114	17	139	LAMINAR	0	17	0.7
TOTAL VOLUME		478			TOTAL PRESSURE DROP			28.7

LAG: 21.3 MINUTES 2053 STROKES #1 AND 1965 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1323.1	HHP	729	IMPACT FORCE	1779
% SURFACE PRESSURE	45.5	HHP/sqin	6.19	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	70.8		
STRING	1013.1		
BIT	1323.1		
ANNULUS	28.7		
TOTAL	2435.6	PUMP PRESSURE	2905.1
		% DIFFERENCE	16.2

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.95	HYDROSTATIC PRESSURE 1526.6
CIRCULATING:	ECD 9.12	CIRCULATING PRESSURE 1555.3
PULLING OUT:	TRIP MARGIN 0.34	ESTIMATED SWAB 57.4
	EFFECTIVE MUD WEIGHT 8.61	BOTTOM HOLE PRESSURE 1469.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1099.9

SPM 1 94 SPM 2 90 FLOW RATE 916

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	80	142	LAMINAR	1	79	9.4
HWDP/OH	0.398	44	55	141	LAMINAR	0	54	3.0
DP/OH	0.398	2	55	141	LAMINAR	0	54	0.1
DP/CSG	0.427	312	51	141	LAMINAR	0	51	18.0
DP/RIS	1.325	114	16	140	LAMINAR	0	16	0.7

TOTAL VOLUME 518 TOTAL PRESSURE DROP 31.2

LAG: 23.8 MINUTES 2225 STROKES #1 AND 2128 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1235.1	HHP	660	IMPACT FORCE	1661
% SURFACE PRESSURE	41.8	HHP/sqin	5.60	JET VELOCITY	120

PRESSURE BREAKDOWN:

SURFACE	66.6				
STRING	991.3				
BIT	1235.1				
ANNULUS	31.2				
TOTAL	2324.1	PUMP PRESSURE	2952.3	% DIFFERENCE	21.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 8.88	HYDROSTATIC PRESSURE 1666.9
CIRCULATING:	ECD 9.05	CIRCULATING PRESSURE 1698.1
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 62.3
	EFFECTIVE MUD WEIGHT 8.55	BOTTOM HOLE PRESSURE 1604.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1199.9

SPM 1 90 SPM 2 88 FLOW RATE 892

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	77	106	LAMINAR	2	76	5.6
HWDP/OH	0.398	44	53	103	LAMINAR	1	53	1.7
DP/OH	0.398	42	53	103	LAMINAR	1	53	1.6
DP/CSG	0.427	312	50	103	LAMINAR	1	49	10.2
DP/RIS	1.325	114	16	100	LAMINAR	0	16	0.4
TOTAL VOLUME		558			TOTAL PRESSURE DROP		19.4	

LAG: 26.3 MINUTES 2370 STROKES #1 AND 2318 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1201.6	HHP	625	IMPACT FORCE	1616
% SURFACE PRESSURE	40.5	HHP/sqin	5.31	JET VELOCITY	117

PRESSURE BREAKDOWN:

SURFACE	61.2		
STRING	946.0		
BIT	1201.6		
ANNULUS	19.4		
TOTAL	2228.2	PUMP PRESSURE	2968.7
		% DIFFERENCE	24.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.11	HYDROSTATIC PRESSURE 1865.1
CIRCULATING:	ECD 9.21	CIRCULATING PRESSURE 1884.5
PULLING OUT:	TRIP MARGIN 0.19	ESTIMATED SWAB 38.8
	EFFECTIVE MUD WEIGHT 8.92	BOTTOM HOLE PRESSURE 1826.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1299.8

SPM 1 87 SPM 2 90 FLOW RATE 883

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DRG
DC/OH	0.274	46	77	106	LAMINAR	2	75	5.5
HWDP/OH	0.398	44	53	104	LAMINAR	1	52	1.7
DP/OH	0.398	82	53	104	LAMINAR	1	52	3.1
DP/CSG	0.427	312	49	104	LAMINAR	1	49	10.2
DP/RIS	1.325	114	16	101	LAMINAR	0	16	0.3
TOTAL VOLUME		598	TOTAL PRESSURE DROP			20.9		

LAG: 28.4 MINUTES 2471 STROKES #1 AND 2552 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1161.6	HHP	598	IMPACT FORCE	1562
% SURFACE PRESSURE	39.9	HHP/sqin	5.07	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	59.4		
STRING	953.0		
BIT	1161.6		
ANNULUS	20.9		
TOTAL	2194.8	PUMP PRESSURE	2910.5
		% DIFFERENCE	24.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.00	HYDROSTATIC PRESSURE 1995.5
CIRCULATING:	ECD 9.09	CIRCULATING PRESSURE 2016.3
PULLING OUT:	TRIP MARGIN 0.19	ESTIMATED SWAB 41.7
	EFFECTIVE MUD WEIGHT 8.81	BOTTOM HOLE PRESSURE 1953.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1399.8

SPM 1 114 SPM 2 10 FLOW RATE 618

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	54	114	LAMINAR	1	53	6.1
HWDP/OH	0.398	44	37	110	LAMINAR	0	37	1.8
DP/OH	0.398	121	37	110	LAMINAR	0	37	4.8
DP/CSG	0.427	312	34	109	LAMINAR	0	34	10.5
DP/RIS	1.325	114	11	103	LAMINAR	0	11	0.3
TOTAL VOLUME		638			TOTAL PRESSURE DROP			23.5

LAG: 43.3 MINUTES 4917 STROKES #1 AND 441 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	582.3	HHP	210	IMPACT FORCE	783
% SURFACE PRESSURE	40.1	HHP/sqin	1.78	JET VELOCITY	81

PRESSURE BREAKDOWN:

SURFACE	35.3		
STRING	586.1		
BIT	582.3		
ANNULUS	23.5		
TOTAL	1227.2	PUMP PRESSURE	1450.4
		% DIFFERENCE	15.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.19	HYDROSTATIC PRESSURE 2195.1
CIRCULATING:	ECD 9.29	CIRCULATING PRESSURE 2218.7
PULLING OUT:	TRIP MARGIN 0.20	ESTIMATED SWAB 47.1
	EFFECTIVE MUD WEIGHT 8.99	BOTTOM HOLE PRESSURE 2148.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1499.8

SPM 1 87 SPM 2 86 FLOW RATE 865

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	75	115	LAMINAR	1	74	6.8
HWDP/OH	0.398	44	52	110	LAMINAR	0	51	2.0
DP/OH	0.398	161	52	110	LAMINAR	0	51	7.1
DP/CSG	0.427	312	48	109	LAMINAR	0	48	11.7
DP/RIS	1.325	114	16	103	LAMINAR	0	15	0.4

TOTAL VOLUME 677 TOTAL PRESSURE DROP 28.0

LAG: 32.9 MINUTES 2847 STROKES #1 AND 2846 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1137.6	HHP	574	IMPACT FORCE	1530
% SURFACE PRESSURE	38.1	HHP/sqin	4.87	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	64.5				
STRING	1108.1				
BIT	1137.6				
ANNULUS	28.0				
TOTAL	2338.1	PUMP PRESSURE	2986.4	% DIFFERENCE	21.7

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.18	HYDROSTATIC PRESSURE 2349.6
CIRCULATING:	ECD 9.29	CIRCULATING PRESSURE 2377.6
PULLING OUT:	TRIP MARGIN 0.22	ESTIMATED SWAB 56.0
	EFFECTIVE MUD WEIGHT 8.96	BOTTOM HOLE PRESSURE 2293.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1599.7

SPM 1 88 SPM 2 84 FLOW RATE 856

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	74	114	LAMINAR	1	73	6.8
HWDP/OH	0.398	44	51	109	LAMINAR	0	51	2.0
DP/OH	0.398	201	51	109	LAMINAR	0	51	8.8
DP/CSG	0.427	312	48	108	LAMINAR	0	47	11.7
DP/RIS	1.325	114	15	102	LAMINAR	0	15	0.4
TOTAL VOLUME		717			TOTAL PRESSURE DROP			29.6

LAG: 35.2 MINUTES 3082 STROKES #1 AND 2945 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1128.1	HHP	563	IMPACT FORCE	1517
% SURFACE PRESSURE	37.9	HHP/sqin	4.78	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	63.9		
STRING	1135.1		
BIT	1128.1		
ANNULUS	29.6		
TOTAL	2356.7	PUMP PRESSURE	2973.9
		% DIFFERENCE	20.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.30	HYDROSTATIC PRESSURE 2538.2
CIRCULATING:	ECD 9.41	CIRCULATING PRESSURE 2567.8
PULLING OUT:	TRIP MARGIN 0.22	ESTIMATED SWAB 59.3
	EFFECTIVE MUD WEIGHT 9.08	BOTTOM HOLE PRESSURE 2478.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1699.7

SPM 1 83 SPM 2 83 FLOW RATE 831

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	72	122	LAMINAR	1	71	7.9
HWDP/OH	0.398	44	50	114	LAMINAR	0	49	2.2
DP/OH	0.398	241	50	114	LAMINAR	0	49	11.7
DP/CSG	0.427	312	46	113	LAMINAR	0	46	12.8
DP/RIS	1.325	114	15	103	LAMINAR	0	15	0.3
TOTAL VOLUME		757			TOTAL PRESSURE DROP			35.0

LAG: 38.3 MINUTES 3180 STROKES #1 AND 3182 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 1064.5 HHP 516 IMPACT FORCE 1431
% SURFACE PRESSURE 36.1 HHP/sqin 4.38 JET VELOCITY 109

PRESSURE BREAKDOWN:

SURFACE 66.6
STRING 1221.9
BIT 1064.5
ANNULUS 35.0
TOTAL 2388.0 PUMP PRESSURE 2949.7 % DIFFERENCE 19.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.30	HYDROSTATIC PRESSURE 2697.9
CIRCULATING: ECD	9.42	CIRCULATING PRESSURE 2732.9
PULLING OUT: TRIP MARGIN	0.24	ESTIMATED SWAB 70.0
EFFECTIVE MUD WEIGHT	9.06	BOTTOM HOLE PRESSURE 2627.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1799.7

SPM 1 85 SPM 2 84 FLOW RATE 842

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	124	LAMINAR	1	72	8.0
HWDP/OH	0.398	44	50	115	LAMINAR	0	50	2.2
DP/OH	0.398	281	50	115	LAMINAR	0	50	13.7
DP/CSG	0.427	312	47	115	LAMINAR	0	47	12.9
DP/RIS	1.325	114	15	104	LAMINAR	0	15	0.4
TOTAL VOLUME		797			TOTAL PRESSURE DROP		37.1	

LAG: 39.7 MINUTES 3373 STROKES #1 AND 3324 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1073.3	HHP	527	IMPACT FORCE	1443
% SURFACE PRESSURE	36.8	HHP/sqin	4.48	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	67.2		
STRING	1272.1		
BIT	1073.3		
ANNULUS	37.1		
TOTAL	2449.8	PUMP PRESSURE	2914.7
		% DIFFERENCE	15.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.13	HYDROSTATIC PRESSURE 2803.2
CIRCULATING:	ECD 9.25	CIRCULATING PRESSURE 2840.3
PULLING OUT:	TRIP MARGIN 0.24	ESTIMATED SWAB 74.2
	EFFECTIVE MUD WEIGHT 8.89	BOTTOM HOLE PRESSURE 2729.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1899.7

SPM 1 84 SPM 2 80 FLOW RATE 820

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	71	122	LAMINAR	1	71	7.9
HWDP/OH	0.398	44	49	114	LAMINAR	0	49	2.1
DP/OH	0.398	321	49	114	LAMINAR	0	49	15.5
DP/CSG	0.427	312	46	113	LAMINAR	0	45	12.8
DP/RIS	1.325	114	15	103	LAMINAR	0	15	0.3

TOTAL VOLUME 837 TOTAL PRESSURE DROP 38.6

LAG: 42.9 MINUTES 3602 STROKES #1 AND 3430 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1035.4	HHP	495	IMPACT FORCE	1392
% SURFACE PRESSURE	34.9	HHP/sqin	4.20	JET VELOCITY	107

PRESSURE BREAKDOWN:

SURFACE	65.0		
STRING	1266.8		
BIT	1035.4		
ANNULUS	38.6		
TOTAL	2405.8	PUMP PRESSURE	2970.0
		% DIFFERENCE	19.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.30	HYDROSTATIC PRESSURE 3014.0
CIRCULATING:	ECD 9.42	CIRCULATING PRESSURE 3052.7
PULLING OUT:	TRIP MARGIN 0.24	ESTIMATED SWAB 77.3
	EFFECTIVE MUD WEIGHT 9.06	BOTTOM HOLE PRESSURE 2936.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 1999.6

SPM 1 80 SPM 2 78 FLOW RATE 789

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	69	121	LAMINAR	1	68	7.8
HWDP/OH	0.398	44	47	113	LAMINAR	0	47	2.1
DP/OH	0.398	360	47	113	LAMINAR	0	47	17.2
DP/CSG	0.427	312	44	112	LAMINAR	0	44	12.6
DP/RIS	1.325	114	14	102	LAMINAR	0	14	0.3
TOTAL VOLUME		877			TOTAL PRESSURE DROP			40.0

LAG: 46.6 MINUTES 3725 STROKES #1 AND 3642 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	981.1	HHP	452	IMPACT FORCE	1319
% SURFACE PRESSURE	32.9	HHP/sqin	3.83	JET VELOCITY	103

PRESSURE BREAKDOWN:

SURFACE	61.8		
STRING	1239.9		
BIT	981.1		
ANNULUS	40.0		
TOTAL	2322.7	PUMP PRESSURE	2981.0
		% DIFFERENCE	22.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 3240.8
CIRCULATING:	ECD 9.62	CIRCULATING PRESSURE 3280.8
PULLING OUT:	TRIP MARGIN 0.23	ESTIMATED SWAB 80.0
	EFFECTIVE MUD WEIGHT 9.27	BOTTOM HOLE PRESSURE 3160.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2099.6

SPM 1 79 SPM 2 80 FLOW RATE 795

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	69	121	LAMINAR	1	68	7.8	
HWDP/OH	0.398	44	47	113	LAMINAR	0	47	2.1	
DP/OH	0.398	400	47	113	LAMINAR	0	47	19.1	
DP/CSG	0.427	312	44	112	LAMINAR	0	44	12.6	
DP/RIS	1.325	114	14	102	LAMINAR	0	14	0.3	
TOTAL VOLUME		916	TOTAL PRESSURE DROP				42.0		

LAG: 48.4 MINUTES 3826 STROKES #1 AND 3875 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	994.1	HHP	461	IMPACT FORCE	1337
% SURFACE PRESSURE	33.0	HHP/sqin	3.91	JET VELOCITY	104

PRESSURE BREAKDOWN:

SURFACE	62.5		
STRING	1290.7		
BIT	994.1		
ANNULUS	42.0		
TOTAL	2389.4	PUMP PRESSURE	3010.0
		% DIFFERENCE	20.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 3402.9
CIRCULATING:	ECD 9.62	CIRCULATING PRESSURE 3444.9
PULLING OUT:	TRIP MARGIN 0.23	ESTIMATED SWAB 84.0
EFFECTIVE MUD WEIGHT	9.27	BOTTOM HOLE PRESSURE 3318.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2199.5

SPM 1 78 SPM 2 78 FLOW RATE 778

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	68	121	LAMINAR	1	67	7.7
HWDP/OH	0.398	44	47	112	LAMINAR	0	46	2.1
DP/OH	0.398	440	47	112	LAMINAR	0	46	20.9
DP/CSG	0.427	312	43	112	LAMINAR	0	43	12.5
DP/RIS	1.325	114	14	101	LAMINAR	0	14	0.3
TOTAL VOLUME		956	TOTAL PRESSURE DROP			43.5		

LAG: 51.6 MINUTES 4033 STROKES #1 AND 4003 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	958.2	HHP	435	IMPACT FORCE	1288
% SURFACE PRESSURE	32.8	HHP/sqin	3.69	JET VELOCITY	102

PRESSURE BREAKDOWN:

SURFACE	60.4		
STRING	1282.9		
BIT	958.2		
ANNULUS	43.5		
TOTAL	2345.0	PUMP PRESSURE	2916.9
		% DIFFERENCE	19.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.54	HYDROSTATIC PRESSURE 3581.4
CIRCULATING:	ECD 9.66	CIRCULATING PRESSURE 3625.0
PULLING OUT:	TRIP MARGN 0.23	ESTIMATED SWAB 87.1
	EFFECTIVE MUD WEIGHT 9.31	BOTTOM HOLE PRESSURE 3494.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2299.5

SPM 1 0 SPM 2 105 FLOW RATE 525

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	46	150	LAMINAR	0	45	9.7
HWDP/OH	0.398	44	31	141	LAMINAR	0	31	2.7
DP/OH	0.398	480	31	141	LAMINAR	0	31	28.7
DP/CSG	0.427	312	29	140	LAMINAR	0	29	15.8
DP/RIS	1.325	114	9	127	LAMINAR	0	9	0.4
TOTAL VOLUME		996	TOTAL PRESSURE DROP			57.3		

LAG: 79.6 MINUTES 0 STROKES #1 AND 8371 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	430.8	HHP	132	IMPACT FORCE	579
% SURFACE PRESSURE	30.8	HHP/sqin	1.12	JET VELOCITY	69

PRESSURE BREAKDOWN:

SURFACE	31.4		
STRING	684.8		
BIT	430.8		
ANNULUS	57.3		
TOTAL	1204.3	PUMP PRESSURE	1400.3
		% DIFFERENCE	14.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.42	HYDROSTATIC PRESSURE 3693.8
CIRCULATING:	ECD 9.56	CIRCULATING PRESSURE 3751.1
PULLING OUT:	TRIP MARGIN 0.29	ESTIMATED SWAB 114.6
	EFFECTIVE MUD WEIGHT 9.12	BOTTOM HOLE PRESSURE 3579.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2399.5

SPM 1 77 SPM 2 75 FLOW RATE 762

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	66	147	LAMINAR	1	66	11.0
HWDP/OH	0.398	44	46	138	LAMINAR	0	45	3.0
DP/OH	0.398	518	46	138	LAMINAR	0	45	34.8
DP/CSG	0.427	312	42	137	LAMINAR	0	42	17.8
DP/RIS	1.325	114	14	126	LAMINAR	0	14	0.5
TOTAL VOLUME		1035			TOTAL PRESSURE DROP			67.1

LAG: 57.1 MINUTES 4413 STROKES #1 AND 4288 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	914.4	HHP	407	IMPACT FORCE	1230
% SURFACE PRESSURE	31.5	HHP/sqin	3.45	JET VELOCITY	100

PRESSURE BREAKDOWN:

SURFACE	60.6		
STRING	1365.9		
BIT	914.4		
ANNULUS	67.1		
TOTAL	2408.0	PUMP PRESSURE	2906.1
		% DIFFERENCE	17.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 3888.9
CIRCULATING:	ECD 9.66	CIRCULATING PRESSURE 3956.0
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 134.2
	EFFECTIVE MUD WEIGHT 9.17	BOTTOM HOLE PRESSURE 3754.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2599.5

SPM 1 77 SPM 2 74 FLOW RATE 755

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	66	166	LAMINAR	0	65	13.5
HWD/PH	0.398	44	45	155	LAMINAR	0	45	3.6
DP/OH	0.398	598	45	155	LAMINAR	0	45	49.0
DP/CSG	0.427	312	42	154	LAMINAR	0	42	21.7
DP/RIS	1.325	114	14	141	LAMINAR	0	14	0.6
TOTAL VOLUME		1115			TOTAL PRESSURE DROP			88.5

LAG: 62.0 MINUTES 4806 STROKES #1 AND 4565 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	889.5	HHP	392	IMPACT FORCE	1196
% SURFACE PRESSURE	29.6	HHP/sqin	3.32	JET VELOCITY	99

PRESSURE BREAKDOWN:

SURFACE	62.4		
STRING	1477.3		
BIT	889.5		
ANNULUS	88.5		
TOTAL	2517.6	PUMP PRESSURE	3009.5
		% DIFFERENCE	16.3

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.41	HYDROSTATIC PRESSURE 4175.0
CIRCULATING:	ECD 9.61	CIRCULATING PRESSURE 4263.5
PULLING OUT:	TRIP MARGIN 0.40	ESTIMATED SWAB 176.9
EFFECTIVE MUD WEIGHT	9.02	BOTTOM HOLE PRESSURE 3998.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2700.0 AND TVD 2699.5

SPM 1 76 SPM 2 73 FLOW RATE 744

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	65	177	LAMINAR	0	64	15.3
HWDP/OH	0.398	44	44	168	LAMINAR	0	44	4.2
DP/OH	0.398	638	44	168	LAMINAR	0	44	60.7
DP/CSG	0.427	312	41	167	LAMINAR	0	41	25.3
DP/RIS	1.325	114	13	155	LAMINAR	0	13	0.7
TOTAL VOLUME		1155			TOTAL PRESSURE DROP			106.3

LAG: 65.2 MINUTES 4947 STROKES #1 AND 4758 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	875.7	HHP	380	IMPACT FORCE	1178
% SURFACE PRESSURE	29.7	HHP/sqin	3.23	JET VELOCITY	97

PRESSURE BREAKDOWN:

SURFACE	61.4		
STRING	1490.2		
BIT	875.7		
ANNULUS	106.3		
TOTAL	2533.6	PUMP PRESSURE	2949.9
		% DIFFERENCE	14.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.54	HYDROSTATIC PRESSURE 4394.5
CIRCULATING:	ECD 9.77	CIRCULATING PRESSURE 4500.8
PULLING OUT:	TRIP MARGIN 0.46	ESTIMATED SWAB 212.6
	EFFECTIVE MUD WEIGHT 9.08	BOTTOM HOLE PRESSURE 4181.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2800.0 AND TVD 2799.5

SPM 1 77 SPM 2 73 FLOW RATE 750

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSUR DRO
DC/OH	0.274	47	65	154	LAMINAR	0	65	12.1
HWDP/OH	0.398	44	45	143	LAMINAR	0	45	3.2
DP/OH	0.398	678	45	143	LAMINAR	0	45	48.6
DP/CSG	0.427	312	42	142	LAMINAR	0	42	18.9
DP/RIS	1.325	114	13	128	LAMINAR	0	13	0.5
TOTAL VOLUME		1195	TOTAL PRESSURE DROP			83.4		

LAG: 66.9 MINUTES 5150 STROKES #1 AND 4891 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	895.5	HHP	392	IMPACT FORCE	1204
% SURFACE PRESSURE	30.4	HHP/sqin	3.32	JET VELOCITY	98

PRESSURE BREAKDOWN:

SURFACE	62.6		
STRING	1555.4		
BIT	895.5		
ANNULUS	83.4		
TOTAL	2597.0	PUMP PRESSURE	2946.9
		% DIFFERENCE	11.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS		
NOT CIRCULATING:	MUD WEIGHT	9.61	HYDROSTATIC PRESSURE	4590.3
CIRCULATING:	ECD	9.79	CIRCULATING PRESSURE	4673.6
PULLING OUT:	TRIP MARGIN	0.35	ESTIMATED SWAB	166.8
	EFFECTIVE MUD WEIGHT	9.26	BOTTOM HOLE PRESSURE	4423.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2900.0 AND TVD 2899.5

SPM 1 77 SPM 2 73 FLOW RATE 748

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	65	155	LAMINAR	0	64	12.1
HWDP/OH	0.398	44	45	144	LAMINAR	0	45	3.2
DP/OH	0.398	717	45	144	LAMINAR	0	45	51.4
DP/CSG	0.427	312	42	143	LAMINAR	0	41	18.9
DP/RIS	1.325	114	13	129	LAMINAR	0	13	0.5

TOTAL VOLUME 1235 TOTAL PRESSURE DROP 86.1

LAG: 69.3 MINUTES 5309 STROKES #1 AND 5066 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	876.1	HHP	382	IMPACT FORCE	1178
% SURFACE PRESSURE	29.3	HHP/sqin	3.24	JET VELOCITY	98

PRESSURE BREAKDOWN:

SURFACE	61.5		
STRING	1563.0		
BIT	876.1		
ANNULUS	86.1		
TOTAL	2586.7	PUMP PRESSURE	2986.2
		% DIFFERENCE	13.4

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.45	HYDROSTATIC PRESSURE 4676.3
CIRCULATING:	ECD 9.63	CIRCULATING PRESSURE 4762.5
PULLING OUT:	TRIP MARGIN 0.35	ESTIMATED SWAB 172.3
	EFFECTIVE MUD WEIGHT 9.11	BOTTOM HOLE PRESSURE 4504.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3000.0 AND TVD 2999.3

SPM 1 76 SPM 2 76 FLOW RATE 755

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	66	153	LAMINAR	0	65	11.8
HWDP/OH	0.398	44	45	144	LAMINAR	0	45	3.2
DP/OH	0.398	757	45	144	LAMINAR	0	45	54.5
DP/CSG	0.427	311	42	143	LAMINAR	0	42	19.1
DP/RIS	1.325	114	14	131	LAMINAR	0	14	0.5
TOTAL VOLUME		1274			TOTAL PRESSURE DROP			89.1

LAG: 70.9 MINUTES 5355 STROKES #1 AND 5355 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	893.9	HHP	394	IMPACT FORCE	1202
% SURFACE PRESSURE	30.2	HHP/sqin	3.34	JET VELOCITY	99

PRESSURE BREAKDOWN:

SURFACE	60.6		
STRING	1574.1		
BIT	893.9		
ANNULUS	89.1		
TOTAL	2617.6	PUMP PRESSURE	2960.4
		% DIFFERENCE	11.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.46	HYDROSTATIC PRESSURE 4838.6
CIRCULATING:	ECD 9.63	CIRCULATING PRESSURE 4927.7
PULLING OUT:	TRIP MARGTN 0.35	ESTIMATED SWAB 178.2
	EFFECTIVE MUD WEIGHT 9.11	BOTTOM HOLE PRESSURE 4660.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3100.0 AND TVD 3099.2

SPM 1 78 SPM 2 72 FLOW RATE 753

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	65	152	LAMINAR	1	65	11.4
HWDP/OH	0.398	44	45	144	LAMINAR	0	45	3.1
DP/OH	0.398	797	45	144	LAMINAR	0	45	56.1
DP/CSG	0.427	312	42	143	LAMINAR	0	42	18.7
DP/RIS	1.325	114	14	132	LAMINAR	0	13	0.5
TOTAL VOLUME		1314			TOTAL PRESSURE DROP			89.8

LAG: 73.3 MINUTES 5753 STROKES #1 AND 5292 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 868.5 HHP 382 IMPACT FORCE 1168
% SURFACE PRESSURE 29.2 HHP/sqin 3.24 JET VELOCITY 99

PRESSURE BREAKDOWN:

SURFACE 58.0
STRING 1541.4
BIT 868.5
ANNULUS 89.8
TOTAL 2557.8 PUMP PRESSURE 2974.5 % DIFFERENCE 14.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.25	HYDROSTATIC PRESSURE 4889.0
CIRCULATING: ECD	9.42	CIRCULATING PRESSURE 4978.8
PULLING OUT: TRIP MARGIN	0.34	ESTIMATED SWAB 179.6
EFFECTIVE MUD WEIGHT	8.91	BOTTOM HOLE PRESSURE 4709.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3200.0 AND TVD 3198.9

SPM 1 77 SPM 2 72 FLOW RATE 742

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	64	151	LAMINAR	0	64	11.3
HWDP/OH	0.398	44	44	143	LAMINAR	0	44	3.1
DP/OH	0.398	837	44	143	LAMINAR	0	44	58.6
DP/CSG	0.427	312	41	142	LAMINAR	0	41	18.6
DP/RIS	1.325	114	13	131	LAMINAR	0	13	0.5
TOTAL VOLUME		1354	TOTAL PRESSURE DROP			92.1		

LAG: 76.6 MINUTES 5868 STROKES #1 AND 5512 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 859.5 HHP 372 IMPACT FORCE 1156
% SURFACE PRESSURE 29.1 HHP/sqin 3.16 JET VELOCITY 97

PRESSURE BREAKDOWN:

SURFACE 57.4
STRING 1557.4
BIT 859.5
ANNULUS 92.1
TOTAL 2566.4 PUMP PRESSURE 2951.4 % DIFFERENCE 13.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING: MUD WEIGHT	9.42	HYDROSTATIC PRESSURE 5138.2
CIRCULATING: ECD	9.58	CIRCULATING PRESSURE 5230.4
PULLING OUT: TRIP MARGIN	0.34	ESTIMATED SWAB 184.3
EFFECTIVE MUD WEIGHT	9.08	BOTTOM HOLE PRESSURE 4954.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3300.0 AND TVD 3298.6

SPM 1 73 SPM 2 74 FLOW RATE 733

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DRO
DC/OH	0.287	50	61	151	LAMINAR	0	61	10.3
HWDP/OH	0.398	44	44	143	LAMINAR	0	44	3.1
DP/OH	0.398	877	44	143	LAMINAR	0	44	61.1
DP/CSG	0.427	312	41	143	LAMINAR	0	41	18.5
DP/RIS	1.325	114	13	132	LAMINAR	0	13	0.5
TOTAL VOLUME		1396	TOTAL PRESSURE DROP			93.5		

LAG: 80.0 MINUTES 5842 STROKES #1 AND 5891 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	829.2	HHP	355	IMPACT FORCE	1115
% SURFACE PRESSURE	28.3	HHP/sq.in	3.01	JET VELOCITY	96

PRESSURE BREAKDOWN:

SURFACE	55.6		
STRING	1541.6		
BIT	829.2		
ANNULUS	93.5		
TOTAL	2519.9	PUMP PRESSURE	2931.3
		% DIFFERENCE	14.0

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.31	HYDROSTATIC PRESSURE 5238.3
CIRCULATING:	ECD 9.47	CIRCULATING PRESSURE 5331.8
PULLING OUT:	TRIP MARGIN 0.33	ESTIMATED SWAB 187.0
	EFFECTIVE MUD WEIGHT 8.98	BOTTOM HOLE PRESSURE 5051.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3400.0 AND TVD 3398.4

SPM 1 73 SPM 2 73 FLOW RATE 726

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.287	50	60	160	LAMINAR	0	60	11.6
HWDP/OH	0.398	44	43	157	LAMINAR	0	43	3.7
DP/OH	0.398	917	43	157	LAMINAR	0	43	77.2
DP/CSG	0.427	312	40	157	LAMINAR	0	40	22.6
DP/RIS	1.325	114	13	152	LAMINAR	0	13	0.8
TOTAL VOLUME		1436			TOTAL PRESSURE DROP			115.8

LAG: 83.1 MINUTES 6034 STROKES #1 AND 6034 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	828.8	HHP	351	IMPACT FORCE	1115
% SURFACE PRESSURE	28.1	HHP/sqin	2.98	JET VELOCITY	95

PRESSURE BREAKDOWN:

SURFACE	51.7		
STRING	1461.7		
BIT	828.8		
ANNULUS	115.8		
TOTAL	2458.1	PUMP PRESSURE	2954.0
		% DIFFERENCE	16.8

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.50	HYDROSTATIC PRESSURE 5507.8
CIRCULATING:	ECD 9.70	CIRCULATING PRESSURE 5623.7
PULLING OUT:	TRIP MARGIN 0.40	ESTIMATED SWAB 231.7
	EFFECTIVE MUD WEIGHT 9.10	BOTTOM HOLE PRESSURE 5276.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3450.0 AND TVD 3448.3

SPM 1 69 SPM 2 69 FLOW RATE 691

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.287	50	57	165	LAMINAR	0	57	12.1
HWDP/OH	0.398	44	41	163	LAMINAR	0	41	4.0
DP/OH	0.398	937	41	163	LAMINAR	0	41	84.6
DP/CSG	0.427	312	39	163	LAMINAR	0	38	24.3
DP/RIS	1.325	114	12	161	LAMINAR	0	12	0.9
TOTAL VOLUME		1456	TOTAL PRESSURE DROP			125.9		

LAG: 88.5 MINUTES 6118 STROKES #1 AND 6117 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	759.6	HHP	306	IMPACT FORCE	1021
% SURFACE PRESSURE	26.1	HHP/sqin	2.60	JET VELOCITY	90

PRESSURE BREAKDOWN:

SURFACE	46.3		
STRING	1322.4		
BIT	759.6		
ANNULUS	125.9		
TOTAL	2254.2	PUMP PRESSURE	2912.7
		% DIFFERENCE	22.6

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.60	HYDROSTATIC PRESSURE 5647.5
CIRCULATING:	ECD 9.81	CIRCULATING PRESSURE 5773.4
PULLING OUT:	TRIP MARGIN 0.43	ESTIMATED SWAB 251.8
	EFFECTIVE MUD WEIGHT 9.17	BOTTOM HOLE PRESSURE 5395.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3460.0 AND TVD 3458.3

SPM 1 57 SPM 2 0 FLOW RATE 286

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.119	1	57	115	LAMINAR	2	55	0.6
DC/LIN	0.287	44	24	101	LAMINAR	0	23	3.1
HWDP/LIN	0.398	44	17	92	LAMINAR	0	17	1.0
DP/LIN	0.398	946	17	92	LAMINAR	0	17	20.9
DP/CSG	0.427	312	16	91	LAMINAR	0	16	5.8
DP/RIS	1.325	114	5	80	LAMINAR	0	5	0.1
TOTAL VOLUME		1460			TOTAL PRESSURE DROP		31.5	

LAG: 214.5 MINUTES 12272 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP 294.3 HHP 49 IMPACT FORCE 263
 % SURFACE PRESSURE 31.5 HHP/sqin 0.64 JET VELOCITY 56

PRESSURE BREAKDOWN:

SURFACE 10.0
 STRING 281.5
 BIT 294.3
 ANNULUS 31.5
 TOTAL 617.3 PUMP PRESSURE 933.8 % DIFFERENCE 33.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.60	HYDROSTATIC PRESSURE 5663.9
CIRCULATING:	ECD 9.65	CIRCULATING PRESSURE 5695.4
PULLING OUT:	TRIP MARGIN 0.11	ESTIMATED SWAB 63.0
	EFFECTIVE MUD WEIGHT 9.49	BOTTOM HOLE PRESSURE 5601.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3500.0 AND TVD 3498.3

SPM 1 71 SPM 2 72 FLOW RATE 715

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.287	50	59	101	LAMINAR	1	59	5.3
HWDP/OH	0.398	44	43	92	LAMINAR	0	42	1.5
DP/OH	0.398	956	43	92	LAMINAR	0	42	31.8
DP/CSC	0.427	312	40	92	LAMINAR	0	40	8.7
DP/RIS	1.325	114	13	80	LAMINAR	0	13	0.2
TOTAL VOLUME		1476					TOTAL PRESSURE DROP	47.5

LAG: 86.6 MINUTES 6161 STROKES #1 AND 6241 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	809.9	HHP	338	IMPACT FORCE	1089
% SURFACE PRESSURE	27.6	HHP/sqin	2.87	JET VELOCITY	94

PRESSURE BREAKDOWN:

SURFACE	52.0				
STRING	1499.6				
BIT	809.9				
ANNULUS	47.5				
TOTAL	2409.0	PUMP PRESSURE	2935.1	% DIFFERENCE	17.9

BOTTOM HOLE PRESSURES:

	DENSITY UNITS	PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT 9.55	HYDROSTATIC PRESSURE 5699.6
CIRCULATING:	ECD 9.63	CIRCULATING PRESSURE 5747.1
PULLING OUT:	TRIP MARGIN 0.16	ESTIMATED SWAB 95.0
	EFFECTIVE MUD WEIGHT 9.39	BOTTOM HOLE PRESSURE 5604.6

(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 dollar

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	86.0-	225.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20	20 20
COST	0.00	TRIP TIME	2.0	BIT RUN		139.0
TOTAL HOURS	3.08	TOTAL TURNS	11808	CONDITION	T1	B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
90.0	38.2	1.0	57	8.6	0.50	0.10	359	96	1922	8.3	13.6
95.0	30.6	1.0	68	8.6	0.56	0.27	1021	119.20	920.29	8.3	13.6
100.0	45.4	1.0	67	8.6	0.50	0.38	1463	80.38	620.32	8.3	13.6
105.0	23.3	0.9	65	8.6	0.58	0.59	2300	157.04	498.40	8.3	13.6
110.0	45.2	1.4	57	8.6	0.50	0.70	2678	80.79	411.40	8.3	13.6
115.0	47.2	2.4	63	8.6	0.55	0.81	3079	77.30	353.80	8.3	13.7
120.0	36.6	0.5	59	8.6	0.47	0.95	3564	99.91	316.46	8.3	13.7
125.0	49.5	0.4	62	8.6	0.43	1.05	3939	73.85	285.36	8.3	13.7
130.0	27.4	4.0	58	8.6	0.68	1.23	4579	133.50	268.10	8.3	13.7
135.0	51.0	5.1	71	8.6	0.62	1.33	4995	71.62	248.05	8.3	13.8
140.0	72.0	5.7	71	8.6	0.57	1.40	5291	50.72	229.78	8.3	13.8
145.0	42.3	6.2	72	8.6	0.68	1.52	5801	86.43	217.63	8.3	13.8
150.0	87.0	5.5	70	8.6	0.52	1.57	6043	42.00	203.91	8.3	13.8
155.0	78.9	6.1	66	8.6	0.54	1.64	6293	46.26	192.49	8.3	13.8
160.0	130.4	5.7	68	8.6	0.44	1.68	6450	28.00	181.37	8.3	13.9
165.0	54.9	4.0	59	8.6	0.55	1.77	6773	66.55	174.10	8.3	13.9
170.0	59.8	3.2	64	8.6	0.53	1.85	7093	61.07	167.38	8.3	13.9
175.0	47.2	4.7	65	8.6	0.61	1.96	7505	77.30	162.32	8.3	13.9
180.0	43.8	4.8	67	8.6	0.63	2.07	7965	83.39	158.12	8.3	13.9
185.0	39.5	4.6	64	8.6	0.64	2.20	8448	92.52	154.80	8.3	14.0
190.0	68.2	4.3	73	8.6	0.56	2.27	8770	53.56	149.94	8.3	14.0
195.0	68.2	4.7	63	8.6	0.53	2.34	9046	53.56	145.52	8.3	14.0
200.0	86.1	6.1	64	8.6	0.52	2.40	9270	42.40	140.99	8.3	14.0
205.0	26.2	6.2	58	8.6	0.73	2.59	9932	139.18	140.92	8.3	14.1
210.0	40.4	6.6	68	8.6	0.69	2.72	10439	90.31	138.88	8.3	14.1
215.0	46.2	3.8	62	8.6	0.59	2.82	10844	79.07	136.56	8.3	14.1
220.0	70.9	4.9	67	8.6	0.54	2.89	11128	51.53	133.39	8.3	14.1
225.0	26.8	5.2	61	8.6	0.72	3.08	11808	136.14	133.49	8.3	14.1

BIT NUMBER	1	IADC CODE	111	INTERVAL	225.0-	830.4
HTC OSC3AJ		SIZE	17.500	NOZZLES	18	18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN		605.4
TOTAL HOURS	12.72	TOTAL TURNS	106193	CONDITION	T1	B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
230.0	264.0	15.0	120	8.6	0.54	0.02	136	14	3688	8.3	14.2
235.0	206.9	18.8	120	8.6	0.63	0.04	310	18	1853	8.3	14.2
240.0	170.5	8.8	120	8.6	0.58	0.07	521	21	1242	8.3	14.2
245.0	211.8	17.8	120	8.6	0.62	0.10	691	17.25	936.01	8.3	14.2
250.0	240.0	14.2	120	8.6	0.56	0.12	841	15.22	751.85	8.3	14.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
255.0	246.6	22.2	120	8.6	0.61	0.14	987	14.81	629.01	8.3	14.3
260.0	181.8	14.0	120	8.6	0.63	0.16	1185	20.09	542.02	8.3	14.3
265.0	260.9	15.2	120	8.6	0.54	0.18	1323	14.00	476.02	8.3	14.3
270.0	216.9	14.1	120	8.6	0.58	0.21	1489	16.84	425.00	8.3	14.3
275.0	246.6	13.4	120	8.6	0.54	0.23	1635	14.81	383.98	8.3	14.3
280.0	159.3	15.7	120	8.6	0.68	0.26	1861	22.93	351.16	8.3	14.4
285.0	144.0	14.6	120	8.6	0.69	0.29	2111	25.36	324.01	8.3	14.4
290.0	85.7	12.4	120	8.6	0.79	0.35	2531	42.61	302.36	8.3	14.4
295.0	140.0	12.8	120	8.6	0.68	0.39	2789	26.09	282.63	8.3	14.4
300.0	137.4	12.8	120	8.6	0.68	0.42	3051	26.58	265.56	8.3	14.4
305.0	225.0	13.2	120	8.6	0.56	0.45	3211	16.23	249.97	8.3	14.5
310.0	230.8	13.8	120	8.7	0.56	0.47	3367	15.83	236.20	8.3	14.5
315.0	210.0	18.2	120	8.7	0.62	0.49	3538	17.39	224.04	8.3	14.5
320.0	189.5	15.6	120	8.7	0.62	0.52	3728	19.27	213.27	8.3	14.5
325.0	180.0	14.0	120	8.7	0.62	0.55	3928	20.29	203.62	8.3	14.5
330.0	197.8	15.2	120	8.7	0.61	0.57	4110	18.46	194.80	8.3	14.5
335.0	104.3	16.6	120	8.7	0.78	0.62	4455	35.00	187.54	8.3	14.6
340.0	160.0	13.4	120	8.7	0.64	0.65	4680	22.83	180.38	8.3	14.6
345.0	120.0	12.7	120	8.7	0.70	0.69	4980	30.43	174.13	8.3	14.6
350.0	71.1	11.8	120	8.7	0.82	0.76	5487	51.40	169.22	8.3	14.6
355.0	51.7	13.1	120	8.7	0.91	0.86	6183	70.66	165.43	8.3	14.6
360.0	81.5	13.3	120	8.8	0.80	0.92	6625	44.83	160.96	8.3	14.7
365.0	144.0	14.8	120	8.8	0.68	0.95	6875	25.36	156.12	8.3	14.7
370.0	272.7	24.6	120	8.8	0.58	0.97	7007	13.39	151.20	8.3	14.7
375.0	127.7	24.4	120	8.8	0.79	1.01	7289	28.61	147.11	8.3	14.7
380.0	120.0	27.0	120	8.8	0.83	1.05	7589	30.43	143.35	8.3	14.7
385.0	124.5	26.0	120	8.8	0.81	1.09	7878	29.33	139.78	8.3	14.8
390.0	102.3	29.1	120	8.8	0.89	1.14	8230	35.71	136.63	8.3	14.8
395.0	92.3	31.4	120	8.8	0.94	1.20	8620	39.56	133.78	8.3	14.8
400.0	128.6	29.7	120	8.7	0.83	1.24	8900	28.40	130.76	8.3	14.8
405.0	101.7	30.9	120	8.7	0.91	1.29	9254	35.91	128.13	8.3	14.8
410.0	84.1	28.1	120	8.8	0.94	1.34	9682	43.42	125.84	8.3	14.8
415.0	88.7	33.8	120	8.8	0.97	1.40	10088	41.19	123.61	8.3	14.9
420.0	87.1	32.6	120	8.8	0.97	1.46	10502	41.93	121.52	8.3	14.9
425.0	113.2	34.4	120	8.8	0.90	1.50	10820	32.26	119.29	8.3	14.9
430.0	64.1	33.7	120	8.8	1.07	1.58	11382	57.01	117.77	8.3	14.9
435.0	87.4	36.0	120	8.8	0.99	1.64	11794	41.80	115.96	8.3	14.9
440.0	68.7	35.9	120	8.8	1.07	1.71	12318	53.17	114.50	8.3	15.0
445.0	76.9	35.2	120	8.7	1.03	1.78	12786	47.48	112.98	8.3	15.0
450.0	99.5	33.8	120	8.7	0.95	1.83	13148	36.70	111.28	8.3	15.0
455.0	180.0	36.7	120	8.7	0.78	1.85	13348	20.29	109.30	8.3	15.0
460.0	52.2	35.0	120	8.7	1.15	1.95	14038	70.00	108.47	8.3	15.0
465.0	52.2	34.9	120	8.7	1.15	2.05	14728	70.00	107.66	8.3	15.0
470.0	124.1	35.9	120	8.8	0.88	2.09	15018	29.42	106.07	8.3	15.1
475.0	57.1	37.3	120	8.8	1.13	2.17	15648	63.91	105.22	8.3	15.1
480.0	63.9	37.6	120	8.8	1.10	2.25	16211	57.16	104.28	8.3	15.1
485.0	87.8	35.2	120	8.8	0.98	2.31	16621	41.59	103.08	8.3	15.1
490.0	80.7	33.3	120	8.8	0.99	2.37	17067	45.24	101.99	8.3	15.1
495.0	55.0	33.0	120	8.8	1.11	2.46	17722	66.40	101.33	8.3	15.1
500.0	90.0	32.6	120	8.8	0.96	2.52	18122	40.58	100.22	8.3	15.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
505.0	55.4	35.8	120	8.9	1.12	2.61	18772	65.94	99.61	8.3	15.2
510.0	40.8	35.8	120	8.8	1.22	2.73	19654	89.47	99.43	8.3	15.2
515.0	41.7	30.7	120	8.8	1.17	2.85	20518	87.65	99.23	8.3	15.2
520.0	39.6	32.2	120	8.8	1.20	2.98	21426	92.11	99.11	8.3	15.2
525.0	35.4	30.6	120	8.8	1.22	3.12	22444	103.27	99.18	8.3	15.3
530.0	24.8	30.8	120	8.8	1.33	3.32	23897	147.43	99.97	8.3	15.3
535.0	55.4	36.3	120	8.7	1.14	3.41	24547	65.94	99.42	8.3	15.3
540.0	42.9	32.9	120	8.7	1.19	3.53	25387	85.21	99.19	8.3	15.3
545.0	44.0	28.6	120	8.7	1.14	3.64	26205	82.98	98.94	8.3	15.3
550.0	59.4	32.9	120	8.7	1.09	3.72	26811	61.48	98.36	8.3	15.3
555.0	42.8	28.3	120	8.7	1.15	3.84	27653	85.42	98.17	8.3	15.4
560.0	59.4	33.7	120	8.7	1.11	3.92	28259	61.48	97.62	8.3	15.4
565.0	45.0	33.1	120	8.7	1.18	4.04	29059	81.16	97.38	8.3	15.4
570.0	53.4	33.4	120	8.7	1.13	4.13	29733	68.37	96.96	8.3	15.4
575.0	81.1	30.3	120	8.7	0.97	4.19	30177	45.04	96.22	8.3	15.4
580.0	74.4	31.2	120	8.7	1.01	4.26	30661	49.10	95.55	8.3	15.4
585.0	51.9	29.6	120	8.7	1.10	4.35	31355	70.39	95.20	8.3	15.4
590.0	47.4	28.3	120	8.7	1.12	4.46	32115	77.10	94.96	8.3	15.5
595.0	42.1	29.2	120	8.8	1.16	4.58	32971	86.84	94.85	8.3	15.5
600.0	46.7	28.6	150	8.8	1.18	4.69	33935	78.26	94.62	8.3	15.5
605.0	52.6	26.9	150	8.8	1.12	4.78	34790	69.39	94.29	8.3	15.5
610.0	51.4	27.9	150	8.8	1.14	4.88	35665	71.01	93.99	8.3	15.5
615.0	33.8	30.0	150	8.7	1.30	5.03	36998	108.21	94.17	8.3	15.5
620.0	32.0	30.1	150	8.7	1.32	5.18	38405	114.13	94.42	8.3	15.6
625.0	30.5	28.9	150	8.7	1.32	5.35	39880	119.70	94.74	8.3	15.6
630.0	20.3	28.8	150	8.7	1.44	5.59	42092	179.56	95.79	8.3	15.6
635.0	26.9	29.3	150	8.7	1.36	5.78	43767	135.94	96.28	8.3	15.6
640.0	28.1	29.7	150	8.7	1.34	5.96	45367	129.85	96.68	8.3	15.6
645.0	28.8	29.2	150	8.7	1.34	6.13	46930	126.81	97.04	8.3	15.6
650.0	40.4	29.6	150	8.7	1.24	6.25	48042	90.29	96.96	8.3	15.7
655.0	37.5	27.7	150	8.7	1.24	6.39	49242	97.39	96.97	8.3	15.7
660.0	39.6	29.3	150	8.7	1.24	6.51	50380	92.31	96.91	8.3	15.7
665.0	25.2	30.3	150	8.6	1.40	6.71	52167	145.07	97.46	8.3	15.7
670.0	31.0	30.2	150	8.6	1.34	6.87	53617	117.68	97.69	8.3	15.7
675.0	37.1	30.8	150	8.6	1.29	7.01	54830	98.40	97.69	8.3	15.7
680.0	38.7	31.1	150	8.7	1.28	7.14	55992	94.34	97.66	8.3	15.8
685.0	58.2	30.2	150	8.7	1.15	7.22	56765	62.71	97.28	8.3	15.8
690.0	34.0	30.8	150	8.7	1.31	7.37	58087	107.33	97.39	8.3	15.8
695.0	37.6	31.7	150	8.7	1.29	7.50	59283	97.01	97.38	8.3	15.8
700.0	39.7	31.7	150	8.7	1.27	7.63	60415	91.91	97.32	8.3	15.8
705.0	28.3	30.5	150	8.7	1.35	7.81	62008	129.24	97.66	8.3	15.8
710.0	26.2	29.1	150	8.7	1.36	8.00	63728	139.59	98.09	8.3	15.8
715.0	27.8	28.9	150	8.7	1.35	8.18	65344	131.20	98.43	8.3	15.9
720.0	26.7	29.9	150	8.6	1.39	8.36	67029	136.75	98.81	8.3	15.9
725.0	28.5	29.1	150	8.6	1.36	8.54	68609	128.23	99.11	8.3	15.9
730.0	30.2	29.9	150	8.6	1.35	8.70	70102	121.12	99.33	8.3	15.9
735.0	29.2	26.0	150	8.6	1.31	8.88	71642	124.98	99.58	8.3	15.9
740.0	35.6	28.4	150	8.6	1.28	9.02	72907	102.66	99.61	8.3	15.9
745.0	35.5	30.6	150	8.6	1.31	9.16	74174	102.86	99.64	8.3	15.9
750.0	33.1	31.2	150	8.6	1.33	9.31	75532	110.17	99.74	8.3	16.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
755.0	31.9	32.3	150	8.6	1.36	9.47	76944	114.63	99.88	8.3	16.0
760.0	26.5	32.3	150	8.6	1.42	9.65	78644	137.96	100.24	8.3	16.0
765.0	27.5	36.3	150	8.6	1.45	9.84	80282	132.89	100.54	8.3	16.0
770.0	30.0	35.0	150	8.6	1.41	10.00	81782	121.73	100.73	8.3	16.0
775.0	32.9	35.5	150	8.6	1.38	10.15	83149	110.98	100.83	8.3	16.0
780.0	32.3	39.4	150	8.6	1.43	10.31	84542	113.01	100.94	8.3	16.0
785.0	34.2	40.1	150	8.6	1.41	10.46	85859	106.92	100.99	8.3	16.1
790.0	32.4	40.3	150	8.6	1.43	10.61	87247	112.60	101.09	8.3	16.1
795.0	28.3	41.4	150	8.6	1.49	10.79	88837	129.04	101.34	8.3	16.1
800.0	22.6	40.3	150	8.6	1.55	11.01	90829	161.70	101.86	8.3	16.1
805.0	18.9	41.0	150	8.7	1.61	11.27	93212	193.35	102.65	8.3	16.1
810.0	16.6	35.3	150	8.7	1.58	11.57	95924	220.13	103.65	8.3	16.1
815.0	20.9	37.7	150	8.7	1.54	11.81	98074	174.48	104.26	8.3	16.1
820.0	19.0	34.3	150	8.6	1.53	12.08	100442	192.14	104.99	8.3	16.2
825.0	18.6	36.4	150	8.6	1.57	12.35	102864	196.60	105.76	8.3	16.2
830.0	14.7	37.4	150	8.6	1.66	12.69	105936	249.26	106.94	8.3	16.2
830.4	14.0	37.4	150	8.6	1.68	12.72	106193	261.22	107.04	8.3	16.2

BIT NUMBER	2	IADC CODE	114	INTERVAL	830.4- 1344.8
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2381.00	TRIP TIME	4.9	BIT RUN	514.4
TOTAL HOURS	26.03	TOTAL TURNS	221520	CONDITION	T4 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
831.0	120.0	17.4	71	8.8	0.67	0.01	21	30	33823	8.3	16.2
834.0	120.0	18.0	66	8.8	0.65	0.03	120	30	5663	8.3	16.2
838.0	34.0	18.3	100	8.8	1.13	0.15	827	108	2739	8.3	16.2
839.0	15.5	18.3	100	8.8	1.35	0.21	1213	235	2448	8.3	16.2
840.0	18.0	20.0	100	8.8	1.33	0.27	1547	203	2214	8.3	16.2
841.0	22.2	20.8	100	8.8	1.28	0.31	1817	164	2021	8.3	16.2
842.0	18.7	21.3	100	8.8	1.34	0.37	2138	196	1863	8.3	16.2
843.0	17.2	25.1	100	8.8	1.42	0.42	2487	212	1732	8.3	16.2
844.0	25.9	37.9	100	8.8	1.46	0.46	2718	141	1615	8.3	16.2
845.0	22.9	38.6	100	8.8	1.52	0.51	2980	159	1515	8.3	16.2
846.0	32.7	39.6	100	8.8	1.40	0.54	3163	112	1425	8.3	16.2
847.0	36.7	39.1	100	8.8	1.36	0.56	3327	99	1346	8.3	16.2
848.0	25.7	36.1	100	8.8	1.45	0.60	3560	142	1277	8.3	16.2
849.0	23.8	37.4	100	8.8	1.49	0.65	3812	153	1217	8.3	16.2
850.0	34.6	37.6	100	8.8	1.36	0.67	3985	106	1160	8.3	16.2
851.0	33.0	37.8	100	8.8	1.38	0.70	4167	111	1109	8.3	16.2
852.0	33.6	37.7	100	8.8	1.37	0.73	4345	109	1063	8.3	16.3
853.0	36.0	35.9	112	8.8	1.37	0.76	4532	101	1020	8.3	16.3
854.0	43.4	36.7	150	8.8	1.41	0.79	4739	84.20	980.62	8.3	16.3
855.0	36.7	36.8	150	8.8	1.47	0.81	4984	99.42	944.80	8.3	16.3
856.0	39.1	36.7	150	8.8	1.45	0.84	5214	93.33	911.54	8.3	16.3
857.0	32.4	31.0	150	8.8	1.44	0.87	5492	112.60	881.50	8.3	16.3
858.0	34.0	33.7	150	8.8	1.46	0.90	5757	107.53	853.46	8.3	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
859.0	25.4	35.5	150	8.8	1.58	0.94	6112	144.05	828.66	8.3	16.3
860.0	29.5	37.0	150	8.8	1.55	0.97	6417	123.76	804.84	8.3	16.3
861.0	33.0	35.9	150	8.8	1.50	1.00	6689	110.57	782.15	8.3	16.3
862.0	35.0	37.5	150	8.8	1.50	1.03	6947	104.49	760.71	8.3	16.3
863.0	38.3	37.3	150	8.8	1.47	1.06	7182	95.36	740.30	8.3	16.3
864.0	36.7	37.0	150	8.8	1.48	1.08	7427	99.42	721.22	8.3	16.3
865.0	38.7	37.1	150	8.8	1.46	1.11	7659	94.34	703.11	8.3	16.3
866.0	30.5	37.6	150	8.8	1.55	1.14	7954	119.70	686.72	8.3	16.3
867.0	40.0	38.6	150	8.8	1.46	1.17	8179	91.30	670.45	8.3	16.3
868.0	45.6	39.6	150	8.8	1.43	1.19	8377	80.14	654.75	8.3	16.3
869.0	41.4	39.6	150	8.8	1.46	1.21	8594	88.26	640.07	8.3	16.3
870.0	43.9	39.8	150	8.8	1.44	1.24	8799	83.18	626.01	8.3	16.3
871.0	46.2	39.9	150	8.8	1.43	1.26	8994	79.13	612.54	8.3	16.3
872.0	46.2	39.8	150	8.8	1.43	1.28	9189	79.13	599.72	8.3	16.3
873.0	45.0	39.3	150	8.8	1.43	1.30	9389	81.16	587.55	8.3	16.3
874.0	48.6	39.8	150	8.8	1.41	1.32	9574	75.07	575.79	8.3	16.3
875.0	30.8	38.0	150	8.8	1.55	1.35	9867	118.69	565.54	8.3	16.3
876.0	32.7	35.5	150	8.8	1.50	1.39	10142	111.59	555.59	8.3	16.3
877.0	36.7	36.5	150	8.8	1.47	1.41	10387	99.42	545.80	8.3	16.3
878.0	37.9	37.0	150	8.8	1.47	1.44	10624	96.37	536.36	8.3	16.3
879.0	37.5	37.0	150	8.8	1.47	1.47	10864	97.39	527.33	8.3	16.3
880.0	40.9	37.0	150	8.8	1.45	1.49	11084	89.27	518.49	8.3	16.3
881.0	36.4	37.4	150	8.8	1.49	1.52	11332	100.43	510.23	8.3	16.3
882.0	43.4	37.1	150	8.8	1.43	1.54	11539	84.20	501.97	8.3	16.3
883.0	40.9	36.7	150	8.7	1.45	1.57	11759	89.27	494.13	8.3	16.3
884.0	45.0	34.7	150	8.8	1.39	1.59	11959	81.16	486.42	8.3	16.3
885.0	45.6	35.3	150	8.8	1.39	1.61	12157	80.14	478.98	8.3	16.3
886.0	47.4	34.1	150	8.7	1.36	1.63	12347	77.10	471.75	8.3	16.3
887.0	41.4	34.8	150	8.8	1.42	1.65	12564	88.26	464.98	8.3	16.3
888.0	36.4	34.2	150	8.7	1.45	1.68	12812	100.43	458.65	8.3	16.3
889.0	36.4	34.9	150	8.8	1.46	1.71	13059	100.43	452.54	8.3	16.4
890.0	40.0	35.7	150	8.7	1.44	1.73	13284	91.30	446.48	8.3	16.4
891.0	35.6	35.4	150	8.7	1.48	1.76	13537	102.46	440.80	8.3	16.4
892.0	29.3	35.5	150	8.7	1.55	1.80	13844	124.78	435.67	8.3	16.4
893.0	33.3	36.9	150	8.7	1.52	1.83	14114	109.56	430.46	8.3	16.4
894.0	28.1	36.0	150	8.7	1.57	1.86	14434	129.85	425.73	8.3	16.4
895.0	31.3	33.2	150	8.7	1.49	1.89	14722	116.66	420.95	8.3	16.4
896.0	33.6	34.5	150	8.7	1.48	1.92	14989	108.55	416.19	8.3	16.4
897.0	32.7	34.0	150	8.7	1.49	1.95	15264	111.59	411.61	8.3	16.4
898.0	37.9	35.2	150	8.7	1.45	1.98	15502	96.37	406.95	8.3	16.4
899.0	35.0	35.0	150	8.7	1.48	2.01	15759	104.49	402.54	8.3	16.4
900.0	35.3	35.4	150	8.7	1.48	2.04	16014	103.47	398.24	8.3	16.4
901.0	32.1	35.5	150	8.7	1.51	2.07	16294	113.62	394.21	8.3	16.4
902.0	31.6	35.9	150	8.7	1.53	2.10	16579	115.65	390.32	8.3	16.4
903.0	37.5	34.4	150	8.7	1.45	2.13	16819	97.39	386.29	8.3	16.4
904.0	33.3	34.8	150	8.7	1.49	2.16	17089	109.56	382.53	8.3	16.4
905.0	34.3	35.8	150	8.7	1.50	2.19	17352	106.52	378.83	8.3	16.4
906.0	34.6	35.5	150	8.7	1.49	2.22	17612	105.50	375.21	8.3	16.4
907.0	36.4	37.7	150	8.7	1.50	2.24	17859	100.43	371.62	8.3	16.4
908.0	37.1	37.2	150	8.7	1.49	2.27	18102	98.40	368.10	8.3	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
909.0	40.0	37.6	150	8.7	1.47	2.29	18327	91.30	364.58	8.3	16.4
910.0	44.4	38.2	150	8.7	1.44	2.32	18529	82.17	361.03	8.3	16.4
911.0	44.4	38.3	150	8.7	1.44	2.34	18732	82.17	357.57	8.3	16.4
912.0	45.6	38.2	150	8.7	1.43	2.36	18929	80.14	354.17	8.3	16.4
913.0	36.0	35.3	150	8.7	1.48	2.39	19179	101.44	351.11	8.3	16.4
914.0	41.9	36.1	150	8.7	1.44	2.41	19394	87.24	347.96	8.3	16.4
915.0	33.0	36.8	150	8.7	1.53	2.44	19667	110.57	345.15	8.3	16.4
916.0	31.9	37.0	150	8.7	1.54	2.48	19949	114.63	342.46	8.3	16.4
917.0	34.0	38.0	150	8.7	1.53	2.50	20214	107.53	339.75	8.3	16.4
918.0	30.3	37.8	150	8.7	1.57	2.54	20512	120.72	337.25	8.3	16.4
919.0	33.3	38.3	150	8.7	1.55	2.57	20782	109.56	334.68	8.3	16.4
920.0	30.8	38.6	150	8.7	1.57	2.60	21074	118.69	332.27	8.3	16.4
921.0	35.0	39.9	150	8.7	1.54	2.63	21332	104.49	329.75	8.3	16.4
922.0	31.9	40.8	150	8.7	1.59	2.66	21614	114.63	327.40	8.3	16.4
926.0	32.1	40.0	150	9.0	1.53	2.78	22736	113.84	318.47	8.3	16.5
927.0	24.3	40.0	150	9.0	1.62	2.83	23106	150.14	316.72	8.3	16.5
929.0	32.7	40.0	150	9.0	1.52	2.89	23656	111.59	312.56	8.3	16.5
930.0	34.3	40.0	150	9.0	1.50	2.92	23919	106.52	310.50	8.3	16.5
931.0	31.0	40.2	150	9.1	1.52	2.95	24209	117.68	308.58	8.3	16.5
932.0	32.7	40.3	150	9.0	1.52	2.98	24484	111.59	306.64	8.3	16.5
933.0	32.4	40.6	150	9.0	1.53	3.01	24761	112.60	304.75	8.3	16.5
934.0	35.6	40.6	150	9.0	1.50	3.04	25014	102.46	302.80	8.3	16.5
935.0	34.6	40.9	150	9.0	1.51	3.07	25274	105.50	300.91	8.3	16.5
936.0	30.3	40.9	150	9.0	1.56	3.10	25571	120.72	299.20	8.3	16.5
937.0	25.5	40.9	150	9.0	1.62	3.14	25924	143.04	297.74	8.3	16.5
938.0	23.1	39.5	150	9.0	1.63	3.18	26314	158.25	296.44	8.3	16.5
939.0	37.9	42.9	150	8.9	1.51	3.21	26551	96.37	294.60	8.3	16.5
940.0	37.5	40.0	150	9.0	1.48	3.24	26791	97.39	292.80	8.3	16.5
941.0	40.9	40.6	150	8.9	1.46	3.26	27011	89.27	290.96	8.3	16.5
942.0	43.4	40.7	150	9.0	1.44	3.28	27219	84.20	289.11	8.3	16.5
943.0	46.2	41.2	150	9.0	1.42	3.30	27414	79.13	287.24	8.3	16.5
944.0	49.3	41.7	150	9.0	1.40	3.32	27596	74.05	285.37	8.3	16.5
945.0	46.2	41.2	150	9.0	1.42	3.35	27791	79.13	283.57	8.3	16.5
946.0	41.4	40.8	150	9.0	1.45	3.37	28009	88.26	281.88	8.3	16.5
947.0	41.4	41.8	150	9.0	1.47	3.39	28226	88.26	280.22	8.3	16.5
948.0	28.3	37.2	150	9.0	1.54	3.43	28544	128.83	278.93	8.3	16.5
949.0	26.7	35.6	150	8.9	1.54	3.47	28881	136.95	277.73	8.3	16.5
950.0	27.3	36.3	150	8.9	1.54	3.50	29211	133.91	276.53	8.3	16.5
951.0	22.8	36.5	150	9.0	1.61	3.55	29606	160.28	275.57	8.3	16.5
952.0	27.9	36.4	150	9.0	1.54	3.58	29929	130.86	274.38	8.3	16.5
953.0	26.7	36.4	150	9.0	1.55	3.62	30266	136.95	273.25	8.3	16.5
954.0	22.6	35.8	150	9.0	1.60	3.67	30664	161.30	272.35	8.3	16.5
955.0	24.0	35.3	150	9.0	1.57	3.71	31039	152.17	271.38	8.3	16.5
956.0	27.9	37.0	150	8.9	1.55	3.74	31361	130.86	270.27	8.3	16.5
957.0	21.3	35.1	150	8.9	1.61	3.79	31784	171.44	269.48	8.3	16.5
958.0	27.9	35.8	150	8.9	1.54	3.83	32106	130.86	268.40	8.3	16.5
959.0	28.1	35.8	150	8.9	1.53	3.86	32426	129.85	267.32	8.3	16.5
960.0	22.6	35.8	150	8.9	1.60	3.91	32824	161.30	266.50	8.3	16.5
961.0	25.2	35.5	150	8.9	1.57	3.95	33181	145.07	265.57	8.3	16.5
962.0	28.8	36.6	150	8.9	1.53	3.98	33494	126.81	264.52	8.3	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
963.0	30.0	37.9	150	8.9	1.54	4.01	33794	121.73	263.44	8.3	16.5
964.0	29.8	37.6	150	8.9	1.54	4.05	34096	122.75	262.39	8.3	16.5
965.0	30.0	37.9	150	8.9	1.54	4.08	34396	121.73	261.34	8.3	16.6
966.0	27.9	38.6	150	8.9	1.57	4.12	34719	130.86	260.38	8.3	16.6
967.0	25.7	37.0	150	8.9	1.59	4.15	35069	142.02	259.51	8.3	16.6
968.0	22.6	37.1	150	8.9	1.63	4.20	35466	161.30	258.80	8.3	16.6
969.0	25.5	36.9	150	8.9	1.59	4.24	35819	143.04	257.97	8.3	16.6
970.0	25.7	37.9	150	8.9	1.59	4.28	36169	142.02	257.14	8.3	16.6
971.0	27.3	35.4	150	8.9	1.54	4.31	36499	133.91	256.26	8.3	16.6
972.0	27.9	34.5	150	8.9	1.52	4.35	36821	130.86	255.37	8.3	16.6
973.0	25.0	35.2	150	8.9	1.57	4.39	37181	146.08	254.61	8.3	16.6
974.0	31.3	35.4	150	8.9	1.50	4.42	37469	116.66	253.65	8.3	16.6
975.0	32.1	34.3	150	8.9	1.47	4.45	37749	113.62	252.68	8.3	16.6
976.0	40.4	34.6	150	8.9	1.40	4.48	37971	90.29	251.56	8.3	16.6
977.0	32.7	32.2	150	8.9	1.44	4.51	38246	111.59	250.61	8.3	16.6
978.0	36.4	32.6	150	8.9	1.41	4.54	38494	100.43	249.59	8.3	16.6
979.0	38.7	35.2	150	8.9	1.42	4.56	38726	94.34	248.55	8.3	16.6
980.0	36.4	38.6	150	8.9	1.49	4.59	38974	100.43	247.56	8.3	16.6
981.0	37.9	40.6	150	8.9	1.50	4.62	39211	96.37	246.55	8.3	16.6
982.0	31.3	42.3	150	8.9	1.58	4.65	39499	116.66	245.69	8.3	16.6
983.0	27.9	40.2	150	8.9	1.60	4.68	39821	130.86	244.94	8.3	16.6
984.0	20.8	38.5	150	8.9	1.68	4.73	40254	175.50	244.49	8.3	16.6
985.0	18.5	36.8	150	8.9	1.69	4.79	40741	197.82	244.19	8.3	16.6
986.0	22.4	37.8	150	8.9	1.64	4.83	41144	163.33	243.67	8.3	16.6
987.0	22.9	39.0	150	8.9	1.64	4.87	41536	159.27	243.13	8.3	16.6
988.0	20.9	39.1	150	8.9	1.67	4.92	41966	174.48	242.69	8.3	16.6
989.0	23.5	39.0	150	9.0	1.62	4.96	42349	155.21	242.14	8.3	16.6
990.0	23.2	38.9	150	9.0	1.63	5.01	42736	157.24	241.61	8.3	16.6
991.0	24.2	38.7	150	9.0	1.61	5.05	43109	151.15	241.05	8.3	16.6
992.0	25.9	38.7	150	9.0	1.59	5.09	43456	141.01	240.43	8.3	16.6
993.0	26.1	39.6	150	9.0	1.59	5.13	43801	139.99	239.81	8.3	16.6
994.0	19.4	38.6	150	9.0	1.68	5.18	44266	188.69	239.50	8.3	16.6
995.0	24.5	38.4	150	9.0	1.60	5.22	44634	149.12	238.95	8.3	16.6
996.0	29.5	41.8	150	9.0	1.58	5.25	44939	123.76	238.25	8.3	16.6
997.0	27.7	41.6	150	9.0	1.60	5.29	45264	131.88	237.61	8.3	16.6
998.0	27.7	42.2	150	9.0	1.61	5.32	45589	131.88	236.98	8.3	16.6
999.0	29.0	43.1	150	9.0	1.61	5.36	45899	125.79	236.32	8.3	16.6
1000.0	30.8	45.3	150	8.9	1.61	5.39	46191	118.69	235.63	8.3	16.6
1001.0	26.5	44.9	150	8.9	1.66	5.43	46531	137.96	235.06	8.3	16.6
1002.0	28.1	45.2	150	8.9	1.64	5.46	46851	129.85	234.45	8.3	16.6
1003.0	33.3	45.1	150	8.9	1.58	5.49	47121	109.56	233.72	8.3	16.6
1004.0	30.8	44.8	150	8.9	1.61	5.53	47414	118.69	233.06	8.3	16.7
1005.0	35.0	45.6	150	8.9	1.58	5.56	47671	104.49	232.32	8.3	16.7
1006.0	35.6	45.7	150	8.9	1.57	5.58	47924	102.46	231.58	8.3	16.7
1007.0	37.1	45.7	150	8.9	1.56	5.61	48166	98.40	230.83	8.3	16.7
1008.0	41.4	46.1	150	8.9	1.52	5.63	48384	88.26	230.03	8.3	16.7
1009.0	41.9	46.1	150	8.9	1.52	5.66	48599	87.24	229.23	8.3	16.7
1010.0	41.4	46.6	150	8.9	1.53	5.68	48816	88.26	228.44	8.3	16.7
1011.0	42.9	46.9	150	8.9	1.52	5.71	49026	85.21	227.65	8.3	16.7
1012.0	27.1	44.3	150	8.9	1.65	5.74	49359	134.92	227.14	8.3	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1013.0	37.9	46.0	150	9.0	1.53	5.77	49596	96.37	226.42	8.3	16.7
1014.0	40.0	47.1	150	9.0	1.52	5.79	49821	91.30	225.69	8.3	16.7
1015.0	36.4	47.2	150	9.0	1.56	5.82	50069	100.43	225.01	8.3	16.7
1016.0	32.1	47.0	150	9.0	1.61	5.85	50349	113.62	224.41	8.3	16.7
1017.0	36.0	47.3	150	9.0	1.57	5.88	50599	101.44	223.75	8.3	16.7
1018.0	33.6	47.2	150	8.9	1.60	5.91	50866	108.55	223.13	8.3	16.7
1019.0	33.3	47.7	150	8.9	1.61	5.94	51136	109.56	222.53	8.3	16.7
1020.0	31.6	47.9	150	8.9	1.64	5.97	51421	115.65	221.97	8.3	16.7
1021.0	34.6	48.2	150	9.0	1.59	6.00	51681	105.50	221.36	8.3	16.7
1022.0	26.5	46.8	150	9.0	1.67	6.04	52021	137.96	220.92	8.3	16.7
1023.0	33.0	48.1	150	9.0	1.61	6.07	52294	110.57	220.35	8.3	16.7
1024.0	28.8	45.4	150	9.0	1.63	6.10	52606	126.81	219.87	8.3	16.7
1025.0	30.8	45.8	150	9.0	1.61	6.14	52899	118.69	219.35	8.3	16.7
1026.0	32.7	46.2	150	9.0	1.59	6.17	53174	111.59	218.80	8.3	16.7
1027.0	32.7	46.4	150	9.0	1.59	6.20	53449	111.59	218.25	8.3	16.7
1028.0	31.0	46.7	150	9.0	1.61	6.23	53739	117.68	217.74	8.3	16.7
1029.0	30.8	47.3	150	9.0	1.62	6.26	54031	118.69	217.24	8.3	16.7
1030.0	30.5	47.7	150	9.0	1.63	6.29	54326	119.70	216.75	8.3	16.7
1031.0	27.5	43.9	150	9.0	1.63	6.33	54654	132.89	216.34	8.3	16.7
1032.0	32.1	46.4	150	9.0	1.60	6.36	54934	113.62	215.83	8.3	16.7
1033.0	38.7	46.3	150	9.0	1.53	6.39	55166	94.34	215.23	8.3	16.7
1034.0	33.3	46.6	150	9.0	1.59	6.42	55436	109.56	214.71	8.3	16.7
1035.0	20.2	46.9	150	9.0	1.77	6.47	55881	180.57	214.54	8.3	16.7
1036.0	24.7	47.0	150	9.0	1.70	6.51	56246	148.11	214.22	8.3	16.7
1037.0	25.7	46.8	150	9.0	1.68	6.55	56596	142.02	213.87	8.3	16.7
1038.0	25.5	47.2	150	9.0	1.69	6.59	56949	143.04	213.53	8.3	16.7
1039.0	28.6	47.9	150	9.0	1.66	6.62	57264	127.82	213.12	8.3	16.7
1040.0	27.5	48.4	150	9.0	1.68	6.66	57591	132.89	212.73	8.3	16.7
1041.0	24.0	44.8	150	9.0	1.68	6.70	57966	152.17	212.45	8.3	16.7
1042.0	21.6	41.7	150	9.0	1.68	6.75	58384	169.41	212.24	8.3	16.7
1043.0	23.1	41.6	150	9.0	1.66	6.79	58774	158.25	211.99	8.3	16.7
1044.0	25.4	42.4	150	9.0	1.64	6.83	59129	144.05	211.67	8.3	16.7
1045.0	20.6	46.0	150	9.0	1.76	6.88	59566	177.53	211.51	8.3	16.8
1046.0	18.1	40.4	150	9.0	1.72	6.93	60064	201.87	211.47	8.3	16.8
1047.0	22.2	42.0	150	9.1	1.67	6.98	60469	164.34	211.25	8.3	16.8
1048.0	18.4	40.3	150	9.0	1.71	7.03	60959	198.83	211.19	8.3	16.8
1049.0	17.2	43.9	150	9.1	1.77	7.09	61481	212.02	211.20	8.3	16.8
1050.0	22.6	42.2	150	9.1	1.66	7.13	61879	161.30	210.97	8.3	16.8
1051.0	18.0	41.6	150	9.1	1.73	7.19	62379	202.89	210.93	8.3	16.8
1052.0	18.4	42.0	150	9.1	1.72	7.24	62869	198.83	210.88	8.3	16.8
1053.0	15.4	42.7	150	9.1	1.79	7.31	63454	237.38	211.00	8.3	16.8
1054.0	16.4	42.8	150	9.1	1.77	7.37	64004	223.18	211.05	8.3	16.8
1055.0	16.1	43.0	150	9.1	1.78	7.43	64564	227.24	211.12	8.3	16.8
1056.0	15.2	40.2	150	9.1	1.76	7.50	65156	240.42	211.25	8.3	16.8
1057.0	14.9	39.3	150	9.2	1.75	7.57	65761	245.50	211.40	8.3	16.8
1058.0	14.4	39.5	150	9.2	1.76	7.63	66386	253.61	211.59	8.3	16.8
1059.0	15.6	40.1	141	9.1	1.73	7.70	66929	234.34	211.69	8.3	16.8
1060.0	19.0	38.5	140	9.1	1.64	7.75	67370	191.73	211.60	8.3	16.8
1061.0	17.6	38.1	140	9.1	1.67	7.81	67848	207.96	211.59	8.3	16.8
1062.0	17.1	39.7	140	9.1	1.70	7.87	68341	214.05	211.60	8.3	16.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1063.0	20.9	40.2	140	9.1	1.63	7.91	68742	174.48	211.44	8.3	16.8
1064.0	19.6	40.6	140	9.1	1.66	7.97	69171	186.66	211.33	8.3	16.8
1065.0	17.9	40.6	140	9.1	1.69	8.02	69640	203.90	211.30	8.3	16.8
1066.0	22.2	40.4	140	9.1	1.62	8.07	70018	164.34	211.10	8.3	16.8
1067.0	20.2	40.8	140	9.1	1.66	8.12	70434	180.57	210.97	8.3	16.8
1068.0	19.8	40.6	140	9.1	1.67	8.17	70858	184.63	210.86	8.3	16.8
1069.0	25.2	39.5	140	9.0	1.58	8.21	71192	145.07	210.58	8.3	16.8
1070.0	21.3	38.9	140	8.9	1.65	8.25	71586	171.44	210.42	8.3	16.8
1071.0	16.5	40.1	140	8.9	1.76	8.31	72095	221.15	210.47	8.3	16.8
1072.0	15.4	40.8	140	8.9	1.79	8.38	72641	237.38	210.58	8.3	16.8
1073.0	14.8	41.3	140	8.8	1.82	8.45	73210	247.52	210.73	8.3	16.8
1074.0	14.8	41.4	140	8.8	1.82	8.51	73780	247.52	210.88	8.3	16.8
1075.0	14.5	41.8	140	8.8	1.84	8.58	74361	252.60	211.05	8.3	16.8
1076.0	13.6	38.5	140	8.8	1.81	8.66	74977	267.81	211.28	8.3	16.8
1077.0	14.1	39.8	140	9.0	1.78	8.73	75572	258.68	211.47	8.3	16.8
1078.0	14.1	40.3	140	9.0	1.78	8.80	76167	258.68	211.66	8.3	16.8
1079.0	21.3	38.2	140	9.0	1.62	8.85	76561	171.44	211.50	8.3	16.8
1080.0	16.8	39.2	140	9.1	1.70	8.90	77060	217.09	211.53	8.3	16.8
1081.0	16.9	38.6	140	9.0	1.70	8.96	77557	216.08	211.54	8.3	16.8
1082.0	15.3	38.6	140	9.0	1.73	9.03	78106	238.39	211.65	8.3	16.8
1083.0	16.9	38.9	140	9.0	1.71	9.09	78603	216.08	211.67	8.3	16.8
1084.0	18.0	40.0	140	9.0	1.71	9.14	79069	202.89	211.63	8.3	16.8
1085.0	15.6	39.6	140	8.9	1.75	9.21	79608	234.34	211.72	8.3	16.8
1086.0	17.6	40.3	140	8.9	1.72	9.26	80084	206.95	211.70	8.3	16.9
1087.0	15.8	40.3	140	8.9	1.77	9.33	80616	231.29	211.78	8.3	16.9
1088.0	17.1	39.7	140	8.9	1.73	9.39	81109	214.05	211.79	8.3	16.9
1089.0	16.7	41.1	140	9.0	1.74	9.45	81610	218.11	211.81	8.3	16.9
1090.0	18.1	41.3	140	9.0	1.71	9.50	82075	201.87	211.77	8.3	16.9
1091.0	14.6	40.5	140	9.0	1.77	9.57	82649	249.55	211.92	8.3	16.9
1092.0	14.8	41.1	140	9.0	1.78	9.64	83216	246.51	212.05	8.3	16.9
1093.0	16.8	41.6	140	9.0	1.75	9.70	83715	217.09	212.07	8.3	16.9
1094.0	16.5	42.1	140	9.0	1.76	9.76	84224	221.15	212.11	8.3	16.9
1095.0	14.5	41.6	140	8.9	1.81	9.83	84805	252.60	212.26	8.3	16.9
1096.0	17.9	42.4	140	8.9	1.75	9.88	85274	203.90	212.23	8.3	16.9
1097.0	14.7	40.9	140	8.9	1.80	9.95	85845	248.54	212.36	8.3	16.9
1098.0	17.2	39.9	140	8.9	1.73	10.01	86333	212.02	212.36	8.3	16.9
1099.0	25.5	41.9	140	8.9	1.62	10.05	86662	143.04	212.10	8.3	16.9
1100.0	17.7	41.6	140	8.9	1.75	10.10	87136	205.93	212.08	8.3	16.9
1101.0	18.5	41.7	140	8.9	1.74	10.16	87591	197.82	212.03	8.3	16.9
1102.0	20.8	42.7	140	8.9	1.71	10.21	87994	175.50	211.89	8.3	16.9
1103.0	24.2	42.6	140	8.9	1.65	10.25	88342	151.15	211.67	8.3	16.9
1104.0	25.0	42.9	140	8.9	1.65	10.29	88678	146.08	211.43	8.3	16.9
1105.0	22.0	43.1	140	8.9	1.69	10.33	89061	166.37	211.27	8.3	16.9
1106.0	21.6	43.5	140	8.9	1.71	10.38	89450	169.41	211.12	8.3	16.9
1107.0	19.1	43.3	140	8.9	1.75	10.43	89889	190.72	211.04	8.3	16.9
1108.0	20.0	41.9	140	8.9	1.71	10.48	90309	182.60	210.94	8.3	16.9
1109.0	17.7	42.7	140	8.9	1.77	10.54	90783	205.93	210.92	8.3	16.9
1110.0	16.4	43.2	140	8.9	1.80	10.60	91294	222.16	210.96	8.3	16.9
1111.0	17.4	43.1	140	8.9	1.78	10.66	91777	209.99	210.96	8.3	16.9
1112.0	19.9	43.3	140	8.9	1.73	10.71	92199	183.61	210.86	8.3	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1113.0	17.7	43.4	140	8.9	1.78	10.76	92673	205.93	210.84	8.3	16.9
1114.0	17.0	43.4	140	9.0	1.77	10.82	93167	215.06	210.86	8.3	16.9
1115.0	16.7	43.5	140	9.1	1.76	10.88	93669	218.11	210.88	8.3	16.9
1116.0	17.7	43.5	140	9.1	1.73	10.94	94143	205.93	210.87	8.3	16.9
1117.0	14.3	43.2	140	9.1	1.80	11.01	94728	254.63	211.02	8.3	16.9
1118.0	18.0	43.2	140	9.1	1.73	11.06	95195	202.89	210.99	8.3	16.9
1119.0	18.9	43.6	140	9.0	1.72	11.12	95638	192.74	210.93	8.3	16.9
1120.0	21.1	43.7	140	9.0	1.69	11.16	96037	173.47	210.80	8.3	16.9
1121.0	20.5	43.5	140	9.0	1.70	11.21	96448	178.54	210.69	8.3	16.9
1122.0	19.3	43.7	140	9.0	1.73	11.26	96884	189.70	210.62	8.3	16.9
1123.0	20.1	43.7	140	9.0	1.71	11.31	97302	181.59	210.52	8.3	16.9
1124.0	19.4	43.9	140	9.0	1.73	11.37	97736	188.69	210.44	8.3	16.9
1125.0	21.6	44.1	140	9.0	1.70	11.41	98126	169.41	210.30	8.3	16.9
1126.0	23.4	44.2	140	9.0	1.67	11.46	98485	156.22	210.12	8.3	16.9
1127.0	25.5	43.9	140	8.9	1.64	11.49	98814	143.15	209.89	8.3	16.9
1128.0	20.0	47.5	140	8.9	1.78	11.54	99234	182.60	209.80	8.3	16.9
1129.0	24.0	47.8	140	8.9	1.72	11.59	99584	152.17	209.61	8.3	17.0
1130.0	18.0	47.1	140	8.9	1.82	11.64	100051	202.89	209.59	8.3	17.0
1130.2	20.6	46.6	140	8.9	1.76	11.65	100132	177.53	209.57	8.3	17.0
1131.0	15.4	45.6	140	8.9	1.85	11.70	100569	237.13	209.64	8.3	17.0
1132.0	16.8	46.4	140	8.9	1.83	11.76	101068	217.09	209.66	8.3	17.0
1133.0	16.0	46.2	140	8.9	1.85	11.83	101593	228.25	209.72	8.3	17.0
1134.0	16.7	45.8	140	8.9	1.82	11.89	102095	218.11	209.75	8.3	17.0
1135.0	20.0	46.6	140	8.8	1.79	11.94	102515	182.60	209.66	8.3	17.0
1136.0	25.4	45.2	140	8.8	1.68	11.97	102846	144.05	209.45	8.3	17.0
1137.0	22.2	42.2	140	9.0	1.66	12.02	103224	164.34	209.30	8.3	17.0
1138.0	19.4	43.3	140	9.0	1.72	12.07	103658	188.69	209.23	8.3	17.0
1139.0	18.4	43.4	140	9.0	1.74	12.13	104115	198.83	209.20	8.3	17.0
1140.0	18.8	43.5	140	9.0	1.73	12.18	104561	193.76	209.15	8.3	17.0
1141.0	15.9	43.5	140	8.9	1.80	12.24	105088	229.26	209.22	8.3	17.0
1142.0	16.3	43.4	140	9.0	1.78	12.30	105604	224.19	209.26	8.3	17.0
1143.0	17.1	43.5	140	9.0	1.76	12.36	106096	214.05	209.28	8.3	17.0
1144.0	16.8	43.5	140	9.0	1.77	12.42	106596	217.09	209.30	8.3	17.0
1145.0	16.8	44.0	140	9.0	1.78	12.48	107095	217.09	209.33	8.3	17.0
1146.0	15.4	42.6	140	9.0	1.79	12.55	107640	236.70	209.42	8.3	17.0
1147.0	16.4	43.5	140	9.0	1.79	12.61	108153	223.18	209.46	8.3	17.0
1148.0	13.8	43.7	140	9.0	1.85	12.68	108762	264.77	209.63	8.3	17.0
1149.0	24.2	49.3	140	9.0	1.71	12.72	109110	151.15	209.45	8.3	17.0
1150.0	22.6	46.2	140	9.0	1.70	12.76	109481	161.30	209.30	8.3	17.0
1151.0	23.5	46.6	140	9.0	1.69	12.81	109838	155.21	209.13	8.3	17.0
1152.0	23.7	46.8	140	9.0	1.69	12.85	110192	154.20	208.96	8.3	17.0
1153.0	24.3	47.2	140	9.0	1.68	12.89	110538	150.14	208.78	8.3	17.0
1154.0	24.5	47.0	140	9.0	1.68	12.93	110881	149.12	208.59	8.3	17.0
1155.0	21.8	45.8	140	9.0	1.70	12.98	111266	167.38	208.47	8.3	17.0
1156.0	34.3	42.9	140	9.0	1.51	13.01	111511	106.52	208.15	8.3	17.0
1157.0	32.7	42.2	140	9.0	1.51	13.04	111767	111.59	207.86	8.3	17.0
1158.0	29.0	40.6	140	9.0	1.54	13.07	112057	125.79	207.61	8.3	17.0
1159.0	26.1	40.2	140	9.0	1.57	13.11	112379	139.99	207.40	8.3	17.0
1160.0	22.8	40.6	140	9.0	1.62	13.15	112747	160.28	207.26	8.3	17.0
1161.0	24.7	41.0	140	9.0	1.60	13.19	113088	148.11	207.08	8.3	17.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1162.0	23.7	41.3	140	9.0	1.61	13.24	113443	154.20	206.92	8.3	17.0
1163.0	19.5	41.6	140	9.1	1.68	13.29	113874	187.67	206.86	8.3	17.0
1164.0	16.7	40.7	140	9.1	1.72	13.35	114376	218.11	206.90	8.3	17.0
1165.0	16.0	42.2	140	9.1	1.75	13.41	114901	228.25	206.96	8.3	17.0
1166.0	14.6	42.1	140	9.1	1.78	13.48	115475	249.55	207.09	8.3	17.0
1167.0	14.8	42.2	140	9.1	1.78	13.55	116044	247.52	207.21	8.3	17.0
1168.0	14.8	41.3	140	9.1	1.77	13.61	116614	247.52	207.33	8.3	17.0
1169.0	14.9	40.7	140	9.1	1.76	13.68	117176	244.48	207.44	8.3	17.0
1170.0	14.9	40.9	140	9.1	1.76	13.75	117741	245.50	207.55	8.3	17.0
1171.0	15.5	41.8	140	9.1	1.76	13.81	118282	235.35	207.63	8.3	17.0
1172.0	12.2	41.9	140	9.1	1.84	13.89	118973	300.28	207.90	8.3	17.0
1173.0	12.1	41.1	140	9.1	1.83	13.98	119668	302.30	208.18	8.3	17.1
1175.0	19.1	40.9	140	9.1	1.67	14.08	120545	190.72	208.07	8.3	17.1
1176.0	18.5	41.3	140	9.1	1.69	14.14	121000	197.82	208.04	8.3	17.1
1177.0	16.7	41.3	140	9.1	1.73	14.20	121504	219.12	208.08	8.3	17.1
1178.0	17.7	41.2	140	9.1	1.70	14.25	121978	205.93	208.07	8.3	17.1
1179.0	17.5	41.6	140	9.1	1.71	14.31	122459	208.98	208.07	8.3	17.1
1180.0	18.0	41.3	140	9.1	1.70	14.37	122925	202.89	208.06	8.3	17.1
1181.0	18.3	42.0	140	9.1	1.70	14.42	123385	199.85	208.03	8.3	17.1
1182.0	18.6	42.1	140	9.1	1.70	14.47	123838	196.80	208.00	8.3	17.1
1183.0	18.8	42.4	140	9.1	1.70	14.53	124283	193.76	207.96	8.3	17.1
1184.0	17.6	41.9	140	9.1	1.71	14.58	124759	206.95	207.96	8.3	17.1
1185.0	18.8	42.4	140	9.1	1.70	14.64	125207	194.77	207.92	8.3	17.1
1186.0	19.8	42.5	140	9.1	1.68	14.69	125632	184.63	207.86	8.3	17.1
1187.0	21.1	42.5	140	9.1	1.66	14.73	126031	173.47	207.76	8.3	17.1
1188.0	20.0	42.0	140	9.1	1.67	14.78	126451	182.60	207.69	8.3	17.1
1189.0	19.6	42.6	140	9.1	1.68	14.84	126880	186.66	207.63	8.3	17.1
1190.0	20.2	42.6	140	9.1	1.67	14.89	127296	180.57	207.56	8.3	17.1
1191.0	19.6	43.0	140	9.1	1.69	14.94	127725	186.66	207.50	8.3	17.1
1192.0	19.6	42.8	140	9.1	1.69	14.99	128154	186.66	207.44	8.3	17.1
1194.0	15.3	40.9	140	9.1	1.75	15.12	129256	239.41	207.62	8.3	17.1
1195.0	17.0	41.6	140	9.1	1.72	15.18	129750	215.06	207.64	8.3	17.1
1196.0	15.1	39.9	140	9.1	1.74	15.24	130308	242.45	207.73	8.3	17.1
1197.0	16.4	40.4	140	9.1	1.72	15.31	130821	223.18	207.77	8.3	17.1
1198.0	16.4	40.9	140	9.1	1.72	15.37	131335	223.18	207.82	8.3	17.1
1199.0	17.1	40.9	140	9.1	1.71	15.42	131825	213.03	207.83	8.3	17.1
1200.0	18.6	40.8	140	9.1	1.68	15.48	132277	196.80	207.80	8.3	17.1
1200.2	12.4	40.9	140	9.1	1.82	15.49	132413	294.19	207.85	8.3	17.1
1202.0	17.1	41.1	140	9.1	1.71	15.60	133295	213.03	207.87	8.3	17.1
1203.0	19.5	39.5	140	9.1	1.65	15.65	133726	187.67	207.82	8.3	17.1
1204.0	23.2	39.8	140	9.1	1.59	15.69	134088	157.24	207.68	8.3	17.1
1205.0	23.2	40.3	140	9.1	1.60	15.74	134450	157.24	207.55	8.3	17.1
1206.0	23.4	40.3	140	9.1	1.60	15.78	134809	156.22	207.41	8.3	17.1
1207.0	22.9	40.5	140	9.1	1.60	15.82	135175	159.27	207.28	8.3	17.1
1208.0	21.4	40.5	140	9.1	1.63	15.87	135567	170.43	207.19	8.3	17.1
1209.0	19.3	40.7	140	9.1	1.67	15.92	136004	189.70	207.14	8.3	17.1
1210.0	20.1	41.1	140	9.1	1.65	15.97	136421	181.59	207.07	8.3	17.1
1211.0	19.4	41.3	140	9.1	1.67	16.02	136855	188.69	207.02	8.3	17.1
1212.0	14.3	41.1	140	9.1	1.78	16.09	137441	254.63	207.15	8.3	17.1
1213.0	17.6	41.5	140	9.0	1.72	16.15	137919	207.96	207.15	8.3	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1214.0	18.5	41.7	140	9.1	1.70	16.20	138374	197.82	207.13	8.3	17.1
1215.0	18.3	41.6	140	9.1	1.71	16.26	138834	199.85	207.11	8.3	17.1
1216.0	18.9	41.7	140	9.1	1.69	16.31	139277	192.74	207.07	8.3	17.1
1217.0	21.4	41.6	140	9.1	1.65	16.36	139669	170.43	206.98	8.3	17.1
1218.0	19.6	41.6	140	9.1	1.68	16.41	140099	186.66	206.92	8.3	17.2
1219.0	18.8	41.9	140	9.1	1.69	16.46	140544	193.76	206.89	8.3	17.2
1220.0	20.9	41.7	140	9.1	1.66	16.51	140946	174.48	206.81	8.3	17.2
1223.0	16.7	41.1	140	9.1	1.73	16.69	142451	218.11	206.89	8.3	17.2
1224.0	14.0	39.5	140	9.1	1.77	16.76	143050	260.71	207.03	8.3	17.2
1225.0	16.4	40.5	140	9.1	1.73	16.82	143561	222.16	207.07	8.3	17.2
1226.0	17.6	41.0	140	9.1	1.71	16.88	144037	206.95	207.07	8.3	17.2
1227.0	16.4	40.8	140	9.0	1.74	16.94	144551	223.18	207.11	8.3	17.2
1228.0	15.8	39.3	140	9.0	1.73	17.00	145083	231.29	207.17	8.3	17.2
1229.0	16.6	38.8	140	9.0	1.71	17.06	145589	220.13	207.20	8.3	17.2
1230.0	16.4	38.7	140	9.0	1.71	17.12	146102	223.18	207.24	8.3	17.2
1231.0	17.2	38.7	140	9.0	1.69	17.18	146590	212.02	207.25	8.3	17.2
1232.0	14.3	38.8	140	9.1	1.75	17.25	147178	255.64	207.37	8.3	17.2
1233.0	16.0	38.9	140	9.1	1.71	17.31	147703	228.25	207.43	8.3	17.2
1234.0	13.9	38.9	140	9.1	1.76	17.39	148307	262.74	207.56	8.3	17.2
1235.0	11.8	38.9	140	9.1	1.82	17.47	149021	310.42	207.82	8.3	17.2
1236.0	14.7	38.7	140	9.1	1.74	17.54	149593	248.54	207.92	8.3	17.2
1237.0	17.6	38.2	140	9.1	1.67	17.60	150071	207.96	207.92	8.3	17.2
1238.0	17.8	38.3	140	9.1	1.67	17.65	150543	204.92	207.91	8.3	17.2
1239.0	15.0	38.4	140	9.1	1.73	17.72	151103	243.47	208.00	8.3	17.2
1240.0	17.5	40.4	140	9.0	1.71	17.78	151583	208.98	208.00	8.3	17.2
1241.0	22.6	41.8	140	9.0	1.64	17.82	151954	161.30	207.89	8.3	17.2
1242.0	16.5	41.8	140	9.0	1.75	17.88	152463	221.15	207.92	8.3	17.2
1243.0	17.4	42.5	140	9.0	1.74	17.94	152946	209.99	207.92	8.3	17.2
1244.0	16.7	43.2	140	9.0	1.76	18.00	153450	219.12	207.95	8.3	17.2
1245.0	17.1	42.5	140	9.1	1.74	18.06	153940	213.03	207.96	8.3	17.2
1246.0	17.9	43.0	140	9.1	1.73	18.11	154409	203.90	207.95	8.3	17.2
1247.0	17.1	42.8	140	9.1	1.74	18.17	154899	213.03	207.96	8.3	17.2
1248.0	18.8	42.8	140	9.1	1.71	18.22	155345	193.76	207.93	8.3	17.2
1249.0	18.4	42.9	140	9.1	1.72	18.28	155802	198.83	207.91	8.3	17.2
1250.0	14.7	42.0	140	9.1	1.78	18.35	156374	248.54	208.01	8.3	17.2
1251.0	14.6	39.1	140	9.1	1.74	18.42	156948	249.55	208.10	8.3	17.2
1252.0	15.9	39.3	140	9.0	1.72	18.48	157475	229.26	208.15	8.3	17.2
1253.0	13.6	38.8	140	9.0	1.78	18.55	158091	267.81	208.30	8.3	17.2
1254.0	13.7	37.1	140	9.0	1.76	18.62	158705	266.80	208.43	8.3	17.2
1255.0	14.5	37.1	140	9.0	1.74	18.69	159286	252.60	208.54	8.3	17.2
1256.0	13.2	37.3	140	9.0	1.77	18.77	159920	275.93	208.70	8.3	17.2
1257.0	14.0	37.4	140	9.0	1.76	18.84	160520	260.71	208.82	8.3	17.2
1258.0	13.7	37.2	140	9.0	1.76	18.91	161131	265.78	208.95	8.3	17.2
1259.0	14.3	37.6	140	9.0	1.75	18.98	161717	254.63	209.06	8.3	17.2
1260.0	14.4	40.7	140	9.0	1.79	19.05	162300	253.61	209.16	8.3	17.2
1261.0	15.1	42.0	140	9.0	1.80	19.12	162856	241.44	209.24	8.3	17.2
1262.0	11.9	42.0	140	8.9	1.88	19.20	163563	307.38	209.46	8.3	17.2
1263.0	10.3	42.1	140	8.9	1.94	19.30	164382	356.07	209.80	8.3	17.2
1264.0	9.9	42.2	140	8.9	1.95	19.40	165229	368.24	210.17	8.3	17.3
1265.0	10.1	42.1	140	8.9	1.94	19.50	166059	361.14	210.52	8.3	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1266.0	9.3	39.3	140	8.9	1.93	19.61	166965	393.60	210.94	8.3	17.3
1267.0	7.4	38.6	140	8.9	2.00	19.74	168094	490.99	211.58	8.3	17.3
1268.0	9.1	38.8	140	8.9	1.94	19.85	169016	400.71	212.01	8.3	17.3
1269.0	8.0	39.0	140	8.9	1.98	19.98	170061	454.47	212.56	8.3	17.3
1270.0	9.6	38.4	140	8.9	1.91	20.08	170934	379.40	212.94	8.3	17.3
1271.0	13.0	38.1	140	8.9	1.80	20.16	171580	281.00	213.10	8.3	17.3
1272.0	14.9	39.2	140	8.9	1.77	20.22	172145	245.50	213.17	8.3	17.3
1273.0	16.1	40.0	140	9.0	1.75	20.29	172665	226.22	213.20	8.3	17.3
1274.0	14.1	40.3	140	8.9	1.80	20.36	173262	259.70	213.30	8.3	17.3
1275.0	14.4	40.1	140	8.9	1.79	20.43	173846	253.61	213.39	8.3	17.3
1276.0	14.3	40.4	140	8.9	1.80	20.50	174431	254.63	213.49	8.3	17.3
1277.0	15.7	41.5	140	9.0	1.77	20.56	174966	232.31	213.53	8.3	17.3
1278.0	15.5	41.6	140	9.0	1.78	20.63	175509	236.37	213.58	8.3	17.3
1279.0	16.4	41.7	140	8.9	1.78	20.69	176023	223.18	213.60	8.3	17.3
1280.0	14.6	41.4	140	9.0	1.79	20.75	176597	249.55	213.68	8.3	17.3
1281.0	22.1	43.6	140	9.0	1.67	20.80	176977	165.35	213.57	8.3	17.3
1282.0	20.5	41.7	140	9.0	1.67	20.85	177388	178.54	213.50	8.3	17.3
1283.0	18.7	41.6	140	9.0	1.71	20.90	177838	195.79	213.46	8.3	17.3
1284.0	20.7	42.0	140	9.0	1.68	20.95	178244	176.51	213.38	8.3	17.3
1285.0	20.0	42.0	140	9.0	1.69	21.00	178664	182.60	213.31	8.3	17.3
1286.0	17.1	42.0	140	9.0	1.74	21.06	179156	214.05	213.31	8.3	17.3
1287.0	15.2	42.3	140	9.0	1.79	21.13	179709	240.42	213.37	8.3	17.3
1288.0	13.5	41.8	140	9.0	1.82	21.20	180332	270.86	213.50	8.3	17.3
1289.0	14.1	40.7	140	9.0	1.79	21.27	180927	258.68	213.59	8.3	17.3
1290.0	18.4	41.0	140	9.0	1.71	21.32	181385	198.83	213.56	8.3	17.3
1291.0	17.9	42.3	140	9.0	1.74	21.38	181854	203.90	213.54	8.3	17.3
1292.0	18.0	42.3	140	9.0	1.73	21.44	182320	202.89	213.52	8.3	17.3
1293.0	18.3	43.6	140	9.0	1.74	21.49	182780	199.85	213.49	8.3	17.3
1294.0	18.2	44.8	140	9.0	1.76	21.55	183242	200.86	213.46	8.3	17.3
1295.0	15.1	42.3	140	9.0	1.79	21.61	183800	242.45	213.52	8.3	17.3
1296.0	12.3	40.9	140	9.0	1.84	21.69	184481	296.22	213.70	8.3	17.3
1297.0	12.4	40.5	140	9.0	1.83	21.77	185160	295.20	213.88	8.3	17.3
1298.0	14.4	40.2	140	9.0	1.78	21.84	185743	253.61	213.96	8.3	17.3
1299.0	16.4	38.9	140	9.0	1.72	21.90	186257	223.18	213.98	8.3	17.3
1300.0	16.4	45.3	140	9.0	1.80	21.97	186768	222.16	214.00	8.3	17.3
1301.0	12.5	41.3	140	9.0	1.85	22.05	187442	293.17	214.17	8.3	17.3
1302.0	13.3	41.1	140	9.0	1.82	22.12	188072	273.90	214.29	8.3	17.3
1303.0	14.1	41.2	140	9.0	1.81	22.19	188669	259.70	214.39	8.3	17.3
1304.0	12.5	41.4	140	9.0	1.85	22.27	189344	293.17	214.56	8.3	17.3
1305.0	12.3	41.3	140	8.9	1.86	22.35	190025	296.22	214.73	8.3	17.3
1306.0	15.5	40.2	140	9.0	1.76	22.42	190569	236.37	214.77	8.3	17.3
1307.0	14.8	41.4	140	9.0	1.79	22.49	191138	247.52	214.84	8.3	17.3
1308.0	12.5	39.8	140	9.0	1.83	22.57	191808	291.15	215.00	8.3	17.3
1309.0	18.4	38.4	140	9.0	1.68	22.62	192265	198.83	214.97	8.3	17.3
1310.0	16.4	38.8	140	9.0	1.72	22.68	192776	222.16	214.98	8.3	17.3
1311.0	17.1	38.4	140	9.0	1.70	22.74	193268	214.05	214.98	8.3	17.4
1312.0	15.4	38.6	140	9.0	1.74	22.80	193814	237.38	215.03	8.3	17.4
1313.0	16.9	38.7	140	9.0	1.71	22.86	194311	216.08	215.03	8.3	17.4
1314.0	19.4	41.1	140	9.0	1.69	22.92	194745	188.69	214.97	8.3	17.4
1315.0	17.1	41.7	143	9.0	1.75	22.97	195248	214.05	214.97	8.3	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1316.0	17.3	42.6	150	9.0	1.78	23.03	195768	211.00	214.96	8.3	17.4
1317.0	12.5	41.7	150	8.9	1.89	23.11	196490	293.17	215.13	8.3	17.4
1318.0	15.8	37.3	150	8.9	1.75	23.18	197060	231.29	215.16	8.3	17.4
1319.0	15.5	38.1	150	8.9	1.76	23.24	197643	236.37	215.20	8.3	17.4
1320.0	13.3	38.9	150	8.9	1.82	23.31	198318	273.90	215.32	8.3	17.4
1321.0	10.8	39.0	150	8.9	1.90	23.41	199150	337.81	215.57	8.3	17.4
1322.0	11.4	37.4	150	8.9	1.85	23.50	199943	321.58	215.79	8.3	17.4
1323.0	10.7	38.3	150	8.9	1.89	23.59	200785	341.87	216.04	8.3	17.4
1324.0	8.5	41.7	150	8.9	2.02	23.71	201843	429.11	216.47	8.3	17.4
1325.0	9.3	40.2	150	8.9	1.97	23.81	202808	391.58	216.83	8.3	17.4
1326.0	13.0	40.4	150	8.9	1.85	23.89	203498	279.99	216.96	8.3	17.4
1327.0	9.3	40.0	150	9.0	1.95	24.00	204463	391.58	217.31	8.3	17.4
1328.0	9.7	40.0	150	9.0	1.94	24.10	205393	377.37	217.63	8.3	17.4
1329.0	9.5	40.0	150	9.0	1.95	24.21	206343	385.49	217.97	8.3	17.4
1330.0	10.9	40.2	150	9.0	1.90	24.30	207168	334.77	218.20	8.3	17.4
1331.0	12.3	41.9	150	9.0	1.88	24.38	207898	296.22	218.36	8.3	17.4
1332.0	10.4	42.2	150	9.0	1.95	24.48	208765	352.01	218.62	8.3	17.4
1333.0	12.0	43.1	150	9.0	1.91	24.56	209515	304.33	218.79	8.3	17.4
1334.0	12.0	44.9	150	9.0	1.94	24.64	210268	305.35	218.96	8.3	17.4
1335.0	11.4	43.0	150	8.9	1.94	24.73	211058	320.56	219.17	8.3	17.4
1336.0	8.5	43.4	150	8.9	2.05	24.85	212113	428.10	219.58	8.3	17.4
1337.0	12.7	43.4	150	8.9	1.90	24.93	212820	287.09	219.71	8.3	17.4
1338.0	10.8	44.1	150	9.0	1.96	25.02	213650	336.80	219.94	8.3	17.4
1339.0	9.4	43.5	150	9.0	2.00	25.13	214613	390.56	220.28	8.3	17.4
1340.0	8.5	44.0	150	9.0	2.04	25.24	215668	428.10	220.69	8.3	17.4
1341.0	8.5	44.6	150	9.0	2.05	25.36	216725	429.11	221.09	8.3	17.4
1342.0	6.6	45.6	150	9.0	2.17	25.51	218098	556.93	221.75	8.3	17.4
1343.0	7.3	44.8	150	9.0	2.11	25.65	219338	503.16	222.30	8.3	17.4
1344.0	9.0	45.0	150	9.0	2.03	25.76	220340	406.79	222.66	8.3	17.4
1344.8	3.0	30.5	75	9.0	1.94	26.03	221520	1202	224	8.3	17.4

BIT NUMBER	3	IADC CODE	116	INTERVAL	1344.8- 1989.2
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.2	BIT RUN	644.4
TOTAL HOURS	29.80	TOTAL TURNS	267622	CONDITION	T3 B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1345.0	4.4	18.7	140	9.3	1.71	0.05	378	822	127504	8.3	17.4
1346.0	22.6	39.3	140	9.3	1.56	0.09	749	161	21385	8.3	17.4
1347.0	16.3	41.3	140	9.4	1.68	0.15	1265	224	11766	8.3	17.4
1348.0	13.2	40.2	140	9.3	1.75	0.23	1902	277	8176	8.3	17.4
1349.0	22.6	40.2	140	9.3	1.57	0.27	2273	161	6268	8.3	17.4
1350.0	12.4	40.5	140	9.3	1.78	0.35	2949	294	5119	8.3	17.4
1351.0	16.7	40.6	140	9.3	1.69	0.41	3453	219	4329	8.3	17.4
1352.0	13.7	40.8	140	9.2	1.77	0.48	4065	266	3764	8.3	17.4
1353.0	13.6	40.9	140	9.2	1.77	0.56	4683	269	3338	8.3	17.4
1354.0	11.4	39.9	140	9.2	1.81	0.65	5418	320	3010	8.3	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1355.0	22.6	36.8	140	9.2	1.55	0.69	5789	161	2731	8.3	17.4
1356.0	20.7	39.0	140	9.2	1.60	0.74	6195	177	2503	8.3	17.4
1357.0	18.9	39.3	140	9.2	1.63	0.79	6638	193	2313	8.3	17.4
1358.0	23.1	40.0	140	9.2	1.57	0.83	7002	158	2150	8.3	17.4
1359.0	22.6	39.9	140	9.2	1.58	0.88	7373	161	2010	8.3	17.4
1360.0	21.7	39.7	140	9.2	1.59	0.92	7761	168	1889	8.3	17.5
1361.0	15.5	36.9	146	9.3	1.68	0.99	8328	236	1787	8.3	17.5
1362.0	14.2	35.7	150	9.3	1.70	1.06	8963	258	1698	8.3	17.5
1363.0	13.2	35.3	150	9.2	1.72	1.14	9646	277	1620	8.3	17.5
1364.0	17.1	35.5	150	9.2	1.63	1.19	10171	213	1547	8.3	17.5
1365.0	14.3	33.5	150	9.3	1.66	1.26	10798	255	1483	8.3	17.5
1366.0	9.8	35.9	150	9.3	1.81	1.36	11716	372	1430	8.3	17.5
1367.0	16.9	41.2	150	9.3	1.71	1.42	12248	216	1376	8.3	17.5
1368.0	13.8	40.6	150	9.3	1.77	1.50	12901	265	1328	8.3	17.5
1369.0	15.2	40.2	150	9.3	1.74	1.56	13493	240	1283	8.3	17.5
1370.0	12.6	37.8	150	9.3	1.76	1.64	14206	289	1243	8.3	17.5
1371.0	16.2	35.5	150	9.3	1.65	1.70	14761	225	1204	8.3	17.5
1372.0	14.9	36.2	150	9.3	1.68	1.77	15366	245	1169	8.3	17.5
1373.0	13.9	36.8	150	9.2	1.73	1.84	16013	263	1137	8.3	17.5
1374.0	11.2	36.9	150	9.2	1.81	1.93	16818	327	1109	8.3	17.5
1375.0	15.7	36.7	150	9.2	1.70	2.00	17393	233	1080	8.3	17.5
1376.0	16.3	36.6	150	9.2	1.68	2.06	17946	224	1053	8.3	17.5
1377.0	14.2	36.8	150	9.2	1.72	2.13	18581	258	1028	8.3	17.5
1378.0	17.3	36.9	150	9.2	1.66	2.19	19101	211	1004	8.3	17.5
1379.0	14.0	35.7	150	9.2	1.71	2.26	19746	261.73	981.86	8.3	17.5
1380.0	17.6	37.1	150	9.2	1.65	2.31	20258	207.96	959.88	8.3	17.5
1381.0	16.7	37.5	150	9.2	1.67	2.37	20796	218.11	939.39	8.3	17.5
1382.0	17.4	37.6	150	9.2	1.66	2.43	21313	209.99	919.78	8.3	17.5
1383.0	19.8	37.4	150	9.2	1.61	2.48	21768	184.63	900.54	8.3	17.5
1384.0	13.8	37.0	150	9.3	1.72	2.55	22421	264.77	884.32	8.3	17.5
1385.0	13.4	36.7	150	9.3	1.72	2.63	23091	271.87	869.08	8.3	17.5
1386.0	16.1	39.4	150	9.3	1.70	2.69	23651	227.24	853.50	8.3	17.5
1387.0	18.8	41.9	150	9.3	1.68	2.74	24128	193.76	837.87	8.3	17.5
1388.0	22.4	42.2	150	9.3	1.63	2.79	24531	163.33	822.26	8.3	17.5
1389.0	22.0	42.0	150	9.3	1.63	2.83	24941	166.37	807.42	8.3	17.5
1390.0	24.0	41.6	150	9.3	1.60	2.88	25316	152.17	792.92	8.3	17.5
1391.0	23.4	42.9	150	9.3	1.62	2.92	25701	156.22	779.14	8.3	17.5
1392.0	24.8	44.1	150	9.3	1.62	2.96	26063	147.09	765.75	8.3	17.5
1393.0	24.0	44.5	150	9.2	1.64	3.00	26438	152.17	753.02	8.3	17.5
1394.0	17.9	43.9	150	9.2	1.74	3.06	26941	203.90	741.86	8.3	17.5
1395.0	24.5	44.6	150	9.2	1.65	3.10	27308	149.12	730.05	8.3	17.5
1396.0	31.0	44.1	150	9.2	1.56	3.13	27598	117.68	718.09	8.3	17.5
1397.0	24.5	44.3	150	9.2	1.64	3.17	27966	149.12	707.19	8.3	17.5
1398.0	25.7	44.5	150	9.2	1.62	3.21	28316	142.02	696.57	8.3	17.5
1399.0	24.8	44.6	150	9.2	1.64	3.25	28678	147.09	686.43	8.3	17.5
1400.0	14.3	39.1	150	9.2	1.75	3.32	29308	255.64	678.62	8.3	17.5
1401.0	15.6	39.1	150	9.2	1.72	3.38	29886	234.34	670.72	8.3	17.5
1402.0	13.3	33.6	150	9.2	1.69	3.46	30561	273.90	663.78	8.3	17.5
1403.0	17.0	32.5	150	9.2	1.60	3.52	31091	215.06	656.07	8.3	17.5
1404.0	19.8	31.9	150	9.2	1.55	3.57	31546	184.63	648.11	8.3	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1405.0	11.5	32.4	150	9.2	1.72	3.66	32331	318.54	642.63	8.3	17.5
1406.0	12.0	32.7	150	9.2	1.71	3.74	33078	303.32	637.09	8.3	17.5
1407.0	10.7	32.8	150	9.2	1.75	3.83	33923	342.88	632.36	8.3	17.5
1408.0	19.5	39.4	150	9.2	1.65	3.88	34386	187.67	625.32	8.3	17.5
1409.0	15.5	40.3	150	9.2	1.74	3.95	34966	235.35	619.25	8.3	17.5
1410.0	17.1	40.6	150	9.2	1.71	4.01	35493	214.05	613.03	8.3	17.5
1411.0	15.9	40.8	150	9.2	1.73	4.07	36058	229.26	607.24	8.3	17.6
1412.0	16.4	40.4	150	9.2	1.72	4.13	36608	223.18	601.52	8.3	17.6
1413.0	17.5	40.5	150	9.2	1.70	4.19	37123	208.98	595.77	8.3	17.6
1414.0	16.8	40.5	150	9.2	1.71	4.25	37658	217.09	590.29	8.3	17.6
1415.0	17.9	40.5	150	9.2	1.69	4.30	38161	203.90	584.79	8.3	17.6
1416.0	18.4	40.7	150	9.2	1.68	4.36	38651	198.83	579.37	8.3	17.6
1417.0	18.5	40.9	150	9.2	1.69	4.41	39138	197.82	574.08	8.3	17.6
1418.0	18.2	40.8	150	9.1	1.71	4.47	39633	200.86	568.98	8.3	17.6
1419.0	16.4	41.0	150	9.1	1.74	4.53	40181	222.16	564.31	8.3	17.6
1420.0	15.4	41.3	150	9.2	1.77	4.59	40766	237.38	559.96	8.3	17.6
1421.0	13.4	42.6	150	9.1	1.83	4.67	41436	271.87	556.18	8.3	17.6
1422.0	22.4	44.7	150	9.1	1.68	4.71	41838	163.33	551.09	8.3	17.6
1423.0	26.1	42.4	150	9.2	1.60	4.75	42183	139.99	545.84	8.3	17.6
1424.0	20.1	43.2	150	9.2	1.70	4.80	42631	181.59	541.24	8.3	17.6
1425.0	14.6	44.0	150	9.2	1.82	4.87	43248	250.57	537.61	8.3	17.6
1426.0	22.0	43.9	150	9.2	1.67	4.91	43658	166.37	533.04	8.3	17.6
1427.0	16.8	44.1	150	9.2	1.77	4.97	44193	217.09	529.20	8.3	17.6
1428.0	16.2	44.1	150	9.2	1.78	5.04	44748	225.21	525.54	8.3	17.6
1429.0	17.4	44.1	150	9.2	1.75	5.09	45266	209.99	521.80	8.3	17.6
1430.0	24.2	44.4	150	9.2	1.65	5.13	45638	151.15	517.45	8.3	17.6
1431.0	17.9	44.3	150	9.2	1.75	5.19	46141	203.90	513.81	8.3	17.6
1432.0	22.5	44.0	150	9.2	1.67	5.23	46541	162.31	509.78	8.3	17.6
1433.0	23.4	43.9	150	9.2	1.65	5.28	46926	156.22	505.77	8.3	17.6
1434.0	24.0	44.0	150	9.2	1.64	5.32	47301	152.17	501.80	8.3	17.6
1435.0	20.7	44.5	150	9.2	1.70	5.37	47736	176.51	498.20	8.3	17.6
1436.0	16.8	44.8	150	9.1	1.78	5.43	48271	217.09	495.12	8.3	17.6
1437.0	13.5	45.1	150	9.1	1.87	5.50	48936	269.84	492.67	8.3	17.6
1438.0	18.4	44.8	150	9.1	1.75	5.55	49426	198.83	489.52	8.3	17.6
1439.0	18.3	44.7	150	9.1	1.75	5.61	49918	199.85	486.44	8.3	17.6
1440.0	20.5	45.4	150	9.1	1.72	5.66	50358	178.54	483.21	8.3	17.6
1441.0	19.0	44.7	150	9.1	1.74	5.71	50831	191.73	480.18	8.3	17.6
1442.0	26.9	44.4	150	9.2	1.61	5.75	51166	135.94	476.64	8.3	17.6
1443.0	29.8	43.5	150	9.1	1.57	5.78	51468	122.75	473.04	8.3	17.6
1444.0	30.8	43.5	150	9.1	1.56	5.81	51761	118.69	469.46	8.3	17.6
1445.0	31.9	43.3	150	9.1	1.54	5.85	52043	114.63	465.92	8.3	17.6
1446.0	29.0	43.2	150	9.2	1.57	5.88	52353	125.79	462.56	8.3	17.6
1447.0	32.7	43.2	150	9.2	1.53	5.91	52628	111.59	459.13	8.3	17.6
1448.0	28.6	43.6	150	9.1	1.58	5.95	52943	127.82	455.92	8.3	17.6
1449.0	30.8	43.8	150	9.2	1.56	5.98	53236	118.69	452.68	8.3	17.6
1450.0	23.4	43.9	150	9.2	1.65	6.02	53621	156.22	449.86	8.3	17.6
1451.0	27.7	44.2	150	9.2	1.60	6.06	53946	131.88	446.87	8.3	17.6
1452.0	27.5	44.3	150	9.2	1.60	6.09	54273	132.89	443.94	8.3	17.6
1453.0	28.6	44.1	150	9.2	1.58	6.13	54588	127.82	441.02	8.3	17.6
1454.0	26.7	44.0	150	9.2	1.61	6.17	54926	136.95	438.23	8.3	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1455.0	21.3	44.7	150	9.2	1.70	6.21	55348	171.44	435.81	8.3	17.6
1456.0	37.1	44.2	150	9.1	1.50	6.24	55591	98.40	432.78	8.3	17.6
1457.0	32.4	44.2	150	9.1	1.55	6.27	55868	112.60	429.92	8.3	17.6
1458.0	35.3	44.2	150	9.2	1.51	6.30	56123	103.47	427.04	8.3	17.6
1459.0	32.4	43.6	150	9.1	1.54	6.33	56401	112.60	424.29	8.3	17.6
1460.0	33.0	43.7	150	9.1	1.54	6.36	56673	110.57	421.56	8.3	17.6
1461.0	32.7	44.2	150	9.1	1.55	6.39	56948	111.59	418.90	8.3	17.6
1462.0	31.3	44.3	150	9.1	1.56	6.42	57236	116.66	416.32	8.3	17.7
1463.0	35.0	44.7	150	9.1	1.53	6.45	57493	104.49	413.68	8.3	17.7
1464.0	31.6	44.8	150	9.1	1.56	6.48	57778	115.65	411.18	8.3	17.7
1465.0	24.2	44.5	150	9.1	1.65	6.52	58151	151.15	409.02	8.3	17.7
1466.0	28.6	42.1	150	9.1	1.57	6.56	58466	127.82	406.70	8.3	17.7
1467.0	29.8	43.1	150	9.2	1.56	6.59	58768	122.75	404.37	8.3	17.7
1468.0	21.8	44.7	150	9.1	1.69	6.64	59181	167.38	402.45	8.3	17.7
1469.0	23.7	42.7	150	9.2	1.64	6.68	59561	154.20	400.45	8.3	17.7
1470.0	36.7	42.0	150	9.2	1.47	6.71	59806	99.42	398.04	8.3	17.7
1471.0	32.7	42.4	150	9.2	1.52	6.74	60081	111.59	395.78	8.3	17.7
1472.0	35.0	42.3	150	9.2	1.49	6.77	60338	104.49	393.49	8.3	17.7
1473.0	18.0	43.9	150	9.2	1.74	6.82	60838	202.89	392.00	8.3	17.7
1474.0	20.9	44.0	150	9.2	1.69	6.87	61268	174.48	390.31	8.3	17.7
1475.0	17.7	44.4	150	9.2	1.75	6.93	61776	205.93	388.90	8.3	17.7
1476.0	14.0	41.4	150	9.2	1.79	7.00	62418	260.71	387.92	8.3	17.7
1477.0	23.2	41.5	150	9.2	1.62	7.04	62806	157.24	386.18	8.3	17.7
1478.0	24.5	41.9	150	9.2	1.61	7.08	63173	149.12	384.40	8.3	17.7
1479.0	16.9	41.4	150	9.2	1.73	7.14	63706	216.08	383.14	8.3	17.7
1480.0	18.3	41.4	150	9.2	1.70	7.20	64198	199.85	381.79	8.3	17.7
1481.0	19.5	41.6	150	9.2	1.68	7.25	64661	187.67	380.36	8.3	17.7
1482.0	17.6	41.5	150	9.2	1.72	7.30	65173	207.96	379.11	8.3	17.7
1483.0	13.2	42.0	150	9.2	1.82	7.38	65856	276.94	378.37	8.3	17.7
1484.0	23.7	41.3	150	9.2	1.62	7.42	66236	154.20	376.76	8.3	17.7
1485.0	14.8	41.9	150	9.2	1.79	7.49	66846	247.52	375.83	8.3	17.7
1486.0	15.0	41.0	150	9.2	1.76	7.56	67446	243.47	374.90	8.3	17.7
1487.0	16.6	41.6	150	9.2	1.74	7.62	67989	220.64	373.81	8.3	17.7
1488.0	15.5	41.5	150	9.2	1.76	7.68	68569	235.35	372.84	8.3	17.7
1489.0	19.9	41.7	150	9.2	1.68	7.73	69022	183.61	371.53	8.3	17.7
1490.0	15.4	41.9	150	9.2	1.77	7.80	69607	237.38	370.61	8.3	17.7
1491.0	15.0	41.2	150	9.2	1.77	7.86	70207	243.47	369.74	8.3	17.7
1492.0	17.9	42.7	150	9.2	1.73	7.92	70709	203.90	368.61	8.3	17.7
1493.0	17.8	43.1	150	9.2	1.73	7.98	71214	204.92	367.51	8.3	17.7
1494.0	22.2	43.6	150	9.2	1.66	8.02	71619	164.34	366.15	8.3	17.7
1495.0	22.0	43.4	150	9.2	1.66	8.07	72029	166.37	364.82	8.3	17.7
1496.0	17.5	44.3	150	9.2	1.75	8.12	72544	208.98	363.79	8.3	17.7
1497.0	20.6	43.2	150	9.2	1.68	8.17	72982	177.53	362.56	8.3	17.7
1498.0	19.5	44.2	150	9.2	1.72	8.22	73444	187.67	361.42	8.3	17.7
1499.0	19.3	44.2	150	9.2	1.72	8.28	73912	189.70	360.31	8.3	17.7
1500.0	18.8	44.1	150	9.2	1.73	8.33	74392	194.77	359.24	8.3	17.7
1501.0	17.4	44.2	150	9.2	1.76	8.39	74909	209.99	358.28	8.3	17.7
1502.0	20.2	44.2	150	9.2	1.71	8.44	75354	180.57	357.15	8.3	17.7
1503.0	20.9	44.2	150	9.2	1.69	8.48	75784	174.48	356.00	8.3	17.7
1504.0	17.3	44.3	150	9.2	1.76	8.54	76304	211.00	355.09	8.3	17.7

DEPTH	ROP	WOR	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1505.0	22.9	44.3	150	9.2	1.66	8.59	76697	159.27	353.87	8.3	17.7
1506.0	18.7	42.0	150	9.2	1.70	8.64	77179	195.79	352.89	8.3	17.7
1507.0	22.0	40.3	150	9.2	1.63	8.68	77589	166.37	351.74	8.3	17.7
1508.0	23.1	39.7	150	9.2	1.60	8.73	77979	158.25	350.55	8.3	17.7
1509.0	22.0	40.0	150	9.2	1.62	8.77	78389	166.37	349.43	8.3	17.7
1510.0	21.7	40.0	150	9.2	1.63	8.82	78804	168.40	348.33	8.3	17.7
1511.0	22.9	40.0	150	9.2	1.61	8.86	79197	159.27	347.19	8.3	17.7
1512.0	22.1	39.6	150	9.2	1.61	8.91	79604	165.35	346.11	8.3	17.7
1513.0	25.2	39.6	150	9.2	1.57	8.95	79962	145.07	344.91	8.3	17.7
1514.0	23.5	40.0	150	9.2	1.60	8.99	80344	155.21	343.79	8.3	17.7
1515.0	18.2	41.6	150	9.2	1.70	9.05	80839	200.86	342.95	8.3	17.7
1516.0	22.9	42.8	150	9.2	1.64	9.09	81232	159.27	341.88	8.3	17.8
1517.0	22.1	43.0	150	9.2	1.66	9.13	81639	165.35	340.85	8.3	17.8
1518.0	21.4	43.0	150	9.2	1.67	9.18	82059	170.43	339.87	8.3	17.8
1519.0	22.5	42.9	150	9.2	1.65	9.23	82459	162.31	338.85	8.3	17.8
1520.0	21.3	43.1	150	9.2	1.67	9.27	82882	171.44	337.89	8.3	17.8
1521.0	19.4	43.4	150	9.2	1.70	9.32	83347	188.69	337.05	8.3	17.8
1522.0	22.0	43.7	150	9.2	1.67	9.37	83757	166.37	336.08	8.3	17.8
1523.0	21.6	43.7	150	9.2	1.67	9.42	84174	169.41	335.15	8.3	17.8
1524.0	19.9	44.0	150	9.2	1.70	9.47	84627	183.61	334.30	8.3	17.8
1525.0	17.1	42.9	150	9.2	1.74	9.52	85154	214.05	333.64	8.3	17.8
1526.0	21.4	41.5	150	9.2	1.65	9.57	85574	170.43	332.74	8.3	17.8
1527.0	19.6	40.0	150	9.2	1.66	9.62	86034	186.66	331.93	8.3	17.8
1528.0	21.2	40.4	150	9.2	1.64	9.67	86459	172.46	331.06	8.3	17.8
1529.0	21.2	40.6	150	9.2	1.64	9.72	86884	172.46	330.20	8.3	17.8
1530.0	20.2	40.6	150	9.2	1.65	9.77	87329	180.57	329.39	8.3	17.8
1531.0	22.6	41.3	150	9.2	1.63	9.81	87727	161.30	328.49	8.3	17.8
1532.0	23.4	43.6	150	9.2	1.64	9.85	88112	156.22	327.57	8.3	17.8
1533.0	22.1	43.6	150	9.2	1.66	9.90	88519	165.35	326.71	8.3	17.8
1534.0	18.2	43.1	150	9.2	1.72	9.95	89014	200.86	326.04	8.3	17.8
1535.0	21.8	42.6	150	9.2	1.65	10.00	89427	167.38	325.21	8.3	17.8
1536.0	19.1	42.6	150	9.2	1.70	10.05	89897	190.72	324.51	8.3	17.8
1537.0	20.6	42.4	150	9.2	1.67	10.10	90334	177.53	323.74	8.3	17.8
1538.0	21.1	42.4	150	9.2	1.66	10.15	90762	173.47	322.96	8.3	17.8
1539.0	19.7	42.3	150	9.2	1.69	10.20	91219	185.64	322.26	8.3	17.8
1540.0	20.3	42.4	150	9.2	1.68	10.25	91662	179.56	321.53	8.3	17.8
1541.0	19.8	42.4	150	9.2	1.69	10.30	92117	184.63	320.83	8.3	17.8
1542.0	18.9	42.5	150	9.2	1.70	10.35	92592	192.74	320.18	8.3	17.8
1543.0	21.4	42.6	150	9.2	1.66	10.40	93012	170.43	319.42	8.3	17.8
1544.0	30.0	39.6	150	9.2	1.51	10.43	93312	121.73	318.43	8.3	17.8
1545.0	14.7	43.0	150	9.2	1.79	10.50	93924	248.54	318.08	8.3	17.8
1546.0	18.7	42.8	150	9.2	1.71	10.55	94407	195.79	317.47	8.3	17.8
1547.0	20.1	42.5	150	9.2	1.68	10.60	94854	181.59	316.80	8.3	17.8
1548.0	22.6	42.2	150	9.2	1.64	10.65	95252	161.30	316.04	8.3	17.8
1549.0	20.8	42.5	150	9.2	1.67	10.69	95684	175.50	315.35	8.3	17.8
1550.0	19.4	42.5	150	9.2	1.69	10.75	96149	188.69	314.73	8.3	17.8
1551.0	20.6	42.4	150	9.2	1.67	10.80	96587	177.53	314.07	8.3	17.8
1552.0	23.4	42.3	150	9.2	1.63	10.84	96972	156.22	313.30	8.3	17.8
1553.0	22.6	42.9	150	9.2	1.65	10.88	97369	161.30	312.57	8.3	17.8
1554.0	17.8	49.3	150	9.2	1.81	10.94	97874	204.92	312.06	8.3	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1555.0	19.4	43.0	150	9.2	1.70	10.99	98339	188.69	311.47	8.3	17.8
1556.0	21.6	42.8	150	9.2	1.66	11.04	98757	169.41	310.80	8.3	17.8
1557.0	16.3	43.1	150	9.2	1.76	11.10	99309	224.19	310.39	8.3	17.8
1558.0	13.6	43.4	150	9.2	1.83	11.17	99972	268.83	310.20	8.3	17.8
1559.0	15.3	43.1	150	9.2	1.78	11.24	100559	238.39	309.86	8.3	17.8
1560.0	17.5	43.0	150	9.2	1.74	11.29	101074	208.98	309.39	8.3	17.8
1561.0	20.0	42.8	150	9.3	1.67	11.34	101524	182.60	308.81	8.3	17.8
1562.0	25.9	42.9	150	9.3	1.58	11.38	101872	141.01	308.03	8.3	17.8
1563.0	20.7	39.9	150	9.3	1.62	11.43	102307	176.80	307.43	8.3	17.8
1564.0	22.0	39.8	150	9.3	1.60	11.48	102717	166.37	306.79	8.3	17.8
1565.0	21.6	39.9	150	9.3	1.61	11.52	103135	169.41	306.16	8.3	17.8
1566.0	16.6	39.9	150	9.3	1.69	11.58	103677	220.13	305.78	8.3	17.8
1567.0	18.2	40.1	150	9.3	1.67	11.64	104172	200.86	305.30	8.3	17.8
1568.0	18.8	40.2	150	9.3	1.66	11.69	104650	193.76	304.80	8.3	17.8
1569.0	21.2	40.8	150	9.3	1.62	11.74	105075	172.46	304.21	8.3	17.8
1570.0	15.5	40.9	150	9.3	1.73	11.80	105655	235.35	303.91	8.3	17.8
1571.0	17.8	41.1	150	9.3	1.69	11.86	106160	204.92	303.47	8.3	17.9
1572.0	21.4	41.6	150	9.3	1.63	11.91	106580	170.43	302.88	8.3	17.9
1573.0	21.1	40.7	150	9.3	1.62	11.95	107007	173.47	302.32	8.3	17.9
1574.0	20.7	41.3	150	9.3	1.64	12.00	107442	176.51	301.77	8.3	17.9
1575.0	21.2	41.6	150	9.3	1.63	12.05	107867	172.46	301.21	8.3	17.9
1576.0	18.8	41.2	150	9.3	1.67	12.10	108345	193.76	300.74	8.3	17.9
1577.0	19.0	41.4	150	9.3	1.67	12.15	108817	191.73	300.27	8.3	17.9
1578.0	17.3	41.4	150	9.3	1.70	12.21	109337	211.00	299.89	8.3	17.9
1579.0	16.1	41.8	150	9.3	1.73	12.27	109895	226.22	299.57	8.3	17.9
1580.0	17.9	41.4	150	9.3	1.69	12.33	110397	203.90	299.17	8.3	17.9
1581.0	20.3	41.7	150	9.3	1.65	12.38	110840	179.56	298.66	8.3	17.9
1582.0	20.0	42.0	150	9.3	1.66	12.43	111290	182.60	298.17	8.3	17.9
1583.0	20.0	41.9	150	9.3	1.66	12.48	111740	182.60	297.69	8.3	17.9
1584.0	18.2	41.0	150	9.3	1.68	12.53	112235	200.86	297.28	8.3	17.9
1585.0	24.8	41.0	150	9.3	1.57	12.57	112597	147.09	296.66	8.3	17.9
1586.0	18.5	42.0	150	9.3	1.69	12.63	113085	197.82	296.25	8.3	17.9
1587.0	19.1	41.4	150	9.3	1.67	12.68	113555	190.72	295.81	8.3	17.9
1588.0	17.2	39.5	150	9.3	1.68	12.74	114078	212.33	295.47	8.3	17.9
1589.0	16.0	39.7	150	9.3	1.70	12.80	114641	228.25	295.19	8.3	17.9
1590.0	15.6	39.9	150	9.3	1.71	12.87	115218	234.34	294.94	8.3	17.9
1591.0	14.6	40.3	150	9.3	1.74	12.93	115833	249.55	294.76	8.3	17.9
1592.0	21.3	39.7	150	9.3	1.61	12.98	116256	171.44	294.26	8.3	17.9
1593.0	18.5	39.4	150	9.3	1.65	13.03	116743	197.82	293.87	8.3	17.9
1594.0	18.8	39.5	150	9.3	1.65	13.09	117223	194.77	293.48	8.3	17.9
1595.0	21.6	39.3	150	9.3	1.60	13.13	117641	169.41	292.98	8.3	17.9
1596.0	22.6	39.6	150	9.3	1.59	13.18	118038	161.30	292.46	8.3	17.9
1597.0	20.3	39.9	150	9.3	1.63	13.23	118481	179.56	292.01	8.3	17.9
1598.0	19.5	40.1	150	9.3	1.64	13.28	118943	187.67	291.60	8.3	17.9
1599.0	19.6	40.2	150	9.3	1.64	13.33	119403	186.66	291.18	8.3	17.9
1600.0	28.3	37.8	150	9.3	1.49	13.37	119721	128.83	290.55	8.3	17.9
1601.0	27.3	38.6	150	9.3	1.51	13.40	120051	133.91	289.94	8.3	17.9
1602.0	23.2	40.0	150	9.3	1.58	13.45	120438	157.24	289.42	8.3	17.9
1603.0	22.6	40.3	150	9.3	1.60	13.49	120836	161.30	288.92	8.3	17.9
1604.0	22.6	40.7	150	9.3	1.60	13.53	121233	161.30	288.43	8.3	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1605.0	23.1	40.8	150	9.3	1.60	13.58	121623	158.25	287.93	8.3	17.9
1606.0	19.9	40.6	150	9.3	1.64	13.63	122076	183.61	287.53	8.3	17.9
1607.0	21.7	40.8	150	9.3	1.62	13.67	122491	168.40	287.08	8.3	17.9
1608.0	22.6	40.7	150	9.3	1.60	13.72	122888	161.30	286.60	8.3	17.9
1609.0	21.8	41.1	150	9.3	1.62	13.76	123301	167.38	286.15	8.3	17.9
1610.0	18.4	41.6	150	9.3	1.68	13.82	123791	198.83	285.82	8.3	17.9
1611.0	16.8	38.4	150	9.3	1.68	13.88	124326	217.09	285.56	8.3	17.9
1612.0	18.2	37.7	150	9.3	1.64	13.93	124821	200.86	285.24	8.3	17.9
1613.0	15.7	37.9	150	9.3	1.69	14.00	125393	232.31	285.05	8.3	17.9
1614.0	16.2	38.0	150	9.3	1.68	14.06	125948	225.21	284.82	8.3	17.9
1615.0	16.2	38.0	150	9.3	1.68	14.12	126503	225.21	284.60	8.3	17.9
1616.0	17.2	38.0	150	9.3	1.66	14.18	127026	212.02	284.34	8.3	17.9
1617.0	14.1	38.3	150	9.2	1.74	14.25	127663	258.68	284.24	8.3	17.9
1618.0	12.5	38.4	150	9.3	1.78	14.33	128386	293.17	284.27	8.3	17.9
1619.0	18.5	35.7	150	9.3	1.61	14.38	128873	197.82	283.96	8.3	17.9
1620.0	20.8	36.5	150	9.3	1.58	14.43	129306	175.50	283.56	8.3	17.9
1621.0	24.7	37.1	150	9.3	1.53	14.47	129671	148.11	283.07	8.3	17.9
1622.0	16.7	37.5	150	9.3	1.66	14.53	130211	219.12	282.84	8.3	17.9
1623.0	16.8	37.9	150	9.3	1.67	14.59	130746	217.09	282.61	8.3	17.9
1624.0	21.7	37.5	150	9.3	1.58	14.64	131161	168.40	282.20	8.3	17.9
1625.0	21.2	37.5	150	9.3	1.59	14.68	131586	172.46	281.81	8.3	17.9
1626.0	17.8	37.9	150	9.3	1.65	14.74	132091	204.92	281.53	8.3	17.9
1627.0	18.4	37.9	150	9.3	1.64	14.79	132581	198.83	281.24	8.3	17.9
1628.0	18.6	37.3	150	9.3	1.63	14.85	133066	196.80	280.94	8.3	18.0
1629.0	25.0	36.8	150	9.3	1.53	14.89	133426	146.08	280.47	8.3	18.0
1630.0	19.9	40.6	150	9.2	1.65	14.94	133878	183.61	280.13	8.3	18.0
1631.0	15.9	41.0	150	9.3	1.73	15.00	134446	230.28	279.95	8.3	18.0
1632.0	17.7	40.2	150	9.3	1.68	15.06	134953	205.93	279.70	8.3	18.0
1633.0	16.1	40.5	150	9.2	1.72	15.12	135511	226.22	279.51	8.3	18.0
1634.0	17.3	41.0	150	9.2	1.71	15.18	136031	211.00	279.27	8.3	18.0
1635.0	18.8	40.8	150	9.2	1.67	15.23	136508	193.76	278.98	8.3	18.0
1636.0	15.1	41.1	150	9.2	1.75	15.30	137103	241.44	278.85	8.3	18.0
1637.0	15.0	41.0	150	9.2	1.75	15.36	137703	243.47	278.73	8.3	18.0
1638.0	10.8	40.0	150	9.2	1.85	15.46	138538	338.82	278.93	8.3	18.0
1639.0	14.0	40.0	150	9.2	1.77	15.53	139183	261.73	278.87	8.3	18.0
1640.0	14.2	40.0	150	9.2	1.76	15.60	139816	256.65	278.80	8.3	18.0
1641.0	14.4	40.0	150	9.3	1.75	15.67	140441	253.61	278.71	8.3	18.0
1642.0	12.7	40.0	150	9.3	1.79	15.75	141151	288.10	278.75	8.3	18.0
1643.0	14.1	40.0	150	9.2	1.76	15.82	141788	258.68	278.68	8.3	18.0
1644.0	22.2	40.0	150	9.2	1.61	15.86	142193	164.34	278.30	8.3	18.0
1645.0	20.8	39.1	150	9.3	1.61	15.91	142626	175.50	277.95	8.3	18.0
1646.0	19.5	40.0	150	9.3	1.64	15.96	143088	187.67	277.65	8.3	18.0
1647.0	25.2	39.9	150	9.3	1.55	16.00	143446	145.07	277.22	8.3	18.0
1648.0	18.1	39.4	150	9.3	1.66	16.06	143943	201.87	276.97	8.3	18.0
1649.0	20.7	39.9	150	9.3	1.62	16.11	144378	176.51	276.64	8.3	18.0
1650.0	17.8	40.3	150	9.3	1.67	16.16	144883	204.92	276.40	8.3	18.0
1651.0	18.8	39.9	150	9.3	1.65	16.21	145361	193.76	276.13	8.3	18.0
1652.0	22.9	40.2	150	9.4	1.58	16.26	145753	159.27	275.75	8.3	18.0
1653.0	19.9	40.3	150	9.3	1.63	16.31	146206	183.61	275.45	8.3	18.0
1654.0	17.8	39.9	150	9.3	1.66	16.36	146711	204.92	275.22	8.3	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1655.0	19.0	39.4	150	9.3	1.64	16.42	147183	191.73	274.96	8.3	18.0
1656.0	26.9	39.9	150	9.3	1.53	16.45	147518	135.94	274.51	8.3	18.0
1657.0	12.8	40.1	150	9.3	1.78	16.53	148221	285.06	274.54	8.3	18.0
1658.0	20.5	40.6	150	9.3	1.63	16.58	148661	178.54	274.24	8.3	18.0
1659.0	21.3	40.0	150	9.3	1.60	16.63	149083	171.44	273.91	8.3	18.0
1660.0	21.6	40.2	150	9.3	1.61	16.67	149501	169.41	273.58	8.3	18.0
1661.0	20.8	40.6	150	9.3	1.62	16.72	149933	175.50	273.27	8.3	18.0
1662.0	19.8	40.3	150	9.3	1.63	16.77	150388	184.63	272.99	8.3	18.0
1663.0	19.4	39.6	150	9.3	1.63	16.82	150853	188.69	272.72	8.3	18.0
1664.0	19.0	39.4	150	9.3	1.64	16.88	151326	191.73	272.47	8.3	18.0
1665.0	15.7	40.7	150	9.3	1.72	16.94	151898	232.31	272.34	8.3	18.0
1666.0	24.7	41.6	150	9.3	1.58	16.98	152263	148.11	271.96	8.3	18.0
1667.0	23.2	40.4	150	9.3	1.58	17.02	152651	157.24	271.60	8.3	18.0
1668.0	23.7	40.6	150	9.3	1.58	17.07	153031	154.20	271.24	8.3	18.0
1669.0	22.4	40.5	150	9.3	1.60	17.11	153433	163.33	270.90	8.3	18.0
1670.0	24.2	40.4	150	9.3	1.57	17.15	153806	151.15	270.54	8.3	18.0
1671.0	21.7	40.7	150	9.3	1.61	17.20	154221	168.40	270.22	8.3	18.0
1672.0	22.1	40.7	150	9.3	1.60	17.24	154629	165.35	269.90	8.3	18.0
1673.0	25.0	40.7	150	9.3	1.56	17.28	154988	146.08	269.53	8.3	18.0
1674.0	27.1	40.4	150	9.3	1.53	17.32	155321	134.92	269.12	8.3	18.0
1675.0	28.3	38.9	150	9.3	1.50	17.36	155638	128.83	268.69	8.3	18.0
1676.0	27.9	38.5	150	9.3	1.50	17.39	155961	130.86	268.28	8.3	18.0
1677.0	29.5	37.7	150	9.3	1.47	17.43	156266	123.76	267.84	8.3	18.0
1678.0	23.8	37.7	150	9.3	1.54	17.47	156643	153.18	267.50	8.3	18.0
1679.0	18.4	37.5	150	9.3	1.63	17.52	157133	198.83	267.29	8.3	18.0
1680.0	20.2	37.9	150	9.3	1.60	17.57	157578	180.57	267.03	8.3	18.0
1681.0	24.7	37.1	150	9.4	1.52	17.61	157943	148.11	266.68	8.3	18.0
1682.0	22.1	36.6	150	9.4	1.55	17.66	158351	165.35	266.38	8.3	18.0
1683.0	22.5	37.0	150	9.4	1.54	17.70	158751	162.31	266.07	8.3	18.0
1684.0	27.7	37.8	150	9.4	1.49	17.74	159076	131.88	265.67	8.3	18.0
1685.0	29.3	37.0	150	9.4	1.46	17.77	159383	124.78	265.26	8.3	18.0
1686.0	32.1	37.3	150	9.4	1.43	17.80	159663	113.62	264.82	8.3	18.1
1687.0	34.0	37.6	150	9.4	1.42	17.83	159928	107.53	264.36	8.3	18.1
1688.0	19.6	37.6	150	9.4	1.59	17.88	160388	186.66	264.13	8.3	18.1
1689.0	21.7	37.1	150	9.4	1.55	17.93	160803	168.40	263.85	8.3	18.1
1690.0	26.5	37.8	150	9.4	1.50	17.97	161143	137.96	263.49	8.3	18.1
1691.0	29.5	37.6	150	9.4	1.46	18.00	161448	123.76	263.08	8.3	18.1
1692.0	29.3	37.5	150	9.4	1.46	18.04	161756	124.78	262.69	8.3	18.1
1693.0	32.1	37.6	150	9.4	1.43	18.07	162036	113.62	262.26	8.3	18.1
1694.0	31.9	37.8	150	9.4	1.44	18.10	162318	114.63	261.83	8.3	18.1
1695.0	30.5	39.6	150	9.4	1.47	18.13	162613	119.70	261.43	8.3	18.1
1696.0	29.8	38.6	150	9.4	1.47	18.17	162916	122.75	261.03	8.3	18.1
1697.0	28.3	37.9	150	9.4	1.48	18.20	163233	128.83	260.66	8.3	18.1
1698.0	30.0	37.7	150	9.4	1.46	18.23	163533	121.73	260.27	8.3	18.1
1699.0	27.5	38.6	150	9.3	1.51	18.27	163861	132.89	259.91	8.3	18.1
1700.0	32.4	38.8	150	9.3	1.46	18.30	164138	112.60	259.49	8.3	18.1
1701.0	29.0	38.7	150	9.3	1.49	18.34	164448	125.79	259.12	8.3	18.1
1702.0	30.8	38.7	150	9.4	1.46	18.37	164741	118.69	258.72	8.3	18.1
1703.0	32.0	37.7	150	9.4	1.44	18.40	165022	114.13	258.32	8.3	18.1
1704.0	32.7	39.7	150	9.4	1.45	18.43	165297	111.59	257.91	8.3	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1705.0	30.3	39.3	150	9.4	1.47	18.46	165594	120.72	257.53	8.3	18.1
1706.0	33.3	39.4	150	9.4	1.44	18.49	165864	109.56	257.12	8.3	18.1
1707.0	33.0	39.4	150	9.4	1.44	18.52	166137	110.57	256.72	8.3	18.1
1708.0	31.0	39.4	150	9.4	1.46	18.56	166427	117.68	256.33	8.3	18.1
1709.0	30.0	39.5	150	9.4	1.47	18.59	166727	121.73	255.96	8.3	18.1
1710.0	27.9	39.9	150	9.4	1.50	18.62	167049	130.86	255.62	8.3	18.1
1711.0	26.1	40.1	150	9.4	1.52	18.66	167394	139.99	255.30	8.3	18.1
1712.0	34.3	39.8	150	9.4	1.43	18.69	167657	106.52	254.90	8.3	18.1
1713.0	28.6	39.5	150	9.4	1.49	18.73	167972	127.82	254.55	8.3	18.1
1714.0	32.1	40.6	150	9.3	1.48	18.76	168252	113.62	254.17	8.3	18.1
1715.0	29.5	39.7	150	9.3	1.51	18.79	168557	123.76	253.82	8.3	18.1
1716.0	26.7	40.0	150	9.3	1.53	18.83	168894	136.95	253.51	8.3	18.1
1717.0	34.0	39.8	150	9.3	1.46	18.86	169159	107.53	253.11	8.3	18.1
1718.0	33.0	39.6	150	9.3	1.47	18.89	169432	110.57	252.73	8.3	18.1
1719.0	23.4	40.3	150	9.2	1.60	18.93	169817	156.22	252.47	8.3	18.1
1720.0	29.8	41.0	150	9.3	1.52	18.97	170119	122.75	252.13	8.3	18.1
1721.0	31.9	40.6	150	9.3	1.49	19.00	170402	114.63	251.76	8.3	18.1
1722.0	33.3	39.9	150	9.3	1.46	19.03	170672	109.56	251.38	8.3	18.1
1723.0	24.3	40.0	150	9.3	1.56	19.07	171042	150.14	251.12	8.3	18.1
1724.0	29.3	40.0	150	9.3	1.50	19.10	171349	124.78	250.78	8.3	18.1
1725.0	22.5	40.0	150	9.3	1.59	19.15	171749	162.31	250.55	8.3	18.1
1726.0	28.1	40.0	150	9.3	1.52	19.18	172069	129.85	250.23	8.3	18.1
1727.0	27.7	40.0	150	9.3	1.53	19.22	172394	131.88	249.93	8.3	18.1
1728.0	26.1	40.6	150	9.3	1.56	19.26	172739	139.99	249.64	8.3	18.1
1729.0	35.0	41.0	150	9.3	1.46	19.29	172997	104.49	249.26	8.3	18.1
1730.0	23.4	41.8	150	9.2	1.61	19.33	173382	156.22	249.02	8.3	18.1
1731.0	33.3	41.0	150	9.2	1.49	19.36	173652	109.56	248.66	8.3	18.1
1732.0	37.5	37.8	150	9.2	1.41	19.38	173892	97.39	248.27	8.3	18.1
1733.0	34.0	41.7	150	9.2	1.49	19.41	174157	107.53	247.90	8.3	18.1
1734.0	40.4	41.0	150	9.2	1.42	19.44	174379	90.29	247.50	8.3	18.1
1735.0	37.1	40.6	150	9.2	1.44	19.47	174622	98.40	247.12	8.3	18.1
1736.0	33.3	40.7	150	9.3	1.48	19.50	174892	109.56	246.77	8.3	18.1
1737.0	25.5	41.5	150	9.3	1.58	19.53	175244	143.04	246.50	8.3	18.1
1738.0	23.7	42.0	150	9.3	1.61	19.58	175624	154.20	246.27	8.3	18.1
1739.0	14.5	42.5	150	9.3	1.77	19.65	176244	251.58	246.28	8.3	18.1
1740.0	16.4	42.7	150	9.3	1.74	19.71	176792	222.16	246.22	8.3	18.1
1741.0	17.1	42.5	150	9.2	1.73	19.77	177319	214.05	246.14	8.3	18.1
1742.0	16.0	42.8	150	9.2	1.77	19.83	177882	228.25	246.09	8.3	18.1
1743.0	25.0	42.9	150	9.2	1.61	19.87	178242	146.08	245.84	8.3	18.1
1744.0	32.7	41.8	150	9.2	1.51	19.90	178517	111.59	245.51	8.3	18.1
1745.0	34.0	41.5	150	9.1	1.50	19.93	178782	107.53	245.16	8.3	18.1
1746.0	30.8	41.5	150	9.1	1.53	19.96	179074	118.69	244.85	8.3	18.2
1747.0	31.6	41.7	150	9.1	1.53	19.99	179359	115.65	244.52	8.3	18.2
1748.0	31.0	42.0	150	9.2	1.53	20.02	179649	117.68	244.21	8.3	18.2
1749.0	25.7	42.2	150	9.1	1.61	20.06	179999	142.02	243.96	8.3	18.2
1750.0	34.0	42.1	150	9.2	1.49	20.09	180264	107.53	243.62	8.3	18.2
1751.0	36.4	40.3	150	9.3	1.44	20.12	180512	100.43	243.27	8.3	18.2
1752.0	37.5	41.0	150	9.3	1.43	20.15	180752	97.39	242.91	8.3	18.2
1753.0	30.8	41.8	150	9.3	1.51	20.18	181044	118.69	242.60	8.3	18.2
1754.0	36.4	41.8	150	9.3	1.45	20.21	181292	100.43	242.26	8.3	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1755.0	32.1	41.8	150	9.2	1.51	20.24	181572	113.62	241.94	8.3	18.2
1756.0	30.8	41.9	150	9.1	1.54	20.27	181864	118.69	241.64	8.3	18.2
1757.0	31.9	42.2	150	9.2	1.53	20.30	182147	114.63	241.34	8.3	18.2
1758.0	28.6	42.5	150	9.3	1.55	20.34	182462	127.82	241.06	8.3	18.2
1759.0	30.0	42.2	150	9.3	1.52	20.37	182762	121.73	240.77	8.3	18.2
1760.0	13.5	40.0	150	9.3	1.76	20.44	183429	270.52	240.84	8.3	18.2
1761.0	15.3	38.3	150	9.4	1.69	20.51	184016	238.39	240.84	8.3	18.2
1762.0	18.7	34.5	150	9.4	1.57	20.56	184499	195.79	240.73	8.3	18.2
1763.0	20.5	42.5	150	9.4	1.64	20.61	184939	178.54	240.58	8.3	18.2
1764.0	23.2	41.9	150	9.4	1.59	20.66	185326	157.24	240.38	8.3	18.2
1765.0	25.4	42.2	150	9.4	1.57	20.69	185681	144.05	240.15	8.3	18.2
1766.0	21.1	42.5	150	9.4	1.64	20.74	186109	173.47	240.00	8.3	18.2
1767.0	17.6	43.1	150	9.3	1.71	20.80	186621	207.96	239.92	8.3	18.2
1768.0	24.3	42.6	150	9.3	1.60	20.84	186991	150.14	239.71	8.3	18.2
1769.0	32.4	41.8	150	9.3	1.50	20.87	187269	112.60	239.41	8.3	18.2
1770.0	43.9	43.6	150	9.2	1.42	20.89	187474	83.18	239.04	8.3	18.2
1771.0	34.3	41.9	150	9.2	1.49	20.92	187736	106.52	238.73	8.3	18.2
1772.0	40.9	41.6	150	9.2	1.42	20.95	187956	89.27	238.38	8.3	18.2
1773.0	45.9	42.0	150	9.2	1.39	20.97	188152	79.56	238.01	8.3	18.2
1774.0	43.8	41.5	150	9.2	1.40	20.99	188358	83.38	237.65	8.3	18.2
1775.0	44.3	41.0	150	9.2	1.40	21.01	188561	82.44	237.29	8.3	18.2
1776.0	37.9	41.0	150	9.3	1.43	21.04	188798	96.36	236.96	8.3	18.2
1777.0	32.0	40.0	150	9.3	1.48	21.07	189080	114.13	236.68	8.3	18.2
1778.0	35.2	40.0	150	9.3	1.45	21.10	189335	103.75	236.37	8.3	18.2
1779.0	28.2	41.0	150	9.3	1.53	21.14	189654	129.50	236.12	8.3	18.2
1780.0	49.4	40.0	150	9.3	1.33	21.16	189837	73.93	235.75	8.3	18.2
1781.0	47.4	40.0	150	9.3	1.35	21.18	190026	77.05	235.39	8.3	18.2
1782.0	45.2	40.0	150	9.3	1.36	21.20	190226	80.80	235.03	8.3	18.2
1783.0	43.4	41.0	150	9.3	1.39	21.22	190433	84.05	234.69	8.3	18.2
1784.0	40.9	41.3	150	9.3	1.42	21.25	190653	89.27	234.36	8.3	18.2
1785.0	37.5	40.8	150	9.3	1.43	21.27	190893	97.39	234.05	8.3	18.2
1786.0	39.1	40.1	150	9.3	1.41	21.30	191123	93.33	233.73	8.3	18.2
1787.0	34.6	40.0	150	9.3	1.46	21.33	191383	105.50	233.44	8.3	18.2
1788.0	24.5	37.6	150	9.3	1.54	21.37	191750	149.12	233.25	8.3	18.2
1789.0	36.7	38.7	150	9.2	1.43	21.40	191995	99.42	232.95	8.3	18.2
1790.0	56.2	39.3	150	9.3	1.29	21.41	192155	64.92	232.57	8.3	18.2
1791.0	42.4	39.4	150	9.2	1.39	21.44	192368	86.23	232.24	8.3	18.2
1792.0	40.4	39.3	150	9.2	1.40	21.46	192590	90.29	231.92	8.3	18.2
1793.0	40.4	39.4	150	9.2	1.41	21.49	192813	90.29	231.61	8.3	18.2
1794.0	43.4	39.5	150	9.2	1.39	21.51	193020	84.20	231.28	8.3	18.2
1795.0	30.3	40.2	150	9.2	1.51	21.54	193318	120.72	231.03	8.3	18.2
1796.0	32.4	40.6	150	9.3	1.49	21.57	193595	112.60	230.77	8.3	18.2
1797.0	36.7	40.6	150	9.2	1.45	21.60	193840	99.42	230.48	8.3	18.2
1798.0	38.7	40.1	150	9.2	1.42	21.63	194073	94.34	230.18	8.3	18.2
1799.0	14.2	40.7	150	9.1	1.79	21.70	194708	257.67	230.24	8.3	18.2
1800.0	16.6	40.8	150	9.1	1.74	21.76	195250	220.13	230.22	8.3	18.2
1801.0	15.7	41.0	150	9.1	1.76	21.82	195825	233.32	230.23	8.3	18.2
1802.0	34.6	40.4	150	9.2	1.48	21.85	196085	105.50	229.95	8.3	18.2
1803.0	26.5	39.3	150	9.2	1.56	21.89	196425	137.96	229.75	8.3	18.2
1804.0	30.8	39.9	150	9.2	1.51	21.92	196718	118.69	229.51	8.3	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1805.0	37.9	39.3	150	9.2	1.43	21.95	196955	96.37	229.22	8.3	18.2
1806.0	24.3	39.9	150	9.2	1.59	21.99	197325	150.14	229.05	8.3	18.2
1807.0	38.7	39.9	150	9.1	1.44	22.01	197558	94.34	228.76	8.3	18.2
1808.0	20.0	39.0	150	9.1	1.65	22.06	198008	182.60	228.66	8.3	18.3
1809.0	30.3	41.3	150	9.1	1.54	22.10	198305	120.72	228.43	8.3	18.3
1810.0	36.7	40.0	150	9.2	1.46	22.12	198550	99.42	228.15	8.3	18.3
1811.0	35.6	39.6	150	9.1	1.46	22.15	198803	102.46	227.88	8.3	18.3
1812.0	40.4	39.3	150	9.2	1.41	22.18	199025	90.29	227.58	8.3	18.3
1813.0	35.0	39.5	150	9.2	1.47	22.21	199283	104.49	227.32	8.3	18.3
1814.0	34.0	39.9	150	9.2	1.48	22.24	199548	107.53	227.07	8.3	18.3
1815.0	46.2	39.5	150	9.2	1.37	22.26	199743	79.13	226.75	8.3	18.3
1816.0	22.0	40.3	150	9.1	1.64	22.30	200153	166.37	226.62	8.3	18.3
1817.0	40.0	32.9	150	9.1	1.35	22.33	200378	91.30	226.34	8.3	18.3
1818.0	31.6	40.6	150	9.1	1.53	22.36	200663	115.65	226.10	8.3	18.3
1819.0	37.9	40.1	150	9.1	1.46	22.39	200900	96.37	225.83	8.3	18.3
1820.0	35.6	39.7	150	9.1	1.47	22.41	201153	102.46	225.57	8.3	18.3
1821.0	38.3	40.0	150	9.1	1.45	22.44	201388	95.36	225.30	8.3	18.3
1822.0	33.6	39.8	150	9.1	1.49	22.47	201655	108.55	225.05	8.3	18.3
1823.0	23.2	41.1	150	9.1	1.63	22.51	202043	157.24	224.91	8.3	18.3
1824.0	38.3	40.6	150	9.1	1.45	22.54	202278	95.36	224.64	8.3	18.3
1825.0	51.4	39.4	150	9.1	1.34	22.56	202453	71.01	224.32	8.3	18.3
1826.0	32.7	40.0	150	9.1	1.50	22.59	202728	111.59	224.09	8.3	18.3
1827.0	22.6	39.9	150	9.1	1.63	22.63	203125	161.30	223.96	8.3	18.3
1828.0	34.0	41.0	150	9.1	1.50	22.66	203390	107.53	223.71	8.3	18.3
1829.0	44.4	40.1	150	9.1	1.40	22.68	203593	82.17	223.42	8.3	18.3
1830.0	40.9	40.1	150	9.1	1.42	22.71	203813	89.27	223.15	8.3	18.3
1831.0	37.9	40.4	150	9.1	1.46	22.74	204050	96.37	222.88	8.3	18.3
1832.0	25.2	41.1	150	9.1	1.60	22.78	204408	145.07	222.72	8.3	18.3
1833.0	36.4	41.3	150	9.1	1.48	22.80	204655	100.43	222.47	8.3	18.3
1834.0	37.9	40.0	150	9.2	1.44	22.83	204893	96.36	222.22	8.3	18.3
1835.0	33.9	40.0	150	9.2	1.47	22.86	205158	107.73	221.98	8.3	18.3
1836.0	33.6	40.0	150	9.3	1.46	22.89	205426	108.69	221.75	8.3	18.3
1837.0	17.1	41.1	150	9.3	1.70	22.95	205952	213.57	221.74	8.3	18.3
1838.0	36.0	40.0	150	9.3	1.44	22.97	206202	101.44	221.49	8.3	18.3
1839.0	34.9	40.0	150	9.3	1.45	23.00	206460	104.64	221.26	8.3	18.3
1840.0	37.3	40.0	150	9.3	1.43	23.03	206702	97.91	221.01	8.3	18.3
1841.0	33.7	40.0	150	9.3	1.46	23.06	206969	108.37	220.78	8.3	18.3
1842.0	35.3	40.0	150	9.3	1.44	23.09	207224	103.46	220.54	8.3	18.3
1843.0	33.2	40.0	150	9.3	1.47	23.12	207495	110.00	220.32	8.3	18.3
1844.0	39.0	40.0	150	9.3	1.41	23.14	207725	93.64	220.07	8.3	18.3
1845.0	21.3	40.0	150	9.3	1.61	23.19	208148	171.46	219.97	8.3	18.3
1846.0	30.9	40.0	150	9.3	1.49	23.22	208439	118.19	219.77	8.3	18.3
1847.0	31.8	40.0	150	9.3	1.48	23.25	208722	114.84	219.56	8.3	18.3
1848.0	29.2	40.0	150	9.3	1.51	23.29	209030	125.07	219.37	8.3	18.3
1849.0	25.1	40.0	150	9.3	1.56	23.33	209389	145.50	219.22	8.3	18.3
1850.0	25.0	40.0	150	9.3	1.56	23.37	209749	146.08	219.08	8.3	18.3
1851.0	31.4	40.0	150	9.3	1.48	23.40	210036	116.31	218.88	8.3	18.3
1852.0	31.3	40.0	150	9.3	1.48	23.43	210323	116.68	218.67	8.3	18.3
1853.0	30.5	40.0	150	9.3	1.49	23.47	210618	119.74	218.48	8.3	18.3
1854.0	37.6	40.0	150	9.3	1.42	23.49	210858	97.13	218.24	8.3	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1855.0	40.6	40.0	150	9.3	1.40	23.52	211079	89.95	217.99	8.3	18.3
1856.0	26.2	40.0	150	9.3	1.54	23.55	211423	139.39	217.84	8.3	18.3
1857.0	42.0	40.0	150	9.3	1.39	23.58	211637	86.95	217.58	8.3	18.3
1858.0	21.3	40.0	150	9.3	1.61	23.63	212060	171.46	217.49	8.3	18.3
1859.0	37.3	40.0	150	9.3	1.43	23.65	212301	97.91	217.26	8.3	18.3
1860.0	41.4	40.0	150	9.3	1.39	23.68	212518	88.21	217.01	8.3	18.3
1861.0	23.9	40.0	150	9.3	1.57	23.72	212895	152.80	216.88	8.3	18.3
1862.0	20.4	40.0	150	9.3	1.63	23.77	213336	179.02	216.81	8.3	18.3
1863.0	15.5	40.0	150	9.3	1.72	23.83	213917	235.61	216.85	8.3	18.3
1864.0	43.0	40.0	150	9.3	1.38	23.86	214126	84.93	216.59	8.3	18.3
1865.0	15.7	40.0	150	9.3	1.71	23.92	214699	232.61	216.62	8.3	18.3
1866.0	12.1	40.0	150	9.3	1.80	24.00	215443	301.82	216.79	8.3	18.3
1867.0	18.5	40.0	150	9.3	1.66	24.06	215930	197.41	216.75	8.3	18.3
1868.0	39.8	40.0	150	9.3	1.41	24.08	216156	91.76	216.51	8.3	18.3
1869.0	28.1	40.0	150	9.3	1.52	24.12	216476	129.96	216.35	8.3	18.3
1870.0	38.4	40.0	150	9.3	1.42	24.14	216710	95.10	216.12	8.3	18.3
1871.0	33.2	40.0	150	9.3	1.47	24.17	216981	110.00	215.91	8.3	18.3
1872.0	36.3	40.0	150	9.3	1.44	24.20	217229	100.61	215.69	8.3	18.3
1873.0	31.1	40.0	150	9.3	1.49	24.23	217519	117.43	215.51	8.3	18.4
1874.0	27.7	40.0	150	9.3	1.53	24.27	217844	131.84	215.35	8.3	18.4
1875.0	31.6	40.0	150	9.3	1.48	24.30	218128	115.57	215.16	8.3	18.4
1876.0	41.1	40.0	150	9.3	1.39	24.32	218347	88.86	214.92	8.3	18.4
1877.0	27.8	40.0	150	9.3	1.52	24.36	218671	131.37	214.77	8.3	18.4
1878.0	40.5	40.0	150	9.3	1.40	24.38	218893	90.17	214.53	8.3	18.4
1879.0	23.0	40.0	150	9.3	1.59	24.43	219285	158.78	214.43	8.3	18.4
1880.0	42.8	40.0	150	9.3	1.38	24.45	219495	85.33	214.19	8.3	18.4
1881.0	29.5	40.0	150	9.3	1.50	24.49	219800	123.80	214.02	8.3	18.4
1882.0	30.1	40.0	150	9.3	1.50	24.52	220099	121.33	213.85	8.3	18.4
1883.0	19.4	40.0	150	9.3	1.64	24.57	220563	188.25	213.80	8.3	18.4
1884.0	29.3	40.0	150	9.3	1.51	24.60	220870	124.64	213.63	8.3	18.4
1885.0	18.6	40.0	150	9.3	1.66	24.66	221354	196.34	213.60	8.3	18.4
1886.0	29.0	40.0	150	9.3	1.51	24.69	221664	125.93	213.44	8.3	18.4
1887.0	20.9	40.0	150	9.3	1.62	24.74	222095	174.74	213.37	8.3	18.4
1888.0	26.1	40.0	150	9.3	1.55	24.78	222440	139.92	213.23	8.3	18.4
1889.0	19.5	40.0	150	9.3	1.64	24.83	222901	187.28	213.19	8.3	18.4
1890.0	23.8	40.0	150	9.3	1.58	24.87	223279	153.45	213.08	8.3	18.4
1891.0	24.1	40.0	150	9.3	1.57	24.91	223653	151.54	212.96	8.3	18.4
1892.0	14.0	40.0	150	9.3	1.75	24.99	224296	260.86	213.05	8.3	18.4
1893.0	27.4	40.0	150	9.3	1.53	25.02	224624	133.28	212.91	8.3	18.4
1894.0	28.3	40.0	150	9.3	1.52	25.06	224942	129.05	212.75	8.3	18.4
1895.0	24.2	40.0	150	9.3	1.57	25.10	225314	150.91	212.64	8.3	18.4
1896.0	33.7	40.0	150	9.3	1.46	25.13	225581	108.37	212.45	8.3	18.4
1897.0	36.2	40.0	150	9.3	1.44	25.16	225830	100.88	212.25	8.3	18.4
1898.0	28.3	40.0	150	9.3	1.52	25.19	226148	129.05	212.10	8.3	18.4
1899.0	38.3	40.0	150	9.3	1.42	25.22	226383	95.35	211.89	8.3	18.4
1900.0	30.7	40.0	150	9.3	1.49	25.25	226676	118.96	211.72	8.3	18.4
1901.0	21.5	40.0	150	9.3	1.61	25.30	227095	169.86	211.65	8.3	18.4
1902.0	26.0	40.0	150	9.3	1.55	25.33	227441	140.46	211.52	8.3	18.4
1903.0	24.4	40.0	150	9.3	1.57	25.38	227810	149.67	211.41	8.3	18.4
1904.0	36.6	40.0	150	9.3	1.43	25.40	228056	99.78	211.21	8.3	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1905.0	24.5	40.0	150	9.3	1.57	25.44	228423	149.06	211.10	8.3	18.4
1906.0	34.8	40.0	150	9.3	1.45	25.47	228682	104.94	210.91	8.3	18.4
1907.0	49.6	40.0	150	9.3	1.33	25.49	228863	73.63	210.66	8.3	18.4
1908.0	30.1	40.0	150	9.3	1.50	25.53	229162	121.33	210.50	8.3	18.4
1909.0	27.6	40.0	150	9.3	1.53	25.56	229488	132.32	210.37	8.3	18.4
1910.0	25.8	40.0	150	9.3	1.55	25.60	229837	141.55	210.24	8.3	18.4
1911.0	32.7	42.2	150	9.2	1.51	25.63	230112	111.59	210.07	8.3	18.4
1912.0	23.7	41.8	150	9.3	1.60	25.67	230492	154.20	209.97	8.3	18.4
1913.0	22.8	39.9	150	9.2	1.60	25.72	230887	160.28	209.88	8.3	18.4
1913.5	21.2	39.5	150	9.2	1.62	25.74	231099	172.46	209.85	8.3	18.4
1914.0	26.9	39.0	150	9.2	1.54	25.76	231267	135.94	209.79	8.3	18.4
1914.5	23.7	39.0	150	9.2	1.57	25.78	231457	154.20	209.74	8.3	18.4
1915.0	28.6	38.5	150	9.3	1.50	25.80	231614	127.82	209.67	8.3	18.4
1915.5	33.3	39.2	150	9.3	1.45	25.81	231749	109.56	209.58	8.3	18.4
1916.0	24.7	39.0	150	9.3	1.56	25.83	231932	148.11	209.52	8.3	18.4
1916.5	30.0	38.7	150	9.3	1.49	25.85	232082	121.73	209.45	8.3	18.4
1917.0	32.1	38.3	150	9.3	1.46	25.87	232222	113.62	209.36	8.3	18.4
1917.5	24.7	38.3	150	9.3	1.55	25.89	232404	148.11	209.31	8.3	18.4
1918.0	32.1	38.0	150	9.3	1.46	25.90	232544	113.62	209.23	8.3	18.4
1918.5	26.5	38.5	150	9.3	1.52	25.92	232714	137.96	209.16	8.3	18.4
1919.0	31.6	38.4	150	9.3	1.47	25.94	232857	115.65	209.08	8.3	18.4
1919.5	27.7	38.0	150	9.3	1.51	25.95	233019	131.88	209.02	8.3	18.4
1920.0	32.1	37.9	150	9.3	1.45	25.97	233159	113.62	208.93	8.3	18.4
1920.5	29.5	39.1	150	9.3	1.49	25.99	233312	123.76	208.86	8.3	18.4
1921.0	21.4	38.6	150	9.3	1.59	26.01	233522	170.43	208.83	8.3	18.4
1921.5	30.5	36.5	150	9.3	1.45	26.03	233669	119.70	208.75	8.3	18.4
1922.0	27.7	38.2	150	9.3	1.50	26.04	233832	131.88	208.68	8.3	18.4
1922.5	34.6	38.4	150	9.4	1.42	26.06	233962	105.50	208.59	8.3	18.4
1923.0	17.5	40.7	150	9.4	1.68	26.09	234219	208.98	208.59	8.3	18.4
1923.5	23.1	40.8	150	9.4	1.59	26.11	234414	158.25	208.55	8.3	18.4
1924.0	25.7	40.5	150	9.4	1.55	26.13	234589	142.02	208.49	8.3	18.4
1924.5	25.0	40.7	150	9.3	1.56	26.15	234769	146.08	208.44	8.3	18.4
1925.0	28.6	40.2	150	9.3	1.51	26.17	234927	127.82	208.37	8.3	18.4
1925.5	30.5	40.5	150	9.4	1.49	26.18	235074	119.70	208.29	8.3	18.4
1926.0	26.1	40.5	150	9.4	1.54	26.20	235247	139.99	208.23	8.3	18.4
1926.5	29.5	41.3	150	9.3	1.51	26.22	235399	123.76	208.16	8.3	18.4
1927.0	30.5	41.7	150	9.3	1.51	26.24	235547	119.70	208.09	8.3	18.4
1927.5	27.7	41.9	150	9.3	1.54	26.25	235709	131.88	208.02	8.3	18.4
1928.0	26.5	41.7	150	9.4	1.55	26.27	235879	137.96	207.96	8.3	18.4
1928.5	26.9	41.6	150	9.3	1.55	26.29	236047	135.94	207.90	8.3	18.4
1929.0	34.6	41.0	150	9.4	1.45	26.31	236177	105.50	207.81	8.3	18.4
1929.5	26.1	40.5	150	9.4	1.54	26.32	236349	139.99	207.75	8.3	18.4
1930.0	23.7	41.8	150	9.4	1.59	26.35	236539	154.20	207.71	8.3	18.4
1930.5	18.8	38.5	150	9.4	1.63	26.37	236779	194.77	207.70	8.3	18.4
1931.0	25.0	40.9	150	9.4	1.56	26.39	236959	146.08	207.64	8.3	18.4
1931.5	18.2	41.9	150	9.4	1.68	26.42	237207	200.86	207.64	8.3	18.4
1932.0	30.5	41.7	150	9.4	1.50	26.44	237354	119.70	207.56	8.3	18.4
1932.5	28.6	41.5	150	9.4	1.52	26.45	237512	127.82	207.49	8.3	18.4
1933.0	21.2	41.3	150	9.4	1.61	26.48	237724	172.46	207.46	8.3	18.4
1933.5	30.5	41.3	150	9.4	1.49	26.49	237872	119.70	207.39	8.3	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1934.0	29.5	41.1	150	9.4	1.51	26.51	238024	123.76	207.32	8.3	18.4
1934.5	30.0	41.5	150	9.4	1.50	26.53	238174	121.73	207.25	8.3	18.4
1935.0	26.9	41.6	150	9.4	1.54	26.55	238342	135.94	207.19	8.3	18.4
1935.5	26.1	41.5	150	9.4	1.55	26.56	238514	139.99	207.13	8.3	18.4
1936.0	22.5	41.5	150	9.4	1.60	26.59	238714	162.31	207.09	8.3	18.4
1936.5	29.0	42.2	150	9.4	1.52	26.60	238869	125.79	207.02	8.3	18.4
1937.0	20.9	42.5	150	9.4	1.64	26.63	239084	174.48	207.00	8.3	18.4
1937.5	27.7	42.6	150	9.4	1.54	26.65	239247	131.88	206.93	8.3	18.4
1938.0	26.5	42.8	150	9.4	1.56	26.67	239417	137.96	206.87	8.3	18.4
1938.5	23.7	42.6	150	9.4	1.60	26.69	239607	154.20	206.83	8.3	18.5
1939.0	60.0	38.9	150	9.4	1.25	26.69	239682	60.87	206.71	8.3	18.5
1939.5	34.6	34.2	150	9.3	1.38	26.71	239812	105.50	206.62	8.3	18.5
1940.0	24.0	36.3	150	9.3	1.53	26.73	239999	152.17	206.58	8.3	18.5
1940.5	11.5	38.4	150	9.3	1.79	26.77	240392	318.54	206.67	8.3	18.5
1941.0	13.6	37.2	150	9.3	1.72	26.81	240722	267.81	206.72	8.3	18.5
1941.5	12.4	37.4	150	9.3	1.75	26.85	241084	294.19	206.79	8.3	18.5
1942.0	13.1	38.6	150	9.3	1.75	26.89	241427	277.96	206.85	8.3	18.5
1942.5	20.2	39.1	150	9.3	1.61	26.91	241649	180.57	206.83	8.3	18.5
1943.0	14.1	39.2	150	9.4	1.73	26.95	241969	259.70	206.88	8.3	18.5
1943.5	18.0	39.3	150	9.3	1.65	26.98	242219	202.89	206.87	8.3	18.5
1944.0	19.8	39.3	150	9.4	1.62	27.00	242447	184.63	206.85	8.3	18.5
1944.5	11.3	39.4	150	9.4	1.80	27.05	242844	322.59	206.95	8.3	18.5
1945.0	10.8	39.3	150	9.4	1.81	27.09	243262	338.82	207.06	8.3	18.5
1945.5	19.4	38.9	150	9.4	1.62	27.12	243494	188.69	207.05	8.3	18.5
1946.0	19.6	38.8	150	9.4	1.61	27.14	243724	186.66	207.03	8.3	18.5
1946.5	39.1	38.6	150	9.4	1.38	27.16	243839	93.33	206.93	8.3	18.5
1947.0	17.3	39.1	150	9.4	1.66	27.19	244099	211.00	206.94	8.3	18.5
1947.5	15.0	39.2	150	9.4	1.71	27.22	244399	243.47	206.97	8.3	18.5
1948.0	19.4	39.3	150	9.4	1.62	27.24	244632	188.69	206.95	8.3	18.5
1948.5	12.8	40.3	150	9.4	1.77	27.28	244984	286.07	207.02	8.3	18.5
1949.0	45.0	40.8	150	9.4	1.36	27.29	245084	81.16	206.91	8.3	18.5
1949.5	15.7	42.1	150	9.4	1.73	27.33	245372	233.32	206.94	8.3	18.5
1950.0	32.1	43.4	150	9.4	1.50	27.34	245512	113.62	206.86	8.3	18.5
1950.5	24.7	43.5	150	9.4	1.59	27.36	245694	148.11	206.81	8.3	18.5
1951.0	34.0	43.5	150	9.4	1.48	27.38	245827	107.53	206.73	8.3	18.5
1951.5	23.4	43.5	150	9.4	1.61	27.40	246019	156.22	206.69	8.3	18.5
1952.0	22.2	44.3	150	9.4	1.63	27.42	246222	164.34	206.65	8.3	18.5
1952.5	26.5	44.0	150	9.4	1.57	27.44	246392	137.96	206.60	8.3	18.5
1953.0	15.7	44.4	150	9.4	1.76	27.47	246679	233.32	206.62	8.3	18.5
1953.5	29.5	44.1	150	9.4	1.54	27.49	246832	123.76	206.55	8.3	18.5
1954.0	23.4	43.9	150	9.4	1.61	27.51	247024	156.22	206.51	8.3	18.5
1954.5	22.5	44.4	150	9.4	1.63	27.53	247224	162.31	206.47	8.3	18.5
1955.0	14.8	45.5	150	9.4	1.79	27.57	247529	247.52	206.51	8.3	18.5
1955.5	20.9	42.5	150	9.3	1.65	27.59	247744	174.48	206.48	8.3	18.5
1956.0	19.4	41.6	150	9.3	1.66	27.62	247977	188.69	206.46	8.3	18.5
1956.5	16.8	41.6	150	9.3	1.71	27.65	248244	217.09	206.47	8.3	18.5
1957.0	21.2	41.3	150	9.3	1.63	27.67	248457	172.46	206.45	8.3	18.5
1957.5	22.8	41.3	150	9.3	1.60	27.69	248654	160.28	206.41	8.3	18.5
1958.0	14.8	41.3	150	9.3	1.75	27.73	248959	247.52	206.44	8.3	18.5
1958.5	12.9	36.2	150	9.4	1.71	27.76	249307	282.02	206.50	8.3	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1959.0	16.4	37.5	150	9.4	1.65	27.79	249582	223.18	206.52	8.3	18.5
1959.5	19.8	41.4	150	9.4	1.64	27.82	249809	184.63	206.50	8.3	18.5
1960.0	17.0	42.0	150	9.4	1.69	27.85	250074	215.06	206.51	8.3	18.5
1960.5	16.4	40.9	150	9.4	1.69	27.88	250349	223.18	206.52	8.3	18.5
1961.0	10.7	39.8	150	9.5	1.80	27.93	250772	342.88	206.63	8.3	18.5
1961.5	20.0	39.0	150	9.5	1.59	27.95	250997	182.60	206.61	8.3	18.5
1962.0	14.3	38.1	150	9.5	1.68	27.99	251312	255.64	206.65	8.3	18.5
1962.5	22.0	37.6	150	9.5	1.54	28.01	251517	166.37	206.62	8.3	18.5
1963.0	29.5	37.9	150	9.5	1.44	28.03	251669	123.76	206.55	8.3	18.5
1963.5	32.1	39.7	150	9.5	1.44	28.04	251809	113.62	206.48	8.3	18.5
1964.0	16.1	40.2	150	9.5	1.67	28.07	252089	227.24	206.49	8.3	18.5
1964.5	15.1	40.6	150	9.5	1.70	28.11	252387	241.44	206.52	8.3	18.5
1965.0	16.7	41.5	150	9.5	1.68	28.14	252657	219.12	206.53	8.3	18.5
1965.5	14.6	41.0	150	9.5	1.71	28.17	252964	249.55	206.56	8.3	18.5
1966.0	30.0	40.4	150	9.5	1.47	28.19	253114	121.73	206.50	8.3	18.5
1966.5	24.0	39.8	150	9.5	1.54	28.21	253302	152.17	206.45	8.3	18.5
1967.0	25.0	39.5	150	9.5	1.52	28.23	253482	146.08	206.40	8.3	18.5
1968.0	17.0	40.7	150	9.5	1.66	28.29	254012	215.06	206.42	8.3	18.5
1968.5	14.6	40.5	150	9.5	1.71	28.32	254319	249.55	206.45	8.3	18.5
1969.0	11.5	40.7	150	9.5	1.80	28.36	254712	318.54	206.54	8.3	18.5
1969.5	12.2	39.5	150	9.5	1.76	28.41	255082	300.28	206.62	8.3	18.5
1970.0	11.5	38.8	150	9.5	1.76	28.45	255474	318.54	206.71	8.3	18.5
1970.5	18.2	38.7	150	9.5	1.61	28.48	255722	200.86	206.70	8.3	18.5
1971.0	14.4	39.8	150	9.5	1.70	28.51	256034	253.61	206.74	8.3	18.5
1971.5	13.7	39.7	150	9.5	1.71	28.55	256362	265.78	206.79	8.3	18.5
1972.0	13.1	39.0	150	9.5	1.72	28.59	256704	277.96	206.84	8.3	18.5
1972.5	21.7	39.4	150	9.5	1.56	28.61	256912	168.40	206.81	8.3	18.5
1973.0	22.2	39.4	150	9.5	1.55	28.63	257114	164.34	206.78	8.3	18.5
1973.5	21.4	41.5	150	9.5	1.59	28.65	257324	170.43	206.75	8.3	18.5
1974.0	22.2	40.3	150	9.5	1.57	28.68	257527	164.34	206.72	8.3	18.5
1974.5	22.0	40.2	150	9.5	1.57	28.70	257732	166.37	206.68	8.3	18.5
1975.0	25.0	40.2	150	9.5	1.53	28.72	257912	146.08	206.64	8.3	18.5
1975.5	19.4	40.8	150	9.5	1.62	28.75	258144	188.69	206.62	8.3	18.5
1976.0	23.1	40.6	150	9.5	1.56	28.77	258339	158.25	206.58	8.3	18.5
1976.5	22.8	41.0	150	9.5	1.57	28.79	258537	160.28	206.55	8.3	18.5
1977.0	26.9	42.4	150	9.5	1.53	28.81	258704	135.94	206.49	8.3	18.5
1977.5	48.6	45.2	150	9.5	1.37	28.82	258797	75.07	206.39	8.3	18.5
1978.0	26.9	43.8	150	9.5	1.55	28.84	258964	135.94	206.33	8.3	18.5
1978.5	27.7	45.9	150	9.5	1.56	28.86	259127	131.88	206.27	8.3	18.5
1979.0	29.5	45.0	150	9.5	1.53	28.87	259279	123.76	206.21	8.3	18.5
1979.5	32.1	44.9	150	9.5	1.50	28.89	259419	113.62	206.14	8.3	18.5
1980.0	28.1	45.3	150	9.5	1.55	28.91	259579	129.85	206.08	8.3	18.5
1980.5	24.3	45.3	150	9.5	1.59	28.93	259764	150.14	206.03	8.3	18.5
1981.0	23.1	45.8	150	9.5	1.62	28.95	259959	158.25	205.99	8.3	18.5
1981.5	22.8	45.1	150	9.5	1.62	28.97	260157	160.28	205.96	8.3	18.5
1982.0	18.9	45.5	150	9.5	1.69	29.00	260394	192.74	205.95	8.3	18.5
1982.5	16.7	47.3	150	9.5	1.76	29.03	260664	219.12	205.96	8.3	18.5
1983.0	17.0	49.5	150	9.5	1.78	29.06	260929	215.06	205.96	8.3	18.5
1983.5	13.7	47.0	150	9.5	1.82	29.09	261257	265.78	206.01	8.3	18.5
1984.0	12.9	46.6	150	9.5	1.83	29.13	261607	284.04	206.07	8.3	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1984.5	12.8	46.5	150	9.5	1.83	29.17	261959	286.07	206.14	8.3	18.5
1985.0	10.9	46.5	150	9.5	1.89	29.22	262372	334.77	206.24	8.3	18.5
1985.5	9.7	46.9	150	9.5	1.93	29.27	262837	377.37	206.37	8.3	18.5
1986.0	8.2	46.9	150	9.5	1.99	29.33	263384	444.33	206.55	8.3	18.5
1986.5	7.9	47.6	150	9.4	2.02	29.39	263957	464.62	206.76	8.3	18.5
1987.0	8.0	49.4	150	9.5	2.04	29.45	264522	458.53	206.95	8.3	18.5
1987.5	4.9	43.9	150	9.4	2.13	29.56	265434	740.54	207.37	8.3	18.5
1988.0	7.9	46.7	150	9.5	2.01	29.62	266007	464.62	207.57	8.3	18.5
1988.5	7.1	46.0	150	9.5	2.03	29.69	266642	515.34	207.81	8.3	18.5
1989.0	8.2	45.9	150	9.5	1.98	29.75	267189	444.33	207.99	8.3	18.5
1989.2	4.2	45.1	150	9.5	2.20	29.80	267622	877.49	208.20	8.3	18.5

BIT NUMBER	4	IADC CODE	517	INTERVAL	1989.2- 2389.7
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	400.5
TOTAL HOURS	31.64	TOTAL TURNS	173061	CONDITION	T6 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
1990.0	2.4	25.9	54	9.5	1.72	0.33	1079	1513	44569	8.3	18.5
1991.0	2.9	28.9	60	9.5	1.75	0.67	2309	1248	20502	8.3	18.5
1992.0	2.5	38.4	90	9.5	2.08	1.07	4469	1461	13701	8.3	18.5
1993.0	4.3	39.9	88	9.5	1.92	1.30	5685	844	10318	8.3	18.5
1994.0	5.0	44.4	86	9.5	1.93	1.50	6712	726	8320	8.3	18.5
1995.0	5.4	38.1	85	9.5	1.81	1.69	7648	671	7001	8.3	18.5
1996.0	5.8	39.7	44	9.5	1.60	1.86	8106	632	6064	8.3	18.5
1997.0	4.8	37.8	85	9.5	1.84	2.07	9164	758	5384	8.3	18.5
1997.5	5.8	44.5	85	9.5	1.88	2.15	9603	629	5098	8.3	18.5
1998.0	6.3	44.8	95	9.5	1.89	2.23	10054	578	4841	8.3	18.5
1998.5	6.3	44.9	100	9.5	1.91	2.31	10534	584	4612	8.3	18.5
1999.0	9.4	44.7	100	9.5	1.77	2.37	10854	390	4396	8.3	18.5
1999.5	7.6	45.0	100	9.5	1.85	2.43	11249	481	4206	8.3	18.5
2000.0	8.7	44.7	100	9.5	1.80	2.49	11592	418	4031	8.3	18.5
2000.5	8.8	44.6	100	9.5	1.79	2.55	11932	414	3871	8.3	18.5
2001.0	18.0	44.2	100	9.5	1.55	2.57	12099	203	3716	8.3	18.5
2001.5	18.9	44.1	100	9.5	1.53	2.60	12257	193	3572	8.3	18.5
2002.0	14.9	44.1	100	9.5	1.61	2.63	12459	245	3442	8.3	18.5
2002.5	12.2	44.7	100	9.5	1.69	2.67	12706	300	3324	8.3	18.5
2003.0	11.6	44.6	100	9.5	1.70	2.72	12964	314	3215	8.3	18.5
2003.5	11.3	44.7	100	9.5	1.71	2.76	13231	325	3114	8.3	18.5
2004.0	11.8	45.0	100	9.5	1.70	2.80	13484	308	3019	8.3	18.5
2004.5	9.2	44.9	100	9.5	1.78	2.86	13811	398	2934	8.3	18.5
2005.0	7.8	45.0	100	9.5	1.84	2.92	14196	469	2856	8.3	18.5
2005.5	6.9	45.1	100	9.5	1.88	3.00	14632	532	2784	8.3	18.5
2006.0	11.5	45.6	100	9.5	1.72	3.04	14892	317	2711	8.3	18.5
2006.5	10.5	45.0	100	9.5	1.74	3.09	15177	347	2643	8.3	18.6
2007.0	9.7	45.3	100	9.5	1.77	3.14	15486	375	2579	8.3	18.6
2007.5	8.2	45.3	100	9.5	1.82	3.20	15852	446	2521	8.3	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2008.0	7.9	45.4	100	9.5	1.83	3.26	16231	461	2466	8.3	18.6
2008.5	10.7	45.3	100	9.5	1.73	3.31	16511	341	2411	8.3	18.6
2009.0	12.9	45.2	100	9.5	1.67	3.35	16742	282	2357	8.3	18.6
2009.5	10.0	45.1	100	9.5	1.75	3.40	17042	365	2308	8.3	18.6
2010.0	13.1	45.1	100	9.6	1.66	3.44	17271	278	2259	8.3	18.6
2010.5	11.0	45.0	100	9.6	1.72	3.48	17544	333	2214	8.3	18.6
2011.0	10.9	45.0	100	9.5	1.72	3.53	17819	335	2171	8.3	18.6
2011.5	11.9	45.1	100	9.5	1.69	3.57	18071	306	2129	8.3	18.6
2012.0	9.4	45.3	100	9.5	1.77	3.62	18389	388	2091	8.3	18.6
2012.5	7.9	45.5	100	9.5	1.84	3.69	18769	463	2056	8.3	18.6
2013.0	9.4	45.2	100	9.5	1.77	3.74	19089	390	2021	8.3	18.6
2013.5	8.5	45.6	100	9.5	1.81	3.80	19441	428	1988	8.3	18.6
2014.0	10.5	45.4	100	9.5	1.74	3.84	19726	347	1955	8.3	18.6
2014.5	15.9	45.2	100	9.5	1.60	3.88	19914	229	1921	8.3	18.6
2015.0	7.5	47.3	100	9.5	1.88	3.94	20312	485	1897	8.3	18.6
2015.5	11.0	45.3	100	9.5	1.73	3.99	20586	333	1863	8.3	18.6
2016.0	14.6	45.2	100	9.5	1.63	4.02	20791	250	1833	8.3	18.6
2016.5	17.8	44.9	100	9.5	1.56	4.05	20959	205	1804	8.3	18.6
2017.0	14.2	45.0	100	9.5	1.64	4.09	21171	258	1776	8.3	18.6
2017.5	19.6	44.9	100	9.5	1.53	4.11	21324	187	1748	8.3	18.6
2018.0	21.4	44.9	100	9.5	1.50	4.13	21464	170	1720	8.3	18.6
2018.5	16.7	45.3	100	9.5	1.59	4.16	21644	219	1695	8.3	18.6
2019.0	22.8	44.7	100	9.5	1.48	4.19	21776	160	1669	8.3	18.6
2019.5	45.0	43.6	100	9.5	1.24	4.20	21842	81	1643	8.3	18.6
2020.0	22.2	38.2	100	9.5	1.42	4.22	21977	164	1619	8.3	18.6
2020.5	34.6	44.9	100	9.4	1.35	4.23	22064	106	1595	8.3	18.6
2021.0	47.4	46.5	100	9.4	1.25	4.24	22127	77	1571	8.3	18.6
2021.5	12.9	45.5	100	9.5	1.69	4.28	22361	284	1551	8.3	18.6
2022.0	21.7	44.3	100	9.5	1.49	4.31	22499	168	1530	8.3	18.6
2022.5	26.5	45.1	100	9.5	1.43	4.33	22612	138	1509	8.3	18.6
2023.0	41.9	43.8	100	9.5	1.26	4.34	22684	87	1488	8.3	18.6
2024.0	28.6	46.5	100	9.5	1.42	4.37	22894	128	1449	8.3	18.6
2025.0	40.0	41.2	100	9.5	1.26	4.40	23044	91	1411	8.3	18.6
2026.0	54.5	41.7	100	9.5	1.16	4.42	23154	67	1374	8.3	18.6
2027.0	60.0	42.6	100	9.5	1.13	4.43	23254	61	1339	8.3	18.6
2028.0	69.2	42.7	100	9.5	1.09	4.45	23341	53	1306	8.3	18.6
2029.0	43.9	43.6	100	9.5	1.25	4.47	23477	83	1276	8.3	18.6
2030.0	37.5	43.0	100	9.5	1.30	4.50	23637	97	1247	8.3	18.6
2031.0	40.4	42.4	100	9.5	1.27	4.52	23786	90	1219	8.3	18.6
2032.0	43.4	41.8	100	9.5	1.24	4.54	23924	84	1193	8.3	18.6
2033.0	42.9	44.2	100	9.4	1.27	4.57	24064	85	1167	8.3	18.6
2034.0	38.7	43.5	100	9.4	1.30	4.59	24219	94	1143	8.3	18.6
2035.0	67.9	43.4	100	9.4	1.11	4.61	24307	54	1120	8.3	18.6
2036.0	78.3	43.2	100	9.4	1.06	4.62	24384	47	1097	8.3	18.6
2037.0	75.0	43.9	100	9.4	1.08	4.63	24464	49	1075	8.3	18.6
2038.0	53.7	44.9	100	9.4	1.20	4.65	24576	68	1054	8.3	18.6
2039.0	46.8	43.7	100	9.4	1.24	4.67	24704	78	1034	8.3	18.6
2040.0	29.8	46.1	100	9.4	1.41	4.71	24906	123	1016	8.3	18.6
2041.0	60.0	43.6	100	9.4	1.15	4.72	25006	60.87	998.05	8.3	18.6
2042.0	69.2	42.1	100	9.4	1.09	4.74	25092	52.75	980.15	8.3	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2043.0	44.4	44.2	100	9.4	1.25	4.76	25227	82.17	963.46	8.3	18.6
2044.0	48.0	44.6	100	9.4	1.23	4.78	25352	76.08	947.26	8.3	18.6
2045.0	55.4	43.7	100	9.4	1.18	4.80	25461	65.94	931.47	8.3	18.6
2046.0	54.5	43.6	100	9.4	1.18	4.82	25571	66.95	916.25	8.3	18.6
2047.0	49.3	43.7	100	9.4	1.22	4.84	25692	74.05	901.68	8.3	18.6
2048.0	14.6	25.7	100	9.4	1.39	4.91	26104	250.57	890.60	8.3	18.6
2049.0	57.1	30.1	100	9.4	1.04	4.93	26209	63.91	876.78	8.3	18.6
2050.0	57.1	45.2	100	9.4	1.18	4.94	26314	63.91	863.41	8.3	18.6
2051.0	45.0	39.2	100	9.4	1.20	4.96	26447	81.16	850.75	8.3	18.6
2052.0	57.1	43.6	100	9.5	1.16	4.98	26552	63.91	838.22	8.3	18.6
2053.0	63.1	40.0	100	9.5	1.09	5.00	26647	57.88	825.99	8.3	18.6
2054.0	47.0	40.8	100	9.5	1.20	5.02	26775	77.77	814.45	8.3	18.6
2055.0	56.2	39.7	100	9.5	1.13	5.04	26882	64.92	803.05	8.3	18.6
2056.0	48.0	42.1	100	9.5	1.20	5.06	27007	76.08	792.17	8.3	18.6
2057.0	21.3	30.0	100	9.5	1.33	5.10	27289	171.44	783.02	8.3	18.6
2058.0	45.6	20.5	100	9.5	1.00	5.13	27420	80.14	772.80	8.3	18.6
2059.0	25.5	13.6	100	9.5	1.04	5.17	27655	143.04	763.78	8.3	18.6
2060.0	66.7	18.0	100	9.5	0.86	5.18	27745	54.78	753.76	8.3	18.6
2061.0	72.0	30.0	100	9.5	0.97	5.19	27829	50.72	743.97	8.3	18.6
2062.0	69.2	32.5	100	9.5	1.00	5.21	27915	52.75	734.48	8.3	18.6
2063.0	51.4	35.0	100	9.5	1.12	5.23	28032	71.01	725.49	8.3	18.6
2064.0	63.2	40.0	100	9.5	1.09	5.24	28127	57.82	716.56	8.3	18.6
2065.0	66.7	39.0	100	9.5	1.07	5.26	28217	54.78	707.83	8.3	18.6
2066.0	70.6	35.7	100	9.5	1.02	5.27	28302	51.74	699.29	8.3	18.6
2067.0	62.1	39.9	100	9.5	1.10	5.29	28399	58.84	691.06	8.3	18.6
2068.0	66.7	38.8	100	9.5	1.07	5.30	28489	54.78	682.98	8.3	18.6
2069.0	90.0	39.1	100	9.5	0.97	5.32	28555	40.58	674.93	8.3	18.6
2070.0	75.0	39.5	100	9.5	1.03	5.33	28635	48.69	667.18	8.3	18.6
2071.0	85.7	39.1	100	9.5	0.99	5.34	28705	42.61	659.55	8.3	18.6
2072.0	39.6	39.1	100	9.5	1.24	5.37	28857	92.31	652.69	8.3	18.6
2073.0	60.0	41.1	100	9.5	1.12	5.38	28957	60.87	645.63	8.3	18.6
2074.0	52.2	40.2	100	9.5	1.16	5.40	29072	70.00	638.84	8.3	18.6
2075.0	75.0	41.1	100	9.5	1.05	5.42	29152	48.69	631.97	8.3	18.6
2076.0	63.2	40.9	100	9.5	1.10	5.43	29247	57.82	625.35	8.3	18.6
2077.0	52.9	41.7	100	9.5	1.17	5.45	29360	68.98	619.01	8.3	18.7
2078.0	49.3	41.4	100	9.5	1.19	5.47	29482	74.05	612.88	8.3	18.7
2079.0	40.4	41.7	100	9.5	1.25	5.50	29630	90.29	607.06	8.3	18.7
2080.0	64.3	41.4	100	9.5	1.10	5.51	29724	56.81	601.00	8.3	18.7
2081.0	62.1	40.9	100	9.5	1.11	5.53	29820	58.84	595.09	8.3	18.7
2082.0	48.6	32.7	100	9.5	1.11	5.55	29944	75.07	589.49	8.3	18.7
2083.0	30.3	42.4	100	9.5	1.36	5.58	30142	120.72	584.49	8.3	18.7
2084.0	76.6	42.4	100	9.5	1.05	5.59	30220	47.68	578.83	8.3	18.7
2085.0	50.0	42.9	100	9.5	1.20	5.61	30340	73.04	573.55	8.3	18.7
2086.0	23.2	42.4	100	9.5	1.45	5.66	30599	157.24	569.25	8.3	18.7
2087.0	17.0	45.8	100	9.5	1.59	5.72	30952	215.06	565.63	8.3	18.7
2088.0	34.3	45.2	100	9.5	1.34	5.74	31127	106.52	560.98	8.3	18.7
2089.0	35.0	45.1	100	9.5	1.34	5.77	31299	104.49	556.41	8.3	18.7
2090.0	27.7	44.7	100	9.5	1.41	5.81	31515	131.88	552.19	8.3	18.7
2091.0	33.0	43.4	100	9.5	1.34	5.84	31697	110.57	547.86	8.3	18.7
2092.0	23.4	39.2	100	9.5	1.41	5.88	31954	156.22	544.05	8.3	18.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	F
2093.0	57.1	41.3	100	9.5	1.14	5.90	32059	63.91	539.42	8.3	18.
2094.0	52.2	41.3	100	9.5	1.17	5.92	32174	70.00	534.94	8.3	18.
2095.0	58.1	41.9	100	9.5	1.14	5.94	32277	62.90	530.48	8.3	18.
2096.0	25.9	39.9	100	9.5	1.38	5.97	32509	141.01	526.83	8.3	18.
2097.0	60.0	37.8	100	9.5	1.09	5.99	32609	60.87	522.51	8.3	18.
2098.0	23.7	38.3	100	9.5	1.39	6.03	32862	154.20	519.13	8.3	18.
2099.0	49.3	25.3	100	9.5	1.03	6.05	32984	74.05	515.07	8.3	18.
2100.0	48.3	10.0	100	9.5	0.83	6.07	33108	75.61	511.11	8.3	18.
2101.0	42.4	10.0	100	9.5	0.86	6.10	33249	86.13	507.30	8.3	18.
2102.0	51.7	11.0	100	9.5	0.83	6.12	33365	70.64	503.43	8.3	18.
2103.0	24.9	15.0	100	9.5	1.07	6.16	33606	146.67	500.30	8.3	18.
2104.0	17.5	16.0	100	9.5	1.18	6.22	33949	208.69	497.76	8.3	18.
2105.0	9.9	6.4	100	9.6	1.07	6.32	34557	370.27	496.66	8.3	18.
2106.0	17.2	7.3	100	9.6	0.98	6.37	34906	212.02	494.22	8.3	18.
2107.0	15.8	6.3	100	9.6	0.97	6.44	35286	231.29	491.99	8.3	18.
2108.0	29.0	9.3	100	9.6	0.92	6.47	35492	125.79	488.91	8.3	18.
2109.0	42.4	19.7	100	9.6	0.99	6.50	35634	86.23	485.54	8.3	18.
2110.0	52.2	21.8	100	9.6	0.96	6.52	35749	70.00	482.10	8.3	18.
2111.0	70.6	34.9	100	9.6	1.01	6.53	35834	51.74	478.57	8.3	18.
2112.0	50.0	40.6	100	9.6	1.16	6.55	35954	73.04	475.27	8.3	18.
2113.0	27.1	40.2	100	9.6	1.36	6.59	36176	134.92	472.52	8.3	18.
2114.0	34.0	19.5	100	9.6	1.05	6.62	36352	107.53	469.59	8.3	18.
2115.0	14.9	14.0	100	9.6	1.17	6.68	36754	244.48	467.81	8.3	18.
2116.0	14.3	12.0	100	9.6	1.14	6.75	37172	254.63	466.12	8.3	18.
2117.0	18.8	21.5	100	9.6	1.24	6.81	37491	193.76	463.99	8.3	18.
2118.0	20.1	41.2	100	9.6	1.47	6.86	37789	181.59	461.80	8.3	18.
2119.0	25.0	38.5	100	9.6	1.36	6.90	38029	146.08	459.37	8.3	18.
2120.0	18.2	36.3	100	9.6	1.44	6.95	38359	200.86	457.39	8.3	18.
2121.0	14.6	40.6	100	9.6	1.57	7.02	38771	250.57	455.82	8.3	18.
2122.0	15.1	40.4	100	9.5	1.56	7.08	39167	241.44	454.21	8.3	18.
2123.0	12.6	43.6	94	9.5	1.64	7.16	39616	290.13	452.98	8.3	18.
2124.0	9.8	44.3	90	9.6	1.71	7.27	40168	373.32	452.39	8.3	18.
2125.0	28.8	42.5	90	9.6	1.33	7.30	40355	126.81	449.99	8.3	18.
2126.0	12.4	33.1	90	9.6	1.49	7.38	40792	295.20	448.86	8.3	18.
2127.0	7.1	40.5	90	9.6	1.76	7.52	41551	513.31	449.33	8.3	18.
2128.0	14.5	40.5	90	9.6	1.53	7.59	41924	252.60	447.91	8.3	18.
2129.0	28.8	40.3	90	9.6	1.31	7.63	42112	126.81	445.62	8.3	18.
2130.0	27.9	38.9	90	9.6	1.31	7.66	42305	130.86	443.38	8.3	18.
2131.0	17.6	40.2	90	9.6	1.47	7.72	42613	207.96	441.72	8.3	18.
2132.0	21.4	39.2	90	9.5	1.40	7.77	42865	170.43	439.82	8.3	18.
2133.0	6.0	38.9	90	9.6	1.80	7.93	43771	612.72	441.02	8.3	18.
2134.0	6.8	38.5	90	9.6	1.75	8.08	44563	535.63	441.68	8.3	18.
2135.0	5.4	42.3	90	9.5	1.89	8.26	45554	670.55	443.25	8.3	18.
2136.0	6.4	41.5	90	9.5	1.83	8.42	46402	573.16	444.13	8.3	18.
2137.0	5.9	40.1	90	9.5	1.82	8.59	47312	615.77	445.29	8.3	18.
2138.0	46.2	37.6	90	9.6	1.13	8.61	47429	79.13	442.83	8.3	18.
2139.0	47.4	37.1	90	9.5	1.12	8.63	47543	77.10	440.39	8.3	18.
2140.0	40.0	38.1	90	9.5	1.19	8.66	47678	91.30	438.07	8.3	18.
2141.0	28.8	38.8	90	9.5	1.30	8.69	47866	126.81	436.02	8.3	18.
2142.0	27.5	38.8	90	9.6	1.31	8.73	48062	132.89	434.04	8.3	18.

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2143.0	25.5	38.3	90	9.6	1.33	8.77	48274	143.04	432.15	8.3	18.7
2144.0	29.3	38.9	90	9.6	1.29	8.80	48458	124.78	430.16	8.3	18.7
2145.0	23.8	39.6	90	9.6	1.36	8.84	48685	153.18	428.38	8.3	18.7
2146.0	27.7	39.1	90	9.6	1.31	8.88	48880	131.88	426.49	8.3	18.7
2147.0	46.8	37.9	90	9.6	1.13	8.90	48995	78.11	424.29	8.3	18.7
2148.0	40.4	33.0	90	9.6	1.13	8.93	49129	90.29	422.18	8.3	18.7
2149.0	54.5	35.5	90	9.6	1.06	8.94	49228	66.95	419.96	8.3	18.8
2150.0	24.3	37.8	90	9.6	1.34	8.99	49450	150.14	418.28	8.3	18.8
2151.0	43.4	36.1	90	9.6	1.14	9.01	49574	84.20	416.22	8.3	18.8
2152.0	69.2	34.1	90	9.6	0.97	9.02	49652	52.75	413.98	8.3	18.8
2153.0	19.0	38.1	90	9.6	1.42	9.08	49936	191.73	412.63	8.3	18.8
2154.0	5.7	36.6	90	9.6	1.78	9.25	50891	646.20	414.04	8.3	18.8
2155.0	13.0	40.4	90	9.6	1.57	9.33	51305	279.99	413.24	8.3	18.8
2156.0	39.1	38.9	90	9.6	1.20	9.35	51443	93.33	411.32	8.3	18.8
2157.0	29.8	38.4	90	9.6	1.28	9.39	51625	122.75	409.60	8.3	18.8
2158.0	43.9	35.7	90	9.6	1.13	9.41	51748	83.18	407.66	8.3	18.8
2159.0	35.6	37.0	90	9.5	1.21	9.44	51899	102.46	405.87	8.3	18.8
2160.0	22.9	27.8	90	9.6	1.24	9.48	52135	159.27	404.42	8.3	18.8
2161.0	43.9	26.1	90	9.6	1.03	9.51	52258	83.18	402.55	8.3	18.8
2162.0	41.4	36.0	90	9.6	1.15	9.53	52388	88.26	400.73	8.3	18.8
2163.0	28.6	39.9	90	9.6	1.31	9.56	52577	127.82	399.16	8.3	18.8
2164.0	31.9	36.6	90	9.6	1.24	9.60	52747	114.63	397.54	8.3	18.8
2165.0	51.4	38.1	90	9.6	1.10	9.62	52852	71.01	395.68	8.3	18.8
2166.0	36.0	38.6	90	9.6	1.22	9.64	53002	101.44	394.02	8.3	18.8
2167.0	14.9	40.1	90	9.6	1.52	9.71	53365	245.50	393.18	8.3	18.8
2168.0	30.3	38.7	90	9.6	1.28	9.74	53543	120.72	391.66	8.3	18.8
2169.0	17.9	36.3	90	9.6	1.41	9.80	53845	203.90	390.61	8.3	18.8
2170.0	7.6	35.6	90	9.6	1.67	9.93	54556	480.85	391.11	8.3	18.8
2171.0	6.1	38.9	90	9.6	1.78	10.09	55435	594.46	392.23	8.3	18.8
2172.0	16.7	19.7	90	9.6	1.21	10.15	55757	218.11	391.28	8.3	18.8
2173.0	23.5	37.6	90	9.6	1.34	10.20	55987	155.21	389.99	8.3	18.8
2174.0	13.4	38.8	90	9.6	1.54	10.27	56389	271.87	389.35	8.3	18.8
2175.0	9.5	39.1	90	9.6	1.65	10.38	56957	384.47	389.33	8.3	18.8
2176.0	55.4	37.1	90	9.5	1.07	10.39	57055	65.94	387.60	8.3	18.8
2177.0	37.7	38.5	90	9.5	1.21	10.42	57198	96.87	386.05	8.3	18.8
2178.0	41.9	38.5	90	9.6	1.17	10.44	57327	87.16	384.46	8.3	18.8
2179.0	13.3	41.5	90	9.6	1.57	10.52	57733	274.59	383.89	8.3	18.8
2180.0	27.9	41.3	90	9.6	1.33	10.56	57927	130.86	382.56	8.3	18.8
2181.0	18.8	41.8	90	9.6	1.46	10.61	58215	194.77	381.58	8.3	18.8
2182.0	9.7	43.3	90	9.6	1.70	10.71	58774	378.39	381.56	8.3	18.8
2183.0	9.6	42.6	90	9.6	1.69	10.82	59335	379.40	381.55	8.3	18.8
2184.0	9.4	42.4	90	9.6	1.70	10.92	59911	389.55	381.59	8.3	18.8
2185.0	40.0	43.6	90	9.5	1.24	10.95	60046	91.30	380.11	8.3	18.8
2186.0	28.1	41.1	90	9.5	1.33	10.98	60238	129.85	378.84	8.3	18.8
2187.0	31.0	39.8	90	9.5	1.29	11.02	60412	117.68	377.52	8.3	18.8
2188.0	9.4	43.1	90	9.6	1.71	11.12	60984	386.50	377.56	8.3	18.8
2189.0	11.0	42.7	90	9.6	1.65	11.21	61476	332.74	377.34	8.3	18.8
2190.0	11.6	39.4	90	9.6	1.60	11.30	61942	315.49	377.03	8.3	18.8
2191.0	40.0	38.7	90	9.6	1.19	11.32	62077	91.30	375.62	8.3	18.8
2192.0	33.6	42.4	90	9.6	1.28	11.35	62238	108.55	374.30	8.3	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2193.0	20.3	35.5	90	9.6	1.37	11.40	62503	179.56	373.34	8.3	18.8
2194.0	48.6	45.7	90	9.5	1.19	11.42	62614	75.07	371.89	8.3	18.8
2195.0	59.3	31.5	90	9.6	1.00	11.44	62705	61.59	370.38	8.3	18.8
2196.0	67.9	38.5	90	9.6	1.01	11.45	62785	53.77	368.85	8.3	18.8
2197.0	48.6	40.3	90	9.5	1.14	11.48	62896	75.07	367.43	8.3	18.8
2198.0	5.1	45.9	90	9.6	1.95	11.67	63949	712.14	369.09	8.3	18.8
2199.0	5.8	46.9	90	9.6	1.92	11.84	64879	628.96	370.32	8.3	18.8
2200.0	6.9	46.6	90	9.5	1.86	11.99	65663	530.55	371.08	8.3	18.8
2201.0	10.3	46.5	90	9.5	1.72	12.08	66187	354.04	371.00	8.3	18.8
2202.0	6.2	46.8	90	9.5	1.91	12.25	67052	585.33	372.01	8.3	18.8
2203.0	5.9	46.8	90	9.5	1.93	12.42	67975	623.88	373.19	8.3	18.8
2204.0	12.6	46.4	90	9.5	1.66	12.50	68404	290.13	372.80	8.3	18.8
2205.0	24.8	44.1	90	9.5	1.40	12.54	68621	147.09	371.76	8.3	18.8
2206.0	32.7	42.1	90	9.5	1.29	12.57	68786	111.59	370.56	8.3	18.8
2207.0	33.0	44.1	90	9.6	1.30	12.60	68950	110.57	369.36	8.3	18.8
2208.0	29.8	44.0	90	9.5	1.34	12.63	69131	122.55	368.23	8.3	18.8
2209.0	32.1	44.9	90	9.6	1.32	12.66	69299	113.62	367.08	8.3	18.8
2210.0	20.0	40.0	90	9.6	1.42	12.71	69569	182.60	366.24	8.3	18.8
2211.0	37.9	43.4	90	9.6	1.25	12.74	69711	96.37	365.02	8.3	18.8
2212.0	42.9	44.6	90	9.6	1.22	12.76	69837	85.21	363.77	8.3	18.8
2213.0	37.9	44.9	90	9.6	1.26	12.79	69980	96.37	362.57	8.3	18.8
2214.0	29.8	43.2	90	9.5	1.33	12.82	70161	122.75	361.51	8.3	18.8
2215.0	28.8	42.2	90	9.5	1.34	12.86	70349	126.81	360.47	8.3	18.8
2216.0	10.9	44.2	90	9.5	1.68	12.95	70844	334.77	360.35	8.3	18.8
2217.0	8.4	44.3	90	9.5	1.77	13.07	71484	433.17	360.67	8.3	18.8
2218.0	12.1	44.0	90	9.5	1.64	13.15	71931	301.82	360.42	8.3	18.8
2219.0	16.2	43.9	90	9.5	1.55	13.21	72264	225.71	359.83	8.3	18.8
2220.0	25.4	43.6	90	9.5	1.39	13.25	72477	144.05	358.90	8.3	18.8
2221.0	25.2	43.2	90	9.5	1.39	13.29	72692	145.07	357.97	8.3	18.8
2222.0	12.4	44.4	90	9.5	1.64	13.37	73127	294.19	357.70	8.3	18.8
2223.0	5.4	45.1	90	9.5	1.94	13.56	74135	681.71	359.08	8.3	18.9
2224.0	31.6	43.4	90	9.5	1.32	13.59	74306	115.65	358.05	8.3	18.9
2225.0	8.4	45.0	90	9.5	1.78	13.71	74952	437.23	358.38	8.3	18.9
2226.0	11.9	44.6	90	9.5	1.66	13.79	75405	306.36	358.16	8.3	18.9
2227.0	14.1	44.6	90	9.5	1.60	13.86	75788	258.68	357.75	8.3	18.9
2228.0	8.4	44.8	90	9.5	1.78	13.98	76431	435.20	358.07	8.3	18.9
2229.0	27.1	43.7	90	9.5	1.37	14.02	76631	134.92	357.14	8.3	18.9
2230.0	29.8	43.6	90	9.5	1.34	14.05	76812	122.75	356.17	8.3	18.9
2231.0	25.7	43.6	90	9.5	1.39	14.09	77022	142.02	355.28	8.3	18.9
2232.0	22.5	43.3	90	9.5	1.44	14.14	77262	162.31	354.49	8.3	18.9
2233.0	25.0	46.4	90	9.4	1.44	14.18	77478	146.08	353.63	8.3	18.9
2234.0	25.5	44.2	90	9.4	1.41	14.21	77690	143.04	352.77	8.3	18.9
2235.0	29.8	43.7	90	9.5	1.35	14.25	77871	122.75	351.83	8.3	18.9
2236.0	33.3	43.4	90	9.4	1.31	14.28	78033	109.56	350.85	8.3	18.9
2237.0	22.0	44.4	90	9.5	1.45	14.32	78279	166.37	350.11	8.3	18.9
2238.0	21.1	44.8	90	9.5	1.47	14.37	78536	173.47	349.40	8.3	18.9
2239.0	28.6	44.3	90	9.5	1.36	14.41	78725	127.82	348.51	8.3	18.9
2240.0	26.5	44.4	90	9.5	1.39	14.44	78929	137.96	347.67	8.3	18.9
2241.0	25.2	44.0	90	9.5	1.40	14.48	79143	145.07	346.87	8.3	18.9
2242.0	29.0	43.7	90	9.5	1.35	14.52	79329	125.79	345.99	8.3	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FC
2243.0	31.0	44.9	90	9.5	1.34	14.55	79503	117.68	345.09	8.3	18.9
2244.0	27.7	44.7	90	9.5	1.37	14.59	79698	131.88	344.26	8.3	18.9
2245.0	28.3	44.8	90	9.5	1.37	14.62	79889	128.83	343.41	8.3	18.9
2246.0	32.1	44.4	90	9.5	1.32	14.65	80057	113.62	342.52	8.3	18.9
2247.0	31.3	44.5	90	9.5	1.33	14.69	80229	116.66	341.64	8.3	18.9
2248.0	10.8	45.9	90	9.5	1.71	14.78	80730	338.82	341.63	8.3	18.9
2249.0	6.7	42.2	88	9.5	1.82	14.93	81523	548.81	342.43	8.3	18.9
2250.0	25.4	40.7	90	9.5	1.37	14.97	81736	144.05	341.67	8.3	18.9
2251.0	11.6	41.5	90	9.5	1.63	15.05	82201	314.48	341.57	8.3	18.9
2252.0	22.2	41.2	90	9.5	1.41	15.10	82444	164.34	340.89	8.3	18.9
2253.0	27.7	40.6	90	9.5	1.34	15.13	82639	131.88	340.10	8.3	18.9
2254.0	28.6	40.3	90	9.5	1.32	15.17	82828	127.82	339.30	8.3	18.9
2255.0	27.9	40.4	90	9.5	1.33	15.21	83021	130.86	338.51	8.3	18.9
2256.0	14.3	41.3	90	9.5	1.56	15.28	83398	254.63	338.20	8.3	18.9
2257.0	6.1	42.4	90	9.5	1.85	15.44	84287	601.57	339.18	8.3	18.9
2258.0	7.4	42.3	90	9.5	1.79	15.58	85016	493.02	339.75	8.3	18.9
2259.0	8.7	42.1	90	9.5	1.73	15.69	85634	417.95	340.04	8.3	18.9
2260.0	9.9	42.5	90	9.5	1.69	15.79	86179	368.24	340.15	8.3	18.9
2261.0	10.0	42.2	90	9.5	1.69	15.89	86719	365.20	340.24	8.3	18.9
2262.0	4.2	42.6	90	9.5	1.98	16.13	87997	864.31	342.16	8.3	18.9
2263.0	8.6	42.2	90	9.5	1.74	16.24	88625	425.05	342.46	8.3	18.9
2264.0	16.9	41.8	90	9.5	1.51	16.30	88945	216.08	342.00	8.3	18.9
2265.0	18.0	41.8	90	9.5	1.49	16.36	89245	202.89	341.50	8.3	18.9
2266.0	13.5	41.9	90	9.4	1.59	16.43	89644	269.84	341.24	8.3	18.9
2267.0	27.5	41.2	90	9.5	1.35	16.47	89840	132.89	340.49	8.3	18.9
2268.0	16.5	42.0	90	9.5	1.53	16.53	90167	221.15	340.06	8.3	18.9
2269.0	7.3	42.7	90	9.5	1.80	16.67	90904	498.09	340.63	8.3	18.9
2270.0	9.4	38.7	90	9.5	1.67	16.77	91477	387.52	340.79	8.3	18.9
2271.0	10.9	38.6	90	9.5	1.62	16.86	91972	334.77	340.77	8.3	18.9
2272.0	19.5	42.2	90	9.4	1.47	16.91	92249	187.67	340.23	8.3	18.9
2273.0	8.0	43.1	90	9.4	1.78	17.04	92923	455.49	340.64	8.3	18.9
2274.0	10.4	42.9	90	9.4	1.69	17.14	93440	349.98	340.67	8.3	18.9
2275.0	10.7	43.0	90	9.4	1.69	17.23	93943	339.84	340.67	8.3	18.9
2276.0	15.9	42.5	90	9.4	1.55	17.29	94283	230.28	340.28	8.3	18.9
2277.0	14.3	42.9	90	9.4	1.59	17.36	94660	254.63	339.99	8.3	18.9
2278.0	14.1	42.5	90	9.4	1.59	17.43	95042	258.68	339.70	8.3	18.9
2279.0	8.8	36.5	90	9.4	1.67	17.55	95657	415.92	339.97	8.3	18.9
2280.0	21.7	34.8	90	9.4	1.36	17.59	95906	168.40	339.38	8.3	18.9
2281.0	25.9	35.1	90	9.4	1.31	17.63	96115	141.01	338.70	8.3	18.9
2282.0	25.5	35.5	90	9.4	1.32	17.67	96326	143.04	338.03	8.3	18.9
2283.0	25.9	35.2	90	9.4	1.31	17.71	96535	141.01	337.36	8.3	18.9
2284.0	29.0	35.4	90	9.4	1.28	17.74	96721	125.79	336.64	8.3	18.9
2285.0	28.6	35.5	90	9.4	1.28	17.78	96910	127.82	335.93	8.3	18.9
2286.0	25.4	36.2	90	9.4	1.33	17.82	97123	144.05	335.29	8.3	18.9
2287.0	25.4	35.1	90	9.4	1.32	17.86	97336	144.05	334.65	8.3	18.9
2288.0	27.9	35.9	90	9.4	1.30	17.89	97529	130.86	333.96	8.3	18.9
2289.0	29.0	41.0	90	9.4	1.34	17.93	97715	125.79	333.27	8.3	18.9
2290.0	26.9	43.4	90	9.4	1.39	17.96	97916	135.94	332.61	8.3	18.9
2291.0	34.0	43.6	90	9.4	1.31	17.99	98075	107.53	331.87	8.3	18.9
2292.0	27.1	45.0	90	9.4	1.40	18.03	98275	134.92	331.22	8.3	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2293.0	13.0	45.3	90	9.4	1.66	18.11	98690	281.00	331.05	8.3	18.9
2294.0	25.0	46.7	90	9.4	1.45	18.15	98906	146.08	330.45	8.3	18.9
2295.0	23.5	46.7	90	9.4	1.47	18.19	99136	155.21	329.87	8.3	18.9
2296.0	10.7	47.4	90	9.4	1.75	18.28	99641	341.87	329.91	8.3	18.9
2297.0	14.2	46.6	90	9.4	1.64	18.35	100022	257.67	329.68	8.3	18.9
2298.0	13.5	46.2	92	9.4	1.66	18.43	100428	269.84	329.48	8.3	18.9
2299.0	12.7	46.0	95	9.4	1.69	18.51	100878	288.10	329.35	8.3	19.0
2300.0	14.1	47.4	95	9.4	1.67	18.58	101281	258.68	329.12	8.3	19.0
2301.0	5.5	48.2	95	9.4	2.00	18.76	102323	667.50	330.21	8.3	19.0
2302.0	10.0	48.4	95	9.4	1.79	18.86	102893	365.20	330.32	8.3	19.0
2303.0	12.4	47.6	95	9.4	1.71	18.94	103354	295.20	330.21	8.3	19.0
2304.0	11.8	48.5	97	9.4	1.74	19.03	103847	308.39	330.14	8.3	19.0
2305.0	10.0	47.9	100	9.4	1.80	19.13	104449	366.21	330.25	8.3	19.0
2306.0	12.9	47.8	100	9.5	1.71	19.20	104912	282.02	330.10	8.3	19.0
2307.0	20.5	44.0	100	9.5	1.51	19.25	105206	178.54	329.62	8.3	19.0
2308.0	20.5	33.8	100	9.5	1.39	19.30	105499	178.54	329.15	8.3	19.0
2309.0	16.1	41.2	100	9.5	1.56	19.36	105872	227.24	328.83	8.3	19.0
2310.0	5.8	43.2	100	9.5	1.92	19.54	106916	635.04	329.78	8.3	19.0
2311.0	3.5	43.0	100	9.5	2.07	19.82	108627	1042	332	8.3	19.0
2312.0	14.6	41.8	100	9.5	1.59	19.89	109039	250.57	331.75	8.3	19.0
2313.0	21.1	41.0	100	9.5	1.46	19.94	109324	173.47	331.26	8.3	19.0
2314.0	22.5	39.9	100	9.5	1.43	19.98	109591	162.31	330.74	8.3	19.0
2315.0	20.7	40.4	100	9.5	1.46	20.03	109881	176.51	330.26	8.3	19.0
2316.0	19.3	41.2	100	9.5	1.49	20.08	110192	189.70	329.83	8.3	19.0
2317.0	16.8	42.3	100	9.5	1.54	20.14	110549	217.09	329.49	8.3	19.0
2318.0	8.9	44.7	98	9.6	1.78	20.26	111213	410.85	329.74	8.3	19.0
2319.0	7.7	45.2	90	9.6	1.80	20.38	111914	473.75	330.17	8.3	19.0
2320.0	11.7	45.7	90	9.6	1.66	20.47	112376	312.45	330.12	8.3	19.0
2321.0	9.9	46.3	90	9.6	1.73	20.57	112923	370.27	330.24	8.3	19.0
2322.0	5.7	45.6	90	9.6	1.91	20.75	113873	642.14	331.18	8.3	19.0
2323.0	9.7	45.4	90	9.6	1.73	20.85	114431	377.37	331.32	8.3	19.0
2324.0	1.9	45.5	90	9.5	2.27	21.37	117219	1886	336	8.3	19.0
2325.0	4.5	45.9	90	9.5	2.00	21.59	118422	813.58	337.38	8.3	19.0
2326.0	4.7	46.8	90	9.5	2.00	21.80	119564	771.99	338.67	8.3	19.0
2327.0	4.3	45.4	90	9.5	2.02	22.04	120831	857.21	340.21	8.3	19.0
2328.0	6.2	43.7	90	9.5	1.87	22.20	121698	586.35	340.93	8.3	19.0
2329.0	6.1	43.7	90	9.5	1.88	22.36	122582	597.51	341.69	8.3	19.0
2330.0	23.1	43.4	90	9.5	1.43	22.40	122816	158.25	341.15	8.3	19.0
2331.0	20.6	43.6	90	9.4	1.47	22.45	123078	177.53	340.67	8.3	19.0
2332.0	26.7	42.9	90	9.5	1.38	22.49	123281	136.95	340.08	8.3	19.0
2333.0	7.9	44.4	90	9.4	1.80	22.62	123960	459.54	340.42	8.3	19.0
2334.0	5.6	44.7	90	9.4	1.92	22.79	124920	649.24	341.32	8.3	19.0
2335.0	7.6	44.8	90	9.4	1.82	22.93	125634	482.88	341.73	8.3	19.0
2336.0	10.9	45.0	90	9.5	1.69	23.02	126130	335.05	341.71	8.3	19.0
2337.0	4.4	44.9	90	9.5	2.00	23.25	127358	830.83	343.12	8.3	19.0
2338.0	1.3	41.2	90	9.5	2.36	24.04	131648	2901	350	8.3	19.0
2339.0	3.6	42.6	90	9.5	2.04	24.32	133157	1021	352	8.3	19.0
2340.0	4.8	44.8	90	9.5	1.97	24.53	134285	762.86	353.54	8.3	19.0
2341.0	9.9	43.0	90	9.5	1.71	24.63	134833	370.27	353.58	8.3	19.0
2342.0	13.2	43.3	90	9.5	1.61	24.71	135242	276.94	353.37	8.3	19.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2343.0	11.4	44.1	90	9.5	1.67	24.79	135718	321.58	353.28	8.3	19.0
2344.0	5.8	44.6	90	9.5	1.91	24.97	136649	629.97	354.06	8.3	19.0
2345.0	3.7	45.5	90	9.5	2.07	25.24	138118	993.14	355.85	8.3	19.0
2346.0	5.1	43.2	90	9.4	1.94	25.44	139184	721.27	356.88	8.3	19.0
2347.0	10.2	43.4	90	9.4	1.70	25.53	139714	358.10	356.88	8.3	19.0
2348.0	9.9	37.8	90	9.4	1.64	25.63	140257	367.23	356.91	8.3	19.0
2349.0	14.9	29.4	90	9.5	1.40	25.70	140618	244.48	356.60	8.3	19.0
2350.0	15.7	29.8	90	9.4	1.39	25.76	140962	232.31	356.25	8.3	19.0
2351.0	17.1	30.0	90	9.5	1.37	25.82	141278	214.05	355.86	8.3	19.0
2352.0	12.8	30.7	90	9.5	1.47	25.90	141701	286.07	355.67	8.3	19.0
2353.0	10.7	35.8	90	9.5	1.59	25.99	142205	340.85	355.63	8.3	19.0
2354.0	8.9	36.7	90	9.4	1.66	26.11	142813	410.85	355.78	8.3	19.0
2355.0	5.3	38.0	90	9.4	1.85	26.30	143831	688.81	356.69	8.3	19.0
2356.0	3.8	42.2	90	9.4	2.02	26.56	145241	953.58	358.32	8.3	19.0
2357.0	6.9	43.0	90	9.5	1.83	26.70	146027	531.57	358.79	8.3	19.0
2358.0	17.6	40.2	90	9.5	1.48	26.76	146335	207.96	358.38	8.3	19.0
2359.0	15.5	40.3	90	9.5	1.53	26.82	146683	235.35	358.05	8.3	19.0
2360.0	16.0	41.2	90	9.5	1.53	26.89	147020	228.25	357.70	8.3	19.0
2361.0	16.4	40.8	90	9.5	1.51	26.95	147349	222.16	357.33	8.3	19.0
2362.0	16.7	40.1	90	9.5	1.50	27.01	147671	218.11	356.96	8.3	19.0
2363.0	14.7	39.7	90	9.5	1.53	27.07	148039	248.54	356.67	8.3	19.0
2364.0	20.5	40.4	90	9.5	1.43	27.12	148303	178.54	356.19	8.3	19.0
2365.0	20.2	39.6	90	9.5	1.43	27.17	148570	180.57	355.72	8.3	19.0
2366.0	9.0	42.1	90	9.5	1.73	27.28	149167	403.75	355.85	8.3	19.0
2367.0	5.8	41.0	90	9.5	1.86	27.46	150097	628.96	356.57	8.3	19.0
2368.0	9.5	44.2	90	9.5	1.74	27.56	150667	385.49	356.65	8.3	19.0
2369.0	4.5	43.5	90	9.5	1.98	27.78	151873	815.61	357.86	8.3	19.0
2370.0	4.0	40.0	90	9.5	1.97	28.03	153218	909.96	359.31	8.3	19.0
2371.0	3.6	42.7	90	9.5	2.04	28.31	154711	1009	361	8.3	19.0
2372.0	3.7	43.3	90	9.4	2.04	28.58	156157	977.92	362.62	8.3	19.0
2373.0	7.2	42.8	90	9.4	1.82	28.72	156905	506.21	363.00	8.3	19.0
2374.0	12.4	41.5	90	9.4	1.62	28.80	157340	294.19	362.82	8.3	19.0
2375.0	7.9	41.5	90	9.4	1.77	28.92	158026	463.60	363.08	8.3	19.0
2376.0	6.5	38.3	90	9.4	1.79	29.08	158863	566.06	363.61	8.3	19.0
2377.0	9.9	34.8	90	9.4	1.60	29.18	159409	369.26	363.62	8.3	19.1
2378.0	4.2	42.7	90	9.5	1.99	29.42	160699	872.42	364.93	8.3	19.1
2379.0	9.7	33.5	90	9.5	1.59	29.52	161254	375.34	364.96	8.3	19.1
2380.0	16.1	40.5	90	9.5	1.51	29.58	161590	227.24	364.60	8.3	19.1
2381.0	7.8	43.8	90	9.5	1.80	29.71	162284	469.69	364.87	8.3	19.1
2382.0	2.7	40.0	90	9.4	2.09	30.08	164260	1336	367	8.3	19.1
2383.0	2.9	34.6	90	9.4	1.99	30.43	166144	1274	370	8.3	19.1
2384.0	4.8	32.0	90	9.4	1.79	30.64	167273	763.88	370.64	8.3	19.1
2385.0	12.4	33.1	90	9.5	1.51	30.72	167710	295.20	370.45	8.3	19.1
2386.0	16.6	36.6	90	9.4	1.46	30.78	168035	220.13	370.08	8.3	19.1
2387.0	4.6	41.4	90	9.4	1.94	30.99	169198	786.19	371.12	8.3	19.1
2388.0	3.8	37.8	98	9.4	1.98	31.26	170741	962.71	372.60	8.3	19.1
2389.0	5.0	39.3	100	9.4	1.92	31.46	171941	730.40	373.50	8.3	19.1
2389.7	3.8	39.9	100	9.4	2.03	31.64	173061	973.87	374.55	8.3	19.1

BIT NUMBER	5	IADC CODE	517	INTERVAL	2389.7- 2667.4
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.7	BIT RUN	277.7
TOTAL HOURS	31.19	TOTAL TURNS	164301	CONDITION	T8 R3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2390.0	7.6	15.1	80	9.5	1.31	0.04	190	482	122603	8.3	19.1
2391.0	3.6	25.0	80	9.5	1.70	0.31	1509	1003	29065	8.3	19.1
2392.0	4.4	38.2	80	9.5	1.86	0.54	2587	821	16785	8.3	19.1
2393.0	5.2	42.9	81	9.5	1.88	0.73	3521	700	11911	8.3	19.1
2394.0	4.6	44.7	90	9.5	1.98	0.95	4692	792	9325	8.3	19.1
2395.0	4.3	43.6	90	9.5	1.98	1.18	5939	843	7725	8.3	19.1
2396.0	4.3	44.4	90	9.5	2.00	1.41	7187	844	6632	8.3	19.1
2397.0	5.5	44.2	90	9.5	1.91	1.59	8165	661	5814	8.3	19.1
2398.0	5.0	43.7	90	9.5	1.93	1.79	9239	726	5201	8.3	19.1
2399.0	5.3	43.2	90	9.5	1.91	1.98	10253	686	4716	8.3	19.1
2400.0	13.0	43.5	90	9.5	1.61	2.05	10667	280	4285	8.3	19.1
2401.0	12.1	43.6	90	9.5	1.64	2.14	11114	302	3933	8.3	19.1
2402.0	7.9	43.3	90	9.5	1.78	2.26	11795	461	3650	8.3	19.1
2403.0	13.3	45.7	90	9.4	1.66	2.34	12200	274	3397	8.3	19.1
2404.0	9.7	45.5	90	9.4	1.75	2.44	12757	376	3185	8.3	19.1
2405.0	18.9	44.3	90	9.4	1.51	2.49	13042	193	2990	8.3	19.1
2406.0	13.4	45.1	90	9.4	1.63	2.57	13444	272	2823	8.3	19.1
2407.0	9.5	43.3	90	9.4	1.73	2.67	14014	385	2682	8.3	19.1
2408.0	8.4	48.9	90	9.4	1.84	2.79	14654	433	2559	8.3	19.1
2409.0	6.2	47.2	90	9.4	1.93	2.95	15526	589	2457	8.3	19.1
2410.0	6.9	46.9	90	9.4	1.89	3.10	16312	532	2362	8.3	19.1
2411.0	5.6	47.1	90	9.4	1.96	3.28	17275	651	2282	8.3	19.1
2412.0	8.2	46.8	90	9.4	1.83	3.40	17930	443	2200	8.3	19.1
2413.0	10.3	46.6	90	9.4	1.75	3.50	18455	355	2120	8.3	19.1
2414.0	9.9	46.9	90	9.4	1.77	3.60	19003	370	2048	8.3	19.1
2415.0	8.7	46.9	90	9.4	1.81	3.71	19621	418	1984	8.3	19.1
2416.0	8.3	42.0	90	9.4	1.76	3.83	20270	439	1925	8.3	19.1
2417.0	23.5	42.0	90	9.4	1.42	3.87	20500	155	1860	8.3	19.1
2418.0	15.5	41.9	90	9.4	1.55	3.94	20849	236	1803	8.3	19.1
2419.0	12.2	41.8	90	9.4	1.63	4.02	21290	298	1752	8.3	19.1
2420.0	11.1	41.9	90	9.4	1.66	4.11	21776	329	1705	8.3	19.1
2421.0	16.1	42.0	90	9.4	1.54	4.17	22111	226	1657	8.3	19.1
2422.0	10.9	44.5	90	9.4	1.71	4.27	22607	336	1616	8.3	19.1
2423.0	8.8	44.8	90	9.4	1.78	4.38	23218	413	1580	8.3	19.1
2424.0	14.1	44.6	90	9.4	1.62	4.45	23602	260	1542	8.3	19.1
2425.0	17.8	43.8	90	9.4	1.53	4.51	23905	205	1504	8.3	19.1
2426.0	10.1	43.3	90	9.4	1.72	4.60	24440	362	1473	8.3	19.1
2427.0	7.5	45.0	90	9.4	1.84	4.74	25162	488	1446	8.3	19.1
2428.0	7.5	45.0	90	9.4	1.84	4.87	25877	484	1421	8.3	19.1
2429.0	8.5	45.5	90	9.4	1.81	4.99	26513	430	1396	8.3	19.1
2430.0	9.8	44.9	90	9.4	1.75	5.09	27062	371	1370	8.3	19.1
2431.0	10.6	44.6	90	9.4	1.72	5.18	27571	344	1346	8.3	19.1
2432.0	26.7	44.7	90	9.4	1.40	5.22	27773	137	1317	8.3	19.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2433.0	16.4	45.1	90	9.4	1.57	5.28	28102	222	1292	8.3	19.1
2434.0	18.0	45.0	90	9.4	1.54	5.34	28402	203	1267	8.3	19.1
2435.0	36.0	44.6	90	9.4	1.30	5.37	28552	101	1241	8.3	19.1
2436.0	5.3	44.1	90	9.4	1.95	5.55	29572	690	1229	8.3	19.1
2437.0	5.4	44.2	90	9.4	1.94	5.74	30580	682	1218	8.3	19.1
2438.0	9.9	44.2	90	9.4	1.73	5.84	31123	367	1200	8.3	19.1
2439.0	8.0	44.0	90	9.4	1.81	5.97	31795	454	1185	8.3	19.1
2440.0	9.7	44.0	90	9.4	1.74	6.07	32351	376	1169	8.3	19.1
2441.0	13.7	43.7	90	9.4	1.62	6.14	32746	267	1151	8.3	19.1
2442.0	12.2	43.9	90	9.4	1.66	6.22	33190	300	1135	8.3	19.1
2443.0	27.5	42.8	90	9.4	1.38	6.26	33386	133	1116	8.3	19.1
2444.0	24.2	43.2	90	9.4	1.42	6.30	33610	151	1099	8.3	19.1
2445.0	19.0	43.7	90	9.4	1.51	6.36	33893	192	1082	8.3	19.1
2446.0	20.9	43.8	90	9.4	1.48	6.40	34151	174	1066	8.3	19.1
2447.0	21.3	44.1	90	9.3	1.48	6.45	34405	171	1050	8.3	19.1
2448.0	27.1	43.9	90	9.4	1.39	6.49	34604	135	1035	8.3	19.1
2449.0	26.1	43.9	90	9.4	1.41	6.53	34811	140	1020	8.3	19.1
2450.0	19.8	44.3	90	9.4	1.50	6.58	35084	185	1006	8.3	19.1
2451.0	29.8	43.7	90	9.4	1.36	6.61	35266	122.75	991.41	8.3	19.1
2452.0	25.9	44.1	90	9.4	1.41	6.65	35474	141.01	977.76	8.3	19.1
2453.0	20.8	44.1	90	9.4	1.48	6.70	35734	175.50	965.09	8.3	19.1
2454.0	10.1	45.2	90	9.4	1.74	6.79	36268	361.14	955.70	8.3	19.1
2455.0	9.9	43.1	90	9.4	1.71	6.90	36811	367.23	946.68	8.3	19.1
2456.0	20.9	44.0	90	9.5	1.46	6.94	37069	174.74	935.04	8.3	19.1
2457.0	7.1	45.2	90	9.5	1.84	7.08	37829	514.37	928.79	8.3	19.2
2458.0	6.4	45.0	90	9.5	1.87	7.24	38673	570.63	923.55	8.3	19.2
2459.0	12.5	45.0	90	9.5	1.65	7.32	39105	292.16	914.44	8.3	19.2
2460.0	10.9	44.2	90	9.5	1.68	7.41	39601	335.05	906.19	8.3	19.2
2461.0	9.6	44.2	90	9.5	1.72	7.52	40163	380.42	898.82	8.3	19.2
2462.0	10.6	45.1	90	9.5	1.70	7.61	40673	344.53	891.15	8.3	19.2
2463.0	11.0	45.1	90	9.5	1.69	7.70	41163	332.00	883.52	8.3	19.2
2464.0	34.5	45.1	90	9.5	1.30	7.73	41320	105.86	873.06	8.3	19.2
2465.0	14.8	45.1	90	9.5	1.59	7.80	41685	246.76	864.74	8.3	19.2
2466.0	10.1	45.6	90	9.5	1.72	7.90	42219	361.58	858.15	8.3	19.2
2467.0	8.4	45.8	90	9.5	1.79	8.02	42862	434.76	852.67	8.3	19.2
2468.0	10.8	45.0	90	9.5	1.69	8.11	43362	338.15	846.10	8.3	19.2
2469.0	8.3	45.0	90	9.5	1.78	8.23	44013	440.00	840.98	8.3	19.2
2470.0	9.6	45.0	90	9.5	1.73	8.33	44575	380.42	835.24	8.3	19.2
2471.0	11.2	45.0	90	9.5	1.68	8.42	45058	326.07	828.98	8.3	19.2
2472.0	12.8	45.0	90	9.5	1.64	8.50	45479	285.31	822.37	8.3	19.2
2473.0	21.6	44.7	90	9.5	1.46	8.55	45729	169.07	814.53	8.3	19.2
2474.0	18.9	42.0	90	9.5	1.48	8.60	46014	192.74	807.15	8.3	19.2
2475.0	15.7	41.0	90	9.5	1.53	8.66	46359	233.32	800.43	8.3	19.2
2476.0	8.7	41.3	90	9.5	1.73	8.78	46980	419.98	796.02	8.3	19.2
2477.0	18.0	41.0	90	9.5	1.48	8.83	47280	202.89	789.22	8.3	19.2
2478.0	10.5	41.3	90	9.5	1.66	8.93	47793	346.94	784.22	8.3	19.2
2479.0	13.1	41.1	90	9.5	1.59	9.01	48206	278.97	778.56	8.3	19.2
2480.0	9.3	41.6	90	9.5	1.71	9.11	48789	394.62	774.31	8.3	19.2
2481.0	13.3	42.2	90	9.5	1.60	9.19	49196	274.91	768.84	8.3	19.2
2482.0	13.6	41.4	90	9.5	1.58	9.26	49593	268.83	763.42	8.3	19.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2483.0	9.8	42.0	90	9.5	1.70	9.36	50145	373.32	759.24	8.3	19.2
2484.0	15.7	41.5	90	9.5	1.53	9.43	50489	232.31	753.65	8.3	19.2
2485.0	11.6	41.9	90	9.5	1.64	9.51	50954	314.48	749.04	8.3	19.2
2486.0	10.3	41.7	90	9.5	1.68	9.61	51479	355.06	744.95	8.3	19.2
2487.0	16.7	41.6	90	9.4	1.52	9.67	51801	218.11	739.54	8.3	19.2
2488.0	14.8	41.7	90	9.4	1.56	9.74	52167	247.52	734.53	8.3	19.2
2489.0	8.0	42.0	90	9.4	1.77	9.86	52842	456.50	731.73	8.3	19.2
2490.0	7.5	42.0	90	9.4	1.79	10.00	53561	485.92	729.28	8.3	19.2
2491.0	11.8	42.3	90	9.4	1.65	10.08	54020	310.42	725.14	8.3	19.2
2492.0	18.6	42.5	90	9.4	1.50	10.14	54311	196.80	719.98	8.3	19.2
2493.0	8.1	42.5	90	9.4	1.78	10.26	54981	453.46	717.40	8.3	19.2
2494.0	8.6	42.7	90	9.4	1.75	10.38	55607	423.02	714.58	8.3	19.2
2495.0	9.2	40.9	90	9.4	1.71	10.48	56192	395.63	711.55	8.3	19.2
2496.0	7.6	41.0	90	9.4	1.77	10.62	56906	482.88	709.40	8.3	19.2
2497.0	7.2	40.6	90	9.4	1.78	10.76	57653	505.19	707.49	8.3	19.2
2498.0	9.6	40.3	90	9.4	1.69	10.86	58215	380.42	704.47	8.3	19.2
2499.0	13.6	40.5	90	9.4	1.58	10.93	58611	267.81	700.48	8.3	19.2
2500.0	8.9	40.2	90	9.4	1.71	11.04	59217	409.84	697.84	8.3	19.2
2501.0	13.3	39.8	90	9.4	1.58	11.12	59624	274.91	694.04	8.3	19.2
2502.0	10.7	41.1	90	9.4	1.67	11.21	60129	341.87	690.91	8.3	19.2
2503.0	10.3	42.8	90	9.4	1.70	11.31	60656	356.07	687.95	8.3	19.2
2504.0	11.4	42.8	90	9.4	1.67	11.40	61130	320.56	684.74	8.3	19.2
2505.0	12.1	42.6	90	9.4	1.64	11.48	61575	301.29	681.41	8.3	19.2
2506.0	14.6	42.5	90	9.4	1.58	11.55	61944	249.55	677.70	8.3	19.2
2507.0	9.9	42.7	90	9.4	1.71	11.65	62487	367.23	675.05	8.3	19.2
2508.0	9.0	42.6	90	9.4	1.74	11.76	63086	404.76	672.77	8.3	19.2
2509.0	9.9	42.6	90	9.4	1.71	11.86	63632	369.26	670.22	8.3	19.2
2510.0	12.4	42.3	90	9.4	1.63	11.94	64067	294.19	667.10	8.3	19.2
2511.0	14.7	46.1	90	9.4	1.62	12.01	64434	248.54	663.65	8.3	19.2
2512.0	12.7	43.8	90	9.4	1.64	12.09	64860	288.10	660.58	8.3	19.2
2513.0	12.9	44.2	90	9.4	1.64	12.17	65279	283.03	657.51	8.3	19.2
2514.0	15.9	43.9	90	9.4	1.56	12.23	65618	229.26	654.07	8.3	19.2
2515.0	10.0	44.4	90	9.4	1.73	12.33	66159	366.21	651.77	8.3	19.2
2516.0	10.4	44.2	90	9.4	1.71	12.43	66680	352.01	649.40	8.3	19.2
2517.0	14.0	44.2	90	9.4	1.61	12.50	67067	261.73	646.35	8.3	19.2
2518.0	17.0	44.1	90	9.4	1.54	12.56	67385	215.06	642.99	8.3	19.2
2519.0	8.7	44.7	90	9.5	1.77	12.67	68009	422.01	641.28	8.3	19.2
2520.0	12.9	43.9	90	9.5	1.62	12.75	68427	283.03	638.53	8.3	19.2
2521.0	9.9	45.2	90	9.5	1.73	12.85	68970	367.23	636.47	8.3	19.2
2522.0	12.8	45.3	90	9.5	1.65	12.93	69392	285.06	633.81	8.3	19.2
2523.0	6.0	43.9	90	9.5	1.88	13.10	70292	608.67	633.62	8.3	19.2
2524.0	12.1	45.2	90	9.5	1.66	13.18	70739	302.30	631.16	8.3	19.2
2525.0	10.5	43.2	90	9.5	1.69	13.27	71252	346.94	629.05	8.3	19.2
2526.0	10.6	43.7	90	9.5	1.69	13.37	71762	344.91	626.97	8.3	19.2
2527.0	22.1	40.4	90	9.5	1.41	13.41	72006	165.35	623.61	8.3	19.2
2528.0	20.3	41.8	90	9.5	1.45	13.46	72272	179.56	620.40	8.3	19.2
2529.0	11.5	43.9	90	9.5	1.66	13.55	72740	316.51	618.22	8.3	19.2
2530.0	14.1	43.8	90	9.5	1.60	13.62	73124	259.70	615.66	8.3	19.2
2531.0	15.9	44.1	90	9.5	1.56	13.68	73464	230.28	612.93	8.3	19.2
2532.0	13.4	45.0	90	9.5	1.63	13.76	73868	272.89	610.54	8.3	19.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2533.0	11.5	45.4	90	9.5	1.68	13.84	74336	316.51	608.49	8.3	19.2
2534.0	12.0	45.6	90	9.5	1.67	13.93	74784	303.32	606.38	8.3	19.2
2535.0	11.0	45.8	90	9.5	1.70	14.02	75275	331.72	604.49	8.3	19.2
2536.0	10.7	45.2	90	9.5	1.71	14.11	75780	341.87	602.69	8.3	19.2
2537.0	13.1	45.5	90	9.5	1.64	14.19	76191	277.96	600.49	8.3	19.2
2538.0	12.1	45.7	90	9.5	1.67	14.27	76637	301.29	598.47	8.3	19.2
2539.0	11.2	42.2	90	9.5	1.65	14.36	77119	326.07	596.64	8.3	19.3
2540.0	11.6	41.7	90	9.5	1.63	14.45	77585	314.83	594.77	8.3	19.3
2541.0	18.9	41.8	90	9.4	1.48	14.50	77870	193.23	592.12	8.3	19.3
2542.0	11.6	41.6	90	9.4	1.64	14.59	78336	314.83	590.29	8.3	19.3
2543.0	21.2	39.9	90	9.5	1.42	14.63	78591	172.46	587.57	8.3	19.3
2543.2	26.7	38.9	90	9.5	1.33	14.64	78631	136.95	586.98	8.3	19.3
2543.4	9.7	38.3	90	9.5	1.65	14.66	78742	375.34	586.71	8.3	19.3
2543.6	5.5	40.1	90	9.5	1.86	14.70	78940	669.53	586.81	8.3	19.3
2543.8	20.0	39.5	90	9.5	1.43	14.71	78994	182.60	586.29	8.3	19.3
2544.0	15.3	38.4	90	9.5	1.50	14.72	79065	238.39	585.84	8.3	19.3
2544.2	12.6	39.6	90	9.5	1.58	14.74	79150	289.12	585.45	8.3	19.3
2544.4	13.1	40.7	90	9.5	1.58	14.75	79233	278.97	585.06	8.3	19.3
2545.0	15.4	40.9	90	9.5	1.53	14.79	79443	236.70	583.71	8.3	19.3
2546.0	10.5	41.1	90	9.5	1.66	14.89	79957	347.95	582.20	8.3	19.3
2547.0	9.2	42.1	90	9.5	1.72	14.99	80542	395.63	581.02	8.3	19.3
2548.0	6.3	41.9	90	9.5	1.84	15.15	81397	578.23	581.00	8.3	19.3
2549.0	4.6	42.2	90	9.5	1.95	15.37	82564	789.24	582.31	8.3	19.3
2550.0	6.1	43.6	90	9.5	1.88	15.53	83449	598.52	582.41	8.3	19.3
2551.0	5.9	42.0	90	9.4	1.87	15.70	84369	621.85	582.65	8.3	19.3
2552.0	6.9	41.7	90	9.4	1.81	15.85	85147	526.50	582.31	8.3	19.3
2553.0	7.1	41.6	90	9.5	1.80	15.99	85909	515.34	581.90	8.3	19.3
2554.0	15.3	41.3	90	9.5	1.54	16.05	86263	239.41	579.81	8.3	19.3
2555.0	13.2	41.4	90	9.5	1.59	16.13	86671	275.93	577.97	8.3	19.3
2556.0	16.0	41.6	90	9.5	1.53	16.19	87009	228.25	575.87	8.3	19.3
2557.0	16.3	41.6	90	9.5	1.53	16.25	87340	224.19	573.77	8.3	19.3
2558.0	15.1	41.9	90	9.5	1.55	16.32	87699	242.45	571.80	8.3	19.3
2559.0	13.8	40.3	90	9.4	1.57	16.39	88089	263.76	569.98	8.3	19.3
2560.0	21.4	41.1	90	9.5	1.43	16.44	88341	170.43	567.64	8.3	19.3
2561.0	15.1	43.7	90	9.4	1.58	16.50	88699	242.45	565.74	8.3	19.3
2562.0	19.5	41.9	90	9.4	1.47	16.56	88977	187.67	563.54	8.3	19.3
2563.0	16.3	41.2	90	9.5	1.52	16.62	89308	224.19	561.58	8.3	19.3
2564.0	19.1	41.9	90	9.5	1.47	16.67	89590	190.72	559.46	8.3	19.3
2565.0	19.0	42.0	90	9.4	1.48	16.72	89874	191.73	557.36	8.3	19.3
2566.0	16.4	42.2	90	9.5	1.53	16.78	90204	223.18	555.46	8.3	19.3
2567.0	10.0	43.0	90	9.5	1.70	16.88	90744	365.20	554.39	8.3	19.3
2568.0	8.9	43.0	90	9.4	1.75	17.00	91351	410.34	553.58	8.3	19.3
2569.0	11.2	43.3	90	9.5	1.67	17.08	91834	326.65	552.32	8.3	19.3
2570.0	19.1	42.1	90	9.5	1.47	17.14	92116	190.72	550.31	8.3	19.3
2571.0	11.7	42.5	90	9.5	1.64	17.22	92578	312.45	549.00	8.3	19.3
2572.0	11.7	42.6	90	9.5	1.64	17.31	93038	311.43	547.70	8.3	19.3
2573.0	5.4	42.9	90	9.5	1.91	17.49	94042	678.66	548.41	8.3	19.3
2574.0	4.6	43.0	85	9.5	1.94	17.71	95150	793.91	549.74	8.3	19.3
2575.0	5.3	43.2	91	9.5	1.92	17.90	96171	683.23	550.46	8.3	19.3
2576.0	5.5	43.0	80	9.5	1.87	18.08	97043	663.45	551.07	8.3	19.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2577.0	6.6	43.3	80	9.4	1.81	18.23	97773	555.92	551.10	8.3	19.3
2578.0	9.4	42.0	80	9.4	1.67	18.34	98281	386.50	550.22	8.3	19.3
2579.0	13.9	43.3	80	9.4	1.56	18.41	98627	262.74	548.70	8.3	19.3
2580.0	15.2	42.9	80	9.4	1.53	18.48	98943	240.42	547.08	8.3	19.3
2581.0	7.7	42.8	80	9.5	1.75	18.61	99568	475.77	546.71	8.3	19.3
2582.0	7.8	42.5	80	9.4	1.74	18.73	100180	465.63	546.29	8.3	19.3
2583.0	6.5	42.5	80	9.5	1.80	18.89	100923	565.05	546.39	8.3	19.3
2584.0	7.6	42.5	80	9.4	1.75	19.02	101556	481.86	546.05	8.3	19.3
2585.0	9.2	41.7	80	9.4	1.68	19.13	102079	397.66	545.29	8.3	19.3
2586.0	7.7	41.4	80	9.4	1.73	19.26	102700	472.73	544.92	8.3	19.3
2587.0	14.8	41.0	80	9.4	1.51	19.33	103024	246.51	543.41	8.3	19.3
2588.0	8.4	40.3	80	9.4	1.69	19.44	103595	434.18	542.86	8.3	19.3
2589.0	11.3	40.0	80	9.4	1.59	19.53	104021	324.62	541.77	8.3	19.3
2590.0	6.3	39.4	80	9.4	1.77	19.69	104788	583.31	541.97	8.3	19.3
2591.0	11.4	40.2	80	9.4	1.59	19.78	105211	321.58	540.88	8.3	19.3
2592.0	6.8	40.5	80	9.4	1.76	19.93	105917	537.66	540.86	8.3	19.3
2593.0	7.5	40.4	80	9.4	1.73	20.06	106556	485.92	540.59	8.3	19.3
2594.0	6.6	40.7	80	9.4	1.77	20.21	107283	552.87	540.65	8.3	19.3
2595.0	13.4	40.1	80	9.4	1.54	20.29	107641	272.89	539.35	8.3	19.3
2596.0	12.8	40.1	80	9.4	1.55	20.37	108016	285.06	538.11	8.3	19.3
2597.0	18.6	40.4	80	9.4	1.43	20.42	108275	196.80	536.47	8.3	19.3
2598.0	17.8	39.4	80	9.4	1.44	20.48	108544	204.92	534.88	8.3	19.3
2599.0	9.3	41.5	80	9.4	1.68	20.58	109061	393.60	534.20	8.3	19.3
2600.0	10.4	41.1	80	9.4	1.64	20.68	109523	351.00	533.33	8.3	19.3
2601.0	8.5	41.2	80	9.4	1.70	20.80	110087	429.11	532.84	8.3	19.3
2602.0	15.3	40.5	80	9.5	1.49	20.86	110400	238.39	531.45	8.3	19.3
2603.0	11.2	41.0	80	9.5	1.59	20.95	110829	326.65	530.49	8.3	19.3
2604.0	10.7	41.0	80	9.5	1.60	21.05	111276	339.84	529.60	8.3	19.3
2605.0	12.5	41.1	80	9.5	1.56	21.13	111661	293.17	528.50	8.3	19.3
2606.0	13.2	41.2	80	9.5	1.54	21.20	112025	276.94	527.34	8.3	19.3
2607.0	19.8	40.9	80	9.5	1.40	21.25	112268	184.63	525.76	8.3	19.3
2608.0	5.4	41.9	80	9.5	1.84	21.44	113149	670.55	526.43	8.3	19.3
2609.0	5.1	42.0	80	9.5	1.86	21.63	114087	713.15	527.28	8.3	19.3
2610.0	4.2	41.9	80	9.5	1.92	21.87	115236	874.45	528.85	8.3	19.3
2611.0	13.5	41.0	80	9.5	1.53	21.94	115592	270.86	527.69	8.3	19.3
2612.0	6.1	41.7	80	9.5	1.80	22.11	116375	595.48	527.99	8.3	19.3
2613.0	4.0	42.0	80	9.5	1.94	22.36	117585	921.12	529.75	8.3	19.3
2614.0	5.3	42.2	80	9.5	1.85	22.55	118487	685.76	530.45	8.3	19.3
2615.0	6.0	42.2	80	9.5	1.81	22.71	119285	607.65	530.79	8.3	19.3
2616.0	7.2	42.4	80	9.5	1.75	22.85	119956	510.27	530.70	8.3	19.3
2617.0	12.9	42.9	80	9.5	1.57	22.93	120327	282.02	529.61	8.3	19.3
2618.0	13.5	41.9	80	9.5	1.54	23.00	120681	269.84	528.47	8.3	19.3
2619.0	16.7	41.8	80	9.5	1.47	23.06	120969	219.12	527.12	8.3	19.3
2620.0	17.9	41.8	80	9.5	1.44	23.12	121237	203.90	525.72	8.3	19.3
2621.0	20.2	41.6	80	9.5	1.41	23.17	121475	180.57	524.22	8.3	19.3
2622.0	13.3	42.0	80	9.5	1.55	23.25	121836	274.91	523.15	8.3	19.3
2623.0	11.0	42.2	80	9.5	1.61	23.34	122272	331.72	522.33	8.3	19.4
2624.0	5.1	42.7	80	9.5	1.87	23.53	123205	710.11	523.13	8.3	19.4
2625.0	5.6	42.9	80	9.5	1.85	23.71	124068	656.35	523.70	8.3	19.4
2626.0	6.6	42.8	80	9.5	1.79	23.86	124792	550.84	523.81	8.3	19.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICDST	CCDST	PP	FG
2627.0	3.9	41.4	87	9.5	1.97	24.11	126123	927.20	525.51	8.3	19.4
2628.0	3.9	40.7	90	9.5	1.97	24.37	127506	935.32	527.23	8.3	19.4
2629.0	3.5	42.0	90	9.5	2.02	24.65	129039	1037	529	8.3	19.4
2630.0	4.2	42.0	90	9.5	1.97	24.89	130314	862.28	530.75	8.3	19.4
2631.0	4.6	41.7	90	9.5	1.93	25.11	131477	786.19	531.81	8.3	19.4
2632.0	5.5	41.7	90	9.5	1.88	25.29	132462	666.49	532.36	8.3	19.4
2633.0	7.1	41.8	90	9.5	1.79	25.43	133223	514.32	532.29	8.3	19.4
2634.0	6.0	41.9	90	9.5	1.85	25.60	134126	610.70	532.61	8.3	19.4
2635.0	7.7	41.3	90	9.5	1.76	25.73	134831	476.79	532.38	8.3	19.4
2636.0	15.2	41.3	90	9.5	1.54	25.79	135186	240.42	531.19	8.3	19.4
2637.0	21.1	41.6	90	9.5	1.43	25.84	135443	173.47	529.75	8.3	19.4
2638.0	22.6	41.7	90	9.5	1.41	25.88	135681	161.30	528.26	8.3	19.4
2639.0	13.5	42.0	90	9.5	1.59	25.96	136082	270.86	527.23	8.3	19.4
2640.0	7.0	42.5	90	9.5	1.81	26.10	136851	520.41	527.20	8.3	19.4
2641.0	23.1	41.5	90	9.5	1.40	26.14	137085	158.25	525.74	8.3	19.4
2642.0	6.9	42.1	90	9.5	1.81	26.29	137870	530.55	525.76	8.3	19.4
2643.0	7.1	42.3	90	9.5	1.80	26.43	138632	515.34	525.71	8.3	19.4
2644.0	7.1	42.2	90	9.5	1.80	26.57	139397	517.37	525.68	8.3	19.4
2645.0	11.4	41.8	90	9.5	1.63	26.66	139869	319.55	524.87	8.3	19.4
2646.0	13.4	43.6	90	9.5	1.60	26.74	140273	272.89	523.89	8.3	19.4
2647.0	3.8	43.8	90	9.5	2.02	27.00	141687	956.62	525.57	8.3	19.4
2648.0	2.6	42.8	90	9.6	2.13	27.39	143787	1420	529	8.3	19.4
2649.0	3.6	44.8	90	9.5	2.06	27.66	145293	1019	531	8.3	19.4
2650.0	5.8	44.7	90	9.5	1.89	27.84	146222	627.94	531.30	8.3	19.4
2651.0	4.7	45.1	90	9.5	1.97	28.05	147372	778.08	532.24	8.3	19.4
2652.0	8.0	45.6	90	9.5	1.80	28.17	148047	456.50	531.95	8.3	19.4
2653.0	4.8	43.8	90	9.5	1.95	28.38	149171	759.82	532.82	8.3	19.4
2654.0	8.9	44.0	90	9.5	1.74	28.50	149778	410.85	532.36	8.3	19.4
2655.0	16.7	47.4	90	9.5	1.57	28.56	150101	218.11	531.17	8.3	19.4
2656.0	4.0	46.7	90	9.5	2.05	28.81	151452	914.01	532.61	8.3	19.4
2657.0	4.6	46.2	90	9.5	2.00	29.02	152636	800.40	533.61	8.3	19.4
2658.0	5.1	46.2	90	9.5	1.96	29.22	153702	721.27	534.31	8.3	19.4
2659.0	5.8	45.4	90	9.5	1.90	29.39	154631	627.94	534.66	8.3	19.4
2660.0	8.8	45.3	90	9.5	1.76	29.51	155247	416.94	534.22	8.3	19.4
2661.0	10.8	45.3	90	9.5	1.70	29.60	155745	336.80	533.50	8.3	19.4
2662.0	6.6	46.2	90	9.5	1.87	29.75	156558	549.83	533.56	8.3	19.4
2663.0	8.6	46.3	90	9.5	1.78	29.87	157190	427.08	533.17	8.3	19.4
2664.0	5.4	45.9	90	9.5	1.94	30.05	158190	676.63	533.69	8.3	19.4
2665.0	5.1	46.3	90	9.5	1.96	30.25	159249	716.20	534.35	8.3	19.4
2666.0	2.6	43.7	90	9.5	2.15	30.63	161328	1406	538	8.3	19.4
2667.0	2.7	44.7	90	9.5	2.16	31.01	163353	1370	541	8.3	19.4
2667.4	2.2	44.7	86	9.5	2.21	31.19	164301	1681	542	8.3	19.4

BIT NUMBER	6	IADC CODE	517	INTERVAL	2667.4- 2913.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.2	BIT RUN	245.6
TOTAL HOURS	31.76	TOTAL TURNS	166345	CONDITION	T8 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2668.0	3.2	34.0	75	9.6	1.86	0.19	851	1151	65255	8.3	19.4
2669.0	3.9	43.8	75	9.6	1.94	0.44	1994	927	25050	8.3	19.4
2670.0	13.2	42.8	75	9.6	1.53	0.52	2335	277	15522	8.3	19.4
2671.0	14.9	42.9	75	9.6	1.49	0.59	2636	244	11278	8.3	19.4
2672.0	5.6	43.6	75	9.6	1.82	0.77	3446	657	8969	8.3	19.4
2673.0	13.9	43.0	75	9.6	1.51	0.84	3770	263	7415	8.3	19.4
2674.0	6.7	43.7	75	9.6	1.76	0.99	4439	543	6373	8.3	19.4
2675.0	7.3	43.5	80	9.6	1.75	1.12	5090	497	5600	8.3	19.4
2676.0	9.7	42.6	90	9.6	1.68	1.23	5650	378	4993	8.3	19.4
2677.0	6.1	41.9	90	9.6	1.83	1.39	6530	595	4535	8.3	19.4
2678.0	6.3	41.6	90	9.6	1.81	1.55	7394	584	4162	8.3	19.4
2679.0	6.5	41.1	90	9.6	1.79	1.70	8222	560	3852	8.3	19.4
2680.0	6.2	41.2	90	9.6	1.81	1.86	9091	587	3593	8.3	19.4
2681.0	8.7	41.0	90	9.6	1.70	1.98	9713	421	3359	8.3	19.4
2682.0	9.8	41.3	90	9.6	1.67	2.08	10265	373	3155	8.3	19.4
2683.0	8.6	41.6	90	9.6	1.71	2.20	10891	423	2980	8.3	19.4
2684.0	10.7	42.0	90	9.6	1.65	2.29	11393	340	2821	8.3	19.4
2685.0	7.1	43.2	90	9.6	1.80	2.43	12154	514	2690	8.3	19.4
2686.0	9.6	42.9	90	9.6	1.69	2.53	12718	381	2566	8.3	19.4
2687.0	10.9	42.7	90	9.6	1.65	2.63	13211	334	2452	8.3	19.4
2688.0	13.0	42.6	90	9.6	1.59	2.70	13625	280	2346	8.3	19.4
2689.0	27.1	42.2	90	9.6	1.35	2.74	13825	135	2244	8.3	19.4
2690.0	27.5	41.4	90	9.6	1.33	2.78	14021	133	2151	8.3	19.4
2691.0	4.0	43.7	89	9.6	1.99	3.02	15342	904	2098	8.3	19.4
2692.0	4.5	43.6	85	9.6	1.93	3.25	16474	811	2045	8.3	19.4
2693.0	4.3	43.7	85	9.6	1.95	3.48	17650	842	1998	8.3	19.4
2694.0	5.5	50.1	85	9.6	1.96	3.66	18581	666	1948	8.3	19.4
2695.0	5.6	47.3	85	9.6	1.91	3.84	19492	652	1901	8.3	19.4
2696.0	6.0	46.3	85	9.6	1.88	4.00	20342	609	1856	8.3	19.4
2697.0	6.3	46.4	85	9.6	1.87	4.16	21158	584	1813	8.3	19.4
2698.0	7.0	46.3	85	9.6	1.83	4.31	21885	520	1771	8.3	19.4
2699.0	9.8	46.2	85	9.5	1.72	4.41	22406	373	1727	8.3	19.4
2700.0	6.8	46.9	85	9.5	1.85	4.56	23158	539	1690	8.3	19.4
2701.0	6.1	47.9	85	9.5	1.90	4.72	23990	595	1658	8.3	19.4
2702.0	11.4	47.7	85	9.5	1.68	4.81	24439	322	1619	8.3	19.4
2703.0	13.1	41.2	85	9.5	1.56	4.88	24827	278	1581	8.3	19.4
2704.0	14.3	43.3	85	9.5	1.56	4.95	25183	255	1545	8.3	19.4
2705.0	8.5	43.5	85	9.5	1.73	5.07	25785	431	1516	8.3	19.4
2706.0	22.2	42.0	85	9.5	1.40	5.12	26014	164	1481	8.3	19.4
2707.0	14.5	43.1	85	9.5	1.55	5.19	26365	252	1449	8.3	19.4
2708.0	10.1	43.6	85	9.5	1.68	5.28	26873	363	1423	8.3	19.5
2709.0	7.3	43.8	85	9.5	1.79	5.42	27575	503	1401	8.3	19.5
2710.0	6.7	44.1	85	9.5	1.82	5.57	28333	543	1380	8.3	19.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2711.0	5.4	45.3	85	9.5	1.90	5.75	29270	671	1364	8.3	19.5
2712.0	9.5	42.1	85	9.5	1.67	5.86	29804	382	1342	8.3	19.5
2713.0	24.0	44.7	90	9.5	1.43	5.90	30029	152	1316	8.3	19.5
2714.0	6.5	45.1	90	9.5	1.88	6.06	30861	563	1300	8.3	19.5
2715.0	6.3	45.5	90	9.5	1.89	6.21	31716	578	1285	8.3	19.5
2716.0	6.3	47.0	90	9.5	1.91	6.37	32571	578	1270	8.3	19.5
2717.0	5.8	46.7	90	9.5	1.94	6.55	33509	634	1257	8.3	19.5
2718.0	7.7	48.3	90	9.4	1.86	6.67	34206	472	1242	8.3	19.5
2719.0	6.5	48.1	90	9.4	1.92	6.83	35031	558	1229	8.3	19.5
2720.0	5.5	49.6	90	9.5	1.99	7.01	36014	664	1218	8.3	19.5
2721.0	10.7	49.0	90	9.4	1.75	7.10	36516	340	1202	8.3	19.5
2722.0	12.2	45.0	90	9.4	1.66	7.18	36959	299	1185	8.3	19.5
2723.0	8.7	45.0	90	9.5	1.78	7.30	37581	421	1171	8.3	19.5
2724.0	10.7	45.0	90	9.4	1.71	7.39	38084	340	1157	8.3	19.5
2725.0	3.6	45.0	90	9.4	2.08	7.67	39569	1004	1154	8.3	19.5
2726.0	6.2	45.0	90	9.6	1.86	7.83	40439	588	1144	8.3	19.5
2727.0	4.9	45.0	90	9.6	1.94	8.03	41534	741	1137	8.3	19.5
2728.0	2.9	45.0	90	9.6	2.12	8.37	43386	1253	1139	8.3	19.5
2729.0	5.7	45.0	90	9.6	1.90	8.55	44339	644	1131	8.3	19.5
2730.0	4.5	45.0	90	9.6	1.97	8.77	45531	806	1126	8.3	19.5
2731.0	7.1	45.0	90	9.6	1.82	8.91	46292	514	1117	8.3	19.5
2732.0	6.6	45.0	90	9.6	1.84	9.06	47110	553	1108	8.3	19.5
2733.0	8.4	45.0	90	9.6	1.76	9.18	47753	435	1098	8.3	19.5
2734.0	5.2	45.0	90	9.6	1.92	9.38	48791	702	1092	8.3	19.5
2735.0	7.5	45.0	90	9.6	1.80	9.51	49511	487	1083	8.3	19.5
2736.0	6.3	45.0	90	9.6	1.86	9.67	50368	580	1075	8.3	19.5
2737.0	4.5	45.0	90	9.6	1.97	9.89	51568	812	1072	8.3	19.5
2738.0	6.6	45.0	90	9.6	1.85	10.04	52391	556	1064	8.3	19.5
2739.0	8.9	45.0	90	9.6	1.75	10.15	52998	411	1055	8.3	19.5
2740.0	15.5	45.0	90	9.6	1.56	10.22	53348	236	1044	8.3	19.5
2741.0	15.1	45.0	90	9.6	1.57	10.29	53705	241	1033	8.3	19.5
2742.0	19.4	45.0	90	9.6	1.49	10.34	53984	189	1022	8.3	19.5
2743.0	19.4	45.0	90	9.6	1.49	10.39	54263	189	1011	8.3	19.5
2744.0	20.0	45.0	90	9.7	1.46	10.44	54533	182.60	999.81	8.3	19.5
2745.0	10.4	45.0	90	9.7	1.67	10.54	55052	351.00	991.45	8.3	19.5
2746.0	6.4	45.0	90	9.7	1.83	10.69	55901	574.18	986.14	8.3	19.5
2747.0	9.3	45.0	90	9.7	1.71	10.80	56481	392.59	978.68	8.3	19.5
2748.0	17.6	45.0	90	9.7	1.50	10.86	56787	206.95	969.11	8.3	19.5
2749.0	16.7	45.0	90	9.7	1.52	10.92	57111	219.12	959.92	8.3	19.5
2750.0	20.7	45.0	90	9.7	1.45	10.96	57372	176.51	950.43	8.3	19.5
2751.0	23.1	45.0	90	9.7	1.41	11.01	57606	158.25	940.96	8.3	19.5
2752.0	18.4	45.0	90	9.7	1.48	11.06	57900	198.83	932.18	8.3	19.5
2753.0	20.7	45.0	90	9.7	1.45	11.11	58161	176.51	923.36	8.3	19.5
2754.0	20.1	45.0	90	9.7	1.45	11.16	58430	181.59	914.79	8.3	19.5
2755.0	11.5	45.0	90	9.7	1.64	11.25	58898	316.51	907.96	8.3	19.5
2756.0	17.0	45.0	90	9.7	1.51	11.31	59216	215.06	900.14	8.3	19.5
2757.0	16.1	45.0	90	9.7	1.53	11.37	59552	227.24	892.63	8.3	19.5
2758.0	15.8	45.0	90	9.7	1.53	11.43	59894	231.29	885.33	8.3	19.5
2759.0	16.0	45.0	90	9.7	1.53	11.49	60231	228.25	878.16	8.3	19.5
2760.0	7.8	45.0	90	9.7	1.77	11.62	60921	466.64	873.71	8.3	19.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2761.0	10.1	45.0	90	9.7	1.68	11.72	61458	363.17	868.26	8.3	19.5
2762.0	12.3	45.0	90	9.7	1.62	11.80	61896	296.22	862.21	8.3	19.5
2763.0	9.5	45.0	90	9.7	1.70	11.91	62463	383.46	857.20	8.3	19.5
2764.0	6.6	45.0	90	9.7	1.82	12.06	63279	551.86	854.04	8.3	19.5
2765.0	8.3	45.0	90	9.7	1.75	12.18	63929	439.25	849.79	8.3	19.5
2766.0	9.0	45.0	90	9.7	1.72	12.29	64529	405.78	845.29	8.3	19.5
2767.0	18.1	45.0	90	9.7	1.49	12.35	64827	201.87	838.83	8.3	19.5
2768.0	11.6	45.0	90	9.7	1.64	12.43	65294	315.49	833.63	8.3	19.5
2769.0	11.7	45.0	90	9.7	1.63	12.52	65757	313.46	828.51	8.3	19.5
2770.0	6.8	45.0	90	9.7	1.81	12.66	66551	536.64	825.66	8.3	19.5
2771.0	18.6	45.0	90	9.7	1.48	12.72	66842	196.80	819.59	8.3	19.5
2772.0	12.9	45.0	90	9.7	1.60	12.80	67262	284.04	814.47	8.3	19.5
2773.0	15.2	45.0	90	9.7	1.55	12.86	67617	240.42	809.04	8.3	19.5
2774.0	14.0	45.0	90	9.7	1.58	12.93	68004	261.73	803.90	8.3	19.5
2775.0	11.6	45.0	90	9.7	1.64	13.02	68469	314.48	799.35	8.3	19.5
2776.0	9.8	45.0	90	9.7	1.69	13.12	69020	372.30	795.42	8.3	19.5
2777.0	11.6	45.0	90	9.7	1.64	13.21	69485	314.48	791.03	8.3	19.5
2778.0	10.9	45.0	90	9.7	1.66	13.30	69978	333.75	786.90	8.3	19.5
2779.0	8.9	45.0	90	9.7	1.73	13.41	70587	411.86	783.54	8.3	19.5
2780.0	6.1	45.0	90	9.7	1.85	13.57	71466	594.46	781.86	8.3	19.5
2781.0	5.9	45.0	90	9.7	1.86	13.74	72381	618.81	780.42	8.3	19.5
2782.0	14.7	45.0	90	9.7	1.56	13.81	72749	248.54	775.78	8.3	19.5
2783.0	30.8	45.0	90	9.7	1.31	13.84	72924	118.69	770.10	8.3	19.5
2784.0	11.6	45.0	90	9.7	1.64	13.93	73391	315.49	766.20	8.3	19.5
2785.0	14.3	45.0	90	9.7	1.57	14.00	73769	255.64	761.86	8.3	19.5
2786.0	8.8	45.0	90	9.7	1.73	14.11	74379	412.88	758.92	8.3	19.5
2787.0	10.6	45.0	90	9.7	1.67	14.21	74888	343.90	755.45	8.3	19.5
2788.0	8.8	45.0	90	9.7	1.73	14.32	75501	414.91	752.62	8.3	19.5
2789.0	9.1	45.0	90	9.7	1.72	14.43	76094	400.71	749.73	8.3	19.5
2790.0	6.1	45.0	90	9.8	1.82	14.60	76977	597.51	748.49	8.3	19.5
2791.0	5.4	45.0	90	9.8	1.86	14.78	77973	673.59	747.88	8.3	19.5
2792.0	5.3	45.0	90	9.8	1.87	14.97	78984	683.74	747.37	8.3	19.5
2793.0	9.0	45.0	90	9.8	1.70	15.08	79587	407.81	744.66	8.3	19.5
2794.0	9.4	45.0	90	9.8	1.68	15.19	80163	389.55	741.86	8.3	19.5
2795.0	11.3	45.0	90	9.7	1.65	15.27	80642	323.61	738.58	8.3	19.6
2796.0	14.2	45.0	90	9.6	1.59	15.34	81021	256.65	734.83	8.3	19.6
2797.0	14.9	45.0	90	9.6	1.57	15.41	81384	245.50	731.06	8.3	19.6
2798.0	12.3	45.0	90	9.6	1.63	15.49	81822	296.22	727.73	8.3	19.6
2799.0	14.0	45.0	90	9.6	1.59	15.56	82208	260.71	724.18	8.3	19.6
2800.0	15.0	45.0	90	9.6	1.57	15.63	82568	243.47	720.55	8.3	19.6
2801.0	14.2	45.0	90	9.6	1.59	15.70	82949	257.67	717.09	8.3	19.6
2802.0	11.3	45.0	90	9.5	1.68	15.79	83427	323.61	714.16	8.3	19.6
2803.0	5.8	45.0	90	9.5	1.89	15.96	84354	626.93	713.52	8.3	19.6
2804.0	4.6	45.0	90	9.6	1.96	16.18	85530	795.32	714.12	8.3	19.6
2805.0	5.6	45.0	90	9.6	1.89	16.36	86489	648.23	713.64	8.3	19.6
2806.0	5.4	45.0	90	9.6	1.91	16.54	87485	673.59	713.35	8.3	19.6
2807.0	6.9	45.0	90	9.6	1.83	16.69	88263	526.50	712.01	8.3	19.6
2808.0	7.0	45.0	90	9.6	1.82	16.83	89036	522.44	710.67	8.3	19.6
2809.0	5.9	45.0	90	9.6	1.88	17.00	89946	615.77	710.00	8.3	19.6
2810.0	6.9	45.0	90	9.6	1.83	17.14	90726	527.51	708.72	8.3	19.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2811.0	11.3	45.0	90	9.6	1.67	17.23	91205	323.61	706.03	8.3	19.6
2812.0	28.1	45.0	90	9.6	1.36	17.27	91397	129.85	702.05	8.3	19.6
2813.0	26.7	45.0	90	9.6	1.38	17.30	91599	136.95	698.17	8.3	19.6
2814.0	26.9	45.0	90	9.6	1.38	17.34	91800	135.94	694.33	8.3	19.6
2815.0	8.4	45.0	90	9.6	1.77	17.46	92447	437.23	692.59	8.3	19.6
2816.0	19.5	45.0	90	9.6	1.48	17.51	92724	187.67	689.19	8.3	19.6
2817.0	8.5	45.0	90	9.6	1.76	17.63	93360	430.12	687.46	8.3	19.6
2818.0	4.5	45.0	90	9.6	1.97	17.85	94572	819.67	688.34	8.3	19.6
2819.0	5.2	45.0	90	9.6	1.92	18.05	95615	705.04	688.45	8.3	19.6
2820.0	3.4	45.0	90	9.6	2.07	18.34	97220	1085	691	8.3	19.6
2821.0	5.2	45.0	90	9.6	1.92	18.54	98258	702.00	691.12	8.3	19.6
2822.0	10.1	45.0	90	9.6	1.70	18.63	98790	360.13	688.98	8.3	19.6
2823.0	21.3	45.0	90	9.5	1.47	18.68	99044	171.44	685.66	8.3	19.6
2824.0	15.3	45.0	90	9.5	1.57	18.75	99398	239.41	682.81	8.3	19.6
2825.0	16.5	45.0	90	9.6	1.54	18.81	99725	221.15	679.88	8.3	19.6
2826.0	6.8	45.0	90	9.6	1.84	18.95	100518	536.64	678.97	8.3	19.6
2827.0	16.0	45.0	90	9.6	1.54	19.02	100856	228.25	676.15	8.3	19.6
2828.0	11.2	45.0	90	9.6	1.66	19.11	101339	326.65	673.97	8.3	19.6
2829.0	4.7	45.0	90	9.6	1.95	19.32	102477	769.96	674.57	8.3	19.6
2830.0	4.3	45.0	90	9.6	1.98	19.55	103745	857.21	675.69	8.3	19.6
2831.0	4.3	45.0	90	9.6	1.98	19.79	105008	854.16	676.78	8.3	19.6
2832.0	4.7	45.0	90	9.6	1.96	20.00	106163	781.12	677.42	8.3	19.6
2833.0	6.7	45.0	90	9.5	1.85	20.15	106974	548.81	676.64	8.3	19.6
2834.0	6.2	45.0	90	9.5	1.88	20.31	107840	585.33	676.09	8.3	19.6
2835.0	22.0	45.0	90	9.5	1.45	20.36	108086	166.37	673.05	8.3	19.6
2836.0	31.0	45.0	90	9.5	1.34	20.39	108260	117.68	669.76	8.3	19.6
2837.0	8.7	45.0	90	9.5	1.77	20.50	108881	419.98	668.28	8.3	19.6
2838.0	4.7	45.0	89	9.5	1.97	20.72	110027	785.18	668.97	8.3	19.6
2839.0	6.0	45.0	85	9.5	1.87	20.89	110880	610.70	668.63	8.3	19.6
2840.0	7.2	45.0	85	9.5	1.81	21.02	111590	508.24	667.70	8.3	19.6
2841.0	10.1	45.0	85	9.5	1.70	21.12	112094	361.14	665.93	8.3	19.6
2842.0	13.2	45.0	85	9.5	1.60	21.20	112480	275.93	663.70	8.3	19.6
2843.0	9.6	45.0	85	9.5	1.71	21.30	113012	381.43	662.09	8.3	19.6
2844.0	15.0	45.0	85	9.5	1.56	21.37	113352	243.47	659.72	8.3	19.6
2845.0	10.0	45.0	85	9.5	1.70	21.47	113862	365.20	658.06	8.3	19.6
2846.0	9.1	45.0	85	9.5	1.73	21.58	114424	402.40	656.63	8.3	19.6
2847.0	9.4	44.8	85	9.5	1.72	21.69	114968	389.55	655.14	8.3	19.6
2848.0	15.9	44.7	85	9.5	1.54	21.75	115290	230.28	652.79	8.3	19.6
2849.0	10.1	44.5	85	9.5	1.70	21.85	115797	363.17	651.20	8.3	19.6
2850.0	13.6	43.5	85	9.4	1.59	21.92	116172	268.83	649.10	8.3	19.6
2851.0	7.5	44.1	85	9.5	1.79	22.06	116852	486.93	648.22	8.3	19.6
2852.0	5.7	44.3	85	9.5	1.89	22.23	117749	642.14	648.19	8.3	19.6
2853.0	5.2	44.4	85	9.5	1.92	22.42	118731	703.01	648.48	8.3	19.6
2854.0	9.5	44.0	85	9.5	1.71	22.53	119268	384.47	647.07	8.3	19.6
2855.0	6.5	45.3	85	9.5	1.86	22.68	120057	565.05	646.63	8.3	19.6
2856.0	6.3	45.5	85	9.5	1.87	22.84	120860	575.19	646.25	8.3	19.6
2857.0	10.4	45.0	85	9.5	1.69	22.94	121352	352.01	644.70	8.3	19.6
2858.0	10.9	45.0	85	9.5	1.68	23.03	121818	333.75	643.07	8.3	19.6
2859.0	6.3	45.4	85	9.5	1.87	23.19	122624	577.22	642.72	8.3	19.6
2860.0	6.3	45.6	85	9.5	1.87	23.35	123434	580.26	642.40	8.3	19.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2861.0	4.2	45.6	85	9.5	2.01	23.58	124647	868.36	643.57	8.3	19.6
2862.0	3.7	45.8	85	9.5	2.06	23.86	126027	988.07	645.34	8.3	19.6
2863.0	4.1	45.8	85	9.5	2.02	24.10	127264	885.61	646.57	8.3	19.6
2864.0	4.2	46.5	85	9.5	2.02	24.34	128482	872.42	647.71	8.3	19.6
2865.0	4.9	49.0	85	9.5	2.01	24.54	129529	749.67	648.23	8.3	19.6
2866.0	6.3	48.0	85	9.5	1.90	24.70	130339	580.26	647.89	8.3	19.6
2867.0	3.9	48.4	85	9.5	2.06	24.95	131634	927.20	649.29	8.3	19.6
2868.0	6.5	46.1	85	9.5	1.86	25.11	132416	559.97	648.84	8.3	19.6
2869.0	24.2	41.2	85	9.5	1.37	25.15	132627	151.15	646.37	8.3	19.6
2870.0	25.4	40.5	85	9.5	1.35	25.19	132828	144.05	643.89	8.3	19.6
2871.0	5.8	42.9	85	9.5	1.86	25.36	133715	635.04	643.85	8.3	19.6
2872.0	3.6	43.2	85	9.5	2.03	25.64	135137	1019	646	8.3	19.6
2873.0	3.5	42.9	85	9.5	2.03	25.93	136599	1047	648	8.3	19.6
2874.0	4.9	43.4	85	9.5	1.92	26.13	137631	738.52	648.07	8.3	19.6
2875.0	4.4	44.7	85	9.5	1.98	26.36	138780	822.71	648.91	8.3	19.6
2876.0	5.8	44.2	85	9.5	1.88	26.53	139659	629.97	648.82	8.3	19.6
2877.0	5.2	44.4	85	9.5	1.92	26.72	140635	698.95	649.06	8.3	19.6
2878.0	5.8	44.4	85	9.5	1.89	26.89	141519	633.01	648.99	8.3	19.6
2879.0	13.8	43.4	85	9.5	1.58	26.97	141889	264.77	647.17	8.3	19.6
2880.0	9.7	44.2	85	9.5	1.71	27.07	142415	376.36	645.90	8.3	19.6
2881.0	19.1	43.5	85	9.5	1.47	27.12	142681	190.72	643.77	8.3	19.6
2882.0	7.0	44.5	85	9.5	1.82	27.26	143409	521.42	643.20	8.3	19.6
2883.0	6.4	44.5	85	9.5	1.85	27.42	144204	569.10	642.85	8.3	19.7
2884.0	9.9	44.1	85	9.5	1.69	27.52	144720	369.26	641.59	8.3	19.7
2885.0	14.6	44.1	85	9.5	1.57	27.59	145068	249.55	639.79	8.3	19.7
2886.0	6.0	44.3	85	9.5	1.86	27.76	145921	610.70	639.65	8.3	19.7
2887.0	10.9	43.7	85	9.5	1.66	27.85	146389	334.77	638.27	8.3	19.7
2888.0	9.7	43.9	85	9.5	1.70	27.95	146914	376.36	637.08	8.3	19.7
2889.0	5.7	44.5	85	9.5	1.89	28.13	147809	641.13	637.10	8.3	19.7
2890.0	9.8	44.5	85	9.5	1.71	28.23	148332	374.33	635.92	8.3	19.7
2891.0	13.6	44.4	85	9.5	1.60	28.30	148706	267.81	634.27	8.3	19.7
2892.0	11.5	45.0	85	9.4	1.67	28.39	149148	316.51	632.86	8.3	19.7
2894.0	13.6	40.0	85	9.4	1.55	28.54	149896	267.81	629.63	8.3	19.7
2895.0	14.2	41.3	85	9.5	1.55	28.61	150256	257.67	628.00	8.3	19.7
2896.0	14.0	41.1	85	9.5	1.55	28.68	150622	261.73	626.40	8.3	19.7
2897.0	14.2	41.1	85	9.5	1.55	28.75	150980	256.65	624.79	8.3	19.7
2898.0	3.9	41.8	85	9.5	1.98	29.00	152289	937.35	626.14	8.3	19.7
2899.0	3.8	42.5	85	9.5	2.00	29.27	153639	966.77	627.61	8.3	19.7
2900.0	5.2	42.4	85	9.5	1.89	29.46	154612	696.92	627.91	8.3	19.7
2901.0	5.8	42.0	85	9.5	1.85	29.63	155492	629.97	627.92	8.3	19.7
2902.0	11.4	42.8	85	9.5	1.64	29.72	155940	320.56	626.61	8.3	19.7
2903.0	14.8	43.0	85	9.5	1.55	29.79	156284	246.51	625.00	8.3	19.7
2904.0	15.7	42.8	85	9.5	1.53	29.85	156610	233.32	623.34	8.3	19.7
2905.0	9.3	43.4	85	9.5	1.71	29.96	157161	394.62	622.38	8.3	19.7
2906.0	4.7	45.3	85	9.5	1.97	30.17	158243	775.04	623.02	8.3	19.7
2907.0	4.9	45.0	85	9.4	1.96	30.38	159284	745.31	623.53	8.3	19.7
2908.0	4.9	45.0	85	9.4	1.96	30.58	160325	745.31	624.03	8.3	19.7
2909.0	7.1	45.0	85	9.4	1.84	30.72	161043	514.37	623.58	8.3	19.7
2910.0	8.7	45.0	85	9.4	1.77	30.84	161629	419.77	622.74	8.3	19.7
2911.0	4.6	45.0	85	9.4	1.98	31.05	162738	793.91	623.44	8.3	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2912.0	3.1	45.0	85	9.4	2.12	31.38	164383	1178	626	8.3	19.7
2913.0	2.6	45.0	85	9.4	2.18	31.76	166345	1405	629	8.3	19.7

BIT NUMBER	7	IADC CODE	517	INTERVAL	2913.0- 3046.5
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.7	BIT RUN	133.5
TOTAL HOURS	16.88	TOTAL TURNS	86402	CONDITION	TR B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
2914.0	7.8	37.5	69	9.8	1.58	0.13	535	469	40758	8.3	19.7
2915.0	5.1	42.2	85	9.7	1.84	0.32	1528	711	20734	8.3	19.7
2916.0	9.0	42.1	85	9.7	1.67	0.43	2097	408	13959	8.3	19.7
2917.0	10.0	41.9	85	9.6	1.64	0.53	2606	364	10560	8.3	19.7
2918.0	15.0	41.5	85	9.6	1.52	0.60	2946	243	8497	8.3	19.7
2919.0	7.3	42.1	85	9.5	1.77	0.74	3649	503	7165	8.3	19.7
2920.0	6.5	45.0	85	9.5	1.85	0.89	4433	562	6221	8.3	19.7
2921.0	7.0	45.0	85	9.5	1.82	1.04	5162	522	5509	8.3	19.7
2922.0	11.3	45.0	85	9.5	1.66	1.12	5613	323	4933	8.3	19.7
2923.0	8.5	45.0	85	9.5	1.76	1.24	6213	430	4482	8.3	19.7
2924.0	6.8	45.0	85	9.5	1.83	1.39	6963	537	4124	8.3	19.7
2925.0	9.2	45.0	85	9.5	1.73	1.50	7517	397	3813	8.3	19.7
2926.0	7.5	45.0	85	9.5	1.80	1.63	8197	487	3557	8.3	19.7
2927.0	7.0	45.0	85	9.5	1.82	1.77	8926	522	3340	8.3	19.7
2928.0	6.2	45.0	85	9.5	1.86	1.94	9749	589	3157	8.3	19.7
2929.0	9.6	45.0	85	9.5	1.72	2.04	10280	380	2983	8.3	19.7
2930.0	7.8	45.0	85	9.5	1.79	2.17	10934	468	2836	8.3	19.7
2931.0	8.0	45.0	85	9.5	1.78	2.29	11571	457	2703	8.3	19.7
2932.0	11.9	45.0	85	9.5	1.64	2.38	12001	308	2577	8.3	19.7
2933.0	6.7	42.1	85	9.5	1.80	2.53	12767	549	2476	8.3	19.7
2934.0	6.4	42.2	85	9.5	1.81	2.68	13566	572	2385	8.3	19.7
2935.0	5.4	42.4	85	9.5	1.87	2.87	14516	680	2308	8.3	19.7
2936.0	5.0	42.5	85	9.5	1.89	3.07	15531	727	2239	8.3	19.7
2937.0	4.2	42.6	85	9.5	1.96	3.31	16754	875	2182	8.3	19.7
2938.0	3.6	42.9	85	9.5	2.01	3.59	18188	1027	2136	8.3	19.7
2939.0	7.0	44.7	85	9.5	1.81	3.73	18920	524	2074	8.3	19.7
2940.0	37.9	43.1	85	9.5	1.23	3.76	19055	96	2001	8.3	19.7
2941.0	15.3	41.6	85	9.5	1.52	3.83	19387	238	1938	8.3	19.7
2942.0	8.4	40.2	85	9.5	1.70	3.94	19995	435	1886	8.3	19.7
2943.0	28.1	38.7	85	9.5	1.29	3.98	20177	130	1827	8.3	19.7
2944.0	18.4	39.3	85	9.5	1.43	4.03	20454	199	1775	8.3	19.7
2945.0	8.2	41.3	85	9.5	1.72	4.16	21073	443	1733	8.3	19.7
2946.0	5.8	40.4	85	9.5	1.82	4.33	21950	628	1700	8.3	19.7
2947.0	7.3	40.1	85	9.5	1.74	4.47	22651	502	1665	8.3	19.7
2948.0	10.1	39.8	85	9.5	1.63	4.56	23154	360	1627	8.3	19.7
2949.0	9.7	40.1	85	9.5	1.65	4.67	23681	377	1593	8.3	19.7
2950.0	7.9	42.1	85	9.5	1.74	4.79	24325	461	1562	8.3	19.7
2951.0	13.8	33.7	85	9.5	1.46	4.87	24694	265	1528	8.3	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2952.0	11.9	31.3	85	9.5	1.47	4.95	25124	307	1497	8.3	19.7
2953.0	12.7	32.9	85	9.5	1.48	5.03	25526	288	1466	8.3	19.7
2954.0	8.6	35.6	85	9.5	1.63	5.14	26117	423	1441	8.3	19.7
2955.0	9.4	35.7	85	9.5	1.60	5.25	26656	387	1416	8.3	19.7
2956.0	9.5	35.6	85	9.5	1.60	5.36	27190	382	1392	8.3	19.7
2957.0	8.8	35.7	85	9.5	1.63	5.47	27771	416	1370	8.3	19.7
2958.0	9.2	35.7	85	9.5	1.61	5.58	28328	399	1348	8.3	19.7
2959.0	9.9	35.7	85	9.5	1.59	5.68	28842	368	1327	8.3	19.7
2960.0	9.0	40.0	85	9.5	1.67	5.79	29406	404	1307	8.3	19.7
2961.0	11.2	41.6	85	9.5	1.63	5.88	29861	326	1287	8.3	19.7
2962.0	7.0	42.4	85	9.5	1.79	6.02	30589	521	1271	8.3	19.7
2963.0	5.7	41.8	85	9.5	1.85	6.20	31490	645	1258	8.3	19.7
2964.0	9.6	40.1	85	9.5	1.66	6.30	32021	380	1241	8.3	19.7
2965.0	11.5	45.0	85	9.5	1.65	6.39	32465	318	1223	8.3	19.7
2966.0	13.6	45.0	85	9.5	1.60	6.46	32840	269	1205	8.3	19.7
2967.0	12.6	45.0	85	9.5	1.62	6.54	33245	290	1189	8.3	19.7
2968.0	7.9	45.0	85	9.5	1.78	6.67	33890	462	1175	8.3	19.7
2969.0	9.6	45.0	85	9.5	1.72	6.77	34421	380	1161	8.3	19.7
2970.0	8.1	45.0	85	9.5	1.77	6.90	35051	451	1149	8.3	19.7
2971.0	7.7	45.0	85	9.5	1.79	7.03	35713	474	1137	8.3	19.7
2972.0	12.3	45.0	85	9.5	1.63	7.11	36128	297	1123	8.3	19.8
2973.0	6.0	43.0	85	9.4	1.87	7.27	36978	609	1114	8.3	19.8
2974.0	4.7	42.8	85	9.4	1.94	7.49	38055	771	1109	8.3	19.8
2975.0	5.3	42.9	85	9.5	1.89	7.67	39017	689	1102	8.3	19.8
2976.0	5.3	42.9	85	9.5	1.89	7.86	39971	684	1095	8.3	19.8
2977.0	5.7	42.9	85	9.5	1.87	8.04	40871	644	1088	8.3	19.8
2978.0	11.4	42.5	85	9.5	1.62	8.13	41317	320	1076	8.3	19.8
2979.0	12.9	42.5	85	9.5	1.58	8.20	41714	284	1064	8.3	19.8
2980.0	7.9	42.9	85	9.5	1.75	8.33	42360	463	1055	8.3	19.8
2981.0	8.4	43.2	85	9.6	1.73	8.45	42968	435	1046	8.3	19.8
2982.0	8.2	43.2	85	9.6	1.73	8.57	43591	446	1038	8.3	19.8
2983.0	14.7	42.6	85	9.6	1.53	8.64	43938	249	1026	8.3	19.8
2984.0	17.1	42.4	85	9.6	1.48	8.70	44236	213	1015	8.3	19.8
2985.0	15.5	42.6	85	9.6	1.51	8.76	44564	235	1004	8.3	19.8
2986.0	10.6	43.3	85	9.6	1.65	8.86	45046	344.91	994.95	8.3	19.8
2987.0	13.5	43.0	85	9.6	1.57	8.93	45424	270.86	985.16	8.3	19.8
2988.0	12.2	43.4	85	9.5	1.61	9.01	45843	300.28	976.03	8.3	19.8
2989.0	10.3	42.3	85	9.6	1.65	9.11	46336	353.03	967.83	8.3	19.8
2990.0	8.3	41.6	85	9.5	1.71	9.23	46950	439.25	960.97	8.3	19.8
2991.0	12.1	41.2	85	9.5	1.58	9.31	47371	301.29	952.51	8.3	19.8
2992.0	12.9	41.1	85	9.6	1.56	9.39	47766	283.03	944.03	8.3	19.8
2993.0	12.9	41.1	85	9.5	1.56	9.47	48161	283.03	935.77	8.3	19.8
2994.0	9.4	41.7	85	9.5	1.69	9.57	48707	390.56	929.04	8.3	19.8
2995.0	9.0	41.8	85	9.4	1.71	9.68	49272	404.76	922.65	8.3	19.8
2996.0	7.0	41.8	85	9.4	1.80	9.83	50004	524.47	917.85	8.3	19.8
2997.0	6.9	42.4	85	9.4	1.81	9.97	50748	532.58	913.26	8.3	19.8
2998.0	24.2	45.0	85	9.5	1.40	10.02	50959	150.91	904.29	8.3	19.8
2999.0	10.7	43.2	85	9.4	1.67	10.11	51433	339.84	897.73	8.3	19.8
3000.0	6.9	42.4	85	9.5	1.80	10.25	52170	527.51	893.48	8.3	19.8
3001.0	7.0	45.0	85	9.5	1.82	10.40	52898	521.42	889.25	8.3	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3002.0	5.8	50.5	85	9.5	1.96	10.57	53781	632.34	886.36	8.3	19.8
3003.0	9.7	45.7	85	9.5	1.71	10.67	54305	375.34	880.68	8.3	19.8
3004.0	6.2	45.0	85	9.5	1.86	10.83	55128	589.03	877.48	8.3	19.8
3005.0	6.6	45.0	85	9.5	1.84	10.98	55901	553.33	873.96	8.3	19.8
3006.0	7.2	45.0	85	9.5	1.81	11.12	56609	507.22	870.01	8.3	19.8
3007.0	9.8	45.0	85	9.5	1.71	11.23	57129	372.65	864.72	8.3	19.8
3008.0	15.0	45.0	85	9.5	1.56	11.29	57469	243.47	858.18	8.3	19.8
3009.0	10.3	45.0	85	9.5	1.69	11.39	57965	354.56	852.94	8.3	19.8
3010.0	9.7	45.0	85	9.5	1.71	11.49	58490	376.49	848.02	8.3	19.8
3011.0	8.4	45.0	85	9.5	1.76	11.61	59097	434.76	843.81	8.3	19.8
3012.0	13.6	45.0	85	9.5	1.60	11.68	59472	268.53	838.00	8.3	19.8
3013.0	18.3	45.0	85	9.5	1.50	11.74	59751	199.56	831.61	8.3	19.8
3014.0	14.9	45.0	85	9.5	1.57	11.81	60093	245.10	825.80	8.3	19.8
3015.0	14.5	45.0	85	9.5	1.58	11.88	60445	251.86	820.18	8.3	19.8
3016.0	8.5	45.0	85	9.5	1.76	11.99	61045	429.65	816.39	8.4	19.8
3017.0	11.1	45.0	85	9.5	1.67	12.08	61505	329.01	811.70	8.4	19.8
3018.0	21.1	45.0	85	9.5	1.45	12.13	61746	173.08	805.62	8.4	19.8
3019.0	4.9	45.0	85	9.5	1.94	12.33	62787	745.31	805.05	8.4	19.8
3020.0	5.6	45.0	85	9.5	1.90	12.51	63698	652.14	803.62	8.4	19.8
3021.0	15.0	45.0	85	9.5	1.56	12.58	64038	243.47	798.43	8.4	19.8
3022.0	7.0	45.0	85	9.5	1.82	12.72	64766	521.71	795.89	8.4	19.8
3023.0	6.5	37.5	85	9.2	1.81	12.88	65551	562.00	793.77	8.4	19.8
3024.0	5.3	41.2	85	9.2	1.93	13.06	66510	686.44	792.80	8.4	19.8
3025.0	6.6	43.2	85	9.2	1.89	13.22	67288	556.93	790.69	8.4	19.8
3026.0	5.5	43.8	85	9.2	1.96	13.40	68216	664.46	789.58	8.4	19.8
3027.0	17.6	44.5	85	9.2	1.55	13.46	68505	206.95	784.47	8.4	19.8
3028.0	5.6	41.9	85	9.2	1.91	13.63	69414	651.27	783.31	8.4	19.8
3029.0	9.1	41.9	85	9.3	1.73	13.74	69972	399.69	780.00	8.4	19.8
3030.0	7.9	42.0	85	9.3	1.78	13.87	70620	463.60	777.30	8.4	19.8
3031.0	13.0	41.7	85	9.3	1.61	13.95	71011	279.99	773.08	8.4	19.8
3032.0	15.9	41.5	85	9.3	1.54	14.01	71332	230.28	768.52	8.4	19.8
3033.0	10.6	42.0	85	9.3	1.68	14.11	71815	345.93	765.00	8.4	19.8
3034.0	8.8	43.1	85	9.3	1.76	14.22	72395	414.91	762.11	8.4	19.8
3035.0	10.0	43.3	85	9.3	1.72	14.32	72903	364.19	758.84	8.4	19.8
3036.0	8.0	43.2	85	9.3	1.79	14.44	73542	457.51	756.40	8.4	19.8
3037.0	3.4	45.0	85	9.4	2.09	14.74	75042	1074	759	8.4	19.8
3038.0	3.7	37.2	85	9.4	1.94	15.01	76421	987.05	760.78	8.4	19.8
3039.0	7.7	40.8	85	9.4	1.75	15.14	77082	473.75	758.50	8.4	19.8
3040.0	5.9	42.2	85	9.4	1.86	15.31	77948	619.83	757.41	8.4	19.8
3041.0	8.3	41.3	87	9.4	1.75	15.43	78584	442.30	754.95	8.4	19.8
3042.0	5.0	42.6	90	9.4	1.95	15.63	79656	725.33	754.72	8.4	19.8
3043.0	10.3	42.2	90	9.4	1.70	15.72	80180	354.04	751.64	8.4	19.8
3044.0	7.1	41.4	90	9.4	1.81	15.86	80936	511.28	749.80	8.4	19.8
3045.0	2.7	42.7	90	9.3	2.17	16.24	82967	1374	755	8.4	19.8
3046.0	2.0	42.9	90	9.2	2.29	16.74	85656	1819	763	8.5	19.8
3046.5	3.6	41.3	90	9.2	2.07	16.88	86402	1008	763	8.5	19.8

BIT NUMBER	8	IADC CODE	517	INTERVAL	3046.0- 3165.2
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.7	BIT RUN	119.2
TOTAL HOURS	20.85	TOTAL TURNS	87015	CONDITION	T3 B3 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3047.0	9.6	49.0	79	9.4	1.76	0.10	494	380	40669	8.5	19.8
3048.0	7.1	48.5	71	9.4	1.82	0.24	1089	513	20591	8.5	19.8
3049.0	7.1	48.7	70	9.3	1.83	0.39	1679	513	13898	8.5	19.8
3050.0	10.9	48.3	70	9.3	1.67	0.48	2063	334	10507	8.5	19.8
3051.0	5.2	48.7	70	9.3	1.95	0.67	2876	707	8547	8.5	19.8
3052.0	5.6	46.8	70	9.3	1.90	0.85	3624	650	7231	8.5	19.8
3053.0	12.5	45.4	70	9.3	1.60	0.93	3960	292	6240	8.5	19.8
3054.0	12.9	47.1	70	9.2	1.62	1.01	4287	284	5495	8.5	19.8
3055.0	6.1	46.4	70	9.2	1.89	1.17	4978	601	4951	8.5	19.8
3056.0	35.6	45.9	70	9.1	1.26	1.20	5095	102	4467	8.6	19.8
3057.0	11.9	50.1	70	9.3	1.67	1.28	5449	307	4088	8.6	19.8
3058.0	5.5	50.6	70	9.3	1.96	1.47	6218	669	3803	8.6	19.8
3059.0	11.7	50.2	70	9.3	1.68	1.55	6576	311	3535	8.6	19.8
3060.0	13.4	50.2	70	9.2	1.64	1.63	6889	272	3302	8.6	19.8
3061.0	7.0	49.0	70	9.2	1.86	1.77	7489	522	3116	8.6	19.8
3062.0	10.4	45.9	70	9.2	1.68	1.86	7893	351	2944	8.6	19.8
3063.0	11.5	50.5	70	9.2	1.70	1.95	8259	319	2789	8.6	19.8
3064.0	16.0	50.0	70	9.2	1.57	2.01	8522	228	2647	8.6	19.8
3065.0	14.3	50.5	70	9.2	1.62	2.08	8815	255	2521	8.6	19.8
3066.0	14.5	51.4	70	9.3	1.62	2.15	9104	252	2408	8.6	19.8
3067.0	14.8	51.1	70	9.3	1.61	2.22	9388	247	2305	8.6	19.8
3068.0	6.9	52.2	70	9.3	1.89	2.37	9998	531	2224	8.6	19.8
3069.0	7.3	53.6	70	9.3	1.88	2.50	10571	498	2149	8.6	19.8
3070.0	7.5	53.5	70	9.3	1.87	2.64	11133	489	2080	8.5	19.8
3071.0	5.0	54.0	70	9.4	2.01	2.84	11978	734	2026	8.5	19.8
3072.0	5.2	54.2	70	9.4	2.00	3.03	12778	696	1975	8.5	19.8
3073.0	5.1	54.0	70	9.4	2.01	3.22	13603	717	1928	8.5	19.8
3074.0	6.1	52.6	70	9.4	1.92	3.39	14288	595	1881	8.5	19.8
3075.0	9.1	51.4	70	9.3	1.77	3.50	14751	403	1830	8.5	19.8
3076.0	6.8	51.2	70	9.3	1.87	3.64	15368	537	1787	8.5	19.8
3077.0	16.1	50.9	70	9.3	1.56	3.71	15629	227	1736	8.5	19.8
3078.0	12.8	51.0	70	9.3	1.65	3.79	15958	286	1691	8.5	19.8
3079.0	18.7	50.2	70	9.4	1.50	3.84	16183	196	1646	8.5	19.8
3080.0	11.4	50.8	70	9.4	1.67	3.93	16551	320	1607	8.5	19.8
3081.0	6.4	51.5	70	9.4	1.88	4.08	17204	568	1577	8.5	19.8
3082.0	6.9	50.6	70	9.4	1.85	4.23	17810	526	1548	8.5	19.8
3083.0	5.3	49.6	70	9.4	1.94	4.42	18605	692	1525	8.5	19.8
3084.0	5.1	50.0	70	9.3	1.96	4.61	19427	714	1503	8.5	19.8
3085.0	5.6	50.0	70	9.3	1.93	4.79	20179	654	1482	8.5	19.8
3086.0	5.4	50.1	70	9.3	1.95	4.98	20962	681	1462	8.5	19.8
3087.0	5.6	50.4	70	9.3	1.94	5.15	21708	648	1442	8.5	19.8
3088.0	6.3	52.4	70	9.3	1.93	5.31	22369	575	1421	8.5	19.8
3089.0	6.2	52.5	70	9.3	1.94	5.47	23049	591	1402	8.5	19.8

DEPTH	ROP	WOR	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3090.0	18.0	51.7	70	9.3	1.54	5.53	23283	203	1375	8.5	19.8
3091.0	21.8	51.8	70	9.3	1.47	5.57	23475	167	1348	8.6	19.8
3092.0	12.9	50.9	70	9.3	1.65	5.65	23799	282	1325	8.6	19.8
3093.0	14.8	50.8	70	9.3	1.60	5.72	24083	247	1302	8.6	19.8
3094.0	9.4	51.2	70	9.3	1.77	5.83	24532	391	1283	8.6	19.8
3095.0	5.1	49.2	70	9.3	1.96	6.02	25359	719	1271	8.6	19.8
3096.0	5.8	49.1	70	9.3	1.91	6.20	26083	629	1258	8.6	19.8
3097.0	4.0	49.2	70	9.3	2.05	6.44	27123	905	1251	8.6	19.8
3098.0	5.6	49.2	70	9.3	1.94	6.62	27879	657	1240	8.6	19.8
3099.0	7.5	48.9	70	9.3	1.83	6.76	28438	486	1226	8.6	19.8
3100.0	7.3	49.0	70	9.2	1.84	6.89	29013	500	1212	8.6	19.8
3101.0	4.4	49.0	70	9.2	2.02	7.12	29976	837	1205	8.6	19.8
3102.0	7.3	48.5	70	9.2	1.84	7.26	30552	501	1193	8.6	19.8
3103.0	9.4	48.2	70	9.3	1.74	7.37	30999	389	1179	8.6	19.8
3104.0	7.4	48.8	70	9.3	1.83	7.50	31565	492	1167	8.6	19.8
3105.0	7.7	48.4	70	9.3	1.81	7.63	32112	476	1155	8.6	19.8
3106.0	9.1	48.4	70	9.3	1.75	7.74	32575	403	1143	8.6	19.8
3107.0	5.5	48.6	70	9.3	1.93	7.92	33338	663	1135	8.6	19.8
3108.0	6.7	48.8	70	9.3	1.87	8.07	33965	545	1125	8.5	19.9
3109.0	7.3	48.8	70	9.3	1.83	8.21	34536	497	1115	8.5	19.9
3110.0	6.4	48.8	70	9.2	1.89	8.36	35192	570	1107	8.5	19.9
3111.0	4.6	48.6	70	9.2	2.00	8.58	36104	793	1102	8.5	19.9
3112.0	6.4	48.9	70	9.2	1.89	8.74	36761	571	1094	8.5	19.9
3113.0	4.8	52.9	70	9.2	2.04	8.95	37633	758	1089	8.5	19.9
3114.0	3.0	50.8	70	9.3	2.18	9.28	39019	1205	1091	8.5	19.9
3115.0	11.5	50.3	70	9.3	1.69	9.36	39383	317	1079	8.5	19.9
3116.0	8.4	50.4	70	9.3	1.81	9.48	39885	437	1070	8.5	19.9
3117.0	5.4	50.3	70	9.3	1.96	9.67	40668	681	1065	8.5	19.9
3118.0	5.5	50.3	70	9.3	1.95	9.85	41425	658	1059	8.5	19.9
3119.0	9.7	50.0	70	9.3	1.75	9.95	41859	377	1050	8.5	19.9
3120.0	3.4	50.6	70	9.3	2.13	10.24	43087	1067	1050	8.5	19.9
3121.0	11.5	49.9	70	9.2	1.69	10.33	43452	318	1040	8.5	19.9
3122.0	15.3	49.9	70	9.2	1.59	10.40	43727	239	1030	8.5	19.9
3123.0	6.0	50.6	70	9.2	1.93	10.56	44423	605	1024	8.5	19.9
3124.0	3.8	51.8	70	9.2	2.12	10.83	45540	972	1024	8.5	19.9
3125.0	6.6	51.5	70	9.2	1.91	10.98	46173	550	1018	8.5	19.9
3126.0	10.6	51.0	70	9.2	1.73	11.07	46568	344	1009	8.5	19.9
3127.0	9.7	51.2	70	9.2	1.77	11.18	47001	376	1001	8.5	19.9
3128.0	5.6	51.6	70	9.2	1.97	11.35	47746	648.23	996.97	8.5	19.9
3129.0	7.8	50.9	70	9.2	1.84	11.48	48287	469.69	990.62	8.5	19.9
3130.0	3.7	51.8	70	9.2	2.12	11.75	49417	983.00	990.53	8.5	19.9
3131.0	3.0	52.0	70	9.3	2.20	12.09	50826	1225	993	8.5	19.9
3132.0	3.2	51.9	70	9.3	2.17	12.40	52138	1140	995	8.5	19.9
3133.0	4.6	42.5	70	9.3	1.91	12.61	53043	787.21	992.61	8.5	19.9
3134.0	4.7	43.5	70	9.3	1.92	12.83	53943	782.14	990.22	8.5	19.9
3135.0	2.7	50.3	70	9.3	2.20	13.19	55473	1331	994	8.5	19.9
3136.0	3.1	50.0	70	9.3	2.15	13.52	56828	1178	996	8.5	19.9
3137.0	4.5	49.1	70	9.3	2.00	13.74	57752	803.44	993.97	8.5	19.9
3138.0	5.8	49.1	70	9.3	1.92	13.91	58475	628.96	990.01	8.5	19.9
3139.0	7.6	49.1	70	9.3	1.82	14.04	59027	479.83	984.52	8.5	19.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3140.0	5.7	49.1	70	9.3	1.93	14.22	59767	643.16	980.89	8.5	19.9
3141.0	3.7	49.4	70	9.3	2.09	14.49	60904	989.08	980.98	8.5	19.9
3142.0	8.4	49.5	70	9.3	1.79	14.61	61402	433.17	975.27	8.5	19.9
3143.0	8.3	49.2	70	9.3	1.79	14.73	61910	441.28	969.76	8.5	19.9
3144.0	9.9	49.3	70	9.3	1.73	14.83	62332	367.23	963.62	8.5	19.9
3145.0	10.6	49.3	70	9.3	1.71	14.92	62730	345.93	957.38	8.5	19.9
3146.0	10.1	49.3	70	9.3	1.73	15.02	63148	363.17	951.43	8.5	19.9
3147.0	11.5	49.2	70	9.2	1.68	15.11	63512	316.51	945.15	8.5	19.9
3148.0	3.9	49.7	70	9.3	2.07	15.36	64583	931.26	945.01	8.5	19.9
3149.0	2.9	49.7	70	9.2	2.18	15.71	66056	1281	948	8.5	19.9
3150.0	6.7	49.3	70	9.2	1.87	15.86	66684	545.77	944.41	8.5	19.9
3151.0	6.0	49.6	70	9.3	1.92	16.03	67383	607.65	941.20	8.5	19.9
3152.0	4.1	49.8	70	9.3	2.05	16.27	68410	893.73	940.75	8.5	19.9
3153.0	2.6	49.7	70	9.2	2.21	16.65	70002	1384	945	8.5	19.9
3154.0	2.6	53.3	70	9.3	2.27	17.04	71621	1408	949	8.5	19.9
3155.0	3.6	50.4	70	9.3	2.11	17.31	72783	1010	950	8.5	19.9
3156.0	2.1	50.5	70	9.3	2.30	17.79	74771	1729	957	8.5	19.9
3157.0	2.5	50.2	70	9.3	2.23	18.19	76448	1458	961	8.5	19.9
3158.0	3.5	50.2	70	9.3	2.12	18.48	77657	1052	962	8.5	19.9
3159.0	2.7	48.6	70	9.3	2.19	18.84	79202	1343	966	8.5	19.9
3160.0	4.5	48.3	70	9.2	2.00	19.06	80131	807.50	964.13	8.5	19.9
3161.0	2.2	52.7	70	9.3	2.32	19.52	82058	1676	970	8.5	19.9
3162.0	3.6	51.3	70	9.3	2.12	19.80	83211	1002	971	8.5	19.9
3163.0	3.7	56.1	60	9.3	2.12	20.07	84186	988.07	970.74	8.5	19.9
3164.0	3.1	55.5	60	9.2	2.19	20.40	85365	1196	973	8.5	19.9
3165.0	2.6	55.4	60	9.2	2.25	20.78	86751	1406	976	8.5	19.9
3165.2	2.7	55.4	60	9.2	2.23	20.85	87015	1339	977	8.5	19.9

BIT NUMBER	9	IADC CODE	537	INTERVAL	3165.2- 3267.1
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	8.8	BIT RUN	101.9
TOTAL HOURS	31.09	TOTAL TURNS	98544	CONDITION	T2 B3 G0.063

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3166.0	2.0	45.0	60	9.4	2.15	0.40	1440	1826	51716	8.5	19.9
3167.0	2.3	45.0	60	9.4	2.10	0.83	3005	1588	23867	8.5	19.9
3168.0	3.1	45.0	60	9.4	2.00	1.16	4167	1178	15764	8.5	19.9
3169.0	3.1	45.0	60	9.4	2.00	1.48	5328	1178	11925	8.5	19.9
3170.0	3.2	45.0	60	9.4	1.99	1.79	6453	1141	9679	8.5	19.9
3171.0	4.6	50.0	60	9.4	1.93	2.01	7238	796	8147	8.5	19.9
3172.0	6.4	50.1	60	9.4	1.81	2.17	7804	575	7034	8.5	19.9
3173.0	3.7	50.3	60	9.4	2.01	2.44	8784	994	6259	8.5	19.9
3174.0	2.7	50.9	60	9.4	2.12	2.81	10104	1339	5700	8.5	19.9
3175.0	1.8	52.2	60	9.4	2.30	3.37	12145	2070	5330	8.6	19.9
3176.0	2.5	52.2	60	9.4	2.18	3.78	13599	1475	4973	8.6	19.9
3177.0	3.1	52.5	60	9.4	2.11	4.10	14771	1189	4652	8.6	19.9
3178.0	2.0	51.5	60	9.4	2.24	4.60	16550	1805	4430	8.6	19.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3179.0	2.8	50.6	60	9.4	2.10	4.95	17821	1289	4202	8.6	19.9
3180.0	2.6	49.7	60	9.4	2.11	5.33	19183	1382	4012	8.6	19.9
3181.0	2.1	50.0	69	9.4	2.25	5.80	21130	1725	3867	8.6	19.9
3182.0	2.6	50.2	70	9.3	2.20	6.18	22726	1388	3719	8.6	19.9
3183.0	7.2	50.0	70	9.2	1.87	6.32	23310	508	3539	8.6	19.9
3184.0	6.2	50.1	70	9.2	1.93	6.48	23993	593	3382	8.6	19.9
3185.0	11.7	49.9	70	9.2	1.69	6.57	24352	312	3227	8.6	19.9
3186.0	8.5	49.7	70	9.2	1.81	6.69	24846	429	3093	8.6	19.9
3187.0	11.4	49.6	70	9.2	1.69	6.77	25213	320	2965	8.6	19.9
3188.0	12.3	49.6	70	9.2	1.66	6.85	25554	297	2848	8.6	19.9
3189.0	14.2	49.3	50	9.2	1.49	6.93	25765	258	2740	8.6	19.9
3190.0	14.3	49.4	50	9.2	1.50	7.00	25975	256	2639	8.6	19.9
3191.0	2.8	50.8	50	9.2	2.09	7.35	27047	1305	2588	8.6	19.9
3192.0	1.7	51.0	50	9.3	2.28	7.96	28864	2211	2574	8.6	19.9
3193.0	2.5	50.5	50	9.2	2.12	8.36	30061	1458	2534	8.6	19.9
3194.0	2.1	50.8	50	9.2	2.20	8.83	31475	1722	2505	8.6	19.9
3195.0	2.3	50.5	50	9.2	2.17	9.27	32794	1606	2475	8.6	19.9
3196.0	2.2	51.0	50	9.4	2.14	9.72	34148	1647	2448	8.6	19.9
3197.0	1.9	51.2	54	9.4	2.23	10.24	35845	1898	2431	8.6	19.9
3198.0	4.1	50.8	55	9.4	1.95	10.48	36651	892	2384	8.6	19.9
3199.0	7.9	50.5	55	9.4	1.71	10.61	37066	460	2327	8.6	19.9
3200.0	6.8	50.8	55	9.4	1.77	10.76	37554	540	2276	8.6	19.9
3208.0	3.7	49.5	50	9.4	1.95	12.95	44127	1000	2037	8.6	20.0
3209.0	6.7	48.5	50	9.4	1.72	13.10	44575	545	2003	8.6	20.0
3210.0	10.7	46.3	50	9.4	1.53	13.19	44855	341	1966	8.6	20.0
3211.0	6.0	49.1	50	9.3	1.78	13.36	45359	614	1937	8.6	20.0
3212.0	5.7	49.0	50	9.3	1.79	13.53	45888	644	1909	8.6	20.0
3213.0	6.1	49.0	50	9.3	1.77	13.70	46380	599	1882	8.6	20.0
3214.0	3.9	49.9	50	9.3	1.94	13.96	47152	940	1862	8.6	20.0
3215.0	1.9	50.2	50	9.3	2.19	14.48	48723	1912	1863	8.6	20.0
3216.0	1.8	49.8	50	9.3	2.21	15.04	50413	2057	1867	8.6	20.0
3217.0	8.9	49.3	50	9.3	1.64	15.16	50750	411	1839	8.6	20.0
3218.0	7.2	49.5	50	9.3	1.72	15.30	51170	510	1814	8.6	20.0
3219.0	6.5	49.7	50	9.3	1.76	15.45	51628	558	1790	8.6	20.0
3220.0	6.1	49.8	50	9.3	1.79	15.61	52120	600	1769	8.6	20.0
3221.0	3.2	50.0	50	9.3	2.02	15.93	53065	1150	1758	8.6	20.0
3222.0	5.0	49.9	50	9.3	1.86	16.13	53670	736	1740	8.6	20.0
3223.0	4.7	49.9	50	9.3	1.88	16.34	54310	779	1723	8.6	20.0
3224.0	14.9	49.1	50	9.3	1.46	16.41	54512	245	1698	8.6	20.0
3225.0	4.1	50.1	50	9.3	1.93	16.66	55250	899	1685	8.6	20.0
3226.0	2.7	50.3	50	9.4	2.06	17.02	56355	1345	1679	8.6	20.0
3227.0	2.8	50.6	50	9.4	2.05	17.38	57422	1298	1673	8.6	20.0
3228.0	2.5	51.1	50	9.2	2.14	17.78	58621	1460	1669	8.6	20.0
3229.0	3.2	50.7	50	9.2	2.05	18.09	59546	1126	1661	8.6	20.0
3230.0	3.1	50.5	50	9.2	2.06	18.41	60502	1164	1653	8.6	20.0
3231.0	2.2	50.6	50	9.3	2.15	18.85	61837	1625	1653	8.6	20.0
3232.0	1.7	50.8	50	9.3	2.26	19.44	63600	2146	1660	8.6	20.0
3233.0	1.8	51.0	50	9.4	2.21	20.00	65277	2042	1666	8.6	20.0
3234.0	3.4	51.0	50	9.4	1.98	20.29	66153	1066	1657	8.6	20.0
3235.0	2.7	51.0	50	9.4	2.06	20.66	67259	1346	1653	8.6	20.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3236.0	2.4	51.6	50	9.5	2.10	21.08	68527	1544	1651	8.6	20.0
3237.0	9.5	49.4	50	9.5	1.58	21.19	68844	385	1634	8.6	20.0
3238.0	3.0	51.6	50	9.5	2.00	21.52	69833	1204	1628	8.6	20.0
3239.0	2.9	51.8	50	9.5	2.02	21.86	70854	1243	1622	8.6	20.0
3240.0	3.2	52.8	50	9.4	2.02	22.17	71791	1141	1616	8.6	20.0
3241.0	3.3	52.0	50	9.4	2.01	22.47	72694	1099	1609	8.6	20.0
3242.0	2.4	52.6	50	9.3	2.15	22.89	73952	1532	1608	8.6	20.0
3243.0	2.7	50.8	50	9.3	2.08	23.26	75056	1344	1605	8.6	20.0
3244.0	2.2	50.4	50	9.2	2.17	23.72	76430	1673	1606	8.6	20.0
3245.0	3.0	52.0	50	9.2	2.09	24.05	77429	1215	1601	8.6	20.0
3246.0	2.8	52.8	50	9.2	2.13	24.41	78504	1309	1597	8.6	20.0
3247.0	2.1	53.4	50	9.2	2.24	24.88	79935	1743	1599	8.6	20.0
3248.0	2.9	52.3	50	9.3	2.09	25.23	80984	1276	1595	8.6	20.0
3249.0	2.5	52.6	50	9.5	2.11	25.64	82207	1489	1594	8.6	20.0
3250.0	3.3	53.0	50	9.5	2.00	25.95	83125	1118	1588	8.6	20.0
3251.0	4.4	51.8	50	9.5	1.89	26.17	83804	826	1579	8.6	20.0
3252.0	3.6	52.1	50	9.3	2.00	26.45	84642	1021	1573	8.6	20.0
3253.0	2.6	53.6	50	9.3	2.16	26.84	85815	1427	1571	8.6	20.0
3254.0	2.9	52.8	50	9.2	2.11	27.19	86864	1277	1568	8.6	20.0
3255.0	3.1	53.4	50	9.2	2.10	27.52	87837	1185	1564	8.6	20.0
3256.0	3.5	52.7	50	9.2	2.05	27.80	88697	1047	1558	8.6	20.0
3257.0	3.1	52.8	50	9.3	2.07	28.13	89675	1191	1554	8.6	20.0
3258.0	3.3	50.3	50	9.3	2.01	28.43	90585	1108	1549	8.6	20.0
3259.0	3.0	50.6	50	9.2	2.06	28.77	91583	1214	1545	8.6	20.0
3260.0	3.0	51.6	50	9.3	2.05	29.09	92568	1199	1542	8.6	20.0
3261.0	3.6	51.7	50	9.3	1.99	29.37	93393	1004	1536	8.6	20.0
3262.0	5.1	53.7	50	9.3	1.89	29.57	93979	713	1528	8.6	20.0
3263.0	4.2	53.3	50	9.3	1.96	29.80	94694	870	1521	8.6	20.0
3264.0	3.0	52.9	50	9.3	2.07	30.13	95680	1201	1518	8.6	20.0
3265.0	5.0	50.5	50	9.3	1.85	30.33	96280	729	1510	8.6	20.0
3266.0	3.3	50.3	50	9.3	2.01	30.63	97186	1104	1506	8.6	20.0
3267.0	2.6	49.6	50	9.3	2.07	31.01	98323	1384	1505	8.6	20.0
3267.1	1.4	49.2	50	9.3	2.30	31.09	98544	2688	1506	8.6	20.0

BIT NUMBER	10	IADC CODE	537	INTERVAL	3267.1- 3321.2
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	8.7	BIT RUN	54.1
TOTAL HOURS	14.62	TOTAL TURNS	43857	CONDITION	T2 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3268.0	2.9	44.7	50	9.4	1.96	0.31	927	1254	45195	8.6	20.0
3269.0	2.8	46.7	50	9.3	2.03	0.67	2013	1322	22104	8.6	20.0
3270.0	2.8	47.9	50	9.2	2.05	1.03	3094	1316	14935	8.6	20.0
3271.0	2.6	48.5	50	9.2	2.08	1.41	4230	1383	11460	8.6	20.0
3272.0	2.8	49.4	50	9.2	2.08	1.76	5291	1292	9385	8.6	20.0
3273.0	2.9	50.0	50	9.3	2.05	2.10	6313	1244	8005	8.6	20.0
3274.0	2.7	49.9	50	9.3	2.08	2.47	7410	1335	7039	8.6	20.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3275.0	3.8	51.0	50	9.3	1.97	2.74	8209	973	6271	8.6	20.0
3276.0	4.4	50.1	50	9.3	1.90	2.96	8887	826	5659	8.6	20.1
3277.0	6.1	50.1	50	9.3	1.78	3.13	9383	604	5148	8.6	20.0
3278.0	5.5	49.0	50	9.3	1.81	3.31	9931	668	4737	8.6	20.0
3279.0	3.0	49.9	50	9.2	2.07	3.65	10946	1235	4443	8.6	20.0
3280.0	3.5	50.8	50	9.2	2.02	3.93	11799	1039	4179	8.6	20.0
3281.0	3.4	51.2	50	9.2	2.04	4.22	12673	1064	3955	8.6	20.0
3282.0	5.0	50.1	50	9.2	1.89	4.43	13279	738	3739	8.6	20.0
3283.0	3.6	50.2	50	9.2	1.99	4.71	14117	1021	3568	8.6	20.0
3284.0	3.7	49.2	50	9.3	1.96	4.98	14926	984	3415	8.6	20.0
3285.0	5.2	50.4	50	9.3	1.86	5.17	15506	706	3264	8.6	20.0
3286.0	6.1	50.6	50	9.3	1.79	5.33	15996	596	3123	8.6	20.0
3287.0	6.8	50.6	50	9.3	1.76	5.48	16439	540	2993	8.6	20.0
3288.0	4.5	51.5	50	9.3	1.92	5.70	17100	804	2888	8.6	20.0
3289.0	6.3	51.9	50	9.3	1.81	5.86	17578	582	2783	8.6	20.0
3290.0	4.2	51.8	50	9.3	1.95	6.10	18292	869	2699	8.6	20.0
3291.0	4.1	51.9	50	9.3	1.96	6.34	19026	893	2624	8.6	20.0
3292.0	5.7	50.1	50	9.3	1.82	6.52	19556	645	2544	8.6	20.0
3293.0	3.5	51.2	50	9.2	2.03	6.81	20424	1057	2487	8.6	20.0
3294.0	3.2	52.2	50	9.3	2.05	7.12	21372	1154	2437	8.6	20.0
3295.0	3.7	53.0	50	9.3	2.00	7.39	22185	989	2385	8.6	20.0
3296.0	5.6	53.0	50	9.3	1.85	7.57	22721	653	2325	8.6	20.0
3297.0	3.4	52.4	50	9.3	2.03	7.87	23616	1090	2284	8.6	20.1
3298.0	2.6	52.3	50	9.3	2.12	8.25	24756	1387	2255	8.6	20.1
3299.0	2.7	52.8	50	9.3	2.12	8.63	25876	1363	2227	8.6	20.1
3300.0	3.1	53.2	50	9.3	2.06	8.94	26832	1165	2195	8.6	20.1
3301.0	3.1	51.6	50	9.3	2.04	9.27	27796	1174	2165	8.6	20.1
3302.0	3.2	52.1	50	9.3	2.04	9.58	28734	1141	2135	8.6	20.1
3303.0	6.1	51.4	50	9.3	1.80	9.74	29223	595	2092	8.6	20.1
3304.0	4.8	49.7	50	9.3	1.86	9.95	29846	758	2056	8.6	20.1
3305.0	3.6	50.8	50	9.3	1.98	10.23	30679	1014	2029	8.6	20.1
3306.0	3.4	51.2	50	9.3	2.01	10.52	31571	1086	2005	8.6	20.1
3307.0	3.0	50.9	50	9.3	2.05	10.85	32559	1202	1984	8.6	20.1
3308.0	2.5	50.3	50	9.3	2.11	11.25	33741	1438	1971	8.6	20.1
3309.0	3.0	50.1	50	9.3	2.05	11.58	34746	1223	1953	8.6	20.1
3310.0	3.0	49.7	50	9.3	2.04	11.92	35753	1226	1936	8.6	20.1
3311.0	3.1	50.2	50	9.3	2.04	12.24	36719	1176	1919	8.6	20.1
3312.0	4.2	51.6	50	9.2	1.95	12.48	37426	861	1895	8.6	20.1
3313.0	4.2	50.7	50	9.3	1.94	12.72	38149	880	1873	8.6	20.1
3314.0	5.4	51.4	50	9.3	1.86	12.90	38709	682	1848	8.6	20.1
3315.0	3.8	51.4	50	9.3	1.98	13.17	39501	965	1829	8.6	20.1
3316.0	4.3	51.2	50	9.3	1.93	13.40	40204	855	1810	8.6	20.1
3317.0	3.1	51.5	50	9.3	2.05	13.73	41176	1183	1797	8.6	20.1
3318.0	9.2	51.1	50	9.3	1.66	13.83	41503	399	1770	8.6	20.1
3319.0	4.8	51.2	50	9.3	1.89	14.04	42125	757	1750	8.6	20.1
3320.0	3.2	52.0	50	9.3	2.04	14.35	43055	1132	1738	8.6	20.1
3321.0	5.1	51.7	50	9.3	1.87	14.55	43643	716	1719	8.6	20.1
3321.2	2.8	51.2	50	9.3	2.09	14.62	43857	1304	1718	8.6	20.1

BIT NUMBER	11	IADC CODE	537	INTERVAL	3321.2- 3447.0
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	9.3	BIT RUN	125.8
TOTAL HOURS	40.33	TOTAL TURNS	123103	CONDITION	T2 B4 G0.062

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3322.0	2.7	30.0	30	9.5	1.59	0.30	533	1353	53525	8.6	20.1
3323.0	6.7	40.0	45	9.5	1.56	0.45	936	545	24092	8.6	20.1
3324.0	13.2	50.0	50	9.5	1.48	0.52	1164	277	15586	8.6	20.1
3325.0	4.5	50.0	50	9.5	1.85	0.74	1830	812	11698	8.6	20.1
3326.0	3.1	50.0	50	9.5	1.98	1.07	2798	1178	9506	8.6	20.1
3327.0	2.9	50.0	50	9.5	2.01	1.41	3832	1259	8085	8.6	20.1
3328.0	2.6	50.0	50	9.5	2.05	1.80	4986	1405	7102	8.6	20.1
3329.0	3.7	50.0	50	9.5	1.92	2.07	5797	987	6318	8.6	20.1
3330.0	3.4	50.0	50	9.5	1.95	2.36	6679	1074	5722	8.6	20.1
3331.0	4.6	50.0	50	9.5	1.85	2.58	7332	794	5219	8.6	20.1
3332.0	2.8	50.0	50	9.5	2.02	2.93	8403	1304	4857	8.6	20.1
3333.0	1.7	50.0	50	9.5	2.19	3.52	10168	2148	4627	8.6	20.1
3333.4	1.9	50.0	50	9.5	2.16	3.73	10804	1938	4539	8.6	20.1
3333.6	4.2	50.0	50	9.5	1.88	3.78	10947	867	4480	8.6	20.1
3334.0	2.7	50.0	50	9.5	2.03	3.93	11385	1334	4382	8.6	20.1
3334.5	4.1	50.0	50	9.5	1.89	4.05	11755	901	4251	8.6	20.1
3335.0	13.3	50.0	50	9.5	1.48	4.09	11868	274	4107	8.6	20.1
3335.5	14.4	50.0	50	9.5	1.45	4.12	11972	254	3972	8.6	20.1
3336.0	4.0	49.0	50	9.5	1.88	4.25	12347	913	3869	8.6	20.1
3336.5	2.3	49.9	50	9.5	2.08	4.46	12986	1556	3793	8.6	20.1
3337.0	3.4	49.5	50	9.4	1.97	4.61	13427	1073	3707	8.6	20.1
3337.5	3.1	49.4	50	9.4	2.00	4.77	13912	1181	3629	8.6	20.1
3338.0	3.0	49.7	50	9.4	2.01	4.93	14404	1199	3557	8.6	20.1
3339.0	4.0	49.5	50	9.4	1.91	5.19	15160	920	3409	8.6	20.1
3340.0	16.4	48.7	50	9.4	1.41	5.25	15343	222	3239	8.6	20.1
3341.0	3.2	49.5	50	9.4	1.99	5.56	16285	1147	3134	8.6	20.1
3342.0	3.2	50.7	50	9.4	2.00	5.87	17210	1126	3037	8.6	20.1
3343.0	3.5	49.8	50	9.4	1.96	6.16	18074	1051	2946	8.6	20.1
3344.0	3.1	51.9	50	9.4	2.03	6.48	19039	1175	2868	8.6	20.1
3345.0	3.0	52.1	50	9.4	2.05	6.81	20044	1223	2799	8.6	20.1
3346.0	3.3	52.2	50	9.4	2.01	7.11	20944	1096	2731	8.6	20.1
3347.0	2.6	52.1	50	9.4	2.10	7.50	22114	1425	2680	8.6	20.1
3348.0	2.2	52.7	50	9.4	2.16	7.95	23456	1633	2641	8.6	20.1
3349.0	2.7	51.4	50	9.4	2.08	8.33	24577	1364	2595	8.6	20.1
3350.0	3.0	51.5	50	9.4	2.04	8.66	25590	1234	2548	8.6	20.1
3351.0	2.4	51.4	50	9.4	2.11	9.08	26827	1505	2513	8.6	20.1
3352.0	4.5	51.1	50	9.4	1.89	9.30	27499	818	2458	8.6	20.1
3353.0	12.5	50.9	50	9.4	1.52	9.38	27739	293	2390	8.6	20.1
3354.0	3.3	52.3	50	9.4	2.01	9.68	28651	1110	2351	8.6	20.1
3355.0	26.5	49.5	50	9.4	1.24	9.72	28764	138	2285	8.6	20.1
3356.0	2.0	52.1	50	9.4	2.19	10.22	30265	1827	2272	8.6	20.1
3357.0	2.5	51.8	50	9.4	2.11	10.63	31479	1478	2250	8.6	20.1
3358.0	3.3	51.3	50	9.4	2.01	10.93	32400	1121	2219	8.6	20.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3359.0	4.0	51.1	50	9.4	1.93	11.18	33154	918	2185	8.6	20.1
3360.0	4.8	51.4	50	9.4	1.87	11.39	33784	767	2148	8.6	20.1
3361.0	6.7	50.5	50	9.4	1.74	11.54	34230	543	2108	8.6	20.1
3362.0	8.3	51.0	50	9.4	1.67	11.66	34592	440	2067	8.6	20.1
3363.0	3.0	51.5	50	9.4	2.04	12.00	35606	1235	2047	8.6	20.1
3364.0	4.6	51.3	50	9.4	1.88	12.22	36259	794	2018	8.6	20.1
3365.0	6.2	50.6	50	9.4	1.77	12.38	36740	586	1985	8.6	20.1
3366.0	11.5	50.5	50	9.4	1.55	12.47	37000	317	1948	8.6	20.1
3367.0	3.5	51.3	50	9.4	1.98	12.75	37858	1044	1928	8.6	20.1
3368.0	5.2	51.1	50	9.4	1.84	12.95	38440	709	1902	8.6	20.1
3369.0	13.6	49.9	50	9.4	1.48	13.02	38661	269	1868	8.6	20.1
3370.0	12.4	49.8	50	9.4	1.51	13.10	38903	294	1836	8.6	20.1
3371.0	7.0	50.7	50	9.4	1.73	13.24	39331	521	1809	8.6	20.1
3372.0	4.9	50.6	50	9.4	1.85	13.45	39946	749	1788	8.6	20.1
3373.0	3.0	50.5	50	9.4	2.03	13.79	40959	1233	1778	8.6	20.1
3374.0	2.2	50.8	50	9.4	2.14	14.24	42325	1664	1776	8.6	20.1
3375.0	2.1	50.8	50	9.4	2.16	14.72	43769	1757	1775	8.6	20.1
3376.0	2.5	50.4	50	9.4	2.09	15.13	44984	1480	1770	8.6	20.1
3377.0	3.2	50.3	50	9.4	2.00	15.44	45919	1137	1758	8.6	20.1
3378.0	2.4	49.7	50	9.4	2.09	15.86	47175	1530	1754	8.6	20.1
3379.0	2.4	52.2	50	9.4	2.13	16.28	48432	1530	1751	8.6	20.1
3380.0	5.6	50.1	50	9.4	1.80	16.46	48967	651	1732	8.6	20.1
3381.0	10.1	49.4	50	9.4	1.58	16.55	49264	361	1709	8.6	20.1
3382.0	6.1	50.2	50	9.4	1.77	16.72	49754	596	1691	8.6	20.1
3383.0	1.6	51.5	50	9.4	2.26	17.34	51619	2270	1700	8.6	20.1
3384.0	2.9	51.9	50	9.4	2.06	17.69	52658	1265	1693	8.6	20.1
3385.0	2.8	50.5	50	9.4	2.05	18.04	53734	1311	1687	8.6	20.1
3386.0	3.6	48.7	50	9.4	1.94	18.32	54573	1021	1677	8.6	20.1
3387.0	2.1	48.8	50	9.4	2.12	18.80	55998	1735	1678	8.6	20.1
3388.0	3.0	49.4	50	9.4	2.01	19.13	56989	1206	1671	8.6	20.1
3389.0	6.3	48.9	50	9.4	1.75	19.29	57469	584	1655	8.6	20.1
3390.0	2.0	50.5	50	9.4	2.17	19.80	58993	1855	1658	8.6	20.1
3391.0	3.8	50.3	50	9.5	1.92	20.06	59786	966	1648	8.6	20.1
3392.0	5.5	50.6	50	9.5	1.79	20.25	60335	669	1634	8.6	20.2
3393.0	2.5	50.7	50	9.5	2.07	20.64	61534	1460	1631	8.6	20.2
3394.0	1.7	49.0	50	9.5	2.17	21.22	63273	2116	1638	8.6	20.2
3395.0	2.2	49.7	50	9.5	2.10	21.67	64622	1642	1638	8.6	20.2
3396.0	2.5	48.9	50	9.5	2.05	22.07	65823	1462	1636	8.6	20.2
3397.0	3.8	47.8	50	9.5	1.88	22.33	66604	951	1627	8.6	20.2
3398.0	2.6	49.2	50	9.5	2.03	22.71	67743	1387	1624	8.6	20.2
3399.0	5.4	48.7	50	9.5	1.77	22.90	68298	676	1611	8.6	20.2
3400.0	2.7	48.7	50	9.5	2.01	23.27	69396	1337	1608	8.6	20.2
3401.0	3.3	48.1	50	9.5	1.94	23.57	70313	1116	1602	8.6	20.2
3402.0	2.1	50.0	50	9.5	2.12	24.05	71741	1739	1603	8.6	20.2
3403.0	2.8	50.0	50	9.5	2.02	24.40	72813	1304	1600	8.6	20.2
3404.0	2.9	50.0	50	9.5	2.01	24.75	73847	1259	1596	8.6	20.2
3405.0	5.5	50.0	50	9.5	1.78	24.93	74393	664	1585	8.6	20.2
3406.0	30.7	48.4	50	9.5	1.17	24.96	74490	119	1567	8.6	20.2
3407.0	27.5	47.9	50	9.5	1.21	25.00	74600	133	1551	8.6	20.2
3408.0	11.9	43.5	50	9.5	1.45	25.08	74852	307	1536	8.6	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3409.0	13.2	45.6	50	9.5	1.44	25.16	75079	277	1522	8.6	20.2
3410.0	13.4	45.8	50	9.5	1.43	25.23	75303	273	1508	8.6	20.2
3411.0	7.1	46.8	50	9.5	1.66	25.38	75725	514	1497	8.6	20.2
3412.0	1.7	48.3	50	9.5	2.17	25.96	77474	2128	1504	8.6	20.2
3413.0	1.5	48.8	50	9.5	2.22	26.62	79465	2425	1514	8.6	20.2
3414.0	1.9	49.2	50	9.5	2.15	27.16	81080	1965	1519	8.6	20.2
3415.0	2.9	48.1	50	9.5	1.98	27.51	82119	1266	1516	8.6	20.2
3416.0	3.2	48.4	50	9.5	1.95	27.81	83044	1126	1512	8.6	20.2
3417.0	4.2	48.1	50	9.5	1.85	28.05	83758	870	1505	8.6	20.2
3418.0	4.7	48.4	50	9.5	1.82	28.27	84401	782	1498	8.6	20.2
3419.0	2.3	49.2	50	9.5	2.08	28.70	85702	1584	1498	8.6	20.2
3420.0	1.6	48.4	50	9.5	2.20	29.34	87618	2333	1507	8.6	20.2
3421.0	1.8	47.6	50	9.5	2.14	29.90	89314	2064	1513	8.6	20.2
3422.0	2.0	47.5	50	9.5	2.10	30.39	90784	1789	1515	8.6	20.2
3423.0	2.0	48.8	50	9.5	2.13	30.91	92323	1873	1519	8.6	20.2
3424.0	1.9	50.1	50	9.5	2.16	31.43	93899	1919	1523	8.6	20.2
3425.0	2.8	50.1	50	9.5	2.03	31.79	94983	1320	1521	8.6	20.2
3426.0	1.8	49.9	50	9.5	2.18	32.36	96687	2074	1526	8.6	20.2
3427.0	1.9	49.7	50	9.5	2.15	32.89	98263	1918	1530	8.6	20.2
3428.0	1.6	52.5	60	9.6	2.29	33.51	100505	2261	1537	8.6	20.2
3429.0	1.9	50.9	64	9.6	2.22	34.02	102480	1883	1540	8.6	20.2
3430.0	2.5	51.8	60	9.6	2.13	34.42	103926	1467	1539	8.6	20.2
3431.0	3.1	51.7	60	9.6	2.05	34.75	105097	1188	1536	8.6	20.2
3432.0	1.4	51.9	60	9.6	2.34	35.49	107751	2692	1546	8.6	20.2
3433.0	1.1	52.3	60	9.6	2.41	36.36	110898	3192	1561	8.6	20.2
3434.0	2.2	49.1	60	9.6	2.13	36.81	112514	1639	1562	8.6	20.2
3435.0	3.2	46.2	52	9.6	1.92	37.13	113500	1157	1558	8.6	20.2
3436.0	2.0	49.6	50	9.6	2.10	37.62	114976	1797	1560	8.6	20.2
3437.0	3.2	49.5	50	9.6	1.95	37.93	115911	1138	1557	8.6	20.2
3438.0	10.1	50.0	50	9.6	1.56	38.03	116208	362	1546	8.6	20.2
3439.0	15.3	47.1	50	9.6	1.39	38.09	116404	239	1535	8.6	20.2
3440.0	14.0	47.9	50	9.6	1.42	38.17	116619	261	1525	8.6	20.2
3441.0	6.7	47.1	50	9.6	1.67	38.32	117069	548	1516	8.6	20.2
3442.0	11.5	45.4	50	9.6	1.47	38.40	117330	319	1507	8.6	20.2
3443.0	23.2	50.1	50	9.6	1.27	38.45	117459	157	1495	8.6	20.2
3444.0	5.8	47.0	50	9.6	1.71	38.62	117977	630	1488	8.6	20.2
3445.0	1.5	47.9	50	9.6	2.18	39.27	119928	2375	1496	8.6	20.2
3446.0	2.0	49.4	50	9.6	2.10	39.76	121404	1797	1498	8.6	20.2
3447.0	1.8	43.7	50	9.6	2.07	40.33	123103	2068	1502	8.6	20.2

BIT NUMBER	12	IADC CODE	517	INTERVAL	3447.0- 3453.1
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	9.3	BIT RUN	6.1
TOTAL HOURS	0.63	TOTAL TURNS	2208	CONDITION	T1 B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	URNS	ICOST	CCOST	PP	FG
3448.0	9.1	28.5	52	9.6	1.35	0.11	343	400	42880	8.6	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3449.0	21.6	30.3	60	9.6	1.16	0.16	510	169	21525	8.6	20.2
3450.0	10.0	29.9	60	9.6	1.39	0.26	871	366	14472	8.6	20.2
3451.0	5.3	28.1	60	9.6	1.55	0.44	1550	689	11026	8.6	20.2
3452.0	11.5	32.9	60	9.6	1.38	0.53	1864	319	8885	8.6	20.2
3453.0	14.4	34.0	60	9.6	1.33	0.60	2114	254	7446	8.6	20.2
3453.1	3.8	36.1	60	9.6	1.76	0.63	2208	954	7340	8.6	20.2

BIT NUMBER	12	IADC CODE	4	INTERVAL	3453.1- 3462.8
CHRIS RC4		SIZE	9.875	NOZZLES	14 15 15
COST	18000.00	TRIP TIME	9.3	BIT RUN	9.7
TOTAL HOURS	1.16	TOTAL TURNS	6548	CONDITION	T0 B0 G0.100

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3453.2	34.3	10.0	80	9.6	0.89	0.00	14	107	519743	8.6	20.2
3453.4	10.7	12.0	81	9.6	1.21	0.02	104	340	173474	8.6	20.2
3453.6	25.7	15.0	78	9.6	1.04	0.03	141	142	104141	8.6	20.2
3453.8	3.8	15.0	80	9.6	1.55	0.08	392	954	74659	8.6	20.2
3454.0	15.7	16.0	95	9.6	1.25	0.09	464	233	58120	8.6	20.2
3454.2	21.2	16.3	95	9.6	1.17	0.10	518	172	47584	8.6	20.2
3454.4	17.1	16.7	95	9.6	1.23	0.12	585	213	40296	8.6	20.2
3454.6	24.8	15.6	95	9.6	1.12	0.12	631	147	34943	8.6	20.2
3454.8	14.7	17.1	95	9.6	1.28	0.14	708	249	30861	8.6	20.2
3455.0	8.2	17.4	95	9.6	1.45	0.16	848	446	27660	8.6	20.2
3455.2	10.9	18.3	95	9.6	1.39	0.18	952	335	25057	8.6	20.2
3455.4	14.7	18.2	95	9.6	1.31	0.19	1030	249	22900	8.6	20.2
3455.6	18.0	19.5	95	9.6	1.27	0.20	1093	203	21084	8.6	20.2
3455.8	15.3	20.7	95	9.6	1.34	0.22	1167	238	19540	8.6	20.2
3456.0	17.6	19.8	95	9.6	1.28	0.23	1232	208	18207	8.6	20.2
3456.2	22.5	20.0	95	9.6	1.22	0.24	1283	162	17043	8.6	20.2
3456.4	25.3	18.9	95	9.6	1.17	0.25	1328	145	16019	8.6	20.2
3456.6	55.4	19.2	95	9.6	0.96	0.25	1349	66	15107	8.6	20.2
3456.8	30.0	19.8	95	9.6	1.13	0.26	1387	122	14297	8.6	20.2
3457.0	10.3	21.5	95	9.6	1.47	0.28	1497	355	13582	8.6	20.2
3457.2	14.7	21.3	95	9.6	1.36	0.29	1575	249	12932	8.6	20.2
3457.4	9.1	20.5	95	9.6	1.48	0.31	1700	401	12349	8.6	20.2
3457.6	14.1	21.2	95	9.6	1.37	0.33	1781	259	11811	8.6	20.2
3457.8	13.6	21.7	95	9.6	1.39	0.34	1865	269	11320	8.6	20.2
3458.0	15.7	21.4	95	9.6	1.34	0.35	1938	233	10868	8.6	20.2
3458.2	10.4	20.7	95	9.6	1.45	0.37	2047	350	10455	8.6	20.2
3458.4	9.2	20.0	95	9.6	1.47	0.39	2170	396	10076	8.6	20.2
3458.6	9.7	20.3	95	9.6	1.46	0.41	2288	375	9723	8.6	20.2
3458.8	11.3	20.5	95	9.6	1.42	0.43	2389	325	9393	8.6	20.2
3459.0	8.4	20.5	95	9.6	1.51	0.46	2525	436	9090	8.6	20.2
3459.2	11.1	19.7	95	9.6	1.41	0.47	2628	330	8802	8.6	20.2
3459.4	12.9	20.1	95	9.6	1.38	0.49	2717	284	8532	8.6	20.2
3459.6	10.9	20.1	95	9.6	1.42	0.51	2821	335	8280	8.6	20.2
3459.8	12.2	20.5	95	9.6	1.40	0.52	2915	299	8041	8.6	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3460.0	13.6	20.1	95	9.6	1.36	0.54	2998	269	7816	8.6	20.2
3460.2	9.9	20.1	95	9.6	1.45	0.56	3114	370	7606	8.6	20.2
3460.4	8.4	20.2	95	9.6	1.50	0.58	3250	436	7410	8.6	20.2
3460.6	9.4	20.2	95	9.6	1.47	0.60	3372	391	7223	8.6	20.2
3460.8	11.8	20.2	95	9.6	1.40	0.62	3469	309	7043	8.6	20.2
3461.0	17.6	20.3	95	9.6	1.29	0.63	3534	208	6870	8.6	20.2
3461.2	11.3	20.3	95	9.6	1.42	0.65	3635	325	6709	8.6	20.2
3461.4	17.1	20.1	95	9.6	1.30	0.66	3701	213	6552	8.6	20.2
3461.6	14.7	19.9	95	9.6	1.34	0.68	3779	249	6404	8.6	20.2
3461.8	15.7	20.1	95	9.6	1.32	0.69	3852	233	6262	8.6	20.2
3462.0	12.4	20.2	95	9.6	1.39	0.70	3944	294	6128	8.6	20.2
3462.2	15.0	20.1	95	9.6	1.33	0.72	4020	243	5998	8.6	20.2
3462.4	2.6	20.9	95	9.6	1.84	0.80	4458	1405	5900	8.6	20.2
3462.6	1.0	21.4	95	9.6	2.14	1.00	5654	3830	5856	8.6	20.2
3462.8	1.3	25.4	95	9.6	2.16	1.16	6548	2866	5794	8.6	20.2

BIT NUMBER	12	IADC CODE	517	INTERVAL	3462.8- 3521.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	0.00	TRIP TIME	9.5	BIT RUN	58.2
TOTAL HOURS	14.94	TOTAL TURNS	59427	CONDITION	T3 B4 G0.375

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3463.0	2.2	25.0	50	9.6	1.69	0.72	2481	1660	5925	8.6	20.2
3464.0	5.9	30.0	50	9.6	1.49	0.89	2989	619	5198	8.6	20.2
3465.0	6.2	30.0	60	9.6	1.53	1.05	3570	589	4643	8.6	20.2
3466.0	3.5	30.0	60	9.6	1.70	1.34	4601	1046	4256	8.6	20.2
3467.0	3.6	31.8	60	9.6	1.72	1.61	5597	1010	3941	8.6	20.2
3468.0	2.9	35.4	60	9.6	1.84	1.96	6854	1275	3705	8.6	20.2
3469.0	3.0	35.8	60	9.6	1.84	2.30	8064	1227	3504	8.6	20.2
3470.0	3.7	36.5	60	9.6	1.79	2.57	9032	982	3314	8.6	20.2
3471.0	14.0	37.2	60	9.6	1.38	2.64	9289	261	3100	8.6	20.2
3472.0	2.7	40.2	60	9.6	1.95	3.01	10630	1360	2987	8.6	20.2
3473.0	2.2	40.8	60	9.6	2.02	3.47	12289	1683	2907	8.6	20.2
3474.0	2.6	41.2	60	9.6	1.98	3.87	13699	1430	2821	8.6	20.2
3475.0	2.5	37.6	60	9.6	1.93	4.27	15139	1461	2747	8.6	20.2
3476.0	3.6	37.9	60	9.6	1.82	4.54	16139	1014	2657	8.6	20.2
3477.0	3.5	41.1	61	9.6	1.88	4.83	17189	1054	2578	8.6	20.2
3478.0	4.0	45.8	65	9.6	1.92	5.08	18168	917	2500	8.6	20.2
3479.0	2.9	45.8	65	9.6	2.03	5.43	19503	1250	2444	8.6	20.2
3480.0	3.7	46.6	67	9.6	1.97	5.70	20596	986	2382	8.6	20.2
3481.0	3.3	46.7	70	9.6	2.03	6.00	21875	1113	2329	8.6	20.2
3482.0	3.2	46.6	70	9.6	2.03	6.31	23184	1138	2282	8.6	20.2
3483.0	3.1	47.4	70	9.6	2.05	6.63	24519	1161	2240	8.6	20.2
3484.0	3.4	47.0	70	9.6	2.02	6.92	25749	1069	2197	8.6	20.2
3485.0	6.2	47.3	70	9.6	1.82	7.08	26425	588	2140	8.6	20.2
3486.0	2.9	48.0	70	9.5	2.09	7.42	27851	1240	2109	8.6	20.2
3487.0	8.2	48.3	70	9.5	1.74	7.54	28364	446	2054	8.6	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3488.0	18.5	44.5	70	9.5	1.42	7.60	28592	198	1995	8.6	20.2
3489.0	17.8	39.3	70	9.5	1.38	7.66	28828	205	1940	8.6	20.3
3490.0	13.7	46.3	70	9.5	1.54	7.73	29134	267	1889	8.6	20.3
3491.0	11.0	46.2	70	9.5	1.62	7.82	29516	332	1844	8.6	20.3
3491.4	3.9	47.8	70	9.5	1.99	7.92	29946	933	1834	8.6	20.3
3492.0	3.2	48.5	70	9.5	2.07	8.11	30734	1143	1822	8.6	20.3
3493.0	3.1	48.3	70	9.5	2.08	8.44	32107	1194	1804	8.6	20.3
3494.0	3.6	48.2	70	9.6	2.01	8.71	33266	1007	1783	8.6	20.3
3495.0	9.8	49.7	70	9.6	1.69	8.81	33695	373	1746	8.6	20.3
3496.0	13.1	49.4	70	9.6	1.58	8.89	34016	279	1709	8.6	20.3
3497.0	9.8	47.6	70	9.6	1.66	8.99	34443	371	1676	8.6	20.3
3498.0	8.3	45.8	70	9.6	1.70	9.11	34947	438	1646	8.6	20.3
3499.0	2.6	49.2	70	9.6	2.14	9.50	36572	1413	1640	8.6	20.3
3500.0	2.8	49.0	70	9.6	2.11	9.86	38080	1311	1633	8.6	20.3
3501.0	4.4	48.6	70	9.6	1.95	10.09	39041	836	1615	8.6	20.3
3502.0	14.9	49.4	70	9.6	1.54	10.15	39322	244	1584	8.6	20.3
3503.0	15.4	49.6	70	9.6	1.53	10.22	39595	237	1555	8.6	20.3
3504.0	15.6	50.2	70	9.6	1.53	10.28	39865	234	1527	8.6	20.3
3505.0	19.9	50.1	70	9.6	1.45	10.33	40076	184	1500	8.6	20.3
3506.0	4.4	51.6	70	9.6	1.99	10.56	41022	823	1486	8.6	20.3
3507.0	5.6	51.6	70	9.6	1.91	10.74	41776	655	1469	8.6	20.3
3508.0	2.6	51.6	70	9.6	2.17	11.12	43384	1399	1468	8.6	20.3
3509.0	4.3	50.2	70	9.6	1.98	11.35	44360	848	1456	8.6	20.3
3510.0	4.3	48.0	70	9.6	1.95	11.58	45330	844	1445	8.6	20.3
3511.0	3.4	48.5	70	9.6	2.04	11.88	46575	1082	1438	8.6	20.3
3512.0	2.7	48.7	70	9.6	2.12	12.25	48109	1334	1436	8.6	20.3
3513.0	2.9	49.4	70	9.6	2.10	12.59	49537	1242	1433	8.6	20.3
3514.0	3.3	47.7	70	9.6	2.03	12.89	50808	1105	1427	8.6	20.3
3515.0	4.2	48.6	70	9.6	1.95	13.13	51803	865	1417	8.6	20.3
3516.0	4.9	47.6	70	9.6	1.89	13.33	52664	749	1406	8.6	20.3
3517.0	3.3	48.1	70	9.6	2.04	13.64	53947	1116	1401	8.6	20.3
3518.0	4.1	48.7	70	9.6	1.96	13.88	54964	884	1393	8.6	20.3
3519.0	2.3	47.9	70	9.6	2.15	14.30	56753	1556	1395	8.6	20.3
3520.0	3.6	47.0	70	9.6	1.98	14.58	57906	1002	1389	8.6	20.3
3521.0	2.8	48.0	70	9.6	2.09	14.94	59427	1323	1388	8.6	20.3

(d). COMPUTER DATA LISTING ; LIST B

INTERVAL 10m averages.

DEPTH. Well depth, in metres.

ROP. Rate of penetration, in metres per hour.

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

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

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

TOTAL COST Cumulative bit cost, in A dollars.

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

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

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

BIT NUMBER	1	IADC CODE	111	INTERVAL	86.0-	225.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20	20 20
COST	0.00	TRIP TIME	2.0	BIT RUN		139.0
TOTAL HOURS	3.08	TOTAL TURNS	11808	CONDITION	T1	B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
90.0	38.2	4.0	0.10	359	7686.59	96	1922	-
100.0	36.6	14.0	0.38	1463	8684.45	99.79	620.32	-
110.0	30.7	24.0	0.70	2678	9873.60	118.91	411.40	-
120.0	41.2	34.0	0.95	3564	10759.64	88.60	316.46	-
130.0	35.2	44.0	1.23	4579	11796.40	103.68	268.10	-
140.0	59.7	54.0	1.40	5291	12408.11	61.17	229.78	-
150.0	56.9	64.0	1.57	6043	13050.25	64.21	203.91	-
160.0	98.4	74.0	1.68	6450	13421.54	37.13	181.37	-
170.0	57.2	84.0	1.85	7093	14059.63	63.81	167.38	-
180.0	45.5	94.0	2.07	7965	14863.07	80.34	158.12	-
190.0	50.0	104.0	2.27	8770	15593.47	73.04	149.94	-
200.0	76.1	114.0	2.40	9270	16073.30	47.98	140.99	-
210.0	31.8	124.0	2.72	10439	17220.76	114.75	138.88	-
220.0	55.9	134.0	2.89	11128	17873.76	65.30	133.39	-
225.0	26.8	139.0	3.08	11808	18554.46	136.14	133.49	+

BIT NUMBER	1	IADC CODE	111	INTERVAL	225.0-	830.4
HTC OSC3AJ		SIZE	17.500	NOZZLES	18	18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN		605.4
TOTAL HOURS	12.72	TOTAL TURNS	106193	CONDITION	T1	B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
230.0	264.0	5.0	0.02	136	18438.57	14	3688	-
240.0	187.0	15.0	0.07	521	18633.90	20	1242	-
250.0	225.0	25.0	0.12	841	18796.21	16.23	751.85	-
260.0	209.3	35.0	0.16	1185	18970.70	17.45	542.02	-
270.0	236.8	45.0	0.21	1489	19124.89	15.42	425.00	-
280.0	193.5	55.0	0.26	1861	19313.58	18.87	351.16	-
290.0	107.5	65.0	0.35	2531	19653.42	33.98	302.36	-
300.0	138.7	75.0	0.42	3051	19916.74	26.33	265.56	-
310.0	227.8	85.0	0.47	3367	20077.02	16.03	236.20	-
320.0	199.2	95.0	0.52	3728	20260.35	18.33	213.27	-
330.0	188.5	105.0	0.57	4110	20454.11	19.38	194.80	-
340.0	126.3	115.0	0.65	4680	20743.22	28.91	180.38	-
350.0	89.3	125.0	0.76	5487	21152.38	40.92	169.22	-
360.0	63.2	135.0	0.92	6625	21729.85	57.75	160.96	-
370.0	188.5	145.0	0.97	7007	21923.61	19.38	151.20	-
380.0	123.7	155.0	1.05	7589	22218.81	29.52	143.35	-
390.0	112.3	165.0	1.14	8230	22544.01	32.52	136.63	-
400.0	107.5	175.0	1.24	8900	22883.85	33.98	130.76	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
410.0	92.1	185.0	1.34	9682	23280.49	39.66	125.84	-
420.0	87.9	195.0	1.46	10502	23696.08	41.56	121.52	-
430.0	81.8	205.0	1.58	11382	24142.43	44.64	117.77	-
440.0	76.9	215.0	1.71	12318	24617.26	47.48	114.50	-
450.0	86.8	225.0	1.83	13148	25038.14	42.09	111.28	-
460.0	80.9	235.0	1.95	14038	25489.57	45.14	108.47	-
470.0	73.5	245.0	2.09	15018	25986.64	49.71	106.07	-
480.0	60.3	255.0	2.25	16211	26591.97	60.53	104.28	-
490.0	84.1	265.0	2.37	17067	27026.15	43.42	101.99	-
500.0	68.3	275.0	2.52	18122	27561.04	53.49	100.22	-
510.0	47.0	285.0	2.73	19654	28338.11	77.71	99.43	-
520.0	40.6	295.0	2.98	21426	29236.90	89.88	99.11	-
530.0	29.1	305.0	3.32	23897	30490.42	125.35	99.97	+
540.0	48.3	315.0	3.53	25387	31246.18	75.58	99.19	-
550.0	50.6	325.0	3.72	26811	31968.46	72.23	98.36	-
560.0	49.7	335.0	3.92	28259	32702.92	73.45	97.62	-
570.0	48.8	345.0	4.13	29733	33450.57	74.76	96.96	-
580.0	77.6	355.0	4.26	30661	33921.27	47.07	95.55	-
590.0	49.5	365.0	4.46	32115	34658.71	73.74	94.96	-
600.0	44.2	375.0	4.69	33935	35484.18	82.55	94.62	-
610.0	52.0	385.0	4.88	35665	36186.17	70.20	93.99	-
620.0	32.9	395.0	5.18	38405	37297.83	111.17	94.42	+
630.0	24.4	405.0	5.59	42092	38794.14	149.63	95.79	+
640.0	27.5	415.0	5.96	45367	40123.06	132.89	96.68	+
650.0	33.6	425.0	6.25	48042	41208.52	108.55	96.96	+
660.0	38.5	435.0	6.51	50380	42157.02	94.85	96.91	-
670.0	27.8	445.0	6.87	53617	43470.73	131.37	97.69	+
680.0	37.9	455.0	7.14	55992	44434.45	96.37	97.66	-
690.0	43.0	465.0	7.37	58087	45284.65	85.02	97.39	-
700.0	38.7	475.0	7.63	60415	46229.22	94.46	97.32	-
710.0	27.2	485.0	8.00	63728	47573.36	134.41	98.09	+
720.0	27.3	495.0	8.36	67029	48913.10	133.97	98.81	+
730.0	29.3	505.0	8.70	70102	50159.86	124.68	99.33	+
740.0	32.1	515.0	9.02	72907	51298.06	113.82	99.61	+
750.0	34.3	525.0	9.31	75532	52363.23	106.52	99.74	+
760.0	28.9	535.0	9.65	78644	53626.21	126.30	100.24	+
770.0	28.7	545.0	10.00	81782	54899.34	127.31	100.73	+
780.0	32.6	555.0	10.31	84542	56019.29	111.99	100.94	+
790.0	33.3	565.0	10.61	87247	57116.92	109.76	101.09	+
800.0	25.1	575.0	11.01	90829	58570.61	145.37	101.86	+
810.0	17.7	585.0	11.57	95924	60638.05	206.74	103.65	+
820.0	19.9	595.0	12.08	100442	62471.15	183.31	104.99	+
830.0	16.4	605.0	12.69	105936	64700.47	222.93	106.94	+
830.4	14.0	605.4	12.72	106193	64804.96	261.22	107.04	+

BIT NUMBER	2	IADC CODE	114	INTERVAL	830.4- 1344.8
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2381.00	TRIP TIME	4.9	BIT RUN	514.4
TOTAL HOURS	26.03	TOTAL TURNS	221520	CONDITION	T4 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
840.0	35.9	9.6	0.27	1547	21253.72	102	2214	-
850.0	24.6	19.6	0.67	3985	22737.86	148	1160	-
860.0	33.6	29.6	0.97	6417	23823.31	108.55	804.84	-
870.0	37.8	39.6	1.24	8799	24790.08	96.68	626.01	-
880.0	39.4	49.6	1.49	11084	25717.28	92.72	518.49	-
890.0	40.9	59.6	1.73	13284	26609.99	89.27	446.48	-
900.0	33.0	69.6	2.04	16014	27717.76	110.78	398.24	-
910.0	35.8	79.6	2.32	18529	28738.30	102.05	361.03	-
920.0	35.4	89.6	2.60	21074	29771.00	103.27	332.27	-
930.0	31.6	99.6	2.92	23919	30925.33	115.43	310.50	-
940.0	31.3	109.6	3.24	26791	32090.92	116.56	292.80	-
950.0	37.2	119.6	3.50	29211	33072.90	98.20	276.53	-
960.0	24.9	129.6	3.91	32824	34538.78	146.59	266.50	-
970.0	26.9	139.6	4.28	36169	35896.10	135.73	257.14	-
980.0	32.1	149.6	4.59	38974	37034.31	113.82	247.56	-
990.0	23.9	159.6	5.01	42736	38561.05	152.67	241.61	-
1000.0	26.0	169.6	5.39	46191	39963.01	140.20	235.63	-
1010.0	34.3	179.6	5.68	48816	41028.18	106.52	228.44	-
1020.0	34.5	189.6	5.97	51421	42085.23	105.71	221.97	-
1030.0	31.0	199.6	6.29	54326	43264.01	117.88	216.75	-
1040.0	27.6	209.6	6.66	57591	44588.88	132.49	212.73	-
1050.0	21.0	219.6	7.13	61879	46328.65	173.98	210.97	-
1060.0	16.2	229.6	7.75	67370	48583.76	225.51	211.60	+
1070.0	19.9	239.6	8.25	71586	50416.86	183.31	210.42	-
1080.0	15.3	249.6	8.90	77060	52796.75	237.99	211.53	+
1090.0	16.8	259.6	9.50	82075	54976.79	218.00	211.77	+
1100.0	16.6	269.6	10.10	87136	57177.12	220.03	212.08	+
1110.0	20.2	279.6	10.60	91294	58984.86	180.77	210.96	-
1120.0	17.7	289.6	11.16	96037	61047.22	206.24	210.80	-
1130.0	20.9	299.6	11.64	100051	62792.18	174.50	209.59	-
1140.0	18.6	309.6	12.18	104561	64753.10	196.09	209.15	-
1150.0	17.1	319.6	12.76	109481	66891.89	213.88	209.30	+
1160.0	25.7	329.6	13.15	112747	68312.11	142.02	207.26	-
1170.0	16.8	339.6	13.75	117741	70483.02	217.09	207.55	+
1180.0	16.2	349.6	14.37	122925	72737.12	225.41	208.06	+
1190.0	19.2	359.6	14.89	127296	74637.17	190.01	207.56	-
1200.0	16.9	369.6	15.48	132277	76803.01	216.58	207.80	+
1210.0	20.3	379.6	15.97	136421	78604.66	180.17	207.07	-
1220.0	18.6	389.6	16.51	140946	80571.67	196.70	206.81	-
1230.0	16.3	399.6	17.12	146102	82813.59	224.19	207.24	+
1240.0	15.3	409.6	17.78	151583	85196.52	238.29	208.00	+
1250.0	17.5	419.6	18.35	156374	87279.18	208.27	208.01	+
1260.0	14.2	429.6	19.05	162300	89855.87	257.67	209.16	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1270.0	9.7	439.6	20.08	170934	93609.31	375.34	212.94	+
1280.0	14.8	449.6	20.75	176597	96071.37	246.21	213.68	+
1290.0	17.5	459.6	21.32	181385	98153.01	208.16	213.56	-
1300.0	15.6	469.6	21.97	186768	100493.33	234.03	214.00	+
1310.0	14.0	479.6	22.68	192776	103105.53	261.22	214.98	+
1320.0	15.8	489.6	23.31	198318	105421.50	231.60	215.32	+
1330.0	10.2	499.6	24.30	207168	109012.64	359.11	218.20	+
1340.0	10.6	509.6	25.24	215668	112461.75	344.91	220.69	+
1344.8	6.1	514.4	26.03	221520	115319.44	595.35	224.18	+

BIT NUMBER	3	IADC CODE	116	INTERVAL	1344.8- 1989.2
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.2	BIT RUN	644.4
TOTAL HOURS	29.80	TOTAL TURNS	267622	CONDITION	T3 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1350.0	14.8	5.2	0.35	2949	26618.66	247	5119	-
1360.0	17.5	15.2	0.92	7761	28710.44	209	1889	-
1370.0	13.9	25.2	1.64	14206	31331.77	262	1243	-
1380.0	14.9	35.2	2.31	20258	33787.74	245.60	959.88	-
1390.0	17.8	45.2	2.88	25316	35839.96	205.22	792.92	-
1400.0	22.5	55.2	3.32	29308	37460.03	162.01	678.62	-
1410.0	14.6	65.2	4.01	35493	39969.76	250.97	613.03	-
1420.0	17.1	75.2	4.59	40766	42109.22	213.95	559.96	-
1430.0	18.5	85.2	5.13	45638	44086.38	197.72	517.45	-
1440.0	19.1	95.2	5.66	50358	46001.65	191.53	483.21	-
1450.0	27.6	105.2	6.02	53621	47325.50	132.39	449.86	-
1460.0	29.5	115.2	6.36	56673	48564.13	123.86	421.56	-
1470.0	28.7	125.2	6.71	59806	49835.23	127.11	398.04	-
1480.0	20.5	135.2	7.20	64198	51617.61	178.24	381.79	-
1490.0	16.6	145.2	7.80	69607	53812.36	219.48	370.61	-
1500.0	18.8	155.2	8.33	74392	55754.01	194.16	359.24	-
1510.0	20.4	165.2	8.82	78804	57544.50	179.05	348.33	-
1520.0	22.1	175.2	9.27	82882	59199.06	165.46	337.89	-
1530.0	20.2	185.2	9.77	87329	61003.76	180.47	329.39	-
1540.0	20.8	195.2	10.25	91662	62761.79	175.80	321.53	-
1550.0	20.1	205.2	10.75	96149	64582.72	182.09	314.73	-
1560.0	18.3	215.2	11.29	101074	66581.18	199.85	309.39	-
1570.0	19.6	225.2	11.80	105655	68439.93	185.88	303.91	-
1580.0	19.0	235.2	12.33	110397	70364.33	192.44	299.17	-
1590.0	18.7	245.2	12.87	115218	72320.48	195.62	294.94	-
1600.0	20.0	255.2	13.37	119721	74147.50	182.70	290.55	-
1610.0	22.1	265.2	13.82	123791	75799.01	165.15	285.82	-
1620.0	16.3	275.2	14.43	129306	78036.88	223.79	283.56	-
1630.0	19.7	285.2	14.94	133878	79892.30	185.54	280.13	-
1640.0	15.2	295.2	15.60	139816	82301.60	240.93	278.80	-
1650.0	17.8	305.2	16.16	144883	84357.88	205.63	276.40	-

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
1660.0	19.5	315.2	16.67	149501	86231.56	187.37	273.58	-
1670.0	20.9	325.2	17.15	153806	87978.43	174.69	270.54	-
1680.0	23.9	335.2	17.57	157578	89509.23	153.08	267.03	-
1690.0	25.2	345.2	17.97	161143	90955.83	144.66	263.49	-
1700.0	30.1	355.2	18.30	164138	92171.13	121.53	259.49	-
1710.0	30.9	365.2	18.62	167049	93352.45	118.13	255.62	-
1720.0	29.3	375.2	18.97	170119	94598.19	124.57	252.13	-
1730.0	27.6	385.2	19.33	173382	95922.04	132.39	249.02	-
1740.0	26.4	395.2	19.71	176792	97305.74	138.37	246.22	-
1750.0	25.9	405.2	20.09	180264	98714.81	140.91	243.62	-
1760.0	28.4	415.2	20.44	183429	99998.76	128.39	240.84	-
1770.0	22.2	425.2	20.89	187474	101640.13	164.14	239.04	-
1780.0	38.1	435.2	21.16	189837	102598.96	95.88	235.75	-
1790.0	38.8	445.2	21.41	192155	103539.81	94.08	232.57	-
1800.0	29.1	455.2	21.76	195250	104795.69	125.59	230.22	-
1810.0	27.3	465.2	22.12	198550	106134.76	133.91	228.15	-
1820.0	34.6	475.2	22.41	201153	107190.79	105.60	225.57	-
1830.0	33.8	485.2	22.71	203813	108270.16	107.94	223.15	-
1840.0	31.2	495.2	23.03	206702	109442.37	117.22	221.01	-
1850.0	29.5	505.2	23.37	209749	110678.97	123.66	219.08	-
1860.0	32.5	515.2	23.68	212518	111802.69	112.37	217.01	-
1870.0	21.5	525.2	24.14	216710	113503.71	170.10	216.12	-
1880.0	32.3	535.2	24.45	219495	114633.67	113.00	214.19	-
1890.0	23.8	545.2	24.87	223279	116169.34	153.57	213.08	-
1900.0	26.5	555.2	25.25	226676	117547.58	137.82	211.72	-
1910.0	28.5	565.2	25.60	229837	118830.19	128.26	210.24	-
1920.0	27.1	575.2	25.97	233159	120178.39	134.82	208.93	-
1930.0	26.6	585.2	26.35	236539	121549.91	137.15	207.71	-
1940.0	26.0	595.2	26.73	239999	122953.91	140.40	206.58	-
1950.0	16.3	605.2	27.34	245512	125190.76	223.69	206.86	+
1960.0	19.7	615.2	27.85	250074	127042.12	185.14	206.51	-
1970.0	16.7	625.2	28.45	255474	129233.32	219.12	206.71	+
1980.0	21.9	635.2	28.91	259579	130899.03	166.57	206.08	-
1989.2	10.3	644.4	29.80	267622	134162.50	354.72	208.20	+

BIT NUMBER	4	IADC CODE	517	INTERVAL	1989.2- 2389.7
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	400.5
TOTAL HOURS	31.64	TOTAL TURNS	173061	CONDITION	T6 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
1990.0	2.4	0.8	0.33	1079	35655.58	1513	44569	-
2000.0	4.6	10.8	2.49	11592	43534.77	788	4031	-
2010.0	10.6	20.8	3.44	17271	46990.98	346	2259	-
2020.0	12.7	30.8	4.22	21977	49855.77	286	1619	-
2030.0	36.1	40.8	4.50	23637	50866.16	101	1247	-
2040.0	47.3	50.8	4.71	24906	51638.15	77	1016	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2050.0	42.6	60.8	4.94	26314	52495.35	85.72	863.41	-
2060.0	41.9	70.8	5.18	27745	53366.48	87.11	753.76	-
2070.0	67.4	80.8	5.33	28635	53908.19	54.17	667.18	-
2080.0	55.1	90.8	5.51	29724	54570.62	66.24	601.00	-
2090.0	33.5	100.8	5.81	31515	55661.15	109.05	552.19	-
2100.0	37.7	110.8	6.07	33108	56630.49	96.93	511.11	-
2110.0	22.7	120.8	6.52	35749	58238.21	160.77	482.10	-
2120.0	23.0	130.8	6.95	38359	59826.83	158.86	457.39	-
2130.0	14.0	140.8	7.66	42305	62427.87	260.10	443.38	-
2140.0	10.1	150.8	8.66	47678	66061.61	363.37	438.07	-
2150.0	30.5	160.8	8.99	49450	67259.66	119.81	418.28	-
2160.0	20.1	170.8	9.48	52135	69075.52	181.59	404.42	-
2170.0	22.3	180.8	9.93	54556	70712.83	163.73	391.11	-
2180.0	16.0	190.8	10.56	57927	72992.38	227.95	382.56	-
2190.0	13.4	200.8	11.30	61942	75708.05	271.57	377.03	-
2200.0	14.5	210.8	11.99	65663	78224.59	251.65	371.08	-
2210.0	13.8	220.8	12.71	69569	80866.00	264.14	366.24	-
2220.0	18.6	230.8	13.25	72477	82833.03	196.70	358.90	-
2230.0	12.5	240.8	14.05	76812	85764.78	293.17	356.17	-
2240.0	25.5	250.8	14.44	78929	87196.16	143.14	347.67	-
2250.0	19.1	260.8	14.97	81736	89107.37	191.12	341.67	-
2260.0	12.2	270.8	15.79	86179	92112.15	300.48	340.15	-
2270.0	10.2	280.8	16.77	91477	95695.17	358.30	340.79	+
2280.0	12.2	290.8	17.59	95906	98690.83	299.57	339.38	-
2290.0	26.9	300.8	17.96	97916	100050.18	135.94	332.61	-
2300.0	16.3	310.8	18.58	101281	102291.09	224.09	329.12	-
2310.0	10.4	320.8	19.54	106916	105794.98	350.39	329.78	+
2320.0	10.7	330.8	20.47	112376	109203.51	340.85	330.12	+
2330.0	5.2	340.8	22.40	122816	116264.05	706.05	341.15	+
2340.0	4.7	350.8	24.53	134285	124020.77	775.67	353.54	+
2350.0	8.1	360.8	25.76	140962	128536.06	451.53	356.25	+
2360.0	8.9	370.8	26.89	147020	132633.40	409.73	357.70	+
2370.0	8.7	380.8	28.03	153218	136825.09	419.17	359.31	+
2380.0	6.5	390.8	29.58	161590	142486.70	566.16	364.60	+
2389.7	4.7	400.5	31.64	173061	150006.78	775.27	374.55	+

BIT NUMBER	5	IADC CODE	517	INTERVAL	2389.7- 2667.4
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.7	BIT RUN	277.7
TOTAL HOURS	31.19	TOTAL TURNS	164301	CONDITION	T8 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2390.0	7.6	0.3	0.04	190	36780.96	482	122603	-
2400.0	5.0	10.3	2.05	10667	44137.71	736	4285	-
2410.0	9.6	20.3	3.10	16312	47955.06	382	2362	-
2420.0	9.9	30.3	4.11	21776	51650.69	370	1705	-
2430.0	10.2	40.3	5.09	27062	55225.59	357	1370	-

DEPTH	ROP	BIT RUN	HOURS	URNS	TOTAL COST	ICOST	CCOST	I-C
2440.0	10.2	50.3	6.07	32351	58802.52	358	1169	-
2450.0	19.8	60.3	6.58	35084	60650.84	185	1006	-
2460.0	12.0	70.3	7.41	39601	63705.40	305.46	906.19	-
2470.0	10.9	80.3	8.33	44575	67069.86	336.45	835.24	-
2480.0	12.8	90.3	9.11	48789	69919.79	284.99	774.31	-
2490.0	11.3	100.3	10.00	53561	73146.74	322.69	729.28	-
2500.0	9.5	110.3	11.04	59217	76972.21	382.55	697.84	-
2510.0	11.1	120.3	11.94	64067	80251.90	327.97	667.10	-
2520.0	12.4	130.3	12.75	68427	83200.89	294.90	638.53	-
2530.0	11.5	140.3	13.62	73124	86377.12	317.62	615.66	-
2540.0	12.1	150.3	14.45	77585	89393.85	301.67	594.77	-
2550.0	9.2	160.3	15.53	83449	93360.14	396.63	582.41	-
2560.0	11.0	170.3	16.44	88341	96668.25	330.81	567.64	-
2570.0	14.3	180.3	17.14	92116	99221.10	255.28	550.31	-
2580.0	7.5	190.3	18.48	98943	104109.82	488.87	547.08	-
2590.0	8.2	200.3	19.69	104788	108557.14	444.73	541.97	-
2600.0	10.1	210.3	20.68	109523	112159.43	360.23	533.33	-
2610.0	8.4	220.3	21.87	115236	116506.33	434.69	528.85	-
2620.0	8.0	230.3	23.12	121237	121072.34	456.60	525.72	-
2630.0	5.6	240.3	24.89	130314	127538.41	646.61	530.75	+
2640.0	8.3	250.3	26.10	136851	131959.36	442.09	527.20	-
2650.0	5.8	260.3	27.84	146222	138296.59	633.72	531.30	+
2660.0	6.0	270.3	29.51	155247	144400.51	610.39	534.22	+
2667.4	4.4	277.7	31.19	164301	150555.14	831.71	542.15	+

BIT NUMBER	6	IADC CODE	517	INTERVAL	2667.4-	2913.0
HTC J22		SIZE	12.250	NOZZLES	18	18 18
COST	8516.00	TRIP TIME	8.2	BIT RUN		245.6
TOTAL HOURS	31.76	TOTAL TURNS	166345	CONDITION	T8	B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2670.0	5.0	2.6	0.52	2335	40357.38	729	15522	-
2680.0	7.4	12.6	1.86	9091	45267.29	491	3593	-
2690.0	11.0	22.6	2.78	14021	48601.77	333	2151	-
2700.0	5.6	32.6	4.56	23158	55102.33	650	1690	-
2710.0	9.9	42.6	5.57	28333	58808.10	371	1380	-
2720.0	7.0	52.6	7.01	36014	64060.89	525	1218	-
2730.0	5.7	62.6	8.77	45531	70497.54	644	1126	-
2740.0	6.9	72.6	10.22	53348	75783.95	529	1044	-
2750.0	13.4	82.6	10.96	57372	78505.71	272.18	950.43	-
2760.0	15.2	92.6	11.62	60921	80905.88	240.02	873.71	-
2770.0	9.6	102.6	12.66	66551	84713.09	380.72	825.66	-
2780.0	11.0	112.6	13.57	71466	88037.43	332.43	781.86	-
2790.0	9.8	122.6	14.60	76977	91764.49	372.71	748.49	-
2800.0	9.7	132.6	15.63	82568	95545.33	378.08	720.55	-
2810.0	6.6	142.6	17.14	90726	101062.89	551.76	708.72	-
2820.0	8.3	152.6	18.34	97220	105454.42	439.15	691.05	-
2830.0	8.3	162.6	19.55	103745	109867.26	441.28	675.69	-
2840.0	6.8	172.6	21.02	111590	115244.83	537.76	667.70	-
2850.0	11.1	182.6	21.92	116172	118526.22	328.14	649.10	-
2860.0	7.0	192.6	23.35	123434	123726.26	520.00	642.40	-
2870.0	5.4	202.6	25.19	132828	130453.04	672.68	643.89	+
2880.0	5.3	212.6	27.07	142415	137317.78	686.47	645.90	+
2890.0	8.6	222.6	28.23	148332	141555.12	423.73	635.92	-
2900.0	8.1	232.6	29.46	154612	146052.15	449.70	627.91	-
2910.0	7.3	242.6	30.84	161629	151076.92	502.48	622.74	-
2913.0	3.2	245.6	31.76	166345	154453.51	1126	629	+

BIT NUMBER	7	IADC CODE	517	INTERVAL	2913.0-	3046.5
HTC J22		SIZE	12.250	NOZZLES	18	18 18
COST	8516.00	TRIP TIME	8.7	BIT RUN		133.5
TOTAL HOURS	16.88	TOTAL TURNS	86402	CONDITION	T8	B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2920.0	7.8	7.0	0.89	4433	43549.18	466	6221	-
2930.0	7.8	17.0	2.17	10934	48204.04	465	2836	-
2940.0	6.3	27.0	3.76	19055	54019.17	582	2001	-
2950.0	9.7	37.0	4.79	24325	57792.91	377	1562	-
2960.0	10.0	47.0	5.79	29406	61431.72	364	1307	-
2970.0	9.0	57.0	6.90	35051	65473.88	404	1149	-
2980.0	7.0	67.0	8.33	42360	70707.62	523	1055	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2990.0	11.1	77.0	9.23	46950	73994.42	328.68	960.97	-
3000.0	9.8	87.0	10.25	52170	77732.40	373.80	893.48	-
3010.0	8.1	97.0	11.49	58490	82258.27	452.59	848.02	-
3020.0	9.8	107.0	12.51	63698	85987.27	372.90	803.62	-
3030.0	7.4	117.0	13.87	70620	90943.80	495.65	777.30	-
3040.0	7.0	127.0	15.31	77948	96191.34	524.75	757.41	-
3046.5	4.1	133.5	16.88	86402	101920.93	881.47	763.45	+

BIT NUMBER	8	IADC CODE	517	INTERVAL	3046.0-	3165.2
HTC J33		SIZE	12.250	NOZZLES	18	18
COST	8516.00	TRIP TIME	8.7	BIT RUN		119.2
TOTAL HOURS	20.85	TOTAL TURNS	87015	CONDITION	T3	B3 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3050.0	8.4	4.0	0.48	2063	42029.19	435	10507	-
3060.0	8.7	14.0	1.63	6889	46224.93	420	3302	-
3070.0	9.9	24.0	2.64	11133	49915.48	369	2080	-
3080.0	7.8	34.0	3.93	16551	54626.56	471	1607	-
3090.0	6.2	44.0	5.53	23283	60479.90	585	1375	-
3100.0	7.3	54.0	6.89	29013	65462.85	498	1212	-
3110.0	6.8	64.0	8.36	35192	70835.35	537	1107	-
3120.0	5.3	74.0	10.24	43087	77700.10	686	1050	-
3130.0	6.6	84.0	11.75	49417	83204.47	550.44	990.53	-
3140.0	4.1	94.0	14.22	59767	92203.61	899.91	980.89	-
3150.0	6.1	104.0	15.86	66684	98218.25	601.46	944.41	-
3160.0	3.1	114.0	19.06	80131	109910.74	1169	964	+
3165.2	2.9	119.2	20.85	87015	116446.80	1257	977	+

BIT NUMBER	9	IADC CODE	537	INTERVAL	3165.2-	3267.1
HTC J33		SIZE	12.250	NOZZLES	18	18
COST	7774.00	TRIP TIME	8.8	BIT RUN		101.9
TOTAL HOURS	31.09	TOTAL TURNS	98544	CONDITION	T2	B3 G0.063

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3170.0	2.7	4.8	1.79	6453	46457.61	1364	9679	-
3180.0	2.8	14.8	5.33	19183	59372.16	1291	4012	-
3190.0	6.0	24.8	7.00	25975	65457.81	609	2639	-
3200.0	2.7	34.8	10.76	37554	79195.42	1374	2276	-
3210.0	4.1	44.8	13.19	44855	88082.97	889	1966	-
3220.0	4.1	54.8	15.61	52120	96927.91	884	1769	-
3230.0	3.6	64.8	18.41	60502	107131.19	1020	1653	-
3240.0	2.7	74.8	22.17	71791	120873.87	1374	1616	-
3250.0	2.6	84.8	25.95	83125	134671.33	1380	1588	-
3260.0	3.2	94.8	29.09	92568	146166.00	1149	1542	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3267.1	3.6	101.9	31.09	98544	153440.58	1025	1506	-

BIT NUMBER	10	IADC CODE	537	INTERVAL	3267.1- 3321.2			
HTC J33		SIZE	12.250	NOZZLES	18 18 18			
COST	7774.00	TRIP TIME	8.7	BIT RUN	54.1			
TOTAL HOURS	14.62	TOTAL TURNS	43857	CONDITION	T2 B2 G0.000			

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3270.0	2.8	2.9	1.03	3094	43312.65	1299	14935	-
3280.0	3.4	12.9	3.93	11799	53909.54	1060	4179	-
3290.0	4.6	22.9	6.10	18292	61814.09	790	2699	-
3300.0	3.5	32.9	8.94	26832	72210.12	1040	2195	-
3310.0	3.4	42.9	11.92	35753	83069.74	1086	1936	-
3320.0	4.1	52.9	14.35	43055	91958.31	889	1738	-
3321.2	4.5	54.1	14.62	43857	92935.22	814	1718	-

BIT NUMBER	11	IADC CODE	537	INTERVAL	3321.2- 3447.0			
HTC J33		SIZE	12.250	NOZZLES	18 18 18			
COST	7774.00	TRIP TIME	9.3	BIT RUN	125.8			
TOTAL HOURS	40.33	TOTAL TURNS	123103	CONDITION	T2 B4 G0.062			

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3330.0	3.7	8.8	2.36	6679	50356.11	979	5722	-
3340.0	3.5	18.8	5.25	15343	60902.24	1055	3239	-
3350.0	2.9	28.8	8.66	25590	73376.86	1247	2548	-
3360.0	3.7	38.8	11.39	33784	83351.90	998	2148	-
3370.0	5.9	48.8	13.10	38903	89582.61	623	1836	-
3380.0	3.0	58.8	16.46	48967	101834.06	1225	1732	-
3390.0	3.0	68.8	19.80	58993	114038.84	1220	1658	-
3400.0	2.9	78.8	23.27	69396	126703.16	1266	1608	-
3410.0	5.1	88.8	25.23	75303	133893.55	719	1508	-
3420.0	2.4	98.8	29.34	87618	148885.70	1499	1507	-
3430.0	2.0	108.8	34.42	103926	167454.10	1857	1539	+
3440.0	2.7	118.8	38.17	116619	181120.12	1367	1525	-
3447.0	3.2	125.8	40.33	123103	189013.51	1128	1502	-

BIT NUMBER	12	IADC CODE	517	INTERVAL	3447.0- 3453.1
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	9.3	BIT RUN	6.1
TOTAL HOURS	0.63	TOTAL TURNS	2208	CONDITION	T1 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3450.0	11.7	3.0	0.26	871	43415.37	312	14472	-
3453.1	8.3	6.1	0.63	2208	44771.68	438	7340	-

BIT NUMBER	12	IADC CODE	4	INTERVAL	3453.1- 3462.8
CHRIS RC4		SIZE	9.875	NOZZLES	14 15 15
COST	18000.00	TRIP TIME	9.3	BIT RUN	9.7
TOTAL HOURS	1.16	TOTAL TURNS	6548	CONDITION	T0 B0 G0.100

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3460.0	12.8	6.9	0.54	2998	53931.62	285	7816	-
3462.8	4.5	9.7	1.16	6548	56206.01	812	5794	-

BIT NUMBER	12	IADC CODE	517	INTERVAL	3462.8- 3521.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	0.00	TRIP TIME	9.5	BIT RUN	58.2
TOTAL HOURS	14.94	TOTAL TURNS	59427	CONDITION	T3 B4 G0.375

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3470.0	3.7	13.3	2.57	9032	44076.03	984	3314	-
3480.0	3.2	23.3	5.70	20596	55492.59	1142	2382	-
3490.0	4.9	33.3	7.73	29134	62917.33	742	1889	-
3500.0	4.7	43.3	9.86	38080	70695.35	778	1633	-
3510.0	5.8	53.3	11.58	45330	77000.12	630	1445	-
3520.0	3.3	63.3	14.58	57906	87934.82	1093	1389	-
3521.0	2.8	64.3	14.94	59427	89257.66	1323	1388	-

(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.

ZPSP Percentage of surface pressure dropped
at the bit.

H.H.P. Bit hydraulic horsepower.

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

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

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

BIT NUMBER	1	IADC CODE	111	INTERVAL	86.0- 225.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.0	BIT RUN	139.0
TOTAL HOURS	3.08	TOTAL TURNS	11808	CONDITION	T1 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
90.0	430	250.9	172.8	68.9	43	0.08	287	46
100.0	550	390.0	282.8	72.5	91	0.17	469	58
110.0	580	355.0	314.8	88.7	107	0.20	523	61
120.0	605	444.0	341.8	77.0	121	0.23	567	64
130.0	693	600.3	449.1	74.8	182	0.34	745	73
140.0	870	887.9	707.3	79.7	359	0.68	1174	92
150.0	973	1084.8	885.4	81.6	503	0.95	1470	103
160.0	981	1106.8	899.3	81.3	515	0.97	1493	104
170.0	991	1133.7	918.0	81.0	531	1.00	1524	105
180.0	990	1127.0	916.6	81.3	529	1.00	1522	105
190.0	991	1134.4	917.8	80.9	531	1.00	1524	105
200.0	989	1135.1	913.8	80.5	527	0.99	1517	105
210.0	1000	1161.8	934.3	80.4	545	1.03	1551	106
220.0	997	1166.4	928.5	79.6	540	1.02	1541	106
225.0	994	1169.1	923.9	79.0	536	1.01	1534	105

BIT NUMBER	1	IADC CODE	111	INTERVAL	225.0- 830.4
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN	605.4
TOTAL HOURS	12.72	TOTAL TURNS	106193	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
230.0	823	1782.8	965.6	54.2	464	1.93	1298	108
240.0	828	1809.6	978.1	54.1	473	1.97	1315	108
250.0	835	1851.9	994.3	53.7	485	2.01	1337	109
260.0	829	1835.9	974.5	53.1	471	1.96	1310	108
270.0	825	1827.9	966.8	52.9	465	1.93	1300	108
280.0	835	1875.9	989.7	52.8	482	2.00	1331	109
290.0	836	1975.5	998.0	50.5	487	2.03	1342	109
300.0	842	1927.5	1013.7	52.6	498	2.07	1363	110
310.0	844	1942.4	1021.5	52.6	503	2.09	1374	110
320.0	843	2006.7	1021.6	50.9	502	2.09	1374	110
330.0	829	1907.9	991.2	52.0	479	1.99	1333	108
340.0	830	1956.0	992.4	50.7	480	2.00	1334	109
350.0	831	1947.3	998.4	51.3	484	2.01	1343	109
360.0	844	2016.4	1033.6	51.3	509	2.12	1390	110
370.0	835	1984.3	1012.1	51.0	493	2.05	1361	109
380.0	835	1994.0	1015.9	50.9	495	2.06	1366	109
390.0	813	2043.7	960.4	47.0	456	1.89	1291	106
400.0	919	2368.9	1224.3	51.7	657	2.73	1646	121

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
410.0	919	2390.1	1226.4	51.3	658	2.73	1649	120
420.0	920	2450.8	1230.6	50.2	661	2.75	1655	120
430.0	919	2489.8	1232.6	49.5	661	2.75	1658	120
440.0	918	2440.2	1222.8	50.1	655	2.72	1644	120
450.0	929	2439.2	1244.5	51.0	675	2.81	1673	122
460.0	926	2471.0	1240.7	50.2	670	2.79	1668	121
470.0	912	2424.3	1209.6	49.9	644	2.68	1627	119
480.0	919	2439.3	1229.7	50.4	659	2.74	1654	120
490.0	924	2471.4	1246.5	50.4	672	2.80	1676	121
500.0	911	2407.3	1206.6	50.1	641	2.67	1623	119
510.0	925	2503.9	1251.3	50.0	675	2.81	1683	121
520.0	921	2441.8	1234.1	50.5	663	2.76	1660	121
530.0	928	2440.0	1248.2	51.2	676	2.81	1678	121
540.0	913	2412.8	1207.2	50.0	643	2.67	1623	119
550.0	919	2446.6	1217.7	49.8	653	2.71	1637	120
560.0	917	2437.0	1206.1	49.5	645	2.68	1622	120
570.0	917	2458.5	1216.1	49.5	650	2.70	1635	120
580.0	924	2500.6	1237.1	49.5	667	2.77	1664	121
590.0	970	2743.8	1360.5	49.6	770	3.20	1829	127
600.0	978	2805.9	1394.2	49.7	795	3.31	1875	128
610.0	988	2856.6	1418.8	49.7	818	3.40	1908	129
620.0	983	2713.8	1393.6	51.4	799	3.32	1874	129
630.0	983	2728.2	1393.9	51.1	800	3.32	1874	129
640.0	983	2720.9	1400.5	51.5	803	3.34	1883	129
650.0	983	2715.5	1400.5	51.6	803	3.34	1883	129
660.0	983	2715.9	1397.4	51.5	801	3.33	1879	129
670.0	987	2718.6	1391.7	51.2	802	3.33	1871	129
680.0	988	2726.7	1402.1	51.4	808	3.36	1885	129
690.0	987	2731.1	1400.3	51.3	806	3.35	1883	129
700.0	975	2696.2	1369.4	50.8	779	3.24	1842	128
710.0	978	2716.8	1383.8	50.9	790	3.28	1861	128
720.0	975	2750.9	1353.3	49.2	770	3.20	1820	128
730.0	975	2682.1	1356.7	50.6	772	3.21	1824	128
740.0	965	2588.8	1329.5	51.4	749	3.11	1788	126
750.0	978	2726.1	1363.0	50.0	777	3.23	1833	128
760.0	972	2688.0	1344.7	50.0	763	3.17	1808	127
770.0	974	2744.5	1352.4	49.3	768	3.19	1819	127
780.0	976	2718.8	1359.3	50.0	774	3.22	1828	128
790.0	978	2743.7	1367.5	49.8	780	3.24	1839	128
800.0	977	2744.9	1364.6	49.7	778	3.23	1835	128
810.0	973	2730.5	1360.6	49.8	773	3.21	1830	127
820.0	973	2733.9	1355.2	49.6	769	3.20	1822	127
830.0	981	2792.3	1371.0	49.1	785	3.26	1844	128
830.4	981	2790.3	1367.4	49.0	783	3.25	1839	128

BIT NUMBER	2	IADC CODE	114	INTERVAL	830.4- 1344.8
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2381.00	TRIP TIME	4.9	BIT RUN	514.4
TOTAL HOURS	26.03	TOTAL TURNS	221520	CONDITION	T4 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
840.0	946	2815.1	1311.1	46.6	723	6.14	1763	124
850.0	944	2797.1	1304.3	46.6	718	6.10	1754	124
860.0	944	2799.2	1302.9	46.5	718	6.09	1752	124
870.0	941	2806.5	1296.7	46.2	712	6.04	1744	123
880.0	947	2809.8	1301.9	46.3	719	6.10	1751	124
890.0	950	2811.8	1307.6	46.5	725	6.15	1758	124
900.0	948	2798.9	1300.5	46.5	719	6.10	1749	124
910.0	950	2817.2	1306.2	46.4	724	6.14	1757	124
920.0	949	2807.8	1300.4	46.3	720	6.11	1749	124
930.0	946	2913.1	1334.7	45.8	737	6.25	1795	124
940.0	945	2909.5	1326.7	45.6	732	6.21	1784	124
950.0	945	2913.5	1324.2	45.5	730	6.20	1781	124
960.0	947	2944.0	1327.2	45.1	733	6.22	1785	124
970.0	944	2925.0	1314.0	44.9	724	6.14	1767	124
980.0	949	2944.6	1324.0	45.0	733	6.22	1780	124
990.0	943	2927.8	1324.8	45.2	729	6.19	1781	123
1000.0	945	2905.1	1323.1	45.5	729	6.19	1779	124
1010.0	945	2901.3	1317.0	45.4	726	6.16	1771	124
1020.0	938	2900.8	1302.4	44.9	713	6.05	1751	123
1030.0	926	2929.6	1278.8	43.7	691	5.86	1720	121
1040.0	929	2951.5	1285.9	43.6	697	5.91	1729	121
1050.0	920	2956.9	1275.4	43.1	685	5.81	1715	120
1060.0	915	2926.6	1264.5	43.2	675	5.73	1700	120
1070.0	916	2930.5	1234.2	42.1	660	5.60	1660	120
1080.0	915	2960.5	1256.4	42.4	670	5.69	1689	120
1090.0	913	2959.4	1247.5	42.2	664	5.64	1678	119
1100.0	916	2952.3	1235.1	41.8	660	5.60	1661	120
1110.0	912	2930.9	1220.8	41.7	650	5.51	1642	119
1120.0	902	2923.5	1214.3	41.5	639	5.42	1633	118
1130.0	907	2912.8	1211.1	41.6	641	5.44	1629	119
1140.0	906	2966.2	1220.3	41.1	645	5.47	1641	119
1150.0	897	2931.7	1198.2	40.9	627	5.32	1611	117
1160.0	887	2910.9	1176.5	40.4	609	5.17	1582	116
1170.0	554	1149.0	462.8	40.3	150	1.27	622	72
1180.0	893	2957.1	1202.7	40.7	626	5.32	1617	117
1190.0	888	2937.5	1189.3	40.5	616	5.23	1599	116
1200.0	892	2968.7	1201.6	40.5	625	5.31	1616	117
1210.0	885	2936.9	1182.6	40.3	611	5.18	1590	116
1220.0	888	2941.6	1185.7	40.3	614	5.21	1594	116
1230.0	882	2962.2	1161.2	39.2	597	5.07	1561	115
1240.0	882	2957.8	1164.8	39.4	599	5.08	1566	115
1250.0	882	2928.1	1171.6	40.0	603	5.12	1575	115
1260.0	881	2913.9	1151.4	39.5	592	5.02	1548	115

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1270.0	554	1169.5	454.2	38.8	147	1.25	611	72
1280.0	881	2895.4	1155.4	39.9	594	5.04	1554	115
1290.0	880	2883.4	1154.8	40.1	593	5.03	1553	115
1300.0	883	2910.5	1161.6	39.9	598	5.07	1562	115
1310.0	885	2938.7	1163.6	39.6	601	5.10	1565	116
1320.0	883	2937.9	1155.1	39.3	595	5.05	1553	115
1330.0	854	2638.4	1087.6	41.2	542	4.60	1462	112
1340.0	878	2904.0	1148.6	39.6	588	4.99	1545	115
1344.8	448	1439.8	298.6	20.7	78	0.66	401	59

BIT NUMBER	3	IADC CODE	116	INTERVAL	1344.8- 1989.2
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.2	BIT RUN	644.4
TOTAL HOURS	29.80	TOTAL TURNS	267622	CONDITION	T3 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1350.0	878	2955.8	1188.8	40.2	609	5.17	1599	115
1360.0	553	1200.7	468.2	39.0	151	1.28	630	72
1370.0	560	1172.7	481.6	41.1	157	1.34	648	73
1380.0	550	1188.5	463.2	39.0	149	1.26	623	72
1390.0	881	3012.8	1192.6	39.6	613	5.20	1604	115
1400.0	618	1450.4	582.3	40.1	210	1.78	783	81
1410.0	878	2998.1	1178.6	39.3	604	5.12	1585	115
1420.0	882	3014.0	1178.5	39.1	606	5.14	1585	115
1430.0	878	2997.8	1171.7	39.1	600	5.09	1576	115
1440.0	871	2975.8	1148.4	38.6	583	4.95	1544	114
1450.0	869	2990.9	1148.5	38.4	582	4.94	1544	114
1460.0	867	2974.7	1135.1	38.2	574	4.87	1526	113
1470.0	868	2984.5	1143.4	38.3	579	4.91	1537	114
1480.0	865	2962.9	1136.7	38.4	574	4.87	1528	113
1490.0	864	2977.9	1134.3	38.1	572	4.85	1525	113
1500.0	865	2986.4	1137.6	38.1	574	4.87	1530	113
1510.0	862	2981.6	1130.5	37.9	568	4.82	1520	113
1520.0	868	3030.7	1148.5	37.9	582	4.93	1544	114
1530.0	859	2968.1	1124.5	37.9	563	4.78	1512	112
1540.0	860	2988.3	1128.3	37.8	566	4.81	1517	113
1550.0	857	2961.8	1119.2	37.8	559	4.75	1505	112
1560.0	856	2957.8	1116.2	37.7	557	4.73	1501	112
1570.0	854	2946.0	1124.8	38.2	561	4.76	1512	112
1580.0	851	2931.8	1116.6	38.1	555	4.71	1502	111
1590.0	859	2965.0	1136.5	38.3	569	4.83	1528	112
1600.0	856	2973.9	1128.1	37.9	563	4.78	1517	112
1610.0	855	2993.2	1125.5	37.6	561	4.76	1513	112
1620.0	845	2936.0	1094.4	37.3	539	4.58	1472	111
1630.0	847	2945.4	1099.4	37.3	543	4.61	1478	111
1640.0	849	2975.1	1105.4	37.2	548	4.65	1486	111
1650.0	844	2844.5	1101.1	38.7	542	4.60	1481	110

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
1660.0	527	1111.4	428.7	38.6	132	1.12	576	69
1670.0	560	1339.9	485.6	36.2	159	1.35	653	73
1680.0	592	1422.1	541.7	38.1	187	1.59	728	77
1690.0	832	2941.4	1074.9	36.5	521	4.42	1445	109
1700.0	831	2949.7	1064.5	36.1	516	4.38	1431	109
1710.0	832	2961.9	1080.9	36.5	525	4.45	1454	109
1720.0	834	2926.8	1065.7	36.4	518	4.40	1433	109
1730.0	842	2918.9	1085.6	37.2	533	4.53	1460	110
1740.0	842	2960.2	1092.5	36.9	537	4.56	1469	110
1750.0	846	2975.3	1093.0	36.7	539	4.58	1470	111
1760.0	835	2930.0	1073.6	36.6	523	4.44	1444	109
1770.0	838	2862.7	1071.2	37.4	524	4.44	1440	110
1780.0	840	2949.0	1086.5	36.8	532	4.52	1461	110
1790.0	840	2947.8	1083.5	36.8	531	4.51	1457	110
1800.0	842	2914.7	1073.3	36.8	527	4.48	1443	110
1810.0	845	2945.7	1083.7	36.8	535	4.54	1457	111
1820.0	843	2931.6	1072.6	36.6	528	4.48	1442	110
1830.0	843	2953.3	1073.0	36.3	527	4.48	1443	110
1840.0	845	2960.0	1099.5	37.1	542	4.60	1478	111
1850.0	845	2975.0	1099.5	37.0	542	4.60	1478	111
1860.0	845	2980.0	1099.5	36.9	542	4.60	1478	111
1870.0	830	2970.0	1060.8	35.7	513	4.36	1426	109
1880.0	830	2990.0	1060.8	35.5	513	4.36	1426	109
1890.0	820	3000.0	1035.4	34.5	495	4.20	1392	107
1900.0	820	2970.0	1035.4	34.9	495	4.20	1392	107
1910.0	820	2970.0	1035.4	34.9	495	4.20	1392	107
1920.0	814	2989.7	1022.0	34.2	485	4.12	1374	107
1930.0	806	2959.1	1008.4	34.1	474	4.02	1356	105
1940.0	804	2952.4	997.2	33.8	468	3.97	1341	105
1950.0	804	2943.7	1004.4	34.1	471	4.00	1351	105
1960.0	557	1455.7	483.6	33.2	157	1.33	650	73
1970.0	807	2980.1	1023.4	34.3	482	4.09	1376	106
1980.0	803	2951.4	1016.6	34.4	476	4.04	1367	105
1989.2	803	2991.6	1010.3	33.8	473	4.01	1359	105

BIT NUMBER	4	IADC CODE	517	INTERVAL	1989.2- 2389.7
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	400.5
TOTAL HOURS	31.64	TOTAL TURNS	173061	CONDITION	T6 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
1990.0	760	2941.4	909.7	30.9	403	3.42	1223	99
2000.0	789	2981.0	981.1	32.9	452	3.83	1319	103
2010.0	791	2967.2	991.1	33.4	457	3.88	1333	104
2020.0	794	2990.6	989.0	33.1	458	3.89	1330	104
2030.0	747	3000.1	875.5	29.2	382	3.24	1177	98
2040.0	787	3006.4	968.8	32.2	445	3.77	1303	103

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
2050.0	791	2999.3	978.9	32.6	452	3.83	1316	103
2060.0	792	3007.7	987.2	32.8	456	3.87	1328	104
2070.0	788	2988.9	977.5	32.7	449	3.81	1314	103
2080.0	784	2950.8	966.6	32.8	442	3.75	1300	103
2090.0	788	3004.3	978.2	32.6	450	3.82	1315	103
2100.0	795	3010.0	994.1	33.0	461	3.91	1337	104
2110.0	792	2972.9	997.7	33.6	461	3.91	1342	104
2120.0	792	2984.8	995.3	33.3	460	3.90	1338	104
2130.0	777	2896.9	956.4	33.0	434	3.68	1286	102
2140.0	794	3004.7	995.2	33.1	461	3.91	1338	104
2150.0	791	3003.6	990.9	33.0	457	3.88	1332	103
2160.0	787	2983.6	982.8	32.9	451	3.83	1322	103
2170.0	787	2987.5	985.2	33.0	452	3.84	1325	103
2180.0	794	2981.8	999.9	33.5	463	3.93	1345	104
2190.0	784	2978.6	972.8	32.7	445	3.78	1308	103
2200.0	778	2916.9	958.2	32.8	435	3.69	1288	102
2210.0	774	2911.4	950.4	32.6	429	3.64	1278	101
2220.0	775	2910.7	944.1	32.4	427	3.62	1270	101
2230.0	776	2921.2	947.4	32.4	429	3.64	1274	101
2240.0	776	2941.5	944.3	32.1	427	3.63	1270	101
2250.0	772	2907.0	937.4	32.2	422	3.58	1260	101
2260.0	775	2923.5	944.8	32.3	427	3.62	1270	101
2270.0	775	2910.3	942.2	32.4	426	3.61	1267	101
2280.0	772	2888.8	928.2	32.1	418	3.55	1248	101
2290.0	780	2951.7	943.0	31.9	429	3.64	1268	102
2300.0	525	1400.3	430.8	30.8	132	1.12	579	69
2310.0	555	1548.3	484.7	31.3	157	1.33	652	73
2320.0	781	2963.4	967.2	32.6	441	3.74	1301	102
2330.0	783	2955.8	961.1	32.5	439	3.73	1292	102
2340.0	787	2982.8	972.0	32.6	446	3.79	1307	103
2350.0	787	2985.8	968.7	32.4	445	3.77	1303	103
2360.0	785	2983.0	964.3	32.3	441	3.75	1297	103
2370.0	787	2998.7	970.6	32.4	446	3.78	1305	103
2380.0	787	3009.6	974.1	32.4	448	3.80	1310	103
2389.7	784	3009.6	959.4	31.9	439	3.72	1290	103

BIT NUMBER	5	IADC CODE	517	INTERVAL	2389.7- 2667.4
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.7	BIT RUN	277.7
TOTAL HOURS	31.19	TOTAL TURNS	164301	CONDITION	T8 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
2390.0	551	1625.1	478.5	29.4	154	1.31	643	72
2400.0	762	2906.1	914.4	31.5	407	3.45	1230	100
2410.0	775	2984.9	936.6	31.4	423	3.59	1259	101
2420.0	772	2983.0	929.0	31.1	419	3.55	1249	101
2430.0	774	3008.7	931.2	31.0	421	3.57	1252	101

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2440.0	768	2966.0	916.1	30.9	411	3.48	1232	101
2450.0	765	2964.9	909.6	30.7	406	3.45	1223	100
2460.0	770	2992.0	932.6	31.2	419	3.55	1254	101
2470.0	770	2992.0	932.6	31.2	419	3.55	1254	101
2480.0	765	2983.4	918.8	30.8	410	3.48	1236	100
2490.0	767	2996.9	920.3	30.7	412	3.50	1238	100
2500.0	765	2981.6	912.9	30.6	407	3.46	1228	100
2510.0	766	2978.7	916.1	30.8	409	3.47	1232	100
2520.0	765	2971.3	920.1	31.0	411	3.49	1237	100
2530.0	762	2953.0	911.2	30.9	405	3.44	1225	100
2540.0	763	2991.8	915.7	30.6	408	3.46	1231	100
2550.0	764	2978.5	914.8	30.7	408	3.46	1230	100
2560.0	761	2991.5	906.6	30.3	402	3.41	1219	100
2570.0	759	2988.2	904.7	30.3	401	3.40	1217	99
2580.0	761	3002.2	905.6	30.2	402	3.41	1218	100
2590.0	756	3005.1	895.6	29.8	395	3.35	1204	99
2600.0	755	3009.5	889.5	29.6	392	3.32	1196	99
2610.0	756	3007.5	902.3	30.0	398	3.37	1213	99
2620.0	755	3020.8	901.5	29.8	397	3.37	1212	99
2630.0	756	3009.0	900.4	29.9	397	3.37	1211	99
2640.0	752	2996.9	891.3	29.7	391	3.32	1199	98
2650.0	754	2997.5	898.7	30.0	396	3.36	1209	99
2660.0	756	3010.5	901.6	29.9	397	3.37	1212	99
2667.4	754	2997.7	895.4	29.9	394	3.34	1204	99

BIT NUMBER	6	IADC CODE	517	INTERVAL	2667.4- 2913.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.2	BIT RUN	245.6
TOTAL HOURS	31.76	TOTAL TURNS	166345	CONDITION	T8 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2670.0	735	2957.1	860.4	29.1	369	3.13	1157	96
2680.0	743	2952.7	877.7	29.7	380	3.23	1180	97
2690.0	743	2947.7	878.1	29.8	381	3.23	1181	97
2700.0	744	2949.9	875.7	29.7	380	3.23	1178	97
2710.0	753	2998.8	894.6	29.8	393	3.33	1203	98
2720.0	745	2947.7	869.4	29.5	378	3.21	1169	97
2730.0	748	2947.2	887.9	30.1	388	3.29	1194	98
2740.0	749	2949.8	888.4	30.1	388	3.29	1195	98
2750.0	742	2929.8	884.7	30.2	383	3.25	1190	97
2760.0	746	2932.9	894.6	30.5	389	3.30	1203	98
2770.0	750	2970.8	904.3	30.4	396	3.36	1216	98
2780.0	750	2987.9	904.0	30.3	396	3.36	1216	98
2790.0	753	2948.3	925.0	31.4	406	3.45	1244	98
2800.0	750	2946.9	895.5	30.4	392	3.32	1204	98
2810.0	749	2947.3	890.8	30.2	389	3.30	1198	98
2820.0	748	2960.6	889.4	30.0	388	3.29	1196	98
2830.0	750	2953.4	895.6	30.3	392	3.32	1204	98
2840.0	640	2496.8	645.2	25.8	241	2.04	868	84
2850.0	747	2962.3	871.6	29.4	380	3.22	1172	98
2860.0	742	2928.6	863.9	29.5	374	3.18	1162	97
2870.0	748	2959.2	878.8	29.7	384	3.25	1182	98
2880.0	751	2980.4	886.9	29.8	389	3.30	1193	98
2890.0	756	2972.5	897.5	30.2	396	3.36	1207	99
2900.0	748	2986.2	876.1	29.3	382	3.24	1178	98
2910.0	755	2945.0	887.2	30.1	391	3.31	1193	99
2913.0	755	2951.0	887.2	30.1	391	3.31	1193	99

BIT NUMBER	7	IADC CODE	517	INTERVAL	2913.0- 3046.5
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.7	BIT RUN	133.5
TOTAL HOURS	16.88	TOTAL TURNS	86402	CONDITION	T8 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	ZPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2920.0	740	2943.0	861.3	29.3	372	3.15	1158	97
2930.0	740	2943.0	861.3	29.3	372	3.15	1158	97
2940.0	744	2923.3	872.2	29.8	378	3.21	1173	97
2950.0	745	2949.8	874.9	29.7	381	3.23	1177	98
2960.0	748	2911.9	878.5	30.2	383	3.25	1181	98
2970.0	740	2940.0	861.3	29.3	372	3.15	1158	97
2980.0	748	2953.9	883.2	29.9	385	3.27	1188	98

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
2990.0	749	2944.9	886.6	30.1	387	3.29	1192	98
3000.0	755	2960.4	893.9	30.2	394	3.34	1202	99
3010.0	750	2930.0	884.8	30.2	387	3.28	1190	9E
3020.0	750	2930.0	884.8	30.2	387	3.28	1190	98
3030.0	764	2947.8	900.2	30.5	401	3.41	1210	100
3040.0	759	2926.1	898.7	30.7	398	3.38	1209	99
3046.5	764	2952.1	892.3	30.2	398	3.37	1200	100

BIT NUMBER	8	IADC CODE	517	INTERVAL	3046.0- 3165.2
HTC J33		SIZE	12.250	NOZZLES	18 18 1E
COST	8516.00	TRIP TIME	8.7	BIT RUN	119.2
TOTAL HOURS	20.85	TOTAL TURNS	87015	CONDITION	T3 B3 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
3050.0	754	2995.9	878.2	29.3	386	3.28	1181	99
3060.0	755	2972.9	873.4	29.4	385	3.27	1174	99
3070.0	754	2935.2	875.8	29.8	385	3.27	1178	99
3080.0	751	2951.2	879.9	29.8	385	3.27	1183	9E
3090.0	757	2983.0	880.9	29.5	389	3.30	1185	99
3100.0	753	2974.5	868.5	29.2	382	3.24	1168	99
3110.0	752	2974.1	865.7	29.1	380	3.22	1164	9E
3120.0	751	2963.8	864.2	29.2	379	3.21	1162	9E
3130.0	752	2979.2	865.6	29.1	380	3.22	1164	9E
3140.0	754	3002.7	873.7	29.1	384	3.26	1175	99
3150.0	598	1943.7	548.5	28.2	191	1.62	738	7E
3160.0	752	3000.4	866.0	28.9	380	3.22	1165	9E
3165.2	749	2992.9	857.3	28.6	374	3.18	1153	9E

BIT NUMBER	9	IADC CODE	537	INTERVAL	3165.2- 3267.1
HTC J33		SIZE	12.250	NOZZLES	18 18 1E
COST	7774.00	TRIP TIME	8.8	BIT RUN	101.9
TOTAL HOURS	31.09	TOTAL TURNS	98544	CONDITION	T2 B3 G0.062

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
3170.0	740	2971.0	852.3	28.7	368	3.12	1146	97
3180.0	740	2973.5	857.4	28.8	370	3.14	1153	97
3190.0	744	2994.0	840.6	28.1	365	3.09	1130	97
3200.0	742	2951.4	859.5	29.1	372	3.16	1156	97
3210.0	743	2949.1	857.7	29.1	372	3.15	1153	97
3220.0	743	2966.4	845.9	28.5	367	3.11	1137	97
3230.0	740	2947.0	833.0	28.3	360	3.05	1120	97
3240.0	745	2970.5	868.6	29.2	378	3.21	1168	9E
3250.0	745	2948.8	876.7	29.7	381	3.23	1179	99
3260.0	744	2919.0	852.6	29.2	370	3.14	1146	97

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
3267.1	740	2924.8	845.2	28.9	365	3.10	1136	97

BIT NUMBER	10	IADC CODE	537	INTERVAL	3267.1- 3321.2
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	8.7	BIT RUN	54.1
TOTAL HOURS	14.62	TOTAL TURNS	43857	CONDITION	T2 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
3270.0	573	1841.2	502.8	27.3	168	1.43	676	75
3280.0	732	2923.9	814.4	27.9	348	2.95	1095	96
3290.0	737	2961.5	832.5	28.1	358	3.04	1119	96
3300.0	733	2931.3	829.2	28.3	355	3.01	1115	96
3310.0	739	3007.4	839.0	27.9	362	3.07	1128	97
3320.0	729	2852.7	817.5	28.7	348	2.95	1099	95
3321.2	601	1963.8	554.7	28.2	194	1.65	746	79

BIT NUMBER	11	IADC CODE	537	INTERVAL	3321.2- 3447.0
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	9.3	BIT RUN	125.8
TOTAL HOURS	40.33	TOTAL TURNS	123103	CONDITION	T2 B4 G0.062

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/sqin	IMPACT FORCE	JET VELOCITY
3330.0	728	2948.9	834.4	28.3	354	3.01	1122	95
3340.0	732	2908.7	833.7	28.7	356	3.02	1121	96
3350.0	732	2993.1	834.3	27.9	356	3.02	1122	96
3360.0	717	2880.3	801.7	27.8	336	2.85	1078	94
3370.0	726	2964.0	820.6	27.7	348	2.95	1104	95
3380.0	718	2922.6	802.4	27.5	336	2.85	1079	94
3390.0	720	2946.2	806.5	27.4	339	2.87	1084	94
3400.0	726	2954.0	828.8	28.1	351	2.98	1115	95
3410.0	560	1803.5	493.6	27.4	161	1.37	664	73
3420.0	566	1727.5	504.9	29.2	167	1.42	679	74
3430.0	610	2245.1	592.4	26.4	211	1.79	797	80
3440.0	708	2913.4	798.4	27.4	330	2.80	1074	93
3447.0	700	2865.0	779.2	27.2	318	2.70	1048	92

BIT NUMBER	12	IADC CODE	517	INTERVAL	3447.0- 3453.1
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	9.3	BIT RUN	6.1
TOTAL HOURS	0.63	TOTAL TURNS	2208	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3450.0	691	2912.7	759.6	26.1	306	2.60	1021	90
3453.1	693	2864.3	763.9	26.7	309	2.62	1027	91

BIT NUMBER	12	IADC CODE	4	INTERVAL	3453.1- 3462.8
CHRIS RC4		SIZE	9.875	NOZZLES	14 15 15
COST	18000.00	TRIP TIME	9.3	BIT RUN	9.7
TOTAL HOURS	1.16	TOTAL TURNS	6548	CONDITION	T0 B0 G0.100

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3460.0	286	933.8	294.3	31.5	49	0.64	263	56
3462.8	289	660.9	300.4	45.4	51	0.66	268	57

BIT NUMBER	12	IADC CODE	517	INTERVAL	3462.8- 3521.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	0.00	TRIP TIME	9.5	BIT RUN	58.2
TOTAL HOURS	14.94	TOTAL TURNS	59427	CONDITION	T3 B4 G0.375

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3470.0	720	2942.4	820.7	27.9	345	2.93	1104	94
3480.0	723	2966.6	827.4	27.9	349	2.96	1113	95
3490.0	716	2954.3	807.0	27.3	337	2.86	1085	94
3500.0	715	2935.1	809.9	27.6	338	2.87	1089	94
3510.0	727	2915.1	836.9	28.7	355	3.01	1125	95
3520.0	699	2867.9	777.8	27.1	317	2.69	1046	91
3521.0	696	2927.7	769.9	26.3	312	2.65	1035	91

(f). COMPUTER DATA LISTING : LIST D

INTERVAL 10m averages.

DEPTH Well depth, in metres.

SPM1 Stroke rate per minute, for Pump no.1

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

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

ANNULAR VELOCITIES : (in metres per minute)

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

DC/CSG - Between drill collars and casing.

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

HW/CSG - Between heavyweight drill pipe and casing.

DP/OH - Between drill pipe and open hole.

DP/CSG - Between drill pipe and casing.

DP/RIS - Between drill pipe and riser.

BIT NUMBER	1	IADC CODE	111	INTERVAL	86.0- 225.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.0	BIT RUN	139.0
TOTAL HOURS	3.08	TOTAL TURNS	11808	CONDITION	T1 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
90.0	35	51	430	5		5		5		
100.0	53	57	550	7		6		6		
110.0	57	59	580	7		7		7		
120.0	61	60	605	7		7		7		
130.0	70	69	693	8		8		8		
140.0	89	85	870	11		10		10		
150.0	100	94	973	12		11		11		
160.0	100	96	981	12		11		11		
170.0	101	98	991	12		11		11		
180.0	101	97	990	12		11		11		
190.0	101	97	991	12		11		11		
200.0	101	97	989	12		11		11		
210.0	101	99	1000	12		11		11		
220.0	102	98	997	12		11		11		
225.0	101	97	994	12		11		11		

BIT NUMBER	1	IADC CODE	111	INTERVAL	225.0- 830.4
HTC OSC3AJ		SIZE	17.500	NOZZLES	18 18 18
COST	4857.00	TRIP TIME	3.7	BIT RUN	605.4
TOTAL HOURS	12.72	TOTAL TURNS	106193	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
230.0	82	83	823	25	20		18			15
240.0	84	82	828	26	21		18			15
250.0	84	83	835	26	21		18			15
260.0	84	82	829	26	21		18			15
270.0	83	82	825	25	20		18		18	15
280.0	84	83	835	26	21		18		18	15
290.0	84	83	836	26	21		18		18	15
300.0	84	84	842	26	21		18		18	15
310.0	84	85	844	26	21		19		19	15
320.0	84	84	843	26	21		18		18	15
330.0	84	82	829	26	21		18		18	15
340.0	84	82	830	26	21		18		18	15
350.0	84	82	831	26		22	18		18	15
360.0	85	83	844	26		22	19		19	15
370.0	84	83	835	26		22	18		18	15
380.0	83	84	835	26		22	18		18	15
390.0	78	84	813	25		22	18		18	15
400.0	93	91	919	28		24	20		20	17

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
410.0	93	90	919	28		24		24	20	17
420.0	93	91	920	28		24		24	20	17
430.0	93	91	919	28		24		24	20	17
440.0	93	91	918	28		24		24	20	16
450.0	93	93	929	29		25		25	20	17
460.0	93	92	926	29		25		25	20	17
470.0	93	90	912	28		24		24	20	16
480.0	93	91	919	28		24		24	20	17
490.0	93	92	924	29		25		25	20	17
500.0	93	90	911	28		24		24	20	16
510.0	94	91	925	29		25		25	20	17
520.0	94	90	921	28		24		24	20	17
530.0	94	91	928	29		25		25	20	17
540.0	93	90	913	28		24		24	20	16
550.0	95	89	919	28		24		24	20	17
560.0	94	90	917	28		24		24	20	16
570.0	94	89	917	28		24		24	20	16
580.0	95	90	924	29		25		25	20	17
590.0	97	97	970	30		26		26	21	17
600.0	99	97	978	30		26		26	21	18
610.0	100	98	988	30		26		26	22	18
620.0	99	98	983	30		26		26	22	18
630.0	99	98	983	30		26		26	22	18
640.0	99	98	983	30		26		26	22	18
650.0	99	98	983	30		26		26	22	18
660.0	99	98	983	30		26		26	22	18
670.0	99	98	987	30		26		26	22	18
680.0	100	98	988	30		26		26	22	18
690.0	99	99	987	30		26		26	22	18
700.0	98	97	975	30		26		26	21	18
710.0	98	98	978	30		26		26	21	18
720.0	99	96	975	30		26		26	21	18
730.0	98	97	975	30		26		26	21	18
740.0	96	97	965	30		26		26	21	17
750.0	98	97	978	30		26		26	21	18
760.0	97	98	972	30		26		26	21	17
770.0	99	96	974	30		26		26	21	17
780.0	98	97	976	30		26		26	21	18
790.0	98	98	978	30		26		26	21	18
800.0	98	98	977	30		26		26	21	18
810.0	97	97	973	30		26		26	21	17
820.0	97	97	973	30		26		26	21	17
830.0	98	98	981	30		26		26	22	18
830.4	98	98	981	30		26		26	22	18

BIT NUMBER	2	IADC CODE	114	INTERVAL	830.4- 1344.8
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2381.00	TRIP TIME	4.9	BIT RUN	514.4
TOTAL HOURS	26.03	TOTAL TURNS	221520	CONDITION	T4 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
840.0	96	93	946	82	74		53		53	17
850.0	97	92	944	82	74		53		53	17
860.0	97	92	944	82	74		53		53	17
870.0	97	92	941	82	74		52		52	17
880.0	96	93	947	82	74		53		53	17
890.0	98	92	950	82	75		53		53	17
900.0	97	92	948	82	74		53		53	17
910.0	97	93	950	83	75		53		53	17
920.0	98	92	949	82	75		53		53	17
930.0	97	92	946	82	74		53		53	17
940.0	96	93	945	82	74		53		53	17
950.0	97	92	945	82	74		53		53	17
960.0	98	92	947	82	74		53		53	17
970.0	97	92	944	82	74		53		53	17
980.0	99	91	949	82	75		53		53	17
990.0	96	92	943	82		56	53		53	17
1000.0	97	92	945	82		56	53		53	17
1010.0	98	91	945	82		56	53		53	17
1020.0	96	92	938	82		56	52		52	17
1030.0	95	90	926	80		55	52		52	17
1040.0	96	90	929	81		55	52		52	17
1050.0	93	91	920	80		55	51		51	17
1060.0	93	90	915	79		55	51		51	16
1070.0	95	89	916	80		55	51		51	16
1080.0	93	90	915	79		55	51		51	16
1090.0	93	90	913	79		55	51		51	16
1100.0	94	90	916	80		55		55	51	16
1110.0	92	90	912	79		55		55	51	16
1120.0	91	89	902	78		54		54	50	16
1130.0	92	90	907	79		54		54	51	16
1140.0	92	89	906	79		54		54	50	16
1150.0	91	88	897	78		54		54	50	16
1160.0	92	86	887	77		53		53	49	16
1170.0	0	111	554	48		33		33	31	10
1180.0	90	89	893	78		53		53	50	16
1190.0	90	88	888	77		53		53	49	16
1200.0	90	88	892	77		53		53	50	16
1210.0	89	88	885	77		53		53	49	16
1220.0	90	88	888	77		53		53	49	16
1230.0	89	87	882	77		53		53	49	16
1240.0	89	87	882	77		53		53	49	16
1250.0	88	88	882	77		53		53	49	16
1260.0	88	88	881	76		53		53	49	16

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1270.0	0	111	554	48		33		33	31	10
1280.0	87	90	881	77		53		53	49	16
1290.0	86	90	880	76		53		53	49	16
1300.0	87	90	883	77		53		53	49	16
1310.0	87	90	885	77		53		53	49	16
1320.0	87	89	883	77		53		53	49	16
1330.0	79	92	854	74		51		51	48	15
1340.0	84	91	878	76		52		52	49	16
1344.8	44	46	448	39		27		27	25	8

BIT NUMBER	3	IADC CODE	116	INTERVAL	1344.8- 1989.2
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.2	BIT RUN	644.4
TOTAL HOURS	29.80	TOTAL TURNS	267622	CONDITION	T3 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1350.0	87	89	878	76		52		52	49	16
1360.0	0	111	553	48		33		33	31	10
1370.0	3	110	560	49		33		33	31	10
1380.0	0	110	550	48		33		33	31	10
1390.0	89	87	881	77		53		53	49	16
1400.0	114	10	618	54		37		37	34	11
1410.0	91	84	878	76		52		52	49	16
1420.0	92	85	882	77		53		53	49	16
1430.0	91	85	878	76		52		52	49	16
1440.0	88	87	871	76		52		52	49	16
1450.0	87	86	869	75		52		52	48	16
1460.0	86	87	867	75		52		52	48	16
1470.0	87	87	868	75		52		52	48	16
1480.0	87	87	865	75		52		52	48	16
1490.0	87	86	864	75		52		52	48	16
1500.0	87	86	865	75		52		52	48	16
1510.0	85	87	862	75		51		51	48	15
1520.0	88	86	868	75		52		52	48	16
1530.0	87	84	859	75		51		51	48	15
1540.0	89	84	860	75		51		51	48	15
1550.0	88	84	857	74		51		51	48	15
1560.0	88	84	856	74		51		51	48	15
1570.0	87	84	854	74		51		51	48	15
1580.0	86	84	851	74		51		51	47	15
1590.0	88	84	859	75		51		51	48	15
1600.0	88	84	856	74		51		51	48	15
1610.0	88	83	855	74		51		51	48	15
1620.0	85	84	845	73		50		50	47	15
1630.0	85	85	847	74		51		51	47	15
1640.0	84	86	849	74		51		51	47	15
1650.0	85	84	844	73		50		50	47	15

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1660.0	0	105	527	46		31		31	29	9
1670.0	112	0	560	49		33		33	31	10
1680.0	111	7	592	51		35		35	33	11
1690.0	83	83	832	72		50		50	46	15
1700.0	83	83	831	72		50		50	46	15
1710.0	83	84	832	72		50		50	46	15
1720.0	83	84	834	72		50		50	46	15
1730.0	84	85	842	73		50		50	47	15
1740.0	84	85	842	73		50		50	47	15
1750.0	84	85	846	73		51		51	47	15
1760.0	83	84	835	72		50		50	47	15
1770.0	83	84	838	73		50		50	47	15
1780.0	84	84	840	73		50		50	47	15
1790.0	84	84	840	73		50		50	47	15
1800.0	85	84	842	73		50		50	47	15
1810.0	85	85	845	73		51		51	47	15
1820.0	85	84	843	73		50		50	47	15
1830.0	84	84	843	73		50		50	47	15
1840.0	84	85	845	73		50		50	47	15
1850.0	84	85	845	73		50		50	47	15
1860.0	85	84	845	73		50		50	47	15
1870.0	84	82	830	72		50		50	46	15
1880.0	83	83	830	72		50		50	46	15
1890.0	83	81	820	71		49		49	46	15
1900.0	84	80	820	71		49		49	46	15
1910.0	84	80	820	71		49		49	46	15
1920.0	84	79	814	71		49		49	45	15
1930.0	82	80	806	70		48		48	45	14
1940.0	82	79	804	70		48		48	45	14
1950.0	82	79	804	70		48		48	45	14
1960.0	0	111	557	48		33		33	31	10
1970.0	80	81	807	70		48		48	45	14
1980.0	81	80	803	70		48		48	45	14
1989.2	82	78	803	70		48		48	45	14

BIT NUMBER	4	IADC CODE	517	INTERVAL	1989.2- 2389.7
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	400.5
TOTAL HOURS	31.64	TOTAL TURNS	173061	CONDITION	T6 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1990.0	79	73	760	66		45		45	42	14
2000.0	80	78	789	69		47		47	44	14
2010.0	78	80	791	69		47		47	44	14
2020.0	79	80	794	69		47		47	44	14
2030.0	68	81	747	65		45		45	42	13
2040.0	77	80	787	68		47		47	44	14

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP RI
2050.0	78	80	791	69		47		47	44	1
2060.0	78	81	792	69		47		47	44	1
2070.0	77	80	788	68		47		47	44	1
2080.0	77	80	784	68		47		47	44	1
2090.0	78	80	788	68		47		47	44	1
2100.0	79	80	795	69		47		47	44	1
2110.0	78	80	792	69		47		47	44	1
2120.0	78	80	792	69		47		47	44	1
2130.0	76	79	777	67		46		46	43	1
2140.0	78	80	794	69		47		47	44	1
2150.0	78	80	791	69		47		47	44	1
2160.0	78	80	787	68		47		47	44	1
2170.0	78	79	787	68		47		47	44	1
2180.0	79	80	794	69		47		47	44	1
2190.0	77	80	784	68		47		47	44	1
2200.0	78	78	778	68		47		47	43	1
2210.0	78	77	774	67		46		46	43	1
2220.0	77	78	775	67		46		46	43	1
2230.0	78	77	776	67		46		46	43	1
2240.0	78	77	776	67		46		46	43	1
2250.0	78	76	772	67		46		46	43	1
2260.0	78	77	775	67		46		46	43	1
2270.0	78	77	775	67		46		46	43	1
2280.0	77	77	772	67		46		46	43	1
2290.0	81	75	780	68		47		47	43	1
2300.0	0	105	525	46		31		31	29	
2310.0	0	111	555	48		33		33	31	1
2320.0	79	77	781	68		47		47	44	1
2330.0	80	76	783	68		47		47	44	1
2340.0	81	76	787	68		47		47	44	1
2350.0	81	77	787	68		47		47	44	1
2360.0	81	76	785	68		47		47	44	1
2370.0	81	77	787	68		47		47	44	1
2380.0	81	77	787	68		47		47	44	1
2389.7	80	77	784	68		47		47	44	1

BIT NUMBER	5	IADC CODE	517	INTERVAL	2389.7- 2667.
HTC J22		SIZE	12.250	NOZZLES	18 18 1
COST	8516.00	TRIP TIME	7.7	BIT RUN	277
TOTAL HOURS	31.19	TOTAL TURNS	164301	CONDITION	T8 B3 G0.00

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP RI
2390.0	0	110	551	48		33		33	31	
2400.0	77	75	762	66		46		46	42	1
2410.0	77	78	775	67		46		46	43	1
2420.0	76	79	772	67		46		46	43	1
2430.0	78	76	774	67		46		46	43	1

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2440.0	76	78	768	67		46		46	43	14
2450.0	76	77	765	66		46		46	43	14
2460.0	78	76	770	67		46		46	43	14
2470.0	78	76	770	67		46		46	43	14
2480.0	76	77	765	66		46		46	43	14
2490.0	75	78	767	67		46		46	43	14
2500.0	76	77	765	66		46		46	43	14
2510.0	77	76	766	66		46		46	43	14
2520.0	78	75	765	66		46		46	43	14
2530.0	74	78	762	66		46		46	42	14
2540.0	77	75	763	66		46		46	43	14
2550.0	78	75	764	66		46		46	43	14
2560.0	78	74	761	66		45		45	42	14
2570.0	78	74	759	66		45		45	42	14
2580.0	78	74	761	66		45		45	42	14
2590.0	78	73	756	66		45		45	42	14
2600.0	77	74	755	66		45		45	42	14
2610.0	78	73	756	66		45		45	42	14
2620.0	77	74	755	66		45		45	42	14
2630.0	76	76	756	66		45		45	42	14
2640.0	76	74	752	65		45		45	42	14
2650.0	78	73	754	66		45		45	42	14
2660.0	76	76	756	66		45		45	42	14
2667.4	75	75	754	65		45		45	42	14

BIT NUMBER	6	IADC CODE	517	INTERVAL	2667.4- 2913.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.2	BIT RUN	245.6
TOTAL HOURS	31.76	TOTAL TURNS	166345	CONDITION	T8 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2670.0	77	70	735	64		44		44	41	13
2680.0	76	73	743	65		44		44	41	13
2690.0	74	75	743	65		44		44	41	13
2700.0	76	73	744	65		44		44	41	13
2710.0	78	73	753	65		45		45	42	14
2720.0	76	73	745	65		45		45	42	13
2730.0	76	74	748	65		45		45	42	13
2740.0	76	74	749	65		45		45	42	13
2750.0	76	73	742	64		44		44	41	13
2760.0	76	74	746	65		45		45	42	13
2770.0	78	73	750	65		45		45	42	13
2780.0	76	74	750	65		45		45	42	13
2790.0	77	74	753	65		45		45	42	14
2800.0	77	73	750	65		45		45	42	13
2810.0	77	73	749	65		45		45	42	13
2820.0	76	73	748	65		45		45	42	13
2830.0	77	73	750	65		45		45	42	13
2840.0	95	33	640	56		38		38	36	11
2850.0	77	72	747	65		45		45	42	13
2860.0	76	73	742	64		44		44	41	13
2870.0	76	74	748	65		45		45	42	13
2880.0	79	72	751	65		45		45	42	14
2890.0	78	73	756	66		45		45	42	14
2900.0	77	73	748	65		45		45	42	13
2910.0	77	74	755	66		45		45	42	14
2913.0	77	74	755	66		45		45	42	14

BIT NUMBER	7	IADC CODE	517	INTERVAL	2913.0- 3046.5
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.7	BIT RUN	133.5
TOTAL HOURS	16.88	TOTAL TURNS	86402	CONDITION	T8 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2920.0	74	74	740	64		44		44	41	13
2930.0	74	74	740	64		44		44	41	13
2940.0	74	74	744	65		44		44	41	13
2950.0	75	74	745	65		45		45	42	13
2960.0	75	75	748	65		45		45	42	13
2970.0	74	74	740	64		44		44	41	13
2980.0	75	75	748	65		45		45	42	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2990.0	75	74	749	65		45		45	42	13
3000.0	76	76	755	66		45		45	42	14
3010.0	75	75	750	65		45		45	42	13
3020.0	75	75	750	65		45		45	42	13
3030.0	76	77	764	66		46		46	43	14
3040.0	76	76	759	66		45		45	42	14
3046.5	76	77	764	66		46		46	43	14

BIT NUMBER	8	IADC CODE	517	INTERVAL	3046.0- 3165.2
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	8.7	BIT RUN	119.2
TOTAL HOURS	20.85	TOTAL TURNS	87015	CONDITION	T3 B3 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3050.0	77	74	754	65		45		45	42	14
3060.0	77	75	755	66		45		45	42	14
3070.0	77	73	754	65		45		45	42	14
3080.0	77	73	751	65		45		45	42	13
3090.0	78	73	757	66		45		45	42	14
3100.0	78	72	753	65		45		45	42	14
3110.0	76	74	752	65		45		45	42	14
3120.0	76	74	751	65		45		45	42	13
3130.0	76	74	752	65		45		45	42	14
3140.0	76	75	754	65		45		45	42	14
3150.0	0	120	598	52		36		36	33	11
3160.0	77	74	752	65		45		45	42	14
3165.2	77	73	749	65		45		45	42	13

BIT NUMBER	9	IADC CODE	537	INTERVAL	3165.2- 3267.1
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	8.8	BIT RUN	101.9
TOTAL HOURS	31.09	TOTAL TURNS	98544	CONDITION	T2 B3 G0.063

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3170.0	77	71	740	64		44		44	41	13
3180.0	75	73	740	64		44		44	41	13
3190.0	76	73	744	65		44		44	41	13
3200.0	77	72	742	64		44		44	41	13
3210.0	76	72	743	64		44		44	41	13
3220.0	75	74	743	65		44		44	41	13
3230.0	74	74	740	64		44		44	41	13
3240.0	75	75	745	65		45		45	42	13
3250.0	75	74	745	65		45		45	42	13
3260.0	74	75	744	65		44		44	41	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3267.1	74	74	740	64		44		44	41	13

BIT NUMBER	10	IADC CODE	537	INTERVAL	3267.1- 3321.2
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	8.7	BIT RUN	54.1
TOTAL HOURS	14.62	TOTAL TURNS	43857	CONDITION	T2 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3270.0	0	115	573	48		34		34	32	10
3280.0	73	74	732	61		44		44	41	13
3290.0	75	73	737	61		44		44	41	13
3300.0	73	74	733	61		44		44	41	13
3310.0	75	73	739	61		44		44	41	13
3320.0	80	66	729	61		44		44	41	13
3321.2	120	0	601	50		36		36	33	11

BIT NUMBER	11	IADC CODE	537	INTERVAL	3321.2- 3447.0
HTC J33		SIZE	12.250	NOZZLES	18 18 18
COST	7774.00	TRIP TIME	9.3	BIT RUN	125.8
TOTAL HOURS	40.33	TOTAL TURNS	123103	CONDITION	T2 B4 G0.062

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3330.0	73	73	728	60		44		44	41	13
3340.0	73	73	732	61		44		44	41	13
3350.0	73	73	732	61		44		44	41	13
3360.0	71	72	717	60		43		43	40	13
3370.0	73	72	726	60		43		43	40	13
3380.0	73	71	718	60		43		43	40	13
3390.0	73	71	720	60		43		43	40	13
3400.0	73	73	726	60		43		43	40	13
3410.0	112	0	560	47		33		33	31	10
3420.0	113	0	566	47		34		34	32	10
3430.0	58	64	610	51		36		36	34	11
3440.0	70	71	708	59		42		42	39	13
3447.0	71	69	700	58		42		42	39	13

BIT NUMBER	12	IADC CODE	517	INTERVAL	3447.0- 3453.1
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	9.3	BIT RUN	6.1
TOTAL HOURS	0.63	TOTAL TURNS	2208	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3450.0	69	69	691	57		41		41	39	12
3453.1	69	69	693	58		41		41	39	12

BIT NUMBER	12	IADC CODE	4	INTERVAL	3453.1- 3462.8
CHRIS RC4		SIZE	9.875	NOZZLES	14 15 15
COST	18000.00	TRIP TIME	9.3	BIT RUN	9.7
TOTAL HOURS	1.16	TOTAL TURNS	6548	CONDITION	T0 B0 G0.100

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3460.0	57	0	286	57					16	5
3462.8	58	0	289	58					16	5

BIT NUMBER	12	IADC CODE	517	INTERVAL	3462.8- 3521.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	0.00	TRIP TIME	9.5	BIT RUN	58.2
TOTAL HOURS	14.94	TOTAL TURNS	59427	CONDITION	T3 B4 G0.375

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3470.0	72	72	720	60		43		43	40	13
3480.0	73	72	723	60		43		43	40	13
3490.0	71	72	716	59		43		43	40	13
3500.0	71	72	715	59		43		43	40	13
3510.0	73	72	727	60		43		43	41	13
3520.0	68	72	699	58		42		42	39	13
3521.0	68	72	696	58		42		42	39	12


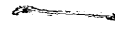


PE603879

This is an enclosure indicator page.
The enclosure PE603879 is enclosed within the
container PE905483 at this location in this
document.

The enclosure PE603879 has the following characteristics:

ITEM_BARCODE = PE603879
CONTAINER_BARCODE = PE905483
NAME = Drill Data Plot
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Drill Data Plot for Veilfin-1
REMARKS =
DATE_CREATED =
DATE_RECEIVED = 31/07/84
W_NO = W857
WELL_NAME = VEILFIN-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

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PE603879

DRILL DATA PLOT

PE603883

This is an enclosure indicator page.
The enclosure PE603883 is enclosed within the
container PE905483 at this location in this
document.

The enclosure PE603883 has the following characteristics:

- ITEM_BARCODE = PE603883
- CONTAINER_BARCODE = PE905483
 - NAME = Temperature Plot
 - BASIN = GIPPSLAND
 - PERMIT = VIC/P1
 - TYPE = WELL
 - SUBTYPE = WELL_LOG
- DESCRIPTION = Temperature Plot for Veilfin-1
- REMARKS =
- DATE_CREATED =
- DATE_RECEIVED = 31/07/84
 - W_NO = W857
 - WELL_NAME = VEILFIN-1
- CONTRACTOR = CORE LABORATORIES
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603883
Temperature Plot

PE 603 880

PRESSURE PLOT

PE603880

This is an enclosure indicator page.
The enclosure PE603880 is enclosed within the
container PE905483 at this location in this
document.

The enclosure PE603880 has the following characteristics:

ITEM_BARCODE = PE603880
CONTAINER_BARCODE = PE905483
 NAME = Pressure Plot
 BASIN = GIPPSLAND
 PERMIT = VIC/P1
 TYPE = WELL
 SUBTYPE = WELL_LOG
 DESCRIPTION = Pressure Plot for Veilfin-1
 REMARKS =
 DATE_CREATED =
 DATE_RECEIVED = 31/07/84
 W_NO = W857
 WELL_NAME = VEILFIN-1
 CONTRACTOR = CORE LABORATORIES
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

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PE603881

This is an enclosure indicator page.
The enclosure PE603881 is enclosed within the
container PE905483 at this location in this
document.

The enclosure PE603881 has the following characteristics:

ITEM_BARCODE = PE603881
CONTAINER_BARCODE = PE905483
 NAME = Geo-Plot
 BASIN = GIPPSLAND
 PERMIT = VIC/P1
 TYPE = WELL
 SUBTYPE = WELL_LOG
 DESCRIPTION = Geo-Plot for Veilfin-1
 REMARKS =
 DATE_CREATED =
 DATE_RECEIVED = 31/07/84
 W_NO = W857
 WELL_NAME = VEILFIN-1
 CONTRACTOR = CORE LABORATORIES
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

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PE 603881

GEO - PLOT

PE 603882

GRAPHOLOG.

PE603882

This is an enclosure indicator page.
The enclosure PE603882 is enclosed within the
container PE905483 at this location in this
document.

The enclosure PE603882 has the following characteristics:

ITEM_BARCODE = PE603882
CONTAINER_BARCODE = PE905483
NAME = Mud Log (Grapholog)
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log (Grapholog) for Veilfin-1
REMARKS =
DATE_CREATED = 31/03/84
DATE_RECEIVED = 31/07/84
W_NO = W857
WELL_NAME = VEILFIN-1
CONTRACTOR = CORE LABORATORIES
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

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