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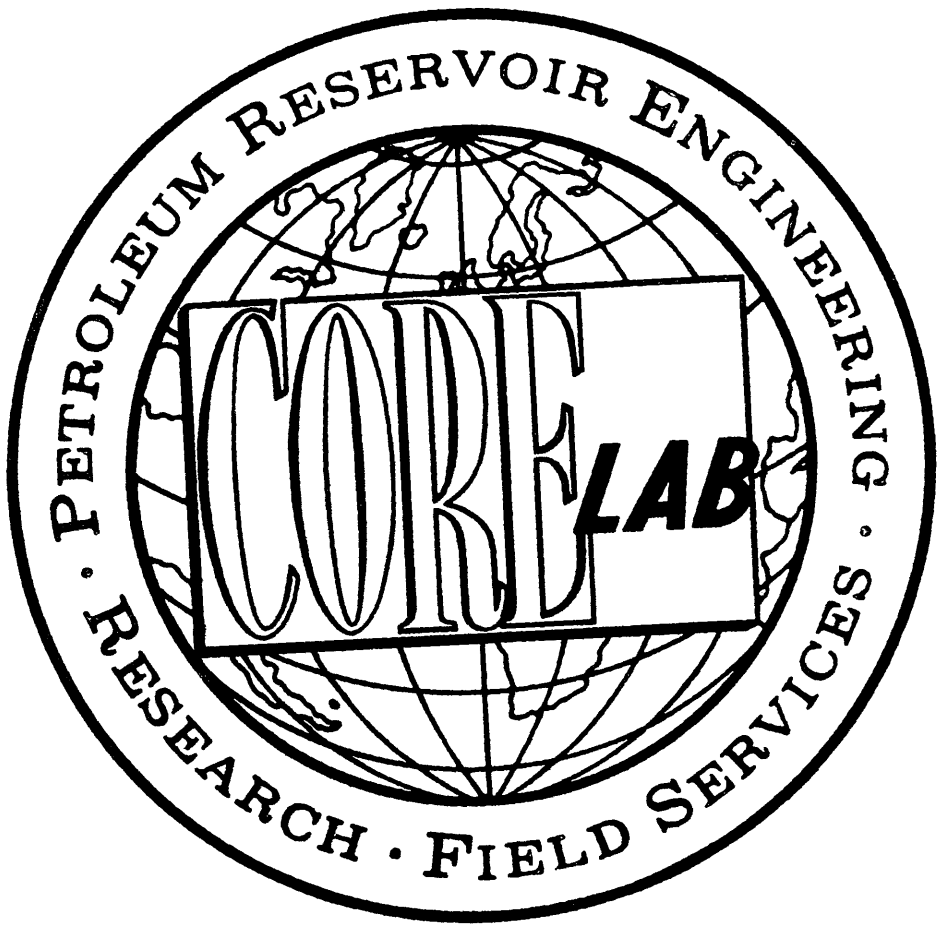
SEPARATE ATTACHMENT TO
WCR VOL 2 OF GRUNTER-1 (W879)
FINAL WELL REPORT



FINAL WELL REPORT

ESSO AUSTRALIA LIMITED

GRUNTER #1

INDEX

INTRODUCTION

Grunter No. 1 was drilled by ESSO AUSTRALIA LTD. in the Bass Strait, Australia.

Well co-ordinates were:

Latitude : 38° 16' 21.22"S
Longitude: 148° 30' 56.13"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.

Grunter No. 1 was spudded on 14th September, 1984 and reached a total depth of 3809 metres on 10th November, 1984.

The main objectives were to:

1. Test the hydrocarbon potential of a fault-sealed, closure within the Latrobe group.

2. Test the hydrocarbon potential of the Latrobe group; and

3. Test a small culmination at the base of the Tuna-Flounder channel.

Elevations were:

Kelly bushings to mean sea level	..... 21 metres
Water depth	..... 108 metres
Kelly bushings to mean sea bed	..... 129 metres

All the depths used in this report and accompanying logs refer to depth below rotary kelly bushings (RKB). The well was production tested in one zone.

Core Laboratories personnel involved in the logging of Grunter No. 1 were as follows:

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

2. RIG SPECIFICATIONS

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LIMITED

WELL GRUNTER #1

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N° 107)
TYPE	SEMI-SUBMERSIBLE, TWIN HULLED
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPICITY OF 1,000,000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNER	DRILLCO 5¼" x 50' HEX KELLY
ROTARY TABLE	OILWELL A 37½ SINGLE ELECTRIC MOTOR
ROTARY SLIPS	VARCO DCS-L
MUD PUMPS	TWO OILWELL A 1700PT. RATED AT 1600HP
MUD SYSTEM	FOUR MUD TANKS HAVING A TOTAL CAPACITY OF 1200 BBL, AND ONE PILL TANK HAVING A CAPAICTY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6 x 8" CENTRIFUGAL BY TWO 100HP ELECTRIC MOTORS. DESANDER: 1 DEMCO 4 CONE 12" MODEL N° 124 DESILTER: 1 DEMCO 4"-16H 16 CONE DEGASSER: 1 SWACO MODEL N° 36 SHALE SHAKERS: 2 BRANDT DUAL UNIT TANDEM - GHI DUAL UNIT
BLOW OUT PREVENTORS	THREE SHAFFER L.W.S. 18 3/4" - 10,000 psi TWO HYDRIL G.L. 18 3/4" - 5,000 psi
WELL CONTROL EQUIP.	FOUR VALV CON ACCUMULATORS CHOKES:2 C.I.W. ABJ H2 2 1/16" - 10,000 psi, 1 SWACO SUPER CHOKE 2" - 10,000 psi
TUBULAR DRILLING EQUIPMENT	DC: 6¼" x 2 13/16" (4" IF TJ) 8" x 2 13/16" (6 5/8" H90 TJ) 9 3/4" x 3" (7 5/8" H90 YJ) HWDP: 5" 50lb/ft GRADE G (6½")) 4½" IF TJ) DP : 5" 19½lb/ft GRADE G & E (6 3/8" OO 4½" IF TJ)
CEMENTING UNIT	HALLIBURTON HT-400 UNIT
MONITORING EQUIPMENT	MARTIN DECKER: MUD VOLUME TOTALIZER 6 CHANNEL DRILLING RECORDER 4 PRESSURE GAUGES FLOWSHOW INDICATOR
POWER SUPPLY	2 EMD MD 18 DIESEL ENGINES RATED AT 1950 HP EACH 1 EMD MD 13 DIESEL ENGINE RATED AT 1500 HP
DIRECTIONAL EQUIP.	-

MISCELLANEOUS (E.G. RISER, COMPENSATION SYSTEM, PIPE RACKER, DP EQUIPMENT)

RISER:REGAN FC-7 TELESCOPIC 21" ID. PLUS FLOW DIVERTOR.
CASING POWER TONGS:ECKEL 13 3/8" (20,000 ft lbs), 20" (35,000 ft lbs)
CMT BULK TANKS:3 x 1570cu ft. RISER TENSIONER: 6 WESTERN GEAR, 50' STROKE, 80,000 lbs.
MUD BULK TANKS: 3 x 1570 cu ft. GUIDE LINE TENSIONERS: 4 WESTERN GEAR 16,000 lbs, 40' STROKE

3. WELL INFORMATION, PROGRESS AND HISTORY

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LIMITED

WELL GRUNTER #1

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N° 107)
TYPE	SEMI-SUBMERSIBLE, TWIN HULLED
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPICITY OF 1,000,000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNER	DRILLCO 5¼" x 50' HEX KELLY
ROTARY TABLE	OILWELL A 37½ SINGLE ELECTRIC MOTOR
ROTARY SLIPS	VARCO DCS-L
MUD PUMPS	TWO OILWELL A 1700PT. RATED AT 1600HP
MUD SYSTEM	FOUR MUD TANKS HAVING A TOTAL CAPACITY OF 1200 BBL, AND ONE PILL TANK HAVING A CAPAICTY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6 x 8" CENTRIFUGAL BY TWO 100HP ELECTRIC MOTORS. DESANDER: 1 DEMCO 4 CONE 12" MODEL N° 124 DESILTER: 1 DEMCO 4"-16H 16 CONE DEGASSER: 1 SWACO MODEL N° 36 SHALE SHAKERS: 2 BRANDT DUAL UNIT TANDEM - GHI DUAL UNIT
BLOW OUT PREVENTORS	THREE SHAFFER L.W.S. 18 3/4" - 10,000 psi TWO HYDRIL G.L. 18 3/4" - 5,000 psi
WELL CONTROL EQUIP.	FOUR VALV CON ACCUMULATORS CHOKES:2 C.I.W. ABJ H2 2 1/16" - 10,000 psi, 1 SWACO SUPER CHOKE 2" - 10,000 psi
TUBULAR DRILLING EQUIPMENT	DC: 6¼" x 2 13/16" (4" IF TJ) 8" x 2 13/16" (6 5/8" H90 TJ) 9 3/4" x 3" (7 5/8" H90 YJ) HWDP: 5" 50lb/ft GRADE G (6½")) 4½" IF TJ) DP : 5" 19½lb/ft GRADE G & E (6 3/8" OO 4½" IF TJ)
CEMENTING UNIT	HALLIBURTON HT-400 UNIT
MONITORING EQUIPMENT	MARTIN DECKER: MUD VOLUME TOTALIZER 6 CHANNEL DRILLING RECORDER 4 PRESSURE GAUGES FLOWSHOW INDICATOR
POWER SUPPLY	2 EMD MD 18 DIESEL ENGINES RATED AT 1950 HP EACH 1 EMD MD 13 DIESEL ENGINE RATED AT 1500 HP
DIRECTIONAL EQUIP.	-

MISCELLANEOUS (E.G. RISER, COMPENSATION SYSTEM, PIPE RACKER, DP EQUIPMENT)

RISER:REGAN FC-7 TELESCOPIC 21" ID. PLUS FLOW DIVERTOR.
CASING POWER TONGS:ECKEL 13 3/8" (20,000 ft lbs), 20" (35,000 ft lbs)
CMT BULK TANKS:3 x 1570cu ft. RISER TENSIONER: 6 WESTERN GEAR, 50' STROKE, 80,000 lbs.
MUD BULK TANKS: 3 x 1570 cu ft. GUIDE LINE TENSIONERS: 4 WESTERN GEAR 16,000 lbs, 40' STROKE

3. WELL INFORMATION, PROGRESS AND HISTORY

WELL INFORMATION SHEE

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No.

WELL NAME GRUNTER #1
OPERATOR ESSO EXPLORATION AND PRODUCTION AUST. INC.
PARTNERS B.H.P. PETROLEUM

RIG	OWNER	SANTA FE (SOUTH SEAS DRILLING COMPANY)		
	NAME OR NUMBER	SOUTHERN CROSS		
	TYPE	SEMI-SUBMERSIBLE		
LOCATION	LATITUDE (X)	38° 16' 21.22"S	LONGITUDE (Y)	148° 30' 56.13"E
	FIELD	GIPPSLAND	AREA	
	COUNTY	BASS STRAIT	STATE	VICTORIA
	COUNTRY	AUSTRALIA		
	DESCRIPTION	EXPLORATION/WILDCAT		
DATUM	Ground Elevation	-	RKB to Ground Level	-
	Mean Water Depth	108m	RKB to Water Level	21m
DATES	SPUD	14TH SEPT 1984	TOTAL DEPTH	10TH NOV 1984

HOLE SIZES	Dpth Fm	Dpth To	Bit Sze"	No of Bits	No Reamers	Date From	Date To	Cased	Logged
	129m	269m	26	1	0	14/09/84	14/09/84	Y	N
	269m	855m	17½	1	0	16/09/84	17/09/84	Y	Y
	855m	3,561m	12¼	12	0	18/09/84	26/10/84	Y	Y
	3,561m	3,809m	8½	4	0	3/11/84	10/11/84	N	Y

DRILLING FLUIDS	Depth From	Depth To	Weights PPG		Type
	129m	269m	8.5	TO 8.5	SEAWATER
	269m	855m	8.5	TO 9.3	SEAWATER - DRILLED SOLIDS
	855m	3,809m	9.3	TO 16.0	SEAWATER GEL + BARITE

WIRELINE LOGGING	Depth From	Depth To	Hole Size	Date Run	Logs Run
	852m	129m	17.5	17/09/84	BHC-GR
	3,011m	836.5m	12¼	1/10/84	DLL-MSFL-GR-CAL
	3,011m	836.5m	12¼	1/10/84	LDT-CNL-GR-CAL
	-	-	12¼	2/10/84	RFT Nos 1-3
	3,524m	3,014m	12¼	19/10/84	LTD-MSFL-GR
	3,524m	2,950m	12¼	19/10/84	LDT-CNL-NGTC
	-	-	12¼	20-24/10/84	RFT Nos 4 - 17
	3,524m	836.5m	12¼	24/10/84	BHC-GR

RISER CASING & LINER	Depth Fm	Depth To	OD "	ID "	Weight	Grade	Thread	Date Run	Cement	Stages	Excess
	0m	129m	22	21	----------RISER----------						
	129m	252m	20	19.124	94.4	X52	JV BOX	16/09/84	"G"	1	-
	129m	836.5m	13 3/8	12.615	54.5	K55	BUTT	17/09/84	"G"	1	-
	129m	3,549m	9 5/8	8.681	47	N80	BUTT	31/10/84	"G"	2	-

WELL INFORMATION SHEET
(SUPPLEMENTARY)

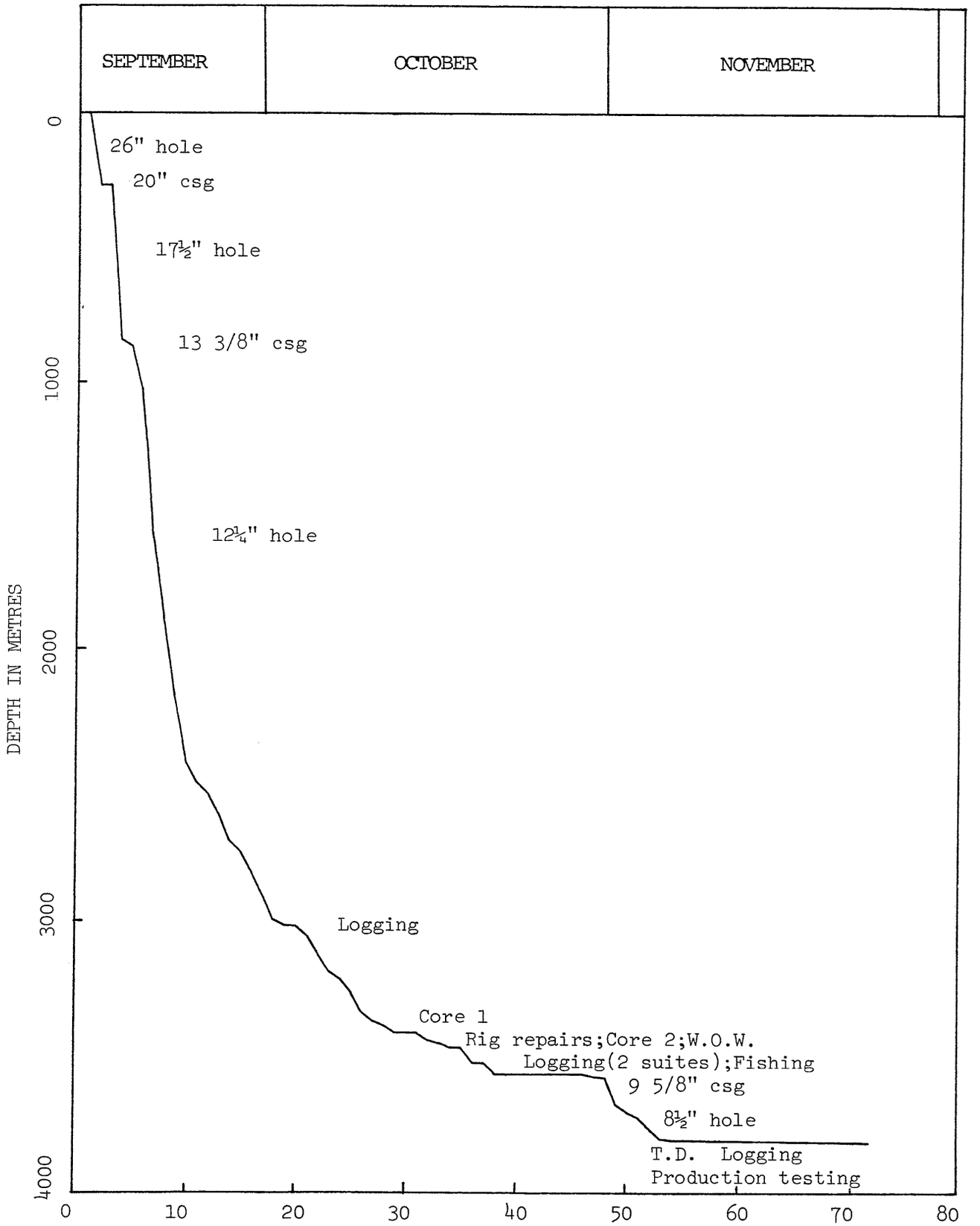
COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Depth from (m)	Depth to (m)	Hole size (ins.)	Date run	Logs run
-	-	12¼	24 OCT 84	VELOCITY SURVEY
3562	3450	12¼	27 OCT 84	DDL-MSFL-GR
3562	3450	12¼	27 OCT 84	GR
3564	2085	12¼	27 OCT 84	HDT
-	-	12¼	27 OCT 84	RFT NO. 18 (Aborted)
-	-	12¼	29 OCT 84	CST NOS. 1-4
3810	3550	8½	11 NOV 84	DLTD-MSFL-GR-CAL
3812	3550	8½	11 NOV 84	LDTC-CNTH-NGTC
3812	3550	8½	11 NOV 84	BHC-GR
-	-	8½	11 NOV 84	CBL
-	-	8½	12 NOV 84	RFT NO. 19
-	-	8½	13 NOV 84	CST NOS. 5-6
3400.5	3392.5	8½	19 NOV 84	PWT NO. 1

PROGRESS LOG

GRUNTER NO.1

ESSO AUSTRALIA LTD



GRUNTER #1
WELL HISTORY

13TH SEPT 1984	Towed to the location of "Grunter #1" and ran anchors.
14TH SEPT 1984	Spudded the well. Drilled 26" hole down to 269 metres.
15TH SEPT 1984	Ran 20" casing; ran the stack and riser.
16TH SEPT 1984	Drilled out the cement, then new hole down to 836 metres.
17TH SEPT 1984	Drilled 17½" hole to 855 metres. Conducted a wiper trip, then ran the 13 3/8" casing, cementing the shoe at 836 metres.
18TH SEPT 1984	Set the seal assembly at the second attempt. Drilled through the cement, then made new hole down to 1026 metres. The P.I.T. at 836.5 metres yielded a leak-off of 15.5 ppg equivalent mud weight.
19TH SEPT 1984	Drilled to 1547 metres, where the pipe became stuck, due to lost circulation.
20TH SEPT 1984	Unstuck the pipe, then P.O.O.H. for a bit change. Drilled ahead to 1879 metres, with another J1.
21ST SEPT 1984	Drilled ahead until Sandstones were encountered (Latrobe formation). Tripped out of the hole to run a more suitable bit (J22). Drilled down to 2161 metres.
22ND SEPT 1984	Drilled 12¼" hole down to 2406 metres.
23RD SEPT 1984	Drilled 12¼" hole down to 2484 metres. Bit change at 2425 metres.
24TH SEPT 1984	Drilled ahead to 2526 metres. Pulled the bit due to dulling.
25TH SEPT 1984	Drilled ahead with a J33 to 2605 metres. Circulated bottoms-up at 2603 metres (for a prospective core point) but there were no shows.
26TH SEPT 1984	Drilled 12¼" hole to 2697 metres.
27TH SEPT 1984	Drilled 12¼" hole to 2736 metres where a bit change was made due to increasing torque. Bit number seven (J33, 3 x 16) was then run into the hole and new hole drilled to 2749 metres. Trip gas from 2736 metres was 2-15-3 units.

28TH SEPT 1984	Drilled 12¼" hole to 2816 metres.
29TH SEPT 1984	Drilled 12¼" hole to 2905 metres.
30TH SEPT 1984	Drilled 12¼" hole to 2991 metres.
1ST OCT 1984	Drilled 12¼" hole to 3011 metres; where the bit was pulled due to the high number of hours it had been drilling. Schlumberger ran the logs DLL-MSFL-GR-CAL and LDT-CNL-GR-CAL over the interval 3011 - 836.5 metres.
2ND OCT 1984	A B.O.P. test was run prior to conducting RFT Nos. 1 - 3.
3RD OCT 1984	Drilled 12¼" hole to 3052 metres.
4TH OCT 1984	Drilled 12¼" hole to 3126 metres.
5TH OCT 1984	Drilled 12¼" hole to 3182 metres.
6TH OCT 1984	Drilled 12¼" hole to 3192 metres where a bit change was made. A phase III pressure integrity test was carried out resulting in a value of 14.4 ppg (E.M.W.). Drilling was then recommenced and 12¼" hole drilled to 3205 metres.
7TH OCT 1984	Drilled 12¼" hole to 3259 metres.
8TH OCT 1984	Drilled 12¼" hole to 3334 metres.
9TH OCT 1984	Drilled 12¼" hole to 3369 metres where the bit was pulled. A B.O.P. Test was carried out.
10TH OCT 1984	A new bit was run into the hole (J44) and 12¼" hole drilled to 3389 metres where a flow check was made and the samples were circulated out. A decision was made to P.O.O.H. to cut core #1.
11TH OCT 1984	The core assembly was run into the hole and the formation was cored from 3389 - 3407 metres (100% recovery). On recovery of the core a new bit was run into the hole (J44) to the casing shoe and hung off to enable repairs to be made to the rotary table substructure.
12TH OCT 1984	Down time to enable repairs to rotary table support beams.
13TH OCT 1984	Completed down time repairs. R.I.H. with a new bit and began to ream the rathole.

14TH OCT 1984	Drilled 12½" hole to 3434 metres where a drilling break was encountered; circulated out and it was decided to cut core #2.
15TH OCT 1984	Cut core #2 from 3434 metres - 3452 metres. Recovered 93.9%.
16TH OCT 1984	Reamed the core rathole, and then drilled 12¼" hole down to 3462 metres. At this point drilling was suspended due to rough weather. P.O.O.H. to the 13 3/8" shoe and hung-off in the rams.
17TH OCT 1984	Waited on weather. P.O.O.H. to change the bit.
18TH OCT 1984	R.I.H. with bit no. 12 (Hughes J33) and drilled down to T.D. (3521 metres).
19-24TH OCT 1984	Schlumberger logged the hole. Conducted a wiper trip on 22nd October, that yielded 1700 units of trip gas. Schlumberger's formation pretests indicated that the pore pressure was 9.1 ppg E.M.W. close to T.D. This is consistent with the high trip gas recorded.
25TH OCT 1984	Completed velocity survey; R.I.H. with bit no. 13 (Hughes J33); tested BOP's; circulated out; trip gas 60-1320-37μ. Drilled 12¼" hole to 3558 metres.
26TH OCT 1984	Drilled to 3562 metres; high gas (up to 2000 units); increased mud weight to 10.7 ppg. Ran 10-10-10; gas 160-225-120μ, increased mud weight to 11 ppg, shut down pumps for 20 minutes. C.O.; gas 3.5-30-13μ. Ran 15 stand W.T.; W.T.G. 9-77-11μ. Increased mud weight to 11.3 ppg; shut down pumps and worked pipe for 10 minutes. C.O.; gas 5-19-3μ. Ran 10 stand W.T. W.T.G. 5-10-7.
27TH OCT 1984	P.O.O.H.; tight from 2006 to 1939 metres. Schlumberger logged the hole. RFT no. 18 got stuck in hole at 3549 metres.
28TH OCT 1984	Fished for RFT tool, R.I.H. and circulated B.U. Trip gas 7-62-12 units.
29TH OCT 1984	P.O.O.H. Schlumberger ran sidewall cores. R.I.H.
30TH OCT 1984	R.I.H., circulated B.U. Trip gas 3-22-8 units. P.O.O.H.
31ST OCT 1984	Ran 9 5/8" shoe at 3549 metres (2 stage cement job).
1ST NOV 1984	Made several attempts to set seal assembly without success.

2ND NOV 1984 Set seal assembly after several attempts, tested B.O.P.'s, ran the wear bushing.

3RD NOV 1984 R.I.H. with NB14 (8½" HTC J7); tagged cement @ 3494 metres. Drilled cement to 3540 metres and tested casing; drilled out shoe and tagged formation @ 3561 metres. B.U. gas 1-560-5 units. Drilled to 3567 metres and conducted a phase II P.I.T., giving a leak off of 19.4 ppg equivalent mud weight. P.O.O.H. to change to a more suitable bit.

4TH NOV 1984 R.I.H. with NB15 (8½" HTC J33). Trip gas was 4-87-23μ @ 3567 metres. Circulated to increase the mud weight to 11.5 ppg. Drilled ahead to 3610 metres.

5TH NOV 1984 Drilled 8½" hole to 3643 metres and circulated out a drill break. Drilled ahead to 3681 metres increasing mud weight to 12 ppg. Connection gas seen on several connections.

6TH NOV 1984 Drilled 8½" hole to 3700 metres, circulated to increase mud weight to 13.4 ppg. A 10 minute pump shutdown during circulation at 13.4 ppg gave B.U. gas of 34-66-32 units. Mud weight was built up to 14 ppg before the gas dropped to 22 units. Pulled out of hole to change the bit.

7TH NOV 1984 R.I.H. with NB16 (8½" HTC J33). Trip gas 8-515-24. Drilled to 3713 metres and circulated, to increase the mud weight to 14.9 ppg (Background gas was running at around 100 units). Drilled ahead to 3721 metres. Connection gas was detected from 3719 metres, and the mud was weighted up to 15.0 ppg. The pore pressure was estimated to be 14.5 ppg between 3715 and 3724 metres. Drilled ahead to 3725 metres.

8TH NOV 1984 Drilled ahead to 3729 metres. Circulated the hole twice, then weighted up the mud to 15.5 ppg. A wiper trip, at this point, to the 9 5/8" casing shoe, yielded 8-45-34 units of gas. The pore pressure was deduced to be around 14.7 ppg equivalent mud weight. It was decided to drill ahead. Reached 3762 metres by midnight. Connection gas was detected from every "Kelly down", indicating that the formation pressure had risen to 15.2 ppg.

9TH NOV 1984 — Drilled 8½" hole down to 3807 metres. Circulated bottoms-up at 3781 metres due to high gas levels (50-80 units). Stopped drilling to circulate out high gas on two other occasions:

at 3791 metres .... maximum gas 26-100-28 units
at 3805 metres .... maximum gas 54-82-43 units

Background gas levels increased and connection gas appeared from every kelly-down, in the drilling interval, indicating that the pore pressure was still increasing (15.3 ppg). The bit torqued up at 3807 metres, so a bit trip was called for.

10TH NOV 84 — Replaced bit no. 16 with another J33. Circulated bottoms-up from 3807 metres (T.G. 25-1700-70 units) prior to drilling down to 3809 metres. This was called "T.D." since the background gas remained above 70 units. Weighted the mud up to 15.8 ppg, before conducting a wiper trip to the 9 5/8" casing shoe. Wiper trip gas was 24-286-25 units, much higher than anticipated, so the mud weight was increased to 16.0 ppg.

11TH NOV 84 — The second circulation yielded bottoms-up gas of 24-94-29 units (with 15.9 ppg mud). Circulating gas remained steady at 29 units with 16.0 ppg mud, so it wad decided to P.O.O.H. Schlumberger logged at T.D. R.I.H. to make a wiper trip.

12TH NOV 84 — Conducted a wiper trip (W.T.G. was 10-1416-20 units). Conditioned the mud to reduce the circulating gas. Schlumberger ran R.F.T. No. 19, then sidewall cores.

13TH NOV 84 — R.I.H. with open-ended drill-pipe and circulated bottoms-up (T.G. 15-1624-16 units). Conditioned the mud then cemented off the open hole.

14TH NOV 84 — Pressure tested the cement plug. Schlumberger ran the junk basket and CCL. Circulated SR log. Circulated and conditioned the mud. Decreased the mud weight from 16 ppg to 9.5 ppg.

15TH NOV 84 — R.I.H. with 3½" tubing. Unable to stab into packer. Pulled the tubing out of the hole.

16TH NOV 84 — R.I.H. with magnet on drill pipe. Retrieved the magnet with no junk on it. R.I.H. with Schlumberger to try to stab into packer - no luck. R.I.H. with a milling tool and milled out the packer.

17TH NOV 84	Completed milling the packer. Conditioned the mud. R.I.H. with casing scrapper.
18TH NOV 84	R.I.H. with Schlumberger gauge ring and junk basket. Set packer at 3377 metres. Stabbed stinger into the packer. Tested the annulus. Rigged up the manifold.
19TH NOV 84	Commenced PWT No. 1. Perforated 3392.5 - 3400.5 metres, opened the well to the separator. Well flowed 400 - 600 bbl/day of 90% water and 10% oil. Up to 70% CO_2 in gas.
20TH NOV 84	Continued flowing well - disappointing test so decided to P/A well. Circulated the hole clean. Gas was 28-2230-19 units. Rig down Otis testing gear and P.O.O.H. 3½" tubing.
21ST NOV 84	P.O.O.H. 3½" tubing and Otis equipment. R.I.H. and set bridge plug @ 3370 metres. Cemented. Reverse circulated. P.O.O.H. Tested the stack.
22ND NOV 84	P.O.O.H. 9 5/8" CSG and set bridge plug. Cut 13 3/8" csg and set plug. Pulled the stack and riser.
23RD NOV 84	Layed down drill pipe and collars. The well head was blown and 20" csg recovered.
24TH NOV 84	W.O.W.
25TH NOV 84	W.O.W.
26TH NOV 84	Waiting on boats.
27TH NOV 84	Pulled the anchors.
28TH NOV 84	Continued to pull the anchors and commenced the tow to the new location.

4. LITHOLOGY AND CORE-O-GRAPHS

LITHOLOGICAL SUMMARY

The main objectives of Grunter #1 were to:

1. Test the hydrocarbon potential of a fault sealed closure within the Latrobe Group.

2. Test the hydrocarbon potential of the Latrobe Group and

3. Test a small culmination at the base of the Tuna - Flounder channel.

Prognosed T.D. was 3,021 metres, but this was extended to 3,809 metres to further evaluate the lower Latrobe Group sediments.

252 - 1,850 metres Gippsland Limestone:

Calcarenite/Calcisiltite: Dominantly calcarenite to approximately 600 metres. Light grey, white; medium to fine grained; soft - firm; friable; argillaceous in part. Abundant fossils including bryozoa, forminifera, shell fragments. Common biosparite in part. Below 600 metres the formation was predominantly calcisiltite with occasional calcarenite and calcilutite: Medium to light grey; firm to moderately hard, occasionaly soft. Commonly very argillaceous - grading to a clay rich marl at the base of this zone. Occasional glauconite; and occasional fossils decreasing with depth.

Gas was 5 - 10 units throughout from 460 metres on, with only C_1 being recorded.

1,850 - 3,809 metres Latrobe Group:

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

The top of the Latrobe down to approximately 2,260 metres consisted of sandstone, with minor coal and siltstone. The sandstone was clear - translucent; medium to very coarse grained, predominantly loose quartz; poorly sorted; sub angular - sub rounded. Good to excellent visible porosity - no significant shows. Minor fine - very fine grained silica cemented sandstone.

Gas increased to 25 units immediately upon entering the Latrobe - with C_1 - C_4 being recorded; then decreased to 3 - 10 units below the top Latrobe.

Below 2,260 metres the formation became increasingly interbedded with siltstone, coal and sandstone beds. Siltstone became the dominant lithology below 2,550 metres.

The siltstone was light to dark grey to grey brown, firm to moderately hard, argillaceous, slightly glauconitic and micromicaceous in part; and moderate to very carbonaceous in parts.

The coal was black, hard, brittle, vitreous. Occasionally silty in part.

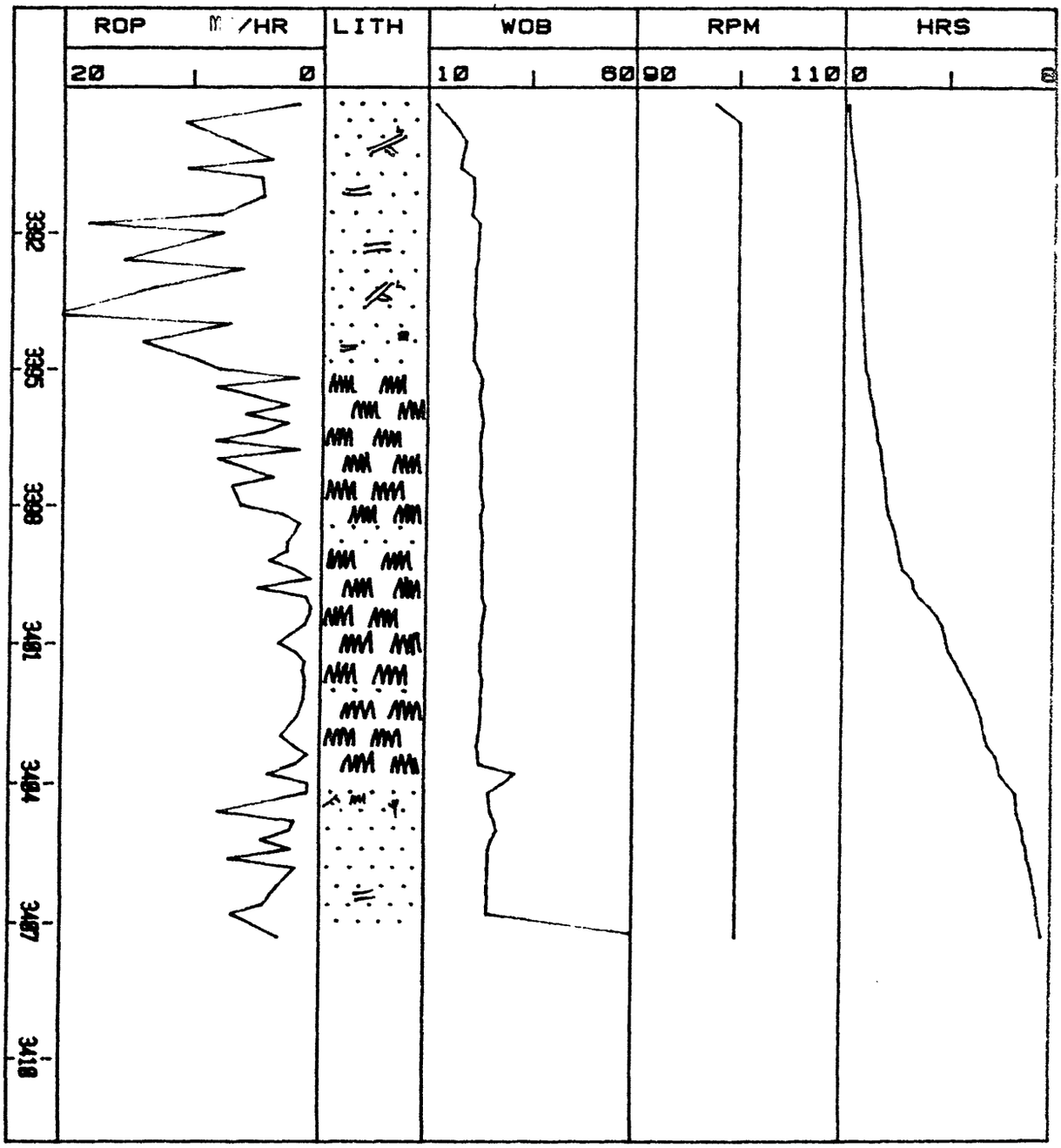
The sandstone was predominantly medium to coarse grained, sub angular to sub rounded, moderately sorted, dominantly loose quartz but occasionally cemented with dolomite and silica. Below 3,400 metres very fine to fine grained sandstone dominated - sub angular to sub rounded, moderately sorted; firm to moderately hard aggregates - commonly cemented with strong silica and dolomite cement.

Visual porosity was very poor to nil. Fluorescence occurred in small zones: trace - 10% dull - moderately bright yellow fluorescence with a slow cut. Gas to 3,000 metres was 10 - 30 units with occasional peaks up to 90 units associated with drill breaks. C_1 - C_4 was recorded. Below 3,000 units gas increased to 20 - 50 units with higher peaks associated with the onset of overpressure from 3,200 metres onwards. C_1 to C_6 were recorded.

Two cores were cut from 3,389 - 3,407 metres and 3,434 - 3,452 metres having interbedded siltstone/silty sandstone lithologies. The sandstone was very fine to fine grained with strong crystalline silica and occasionally dolomite cements; and very poor to no visual porosity. Up to 80% dull yellow/white fluorescence was noted, with only a slow to moderately fast crush cut.

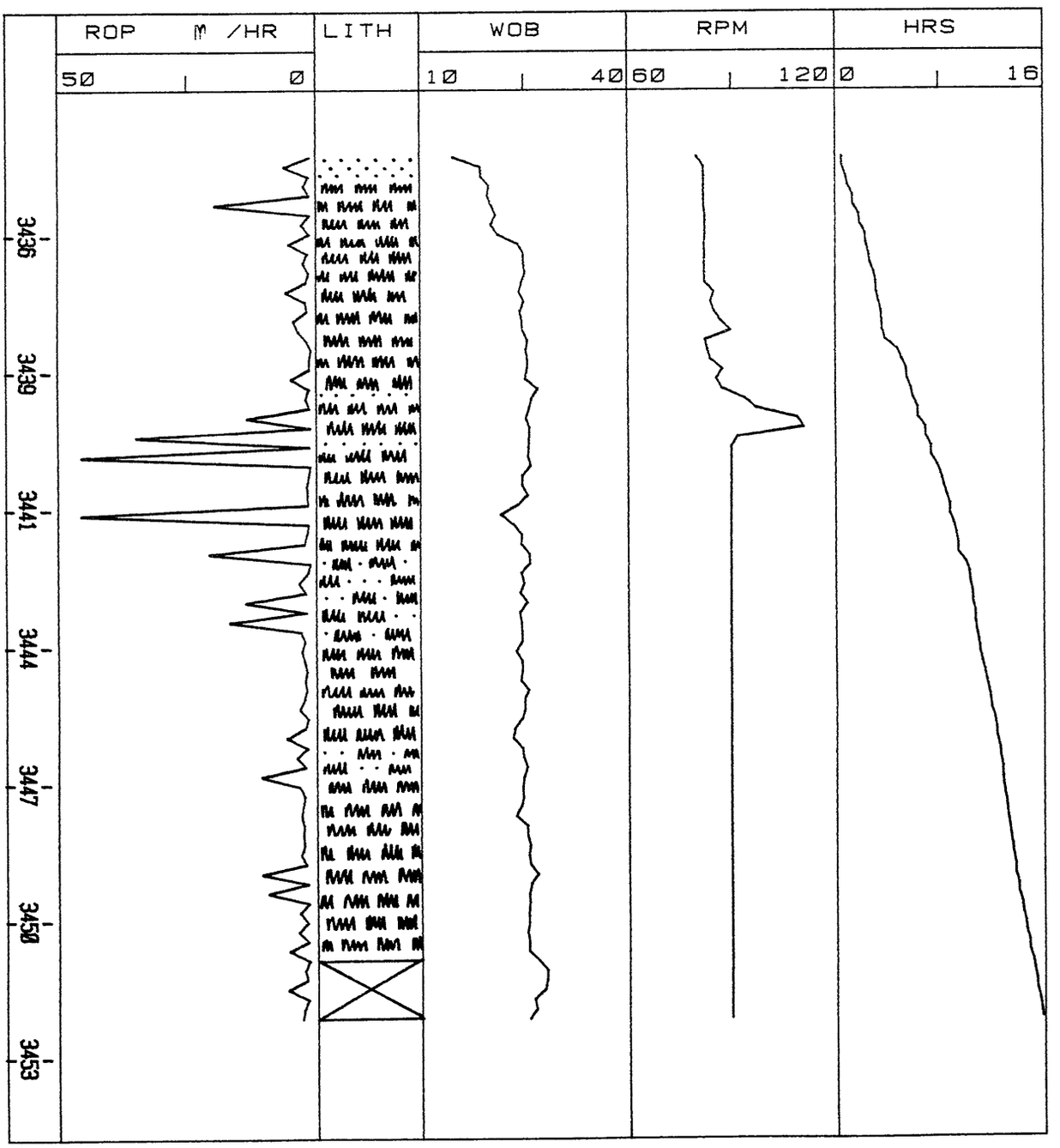
CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	GRUNTER No. 1
CORE NO.:	1
INTERVAL CORED FROM	3389.0m. TO 3407.0m.
CUT: 18.0m	RECOVERED: 18.0m. (100.0%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRIST C23
CORE BARREL SIZE:	8.00in. x 4.00in. x 19.88m.
BIT SIZE: 8.50	MUD WT.: 9.5



CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD
WELL:	GRUNTER No. 1
CORE NO.:	2
INTERVAL CORED FROM	3434.0m. TO 3452.0m.
CUT: 18.0m	RECOVERED: 16.9m. (93.9%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRISTENSEN C-23
CORE BARREL SIZE:	6.00in. x 4.00in. x 19.66m.
BIT SIZE: 8.47	MUD WT.: 9.5



5. EXTENDED SERVICE PACKAGE

EXTENDED SERVICE INTRODUCTION

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

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

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

Core Laboratories E.S. logs include the following :

E.S. PRESSURE LOG

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

CORE LAB DRILL DATA PLOT

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

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

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

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

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

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

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

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

E.S. GEO-PLOT LOG

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

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

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

ELECTRIC LOG PLOT

A plot of shale resistivity (ohm-metres squared/metre), sonic travel time (microseconds per foot), bulk density (gm/cc) and neutron porosity (%), may be made using data supplied by Schlumberger. Two-cycle semi-log paper is used, with a vertical scale of 1:10000. As far as possibl 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 repor 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 H_2S monitor, to detect H_2S emanating from the drilling fluid.

5. Carbon Dioxide detector.
   An Infra-red gas analyzer determines the percentage of CO_2 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 PLOTS DESCRIPTION AND CONCLUSIONS

(with particular reference to formation pressure)

Abnormal pressure was anticipated during the drilling of Grunter #1 as indicated by offset data from the Flounder and Marlin wells. Indeed high geopressures were found.

Referring to the Drill Data Plot, it can be seen that drilling parameter trends remain normal (and typical) for the Gippsland Basin down to about 3,000 metres. At this point though, there is a drill-off in ROP's, associated with an increase in background gas from one unit up to ten units. This is interpreted as an increase in pore pressure (from 8.4 ppg to 8.6 ppg, as confirmed later by Schlumberger's pretests).

Further drill-offs and abnormal trends in the corrected "d" exponent occurred at 3,300-3,700 and 3,400 metres. There were no corresponding increases in background gas or abnormal trends in trip gas associated with these drill-offs, so the latter were considered to be the result of lighological changes rather than increases in formation pressure. Further fuel for this supposition was the absence of conclusive connection gas in these zones. However, it should be noted that possible connection gas had been seen between 3,480-3,490 metres, but the gas peaks coincidentally corresponded with coal gas peaks, and hence they could not be considered as irrefutable evidence of further overpressure.

During the logging runs at 3,521 metres, a wiper trip was made, which yielded 1,700 units of trip gas. With a mud weight of 9.5 ppg, this trip gas peak represents a pore pressure at 3,521 metres of around 9.2 - 9.3 ppg.

A depth of 3,521 metres was supposed to be T.D. for Grunter #1 however it was thought both safe and desirable to extend the well due to the non-appearance of the anticipated very high geopressures. So drilling was resumed, until a point was reached that necessitated the use of 15.5 ppg mud to suppress formation fluids. This point turned out to be 3,809 metres.

Referring once again to the "Drill Data Plot", a further drill-off and abnormal trend in corrected "d" exponents occurred from 3,520 metres to 3,560 metres with a rapid rise in background gas to 2,000 units at 3,554 metres drilling with 9.5 ppg mud. Mud weight was increased at 3,562 metres to 10.7 ppg and a 10/10/10 test gave 225 units over a background of 160 units. Mud weight was further increased to 11.0 ppg and a short wiper trip yielded 77 units over 10 units.

Mud weight was increased further to 11.3 ppg, pumps shut down for 10 minutes and pipe worked. This yielded BU gas of 19 units over 5 units. A further wiper trip yielded 10 units over 7 units. Thus pore pressure was estimated to be 10.7 ppg at this depth (3,562 metres).

Background gas increased rapidly from 3,567 metres and reached a maximum of 508 units at 3,571 metres with 11.5 ppg mud indicating a further increase in pore pressure to 11.3 ppg. Possible connection gas was observed at 3,587 metres of 105 units over 30 units. This gas, however, may be from a drill break at the same depth.

A drill-off and abnormal trend in corrected "d" exponents occurred from 3,610 metres to 3,675 metres with background gas increasing from 10 to 20 units above 3,657 metres to 60 - 80 units below this depth.

At 3,700 metres the mud weight had to be increased to 14.0 ppg (from 12.2 ppg) in order to reduce the very high background gas to around 20 units. This suggested a jump in pore pressure up to 13.5 ppg, i.e. an underbalanced condition, temporarily, at 3,700 metres. It was the low porosity of the formation that alone prevented the well from blowing-out at this point.

The "d" exponent trend is indeed very revealing when viewed on a macro-scale. There is a general normal trend from "surface" down to 3,200 metres, followed by an abnormal "kick-off" down to T.D. However, the angle of "kick-off", or degree of abnormality becomes very pronounced at 3,550 metres. The inference here is that geopressures are normal down to 3,200 metres; abnormal down to 3,550 metres; and distinctly abnormal between 3,550 metres and T.D.

Indeed this is the case. Background gas levels are high, below 3,615 metres, and connection gas appears from every "kelly-down" below 3,650 metres. These evaluators of pore pressure instituted the frequent addition of Barite to the drilling fluid in order to contain the steadily increasing formation pressures, with depth.

Table 1 shows the numerical assessment of these pore pressures for the entire well, constructed by using drilling parametres and R.F.T. data. Table 2 shows the drilling parameters used in this assessment. At T.D. 16.0 ppg mud was necessary to combat the influx of formation fluids.

The profile is presented graphically on both the "Pressure Plot" and "Geoplot".

The "Temperature Plot" adds no further evidence to the case of overpressure unfortunately. Due to the frequent treatment of the mud system (particularly with the addition of barite), short bit runs, fluctuating flow rates, and numerous hole circulations, it is impossible to infer any abnormal trends from the plot. The bottom-hole temperature was extrapolated to 143°C at 3,809 metres, thereby yielding a geothermal gradient of 3.04°C per 100 metres (or 1.93°F per 100 feet), slightly lower than the Gippsland average, which is exactly what would be expected when overpressure is encountered.

TABLE 1

FORMATION PRESSURE PROFILE USING DRILLING PARAMETERS AND R.F.T. DATA

INTERVAL (metres)		FORMATION PRESSURE (ppg E.M.W.)
FROM	TO	
129	2,770	8.4
2,771	3,004	8.5
3,005	3,093	8.6
3,094	3,250	8.5
3,251	3,325	8.6
3,326	3,327	8.7
3,328	3,345	8.8
3,346	3,372	8.9
3,373	3,439	9.0
3,440	3,520	9.1
3,521	3,551	9.2
3,552	3,560	10.2
3,561	3,568	10.7
3,569	3,576	10.9
3,577	3,659	11.0
3,660	3,663	11.5
3,664	3,684	11.9
3,685	3,700	12.2
3,701	3,709	13.5
3,710	3,712	13.8
3,713	3,714	14.0
3,715	3,726	14.5
3,727	3,731	14.7
3,732	3,734	14.8
3,735	3,750	15.0
3,751	3,778	15.2
3,779	3,807	15.3
3,808	3,809	15.5

TABLE 2

Drilling parameter indicators of overpressure

DEPTH (metres)	CONNECTION GAS	TRIP GAS (Units)	10-10-10 GAS (Units)	MUD WEIGHT (P.P.G.)	ESTIMATED PORE PRESSURE (P.P.G.)
3,567		3-87-23		11.2	10.7
3,578	7-8-6			11.5	11.0
3,587	20-105-30			11.5	11.0
3,652	18-52-34			11.7	11.0
3,663	92-160-90			11.8	11.5
3,673	85-190-120			11.9	11.9
3,682	78-140-89			11.9	11.9
3,691	86-132-70			12.1	12.2
3,700		8-515-24	34-66-32	12.2	12.2
3,701	23-50-36			14.0	13.5
3,710	96-135-94			14.0	13.8
3,719	18-58-30			14.9	14.5
3,729	10-18-11	8-45-34		15.5	14.7
3,739	12-22-13			15.5	15.0
3,749	27-32-24			15.5	15.0
3,759	13-31-13			15.5	15.2
3,769	24-32-13			15.5	15.2
3,779	6-80-35			15.5	15.3
3,788	23-46-32			15.5	15.3
3,797	35-71-30			15.5	15.3
3,807	48-102-45	25-1700-70		15.5	15.3
3,809		10-1416-20		15.5	15.5

7. B.H.T. ESTIMATION

CORE LAB
========

STRAIGHT LINE LEAST SQUARES BEST FIT

1/(TIME) ON A LINEAR SCALE AGAINST
TEMPERATURE ON A LINEAR SCALE

ENTERED DATA:

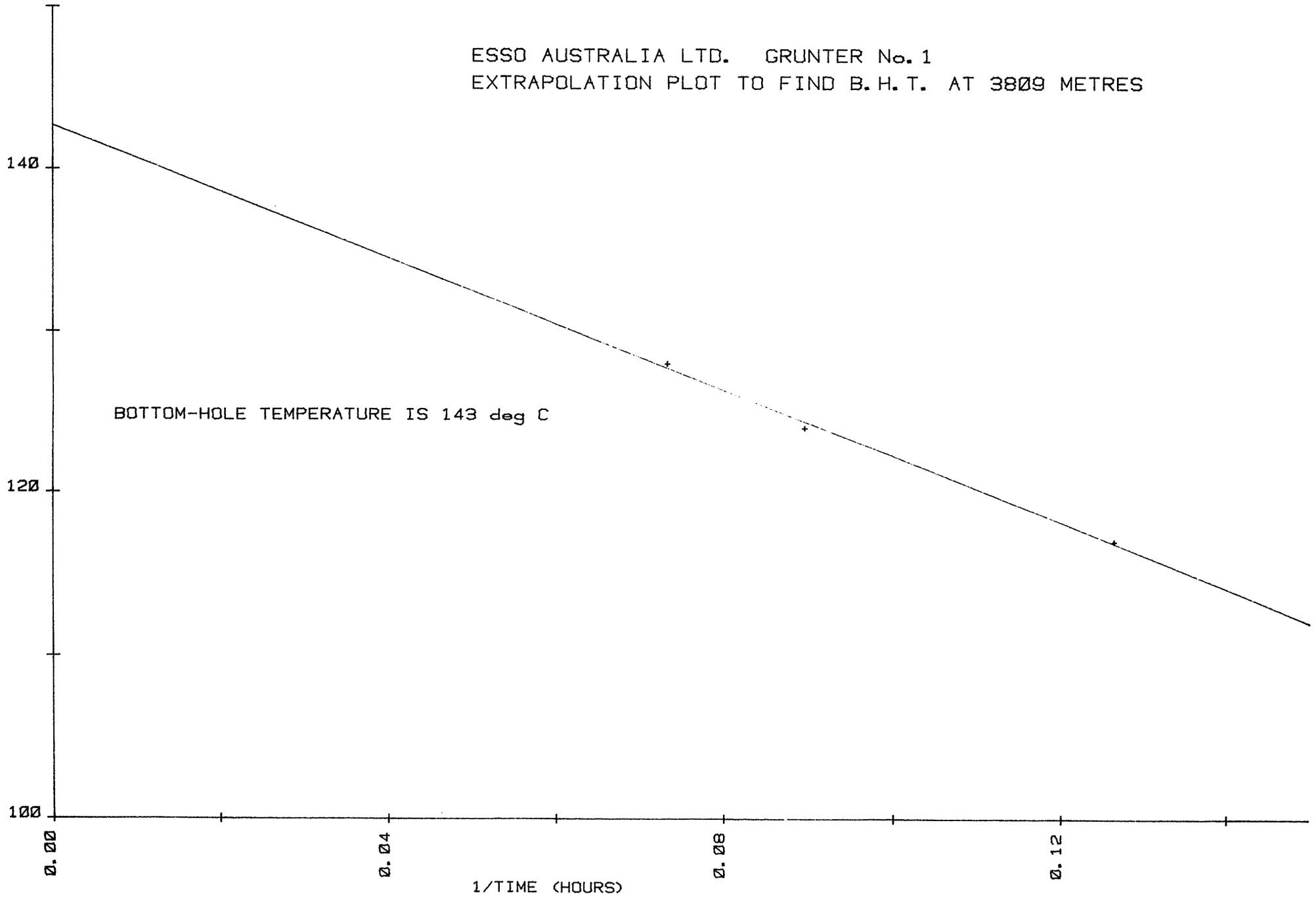
DATA SET #	1/(TIME)	TEMPERATURE
1	0.1263	117
2	0.0895	124
3	0.0732	128

COEFFICIENT & CONSTANT:

Y = m.X + c where m = -2.0427792E 02 and c = 1.4267877E 02

INTERPOLATED DATA:

1/(TIME)	TEMPERATURE
0.0000	143


ESSO AUSTRALIA LTD. GRUNTER No. 1
EXTRAPOLATION PLOT TO FIND B.H.T. AT 3809 METRES
BOTTOM-HOLE TEMPERATURE IS 143 deg C
140
120
100
0.00
0.04
0.08
0.12
1/TIME (HOURS)

8. OVERBURDEN GRADIENT CALCULATIONS AND PLOT

OVERBURDEN GRADIENT CALCULATIONS

DEPTH . . . . . .metres

BULK DENSITY . . . . . .gm/cc

OVERBURDEN PRESSURE INCREMENT. .psi

CUMULATIVE OVERBURDEN PRESSURE .psi

OVERBURDEN PRESSURE GRADIENT . .psi/ft

OVERBURDEN EQUIVALENT DENSITY. .Pounds per gallon

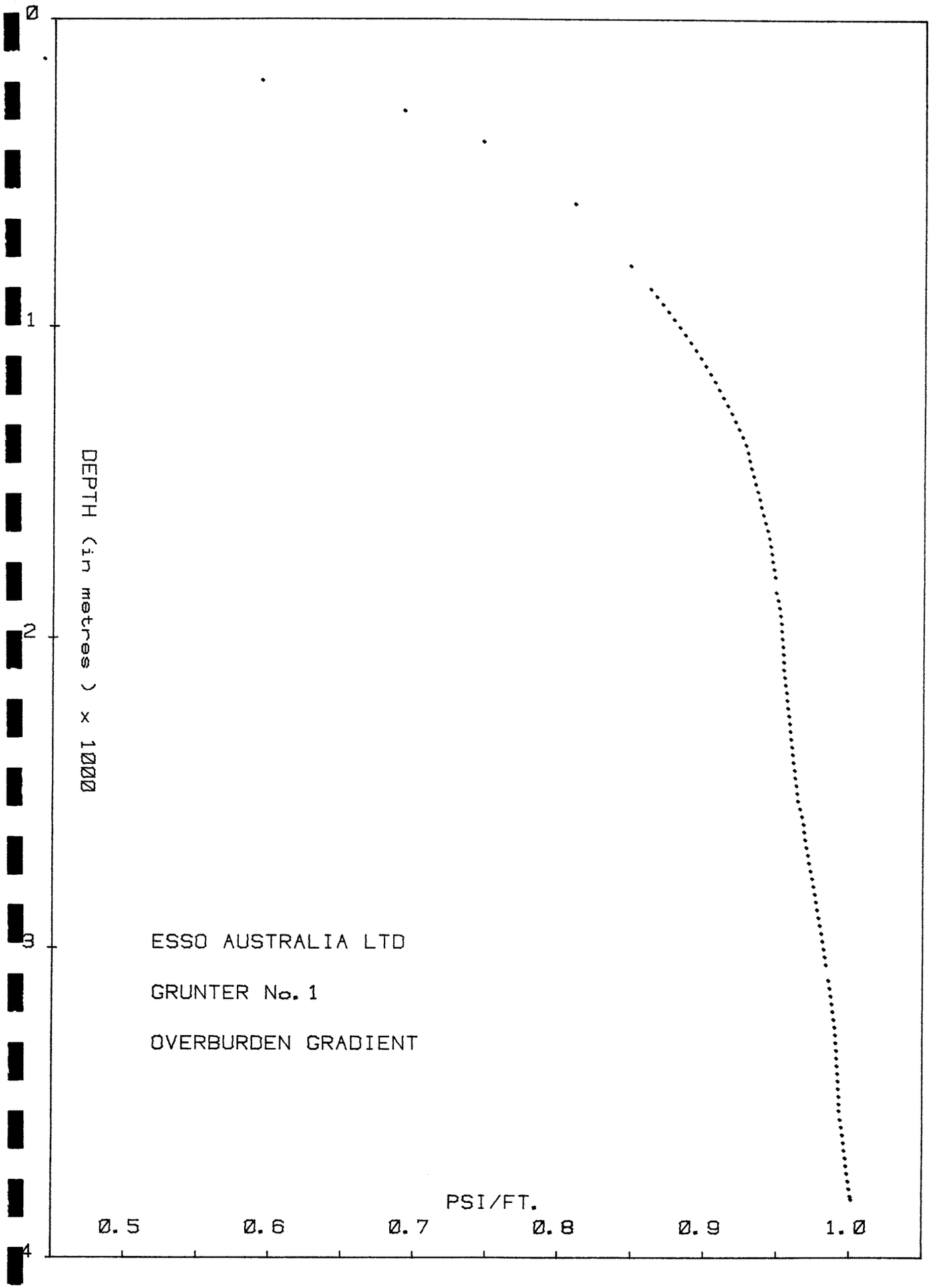
BULK DENSITY TAKEN FROM AVERAGED F.D.C. LOG, OR FROM SONIC LOG FOR SECTIONS WHERE THE F.D.C. LOG IS NOT AVAILABLE.

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	129	1.02	186.92	186.92	0.442	8.49
129	200	2.00	201.73	388.65	0.592	11.39
200	300	2.05	291.22	679.87	0.691	13.28
300	400	2.10	298.33	978.20	0.745	14.33
400	600	2.16	613.70	1591.90	0.809	15.55
600	800	2.22	630.75	2222.64	0.847	16.29
800	875	2.33	248.25	2470.89	0.861	16.55
875	900	2.33	82.75	2553.64	0.865	16.63
900	925	2.35	83.46	2637.10	0.869	16.71
925	950	2.36	83.82	2720.92	0.873	16.79
950	975	2.37	84.17	2805.09	0.877	16.86
975	1000	2.39	84.88	2889.97	0.881	16.94
1000	1025	2.39	84.88	2974.85	0.885	17.01
1025	1050	2.40	85.24	3060.08	0.888	17.08
1050	1075	2.41	85.59	3145.68	0.892	17.15
1075	1100	2.41	85.59	3231.27	0.895	17.22
1100	1125	2.41	85.59	3316.86	0.899	17.28
1125	1150	2.42	85.95	3402.80	0.902	17.34
1150	1175	2.43	86.30	3489.11	0.905	17.41
1175	1200	2.41	85.59	3574.70	0.908	17.46
1200	1225	2.41	85.59	3660.29	0.911	17.51
1225	1250	2.44	86.66	3746.94	0.914	17.57
1250	1275	2.44	86.66	3833.60	0.916	17.62
1275	1300	2.42	85.95	3919.55	0.919	17.67
1300	1325	2.44	86.66	4006.20	0.922	17.72
1325	1350	2.45	87.01	4093.22	0.924	17.77
1350	1375	2.42	85.95	4179.16	0.926	17.82
1375	1400	2.33	82.75	4261.91	0.928	17.84
1400	1425	2.30	81.68	4343.60	0.929	17.87
1425	1450	2.30	81.68	4425.28	0.930	17.89
1450	1475	2.35	83.46	4508.74	0.932	17.92
1475	1500	2.35	83.46	4592.20	0.933	17.94
1500	1525	2.37	84.17	4676.37	0.935	17.97
1525	1550	2.35	83.46	4759.83	0.936	18.00
1550	1575	2.33	82.75	4842.58	0.937	18.02
1575	1600	2.38	84.53	4927.11	0.939	18.05
1600	1625	2.38	84.53	5011.63	0.940	18.08
1625	1650	2.40	85.24	5096.87	0.942	18.11
1650	1675	2.37	84.17	5181.04	0.943	18.13
1675	1700	2.32	82.39	5263.43	0.944	18.15
1700	1725	2.30	81.68	5345.12	0.944	18.16
1725	1750	2.28	80.97	5426.09	0.945	18.17
1750	1775	2.32	82.39	5508.49	0.946	18.19
1775	1800	2.31	82.04	5590.53	0.947	18.21
1800	1825	2.24	79.55	5670.08	0.947	18.21

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
1825	1850	2.28	80.97	5751.06	0.948	18.22
1850	1875	2.42	85.95	5837.00	0.949	18.25
1875	1900	2.36	83.82	5920.82	0.950	18.27
1900	1925	2.33	82.75	6003.57	0.951	18.28
1925	1950	2.30	81.68	6085.25	0.951	18.29
1950	1975	2.24	79.55	6164.80	0.951	18.30
1975	2000	2.28	80.97	6245.78	0.952	18.30
2000	2025	2.29	81.33	6327.11	0.952	18.31
2025	2050	2.26	80.26	6407.37	0.953	18.32
2050	2075	2.24	79.55	6486.93	0.953	18.32
2075	2100	2.22	78.84	6565.77	0.953	18.33
2100	2125	2.32	82.39	6648.16	0.954	18.34
2125	2150	2.32	82.39	6730.56	0.954	18.35
2150	2175	2.37	84.17	6814.73	0.955	18.37
2175	2200	2.28	80.97	6895.70	0.955	18.37
2200	2225	2.33	82.75	6978.45	0.956	18.38
2225	2250	2.34	83.11	7061.56	0.957	18.40
2250	2275	2.32	82.39	7143.95	0.957	18.41
2275	2300	2.31	82.04	7225.99	0.958	18.42
2300	2325	2.32	82.39	7308.39	0.958	18.43
2325	2350	2.35	83.46	7391.85	0.959	18.44
2350	2375	2.32	82.39	7474.24	0.959	18.45
2375	2400	2.32	82.39	7556.64	0.960	18.46
2400	2425	2.40	85.24	7641.87	0.961	18.47
2425	2450	2.33	82.75	7724.62	0.961	18.48
2450	2475	2.41	85.59	7810.21	0.962	18.50
2475	2500	2.37	84.17	7894.38	0.962	18.51
2500	2525	2.34	83.11	7977.49	0.963	18.52
2525	2550	2.59	91.98	8069.47	0.965	18.55
2550	2575	2.57	91.27	8160.75	0.966	18.58
2575	2600	2.50	88.79	8249.53	0.967	18.60
2600	2625	2.33	82.75	8332.28	0.968	18.61
2625	2650	2.41	85.59	8417.88	0.968	18.62
2650	2675	2.47	87.72	8505.60	0.969	18.64
2675	2700	2.52	89.50	8595.10	0.970	18.66
2700	2725	2.43	86.30	8681.40	0.971	18.67
2725	2750	2.50	88.79	8770.18	0.972	18.69
2750	2775	2.51	89.14	8859.33	0.973	18.71
2775	2800	2.50	88.79	8948.11	0.974	18.73
2800	2825	2.49	88.43	9036.55	0.975	18.75
2825	2850	2.47	87.72	9124.27	0.976	18.77
2850	2875	2.44	86.66	9210.93	0.977	18.78
2875	2900	2.53	89.85	9300.78	0.978	18.80
2900	2925	2.50	88.79	9389.57	0.978	18.82
2925	2950	2.53	89.85	9479.42	0.979	18.84
2950	2975	2.48	88.08	9567.50	0.980	18.85
2975	3000	2.46	87.37	9654.86	0.981	18.86
3000	3025	2.52	89.50	9744.36	0.982	18.88
3025	3050	2.47	87.72	9832.08	0.983	18.90
3050	3075	2.52	89.50	9921.58	0.983	18.91

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
3075	3100	2.55	90.56	10012.14	0.984	18.93
3100	3125	2.52	89.50	10101.64	0.985	18.95
3125	3150	2.51	89.14	10190.78	0.986	18.96
3150	3175	2.48	88.08	10278.86	0.987	18.98
3175	3200	2.45	87.01	10365.87	0.987	18.99
3200	3225	2.50	88.79	10454.66	0.988	19.00
3225	3250	2.49	88.43	10543.09	0.989	19.02
3250	3275	2.44	86.66	10629.75	0.989	19.02
3275	3300	2.35	83.46	10713.21	0.990	19.03
3300	3325	2.43	86.30	10799.51	0.990	19.04
3325	3350	2.34	83.11	10882.62	0.990	19.04
3350	3375	2.36	83.82	10966.43	0.990	19.05
3375	3400	2.47	87.72	11054.15	0.991	19.06
3400	3425	2.35	83.46	11137.61	0.991	19.06
3425	3450	2.36	83.82	11221.43	0.991	19.07
3450	3475	2.45	87.01	11308.44	0.992	19.07
3475	3500	2.29	81.33	11389.77	0.992	19.07
3500	3521	2.28	68.02	11457.79	0.992	19.07
3521	3550	2.50	102.99	11560.78	0.993	19.09
3550	3575	2.59	91.98	11652.76	0.994	19.11
3575	3600	2.55	90.56	11743.33	0.994	19.12
3600	3625	2.54	90.21	11833.54	0.995	19.13
3625	3650	2.46	87.37	11920.90	0.995	19.14
3650	3675	2.57	91.27	12012.18	0.996	19.16
3675	3700	2.47	87.72	12099.90	0.997	19.17
3700	3725	2.55	90.56	12190.46	0.997	19.18
3725	3750	2.62	93.05	12283.51	0.998	19.20
3750	3775	2.56	90.92	12374.43	0.999	19.21
3775	3800	2.63	93.40	12467.83	1.000	19.23
3800	3809	2.59	33.11	12500.95	1.000	19.24


0
1
2
3
4
DEPTH (in metres) x 1000
ESSO AUSTRALIA LTD
GRUNTER 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.

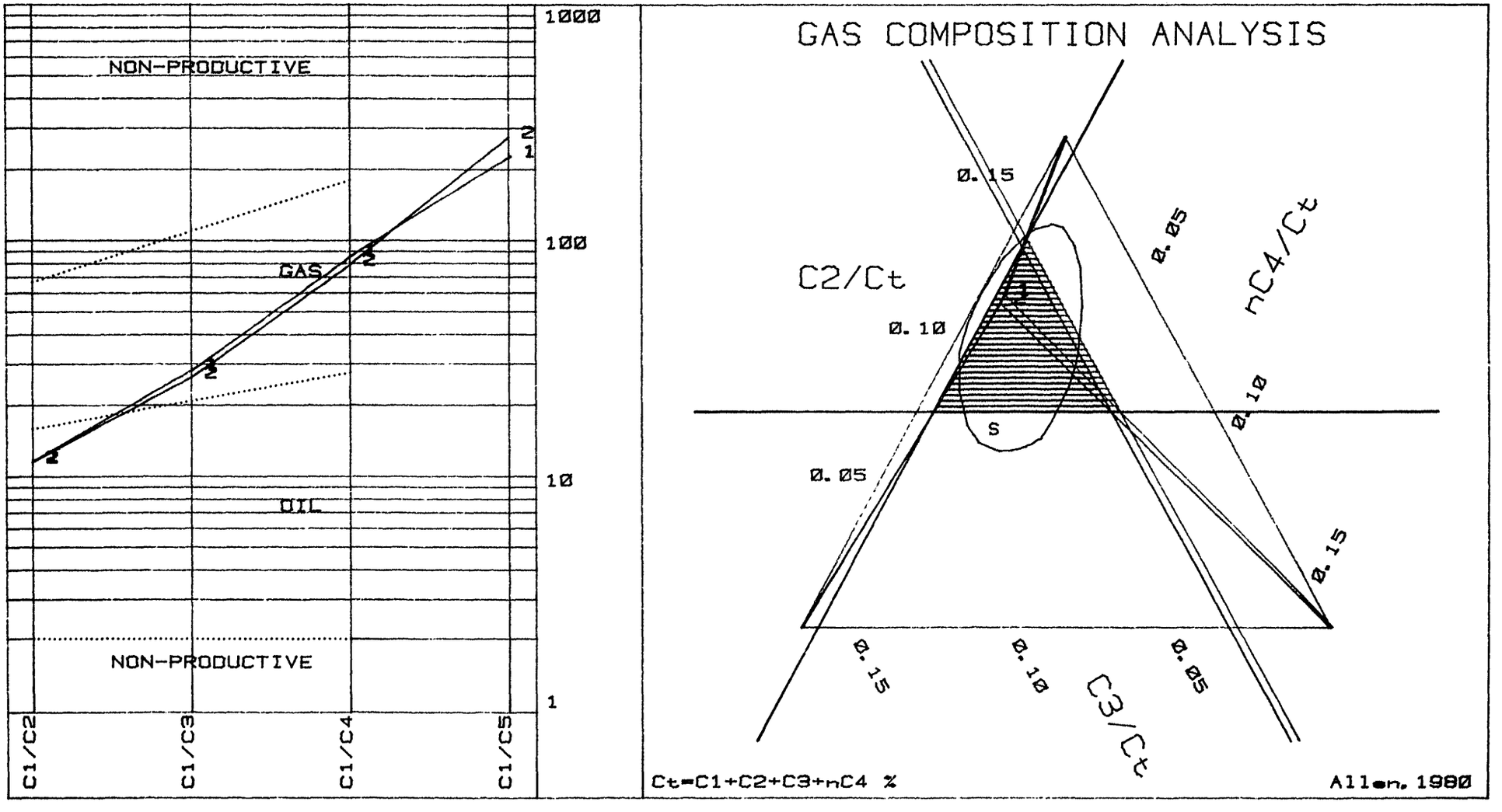
5. The ratios may not be definitive for low permeability zones; however, steep ratio plots may indicate a tight zone.

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.

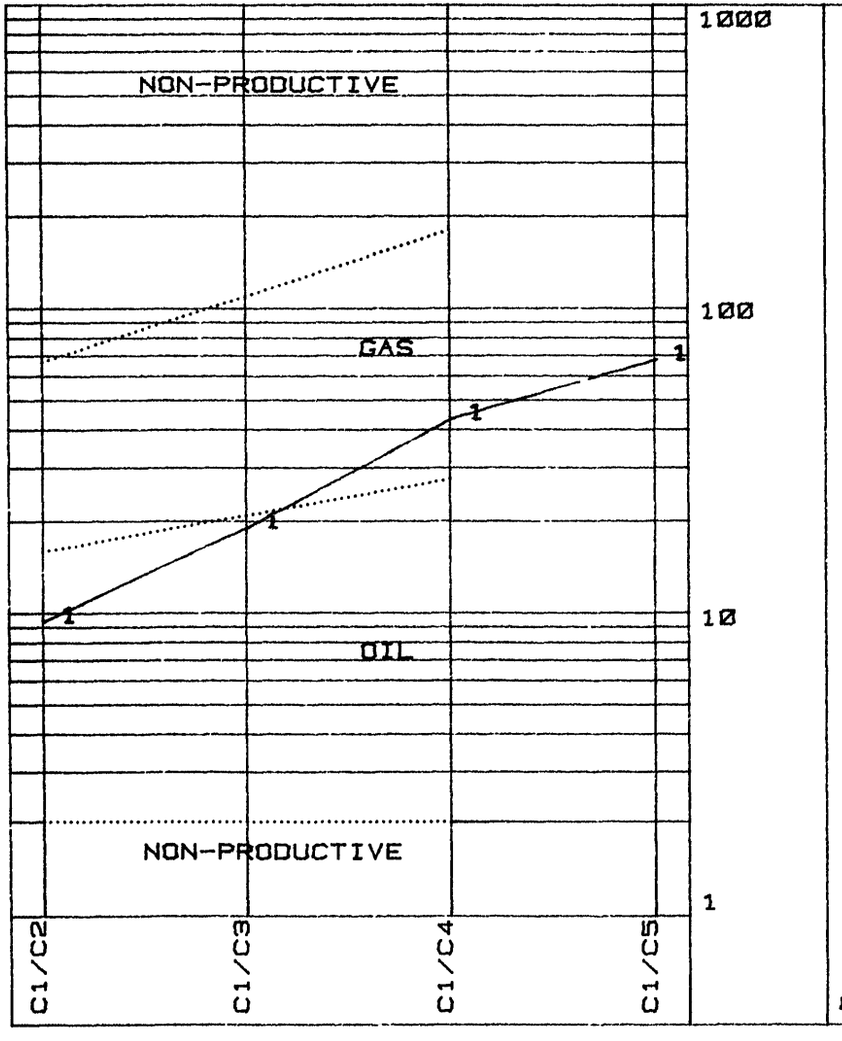
A large triangle plot represents dry gas or low GOR oil, while small triangles represent wet gases or high GOR oils. The homothetic centre of the plot should fall inside the top part of the triangle, otherwise the heavier hydrocarbon is abnormal and may indicate a dead show, (or coal gas).

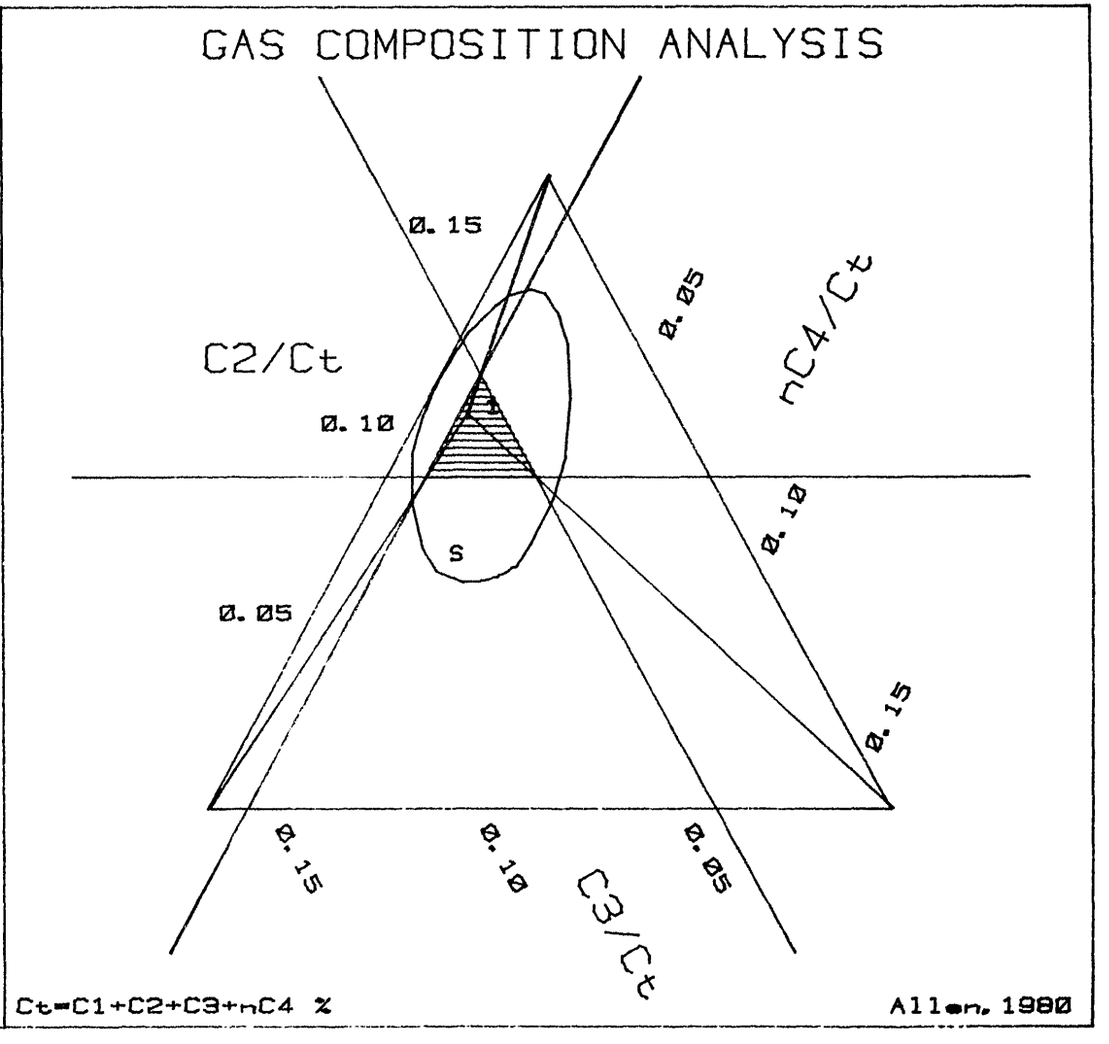
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1



NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3036	1.375	0.119	0.049	0.008	0.008	0.006	0.004	1.551	12	28	85	225
CONCLUSION: PERMEABLE GAS ZONE													
2	3040	1.783	0.155	0.068	0.011	0.011	0.007	0.002	2.017	12	26	79	274
CONCLUSION: PERMEABLE GAS ZONE													

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

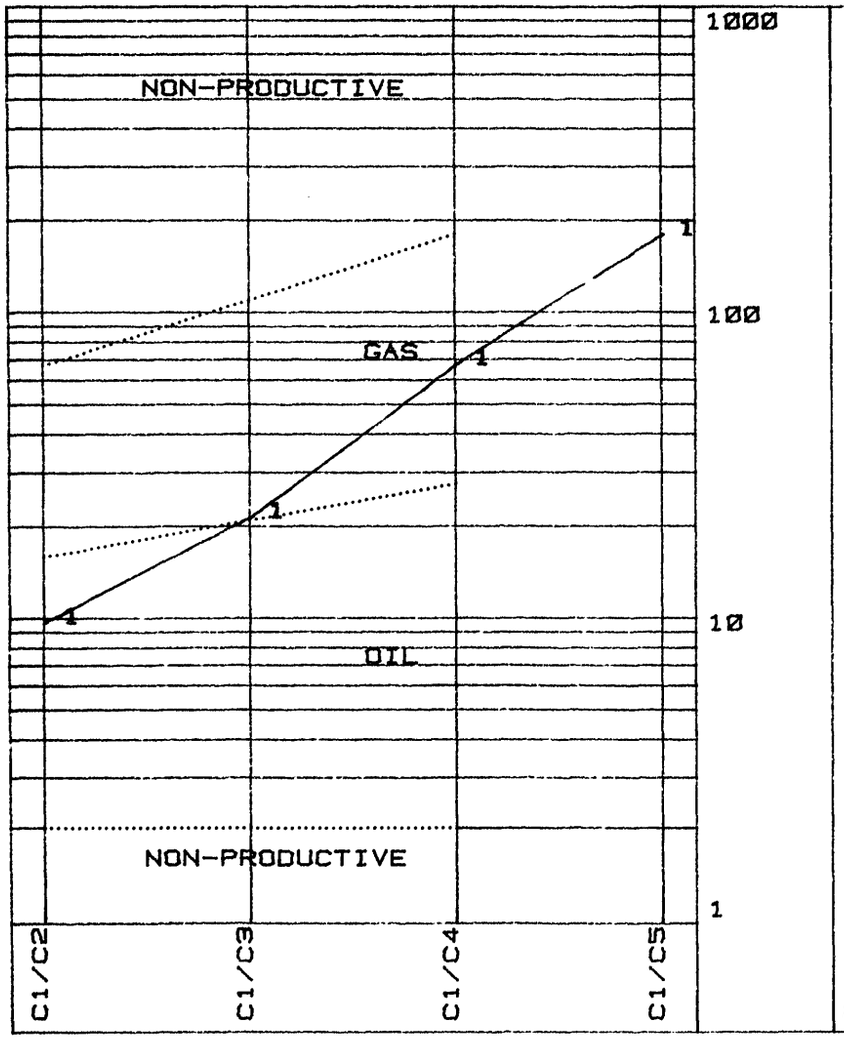


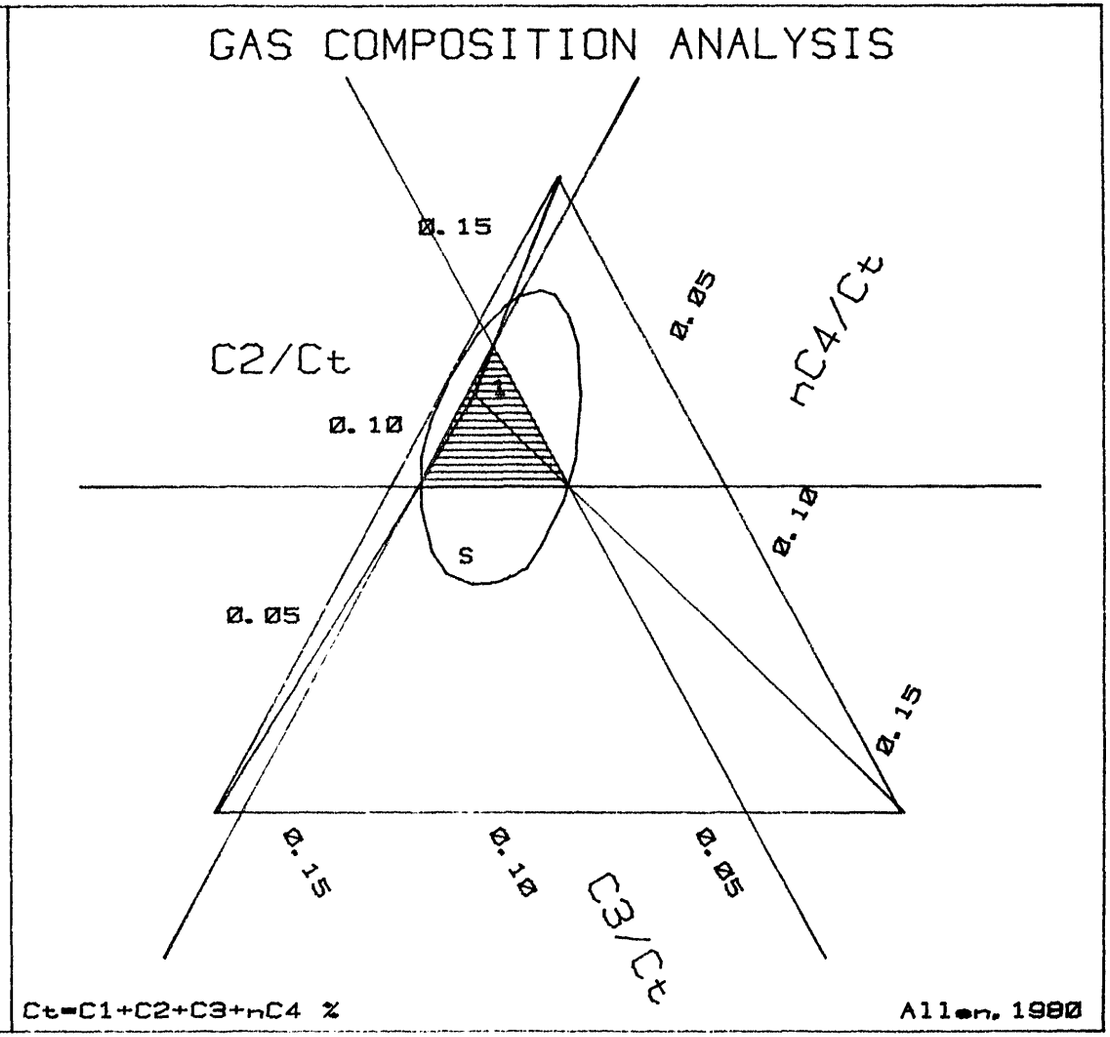


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3048	1.074	0.115	0.057	0.013	0.013	0.016	0.004	1.259	9	19	43	67

CONCLUSION: PERMEABLE WET GAS ZONE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

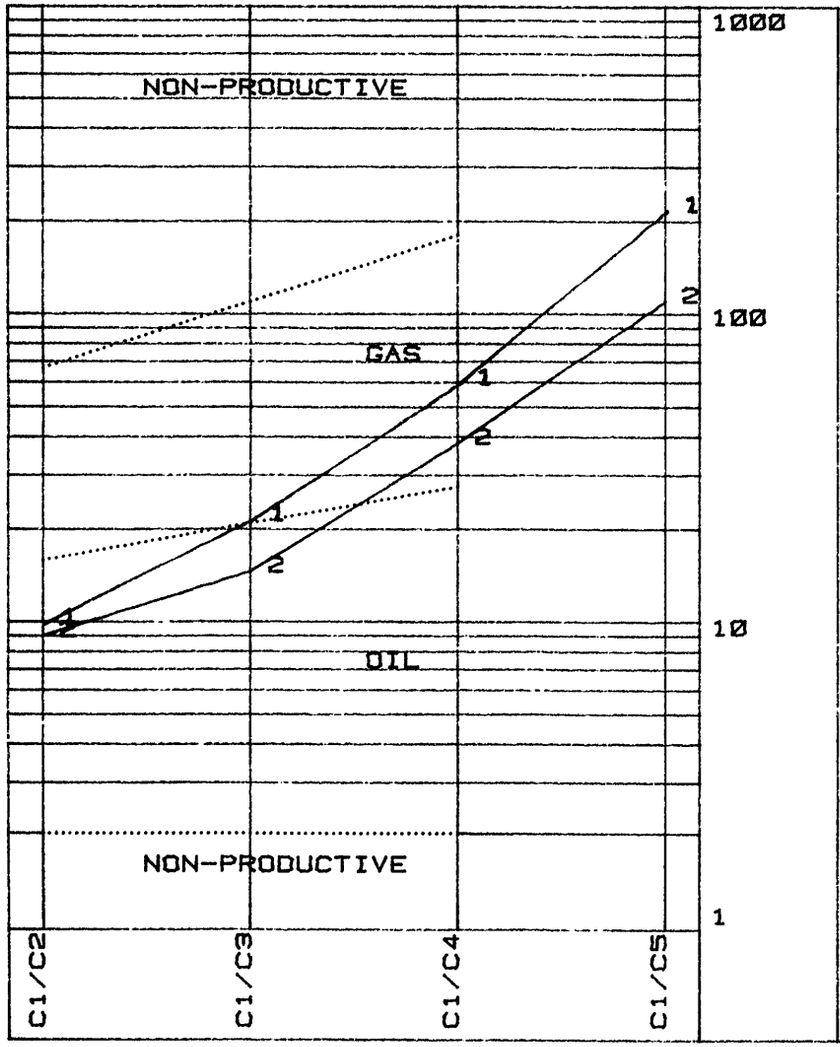


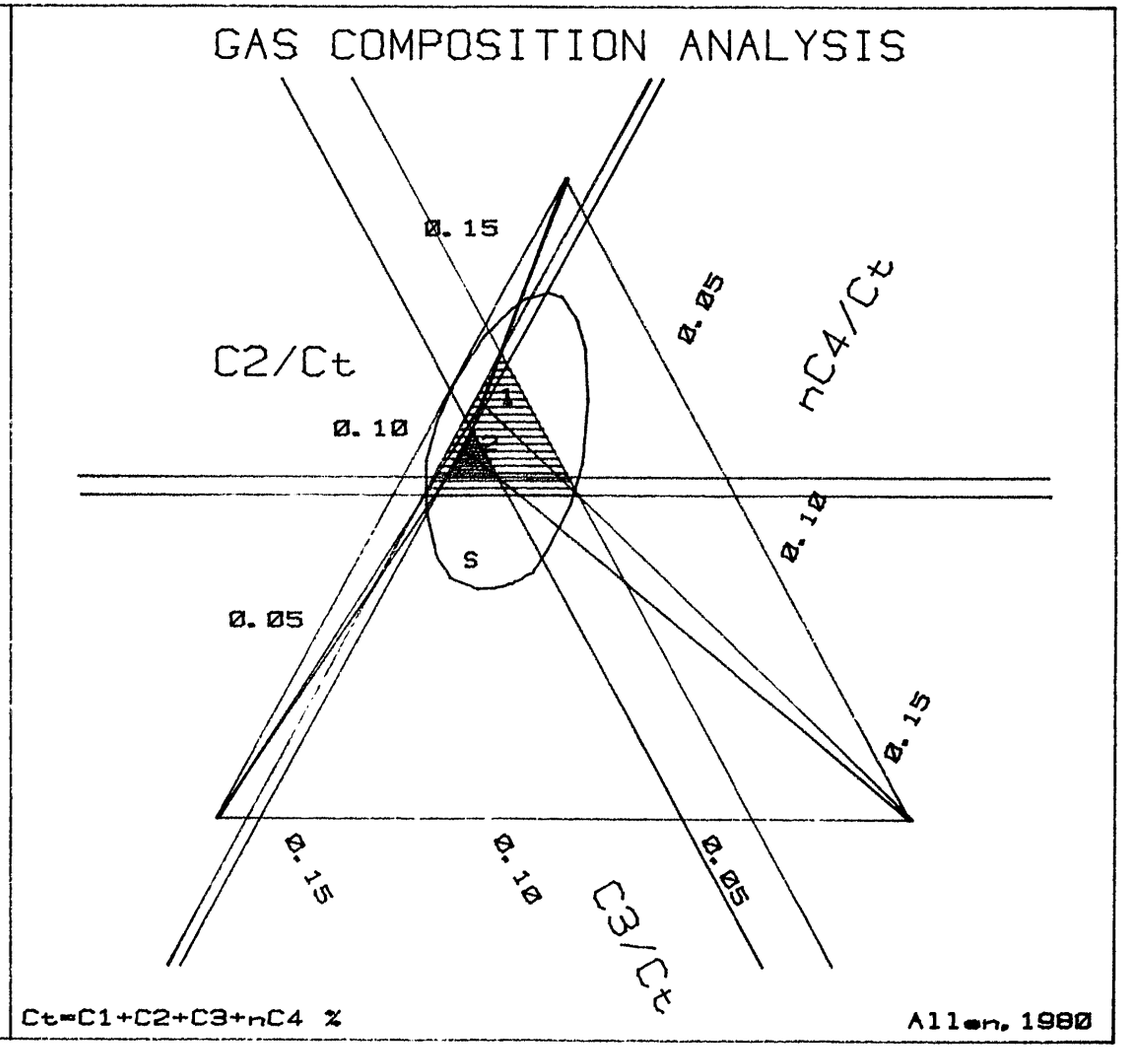


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3144	0.642	0.067	0.030	0.005	0.005	0.004	0.002	0.744	10	21	87	178

CONCLUSION: MODERATELY PERMEABLE GAS ZONE

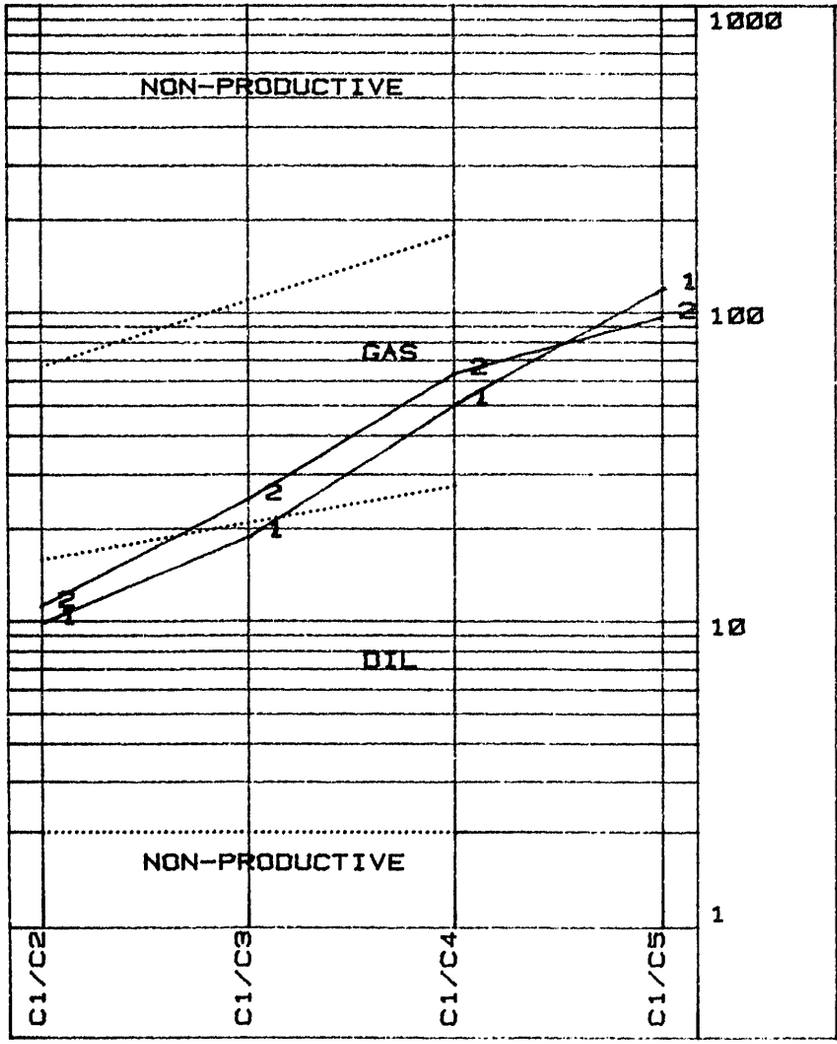
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

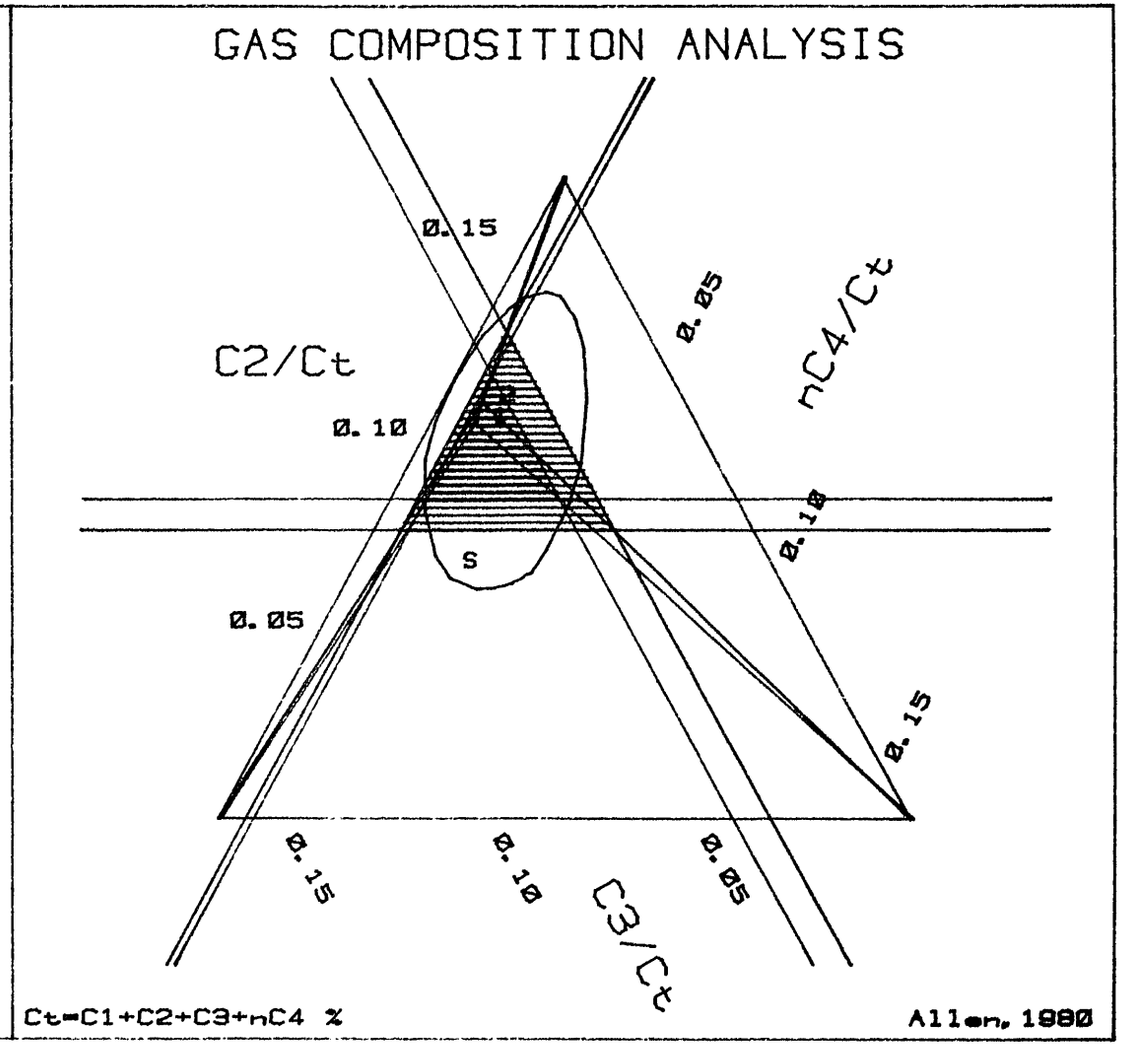




NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3224	0.365	0.037	0.017	0.003	0.003	0.002	0.001	0.423	10	21	59	215
CONCLUSION: MODERATELY PERMEABLE GAS ZONE													
2	3347	1.225	0.137	0.084	0.016	0.016	0.011	0.006	1.462	9	15	38	109
CONCLUSION: WET GAS ZONE													

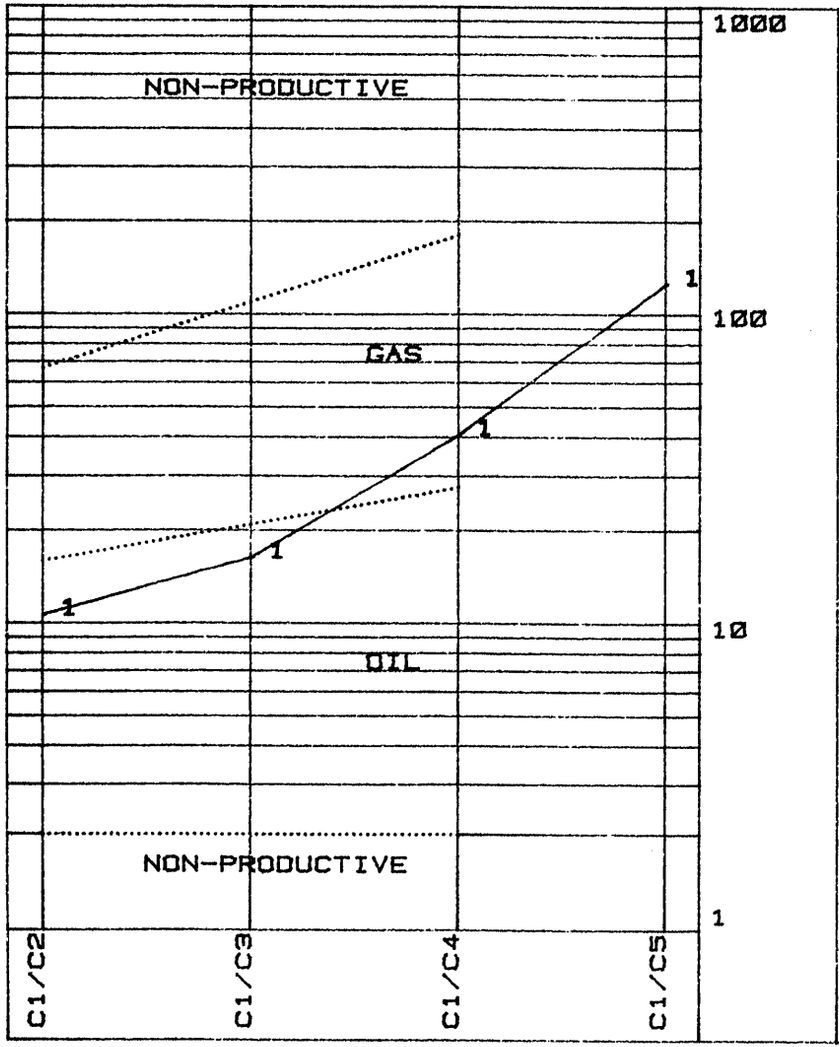
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

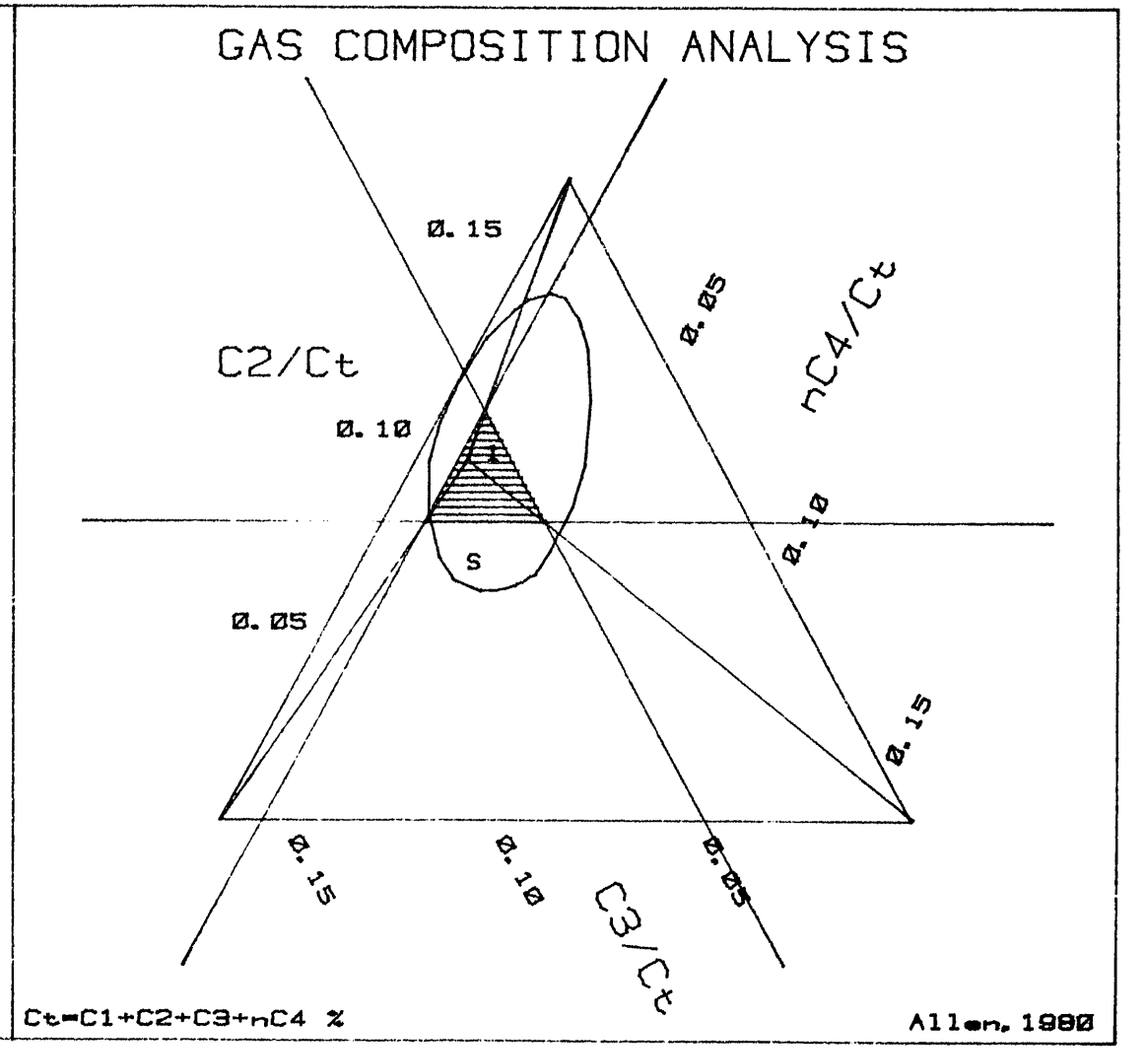




NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3372	0.503	0.051	0.027	0.005	0.005	0.004	0.003	0.595	10	19	50	120
CONCLUSION: PERMEABLE GAS ZONE													
2	3382	0.221	0.020	0.009	0.002	0.002	0.002	0.002	0.251	11	25	63	90
CONCLUSION: PERMEABLE GAS ZONE													

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

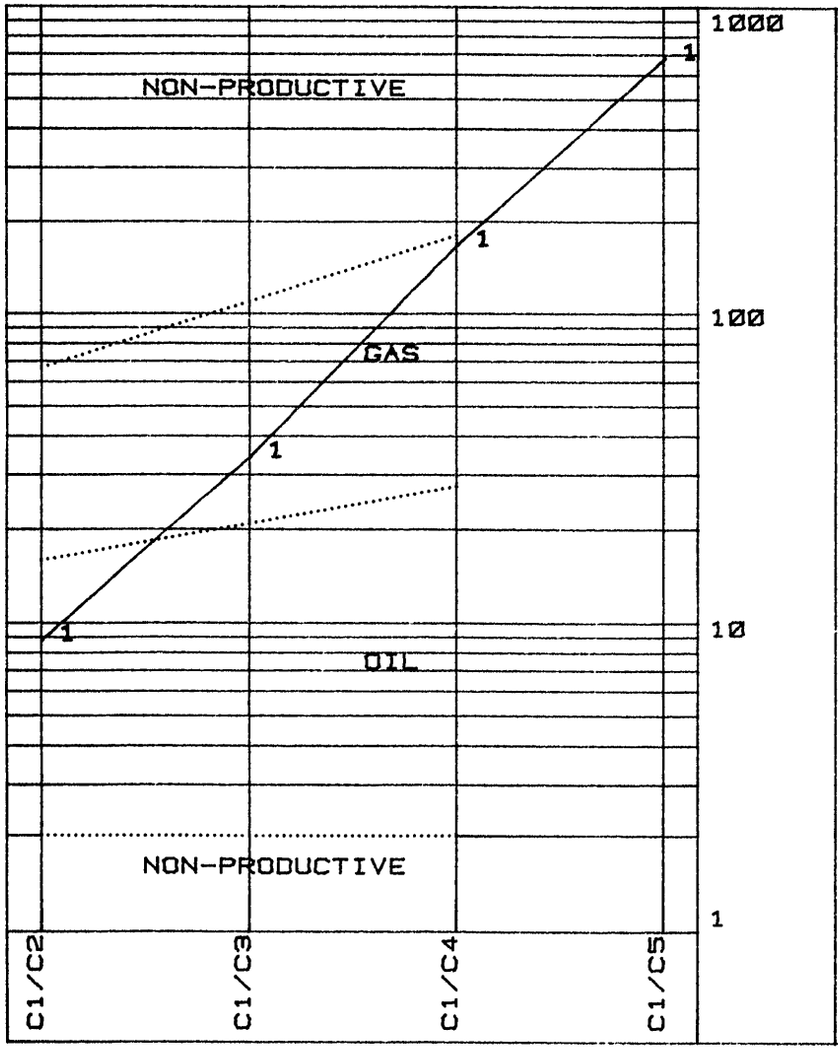


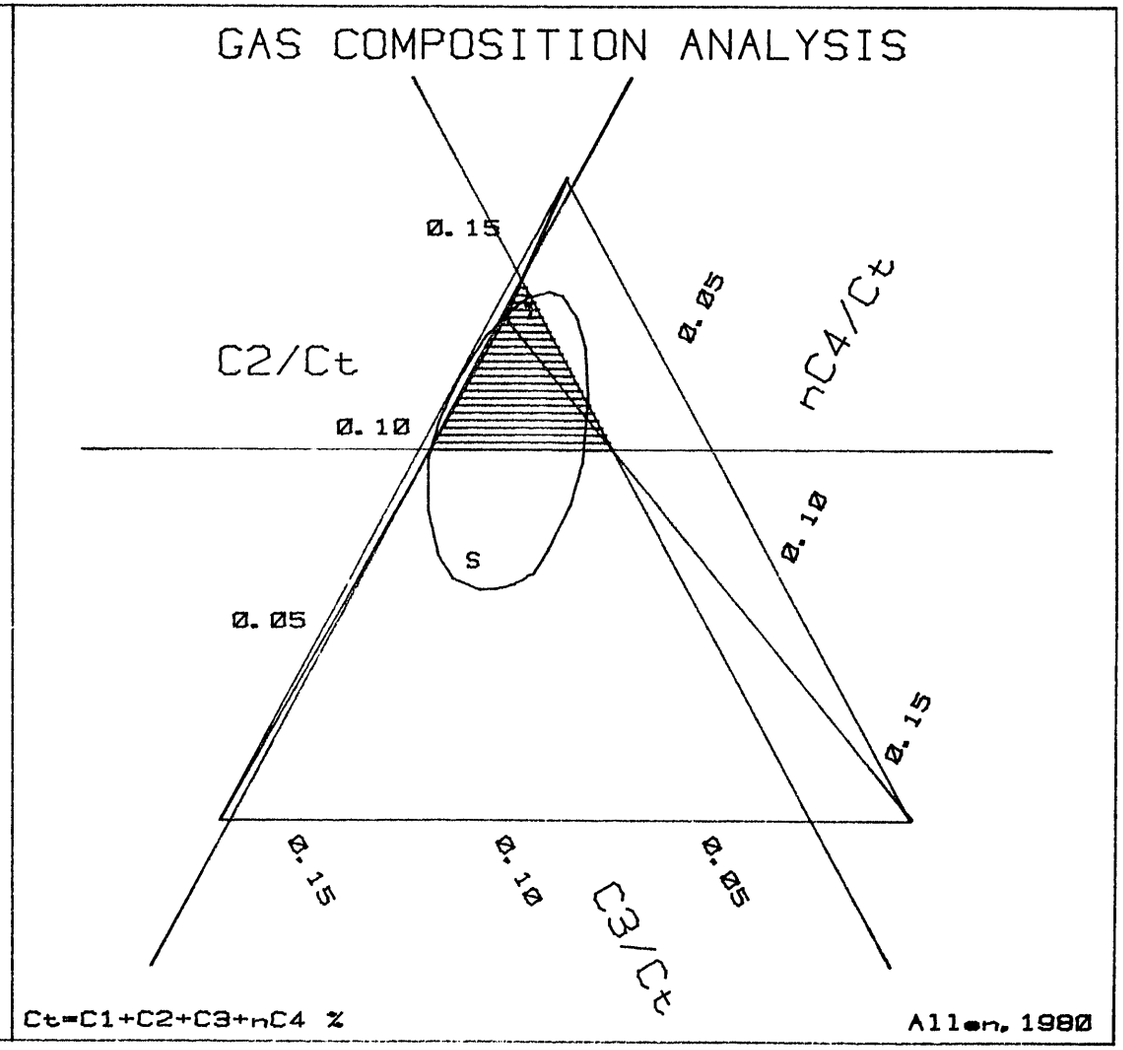


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3432	Ø.288	Ø.028	Ø.019	Ø.004	Ø.004	Ø.002	Ø.001	Ø.348	11	18	40	124

CONCLUSION: MODERATELY PERMEABLE WET GAS ZONE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

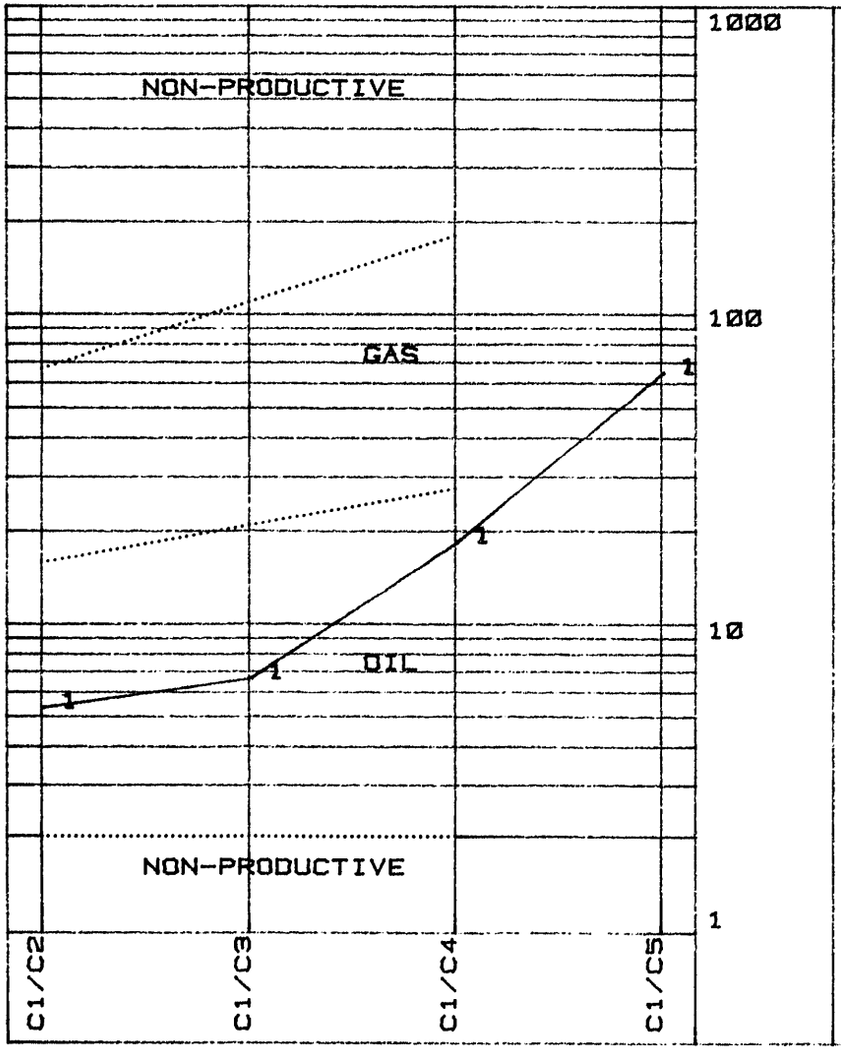


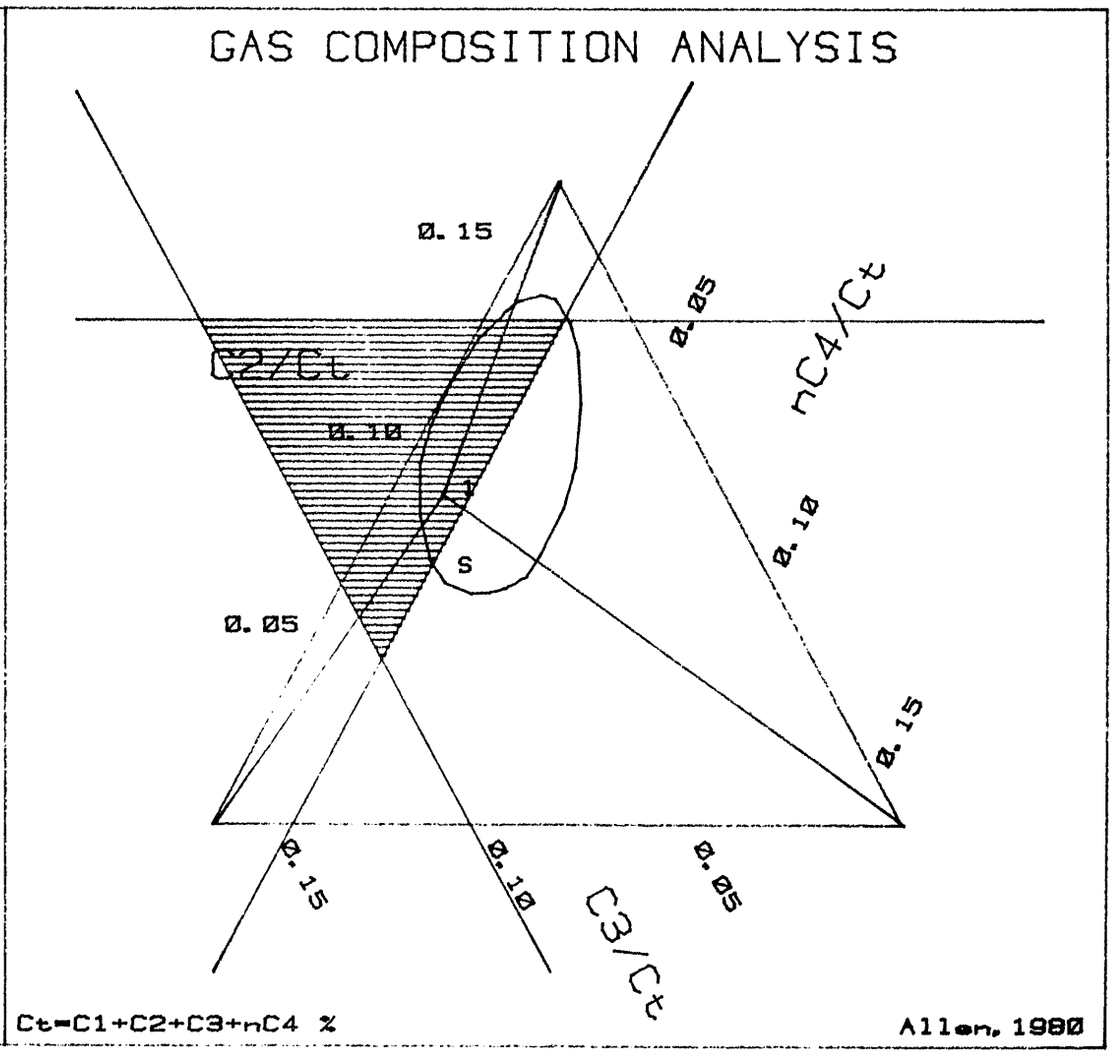


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3522	2.079	0.239	0.061	0.008	0.008	0.003	0.002	2.388	9	34	185	871

CONCLUSION: TIGHT. WET GAS ZONE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1

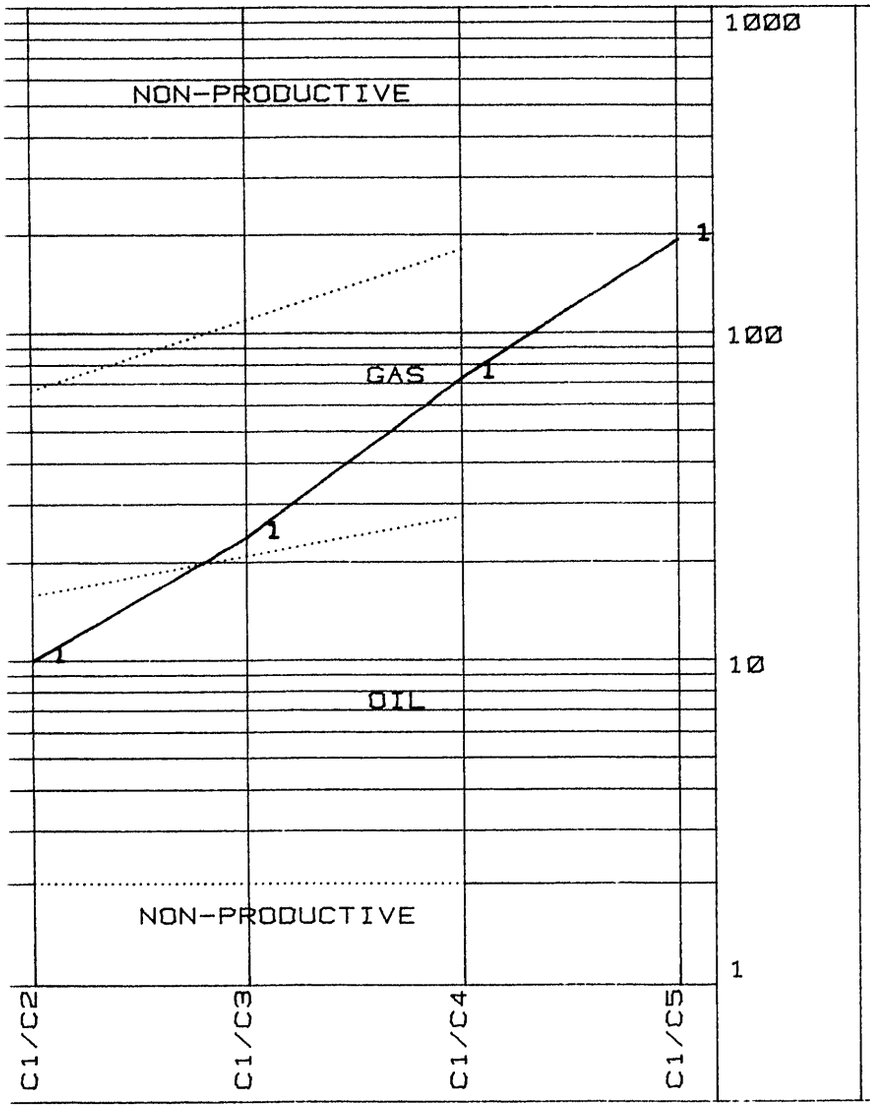


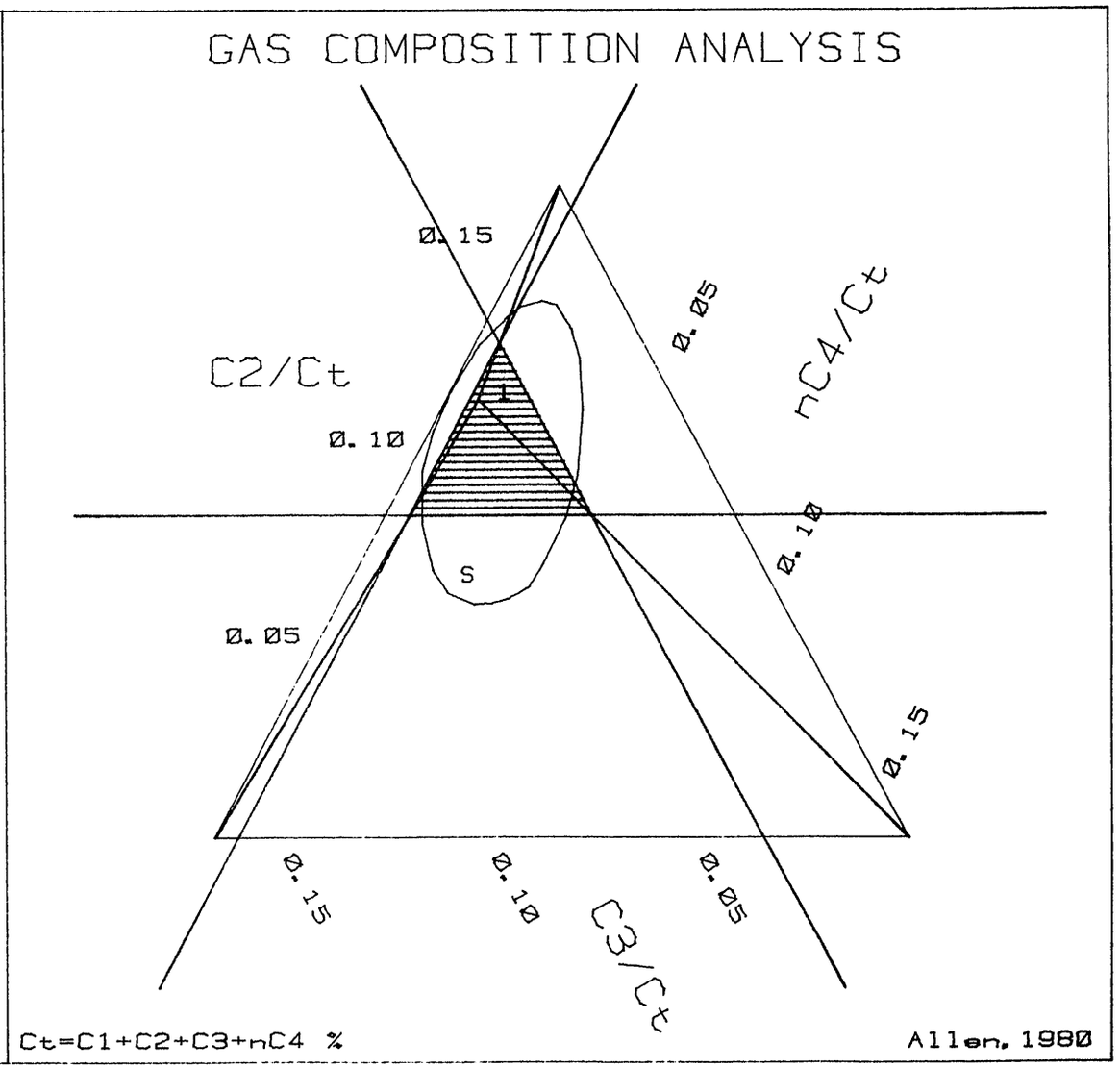


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3554	27.812	5.200	4.187	0.755	0.755	0.429	0.130	37.954	5	7	18	85

CONCLUSION: PRODUCTIVE. TIGHT OIL ZONE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD Well: GRUNTER No. 1





NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	3790	14.848	1.478	Ø.621	Ø.102	Ø.102	Ø.077	Ø.053	17.049	10	24	73	193

CONCLUSION: MODERATELY PERMEABLE GAS RESERVOIR

SIDEWALL CORE GAS ANALYSIS DATA SHEET

COMPANY ESSO AUSTRALIA LIMITED

WELL GRUNTER #1

LOGGING SUITE NO. 4

No.	DEPTH (M)	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
2	3,797	510	600	549	267	56	35	Tr C_7
4	3,785	3,250	5,683	1,256	643	525	70	
6	3,770	574	701	706	420	196	175	100 PPM C_7
9	3,746	510	400	419	124	28	10	Tr C_7
11	3,729.5	669	784	837	222	42	17	Tr C_7
13	3,711	478	534	1,766	1,112	475	253	120 PPM C_7
15	3,683.5	159	234	1,360	1,285	670	385	
24	3,614.5	733	734	994	396	112	52	Tr C_7
25	3,604	223	133	183	74	14	Tr	
27	3,578.5	23,464	2,936	942	161	28	Tr	COALY
29	3,571	1,530	1,218	445	168	56	35	Tr C_7
30	3,567.5	1,020	567	412	130	38	17	Tr C_7
36	3,761	76,625	14,945	5,023	692	112	Tr	COALY
38	3,753.2	42,847	9,170	3,210	371	49	13	COALY
39	3,732.5	9,253	4,270	2,302	692	223	35	
41	3,716	11,222	3,336	1,570	396	56	35	Tr C_7
42	3,702	2,963	2,001	2,145	840	279	96	57 PPM C_7
43	3,689.3	8,161	3,469	2,511	1,483	223	70	COALY Tr C_7 C_8 34 PPM C_7
44	3,681	61,210	16,013	6,488	989	112	35	COALY
45	3,679	41,827	9,341	4,186	494	180	70	
46	3,676	14,255	4,804	4,081	1,384	293	174	91 PPM C_7
48	3,665.8	128	183	235	198	160	150	34 PPM C_7
50	3,642.5	30,605	15,479	12,138	3,560	893	280	22 PPM C_7
52	3,630	32,135	12,810	3,139	247	70	35	11 PPM C_7
54	3,618.5	23,463	5,338	2,092	494	139	57	40 PPR C_7
55	3,591.5	1,785	1,120	941	890	836	629	342 PPM C_7
56	3,583	64	100	287	124	56	35	23 PPM C_7
60	3,550	50	100	215	62	56	35	50 PPM C_7

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 LIMITED
WELL GRUNTER #1

BIT RECORD
Sheet No. 1

Ser No.	Bit No.	Make	Type	IADC Code	Size "	Cost A$	Jets	Depth In (m)	Depth Out (m)	Hole Made m	Drill Time	On Bottom Hours	On Bottom TurnsK	Avg ROP	Avg Cost/m	Condition T B G
LJ 321	RR1	HTC	OSC 3AJ + 26"H/O	111	26	0	20/20/20	129	269	138	5	2.55	10.8	54.9	134.34	2-3-I
VD 499	NB1	HTC	OSC 3AJ	111	17½	4,978	20/20/16	269	855	586	17½	10.68	96.3	54.9	98.53	2-4-I
BM 916	NB2	HTC	J1	116	12¼	2,566	18/18/18	855	1,547	692	31	22.72	202.3	30.5	151.77	2-4-I
CC 766	NB3	HTC	J1	116	12¼	2,566	18/18/18	1,547	1,914	367	15 3/4	11.49	103.4	31.9	182.38	2-3-I
ZC 949	NB4	HTC	J22	517	12¼	8,520	18/18/18	1,914	2,425	511	41	33.47	191.5	15.3	306.61	4-8-I
918 HS	NB5	HTC	J22	517	12¼	8,520	16/16/18	2,425	2,526	101	25	24.17	136.1	4.2	1225.84	8-6-1/8
358 BL	NB6	HTC	J33	537	12¼	8,266	16/16/16	2,526	2,736	210	55	49.20	161.6	4.3	1030.62	4-5-1/8
106 AL	NB7	HTC	J33	537	12¼	8,266	16/16/16	2,736	3,011.6	275.6	83¼	74.25	225.9	3.7	1118.57	5-5-1/8
716 XL	NB8	HTC	J33	537	12¼	8,266	16/16/16	3,011.6	3,192.2	181.2	63½	55.69	156.2	3.2	1331.48	7-8-3/8
059 NK	NB9	HTC	J44	617	12¼	6,919	16/16/16	3,192.2	3,369	176.8	65½	61.76	163.1	2.9	1504.89	4-7-1/8
428 CK	NB10	HTC	J44	617	12¼	6,919	16/16/16	3,369	3,389	20.0	5 3/4	4.65	12.6	4.3	2873.13	1-1-I
81E0333	RCB1	CHRIS	C23	4	8½	0	14/14/15	3,389	3,407.3	18.3	9 3/4	7.64	45.8	2.4	3360.64	0.55
402 CK	NB11	HTC	J44	617	12¼	6,919	16/16/16	3,407.3	3,434	26.7	6 3/4	6.00	17.3	4.5	2351.86	1-1-I
81E0333	RCB1	CHRIS	C23	4	8½	0	14/14/15	3,434	3,452	18.0	15 3/4	15.88	130.2	1.1	6658.81	0.70
428 CK	RR10	HTC	J44	617	12¼	0	16/16/16	3,452	3,462	10.0	3¼	2.48	19.5	4.0	2000.08	2-6-1/8
793 BL	NB12	HTC	J33	537	12¼	8,266	16/16/16	3,462	3,521	59.0	16 3/4	12.74	38.5	4.6	1516.72	1-4-1/8
363 BL	NB13	HTC	J33	537	12¼	8,266	16/16/16	3,521	3,561	40.0	9 3/4	8.91	26.9	4.5	1896.61	2-3-I

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

BIT RECORD
Sheet No. 2

Ser No.	Bit No.	Make	Type	IADC Code	Size "	Jets	Depth In Metres	Hole Made (m)	Drill Time	On Bottom Hours	On Bottom Turns K	Condition T B G	Remarks
793 BL	NB12	HTC	J33	537	12¼	16/16/16	3,462	59.0	16 3/4	12.74	38.5	1-4-1/8	Out at prognosed T.D.
363 BL	NB13	HTC	J33	537	12¼	16/16/16	3,521	40.0	9 3/4	8.91	26.9	2-3-I	Pulled due to overpressure
ER 775	NB14	HTC	J7	316	8½	16/16/16	3,561	6.0	3½	3.64	15.3	5-6-I	Pulled after drilling cement
160 BK	NB15	HTC	J33	537	8½	13/13/13	3,567	133	44½	39.91	133.0	3-8-I	Dulled
108 WK	NB16	HTC	J33	537	8½	13/13/13	3,700	107	45½	40.31	137.7	3-6-I	Torqued-up
107 WK	NB17	HTC	J33	537	8½	16/16/16	3,807	2	3/4	0.75	1.4	1-1-I	Out at T.D.

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

BIT RECORD
Sheet No. 1

Ser No.	Bit No.	Make	Type	IADC Code	Size "	Jets	Depth In Metres	Hole Made (m)	Drill Time	On Bottom Hours	On Bottom Turns K	Condition T B G	Remarks
LJ 321	RR1	HTC	OSC 3AJ +26" H/O	111	26	20/20/20	129	138	5	2.55	10.8	2-3-I	Pulled at 20" csg point
VD 499	NB1	HTC	OSC 34J	111	17½	20/20/16	269	586	17½	10.68	96.3	2-4-I	Pulled at 13 3/8" csg point
BM 916	NB2	HTC	J1	116	12¼	18/18/18	855	692	31	22.72	202.3	2-4-I	Pulled due to formation of a mudring
CC 766	NB3	HTC	J1	116	12¼	18/18/18	1,547	367	15 3/4	11.49	103.4	2-3-I	Pulled at commencement of sandstone
ZC 949	NB4	HTC	J22	517	12¼	18/18/18	1,914	511	41	33.47	191.5	4-8-I	Pulled due to low ROP's
918 HS	NB5	HTC	J22	517	12¼	16/16/18	2,425	101	25	24.17	136.1	8-6-1/8	Dulled
358 BL	NB6	HTC	J33	537	12¼	16/16/16	2,526	210	55	49.20	161.6	4-5-1/8	Dulled
106 AL	NB7	HTC	J33	537	12¼	16/16/16	2,736	275.6	83¼	74.25	225.9	5-5-1/8	Pulled due to high hours
716 XL	NB8	HTC	J33	537	12¼	16/16/16	3,011.6	181.2	63½	55.69	156.2	7-8-3/8	Pulled due to high torque
059 NK	NB9	HTC	J44	617	12¼	16/16/16	3,192.2	176.8	65½	61.76	163.1	4-7-1/8	Pulled due to high torque
428 CK	NB10	HTC	J44	617	12¼	16/16/16	3,369	20.0	5 3/4	4.65	12.6	1-1-I	Pulled to cut core #1
81E0333	RCB1	CHRIS	C23	4	8½	14/14/15	3,389	18.3	9 3/4	7.64	45.8	0.55	Rerun core bit
402 CK	NB11	HTC	J44	617	12¼	16/16/16	3,407.3	26.7	6 3/4	6.00	17.3	1-1-I	Pulled to cut core #2
81E0333	RCB1	CHRIS	C23	4	8½	14/14/15	3,434	18.0	15 3/4	15.88	130.2	0.70	Rerun core bit
428 CK	RR10	HTC	J44	617	12¼	16/16/16	3,452	10.0	3¼	2.48	19.5	2-7-1/8	Reamed the core rat-hole Pulled due to stormy weather

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

BIT RECORD
Sheet No. 2

Ser No.	Bit No.	Make	Type	IADC Code	Size "	Cost A$	Jets	Depth In (m)	Depth Out (m)	Hole Made m	Drill Time	On Bottom Hours	On Bottom TurnsK	Avg ROP	Avg Cost/m	Condition T B G
ER 775	NB14	HTC	J7	316	8½	1,261	16/16/16	3,561	3,567	6.0	3½	3.64	15.3	1.6	8268.91	5-6-I
160 BK	NB15	HTC	J33	537	8½	4,455	13/13/13	3,567	3,700	133	44½	39.91	133.0	3.3	1398.47	3-8-I
108 WK	NB16	HTC	J33	537	8½	4,455	13/13/13	3,700	3,807	107	45½	40.31	137.7	2.7	1762.17	3-6-I
107 WK	NB17	HTC	J33	537	8½	4,455	16/16/16	3,807	3,809	2	3/4	0.75	1.4	2.7	22,222	1-1-I

MUD INFORMATION SHEETS

DEPTH . . . . . Metres

MUD WEIGHT . . . . . Pounds per gallon

FUNNEL VISCOSITY . . . A.P.I.seconds

PLASTIC VISCOSITY. . . Centipoise

YIELD POINT. . . . . Pounds/100 square feet

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

FILTRATE . . . . . A.P.I. c.c.

CAKE THICKNESS . . . . Thirty-seconds of an inch

SALINITY : Ca/Cl . . . ppm

SOLIDS/SAND/OIL. . . . Percentage

MUD INFORMATION SHI

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1 Sheet No.

DEPTH	984	1,358	1,700	2,001	2,385	2,467
DATE	18/9/84	19/9/84	20/9/84	21/9/84	22/9/84	23/9/84
TIME	22:00	15:15	16:15	14:20	20:30	17:00
WEIGHT	9.1	9.0+	9.2	9.5	9.4	9.5
FUNNEL VISCOSITY	36	35	45	48	54	50
PV/YP	4/22	3/20	3/26	9/18	9/21	10/20
N/K	0.25/7.18	0.18/7.64	0.14/11.97	0.41/2.03	0.38/2.83	0.41/2.26
GEL: INITIAL/10 MIN	10/21	11/16	16/26	14/34	12/30	15/36
pH	9.6	9.8	9.1	10.4	10.5	10.5
FILTRATE:API/API HTHP	No Test	No Test	No Test	6.8/24.0	5.4/19.2	5.2/19.4
CAKE	No Test	No Test	No Test	1	1	1
SALINITY (PPM)	17,000	14,000	15,000	15,000	16,000	17,000
SAND	½	0	Tr	Tr	Tr	Tr
SOLIDS	5	4	5	7	6½	7
OIL	0	0	0	0	0	0
NITRATES (PPM)	No Test	No Test	No Test	100	50	140

REMARKS:

Surface drilling fluid was seawater

DRILLED 12¼" HOLE

DEPTH	2,494	2,558	2,670	2,744	2,786	2,870
DATE	24/9/84	25/9/84	26/9/84	27/9/84	28/9/84	29/9/84
TIME	02:30	11:00	12:00	22:00	14:00	14:00
WEIGHT	9.5	9.5	9.5	9.5+	9.5	9.5
FUNNEL VISCOSITY	48	50	54	52	53	50
PV/YP	11/22	10/19	10/28	10/26	10/29	11/28
N/K	0.41/2.48	0.43/2.02	0.34/4.65	0.35/3.97	0.33/5.01	0.36/4.18
GEL: INITIAL/10 MIN	16/38	14/36	16/38	18/42	16/36	18/36
pH	10.3	10.4	10.5	10.4	10.6	10.5
FILTRATE:API/API HTHP	5.6/20.8	5.8/21.0	6.0/21.0	6.4/21.2	6.2/20.6	8.2/24.6
CAKE	1	1	1	1	1	1
SALINITY (PPM)	16,000	17,000	18,000	19,000	19,000	19,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	7.5	8	8	8	8	8
OIL	0	0	0	0	0	0
NITRATES (PPM)	80	120	100	160	180	100

REMARKS: DRILLED 12½" HOLE

MUD INFORMATION SHEE

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No. 2

DEPTH	2,955	3,002	3,011	3,015	3,104	3,159
DATE	30/9/84	1/10/84	2/10/84	3/10/84	4/10/84	5/10/84
TIME	14:00	04:00	19:30	15:00	16:00	14:00
WEIGHT	9.5	9.5+	9.6	9.8	9.5	9.5
FUNNEL VISCOSITY	50	48	50	58	48	48
PV/YP	11/26	11/25	10/26	12/30	11/26	11/31
N/K	0.38/3.56	0.38/3.27	0.52/1.79	0.36/4.38	0.38/3.56	0.34/5.39
GEL: INITIAL/10 MIN	18/42	20/44	18/40	22/46	28/42	22/48
pH	10.5	10.5	10.4	10.3	10.5	10.5
FILTRATE:API/API HTHP	8/24.6	8.2/24.2	7.6/24.2	8.2/25.4	7.2/23.6	7.6/24.0
CAKE	1	1	1	1	1	1
SALINITY (PPM)	19,000	19,000	19,000	19,000	20,000	20,000
SAND	TR	TR	0	TR	TR	TR
SOLIDS	8	8	8	9	8	8
OIL	0	0	0	0	0	0
NITRATES (PPM)	80	100	100	100	180	160
REMARKS:			Logging			

DEPTH	3,196	3,248	3,323	3,370	3,387	3,400
DATE	6/10/84	7/10/84	8/10/84	9/10/84	10/10/84	11/10/84
TIME	19:00	19:00	22:00	12:30	14:00	05:00
WEIGHT	9.6+	9.5	9.5	9.5+	9.5+	9.5
FUNNEL VISCOSITY	52	50	48	46	45	42
PV/YP	8/34	13/33	11/40	11/33	11/26	12/19
N/K	0.25/8.76	0.36/3.91	0.28/8.81	0.32/5.92	0.38/3.56	0.47/1.64
GEL: INITIAL/10 MIN	26/45	24/48	27/42	18/27	21/31	15/24
pH	10.5	10.5	10.0	10.4	10.0	10.3
FILTRATE:API/API HTHP	7.0/22.8	7.4/23.0	6.6/19	7.6/23	7.8/22	7.6/23
CAKE	1	1	1	1	1	1
SALINITY (PPM)	20,000	20,000	23,000	24,000	24,000	24,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	8.5	8	8	8	8	8
OIL	0	0	0	0	0	0
NITRATES (PPM)	150	160	220	160	180	160
REMARKS:	DRILLED 12¼" HOLE		DRILLED 12¼" HOLE		CORE #1	

MUD INFORMATION SHEE

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No. 3

DEPTH	3,407	3,407	3,433	3,449	3,460	3,462
DATE	12/10/84	13/10/84	14/10/84	15/10/84	16/10/84	17/10/84
TIME	14:30	21:30	20:30	12:30	12:30	14:00
WEIGHT	9.5	9.4+	9.6	9.5	9.5	9.5
FUNNEL VISCOSITY	45	42	43	41	41	43
PV/YP	7/21	10/27	9/20	8/24	8/25	8/26
N/K	0.32/3.76	0.34/4.30	0.39/2.55	0.32/4.30	0.31/4.69	0.30/5.08
GEL: INITIAL/10 MIN	19/24	20/25	18/23	20/25	18/28	15/18
pH	10.5	10.5	10.4	10.4	10.5	10.3
FILTRATE:API/API HTHP	7.0/20.4	8.2/21.2	7.6/18.6	7.2/19.0	8.2/19.6	7.4/18.8
CAKE	1	1	1	1	1	1
SALINITY (PPM)	24,000	24,000	24,000	22,000	22,000	22,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	8	8	8.5	8	8	8
OIL	0	0	0	0	0	0
NITRATES (PPM)	150	120	120	190	190	160
REMARKS:	DOWN TIME		DRILLED 12¼" HOLE	CORE #2	DRILLED 12¼" HOLE	WAIT ON WEATHER

DEPTH	3,521	3,521	3,521	3,562	3,562	3,561
DATE	18/10/84	22/10/84	25/10/84	26/10/84	28/10/84	30/10/84
TIME	23:00	16:30	12:00	20:30	23:00	15:00
WEIGHT	9.5+	9.5	9.5	11.3	11.3	11.4
FUNNEL VISCOSITY	38	50	50	43	46	49
PV/YP	10/17	10/26	6/27	13/24	16/20	18/18
N/K	0.45/1.59	0.35/3.97	0.24/7.35	0.43/2.47	0.53/1.32	0.58/0.94
GEL: INITIAL/10 MIN	18/20	18/32	28/32	22/34	12/26	16/28
pH	10.3	10.5	10.3	10.5	10.6	10.5
FILTRATE:API/API HTHP	7.8/19.6	9.4/24.2	9.6/24.2	7.6/22.4	6.2/22.0	7.2/24.0
CAKE	1	1	1	1	1	1
SALINITY (PPM)	22,000	20,000	19,000	20,000	19,000	19,000
SAND	TR	TR	TR	TR	TR	TR
SOLIDS	8	8	8	15	15	16
OIL	0	0	0	0	0	0
NITRATES (PPM)	170	120	110	120	130	110
REMARKS:	DRILLED 12¼" HOLE	WIPER TRIP DURING LOGGING	DRILLED 12¼" HOLE AND INCREASED MUD WEIGHT		WIPER TRIP DURING LOGGING	WIPER TRIP BEFORE RUNNING CASING

MUD INFORMATION SHEI

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No. 4

DEPTH	3,567	3,603	3,661	3,700	3,724	3,752
DATE	3/11/84	4/11/84	5/11/84	6/11/84	7/11/84	8/11/84
TIME	21:00	21:00	19:00	21:00	22:30	22:00
WEIGHT	11.2	11.7	11.9	14.0	15.0	15.5
FUNNEL VISCOSITY	44	50	44	49	53	52
PV/YP	15/25	17/24	18/17	26/26	30/34	30/25
N/K	0.46/2.28	0.50/1.81	0.60/0.84	0.58/1.36	0.55/2.02	0.63/1.10
GEL: INITIAL/10 MIN	24/36	18/46	8/21	18/41	35/54	21/42
pH	10.6	10.5	10.5	10.5	10.5	10.5
FILTRATE:API/API HTHP	8.2/24.8	6.8/21.0	6.2/20.5	5.8/18.6	6.8/20.8	6.4/19.8
CAKE	1	1	1	1	2	2
SALINITY (PPM)	20,000	20,000	20,000	21,000	21,000	22,000
SAND	TR	0.25	TR	0.25	TR	TR
SOLIDS	16	18	19	22	27	30
OIL	0	0	0	0	0	0
NITRATES (PPM)	60	130	140	160	220	180
REMARKS:	WIPER TRIP BEFORE RUNNING CASING	DRILLED OUT CEMENT SHOE AND 6M FORMATION	DRILLED 8½" HOLE WEIGHTED UP THE MUD TO COMBAT OVERPRESSURED FORMATIONS			

DEPTH	3,807	3,809	3,809	
DATE	9/11/84	10/11/84	12/11/84	
TIME	22:00	22:00	05:00	
WEIGHT	15.5	15.8	15.8	
FUNNEL VISCOSITY	50	51	49	
PV/YP	25/25	25/22	25/19	
N/K	0.58/1.30	0.61/1.02	0.65/0.77	
GEL: INITIAL/10 MIN	20/40	16/38	16/33	
pH	10.1	10.7	10.3	
FILTRATE:API/API HTHP	6.8/21.2	7.4/23	8.0/-	
CAKE	2	2	2	
SALINITY (PPM)	22,000	23,000	24,000	
SAND	TR	TR	TR	
SOLIDS	30	33	33	
OIL	0	0	0	
NITRATES (PPM)	220	220	220	
REMARKS:	DRILLED TO T.D.	WIPER TRIP	PLUGGED THE OPEN HOLE; WEIGHTED BACK TO 9.5 PPG; PRODUCTION TESTED	

R.F.T. DATA SHEETS

R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

RUN No.	2	2	3	3	5	5
SEAT No.	18	18	19	19	49	49
CHAMBER CAPACITY (gal)	6	2 3/4	6	1	6	2 3/4
DEPTH (metres)	2861.3	2861.3	2702.5	2702.5	3439.0	3439.0
RECOVERY VOLUMES						
GAS (Cu Ft)	125.28	63.69	154.75	36.78	5.63	2.06
OIL (cc)						
WATER/FILTRATE (cc)	4,250	800	200	100	42,000	9,250
OTHER (cc) Condensate	1,000	450	1,600			
SURFACE PRESSURE (PSI)	2,100	2,000	2,100	1,990	300	300
GAS COMPOSITION						
Cl (PPM)	295,455	233,615	248,002	485,222	293,099	112,250
C2 (PPM)	58,337	54,016	105,011	114,714	36,352	21,811
C3 (PPM)	30,236	23,408	65,659	60,006	15,052	15,769
C4 (PPM)	7,616	4,352	18,472	23,449	8,294	3,456
C5 (PPM)	2,234	744	3,937	4,618	796	1,194
C6 (PPM)	615	212	988	975	131	35
CO2 (%)	Tr	Tr	1	1	>60	34
H2S (PPM)					0	0
OIL PROPERTIES (Condensate)						
DENSITY (°API at 60°)	55.4		56.5			
COLOUR						
FLUORESCENCE						
POUR POINT (°C)						
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.06 @ 94°F		0.06 @ 94°F		0.196 @ 21°C	0.209 @ 21°C
Cl (frm resis) (PPM)	44,000		44,000		36,000	33,500
Cl (frm titrat) (PPM)	19,000	19,000	9,000		21,000	19,000
NITRATES (PPM)	110	80	160		40	50
pH	8.0	8.0				
TRITIUM (DPM)					468	403

COMMENTS

R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No. 2

RUN No.	6	6	7	7	9	9
SEAT No.	50	50	57	57	62	62
CHAMBER CAPACITY (gal)	12	2 3/4	12	2 3/4	12	2 3/4
DEPTH (metres)	3353	3353	3394.2	3394.2	3310.6	3310.6
RECOVERY VOLUMES						
GAS (Cu Ft)	2.1	2.4	2.01	0.91	20.8	22.3
OIL (cc)	Tr	100	Tr	Tr	200	400
WATER/FILTRATE (cc)	43,000	9,000	41,000	9,500	39,500	6,300
OTHER (cc)						
SURFACE PRESSURE (PSI)	180	580	200	350	1,000	1,500
GAS COMPOSITION						
C1 (PPM)	246,328	212,029	302,453	215,147	411,586	410,696
C2 (PPM)	26,809	25,446	39,078	24,992	70,886	70,096
C3 (PPM)	10,035	11,110	15,948	8,960	43,008	42,318
C4 (PPM)	2,419	6,622	3,369	1,987	16,588	15,699
C5 (PPM)	217	746	323	261	4,378	4,069
C6 (PPM)	Tr	132	Tr	Tr	1,082	1,036
CO2 (%)	9	22	10	17	18	30
H2S (PPM)	0	0	0	0	0	0
OIL PROPERTIES (Condensate)						
DENSITY (°API at 60°)		36.3	Tr oil scum		46	48.1
COLOUR		Med brn	Lt brn waxy		lt tan	lt tan
FLUORESCENCE		Brt yell/ wh	Brt lt yell wh		Brt lt wh	
POUR POINT (°C)		30	Flu			
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.20 @ 20°C	0.198 @ 19°C	0.20 @ 18°C	0.196 @ 17.5°C	0.192 @ 17.5°C	0.171 @ 17.5°C
Cl (frm resis) (PPM)	35,500	38,000	38,500	40,000	41,000	47,000
Cl (frm titrat) (PPM)	20,000	20,000	21,000	21,000	22,000	21,000
NITRATES (PPM)	40	25	55	25	75	75
pH	6.8	6.7	7.0	6.8	6.7	7.0
TRITIUM (DPM)	425	466	408	484	462	463
COMMENTS	Scum, waxy yell/wh Flu					

R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No. 3

RUN No.	10	10	11		12	12
SEAT No.	63	63	65		68	68
CHAMBER CAPACITY (gal)	12	2 3/4	12	2 3/4	12	2 3/4
DEPTH (metres)	3328.8	3328.8	3394.4		3394.6	3394.6
RECOVERY VOLUMES						
GAS (Cu Ft)	28.06	17.2	5.48		0	
OIL (cc)	700	600			0	
WATER/FILTRATE (cc)	38,500	6,800	40,400		1,000	
OTHER (cc)						
SURFACE PRESSURE (PSI)	1,150	1,400	350			
GAS COMPOSITION						
C1 (PPM)	386,641	374,169	258,800			
C2 (PPM)	65,433	56,345	30,010			
C3 (PPM)	38,707	27,596	11,827			
C4 (PPM)	14,515	11,404	2,721			
C5 (PPM)	3,124	2,246	646			
C6 (PPM)	327	372	55			
CO2 (%)	22	30	20			
H2S (PPM)	0	Tr	0			
OIL PROPERTIES						
DENSITY (°API at 60°)	44	42.75				
COLOUR	Med brn	Lt-med brn				
FLUORESCENCE	Brt lt yell/wh	Brt lt yell/wh				
POUR POINT (°C)	26	29				
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.197 @ 20.5°C	0.194 @ 22°C	0.199 @ 21°C		0.25 @ 18.5°C	
Cl (frm resis) (PPM)	36,500	35,500	35,500		29,300	
Cl (frm titrat) (PPM)	21,000	20,000	18,000		14,000	
NITRATES (PPM)	40	40	20		10	
pH	6.5	6.7	7.3		8.3	
TRITIUM (DPM)	542	439	461		296	

COMMENTS

Not opened. Suspected blocked flowline. Opened and closed chamber four times.

R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

Sheet No. 4

RUN No.	13	13	15	15	16	16
SEAT No.	76	76	82	82	83	83
CHAMBER CAPACITY (gal)	12	2 3/4	12	2 3/4	12	2 3/4
DEPTH (metres)	3394.3	3394.3	3334.1	3334.1	3044.7	3044.7
RECOVERY VOLUMES						
GAS (Cu Ft)	8.25	3.35	4.53	1.45	26.45	3.4
OIL (cc)					Scum	0
WATER/FILTRATE (cc)	42,500	9,200	41,000	9,100	39	2.5
OTHER (cc)						
SURFACE PRESSURE (PSI)	700	700	400	400	1,350	1,000
GAS COMPOSITION						
C1 (PPM)	144,077	72,038	171,520	178,380	281,292	267,571
C2 (PPM)	14,950	4,380	20,556	16,819	37,352	23,360
C3 (PPM)	2,118	1,144	5,857	8,053	17,571	8,053
C4 (PPM)	629	169	2,048	2,158	1,888	3,821
C5 (PPM)	169	12	398	398	373	1,492
C6 (PPM)	80	tr	131	96	39	164
CO2 (%)	60	60	12	19	3	1
H2S (PPM)	0	1	0	0	0	0
OIL PROPERTIES						
DENSITY (°API at 60°)				Tr scum	60 measured on the refractometer	
COLOUR						
FLUORESCENCE				v weak dull yell-wh	Brt wh	
POUR POINT (°C)						
WATER PROPERTIES						
RESISTIVITY (Ωm)	0.204 @ 18°C	0.217 @ 18°C	0.192 @ 21°C	0.203 @ 21°C	0.191 @ 21°C	0.192 @ 21°C
Cl (frm resis) (PPM)	37,500	35,000	37,000	35,000	37,500	37,000
Cl (frm titrat) (PPM)	17,000	15,000	19,000	17,000	19,000	19,000
NITRATES (PPM)	10	10	15	10	18	20
pH	6.9	6.6	6.6	6.4	7.3	7.5
TRITIUM (DPM)	405	305	434	364	453	450
COMMENTS				Trace H/carbon scum	Chamber 2 opened prematurely probably coincident with Chamber 1	

R.F.T. SAMPLING DATA SHEET

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1

RUN No.	17	17	19	19
SEAT No.	84	84	99	99
CHAMBER CAPACITY (gal)	12	2 3/4	6	2 3/4
DEPTH (metres)	3053.1	3053.1	3572.2	
RECOVERY VOLUMES				
GAS (Cu Ft)	220.9			
OIL (cc) Condensate	2,000			
WATER/FILTRATE (cc)	11,000		1,500	1,500
OTHER (cc)				
SURFACE PRESSURE (PSI)	2,150			
GAS COMPOSITION				
C1 (PPM)	226406			
C2 (PPM)	27097			
C3 (PPM)	11714			
C4 (PPM)	4496			
C5 (PPM)	1492			
C6 (PPM)	406			
CO2 (%)	5			
H2S (PPM)	0			
OIL PROPERTIES				
DENSITY (°API at 60°)	53			
COLOUR	Colourless-lt yell			
FLUORESCENCE	Brt wh			
POUR POINT (°C)				
WATER PROPERTIES				
RESISTIVITY (Ωm)				
Cl (frm resis) (PPM)			14,000	14,000
Cl (frm titrat) (PPM)	18,000			
NITRATES (PPM)	13		0	0
pH	7.0		8.7	8.7
TRITIUM (DPM)	424		465	555
COMMENTS			Seal Failure	Tight Formation

PRODUCTION TEST DATA

PRODUCTION TEST DATA SHEET (LIQUIDS)

COMPANY ESSO AUSTRALIA LIMITED — WELL GRUNTER #1

TEST NO. 1 — PERFORATIONS 3392.6 - 3400.5

DATE 19/11/84 — SHEET NO. 1

TIME	SAMPLING POINT	SHAKE-OUT (%) OIL	H_2O	SOLIDS	°API at 60°F	COLOUR	POUR POINT	WATER Chlor	NO_3	pH	COMMENTS
09:15	CH MAN	91	8.7	0.3	36.12	Drk Brn					
09:30	CH MAN	91	8.7	0.3	37.6	Drk Grn					
21:45	CH MAN	5	90	5	41.6	Drk Grn					
22:15	CH MAN	5	90	5	41.6	Drk Grn					
22:30	CH MAN	4	91	1	41.7	Drk Grn					
22:45	CH MAN	4	91	1	41.7	Drk Grn					
23:00	CH MAN	9.9	90	1	-	-	NOT ENOUGH VOLUME TO DO API				
23:00	CH MAN	10	90	Tr	-	-	NOT ENOUGH VOLUME TO DO API				
00:00	CH MAN	9.9	90	0.1		M-dk Brn					
01:00	CH MAN	9.9	90	0.1		Med Brn Grn	29°				
02:00	CH MAN	9.9	90	0.1		M-dk brn	32°				
03:00	CH MAN	9.9	90	0.1	38.3	Dk brn	32°				
04:00	CH MAN	9.9	90	0.1	39	Dk brn	28°				
05:00	CH MAN	9.9	90	0.1		Dk brn	30°	API not done due to oil/water mix.			Tank Oil sample
06:00	CH MAN	9.9	90	0.1	39.3	Dk brn	31°	10600	0		
07:00	CH MAN				39.9	Dk brn	31°	10500	0		
07:15	SEPARATOR				37.5	Dk brn	32°		0		
08:00	CHOKE				40.0	Dk brn	32°	11000	0		
09:00	CHOKE				37.9	Dk brn	33°		0		
10:00	CHOKE				39.8	Dk brn	33°	11200	0		
10:45	CHOKE				40.1	Dk brn	33°	11000	0		

PRODUCTION WELL TEST DATA SHEET GASES

Sheet No. 1

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1 PWT # 1
PERFORATIONS 3392.5 - 3400.5 (FM.RKB)

TIME	SAMPLING POINT	C1	C2	C3	C4	C5	C6	CO2	H2S
HH:MM		PPM	PPM	PPM	PPM	PPM	PPM	%	PPM
21:30	CH MAN	271,155	49,786	34,503	17,248	6,226	486	78	Nil
23:30	CH MAN	271,096	48,691	34,236	16,136	6,096	426	80	Nil
00:30	CH MAN	277,934	53,616	31,503	15,488	4,280	753	58	-
01:30	CH MAN	264,376	46,382	31,503	16,896	5,660	1,702	52	-
02:30	CH MAN	267,765	52,850	33,003	15,840	5,836	1,580	55	-
03:30	CH MAN	268,762	53,616	33,000	18,022	4,390	1,845	57	-
04:30	CH MAN	267,745	53,616	32,908	17,101	5,836	1,580	58	Tr
05:30	CH MAN	26,878	53,500	32,908	17,192	5,836	1,580	57	Tr
06:30	CH MAN	260,986	53,233	32,853	15,488	5,690	1,337	57	Tr
07:30	CH MAN	280,916	53,616	32,703	17,011	5,852	1,580	57	Tr
08:30	CH MAN	280,812	52,500	22,703	17,011	5,852	1,580	56	Tr
09:30	CH MAN	280,916	53,616	32,908	17,101	5,836	1,580	56	-
10:30	CH MAN	271,155	54,765	30,912	17,283	5,350	1,459	56	-

WATER RESISTIVITY ANALYSIS SHEET

SHEET NO. 1

COMPANY ESSO AUSTRALIA LIMITED
WELL GRUNTER #1
PWT # 3392.5 - 3400.5

DEPTH (M)	TOTAL GAS	C1	C2	C3	C4	TIME	RMF	TEMPERATURE
		RESISTIVITY				21:45	.226	19°C
						22:15	.244	19°C
						22:30	.264	19°C
						23:00	.287	19°C
						23:30	.296	19°C
						00:00	.291	19°C
						00:30	.307	19°C
						01:00	.307	20°C
						01:30	.307	20°C
						02:00	.311	20°C
						02:30	.309	20°C
						03:00	.305	19°C
						03:30	.317	19°C
						04:00	.305	20°C
						04:30	.311	20°C
						05:00	.311	20°C
						05:30	.316	20°C
						06:00	.316	20°C
						06:30	.314	20°C
						07:00	.315	20°C
						07:30	.316	20°C
						08:00	.311	20°C
						08:30	.310	20°C
						09:00	.321	20°C
						09:30	.318	20°C
						10:00	.314	20°C
						10:30	.314	20°C
						11:00	.318	20°C
						11:30		
						12:00		
						12:30		
						13:00		

RMF OF MUD IN PITS AT TIME OF TESTING = .297

APPENDICES

COMPUTER DATA LISTINGS

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

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

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

the following data lists have been made for this well :

(a). Bit record and bit initialization data

(b). Hydraulic analyses

(c). Data list A

(d). Data list B

(e). Data list C

(f). Data list D

COMPUTER PLOTS

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

GEOPLOT - 1:5000 SCALE - 2m averages

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

(a). BIT RECORD AND BIT INITIALIZATION DATA

BIT SIZE . . . . . Inches

BIT COST . . . . . Australian dollars

JET SIZE . . . . . Thirty-seconds of an inch

DEPTHS . . . . . Metres

HOLE MADE. . . . . Metres

DRILLING TIME. . . . . Hours

AVERAGE ROP. . . . . Metres/hour

AVERAGE COST/METRE . . Australian dollars

BIT CONDITION. . . . . Teeth

Bearings

Gauge . . . . Inches

WELL: GRUNTER No.1

BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
1	111	HTC OSC3AJ+26"HO	26.000	0.00	20 20 20	129.0	269.0	140.0	2.55	54.9	2.6	134.34	10819	2	3	0.000
1	111	HTC OSC 3AJ	17.500	4978.00	20 20 16	269.0	855.0	586.0	10.68	54.9	3.8	98.74	96266	2	4	0.000
2	116	HTC J1	12.250	2566.00	18 18 18	855.0	1547.0	692.0	22.72	30.5	5.3	151.58	202314	2	4	0.000
3	116	HTC J1	12.250	2566.00	18 18 18	1547.0	1914.0	367.0	11.49	31.9	6.1	182.03	103398	2	3	0.000
4	517	HTC J22	12.250	8520.00	18 18 18	1914.0	2425.0	511.0	33.47	15.3	7.1	306.62	191519	4	8	0.000
5	517	HTC J22	12.250	8520.00	16 16 18	2425.0	2526.0	101.0	24.17	4.2	7.4	1225.88	136128	8	6	0.125

WELL: GRUNTER No.1

BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
6	537	HTC J33	12.250	8266.00	16 16 16	2526.0	2736.0	210.0	49.20	4.3	7.8	1030.62	161609	4	5	0.125
7	537	HTC J33	12.250	8266.00	16 16 16	2736.0	3011.6	275.6	74.25	3.7	7.9	1118.57	225949	5	5	0.125
8	537	HTC J33	12.250	8266.00	16 16 16	3011.6	3192.2	180.6	55.69	3.2	7.9	1331.65	156196	7	8	0.625
9	617	HTC J44	12.250	6919.00	16 16 16	3192.2	3369.0	176.8	61.76	2.9	9.2	1504.89	163088	4	7	0.125
10	617	HTC J44	12.250	6919.00	16 16 16	3369.0	3389.0	20.0	4.64	4.3	9.2	2873.13	12581	1	1	0.000
10	4	CHRIS C23	8.500	0.00	14 14 15	3389.0	3407.3	18.3	7.64	2.4	9.2	3360.64	45841	0	0	0.550
11	617	HTC J44	12.250	6919.00	16 16 16	3407.3	3434.0	26.7	6.00	4.5	9.3	2351.86	17258	1	1	0.000
11	4	CHRIS C-23	8.470	0.00	14 14 15	3434.0	3452.0	18.0	23.52	1.1	9.3	6658.81	130185	0	0	0.700
11	617	HTC J44	12.250	0.00	16 16 16	3452.0	3462.0	10.0	7.13	4.0	9.3	2000.08	19484	2	6	0.125
12	537	HTC J33	12.250	8266.00	16 16 16	3462.0	3521.0	59.0	12.74	4.6	9.5	1516.72	38517	1	4	0.125
13	537	HTC J33	12.250	8266.00	16 16 16	3521.0	3561.0	40.0	8.91	4.5	9.6	1896.61	26949	2	3	0.000
14	316	HTC J7	8.500	1261.00	16 16 16	3561.0	3567.0	6.0	3.64	1.6	9.6	8268.91	15390	5	6	0.000
15	537	HTC J33	8.500	4455.00	13 13 13	3567.0	3700.0	133.0	39.91	3.3	9.8	1398.47	133020	3	8	0.000
16	537	HTC J33	8.500	4455.00	13 13 13	3700.0	3807.0	107.0	40.31	2.7	10.1	1762.17	137747	3	6	0.000
17	537	HTC J33	8.500	4455.00	16 16 16	3807.0	3809.0	2.0	0.75	2.7	10.222222	20	1380	1	1	0.000

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

STARTING DEPTH.....	129.0		
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	2.6		
BIT DIAMETER.....	26.000		
NOZZLES.....	20	20	20
HW DRILL COLLAR LENGTH, OD, ID....	23.26	9.750	3.062
DRILL COLLAR LENGTH, OD, ID.....	64.86	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	27.85	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	5.0	2.00	
FINISHING DEPTH.....	269.0		
CUMULATIVE HOURS, TURNS.....	2.55	10819	
BIT CONDITION OUT.....	T 2	B 3	G 0.000

BIT NUMBER: 1 IADC CODE 111 HTC OSC 3AJ

STARTING DEPTH.....	269.0		
BIT COST, RIG COST/HOUR.....	4978.00	3652.00	
TRIP TIME.....	3.8		
BIT DIAMETER.....	17.500		
NOZZLES.....	20	20	16
HW DRILL COLLAR LENGTH, OD, ID....	21.27	9.750	3.062
DRILL COLLAR LENGTH, OD, ID.....	92.60	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	252.00	19.124	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.5	2.00	
FINISHING DEPTH.....	855.0		
CUMULATIVE HOURS, TURNS.....	10.68	96266	
BIT CONDITION OUT.....	T 2	B 4	G 0.000

BIT NUMBER: 2 IADC CODE 116 HTC J1

STARTING DEPTH.....	855.0		
BIT COST, RIG COST/HOUR.....	2566.00	3652.00	
TRIP TIME.....	5.3		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	167.02	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.0	2.10	
FINISHING DEPTH.....	1547.0		
CUMULATIVE HOURS, TURNS.....	22.72	202314	
BIT CONDITION OUT.....	T 2	B 4	G 0.000

BIT NUMBER: 3 IADC CODE 116 HTC J1

STARTING DEPTH.....	1547.0		
BIT COST, RIG COST/HOUR.....	2566.00	3652.00	
TRIP TIME.....	6.1		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	167.02	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.20	
FINISHING DEPTH.....	1914.0		
CUMULATIVE HOURS, TURNS.....	11.49	103398	
BIT CONDITION OUT.....	T 2	B 3	G 0.000

BIT NUMBER: 4	IADC CODE 517	HTC J22		
STARTING DEPTH.....	1914.0			
BIT COST, RIG COST/HOUR.....	8520.00	3652.00		
TRIP TIME.....	7.1			
BIT DIAMETER.....	12.250			
NOZZLES.....	18	18	18	
DRILL COLLAR LENGTH, OD, ID.....	167.02	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	836.50	12.615		
RISER LENGTH, ID.....	129.00	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.....	0.14			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.5	2.40		
FINISHING DEPTH.....	2425.0			
CUMULATIVE HOURS, TURNS.....	33.47	191519		
BIT CONDITION OUT.....	T 4	B 8	G 0.000	

BIT NUMBER: 5	IADC CODE 517	HTC J22		
STARTING DEPTH.....	2425.0			
BIT COST, RIG COST/HOUR.....	8520.00	3652.00		
TRIP TIME.....	7.4			
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	18	
DRILL COLLAR LENGTH, OD, ID.....	167.02	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	836.50	12.615		
RISER LENGTH, ID.....	129.00	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.....	0.14			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.5	2.40		
FINISHING DEPTH.....	2526.0			
CUMULATIVE HOURS, TURNS.....	24.16	136139		
BIT CONDITION OUT.....	T 8	B 6	G 0.125	

BIT NUMBER: 6 IADC CODE 537 HTC J33

STARTING DEPTH.....	2526.0		
BIT COST, RIG COST/HOUR.....	8266.00	3652.00	
TRIP TIME.....	7.8		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	167.02	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	2736.0		
CUMULATIVE HOURS, TURNS.....	49.20	161609	
BIT CONDITION OUT.....	T 4	B 5	G 0.125

BIT NUMBER: 7 IADC CODE 537 HTC J33

STARTING DEPTH.....	2736.0		
BIT COST, RIG COST/HOUR.....	8266.00	3652.00	
TRIP TIME.....	7.9		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	168.73	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	3011.6		
CUMULATIVE HOURS, TURNS.....	74.25	225949	
BIT CONDITION OUT.....	T 5	B 5	G 0.125

BIT NUMBER: 8 IADC CODE 537 HTC J33

STARTING DEPTH.....	3011.6		
BIT COST, RIG COST/HOUR.....	8266.00	3652.00	
TRIP TIME.....	7.9		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	168.73	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	3192.2		
CUMULATIVE HOURS, TURNS.....	55.69	156196	
BIT CONDITION OUT.....	T 7	B 9	G 0.625

BIT NUMBER: 9 IADC CODE 617 HTC J44

STARTING DEPTH.....	3192.2		
BIT COST, RIG COST/HOUR.....	6919.00	3652.00	
TRIP TIME.....	9.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	168.44	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	3369.0		
CUMULATIVE HOURS, TURNS.....	61.76	163088	
BIT CONDITION OUT.....	T 4	B 7	G 0.125

BIT NUMBER: 10 IADC CODE 617 HTC J44

STARTING DEPTH.....	3369.0		
BIT COST, RIG COST/HOUR.....	6919.00	3652.00	
TRIP TIME.....	9.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	16	16	16
DRILL COLLAR LENGTH, OD, ID.....	169.12	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.12
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.50	
FINISHING DEPTH.....	3389.0		
CUMULATIVE HOURS, TURNS.....	4.64	12581	
BIT CONDITION OUT.....	T 1	B 1	G 0.000

BIT NUMBER: 10 IADC CODE 4 CHRIS C23

STARTING DEPTH.....	3389.0		
BIT COST, RIG COST/HOUR.....	0.00	3652.00	
TRIP TIME.....	9.2		
BIT DIAMETER.....	8.500		
NOZZLES.....	14	14	15
DRILL COLLAR LENGTH, OD, ID.....	158.61	8.000	2.81
HW DRILL PIPE LENGTH, OD, ID.....	83.24	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	836.50	12.615	
RISER LENGTH, ID.....	129.00	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.....	0.14		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	1.0	2.50	
FINISHING DEPTH.....	3407.3		
CUMULATIVE HOURS, TURNS.....	7.64	45841	
BIT CONDITION OUT.....	T 0	B 0	G 0.550

BIT NUMBER: 11 IADC CODE 617 HTC J44

STARTING DEPTH	3407.3		
BIT COST, RIG COST/HOUR	6919.00	3652.00	
TRIP TIME	9.3		
BIT DIAMETER	12.250		
NOZZLES	16	16	16
DRILL COLLAR LENGTH, OD, ID	169.12	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	836.50	12.615	
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.0	2.50	
FINISHING DEPTH	3434.0		
CUMULATIVE HOURS, TURNS	6.00	17258	
BIT CONDITION OUT	T 1	B 1	G 0.000

BIT NUMBER: 11 IADC CODE 4 CHRIS C-23

STARTING DEPTH	3434.0		
BIT COST, RIG COST/HOUR	0.00	3652.00	
TRIP TIME	9.3		
PREVIOUS HOLE MADE	0.0		
PREVIOUS HOURS, TURNS	7.64	45841	
BIT DIAMETER	8.470		
NOZZLES	14	14	15
HW DRILL COLLAR LENGTH, OD, ID	19.98	6.000	5.500
DRILL COLLAR LENGTH, OD, ID	158.62	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
LINER DEPTH, TOP, ID	3434.00	836.50	12.250
CASING ID	12.615		
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	1.0	2.50	
FINISHING DEPTH	3452.0		
CUMULATIVE HOURS, TURNS	23.52	130185	
BIT CONDITION OUT	T 0	B 0	G 0.700

BIT NUMBER: 11	IADC CODE 617	HTC J44		
STARTING DEPTH.....	3452.0			
BIT COST, RIG COST/HOUR.....	0.00	3652.00		
TRIP TIME.....	9.3			
PREVIOUS HOLE MADE.....	20.0			
PREVIOUS HOURS, TURNS.....	4.64	12581		
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	16	
DRILL COLLAR LENGTH, OD, ID.....	168.44	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	836.50	12.615		
RISER LENGTH, ID.....	129.00	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.....	0.14			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.0	2.55		
FINISHING DEPTH.....	3462.0			
CUMULATIVE HOURS, TURNS.....	7.13	19484		
BIT CONDITION OUT.....	T 2	B 4	G 0.125	

BIT NUMBER: 12	IADC CODE 537	HTC J33		
STARTING DEPTH.....	3462.0			
BIT COST, RIG COST/HOUR.....	8266.00	3652.00		
TRIP TIME.....	9.5			
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	16	
DRILL COLLAR LENGTH, OD, ID.....	168.44	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	83.25	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	836.50	12.615		
RISER LENGTH, ID.....	129.00	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.....	0.14			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.5	2.60		
FINISHING DEPTH.....	3521.0			
CUMULATIVE HOURS, TURNS.....	12.74	30517		
BIT CONDITION OUT.....	T 1	B 4	G 0.125	

BIT NUMBER: 13 IADC CODE 537 HTC J33

STARTING DEPTH	3521.0		
BIT COST, RIG COST/HOUR	8266.00	3652.00	
TRIP TIME	9.6		
BIT DIAMETER	12.250		
NOZZLES	16	16	16
DRILL COLLAR LENGTH, OD, ID	168.44	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	836.50	12.615	
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.60	
FINISHING DEPTH	3561.0		
CUMULATIVE HOURS, TURNS	8.91	26949	
BIT CONDITION OUT	T 2	B 3	G 0.000

BIT NUMBER: 14 IADC CODE 316 HTC J7

STARTING DEPTH	3561.0		
BIT COST, RIG COST/HOUR	1261.00	3652.00	
TRIP TIME	9.6		
BIT DIAMETER	8.500		
NOZZLES	16	16	16
HW DRILL COLLAR LENGTH, OD, ID	9.07	6.500	2.813
DRILL COLLAR LENGTH, OD, ID	215.91	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	3549.00	8.681	
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.60	
FINISHING DEPTH	3567.0		
CUMULATIVE HOURS, TURNS	3.64	15390	
BIT CONDITION OUT	T 5	B 6	G 0.000

BIT NUMBER: 15 IADC CODE 537 HTC J33

STARTING DEPTH	3567.0		
BIT COST, RIG COST/HOUR	4455.00	3652.00	
TRIP TIME	9.8		
BIT DIAMETER	8.500		
NOZZLES	13	13	13
DRILL COLLAR LENGTH, OD, ID	253.22	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	3549.00	8.681	
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.60	
FINISHING DEPTH	3700.0		
CUMULATIVE HOURS, TURNS	39.91	133020	
BIT CONDITION OUT	T 3	B 8	G 0.000

BIT NUMBER: 16 IADC CODE 537 HTC J33

STARTING DEPTH	3700.0		
BIT COST, RIG COST/HOUR	4455.00	3652.00	
TRIP TIME	10.1		
BIT DIAMETER	8.500		
NOZZLES	13	13	13
DRILL COLLAR LENGTH, OD, ID	250.30	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	3549.00	8.681	
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.60	
FINISHING DEPTH	3807.0		
CUMULATIVE HOURS, TURNS	40.31	137747	
BIT CONDITION OUT	T 3	B 6	G 0.000

BIT NUMBER: 17 IADC CODE 537 HTC J33

STARTING DEPTH	3807.0		
BIT COST, RIG COST/HOUR	4455.00	3652.00	
TRIP TIME	10.2		
BIT DIAMETER	8.500		
NOZZLES	16	16	16
DRILL COLLAR LENGTH, OD, ID	250.30	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.25	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	3549.00	8.681	
RISER LENGTH, ID	129.00	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	0.14		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.0	2.60	
FINISHING DEPTH	3809.0		
CUMULATIVE HOURS, TURNS	0.75	1380	
BIT CONDITION OUT	T 1	B 1	G 0.000

(b). HYDRAULIC ANALYSIS

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

DEPTH. . . . . Metres

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

ANNULAR VOLUMES. . . . Barrels, Barrels/metre

ANNULAR VELOCITIES . . Metres/minute

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

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

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

PRESSURE UNITS . . . . Pounds per square inch

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

H.H.P. . . . . Hydraulic horsepower at the bit

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

DENSITY UNITS. . . . . Pounds per gallon

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 200.0 AND TVD 200.0

SPM 1 101 SPM 2 94 FLOW RATE 975

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	1.851	43	13	12	TURBULENT			0.0
DC/OH	1.950	126	12	12	TURBULENT			0.0
HWDP/OH	2.074	58	11	11	LAMINAR	1	10	0.0
DP/OH	2.074	174	11	11	LAMINAR	1	10	0.0
TOTAL VOLUME		402				TOTAL PRESSURE DROP		0.0

LAG: 17.3 MINUTES 1754 STROKES #1 AND 1620 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	878.7	HHP	500	IMPACT FORCE	1459
% SURFACE PRESSURE	57.5	HHP/sqin	0.94	JET VELOCITY	103

PRESSURE BREAKDOWN:

SURFACE	54.5				
STRING	254.3				
BIT	878.7				
ANNULUS	0.0				
TOTAL	1187.5	PUMP PRESSURE	1527.8	% DIFFERENCE	22.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.50	HYDROSTATIC PRESSURE	290.0
CIRCULATING:	ECD	8.50	CIRCULATING PRESSURE	290.0
PULLING OUT:	TRIP MARGIN	0.00	ESTIMATED SWAB	0.0
	EFFECTIVE MUD WEIGHT	8.50	BOTTOM HOLE PRESSURE	290.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 102 SPM 2 97 FLOW RATE 996

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	16	TURBULENT			0.0
DC/OH	0.772	21	31	15	TURBULENT			0.0
DC/CSG	0.961	63	25	14	TURBULENT			0.0
HWDP/CSG	1.085	62	22	13	TURBULENT			0.0
HWDP/RIS	1.325	35	19	12	TURBULENT			0.0
DP/RIS	1.325	136	19	12	TURBULENT			0.0
TOTAL VOLUME		331					TOTAL PRESSURE DROP	0.2

LAG: 14.0 MINUTES 1423 STROKES #1 AND 1361 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1183.6	HHP	688	IMPACT FORCE	1729
% SURFACE PRESSURE	68.5	HHP/sqin	2.86	JET VELOCITY	120

PRESSURE BREAKDOWN:

SURFACE	56.6				
STRING	416.2				
BIT	1183.6				
ANNULUS	0.2				
TOTAL	1656.6	PUMP PRESSURE	1728.4	% DIFFERENCE	4.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.50	HYDROSTATIC PRESSURE	435.0
CIRCULATING:	ECD	8.50	CIRCULATING PRESSURE	435.2
PULLING OUT:	TRIP MARGIN	0.01	ESTIMATED SWAB	0.3
	EFFECTIVE MUD WEIGHT	8.49	BOTTOM HOLE PRESSURE	434.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 102 SPM 2 87 FLOW RATE 944

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	16	TURBULENT			0.0
DC/OH	0.772	71	29	15	TURBULENT			0.1
HWDP/OH	0.896	31	25	13	TURBULENT			0.0
HWDP/CSG	1.085	53	21	13	TURBULENT			0.0
DP/CSG	1.085	80	21	13	TURBULENT			0.0
DP/RIS	1.325	171	17	12	TURBULENT			0.0
TOTAL VOLUME		421			TOTAL PRESSURE DROP			0.2

LAG: 18.7 MINUTES 1902 STROKES #1 AND 1634 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1062.4	HHP	585	IMPACT FORCE	1552
% SURFACE PRESSURE	47.0	HHP/sqin	2.43	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	51.4
STRING	407.2
BIT	1062.4
ANNULUS	0.2
TOTAL	1521.2

PUMP PRESSURE 2261.2 % DIFFERENCE 32.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.50	HYDROSTATIC PRESSURE	580.1
CIRCULATING:	ECD	8.50	CIRCULATING PRESSURE	580.3
PULLING OUT:	TRIP MARGIN	0.01	ESTIMATED SWAB	0.4
	EFFECTIVE MUD WEIGHT	8.49	BOTTOM HOLE PRESSURE	579.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 101 SPM 2 0 FLOW RATE 503

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	18	15	TURBULENT			0.0
DC/OH	0.772	71	16	14	TURBULENT			0.0
HWDP/OH	0.896	75	13	13	TURBULENT			0.0
DP/OH	0.896	46	13	13	TURBULENT			0.0
DP/CSG	1.085	134	11	12	LAMINAR	1	10	0.0
DP/RIS	1.325	171	9	12	LAMINAR	1	8	0.0
TOTAL VOLUME		510			TOTAL PRESSURE DROP			0.1

LAG: 42.6 MINUTES 4289 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	316.1	HHP	93	IMPACT FORCE	462
% SURFACE PRESSURE	42.6	HHP/sqin	0.39	JET VELOCITY	61

PRESSURE BREAKDOWN:

SURFACE	17.2				
STRING	146.0				
BIT	316.1				
ANNULUS	0.1				
TOTAL	479.4	PUMP PRESSURE	742.0	% DIFFERENCE	35.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	759.2
CIRCULATING:	ECD	8.90	CIRCULATING PRESSURE	759.3
PULLING OUT:	TRIP MARGIN	0.00	ESTIMATED SWAB	0.2
	EFFECTIVE MUD WEIGHT	8.90	BOTTOM HOLE PRESSURE	759.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 99 SPM 2 98 FLOW RATE 981

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	71	30	14	TURBULENT			0.1
HWDP/OH	0.896	75	26	13	TURBULENT			0.1
DP/OH	0.896	135	26	13	TURBULENT			0.1
DP/CSG	1.085	134	22	12	TURBULENT			0.0
DP/RIS	1.325	171	18	12	TURBULENT			0.0
TOTAL VOLUME		600			TOTAL PRESSURE DROP			0.4

LAG: 25.7 MINUTES 2530 STROKES #1 AND 2512 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1217.2	HHP	697	IMPACT FORCE	1778
% SURFACE PRESSURE	46.5	HHP/sqin	2.90	JET VELOCITY	118

PRESSURE BREAKDOWN:

SURFACE	57.8				
STRING	524.2				
BIT	1217.2				
ANNULUS	0.4				
TOTAL	1799.5	PUMP PRESSURE	2615.1	% DIFFERENCE	31.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	921.3
CIRCULATING:	ECD	9.00	CIRCULATING PRESSURE	921.6
PULLING OUT:	TRIP MARGIN	0.01	ESTIMATED SWAB	0.7
	EFFECTIVE MUD WEIGHT	8.99	BOTTOM HOLE PRESSURE	920.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 98 SPM 2 98 FLOW RATE 979

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	124	LAMINAR	0	34	0.4
DC/OH	0.772	71	30	122	LAMINAR	0	30	1.2
HWDP/OH	0.896	75	26	120	LAMINAR	0	26	0.8
DP/OH	0.896	225	26	120	LAMINAR	0	26	2.3
DP/CSG	1.085	134	21	120	LAMINAR	0	21	0.9
DP/RIS	1.325	171	18	119	LAMINAR	0	18	0.8
TOTAL VOLUME		690			TOTAL PRESSURE DROP			6.3

LAG: 29.6 MINUTES 2893 STROKES #1 AND 2902 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1252.4	HHP	716	IMPACT FORCE	1830
% SURFACE PRESSURE	47.3	HHP/sqin	2.98	JET VELOCITY	118

PRESSURE BREAKDOWN:

SURFACE	81.5				
STRING	786.6				
BIT	1252.4				
ANNULUS	6.3				
TOTAL	2126.7	PUMP PRESSURE	2649.1	% DIFFERENCE	19.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	1110.6
CIRCULATING:	ECD	9.35	CIRCULATING PRESSURE	1116.9
PULLING OUT:	TRIP MARGIN	0.11	ESTIMATED SWAB	12.6
	EFFECTIVE MUD WEIGHT	9.19	BOTTOM HOLE PRESSURE	1098.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH: 800.0 AND TVD 800.0

SPM 1 99 SPM 2 99 FLOW RATE 990

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	125	LAMINAR	0	35	0.4
DC/OH	0.772	71	31	124	LAMINAR	0	30	1.2
HWDP/OH	0.896	75	26	122	LAMINAR	0	26	0.8
DP/OH	0.896	314	26	122	LAMINAR	0	26	3.2
DP/CSG	1.085	134	22	121	LAMINAR	0	22	0.9
DP/RIS	1.325	171	18	120	LAMINAR	0	18	0.8
TOTAL VOLUME		779			TOTAL PRESSURE DROP			7.2

LAG: 33.1 MINUTES 3269 STROKES #1 AND 3279 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1251.5	HHP	723	IMPACT FORCE	1828
% SURFACE PRESSURE	45.7	HHP/sqin	3.00	JET VELOCITY	119

PRESSURE BREAKDOWN:

SURFACE	81.6				
STRING	834.8				
BIT	1251.5				
ANNULUS	7.2				
TOTAL	2175.1	PUMP PRESSURE	2739.5	% DIFFERENCE	20.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1242.0
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	1249.2
PULLING OUT:	TRIP MARGIN	0.11	ESTIMATED SWAB	14.4
	EFFECTIVE MUD WEIGHT	8.99	BOTTOM HOLE PRESSURE	1227.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 98 SPM 2 97 FLOW RATE 973

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	84	128	LAMINAR	1	83	3.2
DC/CSG	0.303	31	76	127	LAMINAR	1	76	4.6
HWDP/CSG	0.427	36	54	124	LAMINAR	0	54	1.7
DP/CSG	0.427	223	54	124	LAMINAR	0	54	10.9
DP/RIS	1.325	171	17	119	LAMINAR	0	17	0.8
TOTAL VOLUME		478				TOTAL PRESSURE DROP		21.2

LAG: 20.6 MINUTES 2023 STROKES #1 AND 1992 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1457.5	HHP	827	IMPACT FORCE	1960
% SURFACE PRESSURE	48.5	HHP/sqin	7.02	JET VELOCITY	127

PRESSURE BREAKDOWN:

SURFACE	80.5		
STRING	1053.4		
BIT	1457.5		
ANNULUS	21.2		
TOTAL	2612.5	PUMP PRESSURE 3007.2	% DIFFERENCE 13.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	1427.9
CIRCULATING:	ECD	9.44	CIRCULATING PRESSURE	1449.1
PULLING OUT:	TRIP MARGIN	0.28	ESTIMATED SWAB	42.4
	EFFECTIVE MUD WEIGHT	9.02	BOTTOM HOLE PRESSURE	1385.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 97 SPM 2 96 FLOW RATE 966

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	84	128	LAMINAR	1	83	8.2
DC/CSG	0.303	1	76	128	LAMINAR	1	75	0.2
HWDP/CSG	0.427	36	54	124	LAMINAR	0	53	1.7
DP/CSG	0.427	265	54	124	LAMINAR	0	53	13.0
DP/RIS	1.325	171	17	119	LAMINAR	0	17	0.8
TOTAL VOLUME		518				TOTAL PRESSURE DROP		23.9

LAG: 22.5 MINUTES 2191 STROKES #1 AND 2160 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1423.4	HHP	802	IMPACT FORCE	1914
% SURFACE PRESSURE	47.1	HHP/sqin	6.81	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	78.8
STRING	1077.7
BIT	1423.4
ANNULUS	23.9
TOTAL	2603.9

PUMP PRESSURE 3025.0 % DIFFERENCE 13.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	1569.5
CIRCULATING:	ECD	9.34	CIRCULATING PRESSURE	1593.4
PULLING OUT:	TRIP MARGIN	0.28	ESTIMATED SWAB	47.7
	EFFECTIVE MUD WEIGHT	8.92	BOTTOM HOLE PRESSURE	1521.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 97 SPM 2 95 FLOW RATE 962

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	84	168	LAMINAR	1	83	12.3
HWDP/OH	0.398	33	57	171	LAMINAR	0	57	3.2
DP/OH	0.398	5	57	171	LAMINAR	0	57	0.5
DP/CSG	0.427	302	54	171	LAMINAR	0	53	25.1
DP/RIS	1.325	171	17	176	LAMINAR	0	17	1.7
TOTAL VOLUME		558				TOTAL PRESSURE DROP		42.8

LAG: 24.3 MINUTES 2372 STROKES #1 AND 2313 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1380.4	HHP	775	IMPACT FORCE	1856
% SURFACE PRESSURE	44.9	HHP/sqin	6.57	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	69.4		
STRING	988.7		
BIT	1380.4		
ANNULUS	42.8		
TOTAL	2481.3	PUMP PRESSURE 3074.2	% DIFFERENCE 19.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1689.0
CIRCULATING:	ECD	9.23	CIRCULATING PRESSURE	1731.8
PULLING OUT:	TRIP MARGIN	0.46	ESTIMATED SWAB	85.6
	EFFECTIVE MUD WEIGHT	8.54	BOTTOM HOLE PRESSURE	1603.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 96 SPM 2 92 FLOW RATE 941

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	82	168	LAMINAR	1	81	12.3
HWDP/OH	0.398	33	56	171	LAMINAR	0	56	3.2
DP/OH	0.398	45	56	171	LAMINAR	0	54	4.3
DP/CSG	0.427	302	52	171	LAMINAR	0	52	25.1
DP/RIS	1.325	171	17	176	LAMINAR	0	17	1.7
TOTAL VOLUME		597			TOTAL PRESSURE DROP			46.4

LAG: 26.7 MINUTES 2566 STROKES #1 AND 2454 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1320.4	HHP	725	IMPACT FORCE	1776
% SURFACE PRESSURE	43.0	HHP/sqin	6.15	JET VELOCITY	123

PRESSURE BREAKDOWN:

SURFACE	66.7		
STRING	988.3		
BIT	1320.4		
ANNULUS	46.4		
TOTAL	2421.9	PUMP PRESSURE 3067.5	% DIFFERENCE 21.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1842.5
CIRCULATING:	ECD	9.23	CIRCULATING PRESSURE	1888.9
PULLING OUT:	TRIP MARGIN	0.45	ESTIMATED SWAB	92.9
	EFFECTIVE MUD WEIGHT	8.55	BOTTOM HOLE PRESSURE	1749.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1300.0

SPM 1 91 SPM 2 80 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	167	LAMINAR	1	74	12.1
HWDP/OH	0.398	33	51	171	LAMINAR	0	51	3.1
DP/OH	0.398	85	51	171	LAMINAR	0	51	8.0
DP/CSG	0.427	302	48	171	LAMINAR	0	47	24.7
DP/RIS	1.325	171	15	175	LAMINAR	0	15	1.6
TOTAL VOLUME		637				TOTAL PRESSURE DROP		49.5

LAG: 31.3 MINUTES 2854 STROKES #1 AND 2501 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1099.6	HHP	549	IMPACT FORCE	1479
% SURFACE PRESSURE	43.0	HHP/sqin	4.66	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	56.5
STRING	870.4
BIT	1099.6
ANNULUS	49.5
TOTAL	2076.1

PUMP PRESSURE 2560.3 % DIFFERENCE 18.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.05	HYDROSTATIC PRESSURE	2007.1
CIRCULATING:	ECD	9.27	CIRCULATING PRESSURE	2056.7
PULLING OUT:	TRIP MARGIN	0.45	ESTIMATED SWAB	99.1
	EFFECTIVE MUD WEIGHT	8.60	BOTTOM HOLE PRESSURE	1908.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 92 SPM 2 90 FLOW RATE 910

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	79	167	LAMINAR	1	78	12.2
HWDP/OH	0.398	33	54	171	LAMINAR	0	54	3.1
DP/OH	0.398	125	54	171	LAMINAR	0	54	11.8
DP/CSG	0.427	302	51	171	LAMINAR	0	50	24.9
DP/RIS	1.325	171	16	175	LAMINAR	0	16	1.7
TOTAL VOLUME		677				TOTAL PRESSURE DROP		53.7

LAG: 31.3 MINUTES 2870 STROKES #1 AND 2820 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1240.9	HHP	659	IMPACT FORCE	1669
% SURFACE PRESSURE	41.0	HHP/sqin	5.59	JET VELOCITY	119

PRESSURE BREAKDOWN:

SURFACE	63.0		
STRING	1006.8		
BIT	1240.9		
ANNULUS	53.7		
TOTAL	2364.5	PUMP PRESSURE 3027.5	% DIFFERENCE 21.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.05	HYDROSTATIC PRESSURE	2161.5
CIRCULATING:	ECD	9.28	CIRCULATING PRESSURE	2215.3
PULLING OUT:	TRIP MARGIN	0.45	ESTIMATED SWAB	107.5
	EFFECTIVE MUD WEIGHT	8.60	BOTTOM HOLE PRESSURE	2054.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1500.0

SPM 1 89 SPM 2 88 FLOW RATE 884

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	167	LAMINAR	1	76	12.2
HWDP/OH	0.398	33	53	171	LAMINAR	0	53	3.1
DP/OH	0.398	165	53	171	LAMINAR	0	53	15.5
DP/CSG	0.427	302	49	171	LAMINAR	0	49	24.8
DP/RIS	1.325	171	16	175	LAMINAR	0	16	1.7
TOTAL VOLUME		717				TOTAL PRESSURE DROP		57.3

LAG: 34.1 MINUTES 3025 STROKES #1 AND 2999 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1170.9	HHP	604	IMPACT FORCE	1575
% SURFACE PRESSURE	39.3	HHP/sqin	5.12	JET VELOCITY	116

PRESSURE BREAKDOWN:

SURFACE	59.8
STRING	990.0
BIT	1170.9
ANNULUS	57.3
TOTAL	2278.0

PUMP PRESSURE 2977.8 % DIFFERENCE 23.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.05	HYDROSTATIC PRESSURE	2315.9
CIRCULATING:	ECD	9.27	CIRCULATING PRESSURE	2373.2
PULLING OUT:	TRIP MARGIN	0.45	ESTIMATED SWAB	114.5
	EFFECTIVE MUD WEIGHT	8.60	BOTTOM HOLE PRESSURE	2201.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1600.0

SPM 1 89 SPM 2 87 FLOW RATE 882

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	163	LAMINAR	0	76	12.5
HWDP/OH	0.398	33	53	162	LAMINAR	0	52	3.0
DP/OH	0.398	204	53	162	LAMINAR	0	52	18.6
DP/CSG	0.427	302	49	162	LAMINAR	0	49	23.8
DP/RIS	1.325	171	16	161	LAMINAR	0	16	1.4
TOTAL VOLUME		757				TOTAL PRESSURE DROP		59.2

LAG: 36.0 MINUTES 3205 STROKES #1 AND 3154 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1197.8	HHP	616	IMPACT FORCE	1611
% SURFACE PRESSURE	40.2	HHP/sqin	5.23	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	67.4
STRING	1154.9
BIT	1197.8
ANNULUS	59.2
TOTAL	2479.4

PUMP PRESSURE 2981.0 % DIFFERENCE 16.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	2538.6
CIRCULATING:	ECD	9.52	CIRCULATING PRESSURE	2597.8
PULLING OUT:	TRIP MARGIN	0.43	ESTIMATED SWAB	118.5
	EFFECTIVE MUD WEIGHT	8.87	BOTTOM HOLE PRESSURE	2420.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1700.0

SPM 1 89 SPM 2 88 FLOW RATE 881

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	163	LAMINAR	0	76	12.5
HWDP/OH	0.398	33	53	162	LAMINAR	0	52	3.0
DP/OH	0.398	244	53	162	LAMINAR	0	52	22.2
DP/CSG	0.427	302	49	162	LAMINAR	0	49	23.8
DP/RIS	1.325	171	16	161	LAMINAR	0	16	1.4
TOTAL VOLUME		797			TOTAL PRESSURE DROP			62.9

LAG: 38.0 MINUTES 3368 STROKES #1 AND 3325 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1196.6	HHP	615	IMPACT FORCE	1609
% SURFACE PRESSURE	39.8	HHP/sqin	5.22	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	67.4		
STRING	1192.6		
BIT	1196.6		
ANNULUS	62.9		
TOTAL	2519.4	PUMP PRESSURE 3008.0	% DIFFERENCE 16.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	2697.2
CIRCULATING:	ECD	9.52	CIRCULATING PRESSURE	2760.1
PULLING OUT:	TRIP MARGIN	0.43	ESTIMATED SWAB	125.7
	EFFECTIVE MUD WEIGHT	8.87	BOTTOM HOLE PRESSURE	2571.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1800.0

SPM 1 88 SPM 2 88 FLOW RATE 882

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	163	LAMINAR	0	76	17.5
HWDP/OH	0.398	33	53	162	LAMINAR	0	52	3.8
DP/OH	0.398	284	53	162	LAMINAR	0	52	25.8
DP/CSG	0.427	302	49	162	LAMINAR	0	49	23.8
DP/RIS	1.325	171	16	161	LAMINAR	0	16	1.4
TOTAL VOLUME		836				TOTAL PRESSURE DROP		66.5

LAG: 39.8 MINUTES 3503 STROKES #1 AND 3526 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1197.7	HHP	616	IMPACT FORCE	1611
% SURFACE PRESSURE	42.5	HHP/sqin	5.23	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	67.4		
STRING	1232.6		
BIT	1197.7		
ANNULUS	66.5		
TOTAL	2564.2	PUMP PRESSURE 2818.1	% DIFFERENCE 9.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	2855.9
CIRCULATING:	ECD	9.52	CIRCULATING PRESSURE	2922.4
PULLING OUT:	TRIP MARGIN	0.43	ESTIMATED SWAB	133.0
	EFFECTIVE MUD WEIGHT	8.87	BOTTOM HOLE PRESSURE	2722.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1900.0

SPM 1 87 SPM 2 87 FLOW RATE 872

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	76	162	LAMINAR	0	75	12.1
HWDP/OH	0.398	33	52	165	LAMINAR	0	52	3.1
DP/OH	0.398	324	52	165	LAMINAR	0	52	30.4
DP/CSG	0.427	302	49	165	LAMINAR	0	48	24.8
DP/RIS	1.325	171	16	170	LAMINAR	0	16	1.6
TOTAL VOLUME		876			TOTAL PRESSURE DROP			72.1

LAG: 42.2 MINUTES 3682 STROKES #1 AND 3682 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1222.5	HHP	622	IMPACT FORCE	1644
% SURFACE PRESSURE	42.1	HHP/sqin	5.28	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	61.8		
STRING	1164.4		
BIT	1222.5		
ANNULUS	72.1		
TOTAL	2520.8	PUMP PRESSURE 2904.4	% DIFFERENCE 13.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.70	HYDROSTATIC PRESSURE	3144.2
CIRCULATING:	ECD	9.92	CIRCULATING PRESSURE	3216.4
PULLING OUT:	TRIP MARGIN	0.45	ESTIMATED SWAB	144.3
	EFFECTIVE MUD WEIGHT	9.25	BOTTOM HOLE PRESSURE	2999.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 2000.0

SPM 1 85 SPM 2 85 FLOW RATE 850

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	74	157	LAMINAR	1	73	11.9
HWDP/OH	0.398	33	51	157	LAMINAR	0	51	2.9
DP/OH	0.398	364	51	157	LAMINAR	0	51	31.4
DP/CSG	0.427	302	47	157	LAMINAR	0	47	22.5
DP/RIS	1.325	171	15	155	LAMINAR	0	15	1.3
TOTAL VOLUME		916					TOTAL PRESSURE DROP	70.0

LAG: 45.3 MINUTES 3828 STROKES #1 AND 3871 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1136.4	HHP	563	IMPACT FORCE	1528
% SURFACE PRESSURE	38.4	HHP/sqin	4.78	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	64.2				
STRING	1247.1				
BIT	1136.4				
ANNULUS	70.0				
TOTAL	2517.6	PUMP PRESSURE	2962.0	% DIFFERENCE	15.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3241.5
CIRCULATING:	ECD	9.71	CIRCULATING PRESSURE	3311.4
PULLING OUT:	TRIP MARGIN	0.41	ESTIMATED SWAB	139.9
	EFFECTIVE MUD WEIGHT	9.09	BOTTOM HOLE PRESSURE	3101.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2100.0

SPM 1 84 SPM 2 85 FLOW RATE 846

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	157	LAMINAR	1	73	11.9
HWDP/OH	0.398	33	51	157	LAMINAR	0	50	2.9
DP/OH	0.398	404	51	157	LAMINAR	0	50	34.8
DP/CSG	0.427	302	47	157	LAMINAR	0	47	22.5
DP/RIS	1.325	171	15	155	LAMINAR	0	15	1.3
TOTAL VOLUME		956				TOTAL PRESSURE DROP		73.3

LAG: 47.4 MINUTES 3989 STROKES #1 AND 4044 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1127.8	HHP	557	IMPACT FORCE	1517
% SURFACE PRESSURE	39.0	HHP/sqin	4.73	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	63.7		
STRING	1275.4		
BIT	1127.8		
ANNULUS	73.3		
TOTAL	2540.3	PUMP PRESSURE 2888.7	% DIFFERENCE 12.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3403.5
CIRCULATING:	ECD	9.70	CIRCULATING PRESSURE	3476.9
PULLING OUT:	TRIP MARGIN	0.41	ESTIMATED SWAB	146.7
	EFFECTIVE MUD WEIGHT	9.09	BOTTOM HOLE PRESSURE	3256.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2200.0

SPM 1 85 SPM 2 85 FLOW RATE 845

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	154	LAMINAR	1	73	11.4
HWDP/OH	0.398	33	50	153	LAMINAR	0	50	2.7
DP/OH	0.398	444	50	153	LAMINAR	0	50	36.4
DP/CSG	0.427	302	47	153	LAMINAR	0	47	21.5
DP/RIS	1.325	171	15	151	LAMINAR	0	15	1.2
TOTAL VOLUME		996			TOTAL PRESSURE DROP			73.2

LAG: 49.5 MINUTES 4184 STROKES #1 AND 4184 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1123.3	HHP	554	IMPACT FORCE	1510
% SURFACE PRESSURE	38.1	HHP/sqin	4.70	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	63.5				
STRING	1307.3				
BIT	1123.3				
ANNULUS	73.2				
TOTAL	2567.4	PUMP PRESSURE	2951.2	% DIFFERENCE	13.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3565.6
CIRCULATING:	ECD	9.70	CIRCULATING PRESSURE	3638.9
PULLING OUT:	TRIP MARGIN	0.39	ESTIMATED SWAB	146.5
	EFFECTIVE MUD WEIGHT	9.11	BOTTOM HOLE PRESSURE	3419.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2300.0

SPM 1 84 SPM 2 84 FLOW RATE 840

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	120	LAMINAR	1	72	7.8
HWDP/OH	0.398	33	50	110	LAMINAR	0	50	1.6
DP/OH	0.398	483	50	110	LAMINAR	0	50	22.9
DP/CSG	0.427	302	47	109	LAMINAR	0	47	12.1
DP/RIS	1.325	171	15	98	LAMINAR	0	15	0.5
TOTAL VOLUME		1036			TOTAL PRESSURE DROP			44.9

LAG: 51.8 MINUTES 4351 STROKES #1 AND 4351 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1111.1	HHP	545	IMPACT FORCE	1494
% SURFACE PRESSURE	37.3	HHP/sqin	4.62	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	70.7				
STRING	1496.8				
BIT	1111.1				
ANNULUS	44.9				
TOTAL	2723.6	PUMP PRESSURE	2979.7	% DIFFERENCE	8.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3727.7
CIRCULATING:	ECD	9.61	CIRCULATING PRESSURE	3772.6
PULLING OUT:	TRIP MARGIN	0.23	ESTIMATED SWAB	89.9
	EFFECTIVE MUD WEIGHT	9.27	BOTTOM HOLE PRESSURE	3637.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2400.0

SPM 1 83 SPM 2 81 FLOW RATE 821

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	132	LAMINAR	1	71	9.1
HWDP/OH	0.398	33	49	124	LAMINAR	0	49	1.9
DP/OH	0.398	523	49	124	LAMINAR	0	49	29.8
DP/CSG	0.427	302	46	123	LAMINAR	0	46	14.6
DP/RIS	1.325	171	15	112	LAMINAR	0	15	0.6

TOTAL VOLUME 1075 TOTAL PRESSURE DROP 56.1

LAG: 55.0 MINUTES 4575 STROKES #1 AND 4463 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1061.2	HHP	508	IMPACT FORCE	1427
% SURFACE PRESSURE	36.0	HHP/sqin	4.31	JET VELOCITY	107

PRESSURE BREAKDOWN:

SURFACE	67.9
STRING	1475.3
BIT	1061.2
ANNULUS	56.1
TOTAL	2660.4

PUMP PRESSURE 2944.3 % DIFFERENCE 9.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3889.8
CIRCULATING:	ECD	9.64	CIRCULATING PRESSURE	3945.8
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	112.1
	EFFECTIVE MUD WEIGHT	9.23	BOTTOM HOLE PRESSURE	3777.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2500.0

SPM 1 72 SPM 2 75 FLOW RATE 738

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	64	127	LAMINAR	1	63	8.3
HWDP/OH	0.398	33	44	117	LAMINAR	0	44	1.7
DP/OH	0.398	563	44	117	LAMINAR	0	44	28.1
DP/CSG	0.427	302	41	116	LAMINAR	0	41	12.7
DP/RIS	1.325	171	13	104	LAMINAR	0	13	0.5

TOTAL VOLUME 1115 TOTAL PRESSURE DROP 51.3

LAG: 63.5 MINUTES 4587 STROKES #1 AND 4785 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1157.5	HHP	498	IMPACT FORCE	1339
% SURFACE PRESSURE	39.9	HHP/sqin	4.23	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	57.1		
STRING	1275.1		
BIT	1157.5		
ANNULUS	51.3		
TOTAL	2541.0	PUMP PRESSURE 2897.5	% DIFFERENCE 12.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	4051.8
CIRCULATING:	ECD	9.62	CIRCULATING PRESSURE	4103.1
PULLING OUT:	TRIP MARGIN	0.24	ESTIMATED SWAB	102.5
	EFFECTIVE MUD WEIGHT	9.26	BOTTOM HOLE PRESSURE	3949.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2600.0

SPM 1 73 SPM 2 74 FLOW RATE 734

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	64	131	LAMINAR	1	63	8.6
HWDP/OH	0.398	33	44	120	LAMINAR	0	44	1.7
DP/OH	0.398	603	44	120	LAMINAR	0	44	31.1
DP/CSG	0.427	302	41	119	LAMINAR	0	41	13.2
DP/RIS	1.325	171	13	105	LAMINAR	0	13	0.5

TOTAL VOLUME 1155 TOTAL PRESSURE DROP 55.2

LAG: 66.1 MINUTES 4835 STROKES #1 AND 4872 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1357.7	HHP	581	IMPACT FORCE	1443
% SURFACE PRESSURE	44.9	HHP/sqin	4.93	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	57.7				
STRING	1321.0				
BIT	1357.7				
ANNULUS	55.2				
TOTAL	2791.6	PUMP PRESSURE	3021.2	% DIFFERENCE	7.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	4213.9
CIRCULATING:	ECD	9.62	CIRCULATING PRESSURE	4269.1
PULLING OUT:	TRIP MARGIN	0.25	ESTIMATED SWAB	110.3
	EFFECTIVE MUD WEIGHT	9.25	BOTTOM HOLE PRESSURE	4103.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2700.0 AND TVD 2700.0

SPM 1 74 SPM 2 74 FLOW RATE 736

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	64	124	LAMINAR	1	63	7.8
HWDP/OH	0.398	33	44	113	LAMINAR	0	44	1.5
DP/OH	0.398	643	44	113	LAMINAR	0	44	30.0
DP/CSG	0.427	302	41	112	LAMINAR	0	41	11.9
DP/RIS	1.325	171	13	99	LAMINAR	0	13	0.5
TOTAL VOLUME		1195				TOTAL PRESSURE DROP		51.8

LAG: 68.2 MINUTES 5021 STROKES #1 AND 5021 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1359.4	HHP	584	IMPACT FORCE	1444
% SURFACE PRESSURE	45.2	HHP/sqin	4.95	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	56.7		
STRING	1331.0		
BIT	1359.4		
ANNULUS	51.8		
TOTAL	2798.9	PUMP PRESSURE 3005.6	% DIFFERENCE 6.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.45	HYDROSTATIC PRESSURE	4352.9
CIRCULATING:	ECD	9.56	CIRCULATING PRESSURE	4404.7
PULLING OUT:	TRIP MARGIN	0.22	ESTIMATED SWAB	103.5
	EFFECTIVE MUD WEIGHT	9.23	BOTTOM HOLE PRESSURE	4249.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2800.0 AND TVD 2800.0

SPM 1 72 SPM 2 71 FLOW RATE 716

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	62	149	LAMINAR	0	62	10.9
HWDP/OH	0.398	33	43	141	LAMINAR	0	43	2.3
DP/OH	0.398	682	43	141	LAMINAR	0	43	47.1
DP/CSG	0.427	302	40	140	LAMINAR	0	40	17.8
DP/RIS	1.325	171	13	130	LAMINAR	0	13	0.8
TOTAL VOLUME		1235				TOTAL PRESSURE DROP		78.9

LAG: 72.5 MINUTES 5238 STROKES #1 AND 5137 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1304.6	HHP	545	IMPACT FORCE	1386
% SURFACE PRESSURE	43.9	HHP/sqin	4.62	JET VELOCITY	118

PRESSURE BREAKDOWN:

SURFACE	54.6				
STRING	1315.5				
BIT	1304.6				
ANNULUS	78.9				
TOTAL	2753.6	PUMP PRESSURE	2968.8	% DIFFERENCE	7.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.60	HYDROSTATIC PRESSURE	4585.8
CIRCULATING:	ECD	9.77	CIRCULATING PRESSURE	4664.7
PULLING OUT:	TRIP MARGIN	0.33	ESTIMATED SWAB	157.8
	EFFECTIVE MUD WEIGHT	9.27	BOTTOM HOLE PRESSURE	4428.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2900.0 AND TVD 2900.0

SPM 1 71 SPM 2 72 FLOW RATE 717

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	62	149	LAMINAR	0	62	10.9
HWDP/OH	0.398	33	43	141	LAMINAR	0	43	2.3
DP/OH	0.398	722	43	141	LAMINAR	0	43	49.9
DP/CSG	0.427	302	40	140	LAMINAR	0	40	17.8
DP/RIS	1.325	171	13	130	LAMINAR	0	13	0.8
TOTAL VOLUME		1274				TOTAL PRESSURE DROP		81.7

LAG: 74.6 MINUTES 5318 STROKES #1 AND 5392 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1311.5	HHP	549	IMPACT FORCE	1393
% SURFACE PRESSURE	43.5	HHP/sqin	4.66	JET VELOCITY	119

PRESSURE BREAKDOWN:

SURFACE	54.8				
STRING	1353.3				
BIT	1311.5				
ANNULUS	81.7				
TOTAL	2801.3	PUMP PRESSURE	3016.2	% DIFFERENCE	7.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.60	HYDROSTATIC PRESSURE	4749.6
CIRCULATING:	ECD	9.77	CIRCULATING PRESSURE	4831.3
PULLING OUT:	TRIP MARGIN	0.33	ESTIMATED SWAB	163.5
	EFFECTIVE MUD WEIGHT	9.27	BOTTOM HOLE PRESSURE	4586.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3000.0 AND TVD 3000.0

SPM 1 71 SPM 2 71 FLOW RATE 708

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	46	61	156	LAMINAR	0	61	11.8
HWDP/OH	0.398	33	42	149	LAMINAR	0	42	2.5
DP/OH	0.398	762	42	149	LAMINAR	0	42	57.7
DP/CSG	0.427	302	39	148	LAMINAR	0	39	19.5
DP/RIS	1.325	171	13	138	LAMINAR	0	13	0.9
TOTAL VOLUME		1314			TOTAL PRESSURE DROP			92.4

LAG: 78.0 MINUTES 5515 STROKES #1 AND 5529 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1277.7	HHP	528	IMPACT FORCE	1358
% SURFACE PRESSURE	42.6	HHP/sqin	4.48	JET VELOCITY	117

PRESSURE BREAKDOWN:

SURFACE	53.6		
STRING	1352.8		
BIT	1277.7		
ANNULUS	92.4		
TOTAL	2776.5	PUMP PRESSURE 3002.4	% DIFFERENCE 7.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.60	HYDROSTATIC PRESSURE	4913.3
CIRCULATING:	ECD	9.78	CIRCULATING PRESSURE	5005.7
PULLING OUT:	TRIP MARGIN	0.36	ESTIMATED SWAB	184.9
	EFFECTIVE MUD WEIGHT	9.24	BOTTOM HOLE PRESSURE	4728.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3100.0 AND TVD 3100.0

SPM 1 72 SPM 2 69 FLOW RATE 705

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	61	162	LAMINAR	0	61	12.6
HWDP/OH	0.398	33	42	154	LAMINAR	0	42	2.7
DP/OH	0.398	801	42	154	LAMINAR	0	42	64.5
DP/CSG	0.427	302	39	153	LAMINAR	0	39	20.7
DP/RIS	1.325	171	13	142	LAMINAR	0	13	0.9
TOTAL VOLUME		1354				TOTAL PRESSURE DROP		101.4

LAG: 80.7 MINUTES 5780 STROKES #1 AND 5599 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1266.3	HHP	521	IMPACT FORCE	1345
% SURFACE PRESSURE	42.6	HHP/sqin	4.42	JET VELOCITY	117

PRESSURE BREAKDOWN:

SURFACE	54.1		
STRING	1398.9		
BIT	1266.3		
ANNULUS	101.4		
TOTAL	2820.7	PUMP PRESSURE 2971.4	% DIFFERENCE 5.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.60	HYDROSTATIC PRESSURE	5077.1
CIRCULATING:	ECD	9.79	CIRCULATING PRESSURE	5178.5
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	202.8
	EFFECTIVE MUD WEIGHT	9.22	BOTTOM HOLE PRESSURE	4874.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3200.0 AND TVD 3200.0

SPM 1 69 SPM 2 68 FLOW RATE 684

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	59	163	LAMINAR	0	59	12.4
HWDP/OH	0.398	33	41	155	LAMINAR	0	41	2.6
DP/OH	0.398	841	41	155	LAMINAR	0	41	67.0
DP/CSG	0.427	302	38	154	LAMINAR	0	38	20.5
DP/RIS	1.325	171	12	143	LAMINAR	0	12	0.9

TOTAL VOLUME 1394 TOTAL PRESSURE DROP 103.5

LAG: 85.6 MINUTES 5863 STROKES #1 AND 5851 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1180.6	HHP	471	IMPACT FORCE	1254
% SURFACE PRESSURE	40.2	HHP/sqin	4.00	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	50.9
STRING	1343.5
BIT	1180.6
ANNULUS	103.5
TOTAL	2678.5

PUMP PRESSURE 2935.3 % DIFFERENCE 8.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	5186.3
CIRCULATING:	ECD	9.69	CIRCULATING PRESSURE	5289.8
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	207.0
	EFFECTIVE MUD WEIGHT	9.12	BOTTOM HOLE PRESSURE	4979.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3300.0 AND TVD 3300.0

SPM 1 67 SPM 2 68 FLOW RATE 674

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	59	163	LAMINAR	0	58	12.4
HWDP/OH	0.398	33	40	155	LAMINAR	0	40	2.6
DP/OH	0.398	881	40	155	LAMINAR	0	40	69.8
DP/CSG	0.427	302	38	154	LAMINAR	0	37	20.4
DP/RIS	1.325	171	12	143	LAMINAR	0	12	0.9

TOTAL VOLUME 1434 TOTAL PRESSURE DROP 106.2

LAG: 89.3 MINUTES 5939 STROKES #1 AND 6110 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1146.9	HHP	451	IMPACT FORCE	1219
% SURFACE PRESSURE	41.4	HHP/sqin	3.83	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	49.6				
STRING	1337.6				
BIT	1146.9				
ANNULUS	106.2				
TOTAL	2640.3	PUMP PRESSURE	2770.7	% DIFFERENCE	4.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	5348.4
CIRCULATING:	ECD	9.69	CIRCULATING PRESSURE	5454.5
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	212.3
	EFFECTIVE MUD WEIGHT	9.12	BOTTOM HOLE PRESSURE	5136.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3380.0 AND TVD 3380.0

SPM 1 70 SPM 2 69 FLOW RATE 694

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	60	163	LAMINAR	0	60	12.6
HWDP/OH	0.398	33	41	155	LAMINAR	0	41	2.7
DP/OH	0.398	913	41	155	LAMINAR	0	41	73.0
DP/CSG	0.427	302	39	154	LAMINAR	0	39	20.6
DP/RIS	1.325	171	12	143	LAMINAR	0	12	0.9

TOTAL VOLUME 1466 TOTAL PRESSURE DROP 109.8

LAG: 88.6 MINUTES 6166 STROKES #1 AND 6150 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1216.0	HHP	493	IMPACT FORCE	1292
% SURFACE PRESSURE	40.2	HHP/sqin	4.18	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	52.3				
STRING	1435.3				
BIT	1216.0				
ANNULUS	109.8				
TOTAL	2813.3	PUMP PRESSURE	3021.1	% DIFFERENCE	6.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	5478.1
CIRCULATING:	ECD	9.69	CIRCULATING PRESSURE	5587.9
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	219.6
	EFFECTIVE MUD WEIGHT	9.12	BOTTOM HOLE PRESSURE	5258.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3400.0 AND TVD 3400.0

SPM 1 53 SPM 2 0 FLOW RATE 266

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.026	4	241	201	TURBULENT			436.6
HWDP/OH	0.151	13	42	166	LAMINAR	0	42	7.1
DP/OH	0.151	349	42	166	LAMINAR	0	42	197.7
DP/CSG	0.427	302	15	154	LAMINAR	0	15	14.8
DP/RIS	1.325	171	5	143	LAMINAR	0	5	0.7
TOTAL VOLUME		839			TOTAL PRESSURE DROP			656.9

LAG: 132.6 MINUTES 7054 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	276.2	HHP	43	IMPACT FORCE	236
% SURFACE PRESSURE	16.4	HHP/sqin	0.76	JET VELOCITY	55

PRESSURE BREAKDOWN:

SURFACE	9.3
STRING	252.4
BIT	276.2
ANNULUS	656.9
TOTAL	1194.8

PUMP PRESSURE 1684.7 % DIFFERENCE 29.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE 5510.5
CIRCULATING:	ECD	10.63	CIRCULATING PRESSURE 6167.3
PULLING OUT:	TRIP MARGIN	2.26	ESTIMATED SWAB 1313.7
	EFFECTIVE MUD WEIGHT	7.24	BOTTOM HOLE PRESSURE 4196.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3420.0 AND TVD 3420.0

SPM 1 68 SPM 2 71 FLOW RATE 695

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	60	128	LAMINAR	0	60	8.2
HWDP/OH	0.398	33	42	118	LAMINAR	0	41	1.6
DP/OH	0.398	929	42	118	LAMINAR	0	41	45.2
DP/CSG	0.427	302	39	117	LAMINAR	0	39	12.4
DP/RIS	1.325	171	12	104	LAMINAR	0	12	0.5
TOTAL VOLUME		1482				TOTAL PRESSURE DROP		67.9

LAG: 89.6 MINUTES 6117 STROKES #1 AND 6333 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1204.3	HHP	488	IMPACT FORCE	1280
% SURFACE PRESSURE	40.5	HHP/sqin	4.14	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	50.9		
STRING	1409.3		
BIT	1204.3		
ANNULUS	67.9		
TOTAL	2732.4	PUMP PRESSURE 2976.0	% DIFFERENCE 8.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.40	HYDROSTATIC PRESSURE	5484.5
CIRCULATING:	ECD	9.52	CIRCULATING PRESSURE	5552.5
PULLING OUT:	TRIP MARGIN	0.23	ESTIMATED SWAB	135.8
	EFFECTIVE MUD WEIGHT	9.17	BOTTOM HOLE PRESSURE	5348.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3450.0 AND TVD 3450.0

SPM 1 0 SPM 2 55 FLOW RATE 275

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.114	2	57	150	LAMINAR	0	57	1.9
HWDC/LIN	0.363	1	18	131	LAMINAR	0	18	0.1
DC/LIN	0.274	43	24	130	LAMINAR	0	24	6.1
HWDP/LIN	0.398	33	16	128	LAMINAR	0	16	1.3
DP/LIN	0.398	937	16	128	LAMINAR	0	16	36.5
DP/CSG	0.427	302	15	127	LAMINAR	0	15	10.0
DP/RIS	1.325	171	5	114	LAMINAR	0	5	0.4
TOTAL VOLUME		1490			TOTAL PRESSURE DROP			56.2

LAG: 227.6 MINUTES 0 STROKES #1 AND 12522 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	295.3	HHP	47	IMPACT FORCE	252
% SURFACE PRESSURE	17.0	HHP/sqin	0.84	JET VELOCITY	57

PRESSURE BREAKDOWN:

SURFACE	9.9
STRING	270.1
BIT	295.3
ANNULUS	56.2
TOTAL	631.5

PUMP PRESSURE 1736.8 % DIFFERENCE 63.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	5591.5
CIRCULATING:	ECD	9.60	CIRCULATING PRESSURE	5642.7
PULLING OUT:	TRIP MARGIN	0.19	ESTIMATED SWAB	112.5
	EFFECTIVE MUD WEIGHT	9.31	BOTTOM HOLE PRESSURE	5479.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3460.0 AND TVD 3460.0

SPM 1 70 SPM 2 73 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	0.274	46	62	146	LAMINAR	0	62	10.2
HWDP/OH	0.398	33	43	140	LAMINAR	0	43	2.2
DP/OH	0.398	945	43	140	LAMINAR	0	43	62.6
DP/CSG	0.427	302	40	139	LAMINAR	0	40	17.2
DP/RIS	1.325	171	13	131	LAMINAR	0	13	0.8
TOTAL VOLUME		1498				TOTAL PRESSURE DROP		93.2

LAG: 88.0 MINUTES 6135 STROKES #1 AND 6450 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1276.0	HHP	532	IMPACT FORCE	1356
% SURFACE PRESSURE	43.7	HHP/sqin	4.52	JET VELOCITY	118

PRESSURE BREAKDOWN:

SURFACE	51.3				
STRING	1430.3				
BIT	1276.0				
ANNULUS	93.2				
TOTAL	2850.7	PUMP PRESSURE	2918.2	% DIFFERENCE	2.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.40	HYDROSTATIC PRESSURE	5548.7
CIRCULATING:	ECD	9.56	CIRCULATING PRESSURE	5641.9
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	186.3
	EFFECTIVE MUD WEIGHT	9.08	BOTTOM HOLE PRESSURE	5362.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3500.0 AND TVD 3500.0

SPM 1 69 SPM 2 73 FLOW RATE 710

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	62	153	LAMINAR	1	61	11.1
HWDP/OH	0.398	33	42	147	LAMINAR	0	42	2.4
DP/OH	0.398	961	42	147	LAMINAR	0	42	70.6
DP/CSG	0.427	302	40	147	LAMINAR	0	39	19.0
DP/RIS	1.325	171	13	139	LAMINAR	0	13	0.9

TOTAL VOLUME 1514 TOTAL PRESSURE DROP 104.1

LAG: 89.6 MINUTES 6199 STROKES #1 AND 6519 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1258.0	HHP	521	IMPACT FORCE	1337
% SURFACE PRESSURE	43.4	HHP/sqin	4.42	JET VELOCITY	118

PRESSURE BREAKDOWN:

SURFACE	50.6		
STRING	1423.6		
BIT	1258.0		
ANNULUS	104.1		
TOTAL	2836.3	PUMP PRESSURE 2900.1	% DIFFERENCE 2.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.41	HYDROSTATIC PRESSURE	5619.3
CIRCULATING:	ECD	9.59	CIRCULATING PRESSURE	5723.4
PULLING OUT:	TRIP MARGIN	0.35	ESTIMATED SWAB	208.1
	EFFECTIVE MUD WEIGHT	9.06	BOTTOM HOLE PRESSURE	5411.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3550.0 AND TVD 3550.0

SPM 1 70 SPM 2 69 FLOW RATE 697

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	60	154	LAMINAR	0	60	11.3
HWDP/OH	0.398	33	42	146	LAMINAR	0	41	2.4
DP/OH	0.398	981	42	146	LAMINAR	0	41	70.5
DP/CSG	0.427	302	39	145	LAMINAR	0	39	18.5
DP/RIS	1.325	171	13	135	LAMINAR	0	12	0.8

TOTAL VOLUME 1533 TOTAL PRESSURE DROP 103.5

LAG: 92.5 MINUTES 6494 STROKES #1 AND 6392 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1223.6	HHP	497	IMPACT FORCE	1300
% SURFACE PRESSURE	42.9	HHP/sqin	4.22	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	51.6
STRING	1465.4
BIT	1223.6
ANNULUS	103.5
TOTAL	2844.1

PUMP PRESSURE 2854.5 % DIFFERENCE 0.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	5753.6
CIRCULATING:	ECD	9.67	CIRCULATING PRESSURE	5857.1
PULLING OUT:	TRIP MARGIN	0.34	ESTIMATED SWAB	207.0
	EFFECTIVE MUD WEIGHT	9.16	BOTTOM HOLE PRESSURE	5546.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3565.0 AND TVD 3565.0

SPM 1 59 SPM 2 57 FLOW RATE 578

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.096	1	144	138	TURBULENT			2.2
DC/OH	0.106	1	130	135	LAMINAR	2	129	1.3
DC/CSG	0.116	24	119	133	LAMINAR	1	118	33.1
HWDP/CSG	0.160	13	86	124	LAMINAR	1	85	6.3
DP/CSG	0.160	502	86	124	LAMINAR	1	85	236.5
DP/RIS	1.325	171	10	96	LAMINAR	0	10	0.5
TOTAL VOLUME		712				TOTAL PRESSURE DROP		279.8

LAG: 51.7 MINUTES 3025 STROKES #1 AND 2957 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1003.6	HHP	339	IMPACT FORCE	1066
% SURFACE PRESSURE	36.9	HHP/sqin	5.97	JET VELOCITY	96

PRESSURE BREAKDOWN:

SURFACE	44.0				
STRING	1346.0				
BIT	1003.6				
ANNULUS	279.8				
TOTAL	2673.4	PUMP PRESSURE	2723.0	% DIFFERENCE	1.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	11.30	HYDROSTATIC PRESSURE	6872.7
CIRCULATING:	ECD	11.76	CIRCULATING PRESSURE	7152.4
PULLING OUT:	TRIP MARGIN	0.92	ESTIMATED SWAB	559.5
	EFFECTIVE MUD WEIGHT	10.38	BOTTOM HOLE PRESSURE	6313.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3600.0 AND TVD 3600.0

SPM 1 0 SPM 2 96 FLOW RATE 478

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.106	5	108	163	LAMINAR	1	107	12.0
DC/CSG	0.116	23	98	162	LAMINAR	1	98	41.2
HWDP/CSG	0.160	13	71	153	LAMINAR	0	70	8.4
DP/CSG	0.160	503	71	153	LAMINAR	0	70	317.1
DP/RIS	1.325	171	9	127	LAMINAR	0	9	0.8
TOTAL VOLUME		716				TOTAL PRESSURE DROP		379.5

LAG: 62.9 MINUTES 0 STROKES #1 AND 6016 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1599.5	HHP	446	IMPACT FORCE	1122
% SURFACE PRESSURE	56.1	HHP/sqin	7.86	JET VELOCITY	120

PRESSURE BREAKDOWN:

SURFACE	32.6				
STRING	1039.1				
BIT	1599.5				
ANNULUS	379.5				
TOTAL	3050.7	PUMP PRESSURE	2850.2	% DIFFERENCE	7.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	11.50	HYDROSTATIC PRESSURE	7063.0
CIRCULATING:	ECD	12.12	CIRCULATING PRESSURE	7442.4
PULLING OUT:	TRIP MARGIN	1.24	ESTIMATED SWAB	758.9
	EFFECTIVE MUD WEIGHT	10.26	BOTTOM HOLE PRESSURE	6304.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3700.0 AND TVD 3700.0

SPM 1 94 SPM 2 0 FLOW RATE 468

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.106	16	105	143	LAMINAR	1	104	30.9
DC/CSG	0.116	12	96	140	LAMINAR	1	95	17.8
HWDP/CSG	0.160	13	70	127	LAMINAR	1	69	6.6
DP/CSG	0.160	519	70	127	LAMINAR	1	69	255.8
DP/RIS	1.325	171	8	90	LAMINAR	0	8	0.4
TOTAL VOLUME		731				TOTAL PRESSURE DROP		311.5

LAG: 65.6 MINUTES 6143 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1634.9	HHP	447	IMPACT FORCE	1147
% SURFACE PRESSURE	57.8	HHP/sqin	7.87	JET VELOCITY	117

PRESSURE BREAKDOWN:

SURFACE	34.8
STRING	1127.5
BIT	1634.9
ANNULUS	311.5
TOTAL	3108.6

PUMP PRESSURE 2827.2 % DIFFERENCE 10.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	12.24	HYDROSTATIC PRESSURE	7726.1
CIRCULATING:	ECD	12.73	CIRCULATING PRESSURE	8037.6
PULLING OUT:	TRIP MARGIN	0.99	ESTIMATED SWAB	623.0
	EFFECTIVE MUD WEIGHT	11.25	BOTTOM HOLE PRESSURE	7103.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3800.0 AND TVD 3800.0

SPM 1 0 SPM 2 79 FLOW RATE 395

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.106	26	89	134	LAMINAR	1	88	54.9
HWDP/OH	0.151	0	63	114	LAMINAR	0	62	0.1
HWDP/CSG	0.160	13	59	112	LAMINAR	0	58	6.3
DP/CSG	0.160	535	59	112	LAMINAR	0	58	253.0
DP/RIS	1.325	171	7	65	LAMINAR	0	7	0.2
TOTAL VOLUME		746				TOTAL PRESSURE DROP		314.5

LAG: 79.3 MINUTES 0 STROKES #1 AND 6271 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1475.9	HHP	340	IMPACT FORCE	1035
% SURFACE PRESSURE	50.4	HHP/sqin	6.00	JET VELOCITY	99

PRESSURE BREAKDOWN:

SURFACE	34.3
STRING	1128.4
BIT	1475.9
ANNULUS	314.5
TOTAL	2953.1

PUMP PRESSURE 2926.6 % DIFFERENCE 0.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	15.50	HYDROSTATIC PRESSURE	10048.5
CIRCULATING:	ECD	15.99	CIRCULATING PRESSURE	10363.1
PULLING OUT:	TRIP MARGIN	0.97	ESTIMATED SWAB	629.0
	EFFECTIVE MUD WEIGHT	14.53	BOTTOM HOLE PRESSURE	9419.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3808.0 AND TVD 3808.0

SPM 1 92 SPM 2 0 FLOW RATE 462

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.106	26	104	129	LAMINAR	0	104	56.5
HWDP/OH	0.151	1	73	112	LAMINAR	0	73	0.8
HWDP/CSG	0.160	12	69	110	LAMINAR	0	68	6.0
DP/CSG	0.160	537	69	110	LAMINAR	0	68	271.4
DP/RIS	1.325	171	8	69	LAMINAR	0	8	0.3
TOTAL VOLUME		747				TOTAL PRESSURE DROP		335.0

LAG: 67.9 MINUTES 6281 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	879.3	HHP	237	IMPACT FORCE	934
% SURFACE PRESSURE	29.4	HHP/sqin	4.18	JET VELOCITY	77

PRESSURE BREAKDOWN:

SURFACE	43.8
STRING	1443.6
BIT	879.3
ANNULUS	335.0
TOTAL	2701.7

PUMP PRESSURE 2992.4 % DIFFERENCE 9.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	15.50	HYDROSTATIC PRESSURE	10069.7
CIRCULATING:	ECD	16.02	CIRCULATING PRESSURE	10404.7
PULLING OUT:	TRIP MARGIN	1.03	ESTIMATED SWAB	670.0
	EFFECTIVE MUD WEIGHT	14.47	BOTTOM HOLE PRESSURE	9399.7

(c). COMPUTER DATA LISTING : LIST A

INTERVAL . . . . . All depth records (data not averaged)

DEPTH. . . . . Well depth, in metres

ROP. . . . . Rate of penetration, in metres/hour

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

RPM. . . . . Rotary speed, in revolutions per minute

MW . . . . . Mud weight in, in pounds per gallon

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

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

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

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

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

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

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

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

BIT NUMBER	1	IADC CODE	111	INTERVAL	129.0- 269.0
HTC OSC3AJ+26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.6	BIT RUN	140.0
TOTAL HOURS	2.55	TOTAL TURNS	10819	CONDITION	T2 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
135.0	48.4	1.5	45	8.5	0.46	0.12	339	76	1650	8.4	13.1
140.0	69.2	1.5	46	8.5	0.40	0.20	536	52.75	928.37	8.4	13.2
142.0	21.2	1.8	46	8.5	0.61	0.29	794	172.46	812.08	8.4	13.2
145.0	55.4	1.6	46	8.5	0.44	0.34	943	65.94	672.18	8.4	13.2
146.0	39.1	1.7	46	8.5	0.50	0.37	1013	93.33	638.13	8.4	13.2
147.0	55.4	1.7	46	8.5	0.45	0.39	1062	65.94	606.34	8.4	13.2
148.0	30.8	1.7	46	8.5	0.55	0.42	1152	118.69	580.67	8.4	13.2
150.0	110.0	2.0	52	8.5	0.36	0.44	1208	33.20	528.53	8.4	13.2
155.0	50.5	2.7	45	8.5	0.49	0.54	1478	72.28	440.79	8.4	13.2
158.0	13.8	3.0	41	8.5	0.71	0.75	2011	263.76	422.48	8.4	13.2
159.0	65.5	3.4	48	8.5	0.47	0.77	2054	55.79	410.25	8.4	13.2
160.0	24.3	2.4	52	8.5	0.63	0.81	2182	150.14	401.86	8.4	13.3
161.0	15.7	2.9	53	8.5	0.74	0.87	2385	232.31	394.54	8.4	13.3
162.0	37.1	1.1	53	8.5	0.51	0.90	2471	98.40	387.53	8.4	13.3
163.0	37.1	0.3	53	8.5	0.43	0.93	2557	98.40	379.03	8.4	13.3
165.0	32.4	0.7	53	8.5	0.50	0.99	2754	112.60	364.22	8.4	13.3
168.0	29.7	4.6	55	8.5	0.67	1.09	3089	122.86	345.66	8.4	13.3
170.0	40.7	4.6	68	8.5	0.65	1.14	3288	89.78	333.18	8.4	13.3
175.0	80.0	5.5	76	8.5	0.56	1.20	3572	45.65	301.92	8.4	13.3
178.0	37.5	6.0	73	8.5	0.72	1.28	3924	97.39	289.40	8.4	13.3
180.0	126.3	6.0	79	8.5	0.49	1.30	4000	28.91	279.19	8.4	13.3
185.0	118.0	6.5	86	8.5	0.52	1.34	4218	30.94	257.02	8.4	13.4
190.0	103.8	5.2	87	8.5	0.53	1.39	4469	35.17	238.84	8.4	13.4
192.0	56.2	3.5	92	8.5	0.62	1.42	4666	64.92	233.31	8.4	13.4
195.0	66.7	4.0	92	8.5	0.60	1.47	4915	54.78	225.20	8.4	13.4
196.0	86.7	3.9	92	8.5	0.55	1.48	4979	42.10	222.47	8.4	13.4
198.0	74.5	4.4	92	8.5	0.59	1.51	5128	49.03	217.44	8.4	13.4
200.0	92.3	3.2	94	8.5	0.53	1.53	5250	39.56	212.43	8.4	13.4
202.0	80.0	2.9	94	8.5	0.55	1.55	5390	45.65	207.86	8.4	13.4
205.0	114.3	3.1	94	8.5	0.49	1.58	5538	31.95	200.92	8.4	13.4
208.0	41.1	3.5	91	8.5	0.68	1.65	5935	88.76	196.66	8.4	13.4
210.0	31.9	5.0	93	8.5	0.77	1.72	6285	114.38	194.63	8.4	13.5
212.0	64.9	6.3	93	8.5	0.66	1.75	6457	56.30	191.29	8.4	13.5
215.0	32.0	4.5	81	8.5	0.73	1.84	6912	114.13	188.60	8.4	13.5
216.0	171.4	4.1	84	8.5	0.41	1.85	6941	21.30	186.68	8.4	13.5
218.0	61.0	4.7	93	8.5	0.64	1.88	7124	59.85	183.83	8.4	13.5
220.0	78.7	5.1	93	8.5	0.60	1.91	7266	46.41	180.81	8.4	13.5
224.0	70.6	5.6	93	8.5	0.63	1.96	7583	51.74	175.37	8.4	13.5
225.0	45.9	5.3	88	8.5	0.69	1.98	7697	79.63	174.38	8.4	13.5
228.0	167.4	4.3	94	8.5	0.44	2.00	7798	21.81	169.75	8.4	13.5
230.0	90.6	4.7	94	8.5	0.56	2.02	7923	40.32	167.19	8.4	13.5
234.0	189.5	5.5	94	8.5	0.43	2.04	8042	19.27	161.55	8.4	13.6
235.0	45.0	5.3	89	8.5	0.70	2.07	8160	81.16	160.80	8.4	13.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
238.0	211.8	4.7	95	8.5	0.40	2.08	8241	17.25	156.85	8.4	13.6
240.0	62.1	5.8	94	8.5	0.66	2.11	8423	58.84	155.08	8.4	13.6
242.0	146.9	6.1	94	8.5	0.49	2.13	8500	24.85	152.77	8.4	13.6
245.0	144.0	6.0	94	8.5	0.50	2.15	8618	25.36	149.48	8.4	13.6
246.0	104.3	6.3	94	8.5	0.57	2.16	8672	35.00	148.50	8.4	13.6
248.0	61.6	2.5	94	8.5	0.58	2.19	8856	59.31	147.00	8.4	13.6
250.0	65.5	3.0	94	8.5	0.58	2.22	9028	55.79	145.49	8.4	13.6
255.0	36.4	5.8	91	8.5	0.76	2.36	9781	100.43	143.71	8.4	13.6
258.0	102.9	7.1	93	8.5	0.58	2.39	9944	35.51	141.19	8.4	13.6
260.0	163.6	7.9	93	8.5	0.49	2.40	10013	22.32	139.37	8.4	13.7
262.0	26.1	7.2	88	8.5	0.85	2.48	10419	139.99	139.38	8.4	13.7
265.0	114.3	1.0	81	8.5	0.39	2.50	10547	31.95	137.01	8.4	13.7
266.0	144.0	2.6	93	8.5	0.43	2.51	10586	25.36	136.20	8.4	13.7
268.0	90.0	3.2	93	8.5	0.53	2.53	10710	40.58	134.82	8.4	13.7
269.0	51.8	2.5	94	8.5	0.61	2.55	10819	70.50	134.36	8.4	13.7

BIT NUMBER	1	IADC CODE	111	INTERVAL	269.0- 855.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 16
COST	4857.00	TRIP TIME	3.8	BIT RUN	586.0
TOTAL HOURS	10.68	TOTAL TURNS	96266	CONDITION	T2 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
270.0	398.6	6.4	113	8.5	0.36	0.00	17	9	18744	8.4	13.7
275.0	160.0	5.1	123	8.5	0.55	0.03	248	23	3143	8.4	13.7
279.0	300.0	6.8	122	8.5	0.44	0.05	346	12	1891	8.4	13.7
280.0	469.6	8.3	121	8.5	0.35	0.05	362	8	1719	8.4	13.7
284.0	480.0	9.7	121	8.5	0.36	0.06	422	8	1263	8.4	13.7
285.0	400.0	10.0	120	8.5	0.40	0.06	440	9	1185	8.4	13.8
288.0	308.6	9.1	109	8.5	0.43	0.07	503	11.84	999.44	8.4	13.8
290.0	600.0	13.6	114	8.5	0.31	0.07	526	6.09	904.84	8.4	13.8
294.0	432.0	12.8	119	8.5	0.40	0.08	592	8.45	761.42	8.4	13.8
295.0	520.0	12.9	115	8.5	0.35	0.08	605	7.02	732.40	8.4	13.8
298.0	450.0	10.5	150	8.5	0.43	0.09	665	8.12	657.48	8.4	13.8
300.0	327.3	7.1	150	8.5	0.47	0.10	720	11.16	615.78	8.4	13.8
305.0	360.0	9.5	150	8.5	0.47	0.11	845	10.14	531.66	8.4	13.8
310.0	621.8	10.4	150	8.5	0.35	0.12	918	5.87	467.54	8.4	13.8
315.0	308.6	1.5	150	8.5	0.37	0.14	1064	11.84	418.01	8.4	13.9
320.0	67.9	9.6	150	8.5	0.87	0.21	1726	53.77	382.30	8.4	13.9
322.0	317.6	8.3	150	8.5	0.49	0.22	1783	11.50	368.31	8.4	13.9
325.0	248.3	7.7	150	8.5	0.54	0.23	1891	14.71	349.36	8.4	13.9
326.0	540.0	13.0	150	8.5	0.40	0.23	1908	6.76	343.35	8.4	13.9
330.0	171.4	8.6	150	8.5	0.64	0.25	2118	21.30	322.23	8.4	13.9
331.0	160.0	8.8	150	8.5	0.65	0.26	2174	22.83	317.41	8.4	13.9
332.0	257.1	7.1	150	8.5	0.52	0.26	2209	14.20	312.59	8.4	13.9
334.0	400.0	12.5	150	8.5	0.48	0.27	2254	9.13	303.26	8.4	13.9
335.0	276.9	12.1	150	8.5	0.56	0.27	2287	13.19	298.86	8.4	13.9
338.0	144.0	8.5	150	8.5	0.67	0.29	2474	25.36	286.97	8.4	13.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
339.0	156.5	7.4	150	8.5	0.64	0.30	2532	23.33	283.20	8.4	14.0
340.0	423.5	13.9	150	8.5	0.47	0.30	2553	8.62	279.34	8.4	14.0
342.0	240.0	13.2	150	8.5	0.61	0.31	2628	15.22	272.10	8.4	14.0
345.0	151.6	7.5	150	8.5	0.65	0.33	2806	24.09	262.31	8.4	14.0
350.0	435.0	11.5	150	8.5	0.45	0.34	2910	8.40	246.64	8.4	14.0
353.0	480.0	13.3	150	8.5	0.44	0.35	2966	7.61	238.10	8.4	14.0
355.0	79.2	10.8	150	8.5	0.85	0.37	3193	46.11	233.63	8.4	14.0
356.0	300.0	10.5	150	8.5	0.53	0.38	3223	12.17	231.09	8.4	14.0
357.0	171.4	8.9	150	8.5	0.64	0.38	3276	21.30	228.70	8.4	14.0
360.0	400.0	13.5	150	8.5	0.48	0.39	3343	9.13	221.47	8.4	14.0
361.0	288.0	10.0	150	8.5	0.53	0.39	3374	12.68	219.20	8.4	14.0
363.0	327.3	10.5	150	8.5	0.51	0.40	3429	11.16	214.77	8.4	14.0
365.0	64.3	9.2	150	8.5	0.87	0.43	3709	56.81	211.49	8.4	14.0
366.0	128.6	6.7	150	8.5	0.67	0.44	3779	28.40	209.59	8.4	14.1
367.0	180.0	6.9	150	8.5	0.60	0.44	3829	20.29	207.66	8.4	14.1
370.0	360.0	9.5	150	8.5	0.47	0.45	3904	10.14	201.79	8.4	14.1
373.0	276.9	8.9	150	8.5	0.53	0.46	4002	13.19	196.35	8.4	14.1
375.0	38.1	2.7	150	8.5	0.80	0.51	4475	95.91	194.46	8.4	14.1
376.0	211.8	3.5	150	8.5	0.50	0.52	4517	17.25	192.80	8.4	14.1
379.0	216.0	7.4	150	8.5	0.57	0.53	4642	16.91	188.00	8.4	14.1
380.0	288.0	8.8	150	8.5	0.52	0.54	4673	12.68	186.43	8.4	14.1
382.0	300.0	16.4	150	8.5	0.58	0.54	4733	12.17	183.34	8.4	14.1
383.0	50.0	7.6	150	8.5	0.90	0.56	4913	73.04	182.37	8.4	14.1
384.0	64.3	5.9	150	8.5	0.80	0.58	5053	56.81	181.28	8.4	14.1
385.0	64.3	5.3	150	8.5	0.79	0.59	5193	56.81	180.21	8.4	14.1
386.0	156.5	7.0	150	8.5	0.63	0.60	5251	23.33	178.87	8.4	14.1
387.0	240.0	11.4	150	8.5	0.59	0.60	5288	15.22	177.48	8.4	14.1
388.0	156.5	9.8	150	8.5	0.67	0.61	5346	23.33	176.19	8.4	14.1
390.0	150.0	9.2	150	8.5	0.68	0.62	5466	24.35	173.68	8.4	14.1
391.0	288.0	11.3	150	8.5	0.55	0.63	5497	12.68	172.36	8.4	14.1
392.0	240.0	11.3	150	8.5	0.59	0.63	5535	15.22	171.08	8.4	14.1
395.0	95.5	14.3	150	8.5	0.85	0.66	5817	38.24	167.92	8.4	14.2
396.0	232.3	12.2	150	8.5	0.61	0.67	5856	15.72	166.72	8.4	14.2
398.0	266.7	13.0	150	8.5	0.58	0.68	5924	13.70	164.34	8.4	14.2
399.0	276.9	13.5	150	8.5	0.58	0.68	5956	13.19	163.18	8.4	14.2
400.0	276.9	13.5	150	8.5	0.58	0.68	5989	13.19	162.04	8.4	14.2
402.0	81.8	12.6	150	8.5	0.87	0.71	6209	44.64	160.27	8.4	14.2
403.0	83.7	9.8	150	8.5	0.82	0.72	6316	43.62	159.40	8.4	14.2
405.0	138.5	13.8	150	8.5	0.75	0.73	6446	26.38	157.44	8.4	14.2
406.0	90.0	13.0	150	8.5	0.85	0.74	6546	40.58	156.59	8.4	14.2
407.0	21.3	14.2	150	8.5	1.23	0.79	6969	171.44	156.70	8.4	14.2
408.0	26.3	15.5	150	8.5	1.20	0.83	7311	138.98	156.57	8.4	14.2
409.0	48.6	7.5	150	8.5	0.90	0.85	7496	75.07	155.99	8.4	14.2
410.0	180.0	8.8	150	8.5	0.63	0.86	7546	20.29	155.03	8.4	14.2
411.0	128.6	8.6	150	8.5	0.70	0.86	7616	28.40	154.14	8.4	14.2
414.0	360.0	10.5	150	8.5	0.48	0.87	7691	10.14	151.16	8.4	14.2
415.0	180.0	9.8	150	8.5	0.64	0.88	7741	20.29	150.26	8.4	14.2
416.0	276.9	12.7	150	8.5	0.57	0.88	7774	13.19	149.33	8.4	14.2
417.0	200.0	12.2	150	8.5	0.64	0.89	7819	18.26	148.44	8.4	14.2
418.0	180.0	11.6	150	8.5	0.66	0.89	7869	20.29	147.58	8.4	14.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
420.0	360.0	14.4	150	8.5	0.52	0.90	7919	10.14	145.76	8.4	14.2
422.0	257.1	14.2	150	8.5	0.60	0.90	7989	14.20	144.04	8.4	14.3
425.0	93.3	8.6	150	8.5	0.77	0.94	8278	39.13	142.02	8.4	14.3
428.0	187.0	11.6	150	8.5	0.65	0.95	8422	19.53	139.71	8.4	14.3
430.0	257.1	11.8	150	8.5	0.58	0.96	8492	14.20	138.15	8.4	14.3
433.0	156.5	12.0	150	8.6	0.69	0.98	8665	23.33	136.05	8.4	14.3
435.0	225.0	14.1	150	8.6	0.63	0.99	8745	16.23	134.61	8.4	14.3
436.0	133.3	11.8	150	8.6	0.73	1.00	8812	27.39	133.97	8.4	14.3
437.0	100.0	13.0	150	8.6	0.82	1.01	8902	36.52	133.39	8.4	14.3
438.0	116.1	13.1	150	8.6	0.78	1.01	8980	31.45	132.78	8.4	14.3
440.0	126.0	13.4	150	8.6	0.76	1.03	9123	28.98	131.57	8.4	14.3
441.0	83.7	10.9	150	8.7	0.82	1.04	9230	43.62	131.06	8.4	14.3
443.0	82.8	11.0	150	8.7	0.82	1.07	9448	44.13	130.06	8.4	14.3
445.0	90.8	10.6	150	8.7	0.80	1.09	9646	40.24	129.04	8.4	14.3
447.0	124.1	11.2	150	8.7	0.73	1.10	9791	29.42	127.92	8.4	14.3
448.0	133.3	11.1	150	8.7	0.71	1.11	9858	27.39	127.36	8.4	14.3
450.0	211.8	17.8	150	8.8	0.66	1.12	9943	17.25	126.14	8.4	14.3
453.0	190.6	13.9	150	8.8	0.65	1.14	10085	19.16	124.40	8.4	14.4
455.0	300.0	18.6	150	8.8	0.58	1.14	10145	12.17	123.19	8.4	14.4
456.0	300.0	21.3	150	8.8	0.59	1.15	10175	12.17	122.60	8.4	14.4
458.0	194.6	16.9	150	8.8	0.67	1.16	10268	18.77	121.50	8.4	14.4
460.0	171.4	17.7	150	8.8	0.71	1.17	10373	21.30	120.45	8.4	14.4
461.0	156.5	13.4	150	8.8	0.69	1.18	10430	23.33	119.94	8.4	14.4
462.0	133.3	12.3	150	8.8	0.72	1.18	10498	27.39	119.46	8.4	14.4
464.0	175.6	14.2	150	8.8	0.67	1.19	10600	20.80	118.45	8.4	14.4
465.0	211.8	17.1	150	8.8	0.65	1.20	10643	17.25	117.94	8.4	14.4
467.0	110.8	14.9	150	8.8	0.80	1.22	10805	32.97	117.08	8.4	14.4
469.0	110.8	15.7	150	8.8	0.81	1.24	10968	32.97	116.24	8.4	14.4
470.0	76.6	10.9	150	8.8	0.83	1.25	11085	47.68	115.90	8.4	14.4
471.0	156.5	13.5	150	8.8	0.70	1.26	11143	23.33	115.44	8.4	14.4
472.0	150.0	17.7	150	8.8	0.75	1.26	11203	24.35	114.99	8.4	14.4
474.0	104.3	15.0	150	8.8	0.81	1.28	11375	35.00	114.21	8.4	14.4
475.0	92.3	14.5	150	8.8	0.84	1.29	11473	39.56	113.85	8.4	14.4
476.0	51.4	9.4	150	8.8	0.90	1.31	11648	71.01	113.64	8.4	14.4
477.0	78.3	15.1	150	8.8	0.88	1.32	11763	46.66	113.32	8.4	14.4
480.0	154.3	18.4	150	8.8	0.75	1.34	11938	23.67	112.04	8.4	14.5
481.0	144.0	20.8	150	8.8	0.79	1.35	12000	25.36	111.63	8.4	14.5
483.0	97.3	17.2	150	8.8	0.85	1.37	12185	37.53	110.94	8.4	14.5
484.0	65.5	13.2	150	8.8	0.90	1.39	12323	55.79	110.68	8.4	14.5
485.0	55.4	11.9	150	8.8	0.92	1.40	12485	65.94	110.48	8.4	14.5
486.0	72.0	15.0	150	8.8	0.90	1.42	12610	50.72	110.20	8.4	14.5
487.0	78.3	15.5	150	8.8	0.89	1.43	12725	46.66	109.91	8.4	14.5
488.0	58.1	15.2	150	8.8	0.96	1.45	12880	62.90	109.70	8.4	14.5
489.0	73.5	15.2	150	8.8	0.90	1.46	13003	49.71	109.42	8.4	14.5
490.0	49.3	15.0	150	8.8	1.00	1.48	13185	74.05	109.26	8.4	14.5
491.0	60.0	13.4	150	8.8	0.93	1.50	13335	60.87	109.04	8.4	14.5
492.0	66.7	15.4	150	8.8	0.93	1.51	13470	54.78	108.80	8.4	14.5
493.0	72.0	18.0	150	8.8	0.94	1.53	13595	50.72	108.54	8.4	14.5
494.0	15.9	10.6	150	8.8	1.19	1.59	14160	229.26	109.08	8.4	14.5
495.0	37.5	10.8	150	8.9	0.98	1.62	14400	97.39	109.03	8.4	14.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
497.0	41.4	12.5	150	8.9	0.99	1.67	14835	88.26	108.84	8.4	14.5
499.0	30.8	11.0	150	8.9	1.03	1.73	15420	118.69	108.93	8.4	14.5
500.0	32.7	10.9	150	8.9	1.02	1.76	15695	111.59	108.94	8.4	14.5
501.0	12.2	8.9	150	8.9	1.19	1.84	16433	299.26	109.76	8.4	14.5
503.0	34.8	10.3	150	8.9	0.99	1.90	16950	105.00	109.72	8.4	14.5
505.0	28.8	9.1	150	8.9	1.01	1.97	17575	126.81	109.87	8.4	14.5
506.0	42.4	13.2	150	8.9	1.00	1.99	17788	86.23	109.77	8.4	14.5
507.0	40.0	8.7	150	8.9	0.93	2.02	18013	91.30	109.69	8.4	14.5
510.0	63.5	8.2	150	8.9	0.82	2.07	18438	57.49	109.04	8.4	14.6
511.0	135.0	7.7	150	8.9	0.64	2.07	18504	27.05	108.70	8.4	14.6
513.0	56.2	12.9	150	8.9	0.92	2.11	18824	64.92	108.34	8.4	14.6
514.0	42.4	13.5	150	8.9	1.00	2.13	19037	86.23	108.25	8.4	14.6
515.0	46.2	12.4	150	8.9	0.96	2.15	19232	79.13	108.13	8.4	14.6
516.0	23.2	10.5	150	8.9	1.09	2.20	19619	157.24	108.33	8.4	14.6
517.0	40.4	11.4	150	8.9	0.98	2.22	19842	90.29	108.26	8.4	14.6
518.0	78.3	15.9	150	8.9	0.88	2.23	19957	46.66	108.01	8.4	14.6
520.0	124.1	24.0	150	8.9	0.85	2.25	20102	29.42	107.39	8.4	14.6
522.0	141.2	28.9	150	8.9	0.85	2.26	20229	25.87	106.74	8.4	14.6
523.0	225.0	27.0	150	8.9	0.70	2.27	20269	16.23	106.38	8.4	14.6
525.0	144.0	29.8	150	8.9	0.85	2.28	20394	25.36	105.75	8.4	14.6
526.0	163.6	30.9	150	8.9	0.82	2.29	20449	22.32	105.43	8.4	14.6
527.0	225.0	36.0	150	8.9	0.76	2.29	20489	16.23	105.08	8.4	14.6
528.0	124.1	33.3	150	8.9	0.92	2.30	20562	29.42	104.79	8.4	14.6
529.0	29.3	11.3	150	8.9	1.05	2.34	20869	124.78	104.87	8.4	14.6
530.0	92.3	11.2	150	8.9	0.78	2.35	20967	39.56	104.62	8.4	14.6
532.0	47.4	9.8	150	8.9	0.91	2.39	21347	77.10	104.41	8.4	14.6
533.0	36.7	10.6	150	8.9	0.98	2.42	21592	99.42	104.39	8.4	14.6
534.0	69.2	17.5	150	8.9	0.93	2.43	21722	52.75	104.19	8.4	14.6
535.0	51.4	17.1	150	8.9	1.00	2.45	21897	71.01	104.07	8.4	14.6
537.0	180.0	3.1	150	8.9	0.50	2.46	21997	20.29	103.44	8.4	14.6
538.0	53.7	12.9	150	8.9	0.94	2.48	22164	67.97	103.31	8.4	14.6
539.0	66.7	15.0	150	8.9	0.91	2.49	22299	54.78	103.13	8.4	14.6
540.0	56.2	15.1	150	8.9	0.96	2.51	22459	64.92	102.99	8.4	14.7
541.0	65.5	15.1	150	8.9	0.92	2.53	22597	55.79	102.82	8.4	14.7
542.0	48.0	15.4	150	8.9	1.00	2.55	22784	76.08	102.72	8.4	14.7
543.0	70.6	15.9	150	8.9	0.91	2.56	22912	51.74	102.53	8.4	14.7
545.0	32.7	15.9	150	8.9	1.10	2.62	23462	111.59	102.60	8.4	14.7
546.0	47.4	16.3	150	8.9	1.01	2.65	23652	77.10	102.51	8.4	14.7
548.0	61.0	16.2	150	8.9	0.95	2.68	23947	59.85	102.20	8.4	14.7
549.0	109.1	20.6	150	8.9	0.85	2.69	24029	33.48	101.95	8.4	14.7
550.0	92.3	21.3	150	8.9	0.90	2.70	24127	39.56	101.73	8.4	14.7
552.0	81.8	20.6	150	8.9	0.93	2.72	24347	44.64	101.33	8.4	14.7
553.0	72.0	20.0	150	9.0	0.94	2.74	24472	50.72	101.15	8.4	14.7
554.0	70.6	21.3	150	9.0	0.96	2.75	24599	51.74	100.98	8.4	14.7
555.0	94.7	21.5	150	9.0	0.89	2.76	24694	38.55	100.76	8.4	14.7
556.0	83.7	21.1	150	9.0	0.92	2.77	24802	43.62	100.56	8.4	14.7
557.0	62.1	17.5	150	9.0	0.95	2.79	24947	58.84	100.42	8.4	14.7
558.0	46.2	21.4	150	9.0	1.08	2.81	25142	79.13	100.34	8.4	14.7
559.0	56.2	19.8	150	9.0	1.00	2.83	25302	64.92	100.22	8.4	14.7
560.0	65.5	21.2	150	9.0	0.98	2.84	25439	55.79	100.07	8.4	14.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
561.0	120.0	22.1	150	9.0	0.83	2.85	25514	30.43	99.83	8.4	14.7
562.0	180.0	21.2	150	9.0	0.72	2.86	25564	20.29	99.56	8.4	14.7
563.0	109.1	22.2	150	9.0	0.86	2.87	25647	33.48	99.33	8.4	14.7
565.0	104.3	21.6	150	9.0	0.86	2.89	25819	35.00	98.90	8.4	14.7
567.0	104.3	22.8	150	9.0	0.87	2.91	25992	35.00	98.47	8.4	14.7
568.0	61.0	22.6	150	9.0	1.01	2.92	26139	59.85	98.34	8.4	14.7
569.0	76.6	23.9	150	9.0	0.97	2.93	26257	47.68	98.17	8.4	14.7
570.0	78.3	23.4	150	9.0	0.96	2.95	26372	46.66	98.00	8.4	14.7
571.0	92.3	25.8	150	9.0	0.93	2.96	26469	39.56	97.81	8.4	14.8
572.0	62.1	25.9	150	9.0	1.04	2.97	26614	58.84	97.68	8.4	14.8
573.0	81.8	25.3	150	9.0	0.96	2.99	26724	44.64	97.50	8.4	14.8
574.0	58.1	24.6	150	9.0	1.05	3.00	26879	62.90	97.39	8.4	14.8
575.0	87.8	27.0	150	9.0	0.96	3.02	26982	41.59	97.21	8.4	14.8
576.0	42.4	24.3	150	9.0	1.13	3.04	27194	86.23	97.17	8.4	14.8
577.0	67.9	25.9	150	9.0	1.02	3.05	27327	53.77	97.03	8.4	14.8
579.0	72.7	24.6	150	9.0	0.99	3.08	27574	50.22	96.73	8.4	14.8
580.0	94.7	25.0	150	9.0	0.92	3.09	27669	38.55	96.54	8.4	14.8
581.0	61.0	25.1	150	9.0	1.04	3.11	27817	59.85	96.42	8.4	14.8
583.0	74.2	25.3	150	9.0	0.99	3.13	28059	49.20	96.12	8.4	14.8
584.0	73.5	25.3	150	9.0	0.99	3.15	28182	49.71	95.98	8.4	14.8
585.0	48.0	20.9	150	9.0	1.06	3.17	28369	76.08	95.91	8.4	14.8
586.0	62.1	20.0	150	9.0	0.98	3.19	28514	58.84	95.80	8.4	14.8
587.0	48.0	21.1	150	9.0	1.06	3.21	28702	76.08	95.73	8.4	14.8
588.0	67.9	21.1	150	9.0	0.97	3.22	28834	53.77	95.60	8.4	14.8
589.0	49.3	21.8	150	9.0	1.06	3.24	29017	74.05	95.53	8.4	14.8
590.0	69.2	20.9	150	9.0	0.96	3.26	29147	52.75	95.40	8.4	14.8
591.0	49.3	21.3	150	9.0	1.06	3.28	29329	74.05	95.34	8.4	14.8
592.0	50.7	21.7	150	9.0	1.05	3.30	29507	72.03	95.26	8.4	14.8
593.0	60.0	21.4	150	9.0	1.01	3.31	29657	60.87	95.16	8.4	14.8
594.0	60.0	20.4	150	9.0	1.00	3.33	29807	60.87	95.05	8.4	14.8
595.0	54.5	20.2	150	9.0	1.02	3.35	29972	66.95	94.97	8.4	14.8
596.0	54.5	15.9	150	9.0	0.96	3.37	30137	66.95	94.88	8.4	14.8
597.0	54.5	18.1	150	9.0	0.99	3.38	30302	66.95	94.79	8.4	14.8
598.0	72.0	17.4	150	9.0	0.91	3.40	30427	50.72	94.66	8.4	14.8
599.0	43.4	17.0	150	9.0	1.03	3.42	30634	84.20	94.63	8.4	14.8
600.0	63.2	17.6	150	9.0	0.95	3.44	30777	57.82	94.52	8.4	14.8
602.0	52.2	18.0	150	9.0	1.00	3.48	31122	70.00	94.37	8.4	14.8
603.0	64.3	18.3	150	9.0	0.95	3.49	31262	56.81	94.26	8.4	14.9
605.0	117.0	21.0	150	9.0	0.83	3.51	31416	31.21	93.88	8.4	14.9
606.0	80.9	21.3	150	9.0	0.93	3.52	31527	45.14	93.74	8.4	14.9
607.0	100.0	23.7	150	9.0	0.89	3.53	31617	36.52	93.57	8.4	14.9
608.0	76.6	26.8	150	9.0	1.00	3.54	31734	47.68	93.43	8.4	14.9
610.0	102.9	27.5	150	9.0	0.92	3.56	31909	35.51	93.09	8.4	14.9
611.0	73.5	26.9	150	9.0	1.01	3.58	32032	49.71	92.97	8.4	14.9
612.0	61.0	26.2	150	9.0	1.05	3.59	32179	59.85	92.87	8.4	14.9
613.0	81.8	27.4	150	9.0	0.98	3.60	32289	44.64	92.73	8.4	14.9
615.0	41.4	18.7	150	9.0	1.07	3.65	32724	88.26	92.70	8.4	14.9
616.0	76.6	25.4	150	9.0	0.98	3.67	32842	47.68	92.57	8.4	14.9
617.0	54.5	25.8	150	9.0	1.08	3.68	33007	66.95	92.50	8.4	14.9
618.0	87.8	29.4	150	9.0	0.98	3.70	33109	41.59	92.35	8.4	14.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
619.0	64.3	29.1	150	9.0	1.07	3.71	33249	56.81	92.25	8.4	14.9
620.0	81.8	29.2	150	9.0	1.00	3.72	33359	44.64	92.12	8.4	14.9
621.0	59.0	29.3	150	9.0	1.09	3.74	33512	61.88	92.03	8.4	14.9
622.0	87.8	29.3	150	9.0	0.98	3.75	33614	41.59	91.89	8.4	14.9
623.0	60.0	28.4	150	9.0	1.08	3.77	33764	60.87	91.80	8.4	14.9
624.0	48.6	26.7	150	9.0	1.12	3.79	33949	75.07	91.75	8.4	14.9
625.0	76.6	29.1	150	9.0	1.02	3.80	34067	47.68	91.63	8.4	14.9
626.0	69.2	28.1	150	9.0	1.04	3.82	34197	52.75	91.52	8.4	14.9
627.0	83.7	26.3	150	9.0	0.97	3.83	34304	43.62	91.39	8.4	14.9
628.0	73.5	27.1	150	9.0	1.01	3.84	34427	49.71	91.27	8.4	14.9
629.0	120.0	25.3	150	9.0	0.86	3.85	34502	30.43	91.10	8.4	14.9
630.0	100.0	28.0	150	9.0	0.93	3.86	34592	36.52	90.95	8.4	14.9
631.0	66.7	27.7	150	9.0	1.04	3.88	34727	54.78	90.85	8.4	14.9
632.0	80.0	26.9	150	9.0	0.98	3.89	34839	45.65	90.73	8.4	14.9
633.0	31.0	24.6	150	9.0	1.22	3.92	35129	117.68	90.80	8.4	14.9
634.0	128.6	22.9	150	9.0	0.82	3.93	35199	28.40	90.63	8.4	14.9
635.0	21.6	25.8	150	9.0	1.33	3.97	35615	168.83	90.84	8.4	15.0
637.0	94.7	26.2	150	9.0	0.93	4.00	35805	39.55	90.56	8.4	15.0
638.0	109.1	24.6	150	9.0	0.88	4.00	35888	33.48	90.40	8.4	15.0
639.0	24.7	25.3	150	9.0	1.29	4.05	36253	148.11	90.56	8.4	15.0
640.0	39.6	24.4	150	9.0	1.15	4.07	36480	92.31	90.57	8.4	15.0
642.0	49.0	25.5	150	9.0	1.10	4.11	36848	74.56	90.48	8.4	15.0
643.0	48.6	25.3	150	9.0	1.10	4.13	37033	75.07	90.44	8.4	15.0
644.0	56.2	20.1	150	9.0	1.01	4.15	37193	64.92	90.37	8.4	15.0
645.0	67.9	23.5	150	9.0	1.00	4.16	37325	53.77	90.27	8.4	15.0
647.0	45.3	21.9	150	9.0	1.09	4.21	37723	80.65	90.22	8.4	15.0
648.0	45.6	22.4	150	9.0	1.09	4.23	37920	80.14	90.20	8.4	15.0
649.0	16.9	22.4	150	9.0	1.35	4.29	38453	216.08	90.53	8.4	15.0
650.0	16.0	24.7	150	9.0	1.40	4.35	39015	228.25	90.89	8.4	15.0
651.0	9.8	31.6	150	9.0	1.63	4.45	39935	373.32	91.63	8.4	15.0
652.0	59.0	27.5	150	9.1	1.06	4.47	40088	61.88	91.55	8.4	15.0
653.0	16.7	24.2	150	9.1	1.37	4.53	40628	219.12	91.88	8.4	15.0
654.0	14.6	16.0	150	9.1	1.28	4.60	41243	249.55	92.29	8.4	15.0
655.0	18.5	19.6	150	9.1	1.28	4.65	41730	197.82	92.57	8.4	15.0
656.0	48.6	19.0	150	9.1	1.02	4.67	41915	75.07	92.52	8.4	15.0
657.0	76.6	19.4	150	9.2	0.90	4.69	42033	47.68	92.40	8.4	15.0
658.0	59.0	17.5	150	9.2	0.94	4.70	42185	61.88	92.33	8.4	15.0
659.0	41.4	18.3	150	9.2	1.04	4.73	42403	88.26	92.32	8.4	15.0
660.0	23.5	17.2	150	9.2	1.17	4.77	42785	155.21	92.48	8.4	15.0
661.0	27.5	17.5	150	9.2	1.13	4.81	43113	132.89	92.58	8.4	15.0
662.0	34.0	15.4	150	9.2	1.05	4.84	43378	107.53	92.62	8.4	15.0
663.0	27.7	16.8	150	9.3	1.11	4.87	43703	131.88	92.72	8.4	15.0
664.0	81.8	20.5	150	9.3	0.89	4.89	43813	44.64	92.60	8.4	15.0
665.0	30.8	20.4	150	9.3	1.13	4.92	44105	118.69	92.66	8.4	15.0
666.0	80.0	19.6	150	9.3	0.88	4.93	44218	45.65	92.54	8.4	15.0
667.0	21.8	20.7	150	9.3	1.22	4.98	44630	167.38	92.73	8.4	15.0
668.0	72.0	17.8	150	9.3	0.89	4.99	44755	50.72	92.63	8.4	15.1
669.0	34.6	17.9	150	9.3	1.07	5.02	45015	105.50	92.66	8.4	15.1
670.0	26.5	19.9	150	9.3	1.16	5.06	45355	137.96	92.77	8.4	15.1
672.0	52.6	19.4	150	9.3	0.98	5.09	45698	69.49	92.66	8.4	15.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
673.0	29.8	17.0	150	9.3	1.09	5.13	46000	122.75	92.73	8.4	15.1
674.0	31.0	19.0	150	9.3	1.11	5.16	46290	117.68	92.79	8.4	15.1
675.0	45.0	18.2	150	9.3	1.01	5.18	46490	81.16	92.76	8.4	15.1
676.0	55.4	17.0	150	9.3	0.94	5.20	46653	65.94	92.70	8.4	15.1
678.0	32.4	17.5	150	9.3	1.08	5.26	47208	112.60	92.79	8.4	15.1
679.0	21.8	17.8	150	9.3	1.18	5.31	47620	167.38	92.98	8.4	15.1
680.0	47.4	17.8	150	9.3	0.99	5.33	47810	77.10	92.94	8.4	15.1
681.0	31.6	17.5	150	9.3	1.09	5.36	48095	115.65	92.99	8.4	15.1
682.0	19.4	18.2	150	9.3	1.21	5.41	48560	188.69	93.22	8.4	15.1
683.0	50.0	16.9	150	9.3	0.97	5.43	48740	73.04	93.18	8.4	15.1
684.0	22.2	17.8	150	9.3	1.17	5.48	49145	164.34	93.35	8.4	15.1
685.0	31.3	18.2	150	9.3	1.10	5.51	49433	116.66	93.40	8.4	15.1
686.0	32.4	18.0	150	9.3	1.09	5.54	49710	112.60	93.45	8.4	15.1
687.0	43.9	17.9	150	9.3	1.01	5.56	49915	83.18	93.42	8.4	15.1
688.0	25.2	18.4	150	9.3	1.15	5.60	50273	145.07	93.55	8.4	15.1
689.0	52.2	18.1	150	9.3	0.97	5.62	50445	70.00	93.49	8.4	15.1
690.0	18.6	18.6	150	9.3	1.23	5.68	50930	196.80	93.74	8.4	15.1
692.0	15.7	18.9	150	9.3	1.28	5.80	52078	232.82	94.39	8.4	15.1
693.0	28.8	19.8	150	9.3	1.14	5.84	52390	126.81	94.47	8.4	15.1
694.0	59.0	18.8	150	9.3	0.95	5.86	52543	61.88	94.39	8.4	15.1
695.0	20.6	19.6	150	9.3	1.22	5.90	52980	177.53	94.59	8.4	15.1
696.0	37.9	18.8	150	9.3	1.06	5.93	53218	96.37	94.59	8.4	15.1
697.0	26.9	19.0	150	9.3	1.15	5.97	53553	135.94	94.69	8.4	15.1
698.0	53.7	18.7	150	9.3	0.97	5.99	53720	67.97	94.63	8.4	15.1
699.0	23.4	18.8	150	9.3	1.18	6.03	54105	156.22	94.77	8.4	15.1
700.0	34.6	18.9	150	9.3	1.08	6.06	54365	105.50	94.80	8.4	15.1
701.0	50.0	17.6	150	9.3	0.98	6.08	54545	73.04	94.75	8.4	15.2
702.0	19.1	20.8	150	9.3	1.26	6.13	55015	190.72	94.97	8.4	15.2
703.0	35.6	20.2	150	9.3	1.09	6.16	55268	102.46	94.98	8.4	15.2
704.0	46.8	19.6	150	9.3	1.02	6.18	55460	78.11	94.95	8.4	15.2
705.0	25.0	22.9	150	9.3	1.22	6.22	55820	146.08	95.06	8.4	15.2
706.0	28.3	22.0	150	9.3	1.17	6.25	56138	128.83	95.14	8.4	15.2
708.0	36.4	24.6	150	9.3	1.14	6.31	56633	100.43	95.16	8.4	15.2
709.0	29.0	25.2	150	9.3	1.20	6.34	56943	125.79	95.23	8.4	15.2
710.0	31.9	25.5	150	9.3	1.18	6.38	57225	114.63	95.28	8.4	15.2
711.0	41.4	23.5	150	9.3	1.09	6.40	57443	88.26	95.26	8.4	15.2
712.0	40.9	19.1	150	9.3	1.04	6.42	57663	89.27	95.25	8.4	15.2
713.0	36.7	19.2	150	9.3	1.07	6.45	57908	99.42	95.26	8.4	15.2
714.0	35.0	19.4	150	9.3	1.09	6.48	58165	104.49	95.28	8.4	15.2
715.0	40.9	19.2	150	9.3	1.04	6.50	58385	89.27	95.27	8.4	15.2
716.0	41.4	18.6	150	9.3	1.03	6.53	58603	88.26	95.25	8.4	15.2
718.0	28.2	19.8	150	9.3	1.14	6.60	59240	129.34	95.40	8.4	15.2
720.0	20.6	21.8	150	9.3	1.25	6.70	60115	177.53	95.77	8.4	15.2
721.0	18.9	17.6	150	9.3	1.21	6.75	60590	192.74	95.98	8.4	15.2
722.0	38.3	20.7	150	9.3	1.08	6.78	60825	95.36	95.98	8.4	15.2
723.0	34.0	21.4	150	9.3	1.12	6.80	61090	107.53	96.00	8.4	15.2
724.0	39.1	21.5	150	9.3	1.08	6.83	61320	93.33	96.00	8.4	15.2
725.0	48.0	21.1	150	9.3	1.03	6.85	61508	76.08	95.95	8.4	15.2
726.0	55.4	21.2	150	9.3	0.99	6.87	61670	65.94	95.89	8.4	15.2
727.0	24.8	21.4	150	9.3	1.20	6.91	62033	147.09	96.00	8.4	15.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
728.0	40.9	22.3	150	9.3	1.08	6.93	62253	89.27	95.99	8.4	15.2
729.0	20.8	22.1	150	9.3	1.25	6.98	62685	175.50	96.16	8.4	15.2
730.0	48.0	22.2	150	9.3	1.04	7.00	62873	76.08	96.12	8.4	15.2
731.0	28.8	23.0	150	9.3	1.18	7.04	63185	126.81	96.18	8.4	15.2
732.0	37.1	23.1	150	9.3	1.12	7.06	63428	98.40	96.19	8.4	15.2
733.0	37.1	23.1	150	9.3	1.12	7.09	63670	98.40	96.19	8.4	15.2
734.0	32.4	22.8	150	9.3	1.15	7.12	63948	112.60	96.23	8.4	15.2
735.0	38.7	22.9	150	9.3	1.10	7.15	64180	94.34	96.22	8.4	15.2
736.0	32.4	22.6	150	9.3	1.14	7.18	64458	112.60	96.26	8.4	15.3
737.0	39.6	22.7	150	9.3	1.09	7.20	64685	92.31	96.25	8.4	15.3
738.0	34.0	22.6	150	9.3	1.13	7.23	64950	107.53	96.27	8.4	15.3
739.0	28.8	23.1	150	9.2	1.20	7.27	65263	126.81	96.34	8.4	15.3
740.0	45.6	23.0	150	9.2	1.07	7.29	65460	80.14	96.30	8.4	15.3
742.0	39.1	23.1	150	9.2	1.11	7.34	65920	93.33	96.29	8.4	15.3
743.0	32.7	23.1	150	9.2	1.16	7.37	66195	111.59	96.32	8.4	15.3
744.0	48.0	23.0	150	9.2	1.06	7.39	66383	76.08	96.28	8.4	15.3
745.0	28.6	23.2	150	9.2	1.20	7.43	66698	127.82	96.35	8.4	15.3
746.0	54.5	23.2	150	9.2	1.03	7.45	66863	66.95	96.29	8.4	15.3
748.0	33.6	23.2	150	9.1	1.16	7.51	67398	108.55	96.34	8.4	15.3
749.0	18.0	23.8	150	9.1	1.34	7.56	67898	202.89	96.56	8.4	15.3
750.0	43.4	24.3	150	9.1	1.11	7.58	68105	84.20	96.53	8.4	15.3
751.0	36.4	24.2	150	9.1	1.16	7.61	68353	100.43	96.54	8.4	15.3
753.0	32.9	24.3	150	9.1	1.19	7.67	68900	111.08	96.60	8.4	15.3
754.0	30.8	24.3	150	9.1	1.21	7.71	69193	118.69	96.65	8.4	15.3
755.0	47.4	26.0	150	9.1	1.11	7.73	69383	77.10	96.61	8.4	15.3
756.0	40.4	26.7	150	9.1	1.16	7.75	69605	90.29	96.59	8.4	15.3
757.0	51.4	26.9	150	9.1	1.09	7.77	69780	71.01	96.54	8.4	15.3
760.0	53.5	24.0	150	9.1	1.05	7.83	70285	68.31	96.37	8.4	15.3
762.0	49.0	24.4	150	9.1	1.08	7.87	70653	74.56	96.28	8.4	15.3
764.0	65.5	25.1	150	9.1	1.01	7.90	70928	55.79	96.12	8.4	15.3
765.0	30.5	26.8	150	9.1	1.24	7.93	71223	119.70	96.16	8.4	15.3
766.0	63.2	27.0	150	9.1	1.04	7.95	71365	57.82	96.09	8.4	15.3
768.0	28.9	28.3	150	9.1	1.27	8.02	71988	126.30	96.21	8.4	15.3
769.0	31.9	22.4	150	9.1	1.17	8.05	72270	114.63	96.25	8.4	15.3
770.0	50.7	22.6	150	9.1	1.05	8.07	72448	72.03	96.20	8.4	15.3
771.0	59.0	22.7	150	9.1	1.01	8.08	72600	61.88	96.13	8.4	15.4
772.0	43.9	22.8	150	9.1	1.09	8.11	72805	83.18	96.10	8.4	15.4
773.0	52.2	23.1	150	9.1	1.05	8.13	72978	70.00	96.05	8.4	15.4
774.0	63.2	23.1	150	9.1	1.00	8.14	73120	57.82	95.98	8.4	15.4
775.0	41.9	23.4	150	9.1	1.11	8.17	73335	87.24	95.96	8.4	15.4
776.0	63.2	23.4	150	9.1	1.00	8.18	73478	57.82	95.88	8.4	15.4
777.0	37.1	23.7	150	9.1	1.15	8.21	73720	98.40	95.89	8.4	15.4
778.0	19.8	23.1	150	9.1	1.31	8.26	74175	184.63	96.06	8.4	15.4
779.0	52.9	25.1	150	9.1	1.07	8.28	74345	68.98	96.01	8.4	15.4
780.0	41.9	26.7	150	9.1	1.15	8.30	74560	87.24	95.99	8.4	15.4
781.0	52.9	26.1	150	9.1	1.08	8.32	74730	68.98	95.94	8.4	15.4
782.0	38.7	26.5	150	9.1	1.17	8.35	74963	94.34	95.94	8.4	15.4
784.0	43.6	26.1	150	9.1	1.13	8.39	75375	83.69	95.89	8.4	15.4
785.0	50.0	26.1	150	9.1	1.09	8.41	75555	73.04	95.84	8.4	15.4
786.0	33.3	27.2	150	9.1	1.22	8.44	75825	109.56	95.87	8.4	15.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
787.0	48.0	25.2	150	9.1	1.10	8.46	76013	76.08	95.83	8.4	15.4
788.0	23.5	20.7	150	9.1	1.23	8.51	76395	155.21	95.95	8.4	15.4
789.0	51.4	22.4	150	9.1	1.05	8.52	76570	71.01	95.90	8.4	15.4
790.0	38.7	22.4	150	9.1	1.12	8.55	76803	94.34	95.90	8.4	15.4
791.0	42.4	22.1	150	9.1	1.09	8.57	77015	86.23	95.88	8.4	15.4
792.0	40.4	21.9	150	9.1	1.10	8.60	77238	90.29	95.87	8.4	15.4
793.0	36.0	22.2	150	9.1	1.14	8.63	77488	101.44	95.88	8.4	15.4
794.0	35.3	22.5	150	9.1	1.15	8.66	77743	103.47	95.89	8.4	15.4
795.0	41.9	22.5	150	9.1	1.10	8.68	77958	87.24	95.88	8.4	15.4
796.0	33.6	22.4	150	9.1	1.16	8.71	78225	108.55	95.90	8.4	15.4
797.0	30.8	20.9	150	9.1	1.16	8.74	78518	118.69	95.94	8.4	15.4
798.0	27.1	22.4	150	9.1	1.22	8.78	78850	134.92	96.02	8.4	15.4
799.0	41.4	23.3	150	9.1	1.11	8.80	79068	88.26	96.00	8.4	15.4
800.0	49.3	22.9	150	9.1	1.06	8.82	79250	74.05	95.96	8.4	15.4
801.0	27.5	23.1	150	9.1	1.22	8.86	79578	132.89	96.03	8.4	15.4
802.0	40.0	23.4	150	9.1	1.12	8.88	79803	91.30	96.02	8.4	15.4
803.0	23.1	24.0	150	9.1	1.28	8.93	80193	158.25	96.14	8.4	15.4
804.0	46.2	23.7	150	9.1	1.09	8.95	80388	79.13	96.11	8.4	15.4
805.0	28.6	23.4	150	9.1	1.21	8.98	80703	127.82	96.16	8.4	15.4
806.0	41.9	23.6	150	9.1	1.11	9.01	80918	87.24	96.15	8.4	15.4
807.0	24.2	25.8	150	9.1	1.29	9.05	81290	151.15	96.25	8.4	15.5
808.0	18.6	25.4	150	9.1	1.36	9.10	81775	196.80	96.44	8.4	15.5
809.0	17.4	25.5	150	9.1	1.37	9.16	82293	209.99	96.65	8.4	15.5
810.0	33.0	26.0	150	9.1	1.21	9.19	82565	110.57	96.67	8.4	15.5
812.0	32.4	27.0	150	9.1	1.22	9.25	83120	112.60	96.73	8.4	15.5
813.0	29.3	26.6	150	9.1	1.25	9.29	83428	124.78	96.78	8.4	15.5
814.0	66.7	26.9	150	9.1	1.02	9.30	83563	54.78	96.71	8.4	15.5
815.0	24.5	27.2	150	9.1	1.30	9.34	83930	149.12	96.80	8.4	15.5
816.0	17.2	27.4	150	9.1	1.40	9.40	84453	212.02	97.01	8.4	15.5
817.0	60.0	29.0	150	9.1	1.07	9.42	84603	60.87	96.95	8.4	15.5
819.0	67.5	27.8	150	9.1	1.03	9.45	84870	54.10	96.79	8.4	15.5
820.0	47.4	27.9	150	9.1	1.13	9.47	85060	77.10	96.76	8.4	15.5
822.0	33.5	27.5	150	9.1	1.22	9.53	85597	109.05	96.80	8.4	15.5
823.0	24.7	27.4	150	9.1	1.30	9.57	85962	148.11	96.89	8.4	15.5
824.0	40.9	27.4	150	9.1	1.16	9.59	86182	89.27	96.88	8.4	15.5
825.0	27.9	27.4	150	9.1	1.27	9.63	86505	130.86	96.94	8.4	15.5
826.0	36.4	27.4	150	9.1	1.19	9.66	86752	100.43	96.95	8.4	15.5
828.0	40.9	28.5	150	9.1	1.17	9.71	87192	89.27	96.92	8.4	15.5
830.0	30.0	28.4	150	9.1	1.26	9.77	87792	121.73	97.01	8.4	15.5
832.0	28.3	28.5	150	9.1	1.28	9.84	88427	128.83	97.12	8.4	15.5
833.0	24.8	28.5	150	9.1	1.31	9.88	88790	147.09	97.21	8.4	15.5
834.0	29.8	28.5	150	9.1	1.26	9.92	89092	122.75	97.25	8.4	15.5
835.0	20.8	28.9	150	9.1	1.37	9.96	89525	175.50	97.39	8.4	15.5
836.0	32.7	28.8	150	9.1	1.24	9.99	89800	111.59	97.42	8.4	15.5
837.0	20.3	29.2	150	9.1	1.38	10.04	90242	179.56	97.56	8.4	15.5
839.0	28.7	28.0	150	9.1	1.27	10.11	90870	127.31	97.67	8.4	15.5
840.0	25.5	29.0	150	9.1	1.31	10.15	91222	143.04	97.75	8.4	15.5
843.0	33.8	28.8	153	9.1	1.24	10.24	92037	108.21	97.80	8.4	15.5
845.0	25.7	29.2	160	9.1	1.33	10.32	92783	142.02	97.95	8.4	15.6
847.0	32.0	28.8	160	9.1	1.26	10.38	93383	114.13	98.01	8.4	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
848.0	25.5	29.3	160	9.1	1.33	10.42	93760	143.22	98.09	8.4	15.6
850.0	29.0	29.2	160	9.1	1.30	10.49	94421	125.79	98.18	8.4	15.6
855.0	26.0	28.8	160	9.1	1.32	10.68	96266	140.33	98.54	8.4	15.6

BIT NUMBER	2	IADC CODE	116	INTERVAL	855.0- 1547.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.3	BIT RUN	692.0
TOTAL HOURS	22.72	TOTAL TURNS	202314	CONDITION	T2 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
856.0	42.9	23.6	131	9.3	1.15	0.02	183	85	22135	8.4	15.6
859.0	29.5	23.5	129	9.3	1.25	0.13	970	124	5627	8.4	15.6
860.0	40.9	26.5	133	9.3	1.20	0.15	1166	89	4519	8.4	15.6
861.0	61.0	26.3	134	9.3	1.08	0.17	1297	60	3776	8.4	15.6
865.0	48.4	21.6	140	9.3	1.11	0.25	1992	76	2996	8.4	15.6
866.0	43.9	21.9	141	9.3	1.14	0.27	2185	83	2095	8.4	15.6
867.0	16.6	17.9	140	9.3	1.34	0.33	2689	220	1938	8.4	15.6
868.0	34.0	19.6	150	9.3	1.19	0.36	2954	108	1798	8.4	15.6
870.0	22.0	19.1	150	9.3	1.30	0.45	3774	166	1580	8.4	15.6
872.0	24.0	25.1	150	9.3	1.38	0.54	4524	152	1412	8.4	15.6
873.0	16.5	25.3	150	9.3	1.49	0.60	5069	221	1346	8.4	15.6
874.0	26.1	27.7	150	9.3	1.39	0.63	5414	140	1282	8.4	15.6
875.0	35.3	29.8	150	9.3	1.32	0.66	5669	103	1223	8.4	15.6
876.0	51.4	30.3	150	9.3	1.22	0.68	5844	71	1169	8.4	15.6
877.0	41.9	28.8	150	9.3	1.24	0.71	6059	87	1119	8.4	15.6
878.0	33.0	29.2	150	9.3	1.34	0.74	6332	111	1076	8.4	15.6
879.0	33.6	30.3	150	9.3	1.35	0.77	6599	109	1035	8.4	15.6
880.0	30.5	28.9	150	9.3	1.36	0.80	6894	119.70	998.68	8.4	15.6
881.0	40.0	25.0	150	9.3	1.23	0.82	7119	91.30	963.78	8.4	15.7
882.0	42.4	24.4	150	9.3	1.20	0.85	7332	86.23	931.28	8.4	15.7
883.0	27.7	26.1	150	9.3	1.35	0.88	7657	131.88	902.73	8.4	15.7
884.0	20.2	22.4	150	9.3	1.38	0.93	8102	180.57	877.82	8.4	15.7
886.0	18.9	20.5	150	9.3	1.37	1.04	9054	193.25	833.66	8.4	15.7
887.0	24.3	21.2	150	9.3	1.31	1.08	9424	150.14	812.30	8.4	15.7
888.0	18.2	22.5	150	9.3	1.41	1.13	9919	200.86	793.77	8.4	15.7
889.0	40.4	23.5	150	9.3	1.20	1.16	10142	90.29	773.08	8.4	15.7
890.0	19.3	23.9	150	9.3	1.42	1.21	10609	189.70	756.41	8.4	15.7
892.0	28.2	24.2	150	9.3	1.32	1.28	11247	129.34	722.52	8.4	15.7
893.0	24.2	26.0	150	9.3	1.39	1.32	11619	151.15	707.48	8.4	15.7
894.0	33.6	27.1	150	9.3	1.30	1.35	11887	108.55	692.12	8.4	15.7
895.0	35.3	28.6	150	9.3	1.31	1.38	12142	103.47	677.41	8.4	15.7
896.0	75.0	27.3	150	9.3	1.07	1.40	12262	48.69	662.07	8.4	15.7
897.0	37.1	27.0	150	9.3	1.27	1.42	12504	98.40	648.65	8.4	15.7
898.0	42.4	27.3	150	9.3	1.24	1.45	12717	86.23	635.57	8.4	15.7
899.0	36.7	27.5	150	9.3	1.28	1.47	12962	99.42	623.39	8.4	15.7
900.0	47.4	27.7	150	9.3	1.21	1.49	13152	77.10	611.25	8.4	15.7
901.0	31.0	27.8	150	9.3	1.34	1.53	13442	117.68	600.52	8.4	15.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
902.0	24.2	25.0	150	9.3	1.37	1.57	13814	151.15	590.96	8.4	15.7
903.0	45.6	26.8	150	9.3	1.21	1.59	14012	80.14	580.31	8.4	15.7
904.0	32.4	27.6	150	9.3	1.32	1.62	14289	112.60	570.77	8.4	15.7
905.0	52.9	26.0	150	9.3	1.16	1.64	14459	68.98	560.73	8.4	15.7
906.0	27.9	25.5	150	9.3	1.34	1.68	14782	130.86	552.30	8.4	15.7
907.0	43.9	29.4	150	9.3	1.25	1.70	14987	83.18	543.28	8.4	15.7
908.0	35.0	31.5	150	9.3	1.35	1.73	15244	104.49	535.00	8.4	15.7
909.0	51.4	31.0	150	9.3	1.22	1.75	15419	71.01	526.41	8.4	15.7
910.0	35.6	31.0	150	9.3	1.34	1.77	15672	102.46	518.70	8.4	15.7
911.0	36.0	32.7	150	9.3	1.35	1.80	15922	101.44	511.25	8.4	15.7
912.0	37.9	28.4	150	9.3	1.29	1.83	16159	96.37	503.97	8.4	15.7
913.0	50.7	28.6	150	9.3	1.20	1.85	16337	72.03	496.53	8.4	15.7
914.0	43.9	27.4	150	9.3	1.23	1.87	16542	83.18	489.52	8.4	15.7
916.0	37.7	27.9	150	9.3	1.28	1.92	17019	96.88	476.65	8.4	15.7
917.0	31.0	29.5	150	9.3	1.36	1.96	17309	117.68	470.86	8.4	15.7
918.0	31.9	30.6	150	9.3	1.37	1.99	17592	114.63	465.20	8.4	15.7
920.0	22.2	29.2	150	9.3	1.46	2.08	18404	164.85	455.96	8.4	15.8
921.0	26.9	28.6	150	9.3	1.39	2.11	18739	135.94	451.11	8.4	15.8
922.0	24.5	28.0	150	9.3	1.41	2.16	19107	149.12	446.60	8.4	15.8
923.0	37.9	28.6	150	9.3	1.29	2.18	19344	96.37	441.45	8.4	15.8
924.0	29.0	29.9	150	9.3	1.39	2.22	19654	125.79	436.88	8.4	15.8
925.0	36.7	30.1	150	9.3	1.32	2.24	19899	99.42	432.06	8.4	15.8
926.0	24.0	30.2	150	9.3	1.45	2.29	20274	152.17	428.12	8.4	15.8
927.0	36.0	30.6	150	9.3	1.33	2.31	20524	101.44	423.58	8.4	15.8
928.0	19.3	29.1	150	9.3	1.50	2.37	20992	189.70	420.37	8.4	15.8
929.0	33.3	33.6	150	9.3	1.39	2.40	21262	109.56	416.17	8.4	15.8
930.0	17.5	34.4	150	9.3	1.60	2.45	21777	208.98	413.41	8.4	15.8
931.0	28.3	29.3	150	9.3	1.38	2.49	22094	128.83	409.67	8.4	15.8
932.0	21.8	31.1	150	9.3	1.49	2.53	22507	167.38	406.52	8.4	15.8
933.0	36.4	29.3	150	9.3	1.31	2.56	22754	100.43	402.60	8.4	15.8
934.0	34.6	29.9	150	9.3	1.33	2.59	23014	105.50	398.84	8.4	15.8
935.0	45.6	30.5	150	9.3	1.25	2.61	23212	80.14	394.85	8.4	15.8
936.0	34.3	29.9	150	9.3	1.33	2.64	23474	106.52	391.29	8.4	15.8
937.0	39.1	29.0	150	9.3	1.28	2.67	23704	93.33	387.66	8.4	15.8
938.0	28.8	29.0	150	9.3	1.38	2.70	24017	126.81	384.52	8.4	15.8
940.0	35.6	27.3	150	9.3	1.29	2.76	24522	102.46	377.88	8.4	15.8
941.0	32.4	29.1	150	9.3	1.34	2.79	24799	112.60	374.79	8.4	15.8
942.0	36.7	28.7	150	9.3	1.30	2.82	25044	99.42	371.63	8.4	15.8
943.0	30.0	29.9	150	9.3	1.38	2.85	25344	121.73	368.79	8.4	15.8
944.0	33.3	29.3	150	9.3	1.34	2.88	25614	109.56	365.88	8.4	15.8
945.0	25.9	28.0	150	9.3	1.39	2.92	25962	141.01	363.38	8.4	15.8
946.0	40.4	29.7	150	9.3	1.28	2.94	26184	90.29	360.38	8.4	15.8
947.0	22.4	28.6	150	9.3	1.45	2.99	26587	163.33	358.24	8.4	15.8
948.0	37.1	24.4	150	9.3	1.24	3.01	26829	98.40	355.44	8.4	15.8
949.0	37.1	26.1	150	9.3	1.26	3.04	27072	98.40	352.71	8.4	15.8
950.0	56.2	30.9	150	9.3	1.20	3.06	27232	64.92	349.68	8.4	15.8
951.0	32.1	30.6	150	9.3	1.36	3.09	27512	113.62	347.22	8.4	15.8
952.0	39.6	30.2	150	9.3	1.29	3.11	27739	92.31	344.59	8.4	15.8
953.0	30.3	30.8	150	9.3	1.38	3.15	28037	120.72	342.31	8.4	15.8
954.0	47.4	32.8	150	9.3	1.27	3.17	28227	77.10	339.63	8.4	15.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
955.0	37.1	31.7	150	9.3	1.33	3.20	28469	98.40	337.22	8.4	15.8
956.0	52.9	32.1	150	9.3	1.23	3.21	28639	68.98	334.56	8.4	15.8
957.0	37.1	30.9	150	9.3	1.32	3.24	28882	98.40	332.24	8.4	15.8
958.0	63.2	30.9	150	9.3	1.16	3.26	29024	57.82	329.58	8.4	15.8
959.0	43.9	32.6	150	9.3	1.29	3.28	29229	83.18	327.21	8.4	15.8
960.0	25.2	33.6	150	9.3	1.48	3.32	29587	145.07	325.48	8.4	15.9
961.0	35.6	33.9	150	9.3	1.37	3.35	29839	102.46	323.37	8.4	15.9
962.0	48.0	34.5	150	9.3	1.28	3.37	30027	76.08	321.06	8.4	15.9
963.0	34.6	33.4	150	9.3	1.38	3.40	30287	105.50	319.07	8.4	15.9
964.0	41.9	33.7	150	9.3	1.32	3.42	30502	87.24	316.94	8.4	15.9
965.0	50.0	34.3	150	9.3	1.27	3.44	30682	73.04	314.72	8.4	15.9
966.0	48.6	34.3	150	9.3	1.28	3.46	30867	75.07	312.56	8.4	15.9
967.0	42.4	34.1	150	9.3	1.32	3.49	31079	86.23	310.54	8.4	15.9
968.0	50.7	33.5	150	9.3	1.26	3.51	31257	72.03	308.43	8.4	15.9
969.0	36.4	33.1	150	9.3	1.36	3.53	31504	100.43	306.61	8.4	15.9
970.0	51.4	33.3	150	9.3	1.25	3.55	31679	71.01	304.56	8.4	15.9
972.0	38.1	33.0	150	9.3	1.34	3.61	32152	95.87	300.99	8.4	15.9
973.0	33.0	34.1	150	9.3	1.40	3.64	32424	110.57	299.38	8.4	15.9
974.0	63.2	35.2	150	9.3	1.20	3.65	32567	57.82	297.35	8.4	15.9
975.0	40.4	35.4	150	9.3	1.35	3.68	32789	90.29	295.62	8.4	15.9
976.0	39.6	37.3	150	9.3	1.38	3.70	33017	92.31	293.94	8.4	15.9
977.0	25.9	33.3	150	9.3	1.46	3.74	33364	141.01	292.69	8.4	15.9
978.0	31.6	32.9	150	9.3	1.40	3.77	33649	115.65	291.25	8.4	15.9
979.0	37.9	32.1	150	9.3	1.33	3.80	33887	96.37	289.68	8.4	15.9
980.0	40.4	33.8	150	9.3	1.33	3.82	34109	90.29	288.08	8.4	15.9
981.0	30.0	34.3	150	9.3	1.43	3.86	34409	121.73	286.76	8.4	15.9
982.0	26.1	33.4	150	9.3	1.46	3.89	34754	139.99	285.61	8.4	15.9
984.0	37.3	34.0	150	9.3	1.36	3.95	35237	97.89	282.70	8.4	15.9
986.0	39.6	35.5	150	9.3	1.36	4.00	35692	92.31	279.79	8.4	15.9
987.0	33.6	36.3	150	9.3	1.42	4.03	35959	108.55	278.49	8.4	15.9
988.0	23.7	34.8	150	9.3	1.51	4.07	36339	154.20	277.56	8.4	15.9
989.0	37.5	34.7	150	9.2	1.38	4.10	36579	97.39	276.21	8.4	15.9
990.0	17.2	34.1	150	9.2	1.62	4.16	37102	212.02	275.74	8.4	15.9
991.0	36.0	35.8	150	9.2	1.41	4.18	37352	101.44	274.46	8.4	15.9
992.0	23.1	36.0	150	9.2	1.55	4.23	37742	158.25	273.61	8.4	15.9
993.0	28.1	35.2	150	9.2	1.48	4.26	38062	129.85	272.57	8.4	15.9
995.0	24.2	34.9	150	9.2	1.52	4.34	38804	150.65	270.82	8.4	15.9
996.0	35.6	34.4	150	9.2	1.39	4.37	39057	102.46	269.63	8.4	15.9
997.0	23.7	27.9	150	9.2	1.44	4.41	39437	154.20	268.82	8.4	15.9
998.0	35.3	28.5	150	9.2	1.32	4.44	39692	103.47	267.66	8.4	15.9
999.0	32.7	30.9	150	9.2	1.38	4.47	39967	111.59	266.58	8.4	15.9
1000.0	40.4	30.1	150	9.2	1.30	4.50	40189	90.29	265.36	8.4	16.0
1001.0	42.9	30.4	150	9.2	1.29	4.52	40399	85.21	264.13	8.4	16.0
1002.0	48.5	30.0	150	9.2	1.24	4.54	40585	75.30	262.84	8.4	16.0
1003.0	36.0	31.2	150	9.2	1.35	4.57	40835	101.44	261.75	8.4	16.0
1004.0	27.9	32.2	150	9.2	1.44	4.61	41157	130.86	260.87	8.4	16.0
1005.0	19.9	32.1	150	9.2	1.55	4.66	41610	183.61	260.36	8.4	16.0
1006.0	20.6	30.6	150	9.2	1.52	4.70	42047	177.53	259.81	8.4	16.0
1007.0	38.7	30.1	150	9.2	1.31	4.73	42280	94.34	258.72	8.4	16.0
1008.0	31.0	31.7	150	9.2	1.40	4.76	42570	117.68	257.80	8.4	16.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1009.0	33.0	30.8	150	9.2	1.37	4.79	42842	110.57	256.84	8.4	16.0
1010.0	36.4	30.5	150	9.2	1.34	4.82	43090	100.43	255.83	8.4	16.0
1011.0	50.0	32.3	150	9.2	1.26	4.84	43270	73.04	254.66	8.4	16.0
1012.0	33.0	32.3	150	9.2	1.39	4.87	43542	110.57	253.74	8.4	16.0
1013.0	44.7	32.0	150	9.2	1.29	4.89	43744	81.70	252.66	8.4	16.0
1014.0	37.1	32.6	150	9.2	1.36	4.92	43986	98.40	251.69	8.4	16.0
1015.0	31.0	31.8	150	9.2	1.40	4.95	44276	117.68	250.85	8.4	16.0
1016.0	12.5	34.5	150	9.2	1.73	5.03	44996	292.16	251.10	8.4	16.0
1017.0	24.5	30.3	150	9.2	1.46	5.07	45364	149.12	250.47	8.4	16.0
1018.0	27.5	33.7	150	9.2	1.47	5.11	45691	132.89	249.75	8.4	16.0
1019.0	32.4	33.2	150	9.2	1.41	5.14	45969	117.60	248.92	8.4	16.0
1020.0	24.8	33.5	150	9.2	1.50	5.18	46331	147.09	248.30	8.4	16.0
1021.0	28.8	32.3	150	9.2	1.43	5.22	46644	126.81	247.57	8.4	16.0
1022.0	17.6	31.2	150	9.2	1.57	5.27	47154	206.95	247.33	8.4	16.0
1023.0	23.2	32.2	150	9.2	1.50	5.32	47541	157.24	246.79	8.4	16.0
1024.0	35.3	31.9	150	9.2	1.37	5.34	47796	103.47	245.94	8.4	16.0
1025.0	23.5	30.8	150	9.2	1.48	5.39	48179	155.21	245.41	8.4	16.0
1026.0	20.4	30.0	150	9.2	1.51	5.44	48620	179.02	245.02	8.4	16.0
1027.0	24.8	30.7	150	9.2	1.46	5.48	48982	147.09	244.45	8.4	16.0
1028.0	28.3	31.0	150	9.1	1.44	5.51	49300	128.83	243.78	8.4	16.0
1029.0	38.7	30.2	150	9.1	1.33	5.54	49532	94.34	242.92	8.4	16.0
1030.0	27.7	31.0	150	9.1	1.45	5.57	49857	131.88	242.29	8.4	16.0
1031.0	41.9	31.7	150	9.1	1.32	5.60	50072	87.24	241.41	8.4	16.0
1032.0	27.7	32.0	150	9.1	1.46	5.63	50397	131.88	240.79	8.4	16.0
1033.0	25.9	31.9	150	9.1	1.48	5.67	50745	141.01	240.23	8.4	16.0
1034.0	30.0	30.0	150	9.1	1.41	5.70	51045	121.73	239.57	8.4	16.0
1035.0	77.1	29.9	150	9.1	1.11	5.72	51162	47.34	238.50	8.4	16.0
1036.0	15.9	33.0	150	9.1	1.65	5.78	51727	229.26	238.45	8.4	16.0
1037.0	37.5	32.6	150	9.1	1.37	5.81	51967	97.39	237.67	8.4	16.0
1038.0	29.3	31.8	150	9.1	1.44	5.84	52274	124.78	237.05	8.4	16.0
1039.0	37.5	32.0	150	9.1	1.36	5.87	52514	97.39	236.30	8.4	16.0
1040.0	102.9	30.6	150	9.1	1.03	5.88	52602	35.51	235.21	8.4	16.0
1041.0	29.5	30.5	150	9.1	1.42	5.91	52907	123.76	234.61	8.4	16.0
1042.0	36.7	32.0	150	9.1	1.37	5.94	53152	99.42	233.89	8.4	16.1
1043.0	36.4	32.2	150	9.1	1.37	5.97	53399	100.43	233.18	8.4	16.1
1044.0	45.6	32.6	150	9.1	1.31	5.99	53597	80.14	232.37	8.4	16.1
1045.0	29.5	31.2	150	9.1	1.43	6.02	53902	123.76	231.80	8.4	16.1
1046.0	25.4	30.9	150	9.1	1.47	6.06	54257	144.05	231.34	8.4	16.1
1047.0	20.1	32.6	150	9.1	1.57	6.11	54704	181.59	231.08	8.4	16.1
1048.0	36.4	32.7	150	9.1	1.38	6.14	54952	100.43	230.40	8.4	16.1
1049.0	30.0	32.6	150	9.1	1.44	6.17	55252	121.73	229.84	8.4	16.1
1050.0	40.4	32.3	150	9.1	1.34	6.20	55474	90.29	229.13	8.4	16.1
1051.0	43.4	32.1	150	9.0	1.33	6.22	55682	84.20	228.39	8.4	16.1
1052.0	45.0	32.0	150	9.0	1.32	6.24	55882	81.16	227.64	8.4	16.1
1053.0	45.6	32.0	150	9.0	1.31	6.26	56079	80.14	226.89	8.4	16.1
1054.0	47.4	32.0	150	9.0	1.30	6.28	56269	77.10	226.14	8.4	16.1
1055.0	20.9	32.4	150	9.0	1.57	6.33	56699	174.48	225.88	8.4	16.1
1056.0	36.7	32.0	150	9.0	1.38	6.36	56944	99.51	225.25	8.4	16.1
1057.0	39.3	31.4	150	9.0	1.35	6.39	57173	92.82	224.60	8.4	16.1
1058.0	41.9	31.8	150	9.0	1.34	6.41	57388	87.24	223.92	8.4	16.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1059.0	53.7	31.9	150	9.0	1.26	6.43	57556	67.97	223.16	8.4	16.1
1060.0	37.5	32.0	150	9.0	1.38	6.45	57796	97.39	222.54	8.4	16.1
1061.0	48.0	31.8	150	9.0	1.30	6.48	57983	76.08	221.83	8.4	16.1
1062.0	35.3	32.2	150	9.0	1.40	6.50	58238	103.47	221.26	8.4	16.1
1063.0	49.3	32.4	150	9.0	1.29	6.52	58421	74.05	220.55	8.4	16.1
1064.0	42.4	29.9	150	9.0	1.31	6.55	58633	86.23	219.91	8.4	16.1
1065.0	23.5	31.1	150	9.0	1.51	6.59	59016	155.21	219.60	8.4	16.1
1066.0	27.5	33.6	150	9.0	1.50	6.63	59343	132.89	219.19	8.4	16.1
1067.0	47.4	32.8	150	9.0	1.31	6.65	59533	77.10	218.52	8.4	16.1
1068.0	40.9	32.0	150	9.0	1.35	6.67	59753	89.27	217.91	8.4	16.1
1069.0	47.4	32.4	150	9.0	1.31	6.69	59943	77.10	217.26	8.4	16.1
1070.0	32.7	33.0	150	9.0	1.43	6.72	60218	111.59	216.77	8.4	16.1
1071.0	41.9	33.1	150	9.0	1.35	6.75	60433	87.24	216.17	8.4	16.1
1072.0	32.7	33.5	150	9.0	1.44	6.78	60708	111.59	215.68	8.4	16.1
1073.0	37.1	33.7	150	9.0	1.40	6.81	60951	98.40	215.15	8.4	16.1
1074.0	32.0	34.5	150	9.0	1.46	6.84	61232	114.29	214.69	8.4	16.1
1075.0	14.2	35.2	150	9.0	1.74	6.91	61867	257.67	214.88	8.4	16.1
1076.0	34.3	35.0	150	9.0	1.44	6.94	62130	106.52	214.39	8.4	16.1
1077.0	24.3	34.8	150	9.0	1.55	6.98	62500	150.14	214.10	8.4	16.1
1078.0	34.6	34.6	150	9.0	1.44	7.01	62760	105.50	213.61	8.4	16.1
1079.0	26.5	34.5	150	9.0	1.52	7.04	63100	137.96	213.28	8.4	16.1
1080.0	46.2	34.6	150	9.0	1.34	7.07	63295	79.13	212.68	8.4	16.1
1081.0	35.3	34.1	150	9.0	1.42	7.09	63550	103.47	212.20	8.4	16.1
1082.0	57.1	34.2	150	9.0	1.27	7.11	63707	63.91	211.54	8.4	16.1
1083.0	26.7	31.4	150	9.0	1.48	7.15	64045	136.95	211.22	8.4	16.1
1084.0	58.7	34.6	150	9.0	1.26	7.17	64198	62.22	210.57	8.4	16.1
1085.0	23.7	34.1	150	9.0	1.55	7.21	64578	154.20	210.32	8.4	16.2
1086.0	33.0	34.9	150	9.0	1.45	7.24	64851	110.57	209.89	8.4	16.2
1087.0	24.0	34.7	150	9.0	1.56	7.28	65226	152.17	209.64	8.4	16.2
1088.0	28.3	35.2	150	9.0	1.51	7.32	65543	128.83	209.29	8.4	16.2
1089.0	20.1	34.7	150	9.0	1.61	7.37	65991	181.59	209.17	8.4	16.2
1090.0	29.5	34.5	150	9.0	1.49	7.40	66296	123.76	208.81	8.4	16.2
1091.0	21.3	34.4	150	9.0	1.59	7.45	66718	171.44	208.65	8.4	16.2
1092.0	36.7	34.3	150	9.0	1.41	7.47	66963	99.42	208.19	8.4	16.2
1093.0	25.2	34.0	141	9.0	1.51	7.51	67298	145.07	207.93	8.4	16.2
1094.0	30.0	34.5	140	9.0	1.46	7.55	67578	121.73	207.57	8.4	16.2
1095.0	22.6	34.9	140	9.0	1.56	7.59	67949	161.30	207.37	8.4	16.2
1096.0	34.6	35.2	140	9.0	1.42	7.62	68192	105.50	206.95	8.4	16.2
1097.0	22.2	35.0	140	9.0	1.56	7.66	68570	164.34	206.77	8.4	16.2
1098.0	20.6	35.1	140	9.0	1.59	7.71	68978	177.53	206.65	8.4	16.2
1099.0	20.9	35.5	140	9.0	1.59	7.76	69380	174.48	206.52	8.4	16.2
1100.0	16.7	35.5	140	9.0	1.66	7.82	69884	219.12	206.57	8.4	16.2
1101.0	18.6	34.9	140	9.0	1.62	7.87	70336	196.80	206.53	8.4	16.2
1102.0	17.8	35.5	140	9.0	1.64	7.93	70808	204.92	206.53	8.4	16.2
1103.0	26.1	36.5	140	9.0	1.53	7.97	71130	139.99	206.26	8.4	16.2
1104.0	29.3	34.4	140	9.0	1.47	8.00	71417	124.78	205.93	8.4	16.2
1105.0	35.0	34.6	140	9.0	1.41	8.03	71657	104.49	205.53	8.4	16.2
1106.0	25.6	35.0	140	9.0	1.52	8.07	71985	142.66	205.28	8.4	16.2
1107.0	30.5	34.5	140	9.0	1.45	8.10	72261	119.70	204.94	8.4	16.2
1108.0	24.8	34.4	140	9.0	1.52	8.14	72599	147.09	204.71	8.4	16.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1109.0	27.5	34.7	140	9.0	1.49	8.18	72905	132.89	204.42	8.4	16.2
1110.0	36.4	34.5	140	9.0	1.40	8.21	73136	100.43	204.02	8.4	16.2
1111.0	30.3	34.6	140	9.0	1.46	8.24	73413	120.72	203.69	8.4	16.2
1112.0	20.5	31.4	140	9.0	1.54	8.29	73824	178.54	203.59	8.4	16.2
1113.0	36.0	35.0	140	9.0	1.40	8.32	74057	101.44	203.20	8.4	16.2
1114.0	29.0	34.6	140	9.0	1.47	8.35	74347	125.79	202.90	8.4	16.2
1115.0	37.5	34.6	140	9.0	1.39	8.38	74571	97.39	202.49	8.4	16.2
1116.0	33.0	34.4	140	9.0	1.43	8.41	74825	110.57	202.14	8.4	16.2
1117.0	41.4	34.3	140	9.0	1.35	8.43	75028	88.26	201.71	8.4	16.2
1118.0	29.3	34.6	140	9.0	1.47	8.47	75315	124.78	201.41	8.4	16.2
1119.0	34.3	34.9	140	9.0	1.42	8.50	75560	106.52	201.05	8.4	16.2
1120.0	25.0	35.3	140	9.0	1.53	8.54	75896	146.08	200.85	8.4	16.2
1121.0	40.0	35.4	140	9.0	1.38	8.56	76106	91.30	200.43	8.4	16.2
1122.0	24.8	30.9	140	9.0	1.47	8.60	76444	147.09	200.24	8.4	16.2
1123.0	29.0	36.1	140	9.1	1.47	8.64	76734	125.79	199.96	8.4	16.2
1124.0	32.7	35.3	140	9.1	1.42	8.67	76990	111.59	199.63	8.4	16.2
1125.0	27.1	35.4	140	9.1	1.49	8.70	77301	134.92	199.39	8.4	16.2
1126.0	35.3	35.4	140	9.1	1.40	8.73	77539	103.47	199.04	8.4	16.2
1127.0	26.3	35.7	140	9.1	1.50	8.77	77858	138.98	198.81	8.4	16.2
1128.0	31.0	35.8	140	9.1	1.45	8.80	78129	117.68	198.52	8.4	16.3
1129.0	23.5	36.0	140	9.1	1.54	8.84	78486	155.21	198.36	8.4	16.3
1130.0	35.0	35.9	140	9.1	1.41	8.87	78726	104.49	198.02	8.4	16.3
1131.0	24.8	35.9	140	9.1	1.52	8.91	79065	147.09	197.83	8.4	16.3
1132.0	30.0	35.8	140	9.1	1.46	8.95	79345	121.73	197.56	8.4	16.3
1133.0	39.1	35.5	140	9.1	1.37	8.97	79559	93.33	197.18	8.4	16.3
1134.0	31.9	35.4	140	9.1	1.43	9.00	79823	114.63	196.89	8.4	16.3
1135.0	42.4	35.2	140	9.1	1.34	9.03	80021	86.23	196.49	8.4	16.3
1136.0	33.3	35.1	140	9.1	1.42	9.06	80273	109.56	196.18	8.4	16.3
1137.0	43.4	35.2	140	9.1	1.33	9.08	80467	84.20	195.79	8.4	16.3
1138.0	32.4	35.2	140	9.1	1.43	9.11	80726	112.60	195.49	8.4	16.3
1139.0	40.9	35.6	140	9.1	1.35	9.14	80931	89.27	195.12	8.4	16.3
1140.0	33.3	35.8	140	9.1	1.42	9.17	81183	109.56	194.82	8.4	16.3
1141.0	46.5	34.2	140	9.1	1.30	9.19	81364	78.62	194.41	8.4	16.3
1142.0	31.6	36.1	140	9.1	1.45	9.22	81630	115.65	194.14	8.4	16.3
1143.0	35.6	36.2	140	9.1	1.41	9.25	81866	102.46	193.82	8.4	16.3
1144.0	30.8	36.5	140	9.1	1.46	9.28	82139	118.69	193.56	8.4	16.3
1145.0	31.0	37.0	140	9.1	1.46	9.31	82409	117.68	193.30	8.4	16.3
1146.0	26.9	37.2	140	9.1	1.51	9.35	82722	135.94	193.10	8.4	16.3
1147.0	28.1	37.6	140	9.1	1.50	9.38	83021	129.85	192.88	8.4	16.3
1148.0	20.3	37.8	140	9.0	1.63	9.43	83432	179.56	192.84	8.4	16.3
1149.0	26.5	37.7	138	9.0	1.53	9.47	83745	137.96	192.65	8.4	16.3
1150.0	26.9	38.1	138	9.0	1.53	9.51	84054	135.94	192.46	8.4	16.3
1151.0	19.8	37.9	129	9.0	1.61	9.56	84444	184.63	192.43	8.4	16.3
1152.0	60.0	35.2	137	9.0	1.23	9.58	84581	60.87	191.99	8.4	16.3
1153.0	24.0	35.7	138	9.0	1.54	9.62	84925	152.17	191.86	8.4	16.3
1154.0	37.1	36.9	137	9.0	1.41	9.64	85148	98.40	191.54	8.4	16.3
1155.0	28.8	37.1	138	9.0	1.50	9.68	85435	126.81	191.33	8.4	16.3
1156.0	37.1	37.1	138	9.0	1.41	9.71	85657	98.40	191.02	8.4	16.3
1157.0	27.5	37.2	138	9.0	1.52	9.74	85958	132.89	190.83	8.4	16.3
1158.0	40.9	37.1	137	9.0	1.38	9.77	86159	89.27	190.49	8.4	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1159.0	31.9	36.8	138	9.0	1.46	9.80	86418	114.63	190.24	8.4	16.3
1160.0	43.9	36.2	138	9.0	1.35	9.82	86606	83.18	189.89	8.4	16.3
1161.0	42.9	35.1	137	9.0	1.34	9.84	86799	85.21	189.55	8.4	16.3
1162.0	41.4	34.6	140	9.0	1.35	9.87	87002	88.26	189.22	8.4	16.3
1163.0	66.7	35.4	138	9.0	1.20	9.88	87126	54.78	188.78	8.4	16.3
1164.0	38.3	35.2	138	9.0	1.38	9.91	87342	95.36	188.48	8.4	16.3
1165.0	43.9	35.4	138	9.0	1.34	9.93	87529	83.18	188.14	8.4	16.3
1166.0	45.0	35.4	138	9.0	1.33	9.95	87713	81.16	187.80	8.4	16.3
1167.0	60.0	35.4	138	9.0	1.23	9.97	87851	60.87	187.39	8.4	16.3
1168.0	36.4	35.0	138	9.0	1.40	10.00	88078	100.43	187.11	8.4	16.3
1169.0	52.2	34.9	137	9.0	1.28	10.02	88236	70.00	186.74	8.4	16.3
1170.0	43.9	35.4	138	9.0	1.34	10.04	88424	83.18	186.41	8.4	16.3
1171.0	47.0	35.0	140	9.0	1.32	10.06	88603	77.70	186.07	8.4	16.3
1172.0	50.0	35.0	145	9.0	1.31	10.08	88777	73.04	185.71	8.4	16.3
1173.0	49.7	35.5	150	9.0	1.33	10.10	88958	73.55	185.36	8.4	16.3
1174.0	40.7	36.1	150	9.0	1.40	10.13	89180	89.78	185.06	8.4	16.4
1175.0	35.3	35.7	150	9.0	1.44	10.16	89435	103.47	184.80	8.4	16.4
1176.0	45.6	32.0	147	9.0	1.31	10.18	89628	80.14	184.48	8.4	16.4
1177.0	52.9	31.6	150	9.0	1.26	10.20	89798	68.98	184.12	8.4	16.4
1178.0	80.0	31.3	150	9.0	1.13	10.21	89910	45.65	183.69	8.4	16.4
1179.0	52.9	31.1	150	9.0	1.26	10.23	90080	68.98	183.33	8.4	16.4
1180.0	75.0	30.9	150	9.0	1.14	10.24	90200	48.69	182.92	8.4	16.4
1181.0	68.6	29.6	150	9.0	1.16	10.26	90332	53.26	182.52	8.4	16.4
1182.0	49.3	30.0	150	9.0	1.27	10.28	90514	74.05	182.19	8.4	16.4
1183.0	67.9	31.0	150	9.0	1.18	10.29	90647	53.77	181.80	8.4	16.4
1184.0	43.4	31.4	150	9.0	1.32	10.31	90854	84.20	181.50	8.4	16.4
1185.0	48.6	32.1	150	9.0	1.29	10.33	91039	75.07	181.18	8.4	16.4
1186.0	38.7	32.7	150	9.0	1.38	10.36	91272	94.34	180.92	8.4	16.4
1187.0	46.8	33.1	150	9.0	1.32	10.38	91464	78.11	180.61	8.4	16.4
1188.0	39.6	33.1	150	9.0	1.37	10.41	91692	92.31	180.34	8.4	16.4
1189.0	57.1	32.9	150	9.0	1.25	10.42	91849	63.91	179.99	8.4	16.4
1190.0	45.0	32.9	150	9.0	1.33	10.45	92049	81.16	179.70	8.4	16.4
1191.0	36.4	30.1	150	9.0	1.36	10.47	92296	100.32	179.46	8.4	16.4
1192.0	34.6	32.9	150	9.0	1.41	10.50	92556	105.50	179.24	8.4	16.4
1193.0	46.8	33.6	150	9.0	1.33	10.52	92749	78.11	178.94	8.4	16.4
1194.0	28.8	33.0	150	9.0	1.48	10.56	93061	126.81	178.79	8.4	16.4
1195.0	42.9	33.6	150	9.0	1.35	10.58	93271	85.21	178.52	8.4	16.4
1196.0	38.7	33.4	146	9.0	1.38	10.61	93497	94.34	178.27	8.4	16.4
1197.0	43.4	33.8	139	9.0	1.33	10.63	93690	84.20	177.99	8.4	16.4
1198.0	28.8	34.4	145	9.0	1.48	10.67	93992	126.81	177.84	8.4	16.4
1199.0	50.7	34.5	145	9.0	1.30	10.69	94164	72.03	177.54	8.4	16.4
1200.0	36.4	34.2	145	9.0	1.40	10.71	94403	100.43	177.31	8.4	16.4
1201.0	42.4	34.6	145	9.0	1.36	10.74	94608	86.23	177.05	8.4	16.4
1202.0	28.8	34.9	145	9.0	1.49	10.77	94910	126.81	176.91	8.4	16.4
1203.0	46.2	34.9	145	9.0	1.33	10.79	95099	79.13	176.62	8.4	16.4
1204.0	33.0	34.7	145	9.0	1.44	10.82	95362	110.57	176.43	8.4	16.4
1205.0	48.6	34.5	145	9.0	1.31	10.84	95541	75.07	176.15	8.4	16.4
1206.0	45.0	34.0	145	9.0	1.33	10.87	95734	81.16	175.87	8.4	16.4
1207.0	63.2	33.7	145	9.0	1.22	10.88	95872	57.82	175.54	8.4	16.4
1208.0	49.3	33.4	145	9.0	1.29	10.90	96049	74.05	175.25	8.4	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1209.0	62.1	33.2	145	9.0	1.22	10.92	96189	58.84	174.92	8.4	16.4
1210.0	62.1	27.2	145	9.0	1.15	10.93	96329	58.84	174.60	8.4	16.4
1211.0	41.9	34.5	145	9.0	1.36	10.96	96537	87.24	174.35	8.4	16.4
1212.0	53.7	34.3	145	9.0	1.28	10.98	96699	67.97	174.05	8.4	16.4
1213.0	40.4	34.4	145	9.0	1.37	11.00	96914	90.29	173.82	8.4	16.4
1214.0	54.5	34.4	145	9.0	1.27	11.02	97073	66.95	173.52	8.4	16.4
1215.0	40.9	34.3	145	9.0	1.37	11.04	97286	89.27	173.29	8.4	16.4
1216.0	50.7	34.2	145	9.0	1.30	11.06	97457	72.03	173.01	8.4	16.4
1217.0	40.9	34.4	145	9.0	1.37	11.09	97670	89.27	172.78	8.4	16.4
1218.0	50.7	34.6	146	9.0	1.30	11.11	97843	72.03	172.50	8.4	16.4
1219.0	36.4	34.8	150	9.0	1.42	11.14	98091	100.43	172.30	8.4	16.4
1220.0	29.8	34.6	150	9.0	1.49	11.17	98393	122.75	172.14	8.4	16.5
1221.0	34.6	35.6	150	9.0	1.45	11.20	98653	105.50	171.98	8.4	16.5
1222.0	24.5	36.6	150	9.0	1.58	11.24	99021	149.12	171.92	8.4	16.5
1223.0	67.9	35.6	150	9.0	1.22	11.25	99153	53.77	171.60	8.4	16.5
1224.0	55.4	34.6	150	9.0	1.28	11.27	99316	65.94	171.31	8.4	16.5
1225.0	51.4	34.3	150	9.0	1.30	11.29	99491	71.01	171.04	8.4	16.5
1226.0	52.2	34.3	150	9.0	1.30	11.31	99663	70.00	170.77	8.4	16.5
1227.0	57.1	34.5	150	9.0	1.27	11.33	99821	63.91	170.48	8.4	16.5
1228.0	44.4	34.7	150	9.0	1.35	11.35	100023	82.17	170.24	8.4	16.5
1229.0	55.4	34.7	150	9.0	1.28	11.37	100186	65.94	169.97	8.4	16.5
1230.0	41.4	33.7	150	9.0	1.37	11.39	100403	88.26	169.75	8.4	16.5
1231.0	46.8	34.4	150	9.0	1.33	11.41	100596	78.11	169.50	8.4	16.5
1232.0	32.1	35.3	150	9.0	1.47	11.45	100876	113.62	169.36	8.4	16.5
1233.0	22.4	34.8	150	9.0	1.58	11.49	101278	163.33	169.34	8.4	16.5
1234.0	19.6	33.4	150	9.0	1.61	11.54	101738	186.66	169.39	8.4	16.5
1235.0	17.0	33.3	150	9.0	1.65	11.60	102268	215.06	169.51	8.4	16.5
1236.0	38.3	32.7	150	9.0	1.38	11.63	102503	95.36	169.31	8.4	16.5
1237.0	19.3	33.1	150	9.0	1.61	11.68	102971	189.70	169.36	8.4	16.5
1238.0	22.4	33.1	150	9.0	1.56	11.72	103373	163.33	169.35	8.4	16.5
1239.0	26.3	33.6	150	9.0	1.51	11.76	103716	138.98	169.27	8.4	16.5
1240.0	16.7	33.4	150	9.0	1.66	11.82	104256	219.12	169.40	8.4	16.5
1241.0	29.0	33.3	150	9.0	1.48	11.86	104566	125.79	169.29	8.4	16.5
1242.0	34.3	33.0	150	9.0	1.42	11.88	104828	106.52	169.12	8.4	16.5
1243.0	27.3	32.6	150	9.0	1.49	11.92	105158	133.91	169.03	8.4	16.5
1244.0	38.7	32.4	150	9.0	1.37	11.95	105391	94.34	168.84	8.4	16.5
1245.0	26.7	32.7	150	9.0	1.50	11.98	105728	136.95	168.76	8.4	16.5
1246.0	33.0	32.8	150	9.0	1.43	12.01	106001	110.57	168.61	8.4	16.5
1247.0	18.2	33.5	150	9.0	1.63	12.07	106496	200.86	168.69	8.4	16.5
1248.0	26.1	32.9	150	9.1	1.49	12.11	106841	139.99	168.62	8.4	16.5
1249.0	26.1	33.1	150	9.1	1.49	12.15	107186	139.99	168.55	8.4	16.5
1250.0	45.0	32.8	150	9.1	1.31	12.17	107386	81.16	168.33	8.4	16.5
1251.0	31.9	32.5	150	9.1	1.42	12.20	107668	114.63	168.19	8.4	16.5
1252.0	47.4	32.1	150	9.1	1.29	12.22	107858	77.10	167.96	8.4	16.5
1253.0	27.1	32.3	150	9.1	1.47	12.26	108191	134.92	167.88	8.4	16.5
1254.0	42.9	32.5	150	9.1	1.33	12.28	108401	85.21	167.67	8.4	16.5
1255.0	19.0	33.5	150	9.1	1.60	12.33	108873	191.73	167.73	8.4	16.5
1256.0	22.6	34.1	150	9.1	1.55	12.38	109271	161.30	167.71	8.4	16.5
1257.0	23.7	33.8	150	9.1	1.53	12.42	109651	154.20	167.68	8.4	16.5
1258.0	30.0	32.8	150	9.1	1.44	12.45	109951	121.73	167.57	8.4	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1259.0	38.7	32.8	150	9.1	1.36	12.48	110183	94.34	167.39	8.4	16.5
1260.0	44.7	32.6	150	9.1	1.31	12.50	110384	81.66	167.17	8.4	16.5
1261.0	29.8	32.9	150	9.1	1.45	12.54	110687	122.75	167.06	8.4	16.5
1262.0	45.0	33.1	150	9.1	1.32	12.56	110887	81.16	166.85	8.4	16.5
1263.0	28.1	33.0	150	9.1	1.47	12.59	111207	129.85	166.76	8.4	16.5
1264.0	40.9	33.1	150	9.1	1.35	12.62	111427	89.27	166.57	8.4	16.5
1264.5	42.9	33.0	150	9.1	1.33	12.63	111532	85.21	166.47	8.4	16.5
1265.0	43.9	32.8	150	9.1	1.32	12.64	111634	83.18	166.37	8.4	16.5
1266.0	19.3	33.6	150	9.1	1.60	12.69	112102	189.70	166.43	8.4	16.5
1267.0	32.1	34.4	150	9.1	1.44	12.72	112382	113.62	166.30	8.4	16.5
1268.0	25.2	34.4	150	9.1	1.52	12.76	112739	145.07	166.25	8.4	16.6
1269.0	42.4	34.0	150	9.1	1.35	12.79	112952	86.23	166.06	8.4	16.6
1270.0	23.8	34.1	150	9.1	1.53	12.83	113329	153.18	166.03	8.4	16.6
1271.0	20.2	34.6	150	9.1	1.59	12.88	113774	180.57	166.06	8.4	16.6
1272.0	25.7	35.2	150	9.1	1.52	12.92	114124	142.02	166.00	8.4	16.6
1273.0	21.1	35.0	150	9.1	1.59	12.96	114552	173.47	166.02	8.4	16.6
1274.0	21.4	35.4	150	9.1	1.59	13.01	114972	170.43	166.03	8.4	16.6
1275.0	31.0	36.1	150	9.1	1.47	13.04	115262	117.81	165.92	8.4	16.6
1276.0	30.1	34.4	150	9.1	1.46	13.08	115561	121.33	165.81	8.4	16.6
1277.0	29.0	34.4	150	9.1	1.47	13.11	115871	125.79	165.72	8.4	16.6
1278.0	39.6	34.6	150	9.1	1.38	13.14	116099	92.31	165.54	8.4	16.6
1279.0	45.0	35.9	150	9.1	1.35	13.16	116299	81.16	165.34	8.4	16.6
1280.0	23.4	35.1	150	9.1	1.55	13.20	116684	156.22	165.32	8.4	16.6
1281.0	31.9	35.1	150	9.1	1.45	13.23	116966	114.63	165.20	8.4	16.6
1282.0	19.1	35.4	150	9.1	1.62	13.29	117436	190.72	165.26	8.4	16.6
1283.0	40.0	35.1	150	9.1	1.38	13.31	117661	91.30	165.09	8.4	16.6
1284.0	31.6	34.7	150	9.1	1.45	13.34	117946	115.65	164.97	8.4	16.6
1285.0	43.9	33.1	150	9.1	1.33	13.36	118151	83.18	164.78	8.4	16.6
1286.0	40.9	29.9	150	9.1	1.31	13.39	118371	89.27	164.61	8.4	16.6
1287.0	32.9	28.6	150	9.1	1.36	13.42	118645	111.08	164.49	8.4	16.6
1288.0	20.7	27.9	150	9.1	1.49	13.47	119080	176.51	164.51	8.4	16.6
1289.0	33.3	28.1	150	9.1	1.35	13.50	119350	109.56	164.39	8.4	16.6
1290.0	32.1	28.1	150	9.1	1.36	13.53	119630	113.62	164.27	8.4	16.6
1291.0	24.3	31.8	150	9.1	1.50	13.57	120000	150.14	164.24	8.4	16.6
1292.0	16.1	33.4	150	9.1	1.65	13.63	120559	226.73	164.38	8.4	16.6
1293.0	37.1	32.6	150	9.1	1.37	13.66	120801	98.40	164.23	8.4	16.6
1294.0	17.1	29.9	150	9.1	1.58	13.72	121326	213.03	164.34	8.4	16.6
1295.0	51.4	33.2	150	9.1	1.28	13.74	121501	71.01	164.13	8.4	16.6
1296.0	11.9	26.8	150	9.1	1.64	13.82	122255	305.85	164.45	8.4	16.6
1297.0	4.5	20.5	150	9.0	1.82	14.04	124267	816.63	165.93	8.4	16.6
1298.0	7.5	19.5	150	9.0	1.65	14.18	125467	486.93	166.65	8.4	16.6
1299.0	5.2	18.4	150	9.0	1.72	14.37	127187	697.94	167.85	8.4	16.6
1300.0	20.9	27.8	150	9.1	1.49	14.42	127617	174.48	167.86	8.4	16.6
1301.0	25.7	33.6	150	9.1	1.51	14.46	127967	142.02	167.80	8.4	16.6
1302.0	36.7	37.1	150	9.1	1.44	14.48	128212	99.42	167.65	8.4	16.6
1303.0	30.0	36.4	150	9.0	1.50	14.52	128512	121.73	167.55	8.4	16.6
1304.0	17.6	35.8	150	9.1	1.66	14.57	129022	206.95	167.64	8.4	16.6
1305.0	25.9	36.3	150	9.0	1.54	14.61	129370	141.01	167.58	8.4	16.6
1306.0	17.3	41.2	150	9.1	1.74	14.67	129889	210.50	167.67	8.4	16.6
1307.0	17.1	37.8	150	9.0	1.70	14.73	130414	213.03	167.77	8.4	16.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1308.0	22.8	38.9	150	9.1	1.62	14.77	130809	160.28	167.76	8.4	16.6
1309.0	20.6	39.4	150	9.0	1.66	14.82	131246	177.53	167.78	8.4	16.6
1310.0	35.6	38.2	150	9.0	1.46	14.85	131499	102.46	167.63	8.4	16.6
1311.0	19.3	38.7	150	9.1	1.67	14.90	131966	189.70	167.68	8.4	16.6
1312.0	18.3	40.1	150	9.1	1.71	14.95	132459	199.85	167.75	8.4	16.6
1313.0	18.3	38.2	150	9.1	1.69	15.01	132951	199.85	167.82	8.4	16.6
1314.0	27.9	37.1	150	9.0	1.53	15.04	133274	130.86	167.74	8.4	16.6
1315.0	23.2	35.5	150	9.1	1.57	15.09	133661	157.24	167.72	8.4	16.6
1316.0	33.6	38.9	150	9.1	1.49	15.12	133929	108.55	167.59	8.4	16.6
1317.0	38.3	38.3	150	9.0	1.44	15.14	134164	95.36	167.43	8.4	16.7
1318.0	27.7	39.9	150	9.0	1.57	15.18	134489	131.88	167.36	8.4	16.7
1319.0	39.1	39.1	150	9.0	1.44	15.21	134719	93.33	167.20	8.4	16.7
1320.0	19.9	39.1	150	9.1	1.67	15.26	135171	183.61	167.23	8.4	16.7
1321.0	21.7	39.9	150	9.1	1.65	15.30	135586	168.40	167.24	8.4	16.7
1322.0	34.0	39.1	150	9.1	1.49	15.33	135851	107.53	167.11	8.4	16.7
1323.0	18.3	38.9	150	9.1	1.69	15.39	136344	199.85	167.18	8.4	16.7
1324.0	26.7	39.3	150	9.1	1.57	15.42	136681	136.95	167.11	8.4	16.7
1325.0	19.7	34.4	150	9.1	1.61	15.47	137138	185.44	167.15	8.4	16.7
1326.0	18.0	34.2	150	9.1	1.64	15.53	137638	202.89	167.23	8.4	16.7
1327.0	31.0	34.0	150	9.1	1.46	15.56	137928	117.68	167.12	8.4	16.7
1328.0	36.0	33.7	150	9.1	1.40	15.59	138178	101.44	166.98	8.4	16.7
1329.0	22.1	32.9	150	9.1	1.55	15.64	138586	165.35	166.98	8.4	16.7
1330.0	22.1	33.0	150	9.1	1.55	15.68	138993	165.35	166.98	8.4	16.7
1331.0	24.7	32.8	150	9.0	1.52	15.72	139358	148.11	166.94	8.4	16.7
1332.0	26.5	32.0	150	9.1	1.48	15.76	139698	137.96	166.88	8.4	16.7
1333.0	18.2	33.2	150	9.1	1.62	15.81	140193	200.86	166.95	8.4	16.7
1334.0	16.8	32.9	150	9.1	1.64	15.87	140728	217.09	167.05	8.4	16.7
1335.0	22.4	34.8	150	9.1	1.57	15.92	141131	163.33	167.05	8.4	16.7
1336.0	23.8	36.4	150	9.0	1.57	15.96	141509	153.69	167.02	8.4	16.7
1337.0	14.4	36.2	150	9.0	1.69	16.02	142057	222.16	167.13	8.4	16.7
1338.0	15.5	36.3	150	9.1	1.71	16.09	142637	235.35	167.27	8.4	16.7
1339.0	28.1	37.0	150	9.0	1.53	16.12	142957	129.85	167.20	8.4	16.7
1340.0	21.6	38.0	150	9.0	1.63	16.17	143374	169.41	167.20	8.4	16.7
1341.0	26.1	37.5	150	9.0	1.56	16.21	143719	139.99	167.14	8.4	16.7
1342.0	24.5	38.9	150	9.0	1.60	16.25	144087	149.12	167.11	8.4	16.7
1343.0	22.5	37.1	150	9.1	1.60	16.29	144487	162.31	167.10	8.4	16.7
1344.0	17.2	41.2	150	9.1	1.75	16.35	145009	212.02	167.19	8.4	16.7
1345.0	28.8	39.8	150	9.1	1.55	16.38	145322	126.81	167.11	8.4	16.7
1346.0	16.7	39.8	150	9.1	1.74	16.44	145862	219.12	167.21	8.4	16.7
1347.0	31.3	40.1	150	9.1	1.53	16.48	146149	116.66	167.11	8.4	16.7
1348.0	13.6	39.7	150	9.1	1.80	16.55	146809	267.81	167.31	8.4	16.7
1349.0	19.3	39.3	150	9.1	1.68	16.60	147277	189.70	167.36	8.4	16.7
1350.0	13.4	39.2	150	9.1	1.80	16.68	147949	272.89	167.57	8.4	16.7
1351.0	22.0	41.5	150	9.0	1.67	16.72	148359	166.37	167.57	8.4	16.7
1352.0	24.8	42.5	150	9.1	1.64	16.76	148722	147.09	167.53	8.4	16.7
1353.0	33.3	41.3	150	9.1	1.52	16.79	148992	109.56	167.41	8.4	16.7
1354.0	27.7	40.2	150	9.0	1.57	16.83	149317	131.88	167.34	8.4	16.7
1355.0	25.7	38.8	150	9.1	1.58	16.87	149667	142.02	167.29	8.4	16.7
1356.0	34.0	40.2	150	9.1	1.50	16.90	149932	107.53	167.17	8.4	16.7
1357.0	23.4	40.3	150	9.1	1.63	16.94	150317	156.22	167.15	8.4	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1308.0	22.8	38.9	150	9.1	1.62	14.77	130809	160.28	167.76	8.4	16.6
1309.0	20.6	39.4	150	9.0	1.66	14.82	131246	177.53	167.78	8.4	16.6
1310.0	35.6	38.2	150	9.0	1.46	14.85	131499	102.46	167.63	8.4	16.6
1311.0	19.3	38.7	150	9.1	1.67	14.90	131966	189.70	167.68	8.4	16.6
1312.0	18.3	40.1	150	9.1	1.71	14.95	132459	199.85	167.75	8.4	16.6
1313.0	18.3	38.2	150	9.1	1.69	15.01	132951	199.85	167.82	8.4	16.6
1314.0	27.9	37.1	150	9.0	1.53	15.04	133274	130.86	167.74	8.4	16.6
1315.0	23.2	35.5	150	9.1	1.57	15.09	133661	157.24	167.72	8.4	16.6
1316.0	33.6	38.9	150	9.1	1.49	15.12	133929	108.55	167.59	8.4	16.6
1317.0	38.3	38.3	150	9.0	1.44	15.14	134164	95.36	167.43	8.4	16.7
1318.0	27.7	39.9	150	9.0	1.57	15.18	134489	131.88	167.36	8.4	16.7
1319.0	39.1	39.1	150	9.0	1.44	15.21	134719	93.33	167.20	8.4	16.7
1320.0	19.9	39.1	150	9.1	1.67	15.26	135171	183.61	167.23	8.4	16.7
1321.0	21.7	39.9	150	9.1	1.65	15.30	135586	168.40	167.24	8.4	16.7
1322.0	34.0	39.1	150	9.1	1.49	15.33	135851	107.53	167.11	8.4	16.7
1323.0	18.3	38.9	150	9.1	1.69	15.39	136344	199.85	167.18	8.4	16.7
1324.0	24.7	39.3	150	9.1	1.57	15.42	136681	136.95	167.11	8.4	16.7
1325.0	19.7	34.4	150	9.1	1.61	15.47	137138	185.44	167.15	8.4	16.7
1326.0	18.0	34.2	150	9.1	1.64	15.53	137638	202.89	167.23	8.4	16.7
1327.0	31.0	34.0	150	9.1	1.46	15.56	137928	117.68	167.12	8.4	16.7
1328.0	36.0	33.7	150	9.1	1.40	15.59	138178	101.44	166.98	8.4	16.7
1329.0	22.1	32.9	150	9.1	1.55	15.64	138586	165.35	166.98	8.4	16.7
1330.0	22.1	33.0	150	9.1	1.55	15.68	138993	165.35	166.98	8.4	16.7
1331.0	24.7	32.8	150	9.0	1.52	15.72	139358	148.11	166.94	8.4	16.7
1332.0	26.5	32.0	150	9.1	1.48	15.76	139698	137.96	166.88	8.4	16.7
1333.0	18.2	33.2	150	9.1	1.62	15.81	140193	200.86	166.95	8.4	16.7
1334.0	16.8	32.9	150	9.1	1.64	15.87	140728	217.09	167.05	8.4	16.7
1335.0	22.4	34.8	150	9.1	1.57	15.92	141131	163.33	167.05	8.4	16.7
1336.0	23.8	36.4	150	9.0	1.57	15.96	141509	153.69	167.02	8.4	16.7
1337.0	16.4	36.2	150	9.0	1.69	16.02	142057	222.16	167.13	8.4	16.7
1338.0	15.5	36.3	150	9.1	1.71	16.09	142637	235.35	167.27	8.4	16.7
1339.0	28.1	37.0	150	9.0	1.53	16.12	142957	129.85	167.20	8.4	16.7
1340.0	21.6	38.0	150	9.0	1.63	16.17	143374	169.41	167.20	8.4	16.7
1341.0	26.1	37.5	150	9.0	1.56	16.21	143719	139.99	167.14	8.4	16.7
1342.0	24.5	38.9	150	9.0	1.60	16.25	144087	149.12	167.11	8.4	16.7
1343.0	22.5	37.1	150	9.1	1.60	16.29	144487	162.31	167.10	8.4	16.7
1344.0	17.2	41.2	150	9.1	1.75	16.35	145009	212.02	167.19	8.4	16.7
1345.0	28.8	39.8	150	9.1	1.55	16.38	145322	126.81	167.11	8.4	16.7
1346.0	16.7	39.8	150	9.1	1.74	16.44	145862	219.12	167.21	8.4	16.7
1347.0	31.3	40.1	150	9.1	1.53	16.48	146149	116.66	167.11	8.4	16.7
1348.0	13.6	39.7	150	9.1	1.80	16.55	146809	267.81	167.31	8.4	16.7
1349.0	19.3	39.3	150	9.1	1.68	16.60	147277	189.70	167.36	8.4	16.7
1350.0	13.4	39.2	150	9.1	1.80	16.68	147949	272.89	167.57	8.4	16.7
1351.0	22.0	41.5	150	9.0	1.67	16.72	148359	166.37	167.57	8.4	16.7
1352.0	24.8	42.5	150	9.1	1.64	16.76	148722	147.09	167.53	8.4	16.7
1353.0	33.3	41.3	150	9.1	1.52	16.79	148992	109.56	167.41	8.4	16.7
1354.0	27.7	40.2	150	9.0	1.57	16.83	149317	131.88	167.34	8.4	16.7
1355.0	25.7	38.8	150	9.1	1.58	16.87	149667	142.02	167.29	8.4	16.7
1356.0	34.0	40.2	150	9.1	1.50	16.90	149932	107.53	167.17	8.4	16.7
1357.0	23.4	40.3	150	9.1	1.63	16.94	150317	156.22	167.15	8.4	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1308.0	22.8	38.9	150	9.1	1.62	14.77	130809	160.28	167.74	8.4	16.6
1309.0	20.6	39.4	150	9.0	1.66	14.82	131246	177.53	167.78	8.4	16.6
1310.0	35.6	38.2	150	9.0	1.46	14.85	131499	102.46	167.63	8.4	16.6
1311.0	19.3	38.7	150	9.1	1.67	14.90	131966	189.70	167.68	8.4	16.6
1312.0	18.3	40.1	150	9.1	1.71	14.95	132459	199.85	167.75	8.4	16.6
1313.0	18.3	38.2	150	9.1	1.69	15.01	132951	199.85	167.82	8.4	16.6
1314.0	27.9	37.1	150	9.0	1.53	15.04	133274	130.86	167.74	8.4	16.6
1315.0	23.2	35.5	150	9.1	1.57	15.09	133661	157.24	167.72	8.4	16.6
1316.0	33.6	38.9	150	9.1	1.49	15.12	133929	108.55	167.59	8.4	16.6
1317.0	38.3	38.3	150	9.0	1.44	15.14	134164	95.36	167.43	8.4	16.7
1318.0	27.7	39.9	150	9.0	1.57	15.18	134489	131.88	167.36	8.4	16.7
1319.0	39.1	39.1	150	9.0	1.44	15.21	134719	93.33	167.20	8.4	16.7
1320.0	19.9	39.1	150	9.1	1.67	15.26	135171	183.61	167.23	8.4	16.7
1321.0	21.7	39.9	150	9.1	1.65	15.30	135586	168.40	167.24	8.4	16.7
1322.0	34.0	39.1	150	9.1	1.49	15.33	135851	107.53	167.11	8.4	16.7
1323.0	18.3	38.9	150	9.1	1.69	15.39	136344	199.85	167.18	8.4	16.7
1324.0	26.7	39.3	150	9.1	1.57	15.42	136681	136.95	167.11	8.4	16.7
1325.0	19.7	34.4	150	9.1	1.61	15.47	137138	185.44	167.15	8.4	16.7
1326.0	18.0	34.2	150	9.1	1.64	15.53	137638	202.89	167.23	8.4	16.7
1327.0	31.0	34.0	150	9.1	1.46	15.56	137928	117.68	167.12	8.4	16.7
1328.0	34.0	33.7	150	9.1	1.40	15.59	138178	101.44	166.98	8.4	16.7
1329.0	22.1	32.9	150	9.1	1.55	15.64	138586	165.35	166.98	8.4	16.7
1330.0	22.1	33.0	150	9.1	1.55	15.68	138993	165.35	166.98	8.4	16.7
1331.0	24.7	32.8	150	9.0	1.52	15.72	139358	148.11	166.94	8.4	16.7
1332.0	26.5	32.0	150	9.1	1.48	15.76	139698	137.96	166.88	8.4	16.7
1333.0	18.2	33.2	150	9.1	1.62	15.81	140193	200.86	166.95	8.4	16.7
1334.0	16.8	32.9	150	9.1	1.64	15.87	140728	217.09	167.05	8.4	16.7
1335.0	22.4	34.8	150	9.1	1.57	15.92	141131	163.33	167.05	8.4	16.7
1336.0	23.8	36.4	150	9.0	1.57	15.96	141509	153.69	167.02	8.4	16.7
1337.0	16.4	36.2	150	9.0	1.69	16.02	142057	222.16	167.13	8.4	16.7
1338.0	15.5	36.3	150	9.1	1.71	16.09	142637	235.35	167.27	8.4	16.7
1339.0	28.1	37.0	150	9.0	1.53	16.12	142957	129.85	167.20	8.4	16.7
1340.0	21.6	38.0	150	9.0	1.63	16.17	143374	169.41	167.20	8.4	16.7
1341.0	26.1	37.5	150	9.0	1.56	16.21	143719	139.99	167.14	8.4	16.7
1342.0	24.5	38.9	150	9.0	1.60	16.25	144087	149.12	167.11	8.4	16.7
1343.0	22.5	37.1	150	9.1	1.60	16.29	144487	162.31	167.10	8.4	16.7
1344.0	17.2	41.2	150	9.1	1.75	16.35	145009	212.02	167.19	8.4	16.7
1345.0	28.8	39.8	150	9.1	1.55	16.38	145322	126.81	167.11	8.4	16.7
1346.0	16.7	39.8	150	9.1	1.74	16.44	145862	219.12	167.21	8.4	16.7
1347.0	31.3	40.1	150	9.1	1.53	16.48	146149	116.66	167.11	8.4	16.7
1348.0	13.6	39.7	150	9.1	1.80	16.55	146809	267.81	167.31	8.4	16.7
1349.0	19.3	39.3	150	9.1	1.68	16.60	147277	189.70	167.36	8.4	16.7
1350.0	13.4	39.2	150	9.1	1.80	16.68	147949	272.89	167.57	8.4	16.7
1351.0	22.0	41.5	150	9.0	1.67	16.72	148359	166.37	167.57	8.4	16.7
1352.0	24.8	42.5	150	9.1	1.64	16.76	148722	147.09	167.53	8.4	16.7
1353.0	33.3	41.3	150	9.1	1.52	16.79	148992	109.56	167.41	8.4	16.7
1354.0	27.7	40.2	150	9.0	1.57	16.83	149317	131.88	167.34	8.4	16.7
1355.0	25.7	38.8	150	9.1	1.58	16.87	149667	142.02	167.29	8.4	16.7
1356.0	34.0	40.2	150	9.1	1.50	16.90	149932	107.53	167.17	8.4	16.7
1357.0	23.4	40.3	150	9.1	1.63	16.94	150317	156.22	167.15	8.4	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1358.0	15.4	37.4	150	9.1	1.73	17.00	150902	237.38	167.29	8.4	16.7
1359.0	32.7	38.9	150	9.0	1.50	17.03	151177	111.59	167.18	8.4	16.7
1360.0	29.5	38.0	150	9.1	1.52	17.07	151482	123.76	167.09	8.4	16.7
1361.0	30.3	37.6	150	9.0	1.51	17.10	151779	120.72	167.00	8.4	16.7
1362.0	27.1	35.3	150	9.1	1.52	17.14	152112	134.92	166.94	8.4	16.7
1363.0	19.1	36.1	150	9.1	1.64	17.19	152582	190.72	166.99	8.4	16.7
1364.0	26.9	38.7	150	9.1	1.56	17.23	152917	135.94	166.92	8.4	16.7
1365.0	16.0	39.0	150	9.1	1.74	17.29	153479	228.25	167.04	8.4	16.7
1366.0	18.1	38.8	150	9.1	1.70	17.35	153977	201.87	167.11	8.4	16.7
1367.0	21.8	38.9	150	9.0	1.63	17.39	154389	167.38	167.11	8.4	16.7
1368.0	26.3	38.6	150	9.0	1.57	17.43	154732	138.98	167.06	8.4	16.8
1369.0	28.6	38.8	150	9.1	1.54	17.46	155047	127.82	166.98	8.4	16.8
1370.0	29.3	38.1	150	9.1	1.53	17.50	155354	124.78	166.90	8.4	16.8
1371.0	35.0	37.8	150	9.0	1.46	17.53	155612	104.49	166.78	8.4	16.8
1372.0	32.7	38.4	150	9.0	1.49	17.56	155887	111.59	166.67	8.4	16.8
1373.0	23.6	38.8	150	9.0	1.61	17.60	156268	154.70	166.65	8.4	16.8
1374.0	32.4	38.8	150	9.0	1.50	17.63	156546	112.60	166.54	8.4	16.8
1375.0	21.2	38.6	150	9.1	1.64	17.68	156971	172.46	166.56	8.4	16.8
1376.0	37.9	38.5	150	9.1	1.44	17.70	157208	96.37	166.42	8.4	16.8
1377.0	37.5	37.8	150	9.1	1.44	17.73	157448	97.39	166.29	8.4	16.8
1378.0	29.9	36.5	150	9.1	1.50	17.76	157749	122.24	166.21	8.4	16.8
1379.0	43.4	37.5	150	9.0	1.39	17.79	157957	84.20	166.05	8.4	16.8
1380.0	54.5	37.6	150	9.0	1.31	17.81	158122	66.95	165.86	8.4	16.8
1381.0	12.5	38.3	150	9.1	1.81	17.89	158842	292.16	166.16	8.4	16.8
1382.0	77.1	39.6	150	9.0	1.21	17.90	158959	47.34	165.87	8.4	16.8
1383.0	34.6	38.2	150	9.1	1.47	17.93	159219	105.50	165.76	8.4	16.8
1384.0	64.3	37.8	150	9.0	1.26	17.94	159359	56.81	165.55	8.4	16.8
1385.0	40.9	37.6	150	9.1	1.41	17.97	159579	89.27	165.41	8.4	16.8
1386.0	37.5	38.1	150	9.1	1.44	17.99	159819	97.39	165.28	8.4	16.8
1387.0	22.4	39.0	150	9.1	1.63	18.04	160221	163.33	165.28	8.4	16.8
1388.0	36.0	39.5	150	9.1	1.47	18.07	160471	101.44	165.16	8.4	16.8
1389.0	28.3	39.0	150	9.1	1.55	18.10	160789	128.83	165.09	8.4	16.8
1390.0	41.9	39.4	150	9.1	1.42	18.13	161004	87.24	164.95	8.4	16.8
1391.0	53.7	38.4	150	9.0	1.33	18.14	161171	67.97	164.76	8.4	16.8
1392.0	56.1	35.3	150	9.1	1.28	18.16	161331	65.06	164.58	8.4	16.8
1393.0	50.0	38.0	150	9.1	1.35	18.18	161511	73.04	164.41	8.4	16.8
1394.0	62.1	37.9	150	9.0	1.27	18.20	161656	58.84	164.21	8.4	16.8
1395.0	73.5	37.7	150	9.0	1.21	18.21	161779	49.71	164.00	8.4	16.8
1396.0	41.9	37.2	150	9.1	1.40	18.24	161994	87.24	163.86	8.4	16.8
1397.0	58.1	37.4	150	9.1	1.29	18.25	162149	62.90	163.67	8.4	16.8
1398.0	47.4	37.8	150	9.0	1.36	18.27	162339	77.10	163.51	8.4	16.8
1399.0	30.5	38.5	150	9.0	1.52	18.31	162634	119.70	163.43	8.4	16.8
1399.5	52.9	39.0	150	9.1	1.34	18.32	162719	68.98	163.35	8.4	16.8
1400.0	54.5	38.5	150	9.1	1.32	18.33	162801	66.95	163.26	8.4	16.8
1401.0	48.6	38.7	150	9.0	1.36	18.35	162986	75.07	163.10	8.4	16.8
1402.0	32.7	39.6	150	9.0	1.51	18.38	163261	111.59	163.00	8.4	16.8
1403.0	33.3	37.2	150	9.1	1.47	18.41	163531	109.56	162.90	8.4	16.8
1404.0	30.3	35.6	150	9.0	1.48	18.44	163829	120.72	162.83	8.4	16.8
1405.0	50.7	37.9	150	9.1	1.34	18.46	164006	72.03	162.66	8.4	16.8
1406.0	43.9	38.4	150	9.1	1.39	18.48	164211	83.18	162.52	8.4	16.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1407.0	51.4	38.7	150	9.1	1.34	18.50	164386	71.01	162.35	8.4	16.8
1408.0	34.3	39.6	150	9.1	1.49	18.53	164649	106.52	162.25	8.4	16.8
1409.0	47.4	40.3	150	9.0	1.39	18.55	164839	77.10	162.10	8.4	16.8
1410.0	46.2	40.0	150	9.1	1.39	18.57	165034	79.13	161.95	8.4	16.8
1411.0	51.4	39.7	150	9.1	1.35	18.59	165209	71.01	161.78	8.4	16.8
1412.0	39.1	38.4	150	9.0	1.43	18.62	165439	93.33	161.66	8.4	16.8
1413.0	48.0	36.4	150	9.0	1.34	18.64	165626	76.08	161.51	8.4	16.8
1414.0	60.0	38.7	150	9.1	1.29	18.66	165776	60.87	161.33	8.4	16.8
1415.0	50.0	39.8	150	9.1	1.36	18.68	165956	73.04	161.17	8.4	16.8
1416.0	42.4	40.3	150	9.0	1.43	18.70	166169	86.23	161.04	8.4	16.8
1417.0	60.0	39.8	150	9.1	1.30	18.72	166319	60.87	160.86	8.4	16.8
1418.0	39.1	40.0	150	9.0	1.45	18.74	166549	93.33	160.74	8.4	16.8
1419.0	51.4	40.6	150	9.1	1.36	18.76	166724	71.01	160.58	8.4	16.8
1420.0	45.0	40.2	150	9.1	1.40	18.78	166924	81.16	160.44	8.4	16.9
1421.0	56.2	40.1	150	9.0	1.33	18.80	167084	64.92	160.27	8.4	16.9
1422.0	39.6	40.1	150	9.1	1.45	18.83	167311	92.31	160.15	8.4	16.9
1423.0	45.0	35.7	150	9.1	1.35	18.85	167511	81.16	160.01	8.4	16.9
1424.0	41.4	34.7	150	9.1	1.37	18.87	167729	88.26	159.89	8.4	16.9
1425.0	50.7	37.5	150	9.1	1.33	18.89	167906	72.03	159.73	8.4	16.9
1426.0	41.4	39.0	150	9.1	1.42	18.92	168124	88.26	159.61	8.4	16.9
1427.0	50.7	41.7	150	9.1	1.38	18.94	168301	72.03	159.45	8.4	16.9
1428.0	40.0	41.2	150	9.1	1.46	18.96	168526	91.30	159.33	8.4	16.9
1429.0	48.6	39.9	150	9.0	1.37	18.98	168711	75.07	159.19	8.4	16.9
1430.0	34.6	38.8	150	9.1	1.48	19.01	168971	105.50	159.09	8.4	16.9
1431.0	57.1	38.3	150	9.1	1.30	19.03	169129	63.91	158.93	8.4	16.9
1432.0	52.0	37.0	150	9.1	1.31	19.05	169302	70.23	158.77	8.4	16.9
1433.0	60.5	33.3	150	9.0	1.23	19.06	169451	60.36	158.60	8.4	16.9
1434.0	33.6	36.3	150	9.1	1.46	19.09	169718	108.55	158.52	8.4	16.9
1435.0	52.2	36.9	150	9.1	1.32	19.11	169891	70.00	158.37	8.4	16.9
1436.0	45.0	37.2	150	9.1	1.37	19.14	170091	81.16	158.23	8.4	16.9
1437.0	48.0	37.1	150	9.0	1.35	19.16	170278	76.08	158.09	8.4	16.9
1438.0	40.4	37.2	150	9.1	1.41	19.18	170501	90.29	157.98	8.4	16.9
1439.0	46.8	37.8	150	9.1	1.37	19.20	170693	78.11	157.84	8.4	16.9
1440.0	49.3	37.6	150	9.1	1.34	19.22	170876	74.05	157.70	8.4	16.9
1441.0	37.1	37.7	150	9.1	1.44	19.25	171118	98.40	157.59	8.4	16.9
1442.0	37.2	37.9	150	9.1	1.44	19.28	171360	98.06	157.49	8.4	16.9
1443.0	42.4	38.7	150	9.0	1.41	19.30	171572	86.23	157.37	8.4	16.9
1444.0	53.5	38.8	150	9.0	1.33	19.32	171741	68.31	157.22	8.4	16.9
1445.0	50.0	38.3	150	9.1	1.35	19.34	171921	73.04	157.08	8.4	16.9
1446.0	29.5	39.0	150	9.1	1.53	19.37	172226	123.76	157.02	8.4	16.9
1447.0	40.9	39.8	150	9.1	1.43	19.40	172446	89.27	156.91	8.4	16.9
1448.0	29.0	40.3	150	9.1	1.56	19.43	172756	125.79	156.85	8.4	16.9
1449.0	43.9	40.4	150	9.1	1.42	19.45	172961	83.18	156.73	8.4	16.9
1450.0	48.6	39.8	150	9.0	1.37	19.48	173146	75.07	156.59	8.4	16.9
1451.0	54.5	39.8	150	9.0	1.33	19.49	173311	66.95	156.44	8.4	16.9
1452.0	60.0	39.2	150	9.1	1.30	19.51	173461	60.87	156.28	8.4	16.9
1453.0	22.9	41.4	150	9.0	1.65	19.55	173853	159.27	156.29	8.4	16.9
1454.0	44.4	41.8	150	9.1	1.43	19.58	174056	82.17	156.16	8.4	16.9
1455.0	24.0	41.4	150	9.1	1.63	19.62	174431	152.17	156.16	8.4	16.9
1456.0	33.8	40.0	150	9.0	1.50	19.65	174697	108.04	156.08	8.4	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1457.0	52.9	38.8	150	9.1	1.33	19.67	174867	68.98	155.93	8.4	16.9
1458.0	28.6	40.1	150	9.1	1.56	19.70	175182	127.82	155.89	8.4	16.9
1459.0	41.9	40.8	150	9.1	1.44	19.73	175397	87.24	155.77	8.4	16.9
1460.0	28.8	40.9	150	9.1	1.57	19.76	175709	126.81	155.72	8.4	16.9
1461.0	48.6	39.2	150	9.0	1.37	19.78	175894	75.07	155.59	8.4	16.9
1462.0	18.0	44.0	150	9.1	1.77	19.84	176394	202.89	155.67	8.4	16.9
1463.0	41.9	42.4	150	9.1	1.45	19.86	176609	87.24	155.56	8.4	16.9
1464.0	30.8	41.9	150	9.1	1.55	19.89	176902	118.69	155.50	8.4	16.9
1465.0	45.6	41.0	150	9.1	1.41	19.91	177099	80.14	155.37	8.4	16.9
1466.0	25.7	42.2	150	9.1	1.62	19.95	177449	142.02	155.35	8.4	16.9
1467.0	31.3	41.6	150	9.1	1.54	19.99	177737	116.66	155.29	8.4	16.9
1468.0	34.0	42.1	150	9.1	1.52	20.01	178002	107.53	155.21	8.4	16.9
1469.0	23.2	41.6	150	9.1	1.65	20.06	178389	157.24	155.21	8.4	16.9
1470.0	24.7	38.3	150	9.1	1.59	20.10	178753	147.66	155.20	8.4	16.9
1471.0	22.0	40.6	150	9.0	1.65	20.14	179163	166.37	155.22	8.4	16.9
1472.0	30.0	41.9	150	9.0	1.56	20.18	179463	121.73	155.16	8.4	16.9
1473.0	43.9	41.7	150	9.1	1.43	20.20	179668	83.18	155.05	8.4	16.9
1474.0	37.5	40.8	150	9.1	1.47	20.23	179908	97.39	154.95	8.4	17.0
1475.0	34.0	40.9	150	9.1	1.51	20.26	180173	107.53	154.88	8.4	17.0
1476.0	24.7	41.4	150	9.0	1.62	20.30	180538	148.11	154.87	8.4	17.0
1477.0	45.0	41.6	150	9.1	1.42	20.32	180738	81.16	154.75	8.4	17.0
1478.0	31.0	41.4	150	9.1	1.55	20.35	181028	117.68	154.69	8.4	17.0
1479.0	43.9	41.6	150	9.1	1.43	20.37	181233	83.18	154.57	8.4	17.0
1480.0	36.4	39.8	150	9.1	1.47	20.40	181481	100.43	154.49	8.4	17.0
1481.0	45.0	37.4	150	9.1	1.37	20.42	181681	81.16	154.37	8.4	17.0
1482.0	44.4	39.2	150	9.1	1.40	20.45	181883	82.17	154.26	8.4	17.0
1483.0	37.9	40.3	150	9.1	1.46	20.47	182121	96.37	154.16	8.4	17.0
1484.0	60.0	40.5	150	9.1	1.31	20.49	182271	60.87	154.02	8.4	17.0
1485.0	44.4	40.3	150	9.1	1.41	20.51	182473	82.17	153.90	8.4	17.0
1486.0	46.2	40.8	150	9.1	1.40	20.53	182668	79.13	153.78	8.4	17.0
1487.0	34.3	41.7	150	9.1	1.51	20.56	182931	106.52	153.71	8.4	17.0
1488.0	34.0	42.7	150	9.1	1.53	20.59	183196	107.53	153.63	8.4	17.0
1489.0	50.0	42.7	150	9.1	1.39	20.61	183376	73.04	153.51	8.4	17.0
1490.0	43.9	42.8	150	9.1	1.44	20.63	183581	83.18	153.46	8.4	17.0
1491.0	30.0	42.5	150	9.0	1.57	20.67	183881	121.73	153.35	8.4	17.0
1492.0	40.0	42.6	150	9.1	1.47	20.69	184106	91.30	153.25	8.4	17.0
1493.0	40.0	42.8	150	9.1	1.47	20.72	184331	91.30	153.15	8.4	17.0
1493.5	40.0	42.9	150	9.1	1.47	20.73	184443	91.30	153.10	8.4	17.0
1494.0	24.3	43.0	150	9.0	1.65	20.75	184628	150.14	153.10	8.4	17.0
1494.5	51.4	43.1	150	9.1	1.39	20.76	184716	71.01	153.04	8.4	17.0
1495.0	46.2	42.7	150	9.1	1.42	20.77	184813	79.13	152.98	8.4	17.0
1496.0	23.4	42.7	150	9.1	1.66	20.81	185198	156.22	152.99	8.4	17.0
1497.0	43.4	42.5	150	9.0	1.44	20.84	185406	84.20	152.88	8.4	17.0
1498.0	33.6	41.9	150	9.1	1.52	20.87	185673	108.55	152.81	8.4	17.0
1499.0	34.6	40.0	150	9.1	1.49	20.90	185933	105.50	152.74	8.4	17.0
1500.0	50.7	40.5	150	9.1	1.37	20.92	186111	72.03	152.61	8.4	17.0
1501.0	22.5	42.1	150	9.1	1.67	20.96	186511	162.31	152.63	8.4	17.0
1502.0	40.0	41.9	150	9.1	1.46	20.99	186736	91.30	152.53	8.4	17.0
1503.0	30.5	42.1	150	9.0	1.56	21.02	187031	119.70	152.48	8.4	17.0
1504.0	44.4	42.1	150	9.1	1.43	21.04	187233	82.17	152.37	8.4	17.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1506.0	15.8	42.6	150	9.1	1.79	21.17	188373	231.29	152.61	8.4	17.0
1507.0	35.3	43.4	150	9.0	1.52	21.20	188628	103.47	152.54	8.4	17.0
1508.0	38.3	43.2	150	9.0	1.49	21.22	188863	95.36	152.45	8.4	17.0
1509.0	35.0	42.3	150	9.0	1.51	21.25	189121	104.49	152.38	8.4	17.0
1510.0	39.6	40.6	150	9.1	1.45	21.28	189348	92.31	152.29	8.4	17.0
1511.0	50.7	41.0	150	9.1	1.37	21.30	189526	72.03	152.16	8.4	17.0
1512.0	40.0	41.0	150	9.1	1.45	21.32	189751	91.30	152.07	8.4	17.0
1513.0	41.0	40.9	150	9.1	1.44	21.34	189970	89.07	151.98	8.4	17.0
1514.0	37.9	41.2	150	9.1	1.47	21.37	190208	96.37	151.89	8.4	17.0
1515.0	40.6	41.9	150	9.1	1.46	21.40	190429	89.95	151.80	8.4	17.0
1516.0	56.2	40.6	150	9.0	1.33	21.41	190589	64.92	151.67	8.4	17.0
1517.0	23.5	42.9	150	9.1	1.66	21.46	190972	155.21	151.67	8.4	17.0
1518.0	25.0	41.4	150	9.1	1.62	21.50	191332	146.08	151.66	8.4	17.0
1519.0	20.2	38.6	150	9.1	1.66	21.55	191777	180.57	151.71	8.4	17.0
1520.0	26.5	36.4	150	9.1	1.54	21.58	192117	137.96	151.69	8.4	17.0
1521.0	25.7	35.4	150	9.1	1.53	21.62	192467	142.02	151.67	8.4	17.0
1522.0	22.5	37.3	150	9.1	1.60	21.67	192867	162.31	151.69	8.4	17.0
1523.0	29.0	38.4	150	9.1	1.53	21.70	193177	125.79	151.65	8.4	17.0
1524.0	37.5	38.4	150	9.1	1.45	21.73	193417	97.39	151.57	8.4	17.0
1525.0	32.7	38.6	150	9.0	1.49	21.76	193692	111.59	151.51	8.4	17.0
1526.0	17.2	39.1	150	9.1	1.72	21.82	194214	212.02	151.60	8.4	17.0
1527.0	23.1	39.7	150	9.0	1.63	21.86	194604	158.25	151.61	8.4	17.0
1528.0	24.7	39.2	150	9.0	1.60	21.90	194969	148.11	151.60	8.4	17.0
1529.0	35.0	38.0	150	9.2	1.44	21.93	195227	104.34	151.53	8.4	17.0
1530.0	36.5	36.6	150	9.1	1.42	21.96	195473	100.00	151.46	8.4	17.1
1531.0	33.6	37.7	150	9.2	1.46	21.99	195741	108.55	151.39	8.4	17.1
1532.0	38.7	38.4	150	9.2	1.42	22.01	195973	94.34	151.31	8.4	17.1
1533.0	26.3	38.7	150	9.2	1.55	22.05	196316	138.98	151.29	8.4	17.1
1534.0	43.9	38.5	150	9.2	1.38	22.07	196521	83.18	151.19	8.4	17.1
1535.0	27.5	38.8	150	9.1	1.54	22.11	196848	132.89	151.16	8.4	17.1
1536.0	50.0	38.2	150	9.2	1.33	22.13	197028	73.04	151.05	8.4	17.1
1537.0	28.3	38.4	150	9.2	1.52	22.16	197346	128.83	151.02	8.4	17.1
1538.0	31.3	39.2	150	9.1	1.50	22.20	197633	116.66	150.97	8.4	17.1
1539.0	15.0	31.3	150	9.2	1.63	22.26	198233	243.47	151.10	8.4	17.1
1540.0	13.4	25.3	150	9.1	1.57	22.34	198907	273.39	151.28	8.4	17.1
1541.0	15.7	28.3	150	9.2	1.57	22.40	199479	232.31	151.40	8.4	17.1
1542.0	20.7	27.6	150	9.2	1.48	22.45	199914	176.51	151.43	8.4	17.1
1543.0	23.4	26.6	150	9.2	1.43	22.49	200299	156.22	151.44	8.4	17.1
1544.0	12.9	26.4	150	9.2	1.60	22.57	200994	282.02	151.63	8.4	17.1
1545.0	18.6	25.7	150	9.1	1.48	22.62	201479	196.80	151.70	8.4	17.1
1546.0	16.4	32.6	150	9.1	1.63	22.68	202029	223.18	151.80	8.4	17.1
1547.0	31.6	38.2	150	9.1	1.48	22.72	202314	115.65	151.75	8.4	17.1

BIT NUMBER	3	IADC CODE	116	INTERVAL	1547.0- 1914.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.1	BIT RUN	367.0
TOTAL HOURS	11.49	TOTAL TURNS	103398	CONDITION	T2 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1548.0	35.2	25.2	150	9.3	1.27	0.03	256	104	25075	8.4	17.1
1549.0	31.8	27.4	150	9.3	1.33	0.06	539	115	12595	8.4	17.1
1550.0	24.5	27.1	150	9.3	1.40	0.10	906	149	8446	8.4	17.1
1551.0	38.3	27.5	150	9.3	1.27	0.13	1141	95	6359	8.4	17.1
1552.0	23.7	27.1	150	9.3	1.41	0.17	1521	154	5118	8.4	17.1
1553.0	33.3	26.7	150	9.3	1.30	0.20	1791	110	4283	8.4	17.1
1554.0	23.5	30.2	150	9.3	1.45	0.24	2174	155	3693	8.4	17.1
1555.0	32.4	29.9	150	9.3	1.35	0.27	2451	113	3246	8.4	17.1
1556.0	36.6	36.5	150	9.3	1.39	0.30	2697	100	2896	8.4	17.1
1557.0	24.0	34.7	150	9.3	1.51	0.34	3072	152	2622	8.4	17.1
1558.0	22.2	32.7	150	9.3	1.50	0.39	3477	164	2398	8.4	17.1
1559.0	47.4	34.0	150	9.3	1.28	0.41	3667	77	2205	8.4	17.1
1560.0	39.1	34.9	150	9.3	1.35	0.43	3897	93	2043	8.4	17.1
1560.5	41.9	35.2	150	9.3	1.34	0.44	4005	87	1970	8.4	17.1
1561.0	25.4	35.2	150	9.3	1.50	0.46	4182	144	1905	8.4	17.1
1561.5	25.7	36.1	150	9.3	1.50	0.48	4357	142	1844	8.4	17.1
1562.0	40.0	36.2	150	9.3	1.36	0.50	4470	91	1786	8.4	17.1
1562.5	36.0	35.9	150	9.3	1.39	0.51	4595	101	1731	8.4	17.1
1563.0	28.6	35.8	150	9.3	1.46	0.53	4752	128	1681	8.4	17.1
1564.0	29.8	36.1	150	9.3	1.46	0.56	5055	123	1590	8.4	17.1
1565.0	24.8	36.4	150	9.3	1.52	0.60	5417	147	1509	8.4	17.1
1566.0	45.6	36.1	150	9.3	1.32	0.62	5615	80	1434	8.4	17.1
1567.0	29.5	35.7	150	9.3	1.45	0.66	5920	124	1369	8.4	17.1
1568.0	30.0	34.9	150	9.3	1.44	0.69	6220	122	1309	8.4	17.1
1569.0	36.7	35.6	150	9.3	1.38	0.72	6465	99	1254	8.4	17.1
1570.0	45.0	36.0	150	9.3	1.32	0.74	6665	81	1203	8.4	17.1
1571.0	34.8	35.6	150	9.3	1.40	0.77	6923	105	1158	8.4	17.1
1572.0	31.9	35.6	150	9.3	1.43	0.80	7206	115	1116	8.4	17.1
1573.0	37.1	35.5	150	9.3	1.38	0.83	7448	98	1077	8.4	17.1
1574.0	28.3	36.0	150	9.3	1.47	0.86	7766	129	1042	8.4	17.1
1575.0	40.4	36.0	150	9.3	1.36	0.89	7988	90	1008	8.4	17.1
1576.0	55.4	35.5	150	9.3	1.25	0.91	8151	65.94	975.13	8.4	17.1
1577.0	23.1	35.3	150	9.3	1.53	0.95	8541	158.25	947.90	8.4	17.1
1578.0	45.0	35.9	150	9.3	1.32	0.97	8741	81.16	919.94	8.4	17.1
1579.0	32.4	36.7	150	9.3	1.44	1.00	9019	112.81	894.72	8.4	17.1
1580.0	28.6	36.8	150	9.3	1.48	1.04	9334	127.82	871.48	8.4	17.1
1581.0	39.1	36.7	150	9.3	1.37	1.06	9564	93.33	848.59	8.4	17.1
1582.0	39.1	36.6	150	9.3	1.37	1.09	9794	93.33	827.01	8.4	17.1
1583.0	22.2	36.7	150	9.3	1.56	1.13	10199	164.34	808.60	8.4	17.1
1584.0	36.0	37.1	150	9.3	1.41	1.16	10449	101.44	789.49	8.4	17.1
1585.0	33.5	36.5	150	9.3	1.42	1.19	10718	109.05	771.58	8.4	17.1
1585.2	37.9	36.7	150	9.3	1.38	1.20	10765	96.37	768.05	8.4	17.1
1586.0	28.8	37.2	150	9.3	1.48	1.22	11015	126.81	754.90	8.4	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1587.0	29.5	32.7	150	9.3	1.42	1.26	11320	123.76	739.12	8.4	17.2
1588.0	33.3	31.9	150	9.3	1.37	1.29	11590	109.56	723.76	8.4	17.2
1589.0	27.5	31.0	150	9.3	1.42	1.32	11918	132.89	709.69	8.4	17.2
1590.0	35.0	31.7	150	9.3	1.35	1.35	12175	104.49	695.62	8.4	17.2
1591.0	27.1	31.5	150	9.3	1.43	1.39	12508	134.92	682.88	8.4	17.2
1592.0	34.3	31.6	150	9.3	1.36	1.42	12770	106.52	670.07	8.4	17.2
1593.0	24.5	31.5	150	9.3	1.46	1.46	13138	149.12	658.74	8.4	17.2
1594.0	35.0	31.7	150	9.3	1.35	1.49	13395	104.49	646.95	8.4	17.2
1595.0	22.4	31.6	150	9.3	1.49	1.53	13798	163.33	636.88	8.4	17.2
1596.0	31.3	32.6	150	9.3	1.40	1.57	14085	116.66	626.26	8.4	17.2
1597.0	28.6	35.0	150	9.3	1.46	1.60	14400	127.82	616.79	8.4	17.2
1598.0	31.9	33.0	150	9.3	1.40	1.63	14683	114.63	606.45	8.4	17.2
1599.0	27.3	32.6	150	9.3	1.44	1.67	15013	133.91	597.37	8.4	17.2
1600.0	34.0	32.7	150	9.3	1.37	1.70	15270	107.53	588.12	8.4	17.2
1601.0	22.6	33.9	150	9.3	1.51	1.74	15675	161.30	580.22	8.4	17.2
1602.0	27.7	32.8	150	9.3	1.44	1.78	16000	131.88	572.07	8.4	17.2
1603.0	26.9	33.3	150	9.3	1.45	1.82	16335	135.94	564.28	8.4	17.2
1604.0	34.6	33.3	150	9.3	1.37	1.84	16595	105.50	556.23	8.4	17.2
1605.0	26.9	33.0	150	9.3	1.45	1.88	16930	135.94	548.98	8.4	17.2
1606.0	27.7	32.0	150	9.3	1.43	1.92	17255	131.88	541.92	8.4	17.2
1607.0	26.9	33.7	150	9.3	1.46	1.95	17590	135.94	535.15	8.4	17.2
1608.0	37.9	33.6	150	9.3	1.35	1.98	17828	96.37	527.96	8.4	17.2
1609.0	27.3	33.9	150	9.3	1.46	2.02	18158	133.91	521.60	8.4	17.2
1610.0	34.6	33.8	150	9.3	1.38	2.05	18418	105.50	515.00	8.4	17.2
1611.0	28.3	33.7	150	9.3	1.44	2.08	18735	128.83	508.96	8.4	17.2
1612.0	31.6	34.0	150	9.3	1.41	2.11	19020	115.65	502.91	8.4	17.2
1613.0	23.2	34.3	150	9.3	1.51	2.16	19408	157.24	497.67	8.4	17.2
1614.0	32.1	34.6	150	9.3	1.41	2.19	19688	113.62	491.94	8.4	17.2
1615.0	24.0	33.8	150	9.3	1.50	2.23	20063	152.17	486.94	8.4	17.2
1616.0	34.0	39.2	150	9.3	1.45	2.26	20328	107.53	481.45	8.4	17.2
1617.0	33.6	39.4	150	9.3	1.45	2.29	20595	108.55	476.12	8.4	17.2
1618.0	22.8	39.9	150	9.3	1.59	2.33	20990	160.28	471.67	8.4	17.2
1619.0	22.6	36.2	150	9.3	1.54	2.38	21388	161.30	467.36	8.4	17.2
1620.0	18.6	35.4	150	9.3	1.60	2.43	21873	196.80	463.65	8.4	17.2
1621.0	31.6	37.9	150	9.3	1.46	2.46	22158	115.65	458.95	8.4	17.2
1622.0	21.8	38.8	150	9.3	1.59	2.51	22570	167.38	455.06	8.4	17.2
1623.0	32.4	34.7	150	9.3	1.41	2.54	22848	112.60	450.56	8.4	17.2
1624.0	21.4	33.2	150	9.3	1.52	2.59	23268	170.43	446.92	8.4	17.2
1625.0	31.3	31.6	150	9.3	1.38	2.62	23555	116.66	442.68	8.4	17.2
1626.0	27.3	31.3	150	9.3	1.42	2.65	23885	133.91	438.78	8.4	17.2
1627.0	30.3	29.8	150	9.3	1.37	2.69	24183	120.72	434.80	8.4	17.2
1628.0	32.1	29.3	150	9.3	1.35	2.72	24463	113.62	430.83	8.4	17.2
1629.0	36.4	31.4	150	9.3	1.33	2.75	24710	100.43	426.81	8.4	17.2
1630.0	34.3	32.1	150	9.3	1.36	2.77	24973	106.52	422.95	8.4	17.2
1631.0	40.4	32.7	150	9.3	1.32	2.80	25195	90.29	418.99	8.4	17.2
1632.0	27.9	33.1	150	9.3	1.44	2.84	25518	130.86	415.60	8.4	17.2
1633.0	39.6	33.8	150	9.3	1.34	2.86	25745	92.31	411.84	8.4	17.2
1634.0	30.0	33.4	150	9.3	1.42	2.89	26045	121.73	408.50	8.4	17.2
1635.0	19.7	32.9	150	9.3	1.55	2.94	26503	185.64	405.97	8.4	17.2
1636.0	18.0	28.4	150	9.3	1.51	3.00	27003	202.89	403.69	8.4	17.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1637.0	39.6	30.9	150	9.3	1.30	3.03	27230	92.31	400.23	8.4	17.2
1638.0	34.3	32.0	150	9.3	1.36	3.05	27493	106.52	397.00	8.4	17.2
1639.0	27.7	33.0	150	9.3	1.44	3.09	27818	131.88	394.12	8.4	17.2
1640.0	32.1	33.5	150	9.3	1.40	3.12	28098	113.62	391.10	8.4	17.2
1641.0	33.3	33.8	150	9.3	1.39	3.15	28368	109.56	388.11	8.4	17.2
1642.0	25.5	33.8	150	9.3	1.48	3.19	28720	143.04	385.53	8.4	17.2
1643.0	35.0	33.7	150	9.3	1.38	3.22	28978	104.49	382.60	8.4	17.2
1644.0	36.0	32.5	150	9.3	1.35	3.25	29228	101.44	379.70	8.4	17.2
1645.0	25.5	33.9	150	9.3	1.48	3.29	29580	143.04	377.29	8.4	17.2
1646.0	36.7	33.8	150	9.3	1.36	3.31	29825	99.42	374.48	8.4	17.2
1647.0	33.3	33.5	150	9.3	1.39	3.34	30095	109.56	371.83	8.4	17.3
1648.0	42.9	33.4	150	9.3	1.31	3.37	30305	85.21	368.99	8.4	17.3
1649.0	28.1	33.2	150	9.3	1.44	3.40	30625	129.85	366.65	8.4	17.3
1650.0	42.9	33.3	150	9.3	1.31	3.43	30835	85.21	363.92	8.4	17.3
1651.0	28.1	33.6	150	9.3	1.44	3.46	31155	129.85	361.67	8.4	17.3
1652.0	35.6	33.7	150	9.3	1.37	3.49	31408	102.46	359.20	8.4	17.3
1653.0	32.1	32.4	150	9.3	1.39	3.52	31688	113.62	356.88	8.4	17.3
1654.0	41.4	32.9	150	9.3	1.31	3.55	31905	88.26	354.37	8.4	17.3
1655.0	38.7	33.3	150	9.3	1.34	3.57	32138	94.34	351.96	8.4	17.3
1656.0	48.0	33.5	150	9.3	1.27	3.59	32325	76.08	349.43	8.4	17.3
1657.0	27.3	33.3	150	9.3	1.45	3.63	32655	133.91	347.47	8.4	17.3
1658.0	54.5	33.1	150	9.3	1.23	3.65	32820	66.95	344.95	8.4	17.3
1659.0	72.0	33.2	150	9.3	1.14	3.66	32945	50.72	342.32	8.4	17.3
1660.0	28.1	33.6	150	9.3	1.44	3.70	33265	129.85	340.44	8.4	17.3
1661.0	38.3	33.6	150	9.3	1.35	3.72	33500	95.36	338.29	8.4	17.3
1662.0	45.4	33.8	150	9.3	1.29	3.74	33699	80.48	336.05	8.4	17.3
1663.0	29.5	33.4	150	9.3	1.42	3.78	34004	123.76	334.22	8.4	17.3
1664.0	29.0	34.7	150	9.3	1.45	3.81	34314	125.79	332.43	8.4	17.3
1665.0	40.0	34.9	150	9.3	1.35	3.84	34539	91.30	330.39	8.4	17.3
1666.0	36.0	35.3	150	9.3	1.39	3.87	34789	101.44	328.47	8.4	17.3
1667.0	21.4	35.6	150	9.3	1.56	3.91	35209	170.43	327.15	8.4	17.3
1668.0	35.3	34.6	150	9.3	1.38	3.94	35464	103.47	325.30	8.4	17.3
1669.0	22.6	35.9	150	9.3	1.54	3.98	35861	161.30	323.96	8.4	17.3
1670.0	42.4	35.8	150	9.3	1.34	4.01	36074	86.23	322.02	8.4	17.3
1671.0	30.5	35.3	150	9.3	1.44	4.04	36369	119.70	320.39	8.4	17.3
1672.0	26.1	34.9	150	9.3	1.48	4.08	36714	139.99	318.95	8.4	17.3
1673.0	28.6	32.5	150	9.3	1.42	4.11	37029	127.82	317.43	8.4	17.3
1674.0	45.6	34.6	150	9.3	1.30	4.14	37226	80.14	315.56	8.4	17.3
1675.0	32.1	34.7	150	9.3	1.41	4.17	37506	113.62	313.99	8.4	17.3
1676.0	55.4	34.8	150	9.3	1.24	4.19	37669	65.94	312.06	8.4	17.3
1677.0	37.5	33.9	150	9.3	1.36	4.21	37909	97.39	310.41	8.4	17.3
1678.0	47.4	34.2	150	9.3	1.29	4.23	38099	77.10	308.63	8.4	17.3
1679.0	41.4	34.2	150	9.3	1.33	4.26	38316	88.26	306.96	8.4	17.3
1680.0	43.4	35.0	150	9.3	1.32	4.28	38523	84.15	305.29	8.4	17.3
1681.0	40.7	34.5	150	9.3	1.34	4.30	38745	89.78	303.68	8.4	17.3
1682.0	39.1	33.4	150	9.3	1.34	4.33	38975	93.33	302.12	8.4	17.3
1683.0	38.3	33.7	150	9.3	1.35	4.36	39210	95.36	300.60	8.4	17.3
1684.0	56.2	33.7	150	9.3	1.23	4.37	39370	64.92	298.88	8.4	17.3
1685.0	39.1	33.9	150	9.3	1.34	4.40	39600	93.33	297.39	8.4	17.3
1686.0	50.0	34.2	150	9.3	1.27	4.42	39780	73.04	295.78	8.4	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1687.0	41.4	34.1	150	9.3	1.33	4.44	39997	88.26	294.29	8.4	17.3
1688.0	51.4	34.0	150	9.3	1.26	4.46	40172	71.01	292.71	8.4	17.3
1689.0	41.9	34.3	150	9.3	1.33	4.49	40387	87.24	291.26	8.4	17.3
1690.0	52.9	34.0	150	9.3	1.25	4.51	40557	68.98	289.71	8.4	17.3
1691.0	38.7	34.4	150	9.3	1.35	4.53	40790	94.34	288.35	8.4	17.3
1692.0	55.4	29.7	150	9.3	1.19	4.55	40952	65.94	286.82	8.4	17.3
1693.0	42.9	33.6	150	9.3	1.31	4.57	41162	85.21	285.44	8.4	17.3
1694.0	37.5	34.8	150	9.3	1.37	4.60	41402	97.39	284.16	8.4	17.3
1695.0	45.0	35.1	150	9.3	1.31	4.62	41602	81.16	282.79	8.4	17.3
1696.0	42.4	35.1	150	9.3	1.33	4.65	41815	86.23	281.47	8.4	17.3
1697.0	54.5	34.7	150	9.3	1.25	4.66	41980	66.95	280.04	8.4	17.3
1698.0	35.6	34.3	150	9.3	1.38	4.69	42232	102.46	278.86	8.4	17.3
1699.0	49.3	34.9	150	9.3	1.28	4.71	42415	74.05	277.51	8.4	17.3
1700.0	50.7	32.2	150	9.3	1.24	4.73	42592	72.03	276.17	8.4	17.3
1701.0	38.3	32.8	150	9.3	1.34	4.76	42827	95.36	275.00	8.4	17.3
1702.0	45.0	32.5	150	9.3	1.28	4.78	43027	81.16	273.75	8.4	17.3
1703.0	31.9	30.0	150	9.3	1.36	4.81	43310	114.63	272.73	8.4	17.3
1704.0	45.0	32.5	150	9.3	1.28	4.83	43510	81.16	271.51	8.4	17.3
1705.0	36.7	33.5	150	9.3	1.36	4.86	43755	99.42	270.42	8.4	17.3
1706.0	35.3	33.7	150	9.3	1.37	4.89	44010	103.47	269.37	8.4	17.3
1707.0	40.0	35.0	150	9.3	1.35	4.91	44235	91.30	268.25	8.4	17.3
1707.5	60.0	35.6	150	9.3	1.23	4.92	44310	60.87	267.61	8.4	17.3
1708.0	51.4	35.3	150	9.3	1.27	4.93	44397	71.01	267.00	8.4	17.4
1708.5	38.3	35.1	150	9.3	1.36	4.95	44515	95.36	266.47	8.4	17.4
1709.0	43.9	33.9	150	9.3	1.31	4.96	44617	83.18	265.90	8.4	17.4
1710.0	50.0	33.8	150	9.3	1.26	4.98	44797	73.04	264.72	8.4	17.4
1711.0	24.7	31.1	150	9.3	1.45	5.02	45162	148.11	264.01	8.4	17.4
1712.0	67.3	28.7	150	9.3	1.12	5.03	45296	54.27	262.74	8.4	17.4
1713.0	47.4	30.0	150	9.3	1.24	5.05	45486	77.10	261.62	8.4	17.4
1714.0	54.5	30.5	150	9.3	1.20	5.07	45651	66.95	260.45	8.4	17.4
1715.0	38.3	30.1	150	9.3	1.30	5.10	45886	95.36	259.47	8.4	17.4
1716.0	50.0	29.9	150	9.3	1.22	5.12	46066	73.04	258.37	8.4	17.4
1717.0	43.4	30.8	150	9.3	1.27	5.14	46273	84.20	257.34	8.4	17.4
1718.0	48.0	31.5	150	9.3	1.25	5.16	46461	76.08	256.28	8.4	17.4
1719.0	49.3	31.3	150	9.3	1.24	5.18	46643	74.05	255.22	8.4	17.4
1720.0	57.1	31.0	150	9.3	1.19	5.20	46801	63.91	254.12	8.4	17.4
1721.0	42.0	34.1	150	9.3	1.32	5.22	47015	86.95	253.15	8.4	17.4
1722.0	48.0	32.3	150	9.3	1.26	5.24	47203	76.08	252.14	8.4	17.4
1723.0	60.0	32.5	150	9.3	1.19	5.26	47353	60.87	251.06	8.4	17.4
1724.0	38.7	32.9	150	9.3	1.33	5.29	47585	94.34	250.17	8.4	17.4
1725.0	43.9	33.2	150	9.3	1.30	5.31	47790	83.18	249.23	8.4	17.4
1726.0	26.7	34.2	150	9.3	1.47	5.35	48128	136.95	248.61	8.4	17.4
1727.0	48.0	34.1	150	9.3	1.28	5.37	48315	76.08	247.65	8.4	17.4
1728.0	29.5	33.3	150	9.3	1.42	5.40	48620	123.76	246.96	8.4	17.4
1729.0	33.0	33.4	150	9.3	1.39	5.43	48893	110.57	246.21	8.4	17.4
1730.0	40.0	31.2	150	9.3	1.30	5.46	49118	91.30	245.37	8.4	17.4
1731.0	42.9	33.8	150	9.3	1.31	5.48	49328	85.21	244.50	8.4	17.4
1732.0	64.3	33.8	150	9.3	1.18	5.50	49468	56.81	243.48	8.4	17.4
1733.0	46.2	33.7	150	9.3	1.29	5.52	49663	79.13	242.60	8.4	17.4
1733.5	32.7	33.8	150	9.3	1.40	5.53	49800	111.59	242.25	8.4	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
1734.0	50.0	34.1	150	9.3	1.27	5.54	49890	73.04	241.79	8.4	17.4
1735.0	43.4	34.2	150	9.3	1.31	5.57	50098	84.20	240.96	8.4	17.4
1736.0	28.3	35.1	150	9.3	1.46	5.60	50415	128.83	240.36	8.4	17.4
1737.0	50.7	34.2	150	9.3	1.26	5.62	50593	72.03	239.48	8.4	17.4
1738.0	38.3	34.2	150	9.3	1.35	5.65	50828	95.36	238.72	8.4	17.4
1739.0	48.6	33.9	150	9.3	1.27	5.67	51013	75.07	237.87	8.4	17.4
1740.0	37.9	31.3	150	9.3	1.32	5.69	51250	96.37	237.14	8.4	17.4
1741.0	45.0	29.6	150	9.3	1.25	5.72	51450	81.16	236.33	8.4	17.4
1742.0	48.6	28.8	150	9.3	1.21	5.74	51635	75.07	235.51	8.4	17.4
1743.0	60.0	30.2	150	9.3	1.17	5.75	51785	60.87	234.61	8.4	17.4
1744.0	46.2	31.5	150	9.3	1.26	5.78	51980	79.13	233.83	8.4	17.4
1745.0	63.2	32.6	150	9.3	1.18	5.79	52123	57.82	232.94	8.4	17.4
1746.0	40.0	33.2	150	9.3	1.33	5.82	52348	91.30	232.22	8.4	17.4
1747.0	48.6	34.1	150	9.3	1.28	5.84	52533	75.07	231.44	8.4	17.4
1748.0	45.0	34.1	150	9.3	1.30	5.86	52733	81.16	230.69	8.4	17.4
1749.0	42.4	34.3	150	9.3	1.32	5.88	52945	86.23	229.98	8.4	17.4
1750.0	40.4	33.1	150	9.3	1.32	5.91	53168	90.29	229.29	8.4	17.4
1751.0	63.2	27.6	150	9.3	1.12	5.92	53310	57.82	228.45	8.4	17.4
1752.0	29.0	35.9	150	9.3	1.46	5.96	53620	125.79	227.95	8.4	17.4
1753.0	46.2	35.5	150	9.3	1.31	5.98	53815	79.13	227.22	8.4	17.4
1754.0	33.3	35.9	150	9.3	1.42	6.01	54085	109.56	226.66	8.4	17.4
1755.0	50.7	35.1	150	9.3	1.27	6.03	54263	72.03	225.91	8.4	17.4
1756.0	42.4	34.6	150	9.3	1.33	6.05	54475	86.23	225.24	8.4	17.4
1757.0	50.0	34.5	150	9.3	1.27	6.07	54655	73.04	224.52	8.4	17.4
1758.0	40.4	34.9	150	9.3	1.34	6.10	54878	90.29	223.88	8.4	17.4
1759.0	40.0	35.1	150	9.3	1.35	6.12	55103	91.30	223.26	8.4	17.4
1760.0	39.6	34.8	150	9.3	1.35	6.15	55330	92.31	222.64	8.4	17.4
1761.0	50.0	26.7	150	9.3	1.18	6.17	55510	73.04	221.94	8.4	17.4
1762.0	42.4	32.1	150	9.3	1.30	6.19	55723	86.23	221.31	8.4	17.4
1763.0	37.1	30.6	150	9.3	1.32	6.22	55965	98.40	220.74	8.4	17.4
1764.0	36.7	32.6	150	9.3	1.35	6.25	56210	99.42	220.18	8.4	17.4
1765.0	35.0	34.1	150	9.3	1.38	6.27	56468	104.49	219.65	8.4	17.4
1766.0	35.3	32.9	150	9.3	1.36	6.30	56723	103.47	219.12	8.4	17.4
1767.0	24.5	34.2	150	9.3	1.49	6.34	57090	149.12	218.81	8.4	17.4
1768.0	36.4	35.5	150	9.3	1.38	6.37	57338	100.43	218.27	8.4	17.4
1769.0	24.5	34.9	150	9.3	1.50	6.41	57705	149.12	217.96	8.4	17.4
1770.0	29.5	35.5	150	9.3	1.45	6.45	58010	123.76	217.54	8.4	17.4
1771.0	31.0	34.8	150	9.3	1.43	6.48	58300	117.68	217.09	8.4	17.5
1772.0	24.7	34.2	150	9.3	1.49	6.52	58665	148.11	216.78	8.4	17.5
1773.0	36.7	36.2	150	9.3	1.39	6.55	58910	99.42	216.26	8.4	17.5
1774.0	27.7	36.8	150	9.3	1.49	6.58	59235	131.88	215.89	8.4	17.5
1775.0	42.4	36.3	150	9.3	1.34	6.61	59448	86.23	215.32	8.4	17.5
1776.0	35.0	36.2	150	9.3	1.40	6.63	59705	104.49	214.84	8.4	17.5
1777.0	35.6	36.6	150	9.3	1.40	6.66	59958	102.46	214.35	8.4	17.5
1778.0	29.8	35.5	150	9.3	1.45	6.70	60260	122.75	213.95	8.4	17.5
1779.0	45.6	35.9	150	9.3	1.32	6.72	60458	80.14	213.38	8.4	17.5
1780.0	55.4	32.8	150	9.3	1.22	6.74	60620	65.94	212.74	8.4	17.5
1781.0	25.5	31.3	150	9.3	1.44	6.77	60973	143.04	212.45	8.4	17.5
1782.0	41.4	28.0	150	9.3	1.25	6.80	61190	88.26	211.92	8.4	17.5
1783.0	31.9	31.7	150	9.3	1.38	6.83	61473	114.63	211.51	8.4	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1784.0	34.6	31.7	150	9.3	1.35	6.86	61733	105.50	211.06	8.4	17.5
1785.0	38.7	31.4	150	9.3	1.32	6.89	61965	94.34	210.57	8.4	17.5
1786.0	42.9	31.2	150	9.3	1.28	6.91	62175	85.21	210.04	8.4	17.5
1787.0	36.0	31.5	150	9.3	1.34	6.94	62425	101.44	209.59	8.4	17.5
1788.0	33.0	32.3	150	9.3	1.38	6.97	62698	110.57	209.18	8.4	17.5
1789.0	28.8	32.2	150	9.3	1.42	7.00	63010	126.81	208.84	8.4	17.5
1790.0	25.9	31.5	150	9.3	1.44	7.04	63358	141.01	208.56	8.4	17.5
1791.0	32.7	32.0	150	9.3	1.38	7.07	63633	111.59	208.16	8.4	17.5
1792.0	39.6	32.1	150	9.3	1.32	7.10	63860	92.31	207.69	8.4	17.5
1793.0	42.4	31.9	150	9.3	1.29	7.12	64073	86.23	207.20	8.4	17.5
1794.0	25.5	32.3	150	9.3	1.46	7.16	64425	143.04	206.94	8.4	17.5
1795.0	32.1	33.0	150	9.3	1.39	7.19	64705	113.62	206.56	8.4	17.5
1796.0	37.9	32.6	150	9.3	1.34	7.22	64943	96.37	206.12	8.4	17.5
1797.0	46.8	31.6	150	9.3	1.26	7.24	65135	78.11	205.61	8.4	17.5
1798.0	29.5	34.1	150	9.3	1.43	7.27	65440	123.76	205.28	8.4	17.5
1799.0	48.0	34.2	150	9.3	1.28	7.29	65628	76.08	204.77	8.4	17.5
1800.0	30.8	33.9	150	9.3	1.42	7.32	65920	118.69	204.43	8.4	17.5
1801.0	41.9	34.1	150	9.3	1.32	7.35	66135	87.24	203.97	8.4	17.5
1802.0	32.4	34.4	150	9.3	1.41	7.38	66413	112.60	203.61	8.4	17.5
1803.0	33.3	31.1	150	9.3	1.36	7.41	66683	109.56	203.24	8.4	17.5
1804.0	48.6	34.7	150	9.3	1.28	7.43	66868	75.07	202.74	8.4	17.5
1805.0	35.0	36.1	150	9.3	1.40	7.46	67125	104.49	202.36	8.4	17.5
1806.0	41.9	34.3	150	9.3	1.33	7.48	67340	87.24	201.92	8.4	17.5
1807.0	23.2	34.8	150	9.3	1.52	7.53	67728	157.24	201.74	8.4	17.5
1808.0	47.4	34.8	150	9.3	1.29	7.55	67918	77.10	201.27	8.4	17.5
1809.0	35.3	34.4	150	9.3	1.38	7.57	68173	103.47	200.89	8.4	17.5
1810.0	32.4	34.5	150	9.3	1.41	7.61	68450	112.60	200.56	8.4	17.5
1811.0	35.6	34.3	150	9.3	1.38	7.63	68703	102.46	200.19	8.4	17.5
1812.0	37.1	33.9	150	9.3	1.36	7.66	68945	98.40	199.80	8.4	17.5
1813.0	40.4	35.6	150	9.3	1.35	7.69	69168	90.29	199.39	8.4	17.5
1814.0	26.5	35.8	150	9.3	1.49	7.72	69508	137.96	199.16	8.4	17.5
1815.0	48.6	36.0	150	9.3	1.30	7.74	69693	75.07	198.70	8.4	17.5
1816.0	32.9	34.8	150	9.3	1.41	7.77	69966	111.08	198.37	8.4	17.5
1817.0	25.4	36.7	150	9.3	1.51	7.81	70321	144.05	198.17	8.4	17.5
1818.0	35.0	36.6	150	9.3	1.41	7.84	70579	104.49	197.83	8.4	17.5
1819.0	23.5	36.9	150	9.3	1.54	7.88	70961	155.21	197.67	8.4	17.5
1820.0	41.9	36.0	150	9.3	1.34	7.91	71176	87.24	197.26	8.4	17.5
1821.0	31.6	36.8	150	9.3	1.45	7.94	71461	115.65	196.97	8.4	17.5
1822.0	22.9	36.7	150	9.3	1.55	7.98	71854	159.27	196.83	8.4	17.5
1823.0	33.0	36.1	150	9.3	1.42	8.01	72126	110.57	196.52	8.4	17.5
1824.0	19.8	36.5	150	9.3	1.59	8.06	72581	184.63	196.47	8.4	17.5
1825.0	35.0	35.4	150	9.3	1.40	8.09	72839	104.34	196.14	8.4	17.5
1826.0	27.8	35.0	150	9.3	1.46	8.13	73162	131.37	195.91	8.4	17.5
1827.0	27.1	37.2	150	9.3	1.50	8.17	73495	134.92	195.69	8.4	17.5
1828.0	32.1	36.9	150	9.3	1.44	8.20	73775	113.62	195.40	8.4	17.5
1829.0	24.0	37.5	150	9.3	1.54	8.24	74150	152.17	195.25	8.4	17.5
1830.0	30.3	37.5	150	9.4	1.46	8.27	74447	120.72	194.98	8.4	17.5
1831.0	22.1	37.4	150	9.4	1.55	8.32	74855	165.35	194.88	8.4	17.5
1832.0	34.3	37.1	150	9.4	1.41	8.35	75117	106.52	194.57	8.4	17.5
1833.0	19.3	37.8	150	9.4	1.60	8.40	75585	189.70	194.55	8.4	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1834.0	23.7	38.3	150	9.4	1.54	8.44	75965	154.20	194.41	8.4	17.5
1835.0	14.8	38.8	150	9.4	1.70	8.51	76572	246.51	194.59	8.4	17.5
1836.0	27.3	38.1	150	9.4	1.49	8.54	76902	133.91	194.38	8.4	17.5
1837.0	16.8	37.1	150	9.4	1.63	8.60	77437	217.09	194.46	8.4	17.6
1838.0	32.4	35.9	150	9.4	1.41	8.63	77715	112.60	194.18	8.4	17.6
1839.0	20.1	38.0	150	9.4	1.59	8.68	78162	181.59	194.14	8.4	17.6
1840.0	28.6	38.4	150	9.4	1.48	8.72	78477	127.82	193.91	8.4	17.6
1841.0	18.5	38.2	150	9.4	1.62	8.77	78965	197.82	193.92	8.4	17.6
1842.0	23.7	38.7	150	9.4	1.54	8.82	79345	154.20	193.79	8.4	17.6
1843.0	18.6	38.8	150	9.4	1.63	8.87	79830	196.80	193.80	8.4	17.6
1844.0	19.6	39.2	150	9.4	1.61	8.92	80290	186.66	193.77	8.4	17.6
1845.0	16.4	38.7	150	9.4	1.66	8.98	80837	222.16	193.87	8.4	17.6
1846.0	29.5	38.3	150	9.4	1.47	9.02	81142	123.76	193.64	8.4	17.6
1847.0	27.7	39.0	150	9.4	1.50	9.05	81467	131.88	193.43	8.4	17.6
1848.0	17.4	39.2	150	9.4	1.65	9.11	81985	209.99	193.48	8.4	17.6
1849.0	17.7	39.6	150	9.4	1.65	9.17	82492	205.93	193.53	8.4	17.6
1850.0	12.0	39.8	150	9.4	1.78	9.25	83242	304.33	193.89	8.4	17.6
1851.0	16.1	39.8	150	9.4	1.68	9.31	83800	226.22	194.00	8.4	17.6
1852.0	11.0	39.8	150	9.4	1.81	9.40	84620	332.74	194.45	8.4	17.6
1853.0	25.0	39.4	150	9.4	1.54	9.44	84980	146.08	194.29	8.4	17.6
1854.0	13.6	37.6	150	9.4	1.71	9.52	85640	267.81	194.53	8.4	17.6
1855.0	20.8	40.4	150	9.4	1.61	9.56	86072	175.50	194.47	8.4	17.6
1856.0	33.6	38.8	150	9.4	1.43	9.59	86340	108.55	194.19	8.4	17.6
1857.0	33.6	37.7	150	9.4	1.42	9.62	86607	108.55	193.92	8.4	17.6
1858.0	43.6	35.5	150	9.4	1.31	9.65	86814	83.69	193.56	8.4	17.6
1859.0	50.7	37.1	150	9.4	1.28	9.67	86991	72.03	193.17	8.4	17.6
1860.0	30.5	38.2	150	9.4	1.46	9.70	87286	119.70	192.94	8.4	17.6
1861.0	49.3	38.1	150	9.4	1.30	9.72	87469	74.05	192.56	8.4	17.6
1862.0	30.3	38.5	150	9.4	1.46	9.75	87766	120.72	192.33	8.4	17.6
1863.0	53.7	36.5	150	9.4	1.26	9.77	87934	67.97	191.94	8.4	17.6
1864.0	36.7	39.8	150	9.4	1.41	9.80	88179	99.42	191.65	8.4	17.6
1865.0	30.3	40.1	150	9.4	1.48	9.83	88476	120.72	191.42	8.4	17.6
1866.0	40.9	40.0	150	9.4	1.38	9.86	88696	89.27	191.10	8.4	17.6
1867.0	56.2	39.0	150	9.4	1.27	9.87	88856	64.92	190.71	8.4	17.6
1868.0	33.6	39.3	150	9.4	1.44	9.90	89124	108.55	190.45	8.4	17.6
1869.0	41.9	39.4	150	9.4	1.37	9.93	89339	87.24	190.13	8.4	17.6
1870.0	24.3	39.3	150	9.4	1.54	9.97	89709	150.14	190.01	8.4	17.6
1871.0	33.3	40.3	150	9.4	1.45	10.00	89979	109.56	189.76	8.4	17.6
1872.0	22.0	40.9	150	9.4	1.60	10.04	90389	166.37	189.69	8.4	17.6
1873.0	24.7	41.3	150	9.4	1.56	10.08	90754	148.11	189.56	8.4	17.6
1874.0	34.0	41.5	150	9.4	1.46	10.11	91018	107.41	189.31	8.4	17.6
1875.0	30.0	39.0	150	9.4	1.47	10.15	91318	121.73	189.10	8.4	17.6
1876.0	21.4	40.7	150	9.4	1.60	10.19	91738	170.43	189.05	8.4	17.6
1877.0	12.7	41.7	150	9.4	1.79	10.27	92448	288.10	189.35	8.4	17.6
1878.0	16.9	42.2	150	9.4	1.70	10.33	92981	216.08	189.43	8.4	17.6
1879.0	11.5	37.0	150	9.5	1.74	10.42	93761	316.51	189.81	8.4	17.6
1880.0	19.4	36.6	150	9.5	1.57	10.47	94226	188.69	189.81	8.4	17.6
1881.0	24.8	36.7	150	9.5	1.49	10.51	94588	147.09	189.68	8.4	17.6
1882.0	18.5	36.6	150	9.5	1.58	10.56	95076	197.82	189.70	8.4	17.6
1883.0	35.0	36.5	150	9.5	1.38	10.59	95333	104.49	189.45	8.4	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1884.0	27.7	35.8	150	9.5	1.44	10.63	95658	131.88	189.28	8.4	17.6
1884.7	22.9	35.3	150	9.5	1.50	10.66	95933	159.41	189.22	8.4	17.6
1885.0	31.9	9.8	150	9.5	1.01	10.67	96018	114.48	189.15	8.4	17.6
1886.0	28.3	29.6	150	9.5	1.36	10.70	96335	128.83	188.97	8.4	17.6
1887.0	23.1	34.9	150	9.5	1.49	10.75	96725	158.25	188.88	8.4	17.6
1888.0	43.9	33.3	150	9.5	1.27	10.77	96930	83.18	188.57	8.4	17.6
1889.0	22.8	33.7	150	9.7	1.45	10.81	97325	160.28	188.49	8.4	17.6
1890.0	48.0	35.2	150	9.7	1.24	10.83	97513	76.08	188.16	8.4	17.6
1891.0	30.8	35.1	150	9.7	1.37	10.87	97805	118.69	187.96	8.4	17.6
1892.0	42.9	36.3	150	9.7	1.29	10.89	98015	85.21	187.66	8.4	17.6
1893.0	50.0	34.0	150	9.7	1.21	10.91	98195	73.04	187.33	8.4	17.6
1893.5	24.3	34.8	150	9.7	1.44	10.93	98380	150.14	187.28	8.4	17.6
1894.0	11.9	36.3	150	9.7	1.68	10.97	98758	306.36	187.45	8.4	17.6
1895.0	21.4	32.2	150	9.7	1.45	11.02	99178	170.43	187.40	8.4	17.6
1896.0	45.6	32.5	150	9.7	1.22	11.04	99375	80.14	187.09	8.4	17.6
1897.0	72.0	32.0	150	9.7	1.08	11.06	99500	50.72	186.70	8.4	17.6
1898.0	51.4	32.4	150	9.7	1.19	11.08	99675	71.01	186.37	8.4	17.6
1899.0	20.5	33.3	150	9.7	1.48	11.12	100115	178.54	186.35	8.4	17.6
1900.0	33.0	32.8	150	9.7	1.32	11.15	100388	110.57	186.14	8.4	17.6
1901.0	28.1	33.4	150	9.7	1.38	11.19	100708	129.85	185.98	8.4	17.6
1902.0	156.5	30.0	150	9.7	0.84	11.20	100765	23.33	185.52	8.4	17.6
1903.0	24.7	31.6	150	9.7	1.40	11.24	101130	148.11	185.41	8.4	17.6
1904.0	30.0	26.7	150	9.6	1.29	11.27	101430	121.73	185.24	8.4	17.7
1905.0	54.5	27.3	150	9.6	1.13	11.29	101595	66.95	184.91	8.4	17.7
1906.0	62.1	28.3	150	9.6	1.10	11.30	101740	58.84	184.55	8.4	17.7
1907.0	45.6	30.4	150	9.6	1.21	11.33	101938	80.14	184.24	8.4	17.7
1908.0	57.1	30.4	150	9.6	1.15	11.34	102095	63.91	183.93	8.4	17.7
1909.0	109.1	28.8	150	9.6	0.94	11.35	102178	33.48	183.52	8.4	17.7
1910.0	37.1	29.0	150	9.6	1.26	11.38	102420	98.40	183.28	8.4	17.7
1911.0	48.6	31.3	150	9.6	1.21	11.40	102605	75.07	182.98	8.4	17.7
1912.0	25.4	33.6	150	9.6	1.43	11.44	102960	144.05	182.88	8.4	17.7
1913.0	39.1	33.0	150	9.6	1.29	11.47	103190	93.33	182.63	8.4	17.7
1914.0	43.4	32.9	150	9.6	1.26	11.49	103398	84.20	182.36	8.4	17.7

BIT NUMBER	4	IADC CODE	517	INTERVAL	1914.0- 2425.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	511.0
TOTAL HOURS	33.47	TOTAL TURNS	191519	CONDITION	T4 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1915.0	14.8	26.7	57	9.6	1.22	0.07	230	247	34692	8.4	17.7
1916.0	11.5	24.3	81	9.6	1.35	0.15	651	318	17505	8.4	17.7
1917.0	12.3	28.2	101	9.6	1.45	0.24	1143	297	11769	8.4	17.7
1918.0	11.5	25.9	101	9.6	1.44	0.32	1673	319	8906	8.4	17.7
1919.0	11.8	24.5	103	9.6	1.42	0.41	2195	308	7187	8.4	17.7
1920.0	14.5	23.5	103	9.6	1.35	0.48	2624	253	6031	8.4	17.7
1921.0	72.0	22.0	103	9.6	0.89	0.49	2709	51	5177	8.4	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1922.0	48.0	26.7	97	9.6	1.03	0.51	2831	76	4539	8.4	17.7
1923.0	19.0	28.8	97	9.6	1.32	0.56	3136	192	4056	8.4	17.7
1924.0	14.9	27.8	109	9.6	1.42	0.63	3576	245	3675	8.4	17.7
1925.0	31.6	29.9	109	9.7	1.22	0.66	3784	116	3351	8.4	17.7
1926.0	12.8	28.8	109	9.7	1.46	0.74	4296	286	3096	8.4	17.7
1927.0	11.1	28.4	104	9.7	1.48	0.83	4853	328	2883	8.4	17.7
1928.0	76.6	27.7	101	9.7	0.91	0.84	4933	48	2681	8.4	17.7
1929.0	31.9	28.8	104	9.7	1.18	0.88	5128	115	2509	8.4	17.7
1930.0	47.4	29.6	101	9.7	1.07	0.90	5256	77	2357	8.4	17.7
1931.0	102.9	26.7	102	9.7	0.82	0.91	5316	36	2221	8.4	17.7
1932.0	109.1	24.8	103	9.7	0.79	0.92	5373	33	2099	8.4	17.7
1933.0	37.5	26.6	97	9.7	1.09	0.94	5528	97	1994	8.4	17.7
1934.0	100.0	24.6	100	9.7	0.80	0.95	5588	37	1896	8.4	17.7
1935.0	171.4	21.8	105	9.7	0.65	0.96	5625	21	1807	8.4	17.7
1936.0	100.0	24.0	106	9.7	0.81	0.97	5688	37	1726	8.4	17.7
1937.0	92.3	24.5	103	9.7	0.83	0.98	5755	40	1653	8.4	17.7
1938.0	120.0	17.8	107	9.7	0.71	0.99	5808	30	1585	8.4	17.7
1939.0	22.0	20.6	106	9.7	1.18	1.03	6099	166	1529	8.4	17.7
1940.0	24.5	24.0	106	9.7	1.18	1.07	6340	138	1475	8.4	17.7
1941.0	7.4	24.4	106	9.7	1.54	1.21	7202	493	1439	8.4	17.7
1942.0	14.9	24.7	106	9.5	1.38	1.27	7629	245	1396	8.4	17.7
1943.0	21.2	24.3	105	9.5	1.27	1.32	7927	172	1354	8.4	17.7
1944.0	12.4	22.2	105	9.5	1.39	1.40	8434	295	1319	8.4	17.7
1945.0	37.1	18.9	109	9.5	1.05	1.43	8610	98	1279	8.4	17.7
1946.0	40.4	19.0	108	9.5	1.03	1.45	8771	90	1242	8.4	17.7
1947.0	52.2	16.9	109	9.5	0.94	1.47	8896	70	1207	8.4	17.7
1948.0	100.0	19.9	107	9.5	0.79	1.48	8960	37	1172	8.4	17.7
1949.0	59.0	18.6	108	9.5	0.92	1.50	9070	62	1141	8.4	17.7
1950.0	67.9	18.4	108	9.5	0.88	1.51	9166	54	1110	8.4	17.7
1951.0	54.5	18.4	108	9.5	0.94	1.53	9285	67	1082	8.4	17.7
1952.0	80.0	19.1	108	9.5	0.85	1.54	9366	46	1055	8.4	17.7
1953.0	58.1	17.5	104	9.5	0.90	1.56	9474	63	1029	8.4	17.7
1954.0	43.9	15.7	106	9.5	0.95	1.58	9618	83	1006	8.4	17.7
1955.0	75.0	14.7	107	9.5	0.81	1.60	9703	48.69	982.41	8.4	17.7
1956.0	60.0	15.0	106	9.5	0.87	1.61	9809	60.87	960.47	8.4	17.7
1957.0	47.4	14.7	107	9.5	0.92	1.64	9944	77.10	939.92	8.4	17.7
1958.0	27.3	11.5	109	9.5	1.01	1.67	10185	133.91	921.60	8.4	17.7
1959.0	81.8	16.0	107	9.5	0.80	1.68	10263	44.64	902.12	8.4	17.7
1960.0	50.7	16.5	108	9.5	0.93	1.70	10390	72.03	884.07	8.4	17.7
1961.0	35.6	15.3	108	9.5	1.01	1.73	10573	102.46	867.44	8.4	17.7
1962.0	55.4	14.9	109	9.5	0.89	1.75	10690	65.94	850.74	8.4	17.7
1963.0	29.0	12.9	106	9.5	1.01	1.78	10909	125.79	835.95	8.4	17.7
1964.0	41.9	14.0	105	9.5	0.94	1.81	11059	87.24	820.97	8.4	17.7
1965.0	39.6	13.9	106	9.5	0.95	1.83	11219	92.31	806.69	8.4	17.7
1966.0	35.0	13.7	106	9.5	0.98	1.86	11402	104.49	793.18	8.4	17.7
1967.0	49.3	14.9	105	9.5	0.91	1.88	11530	74.05	779.61	8.4	17.7
1968.0	29.0	12.7	107	9.5	1.01	1.92	11751	125.79	767.51	8.4	17.7
1969.0	48.6	14.6	106	9.5	0.91	1.94	11881	75.07	754.92	8.4	17.7
1970.0	32.7	14.0	106	9.5	1.00	1.97	12076	111.59	743.43	8.4	17.7
1971.0	42.9	14.2	107	9.5	0.94	1.99	12225	85.21	731.88	8.4	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1972.0	33.0	12.4	96	9.5	0.95	2.02	12400	110.57	721.17	8.4	17.7
1973.0	31.6	18.5	103	9.5	1.07	2.05	12596	115.65	710.91	8.4	17.7
1974.0	17.3	15.5	105	9.5	1.18	2.11	12962	211.00	702.57	8.4	17.8
1975.0	22.8	14.7	106	9.5	1.10	2.15	13240	160.28	693.68	8.4	17.8
1976.0	14.7	14.0	106	9.5	1.20	2.22	13671	248.54	686.50	8.4	17.8
1977.0	27.9	14.2	105	9.5	1.04	2.26	13897	130.86	677.68	8.4	17.8
1978.0	13.8	14.3	105	9.5	1.22	2.33	14354	263.76	671.22	8.4	17.8
1979.0	21.4	14.9	105	9.5	1.12	2.38	14649	170.43	663.51	8.4	17.8
1980.0	13.0	14.4	106	9.5	1.23	2.45	15135	279.99	657.70	8.4	17.8
1981.0	11.7	14.8	106	9.5	1.27	2.54	15680	313.46	652.56	8.4	17.8
1982.0	23.4	16.0	101	9.5	1.11	2.58	15940	156.22	645.24	8.4	17.8
1983.0	33.0	25.5	103	9.5	1.15	2.61	16126	110.57	637.51	8.4	17.8
1984.0	27.7	21.7	104	9.5	1.16	2.65	16353	131.88	630.29	8.4	17.8
1985.0	45.0	21.9	104	9.5	1.03	2.67	16491	81.16	622.56	8.4	17.8
1986.0	38.7	22.1	103	9.5	1.07	2.70	16651	94.34	615.22	8.4	17.8
1987.0	46.2	22.2	102	9.5	1.02	2.72	16783	79.13	607.88	8.4	17.8
1988.0	35.6	22.4	103	9.5	1.09	2.75	16956	102.46	601.05	8.4	17.8
1989.0	46.8	22.1	103	9.5	1.01	2.77	17088	78.11	594.07	8.4	17.8
1990.0	45.6	22.0	102	9.5	1.02	2.79	17222	80.14	587.31	8.4	17.8
1991.0	63.2	19.3	68	9.5	0.79	2.81	17286	57.82	580.44	8.4	17.8
1992.0	53.0	9.1	77	9.5	0.73	2.83	17374	68.91	573.88	8.4	17.8
1993.0	42.9	22.3	101	9.5	1.04	2.85	17515	85.21	567.69	8.4	17.8
1994.0	46.2	27.7	92	9.5	1.05	2.87	17635	79.13	561.59	8.4	17.8
1995.0	54.5	24.0	106	9.5	1.00	2.89	17751	66.95	555.48	8.4	17.8
1996.0	37.1	23.1	107	9.5	1.10	2.92	17925	98.40	549.90	8.4	17.8
1997.0	50.0	23.2	107	9.5	1.02	2.94	18053	73.04	544.16	8.4	17.8
1998.0	34.0	22.9	107	9.5	1.12	2.96	18242	107.53	538.96	8.4	17.8
1999.0	40.4	23.4	107	9.5	1.08	2.99	18400	90.29	533.68	8.4	17.8
2000.0	40.4	23.1	106	9.5	1.08	3.01	18557	90.29	528.53	8.4	17.8
2001.0	52.9	22.5	107	9.5	1.00	3.03	18678	68.98	523.24	8.4	17.8
2002.0	32.4	21.0	100	9.5	1.09	3.06	18863	112.60	518.58	8.4	17.8
2003.0	50.0	20.6	105	9.5	0.98	3.08	18989	73.04	513.57	8.4	17.8
2003.5	51.4	22.5	104	9.5	1.00	3.09	19050	71.01	511.10	8.4	17.8
2004.0	50.0	22.6	104	9.5	1.01	3.10	19112	73.04	508.67	8.4	17.8
2005.0	37.5	22.9	103	9.5	1.09	3.13	19278	97.39	504.15	8.4	17.8
2006.0	46.2	23.7	101	9.5	1.03	3.15	19409	79.13	499.53	8.4	17.8
2007.0	36.7	23.7	103	9.5	1.10	3.18	19577	99.42	495.22	8.4	17.8
2008.0	43.9	23.5	103	9.5	1.05	3.20	19718	83.18	490.84	8.4	17.8
2009.0	40.4	23.1	102	9.5	1.06	3.23	19869	90.29	486.62	8.4	17.8
2010.0	32.4	24.0	107	9.5	1.15	3.26	20067	112.60	482.73	8.4	17.8
2011.0	25.5	24.2	107	9.5	1.22	3.30	20319	143.04	479.23	8.4	17.8
2012.0	40.4	23.4	106	9.5	1.08	3.32	20476	90.29	475.26	8.4	17.8
2013.0	24.7	30.4	93	9.5	1.27	3.36	20701	148.11	471.95	8.4	17.8
2014.0	23.4	29.1	101	9.5	1.29	3.40	20961	156.22	468.80	8.4	17.8
2015.0	32.7	28.7	101	9.5	1.19	3.44	21147	111.59	465.26	8.4	17.8
2016.0	19.8	28.8	101	9.5	1.34	3.49	21454	184.63	462.51	8.4	17.8
2017.0	31.9	29.3	99	9.5	1.20	3.52	21640	114.63	459.13	8.4	17.8
2018.0	13.4	29.9	99	9.5	1.46	3.59	22084	271.87	457.33	8.4	17.8
2019.0	16.7	29.5	100	9.5	1.39	3.65	22442	218.11	455.05	8.4	17.8
2020.0	16.6	29.4	98	9.5	1.39	3.71	22797	220.13	452.84	8.4	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
2021.0	9.1	33.6	93	9.5	1.61	3.82	23410	400.71	452.35	8.4	17.8
2022.0	9.9	30.2	100	9.5	1.56	3.92	24014	367.23	451.56	8.4	17.8
2023.0	17.6	30.5	100	9.5	1.39	3.98	24354	206.95	449.32	8.4	17.8
2024.0	9.8	30.5	100	9.5	1.57	4.08	24969	374.33	448.63	8.4	17.8
2025.0	22.5	32.8	100	9.5	1.35	4.13	25235	162.31	446.05	8.4	17.8
2026.0	15.7	31.9	100	9.5	1.44	4.19	25617	233.32	444.16	8.4	17.8
2027.0	20.5	32.1	100	9.5	1.37	4.24	25910	178.54	441.81	8.4	17.8
2028.0	17.9	32.2	100	9.5	1.41	4.29	26244	203.90	439.72	8.4	17.8
2029.0	22.1	32.3	100	9.5	1.35	4.34	26516	165.35	437.33	8.4	17.8
2030.0	34.1	29.9	93	9.5	1.16	4.37	26678	107.02	434.48	8.4	17.8
2031.0	27.5	30.1	99	9.5	1.25	4.41	26894	132.89	431.91	8.4	17.8
2032.0	43.4	31.4	97	9.5	1.12	4.43	27029	84.20	428.96	8.4	17.8
2033.0	26.1	31.0	97	9.5	1.27	4.47	27253	139.99	426.53	8.4	17.8
2034.0	20.8	32.5	88	9.5	1.33	4.51	27507	175.50	424.44	8.4	17.8
2035.0	24.0	32.4	98	9.5	1.32	4.56	27753	152.17	422.19	8.4	17.8
2036.0	20.5	31.3	97	9.5	1.35	4.61	28037	178.54	420.19	8.4	17.8
2036.5	22.8	31.5	98	9.5	1.32	4.63	28166	160.28	419.13	8.4	17.8
2037.0	36.7	30.7	97	9.5	1.17	4.64	28245	99.42	417.83	8.4	17.8
2038.0	35.0	31.9	98	9.5	1.19	4.67	28412	104.49	415.31	8.4	17.8
2039.0	54.5	29.3	98	9.5	1.03	4.69	28520	66.95	412.52	8.4	17.8
2040.0	31.0	29.9	99	9.5	1.21	4.72	28711	117.68	410.18	8.4	17.8
2041.0	14.6	31.8	92	9.5	1.44	4.79	29087	249.55	408.91	8.4	17.8
2042.0	48.6	30.9	98	9.5	1.09	4.81	29207	75.07	406.31	8.4	17.8
2043.0	46.8	32.1	96	9.5	1.10	4.83	29331	78.11	403.76	8.4	17.8
2044.0	67.9	34.4	95	9.5	1.01	4.84	29415	53.77	401.07	8.4	17.8
2045.0	14.9	38.5	83	9.5	1.48	4.91	29748	245.50	399.88	8.4	17.9
2046.0	32.1	33.9	98	9.5	1.24	4.94	29931	113.62	397.71	8.4	17.9
2047.0	39.1	34.2	98	9.5	1.18	4.97	30081	93.33	395.42	8.4	17.9
2048.0	37.1	31.7	90	9.5	1.15	5.00	30226	98.40	393.21	8.4	17.9
2049.0	43.9	32.2	98	9.5	1.13	5.02	30360	83.18	390.91	8.4	17.9
2050.0	32.1	29.8	100	9.5	1.20	5.05	30547	113.62	388.87	8.4	17.9
2051.0	75.0	30.1	99	9.5	0.95	5.06	30626	48.69	386.39	8.4	17.9
2052.0	14.2	31.6	101	9.5	1.48	5.13	31053	257.67	385.46	8.4	17.9
2053.0	25.7	30.1	92	9.5	1.25	5.17	31268	142.02	383.71	8.4	17.9
2054.0	30.3	29.2	96	9.5	1.20	5.21	31459	120.72	381.83	8.4	17.9
2055.0	36.5	30.3	98	9.5	1.17	5.23	31620	99.92	379.83	8.4	17.9
2056.0	53.7	29.5	100	9.5	1.05	5.25	31732	67.97	377.63	8.4	17.9
2057.0	8.1	31.9	101	9.5	1.65	5.37	32477	448.38	378.13	8.4	17.9
2058.0	20.5	30.3	96	9.5	1.33	5.42	32759	178.54	376.74	8.4	17.9
2058.5	14.1	32.5	98	9.5	1.48	5.46	32969	259.70	376.34	8.4	17.9
2059.0	31.0	31.9	91	9.5	1.21	5.47	33057	117.68	375.44	8.4	17.9
2059.5	36.7	31.4	100	9.5	1.18	5.49	33138	99.42	374.49	8.4	17.9
2060.0	54.5	29.4	101	9.5	1.05	5.50	33194	66.95	373.44	8.4	17.9
2061.0	36.4	31.8	98	9.5	1.18	5.53	33356	100.43	371.58	8.4	17.9
2062.0	53.7	30.8	99	9.5	1.06	5.54	33466	67.97	369.53	8.4	17.9
2063.0	49.3	31.1	94	9.5	1.07	5.56	33580	74.05	367.55	8.4	17.9
2064.0	66.7	31.1	98	9.5	0.99	5.58	33669	54.78	365.46	8.4	17.9
2065.0	14.1	32.1	102	9.5	1.48	5.65	34101	258.68	364.76	8.4	17.9
2066.0	7.3	32.8	102	9.5	1.70	5.79	34935	498.09	365.63	8.4	17.9
2067.0	17.4	31.8	102	9.5	1.42	5.84	35286	209.99	364.62	8.4	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2068.0	49.3	28.3	84	9.5	1.01	5.86	35388	74.05	362.73	8.4	17.9
2069.0	43.9	29.3	92	9.5	1.08	5.89	35514	83.18	360.93	8.4	17.9
2070.0	31.9	31.2	99	9.5	1.22	5.92	35700	114.63	359.35	8.4	17.9
2071.0	33.6	31.1	100	9.5	1.20	5.95	35879	108.55	357.75	8.4	17.9
2072.0	46.2	31.7	100	9.5	1.11	5.97	36008	79.13	355.99	8.4	17.9
2073.0	26.5	32.6	100	9.5	1.30	6.01	36235	137.96	354.62	8.4	17.9
2074.0	33.0	32.6	100	9.5	1.23	6.04	36417	110.57	353.09	8.4	17.9
2075.0	29.3	31.8	100	9.5	1.25	6.07	36621	124.78	351.67	8.4	17.9
2076.0	41.4	31.7	100	9.5	1.15	6.10	36767	88.26	350.05	8.4	17.9
2077.0	35.0	32.0	100	9.5	1.20	6.12	36939	104.49	348.54	8.4	17.9
2078.0	50.0	25.9	76	9.5	0.95	6.14	37030	73.04	346.86	8.4	17.9
2079.0	33.3	29.3	94	9.5	1.17	6.17	37198	109.56	345.42	8.4	17.9
2080.0	40.9	31.6	92	9.5	1.12	6.20	37333	89.27	343.88	8.4	17.9
2081.0	28.6	31.1	93	9.5	1.23	6.23	37527	127.82	342.59	8.4	17.9
2082.0	38.3	32.0	89	9.5	1.14	6.26	37667	95.36	341.11	8.4	17.9
2083.0	30.3	31.9	91	9.5	1.22	6.29	37847	120.72	339.81	8.4	17.9
2084.0	33.3	31.9	91	9.5	1.19	6.32	38011	109.56	338.46	8.4	17.9
2085.0	26.1	32.0	98	9.5	1.29	6.36	38237	139.99	337.29	8.4	17.9
2086.0	31.0	31.7	98	9.5	1.23	6.39	38427	117.68	336.02	8.4	17.9
2087.0	27.5	31.7	98	9.5	1.27	6.43	38641	132.89	334.84	8.4	17.9
2088.0	27.1	30.7	84	9.5	1.21	6.47	38828	134.92	333.69	8.4	17.9
2089.0	42.4	31.1	92	9.5	1.11	6.49	38958	86.23	332.28	8.4	17.9
2090.0	30.3	31.3	91	9.5	1.21	6.52	39138	120.72	331.08	8.4	17.9
2091.0	40.9	31.3	91	9.5	1.12	6.55	39271	89.27	329.71	8.4	17.9
2092.0	30.8	31.6	91	9.5	1.21	6.58	39449	118.69	328.53	8.4	17.9
2093.0	39.1	31.1	93	9.5	1.14	6.61	39591	93.33	327.21	8.4	17.9
2094.0	27.1	30.7	92	9.5	1.24	6.64	39794	134.92	326.14	8.4	17.9
2095.0	32.7	30.6	88	9.5	1.17	6.67	39955	111.59	324.96	8.4	17.9
2096.0	19.1	31.0	64	9.5	1.24	6.73	40154	190.72	324.22	8.4	17.9
2097.0	24.2	32.7	52	9.5	1.12	6.77	40283	151.15	323.28	8.4	17.9
2098.0	18.9	34.3	69	9.5	1.30	6.82	40501	192.74	322.57	8.4	17.9
2099.0	34.0	36.5	66	9.5	1.13	6.85	40618	107.53	321.40	8.4	17.9
2100.0	25.7	37.0	65	9.5	1.21	6.89	40769	142.02	320.44	8.4	17.9
2101.0	28.3	36.5	66	9.5	1.18	6.92	40908	128.83	319.41	8.4	17.9
2102.0	23.7	37.6	63	9.5	1.24	6.97	41068	154.20	318.54	8.4	17.9
2103.0	31.3	37.0	64	9.5	1.15	7.00	41191	116.66	317.47	8.4	17.9
2104.0	22.5	37.0	64	9.5	1.25	7.04	41362	162.31	316.65	8.4	17.9
2105.0	26.3	37.7	64	9.5	1.21	7.08	41507	138.98	315.72	8.4	17.9
2106.0	19.7	37.1	61	9.5	1.28	7.13	41693	185.64	315.04	8.4	17.9
2107.0	24.3	35.5	61	9.5	1.20	7.17	41844	150.14	314.19	8.4	17.9
2108.0	20.5	38.4	58	9.5	1.26	7.22	42013	178.54	313.49	8.4	17.9
2109.0	33.3	37.1	66	9.5	1.14	7.25	42131	109.56	312.44	8.4	17.9
2110.0	26.3	37.9	64	9.5	1.21	7.29	42277	138.98	311.56	8.4	17.9
2111.0	24.0	38.9	66	9.5	1.26	7.33	42443	152.17	310.75	8.4	17.9
2112.0	9.1	39.7	51	9.5	1.50	7.44	42778	399.69	311.20	8.4	17.9
2113.0	51.4	38.4	74	9.5	1.05	7.46	42865	71.01	309.99	8.4	17.9
2114.0	56.2	40.7	67	9.5	1.01	7.48	42936	64.92	308.77	8.4	17.9
2115.0	5.8	40.3	55	9.5	1.68	7.65	43506	627.94	310.35	8.4	17.9
2116.0	9.1	40.5	61	9.5	1.57	7.76	43909	401.72	310.81	8.4	17.9
2117.0	18.6	37.8	72	9.5	1.36	7.81	44141	196.80	310.25	8.4	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2117.5	6.0	43.5	51	9.5	1.68	7.90	44397	606.64	310.97	8.4	17.9
2118.0	11.4	40.5	51	9.5	1.43	7.94	44530	320.56	311.00	8.4	17.9
2119.0	11.1	43.3	58	9.5	1.52	8.03	44846	329.69	311.09	8.4	18.0
2120.0	10.3	42.7	97	9.5	1.71	8.13	45411	354.04	311.30	8.4	18.0
2121.0	20.5	40.7	101	9.5	1.47	8.18	45708	178.54	310.66	8.4	18.0
2122.0	44.4	37.7	102	9.5	1.19	8.20	45845	82.17	309.56	8.4	18.0
2123.0	36.0	37.1	101	9.5	1.25	8.23	46014	101.44	308.56	8.4	18.0
2124.0	12.5	37.7	102	9.5	1.60	8.31	46506	293.17	308.49	8.4	18.0
2125.0	22.5	37.1	102	9.5	1.40	8.35	46778	162.31	307.80	8.4	18.0
2126.0	40.4	37.1	101	9.5	1.21	8.38	46927	90.29	306.77	8.4	18.0
2127.0	37.1	27.7	81	9.5	1.08	8.40	47058	98.40	305.79	8.4	18.0
2128.0	20.2	29.4	58	9.5	1.17	8.45	47229	180.57	305.21	8.4	18.0
2129.0	52.9	29.8	81	9.5	0.99	8.47	47321	68.98	304.11	8.4	18.0
2130.0	22.4	33.0	69	9.5	1.24	8.52	47506	163.33	303.46	8.4	18.0
2131.0	41.9	32.1	91	9.5	1.12	8.54	47637	87.24	302.46	8.4	18.0
2132.0	13.0	34.4	96	9.5	1.52	8.62	48077	279.99	302.36	8.4	18.0
2133.0	18.7	34.4	98	9.5	1.42	8.67	48394	195.79	301.87	8.4	18.0
2134.0	23.5	33.6	97	9.5	1.33	8.71	48640	155.21	301.20	8.4	18.0
2135.0	26.7	34.8	95	9.5	1.30	8.75	48853	136.95	300.46	8.4	18.0
2136.0	22.0	33.6	93	9.5	1.34	8.80	49108	166.37	299.86	8.4	18.0
2137.0	36.4	30.7	67	9.5	1.06	8.82	49218	100.43	298.96	8.4	18.0
2138.0	10.3	34.3	99	9.5	1.60	8.92	49793	354.04	299.21	8.4	18.0
2139.0	12.4	34.4	97	9.5	1.54	9.00	50262	294.19	299.18	8.4	18.0
2140.0	17.1	33.2	98	9.5	1.43	9.06	50605	214.05	298.81	8.4	18.0
2141.0	83.7	30.3	86	9.5	0.88	9.07	50667	43.62	297.68	8.4	18.0
2142.0	13.0	32.9	94	9.5	1.50	9.15	51100	281.00	297.61	8.4	18.0
2143.0	17.6	36.8	95	9.5	1.46	9.21	51425	206.95	297.21	8.4	18.0
2144.0	6.4	36.7	97	9.5	1.78	9.36	52336	572.15	298.41	8.4	18.0
2145.0	11.7	37.6	95	9.5	1.60	9.45	52825	312.45	298.47	8.4	18.0
2146.0	12.7	34.4	94	9.5	1.52	9.53	53270	287.09	298.42	8.4	18.0
2147.0	5.4	37.7	98	9.5	1.85	9.71	54364	678.66	300.05	8.4	18.0
2148.0	28.3	35.5	96	9.5	1.29	9.75	54567	128.83	299.32	8.4	18.0
2149.0	18.4	35.5	96	9.5	1.43	9.80	54882	198.83	298.89	8.4	18.0
2150.0	25.0	36.6	88	9.5	1.32	9.84	55094	146.08	298.25	8.4	18.0
2151.0	10.5	34.8	96	9.5	1.60	9.94	55645	348.97	298.46	8.4	18.0
2152.0	7.8	36.0	99	9.5	1.72	10.07	56411	470.70	299.18	8.4	18.0
2153.0	7.6	37.2	99	9.5	1.74	10.20	57193	480.85	299.94	8.4	18.0
2154.0	26.5	35.8	98	9.5	1.32	10.24	57415	137.96	299.27	8.4	18.0
2155.0	8.4	33.0	69	9.5	1.54	10.36	57914	437.23	299.84	8.4	18.0
2156.0	17.1	35.1	99	9.5	1.46	10.41	58264	214.05	299.49	8.4	18.0
2157.0	11.7	34.0	100	9.5	1.56	10.50	58777	311.43	299.54	8.4	18.0
2158.0	16.3	33.2	100	9.5	1.45	10.56	59143	224.19	299.23	8.4	18.0
2159.0	19.8	33.5	99	9.5	1.39	10.61	59445	184.63	298.76	8.4	18.0
2160.0	14.9	35.0	100	9.5	1.50	10.68	59849	245.50	298.54	8.4	18.0
2161.0	5.8	34.6	101	9.5	1.79	10.85	60892	629.97	299.89	8.4	18.0
2162.0	12.9	35.1	101	9.5	1.55	10.93	61359	282.02	299.81	8.4	18.0
2163.0	7.5	35.0	101	9.5	1.72	11.06	62171	488.96	300.57	8.4	18.0
2164.0	13.9	34.8	101	9.5	1.52	11.13	62607	262.74	300.42	8.4	18.0
2164.6	13.7	35.3	97	9.5	1.52	11.18	62862	267.14	300.34	8.4	18.0
2165.0	18.0	34.9	100	9.5	1.44	11.20	62994	202.89	300.19	8.4	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2166.0	11.0	34.1	99	9.5	1.58	11.29	63536	332.74	300.32	8.4	18.0
2167.0	9.1	36.4	99	9.5	1.67	11.40	64187	400.71	300.71	8.4	18.0
2168.0	12.6	36.0	99	9.5	1.56	11.48	64657	289.12	300.67	8.4	18.0
2169.0	11.1	35.4	99	9.5	1.59	11.57	65189	327.67	300.77	8.4	18.0
2170.0	34.3	33.7	97	9.5	1.22	11.60	65359	106.52	300.01	8.4	18.0
2171.0	27.7	32.5	99	9.5	1.28	11.63	65573	131.88	299.36	8.4	18.0
2172.0	12.0	35.7	99	9.5	1.58	11.72	66071	305.35	299.38	8.4	18.0
2173.0	14.1	35.7	97	9.5	1.52	11.79	66486	259.70	299.23	8.4	18.0
2174.0	33.3	33.4	98	9.5	1.23	11.82	66663	109.56	298.50	8.4	18.0
2175.0	26.3	31.6	96	9.5	1.27	11.86	66883	138.98	297.89	8.4	18.0
2176.0	12.1	35.6	97	9.5	1.56	11.94	67363	301.29	297.90	8.4	18.0
2177.0	21.3	35.1	94	9.5	1.37	11.99	67629	171.44	297.42	8.4	18.0
2178.0	33.0	33.5	87	9.5	1.19	12.02	67786	110.57	296.71	8.4	18.0
2179.0	29.3	33.7	90	9.5	1.24	12.05	67971	124.78	296.07	8.4	18.0
2180.0	40.9	33.4	92	9.5	1.14	12.08	68105	89.27	295.29	8.4	18.0
2181.0	28.6	33.3	92	9.5	1.25	12.11	68298	127.82	294.66	8.4	18.0
2182.0	41.9	33.3	93	9.5	1.14	12.13	68431	87.24	293.89	8.4	18.0
2183.0	26.9	33.3	93	9.5	1.27	12.17	68638	135.94	293.30	8.4	18.0
2184.0	41.9	33.4	92	9.5	1.14	12.20	68770	87.24	292.54	8.4	18.0
2185.0	24.2	30.0	73	9.5	1.20	12.24	68952	151.15	292.01	8.4	18.0
2186.0	37.5	28.8	67	9.5	1.03	12.26	69060	97.39	291.30	8.4	18.0
2187.0	53.7	28.7	108	9.5	1.06	12.28	69180	67.97	290.48	8.4	18.0
2188.0	38.7	28.2	89	9.5	1.10	12.31	69317	94.34	289.76	8.4	18.0
2189.0	48.0	26.5	104	9.5	1.06	12.33	69448	76.08	288.99	8.4	18.0
2190.0	37.3	27.5	100	9.5	1.13	12.36	69609	97.91	288.30	8.4	18.0
2191.0	40.9	28.1	90	9.5	1.08	12.38	69740	89.27	287.58	8.4	18.0
2192.0	45.6	25.7	110	9.5	1.08	12.40	69885	80.14	286.83	8.4	18.0
2193.0	52.9	27.1	106	9.5	1.05	12.42	70005	68.98	286.05	8.4	18.0
2194.0	30.4	27.0	105	9.5	1.20	12.45	70213	120.13	285.46	8.4	18.0
2195.0	52.8	28.7	97	9.5	1.04	12.47	70323	69.17	284.69	8.4	18.0
2196.0	48.0	30.3	91	9.5	1.06	12.49	70438	76.08	283.95	8.4	18.1
2197.0	63.2	31.3	89	9.5	0.98	12.51	70522	57.82	283.15	8.4	18.1
2198.0	38.7	32.5	87	9.5	1.14	12.54	70657	94.34	282.48	8.4	18.1
2199.0	18.0	34.7	97	9.5	1.43	12.59	70982	202.89	282.21	8.4	18.1
2200.0	8.3	32.0	101	9.5	1.64	12.71	71707	438.24	282.75	8.4	18.1
2201.0	4.6	30.0	101	9.5	1.79	12.93	73021	790.25	284.52	8.4	18.1
2202.0	8.1	29.2	101	9.5	1.61	13.05	73772	452.44	285.10	8.4	18.1
2203.0	14.1	28.4	99	9.5	1.43	13.12	74194	258.68	285.01	8.4	18.1
2204.0	37.1	23.9	79	9.5	1.03	13.15	74322	98.40	284.37	8.4	18.1
2205.0	38.7	26.0	97	9.5	1.10	13.18	74472	94.34	283.71	8.4	18.1
2206.0	50.0	22.9	103	9.5	1.01	13.20	74595	73.04	282.99	8.4	18.1
2207.0	40.9	23.9	102	9.5	1.07	13.22	74746	89.27	282.33	8.4	18.1
2208.0	8.6	27.0	88	9.5	1.51	13.34	75357	423.02	282.81	8.4	18.1
2209.0	4.4	30.2	102	9.5	1.81	13.56	76742	829.82	284.66	8.4	18.1
2210.0	18.6	25.4	95	9.5	1.29	13.62	77050	196.80	284.37	8.4	18.1
2211.0	11.7	24.8	100	9.5	1.43	13.70	77565	313.46	284.47	8.4	18.1
2212.0	22.2	25.7	101	9.5	1.26	13.75	77838	164.34	284.06	8.4	18.1
2213.0	7.9	27.6	96	9.5	1.57	13.87	78564	462.59	284.66	8.4	18.1
2214.0	18.8	28.8	99	9.5	1.35	13.93	78878	193.76	284.36	8.4	18.1
2215.0	24.8	28.2	99	9.5	1.26	13.97	79118	147.09	283.90	8.4	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2216.0	33.3	27.0	94	9.5	1.14	14.00	79286	109.56	283.32	8.4	18.1
2217.0	40.9	26.4	96	9.5	1.08	14.02	79427	89.27	282.68	8.4	18.1
2218.0	27.9	27.5	93	9.5	1.20	14.06	79627	130.86	282.18	8.4	18.1
2219.0	33.6	27.9	90	9.5	1.14	14.09	79787	108.55	281.61	8.4	18.1
2220.0	24.3	28.0	82	9.5	1.21	14.13	79990	150.14	281.18	8.4	18.1
2221.0	42.9	28.5	90	9.5	1.07	14.15	80116	85.21	280.55	8.4	18.1
2222.0	27.1	27.8	97	9.5	1.22	14.19	80332	134.92	280.07	8.4	18.1
2223.0	28.1	29.2	94	9.5	1.22	14.22	80532	129.85	279.59	8.4	18.1
2224.0	32.7	29.1	82	9.5	1.13	14.25	80682	111.59	279.04	8.4	18.1
2225.0	18.3	29.8	96	9.5	1.36	14.31	80997	199.85	278.79	8.4	18.1
2226.0	25.5	29.1	87	9.5	1.22	14.35	81203	143.04	278.36	8.4	18.1
2227.0	24.8	28.9	87	9.5	1.23	14.39	81413	147.09	277.94	8.4	18.1
2228.0	8.5	20.1	64	9.5	1.33	14.51	81865	432.15	278.43	8.4	18.1
2229.0	36.0	4.7	109	9.4	0.79	14.54	82047	101.44	277.87	8.4	18.1
2230.0	17.1	21.3	81	9.5	1.22	14.59	82331	213.03	277.66	8.4	18.1
2231.0	17.1	11.3	75	9.5	1.03	14.65	82593	214.05	277.46	8.4	18.1
2232.0	19.7	23.2	105	9.5	1.28	14.70	82913	185.64	277.17	8.4	18.1
2233.0	32.4	24.1	90	9.5	1.11	14.73	83079	112.60	276.65	8.4	18.1
2234.0	26.1	21.5	100	9.5	1.17	14.77	83308	139.99	276.23	8.4	18.1
2235.0	29.0	24.7	96	9.5	1.17	14.81	83508	125.79	275.76	8.4	18.1
2236.0	35.0	31.2	83	9.5	1.14	14.84	83650	104.49	275.23	8.4	18.1
2237.0	23.2	32.3	92	9.4	1.31	14.88	83868	157.24	274.86	8.4	18.1
2238.0	33.0	31.3	92	9.4	1.19	14.91	84056	110.57	274.35	8.4	18.1
2239.0	24.8	30.7	96	9.4	1.29	14.95	84287	147.09	273.96	8.4	18.1
2240.0	23.2	31.6	99	9.4	1.33	14.99	84542	157.24	273.61	8.4	18.1
2241.0	18.0	32.3	96	9.4	1.40	15.05	84862	202.89	273.39	8.4	18.1
2242.0	32.4	31.6	96	9.5	1.22	15.08	85040	112.60	272.90	8.4	18.1
2243.0	11.7	32.2	93	9.5	1.53	15.16	85519	313.46	273.02	8.4	18.1
2244.0	9.8	33.8	96	9.5	1.61	15.27	86106	371.29	273.32	8.4	18.1
2245.0	7.0	33.8	100	9.5	1.73	15.41	86957	520.41	274.07	8.4	18.1
2246.0	9.0	33.5	100	9.4	1.65	15.52	87624	406.79	274.47	8.4	18.1
2247.0	20.8	33.1	97	9.4	1.37	15.57	87905	175.50	274.17	8.4	18.1
2248.0	11.3	36.6	98	9.5	1.61	15.66	88423	322.59	274.31	8.4	18.1
2249.0	10.6	35.2	98	9.5	1.61	15.75	88975	343.90	274.52	8.4	18.1
2250.0	12.9	34.2	99	9.5	1.54	15.83	89435	282.02	274.54	8.4	18.1
2251.0	11.8	33.9	98	9.5	1.56	15.91	89932	308.39	274.64	8.4	18.1
2252.0	29.3	33.2	100	9.4	1.28	15.95	90137	124.78	274.20	8.4	18.1
2253.0	27.7	28.4	96	9.5	1.22	15.98	90344	131.88	273.78	8.4	18.1
2254.0	17.3	32.2	99	9.5	1.42	16.04	90687	211.00	273.60	8.4	18.1
2255.0	32.1	33.0	86	9.5	1.20	16.07	90847	113.62	273.13	8.4	18.1
2256.0	20.1	33.0	98	9.5	1.38	16.12	91139	181.59	272.86	8.4	18.1
2257.0	17.6	33.3	97	9.5	1.42	16.18	91468	206.95	272.67	8.4	18.1
2258.0	15.7	33.5	98	9.5	1.47	16.24	91841	232.31	272.55	8.4	18.1
2259.0	28.3	33.5	92	9.4	1.27	16.28	92037	128.83	272.13	8.4	18.1
2260.0	23.1	33.1	87	9.5	1.31	16.32	92263	158.25	271.80	8.4	18.1
2261.0	40.0	32.2	86	9.5	1.13	16.34	92393	91.30	271.28	8.4	18.1
2262.0	31.3	31.3	90	9.5	1.20	16.38	92565	116.66	270.84	8.4	18.1
2263.0	30.5	30.4	89	9.4	1.20	16.41	92740	119.70	270.41	8.4	18.1
2264.0	33.0	32.8	95	9.4	1.22	16.44	92912	110.57	269.95	8.4	18.1
2265.0	23.7	32.9	96	9.5	1.32	16.48	93154	154.20	269.62	8.4	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2266.0	36.7	32.9	92	9.5	1.18	16.51	93305	99.42	269.14	8.4	18.1
2267.0	21.3	33.3	98	9.5	1.37	16.56	93580	171.44	268.86	8.4	18.1
2268.0	11.6	34.9	100	9.5	1.59	16.64	94099	314.48	268.99	8.4	18.1
2269.0	5.2	35.3	101	9.4	1.84	16.83	95254	699.97	270.20	8.4	18.1
2270.0	13.4	35.0	100	9.5	1.54	16.91	95700	271.87	270.21	8.4	18.1
2271.0	17.9	34.3	99	9.5	1.44	16.96	96033	203.90	270.02	8.4	18.1
2272.0	20.5	34.2	99	9.5	1.40	17.01	96323	178.54	269.77	8.4	18.1
2273.0	22.2	28.8	87	9.5	1.27	17.06	96559	164.34	269.47	8.4	18.1
2274.0	34.0	28.4	88	9.5	1.14	17.09	96714	107.53	269.02	8.4	18.2
2275.0	9.5	30.0	90	9.5	1.54	17.19	97282	384.42	269.34	8.4	18.2
2276.0	13.1	31.7	102	9.5	1.51	17.27	97752	278.97	269.37	8.4	18.2
2277.0	21.2	34.2	100	9.5	1.39	17.32	98036	172.46	269.10	8.4	18.2
2278.0	49.3	32.6	96	9.4	1.10	17.34	98152	74.05	268.57	8.4	18.2
2279.0	35.6	32.3	97	9.4	1.20	17.36	98315	102.46	268.11	8.4	18.2
2280.0	29.8	31.5	101	9.5	1.25	17.40	98518	122.75	267.71	8.4	18.2
2281.0	20.7	31.0	103	9.5	1.37	17.45	98817	176.51	267.47	8.4	18.2
2282.0	10.3	35.1	96	9.5	1.61	17.54	99377	355.06	267.70	8.4	18.2
2283.0	10.6	36.1	96	9.5	1.62	17.64	99920	344.91	267.91	8.4	18.2
2284.0	38.3	34.5	73	9.5	1.11	17.66	100035	95.36	267.45	8.4	18.2
2285.0	22.8	33.2	83	9.5	1.30	17.71	100255	160.28	267.16	8.4	18.2
2286.0	12.9	35.3	96	9.5	1.55	17.79	100702	284.04	267.20	8.4	18.2
2287.0	55.4	32.6	94	9.4	1.05	17.80	100803	65.94	266.66	8.4	18.2
2288.0	62.1	31.0	86	9.5	0.98	17.82	100887	58.84	266.11	8.4	18.2
2289.0	38.4	31.0	90	9.5	1.13	17.85	101027	95.10	265.65	8.4	18.2
2290.0	33.6	32.9	75	9.5	1.14	17.88	101161	108.55	265.23	8.4	18.2
2291.0	27.3	34.1	78	9.4	1.23	17.91	101333	133.91	264.89	8.4	18.2
2292.0	29.5	28.1	74	9.5	1.12	17.95	101483	123.76	264.51	8.4	18.2
2293.0	29.3	31.9	78	9.5	1.18	17.98	101642	124.78	264.14	8.4	18.2
2294.0	24.7	34.7	76	9.5	1.26	18.02	101827	148.11	263.84	8.4	18.2
2295.0	14.0	24.3	92	9.5	1.35	18.09	102220	260.71	263.83	8.4	18.2
2296.0	18.9	25.0	98	9.5	1.29	18.15	102531	192.74	263.64	8.4	18.2
2297.0	9.5	25.5	102	9.5	1.51	18.25	103173	383.46	263.96	8.4	18.2
2298.0	7.5	31.4	102	9.5	1.67	18.38	103992	489.98	264.55	8.4	18.2
2299.0	9.6	30.0	102	9.5	1.57	18.49	104627	379.40	264.84	8.4	18.2
2300.0	13.0	30.0	102	9.5	1.48	18.57	105094	279.99	264.88	8.4	18.2
2301.0	13.6	29.2	101	9.5	1.46	18.64	105541	268.83	264.89	8.4	18.2
2302.0	19.0	29.3	89	9.5	1.32	18.69	105820	191.73	264.70	8.4	18.2
2303.0	19.9	34.9	93	9.5	1.39	18.74	106101	183.61	264.50	8.4	18.2
2304.0	7.7	33.0	100	9.5	1.68	18.87	106880	472.73	265.03	8.4	18.2
2305.0	15.3	31.9	100	9.5	1.45	18.94	107270	238.39	264.96	8.4	18.2
2306.0	12.2	32.6	98	9.5	1.53	19.02	107754	300.28	265.05	8.4	18.2
2307.0	7.2	32.9	99	9.5	1.70	19.16	108579	506.21	265.67	8.4	18.2
2308.0	9.2	32.7	88	9.4	1.60	19.27	109155	398.68	266.00	8.4	18.2
2309.0	26.7	30.8	99	9.4	1.28	19.30	109377	136.95	265.68	8.4	18.2
2310.0	16.9	25.8	70	9.4	1.25	19.36	109625	216.08	265.55	8.4	18.2
2311.0	24.3	21.4	68	9.4	1.08	19.40	109793	150.14	265.26	8.4	18.2
2312.0	37.1	25.9	90	9.4	1.10	19.43	109938	98.40	264.84	8.4	18.2
2313.0	10.8	30.6	103	9.4	1.56	19.52	110507	337.81	265.02	8.4	18.2
2314.0	16.7	29.8	103	9.4	1.42	19.58	110878	219.12	264.91	8.4	18.2
2315.0	13.0	29.6	103	9.4	1.49	19.66	111351	279.99	264.95	8.4	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2316.0	20.7	29.8	96	9.4	1.34	19.71	111628	176.51	264.73	8.4	18.2
2317.0	31.9	28.4	93	9.4	1.18	19.74	111804	114.63	264.35	8.4	18.2
2318.0	15.3	29.5	103	9.4	1.45	19.81	112208	238.39	264.29	8.4	18.2
2319.0	19.4	29.6	90	9.4	1.33	19.86	112486	188.69	264.10	8.4	18.2
2320.0	25.7	29.4	86	9.4	1.23	19.90	112687	142.02	263.80	8.4	18.2
2321.0	23.7	27.9	80	9.4	1.22	19.94	112890	154.20	263.53	8.4	18.2
2322.0	72.8	25.1	95	9.4	1.24	19.98	113139	160.28	263.28	8.4	18.2
2323.0	27.9	23.7	100	9.4	1.18	20.02	113354	130.86	262.96	8.4	18.2
2324.0	15.4	24.7	102	9.4	1.37	20.08	113753	237.38	262.89	8.4	18.2
2325.0	18.2	25.0	106	9.4	1.34	20.14	114104	200.86	262.74	8.4	18.2
2326.0	11.8	27.5	105	9.4	1.50	20.22	114638	308.39	262.85	8.4	18.2
2327.0	23.8	27.7	99	9.4	1.28	20.26	114887	153.18	262.59	8.4	18.2
2328.0	11.7	26.9	76	9.4	1.40	20.35	115281	313.46	262.71	8.4	18.2
2329.0	12.4	26.7	77	9.4	1.38	20.43	115653	295.20	262.79	8.4	18.2
2330.0	5.5	27.3	87	9.4	1.67	20.61	116601	662.43	263.75	8.4	18.2
2331.0	4.3	28.4	98	9.4	1.79	20.85	117978	851.12	265.16	8.4	18.2
2332.0	11.7	29.2	96	9.4	1.50	20.93	118469	311.43	265.27	8.4	18.2
2333.0	14.6	28.5	96	9.4	1.42	21.00	118864	249.55	265.23	8.4	18.2
2334.0	13.2	29.1	94	9.4	1.46	21.07	119292	276.94	265.26	8.4	18.2
2335.0	10.8	27.6	96	9.4	1.50	21.17	119825	336.80	265.43	8.4	18.2
2336.0	23.8	26.6	94	9.4	1.25	21.21	120062	153.18	265.16	8.4	18.2
2337.0	7.4	28.0	98	9.4	1.63	21.34	120859	495.05	265.71	8.4	18.2
2338.0	4.8	28.4	99	9.4	1.76	21.55	122092	760.83	266.88	8.4	18.2
2339.0	6.6	28.4	97	9.4	1.66	21.70	122975	552.87	267.55	8.4	18.2
2340.0	4.2	29.9	98	9.4	1.82	21.94	124375	868.36	268.96	8.4	18.2
2341.0	15.8	29.3	94	9.4	1.40	22.01	124733	231.80	268.87	8.4	18.2
2342.0	20.0	27.4	94	9.4	1.31	22.06	125014	182.60	268.67	8.4	18.2
2343.0	16.2	29.0	83	9.4	1.36	22.12	125322	225.21	268.57	8.4	18.2
2344.0	3.3	30.2	100	9.4	1.91	22.42	127142	1108	271	8.4	18.2
2345.0	3.8	30.4	99	9.4	1.87	22.68	128695	958.65	272.12	8.4	18.2
2346.0	3.9	30.6	90	9.4	1.83	22.94	130073	932.27	273.65	8.4	18.2
2347.0	17.5	31.8	97	9.4	1.42	23.00	130406	208.98	273.50	8.4	18.2
2348.0	22.0	31.5	81	9.4	1.29	23.04	130627	166.37	273.25	8.4	18.2
2349.0	14.8	30.8	59	9.4	1.30	23.11	130866	247.52	273.19	8.4	18.2
2350.0	17.5	29.0	93	9.4	1.37	23.17	131185	208.98	273.04	8.4	18.2
2351.0	25.7	27.8	100	9.4	1.26	23.20	131418	142.02	272.74	8.4	18.2
2352.0	10.8	30.5	88	9.4	1.52	23.30	131908	337.81	272.89	8.4	18.2
2353.0	6.6	28.6	101	9.4	1.67	23.45	132819	550.84	273.52	8.4	18.2
2354.0	10.8	26.4	100	9.4	1.49	23.54	133375	337.81	273.67	8.4	18.2
2355.0	10.1	25.6	102	9.4	1.50	23.64	133976	360.13	273.87	8.4	18.3
2356.0	10.9	25.3	101	9.4	1.48	23.73	134535	335.78	274.01	8.4	18.3
2357.0	11.8	26.1	101	9.4	1.47	23.82	135050	310.42	274.09	8.4	18.3
2358.0	11.2	26.1	98	9.4	1.48	23.91	135578	326.65	274.21	8.4	18.3
2359.0	11.1	22.7	99	9.4	1.42	24.00	136111	328.68	274.33	8.4	18.3
2360.0	4.9	21.7	100	9.4	1.64	24.20	137345	752.72	275.40	8.4	18.3
2361.0	6.2	21.9	99	9.4	1.57	24.36	138302	587.36	276.10	8.4	18.3
2362.0	5.3	22.1	99	9.4	1.62	24.55	139418	683.48	277.01	8.4	18.3
2363.0	12.9	22.7	99	9.4	1.38	24.63	139881	284.04	277.03	8.4	18.3
2364.0	3.1	27.7	100	9.4	1.88	24.95	141815	1182	279	8.4	18.3
2365.0	20.6	31.5	99	9.4	1.37	25.00	142105	177.53	278.81	8.4	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2366.0	5.2	31.7	100	9.4	1.79	25.19	143253	701.23	279.75	8.4	18.3
2367.0	8.4	31.1	100	9.4	1.64	25.31	143970	437.23	280.09	8.4	18.3
2368.0	16.4	30.3	98	9.4	1.42	25.37	144330	223.18	279.97	8.4	18.3
2369.0	21.6	29.6	94	9.4	1.32	25.42	144591	169.41	279.72	8.4	18.3
2370.0	16.8	29.6	80	9.4	1.34	25.48	144876	217.09	279.59	8.4	18.3
2371.0	13.9	30.1	80	9.4	1.40	25.55	145222	262.74	279.55	8.4	18.3
2372.0	12.2	30.2	82	9.5	1.44	25.63	145627	299.26	279.59	8.4	18.3
2373.0	16.1	29.5	82	9.5	1.35	25.69	145932	227.24	279.48	8.4	18.3
2374.0	15.4	29.6	93	9.5	1.40	25.76	146294	237.38	279.39	8.4	18.3
2375.0	4.5	31.5	93	9.5	1.80	25.98	147536	816.63	280.55	8.4	18.3
2376.0	15.5	29.6	97	9.5	1.33	26.03	147829	187.67	280.35	8.4	18.3
2377.0	4.6	27.5	100	9.5	1.74	26.25	149137	793.30	281.46	8.4	18.3
2378.0	7.0	26.8	98	9.5	1.66	26.35	149975	526.41	281.97	8.4	18.3
2379.0	7.0	24.6	102	9.5	1.58	26.54	150843	520.41	282.49	8.4	18.3
2380.0	3.4	32.1	102	9.5	1.92	26.83	152664	1068	284	8.4	18.3
2381.0	9.3	30.5	102	9.5	1.59	26.94	153321	392.59	284.45	8.4	18.3
2382.0	3.6	30.8	102	9.5	1.88	27.22	155029	1020	286	8.4	18.3
2383.0	4.0	31.0	102	9.5	1.85	27.47	156578	924.16	287.38	8.4	18.3
2384.0	5.7	30.5	102	9.5	1.80	27.69	157888	701.12	288.43	8.4	18.3
2385.0	5.2	31.1	99	9.5	1.81	27.86	159020	695.91	289.30	8.4	18.3
2386.0	7.9	30.8	100	9.5	1.64	28.01	159780	461.57	289.66	8.4	18.3
2386.4	2.0	31.8	100	9.5	2.06	28.20	160957	1705	291	8.4	18.3
2387.0	1.7	31.4	101	9.5	2.10	28.54	163028	2090	293	8.4	18.3
2388.0	5.4	31.6	99	9.5	1.76	28.73	164128	677.65	294.07	8.4	18.3
2389.0	7.8	30.4	76	9.5	1.55	28.86	164713	470.70	294.39	8.4	18.3
2390.0	5.7	32.9	82	9.5	1.71	29.03	165572	636.06	295.11	8.4	18.3
2391.0	6.1	32.4	87	9.5	1.70	29.20	166435	603.59	295.76	8.4	18.3
2392.0	6.6	29.7	96	9.5	1.66	29.35	167312	556.93	296.30	8.4	18.3
2393.0	11.3	29.5	97	9.5	1.50	29.44	167828	324.62	296.36	8.4	18.3
2394.0	20.3	27.8	98	9.5	1.31	29.49	168116	179.56	296.12	8.4	18.3
2395.0	5.6	29.7	97	9.5	1.72	29.67	169161	655.33	296.87	8.4	18.3
2396.0	13.6	28.7	94	9.5	1.42	29.74	169572	267.81	296.81	8.4	18.3
2397.0	14.9	26.7	92	9.5	1.37	29.81	169943	245.50	296.70	8.4	18.3
2398.0	10.0	28.3	96	9.5	1.52	29.91	170515	364.19	296.84	8.4	18.3
2399.0	12.3	23.4	95	9.5	1.38	29.99	170978	296.22	296.84	8.4	18.3
2400.0	16.1	30.2	96	9.5	1.40	30.05	171335	224.22	296.69	8.4	18.3
2401.0	9.7	30.8	97	9.5	1.57	30.15	171935	378.39	296.86	8.4	18.3
2402.0	19.6	30.5	97	9.5	1.35	30.21	172232	186.66	296.63	8.4	18.3
2403.0	16.1	29.4	96	9.5	1.39	30.27	172587	226.22	296.49	8.4	18.3
2404.0	19.9	25.1	97	9.5	1.27	30.32	172878	183.61	296.26	8.4	18.3
2405.0	13.5	24.8	101	9.5	1.39	30.39	173326	271.36	296.21	8.4	18.3
2406.0	16.0	26.0	101	9.5	1.36	30.46	173705	228.25	296.07	8.4	18.3
2407.0	10.0	29.0	99	9.5	1.54	30.56	174300	365.20	296.21	8.4	18.3
2407.4	9.7	27.0	101	9.5	1.52	30.60	174549	377.04	296.28	8.4	18.3
2407.6	12.9	26.5	101	9.5	1.43	30.61	174644	284.04	296.27	8.4	18.3
2407.8	3.4	25.8	101	9.5	1.80	30.67	175001	1075	297	8.4	18.3
2408.0	22.5	25.6	102	9.5	1.26	30.68	175055	162.31	296.53	8.4	18.3
2409.0	4.2	25.5	102	9.5	1.74	30.92	176496	863.29	297.68	8.4	18.3
2410.0	9.5	28.1	101	9.5	1.54	31.02	177133	383.46	297.85	8.4	18.3
2411.0	8.3	27.7	102	9.5	1.58	31.14	177869	440.27	298.14	8.4	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2412.0	37.1	25.6	101	9.5	1.12	31.17	178032	98.40	297.74	8.4	18.3
2413.0	2.7	28.6	102	9.5	1.92	31.53	180280	1338	300	8.4	18.3
2414.0	3.4	30.6	102	9.5	1.89	31.83	182068	1064	301	8.4	18.3
2415.0	2.6	32.3	95	9.5	1.99	32.21	184282	1415	304	8.4	18.3
2416.0	5.0	30.0	98	9.5	1.76	32.41	185462	730.40	304.42	8.4	18.3
2417.0	13.6	28.2	91	9.5	1.41	32.49	185864	268.83	304.35	8.4	18.3
2418.0	9.5	31.2	96	9.5	1.58	32.59	186471	384.47	304.51	8.4	18.3
2419.0	22.0	29.2	93	9.5	1.29	32.64	186726	166.37	304.24	8.4	18.3
2420.0	18.8	28.7	91	9.5	1.32	32.69	187015	193.76	304.02	8.4	18.3
2421.0	25.5	29.0	90	9.5	1.23	32.73	187227	143.04	303.70	8.4	18.3
2422.0	8.9	30.3	96	9.5	1.58	32.84	187874	410.34	303.91	8.4	18.3
2423.0	8.7	31.5	97	9.5	1.61	32.96	188543	419.77	304.14	8.4	18.3
2424.0	4.5	31.3	96	9.5	1.80	33.18	189824	811.56	305.13	8.4	18.3
2425.0	3.4	30.0	96	9.5	1.86	33.47	191519	1074	307	8.4	18.3

BIT NUMBER	5	IADC CODE	517	INTERVAL	2425.0- 2524.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	8516.00	TRIP TIME	7.4	BIT RUN	101.0
TOTAL HOURS	24.16	TOTAL TURNS	136139	CONDITION	T8 B6 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2426.0	18.6	34.1	67	9.5	1.30	0.05	217	196	35737	8.4	18.3
2427.0	5.7	30.4	75	9.5	1.64	0.23	1008	646	18192	8.4	18.3
2428.0	6.1	34.1	93	9.5	1.75	0.40	1929	604	12329	8.4	18.3
2429.0	7.0	32.7	94	9.5	1.68	0.54	2734	519	9377	8.4	18.3
2430.0	6.2	33.3	86	9.5	1.70	0.70	3571	593	7620	8.4	18.3
2431.0	26.9	32.3	92	9.5	1.26	0.74	3777	136	6373	8.4	18.3
2432.0	13.0	32.3	90	9.5	1.48	0.81	4195	281	5502	8.4	18.3
2433.0	7.4	32.2	98	9.5	1.67	0.95	4990	494	4876	8.4	18.3
2434.0	6.7	32.6	89	9.5	1.68	1.10	5790	548	4395	8.4	18.3
2435.0	12.5	32.2	96	9.5	1.51	1.18	6254	292	3985	8.4	18.3
2436.0	5.5	30.3	76	9.5	1.65	1.36	7080	659	3683	8.4	18.3
2437.0	7.1	27.0	96	9.5	1.60	1.50	7892	513	3419	8.4	18.4
2438.0	26.7	25.4	91	9.5	1.18	1.54	8097	137	3166	8.4	18.4
2439.0	15.9	23.9	91	9.5	1.30	1.60	8441	229	2956	8.4	18.4
2440.0	25.7	22.0	96	9.5	1.16	1.64	8666	142	2769	8.4	18.4
2441.0	10.6	24.0	48	9.5	1.24	1.74	8936	346	2617	8.4	18.4
2442.0	48.0	24.9	106	9.5	1.05	1.76	9069	76	2468	8.4	18.4
2443.0	22.8	34.0	105	9.5	1.37	1.80	9345	160	2340	8.4	18.4
2444.0	7.6	36.1	93	9.5	1.70	1.93	10079	480	2242	8.4	18.4
2445.0	30.0	31.0	101	9.5	1.24	1.96	10282	122	2136	8.4	18.4
2446.0	18.8	22.2	93	9.5	1.24	2.02	10581	195	2043	8.4	18.4
2447.0	17.9	17.2	101	9.5	1.20	2.07	10920	204	1960	8.4	18.4
2448.0	24.2	16.3	101	9.5	1.10	2.12	11172	151	1881	8.4	18.4
2449.0	12.8	16.7	81	9.5	1.22	2.19	11551	285	1815	8.4	18.4
2450.0	19.4	21.8	100	9.5	1.24	2.24	11860	189	1750	8.4	18.4
2451.0	21.4	20.4	100	9.5	1.20	2.29	12141	170	1689	8.4	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2452.0	20.5	20.1	100	9.5	1.21	2.34	12435	179	1633	8.4	18.4
2453.0	19.3	20.6	100	9.5	1.23	2.39	12748	190	1581	8.4	18.4
2454.0	13.1	21.3	98	9.5	1.34	2.47	13197	279	1536	8.4	18.4
2455.0	6.5	20.6	99	9.5	1.52	2.62	14102	558	1504	8.4	18.4
2456.0	26.7	20.6	99	9.5	1.14	2.66	14324	137	1460	8.4	18.4
2457.0	20.1	20.1	99	9.5	1.21	2.71	14619	182	1420	8.4	18.4
2458.0	34.0	19.2	99	9.5	1.05	2.74	14794	108	1380	8.4	18.4
2459.0	3.5	22.1	100	9.5	1.72	3.03	16532	1055	1370	8.4	18.4
2460.0	4.5	22.3	100	9.5	1.66	3.25	17882	819	1355	8.4	18.4
2461.0	10.1	21.9	100	9.5	1.42	3.35	18475	361	1327	8.4	18.4
2462.0	27.5	19.6	99	9.5	1.12	3.39	18691	133	1295	8.4	18.4
2463.0	30.5	19.1	99	9.5	1.08	3.42	18887	120	1264	8.4	18.4
2464.0	5.3	21.7	100	9.5	1.60	3.61	20030	693	1249	8.4	18.4
2465.0	18.0	18.2	65	9.5	1.09	3.66	20246	203	1223	8.4	18.4
2466.0	6.3	21.2	101	9.5	1.54	3.82	21208	579	1207	8.4	18.4
2467.0	3.8	22.8	102	9.5	1.72	4.09	22824	966	1202	8.4	18.4
2468.0	3.7	27.1	102	9.5	1.81	4.36	24483	993	1197	8.4	18.4
2469.0	3.8	29.9	102	9.5	1.85	4.63	26111	973	1192	8.4	18.4
2470.0	2.3	30.3	101	9.5	2.01	5.07	28796	1619	1201	8.4	18.4
2471.0	1.7	29.2	102	9.5	2.08	5.67	32467	2185	1223	8.4	18.4
2472.0	0.8	26.8	102	9.5	2.26	6.99	40607	4844	1300	8.4	18.4
2472.6	1.5	27.7	95	9.5	2.07	7.41	42962	2516	1315	8.4	18.4
2473.0	1.2	29.5	101	9.5	2.17	7.73	44898	2927	1328	8.4	18.4
2474.0	7.2	30.2	101	9.5	1.66	7.87	45737	507	1312	8.4	18.4
2475.0	1.6	27.7	103	9.5	2.07	8.51	49683	2343	1332	8.4	18.4
2476.0	2.9	26.4	102	9.5	1.86	8.85	51801	1264	1331	8.4	18.4
2477.0	2.3	32.1	92	9.5	2.00	9.28	54161	1560	1335	8.4	18.4
2478.0	2.1	32.6	96	9.5	2.06	9.77	56970	1775	1344	8.4	18.4
2479.0	3.6	32.3	96	9.5	1.89	10.05	58586	1023	1338	8.4	18.4
2480.0	2.2	32.5	95	9.5	2.04	10.50	61171	1647	1343	8.4	18.4
2481.0	2.6	33.2	96	9.5	2.00	10.88	63338	1381	1344	8.4	18.4
2482.0	2.3	34.0	96	9.5	2.06	11.32	65890	1617	1349	8.4	18.4
2483.0	5.2	33.8	96	9.5	1.80	11.51	66991	699	1338	8.4	18.4
2484.0	3.6	34.1	97	9.5	1.92	11.79	68633	1026	1332	8.4	18.4
2485.0	3.6	34.2	99	9.5	1.92	12.07	70262	1003	1327	8.4	18.4
2486.0	6.1	33.7	98	9.5	1.75	12.23	71216	595	1315	8.4	18.4
2487.0	5.9	32.1	97	9.5	1.73	12.40	72192	616	1304	8.4	18.4
2488.0	4.5	34.1	97	9.5	1.85	12.62	73485	814	1296	8.4	18.4
2489.0	2.6	34.9	97	9.5	2.03	13.01	75719	1405	1297	8.4	18.4
2490.0	3.8	35.1	97	9.5	1.92	13.27	77263	970	1292	8.4	18.4
2491.0	3.5	35.1	90	9.5	1.93	13.56	78821	1057	1289	8.4	18.4
2492.0	2.6	35.1	100	9.5	2.04	13.94	81086	1382	1290	8.4	18.4
2493.0	4.0	34.8	97	9.5	1.90	14.19	82562	923	1285	8.4	18.4
2494.0	3.4	34.9	97	9.5	1.95	14.48	84249	1061	1282	8.4	18.4
2495.0	3.0	34.5	96	9.5	1.98	14.82	86176	1226	1281	8.4	18.4
2496.0	2.1	35.0	96	9.5	2.09	15.29	88869	1705	1287	8.4	18.4
2497.0	2.8	35.6	95	9.5	2.02	15.64	90890	1295	1287	8.4	18.4
2498.0	2.6	39.0	81	9.5	2.05	16.03	92794	1426	1289	8.4	18.4
2499.0	3.8	39.7	100	9.5	2.00	16.30	94378	969	1285	8.4	18.4
2500.0	4.1	35.6	99	9.5	1.91	16.54	95824	890	1279	8.4	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2501.0	6.5	35.0	99	9.5	1.76	16.69	96733	559	1270	8.4	18.4
2502.0	4.2	34.8	99	9.5	1.89	16.93	98152	872	1265	8.4	18.4
2503.0	6.1	32.9	99	9.5	1.74	17.10	99125	601	1256	8.4	18.4
2504.0	5.6	31.6	101	9.5	1.76	17.27	100214	653	1248	8.4	18.4
2505.0	6.8	35.1	101	9.5	1.75	17.42	101104	535	1240	8.4	18.4
2506.0	7.3	35.1	101	9.5	1.73	17.56	101934	499	1230	8.4	18.4
2507.0	5.8	35.5	101	9.5	1.81	17.73	102986	633	1223	8.4	18.4
2508.0	4.2	33.2	96	9.5	1.85	17.97	104356	868	1219	8.4	18.4
2509.0	6.6	34.8	99	9.5	1.75	18.12	105254	551	1211	8.4	18.4
2510.0	7.2	35.2	99	9.5	1.73	18.26	106085	509	1203	8.4	18.4
2511.0	6.7	35.1	99	9.5	1.75	18.41	106974	545	1195	8.4	18.4
2512.0	5.3	36.7	96	9.4	1.86	18.60	108067	692	1189	8.4	18.4
2513.0	7.5	38.2	89	9.4	1.74	18.73	108774	485	1181	8.4	18.4
2514.0	10.1	39.6	91	9.4	1.67	18.83	109316	362	1172	8.4	18.4
2515.0	7.6	39.8	82	9.4	1.73	18.96	109963	483	1164	8.4	18.4
2516.0	4.0	38.5	61	9.4	1.83	19.21	110879	922	1162	8.4	18.4
2517.0	5.6	36.7	83	9.4	1.79	19.39	111770	654	1156	8.4	18.4
2518.0	6.0	35.4	98	9.4	1.80	19.56	112750	607	1150	8.4	18.4
2519.0	8.4	35.2	99	9.4	1.70	19.68	113453	434	1143	8.4	18.4
2520.0	2.8	35.5	99	9.4	2.05	20.04	115609	1323	1145	8.4	18.4
2521.0	3.2	35.7	96	9.4	2.01	20.36	117435	1154	1145	8.4	18.4
2522.0	1.7	36.6	97	9.4	2.22	20.95	120878	2156	1155	8.4	18.5
2523.0	1.2	36.9	92	9.4	2.31	21.76	125376	2966	1174	8.4	18.5
2524.0	2.0	37.2	95	9.5	2.15	22.26	128224	1832	1180	8.4	18.5
2525.0	1.1	43.2	70	9.5	2.35	23.17	132067	3321	1202	8.4	18.5
2525.4	1.1	41.1	73	9.5	2.32	23.53	133625	3251	1210	8.4	18.5
2526.0	0.9	42.5	66	9.5	2.37	24.16	136139	3877	1226	8.4	18.5

BIT NUMBER	6	IADC CODE	537	INTERVAL	2526.0- 2736.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.8	BIT RUN	210.0
TOTAL HOURS	49.20	TOTAL TURNS	161609	CONDITION	T4 B5 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2527.0	1.9	27.7	54	9.5	1.82	0.52	1678	1883	38635	8.4	17.2
2528.0	4.1	34.6	54	9.5	1.70	0.76	2464	893	19764	8.4	17.2
2529.0	2.4	37.9	61	9.5	1.97	1.18	4009	1545	13691	8.4	17.2
2530.0	1.8	39.2	63	9.5	2.09	1.75	6139	2070	10786	8.4	17.2
2531.0	2.7	42.4	56	9.5	1.96	2.12	7369	1334	8895	8.4	17.2
2532.0	2.3	44.0	51	9.5	2.01	2.55	8696	1589	7678	8.4	17.2
2533.0	9.1	45.3	63	9.5	1.64	2.66	9113	403	6638	8.4	17.2
2534.0	1.9	43.8	56	9.5	2.10	3.18	10873	1896	6046	8.4	17.2
2535.0	5.4	44.5	55	9.5	1.76	3.37	11485	677	5449	8.4	17.2
2536.0	5.9	43.5	54	9.5	1.71	3.53	12031	618	4966	8.4	17.2
2537.0	4.6	42.7	47	9.5	1.74	3.75	12650	797	4587	8.4	17.2
2538.0	3.5	41.7	55	9.5	1.86	4.04	13588	1032	4291	8.4	17.2
2539.0	6.5	42.9	58	9.5	1.69	4.19	14123	562	4004	8.4	17.2
2540.0	3.3	42.7	58	9.5	1.91	4.49	15172	1096	3796	8.4	17.2
2541.0	2.4	43.6	58	9.5	2.04	4.91	16636	1530	3645	8.4	17.2
2542.0	8.4	42.4	56	9.5	1.59	5.03	17040	437	3445	8.4	17.2
2543.0	4.6	40.6	56	9.5	1.77	5.25	17777	797	3289	8.4	17.2
2544.0	3.8	39.7	56	9.5	1.82	5.51	18676	973	3160	8.4	17.2
2545.0	4.4	40.4	53	9.5	1.76	5.74	19403	835	3038	8.4	17.2
2546.0	3.7	40.7	56	9.5	1.83	6.01	20306	983	2935	8.4	17.2
2547.0	4.8	40.8	56	9.5	1.75	6.22	21003	759	2831	8.4	17.2
2548.0	5.1	41.0	56	9.5	1.74	6.41	21660	718	2735	8.4	17.2
2549.0	3.2	40.7	56	9.5	1.89	6.73	22719	1155	2667	8.4	17.2
2550.0	4.0	40.6	56	9.5	1.81	6.98	23553	910	2593	8.4	17.2
2551.0	5.2	40.8	56	9.5	1.72	7.17	24191	697	2518	8.4	17.2
2552.0	4.9	38.1	54	9.5	1.70	7.38	24858	749	2450	8.4	17.2
2553.0	6.4	41.7	55	9.5	1.67	7.53	25374	572	2380	8.4	17.2
2554.0	3.0	46.0	49	9.5	1.93	7.86	26337	1198	2338	8.4	17.2
2555.0	4.0	46.3	52	9.5	1.85	8.11	27102	902	2288	8.4	17.2
2556.0	6.3	46.4	56	9.5	1.74	8.27	27638	584	2231	8.4	17.2
2557.0	4.8	45.4	56	9.5	1.82	8.48	28345	767	2184	8.4	17.2
2558.0	5.2	44.0	56	9.5	1.77	8.67	28998	709	2138	8.4	17.2
2559.0	4.4	44.6	56	9.5	1.84	8.90	29772	839	2099	8.4	17.2
2560.0	5.4	44.1	56	9.5	1.76	9.09	30396	680	2057	8.4	17.2
2561.0	6.8	44.1	56	9.5	1.68	9.23	30888	536	2014	8.4	17.2
2562.0	3.4	45.8	56	9.5	1.94	9.53	31879	1085	1988	8.4	17.2
2563.0	3.3	45.0	56	9.5	1.93	9.83	32887	1106	1964	8.4	17.2
2564.0	3.3	44.7	55	9.5	1.93	10.14	33890	1101	1941	8.4	17.3
2565.0	4.8	44.5	55	9.5	1.80	10.34	34583	761	1911	8.4	17.3
2566.0	4.7	43.9	56	9.5	1.81	10.56	35306	784	1883	8.4	17.3
2567.0	3.5	46.2	57	9.5	1.94	10.84	36276	1043	1862	8.4	17.3
2568.0	4.3	46.9	57	9.5	1.87	11.07	37060	840	1838	8.4	17.3
2569.0	1.8	45.8	56	9.5	2.15	11.63	38941	2029	1842	8.4	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2570.0	4.2	40.1	56	9.5	1.79	11.87	39752	876	1820	8.4	17.3
2571.0	9.4	40.0	57	9.5	1.53	11.98	40114	390	1789	8.4	17.3
2572.0	5.8	42.1	56	9.5	1.71	12.15	40694	627	1763	8.4	17.3
2573.0	2.5	40.7	56	9.5	1.96	12.54	42025	1435	1756	8.4	17.3
2574.0	3.8	40.2	56	9.5	1.82	12.80	42909	953	1740	8.4	17.3
2575.0	3.5	40.6	57	9.5	1.86	13.09	43885	1048	1726	8.4	17.3
2576.0	7.1	39.7	57	9.5	1.62	13.23	44366	517	1701	8.4	17.3
2577.0	6.7	39.6	57	9.5	1.63	13.38	44872	545	1679	8.4	17.3
2578.0	5.1	42.7	56	9.5	1.76	13.58	45534	718	1660	8.4	17.3
2579.0	6.2	44.5	55	9.5	1.71	13.74	46070	589	1640	8.4	17.3
2580.0	5.0	45.1	56	9.5	1.79	13.94	46736	730	1623	8.4	17.3
2581.0	5.8	40.0	53	9.5	1.66	14.11	47281	630	1605	8.4	17.3
2582.0	4.8	39.5	51	9.5	1.71	14.32	47923	761	1590	8.4	17.3
2583.0	4.2	39.1	51	9.5	1.75	14.56	48657	870	1577	8.4	17.3
2584.0	6.4	39.1	51	9.5	1.61	14.71	49138	571	1560	8.4	17.3
2585.0	4.9	42.0	56	9.5	1.76	14.92	49826	745	1546	8.4	17.3
2586.0	5.2	40.5	56	9.5	1.72	15.11	50474	702	1532	8.4	17.3
2587.0	2.2	40.8	56	9.5	2.01	15.57	52014	1673	1534	8.4	17.3
2588.0	9.9	40.6	56	9.5	1.51	15.67	52352	367	1516	8.4	17.3
2589.0	2.5	40.4	56	9.5	1.96	16.07	53697	1461	1515	8.4	17.3
2590.0	3.7	40.2	56	9.5	1.83	16.34	54604	987	1507	8.4	17.3
2591.0	4.3	42.3	57	9.5	1.81	16.57	55394	849	1496	8.4	17.3
2592.0	4.1	45.0	57	9.5	1.86	16.81	56221	887	1487	8.4	17.3
2593.0	4.5	46.5	57	9.5	1.86	17.04	56980	815	1477	8.4	17.3
2594.0	3.3	44.1	57	9.5	1.93	17.34	58007	1104	1472	8.4	17.3
2595.0	13.1	42.8	56	9.5	1.45	17.42	58265	279	1454	8.4	17.3
2596.0	6.9	43.3	56	9.5	1.67	17.56	58753	528	1441	8.4	17.3
2597.0	6.1	44.4	57	9.5	1.73	17.72	59314	603	1429	8.4	17.3
2598.0	4.1	44.0	57	9.5	1.86	17.97	60153	901	1422	8.4	17.3
2599.0	5.0	45.4	56	9.5	1.80	18.17	60826	730	1413	8.4	17.3
2600.0	8.2	45.9	55	9.5	1.63	18.29	61231	446	1399	8.4	17.3
2601.0	12.1	42.9	55	9.5	1.47	18.38	61504	302	1385	8.4	17.3
2602.0	29.0	37.5	55	9.5	1.13	18.41	61618	126	1368	8.4	17.3
2603.0	14.3	38.8	55	9.5	1.37	18.48	61849	256	1354	8.4	17.3
2604.0	18.5	44.9	54	9.5	1.34	18.53	62025	198	1339	8.4	17.3
2605.0	9.1	44.0	54	9.5	1.57	18.64	62379	400	1327	8.4	17.3
2606.0	8.7	40.9	55	9.5	1.55	18.76	62758	422	1316	8.4	17.3
2607.0	10.5	40.9	54	9.5	1.49	18.86	63069	349	1304	8.4	17.3
2608.0	11.8	42.1	54	9.5	1.46	18.94	63345	309	1292	8.4	17.3
2609.0	8.9	42.3	54	9.5	1.56	19.05	63710	409	1281	8.4	17.3
2610.0	20.2	42.8	51	9.5	1.27	19.10	63862	181	1268	8.4	17.3
2611.0	9.3	43.0	54	9.5	1.55	19.21	64213	395	1258	8.4	17.3
2612.0	14.7	41.1	55	9.5	1.38	19.28	64436	248	1246	8.4	17.3
2613.0	9.2	43.1	54	9.5	1.56	19.39	64790	398	1236	8.4	17.3
2614.0	12.5	43.6	54	9.5	1.46	19.47	65051	293	1226	8.4	17.3
2615.0	9.4	43.4	54	9.5	1.55	19.57	65395	387	1216	8.4	17.3
2616.0	7.7	43.4	54	9.5	1.62	19.70	65818	473	1208	8.4	17.3
2617.0	9.9	43.1	54	9.5	1.53	19.80	66147	368	1199	8.4	17.3
2618.0	7.2	43.7	49	9.5	1.61	19.94	66554	507	1191	8.4	17.3
2619.0	6.1	44.2	49	9.5	1.68	20.11	67039	602	1185	8.4	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2620.0	11.1	44.1	55	9.5	1.51	20.20	67334	328	1176	8.4	17.3
2621.0	7.2	43.8	55	9.5	1.65	20.34	67792	506	1169	8.4	17.3
2622.0	12.6	43.8	55	9.5	1.46	20.41	68054	289	1159	8.4	17.3
2623.0	13.2	44.6	58	9.5	1.48	20.49	68318	277	1150	8.4	17.3
2624.0	12.9	44.5	60	9.5	1.49	20.57	68597	283	1141	8.4	17.3
2625.0	8.3	43.0	60	9.5	1.62	20.69	69032	438	1134	8.4	17.3
2626.0	13.8	44.6	55	9.5	1.44	20.76	69273	265	1126	8.4	17.3
2627.0	4.7	45.4	55	9.5	1.82	20.97	69981	780	1122	8.4	17.3
2628.0	3.5	45.1	55	9.5	1.91	21.26	70933	1046	1122	8.4	17.3
2629.0	3.9	44.7	54	9.5	1.86	21.52	71770	937	1120	8.4	17.3
2630.0	16.6	46.4	56	9.5	1.40	21.58	71970	220	1111	8.4	17.3
2631.0	2.2	45.7	56	9.5	2.08	22.04	73500	1677	1116	8.4	17.3
2632.0	9.2	43.9	55	9.5	1.57	22.14	73860	398	1110	8.4	17.3
2633.0	9.5	43.5	55	9.5	1.55	22.25	74206	383	1103	8.4	17.3
2634.0	11.5	43.5	55	9.5	1.49	22.34	74492	318	1096	8.4	17.3
2635.0	7.7	43.1	55	9.5	1.62	22.47	74919	472	1090	8.4	17.3
2636.0	7.3	43.9	55	9.5	1.65	22.60	75368	499	1085	8.4	17.3
2637.0	21.3	44.0	55	9.5	1.29	22.65	75523	171	1076	8.4	17.3
2638.0	10.7	43.6	55	9.5	1.52	22.74	75832	343	1070	8.4	17.3
2639.0	8.6	44.0	55	9.5	1.59	22.86	76216	425	1064	8.4	17.3
2640.0	9.7	44.3	55	9.5	1.56	22.96	76558	378	1058	8.4	17.3
2641.0	4.7	45.1	56	9.5	1.82	23.18	77280	783	1056	8.4	17.3
2642.0	2.7	45.7	56	9.5	2.02	23.55	78552	1377	1058	8.4	17.3
2643.0	3.9	44.6	56	9.5	1.88	23.81	79420	938	1057	8.4	17.3
2644.0	2.8	45.0	56	9.5	1.99	24.17	80614	1292	1059	8.4	17.3
2645.0	4.8	45.7	56	9.5	1.82	24.37	81316	760	1057	8.4	17.3
2646.0	3.5	46.5	56	9.5	1.93	24.66	82273	1039	1057	8.4	17.3
2647.0	3.7	46.6	56	9.5	1.92	24.93	83193	998	1056	8.4	17.3
2648.0	3.5	46.6	55	9.5	1.93	25.22	84147	1051	1056	8.4	17.3
2649.0	11.7	46.2	55	9.5	1.51	25.30	84429	311	1050	8.4	17.3
2650.0	4.4	45.4	55	9.5	1.84	25.53	85178	824	1048	8.4	17.3
2651.0	3.5	45.6	55	9.5	1.92	25.81	86122	1036	1048	8.4	17.3
2652.0	3.8	45.4	55	9.5	1.89	26.08	86992	959	1047	8.4	17.3
2653.0	9.9	42.5	55	9.5	1.53	26.18	87324	369	1042	8.4	17.3
2654.0	14.3	47.8	54	9.5	1.46	26.25	87549	255	1036	8.4	17.3
2655.0	13.0	45.6	55	9.5	1.47	26.32	87803	281	1030	8.4	17.3
2656.0	4.6	46.2	55	9.5	1.83	26.54	88516	788	1028	8.4	17.3
2657.0	8.7	46.8	55	9.5	1.62	26.65	88894	418	1024	8.4	17.4
2658.0	4.9	47.1	55	9.5	1.82	26.86	89571	747	1022	8.4	17.4
2659.0	5.0	45.1	55	9.5	1.79	27.06	90231	730	1019	8.4	17.4
2660.0	7.4	43.7	55	9.5	1.64	27.19	90680	496	1015	8.4	17.4
2661.0	2.7	43.1	55	9.5	1.97	27.56	91894	1334	1018	8.4	17.4
2662.0	8.1	42.2	55	9.5	1.60	27.68	92304	451	1014	8.4	17.4
2663.0	3.3	42.3	55	9.5	1.89	27.98	93295	1093	1014	8.4	17.4
2664.0	3.1	47.5	55	9.5	1.99	28.31	94370	1183	1015	8.4	17.4
2665.0	3.3	47.9	55	9.5	1.97	28.61	95383	1121	1016	8.4	17.4
2666.0	2.1	49.0	47	9.5	2.09	29.10	96749	1770	1022	8.4	17.4
2667.0	7.3	48.6	50	9.5	1.67	29.23	97158	497	1018	8.4	17.4
2668.0	3.6	49.0	54	9.5	1.94	29.51	98048	1002	1018	8.4	17.4
2669.0	27.7	48.9	55	9.5	1.24	29.54	98167	132	1012	8.4	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2670.0	4.9	48.7	56	9.5	1.84	29.75	98847	742	1010	8.4	17.4
2671.0	2.4	48.8	55	9.5	2.09	30.16	100223	1513	1013	8.4	17.4
2672.0	3.4	47.9	56	9.5	1.96	30.45	101197	1064	1013	8.4	17.4
2673.0	3.5	46.3	56	9.5	1.93	30.74	102155	1041	1014	8.4	17.4
2674.0	12.4	45.1	56	9.5	1.49	30.82	102425	295	1009	8.4	17.4
2675.0	9.9	44.9	55	9.5	1.57	30.92	102759	367	1004	8.4	17.4
2676.0	9.9	45.1	56	9.5	1.57	31.02	103096	368	1000	8.4	17.4
2677.0	2.8	44.7	56	9.5	2.00	31.38	104318	1319	1002	8.4	17.4
2678.0	2.6	43.9	56	9.5	2.01	31.76	105602	1386	1005	8.4	17.4
2679.0	3.3	48.4	55	9.4	1.99	32.07	106602	1111	1006	8.4	17.4
2680.0	4.8	45.7	55	9.5	1.82	32.27	107287	756	1004	8.4	17.4
2681.0	1.7	48.1	56	9.4	2.22	32.87	109279	2175	1012	8.4	17.4
2682.0	1.8	47.9	57	9.5	2.19	33.42	111147	2003	1018	8.4	17.4
2683.0	1.0	46.1	55	9.5	2.36	34.40	114380	3588	1034	8.4	17.4
2684.0	6.4	49.0	56	9.4	1.76	34.55	114900	567	1031	8.4	17.4
2685.0	4.9	48.7	56	9.5	1.85	34.76	115580	744	1029	8.4	17.4
2686.0	2.3	49.4	56	9.5	2.13	35.19	117022	1574	1033	8.4	17.4
2687.0	3.5	47.8	55	9.4	1.96	35.48	117969	1047	1033	8.4	17.4
2688.0	2.6	48.3	56	9.5	2.08	35.86	119279	1414	1035	8.4	17.4
2689.0	2.0	47.3	57	9.5	2.15	36.36	120978	1930	1040	8.4	17.4
2690.0	1.2	45.0	56	9.5	2.29	37.21	123832	3094	1053	8.4	17.4
2691.0	2.5	44.4	55	9.5	2.02	37.61	125143	1448	1055	8.4	17.4
2692.0	1.3	46.1	55	9.5	2.28	38.39	127736	2847	1066	8.4	17.4
2693.0	1.6	47.4	55	9.5	2.23	39.02	129838	2307	1073	8.4	17.4
2694.0	1.9	47.8	57	9.5	2.19	39.55	131666	1958	1079	8.4	17.4
2695.0	2.0	45.8	56	9.4	2.13	40.06	133350	1837	1083	8.4	17.4
2696.0	1.8	45.4	56	9.5	2.16	40.62	135238	2057	1089	8.4	17.4
2697.0	4.0	46.6	55	9.5	1.89	40.87	136055	902	1088	8.4	17.4
2698.0	2.9	47.8	49	9.4	1.98	41.21	137064	1266	1089	8.4	17.4
2699.0	4.5	48.8	50	9.5	1.85	41.44	137731	811	1087	8.4	17.4
2700.0	2.4	48.9	50	9.5	2.07	41.85	138979	1509	1090	8.4	17.4
2701.0	5.6	48.9	50	9.5	1.78	42.03	139516	651	1087	8.4	17.4
2702.0	9.9	47.6	50	9.5	1.56	42.13	139817	367	1083	8.4	17.4
2703.0	13.5	48.6	49	9.5	1.46	42.20	140035	271	1078	8.4	17.4
2704.0	2.2	49.1	50	9.5	2.09	42.65	141363	1624	1081	8.4	17.4
2705.0	4.4	48.5	51	9.4	1.86	42.87	142049	824	1080	8.4	17.4
2706.0	2.5	48.6	51	9.5	2.06	43.27	143270	1457	1082	8.4	17.4
2707.0	4.8	48.4	51	9.5	1.83	43.48	143907	762	1080	8.4	17.4
2708.0	8.3	46.9	50	9.5	1.62	43.60	144270	442	1077	8.4	17.4
2709.0	22.1	45.9	49	9.4	1.27	43.65	144404	165	1072	8.4	17.4
2710.0	5.2	46.5	50	9.4	1.77	43.84	144973	696	1070	8.4	17.4
2711.0	9.2	45.8	50	9.4	1.57	43.95	145298	399	1066	8.4	17.4
2712.0	6.6	46.5	50	9.4	1.69	44.10	145753	553	1063	8.4	17.4
2713.0	6.5	46.2	50	9.5	1.69	44.25	146214	560	1061	8.4	17.4
2714.0	6.2	46.8	50	9.4	1.71	44.41	146698	590	1058	8.4	17.4
2715.0	3.0	48.6	49	9.5	1.98	44.75	147690	1226	1059	8.4	17.4
2716.0	5.7	44.3	48	9.4	1.69	44.92	148190	640	1057	8.4	17.4
2717.0	4.1	44.2	49	9.5	1.81	45.17	148895	882	1056	8.4	17.4
2718.0	3.7	44.6	49	9.5	1.85	45.44	149688	989	1056	8.4	17.4
2719.0	2.7	44.8	49	9.5	1.97	45.81	150788	1367	1057	8.4	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2720.0	3.1	44.5	52	9.5	1.93	46.13	151797	1182	1058	8.4	17.4
2721.0	2.3	45.3	53	9.4	2.05	46.57	153168	1576	1061	8.4	17.4
2722.0	5.0	44.8	53	9.4	1.78	46.77	153799	727	1059	8.4	17.4
2723.0	2.8	44.8	53	9.5	1.98	47.12	154925	1296	1060	8.4	17.4
2724.0	7.1	44.6	53	9.4	1.66	47.26	155369	513	1057	8.4	17.4
2725.0	3.7	45.1	53	9.4	1.89	47.53	156239	997	1057	8.4	17.4
2726.0	5.7	45.3	54	9.5	1.75	47.71	156809	642	1055	8.4	17.4
2727.0	4.9	45.1	54	9.5	1.80	47.91	157473	747	1053	8.4	17.4
2728.0	4.4	48.9	54	9.5	1.89	48.14	158212	830	1052	8.4	17.4
2729.0	7.1	44.6	54	9.4	1.67	48.28	158669	513	1050	8.4	17.4
2730.0	5.1	45.3	54	9.4	1.79	48.48	159314	722	1048	8.4	17.4
2731.0	4.5	44.7	54	9.4	1.82	48.70	160031	805	1047	8.4	17.4
2732.0	6.2	47.1	53	9.5	1.74	48.86	160550	592	1045	8.4	17.4
2733.0	7.2	48.7	54	9.5	1.71	49.00	160999	510	1042	8.4	17.4
2734.0	13.7	47.8	53	9.5	1.47	49.07	161229	266	1038	8.4	17.4
2735.0	20.5	46.2	51	9.5	1.31	49.12	161379	179	1034	8.4	17.4
2736.0	13.8	43.6	53	9.5	1.43	49.20	161609	265	1031	8.4	17.4

BIT NUMBER	7	IADC CODE	537	INTERVAL	2736.0- 3011.6
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	275.6
TOTAL HOURS	74.25	TOTAL TURNS	225949	CONDITION	T5 B5 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2737.0	7.0	22.9	56	9.4	1.39	0.14	479	524	37641	8.4	17.4
2738.0	7.8	25.9	57	9.4	1.41	0.27	913	467	19054	8.4	17.4
2739.0	4.0	34.6	63	9.5	1.77	0.52	1859	913	13007	8.4	17.4
2740.0	3.0	35.0	61	9.5	1.86	0.85	3083	1217	10059	8.4	17.4
2741.0	1.9	39.1	60	9.4	2.06	1.37	4950	1896	8427	8.4	17.4
2742.0	1.4	42.7	58	9.5	2.21	2.09	7432	2619	7459	8.4	17.4
2743.0	2.3	48.2	58	9.5	2.13	2.53	8968	1617	6624	8.4	17.4
2744.0	2.9	48.9	58	9.4	2.06	2.88	10184	1279	5956	8.4	17.4
2745.0	2.9	49.1	58	9.5	2.03	3.22	11360	1239	5432	8.4	17.4
2746.0	6.2	49.2	58	9.6	1.77	3.38	11919	590	4948	8.4	17.4
2747.0	2.2	49.9	58	9.6	2.14	3.85	13529	1689	4652	8.4	17.4
2748.0	3.9	49.4	61	9.6	1.95	4.11	14473	942	4342	8.4	17.4
2749.0	3.7	43.8	60	9.6	1.89	4.38	15461	998	4085	8.4	17.4
2750.0	1.9	45.5	55	9.6	2.10	4.90	17190	1916	3930	8.4	17.4
2751.0	1.5	53.0	48	9.6	2.24	5.55	19067	2365	3826	8.4	17.5
2752.0	8.0	48.3	52	9.6	1.63	5.68	19460	457	3615	8.4	17.5
2753.0	3.8	49.2	53	9.6	1.91	5.94	20301	970	3460	8.4	17.5
2754.0	2.9	49.7	53	9.6	2.00	6.28	21377	1240	3336	8.4	17.5
2755.0	4.5	53.7	41	9.6	1.81	6.50	21919	812	3204	8.4	17.5
2756.0	2.4	53.5	42	9.6	2.03	6.91	22947	1493	3118	8.4	17.5
2757.0	5.3	52.4	49	9.6	1.80	7.10	23505	695	3003	8.4	17.5
2758.0	5.3	53.5	49	9.6	1.81	7.29	24062	695	2898	8.4	17.5
2759.0	7.7	53.0	50	9.6	1.68	7.42	24448	473	2792	8.4	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
2760.0	4.5	51.0	50	9.6	1.85	7.64	25120	812	2710	8.4	17.5
2761.0	4.3	51.0	50	9.6	1.86	7.88	25818	849	2635	8.4	17.5
2762.0	4.5	51.0	50	9.6	1.85	8.10	26484	812	2565	8.4	17.5
2763.0	4.3	51.9	50	9.6	1.88	8.33	27197	859	2502	8.4	17.5
2764.0	4.3	51.7	48	9.6	1.86	8.57	27873	849	2443	8.4	17.5
2765.0	1.8	52.9	49	9.6	2.18	9.11	29473	1976	2427	8.4	17.5
2766.0	6.0	50.7	51	9.6	1.75	9.27	29982	607	2366	8.4	17.5
2767.0	3.8	50.5	51	9.6	1.91	9.54	30792	967	2321	8.4	17.5
2768.0	2.9	50.8	51	9.6	2.01	9.89	31859	1269	2288	8.4	17.5
2769.0	4.8	46.4	53	9.6	1.79	10.09	32520	758	2242	8.4	17.5
2770.0	1.6	48.4	53	9.6	2.20	10.73	34548	2323	2244	8.4	17.5
2771.0	2.1	47.4	53	9.6	2.08	11.20	36048	1717	2229	8.5	17.5
2772.0	7.0	47.1	53	9.6	1.67	11.34	36505	523	2182	8.5	17.5
2773.0	3.7	46.2	53	9.6	1.87	11.61	37356	976	2149	8.5	17.5
2774.0	2.9	46.6	53	9.6	1.95	11.95	38432	1241	2125	8.5	17.5
2775.0	2.5	46.2	35	9.6	1.88	12.36	39295	1486	2109	8.5	17.5
2776.0	2.9	47.2	39	9.6	1.86	12.70	40093	1260	2088	8.5	17.5
2777.0	7.9	46.9	43	9.6	1.56	12.83	40422	462	2048	8.5	17.5
2778.0	2.3	47.3	44	9.6	1.98	13.26	41563	1570	2037	8.5	17.5
2779.0	5.3	49.5	43	9.6	1.72	13.45	42052	691	2005	8.5	17.5
2780.0	2.2	47.8	43	9.6	2.01	13.91	43252	1692	1998	8.5	17.5
2781.0	3.5	47.6	46	9.6	1.86	14.20	44037	1044	1977	8.5	17.5
2782.0	2.1	50.6	48	9.6	2.09	14.67	45410	1742	1972	8.5	17.5
2783.0	4.4	49.4	48	9.6	1.82	14.90	46070	837	1948	8.5	17.5
2784.0	4.5	50.0	48	9.6	1.82	15.13	46710	812	1924	8.5	17.5
2785.0	3.5	49.0	47	9.6	1.90	15.42	47534	1057	1906	8.5	17.5
2786.0	1.9	51.9	47	9.6	2.15	15.95	49052	1946	1907	8.5	17.5
2787.0	2.7	43.9	52	9.6	1.94	16.31	50188	1336	1896	8.5	17.5
2788.0	6.1	44.0	55	9.6	1.69	16.48	50726	596	1871	8.5	17.5
2789.0	4.0	47.9	55	9.6	1.88	16.73	51553	917	1853	8.5	17.5
2790.0	5.2	50.3	55	9.6	1.82	16.92	52184	699	1832	8.5	17.5
2791.0	4.2	49.8	55	9.6	1.89	17.16	52981	874	1814	8.5	17.5
2792.0	3.6	52.5	56	9.6	1.98	17.44	53906	1012	1800	8.5	17.5
2793.0	2.6	51.7	56	9.6	2.08	17.82	55183	1398	1793	8.5	17.5
2794.0	3.1	47.4	56	9.6	1.97	18.14	56263	1180	1782	8.5	17.5
2795.0	1.8	47.7	55	9.6	2.16	18.71	58142	2085	1787	8.5	17.5
2796.0	3.8	47.7	53	9.6	1.89	18.98	58981	964	1774	8.5	17.5
2797.0	7.1	46.9	53	9.6	1.66	19.12	59425	513	1753	8.5	17.5
2798.0	10.7	46.3	52	9.6	1.51	19.21	59719	343	1730	8.5	17.5
2799.0	13.8	44.8	55	9.6	1.43	19.28	59958	264	1707	8.5	17.5
2800.0	11.1	42.3	55	9.6	1.47	19.37	60255	329	1685	8.5	17.5
2801.0	5.7	41.7	55	9.6	1.69	19.55	60840	642	1669	8.5	17.5
2802.0	4.7	44.4	55	9.6	1.78	19.76	61542	773	1656	8.5	17.5
2803.0	4.4	44.3	55	9.6	1.81	19.99	62304	839	1644	8.5	17.5
2804.0	2.5	44.7	55	9.6	2.01	20.40	63655	1485	1641	8.5	17.5
2805.0	4.2	47.5	54	9.6	1.85	20.63	64427	865	1630	8.5	17.5
2806.0	4.7	49.1	55	9.6	1.84	20.85	65119	770	1618	8.5	17.5
2807.0	2.6	49.5	51	9.6	2.02	21.23	66298	1416	1615	8.5	17.5
2808.0	3.1	46.8	51	9.6	1.93	21.56	67289	1177	1609	8.5	17.5
2809.0	3.6	46.8	58	9.6	1.92	21.84	68261	1029	1601	8.5	17.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2810.0	3.0	53.9	58	9.6	2.07	22.17	69408	1212	1596	8.5	17.5
2811.0	3.0	49.4	58	9.6	2.01	22.50	70556	1214	1591	8.5	17.5
2812.0	3.0	51.9	57	9.6	2.05	22.84	71717	1231	1586	8.5	17.5
2813.0	5.7	48.8	57	9.6	1.79	23.01	72322	641	1574	8.5	17.5
2814.0	2.2	47.8	55	9.6	2.09	23.48	73856	1688	1575	8.5	17.5
2815.0	2.2	47.9	55	9.6	2.09	23.94	75385	1684	1576	8.5	17.5
2816.0	3.2	47.8	55	9.6	1.96	24.25	76416	1141	1571	8.5	17.5
2817.0	4.2	45.9	55	9.6	1.84	24.49	77202	870	1562	8.5	17.5
2818.0	8.1	43.2	52	9.6	1.57	24.61	77587	449	1549	8.5	17.5
2819.0	6.9	45.1	52	9.6	1.65	24.76	78043	533	1536	8.5	17.5
2820.0	5.5	43.6	52	9.6	1.70	24.94	78612	664	1526	8.5	17.5
2821.0	6.7	42.8	52	9.6	1.63	25.09	79081	547	1515	8.5	17.5
2822.0	2.0	43.8	52	9.6	2.04	25.59	80654	1829	1518	8.5	17.5
2823.0	6.8	42.6	52	9.6	1.62	25.74	81116	538	1507	8.5	17.5
2824.0	2.9	43.6	52	9.6	1.91	26.08	82194	1255	1504	8.5	17.5
2825.0	8.0	42.6	52	9.6	1.57	26.20	82586	457	1492	8.5	17.5
2826.0	2.6	42.8	52	9.6	1.93	26.58	83767	1381	1491	8.5	17.5
2827.0	3.7	44.8	52	9.6	1.85	26.85	84613	987	1486	8.5	17.5
2828.0	3.0	46.8	52	9.6	1.95	27.19	85654	1219	1483	8.5	17.5
2829.0	4.5	43.2	54	9.6	1.78	27.41	86382	813	1475	8.5	17.5
2830.0	3.9	43.5	55	9.6	1.83	27.66	87215	928	1470	8.5	17.5
2831.0	3.9	43.2	55	9.6	1.82	27.92	88046	926	1464	8.5	17.5
2832.0	2.4	44.3	55	9.6	2.00	28.33	89398	1504	1464	8.5	17.5
2833.0	15.8	42.3	55	9.6	1.36	28.39	89605	231	1452	8.5	17.5
2834.0	7.9	42.2	52	9.6	1.57	28.52	89999	461	1441	8.5	17.5
2835.0	4.7	44.0	54	9.6	1.77	28.73	90681	772	1435	8.5	17.5
2836.0	5.6	43.4	54	9.6	1.71	28.91	91262	650	1427	8.5	17.5
2837.0	9.3	42.6	54	9.6	1.53	29.02	91612	395	1417	8.5	17.5
2838.0	15.1	40.6	50	9.6	1.32	29.08	91811	241	1405	8.5	17.5
2839.0	10.1	42.6	53	9.6	1.49	29.18	92123	360	1395	8.5	17.5
2840.0	11.9	43.3	50	9.6	1.43	29.27	92377	307	1385	8.5	17.5
2841.0	8.7	43.2	51	9.6	1.54	29.38	92728	418	1375	8.5	17.6
2842.0	7.0	43.4	51	9.6	1.61	29.52	93166	520	1367	8.5	17.6
2843.0	5.0	44.1	52	9.6	1.74	29.72	93786	731	1361	8.5	17.6
2844.0	6.0	44.1	52	9.6	1.67	29.89	94298	606	1354	8.5	17.6
2845.0	5.2	44.1	52	9.6	1.72	30.08	94891	699	1348	8.5	17.6
2846.0	3.3	44.6	52	9.6	1.88	30.38	95822	1101	1346	8.5	17.6
2847.0	10.7	43.8	51	9.6	1.48	30.47	96107	342	1337	8.5	17.6
2848.0	7.6	44.8	53	9.6	1.61	30.61	96524	481	1329	8.5	17.6
2849.0	4.8	44.5	53	9.6	1.76	30.81	97184	762	1324	8.5	17.6
2850.0	8.6	44.4	53	9.6	1.57	30.93	97553	425	1316	8.5	17.6
2851.0	6.2	44.5	53	9.6	1.68	31.09	98066	589	1310	8.5	17.6
2852.0	5.9	43.4	53	9.6	1.68	31.26	98601	617	1304	8.5	17.6
2853.0	3.8	41.5	47	9.6	1.76	31.52	99345	959	1301	8.5	17.6
2854.0	6.4	41.0	45	9.6	1.57	31.68	99765	570	1295	8.5	17.6
2855.0	7.3	40.8	48	9.6	1.55	31.82	100158	501	1288	8.5	17.6
2856.0	10.7	39.7	48	9.6	1.41	31.91	100426	342	1280	8.5	17.6
2857.0	4.7	36.2	48	9.6	1.64	32.13	101050	783	1276	8.5	17.6
2858.0	3.3	36.6	49	9.6	1.76	32.43	101944	1118	1275	8.5	17.6
2859.0	2.0	37.2	47	9.6	1.91	32.94	103373	1847	1280	8.5	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2860.0	1.6	36.8	43	9.6	1.93	33.55	104945	2233	1287	8.5	17.6
2861.0	4.4	36.3	48	9.6	1.65	33.78	105602	831	1284	8.5	17.6
2862.0	4.6	36.1	52	9.6	1.66	33.99	106279	786	1280	8.5	17.6
2863.0	4.7	36.1	53	9.6	1.66	34.21	106958	783	1276	8.5	17.6
2864.0	4.2	36.1	52	9.6	1.69	34.44	107701	870	1273	8.5	17.6
2865.0	3.2	36.1	52	9.6	1.77	34.76	108676	1141	1272	8.5	17.6
2866.0	3.8	36.9	52	9.6	1.73	35.02	109497	961	1269	8.5	17.6
2867.0	4.3	36.5	53	9.6	1.69	35.25	110237	849	1266	8.5	17.6
2868.0	10.5	36.5	50	9.6	1.40	35.35	110524	349	1259	8.5	17.6
2869.0	5.5	38.8	50	9.6	1.63	35.53	111069	660	1255	8.5	17.6
2870.0	7.0	36.7	50	9.6	1.53	35.67	111502	524	1249	8.5	17.6
2871.0	2.8	36.8	50	9.6	1.81	36.03	112573	1292	1250	8.5	17.6
2872.0	3.6	37.4	53	9.6	1.76	36.30	113449	1003	1248	8.5	17.6
2873.0	2.2	37.3	51	9.6	1.91	36.76	114860	1680	1251	8.5	17.6
2874.0	4.0	37.9	50	9.6	1.72	37.01	115622	924	1248	8.5	17.6
2875.0	3.6	37.2	53	9.6	1.76	37.29	116513	1022	1247	8.5	17.6
2876.0	4.1	38.0	52	9.6	1.72	37.54	117274	891	1244	8.5	17.6
2877.0	4.8	37.1	57	9.6	1.69	37.75	117989	759	1241	8.5	17.6
2878.0	4.6	39.9	53	9.6	1.72	37.96	118680	791	1238	8.5	17.6
2879.0	4.7	39.7	53	9.6	1.71	38.17	119357	775	1234	8.5	17.6
2880.0	4.7	39.9	53	9.6	1.71	38.39	120033	776	1231	8.5	17.6
2881.0	8.7	42.4	53	9.6	1.54	38.50	120398	420	1226	8.5	17.6
2882.0	4.9	40.1	53	9.6	1.70	38.71	121052	749	1222	8.5	17.6
2883.0	5.3	42.0	53	9.6	1.70	38.90	121652	689	1219	8.5	17.6
2884.0	2.4	40.6	56	9.6	1.96	39.32	123072	1540	1221	8.5	17.6
2885.0	5.5	39.6	58	9.6	1.69	39.50	123707	661	1217	8.5	17.6
2886.0	5.6	39.8	58	9.6	1.69	39.68	124332	653	1213	8.5	17.6
2887.0	6.6	39.9	58	9.6	1.63	39.83	124860	553	1209	8.5	17.6
2888.0	1.5	41.3	56	9.6	2.11	40.48	127035	2378	1217	8.5	17.6
2889.0	1.2	42.7	56	9.6	2.21	41.29	129780	2970	1228	8.5	17.6
2890.0	2.2	40.5	56	9.6	1.98	41.75	131300	1662	1231	8.5	17.6
2891.0	2.4	38.5	55	9.6	1.93	42.17	132702	1539	1233	8.5	17.6
2892.0	2.4	38.1	56	9.6	1.92	42.59	134121	1540	1235	8.5	17.6
2893.0	4.1	39.0	55	9.6	1.76	42.83	134926	891	1233	8.5	17.6
2894.0	6.5	40.0	55	9.6	1.62	42.99	135434	562	1229	8.5	17.6
2895.0	8.7	39.2	55	9.6	1.52	43.10	135812	419	1223	8.5	17.6
2896.0	4.6	38.3	52	9.6	1.69	43.32	136489	791	1221	8.5	17.6
2897.0	6.9	38.9	52	9.6	1.57	43.46	136939	525	1216	8.5	17.6
2898.0	2.9	38.1	50	9.6	1.82	43.81	137973	1264	1217	8.5	17.6
2899.0	9.4	39.9	49	9.6	1.47	43.92	138287	389	1212	8.5	17.6
2900.0	2.7	39.9	49	9.6	1.87	44.29	139379	1346	1212	8.5	17.6
2901.0	3.5	40.3	49	9.6	1.79	44.57	140235	1058	1212	8.5	17.6
2902.0	6.6	40.6	50	9.6	1.59	44.73	140685	553	1208	8.5	17.6
2903.0	3.0	40.4	48	9.6	1.83	45.06	141638	1202	1208	8.5	17.6
2904.0	7.6	39.8	48	9.6	1.53	45.19	142022	483	1203	8.5	17.6
2905.0	4.0	42.0	49	9.6	1.77	45.44	142757	913	1202	8.5	17.6
2906.0	3.6	43.2	49	9.6	1.82	45.72	143582	1021	1200	8.5	17.6
2907.0	6.7	46.6	49	9.6	1.65	45.87	144023	547	1197	8.5	17.6
2908.0	13.2	46.4	49	9.6	1.42	45.94	144245	277	1191	8.5	17.6
2909.0	3.8	45.8	49	9.6	1.83	46.21	145022	962	1190	8.5	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2910.0	3.7	47.1	49	9.6	1.86	46.47	145814	982	1189	8.5	17.6
2911.0	2.3	46.1	48	9.6	2.00	46.91	147068	1585	1191	8.5	17.6
2912.0	2.8	45.6	48	9.6	1.93	47.27	148115	1326	1192	8.5	17.6
2913.0	3.2	46.0	47	9.6	1.88	47.58	148996	1141	1191	8.5	17.6
2914.0	5.0	47.5	47	9.6	1.75	47.79	149570	735	1189	8.5	17.6
2915.0	3.8	47.9	47	9.6	1.85	48.05	150315	956	1188	8.5	17.6
2916.0	2.0	49.1	50	9.6	2.10	48.55	151814	1829	1191	8.5	17.6
2917.0	2.5	48.3	52	9.6	2.03	48.95	153049	1460	1193	8.5	17.6
2918.0	6.9	47.2	49	9.6	1.65	49.09	153478	532	1189	8.5	17.6
2919.0	4.2	47.1	49	9.6	1.82	49.33	154175	864	1187	8.5	17.6
2920.0	3.0	47.9	51	9.6	1.95	49.66	155190	1213	1187	8.5	17.6
2921.0	4.3	47.5	50	9.6	1.82	49.90	155891	854	1186	8.5	17.6
2922.0	3.7	48.1	51	9.6	1.89	50.17	156721	987	1185	8.5	17.6
2923.0	3.2	48.2	52	9.6	1.94	50.48	157696	1141	1184	8.5	17.6
2924.0	2.9	47.6	52	9.6	1.97	50.83	158771	1270	1185	8.5	17.6
2925.0	3.3	44.8	47	9.6	1.85	51.13	159613	1091	1184	8.5	17.6
2926.0	3.6	44.0	47	9.6	1.81	51.40	160394	1015	1183	8.5	17.6
2927.0	3.1	43.7	47	9.6	1.86	51.72	161296	1168	1183	8.5	17.6
2928.0	4.1	43.7	47	9.6	1.77	51.97	161984	891	1182	8.5	17.6
2929.0	3.2	44.8	48	9.6	1.87	52.28	162884	1141	1182	8.5	17.6
2930.0	4.1	44.3	47	9.6	1.77	52.52	163568	887	1180	8.5	17.6
2931.0	5.7	44.1	47	9.6	1.67	52.70	164066	646	1177	8.5	17.6
2932.0	4.1	44.1	47	9.6	1.77	52.94	164754	891	1176	8.5	17.6
2933.0	4.2	44.4	47	9.6	1.77	53.18	165425	870	1174	8.5	17.6
2934.0	4.3	47.7	47	9.6	1.80	53.41	166078	840	1173	8.5	17.6
2935.0	3.5	46.5	48	9.6	1.86	53.70	166900	1043	1172	8.5	17.6
2936.0	3.2	45.5	48	9.6	1.88	54.01	167791	1129	1172	8.5	17.6
2937.0	6.1	47.3	48	9.6	1.69	54.17	168264	595	1169	8.5	17.6
2938.0	2.8	45.7	48	9.6	1.94	54.53	169318	1323	1170	8.5	17.6
2939.0	8.1	44.7	48	9.6	1.56	54.66	169676	453	1166	8.5	17.7
2940.0	3.8	45.1	48	9.6	1.82	54.92	170431	951	1165	8.5	17.7
2941.0	2.2	46.2	49	9.6	2.02	55.37	171739	1641	1167	8.5	17.7
2942.0	4.0	44.9	49	9.6	1.80	55.62	172468	915	1166	8.5	17.7
2943.0	2.1	46.1	46	9.6	2.01	56.09	173774	1714	1169	8.5	17.7
2944.0	3.1	46.7	47	9.6	1.90	56.41	174685	1171	1169	8.5	17.7
2945.0	7.6	45.0	47	9.6	1.58	56.54	175059	483	1166	8.5	17.7
2946.0	5.3	44.8	47	9.6	1.70	56.73	175590	691	1163	8.5	17.7
2947.0	5.4	45.3	47	9.6	1.70	56.91	176117	680	1161	8.5	17.7
2948.0	5.3	44.6	47	9.6	1.69	57.10	176649	689	1159	8.5	17.7
2949.0	4.1	45.1	47	9.6	1.78	57.35	177337	891	1157	8.5	17.7
2950.0	4.5	45.4	48	9.6	1.76	57.57	177972	807	1156	8.5	17.7
2951.0	8.4	45.7	48	9.6	1.56	57.69	178312	434	1152	8.5	17.7
2952.0	3.8	45.8	48	9.6	1.83	57.95	179075	968	1152	8.5	17.7
2954.0	8.7	45.8	49	9.6	1.55	58.18	179750	421	1145	8.5	17.7
2955.0	3.7	46.1	49	9.6	1.84	58.45	180532	979	1144	8.5	17.7
2956.0	3.9	45.8	49	9.6	1.83	58.71	181290	947	1143	8.5	17.7
2957.0	3.4	45.9	49	9.6	1.87	59.00	182146	1073	1143	8.5	17.7
2958.0	3.5	45.9	48	9.6	1.85	59.29	182964	1035	1142	8.5	17.7
2959.0	9.0	45.5	48	9.6	1.53	59.40	183283	406	1139	8.5	17.7
2960.0	3.9	45.7	48	9.6	1.81	59.65	184018	930	1138	8.5	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2961.0	7.0	45.5	48	9.6	1.62	59.80	184430	523	1136	8.5	17.7
2962.0	4.3	45.6	48	9.6	1.78	60.03	185098	846	1134	8.5	17.7
2963.0	3.6	45.1	48	9.6	1.84	60.31	185906	1023	1134	8.5	17.7
2964.0	2.1	44.8	47	9.6	2.00	60.78	187250	1724	1136	8.5	17.7
2965.0	2.9	43.9	47	9.6	1.89	61.13	188235	1268	1137	8.5	17.7
2966.0	3.9	46.7	48	9.6	1.83	61.38	188983	943	1136	8.5	17.7
2967.0	5.0	48.0	49	9.6	1.76	61.58	189563	725	1134	8.5	17.7
2968.0	6.3	47.6	49	9.6	1.68	61.74	190027	582	1132	8.5	17.7
2969.0	4.2	48.0	49	9.6	1.83	61.98	190725	871	1131	8.5	17.7
2970.0	4.1	48.2	49	9.6	1.84	62.22	191435	887	1130	8.5	17.7
2971.0	5.2	47.9	49	9.6	1.75	62.42	191998	703	1128	8.5	17.7
2972.0	2.3	48.3	49	9.6	2.04	62.86	193290	1611	1130	8.5	17.7
2973.0	2.1	48.1	49	9.6	2.06	63.32	194654	1701	1132	8.5	17.7
2974.0	3.7	47.7	49	9.6	1.87	63.60	195452	997	1132	8.5	17.7
2975.0	3.6	47.3	48	9.6	1.87	63.88	196260	1023	1131	8.5	17.7
2976.0	6.7	47.1	48	9.6	1.65	64.03	196684	542	1129	8.5	17.7
2977.0	4.5	47.1	48	9.6	1.78	64.25	197327	815	1128	8.5	17.7
2978.0	7.4	48.3	48	9.6	1.63	64.38	197710	494	1125	8.5	17.7
2979.0	6.0	47.6	48	9.6	1.69	64.55	198187	609	1123	8.5	17.7
2980.0	5.1	47.4	48	9.6	1.74	64.75	198743	712	1121	8.5	17.7
2981.0	7.5	47.7	48	9.6	1.62	64.88	199122	485	1119	8.5	17.7
2982.0	8.6	48.4	47	9.6	1.58	64.99	199453	426	1116	8.5	17.7
2983.0	10.9	45.3	47	9.6	1.46	65.09	199711	335	1113	8.5	17.7
2984.0	3.2	45.8	47	9.6	1.88	65.40	200589	1135	1113	8.5	17.7
2985.0	4.1	46.9	47	9.6	1.81	65.64	201277	893	1112	8.5	17.7
2986.0	6.9	46.5	47	9.6	1.62	65.79	201682	525	1109	8.5	17.7
2987.0	3.8	46.8	47	9.6	1.84	66.05	202432	969	1109	8.5	17.7
2988.0	2.1	47.2	47	9.6	2.04	66.53	203798	1762	1111	8.5	17.7
2989.0	4.3	47.6	47	9.6	1.80	66.77	204458	854	1110	8.5	17.7
2990.0	1.8	48.7	47	9.6	2.11	67.32	206010	2003	1114	8.5	17.7
2991.0	5.3	46.7	47	9.6	1.72	67.51	206545	693	1112	8.5	17.7
2992.0	5.5	46.6	47	9.6	1.70	67.69	207052	661	1111	8.5	17.7
2993.0	6.0	44.0	45	9.6	1.63	67.85	207500	607	1109	8.5	17.7
2994.0	6.9	41.9	48	9.6	1.58	68.00	207916	530	1106	8.5	17.7
2995.0	2.9	42.1	48	9.6	1.86	68.34	208902	1249	1107	8.5	17.7
2996.0	5.3	41.5	48	9.6	1.66	68.53	209441	684	1105	8.5	17.7
2997.0	2.4	42.1	48	9.6	1.93	68.94	210640	1520	1107	8.5	17.7
2998.0	3.0	42.1	48	9.6	1.85	69.27	211597	1208	1107	8.5	17.7
2999.0	3.6	41.6	48	9.6	1.79	69.55	212411	1026	1107	8.5	17.7
3000.0	3.1	42.3	48	9.6	1.85	69.88	213350	1181	1107	8.5	17.7
3001.0	1.3	42.7	47	9.6	2.14	70.66	215572	2854	1114	8.5	17.7
3002.0	3.0	44.5	47	9.6	1.89	71.00	216530	1230	1114	8.5	17.7
3003.0	2.1	45.7	47	9.6	2.01	71.46	217847	1704	1116	8.5	17.7
3004.0	1.7	45.8	48	9.6	2.10	72.06	219540	2165	1120	8.5	17.7
3005.0	3.2	45.0	47	9.6	1.87	72.37	220421	1141	1120	8.6	17.7
3006.0	3.6	45.1	47	9.6	1.83	72.65	221213	1015	1120	8.6	17.7
3007.0	4.5	44.9	48	9.6	1.75	72.87	221842	804	1119	8.6	17.7
3008.0	2.7	45.0	48	9.6	1.93	73.23	222895	1346	1120	8.6	17.7
3009.0	3.4	47.7	50	9.6	1.90	73.52	223768	1060	1120	8.6	17.7
3010.0	3.9	48.0	50	9.6	1.86	73.78	224534	930	1119	8.6	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3011.0	2.3	48.6	50	9.6	2.06	74.22	225870	1623	1121	8.6	17.7
3011.6	19.8	48.4	43	9.6	1.26	74.25	225949	184	1119	8.6	17.7

BIT NUMBER	8	IADC CODE	537	INTERVAL	3011.0- 3192.2
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	181.2
TOTAL HOURS	55.90	TOTAL TURNS	156875	CONDITION	T7 B8 G0.625

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3012.0	2.8	58.9	53	9.6	2.13	0.36	1131	1298	38415	8.6	17.7
3013.0	9.0	57.6	53	9.6	1.69	0.47	1482	406	19411	8.6	17.7
3014.0	5.9	58.7	50	9.6	1.84	0.64	1990	619	13147	8.6	17.7
3015.0	9.4	58.4	52	9.6	1.68	0.74	2324	391	9958	8.6	17.7
3016.0	4.5	60.3	52	9.6	1.97	0.97	3016	812	8128	8.6	17.7
3017.0	3.9	60.2	54	9.6	2.03	1.22	3842	934	6929	8.6	17.7
3018.0	2.4	60.9	51	9.6	2.20	1.64	5112	1513	6156	8.6	17.7
3019.0	6.3	61.5	51	9.6	1.85	1.79	5593	575	5458	8.6	17.7
3020.0	4.0	63.0	51	9.6	2.04	2.04	6350	904	4952	8.6	17.7
3021.0	3.6	62.0	50	9.6	2.06	2.32	7184	1014	4558	8.6	17.7
3022.0	3.6	59.6	50	9.6	2.03	2.60	8017	1013	4236	8.6	17.7
3023.0	5.6	58.1	50	9.6	1.85	2.78	8557	656	3938	8.6	17.7
3024.0	5.8	58.7	50	9.6	1.85	2.95	9075	631	3683	8.6	17.7
3025.0	5.2	59.3	50	9.6	1.89	3.14	9646	697	3470	8.6	17.7
3026.0	4.2	58.6	50	9.6	1.96	3.38	10356	864	3296	8.6	17.7
3027.0	4.8	60.4	50	9.6	1.93	3.58	10975	756	3137	8.6	17.7
3028.0	3.5	62.0	50	9.6	2.07	3.87	11827	1038	3014	8.6	17.7
3029.0	4.2	60.5	50	9.6	1.99	4.11	12550	880	2895	8.6	17.7
3030.0	8.2	59.4	50	9.6	1.73	4.23	12915	445	2766	8.6	17.7
3031.0	4.7	60.1	50	9.6	1.94	4.44	13553	776	2667	8.6	17.7
3032.0	6.0	60.3	48	9.6	1.84	4.61	14036	613	2569	8.6	17.7
3033.0	8.6	59.5	49	9.6	1.70	4.73	14379	425	2472	8.6	17.7
3034.0	6.3	59.6	49	9.6	1.82	4.88	14843	575	2389	8.6	17.8
3035.0	3.9	60.7	49	9.6	2.01	5.14	15594	927	2328	8.6	17.8
3036.0	5.0	60.7	49	9.6	1.92	5.34	16188	733	2264	8.6	17.8
3037.0	7.4	60.4	49	9.6	1.77	5.47	16587	495	2196	8.6	17.8
3038.0	4.6	58.4	49	9.6	1.92	5.69	17226	789	2144	8.6	17.8
3039.0	4.0	60.5	49	9.6	2.00	5.94	17966	913	2100	8.6	17.8
3040.0	5.0	59.4	49	9.7	1.88	6.14	18560	733	2053	8.6	17.8
3041.0	6.0	58.0	49	9.7	1.80	6.31	19050	609	2005	8.6	17.8
3042.0	7.1	57.7	49	9.7	1.73	6.45	19461	514	1957	8.6	17.8
3043.0	4.0	59.5	48	9.7	1.95	6.70	20177	916	1924	8.6	17.8
3044.0	3.2	58.5	48	9.7	2.02	7.01	21057	1127	1900	8.6	17.8
3045.0	3.6	61.4	48	9.7	2.01	7.28	21846	1009	1874	8.6	17.8
3046.0	3.4	62.8	47	9.7	2.05	7.58	22685	1088	1852	8.6	17.8
3047.0	4.9	64.4	48	9.7	1.93	7.78	23265	739	1821	8.6	17.8
3048.0	5.2	63.0	48	9.6	1.92	7.98	23819	702	1790	8.6	17.8
3049.0	6.8	63.4	49	9.7	1.81	8.12	24253	540	1758	8.6	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
3050.0	4.1	63.8	49	9.7	2.00	8.37	24968	889	1735	8.6	17.8
3051.0	2.1	63.3	48	9.7	2.24	8.84	26345	1739	1735	8.6	17.8
3052.0	2.8	57.3	48	9.7	2.06	9.20	27368	1306	1725	8.6	17.8
3053.0	3.8	56.6	48	9.7	1.94	9.47	28135	970	1707	8.6	17.8
3054.0	4.0	57.8	47	9.7	1.93	9.71	28841	905	1688	8.6	17.8
3055.0	2.4	59.2	48	9.7	2.14	10.13	30038	1509	1684	8.6	17.8
3056.0	4.1	60.6	48	9.7	1.96	10.37	30740	885	1666	8.6	17.8
3057.0	3.5	59.6	48	9.7	2.01	10.66	31572	1052	1653	8.6	17.8
3058.0	14.2	58.4	48	9.7	1.49	10.73	31774	257	1623	8.6	17.8
3059.0	2.6	60.8	48	9.7	2.12	11.11	32865	1379	1618	8.6	17.8
3060.0	2.5	60.2	48	9.7	2.14	11.51	34029	1486	1616	8.6	17.8
3061.0	3.5	58.2	48	9.7	1.99	11.80	34853	1044	1604	8.6	17.8
3062.0	3.5	63.0	48	9.7	2.04	12.08	35676	1043	1593	8.6	17.8
3063.0	3.4	61.3	48	9.7	2.03	12.38	36522	1072	1583	8.6	17.8
3064.0	5.6	64.3	48	9.7	1.89	12.56	37037	653	1566	8.6	17.8
3065.0	4.2	61.3	48	9.7	1.96	12.79	37724	869	1553	8.6	17.8
3066.0	2.7	56.1	48	9.6	2.07	13.17	38811	1378	1549	8.6	17.8
3067.0	3.9	56.1	48	9.6	1.95	13.43	39558	945	1539	8.6	17.8
3068.0	4.4	52.6	48	9.6	1.86	13.66	40210	832	1526	8.6	17.8
3069.0	5.0	52.5	48	9.6	1.81	13.86	40780	724	1512	8.6	17.8
3070.0	3.6	56.7	48	9.6	1.98	14.13	41575	1011	1504	8.6	17.8
3071.0	9.1	60.8	48	9.6	1.69	14.24	41890	403	1486	8.6	17.8
3072.0	9.5	61.7	47	9.6	1.67	14.35	42188	382	1468	8.6	17.8
3073.0	6.7	61.5	48	9.6	1.81	14.50	42619	547	1453	8.6	17.8
3074.0	3.6	60.5	48	9.6	2.03	14.78	43418	1013	1446	8.6	17.8
3075.0	2.8	61.9	48	9.6	2.14	15.14	44456	1317	1444	8.6	17.8
3076.0	5.9	62.6	48	9.6	1.87	15.31	44945	621	1431	8.6	17.8
3077.0	6.2	60.3	48	9.6	1.82	15.47	45410	591	1418	8.6	17.8
3078.0	5.8	60.4	47	9.6	1.84	15.64	45898	632	1407	8.6	17.8
3079.0	12.6	60.5	47	9.6	1.56	15.72	46123	290	1390	8.6	17.8
3080.0	6.7	61.0	48	9.6	1.80	15.87	46549	542	1378	8.6	17.8
3081.0	6.3	60.9	48	9.6	1.82	16.03	47006	580	1366	8.6	17.8
3082.0	2.7	60.6	48	9.6	2.14	16.41	48093	1376	1367	8.6	17.8
3083.0	6.2	59.3	48	9.6	1.81	16.57	48556	585	1356	8.6	17.8
3084.0	8.6	59.2	48	9.6	1.69	16.68	48887	423	1343	8.6	17.8
3085.0	11.9	58.3	48	9.6	1.56	16.77	49127	306	1329	8.6	17.8
3086.0	29.5	59.7	48	9.6	1.24	16.80	49225	124	1313	8.6	17.8
3087.0	5.2	59.8	49	9.6	1.89	16.99	49786	702	1305	8.6	17.8
3088.0	3.4	59.1	49	9.6	2.04	17.29	50646	1074	1302	8.6	17.8
3089.0	4.9	59.5	48	9.6	1.90	17.49	51234	745	1295	8.6	17.8
3090.0	6.7	59.1	48	9.6	1.78	17.64	51662	545	1285	8.6	17.8
3091.0	3.9	59.2	48	9.6	1.99	17.90	52409	940	1281	8.6	17.8
3092.0	4.0	59.0	48	9.6	1.97	18.15	53132	909	1276	8.6	17.8
3093.0	7.5	57.8	48	9.6	1.73	18.28	53516	486	1267	8.6	17.8
3094.0	8.2	59.2	48	9.6	1.71	18.40	53868	444	1257	8.5	17.8
3095.0	9.0	58.3	48	9.6	1.67	18.51	54188	405	1247	8.5	17.8
3096.0	5.5	58.5	48	9.6	1.85	18.69	54712	660	1240	8.5	17.8
3097.0	3.2	57.0	49	9.6	2.03	19.00	55632	1131	1238	8.5	17.8
3098.0	4.4	56.6	50	9.6	1.91	19.23	56300	821	1234	8.5	17.8
3099.0	6.7	55.9	50	9.6	1.76	19.38	56748	549	1226	8.5	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3100.0	4.9	55.5	50	9.6	1.87	19.58	57353	742	1220	8.5	17.8
3101.0	6.2	56.1	50	9.6	1.79	19.74	57834	590	1213	8.5	17.8
3102.0	6.8	54.6	50	9.6	1.74	19.89	58271	536	1206	8.5	17.8
3103.0	6.3	55.2	50	9.6	1.77	20.05	58742	578	1199	8.5	17.8
3104.0	4.8	55.4	50	9.6	1.87	20.25	59365	763	1194	8.5	17.8
3105.0	6.8	54.7	50	9.6	1.74	20.40	59804	538	1187	8.5	17.8
3106.0	4.0	57.0	58	9.6	2.01	20.65	60674	913	1185	8.5	17.8
3107.0	5.0	58.0	49	9.6	1.89	20.85	61271	737	1180	8.5	17.8
3108.0	4.4	58.3	48	9.6	1.93	21.08	61935	837	1176	8.5	17.8
3109.0	6.4	59.2	48	9.6	1.80	21.24	62388	571	1170	8.5	17.8
3110.0	3.1	59.5	48	9.6	2.07	21.56	63319	1176	1170	8.5	17.8
3111.0	2.6	59.7	48	9.6	2.13	21.94	64413	1382	1172	8.5	17.8
3112.0	4.3	61.2	48	9.6	1.97	22.17	65092	859	1169	8.5	17.8
3113.0	3.3	60.7	48	9.6	2.06	22.48	65969	1107	1169	8.5	17.8
3114.0	2.3	61.0	48	9.6	2.19	22.90	67206	1558	1172	8.5	17.8
3115.0	4.3	61.9	48	9.6	1.98	23.14	67884	855	1169	8.5	17.8
3116.0	1.9	57.3	44	9.6	2.18	23.66	69254	1893	1176	8.5	17.8
3117.0	2.2	58.6	51	9.6	2.21	24.11	70666	1670	1181	8.5	17.8
3118.0	6.3	51.5	52	9.6	1.75	24.27	71164	581	1175	8.5	17.8
3119.0	3.3	48.8	49	9.6	1.92	24.58	72057	1102	1175	8.5	17.8
3120.0	3.5	49.0	48	9.6	1.90	24.86	72883	1039	1173	8.5	17.8
3121.0	1.9	50.0	48	9.6	2.12	25.38	74390	1900	1180	8.5	17.8
3122.0	2.0	51.0	47	9.6	2.10	25.88	75786	1820	1186	8.5	17.8
3123.0	1.8	52.5	49	9.6	2.17	26.42	77377	1985	1193	8.5	17.8
3124.0	2.3	53.2	45	9.6	2.08	26.86	78581	1611	1197	8.5	17.8
3125.0	2.3	55.1	50	9.6	2.14	27.31	79916	1623	1200	8.5	17.8
3126.0	5.2	54.8	47	9.6	1.82	27.50	80460	704	1196	8.5	17.8
3127.0	1.8	55.8	47	9.6	2.20	28.04	81983	1975	1203	8.5	17.8
3128.0	3.4	53.1	47	9.6	1.95	28.34	82816	1075	1202	8.5	17.8
3129.0	3.7	51.9	48	9.6	1.92	28.61	83608	999	1200	8.5	17.8
3130.0	3.1	53.3	48	9.6	2.00	28.93	84549	1185	1200	8.5	17.8
3131.0	1.6	54.7	48	9.6	2.24	29.55	86348	2258	1209	8.5	17.8
3132.0	2.5	55.8	48	9.6	2.11	29.95	87517	1470	1211	8.5	17.8
3133.0	3.3	55.0	48	9.5	2.01	30.25	88390	1097	1210	8.5	17.8
3134.0	1.5	54.2	48	9.5	2.28	30.90	90264	2366	1219	8.5	17.8
3135.0	3.0	49.5	48	9.5	1.97	31.23	91211	1199	1219	8.5	17.8
3136.0	1.9	51.1	48	9.5	2.16	31.76	92730	1927	1225	8.5	17.8
3137.0	3.0	52.5	47	9.5	2.01	32.09	93668	1203	1225	8.5	17.8
3138.0	2.3	52.1	47	9.5	2.10	32.52	94892	1568	1227	8.5	17.8
3139.0	3.1	52.6	48	9.5	2.00	32.84	95809	1174	1227	8.5	17.8
3140.0	2.6	52.6	47	9.5	2.06	33.22	96907	1409	1228	8.5	17.9
3141.0	2.0	52.1	48	9.5	2.15	33.72	98333	1827	1233	8.5	17.9
3142.0	2.5	51.8	48	9.5	2.07	34.13	99488	1477	1235	8.5	17.9
3143.0	5.6	52.4	47	9.5	1.79	34.31	99999	657	1230	8.5	17.9
3144.0	5.4	51.3	47	9.5	1.79	34.49	100523	673	1226	8.5	17.9
3145.0	1.9	51.8	48	9.5	2.17	35.03	102044	1945	1232	8.5	17.9
3146.0	2.0	50.7	48	9.5	2.13	35.53	103472	1825	1236	8.5	17.9
3147.0	2.4	49.8	47	9.5	2.05	35.94	104654	1516	1238	8.5	17.9
3148.0	7.9	48.5	48	9.5	1.62	36.07	105014	461	1232	8.5	17.9
3149.0	1.9	48.3	48	9.5	2.11	36.58	106500	1883	1237	8.5	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3150.0	3.4	50.9	48	9.5	1.95	36.88	107344	1071	1236	8.5	17.9
3151.0	2.0	50.2	48	9.5	2.13	37.38	108808	1854	1240	8.5	17.9
3152.0	3.7	49.1	48	9.5	1.90	37.65	109588	991	1239	8.5	17.9
3153.0	2.1	48.5	48	9.5	2.09	38.13	110972	1752	1242	8.5	17.9
3154.0	2.4	52.7	48	9.5	2.10	38.55	112171	1518	1244	8.5	17.9
3155.0	2.4	60.3	48	9.5	2.20	38.97	113370	1531	1246	8.5	17.9
3156.0	1.7	60.2	37	9.5	2.23	39.55	114686	2136	1252	8.5	17.9
3157.0	2.0	57.2	38	9.5	2.13	40.04	115795	1792	1256	8.5	17.9
3158.0	1.4	51.3	54	9.5	2.30	40.74	118055	2552	1265	8.5	17.9
3159.0	5.6	58.4	42	9.5	1.81	40.92	118501	651	1261	8.5	17.9
3160.0	2.0	59.3	42	9.5	2.20	41.42	119756	1826	1264	8.5	17.9
3161.0	2.3	59.6	42	9.5	2.15	41.86	120852	1594	1267	8.5	17.9
3162.0	2.5	60.8	42	9.5	2.14	42.26	121858	1464	1268	8.5	17.9
3163.0	3.1	60.3	43	9.5	2.06	42.58	122685	1163	1267	8.5	17.9
3164.0	3.3	60.3	50	9.5	2.10	42.88	123603	1114	1266	8.5	17.9
3165.0	3.2	60.2	50	9.5	2.10	43.20	124534	1144	1265	8.5	17.9
3166.0	2.9	63.6	46	9.5	2.15	43.54	125484	1266	1265	8.5	17.9
3167.0	3.5	63.8	42	9.5	2.05	43.83	126206	1039	1264	8.5	17.9
3168.0	3.3	63.0	43	9.5	2.07	44.13	126990	1116	1263	8.5	17.9
3169.0	2.2	63.7	43	9.5	2.24	44.59	128176	1684	1266	8.5	17.9
3170.0	1.5	64.0	42	9.5	2.37	45.26	129858	2433	1273	8.5	17.9
3171.0	2.4	65.3	41	9.5	2.20	45.68	130899	1528	1275	8.5	17.9
3172.0	1.3	65.6	41	9.5	2.45	46.46	132833	2872	1285	8.5	17.9
3173.0	1.8	60.1	41	9.5	2.24	47.01	134174	1987	1289	8.5	17.9
3174.0	4.4	59.7	41	9.5	1.90	47.24	134729	831	1286	8.5	17.9
3175.0	9.1	60.6	41	9.5	1.64	47.35	134999	401	1281	8.5	17.9
3176.0	7.1	59.4	41	9.5	1.73	47.49	135348	517	1276	8.5	17.9
3177.0	2.1	60.4	42	9.5	2.19	47.96	136524	1715	1279	8.5	17.9
3178.0	2.4	61.1	42	9.5	2.15	48.37	137560	1495	1280	8.5	17.9
3179.0	1.7	62.3	44	9.5	2.32	48.96	139116	2166	1285	8.5	17.9
3180.0	1.8	62.1	43	9.5	2.28	49.51	140535	2000	1289	8.5	17.9
3181.0	1.7	60.7	42	9.5	2.29	50.11	142057	2206	1295	8.5	17.9
3182.0	2.8	60.7	42	9.5	2.09	50.47	142946	1295	1295	8.5	17.9
3183.0	1.2	61.0	41	9.5	2.40	51.28	144964	2982	1305	8.5	17.9
3184.0	2.0	61.1	41	9.5	2.22	51.78	146197	1831	1308	8.5	17.9
3185.0	4.1	53.0	41	9.5	1.85	52.03	146785	883	1305	8.5	17.9
3186.0	4.2	60.0	43	9.5	1.94	52.26	147399	870	1303	8.5	17.9
3187.0	2.7	60.7	42	9.5	2.10	52.63	148312	1328	1303	8.5	17.9
3188.0	1.9	63.1	42	9.5	2.27	53.16	149628	1925	1306	8.5	17.9
3189.0	2.9	63.6	41	9.5	2.10	53.50	150472	1244	1306	8.5	17.9
3190.0	3.1	63.9	41	9.5	2.09	53.82	151282	1191	1305	8.5	17.9
3191.0	0.9	59.0	42	9.5	2.50	54.96	154163	4149	1321	8.5	17.9
3192.0	1.2	58.0	48	9.5	2.41	55.76	156468	2931	1330	8.5	17.9
3192.2	1.4	58.0	47	9.5	2.36	55.90	156875	2612	1332	8.5	17.9

BIT NUMBER	9	IADC CODE	617	INTERVAL	3192.2- 3369.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	176.8
TOTAL HOURS	61.76	TOTAL TURNS	163088	CONDITION	T4 B7 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3193.0	2.1	30.2	40	9.5	1.75	0.38	906	1743	52390	8.5	17.9
3194.0	1.6	57.8	43	9.5	2.27	1.01	2527	2281	24552	8.5	17.9
3195.0	1.4	60.9	43	9.5	2.37	1.74	4424	2675	16738	8.5	17.9
3196.0	63.5	61.0	42	9.5	0.93	1.75	4464	57	12349	8.5	17.9
3197.0	0.9	54.7	41	9.5	2.44	2.92	7328	4253	10662	8.5	17.9
3198.0	2.6	59.4	34	9.5	2.02	3.30	8100	1385	9063	8.5	17.9
3199.0	1.5	61.6	37	9.5	2.29	3.95	9555	2381	8080	8.5	17.9
3200.0	2.4	60.1	37	9.5	2.09	4.36	10476	1507	7237	8.5	17.9
3201.0	1.4	59.9	37	9.5	2.29	5.07	12053	2576	6708	8.5	17.9
3202.0	4.2	56.2	37	9.5	1.85	5.31	12587	870	6112	8.5	17.9
3203.0	1.4	58.7	29	9.5	2.18	6.00	13795	2532	5780	8.5	17.9
3204.0	3.0	59.1	41	9.5	2.04	6.34	14625	1230	5395	8.5	17.9
3205.0	2.1	59.5	41	9.5	2.17	6.81	15788	1714	5107	8.5	17.9
3206.0	2.1	58.9	40	9.5	2.17	7.29	16961	1765	4865	8.5	17.9
3207.0	1.9	61.7	40	9.5	2.24	7.81	18234	1914	4666	8.5	17.9
3208.0	3.0	61.1	41	9.5	2.06	8.15	19045	1216	4447	8.5	17.9
3209.0	2.4	60.4	40	9.5	2.14	8.57	20064	1534	4274	8.5	17.9
3210.0	2.3	58.4	41	9.5	2.13	9.01	21146	1623	4125	8.5	17.9
3211.0	2.6	58.2	41	9.5	2.07	9.39	22075	1394	3980	8.5	17.9
3212.0	4.5	58.9	41	9.5	1.88	9.61	22616	812	3820	8.5	17.9
3213.0	2.5	59.1	41	9.5	2.10	10.01	23580	1445	3706	8.5	17.9
3214.0	2.9	61.2	40	9.5	2.07	10.35	24409	1255	3593	8.5	17.9
3215.0	1.6	59.4	41	9.5	2.27	10.98	25934	2288	3536	8.5	17.9
3216.0	2.7	62.1	41	9.5	2.11	11.35	26831	1345	3444	8.5	17.9
3217.0	3.0	62.7	41	9.5	2.08	11.69	27652	1231	3355	8.5	17.9
3218.0	3.5	61.2	41	9.5	2.01	11.97	28357	1056	3265	8.5	17.9
3219.0	1.7	60.6	41	9.5	2.26	12.55	29753	2090	3222	8.5	17.9
3220.0	3.3	59.3	41	9.5	2.01	12.85	30500	1118	3146	8.5	17.9
3220.8	3.1	59.1	41	9.5	2.03	13.12	31141	1197	3091	8.5	17.9
3222.0	1.3	58.9	46	9.5	2.38	14.03	33659	2780	3079	8.5	17.9
3223.0	2.0	54.2	44	9.5	2.15	14.52	34970	1795	3037	8.5	17.9
3224.0	10.1	58.1	41	9.5	1.58	14.62	35212	362	2953	8.5	17.9
3225.0	2.6	31.3	53	9.5	1.78	15.00	36414	1392	2905	8.5	17.9
3226.0	3.9	36.3	61	9.5	1.78	15.25	37344	927	2847	8.5	17.9
3227.0	2.3	41.3	60	9.5	2.02	15.68	38882	1561	2810	8.5	17.9
3228.0	1.9	41.0	60	9.5	2.08	16.21	40785	1917	2785	8.5	17.9
3229.0	1.9	40.6	62	9.5	2.09	16.73	42743	1925	2762	8.5	17.9
3230.0	8.5	40.0	60	9.5	1.58	16.85	43167	431	2700	8.5	17.9
3231.0	7.1	40.3	60	9.5	1.64	16.99	43672	513	2644	8.5	17.9
3232.0	13.5	39.6	60	9.5	1.42	17.07	43937	270	2584	8.5	17.9
3233.0	8.2	41.3	54	9.5	1.57	17.19	44330	445	2532	8.5	17.9
3234.0	2.7	42.1	61	9.5	1.99	17.56	45687	1351	2503	8.5	17.9
3235.0	2.4	42.7	63	9.5	2.05	17.97	47257	1509	2480	8.5	17.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3236.0	3.5	41.4	62	9.5	1.90	18.26	48314	1036	2447	8.5	17.9
3237.0	2.3	42.8	61	9.5	2.05	18.69	49911	1586	2428	8.5	17.9
3238.0	3.6	39.6	61	9.5	1.85	18.96	50917	1001	2397	8.5	17.9
3239.0	1.8	41.8	61	9.5	2.11	19.51	52927	1994	2388	8.5	17.9
3240.0	2.4	46.6	59	9.5	2.08	19.92	54386	1517	2370	8.5	17.9
3241.0	4.6	58.2	45	9.5	1.91	20.14	54981	797	2338	8.5	18.0
3242.0	3.4	61.4	43	9.5	2.04	20.43	55738	1059	2317	8.5	18.0
3243.0	2.9	61.3	41	9.5	2.08	20.78	56595	1270	2292	8.5	18.0
3244.0	1.2	55.8	47	9.5	2.39	21.65	59016	3162	2308	8.5	18.0
3245.0	1.8	50.1	48	9.5	2.16	22.20	60600	2016	2303	8.5	18.0
3246.0	2.9	58.4	41	9.5	2.05	22.55	61467	1279	2284	8.5	18.0
3247.0	2.6	59.0	45	9.5	2.13	22.93	62506	1405	2268	8.5	18.0
3248.0	3.9	59.9	41	9.5	1.95	23.19	63132	926	2244	8.5	18.0
3249.0	3.5	62.1	41	9.5	2.02	23.48	63846	1054	2223	8.5	18.0
3250.0	4.2	60.3	41	9.5	1.92	23.71	64422	863	2199	8.5	18.0
3251.0	1.3	61.6	41	9.5	2.39	24.49	66356	2846	2210	8.6	18.0
3252.0	1.5	62.5	42	9.5	2.35	25.15	68012	2420	2214	8.6	18.0
3253.0	2.7	58.3	40	9.5	2.06	25.52	68912	1353	2200	8.6	18.0
3254.0	2.1	58.7	41	9.5	2.17	26.01	70088	1761	2192	8.6	18.0
3255.0	2.0	60.9	41	9.5	2.22	26.52	71349	1867	2187	8.6	18.0
3256.0	2.6	60.0	43	9.5	2.12	26.90	72341	1405	2175	8.6	18.0
3257.0	2.5	61.7	42	9.5	2.14	27.30	73331	1437	2164	8.6	18.0
3258.0	2.5	56.3	45	9.5	2.11	27.69	74413	1455	2153	8.6	18.0
3259.0	2.8	58.4	41	9.5	2.06	28.05	75290	1298	2140	8.6	18.0
3260.0	3.1	58.1	41	9.5	2.01	28.37	76075	1161	2126	8.6	18.0
3261.0	1.5	56.8	41	9.5	2.26	29.02	77692	2375	2129	8.6	18.0
3262.0	2.0	59.1	41	9.6	2.17	29.52	78939	1830	2125	8.6	18.0
3263.0	2.0	55.3	49	9.6	2.18	30.02	80416	1821	2121	8.6	18.0
3264.0	4.8	56.5	49	9.6	1.88	30.23	81034	765	2102	8.6	18.0
3265.0	2.5	57.8	44	9.6	2.10	30.63	82097	1457	2093	8.6	18.0
3266.0	2.6	59.5	44	9.6	2.09	31.00	83086	1379	2083	8.6	18.0
3267.0	2.3	60.2	44	9.6	2.16	31.44	84234	1601	2077	8.6	18.0
3268.0	2.4	60.4	44	9.6	2.14	31.86	85323	1517	2069	8.6	18.0
3269.0	2.0	60.7	44	9.6	2.22	32.37	86661	1862	2067	8.6	18.0
3270.0	2.5	59.6	41	9.6	2.09	32.76	87630	1443	2059	8.6	18.0
3271.0	2.6	62.0	44	9.6	2.13	33.15	88641	1405	2050	8.6	18.0
3272.0	2.1	60.4	43	9.5	2.20	33.62	89866	1745	2047	8.6	18.0
3273.0	2.7	52.5	50	9.5	2.06	34.00	90971	1354	2038	8.6	18.0
3274.0	3.9	49.0	27	9.5	1.68	34.25	91390	930	2024	8.6	18.0
3275.0	3.0	50.7	31	9.5	1.84	34.59	92022	1235	2015	8.6	18.0
3276.0	2.0	58.1	47	9.5	2.23	35.09	93437	1840	2013	8.6	18.0
3277.0	2.3	57.9	48	9.5	2.19	35.53	94704	1598	2008	8.6	18.0
3278.0	3.0	43.8	39	9.5	1.84	35.87	95502	1237	1999	8.6	18.0
3279.0	5.3	55.6	48	9.5	1.85	36.06	96049	691	1984	8.6	18.0
3280.0	10.9	48.9	48	9.5	1.52	36.15	96315	335	1965	8.6	18.0
3281.0	13.2	50.0	47	9.5	1.46	36.22	96528	276	1946	8.6	18.0
3282.0	2.9	57.4	42	9.5	2.05	36.57	97415	1271	1939	8.6	18.0
3283.0	1.8	57.5	43	9.5	2.23	37.14	98863	2062	1940	8.6	18.0
3284.0	2.6	56.4	43	9.5	2.07	37.52	99852	1408	1934	8.6	18.0
3285.0	2.7	59.3	42	9.5	2.09	37.89	100784	1348	1928	8.6	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3286.0	3.5	59.0	43	9.5	2.00	38.18	101521	1043	1918	8.6	18.0
3287.0	4.2	59.7	43	9.5	1.95	38.42	102146	875	1907	8.6	18.0
3288.0	2.9	61.1	44	9.5	2.10	38.76	103049	1762	1901	8.6	18.0
3289.0	5.5	58.5	44	9.5	1.83	38.94	103523	663	1888	8.6	18.0
3290.0	2.7	59.8	44	9.5	2.10	39.31	104478	1330	1882	8.6	18.0
3291.0	3.5	59.9	44	9.5	2.01	39.59	105219	1033	1874	8.6	18.0
3292.0	2.2	62.7	42	9.5	2.20	40.04	106352	1428	1871	8.6	18.0
3293.0	3.2	63.0	43	9.5	2.08	40.35	107166	1157	1864	8.6	18.0
3294.0	1.9	62.9	43	9.5	2.28	40.89	108537	1946	1865	8.6	18.0
3295.0	2.8	61.7	43	9.5	2.11	41.24	109452	1301	1859	8.6	18.0
3296.0	2.2	62.1	43	9.5	2.22	41.71	110645	1691	1858	8.6	18.0
3297.0	2.9	63.4	43	9.5	2.12	42.05	111538	1267	1852	8.6	18.0
3298.0	3.8	63.9	43	9.5	2.03	42.32	112222	971	1844	8.6	18.0
3299.0	1.8	62.9	43	9.5	2.29	42.87	113645	2016	1845	8.6	18.0
3300.0	2.6	64.5	43	9.5	2.18	43.26	114648	1422	1841	8.6	18.0
3301.0	4.9	61.5	42	9.5	1.90	43.47	115169	751	1831	8.6	18.0
3302.0	2.8	61.1	43	9.5	2.11	43.82	116103	1310	1827	8.6	18.0
3303.0	3.1	51.1	55	9.5	2.03	44.15	117172	1187	1821	8.6	18.0
3304.0	5.2	56.6	48	9.5	1.87	44.34	117729	700	1811	8.6	18.0
3305.0	8.5	60.6	44	9.5	1.69	44.46	118036	429	1799	8.6	18.0
3306.0	8.5	58.9	41	9.5	1.65	44.58	118323	429	1787	8.6	18.0
3307.0	4.6	57.8	44	9.5	1.89	44.79	118890	792	1778	8.6	18.0
3308.0	5.8	57.3	43	9.5	1.80	44.97	119339	628	1768	8.6	18.0
3309.0	6.7	57.4	43	9.5	1.74	45.11	119725	545	1757	8.6	18.0
3310.0	2.2	58.4	43	9.5	2.16	45.57	120889	1662	1757	8.6	18.0
3311.0	6.5	59.0	42	9.5	1.77	45.72	121281	564	1747	8.6	18.0
3312.0	3.4	61.3	42	9.5	2.03	46.02	122021	1064	1741	8.6	18.0
3313.0	3.5	59.6	42	9.5	2.00	46.30	122756	1056	1735	8.6	18.0
3314.0	2.6	59.8	42	9.5	2.11	46.68	123721	1384	1732	8.6	18.0
3315.0	6.7	58.7	42	9.5	1.75	46.83	124098	543	1723	8.6	18.0
3316.0	2.2	59.5	42	9.5	2.17	47.28	125241	1637	1722	8.6	18.0
3317.0	4.8	47.9	20	9.5	1.50	47.49	125494	756	1714	8.6	18.0
3318.0	8.1	60.4	42	9.5	1.70	47.61	125807	453	1704	8.6	18.0
3319.0	14.3	60.4	42	9.5	1.48	47.68	125981	255	1693	8.6	18.0
3320.0	8.9	62.0	43	9.5	1.69	47.79	126275	412	1683	8.6	18.0
3321.0	8.6	61.4	44	9.5	1.70	47.91	126578	423	1673	8.6	18.0
3322.0	2.8	62.1	44	9.5	2.13	48.27	127520	1316	1670	8.6	18.0
3323.0	12.4	61.5	43	9.5	1.56	48.35	127729	294	1660	8.6	18.0
3324.0	3.9	60.6	44	9.5	1.98	48.61	128402	940	1654	8.6	18.0
3325.0	5.1	62.0	44	9.5	1.90	48.80	128916	718	1647	8.6	18.0
3326.0	6.4	61.0	43	9.5	1.80	48.96	129319	571	1639	8.7	18.0
3327.0	10.2	60.2	43	9.5	1.62	49.06	129573	357	1630	8.7	18.0
3328.0	11.7	61.0	43	9.5	1.57	49.14	129795	311	1620	8.8	18.0
3329.0	13.7	61.8	43	9.5	1.52	49.22	129983	267	1610	8.8	18.0
3330.0	7.1	59.7	41	9.5	1.73	49.36	130329	517	1602	8.8	18.0
3331.0	13.9	59.7	42	9.5	1.49	49.43	130510	263	1592	8.8	18.0
3332.0	3.5	59.1	42	9.5	2.00	49.72	131247	1058	1589	8.8	18.0
3333.0	4.7	59.3	42	9.5	1.88	49.93	131782	770	1583	8.8	18.0
3334.0	3.0	59.2	42	9.5	2.05	50.26	132621	1208	1580	8.8	18.1
3335.0	3.4	58.2	42	9.5	2.00	50.56	133377	1084	1577	8.8	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3336.0	3.1	58.5	42	9.5	2.03	50.88	134192	1174	1574	8.8	18.1
3337.0	3.5	59.6	42	9.5	2.00	51.17	134926	1054	1570	8.8	18.1
3338.0	3.0	60.6	42	9.5	2.07	51.50	135770	1214	1568	8.8	18.1
3339.0	2.2	61.2	41	9.5	2.18	51.95	136893	1648	1568	8.8	18.1
3340.0	3.0	58.3	41	9.5	2.03	52.29	137715	1230	1566	8.8	18.1
3341.0	2.2	58.5	41	9.5	2.15	52.75	138844	1692	1567	8.8	18.1
3342.0	2.7	60.1	41	9.5	2.09	53.12	139750	1356	1566	8.8	18.1
3343.0	3.6	58.2	41	9.5	1.96	53.41	140435	1026	1562	8.8	18.1
3344.0	2.7	55.4	41	9.5	2.02	53.77	141324	1330	1560	8.8	18.1
3345.0	2.3	59.1	41	9.5	2.13	54.20	142363	1556	1560	8.8	18.1
3346.0	2.7	62.0	41	9.5	2.11	54.57	143264	1350	1559	8.9	18.1
3347.0	4.7	63.4	40	9.5	1.92	54.78	143780	727	1554	8.9	18.1
3348.0	9.7	61.8	40	9.5	1.62	54.88	144026	376	1546	8.9	18.1
3349.0	6.6	61.8	45	9.5	1.81	55.03	144437	554	1540	8.9	18.1
3350.0	2.7	64.7	49	9.5	2.22	55.41	145537	1366	1539	8.9	18.1
3351.0	5.2	59.7	45	9.5	1.87	55.60	146051	702	1534	8.9	18.1
3352.0	1.5	64.6	45	9.5	2.40	56.25	147837	2394	1539	8.9	18.1
3353.0	2.3	64.5	45	9.5	2.24	56.68	149007	1569	1539	8.9	18.1
3354.0	2.3	64.2	45	9.5	2.24	57.12	150182	1573	1540	8.9	18.1
3355.0	1.9	63.4	45	9.5	2.30	57.65	151623	1937	1542	8.9	18.1
3356.0	4.4	56.7	45	9.5	1.91	57.87	152239	829	1538	8.9	18.1
3357.0	2.6	54.1	45	9.5	2.06	58.26	153279	1398	1537	8.9	18.1
3358.0	4.3	57.0	44	9.5	1.92	58.49	153892	855	1533	8.9	18.1
3359.0	2.1	59.7	43	9.5	2.20	58.97	155145	1757	1534	8.9	18.1
3360.0	5.8	60.5	44	9.5	1.84	59.14	155604	633	1529	8.9	18.1
3361.0	3.2	61.4	45	9.5	2.07	59.45	156435	1135	1526	8.9	18.1
3362.0	7.3	61.7	44	9.5	1.77	59.59	156801	501	1520	8.9	18.1
3363.0	3.5	61.8	43	9.5	2.03	59.88	157543	1047	1518	8.9	18.1
3364.0	2.5	62.7	45	9.5	2.19	60.28	158623	1475	1517	8.9	18.1
3365.0	4.7	54.2	49	9.5	1.89	60.49	159253	776	1513	8.9	18.1
3366.0	7.6	54.6	60	9.5	1.79	60.63	159726	483	1507	8.9	18.1
3367.0	1.8	58.0	50	9.5	2.28	61.17	161376	1989	1510	8.9	18.1
3368.0	3.7	57.9	48	9.5	2.01	61.44	162162	987	1507	8.9	18.1
3369.0	3.1	56.8	48	9.5	2.06	61.76	163088	1173	1505	8.9	18.1

BIT NUMBER	10	IADC CODE	617	INTERVAL	3369.0- 3389.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	20.0
TOTAL HOURS	4.64	TOTAL TURNS	12581	CONDITION	T1 R1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3370.0	2.0	28.9	35	9.5	1.71	0.51	1060	1863	42381	8.9	18.1
3371.0	3.1	43.7	34	9.5	1.77	0.83	1725	1181	21781	8.9	18.1
3372.0	10.7	51.4	37	9.5	1.46	0.93	1931	340	14634	8.9	18.1
3373.0	13.8	57.3	40	9.5	1.45	1.00	2105	265	11042	9.0	18.1
3374.0	2.2	61.2	41	9.5	2.17	1.45	3201	1642	9162	9.0	18.1
3375.0	2.9	60.1	41	9.5	2.06	1.79	4045	1248	7843	9.0	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3376.0	3.2	60.0	41	9.5	2.03	2.10	4814	1141	6885	9.0	18.1
3377.0	4.2	60.0	40	9.5	1.92	2.34	5386	870	6133	9.0	18.1
3378.0	2.7	58.6	53	9.5	2.16	2.71	6540	1334	5600	9.0	18.1
3379.0	4.0	58.6	53	9.5	2.03	2.96	7343	916	5132	9.0	18.1
3380.0	7.8	60.3	53	9.5	1.79	3.08	7751	467	4708	9.0	18.1
3381.0	3.1	59.9	53	9.5	2.13	3.41	8778	1173	4413	9.0	18.1
3382.0	5.2	60.6	48	9.5	1.91	3.60	9327	703	4128	9.0	18.1
3383.0	6.0	61.0	54	9.5	1.91	3.77	9868	614	3877	9.0	18.1
3384.0	3.2	59.0	43	9.5	2.03	4.08	10668	1139	3694	9.0	18.1
3385.0	4.2	35.0	57	9.5	1.72	4.32	11483	870	3518	9.0	18.1
3386.0	9.5	32.2	57	9.5	1.43	4.42	11842	384	3333	9.0	18.1
3387.0	16.0	34.5	56	9.5	1.29	4.48	12053	228	3161	9.0	18.1
3388.0	9.5	35.0	56	11.0	1.26	4.59	12406	384	3015	9.0	18.1
3389.0	19.9	35.0	58	9.5	1.24	4.64	12581	184	2873	9.0	18.1

BIT NUMBER	10	IADC CODE	4	INTERVAL	3389.0- 3407.3
CHRIS C23		SIZE	8.500	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.2	BIT RUN	18.3
TOTAL HOURS	7.64	TOTAL TURNS	45841	CONDITION	T0 B0 G0.550

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3389.2	1.6	12.0	98	9.5	1.81	0.12	713	7222	170714	9.0	18.1
3389.6	10.4	16.2	100	9.5	1.44	0.16	943	350	56971	9.0	18.1
3390.0	6.9	19.4	100	9.5	1.63	0.22	1293	533	34396	9.0	18.1
3390.4	3.7	18.2	100	9.5	1.78	0.33	1934	976	24847	9.0	18.1
3390.6	10.3	17.9	100	9.5	1.48	0.34	2051	355	21786	9.0	18.1
3390.8	4.5	21.1	100	9.5	1.80	0.39	2316	806	19455	9.0	18.1
3391.2	4.3	21.3	100	9.5	1.82	0.48	2869	842	16071	9.0	18.1
3391.6	7.7	20.6	100	9.5	1.63	0.53	3183	477	13672	9.0	18.1
3391.8	18.0	22.6	100	9.5	1.41	0.54	3249	203	12710	9.0	18.1
3392.0	7.5	22.5	100	9.5	1.68	0.57	3409	487	11895	9.0	18.1
3392.6	15.2	22.1	100	9.5	1.45	0.61	3646	240	9952	9.0	18.1
3392.8	6.0	21.7	100	9.5	1.73	0.64	3848	614	9461	9.0	18.1
3393.2	12.6	21.7	100	9.5	1.50	0.68	4038	289	8587	9.0	18.1
3393.8	20.6	21.4	100	9.5	1.35	0.71	4213	178	7534	9.0	18.1
3394.0	6.9	21.9	100	9.5	1.69	0.73	4388	533	7256	9.0	18.1
3394.4	13.7	21.3	100	9.5	1.47	0.76	4563	266	6738	9.0	18.1
3394.8	9.4	21.4	100	9.5	1.59	0.81	4818	388	6300	9.0	18.1
3395.0	7.7	22.5	100	9.5	1.67	0.83	4974	474	6106	9.0	18.1
3395.2	1.6	23.4	100	9.5	2.17	0.96	5724	2283	5983	9.0	18.1
3395.4	7.9	23.4	100	9.5	1.68	0.98	5875	462	5810	9.0	18.1
3395.6	5.0	22.8	100	9.5	1.81	1.02	6115	730	5656	9.0	18.1
3395.8	2.4	23.0	100	9.5	2.04	1.11	6619	1532	5535	9.0	18.1
3396.0	5.7	23.4	100	9.5	1.78	1.14	6829	639	5395	9.0	18.1
3396.2	2.4	23.7	100	9.5	2.06	1.22	7329	1522	5287	9.0	18.1
3396.4	4.3	23.2	100	9.5	1.86	1.27	7607	847	5167	9.0	18.1
3396.6	8.0	23.0	100	9.5	1.67	1.30	7757	457	5043	9.0	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3396.8	1.5	23.1	100	9.5	2.19	1.43	8572	2480	4978	9.0	18.1
3397.0	7.8	23.4	100	9.5	1.68	1.46	8725	467	4865	9.0	18.1
3397.4	3.5	23.2	100	9.5	1.92	1.57	9404	1032	4682	9.0	18.1
3397.6	6.7	23.0	100	9.5	1.72	1.60	9583	545	4586	9.0	18.1
3398.0	6.0	23.9	100	9.5	1.78	1.67	9983	609	4409	9.0	18.1
3398.2	2.7	23.2	100	9.5	2.01	1.74	10427	1353	4343	9.0	18.1
3398.4	1.4	23.3	100	9.5	2.21	1.88	11284	2609	4306	9.0	18.1
3398.8	2.4	23.7	100	9.5	2.06	2.05	12284	1522	4192	9.0	18.1
3399.0	2.4	23.5	100	9.5	2.05	2.13	12784	1522	4139	9.0	18.1
3399.2	3.8	23.5	100	9.5	1.91	2.19	13103	969	4077	9.0	18.1
3399.4	1.8	23.7	100	9.5	2.15	2.30	13783	2069	4038	9.0	18.1
3399.6	0.6	23.7	100	9.5	2.51	2.66	15939	6563	4086	9.0	18.1
3399.8	4.7	23.7	100	9.5	1.85	2.70	16196	781	4025	9.0	18.1
3400.0	0.9	23.8	100	9.5	2.37	2.93	17568	4174	4027	9.0	18.1
3400.2	0.5	24.5	100	9.5	2.54	3.30	19798	6787	4077	9.0	18.1
3400.4	0.7	24.1	100	9.5	2.47	3.60	21604	5498	4102	9.0	18.1
3400.6	1.0	23.7	100	9.5	2.33	3.80	22801	3442	4094	9.0	18.1
3400.8	2.0	23.7	100	9.5	2.11	3.90	23389	1790	4055	9.0	18.1
3401.0	3.0	23.7	100	9.5	1.98	3.97	23791	1222	4007	9.0	18.1
3401.2	1.6	23.5	100	9.5	2.17	4.09	24529	2247	3979	9.0	18.1
3401.4	1.0	23.4	100	9.5	2.33	4.30	25763	3753	3975	9.0	18.1
3401.6	1.2	23.3	100	9.5	2.27	4.47	26799	3155	3962	9.0	18.1
3401.8	0.9	23.9	100	9.5	2.35	4.68	28084	3911	3961	9.0	18.1
3402.2	1.1	23.5	100	9.5	2.30	5.06	30349	3447	3946	9.0	18.1
3402.6	1.6	23.5	100	9.5	2.19	5.32	31891	2346	3899	9.0	18.1
3403.0	2.8	23.2	100	9.5	2.00	5.46	32761	1324	3825	9.0	18.1
3403.2	1.8	22.8	100	9.5	2.12	5.57	33428	2029	3800	9.0	18.1
3403.4	0.7	23.2	100	9.5	2.43	5.86	35169	5300	3821	9.0	18.1
3403.6	1.6	23.3	100	9.5	2.17	5.99	35916	2272	3799	9.0	18.1
3403.8	3.7	32.1	100	9.5	2.11	6.04	36238	979	3761	9.0	18.1
3404.0	0.6	29.0	100	9.5	2.63	6.37	38174	5894	3790	9.0	18.1
3404.2	0.7	25.5	100	9.5	2.48	6.64	39838	5062	3806	9.0	18.1
3404.6	7.6	26.1	100	9.5	1.75	6.69	40153	479	3721	9.0	18.1
3404.8	1.7	27.1	100	9.5	2.26	6.82	40876	2201	3702	9.0	18.1
3405.0	2.1	27.7	100	9.5	2.20	6.91	41458	1770	3678	9.0	18.1
3405.2	4.2	26.4	100	9.5	1.94	6.96	41741	862	3643	9.0	18.1
3405.4	2.0	25.5	100	9.5	2.16	7.06	42336	1811	3621	9.0	18.1
3405.6	6.7	25.6	100	9.5	1.78	7.09	42514	543	3583	9.0	18.1
3405.8	1.6	25.4	100	9.5	2.23	7.21	43259	2267	3568	9.0	18.1
3406.2	3.0	25.3	100	9.5	2.02	7.34	44051	1205	3513	9.0	18.1
3406.6	4.2	25.2	100	9.5	1.92	7.44	44623	870	3453	9.0	18.1
3406.8	6.5	25.3	100	9.5	1.78	7.47	44806	558	3420	9.0	18.1
3407.3	2.9	66.6	100	9.5	2.87	7.64	45841	1259	3361	9.0	18.1

BIT NUMBER	11	IADC CODE	617	INTERVAL	3407.3- 3434.0
MTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.3	BIT RUN	26.7
TOTAL HOURS	6.00	TOTAL TURNS	17258	CONDITION	T1 B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3407.5	3.5	20.5	58	9.4	1.55	0.06	196	1040	205453	9.0	18.1
3408.0	3.2	23.1	56	9.4	1.62	0.21	720	1137	59513	9.0	18.1
3409.0	3.3	33.8	54	9.4	1.78	0.52	1712	1109	25158	9.0	18.1
3410.0	6.9	37.9	54	9.4	1.61	0.66	2188	533	16037	9.0	18.1
3411.0	5.0	49.9	54	9.4	1.86	0.86	2833	726	11899	9.0	18.1
3412.0	3.0	60.5	50	9.4	2.15	1.19	3826	1199	9623	9.0	18.1
3413.0	3.4	60.3	51	9.4	2.11	1.49	4725	1082	8124	9.0	18.1
3414.0	2.3	62.5	51	9.4	2.29	1.92	6053	1600	7150	9.0	18.1
3415.0	3.2	62.3	50	9.4	2.15	2.23	6991	1132	6369	9.0	18.1
3416.0	2.6	61.6	50	9.4	2.23	2.62	8157	1408	5799	9.0	18.1
3417.0	11.0	59.5	53	9.4	1.68	2.71	8446	331	5235	9.0	18.1
3418.0	16.3	60.1	53	9.4	1.53	2.77	8641	224	4767	9.0	18.1
3419.0	3.3	61.2	52	9.4	2.14	3.07	9567	1103	4454	9.0	18.1
3420.0	5.4	60.4	48	9.4	1.92	3.26	10125	681	4156	9.0	18.1
3421.0	5.6	56.4	40	9.4	1.78	3.44	10545	648	3900	9.0	18.1
3422.0	2.4	55.6	43	9.4	2.11	3.86	11636	1532	3739	9.0	18.1
3423.0	4.2	55.5	43	9.5	1.89	4.09	12249	862	3556	9.0	18.1
3424.0	3.0	55.7	43	9.5	2.01	4.42	13103	1200	3415	9.0	18.1
3425.0	8.7	55.1	43	9.5	1.62	4.54	13398	418	3246	9.0	18.1
3426.0	5.8	57.7	43	9.5	1.80	4.71	13845	625	3105	9.0	18.1
3427.0	4.4	58.1	44	9.5	1.92	4.94	14449	835	2990	9.0	18.1
3428.0	6.6	58.3	44	9.5	1.76	5.09	14845	551	2872	9.0	18.1
3429.0	4.5	59.2	44	9.5	1.92	5.31	15434	816	2778	9.0	18.1
3430.0	4.3	58.6	44	9.5	1.92	5.54	16042	850	2693	9.0	18.1
3431.0	6.7	58.6	44	9.5	1.77	5.69	16439	547	2602	9.0	18.1
3432.0	4.8	58.5	44	9.5	1.89	5.90	16992	758	2527	9.0	18.1
3433.0	17.7	57.9	44	9.5	1.40	5.96	17142	206	2437	9.0	18.1
3434.0	22.1	57.5	43	9.5	1.31	6.00	17258	165	2352	9.0	18.2

BIT NUMBER	11	IADC CODE	4	INTERVAL	3434.0- 3452.0
CHRIS C-23		SIZE	8.470	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.3	BIT RUN	18.0
TOTAL HOURS	23.52	TOTAL TURNS	130185	CONDITION	T0 B0 G0.700

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3434.2	0.4	15.0	80	9.5	2.24	8.14	48241	9130	318454	9.0	18.2
3434.4	5.4	18.9	82	9.5	1.64	8.18	48423	676	159565	9.0	18.2
3434.6	0.7	19.0	82	9.5	2.23	8.46	49829	5217	108116	9.0	18.2
3434.8	1.7	20.2	82	9.5	2.01	8.58	50408	2148	81624	9.0	18.2
3435.0	6.5	19.9	82	9.5	2.36	8.98	52376	7304	66760	9.0	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
3435.2	10.9	20.5	82	9.5	1.30	8.99	52428	193	55666	9.0	18.2
3435.4	0.4	21.1	82	9.5	2.44	9.44	54657	8237	48890	9.0	18.2
3435.6	2.1	20.4	82	9.5	1.96	9.54	55136	1750	42998	9.0	18.2
3435.8	0.5	21.4	82	9.5	2.41	9.94	57120	7355	39637	9.0	18.2
3436.0	4.6	24.4	82	9.5	1.81	9.98	57336	801	35214	9.0	18.2
3436.2	0.9	25.2	82	9.5	2.34	10.20	58415	3992	32375	9.0	18.2
3436.4	1.8	25.2	82	9.5	2.12	10.31	58958	2009	29845	9.0	18.2
3436.6	0.7	25.4	82	9.5	2.44	10.61	60401	5346	27960	9.0	18.2
3436.8	1.2	24.9	82	9.5	2.24	10.77	61205	2972	26175	9.0	18.2
3437.0	5.1	24.6	85	9.5	1.79	10.81	61405	716	24478	9.0	18.2
3437.2	1.3	25.3	84	9.5	2.24	10.97	62181	2809	23124	9.0	18.2
3437.4	1.0	24.7	85	9.5	2.31	11.16	63201	3652	21978	9.0	18.2
3437.6	3.6	25.0	87	9.5	1.92	11.22	63491	1014	20814	9.0	18.2
3437.8	2.8	25.1	90	9.5	2.01	11.29	63876	1304	19787	9.0	18.2
3438.0	1.1	25.8	82	9.5	2.30	11.47	64775	3320	18964	9.0	18.2
3438.2	0.2	25.6	83	9.5	2.81	12.40	69425	17027	18871	9.0	18.2
3438.4	0.6	25.8	84	9.5	2.52	12.76	71214	6490	18309	9.0	18.2
3438.6	0.6	25.8	88	9.5	2.51	13.10	72984	6155	17780	9.0	18.2
3438.8	4.1	25.5	86	9.5	1.89	13.14	73237	898	17077	9.0	18.2
3439.0	0.6	27.4	87	9.5	2.54	13.47	74924	5879	16629	9.0	18.2
3439.2	1.3	26.4	94	9.5	2.30	13.62	75792	2809	16097	9.1	18.2
3439.4	0.6	26.0	97	9.5	2.52	13.97	77838	6394	15738	9.1	18.2
3439.6	12.6	25.6	109	9.5	1.61	13.99	77942	289	15186	9.1	18.2
3439.8	0.3	26.1	111	9.5	2.77	14.57	81841	10647	15030	9.1	18.2
3440.0	34.3	26.0	92	9.5	1.24	14.58	81873	107	14532	9.1	18.2
3440.2	0.5	25.9	90	9.5	2.56	14.98	84044	7340	14300	9.1	18.2
3440.4	45.0	25.8	90	9.5	1.15	14.98	84068	81	13856	9.1	18.2
3440.6	0.4	26.3	90	9.5	2.65	15.46	86640	8699	13706	9.1	18.2
3440.8	0.7	25.0	90	9.5	2.45	15.74	88183	5217	13450	9.1	18.2
3441.0	1.0	25.0	90	9.5	2.33	15.94	89263	3652	13170	9.1	18.2
3441.2	0.9	25.9	90	9.5	2.39	16.17	90465	4065	12917	9.1	18.2
3441.4	0.8	24.4	90	9.5	2.39	16.42	91812	4555	12691	9.1	18.2
3441.6	45.0	21.9	90	9.5	1.09	16.42	91836	81	12359	9.1	18.2
3441.8	0.6	23.8	90	9.5	2.44	16.74	93554	5808	12191	9.1	18.2
3442.0	1.0	25.0	90	9.5	2.33	16.94	94634	3652	11978	9.1	18.2
3442.2	1.5	24.9	90	9.5	2.20	17.07	95358	2447	11745	9.1	18.2
3442.4	20.0	26.1	90	9.5	1.41	17.08	95412	183	11470	9.1	18.2
3442.6	0.3	26.2	90	9.5	2.72	17.69	98694	11098	11461	9.1	18.2
3442.8	0.8	24.9	90	9.5	2.39	17.93	99996	4403	11301	9.1	18.2
3443.0	2.5	25.3	90	9.5	2.05	18.01	100428	1461	11082	9.1	18.2
3443.2	1.1	24.7	90	9.5	2.29	18.19	101380	3221	10911	9.1	18.2
3443.4	12.9	25.8	90	9.5	1.54	18.20	101464	284	10685	9.1	18.2
3443.6	1.1	24.7	90	9.5	2.30	18.39	102459	3363	10533	9.1	18.2
3443.8	16.0	24.9	90	9.5	1.46	18.40	102526	228	10323	9.1	18.2
3444.0	2.1	25.0	90	9.5	2.10	18.50	103040	1739	10151	9.1	18.2
3444.2	1.4	25.0	90	9.5	2.23	18.64	103812	2609	10003	9.1	18.2
3444.4	2.0	24.1	90	9.5	2.09	18.74	104352	1826	9846	9.1	18.2
3444.6	1.5	25.0	90	9.5	2.21	18.87	105072	2435	9706	9.1	18.2
3444.8	1.0	25.0	90	9.5	2.33	19.07	106152	3652	9594	9.1	18.2
3445.0	1.4	24.7	90	9.5	2.22	19.21	106923	2609	9467	9.1	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3445.2	1.1	25.9	90	9.5	2.33	19.40	107905	3320	9357	9.1	18.2
3445.4	1.6	25.3	90	9.5	2.19	19.52	108568	2242	9232	9.1	18.2
3445.6	2.5	25.4	90	9.5	2.06	19.60	109003	1471	9098	9.1	18.2
3445.8	0.8	24.9	90	9.5	2.39	19.84	110320	4453	9020	9.1	18.2
3446.0	1.5	23.8	90	9.5	2.18	19.98	111048	2460	8910	9.1	18.2
3446.2	5.0	23.6	90	9.5	1.80	20.02	111264	730	8776	9.1	18.2
3446.4	1.0	25.0	90	9.5	2.35	20.23	112386	3794	8696	9.1	18.2
3446.6	3.1	25.2	90	9.5	1.98	20.29	112735	1182	8577	9.1	18.2
3446.8	1.3	25.7	90	9.5	2.27	20.44	113556	2775	8486	9.1	18.2
3447.0	9.9	25.2	90	9.5	1.62	20.46	113665	370	8361	9.1	18.2
3447.2	2.5	25.0	90	9.5	2.05	20.54	114097	1461	8257	9.1	18.2
3447.4	1.6	25.1	90	9.5	2.19	20.67	114772	2283	8167	9.1	18.2
3447.6	1.9	24.8	90	9.5	2.13	20.77	115341	1922	8076	9.1	18.2
3447.8	2.2	24.1	90	9.5	2.06	20.86	115833	1666	7983	9.1	18.2
3448.0	1.7	25.7	90	9.5	2.18	20.98	116451	2090	7898	9.1	18.2
3448.2	1.9	25.8	90	9.5	2.16	21.09	117030	1955	7815	9.1	18.2
3448.4	1.6	26.1	90	9.5	2.21	21.21	117695	2250	7737	9.1	18.2
3448.6	2.3	25.9	90	9.5	2.09	21.30	118163	1583	7653	9.1	18.2
3448.8	1.3	26.1	90	9.5	2.29	21.45	119003	2840	7588	9.1	18.2
3449.0	9.9	27.3	90	9.5	1.66	21.47	119112	370	7497	9.1	18.2
3449.2	0.9	26.2	90	9.5	2.39	21.68	120261	3885	7444	9.1	18.2
3449.4	8.7	25.9	90	9.5	1.67	21.71	120386	421	7353	9.1	18.2
3449.6	0.8	26.0	90	9.5	2.43	21.96	121724	4524	7317	9.1	18.2
3449.8	2.6	25.8	90	9.5	2.05	22.03	122136	1395	7242	9.1	18.2
3450.0	1.1	25.9	90	9.5	2.34	22.22	123155	3444	7194	9.1	18.2
3450.2	2.9	25.6	90	9.5	2.02	22.29	123530	1268	7121	9.1	18.2
3450.4	1.0	25.9	90	9.5	2.37	22.50	124646	3774	7080	9.1	18.2
3450.6	4.6	25.8	90	9.5	1.87	22.54	124878	786	7005	9.1	18.2
3450.8	0.8	27.3	90	9.5	2.47	22.79	126212	4509	6975	9.1	18.2
3451.0	1.7	28.6	90	9.4	2.28	22.90	126851	2161	6918	9.1	18.2
3451.2	1.2	28.5	90	9.4	2.40	23.07	127769	3104	6874	9.1	18.2
3451.4	4.9	28.2	90	9.4	1.92	23.12	127991	751	6804	9.1	18.2
3451.6	1.0	26.7	90	9.4	2.41	23.32	129071	3652	6768	9.1	18.2
3451.8	1.8	27.0	90	9.4	2.22	23.43	129671	2029	6715	9.1	18.2
3452.0	2.1	26.0	90	9.4	2.15	23.52	130185	1739	6659	9.1	18.2

BIT NUMBER	11	IADC CODE	617	INTERVAL	3452.0- 3462.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	9.3	BIT RUN	10.0
TOTAL HOURS	7.13	TOTAL TURNS	19484	CONDITION	T2 B6 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
3453.0	8.9	46.9	51	9.5	1.59	4.75	12928	410	2444	9.1	18.2
3454.0	9.9	49.8	51	9.5	1.58	4.85	13235	369	2349	9.1	18.2
3455.0	5.3	47.5	57	9.5	1.81	5.04	13883	689	2277	9.1	18.2
3456.0	12.6	51.1	45	9.4	1.48	5.12	14096	289	2194	9.1	18.2
3457.0	6.0	52.7	45	9.4	1.77	5.29	14547	613	2131	9.1	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
3458.0	3.7	54.1	45	9.4	1.95	5.56	15267	979	2087	9.1	18.2
3459.0	3.9	57.4	45	9.4	1.97	5.81	15948	925	2044	9.1	18.2
3460.0	2.0	63.9	45	9.4	2.30	6.30	17274	1803	2035	9.1	18.2
3461.0	2.8	61.8	45	9.4	2.16	6.67	18243	1319	2011	9.1	18.2
3462.0	2.2	63.3	45	9.4	2.27	7.13	19484	1685	2000	9.1	18.2

BIT NUMBER	12	IADC CODE	537	INTERVAL	3462.0- 3521.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.5	BIT RUN	59.0
TOTAL HOURS	12.74	TOTAL TURNS	38517	CONDITION	T1 B4 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	TCOST	CCOST	PP	FG
3463.0	2.2	43.1	49	9.4	2.03	0.46	1367	1695	44655	9.1	18.2
3464.0	2.3	51.4	51	9.4	2.13	0.89	2679	1570	23113	9.1	18.2
3465.0	6.0	55.4	50	9.4	1.84	1.06	3181	610	15612	9.1	18.2
3466.0	4.5	61.4	50	9.4	2.01	1.28	3842	810	11911	9.1	18.2
3467.0	3.9	60.9	50	9.4	2.06	1.54	4619	949	9719	9.1	18.2
3468.0	5.6	60.4	50	9.4	1.92	1.72	5151	650	8207	9.1	18.2
3469.0	2.7	61.0	50	9.4	2.21	2.10	6292	1376	7231	9.1	18.2
3470.0	3.4	61.9	53	9.4	2.15	2.39	7229	1086	6463	9.1	18.2
3471.0	12.4	61.5	50	9.4	1.63	2.48	7471	295	5778	9.1	18.2
3472.0	12.7	62.5	50	9.4	1.63	2.55	7709	288	5229	9.1	18.2
3473.0	7.0	61.3	50	9.4	1.84	2.70	8138	522	4801	9.1	18.2
3474.0	14.9	58.0	50	9.4	1.53	2.76	8339	245	4421	9.1	18.2
3475.0	5.5	58.1	50	9.4	1.90	2.95	8887	664	4132	9.1	18.2
3476.0	15.9	57.5	50	9.4	1.50	3.01	9078	230	3854	9.1	18.2
3477.0	7.5	58.6	50	9.4	1.79	3.14	9482	488	3629	9.1	18.2
3478.0	3.4	58.4	51	9.4	2.08	3.44	10376	1074	3470	9.1	18.2
3479.0	6.7	56.2	51	9.4	1.81	3.59	10832	544	3297	9.1	18.2
3480.0	2.0	59.7	51	9.4	2.30	4.08	12331	1806	3215	9.1	18.2
3481.0	10.7	57.4	51	9.4	1.65	4.17	12613	340	3063	9.1	18.2
3482.0	4.8	58.1	51	9.4	1.95	4.38	13243	758	2948	9.1	18.2
3483.0	5.6	61.4	50	9.4	1.93	4.56	13783	654	2839	9.1	18.2
3484.0	3.8	55.9	50	9.4	2.01	4.83	14584	969	2754	9.1	18.2
3485.0	6.5	55.1	50	9.4	1.80	4.98	15045	558	2658	9.1	18.2
3486.0	5.3	58.5	47	9.4	1.89	5.17	15578	689	2576	9.1	18.2
3487.0	4.9	59.2	50	9.4	1.95	5.37	16188	744	2503	9.1	18.2
3488.0	2.8	58.9	50	9.4	2.16	5.73	17276	1325	2458	9.1	18.2
3489.0	5.0	58.8	50	9.4	1.94	5.93	17872	727	2394	9.1	18.2
3490.0	12.3	57.9	50	9.4	1.60	6.01	18115	297	2319	9.1	18.2
3491.0	14.8	57.3	46	9.4	1.50	6.08	18303	248	2247	9.1	18.2
3492.0	14.0	52.7	45	9.4	1.46	6.15	18495	261	2181	9.1	18.2
3493.0	11.1	47.7	51	9.4	1.54	6.24	18770	328	2121	9.1	18.2
3494.0	4.4	50.0	51	9.4	1.89	6.47	19458	829	2081	9.1	18.2
3495.0	3.0	49.2	50	9.4	2.01	6.80	20459	1214	2055	9.1	18.2
3496.0	3.3	49.9	51	9.4	1.99	7.10	21378	1105	2027	9.1	18.2
3497.0	3.6	49.7	53	9.4	1.97	7.38	22251	1003	1997	9.1	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3498.0	4.0	50.0	55	9.4	1.95	7.63	23082	919	1967	9.1	18.2
3499.0	3.7	57.4	54	9.4	2.07	7.90	23961	992	1941	9.1	18.2
3500.0	5.4	56.9	50	9.4	1.89	8.09	24524	682	1908	9.1	18.2
3501.0	4.9	57.4	51	9.5	1.92	8.29	25143	745	1878	9.1	18.2
3502.0	6.1	56.8	51	9.5	1.83	8.46	25648	603	1846	9.1	18.2
3503.0	8.4	57.3	52	9.5	1.73	8.58	26021	437	1812	9.1	18.2
3504.0	3.7	57.5	50	9.5	2.02	8.85	26835	991	1792	9.1	18.2
3505.0	3.2	57.7	51	9.4	2.09	9.16	27797	1147	1777	9.1	18.2
3506.0	6.5	57.1	50	9.4	1.82	9.32	28258	561	1750	9.1	18.2
3507.0	7.0	56.9	50	9.4	1.80	9.46	28686	522	1722	9.1	18.2
3508.0	7.7	58.1	50	9.4	1.77	9.59	29074	472	1695	9.1	18.2
3509.0	8.0	57.4	50	9.4	1.75	9.71	29449	457	1669	9.1	18.2
3510.0	15.4	57.4	50	9.4	1.51	9.78	29643	237	1639	9.1	18.2
3511.0	12.8	57.8	50	9.4	1.58	9.86	29878	286	1611	9.1	18.2
3512.0	9.1	58.0	50	9.4	1.71	9.97	30207	401	1587	9.1	18.2
3513.0	4.9	56.8	50	9.4	1.93	10.17	30819	745	1571	9.1	18.2
3514.0	3.5	57.2	50	9.4	2.06	10.46	31677	1043	1561	9.1	18.2
3515.0	1.8	61.7	50	9.4	2.36	11.01	33343	2029	1569	9.1	18.2
3516.0	3.9	62.2	50	9.4	2.07	11.27	34113	936	1558	9.1	18.2
3517.0	4.5	61.8	50	9.4	2.02	11.49	34779	812	1544	9.1	18.2
3518.0	6.0	62.3	50	9.4	1.91	11.66	35279	609	1527	9.1	18.2
3519.0	18.4	61.6	50	9.4	1.48	11.71	35442	198	1504	9.1	18.2
3520.0	2.5	62.1	50	9.4	2.24	12.11	36642	1461	1503	9.1	18.2
3521.0	1.6	61.5	50	9.4	2.40	12.74	38517	2283	1517	9.1	18.2

BIT NUMBER	13	IADC CODE	537	INTERVAL	3521.0- 3561.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.6	BIT RUN	40.0
TOTAL HOURS	8.91	TOTAL TURNS	26949	CONDITION	T2 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3522.0	9.3	50.6	82	9.5	1.78	0.11	527	391	43716	9.2	18.2
3523.0	2.7	49.3	50	9.5	2.02	0.48	1638	1353	22534	9.2	18.2
3524.0	2.7	50.9	50	9.5	2.04	0.85	2749	1353	15474	9.2	18.2
3525.0	4.1	51.2	50	9.5	1.90	1.09	3481	891	11828	9.2	18.2
3526.0	1.6	51.5	50	9.5	2.23	1.71	5323	2243	9911	9.2	18.2
3527.0	5.4	52.1	50	9.5	1.82	1.89	5882	680	8372	9.2	18.2
3528.0	7.2	49.8	50	9.5	1.69	2.03	6298	507	7249	9.2	18.2
3529.0	8.1	50.6	50	9.5	1.66	2.15	6668	450	6399	9.2	18.2
3530.0	6.3	51.5	50	9.5	1.75	2.31	7144	579	5752	9.2	18.2
3531.0	8.0	50.8	50	9.5	1.66	2.44	7519	457	5223	9.2	18.2
3532.0	1.8	55.0	50	9.5	2.25	3.01	9226	2078	4937	9.2	18.2
3533.0	8.8	55.5	50	9.5	1.68	3.12	9567	415	4560	9.2	18.2
3534.0	4.2	55.5	50	9.5	1.94	3.36	10278	866	4276	9.2	18.2
3535.0	5.8	51.1	50	9.5	1.78	3.53	10796	630	4015	9.2	18.2
3536.0	5.1	50.8	50	9.5	1.82	3.73	11384	716	3796	9.2	18.2
3537.0	9.9	49.2	50	9.5	1.57	3.83	11686	367	3581	9.2	18.2
3538.0	4.5	49.3	50	9.5	1.85	4.05	12358	818	3419	9.2	18.3
3539.0	4.1	49.7	50	9.5	1.88	4.29	13086	887	3278	9.2	18.3
3540.0	4.4	48.4	50	9.5	1.84	4.52	13768	830	3149	9.2	18.3
3541.0	9.5	49.7	50	9.5	1.59	4.63	14084	384	3011	9.2	18.3
3542.0	2.9	51.3	50	9.5	2.02	4.97	15109	1248	2927	9.2	18.3
3543.0	5.0	51.6	50	9.5	1.84	5.17	15707	728	2827	9.2	18.3
3544.0	5.3	51.7	50	9.5	1.82	5.36	16278	695	2734	9.2	18.3
3545.0	2.7	52.0	50	9.5	2.06	5.73	17391	1355	2677	9.2	18.3
3546.0	7.1	51.5	50	9.5	1.71	5.87	17813	513	2590	9.2	18.3
3547.0	7.3	51.8	50	9.5	1.70	6.01	18221	497	2510	9.2	18.3
3548.0	5.9	52.0	50	9.5	1.78	6.17	18729	619	2440	9.2	18.3
3549.0	4.3	51.8	50	9.5	1.90	6.41	19433	856	2383	9.2	18.3
3550.0	4.2	52.4	50	9.5	1.91	6.65	20141	862	2331	9.2	18.3
3551.0	4.9	51.5	50	9.5	1.84	6.85	20749	740	2278	9.2	18.3
3552.0	6.1	49.0	50	9.5	1.74	7.01	21241	600	2224	10.1	18.3
3553.0	3.0	49.8	50	9.5	1.99	7.35	22241	1217	2192	10.1	18.3
3554.0	4.9	50.8	50	9.5	1.84	7.55	22857	750	2148	10.1	18.3
3555.0	12.4	40.7	50	9.5	1.41	7.63	23099	295	2094	10.1	18.3
3556.0	6.7	49.4	50	9.5	1.71	7.78	23549	548	2050	10.1	18.3
3557.0	17.0	50.5	50	9.5	1.40	7.84	23726	215	1999	10.1	18.3
3558.0	9.3	48.4	50	9.5	1.58	7.95	24049	393	1955	10.1	18.3
3559.0	6.2	49.0	50	9.5	1.73	8.11	24532	589	1919	10.1	18.3
3560.0	4.6	48.9	50	9.5	1.83	8.33	25185	794	1891	10.1	18.3
3561.0	1.7	48.9	50	9.5	2.18	8.91	26949	2148	1897	10.7	18.3

BIT NUMBER	14	IADC CODE	316	INTERVAL	3561.0- 3567.0
HTC J7		SIZE	8.500	NOZZLES	16 16 16
COST	1261.00	TRIP TIME	9.6	BIT RUN	6.0
TOTAL HOURS	3.64	TOTAL TURNS	15390	CONDITION	T5 B6 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3562.0	1.6	47.7	70	11.3	2.19	0.62	2613	2272	38593	10.7	18.3
3563.0	2.1	41.7	70	11.3	2.00	1.10	4613	1739	20166	10.7	18.3
3564.0	1.8	38.0	72	11.3	1.99	1.64	6968	1991	14107	10.7	18.3
3565.0	2.1	39.0	71	11.3	1.97	2.13	9026	1764	11022	10.7	18.3
3566.0	0.8	39.4	70	11.2	2.27	3.36	14194	4494	9716	10.7	18.3
3567.0	3.5	39.8	70	11.2	1.83	3.64	15390	1040	8270	10.7	18.3

BIT NUMBER	15	IADC CODE	537	INTERVAL	3567.0- 3700.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	9.8	BIT RUN	133.0
TOTAL HOURS	39.91	TOTAL TURNS	133020	CONDITION	T3 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3568.0	6.4	27.1	60	11.2	1.41	0.16	563	571	40815	10.7	18.3
3569.0	8.4	27.7	60	11.2	1.34	0.27	990	433	20624	10.9	18.3
3570.0	9.5	31.5	60	11.2	1.36	0.38	1368	383	13877	10.9	18.3
3571.0	4.3	35.0	60	11.2	1.64	0.61	2201	845	10619	10.9	18.3
3572.0	2.8	41.0	60	11.2	1.87	0.97	3490	1308	8757	10.9	18.3
3573.0	3.1	41.0	60	11.2	1.84	1.29	4647	1174	7493	10.9	18.3
3574.0	2.0	41.3	60	11.2	1.98	1.80	6465	1844	6686	10.9	18.3
3575.0	2.0	41.5	60	11.2	1.98	2.29	8230	1790	6074	10.9	18.3
3576.0	1.4	44.6	60	11.2	2.14	2.99	10764	2571	5685	10.9	18.3
3577.0	2.1	44.5	60	11.3	2.00	3.46	12461	1722	5289	11.0	18.3
3578.0	1.3	40.3	60	11.5	2.03	4.20	15135	2713	5054	11.0	18.3
3579.0	1.9	39.0	60	11.5	1.90	4.73	17013	1905	4792	11.0	18.3
3580.0	7.9	38.8	60	11.5	1.48	4.85	17467	461	4459	11.0	18.3
3581.0	3.0	40.1	60	11.5	1.78	5.18	18652	1202	4226	11.0	18.3
3582.0	2.8	42.5	59	11.5	1.84	5.54	19903	1295	4031	11.0	18.3
3583.0	2.2	39.7	52	11.5	1.84	6.00	21348	1691	3885	11.0	18.3
3584.0	5.1	39.4	52	11.5	1.57	6.19	21959	715	3698	11.0	18.3
3585.0	8.3	39.8	52	11.5	1.43	6.32	22336	442	3517	11.0	18.3
3586.0	5.2	41.1	52	11.5	1.59	6.51	22935	701	3369	11.0	18.3
3587.0	7.1	39.6	52	11.5	1.48	6.65	23376	516	3226	11.0	18.3
3588.0	9.0	39.4	52	11.5	1.40	6.76	23725	408	3092	11.0	18.3
3589.0	3.5	40.0	52	11.5	1.69	7.04	24608	1034	2999	11.0	18.3
3590.0	3.3	39.8	52	11.5	1.71	7.35	25555	1109	2916	11.0	18.3
3591.0	4.2	40.4	52	11.5	1.65	7.59	26298	870	2831	11.0	18.3
3592.0	2.4	39.7	52	11.5	1.80	8.00	27598	1522	2779	11.0	18.3
3593.0	2.1	40.6	52	11.5	1.86	8.48	29084	1739	2739	11.0	18.3
3594.0	5.7	40.8	52	11.5	1.56	8.65	29631	641	2661	11.0	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3595.0	2.2	40.7	52	11.5	1.85	9.11	31065	1678	2626	11.0	18.3
3596.0	3.3	40.8	52	11.5	1.72	9.41	32003	1099	2573	11.0	18.3
3597.0	5.5	37.9	52	11.5	1.53	9.59	32567	660	2510	11.0	18.3
3598.0	3.3	38.8	52	11.5	1.70	9.90	33522	1118	2465	11.0	18.3
3599.0	4.1	37.7	52	11.5	1.62	10.15	34286	894	2416	11.0	18.3
3600.0	1.8	37.3	52	11.5	1.85	10.70	36021	2031	2404	11.0	18.3
3601.0	3.4	39.2	52	11.6	1.68	10.99	36933	1067	2365	11.0	18.3
3602.0	4.1	37.1	52	11.6	1.59	11.24	37696	894	2323	11.0	18.3
3603.0	5.4	37.9	52	11.6	1.52	11.42	38269	671	2277	11.0	18.3
3604.0	3.6	37.2	52	11.6	1.63	11.70	39138	1016	2243	11.0	18.3
3605.0	2.8	39.1	52	11.6	1.74	12.06	40269	1325	2218	11.0	18.3
3606.0	2.7	40.9	52	11.6	1.77	12.44	41433	1361	2196	11.0	18.3
3607.0	3.0	38.2	52	11.7	1.70	12.77	42489	1227	2172	11.0	18.3
3608.0	2.8	37.9	60	11.7	1.74	13.13	43769	1298	2151	11.0	18.3
3609.0	34.3	39.9	60	11.7	1.03	13.16	43874	107	2102	11.0	18.3
3610.0	2.2	39.0	53	11.7	1.79	13.62	45319	1674	2092	11.0	18.3
3611.0	1.9	41.0	52	11.7	1.86	14.13	46936	1893	2088	11.0	18.3
3612.0	1.8	40.9	52	11.7	1.89	14.70	48708	2075	2087	11.0	18.3
3613.0	3.6	41.1	52	11.7	1.67	14.98	49572	1011	2064	11.0	18.3
3614.0	1.5	40.6	52	11.7	1.93	15.64	51650	2432	2072	11.0	18.3
3615.0	1.9	41.5	52	11.7	1.87	16.18	53307	1940	2069	11.0	18.3
3616.0	1.2	41.2	52	11.7	2.01	17.01	55902	3037	2089	11.0	18.3
3617.0	3.5	39.8	52	11.7	1.66	17.29	56790	1040	2068	11.0	18.3
3618.0	2.5	40.3	52	11.7	1.77	17.69	58026	1447	2056	11.0	18.4
3619.0	3.0	40.6	52	11.7	1.72	18.02	59071	1223	2040	11.0	18.4
3620.0	4.1	41.6	52	11.7	1.65	18.27	59840	900	2018	11.0	18.4
3621.0	4.8	41.1	52	11.7	1.59	18.48	60488	759	1995	11.0	18.4
3622.0	2.5	41.0	52	11.7	1.78	18.87	61723	1446	1985	11.0	18.4
3623.0	5.8	40.6	52	11.7	1.52	19.05	62260	629	1961	11.0	18.4
3624.0	3.3	40.6	52	11.7	1.70	19.35	63216	1119	1946	11.0	18.4
3625.0	3.0	41.8	48	11.7	1.72	19.68	64180	1209	1933	11.0	18.4
3626.0	3.7	39.0	48	11.7	1.62	19.96	64967	998	1917	11.0	18.4
3627.0	3.9	37.5	48	11.7	1.58	20.22	65714	947	1901	11.0	18.4
3628.0	2.6	39.8	48	11.7	1.72	20.59	66805	1384	1893	11.0	18.4
3629.0	3.7	40.0	48	11.7	1.63	20.87	67589	994	1878	11.0	18.4
3630.0	1.8	38.8	48	11.7	1.82	21.43	69211	2056	1881	11.0	18.4
3631.0	2.3	40.5	48	11.7	1.78	21.86	70462	1587	1876	11.0	18.4
3632.0	3.6	41.4	48	11.7	1.66	22.14	71269	1024	1863	11.0	18.4
3633.0	6.7	39.5	48	11.7	1.44	22.29	71696	542	1843	11.0	18.4
3634.0	2.7	41.1	48	11.7	1.74	22.66	72761	1350	1836	11.0	18.4
3635.0	2.7	41.1	48	11.7	1.73	23.03	73817	1339	1829	11.0	18.4
3636.0	2.8	41.1	48	11.7	1.73	23.39	74852	1313	1821	11.0	18.4
3637.0	6.6	40.6	48	11.7	1.46	23.54	75288	552	1803	11.0	18.4
3638.0	4.4	42.3	48	11.7	1.60	23.77	75940	827	1789	11.0	18.4
3639.0	5.6	42.6	48	11.7	1.54	23.95	76458	657	1774	11.0	18.4
3640.0	3.1	40.1	48	11.7	1.68	24.27	77386	1177	1765	11.0	18.4
3641.0	8.1	39.0	48	11.7	1.38	24.39	77742	451	1748	11.0	18.4
3642.0	4.9	40.1	48	11.7	1.54	24.60	78328	744	1734	11.0	18.4
3643.0	7.9	38.8	48	11.7	1.39	24.72	78692	462	1717	11.0	18.4
3644.0	2.9	39.0	48	11.7	1.68	25.07	79683	1256	1711	11.0	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3645.0	2.7	38.8	55	11.7	1.74	25.43	80893	1334	1707	11.0	18.4
3646.0	4.8	38.7	60	11.7	1.60	25.64	81645	763	1695	11.0	18.4
3647.0	3.0	38.6	60	11.7	1.73	25.97	82837	1209	1689	11.0	18.4
3648.0	9.0	39.1	60	11.7	1.42	26.08	83239	408	1673	11.0	18.4
3649.0	3.3	38.9	60	11.7	1.71	26.39	84339	1116	1666	11.0	18.4
3650.0	4.0	37.4	60	11.7	1.63	26.64	85233	907	1657	11.0	18.4
3651.0	4.5	38.4	60	11.7	1.61	26.86	86037	816	1647	11.0	18.4
3652.0	3.2	38.8	60	11.7	1.72	27.18	87172	1151	1641	11.0	18.4
3653.0	4.2	37.7	60	11.7	1.62	27.41	88025	865	1632	11.0	18.4
3654.0	5.9	37.8	60	11.7	1.52	27.58	88633	617	1620	11.0	18.4
3655.0	3.2	39.2	60	11.7	1.72	27.90	89764	1147	1615	11.0	18.4
3656.0	3.0	39.2	60	11.7	1.74	28.23	90967	1220	1611	11.0	18.4
3657.0	4.5	39.5	60	11.7	1.63	28.45	91775	820	1602	11.0	18.4
3658.0	8.0	39.0	60	11.7	1.45	28.58	92227	459	1589	11.0	18.4
3659.0	4.3	39.6	60	11.7	1.64	28.81	93060	845	1581	11.0	18.4
3660.0	7.6	39.4	60	11.7	1.47	28.94	93532	479	1569	11.5	18.4
3661.0	9.8	39.7	60	11.7	1.40	29.04	93899	372	1557	11.5	18.4
3662.0	3.7	40.5	60	11.7	1.70	29.32	94883	998	1551	11.5	18.4
3663.0	3.6	38.8	60	11.8	1.67	29.59	95873	1004	1545	11.5	18.4
3664.0	3.0	39.6	60	11.9	1.72	29.92	97065	1209	1541	11.9	18.4
3665.0	7.4	40.7	60	11.9	1.47	30.06	97550	492	1531	11.9	18.4
3666.0	2.7	42.5	60	11.9	1.80	30.43	98892	1361	1529	11.9	18.4
3667.0	3.7	40.9	60	11.9	1.68	30.70	99859	981	1524	11.9	18.4
3668.0	5.8	40.9	60	11.9	1.54	30.87	100476	626	1515	11.9	18.4
3669.0	1.7	40.9	60	11.9	1.91	31.47	102623	2178	1521	11.9	18.4
3670.0	6.0	38.5	60	11.9	1.51	31.64	103228	614	1512	11.9	18.4
3671.0	4.3	39.3	60	11.9	1.61	31.87	104063	847	1506	11.9	18.4
3672.0	2.3	39.1	60	11.9	1.79	32.30	105622	1582	1507	11.9	18.4
3673.0	5.8	39.5	60	11.9	1.52	32.47	106238	625	1498	11.9	18.4
3674.0	5.1	38.4	60	11.9	1.55	32.67	106941	713	1491	11.9	18.4
3675.0	12.6	38.3	60	11.9	1.29	32.75	107226	289	1480	11.9	18.4
3676.0	13.8	36.9	60	11.9	1.24	32.82	107487	265	1469	11.9	18.4
3677.0	10.0	39.1	60	11.9	1.36	32.92	107846	364	1459	11.9	18.4
3678.0	5.7	40.4	60	11.9	1.54	33.09	108474	637	1451	11.9	18.4
3679.0	4.3	40.9	60	11.9	1.63	33.33	109312	850	1446	11.9	18.4
3680.0	5.4	40.0	60	11.9	1.55	33.51	109979	676	1439	11.9	18.4
3681.0	3.9	39.4	60	11.9	1.64	33.77	110904	938	1435	11.9	18.4
3682.0	3.3	34.8	60	11.9	1.62	34.07	112005	1117	1432	11.9	18.4
3683.0	13.1	39.8	60	11.9	1.29	34.15	112279	278	1422	11.9	18.4
3684.0	9.6	39.4	60	11.9	1.38	34.25	112654	380	1413	11.9	18.4
3685.0	4.7	36.3	60	12.0	1.53	34.47	113420	777	1408	12.2	18.4
3686.0	4.1	35.6	60	12.0	1.56	34.71	114295	888	1403	12.2	18.4
3687.0	4.4	35.3	60	12.0	1.53	34.94	115113	830	1399	12.2	18.4
3688.0	3.2	37.5	60	12.0	1.65	35.25	116241	1144	1397	12.2	18.4
3689.0	4.2	38.0	60	12.1	1.57	35.49	117093	864	1392	12.2	18.4
3690.0	4.3	37.5	60	12.1	1.56	35.72	117925	844	1388	12.2	18.4
3691.0	2.5	38.0	60	12.1	1.72	36.12	119365	1461	1388	12.2	18.4
3692.0	4.3	37.5	60	12.1	1.56	36.35	120195	842	1384	12.2	18.4
3693.0	2.7	41.0	60	12.1	1.74	36.72	121525	1349	1384	12.2	18.4
3694.0	8.0	39.5	60	12.1	1.41	36.84	121975	457	1376	12.2	18.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3695.0	2.6	41.3	60	12.1	1.75	37.22	123345	1390	1376	12.2	18.4
3696.0	2.9	41.6	60	12.1	1.73	37.57	124581	1254	1375	12.2	18.4
3697.0	1.8	42.7	60	12.1	1.88	38.12	126562	2010	1380	12.2	18.4
3698.0	1.8	42.6	60	12.1	1.89	38.68	128586	2053	1386	12.2	18.4
3699.0	1.3	41.4	60	12.1	1.95	39.43	131284	2737	1396	12.2	18.4
3700.0	2.1	42.2	60	12.2	1.82	39.91	133020	1775	1399	12.2	18.4

BIT NUMBER	16	IADC CODE	537	INTERVAL	3700.0- 3807.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	10.1	BIT RUN	107.0
TOTAL HOURS	40.31	TOTAL TURNS	137747	CONDITION	T3 B6 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3701.0	6.6	41.4	60	14.0	1.29	0.15	547	555	41896	13.5	18.4
3702.0	5.8	40.9	60	14.0	1.31	0.32	1169	630	21263	13.5	18.4
3703.0	6.6	40.8	60	14.0	1.28	0.48	1713	552	14359	13.5	18.4
3704.0	5.5	40.0	60	14.0	1.32	0.66	2369	665	10936	13.5	18.4
3705.0	6.5	40.3	58	14.0	1.27	0.81	2907	562	8861	13.5	18.4
3706.0	6.5	40.4	65	14.0	1.30	0.97	3515	566	7478	13.5	18.4
3707.0	6.4	41.0	60	14.0	1.29	1.12	4078	571	6492	13.5	18.4
3708.0	5.3	41.4	52	14.0	1.31	1.31	4671	689	5766	13.5	18.4
3709.0	4.7	41.0	53	14.0	1.34	1.52	5348	771	5211	13.5	18.4
3710.0	3.8	40.2	55	14.0	1.39	1.79	6225	971	4787	13.8	18.5
3711.0	3.0	40.5	52	14.0	1.44	2.12	7274	1218	4463	13.8	18.5
3712.0	3.1	39.5	54	14.0	1.42	2.44	8319	1178	4189	13.8	18.5
3713.0	3.3	39.6	60	14.9	1.35	2.75	9415	1107	3952	14.0	18.5
3714.0	2.2	39.5	64	14.9	1.46	3.19	11137	1630	3786	14.0	18.5
3715.0	1.7	41.0	61	14.9	1.53	3.80	13351	2205	3681	14.5	18.5
3716.0	2.6	42.0	57	14.9	1.43	4.18	14679	1407	3539	14.5	18.5
3717.0	1.8	41.8	59	14.9	1.52	4.73	16643	2012	3449	14.5	18.5
3718.0	2.1	41.7	52	14.9	1.45	5.20	18110	1717	3353	14.5	18.5
3719.0	3.7	41.8	54	14.9	1.32	5.48	18983	991	3228	14.5	18.5
3720.0	1.9	40.3	55	14.9	1.47	6.00	20721	1911	3162	14.5	18.5
3721.0	3.4	38.8	53	14.9	1.30	6.29	21646	1061	3062	14.5	18.5
3722.0	4.3	38.1	57	14.8	1.27	6.52	22449	851	2962	14.5	18.5
3723.0	2.6	39.7	54	14.8	1.39	6.91	23700	1405	2894	14.5	18.5
3724.0	2.6	38.3	51	15.0	1.35	7.29	24869	1405	2832	14.5	18.5
3725.0	2.5	37.3	48	15.0	1.33	7.68	26010	1434	2776	14.5	18.5
3726.0	3.0	39.6	44	15.0	1.29	8.02	26891	1217	2716	14.7	18.5
3727.0	6.6	40.2	38	15.0	1.08	8.17	27237	556	2636	14.7	18.5
3728.0	2.7	40.8	54	15.0	1.38	8.54	28425	1345	2590	14.7	18.5
3729.0	3.3	33.9	52	15.5	1.20	8.84	29379	1107	2539	14.7	18.5
3730.0	1.7	34.7	54	15.5	1.36	9.43	31299	2148	2526	14.7	18.5
3732.0	7.3	34.9	60	15.5	1.07	9.70	32289	500	2399	14.8	18.5
3733.0	1.7	40.2	57	15.5	1.44	10.29	34311	2148	2392	14.8	18.5
3734.0	4.1	38.2	56	15.5	1.22	10.54	35135	891	2348	14.8	18.5
3735.0	1.7	40.8	54	15.5	1.43	11.11	37001	2097	2340	15.0	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3736.0	1.9	40.4	55	15.5	1.42	11.64	38761	1942	2329	15.0	18.5
3737.0	2.4	42.0	56	15.5	1.38	12.06	40164	1536	2308	15.0	18.5
3738.0	1.9	42.2	55	15.5	1.43	12.58	41862	1879	2297	15.0	18.5
3739.0	1.9	42.2	57	15.5	1.44	13.11	43675	1953	2288	15.0	18.5
3740.0	2.1	41.9	59	15.6	1.42	13.60	45390	1771	2275	15.0	18.5
3741.0	1.5	41.1	58	15.6	1.48	14.27	47743	2455	2279	15.0	18.5
3742.0	1.2	41.7	61	15.5	1.55	15.08	50728	2970	2296	15.0	18.5
3743.0	2.8	42.4	54	15.5	1.35	15.44	51896	1321	2273	15.0	18.5
3744.0	1.6	41.8	54	15.5	1.46	16.05	53870	2229	2272	15.0	18.5
3745.0	1.9	42.5	64	15.5	1.47	16.57	55864	1883	2263	15.0	18.5
3746.0	2.6	41.2	69	15.5	1.40	16.95	57448	1401	2245	15.0	18.5
3747.0	2.9	42.1	74	15.5	1.40	17.30	58976	1263	2224	15.0	18.5
3748.0	4.0	42.0	70	15.5	1.32	17.55	60026	913	2196	15.0	18.5
3749.0	5.2	43.7	70	15.5	1.27	17.74	60828	697	2166	15.0	18.5
3750.0	5.3	41.7	64	15.5	1.23	17.93	61548	683	2136	15.0	18.5
3751.0	2.4	42.5	64	15.5	1.42	18.35	63151	1536	2124	15.2	18.5
3752.0	4.9	40.9	52	15.5	1.19	18.55	63789	750	2098	15.2	18.5
3753.0	2.4	42.6	61	15.5	1.41	18.97	65293	1511	2087	15.2	18.5
3754.0	2.6	42.8	64	15.5	1.40	19.35	66769	1400	2074	15.2	18.5
3755.0	1.7	41.9	74	15.5	1.53	19.94	69402	2158	2076	15.2	18.5
3756.0	3.6	41.4	70	15.5	1.34	20.22	70574	1019	2057	15.2	18.5
3757.0	4.1	41.6	63	15.5	1.28	20.46	71501	891	2036	15.2	18.5
3758.0	4.0	41.7	73	15.5	1.33	20.72	72613	923	2017	15.2	18.5
3759.0	2.5	42.5	70	15.5	1.43	21.11	74286	1455	2008	15.2	18.5
3760.0	2.6	41.7	70	15.5	1.42	21.50	75920	1420	1998	15.2	18.5
3761.0	2.1	42.2	60	15.5	1.44	21.99	77673	1776	1994	15.2	18.5
3762.0	2.6	44.1	54	15.5	1.38	22.37	78891	1381	1984	15.2	18.5
3763.0	2.5	43.6	55	15.5	1.38	22.76	80189	1434	1976	15.2	18.5
3764.0	3.2	43.2	51	15.5	1.31	23.08	81153	1157	1963	15.2	18.5
3765.0	3.9	39.9	47	15.5	1.21	23.34	81886	940	1947	15.2	18.5
3766.0	2.1	40.5	56	15.5	1.40	23.81	83511	1752	1944	15.2	18.5
3767.0	2.6	40.9	55	15.5	1.35	24.21	84801	1427	1936	15.2	18.5
3768.0	2.2	40.2	47	15.5	1.34	24.66	86077	1670	1932	15.2	18.5
3769.0	3.1	40.6	44	15.5	1.25	24.98	86911	1164	1921	15.2	18.5
3770.0	1.9	40.0	51	15.5	1.39	25.50	88520	1908	1921	15.2	18.5
3771.0	1.8	41.3	46	15.5	1.40	26.07	90088	2066	1923	15.2	18.5
3772.0	3.6	40.9	43	15.5	1.22	26.35	90798	1006	1910	15.2	18.5
3773.0	6.5	40.6	37	15.5	1.05	26.50	91143	561	1892	15.2	18.5
3774.0	1.8	40.7	43	15.5	1.37	27.05	92560	2004	1893	15.2	18.5
3775.0	2.8	42.1	45	15.5	1.30	27.40	93523	1304	1886	15.2	18.5
3776.0	2.5	49.5	50	15.5	1.43	27.80	94711	1458	1880	15.2	18.5
3777.0	4.3	49.3	51	15.5	1.31	28.04	95437	858	1867	15.2	18.5
3778.0	2.2	49.2	46	15.5	1.44	28.50	96714	1685	1864	15.2	18.5
3779.0	2.8	49.9	45	15.5	1.38	28.86	97669	1304	1857	15.3	18.5
3780.0	2.0	44.6	45	15.5	1.41	29.36	99024	1842	1857	15.3	18.5
3781.0	5.0	38.2	53	15.5	1.16	29.56	99664	733	1843	15.3	18.5
3782.0	2.7	37.6	47	15.5	1.27	29.94	100722	1376	1838	15.3	18.5
3783.0	1.7	33.1	49	15.5	1.31	30.52	102409	2110	1841	15.3	18.5
3784.0	1.9	39.5	49	15.5	1.37	31.04	103946	1925	1842	15.3	18.5
3785.0	5.5	38.7	57	15.5	1.16	31.23	104567	663	1828	15.3	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3786.0	2.1	38.5	64	15.5	1.41	31.71	106439	1776	1827	15.3	18.5
3787.0	2.0	37.6	72	15.5	1.43	32.21	108605	1826	1827	15.3	18.5
3788.0	5.1	38.8	60	15.5	1.19	32.41	109311	716	1815	15.3	18.5
3789.0	3.3	38.5	60	15.5	1.29	32.71	110411	1116	1807	15.3	18.5
3790.0	8.1	38.5	60	15.5	1.09	32.84	110855	451	1792	15.3	18.5
3791.0	1.6	39.3	60	15.5	1.46	33.48	113167	2345	1798	15.3	18.5
3792.0	1.9	39.5	60	15.5	1.43	34.02	115108	1969	1800	15.3	18.5
3793.0	2.8	39.5	60	15.5	1.33	34.37	116372	1282	1794	15.3	18.5
3794.0	2.8	40.5	60	15.5	1.35	34.73	117667	1314	1789	15.3	18.5
3795.0	1.8	39.3	60	15.5	1.43	35.28	119648	2010	1791	15.3	18.5
3796.0	2.4	39.3	60	15.5	1.37	35.69	121138	1512	1788	15.3	18.5
3797.0	2.8	40.3	60	15.5	1.35	36.06	122439	1320	1784	15.3	18.5
3798.0	3.3	40.1	60	15.5	1.30	36.36	123524	1101	1777	15.3	18.5
3799.0	1.8	40.0	60	15.5	1.45	36.93	125580	2086	1780	15.3	18.5
3800.0	3.3	40.8	60	15.5	1.31	37.23	126675	1110	1773	15.3	18.5
3801.0	1.9	41.3	60	15.5	1.45	37.77	128612	1965	1775	15.3	18.5
3802.0	3.2	42.0	60	15.5	1.33	38.08	129726	1130	1769	15.3	18.5
3803.0	4.4	42.0	60	15.5	1.26	38.30	130535	821	1759	15.3	18.5
3804.0	4.0	42.7	60	15.5	1.29	38.55	131435	913	1751	15.3	18.5
3805.0	1.6	41.0	60	15.5	1.48	39.19	133738	2336	1757	15.3	18.5
3806.0	2.0	40.9	60	15.5	1.43	39.69	135529	1817	1757	15.3	18.5
3807.0	1.6	42.0	60	15.5	1.49	40.31	137747	2250	1762	15.3	18.5

BIT NUMBER	17	IADC CODE	537	INTERVAL	3807.0- 3809.0
HTC J33		SIZE	8.500	NOZZLES	16 16 16
COST	4455.00	TRIP TIME	10.2	BIT RUN	2.0
TOTAL HOURS	0.75	TOTAL TURNS	1380	CONDITION	T1 B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3808.0	2.2	19.9	24	15.5	0.96	0.45	660	1660	43365	15.5	18.5
3809.0	3.3	37.2	40	15.5	1.18	0.75	1380	1092	22228	15.5	18.5

(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	129.0- 269.0
HTC OSC3AJ+26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.6	BIT RUN	140.0
TOTAL HOURS	2.55	TOTAL TURNS	10819	CONDITION	T2 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
140.0	56.0	11.0	0.20	536	10212.07	65.17	928.37	-
150.0	41.2	21.0	0.44	1208	11099.16	88.71	528.53	-
160.0	26.9	31.0	0.81	2182	12457.75	135.86	401.86	-
170.0	30.4	41.0	1.14	3288	13660.21	120.25	333.18	-
180.0	63.2	51.0	1.30	4000	14238.44	57.82	279.19	-
190.0	110.5	61.0	1.39	4469	14568.98	33.05	238.84	-
200.0	71.1	71.0	1.53	5250	15082.46	51.35	212.43	-
210.0	53.5	81.0	1.72	6285	15764.67	68.22	194.63	-
220.0	53.0	91.0	1.91	7266	16453.48	68.88	180.81	-
230.0	84.4	101.0	2.02	7923	16886.14	43.27	167.19	-
240.0	111.5	111.0	2.11	8423	17213.81	32.77	155.08	-
250.0	93.4	121.0	2.22	9028	17604.80	39.10	145.49	-
260.0	55.9	131.0	2.40	10013	18258.10	65.33	139.37	-
269.0	59.4	140.0	2.55	10819	18810.97	61.43	134.36	-

BIT NUMBER	1	IADC CODE	111	INTERVAL	269.0- 855.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 16
COST	4857.00	TRIP TIME	3.8	BIT RUN	586.0
TOTAL HOURS	10.68	TOTAL TURNS	96266	CONDITION	T2 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
270.0	398.6	1.0	0.00	17	18743.76	9	18744	-
280.0	214.1	11.0	0.05	362	18914.36	17	1719	-
290.0	418.6	21.0	0.07	526	19001.60	8.72	904.84	-
300.0	417.4	31.0	0.10	720	19089.10	8.75	615.78	-
310.0	456.0	41.0	0.12	918	19169.19	8.01	467.54	-
320.0	111.3	51.0	0.21	1726	19497.19	32.80	382.30	-
330.0	229.5	61.0	0.25	2118	19656.29	15.91	322.23	-
340.0	206.9	71.0	0.30	2553	19832.81	17.65	279.34	-
350.0	252.4	81.0	0.34	2910	19977.50	14.47	246.64	-
360.0	207.6	91.0	0.39	3343	20153.41	17.59	221.47	-
370.0	160.4	101.0	0.45	3904	20381.15	22.77	201.79	-
380.0	117.0	111.0	0.54	4673	20693.19	31.20	186.43	-
390.0	113.6	121.0	0.62	5466	21014.77	32.16	173.68	-
400.0	172.2	131.0	0.68	5989	21226.86	21.21	162.04	-
410.0	57.8	141.0	0.86	7546	21858.86	63.20	155.03	-
420.0	241.6	151.0	0.90	7919	22010.01	15.12	145.76	-
430.0	156.9	161.0	0.96	8492	22242.79	23.28	138.15	-
440.0	142.8	171.0	1.03	9123	22498.58	25.58	131.57	-
450.0	109.6	181.0	1.12	9943	22831.65	33.31	126.14	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
460.0	209.7	191.0	1.17	10373	23005.80	17.41	120.45	-
470.0	126.3	201.0	1.25	11085	23294.92	28.91	115.90	-
480.0	105.6	211.0	1.34	11938	23640.84	34.59	112.04	-
490.0	72.1	221.0	1.48	13185	24147.05	50.62	109.26	-
500.0	35.9	231.0	1.76	15695	25165.55	101.85	108.94	-
510.0	32.8	241.0	2.07	18438	26278.40	111.28	109.04	+
520.0	54.1	251.0	2.25	20102	26953.68	67.53	107.39	-
530.0	104.0	261.0	2.35	20967	27304.68	35.10	104.62	-
540.0	60.3	271.0	2.51	22459	27910.30	60.56	102.99	-
550.0	54.0	281.0	2.70	24127	28586.93	67.66	101.73	-
560.0	68.6	291.0	2.84	25439	29119.52	53.26	100.07	-
570.0	96.5	301.0	2.95	26372	29497.91	37.84	98.00	-
580.0	69.4	311.0	3.09	27669	30024.40	52.65	96.54	-
590.0	60.9	321.0	3.26	29147	30623.94	59.95	95.40	-
600.0	55.2	331.0	3.44	30777	31285.36	66.14	94.52	-
610.0	79.5	341.0	3.56	31909	31744.94	45.96	93.09	-
620.0	62.1	351.0	3.72	33359	32333.32	58.84	92.12	-
630.0	73.0	361.0	3.86	34592	32833.44	50.01	90.95	-
640.0	47.7	371.0	4.07	36480	33599.78	76.63	90.57	-
650.0	35.5	381.0	4.35	39015	34628.43	102.86	90.89	+
660.0	23.9	391.0	4.77	42785	36158.21	152.98	92.48	+
670.0	35.0	401.0	5.06	45355	37201.06	104.28	92.77	+
680.0	36.7	411.0	5.33	47810	38197.24	99.62	92.94	+
690.0	28.8	421.0	5.68	50930	39463.27	126.60	93.74	+
700.0	26.2	431.0	6.06	54365	40857.11	139.38	94.80	
710.0	31.5	441.0	6.38	57225	42017.64	116.05	95.28	+
720.0	31.1	451.0	6.70	60115	43190.34	117.27	95.77	+
730.0	32.6	461.0	7.00	62873	44309.27	111.89	96.12	+
740.0	34.8	471.0	7.29	65460	45359.22	105.00	96.30	+
750.0	34.0	481.0	7.58	68105	46432.50	107.33	96.53	+
760.0	41.3	491.0	7.83	70285	47317.10	88.46	96.37	-
770.0	41.6	501.0	8.07	72448	48194.59	87.75	96.20	-
780.0	42.6	511.0	8.30	74560	49051.80	85.72	95.99	-
790.0	40.1	521.0	8.55	76803	49961.75	91.00	95.90	-
800.0	36.8	531.0	8.82	79250	50954.89	99.31	95.96	+
810.0	27.1	541.0	9.19	82565	52300.05	134.52	96.67	+
820.0	36.1	551.0	9.47	85060	53312.12	101.21	96.76	+
830.0	32.9	561.0	9.77	87792	54420.91	110.88	97.01	+
840.0	26.2	571.0	10.15	91222	55812.73	139.18	97.75	+
850.0	29.6	581.0	10.49	94421	57044.44	123.17	98.18	+
855.0	26.0	586.0	10.68	96266	57746.10	140.33	98.54	+

BIT NUMBER	2	IADC CODE	116	INTERVAL	855.0- 1547.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.3	BIT RUN	692.#
TOTAL HOURS	22.72	TOTAL TURNS	202314	CONDITION	T2 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
860.0	33.5	5.0	0.15	1166	22595.37	109	4519	-
870.0	33.0	15.0	0.45	3774	23700.89	111	1580	-
880.0	28.8	25.0	0.80	6894	24966.92	126.60	998.68	-
890.0	24.2	35.0	1.21	10609	26474.38	150.75	756.41	-
900.0	35.4	45.0	1.49	13152	27506.07	103.17	611.25	-
910.0	35.7	55.0	1.77	15672	28528.63	102.26	518.70	-
920.0	32.9	65.0	2.08	18404	29637.42	110.88	455.96	-
930.0	26.7	75.0	2.45	21777	31005.90	136.85	413.41	-
940.0	32.8	85.0	2.76	24522	32119.76	111.39	377.88	-
950.0	33.2	95.0	3.06	27232	33219.42	109.97	349.68	-
960.0	38.2	105.0	3.32	29587	34175.03	95.56	325.48	-
970.0	43.0	115.0	3.55	31679	35024.12	84.91	304.56	-
980.0	37.0	125.0	3.82	34109	36010.16	98.60	288.08	-
990.0	30.1	135.0	4.16	37102	37224.45	121.43	275.74	-
1000.0	29.1	145.0	4.50	40189	38477.29	125.28	265.36	-
1010.0	31.0	155.0	4.82	43090	39654.27	117.70	255.83	-
1020.0	27.8	165.0	5.18	46331	40969.54	131.53	248.30	-
1030.0	25.5	175.0	5.57	49857	42400.38	143.08	242.29	-
1040.0	32.8	185.0	5.88	52602	43513.90	111.35	235.21	-
1050.0	31.3	195.0	6.20	55474	44679.50	116.56	229.13	-
1060.0	38.8	205.0	6.45	57796	45621.51	94.20	222.54	
1070.0	37.2	215.0	6.72	60218	46604.50	98.30	216.77	-
1080.0	29.3	225.0	7.07	63295	47852.95	124.84	212.68	-
1090.0	30.0	235.0	7.40	66296	49070.62	121.77	208.81	-
1100.0	23.7	245.0	7.82	69884	50610.54	153.99	206.57	-
1110.0	25.8	255.0	8.21	73136	52024.30	141.38	204.02	-
1120.0	30.4	265.0	8.54	75896	53224.39	120.01	200.85	-
1130.0	29.7	275.0	8.87	78726	54454.91	123.05	198.02	-
1140.0	34.2	285.0	9.17	81183	55523.12	106.82	194.82	-
1150.0	29.2	295.0	9.51	84054	56775.45	125.23	192.46	-
1160.0	32.0	305.0	9.82	86606	57916.70	114.13	189.89	-
1170.0	45.5	315.0	10.04	88424	58719.13	80.24	186.41	-
1180.0	50.0	325.0	10.24	90200	59449.12	73.00	182.92	-
1190.0	48.7	335.0	10.45	92049	60199.30	75.02	179.70	-
1200.0	37.5	345.0	10.71	94403	61173.05	97.38	177.31	-
1210.0	45.2	355.0	10.93	96329	61981.56	80.85	174.60	-
1220.0	42.6	365.0	11.17	98393	62839.78	85.82	172.16	-
1230.0	44.8	375.0	11.39	100403	63655.40	81.56	169.75	-
1240.0	23.4	385.0	11.82	104256	65218.66	156.33	169.40	-
1250.0	28.8	395.0	12.17	107386	66488.74	127.01	168.33	-
1260.0	30.0	405.0	12.50	110384	67705.57	121.68	167.17	-
1270.0	30.6	415.0	12.83	113329	68900.58	119.50	166.03	-
1280.0	26.8	425.0	13.20	116684	70261.69	136.11	165.32	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1290.0	30.5	435.0	13.53	119630	71457.22	119.55	164.27	-
1300.0	11.3	445.0	14.42	127617	74698.37	324.12	167.86	+
1310.0	23.2	455.0	14.85	131499	76273.29	157.49	167.63	-
1320.0	24.5	465.0	15.26	135171	77763.51	149.02	167.23	-
1330.0	23.5	475.0	15.68	138993	79314.39	155.09	166.98	-
1340.0	20.5	485.0	16.17	143374	81092.21	177.78	167.20	+
1350.0	19.7	495.0	16.68	147949	82948.64	185.64	167.57	+
1360.0	25.5	505.0	17.07	151482	84382.05	143.34	167.09	-
1370.0	23.2	515.0	17.50	155354	85953.42	157.14	166.90	-
1380.0	32.5	525.0	17.81	158122	87076.41	112.30	165.86	-
1390.0	31.2	535.0	18.13	161004	88245.73	116.93	164.95	-
1400.0	50.1	545.0	18.33	162801	88975.26	72.95	163.26	-
1410.0	40.3	555.0	18.57	165034	89881.15	90.59	161.95	-
1420.0	47.6	565.0	18.78	166924	90648.07	76.69	160.44	-
1430.0	44.0	575.0	19.01	168971	91478.90	83.08	159.09	-
1440.0	47.3	585.0	19.22	170876	92251.64	77.27	157.70	-
1450.0	39.6	595.0	19.48	173146	93172.75	92.11	156.59	-
1460.0	35.1	605.0	19.76	175709	94213.07	104.03	155.72	-
1470.0	29.6	615.0	20.10	178753	95448.21	123.51	155.20	-
1480.0	33.0	625.0	20.40	181481	96554.97	110.68	154.49	-
1490.0	42.9	635.0	20.63	183581	97407.10	85.21	153.40	-
1500.0	35.6	645.0	20.92	186111	98433.72	102.66	152.61	-
1510.0	27.8	655.0	21.28	189348	99747.42	131.37	152.29	-
1520.0	32.5	665.0	21.58	192117	100870.89	112.35	151.69	-
1530.0	26.8	675.0	21.96	195473	102232.71	136.18	151.46	-
1540.0	26.2	685.0	22.34	198907	103626.05	139.33	151.28	-
1547.0	18.5	692.0	22.72	202314	105008.74	197.53	151.75	+

BIT NUMBER	3	IADC CODE	116	INTERVAL	1547.0- 1914.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.1	BIT RUN	367.0
TOTAL HOURS	11.49	TOTAL TURNS	103398	CONDITION	T2 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1550.0	29.8	3.0	0.10	906	25338.99	123	8446	-
1560.0	30.1	13.0	0.43	3897	26552.61	121	2043	-
1570.0	32.5	23.0	0.74	6665	27675.60	112	1203	-
1580.0	33.7	33.0	1.04	9334	28758.72	108.31	871.48	-
1590.0	31.7	43.0	1.35	12175	29911.63	115.29	695.62	-
1600.0	29.0	53.0	1.70	15278	31170.56	125.89	588.12	
1610.0	28.7	63.0	2.05	18418	32444.70	127.41	515.00	-
1620.0	26.0	73.0	2.43	21873	33846.66	140.20	463.65	-
1630.0	29.0	83.0	2.77	24973	35104.58	125.79	422.95	-
1640.0	28.8	93.0	3.12	28098	36372.63	126.81	391.10	-
1650.0	32.9	103.0	3.43	30835	37483.45	111.08	363.92	-
1660.0	37.0	113.0	3.70	33265	38469.49	98.60	340.44	-
1670.0	32.0	123.0	4.01	36074	39609.05	113.96	322.02	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1680.0	36.7	133.0	4.28	38523	40603.15	99.41	305.29	-
1690.0	44.3	143.0	4.51	40557	41428.40	82.53	289.71	-
1700.0	44.2	153.0	4.73	42592	42254.16	82.58	276.17	-
1710.0	40.8	163.0	4.98	44797	43148.90	89.47	264.72	-
1720.0	44.9	173.0	5.20	46801	43961.98	81.31	254.12	-
1730.0	38.8	183.0	5.46	49118	44902.08	94.01	245.37	-
1740.0	42.2	193.0	5.69	51250	45767.40	86.53	237.14	-
1750.0	46.9	203.0	5.91	53168	46545.48	77.81	229.29	-
1760.0	41.6	213.0	6.15	55330	47422.97	87.75	222.64	-
1770.0	33.6	223.0	6.45	58010	48510.46	108.75	217.54	-
1780.0	34.5	233.0	6.74	60620	49569.54	105.91	212.74	-
1790.0	32.9	243.0	7.04	63358	50680.35	111.08	208.56	-
1800.0	35.1	253.0	7.32	65920	51720.16	103.98	204.43	-
1810.0	35.6	263.0	7.61	68450	52746.78	102.66	200.56	-
1820.0	33.0	273.0	7.91	71176	53853.03	110.63	197.26	-
1830.0	27.5	283.0	8.27	74447	55180.28	132.73	194.98	-
1840.0	22.3	293.0	8.72	78477	56815.57	163.53	193.91	-
1850.0	18.9	303.0	9.25	83242	58749.10	193.35	193.89	-
1860.0	22.3	313.0	9.70	87286	60389.96	164.09	192.94	-
1870.0	37.2	323.0	9.97	89709	61372.96	98.30	190.01	-
1880.0	19.9	333.0	10.47	94226	63205.94	183.30	189.81	-
1890.0	27.4	343.0	10.83	97513	64539.79	133.38	188.16	-
1900.0	31.3	353.0	11.15	100388	65706.40	116.66	186.14	-
1910.0	44.3	363.0	11.38	102420	66531.14	82.47	183.28	-
1914.0	36.8	367.0	11.49	103398	66927.79	99.16	182.36	-

BIT NUMBER	4	IADC CODE	517	INTERVAL	1914.0- 2425.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	511.0
TOTAL HOURS	33.47	TOTAL TURNS	191519	CONDITION	T4 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1920.0	12.6	6.0	0.48	2624	36186.32	290	6031	-
1930.0	23.8	16.0	0.90	5256	37719.15	153	2357	-
1940.0	57.5	26.0	1.07	6340	38354.19	64	1475	-
1950.0	22.6	36.0	1.51	9166	39971.33	162	1110	-
1960.0	52.5	46.0	1.70	10390	40667.24	69.59	884.07	-
1970.0	37.9	56.0	1.97	12076	41631.97	96.47	743.43	-
1980.0	20.6	66.0	2.45	15135	43408.27	177.63	657.70	-
1990.0	29.8	76.0	2.79	17222	44635.74	122.75	587.31	-
2000.0	44.7	86.0	3.01	18557	45453.31	81.76	528.53	-
2010.0	41.1	96.0	3.26	20067	46341.96	88.87	482.73	-
2020.0	22.0	106.0	3.71	22797	48000.58	165.86	452.84	-
2030.0	15.2	116.0	4.37	26678	50400.25	239.97	434.48	-
2040.0	28.5	126.0	4.72	28711	51682.50	128.23	410.18	-
2050.0	30.3	136.0	5.05	30547	52886.65	120.41	388.87	-
2060.0	22.3	146.0	5.50	33194	54522.44	163.58	373.44	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2070.0	23.8	156.0	5.92	35700	56058.31	153.59	359.35	-
2080.0	35.6	166.0	6.20	37333	57083.91	102.56	343.88	-
2090.0	30.8	176.0	6.52	39138	58269.80	118.59	331.08	-
2100.0	27.4	186.0	6.89	40769	59601.77	133.20	320.44	-
2110.0	24.9	196.0	7.29	42277	61065.61	146.38	311.56	-
2120.0	11.9	206.0	8.13	45411	64127.20	306.16	311.30	-
2130.0	25.7	216.0	8.52	47506	65546.41	141.92	303.46	-
2140.0	18.4	226.0	9.06	50605	67530.66	198.43	298.81	-
2150.0	12.8	236.0	9.84	55094	70386.32	285.57	298.25	-
2160.0	12.0	246.0	10.68	59849	73441.83	305.55	298.54	+
2170.0	10.9	256.0	11.60	65359	76803.70	336.19	300.01	+
2180.0	21.0	266.0	12.08	68105	78546.52	174.28	295.29	-
2190.0	35.7	276.0	12.36	69609	79569.60	102.31	288.30	-
2200.0	28.2	286.0	12.71	71707	80866.67	129.71	282.75	-
2210.0	11.0	296.0	13.62	77050	84172.74	330.61	284.37	+
2220.0	19.5	306.0	14.13	79990	86042.36	186.96	281.18	-
2230.0	21.5	316.0	14.59	82331	87740.54	169.82	277.66	-
2240.0	25.1	326.0	14.99	84542	89195.26	145.47	273.61	-
2250.0	12.0	336.0	15.83	89435	92246.71	305.14	274.54	+
2260.0	20.3	346.0	16.32	92263	94044.30	179.76	271.80	-
2270.0	17.0	356.0	16.91	95700	96193.91	214.96	270.21	-
2280.0	20.4	366.0	17.40	98518	97983.34	178.94	267.71	-
2290.0	20.9	376.0	17.88	101161	99727.93	174.46	265.23	-
2300.0	14.5	386.0	18.57	105094	102244.76	251.68	264.88	-
2310.0	12.5	396.0	19.36	109625	105158.25	291.35	265.55	+
2320.0	18.8	406.0	19.90	112687	107103.95	194.57	263.80	-
2330.0	14.0	416.0	20.61	116601	109720.21	261.63	263.75	-
2340.0	7.5	426.0	21.94	124375	114576.35	485.61	268.96	+
2350.0	8.2	436.0	23.17	131185	119046.50	447.01	273.04	+
2360.0	9.7	446.0	24.20	137345	122829.36	378.29	275.40	+
2370.0	7.8	456.0	25.48	144876	127491.75	466.24	279.59	+
2380.0	7.4	466.0	26.83	152664	132445.28	495.35	284.22	+
2390.0	4.5	476.0	29.03	165572	140472.58	802.73	295.11	+
2400.0	9.8	486.0	30.05	171335	144192.55	372.00	296.69	+
2410.0	10.3	496.0	31.02	177133	147734.14	354.16	297.85	+
2420.0	6.0	506.0	32.69	187015	153834.00	609.99	304.02	+
2425.0	6.4	511.0	33.47	191519	156692.82	571.76	306.64	+

BIT NUMBER	5	IADC CODE	517	INTERVAL	2425.0- 2526.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	8516.00	TRIP TIME	7.4	BIT RUN	101.0
TOTAL HOURS	24.16	TOTAL TURNS	136139	CONDITION	T8 B6 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2430.0	7.1	5.0	0.70	3571	38099.57	512	7620	-
2440.0	10.6	15.0	1.64	8666	41531.77	343	2769	-
2450.0	16.5	25.0	2.24	11860	43739.20	221	1750	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2460.0	9.9	35.0	3.25	17882	47415.04	368	1355	-
2470.0	5.5	45.0	5.07	28796	54054.58	664	1201	-
2480.0	1.8	55.0	10.50	61171	73883.42	1983	1343	+
2490.0	3.6	65.0	13.27	77263	84008.84	1013	1292	-
2500.0	3.1	75.0	16.54	95824	95943.78	1193	1279	-
2510.0	5.8	85.0	18.26	106085	102224.21	628	1203	-
2520.0	5.6	95.0	20.04	115609	108730.85	651	1145	-
2526.0	1.5	101.0	24.16	136139	123786.56	2509	1226	

BIT NUMBER	6	IADC CODE	537	INTERVAL	2526.0- 2736.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	7774.00	TRIP TIME	7.8	BIT RUN	210.0
TOTAL HOURS	49.20	TOTAL TURNS	161609	CONDITION	T4 B5 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2530.0	2.3	4.0	1.75	6139	42650.85	1598	10663	-
2540.0	3.7	14.0	4.49	15172	52653.28	1000	3761	-
2550.0	4.0	24.0	6.98	23553	61750.81	910	2573	-
2560.0	4.7	34.0	9.09	30396	69447.40	770	2043	-
2570.0	3.6	44.0	11.87	39752	79607.98	1016	1809	-
2580.0	4.8	54.0	13.94	46736	87160.48	755	1614	
2590.0	4.2	64.0	16.34	54604	95926.61	877	1499	-
2600.0	5.1	74.0	18.29	61231	103067.49	714	1393	-
2610.0	12.4	84.0	19.10	63862	106018.65	295	1262	-
2620.0	9.1	94.0	20.20	67334	110017.15	400	1170	-
2630.0	7.2	104.0	21.58	71970	115058.60	504	1106	-
2640.0	7.2	114.0	22.96	76558	120121.52	506	1054	-
2650.0	3.9	124.0	25.53	85178	129494.65	937	1044	-
2660.0	6.0	134.0	27.19	90680	135573.20	608	1012	-
2670.0	3.9	144.0	29.75	98847	144897.97	932	1006	-
2680.0	4.0	154.0	32.27	107287	154117.24	922	1001	-
2690.0	2.0	164.0	37.21	123832	172153.05	1804	1050	+
2700.0	2.2	174.0	41.85	138979	189094.27	1694	1087	+
2710.0	5.0	184.0	43.84	144973	196353.64	726	1067	-
2720.0	4.4	194.0	46.13	151797	204742.08	839	1055	-
2730.0	4.3	204.0	48.48	159314	213307.03	856	1046	-
2736.0	8.4	210.0	49.20	161609	215924.30	436	1028	-

BIT NUMBER	7	IADC CODE	537	INTERVAL	2736.0- 3011.6
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	7774.00	TRIP TIME	7.9	BIT RUN	275.6
TOTAL HOURS	74.25	TOTAL TURNS	225949	CONDITION	T5 B5 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2740.0	4.7	4.0	0.85	3083	39745.91	780	9936	-
2750.0	2.5	14.0	4.90	17190	54532.45	1479	3895	-
2760.0	3.6	24.0	7.64	25120	64541.97	1001	2689	-
2770.0	3.2	34.0	10.73	34548	75811.56	1127	2230	-
2780.0	3.1	44.0	13.91	43252	87429.49	1162	1987	-
2790.0	3.3	54.0	16.92	52184	98414.91	1099	1822	-
2800.0	4.1	64.0	19.37	60255	107376.51	896	1678	-
2810.0	3.6	74.0	22.17	69408	117584.86	1021	1589	-
2820.0	3.6	84.0	24.94	78612	127699.76	1011	1520	-
2830.0	3.7	94.0	27.66	87215	137652.47	995	1464	-
2840.0	6.2	104.0	29.27	92377	143500.75	585	1380	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2850.0	6.0	114.0	30.93	97553	149585.38	608	1312	-
2860.0	3.8	124.0	33.55	104945	159144.13	956	1283	-
2870.0	4.7	134.0	35.67	111502	166899.73	776	1246	-
2880.0	3.7	144.0	38.39	120033	176812.93	991	1228	-
2890.0	3.0	154.0	41.75	131300	189088.46	1228	1228	-
2900.0	3.9	164.0	44.29	139379	198354.07	927	1209	
2910.0	4.6	174.0	46.47	145814	206351.39	800	1186	-
2920.0	3.1	184.0	49.66	155190	217992.14	1164	1185	-
2930.0	3.5	194.0	52.52	163568	228437.20	1045	1178	-
2940.0	4.2	204.0	54.92	170431	237178.48	874	1163	-
2950.0	3.8	214.0	57.57	177972	246860.30	968	1154	-
2960.0	4.8	224.0	59.65	184018	254474.72	761	1136	-
2970.0	3.9	234.0	62.22	191435	263867.46	939	1128	-
2980.0	4.0	244.0	64.75	198743	273073.54	921	1119	-
2990.0	3.9	254.0	67.32	206010	282460.20	939	1112	-
3000.0	3.9	264.0	69.88	213350	291817.43	936	1105	-
3010.0	2.6	274.0	73.78	224534	306067.33	1425	1117	+
3011.6	3.4	275.6	74.25	225949	307801.02	1084	1117	-

BIT NUMBER	8	IADC CODE	537	INTERVAL	3011.0- 3192.2
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	181.2
TOTAL HOURS	55.90	TOTAL TURNS	156875	CONDITION	T7 B8 G0.625

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3020.0	4.4	9.0	2.04	6350	44567.89	828	4952	-
3030.0	4.6	19.0	4.23	12915	52562.05	799	2766	-
3040.0	5.2	29.0	6.14	18560	59542.45	698	2053	-
3050.0	4.5	39.0	8.37	24968	67675.56	813	1735	-
3060.0	3.2	49.0	11.51	34029	79162.11	1149	1616	-
3070.0	3.8	59.0	14.13	41575	88734.48	957	1504	-
3080.0	5.8	69.0	15.87	46549	95072.73	634	1378	-
3090.0	5.7	79.0	17.64	51662	101533.30	646	1285	-
3100.0	5.2	89.0	19.58	57353	108620.21	709	1220	-
3110.0	5.0	99.0	21.56	63319	115858.95	724	1170	-
3120.0	3.0	109.0	24.86	72883	127904.46	1205	1173	+
3130.0	2.5	119.0	28.93	84549	142782.30	1488	1200	+
3140.0	2.3	129.0	33.22	96907	158453.44	1567	1228	+
3150.0	2.7	139.0	36.88	107344	171787.30	1333	1236	+
3160.0	2.2	149.0	41.42	119756	188390.71	1660	1264	+
3170.0	2.6	159.0	45.26	129858	202406.27	1402	1273	+
3180.0	2.4	169.0	49.51	140535	217919.16	1551	1289	+
3190.0	2.3	179.0	53.82	151282	233675.15	1576	1305	+
3192.2	1.1	181.2	55.90	156875	241277.39	3456	1332	

BIT NUMBER	9	IADC CODE	617	INTERVAL	3192.2- 3369.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	176.8
TOTAL HOURS	61.76	TOTAL TURNS	163088	CONDITION	T4 B7 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3200.0	1.8	7.8	4.36	10476	56451.11	2043	7237	-
3210.0	2.2	17.8	9.01	21146	73424.94	1697	4125	-
3220.0	2.6	27.8	12.85	30500	87456.73	1403	3146	-
3230.0	2.5	37.8	16.85	43167	102060.68	1460	2700	-
3240.0	3.3	47.8	19.92	54386	113283.48	1122	2370	-
3250.0	2.6	57.8	23.71	64422	127115.04	1383	2199	-
3260.0	2.1	67.8	28.37	76075	144117.75	1700	2126	-
3270.0	2.3	77.8	32.76	87630	160165.25	1605	2059	
3280.0	3.0	87.8	36.15	96315	172534.37	1237	1965	-
3290.0	3.2	97.8	39.31	104478	184073.74	1154	1882	-
3300.0	2.5	107.8	43.26	114648	198505.23	1443	1841	-
3310.0	4.3	117.8	45.57	120889	206937.29	843	1757	-
3320.0	4.5	127.8	47.79	126275	215060.96	812	1683	-
3330.0	6.4	137.8	49.36	130329	220775.50	571	1602	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3340.0	3.4	147.8	52.29	137715	231478.90	1070	1566	-
3350.0	3.2	157.8	55.41	145537	242863.00	1138	1539	-
3360.0	2.7	167.8	59.14	155604	256510.32	1365	1529	-
3369.0	3.4	176.8	61.76	163088	266076.53	1063	1505	-

BIT NUMBER	10	IADC CODE	617	INTERVAL	3369.0- 3389.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	20.0
TOTAL HOURS	4.64	TOTAL TURNS	12581	CONDITION	T1 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3370.0	2.0	1.0	0.51	1060	42380.60	1863	42381	-
3380.0	3.9	11.0	3.08	7751	51783.63	940	4708	-
3389.0	5.8	20.0	4.64	12581	57462.05	631	2873	-

BIT NUMBER	10	IADC CODE	4	INTERVAL	3389.0- 3407.3
CHRIS C23		SIZE	8.500	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.2	BIT RUN	18.3
TOTAL HOURS	7.64	TOTAL TURNS	45841	CONDITION	T0 B0 G0.550

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3390.0	4.6	1.0	0.22	1293	34395.75	797	34396	-
3400.0	3.7	11.0	2.93	17568	44301.72	991	4027	-
3407.3	1.5	18.3	7.64	45841	61510.44	2357	3361	-

BIT NUMBER	11	IADC CODE	617	INTERVAL	3407.3- 3434.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.3	BIT RUN	26.7
TOTAL HOURS	6.00	TOTAL TURNS	17258	CONDITION	T1 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3410.0	4.1	2.7	0.66	2188	43300.53	896	16037	-
3420.0	3.8	12.7	3.26	10125	52787.27	949	4156	-
3430.0	4.4	22.7	5.54	16042	61123.98	834	2693	-
3434.0	8.7	26.7	6.00	17258	62799.84	419	2352	-

BIT NUMBER	11	IADC CODE	4	INTERVAL	3434.0- 3452.0
CHRIS C-23		SIZE	8.470	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.3	BIT RUN	18.0
TOTAL HOURS	23.52	TOTAL TURNS	130185	CONDITION	T0 B0 G0.700

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3440.0	0.9	6.0	14.58	81873	87193.11	4221	14532	-
3450.0	1.3	16.0	22.22	123155	115111.63	2792	7194	-
3452.0	1.5	18.0	23.52	130185	119866.18	2377	6659	-

BIT NUMBER	11	IADC CODE	617	INTERVAL	3452.0- 3462.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	9.3	BIT RUN	10.0
TOTAL HOURS	7.13	TOTAL TURNS	19484	CONDITION	T2 B6 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3460.0	4.8	28.0	6.30	17274	56985.78	760	2035	-
3462.0	2.4	30.0	7.13	19484	59989.55	1502	2000	-

BIT NUMBER	12	IADC CODE	537	INTERVAL	3462.0- 3521.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.5	BIT RUN	59.0
TOTAL HOURS	12.74	TOTAL TURNS	38517	CONDITION	T1 B4 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3470.0	3.3	8.0	2.39	7229	51705.64	1093	6463	-
3480.0	5.9	18.0	4.08	12331	57862.09	616	3215	-
3490.0	5.2	28.0	6.01	18115	64922.62	706	2319	-
3500.0	4.8	38.0	8.09	24524	72502.69	758	1908	-
3510.0	5.9	48.0	9.78	29643	78673.17	617	1639	-
3520.0	4.3	58.0	12.11	36642	87193.49	852	1503	-
3521.0	1.6	59.0	12.74	38517	89475.99	2283	1517	+

BIT NUMBER	13	IADC CODE	537	INTERVAL	3521.0- 3561.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.6	BIT RUN	40.0
TOTAL HOURS	8.91	TOTAL TURNS	26949	CONDITION	T2 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3530.0	3.9	9.0	2.31	7144	51771.69	938	5752	-
3540.0	4.5	19.0	4.52	13768	59834.68	806	3149	-
3550.0	4.7	29.0	6.65	20141	67593.32	776	2331	-
3560.0	5.9	39.0	8.33	25185	73732.86	614	1891	-
3561.0	1.7	40.0	8.91	26949	75881.09	2148	1897	+

BIT NUMBER	14	IADC CODE	316	INTERVAL	3561.0- 3567.0
HTC J7		SIZE	8.500	NOZZLES	16 16 16
COST	1261.00	TRIP TIME	9.6	BIT RUN	6.0
TOTAL HOURS	3.64	TOTAL TURNS	15390	CONDITION	T5 B6 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3567.0	1.6	6.0	3.64	15390	49619.89	2217	8270	-

BIT NUMBER	15	IADC CODE	537	INTERVAL	3567.0- 3700.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	9.8	BIT RUN	133.0
TOTAL HOURS	39.91	TOTAL TURNS	133020	CONDITION	T3 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3570.0	7.9	3.0	0.38	1368	41631.85	462	13877	-
3580.0	2.2	13.0	4.85	17467	57963.39	1633	4459	-
3590.0	4.0	23.0	7.35	25555	67077.16	911	2916	-
3600.0	3.0	33.0	10.70	36021	79327.60	1225	2404	-
3610.0	3.4	43.0	13.62	45319	89967.60	1064	2092	-
3620.0	2.1	53.0	18.27	59840	106964.62	1700	2018	-
3630.0	3.2	63.0	21.43	69211	118505.95	1154	1881	-
3640.0	3.5	73.0	24.27	77386	128872.56	1037	1765	-
3650.0	4.2	83.0	26.64	85233	137521.51	865	1657	-
3660.0	4.3	93.0	28.94	93532	145940.39	842	1569	-
3670.0	3.7	103.0	31.64	103228	155776.44	984	1512	-
3680.0	5.3	113.0	33.51	109979	162624.62	685	1439	-
3690.0	4.5	123.0	35.72	117925	170685.53	806	1388	-
3700.0	2.4	133.0	39.91	133020	186012.77	1533	1399	+

BIT NUMBER	16	IADC CODE	537	INTERVAL	3700.0- 3807.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	10.1	BIT RUN	107.0
TOTAL HOURS	40.31	TOTAL TURNS	137747	CONDITION	T3 B6 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3710.0	5.6	10.0	1.79	6225	47872.72	653	4787	-
3720.0	2.4	20.0	6.00	20721	63249.87	1538	3162	-
3730.0	2.9	30.0	9.43	31299	75778.80	1253	2526	-
3740.0	2.4	40.0	13.60	45390	90995.46	1522	2275	
3750.0	2.3	50.0	17.93	61548	106809.64	1581	2136	-
3760.0	2.8	60.0	21.50	75920	119870.61	1306	1998	-
3770.0	2.5	70.0	25.50	88520	134480.64	1461	1921	-
3780.0	2.6	80.0	29.36	99024	148569.46	1409	1857	-
3790.0	2.9	90.0	32.84	110855	161262.64	1269	1792	-
3800.0	2.3	100.0	37.23	126675	177310.31	1605	1773	-
3807.0	2.3	107.0	40.31	137747	188542.74	1605	1762	-

BIT NUMBER	17	IADC CODE	537	INTERVAL	3807.0- 3809.0
HTC J33		SIZE	8.500	NOZZLES	16 16 16
COST	4455.00	TRIP TIME	10.2	BIT RUN	2.0
TOTAL HOURS	0.75	TOTAL TURNS	1380	CONDITION	T1 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3809.0	2.7	2.0	0.75	1380	44456.94	1376	22228	-

(e). COMPUTER DATA LISTING : LIST C

INTERVAL . . . . . 10m averages.

DEPTH. . . . . Well depth, in metres.

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

PSP. . . . . Pump pressure, in pounds per square inch.

PBIT . . . . . Bit pressure drop, in pounds per square inch.

%PSP . . . . . Percentage of surface pressure dropped at the bit.

H.H.P. . . . . Bit hydraulic horsepower.

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

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

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

BIT NUMBER	1	IADC CODE	111	INTERVAL	129.0- 269.0
HTC OSC3AJ+26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.6	BIT RUN	140.0
TOTAL HOURS	2.55	TOTAL TURNS	10819	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
140.0	508	374.3	238.6	63.7	71	0.13	396	54
150.0	613	537.6	347.7	64.7	124	0.23	577	65
160.0	620	551.3	355.1	64.4	128	0.24	590	66
170.0	574	571.3	304.3	53.3	102	0.19	505	61
180.0	807	1069.7	601.2	56.2	283	0.53	998	85
190.0	975	1522.0	877.6	57.7	499	0.94	1457	103
200.0	975	1527.8	878.7	57.5	500	0.94	1459	103
210.0	982	1070.3	891.5	83.3	511	0.96	1480	104
220.0	990	1090.7	905.0	83.0	523	0.98	1502	105
230.0	969	1057.2	867.4	82.0	490	0.92	1440	103
240.0	985	1089.0	896.4	82.3	515	0.97	1488	104
250.0	971	1523.1	871.8	57.2	494	0.93	1447	103
260.0	974	1539.4	877.2	57.0	499	0.94	1456	103
269.0	976	1547.1	880.8	56.9	502	0.94	1462	103

BIT NUMBER	1	IADC CODE	111	INTERVAL	269.0- 855.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 16
COST	4857.00	TRIP TIME	3.8	BIT RUN	586.0
TOTAL HOURS	10.68	TOTAL TURNS	96266	CONDITION	T2 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
270.0	974	2354.2	1132.9	48.1	644	2.68	1655	117
280.0	972	2351.2	1128.1	48.0	640	2.66	1648	117
290.0	979	2361.5	1143.5	48.4	653	2.72	1671	118
300.0	996	1728.4	1183.6	68.5	688	2.86	1729	120
310.0	979	2281.6	1142.7	50.1	652	2.71	1669	118
320.0	971	2359.0	1124.3	47.7	637	2.65	1643	117
330.0	970	2356.0	1122.1	47.6	635	2.64	1639	117
340.0	942	2241.1	1058.7	47.2	582	2.42	1547	113
350.0	939	2237.0	1052.7	47.1	577	2.40	1538	113
360.0	941	2247.1	1056.3	47.0	580	2.41	1543	113
370.0	947	2245.7	1070.4	47.7	591	2.46	1564	114
380.0	956	1665.3	1090.1	65.5	608	2.53	1593	115
390.0	938	2236.8	1049.9	46.9	575	2.39	1534	113
400.0	944	2261.2	1062.4	47.0	585	2.43	1552	114
410.0	952	2308.4	1081.2	46.8	600	2.50	1579	115
420.0	941	2259.8	1056.7	46.8	580	2.41	1544	113
430.0	942	2266.4	1058.0	46.7	581	2.42	1546	113
440.0	948	2312.7	1086.0	47.0	601	2.50	1587	114
450.0	983	2426.6	1194.3	49.2	685	2.85	1745	118

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
460.0	980	2386.1	1187.5	49.8	679	2.82	1735	118
470.0	996	1764.6	1224.7	69.4	711	2.96	1789	120
480.0	1001	1788.8	1238.5	69.2	723	3.01	1809	121
490.0	996	1788.9	1225.1	68.5	712	2.96	1790	120
500.0	503	742.0	316.1	42.6	93	0.39	462	61
510.0	975	2519.3	1188.9	47.2	677	2.81	1737	117
520.0	981	2503.8	1202.3	48.0	688	2.86	1756	118
530.0	977	2536.2	1193.5	47.1	681	2.83	1744	118
540.0	973	2555.0	1182.5	46.3	671	2.79	1728	117
550.0	967	2533.9	1168.1	46.1	659	2.74	1706	116
560.0	980	2604.5	1214.6	46.6	695	2.89	1774	118
570.0	984	2559.7	1224.5	47.8	703	2.92	1789	119
580.0	986	2654.8	1227.4	46.2	706	2.93	1793	119
590.0	984	2652.3	1222.2	46.1	701	2.92	1786	118
600.0	981	2615.1	1217.2	46.5	697	2.90	1778	118
610.0	975	2645.9	1201.2	45.4	683	2.84	1755	117
620.0	985	2695.8	1226.6	45.5	705	2.93	1792	119
630.0	986	2700.9	1228.0	45.5	706	2.94	1794	119
640.0	985	2639.9	1226.3	46.5	705	2.93	1791	119
650.0	981	2617.5	1215.7	46.4	696	2.89	1776	118
660.0	743	1588.4	712.1	44.8	308	1.28	1040	89
670.0	971	2614.7	1231.3	47.1	698	2.90	1799	117
680.0	976	2610.6	1245.0	47.7	709	2.95	1819	118
690.0	974	2544.7	1238.9	48.7	704	2.93	1810	117
700.0	979	2649.1	1252.4	47.3	716	2.98	1830	118
710.0	983	2643.6	1262.1	47.7	724	3.01	1844	118
720.0	981	2611.0	1256.5	48.1	719	2.99	1836	118
730.0	980	2658.0	1254.9	47.2	718	2.98	1833	118
740.0	979	2664.4	1238.4	46.5	708	2.94	1809	118
750.0	980	2667.0	1227.3	46.0	702	2.92	1793	118
760.0	985	2734.6	1239.4	45.3	712	2.96	1811	119
770.0	974	2667.9	1212.3	45.4	689	2.86	1771	117
780.0	978	2709.1	1222.3	45.1	698	2.90	1786	118
790.0	980	2721.8	1226.4	45.1	701	2.91	1792	118
800.0	990	2739.5	1251.5	45.7	723	3.00	1828	119
810.0	987	2685.0	1245.6	46.4	718	2.98	1820	119
820.0	969	2704.0	1200.5	44.4	679	2.82	1754	117
830.0	972	2703.4	1207.9	44.7	685	2.85	1765	117
840.0	979	2793.7	1224.4	43.8	699	2.91	1789	118
850.0	975	2776.2	1214.6	43.7	691	2.87	1774	117
855.0	975	2780.4	1213.5	43.6	690	2.87	1773	117

BIT NUMBER	2	IADC CODE	116	INTERVAL	855.0- 1547.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.3	BIT RUN	692.0
TOTAL HOURS	22.72	TOTAL TURNS	202314	CONDITION	T? B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
860.0	978	3053.4	1472.7	48.2	840	7.13	1980	128
870.0	970	2990.6	1451.4	48.5	822	6.97	1952	127
880.0	975	3013.7	1464.6	48.6	833	7.07	1969	128
890.0	972	2984.0	1454.9	48.8	825	7.00	1956	127
900.0	973	3007.2	1457.5	48.5	827	7.02	1960	127
910.0	970	3015.2	1449.2	48.1	820	6.96	1949	127
920.0	977	3040.3	1469.5	48.3	837	7.10	1976	128
930.0	970	3010.6	1450.4	48.2	821	6.97	1950	127
940.0	967	2984.3	1442.1	48.3	814	6.91	1939	127
950.0	972	3013.5	1455.6	48.3	825	7.00	1957	127
960.0	974	3029.3	1462.6	48.3	831	7.05	1967	127
970.0	974	3050.6	1461.2	47.9	830	7.04	1965	127
980.0	975	3039.9	1466.1	48.2	834	7.08	1971	128
990.0	974	3044.4	1445.5	47.5	821	6.97	1944	127
1000.0	966	3025.0	1423.4	47.1	802	6.81	1914	126
1010.0	970	3032.1	1433.6	47.3	811	6.88	1928	127
1020.0	964	3041.1	1417.9	46.6	798	6.77	1907	126
1030.0	970	3043.2	1418.2	46.6	802	6.81	1907	127
1040.0	965	3005.5	1404.5	46.7	791	6.71	1889	126
1050.0	968	3061.5	1412.7	46.1	798	6.77	1900	127
1060.0	966	3036.1	1390.9	45.8	784	6.65	1870	126
1070.0	965	3055.9	1388.4	45.4	782	6.63	1867	126
1080.0	959	3054.6	1372.7	44.9	768	6.52	1846	126
1090.0	962	3060.4	1380.1	45.1	775	6.57	1856	126
1100.0	962	3074.2	1380.4	44.9	775	6.57	1856	126
1110.0	962	3086.3	1379.3	44.7	774	6.57	1855	126
1120.0	958	3084.9	1369.4	44.4	766	6.50	1841	125
1130.0	955	3080.0	1376.0	44.7	767	6.51	1850	125
1140.0	942	3021.0	1337.8	44.3	735	6.24	1799	123
1150.0	948	3040.8	1340.2	44.1	741	6.29	1802	124
1160.0	947	3045.3	1336.8	43.9	738	6.27	1798	124
1170.0	946	3060.6	1333.9	43.6	736	6.24	1794	124
1180.0	944	3069.3	1330.0	43.3	733	6.22	1788	124
1190.0	945	3078.7	1331.4	43.2	734	6.23	1790	124
1200.0	941	3067.5	1320.4	43.0	725	6.15	1776	123
1210.0	941	3065.4	1321.0	43.1	725	6.15	1776	123
1220.0	937	3080.2	1310.5	42.5	717	6.08	1762	123
1230.0	937	3078.5	1308.5	42.5	715	6.07	1760	123
1240.0	940	3097.4	1317.9	42.5	723	6.13	1772	123
1250.0	942	3102.4	1338.5	43.1	736	6.24	1800	123
1260.0	936	3084.1	1320.3	42.8	721	6.12	1775	122
1270.0	933	3072.8	1313.7	42.8	715	6.07	1767	122
1280.0	934	3076.6	1315.9	42.8	717	6.09	1769	122

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1290.0	938	3079.6	1326.1	43.1	726	6.16	1783	123
1300.0	856	2560.3	1099.6	43.0	549	4.66	1479	112
1310.0	929	3034.1	1293.9	42.6	701	5.95	1740	122
1320.0	924	3059.7	1279.8	41.8	690	5.85	1721	121
1330.0	507	1460.0	385.4	26.4	114	0.97	518	66
1340.0	932	3086.2	1302.6	42.2	708	6.01	1752	122
1350.0	916	3003.6	1257.8	41.9	672	5.70	1691	120
1360.0	912	2985.2	1248.2	41.8	664	5.64	1678	119
1370.0	918	3035.7	1263.7	41.6	677	5.74	1699	120
1380.0	916	3036.5	1258.3	41.4	672	5.71	1692	120
1390.0	912	2998.7	1246.7	41.6	663	5.63	1676	119
1400.0	910	3027.5	1240.9	41.0	659	5.59	1669	119
1410.0	913	3062.0	1249.8	40.8	666	5.65	1681	119
1420.0	902	3015.3	1221.2	40.5	643	5.46	1642	118
1430.0	903	3036.1	1224.0	40.3	645	5.47	1646	118
1440.0	905	3071.3	1228.5	40.0	649	5.50	1652	118
1450.0	907	3084.5	1233.6	40.0	653	5.54	1659	119
1460.0	904	3060.6	1226.9	40.1	647	5.49	1650	118
1470.0	885	2952.3	1174.6	39.8	606	5.15	1579	116
1480.0	890	2989.4	1189.0	39.8	618	5.24	1599	116
1490.0	895	3040.1	1201.5	39.5	627	5.32	1616	117
1500.0	884	2977.8	1170.9	39.3	604	5.12	1575	116
1510.0	892	3029.5	1192.2	39.4	620	5.26	1603	117
1520.0	579	1409.0	502.6	35.7	170	1.44	676	76
1530.0	865	2979.5	1135.1	38.1	573	4.86	1526	113
1540.0	592	1457.4	531.8	36.5	184	1.56	715	77
1547.0	895	3110.3	1215.7	39.1	635	5.39	1635	117

BIT NUMBER	3	IADC CODE	116	INTERVAL	1547.0- 1914.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.1	BIT RUN	367.0
TOTAL HOURS	11.49	TOTAL TURNS	103398	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1550.0	888	2980.5	1214.9	40.8	629	5.34	1634	116
1560.0	885	3006.3	1205.7	40.1	622	5.28	1621	116
1570.0	886	3029.2	1209.6	39.9	625	5.30	1627	116
1580.0	887	2953.9	1211.3	41.0	627	5.32	1629	116
1590.0	890	3006.6	1221.0	40.6	634	5.38	1642	116
1600.0	882	2981.0	1197.8	40.2	616	5.23	1611	115
1610.0	882	2910.1	1197.6	41.2	616	5.23	1610	115
1620.0	881	2892.4	1195.4	41.3	614	5.21	1607	115
1630.0	859	2956.3	1137.2	38.5	570	4.84	1529	112
1640.0	880	2914.6	1194.1	41.0	613	5.20	1606	115
1650.0	893	2918.0	1227.6	42.1	639	5.42	1651	117
1660.0	889	2911.5	1218.8	41.9	632	5.37	1639	116
1670.0	890	2862.2	1220.1	42.6	633	5.37	1641	116

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1680.0	895	2860.0	1233.4	43.1	644	5.46	1659	117
1690.0	890	2940.5	1220.0	41.5	633	5.37	1640	116
1700.0	881	3008.0	1196.6	39.8	615	5.22	1609	115
1710.0	852	2846.1	1119.3	39.3	557	4.72	1505	111
1720.0	863	2986.0	1146.9	38.4	577	4.90	1542	113
1730.0	847	2845.3	1106.4	38.9	547	4.64	1488	111
1740.0	857	2865.0	1130.9	39.5	565	4.80	1521	112
1750.0	873	2986.6	1173.9	39.3	598	5.07	1579	114
1760.0	876	2988.3	1181.7	39.5	604	5.12	1589	115
1770.0	861	2982.6	1142.0	38.3	574	4.87	1536	113
1780.0	879	2905.6	1191.8	41.0	612	5.19	1603	115
1790.0	882	2974.4	1197.6	40.3	616	5.23	1610	115
1800.0	882	2818.1	1197.7	42.5	616	5.23	1611	115
1810.0	868	2947.6	1160.9	39.4	588	4.99	1561	114
1820.0	865	2903.1	1153.7	39.7	582	4.94	1551	113
1830.0	873	2826.5	1182.5	41.8	603	5.11	1590	114
1840.0	849	2997.5	1122.2	37.4	556	4.72	1509	111
1850.0	847	2802.9	1117.7	39.9	552	4.69	1503	111
1860.0	853	2965.4	1133.9	38.2	564	4.79	1525	112
1870.0	873	2949.9	1186.9	40.2	604	5.13	1596	114
1880.0	853	2925.4	1144.2	39.1	569	4.83	1539	112
1890.0	877	2931.1	1237.1	42.2	633	5.37	1664	115
1900.0	872	2904.4	1222.5	42.1	622	5.28	1644	114
1910.0	849	2973.6	1147.1	38.6	568	4.82	1543	111
1914.0	841	2946.3	1124.1	38.2	551	4.68	1512	110

BIT NUMBER	4	IADC CODE	517	INTERVAL	1914.0- 2425.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	511.0
TOTAL HOURS	33.47	TOTAL TURNS	191519	CONDITION	T4 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1920.0	943	2989.6	1415.7	47.4	779	6.61	1904	123
1930.0	858	2931.2	1183.7	40.4	593	5.03	1592	112
1940.0	859	2913.0	1185.3	40.7	594	5.04	1594	112
1950.0	855	3019.6	1150.3	38.1	574	4.87	1547	112
1960.0	845	2969.1	1124.3	37.9	554	4.70	1512	111
1970.0	850	2936.5	1136.3	38.7	563	4.78	1528	111
1980.0	851	2944.8	1141.2	38.8	567	4.81	1535	111
1990.0	851	2997.9	1140.1	38.0	566	4.80	1533	111
2000.0	850	2962.0	1136.4	38.4	563	4.78	1528	111
2010.0	850	2945.0	1138.0	38.6	565	4.79	1530	111
2020.0	848	2955.9	1133.2	38.3	561	4.76	1524	111
2030.0	845	2967.3	1123.8	37.9	554	4.70	1511	111
2040.0	845	2974.8	1125.0	37.8	555	4.71	1513	111
2050.0	844	2934.7	1120.8	38.2	552	4.68	1507	110
2060.0	842	2986.7	1117.3	37.4	549	4.66	1502	110

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2070.0	847	2951.7	1128.9	38.2	558	4.73	1518	111
2080.0	842	2918.7	1116.0	38.2	548	4.65	1501	110
2090.0	843	2923.9	1119.6	38.3	551	4.67	1505	110
2100.0	846	2888.7	1127.8	39.0	557	4.73	1517	111
2110.0	847	2941.9	1128.7	38.4	558	4.73	1518	111
2120.0	873	2933.1	1199.2	40.9	611	5.18	1613	114
2130.0	846	2946.5	1127.4	38.3	557	4.72	1516	111
2140.0	858	2991.4	1157.6	38.7	579	4.91	1557	112
2150.0	857	2989.2	1156.2	38.7	578	4.90	1555	112
2160.0	854	2946.9	1148.5	39.0	572	4.86	1544	112
2170.0	854	2964.7	1148.9	38.8	573	4.86	1545	112
2180.0	853	2951.0	1146.2	38.8	571	4.84	1541	112
2190.0	850	2988.0	1136.5	38.0	563	4.78	1528	111
2200.0	845	2951.2	1123.3	38.1	554	4.70	1510	111
2210.0	849	2931.7	1134.5	38.7	562	4.77	1526	111
2220.0	849	2953.7	1133.9	38.4	561	4.76	1525	111
2230.0	855	2955.2	1144.3	38.7	571	4.84	1539	112
2240.0	850	3003.8	1132.6	37.7	562	4.77	1523	111
2250.0	846	2961.2	1122.0	37.9	554	4.70	1509	111
2260.0	849	2979.8	1128.1	37.9	559	4.74	1517	111
2270.0	847	2971.5	1123.3	37.8	555	4.71	1510	111
2280.0	840	2953.9	1105.3	37.4	542	4.60	1486	110
2290.0	844	2967.9	1115.2	37.6	549	4.66	1500	110
2300.0	840	2979.7	1111.1	37.3	545	4.62	1494	110
2310.0	841	3019.9	1102.3	36.5	541	4.59	1482	110
2320.0	843	2985.4	1106.8	37.1	544	4.62	1488	110
2330.0	842	3039.0	1105.0	36.4	543	4.61	1486	110
2340.0	724	2341.7	816.0	34.8	345	2.92	1097	95
2350.0	836	3021.1	1087.9	36.0	530	4.50	1463	109
2360.0	836	3018.9	1088.5	36.1	531	4.50	1464	109
2370.0	833	3033.8	1081.5	35.6	526	4.46	1454	109
2380.0	825	2991.5	1072.5	35.9	516	4.38	1442	108
2390.0	818	2926.9	1053.7	36.0	503	4.27	1417	107
2400.0	821	2944.3	1061.2	36.0	508	4.31	1427	107
2410.0	832	2987.8	1088.8	36.4	528	4.48	1464	109
2420.0	832	3022.2	1089.0	36.0	528	4.48	1464	109
2425.0	830	3009.0	1083.6	36.0	525	4.45	1457	109

BIT NUMBER	5	IADC CODE	517	INTERVAL	2425.0- 2526.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	8516.00	TRIP TIME	7.4	BIT RUN	101.0
TOTAL HOURS	24.16	TOTAL TURNS	136139	CONDITION	T8 B6 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2430.0	729	2897.5	1130.2	39.0	481	4.08	1307	111
2440.0	729	2879.9	1130.9	39.3	481	4.08	1308	111
2450.0	728	2883.7	1128.8	39.1	480	4.07	1306	111

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2460.0	743	2966.8	1175.3	39.6	510	4.32	1359	113
2470.0	745	2949.3	1181.9	40.1	514	4.36	1367	113
2480.0	748	2945.5	1191.7	40.5	520	4.41	1378	114
2490.0	748	2977.1	1190.7	40.0	520	4.41	1377	114
2500.0	738	2897.5	1157.5	39.9	498	4.23	1339	112
2510.0	745	2949.0	1181.5	40.1	514	4.36	1366	113
2520.0	748	2982.9	1177.2	39.5	514	4.36	1362	114
2526.0	652	2307.0	904.3	39.2	344	2.92	1046	99

BIT NUMBER	6	IADC CODE	537	INTERVAL	2526.0- 2736.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	7774.00	TRIP TIME	7.8	BIT RUN	210.0
TOTAL HOURS	49.20	TOTAL TURNS	161609	CONDITION	T4 B5 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2530.0	729	3015.1	1341.0	44.5	571	4.84	1425	121
2540.0	736	2999.3	1366.2	45.6	587	4.98	1452	122
2550.0	740	3014.6	1380.7	45.8	596	5.06	1467	123
2560.0	736	2984.7	1365.1	45.7	586	4.97	1450	122
2570.0	735	2995.0	1362.6	45.5	584	4.96	1448	122
2580.0	735	2989.8	1360.7	45.5	583	4.95	1446	122
2590.0	735	3004.7	1363.1	45.4	585	4.96	1448	122
2600.0	734	3021.2	1357.7	44.9	581	4.93	1443	122
2610.0	716	2929.4	1291.5	44.1	539	4.58	1372	119
2620.0	692	2816.5	1208.2	42.9	488	4.14	1284	115
2630.0	728	2990.0	1336.5	44.7	568	4.82	1420	121
2640.0	583	2014.8	857.2	42.5	292	2.47	911	97
2650.0	718	2897.2	1301.6	44.9	546	4.63	1383	119
2660.0	728	2973.9	1336.3	44.9	568	4.82	1420	121
2670.0	713	2842.6	1282.4	45.1	534	4.53	1363	118
2680.0	729	2970.6	1333.8	44.9	567	4.81	1417	121
2690.0	733	2972.2	1346.8	45.3	576	4.89	1431	121
2700.0	736	3005.6	1359.4	45.2	584	4.95	1444	122
2710.0	725	2975.9	1317.9	44.3	557	4.73	1400	120
2720.0	726	2978.5	1322.2	44.4	560	4.75	1405	120
2730.0	720	2932.9	1301.1	44.4	547	4.64	1382	119
2736.0	722	2958.3	1306.7	44.2	550	4.67	1388	120

BIT NUMBER	7	IADC CODE	537	INTERVAL	2736.0- 3011.6
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	7774.00	TRIP TIME	7.9	BIT RUN	275.6
TOTAL HOURS	74.25	TOTAL TURNS	225949	CONDITION	T5 R5 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2740.0	709	2993.7	1259.6	42.1	521	4.42	1338	117
2750.0	721	3000.9	1323.7	44.1	557	4.72	1406	119
2760.0	723	3018.0	1333.7	44.2	563	4.78	1417	120
2770.0	714	2953.7	1298.3	44.0	541	4.59	1379	118
2780.0	717	2971.2	1310.6	44.1	548	4.65	1392	119
2790.0	723	3017.5	1332.9	44.2	562	4.77	1416	120
2800.0	716	2968.8	1304.6	43.9	545	4.62	1386	118
2810.0	721	2989.7	1324.5	44.3	557	4.73	1407	119
2820.0	726	3003.7	1343.5	44.7	569	4.83	1427	120
2830.0	721	2997.8	1323.1	44.1	556	4.72	1406	119
2840.0	716	2991.5	1307.2	43.7	546	4.63	1389	119

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2850.0	717	3001.5	1311.2	43.7	549	4.66	1393	119
2860.0	717	2993.4	1308.4	43.7	547	4.64	1390	119
2870.0	721	3033.8	1324.9	43.7	557	4.73	1408	119
2880.0	714	2994.4	1300.7	43.4	542	4.60	1382	118
2890.0	713	2976.7	1296.3	43.5	539	4.58	1377	118
2900.0	717	3016.2	1311.5	43.5	549	4.66	1393	119
2910.0	714	2995.4	1300.6	43.4	542	4.60	1382	118
2920.0	523	1687.7	696.3	41.3	212	1.80	740	87
2930.0	712	2980.2	1291.0	43.3	536	4.55	1372	118
2940.0	716	2997.1	1305.5	43.6	545	4.63	1387	119
2950.0	714	2966.6	1299.1	43.8	541	4.59	1380	118
2960.0	711	2945.0	1286.6	43.7	533	4.53	1367	118
2970.0	713	2977.4	1295.0	43.5	539	4.57	1376	118
2980.0	705	2947.3	1266.9	43.0	521	4.42	1346	117
2990.0	710	2990.4	1283.7	42.9	532	4.51	1364	118
3000.0	708	3002.4	1277.7	42.6	528	4.48	1358	117
3010.0	705	3002.0	1265.3	42.1	520	4.41	1344	117
3011.6	704	3001.8	1262.3	42.1	518	4.40	1341	117

BIT NUMBER	8	IADC CODE	537	INTERVAL	3011.6- 3192.2
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	180.6
TOTAL HOURS	55.69	TOTAL TURNS	156196	CONDITION	T7 B8 G0.625

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3020.0	568	2123.0	823.3	38.8	273	2.32	875	94
3030.0	691	2967.7	1217.9	41.0	491	4.17	1294	114
3040.0	693	2942.5	1238.1	42.1	501	4.25	1315	115
3050.0	685	2858.7	1209.8	42.3	484	4.11	1285	114
3060.0	700	2938.8	1261.9	42.9	515	4.37	1341	116
3070.0	696	2937.8	1235.2	42.0	502	4.26	1312	115
3080.0	699	2935.8	1245.3	42.4	508	4.31	1323	116
3090.0	700	2938.2	1249.7	42.5	511	4.33	1328	116
3100.0	705	2971.4	1266.3	42.6	521	4.42	1345	117
3110.0	700	2933.6	1249.2	42.6	510	4.33	1327	116
3120.0	703	2945.3	1261.0	42.8	518	4.39	1340	116
3130.0	699	2917.9	1246.8	42.7	509	4.32	1325	116
3140.0	704	2940.5	1248.9	42.5	513	4.35	1327	117
3150.0	703	2946.1	1246.6	42.3	511	4.34	1324	116
3160.0	702	2891.6	1241.2	42.9	508	4.31	1319	116
3170.0	700	3000.0	1234.3	41.1	504	4.27	1311	116
3180.0	707	3000.0	1261.2	42.0	520	4.42	1340	117
3190.0	706	3000.0	1255.9	41.9	517	4.39	1334	117
3192.2	706	3000.0	1256.1	41.9	517	4.39	1335	117

BIT NUMBER	9	IADC CODE	617	INTERVAL	3192.2- 3369.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	176.8
TOTAL HOURS	61.76	TOTAL TURNS	163088	CONDITION	T4 B7 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3200.0	684	2935.3	1180.6	40.2	471	4.00	1254	113
3210.0	687	2923.2	1190.8	40.7	477	4.05	1265	114
3220.0	687	2873.6	1189.5	41.4	477	4.04	1264	114
3230.0	686	2904.8	1186.2	40.8	475	4.03	1260	114
3240.0	691	2898.3	1202.8	41.5	485	4.11	1278	114
3250.0	690	2907.0	1200.3	41.3	483	4.10	1275	114
3260.0	691	2889.8	1204.5	41.7	486	4.12	1280	114
3270.0	682	2710.5	1186.3	43.8	472	4.01	1260	113
3280.0	685	2865.1	1181.7	41.2	472	4.00	1256	113
3290.0	519	1695.4	680.1	40.1	206	1.75	723	86
3300.0	674	2770.7	1146.9	41.4	451	3.83	1219	112
3310.0	679	2799.3	1161.0	41.5	460	3.90	1234	112
3320.0	677	2940.3	1155.9	39.3	457	3.87	1228	112
3330.0	674	2931.7	1146.1	39.1	451	3.82	1218	112

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3340.0	684	2982.1	1179.6	39.6	471	3.99	1253	113
3350.0	661	2807.6	1101.2	39.2	425	3.60	1170	109
3360.0	688	3025.8	1193.1	39.4	479	4.06	1268	114
3369.0	525	1860.8	694.5	37.3	213	1.80	738	87

BIT NUMBER	10	IADC CODE	617	INTERVAL	3369.0- 3389.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	20.0
TOTAL HOURS	4.64	TOTAL TURNS	12581	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3370.0	667	2935.3	1123.0	38.3	437	3.71	1193	111
3380.0	694	3021.1	1216.0	40.2	493	4.18	1292	115
3389.0	800	1855.0	1612.5	86.9	752	6.38	1713	132

BIT NUMBER	10	IADC CODE	4	INTERVAL	3389.0- 3407.3
CHRIS C23		SIZE	8.500	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.2	BIT RUN	18.3
TOTAL HOURS	7.64	TOTAL TURNS	45841	CONDITION	T0 B0 G0.550

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3390.0	270	2153.0	285.3	13.2	45	0.79	244	56
3400.0	266	1684.7	276.2	16.4	43	0.76	236	55
3407.3	145	1303.2	82.0	6.3	7	0.12	70	30

BIT NUMBER	11	IADC CODE	617	INTERVAL	3407.3- 3434.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.3	BIT RUN	26.7
TOTAL HOURS	6.00	TOTAL TURNS	17258	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3410.0	693	3007.1	1198.8	39.9	485	4.11	1274	115
3420.0	695	2976.0	1204.3	40.5	488	4.14	1280	115
3430.0	701	2986.4	1238.1	41.5	506	4.29	1315	116
3434.0	701	2979.3	1239.1	41.6	507	4.30	1317	116

BIT NUMBER	11	IADC CODE	4	INTERVAL	3434.0- 3452.0
CHRIS C-23		SIZE	8.470	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.3	BIT RUN	18.0
TOTAL HOURS	23.52	TOTAL TURNS	130185	CONDITION	T0 B0 G0.700

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3440.0	275	1644.9	295.9	18.0	48	0.84	253	57
3450.0	275	1736.8	295.3	17.0	47	0.84	252	57
3452.0	275	1695.0	292.1	17.2	47	0.83	249	57

BIT NUMBER	11	IADC CODE	617	INTERVAL	3452.0- 3462.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	9.3	BIT RUN	10.0
TOTAL HOURS	7.13	TOTAL TURNS	19484	CONDITION	T2 B6 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3460.0	715	2918.2	1276.0	43.7	532	4.52	1356	118
3462.0	714	2947.3	1271.5	43.1	530	4.49	1351	118

BIT NUMBER	12	IADC CODE	537	INTERVAL	3462.0- 3521.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.5	BIT RUN	59.0
TOTAL HOURS	12.74	TOTAL TURNS	38517	CONDITION	T1 B4 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3470.0	702	2865.7	1228.4	42.9	503	4.27	1305	116
3480.0	720	2866.2	1294.8	45.2	544	4.62	1376	119
3490.0	708	2902.2	1251.6	43.1	517	4.39	1330	117
3500.0	710	2900.1	1258.0	43.4	521	4.42	1337	118
3510.0	705	2904.5	1240.7	42.7	510	4.33	1318	117
3520.0	705	2933.5	1239.6	42.3	510	4.33	1317	117
3521.0	707	2911.7	1247.6	42.8	515	4.37	1326	117

BIT NUMBER	13	IADC CODE	537	INTERVAL	3521.0- 3561.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.6	BIT RUN	40.0
TOTAL HOURS	8.91	TOTAL TURNS	26949	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3530.0	702	2879.5	1242.0	43.1	509	4.32	1320	116
3540.0	687	2813.8	1189.6	42.3	477	4.04	1264	114
3550.0	698	2903.4	1227.3	42.3	500	4.24	1304	116
3560.0	695	2866.0	1217.0	42.5	493	4.19	1293	115
3561.0	695	2866.0	1217.0	42.5	493	4.19	1293	115

BIT NUMBER	14	IADC CODE	316	INTERVAL	3561.0- 3567.0
HTC J7		SIZE	8.500	NOZZLES	16 16 16
COST	1261.00	TRIP TIME	9.6	BIT RUN	6.0
TOTAL HOURS	3.64	TOTAL TURNS	15390	CONDITION	T5 B6 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3567.0	593	2750.2	1044.9	38.0	361	6.37	1110	98

BIT NUMBER	15	IADC CODE	537	INTERVAL	3567.0- 3700.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	9.8	BIT RUN	133.0
TOTAL HOURS	39.91	TOTAL TURNS	133020	CONDITION	T3 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3570.0	479	2782.2	1567.5	56.3	438	7.73	1099	120
3580.0	477	2872.6	1594.3	55.5	444	7.82	1118	120
3590.0	474	2783.7	1572.8	56.5	435	7.66	1103	119
3600.0	478	2850.2	1599.5	56.1	446	7.86	1122	120
3610.0	470	2801.5	1576.1	56.3	432	7.62	1105	119
3620.0	462	2738.0	1521.0	55.6	410	7.23	1067	116
3630.0	476	2811.2	1616.2	57.5	449	7.91	1134	119
3640.0	479	2793.8	1633.1	58.5	456	8.04	1145	120
3650.0	486	2857.7	1681.8	58.9	477	8.40	1180	122
3660.0	489	2837.0	1705.6	60.1	487	8.58	1196	123
3670.0	481	2869.0	1674.9	58.4	470	8.28	1175	121
3680.0	480	2850.0	1668.5	58.5	467	8.23	1170	120
3690.0	474	2842.6	1655.6	58.2	458	8.07	1161	119
3700.0	468	2827.2	1634.9	57.8	447	7.87	1147	117

BIT NUMBER	16	IADC CODE	537	INTERVAL	3700.0- 3807.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	10.1	BIT RUN	107.0
TOTAL HOURS	40.31	TOTAL TURNS	137747	CONDITION	T3 B6 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3710.0	421	2961.5	1512.9	51.1	372	6.55	1061	106
3720.0	403	2953.3	1477.3	50.0	348	6.13	1036	101
3730.0	393	2906.0	1455.7	50.1	334	5.88	1021	98
3740.0	398	2976.4	1502.9	50.5	349	6.15	1054	100
3750.0	397	2966.4	1485.9	50.1	344	6.06	1042	100
3760.0	398	2970.0	1495.1	50.3	347	6.12	1049	100
3770.0	393	2912.0	1459.4	50.1	335	5.90	1024	99
3780.0	397	2972.2	1488.9	50.1	345	6.08	1044	100
3790.0	395	2918.6	1475.2	50.5	340	6.00	1035	99
3800.0	395	2926.6	1475.9	50.4	340	6.00	1035	99
3807.0	397	2958.1	1488.3	50.3	345	6.08	1044	100

BIT NUMBER	17	IADC CODE	537	INTERVAL	3807.0- 3809.0
HTC J33		SIZE	8.500	NOZZLES	16 16 16
COST	4455.00	TRIP TIME	10.2	BIT RUN	2.0
TOTAL HOURS	0.75	TOTAL TURNS	1380	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3809.0	460	2984.6	871.2	29.2	234	4.12	926	76

(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	129.0- 269.0
HTC OSC3AJ+26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.6	BIT RUN	140.0
TOTAL HOURS	2.55	TOTAL TURNS	10819	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
140.0	102	0	508	6		6		6		
150.0	60	63	613	7		7		7		
160.0	65	59	620	8		7		7		
170.0	60	55	574	7		7		7		
180.0	82	79	807	10		9		9		
190.0	102	93	975	12		11		11		
200.0	101	94	975	12		11		11		
210.0	102	94	982	12		11		11		
220.0	103	95	990	12		11		11		
230.0	100	94	969	12		11		11		
240.0	103	94	985	12		11		11		
250.0	101	93	971	12		11		11		
260.0	102	93	974	12		11		11		
269.0	102	93	976	12		11		11		

BIT NUMBER	1	IADC CODE	111	INTERVAL	269.0- 855.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 16
COST	4857.00	TRIP TIME	3.8	BIT RUN	586.0
TOTAL HOURS	10.68	TOTAL TURNS	96266	CONDITION	T2 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
270.0	100	95	974		24		21			18
280.0	102	93	972	30	24		21			17
290.0	101	95	979	30	24		21			18
300.0	102	97	996	31	25		22			18
310.0	102	94	979	30	24		21			18
320.0	100	94	971	30	24		21			17
330.0	101	93	970	30	24		21		21	17
340.0	102	87	942	29	23		21		21	17
350.0	101	87	939	29	23		21		21	17
360.0	101	87	941	29	23		21		21	17
370.0	101	88	947	29		25	21		21	17
380.0	100	91	956	29		25	21		21	17
390.0	101	87	938	29		25	21		21	17
400.0	102	87	944	29		25	21		21	17
410.0	101	90	952	29		25	21		21	17
420.0	101	87	941	29		25	21		21	17
430.0	102	87	942	29		25	21		21	17
440.0	102	88	948	29		25	21		21	17
450.0	98	98	983	30		26		26	22	18

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
460.0	98	98	980	30		26		26	22	18
470.0	99	100	996	31		26		26	22	18
480.0	100	101	1001	31		27		27	22	18
490.0	98	101	996	31		26		26	22	18
500.0	101	0	503	16		13		13	11	9
510.0	98	97	975	30		26		26	21	18
520.0	99	98	981	30		26		26	22	18
530.0	98	98	977	30		26		26	21	18
540.0	98	97	973	30		26		26	21	17
550.0	97	97	967	30		26		26	21	17
560.0	98	98	980	30		26		26	22	18
570.0	98	99	984	30		26		26	22	18
580.0	98	99	986	30		26		26	22	18
590.0	99	98	984	30		26		26	22	18
600.0	99	98	981	30		26		26	22	18
610.0	97	98	975	30		26		26	22	18
620.0	99	98	985	30		26		26	21	18
630.0	99	98	986	30		26		26	22	18
640.0	99	98	985	30		26		26	22	18
650.0	99	98	981	30		26		26	22	18
660.0	44	105	743	23		20		20	16	13
670.0	97	97	971	30		26		26	21	17
680.0	98	98	976	30		26		26	21	18
690.0	96	99	974	30		26		26	21	18
700.0	98	98	979	30		26		26	21	18
710.0	99	98	983	30		26		26	22	18
720.0	99	97	981	30		26		26	22	18
730.0	98	98	980	30		26		26	22	18
740.0	98	98	979	30		26		26	21	18
750.0	98	98	980	30		26		26	21	18
760.0	99	98	985	30		26		26	22	18
770.0	97	98	974	30		26		26	21	18
780.0	98	98	978	30		26		26	21	18
790.0	99	97	980	30		26		26	21	18
800.0	99	99	990	31		26		26	22	18
810.0	99	99	987	30		26		26	22	18
820.0	97	97	969	30		26		26	21	17
830.0	97	98	972	30		26		26	21	17
840.0	97	99	979	30		26		26	21	18
850.0	97	98	975	30		26		26	21	18
855.0	97	98	975	30		26		26	21	18

BIT NUMBER	2	IADC CODE	116	INTERVAL	855.0- 1547.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	5.3	BIT RUN	692.0
TOTAL HOURS	22.72	TOTAL TURNS	202314	CONDITION	T2 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ BIS
860.0	98	98	978	85	77		54		54	18
870.0	97	97	970	84	76		54		54	17
880.0	98	97	975	85	77		54		54	18
890.0	98	97	972	84	76		54		54	17
900.0	98	97	973	84	76		54		54	17
910.0	98	96	970	84	76		54		54	17
920.0	99	97	977	85	77		54		54	18
930.0	98	96	970	84	76		54		54	17
940.0	98	96	967	84	76		54		54	17
950.0	98	97	972	84	76		54		54	17
960.0	98	97	974	85	77		54		54	18
970.0	98	97	974	85	76		54		54	17
980.0	98	97	975	85	77		54		54	18
990.0	98	96	974	85	76		54		54	17
1000.0	97	96	966	84	76		54		54	17
1010.0	97	97	970	84		58	54		54	17
1020.0	97	96	964	84		58	54		54	17
1030.0	97	97	970	84		58	54		54	17
1040.0	97	96	965	84		58	54		54	17
1050.0	97	97	968	84		58	54		54	17
1060.0	97	96	966	84		58	54		54	17
1070.0	97	96	965	84		58	54		54	17
1080.0	97	95	959	83		57	53		53	17
1090.0	97	96	962	84		57		57	54	17
1100.0	97	95	962	84		57		57	54	17
1110.0	97	95	962	84		57		57	54	17
1120.0	96	96	958	83		57		57	53	17
1130.0	96	96	955	83		57		57	53	17
1140.0	96	93	942	82		56		56	52	17
1150.0	96	94	948	82		57		57	53	17
1160.0	96	94	947	82		57		57	53	17
1170.0	96	93	946	82		57		57	53	17
1180.0	95	94	944	82		56		56	53	17
1190.0	95	94	945	82		56		56	53	17
1200.0	96	92	941	82		56		56	52	17
1210.0	96	92	941	82		56		56	52	17
1220.0	96	92	937	81		56		56	52	17
1230.0	95	92	937	81		56		56	52	17
1240.0	96	92	940	82		56		56	52	17
1250.0	96	92	942	82		56		56	52	17
1260.0	96	91	936	81		56		56	52	17
1270.0	95	91	933	81		56		56	52	17
1280.0	95	92	934	81		56		56	52	17

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1290.0	96	91	938	81		56		56	52	17
1300.0	91	80	856	74		51		51	48	15
1310.0	94	92	929	81		56		56	52	17
1320.0	94	91	924	80		55		55	51	17
1330.0	101	0	507	44		30		30	28	9
1340.0	95	92	932	81		56		56	52	17
1350.0	92	91	916	80		55		55	51	16
1360.0	92	90	912	79		55		55	51	16
1370.0	93	91	918	80		55		55	51	16
1380.0	92	91	916	80		55		55	51	16
1390.0	91	91	912	79		54		54	51	16
1400.0	92	90	910	79		54		54	51	16
1410.0	92	91	913	79		55		55	51	16
1420.0	90	90	902	78		54		54	50	16
1430.0	90	90	903	78		54		54	50	16
1440.0	91	90	905	79		54		54	50	16
1450.0	92	90	907	79		54		54	51	16
1460.0	91	90	904	79		54		54	50	16
1470.0	90	87	885	77		53		53	49	16
1480.0	90	88	890	77		53		53	50	16
1490.0	90	89	895	78		53		53	50	16
1500.0	89	88	884	77		53		53	49	16
1510.0	90	88	892	77		53		53	50	16
1520.0	116	0	579	50		35		35	32	10
1530.0	87	86	865	75		52		52	48	16
1540.0	118	0	592	51		35		35	33	11
1547.0	90	89	895	78		54		54	50	16

BIT NUMBER	3	IADC CODE	116	INTERVAL	1547.0- 1914.0
HTC J1		SIZE	12.250	NOZZLES	18 18 18
COST	2694.00	TRIP TIME	6.1	BIT RUN	367.0
TOTAL HOURS	11.49	TOTAL TURNS	103398	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1550.0	89	88	888	77		53		53	49	16
1560.0	90	87	885	77		53		53	49	16
1570.0	90	87	886	77		53		53	49	16
1580.0	90	88	887	77		53		53	49	16
1590.0	91	87	890	77		53		53	50	16
1600.0	89	87	882	77		53		53	49	16
1610.0	89	87	882	77		53		53	49	16
1620.0	89	88	881	76		53		53	49	16
1630.0	89	83	859	75		51		51	48	15
1640.0	90	86	880	76		53		53	49	16
1650.0	90	88	893	78		53		53	50	16
1660.0	89	89	889	77		53		53	50	16
1670.0	89	89	890	77		53		53	50	16

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1680.0	90	89	895	78		53		53	50	16
1690.0	89	89	890	77		53		53	50	16
1700.0	89	88	881	77		53		53	49	16
1710.0	85	85	852	74		51		51	47	15
1720.0	86	86	863	75		52		52	48	15
1730.0	85	84	847	74		51		51	47	15
1740.0	86	86	857	74		51		51	48	15
1750.0	89	86	873	76		52		52	49	16
1760.0	88	87	876	76		52		52	49	16
1770.0	87	86	861	75		51		51	48	15
1780.0	89	87	879	76		53		53	49	16
1790.0	88	88	882	77		53		53	49	16
1800.0	88	88	882	77		53		53	49	16
1810.0	87	87	868	75		52		52	48	16
1820.0	87	86	865	75		52		52	48	16
1830.0	87	87	873	76		52		52	49	16
1840.0	85	85	849	74		51		51	47	15
1850.0	84	85	847	74		51		51	47	15
1860.0	85	85	853	74		51		51	48	15
1870.0	87	87	873	76		52		52	49	16
1880.0	85	85	853	74		51		51	48	15
1890.0	89	87	877	76		52		52	49	16
1900.0	87	87	872	76		52		52	49	16
1910.0	86	84	849	74		51		51	47	15
1914.0	86	83	841	73		50		50	47	15

BIT NUMBER	4	IADC CODE	517	INTERVAL	1914.0- 2425.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	8516.00	TRIP TIME	7.1	BIT RUN	511.0
TOTAL HOURS	33.47	TOTAL TURNS	191519	CONDITION	T4 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1920.0	94	94	943	82		56		56	53	17
1930.0	86	86	858	75		51		51	48	15
1940.0	86	86	859	75		51		51	48	15
1950.0	84	87	855	74		51		51	48	15
1960.0	90	80	845	73		51		51	47	15
1970.0	84	86	850	74		51		51	47	15
1980.0	84	86	851	74		51		51	47	15
1990.0	84	86	851	74		51		51	47	15
2000.0	85	85	850	74		51		51	47	15
2010.0	85	85	850	74		51		51	47	15
2020.0	84	86	848	74		51		51	47	15
2030.0	84	85	845	73		50		50	47	15
2040.0	84	86	845	73		51		51	47	15
2050.0	84	84	844	73		50		50	47	15
2060.0	84	85	842	73		50		50	47	15

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2070.0	84	86	847	74		51		51	47	15
2080.0	84	85	842	73		50		50	47	15
2090.0	84	84	843	73		50		50	47	15
2100.0	84	85	846	74		51		51	47	15
2110.0	85	85	847	74		51		51	47	15
2120.0	89	86	873	76		52		52	49	16
2130.0	83	86	846	73		51		51	47	15
2140.0	86	86	858	74		51		51	48	15
2150.0	86	86	857	74		51		51	48	15
2160.0	85	86	854	74		51		51	48	15
2170.0	84	87	854	74		51		51	48	15
2180.0	85	86	853	74		51		51	48	15
2190.0	85	85	850	74		51		51	47	15
2200.0	85	85	845	73		50		50	47	15
2210.0	85	85	849	74		51		51	47	15
2220.0	84	86	849	74		51		51	47	15
2230.0	86	86	855	74		51		51	48	15
2240.0	84	86	850	74		51		51	47	15
2250.0	85	84	846	74		51		51	47	15
2260.0	85	85	849	74		51		51	47	15
2270.0	85	85	847	74		51		51	47	15
2280.0	84	84	840	73		50		50	47	15
2290.0	85	84	844	73		50		50	47	15
2300.0	84	84	840	73		50		50	47	15
2310.0	84	85	841	73		50		50	47	15
2320.0	84	85	843	73		50		50	47	15
2330.0	84	84	842	73		50		50	47	15
2340.0	80	65	724	63		43		43	40	13
2350.0	84	84	836	73		50		50	47	15
2360.0	83	84	836	73		50		50	47	15
2370.0	83	84	833	72		50		50	46	15
2380.0	82	83	825	72		49		49	46	15
2390.0	82	81	818	71		49		49	46	15
2400.0	83	81	821	71		49		49	46	15
2410.0	81	85	832	72		50		50	46	15
2420.0	82	84	832	72		50		50	46	15
2425.0	82	84	830	72		50		50	46	15

BIT NUMBER	5	IADC CODE	517	INTERVAL	2425.0- 2526.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	8516.00	TRIP TIME	7.4	BIT RUN	101.0
TOTAL HOURS	24.16	TOTAL TURNS	136139	CONDITION	T8 B6 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2430.0	72	74	729	63		44		44	41	13
2440.0	73	73	729	63		44		44	41	13
2450.0	73	73	728	63		44		44	41	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2460.0	74	74	743	65		44		44	41	13
2470.0	75	75	745	65		45		45	42	13
2480.0	74	75	748	65		45		45	42	13
2490.0	72	77	748	65		45		45	42	13
2500.0	72	75	738	64		44		44	41	13
2510.0	74	75	745	65		45		45	42	13
2520.0	74	75	748	65		45		45	42	13
2526.0	43	88	652	57		39		39	36	12

BIT NUMBER	6	IADC CODE	537	INTERVAL	2526.0- 2736.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	7774.00	TRIP TIME	7.8	BIT RUN	210.0
TOTAL HOURS	49.20	TOTAL TURNS	161609	CONDITION	T4 B5 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2530.0	72	73	729	63		44		44	41	13
2540.0	73	74	736	64		44		44	41	13
2550.0	74	74	740	64		44		44	41	13
2560.0	73	74	736	64		44		44	41	13
2570.0	73	74	735	64		44		44	41	13
2580.0	74	73	735	64		44		44	41	13
2590.0	74	74	735	64		44		44	41	13
2600.0	73	74	734	64		44		44	41	13
2610.0	73	70	716	62		43		43	40	13
2620.0	71	67	692	60		41		41	39	12
2630.0	73	73	728	63		44		44	41	13
2640.0	58	59	583	51		35		35	32	10
2650.0	72	72	718	62		43		43	40	13
2660.0	72	73	728	63		44		44	41	13
2670.0	78	65	713	62		43		43	40	13
2680.0	73	72	729	63		44		44	41	13
2690.0	73	74	733	64		44		44	41	13
2700.0	74	74	736	64		44		44	41	13
2710.0	73	72	725	63		43		43	40	13
2720.0	73	72	726	63		43		43	40	13
2730.0	73	71	720	63		43		43	40	13
2736.0	73	72	722	63		43		43	40	13

BIT NUMBER	7	IADC CODE	537	INTERVAL	2736.0- 3011.6
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	7774.00	TRIP TIME	7.9	BIT RUN	275.6
TOTAL HOURS	74.25	TOTAL TURNS	225949	CONDITION	T5 B5 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2740.0	71	70	709	62		42		42	39	13
2750.0	72	72	721	63		43		43	40	13
2760.0	72	72	723	63		43		43	40	13
2770.0	72	70	714	62		43		43	40	13
2780.0	73	70	717	62		43		43	40	13
2790.0	73	72	723	63		43		43	40	13
2800.0	72	71	716	62		43		43	40	13
2810.0	73	71	721	63		43		43	40	13
2820.0	73	72	726	63		43		43	40	13
2830.0	72	72	721	63		43		43	40	13
2840.0	71	72	716	62		43		43	40	13

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2850.0	72	72	717	62		43		43	40	13
2860.0	71	72	717	62		43		43	40	13
2870.0	72	72	721	63		43		43	40	13
2880.0	70	73	714	62		43		43	40	13
2890.0	71	72	713	62		43		43	40	13
2900.0	71	72	717	62		43		43	40	1
2910.0	70	72	714	62		43		43	40	13
2920.0	0	105	523	45		31		31	29	9
2930.0	70	72	712	62		43		43	40	13
2940.0	71	72	716	62		43		43	40	13
2950.0	71	72	714	62		43		43	40	13
2960.0	70	72	711	62		42		42	40	13
2970.0	71	71	713	62		43		43	40	13
2980.0	70	71	705	61		42		42	39	13
2990.0	71	71	710	62		42		42	40	13
3000.0	71	71	708	61		42		42	39	13
3010.0	71	70	705	61		42		42	39	13
3011.6	71	70	704	61		42		42	39	13

BIT NUMBER	8	IADC CODE	537	INTERVAL	3011.6- 3192.2
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	7.9	BIT RUN	180.6
TOTAL HOURS	55.69	TOTAL TURNS	156196	CONDITION	T7 B8 G0.625

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3020.0	70	44	568	49		34		34	32	10
3030.0	69	69	691	60		41		41	39	12
3040.0	69	70	693	60		41		41	39	12
3050.0	70	67	685	60		41		41	38	12
3060.0	71	70	700	61		42		42	39	13
3070.0	71	69	696	60		42		42	39	13
3080.0	70	70	699	61		42		42	39	13
3090.0	70	70	700	61		42		42	39	13
3100.0	72	69	705	61		42		42	39	13
3110.0	70	70	700	61		42		42	39	13
3120.0	71	70	703	61		42		42	39	13
3130.0	70	70	699	61		42		42	39	13
3140.0	71	70	704	61		42		42	39	13
3150.0	71	69	703	61		42		42	39	13
3160.0	71	69	702	61		42		42	39	13
3170.0	71	69	700	61		42		42	39	13
3180.0	70	71	707	61		42		42	39	13
3190.0	70	71	706	61		42		42	39	13
3192.2	70	71	706	61		42		42	39	13

BIT NUMBER	9	IADC CODE	617	INTERVAL	3192.2- 3369.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	176.8
TOTAL HOURS	61.76	TOTAL TURNS	163088	CONDITION	T4 B7 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3200.0	69	68	684	59		41		41	38	12
3210.0	68	70	687	60		41		41	38	12
3220.0	69	69	687	60		41		41	38	12
3230.0	68	69	686	60		41		41	38	12
3240.0	69	69	691	60		41		41	38	12
3250.0	69	69	690	60		41		41	38	12
3260.0	70	68	691	60		41		41	39	12
3270.0	68	69	682	59		41		41	38	12
3280.0	67	70	685	59		41		41	38	12
3290.0	104	0	519	45		31		31	29	9
3300.0	67	68	674	59		40		40	38	12
3310.0	68	68	679	59		41		41	38	12
3320.0	67	68	677	59		40		40	38	12
3330.0	67	68	674	59		40		40	38	12

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3340.0	68	69	684	59		41		41	38	12
3350.0	61	71	661	57		39		39	37	12
3360.0	69	69	688	60		41		41	38	12
3369.0	1	104	525	46		31		31	29	9

BIT NUMBER	10	IADC CODE	617	INTERVAL	3369.0- 3389.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.2	BIT RUN	20.0
TOTAL HOURS	4.64	TOTAL TURNS	12581	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3370.0	68	66	667	58		40		40	37	12
3380.0	70	69	694	60		41		41	39	12
3389.0	0	160	800	69		48		48	45	14

BIT NUMBER	10	IADC CODE	4	INTERVAL	3389.0- 3407.3
CHRIS C23		SIZE	8.500	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.2	BIT RUN	18.3
TOTAL HOURS	7.64	TOTAL TURNS	45841	CONDITION	T0 B0 G0.550

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3390.0	54	0	270	245		43		43	15	5
3400.0	53	0	266	241		42		42	15	5
3407.3	29	0	145	131		23		23	8	3

BIT NUMBER	11	IADC CODE	617	INTERVAL	3407.3- 3434.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	6919.00	TRIP TIME	9.3	BIT RUN	26.7
TOTAL HOURS	6.00	TOTAL TURNS	17258	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3410.0	69	70	693	60		41		41	39	12
3420.0	68	71	695	60		42		42	39	12
3430.0	69	71	701	61		42		42	39	13
3434.0	69	71	701	61		42		42	39	13

BIT NUMBER	11	IADC CODE	4	INTERVAL	3434.0- 3452.0
CHRIS C-23		SIZE	8.470	NOZZLES	14 14 15
COST	0.00	TRIP TIME	9.3	BIT RUN	18.0
TOTAL HOURS	23.52	TOTAL TURNS	130185	CONDITION	T0 B0 G0.700

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3440.0	0	55	275						15	5
3450.0	0	55	275						15	5
3452.0	0	55	275						15	5

BIT NUMBER	11	IADC CODE	617	INTERVAL	3452.0- 3462.0
HTC J44		SIZE	12.250	NOZZLES	16 16 16
COST	0.00	TRIP TIME	9.3	BIT RUN	10.0
TOTAL HOURS	7.13	TOTAL TURNS	19484	CONDITION	T2 B6 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3460.0	70	73	715	62		43		43	40	13
3462.0	70	73	714	62		43		43	40	13

BIT NUMBER	12	IADC CODE	537	INTERVAL	3462.0- 3521.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.5	BIT RUN	59.0
TOTAL HOURS	12.74	TOTAL TURNS	38517	CONDITION	T1 B4 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3470.0	69	71	702	61		42		42	39	13
3480.0	70	75	720	63		43		43	40	13
3490.0	70	71	708	62		42		42	39	13
3500.0	69	73	710	62		42		42	40	13
3510.0	68	73	705	61		42		42	39	13
3520.0	71	71	705	61		42		42	39	13
3521.0	71	71	707	61		42		42	39	13

BIT NUMBER	13	IADC CODE	537	INTERVAL	3521.0- 3561.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	8266.00	TRIP TIME	9.6	BIT RUN	40.0
TOTAL HOURS	8.91	TOTAL TURNS	26949	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3530.0	71	69	702	61		42		42	39	13
3540.0	70	68	687	60		41		41	38	12
3550.0	70	69	698	61		42		42	39	13
3560.0	70	69	695	60		42		42	39	12
3561.0	70	69	695	60		42		42	39	12

BIT NUMBER	14	IADC CODE	316	INTERVAL	3561.0- 3567.0
HTC J7		SIZE	8.500	NOZZLES	16 16 16
COST	1261.00	TRIP TIME	9.6	BIT RUN	6.0
TOTAL HOURS	3.64	TOTAL TURNS	15390	CONDITION	T5 B6 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3567.0	60	58	593	134	122		88		88	11

BIT NUMBER	15	IADC CODE	537	INTERVAL	3567.0- 3700.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	9.8	BIT RUN	133.0
TOTAL HOURS	39.91	TOTAL TURNS	133020	CONDITION	T3 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3570.0	96	0	479	108	99		71		71	9
3580.0	95	0	477	107	98		71		71	9
3590.0	95	0	474	107	98		70		70	9
3600.0	0	96	478	108	98		71		71	9
3610.0	0	94	470	106	97		70		70	8
3620.0	0	92	462	104	95		69		69	8
3630.0	95	0	476	107	98		71		71	9
3640.0	53	43	479	108	99		71		71	9
3650.0	97	0	486	109	100		72		72	9
3660.0	98	0	489	110	101		73		73	9
3670.0	96	0	481	108	99		71		71	9
3680.0	96	0	480	108	99		71		71	9
3690.0	95	0	474	107	98		70		70	9
3700.0	94	0	468	105	96		70		70	8

BIT NUMBER	16	IADC CODE	537	INTERVAL	3700.0- 3807.0
HTC J33		SIZE	8.500	NOZZLES	13 13 13
COST	4455.00	TRIP TIME	10.1	BIT RUN	107.0
TOTAL HOURS	40.31	TOTAL TURNS	137747	CONDITION	T3 B6 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3710.0	0	84	421	95	87		63		63	8
3720.0	0	81	403	91	83		60		60	7
3730.0	79	0	393	88	81		58		58	7
3740.0	80	0	398	90	82		59		59	7
3750.0	79	0	397	89	82		59		59	7
3760.0	80	0	398	90	82		59		59	7
3770.0	79	0	393	89	81		58		58	7
3780.0	79	0	397	89	82		59		59	7
3790.0	0	79	395	89	81		59		59	7
3800.0	0	79	395	89		63	59		59	7
3807.0	0	79	397	89		63	59		59	7

BIT NUMBER	17	IADC CODE	537	INTERVAL	3807.0- 3809.0
HTC J33		SIZE	8.500	NOZZLES	16 16 16
COST	4455.00	TRIP TIME	10.2	BIT RUN	2.0
TOTAL HOURS	0.75	TOTAL TURNS	1380	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3809.0	92	0	460	104		73	68		68	8

PE603423

This is an enclosure indicator page.
The enclosure PE603423 is enclosed within the container PE906100 at this location in this document.

The enclosure PE603423 has the following characteristics:

ITEM_BARCODE	= PE603423
CONTAINER_BARCODE	= PE906100
NAME	= Drill Data Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Drill Data Plot showing rate of penetration mud gas corrected 'd' exponent and shale density for Grunter-1.
REMARKS	=
DATE_CREATED	= 30/11/1984
DATE_RECEIVED	= 30/01/1985
W_NO	= W879
WELL_NAME	= GRUNTER-1
CONTRACTOR	= CORE LABORATORIES AUSTRALIA LTD
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603424

This is an enclosure indicator page.
The enclosure PE603424 is enclosed within the container PE906100 at this location in this document.

The enclosure PE603424 has the following characteristics:

ITEM_BARCODE	= PE603424
CONTAINER_BARCODE	= PE906100
NAME	= Temperature Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Temperature Plot for Grunter-1.
REMARKS	=
DATE_CREATED	= 30/11/1984
DATE_RECEIVED	= 30/01/1985
W_NO	= W879
WELL_NAME	= GRUNTER-1
CONTRACTOR	= CORE LABORATORIES AUSTRALIA LTD
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603425

This is an enclosure indicator page.
The enclosure PE603425 is enclosed within the container PE906100 at this location in this document.

The enclosure PE603425 has the following characteristics:

ITEM_BARCODE	= PE603425
CONTAINER_BARCODE	= PE906100
NAME	= Pressure Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Pressure Plot for Grunter-1 showing pore pressure and mud weight.
REMARKS	=
DATE_CREATED	= 30/11/1984
DATE_RECEIVED	= 30/01/1985
W_NO	= W879
WELL_NAME	= GRUNTER-1
CONTRACTOR	= CORE LABORATORIES AUSTRALIA LTD
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603426

This is an enclosure indicator page.
The enclosure PE603426 is enclosed within the container PE906100 at this location in this document.

The enclosure PE603426 has the following characteristics:

ITEM_BARCODE	= PE603426
CONTAINER_BARCODE	= PE906100
NAME	= Geoplot
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Geoplot for Grunter-1 showing incremental and cumulative cost and other logs.
REMARKS	=
DATE_CREATED	= 30/11/1984
DATE_RECEIVED	= 30/01/1985
W_NO	= W879
WELL_NAME	= GRUNTER-1
CONTRACTOR	= CORE LABORATORIES AUSTRALIA LTD
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603427

This is an enclosure indicator page.
The enclosure PE603427 is enclosed within the container PE906100 at this location in this document.

The enclosure PE603427 has the following characteristics:

ITEM_BARCODE	= PE603427
CONTAINER_BARCODE	= PE906100
NAME	= Grapholog
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Grapholog (mud log) for Grunter-1.
REMARKS	=
DATE_CREATED	= 30/11/1984
DATE_RECEIVED	= 30/01/1985
W_NO	= W879
WELL_NAME	= GRUNTER-1
CONTRACTOR	= CORE LABORATORIES AUSTRALIA LTD
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)