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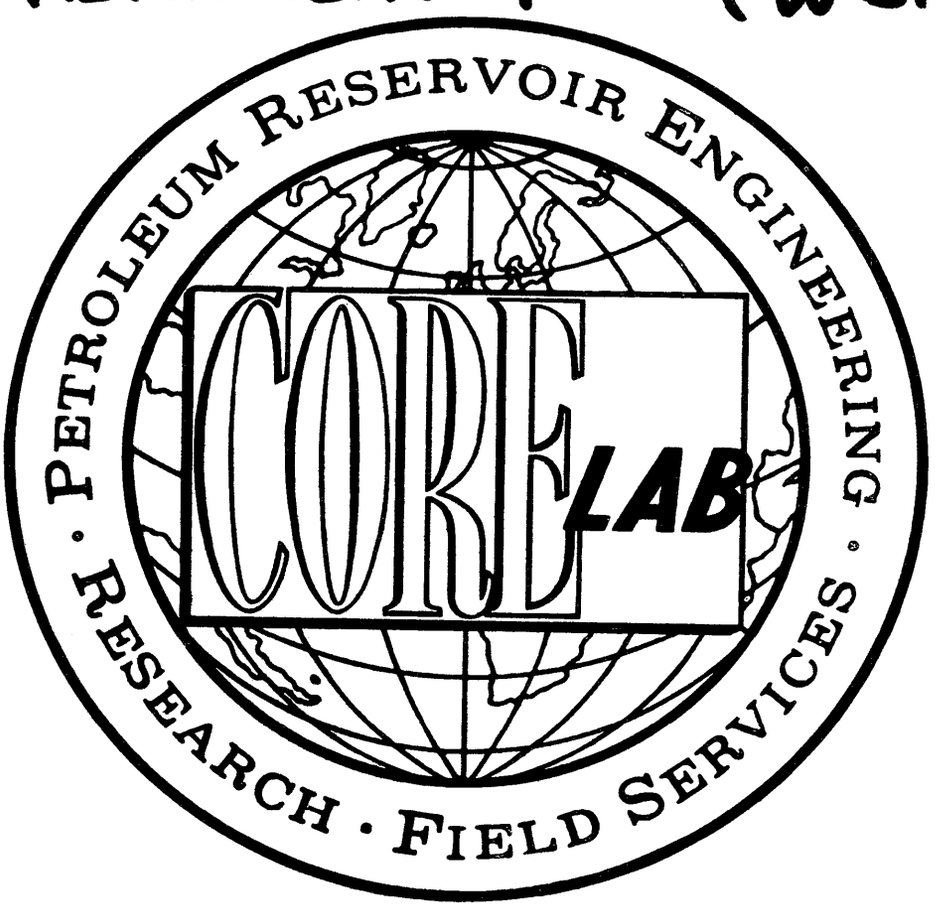
ATTACHMENT TO WCR VOL 2 TERAGLIN-1 (W814)



ESSO AUSTRALIA LTD.

ES WELL REPORT

TERAGLIN NO. 1

1173 KINGSFORD SMITH DR., BOX 456 HAMILTON CENTRAL, BRISBANE, QLD 4007
TELEPHONE (07) 268 5732, 260 1722 TELEX AA42513

CORE LABORATORIES AUSTRALIA (QLD.) LTD.

18th July 1983

Mr. S Twartz
Esso Australia Ltd.
(Geology Department)
Esso House
127 Kent Street
Sydney
N.S.W. 2001

Dear Mr. Twartz,

Please find enclosed the original well report plus five (5) copies, for the well TERAGLIN NO. 1. If you have any enquiries please do not hesitate to contact us.

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

for M. MOWATT
Unit Supervisor
FL 802

ARC:pc

PERTH: 4/126 RADIUM STREET, WELSHPOOL W.A. 6106 (09) 451 3088 ADELAIDE: 33 KING WILLIAM STREET, ADELAIDE, S.A. 5000. (08) 212 7212

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INTRODUCTION

TERAGLIN NO. 1 was drilled by ESSO AUSTRALIA LTD. in the Bass Strait, Australia.

Well co-ordinates were:

Latitude	:	38° 22' 50.90" S
Longitude	:	148° 20' 30.13" E

The well was drilled by South Seas Drilling Company's semi-submersible rig "Southern Cross", and monitored by Core Laboratories Intermediate Extended Service Field Laboratory 802.

TERAGLIN NO. 1 was spudded on 30th April 1983 and reached a total depth of 3371.3m on 26th May 1983, a total drilling time of 26 days. The main objective of the well was to firstly test a small topographic high at the top of the Latrobe group and a series of intra Latrobe group truncation traps; and secondly to provide stratigraphic control within the Latrobe group where only sparse data currently exists.

Elevations were:

Kelly bushings to mean sea level	21m
Water depth	79.28m
Kelly bushings to mean sea bed	100.28m

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

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

M. MOWATT	-	Unit Supervisor
G. MUNN	-	Pressure Engineer
B. GIFTSON	-	Logging Crew Chief
R. LOWMAN	-	Well Logger
B. PAULET	-	Well Logger
P. DENTON	-	Well Logger
A. BOCK	-	Sample Catcher
G. KILLEN	-	Sample Catcher
N. ELLIOTT	-	Sample Catcher
T. GROTH	-	Sample Catcher

2. RIG SPECIFICATIONS

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL TERAGLIN NO. 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 CAPACITY OF 1 000 000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS.
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS.
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNER	DRILLCO 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 CAPACITY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6x8" CENTRIFUGAL BY TWO 100 HP ELECTRIC MOTORS. DESANDER : 1 DEMCO 4 CONE 12" MODEL N° 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. 18¾" - 10 000 psi TWO HYDRIL G.L. 18¾" - 5000 psi
WELL CONTROL EQUIP.	FOUR VALVCON ACCUMULATORS. 2" - 10 000ps. CHOKES: 2 C.I.W. ABJ H2 2 1/16" - 10 000 psi, 1 SWACO SUPER CHOKE
TUBULAR DRILLING EQUIPMENT	DC : 6¼" x 2 13/16" (4" IF TJ) 8 " x 2 13/16" (6 5/8" H90 TJ) 9¾" x 3" (7 5/8" H90 YJ) HWDP : 5" 50lb/ft GRADE G (6½" OD 4½" IF TJ) DP : 5" 19½lb/ft GRADE G&E (6 3/8" OD 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 12 DIESEL ENGINE RATED AT 1500 HP
DIRECTIONAL EQUIP.	-

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

RISER: REGAN FC-7 TELESCOPIC 21" ID. PLUS FLOW DIVERTOR.
CASING POWER TONGS: ECKEL 13 3/8" (20 000 ft lbs), 20" (35 000 ft lbs)
CMT BULK TANKS: 3x1570cu ft. RISER TENSIONER: 6WESTERN GEAR, 50'STROKE, 80 000lbs.
MUD BULK TANKS: 3x1570cu ft. GUIDE LINE TENSIONERS : 4 WESTERN GEAR 16 000 lbs, 40'STROKE

3. WELL INFORMATION, PROGRESS AND HISTORY

WELL INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL TERAGLIN NO. 1

Sheet No. 1

WELL NAME	TERAGLIN NO. 1			
OPERATOR	ESSO AUSTRALIA LTD.			
PARTNERS	B.H.P.			
RIG	OWNER	SOUTH SEAS DRILLING COMPANY		
	NAME OR NUMBER	SOUTHERN CROSS		
	TYPE	SEMI-SUBMERSIBLE		
LOCATION	LATITUDE (X)	38° 22' 50.90" S	LONGITUDE (Y)	148° 20' 30.13" E
	FIELD	GIPPSLAND BASIN	AREA	BASS STRAIT
	COUNTY	AUSTRALIA	STATE	VICTORIA
	COUNTRY	AUSTRALIA		
	DESCRIPTION	EXPLORATION		
DATUM POINTS	Ground Elevation	-	RKB to Ground Level	-
	Mean Water Depth	79.28M	RKB to Water Level	21M
DATES	SPUD	30TH APRIL 1983	TOTAL DEPTH	3371.3M

HOLE SIZES

Depth From	Depth To	Bit Size	No. of Bits	No. of Reamers	Date From	Date To	Cased	Logged
100.28	239	26"	1	-	30/4/83	30/4/83	YES	NO
239	828	17½"	1	-	2/5/83	3/5/83	YES	YES
828	3371	12¼"	8	-	10/5/83	26/5/83	NO	YES

DRILLING FLUID

Depth From	Depth To	Weights	Type
100.28	239	8.6 TO 8.6	SEAWATER
239	828	8.6 TO 9.2	SEAWATER GEL
828	3371.3	9.2 TO 9.3	SEAWATER GEL
		TO	
		TO	
		TO	
		TO	
		TO	

WIRELINE LOGGING

Depth From	Depth To	Hole Size	Date Run	Logs Run
824	224	17½"	3/5/83	BHC-CAL-GR
3373.3	813	12¼"	27/5/83	DLL-MSFL-GR-CAL
3372	813	12¼"	27/5/83	LDL-CNL-CAL-GR
3369	813	12¼"	27/5/83	BHC-GR
3371.5	2300	12¼"	27/5/83	HDT
3373	230	12¼"	28/5/83	WST (15 LEVELS) (VELOCITY SURVEY)
-	-	12¼"	28/5/83	RFT NO. 1 (20 PRETESTS)
-	-	12¼"	28/5/83	RFT NO. 2

RISER, CASING & LINER

Depth From	Depth To	OD	ID	Weight	Grade	Threads	Date Run	Cement	Stages	Excess
2	100.3	21.5"	21"	---------- RISER ----------						
100.3	224	20"	19.124"	94.4	X-52	JV BOX	1/5/83	"G"	1	-
100.3	814	13-3/8"	12.615"	54.5	K-55	BUTT	9/5/83	"G"	1	-

CORE LAB

COMPANY ESSO AUSTRALIA LTD.
WELL TERGALIN NO. 1

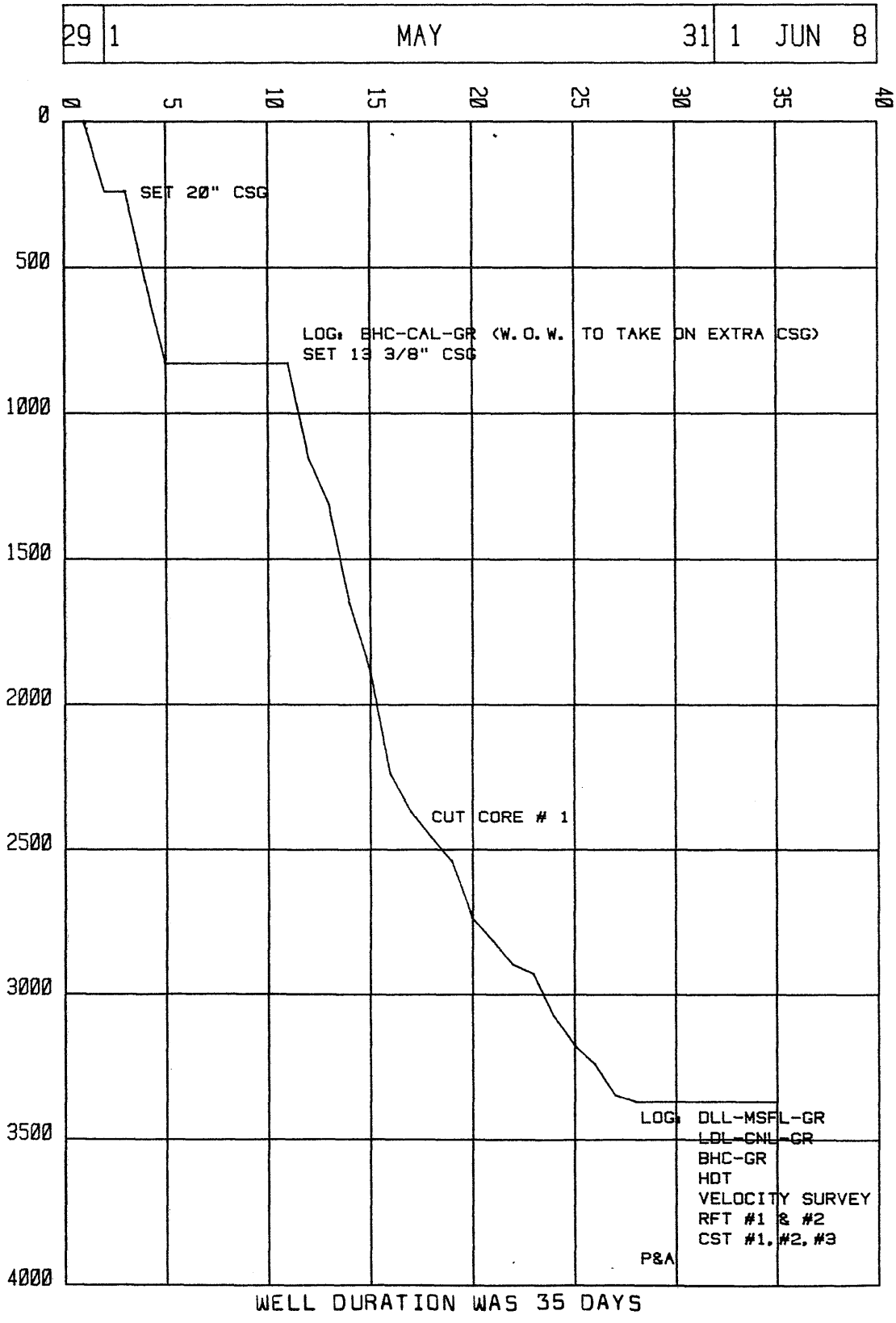
WELL INFORMATION SHEET
(SUPPLEMENTARY)

Sheet No. 1

WIRELINE LOGGING (continued)

Depth from	Depth to	Hole size	Date run	Logs run
-	-	12¼"	28/5/83	CST NO. 1 (SHOT 51, RECOVERED 33)
-	-	12¼"	28/5/83	CST NO. 2 (SHOT 51, RECOVERED 46)
-	-	12¼"	29/5/83	CST NO. 3 (SHOT 30, RECOVERED 27)

PROGRESS LOG
ESSO AUSTRALIA LTD. TERAGLIN NO. 1



WELL DURATION WAS 35 DAYS

WELL HISTORY

29th April 1983. Under tow to location, 38° 22' 50.90" S 148°20' 30.13" E, ran all anchors.

30th April 1983. Ballasted down rig (RKB to ML of 100.28m) and ran the base plate. Made up BHA and tension anchors prior to RIH and spudding the well at 16:15 hours. Continued drilling 26" hole to 239m. (20" casing point.) With negligible weight on the bit increasing to 9-10 K pounds the section drilled at 20-60 m/hr with occasional ROP's over 100 m/hr.

1st May 1983. POOH and retrieve survey (3/4°). RIH for wiper trip; tight hole from 195 to 214m, and circulated for 15 mins prior to POOH to run 20" casing, which was set at 224m. Cemented casing. POOH with stinger and 20" running tool. The BOP and riser were then run, the stack being landed at 23:10 hours. A test of the 20" casing then failed.

2nd May 1983. Failing in an attempt to pressure test against the shear rams, the test tool was made up and run after pulling the divertor running tool and wear bushing. The connector tested OK and the wear bushing was run again prior to hooking up the flowline and divertor.

Making up the new BHA with Bit No. 2 (HTC OSC 3AJ 17½") and RIH to 129m (tight inside casing), cement was drilled for over 5 hours before drilling out the shoe and washing the rathole to 239m. Drilling 17½" hole continued to 543m in the Gippsland Limestone formation with 30-80% claystone evident below 400m. Maximum gas was 220/250/100 units at 490m and was steadily increasing below 320m, only occasionally returning to a background of around 30 units. Drill rates prior to 440m were in excess of 150m/hr and below 440m, 30-100 m/hr on average.

3rd May 1983. Continued drilling 17½" hole to 828m (13-3/8" casing point. Maximum gas was 13/40/29 units at 600m over a background of 12-16 units. ROP's steadied to 50-90 m/hr to 690m and then down to 20-50 m/hr to 828m. Increased mud weight from 8.7 -- 9.2 ppg and slower ROP's with reduced WOB resulted in the much lower gas readings than those observed a day earlier and the wiper trip gas after POOH to the 20" casing shoe and returning to bottom was 0/35.3/10 units. Retrieving a survey (¼°) and POOH, Schlumberger were rigged up and logged from 824-224m. (BHC-CAL-GR)

4th May 1983. RIH for wiper trip, 4m of fill were found and circulating out maximum gas was 9.5 units. POOH and wait on weather to off-load work boats with required remainder of 13-3/8" casing.

5th May 1983. Still waiting on 13-3/8" casing. RIH with open-ended DP to 254m and circulated for 15 mins, tested cement lines to 600 psi and pumped 10 bbls seawater ahead of 100 sx cement mixed with 28 bbls seawater (slurry weight 13.5 ppg) and displaced with 11 bbls seawater.

POOH slowly to 229m and circulating 1½x annular volume (no cement in returns), 5 bbls seawater were then pumped ahead of 340 sx cement mixed with 40½ bbls (slurry weight 15.8 ppg) and displaced with 8½ bbls seawater. POOH to 174m and reverse circulating out (no cement

evident in returns).

6th May 1983. Waiting on weather to pull BOP stack after RIH and tagging cement at 186m and running in again to retrieve the wear bushing.

7th May 1983. Pulled the BOP stack to the surface, and the cement assembly was made up. RIH and screwed into the wellhead. Rigging up the surface lines and circulati (failing the first time due to a leaking bull plug necessitating POOH and RIH again), 5 bbls/ minute at 450 pounds/sq inch were circulated, with divers monitoring circulation. Testing the lines to 1000 psi, 588 sx cement displaced with 14 bbls of seawater were pumped. Divers observed no cement and circulation continued to a total of 44½ bbls until cement was observed. Backing out and laying down the running tool, the stack was then run back to bottom.

8th May 1983. Running riser and landing the BOP stack at 03:15 hours and running in to test for 10 mins at 500 psi the wear bushing was run and a new BHA made up and RIH. Cement was tagged at 177m and drilled soft to 186m and hard to 255m. Procedure was then to ream from 255m to 325m, RIH to 808m and wash and ream from 808m to 828m, circulating B/U and conditioning the mud (B/U gas was 0.5/54/6.1 units). Pumping a slug and pulling up 23 stands to 171m for a wiper trip and RIH to 828m again, no fill was found and B/U from the wiper trip was 0.7/1.3/0.2 units. Pumping a slug, the bit was POOH to run 13-3/8" casing.

9th May 1983. Pulling the wear bushing, the 13-3/8" casing was run and cemented, (shoe at 814m). Prior to cementing, the hole was circulated up the outside of the casing but maximum gas observed was 0.5 units.

10th May 1983. M/U a new BHA, testing the casing and shear rams to 1500 psi, and RIH, the cement was tagged at 782m. Trip gas to surface was 0.2/5/0 units, and drilling 6m of new formation to 834m a PIT was conducted to yield 17.5 ppg MWE after the formation held (without leak off) to 1200 psi. Drilling 12¼" hole continued to 1153m through the Gippsland Limestone formation with ROP's varying between 60-80 m/hr from the casing shoe to 900m and mainly 20-40 m/hr from 900m to 1153m. Maximum gas recorded was 8/13.2/9 units at 856m over BG levels of 3-6 units. The bit used (No. 3) was an HTC X3A. A flow check at 948m indicated no flow.

11th May 1983. Drilling 12¼" hole continued to 1296m where the bit was pulled due to low ROP's and Hi-torque. (BCO was 5/5/$\frac{1}{8}$). A survey run prior to pulling the bit indicated a 1° deviation. RIH with Bit No. 4 (HTC X3A) the trip gas was 1.1/32.1/3.8 units and maximum gas for the day was 6.1/11.4/7.9 units at 1264m over background levels of 4-6 units above 1296m and 7-9 units below that with Bit No. 4. ROP's remained consistently at 15-20 m/hr (both bits) and reaming a single at 1312m yielded 7/13.2/8 units of gas. Drilling ahead with Bit No. 4, midnight depth was 1312m.

12th May 1983. Drilling continued to 1649m with fairly constant ROP's of 15-22 m/hr. Maximum gas was 7.8/16.3/9.3 units at 1329m over BG levels of 4 -- 6 units (occasionally rising to 8 units) and flow checks were made (both negative) at 1618m and 1630m.

13th May 1983. Drilling continued to 1724m where Bit No. 4 was

POOH, after a survey was dropped (misrun), having been on bottom for 26 hours and 329000 revolutions following an increase in torque and decrease in ROP's. No. 5 (HTC X3A) was RIH, and bottoms up circulated (0-51-15 units) prior to dropping a survey, 5 stands were pulled and the survey recovered ($1\frac{1}{2}^{o}$ N 50^{o} E). RIH and continued drilling to 1886m, with ROP's of 20 m/hr, background gas levels were 4-7 units with a maximum of 1.6/11.6/7.2 units from 1886m.

14th May 1983. Drilling continued to 2239m with a maximum gas of 7.5 units from 1889m and background gas of 3 units. A survey was dropped ($\frac{1}{2}^{o}$ S 20^{o} W). Flow checks were made at 1448m and 1962m after drill-breaks. POOH due to increased torque and decreased ROP's. 20-40 kips of drag was noted on the first 4 stands. The bit was graded T5, B8, I, having, spent 24 hours, on bottom and after 223000 revolutions. A PIT Phase III was conducted, after the BOP's were cleared, and tested to 1150 psi with 9.2+ ppg mud for EMW of 17.5 ppg with no leak off.

15th May 1983. No. 6 (HTC J11) was RIH, and a tight spot encountered at 1524m, no fill was found at bottom. Having worked the junk sub drilling continued. Trip gas was 1/32/7 units. A flow check was made following a drilling break at 2280m (-ve).

Background gas levels were 1.5-2 units with a maximum of 5.3 units from 2244m. ROP's were 6-8 m/hr.

16th May 1983. Drilling continued from 2368m at 6-8 m/hr. Flow checks were made at 2424m, 2441m and 2450m following drill breaks, but no flow was seen, and bottoms up circulated at 2426m (maximum gas 2.2 units) and 2459m (maximum gas 2.5 units). The bit was then POOH after 28 on bottom hours and 156000 revolutions, the decision to core having been made. The bit was graded T3, B5, 1/16", the survey was a misrun. The BOP's were then tested and the core-barrel made up. ROP's had increased due to the formation change from calcareous mudstone, in the Lakes Entrance, to sandstone, siltstone and coal, in the Latrobe formation, from 6-10 m/hr to 10-20 m/hr and occasionally higher.

17th May 1983. RIH with 9-7/8" core bit (CHRIS RC 4) and 8" core barrel. Bottoms up were then circulated (2/18/8 units) prior to dropping the ball and coring ahead. The core was cut in 0.52 on-bottom hours and after POOH, 11.5m (100%) was recovered. Bit No. 7 (HTC J22) was then RIH. The rathole was reamed from 2459-2471m before drilling recommenced. Trip gas was 0.6/17.9/0.8 units and background gas for the day was 0.5 - 1 units with a maximum drilled gas of 1.9 units from 2492m. Drilling continued at an average of 14.9 m/hr to 2538m.

18th May 1983. Drilling ahead to 2736m at an average of 9.3 m/hr with background gas of 1 unit and a maximum of 7.5 units from 2691m (a coal). Flow checks were made at 2582m and 2625m, no flow was evident.

19th May 1983. Drilling ahead to 2769m where the torque increased severely. A survey was dropped ($\frac{1}{4}^{o}$) and the bit pulled. It was graded T7, B8, $\frac{1}{4}$", after 30.31 on bottom hours and 142000 revolutions No. 8 (HTC J22) was RIH with a junk sub. Hole was reamed (pre-cautionary) from 2750m - 2769m, and the junk sub worked. Trip gas was 0.8/65/1.4 units. Drilling continued at an average of 6 m/hr to 2813m. A flow check was made at 2756m, no flow, after a drill

break from 2755m.

20th May 1983. Drilling ahead to 2897m at an average of 4.1 m/hr with a BG of 0.2 - 0.4 units, and a maximum of 2.7 units from 2817m. A flow check (negative) was made at 2828m after a drill break from 2825m.

21st May 1983. Continued drilling to 2918m where the bit was pulled due to low ROP's, after 37.36 on-bottom hours, 122000 revolutions, and 149m of hole. The survey was 1½°. No. 9 (HTC J33) was RIH, with precautionary reaming from 2900 - 2918m, and the junk sub worked prior to drilling ahead. Trip gas was 0.6/15.5/2.4 units. BG was 0.3 units for the day with a maximum of 0.6 units from 2921m. Drilling continued slowly at 1.6 m/hr to 2929m.

22nd May 1983. Drilling ahead to 3073m with a maximum gas of 3061 - 3066m over a BG of 0.5 - 1 unit. ROP's were 8-16 m/hr, with some slower sections drilling at 3-6 m/hr (3044m - 3060m). Flow checks were made at 2958m, 2975m, 2989m, 2999m and 3008m, no flows were seen.

23rd May 1983. Drilled ahead to 3175m with background gas of 1 - 2 units and a maximum gas of 6 units from a coal at 3166m. ROP's were 3 - 6 m/hr with some drill-offs in more porous sandstones and coals. Flow checks were made at 3117m and 3163m but no flow was seen.

24th May 1983. Drilled ahead to 3179m where the bit was POOH due to low ROP's. It was graded T4, B5, ¼" having drilled 261m in 51¼ on bottom hours and made 183000 revolutions. No. 10 (HTC J33) was RIH to 3162m and then the hole was reamed to 3179m. Having worked the junk sub drilling recommenced to 3239m. Trip gas was 1.3/13.1/3.8 units, and maximum gas was 8.5 units from a coal at 3170m, over background levels of 2 to 3 units. Flow checks were made at 3213m and 3217m but no flow was detected.

25th May 1983. Drilling continued to 3347m with a maximum gas of 26 units from 3274m (coal) over a background of 2-3 units. Connection gas was detected from 3238m (2/5.5/2.5 units), 3248m (2/5.3/2 units) and 3295m (6.6/7/5.2 units). It was estimated that the Pore Pressure had risen to 8.7 ppg. Flow checks were conducted at 3260m, 3299m, 3324m, 3333m and 3343m, but no flows were detected. High gas values of 15 units from 3256m, 24 units from 3260m and 26 units from 3275m were associated with coals.

26th May 1983. Drilling ahead continued at 2-6 m/hr with a background gas of 3 units and a maximum of 5 units from 3346m. A flow check was made at KD 3352m, no flow was evident. Drilled on to 3371.3m - T.D. Circulated bottoms up and POOH to shoe. Retrieving the survey (3°) and returning to bottom, WTG was 0.7/5/1.7 units and 6m of fill were found. POOH and Schlumberger rigged up.

27th May 1983. Schlumberger ran the following tools:

DLL-MSFL-GR	(3373.3 - 813m)
LDL-CNL-GR	(3372 - 813m)
BHC-GR	(3373.3 - 813m)
HDT	(3371.5 - 2300m)

28th May 1983. Schlumberger continued logging:

WST (velocity survey) to 3372m 915 levels
RFT's 1, 2
CST Nos 1, 2

29th May 1983. Schlumberger continued logging:

CST No. 3

RIH with open-ended drill pipe to 3300, and B/U were circulated. Set 3 cement plugs (3300m, 2475m, 2351m)

30th May 1983. Cut and retrieved the 13-3/8" casing from 200m. Set Plug No. 4 at 231m. Pulled the stack and riser. Cut the 20" casing.

1st June 1983. Pulled the pile joint, guide base and template. Waited on weather to pull the anchors.

2nd June 1983. Deballasted the rig, pulled the anchors and commenced the tow to "Luderick No. 1". (Well duration was 35 days.)

4. LITHOLOGY AND CORE-O-GRAPHS

LITHOLOGICAL SUMMARY

The objective of TERAGLIN NO. 1 was firstly to test a small topographic high at the top of the Latrobe group, and a series of intra Latrobe Group truncation traps, and secondly to provide stratigraphic control within the Latrobe group where only sparse data currently exists.

(NOTE: The formation tops are open to speculation and are based entirely on examination of cuttings. All depths from R.K.B.)

Gippsland Limestone (239 - 2230m)

The Gippsland Limestone consisted generally of a very light grey to medium dark grey, moderately sorted calcilutite/calcisiltite. The top part of the formation above 800m was predominantly light to medium grey calcarenite/calcisitite grading to very calcareous and sticky claystone in parts and was generally more fossiliferous (typically foraminifera, Bryozoa, Echindermata, Bastropodia and shell fragments). The lower calcisiltite/calcilutite, while being less argillaceous bore increased traces of glauconite and specks of carbonaceous material.

Background gas varied from 3 - 10 units on average below the 13-3/8" casing shoe, after high gas readings of up to 250 units over background levels of 30 units while drilling between the 20" and 13-3/8" casing points, as a result of the high ROP's.

Lakes Entrance Formation (2230 - 2415m)

The Lakes Entrance Formation was a light to medium dark grey, soft to firm, very calcareous mudstone. Foraminifera were evident throughout the formation and traces of pyrite were also present. The mudstone graded in parts to medium-dark grey siltstone and light grey claystone, both slightly to moderately calcareous.

Background gas was consistently around 2 units with C_1 and C_2 recorded along with traces of C_3.

Latrobe Formation (2415 - T.D.)

The Latrobe Formation consisted of interbedded sandstones, siltstones and coal.

The upper Latrobe was mainly sandstone with minor coals and siltstones. The sandstone consisted of loose grains to fine aggregates, clear to frosty, very fine to coarse grains, angular to sub-rounded and poorly sorted. Aggregates were friable with minor argillaceous matrix which was pyritic in parts. No shows were evident in this sandstone. The siltstone was light to medium grey to brownish grey, soft to firm and slightly calcareous, and graded to claystone in parts.

Background gas was low and usually less than 1 unit and minor peaks due to coal were less than 4 units.

The middle Latrobe (2640 - 3040m) consisted of sandstones with thicker interbeds of coal and siltstone. The sandstone being again predominantly loose and grading from well to poorly sorted with

depth. Traces of mica, pyrite and glauconite were also evident and grain size varied from predominantly very coarse in the well sorted sandstone to fine-medium in the deeper more poorly sorted beds. The siltstone was mainly brownish-grey, soft to firm, micaceous and carbonaceous.

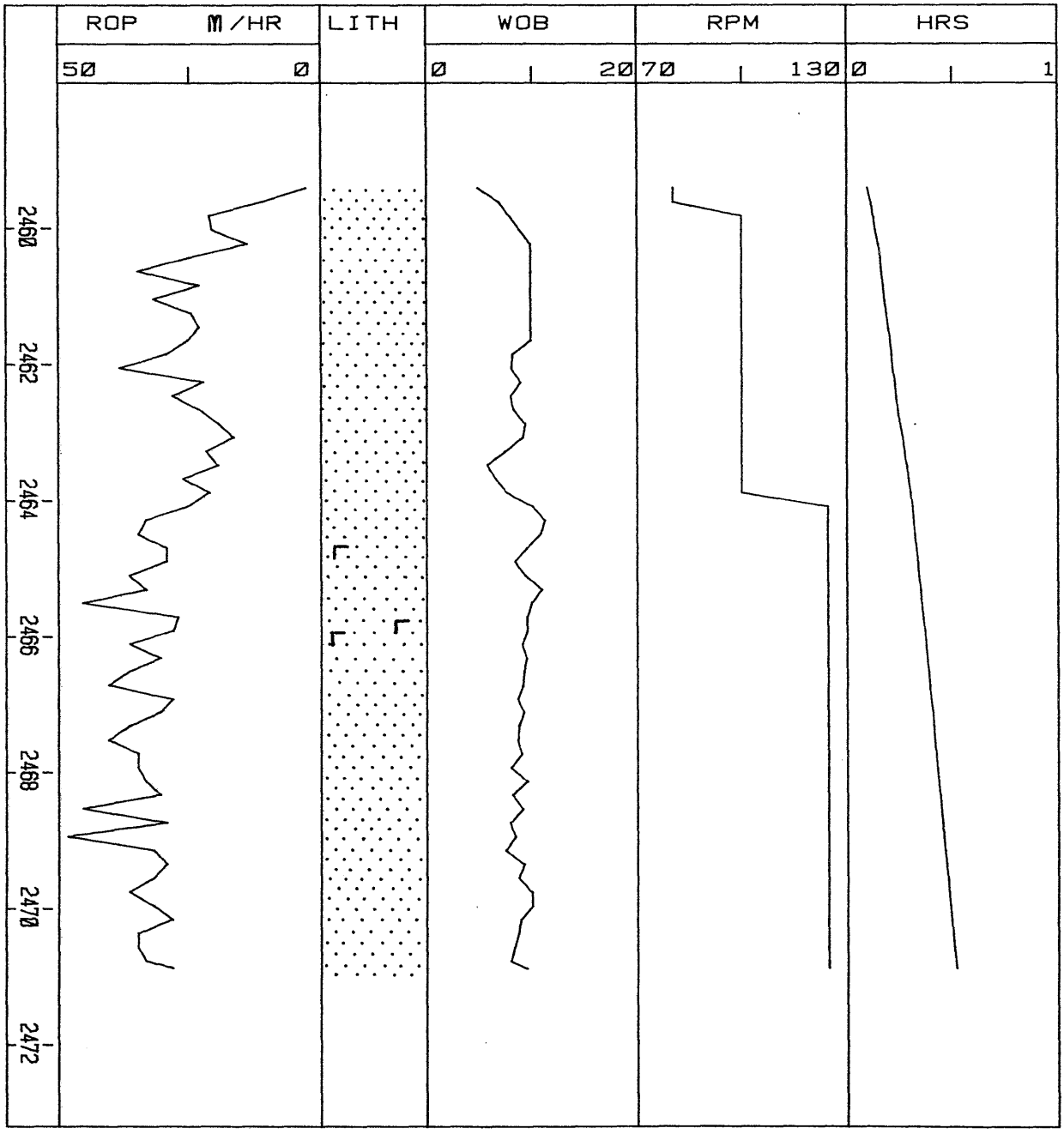
Background gas was again low, below 2 units, with up to 8 units from coals, and no shows were evident. ??→ SWC descriptions and mud log

The lower Latrobe was interbedded sandstone, siltstone and coals with siltstone predominating. The sandstone varied from very fine to medium grained around 3100m, to medium to coarse around 3300m and was usually well sorted with dolomitic cementation when aggregated.

Grains were sub-angular to sub-rounded and nothing more than trace mineral fluorescence was observed, which occurred in the lower sandstone. The siltstone was predominantly medium-dark grey, sub-fissile, firm to hard, and graded to a sub-fissile to fissile, carbonaceous shale in parts. Background gas was 2 to 5 units and peaks from coals reached 18 to 25 units.

CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	TERAGLIN # 1
CORE NO.:	1
INTERVAL CORED FROM	2459.2m. TO 2570.7m.
CUT: 11.5 m	RECOVERED: 11.5m. (100.0%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRISTENSEN RC4
CORE BARREL SIZE:	8.00in. x 5.25in. x 18.29m.
BIT SIZE: 9.68	MUD WT.: 9.3



latimer '81

5. EXTENDED SERVICE PACKAGE

INTERMEDIATE EXTENDED SERVICE INTRODUCTION

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

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

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

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

I.E.S. PRESSURE LOG

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

CORE LAB DRILL DATA PLOT

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

The main plot is that of the corrected "d"exponent, which is presented on a logarithmic scale. The "d" exponent was first developed by 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 compensat 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 multiplie 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.

I.E.S. GEO-PLOT LOG

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

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

Flowline temperature and end-to-end plot of flowline temperature are the two main plots relating to the temperature of the returning drilling fluid. These are plotted on a vertical scale of 1:5000. The use of these plots as an indicator of the presence of over-pressure takes secondary role to the I.E.S. drill log. Continuous observation of flowline temperature may indicate an increase in geothermal gradient. Factors affecting temperature are noted on the log, such as new bit runs, changes in the circulation rates, circulating cuttings out and the addition of water and chemicals to the active mud system. Since the goal of the end-to-end plot is to provide a representation of the geothermal gradient, all surface changes which would cause artificial changes in 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 (%), is made using data supplied by Schlumberger. Two-cycle semi-log paper is used, with a vertical scale of 1:10000. As far as possible only clean shale points are selected and plotted. The relatively compressed vertical scale makes deviations from the normal compaction trend easier to identify.

PROGRESS LOG

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

DATA RECORDING

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

MUD DATA SHEETS

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

DRILLING PARAMETER PLOT

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

HYDRAULIC ANALYSES

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

GAS COMPOSITION ANALYSIS

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

1. Log plot
2. Triangulation plot

Both plots are included in this report.

GRAPHOLOG

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

MISCELLANEOUS

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

CORE LABORATORIES EQUIPMENT

Core Laboratories Field Laboratory 802 monitoring equipment includes the following :

A. MUD LOGGING

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

B. INTERMEDIATE EXTENDED SERVICE PACKAGE

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

CORE LABORATORIES MONITORING EQUIPMENT

DEPTH

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

WEIGHT-ON-BIT

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

ROTARY SPEED

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

PUMP PRESSURE

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

PIT VOLUME

Six individual pits can be displayed on the meter. The pit volume total is calculated in the PVT panel and displayed on a digital meter. The sensors are vertical floats driving potentiometers accurate to +/- 1 barrel. Each sensor is equipped with a wave compensating device. In addition, a sensor is fitted to the rig's trip tank, so that hole fill-up during trips may be closely monitored. A recorder chart displays the levels of the active pits, the pit volume total, and the trip tank.

PUMP STROKES

These are the limit switch type, counting individual strokes. The Pulse Data Box can monitor one or two pumps individually or integrate the total number of strokes from both pumps. The pump rate per minute is displayed on a recorder chart.

ROTARY TORQUE

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

MUD TEMPERATURE

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

MUD CONDUCTIVITY

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

All the sensors are 5 to 24V DC powered with the exception of the air driven gas trap. Along with monitoring and maintaining the above equipment, Core Lab performed other duties...

CUTTINGS

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

GAS

1. Flame Ionization Total Hydrocarbon gas detector.
   The T.H.M. accurately determines hydrocarbon concentrations up to 100% saturation.

2. Flame Ionization Detector chromatograph.
   The F.I.D. is capable of accurate determination of hydrocarbon concentration from C1 to C6+.

3. Hot Wire gas detector (Wheatstone Bridge type).
   A back-up system for total gas detection.

SHALE DENSITY

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

PRESSURE SUMMARY

TERAGLIN NO. 1 was drilled in the Gippsland Basin in an area where abnormal pressures have not previously been encountered, thus normal pressureswere expected for this well.

Core Laboratories FL 802 monitored various pressure detection parameters, the primary means of detection being plotted on the 'DRILL DATA PLOT' (see plots at the end of this report).

The 'd'c exponent trend shown on the Drill Data Plot is scattered down to 600m, reflecting the poorly consolidated limestone and claystone lithology. Gas in this section was high with up to 250 units of gas measured over a background of 30 units. These high values were due to the high ROP's releasing gas from the cuttings drilled rather than produced gas from the formation and pressures are considered to be normal in this section.

The 'd'c exponent then manifests a normal trend down to 1550m, with offsets occurring at the change in hole size for NB 3 and at NB 4. Gas levels dropped down to a BG of 5 units in this section, mud weight having been increased to 9.2 ppg by this stage.

A vertical trend is then established down to 1700, and then a drill-off trend is noticeable to 2400m. This tendency is common in the Gippsland Basin in this Gippsland Limestone section and reflects transitional changes in limestone from a calcilutite through a calcisiltite to a calcareous siltstone or mudstone in the Lakes Entrance Formation, and is not thought to be indicative of abnormal pressures.

In the Latrobe Formation an initial drill-off is seen reflecting the lithological change to a predominantly sandstone/siltstone sequence, and then a normal trend is established to T.D. which is seen to be scattered due to the interbedded nature of the formation. Gas levels are low, below 1 unit with occasional peaks from coals down to 3050m where background levels start to rise to 2-3 units. This increase is due mainly to the increased coal content in the formation plus a probable rise in Pore Pressure (RFT data suggests that the rise is from 8.3 ppg to 8.4 ppg). Background gas levels continued to rise to 3-4 units by 3200m, and connection gas was first noted at 3238m (2/5.5/2 units) and at 3248 (2/5.5/2 units) from which it was concluded that Pore Pressures had risen still further. Coal breaks then became more common, camoflaging other possible connection gas, until 3295m where a peak of 6/7/5 units was noted, the BG also having increased to 4-6 units, which substantiated the likely pressure increase. Mud weight for this interval was 9.2 - 9.3 ppg, providing overbalance of 200-300 psi. Gas dropped off to a BG of 2 units after 3300m.

A plot of selected d'c' exponents from 'shaly' formations was made but this proved inconclusive due to well cemented sandstones, a high calcareous content in samples and down hole junk influencing ROP's.

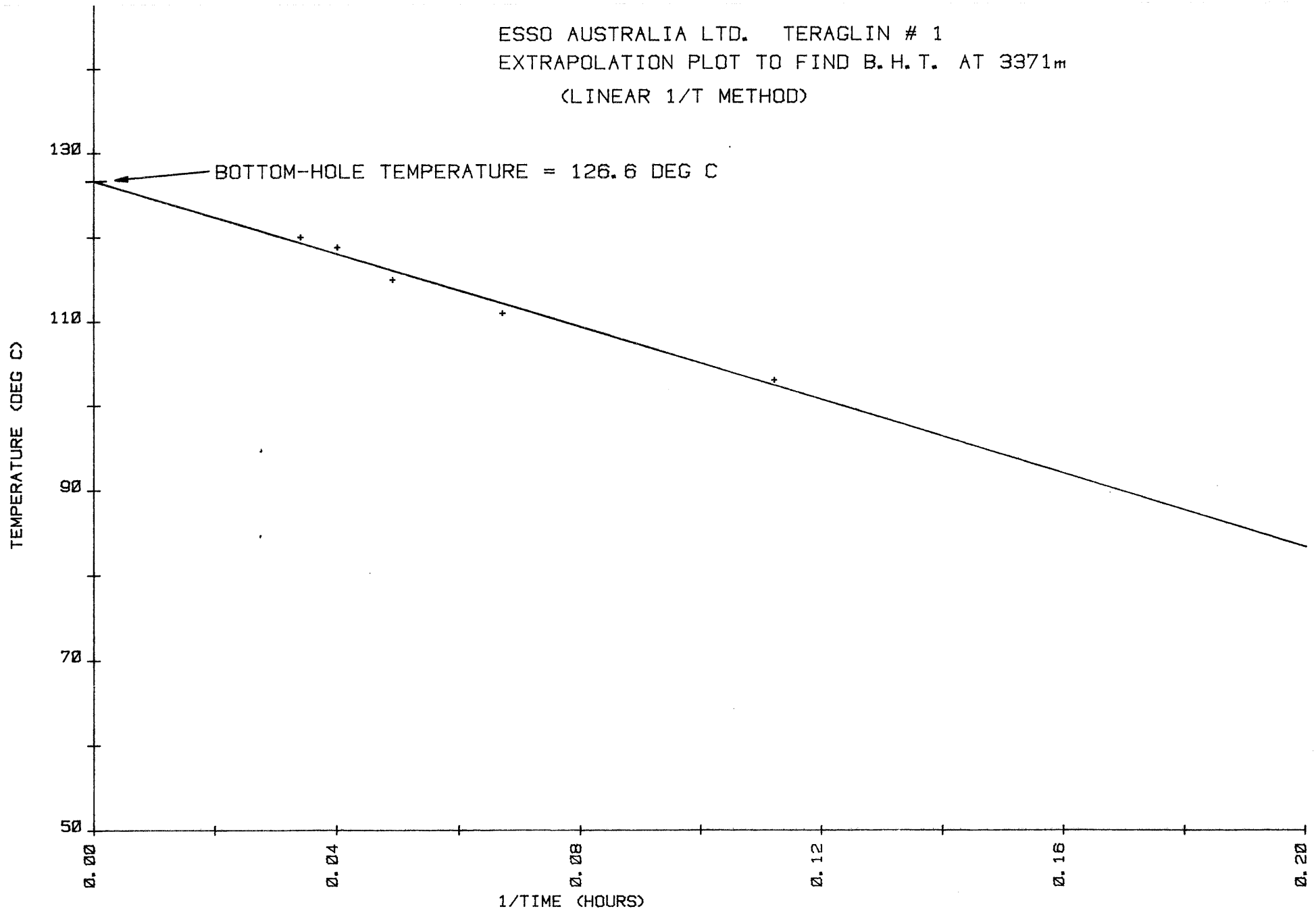
Reliable conclusions cannot be drawn from the temperature plot due to the periodic treatment of the mud system as well as bit changes, but the end-to-end curve indicates a normal trend with a thermal gradient for TERAGLIN NO. 1 of 3.43^{o}F per 100m and the maximum bottom hole temperature at 3371m (extrapolated by Horner method) was 127.6^{o}C (261.7^{o}F).

The Pressure Plot is the pressure conclusion log for this well and illustrates the slight increase in pore pressure below 2750m as evidenced by Schlumberger's Repeat Formation Test Data. The increase in pressure was from 8.2 to 8.3 and then to 8.4 below 3030m.

The Fracture Gradient was derived using information obtained from an integrity test at the 13-3/8" casing shoe at 814m, and the shape of the curve is based on data obtained from the U.S. Gulf Coast Basin. Leak-Off did not occur and the formation was tested to 17.5 MWE.

The Gulf Coast curve was then offset to match this local data. This is hence as true a fracture gradient as can be obtained until further leak-off data on the Gippsland Basin is available.

7. B.H.T. ESTIMATION


ESSO AUSTRALIA LTD. TERAGLIN # 1
EXTRAPOLATION PLOT TO FIND B.H.T. AT 3371m
(LINEAR 1/T METHOD)
BOTTOM-HOLE TEMPERATURE = 126.6 DEG C
130
110
90
70
50
TEMPERATURE (DEG C)
0.00
0.04
0.08
0.12
0.16
0.20
1/TIME (HOURS)

CORE LAB

B.H.T. INTERPOLATION (LINEAR 1/T METHOD) AT 3371 M

STRAIGHT LINE LEAST SQUARES BEST FIT

1/TIME ON A LINEAR SCALE AGAINST TEMP (DEG C) ON A LINEAR SCALE

ENTERED DATA:

DATA SET #	T	1/TIME	TEMP (DEG C)	LOG:
1	8.92	0.112	103.0	DLL-MSFL-GR
2	14.83	0.067	111.0	LDL-CNL-GR
3	20.58	0.049	115.0	BHC-GR
4	24.75	0.040	118.8	HDT
5	29.25	0.034	120.0	Velocity Surve;

COEFFICIENT & CONSTANT:

Y = m.X + c where m = -2.1652993E 02 and c = 1.2663841E 02

INTERPOLATED DATA:

1/TIME	TEMP (DEG C)
0.000	B.H.T.=126.6

CORE LAB

B.H.T. INTERPOLATION (HORNER METHOD) AT 3371 m

STRAIGHT LINE LEAST SQUARES BEST FIT

(T+t)/T ON A LOGARITHMIC SCALE AGAINST TEMP (DEG C) ON A LINEAR SCALE

ENTERED DATA:

DATA SET #	T	HORNER TIME (T+t)/T	TEMP (DEG C)	LOG:
1	8.92	1.196	103.0	DLL-MSFL-GR
2	14.83	1.118	111.0	LDL-CNL-GR
3	20.58	1.085	115.0	BHC-GR
4	24.75	1.071	118.8	HDT
5	29.25	1.060	120.0	Velocity Surve

COEFFICIENT & CONSTANT:

Y = m.log(X) + c where m = -3.2286632E 02 and c = 1.2755290E 02

INTERPOLATED DATA:

(T+t)/T	TEMP (DEG C)
1.000	B.H.T. = 127.6

NOTE: HORNER TIME IS (T+t)/T WHERE T=Time since circulation stopped
t=Time of circulation
=1.75 hours in this case.

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/m

OVERBURDEN EQUIVALENT DENSITY. .Pounds per gallon

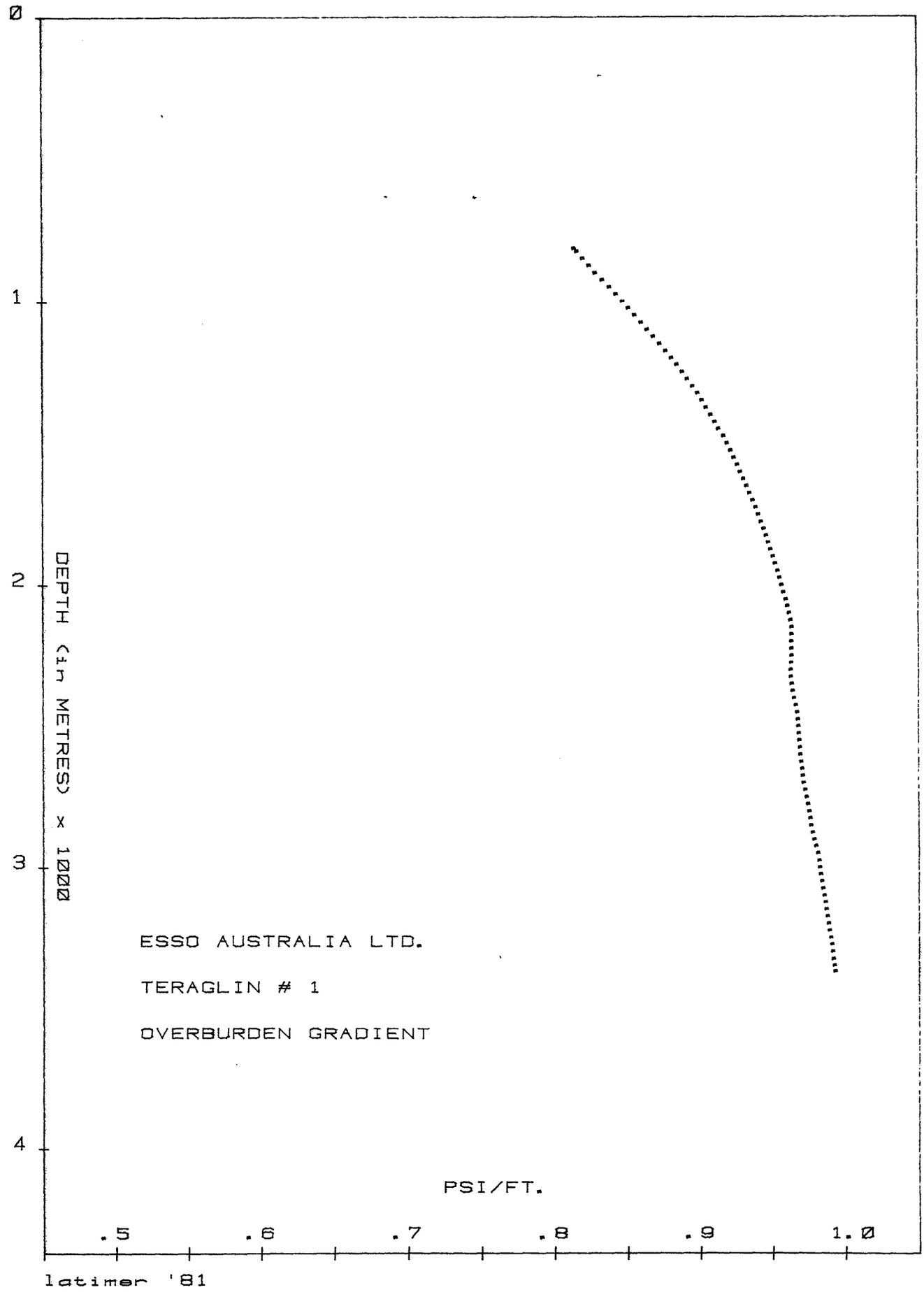
BULK DENSITY TAKEN FROM AVERAGED F.D.C. LOG, OR FROM SONIC LOG FOR SECTIONS WHERE THE F.D.C. LOG IS NOT AVAILABLE.

OVERBURDEN GRADIENT CALCULATIONS

DEPTH from	DEPTH to	AVR.BULK DENSITY	O/BURDEN INCR.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
m	m	gms/cc	psi	psi	psi/ft	ppg
0	100	1.02	44.29	44.29	0.442	8.49
100	814	2.00	618.08	662.37	0.814	15.65
814	825	2.21	10.53	672.90	0.816	15.69
825	850	2.20	23.82	696.71	0.820	15.76
850	875	2.25	24.36	721.07	0.824	15.85
875	900	2.25	24.36	745.42	0.828	15.93
900	925	2.33	25.22	770.65	0.833	16.02
925	950	2.35	25.44	796.09	0.838	16.12
950	975	2.35	25.44	821.52	0.843	16.20
975	1000	2.35	25.44	846.96	0.847	16.29
1000	1025	2.34	25.33	872.29	0.851	16.37
1025	1050	2.38	25.76	898.06	0.855	16.45
1050	1075	2.40	25.98	924.04	0.860	16.53
1075	1100	2.41	26.09	950.13	0.864	16.61
1100	1125	2.43	26.30	976.43	0.868	16.69
1125	1150	2.45	26.52	1002.95	0.872	16.77
1150	1175	2.46	26.63	1029.58	0.876	16.85
1175	1200	2.48	26.85	1056.43	0.880	16.93
1200	1225	2.45	26.52	1082.95	0.884	17.00
1225	1250	2.45	26.52	1109.47	0.888	17.07
1250	1275	2.46	26.63	1136.10	0.891	17.14
1275	1300	2.51	27.17	1163.27	0.895	17.21
1300	1325	2.47	26.74	1190.01	0.898	17.27
1325	1350	2.45	26.52	1216.53	0.901	17.33
1350	1375	2.45	26.52	1243.05	0.904	17.39
1375	1400	2.47	26.74	1269.79	0.907	17.44
1400	1425	2.48	26.85	1296.63	0.910	17.50
1425	1450	2.45	26.52	1323.16	0.913	17.55
1450	1475	2.56	27.71	1350.87	0.916	17.61
1475	1500	2.45	26.52	1377.39	0.918	17.66
1500	1525	2.46	26.63	1404.02	0.921	17.71
1525	1550	2.47	26.74	1430.76	0.923	17.75
1550	1575	2.46	26.63	1457.39	0.925	17.79
1575	1600	2.45	26.52	1483.91	0.927	17.84
1600	1625	2.47	26.74	1510.64	0.930	17.88
1625	1650	2.47	26.74	1537.38	0.932	17.92
1650	1675	2.50	27.06	1564.44	0.934	17.96
1675	1700	2.49	26.95	1591.40	0.936	18.00
1700	1725	2.47	26.74	1618.14	0.938	18.04
1725	1750	2.47	26.74	1644.87	0.940	18.08
1750	1775	2.49	26.95	1671.83	0.942	18.11
1775	1800	2.46	26.63	1698.46	0.944	18.15
1800	1825	2.46	26.63	1725.09	0.945	18.18
1825	1850	2.45	26.52	1751.61	0.947	18.21
1850	1875	2.46	26.63	1778.24	0.948	18.24
1875	1900	2.46	26.63	1804.87	0.950	18.27
1900	1925	2.47	26.74	1831.61	0.951	18.30
1925	1950	2.47	26.74	1858.34	0.953	18.33
1950	1975	2.45	26.52	1884.86	0.954	18.35
1975	2000	2.47	26.74	1911.60	0.956	18.38

DEPTH from	DEPTH to	AVR.BULK DENSITY	O/BURDEN INCR.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
m	m	gms/cc	psi	psi	psi/ft	ppg
2000	2025	2.45	26.52	1938.12	0.957	18.41
2025	2050	2.48	26.85	1964.97	0.959	18.43
2050	2075	2.43	26.30	1991.27	0.960	18.45
2075	2100	2.45	26.52	2017.80	0.961	18.48
2100	2125	2.43	26.30	2044.10	0.962	18.50
2125	2150	2.32	25.11	2069.21	0.962	18.51
2150	2175	2.23	24.14	2093.35	0.962	18.51
2175	2200	2.21	23.92	2117.28	0.962	18.51
2200	2225	2.20	23.82	2141.09	0.962	18.51
2225	2250	2.25	24.36	2165.45	0.962	18.51
2250	2275	2.19	23.71	2189.16	0.962	18.51
2275	2300	2.13	23.06	2212.21	0.962	18.50
2300	2325	2.26	24.46	2236.68	0.962	18.50
2325	2350	2.35	25.44	2262.12	0.963	18.51
2350	2375	2.35	25.44	2287.55	0.963	18.52
2375	2400	2.45	26.52	2314.08	0.964	18.54
2400	2425	2.52	27.28	2341.35	0.966	18.57
2425	2450	2.46	26.63	2367.98	0.967	18.59
2450	2475	2.30	24.90	2392.88	0.967	18.59
2475	2500	2.32	25.11	2418.00	0.967	18.60
2500	2525	2.30	24.90	2442.89	0.967	18.61
2525	2550	2.31	25.01	2467.90	0.968	18.61
2550	2575	2.34	25.33	2493.23	0.968	18.62
2575	2600	2.32	25.11	2518.34	0.969	18.63
2600	2625	2.35	25.44	2543.78	0.969	18.64
2625	2650	2.40	25.98	2569.76	0.970	18.65
2650	2675	2.36	25.55	2595.31	0.970	18.66
2675	2700	2.42	26.20	2621.51	0.971	18.67
2700	2725	2.46	26.63	2648.14	0.972	18.69
2725	2750	2.49	26.95	2675.09	0.973	18.71
2750	2775	2.41	26.09	2701.18	0.973	18.72
2775	2800	2.52	27.28	2728.46	0.974	18.74
2800	2825	2.42	26.20	2754.65	0.975	18.75
2825	2850	2.41	26.09	2780.74	0.976	18.76
2850	2875	2.50	27.06	2807.80	0.977	18.78
2875	2900	2.55	27.60	2835.41	0.978	18.80
2900	2925	2.60	28.15	2863.55	0.979	18.83
2925	2950	2.59	28.04	2891.59	0.980	18.85
2950	2975	2.50	27.06	2918.65	0.981	18.87
2975	3000	2.40	25.98	2944.63	0.982	18.88
3000	3025	2.40	25.98	2970.61	0.982	18.89
3025	3050	2.53	27.39	2998.00	0.983	18.90
3050	3075	2.52	27.28	3025.28	0.984	18.92
3075	3100	2.53	27.39	3052.67	0.985	18.94
3100	3125	2.47	26.74	3079.40	0.985	18.95
3125	3150	2.45	26.52	3105.92	0.986	18.96
3150	3175	2.46	26.63	3132.55	0.987	18.97
3175	3200	2.52	27.28	3159.83	0.987	18.99
3200	3225	2.50	27.06	3186.90	0.988	19.00
3225	3250	2.53	27.39	3214.28	0.989	19.02

DEPTH from	DEPTH to	AVR.BULK DENSITY	O/BURDEN INCR.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
m	m	gms/cc	psi	psi	psi/ft	ppg
3250	3275	2.49	26.95	3241.24	0.990	19.03
3275	3300	2.47	26.74	3267.97	0.990	19.04
3300	3325	2.46	26.63	3294.60	0.991	19.05
3325	3350	2.46	26.63	3321.23	0.991	19.07
3350	3371	2.47	22.46	3343.69	0.992	19.07


0
1
2
3
4
DEPTH (in METRES) x 1000
ESSO AUSTRALIA LTD.
TERAGLIN # 1
OVERBURDEN GRADIENT
PSI/FT.
.5
.6
.7
.8
.9
1.0
latimer '81

9. GAS ANALYSES

CORE LAB

SIDEWALL CORE GAS ANALYSIS DATA SHEET

SHEET # 1

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. FL 802

WELL TERAGLIN NO. 1

NO	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
6	3278.5	2294	730	118	9	13	18	
7		480	190	108	45	14	9	
10		120	106	79	27	14	18	
11		30	23	7	5	7	-	
104		360	129	126	36	14	18	

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

CORE LAB

BIT RECORD

COMPANY ESSO AUSTRALIA LTD.

WELL TERAGLIN NO. 1

Sheet No. 1

	Bit No.	Make	Type	IADC Code	Size	Jets	Depth In	Hole Made	Drilling Time	On Bottom Hours	Turns K	Condition T B G	Remarks	COST
SR	RR 1	HTC	OSC 3AJ +26" HO	111 -	17½ 26	20/20/20 -	102.5	136.5	7¼	3.62	14	2-2-I	POOH FOR 20" CSG.	-
XR	2	HTC	OSC 3AJ	111	17½	20/20/20	239.0	589.0	18¼	9.26	83	2-5-I	POOH FOR 13-3/8" CSG.	4442
UK	3	HTC	HTC X3A	114	12¼	18/18/16	828.0	468.0	26	20.76	179	5-5-1/8	HI-TORQUE/LOW ROP.	2201
UK	4	HTC	HTC X3A	114	12¼	18/18/18	1296.0	428.4	32¼	26.07	239	5-8-I	HI-TORQUE/LOW ROP.	2201
KK	5	HTC	HTC X3A	114	12¼	18/18/18	1724.4	515.0	29	24.27	223	5-8-I	HI-TORQUE/LOW ROP.	2201
33	6	HTC	HTC J11	437	12¼	18/18/18	2239.4	219.8	33½	28.13	156	3-5-1/16	POOH TO CORE.	6788
333	6	CHRIS	RC 4	4	9-7/8	15/15/14	2459.2	11.5	3/4	0.5	3	20%	100% RECOVERY.	21210
WK	7	HTC	HTC J22	517	12¼	18/18/18	2470.2	299.1	36½	30.31	142	7-8-¼	HI-TORQUE/LOW ROP.	6788
HS	8	HTC	HTC J22	517	12¼	18/16/16	2769.8	148.2	39½	37.34	120	4-4-I	LOW ROP.	6788
BL	9	HTC	HTC J33	537	12¼	15/15/15	2918.0	260.7	56	51.23	183	4-5-¼	LOW ROP.	6637
JK	10	HTC	HTC J33	537	12¼	15/15/15	3178.7	192.6	45	40.38	144	7-8-¼	POOH T.D.	6637

7520-487 (CL 1153)

CORE LAB

BIT RECORD

COMPANY ESSO AUSTRALIA LTD.

WELL TERAGLIN NO. 1

Sheet No. 1

NO.	Bit No.	Make	Type	IADC Code	Size	Cost	Jets	Depth In	Depth Out	Hole Made	Drilling Time	On Bottom Hours	Turns K	Average ROP	Average Cost/ M	Condition T B G
5 SR	RR 1	HTC	OSC 3AJ +26" HO	111 -	17½ 26	-	20/20/20 -	102.5	239.0	136.5	7¼	3.62	14	30.3	187.13	2-2-I
2 XR	2	HTC	OSC 3AJ	111	17½	4442	20/20/20	239.0	828.0	589.0	18¼	9.26	83	63.6	101.58	2-5-I
3 UK	3	HTC	HTC X3A	114	12¼	2201	18/18/16	828.0	1296.0	468.0	26	20.76	179	22.5	235.42	5-5-1/8
9 UK	4	HTC	HTC X3A	114	12¼	2201	18/18/18	1296.0	1724.4	428.4	32¼	26.07	239	16.4	319.65	5-8-I
3 KK	5	HTC	HTC X3A	114	12¼	2201	18/18/18	1724.4	2239.4	515.0	29	24.27	223	21.2	257.66	5-8-I
183	6	HTC	HTC J11	437	12¼	6788	18/18/18	2239.4	2459.2	219.8	33½	28.13	156	7.8	712.57	3-5-1/16
B 333	6	CHRIS	RC 4	4	9-7/8	21210	EQUIVALENT 15/15/14	2459.2	2470.7	11.5	3/4	0.5	3	22.1	1844.35	20%
3 WK	7	HTC	HTC J22	517	12¼	6788	18/18/18	2470.7	2769.8	299.1	36½	30.31	142	9.9	563.06	7-8-¼
0 HS	8	HTC	HTC J22	517	12¼	6788	18/16/16	2769.8	2918.0	148.2	39½	37.34	120	4.0	1349.01	4-4-I
5 BL	9	HTC	HTC J33	537	12¼	6637	15/15/15	2918.0	3178.7	260.7	56	51.23	183	5.1	1000.38	5-4-¼
7 JK	10	HTC	HTC J33	537	12¼	6637	15/15/15	3178.7	3371.3	192.6	45	40.38	144	4.8	1126.20	7-8-¼

7520-486 (CL 1152)

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

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL TERAGLIN NO. 1

Sheet No. 1

DEPTH (M)		239	485	828	828	828	828
DATE	30/4/83	1/5/83	2/5/83	3/5/83	4/5/83	5/5/83	6/5/83
TIME			22:00	11:00	10:00		
WEIGHT		8.6+	8.9	9.2	9.0		
FUNNEL VISCOSITY			32	33	30		
PV/YP				4/16	3/12		
N/K	S	S	S	.26/3.88	.26/2.91	S	S
GEL: INITIAL/10 MIN	E	E	E	3/5	2/3	E	E
pH	A	A	A	9.6	9.3	A	A
FILTRATE: API/API HTHP				-/-	-/-		
CAKE	W	W	W	1	1	W	W
SALINITY (PPM)	A	A	A	18700	18000	A	A
SAND	T	T	T	1/4	1/4	T	T
SOLIDS	E	E	E	4	2	E	E
OIL	R	R	R	-	-	R	R

REMARKS:

DRILLED 26" HOLE SET 20" CSG AT 224M

DRILLED 17½" HOLE TO 828m AND LOG

WOW TO RUN 13-3/8" CSG

DEPTH (M)	828	828	828	1139	1298	1639	1837
DATE	7/5/83	8/5/83	9/5/83	10/5/83	11/5/83	12/5/83	13/5/83
TIME		21:45	22:45	22:45	22:00	23:15	21:00
WEIGHT		9.0	9.0+	9.0	9.1	9.2	9.2
FUNNEL VISCOSITY		45	40	32	28	32	37
PV/YP		10/32	4/17	5/18	3/6	3/13	6/22
N/K	S	.31/6.15	.25/4.38	.28/3.92	.41/.90	.23/3.94	.27/4.38
GEL: INITIAL/10 MIN	E	5/27	6/8	6/8	3/5	4/6	6/18
pH	A	9.7	12.0	10.2	9.9	9.2	10.4
FILTRATE: API/API HTHP	W	-/-	-/-	NC	NC	NC	NC
CAKE	A	3	-	-	-	-	-
SALINITY (PPM)	T	17400	17000	17000	17000	15000	16000
SAND	E	1/4	TR	TR	TR	TR	TR
SOLIDS	R	3	5	5	5	5	5
OIL		-	0	0	0	0	0

REMARKS:

W.O.W. CMT PLUGS IN HOLE

CLEAN HOLE AFTER DRILLING PLUGS

RUN 13-3/8" CSG TO 814M CMT SAME

DRILLED 12¼" HOLE

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL TERAGLIN NO. 1

Sheet No. 2

DEPTH (M)	2235	2361	2459	2505	2724	2799	2900
DATE	14/5/83	15/5/83	16/5/83	17/5/83	18/5/83	19/5/83	20/5/83
TIME	19:00	23:00	14:00	22:00	22:00	22:00	01:00
WEIGHT	9.2+	9.3	9.3	9.3	9.3	9.3+	9.2+
FUNNEL VISCOSITY	42	48	49	45	44	45	46
PV/YP	8/12	9/21	8/26	8/28	11/23	8/24	8/26
N/K	.49/.97	.38/2.83	.30/5.08	.31/5.22	.39/3.00	.33/4.47	.30/5.1
GEL: INITIAL/10 MIN	8/10	9/21	12/30	13/32	12/32	14/28	22/34
pH	9.5	10.6	10.5	10.8	10.6	10.4	10.1
FILTRATE: API/ HTHP	16	10.6/21.8	9.8/25	10.8/25	9.8/22	9.6/20.8	10.2/21.8
CAKE	2	1	1	1	1	1	1
SALINITY (PPM)	18000	17000	18000	19000	20000	20000	19000
SAND	TR	TR	TR	1/4	1/4	1/4	1/4
SOLIDS	6	7	7	7	7	8	8
OIL	0	0	0	0	0	0	0
NITRATE (MG/L)		200	200	200	200	200	180

REMARKS:

DRILLED 12¼" HOLE

DEPTH (M)	2922	3063	3168	3233	3336	3371	3371
DATE	21/5/83	22/5/83	23/5/83	24/5/83	25/5/83	26/5/83	27/5/83
TIME	22:30	22:00	22:00	22:00	21:30	17:30	16:00
WEIGHT	9.2	9.2	9.2+	9.3	9.2	9.3	9.2
FUNNEL VISCOSITY	45	43	43	41	41	45	38
PV/YP	8/22	8/25	7/29	9/24	8/21	10/25	6/14
N/K	.36/3.45	.31/5.22	.28/6.38	.34/3.602	.35/3.24	.36/3.65	.38/1.8
GEL: INITIAL/10 MIN	18/34	21/40	28/36	16/28	15/21	25/36	10/22
pH	10.5	10.2	10.4	10.5	10.3	10.5	10.4
FILTRATE: API/API HTHP	9.8/20.6	9.6/20.2	7.8/19.2	7.7/19.1	7.3/18.3	8.8/19.2	6.8/18.4
CAKE	1	1	1	1	1	1	1
SALINITY (PPM)	19000	20000	19700	20000	20000	20000	20000
SAND	TR	TR	TR	TR	TR	TR	TR
SOLIDS	7	7	5	5	4.5	5	5
OIL	0	0	0	0	–	–	–
NITRATES (MG/L)	200	140	160	160	190	160	140

REMARKS:

DRILLED 12¼" HOLE

T.D. OF 3371M REACHED. SCHLUM. LOGGING

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL TERAGLIN NO. 1

Sheet No. 3

DEPTH (M)	3371	3371					
DATE	28/5/83	29/5/83					
TIME	18:00	22:00					
WEIGHT	9.2	9.3					
FUNNEL VISCOSITY	42	45					
PV/YP	8/19	12/26					
N/K	.37/2.62	.40/3.22					
GEL: INITIAL/10 MIN	12/28	15/30					
pH	10.3	10.7					
FILTRATE: API/API HTHP	7.2/-	-/-					
CAKE	1						
SALINITY (PPM)	21000						
SAND	TR						
SOLIDS	5						
OIL	-						
NITRATE (MG/L)	140						

REMARKS:

SCHLUM. LOGGING
RUNNING CMT PLUGS
NO MUD IN PITS

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

REMARKS:

R.F.T. DATA SHEETS

CORE LAB

PORE PRESSURE DATA SHEET

DATA FROM: RFT NO. 1

COMPANY: ESSO AUSTRALIA LTD.

WELL : TERAGLIN NO. 1

DEPTH (FROM RKB) IN METERS	DEPTH (FROM MSL) TOTAL VERTICAL DEPTH IN METERS	PORE PRESSURE (PSIA)	PORE PRESSURE GRADIENT EMW (MSL) (PPG)	PORE PRESSURE GRADIENT (PSI/M)
RFT NO. 1				
2468.7	2447.7	3432	8.24	1.402
2508.4	2487.4	3489	8.24	1.403
2608.8	2587.8	3629	8.24	1.402
2701.8	2680.8	3710	8.13	1.384
2737.2	2716.2	3812	8.24	1.403
2760.7	2739.7	3847	8.25	1.404
2837.4	2816.4	3962	8.26	1.407
3032.2	3011.2	4286	8.36	1.423
3063.4	3042.4	4351	8.40	1.430
3106.5	3085.5	4413	8.40	1.430
3114.9	3093.9	4424	8.40	1.430
3167.0	3146.0	4540	8.48	1.443
3215.3	3194.3	4588	8.44	1.436
3227.0	3206.0	4609	8.44	1.438
3228.4	3207.4	4613	8.45	1.438
3228.5	3207.5	4612	8.44	1.438
3273.0	3252.0	4689	8.47	1.442
3305.5	3284.5	4672	8.35	1.422
3328.7	3307.7	4713	8.37	1.425

CORE LAB

PORE PRESSURE DATA SHEET

DATA FROM: RFT NO. 2

COMPANY: ESSO AUSTRALIA LTD.

WELL : TERAGLIN NO. 1

DEPTH (FROM RKB)	DEPTH (FROM MSL)	PORE PRESSURE	PORE PRESSURE GRADIENT EMW (MSL)	PORE PRESSURE GRADIENT
IN METERS	TOTAL VERTICAL DEPTH IN METERS	(PSIA)	(PPG)	(PSI/M)
RFT NO. 2				
3273.0	3252.0	4693	8.48	1.443
3273.2	3252.2	4689	8.47	1.442

CORE LABORATORIES R.F.T. DATA SHEET - SAMPLING DATA

COMPANY : ESSO AUSTRALIA LTD. WELL : TERAGLIN NO. 1

RUN No. : 2 PRESSURE GAUGE TYPE : RFT

CHAMBER No.	1	2
CHAMBER CAPACITY	6	2-3/4
CHOKE SIZE	0.03	0.03
SEAT No.	22	22
DEPTH (M) (from RKB)	3273.2	3273.2
A RECORDING TIMES		
TOOL SET	14:09:47	
PRETEST OPEN	14:10:04	
TIME OPEN		
CHAMBER OPEN	14:11:28	14:34
CHAMBER FULL	14:25:59	14:45:29
FILL TIME	14:31	11:29
START BUILD UP	14:25:59	14:45:59
FINISH BUILD UP	14:32:57	14:58:34
BUILD UP TIME	06:58	13:05
SEAL CHAMBER	14:33	14:58:34
TOOL RETRACT		14:59:42
TOTAL TIME		
B SAMPLE PRESSURES		
IHP (PSIG)	5205	
ISIP (PSIG)	4686	
IFP (PSIG)	151	412
FFP (PSIG)	4260	652
FSIP (PSIG)	4689	4685
FHP ( )		
TEMP. CORR. ( )		
COMMENTS		
C TEMPERATURE		
DEPTH TOOL REACHED(M)	3273.2	3273.2
MAX. REC. TEMP. (°C)		256.304
TIME CIRC. STOPPED		
TIME SINCE CIRC.		
D SAMPLE RECOVERY		
SURFACE PRESSURE (PSIG)	200	350
VOL. GAS (SF)	38	2.5
VOL. OIL ( )		
VOL. WATER (CM^3)	20750	9000
VOL. FILTRATE ( )		
VOL. CONDENSATE ( )		
VOL. OTHER ( )		
E SAMPLE PROPERTIES		
(a) GAS C1 (PPM)	122368	266200
GAS C2 (PPM)	4869	11200
GAS C3 (PPM)	472	500
GAS C4 (PPM)	73	100
GAS C5 (PPM)	0	TR
GAS C6+ (PPM)	-	-
GAS CO_2 (% VOL)	4.7	1.2
GAS H_2S (PPM)	0	0
(b) OIL PROPERTIES		
DENSITY: ( ) HYDROMETER		
DENSITY: ( ) REFRACTOMETER		
REFRACTIVE INDEX		
COLOUR		
FLUORESCENCE		
G.O.R. ( )		

OIL PROPERTIES CONT.		
ODOUR		
POUR POINT (°)		
COMMENTS		
(c) WATER PROPERTIES		
RESISTIVITY ( )	.121@17°C	.168@17°C
Cl (frm. resis.) (Cl°)	21000	15000
Cl (frm. titrat) (PPM)	21500	17000
NO_3 (PPM)	44	22
pH	7.5	7.0
OTHER TRACERS ( )		
DENSITY ( )		
FLUORESCENCE		
COLOUR	LT. BRN	LT. BRN.
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		

F MUD PROPERTIES	
TYPE	SEAWATER/GEL/POLY
RESISTIVITY ( )	.25@17°C
Cl (frm.resis.) ( )	28000
Cl (frm.titrat) (PPM)	21000
NO_3 Drld/1st.circ (MG/L)	160/140
pH	7.2
OTHER TRACERS ( )	-
DENSITY (PPG)	9.2

G GENERAL COMMENTS

? MUD FILTRATE AND FORMATION WATER WERE RECOVERED.

RFT NO. 1 CONSISTED OF 20 PRETESTS ONLY.

2 PRETESTS WERE ALSO CONDUCTED PRIOR TO SAMPLING IN RFT NO. 2.

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3323.0	6.3	60.0	60	9.3	1.95	27.68	98264	668	1130	8.4	21.4
3324.0	8.5	60.0	60	9.3	1.84	27.80	98686	497	1126	8.4	21.4
3325.0	6.9	60.0	60	9.3	1.92	27.95	99205	611	1122	8.4	21.4
3326.0	6.1	60.0	60	9.3	1.97	28.11	99792	692	1119	8.4	21.4
3327.0	5.3	60.0	60	9.3	2.02	28.30	100473	802	1117	8.4	21.4
3328.0	3.3	60.0	60	9.3	2.20	28.60	101556	1276	1118	8.4	21.4
3329.0	4.6	60.0	60	9.3	2.08	28.82	102346	931	1117	8.4	21.4
3330.0	8.0	60.0	60	9.3	1.87	28.94	102796	530	1113	8.4	21.4
3331.0	6.4	60.0	60	9.3	1.95	29.10	103355	659	1110	8.4	21.4
3332.0	5.4	60.0	60	9.3	2.02	29.28	104027	792	1108	8.4	21.4
3333.0	5.9	60.0	60	9.3	1.99	29.46	104642	725	1105	8.4	21.4
3334.0	5.8	60.0	60	9.3	1.99	29.63	105259	727	1103	8.4	21.4
3335.0	5.7	60.0	60	9.3	2.00	29.80	105893	747	1101	8.4	21.4
3336.0	4.5	60.0	60	9.3	2.09	30.03	106694	944	1100	8.4	21.4
3337.0	7.3	60.0	60	9.3	1.90	30.16	107184	577	1096	8.4	21.4
3338.0	8.7	60.0	60	9.3	1.84	30.28	107600	490	1093	8.4	21.4
3339.0	7.0	60.0	60	9.3	1.92	30.42	108116	608	1090	8.4	21.4
3340.0	8.2	60.0	60	9.3	1.86	30.54	108553	515	1086	8.4	21.4
3341.0	7.5	60.0	60	9.3	1.89	30.68	109033	565	1083	8.4	21.4
3342.0	6.5	60.0	60	9.3	1.94	30.83	109583	648	1080	8.4	21.4
3343.0	8.9	60.0	60	9.3	1.83	30.94	109989	478	1077	8.4	21.4
3344.0	7.2	60.0	60	9.3	1.91	31.08	110487	587	1074	8.4	21.4
3345.0	3.2	60.0	60	9.3	2.21	31.39	111604	1316	1075	8.4	21.4
3346.0	2.0	60.0	60	9.3	2.40	31.90	113439	2162	1082	8.4	21.4
3347.0	4.2	59.2	60	9.3	2.10	32.14	114289	1001	1081	8.4	21.4
3348.0	5.9	58.8	60	9.3	1.97	32.30	114897	716	1079	8.4	21.4
3349.0	6.2	58.8	60	9.3	1.95	32.47	115478	684	1077	8.4	21.4
3350.0	5.4	58.5	60	9.3	2.00	32.65	116142	782	1075	8.4	21.4
3351.0	5.1	58.1	60	9.3	2.02	32.85	116853	838	1073	8.4	21.4
3352.0	3.3	60.2	60	9.3	2.21	33.15	117955	1298	1075	8.4	21.4
3353.0	2.7	61.0	60	9.3	2.30	33.53	119303	1588	1078	8.4	21.4
3354.0	2.7	64.0	60	9.3	2.33	33.90	120643	1579	1081	8.4	21.4
3355.0	2.4	65.3	60	9.3	2.39	34.31	122123	1744	1084	8.4	21.4
3356.0	2.6	63.6	60	9.3	2.35	34.70	123520	1646	1088	8.4	21.4
3357.0	2.4	63.8	60	9.3	2.37	35.11	125012	1758	1091	8.4	21.4
3358.0	3.6	62.8	60	9.3	2.21	35.39	126023	1191	1092	8.4	21.4
3359.0	3.7	62.9	60	9.3	2.20	35.66	126995	1145	1092	8.4	21.4
3360.0	4.1	61.9	60	9.3	2.15	35.91	127882	1045	1092	8.4	21.4
3361.0	5.4	61.1	60	9.3	2.03	36.10	128548	785	1090	8.4	21.4
3362.0	1.8	62.1	60	9.3	2.45	36.64	130497	2296	1097	8.4	21.5
3363.0	1.1	57.8	60	9.3	2.58	37.53	133697	3770	1111	8.4	21.5
3364.0	4.5	58.1	60	9.3	2.06	37.75	134490	934	1110	8.4	21.5
3365.0	3.9	59.2	60	9.3	2.13	38.01	135422	1098	1110	8.4	21.5
3366.0	6.6	56.6	60	9.3	1.90	38.16	135964	639	1108	8.4	21.5
3367.0	3.8	56.5	60	9.3	2.11	38.42	136914	1119	1108	8.4	21.5
3368.0	1.0	47.8	60	9.3	2.47	39.45	140609	4353	1125	8.4	21.5
3369.0	6.2	47.5	60	9.3	1.81	39.61	141186	680	1123	8.4	21.5
3370.0	3.2	48.8	60	9.3	2.07	39.92	142317	1332	1124	8.4	21.5
3371.0	3.3	49.2	60	9.3	2.06	40.22	143405	1282	1124	8.4	21.5
3371.3	1.9	52.0	60	9.3	2.29	40.38	143960	2179	1126	8.4	21.5

(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	100.3-239.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.5	BIT RUN	138.7
TOTAL HOURS	3.62	TOTAL TURNS	14080	CONDITION	T2 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
110.0	38.9	9.7	0.25	211	11659.29	108.95	1201.99	-
120.0	39.7	19.7	0.50	1058	12727.70	106.84	646.08	-
130.0	56.0	29.7	0.68	1814	13484.62	75.69	454.03	-
140.0	35.4	39.7	0.96	2983	14682.27	119.76	369.83	-
150.0	33.8	49.7	1.26	4218	15936.70	125.44	320.66	-
160.0	16.4	59.7	1.87	6798	18522.53	258.58	310.26	-
170.0	30.6	69.7	2.19	8171	19909.10	138.66	285.64	-
180.0	41.1	79.7	2.44	9213	20939.90	103.08	262.73	-
190.0	43.8	89.7	2.67	10165	21908.26	96.84	244.24	-
200.0	92.8	99.7	2.77	10616	22365.35	45.71	224.33	-
210.0	62.9	109.7	2.93	11282	23039.19	67.38	210.02	-
220.0	50.6	119.7	3.13	12100	23877.97	83.88	199.48	-
230.0	25.3	129.7	3.52	13698	25551.99	167.40	197.01	-
239.0	92.4	138.7	3.62	14080	25964.88	45.88	187.20	-

BIT NUMBER	2	IADC CODE	111	INTERVAL	239.0-828.0
HTC OSC3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	3.8	BIT RUN	589.0
TOTAL HOURS	9.26	TOTAL TURNS	83317	CONDITION	T2 B5 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
240.0	183.8	1.0	0.01	49	20580.87	23.07	20581	-
260.0	147.2	21.0	0.14	1272	21157.14	28.81	1007.48	-
270.0	297.4	31.0	0.17	1575	21299.74	14.26	687.09	-
280.0	235.3	41.0	0.22	1957	21479.98	18.02	523.90	-
290.0	63.5	51.0	0.37	3374	22147.55	66.76	434.27	-
300.0	83.7	61.0	0.49	4449	22654.11	50.66	371.38	-
310.0	139.5	71.0	0.57	5094	22958.05	30.39	323.35	-
320.0	161.4	81.0	0.63	5651	23220.76	26.27	286.68	-
330.0	289.5	91.0	0.66	5962	23367.24	14.65	256.78	
340.0	255.3	101.0	0.70	6315	23533.35	16.61	233.00	-
350.0	243.2	111.0	0.74	6685	23707.70	17.44	213.58	-
360.0	244.9	121.0	0.78	7052	23880.88	17.32	197.36	-
370.0	259.0	131.0	0.82	7400	24044.63	16.37	183.55	-
380.0	233.8	141.0	0.86	7785	24226.05	18.14	171.82	-
390.0	215.6	151.0	0.91	8202	24422.78	19.67	161.74	-
400.0	214.3	161.0	0.96	8622	24620.69	19.79	152.92	-
410.0	190.5	171.0	1.01	9095	24843.35	22.27	145.28	-
420.0	179.1	181.0	1.07	9597	25080.14	23.68	138.56	-
430.0	182.7	191.0	1.12	10090	25312.21	23.21	132.52	-
440.0	248.3	201.0	1.16	10452	25483.03	17.08	126.78	-
450.0	76.6	211.0	1.29	11627	26036.72	55.37	123.40	-
460.0	46.4	221.0	1.51	13567	26950.89	91.42	121.95	-
470.0	27.8	231.0	1.87	16805	28476.47	152.56	123.27	+
480.0	39.0	241.0	2.12	19114	29564.73	108.83	122.68	-
490.0	162.9	251.0	2.19	19666	29825.08	26.04	118.83	-
500.0	179.1	261.0	2.24	20169	30061.87	23.68	115.18	-
510.0	101.4	271.0	2.34	21056	30480.08	41.82	112.47	-
520.0	60.0	281.0	2.51	22556	31186.91	70.68	110.99	-
530.0	49.4	291.0	2.71	24379	32045.72	85.88	110.12	-
540.0	39.0	301.0	2.97	26689	33134.24	108.85	110.08	-
550.0	38.2	311.0	3.23	29046	34245.15	111.09	110.11	+
560.0	47.1	321.0	3.44	30956	35145.18	90.00	109.49	-
570.0	47.3	331.0	3.65	32859	36041.68	89.65	108.89	-
580.0	66.8	341.0	3.80	34206	36676.65	63.50	107.56	-
590.0	69.5	351.0	3.94	35501	37286.89	61.02	106.23	-
600.0	69.2	361.0	4.09	36801	37899.48	61.26	104.98	-
610.0	73.2	371.0	4.23	38031	38479.08	57.96	103.72	-
620.0	59.7	381.0	4.39	39539	39189.45	71.04	102.86	-
630.0	63.6	391.0	4.55	40954	39856.23	66.68	101.93	-
640.0	52.7	401.0	4.74	42661	40660.84	80.46	101.40	-
650.0	48.9	411.0	4.94	44501	41527.89	86.70	101.04	-
660.0	57.2	421.0	5.12	46074	42268.88	74.10	100.40	-
670.0	66.2	431.0	5.27	47434	42909.75	64.09	99.56	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
680.0	56.1	441.0	5.45	49039	43666.06	75.63	99.02	-
690.0	53.9	451.0	5.63	50709	44453.00	78.69	98.57	-
700.0	35.0	461.0	5.92	53279	45664.04	121.10	99.05	+
710.0	37.0	471.0	6.19	55709	46809.11	114.51	99.38	+
720.0	41.7	481.0	6.43	57866	47825.77	101.67	99.43	+
730.0	51.5	491.0	6.62	59614	48649.23	82.35	99.08	-
740.0	36.7	501.0	6.90	62066	49804.90	115.57	99.41	+
750.0	36.1	511.0	7.17	64556	50978.25	117.33	99.76	+
760.0	39.4	521.0	7.43	66841	52054.99	107.67	99.91	+
770.0	36.5	531.0	7.70	69309	53217.73	116.27	100.22	+
780.0	56.2	541.0	7.88	70911	53972.46	75.47	99.76	-
790.0	40.7	551.0	8.12	73124	55015.43	104.30	99.85	+
800.0	45.5	561.0	8.34	75104	55948.45	93.30	99.73	-
810.0	29.8	571.0	8.68	78127	57372.88	142.44	100.48	+
820.0	30.4	581.0	9.01	81087	58767.70	139.48	101.15	+
828.0	32.3	589.0	9.26	83317	59818.86	131.40	101.56	+

BIT NUMBER	3	IADC CODE	114	INTERVAL	828.0-1296.0
HTC X3A		SIZE	12.250	NOZZLES	18 18 16
COST	2201.00	TRIP TIME	4.7	BIT RUN	468.0
TOTAL HOURS	20.76	TOTAL TURNS	179081	CONDITION	T5 B5 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
830.0	132.1	2.0	0.02	45	22197.91	32.10	11099	-
840.0	33.1	12.0	0.32	1269	23479.71	128.18	1956.64	-
850.0	66.7	22.0	0.47	2529	24115.86	63.62	1096.18	-
860.0	69.5	32.0	0.61	3738	24726.47	61.06	772.70	-
870.0	69.6	42.0	0.76	4946	25336.15	60.97	603.24	-
880.0	54.7	52.0	0.94	6481	26111.31	77.52	502.14	-
890.0	65.7	62.0	1.09	7817	26756.88	64.56	431.56	-
900.0	60.5	72.0	1.26	9305	27457.82	70.09	381.36	-
910.0	51.2	82.0	1.45	11062	28286.00	82.82	344.95	-
920.0	45.2	92.0	1.67	13052	29223.73	93.77	317.65	-
930.0	34.5	102.0	1.96	15663	30453.83	123.01	298.57	-
940.0	26.3	112.0	2.34	19088	32067.87	161.40	286.32	-
950.0	34.1	122.0	2.64	21728	33311.90	124.40	273.05	-
960.0	30.4	132.0	2.97	24693	34709.08	139.72	262.95	-
970.0	30.4	142.0	3.29	27498	36105.07	139.60	254.26	
980.0	36.7	152.0	3.57	29787	37260.74	115.57	245.14	-
990.0	40.4	162.0	3.81	31866	38310.39	104.96	236.48	-
1000.0	40.5	172.0	4.06	33941	39357.68	104.73	228.82	-
1010.0	41.9	182.0	4.30	35916	40368.69	101.10	221.81	-
1020.0	36.3	192.0	4.57	38146	41536.14	116.75	216.33	-
1030.0	41.7	202.0	4.81	40090	42553.98	101.78	210.66	-
1040.0	38.7	212.0	5.07	42185	43650.75	109.68	205.90	-
1050.0	32.8	222.0	5.38	44651	44941.90	129.11	202.44	-
1060.0	35.2	232.0	5.66	46955	46148.23	120.63	198.91	-
1070.0	32.9	242.0	5.97	49416	47437.02	128.88	196.02	-
1080.0	41.0	252.0	6.21	51392	48471.36	103.43	192.35	-
1090.0	28.0	262.0	6.57	54287	49987.00	151.56	190.79	-
1100.0	28.0	272.0	6.92	57176	51499.62	151.26	189.34	-
1110.0	22.6	282.0	7.37	60767	53379.80	188.02	189.29	-
1120.0	22.7	292.0	7.81	64449	55249.37	186.96	189.21	-
1130.0	23.9	302.0	8.23	67961	57022.35	177.30	188.82	-
1140.0	14.9	312.0	8.90	73717	59877.95	285.56	191.92	+
1150.0	18.6	322.0	9.44	78395	62158.44	228.05	193.04	+
1160.0	14.0	332.0	10.15	84600	65183.19	302.47	196.33	+
1170.0	17.9	342.0	10.71	89448	67546.71	236.35	197.51	+
1180.0	14.9	352.0	11.38	95282	70390.52	284.38	199.97	+
1190.0	13.7	362.0	12.11	101719	73485.87	309.54	203.00	+
1200.0	13.7	372.0	12.84	108300	76587.10	310.12	205.88	+
1210.0	12.9	382.0	13.61	115257	79865.58	327.85	209.07	+
1220.0	12.9	392.0	14.39	122260	83165.43	329.99	212.16	+
1230.0	13.0	402.0	15.16	129201	86436.06	327.06	215.02	+
1240.0	13.1	412.0	15.93	136092	89683.56	324.75	217.68	+
1250.0	12.3	422.0	16.74	143390	93122.56	343.90	220.67	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1260.0	11.7	432.0	17.59	151070	96741.39	361.88	223.94	+
1270.0	11.8	442.0	18.44	158716	100344.11	360.27	227.02	+
1280.0	11.4	452.0	19.32	166635	104075.83	373.17	230.26	+
1290.0	12.3	462.0	20.14	173796	107527.46	345.16	232.74	+
1296.0	9.5	468.0	20.76	179081	110195.76	444.72	235.46	+

BIT NUMBER	4	IADC CODE	114	INTERVAL	1296.0-1724.4
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	5.7	BIT RUN	428.4
TOTAL HOURS	26.07	TOTAL TURNS	238949	CONDITION	T5 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1300.0	12.7	4.0	0.32	1894	27713.56	334.72	6928.39	-
1310.0	17.4	14.0	0.89	6255	30148.60	243.50	2153.47	-
1320.0	15.3	24.0	1.55	12179	32928.03	277.94	1372.00	-
1330.0	18.2	34.0	2.09	17253	35252.33	232.43	1036.83	-
1340.0	15.6	44.0	2.74	23222	37974.03	272.17	863.05	-
1350.0	21.4	54.0	3.20	27577	39960.23	198.62	740.00	-
1360.0	23.2	64.0	3.63	31589	41789.75	182.95	652.96	-
1370.0	28.1	74.0	3.99	34904	43301.20	151.14	585.15	-
1390.0	19.8	94.0	5.00	44297	47584.96	214.19	506.22	-
1400.0	19.4	104.0	5.52	49081	49766.33	218.14	478.52	-
1410.0	21.6	114.0	5.98	53382	51727.58	196.12	453.75	-
1420.0	19.7	124.0	6.49	58100	53879.20	215.16	434.51	-
1430.0	21.5	134.0	6.95	62497	55852.80	197.36	416.81	-
1440.0	22.5	144.0	7.40	66763	57737.28	188.45	400.95	-
1450.0	19.0	154.0	7.92	71810	59967.09	222.98	389.40	-
1460.0	19.9	164.0	8.42	76634	62098.17	213.11	378.65	-
1470.0	15.3	174.0	9.08	82927	64878.09	277.99	372.86	-
1480.0	18.1	184.0	9.63	88093	67218.50	234.04	365.32	-
1490.0	14.7	194.0	10.31	94407	70097.66	287.92	361.33	-
1500.0	19.6	204.0	10.82	99155	72262.93	216.53	354.23	-
1510.0	13.4	214.0	11.56	106081	75421.30	315.84	352.44	-
1520.0	17.4	224.0	12.14	111240	77852.54	243.12	347.56	-
1530.0	14.7	234.0	12.82	117375	80743.49	289.09	345.06	-
1540.0	16.4	244.0	13.43	122867	83331.09	258.76	341.52	-
1550.0	15.4	254.0	14.08	128727	86092.45	276.14	338.95	-
1560.0	14.4	264.0	14.77	134967	89032.88	294.04	337.25	-
1570.0	17.0	274.0	15.36	140272	91532.71	249.98	334.06	-
1580.0	16.7	284.0	15.96	145667	94074.96	254.22	331.25	-
1590.0	16.2	294.0	16.58	151224	96693.77	261.88	328.89	-
1600.0	15.0	304.0	17.25	157244	99530.53	283.68	327.40	-
1610.0	15.1	314.0	17.91	163190	102332.55	280.20	325.90	-
1620.0	18.4	324.0	18.45	168075	104634.47	230.19	322.95	-
1630.0	15.7	334.0	19.09	173823	107342.82	270.83	321.39	-
1640.0	16.0	344.0	19.72	179435	109987.56	264.47	319.73	-
1650.0	16.7	354.0	20.31	184810	112520.38	253.28	317.85	-
1660.0	15.8	364.0	20.94	190490	115196.92	267.65	316.48	-
1670.0	11.7	374.0	21.80	198190	118825.33	362.84	317.71	+
1680.0	9.3	384.0	22.87	208185	123385.58	456.03	321.32	+
1690.0	12.2	394.0	23.69	216281	126853.78	346.82	321.96	+
1700.0	17.8	404.0	24.25	221850	129239.34	238.56	319.90	-
1710.0	16.8	414.0	24.85	227582	131762.73	252.34	318.27	-
1720.0	13.9	424.0	25.57	234268	134811.54	304.88	317.95	-
1724.4	8.7	428.4	26.07	238949	136946.18	485.14	319.67	+

BIT NUMBER	5	IADC CODE	114	INTERVAL	1724.4-2239.4
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	6.5	BIT RUN	515.0
TOTAL HOURS	24.27	TOTAL TURNS	222918	CONDITION	T5 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1730.0	16.6	5.6	0.34	2983	31199.54	255.72	5571.35	-
1740.0	19.1	15.6	0.86	7688	33416.64	221.71	2142.09	-
1750.0	19.3	25.6	1.38	12340	35609.01	219.24	1390.98	-
1760.0	15.1	35.6	2.04	18295	38415.13	280.61	1079.08	-
1770.0	18.7	45.6	2.57	23108	40682.89	226.78	892.17	-
1780.0	18.0	55.6	3.13	28105	43037.82	235.49	774.06	-
1790.0	17.3	65.6	3.71	33303	45487.00	244.92	693.40	-
1800.0	19.6	75.6	4.22	37900	47653.45	216.64	630.34	-
1810.0	20.3	85.6	4.71	42325	49738.60	208.52	581.06	-
1820.0	18.9	95.6	5.24	47093	51985.16	224.66	543.78	-
1830.0	20.4	105.6	5.73	51515	54069.14	208.40	512.02	-
1840.0	19.7	115.6	6.24	56088	56223.80	215.47	486.37	-
1850.0	21.2	125.6	6.71	60338	58226.49	200.27	463.59	-
1860.0	19.5	135.6	7.22	64963	60405.90	217.94	445.47	-
1870.0	18.4	145.6	7.77	69843	62705.46	229.96	430.67	-
1880.0	20.9	155.6	8.25	74153	64736.43	203.10	416.04	-
1890.0	19.1	165.6	8.77	78863	66955.89	221.95	404.32	-
1900.0	21.7	175.6	9.23	83055	68912.36	195.65	392.44	-
1910.0	20.9	185.6	9.71	87513	70945.27	203.29	382.25	-
1920.0	20.3	195.6	10.20	92094	73034.18	208.89	373.39	-
1930.0	18.6	205.6	10.74	97102	75318.13	228.40	366.33	-
1940.0	20.2	215.6	11.24	101705	77417.10	209.90	359.08	-
1950.0	18.5	225.6	11.78	106730	79708.56	229.15	353.32	-
1960.0	22.2	235.6	12.23	110915	81617.01	190.84	346.42	-
1970.0	23.8	245.6	12.65	114821	83398.23	178.12	339.57	-
1980.0	24.3	255.6	13.06	118641	85140.37	174.21	333.10	-
1990.0	20.7	265.6	13.54	123136	87190.19	204.98	328.28	-
2000.0	22.1	275.6	13.99	127350	89111.78	192.16	323.34	-
2010.0	23.0	285.6	14.43	131394	90955.78	184.40	318.47	-
2020.0	21.1	295.6	14.90	135806	92967.90	201.21	314.51	-
2030.0	25.0	305.6	15.30	139529	94665.49	169.76	309.77	-
2040.0	22.4	315.6	15.75	143683	96559.82	189.43	305.96	-
2050.0	22.0	325.6	16.20	147905	98485.07	192.52	302.47	-
2060.0	25.1	335.6	16.60	151617	100177.94	169.29	298.50	-
2070.0	23.7	345.6	17.02	155543	101968.46	179.05	295.05	-
2080.0	25.3	355.6	17.42	159222	103646.02	167.76	291.47	-
2090.0	27.2	365.6	17.79	162639	105204.31	155.83	287.76	-
2100.0	24.4	375.6	18.20	166457	106945.36	174.10	284.73	-
2110.0	22.5	385.6	18.64	170585	108827.89	188.25	282.23	-
2120.0	23.5	395.6	19.07	174542	110632.21	180.43	279.66	-
2130.0	21.0	405.6	19.54	178976	112654.47	202.23	277.75	-
2140.0	22.8	415.6	19.98	183064	114518.46	186.40	275.55	-
2150.0	23.0	425.6	20.42	187104	116360.73	184.23	273.40	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2160.0	23.3	435.6	20.85	191087	118177.29	181.66	271.30	-
2170.0	26.5	445.6	21.22	194595	119777.09	159.98	268.80	-
2180.0	26.1	455.6	21.61	198158	121401.52	162.44	266.47	-
2190.0	26.0	465.6	21.99	201738	123034.30	163.28	264.25	-
2200.0	26.7	475.6	22.37	205216	124620.09	158.58	262.03	-
2210.0	27.0	485.6	22.74	208664	126192.79	157.27	259.87	-
2220.0	23.0	495.6	23.17	212705	128035.27	184.25	258.34	-
2230.0	21.1	505.6	23.64	217110	130044.43	200.92	257.21	-
2239.4	15.1	515.0	24.27	222918	132692.65	281.73	257.66	+

BIT NUMBER	6	IADC CODE	437	INTERVAL	2239.4-2459.2
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.2	BIT RUN	219.8
TOTAL HOURS	28.13	TOTAL TURNS	155751	CONDITION	T3 B5 G0.06

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2240.0	4.4	0.6	0.14	991	37907.04	973.07	63178	-
2250.0	6.2	10.6	1.75	12000	44736.49	682.94	4220.42	-
2260.0	6.3	20.6	3.33	21243	51443.16	670.67	2497.24	-
2270.0	7.7	30.6	4.63	27849	56970.60	552.74	1861.78	-
2280.0	7.7	40.6	5.93	33392	62461.52	549.09	1538.46	-
2290.0	8.2	50.6	7.15	40362	67647.32	518.58	1336.90	-
2300.0	7.6	60.6	8.46	47824	73199.49	555.22	1207.91	-
2310.0	6.2	70.6	10.07	56067	80046.35	684.69	1133.80	-
2320.0	5.9	80.6	11.76	62987	87206.58	716.02	1081.97	-
2330.0	6.1	90.6	13.39	71422	94119.41	691.28	1038.85	-
2340.0	7.6	100.6	14.71	79354	99725.77	560.64	991.31	-
2350.0	6.4	110.6	16.27	88133	106321.70	659.59	961.32	
2360.0	7.1	120.6	17.67	96107	112254.39	593.27	930.80	-
2370.0	7.2	130.6	19.06	104057	118169.41	591.50	904.82	-
2380.0	7.4	140.6	20.42	111767	123906.47	573.71	881.27	-
2390.0	7.8	150.6	21.69	119049	129323.89	541.74	858.72	-
2400.0	7.5	160.6	23.03	126670	134994.51	567.06	840.56	-
2410.0	8.2	170.6	24.25	133631	140173.37	517.89	821.65	-
2420.0	8.3	180.6	25.45	140491	145277.81	510.44	804.42	-
2430.0	13.5	190.6	26.20	144728	148430.20	315.24	778.75	-
2440.0	13.3	200.6	26.95	149021	151624.26	319.41	755.85	-
2450.0	12.0	210.6	27.78	153752	155144.29	352.00	736.68	-
2459.2	26.2	219.8	28.13	155751	156631.79	161.68	712.61	-

BIT NUMBER	6	IADC CODE	4	INTERVAL	2459.2-2470.7
CHRIS RC4		SIZE	9.675	NOZZLES	15 15 14
COST	21210.00	TRIP TIME	7.2	BIT RUN	11.5
TOTAL HOURS	0.52	TOTAL TURNS	3271	CONDITION	T0 B0 G0.200

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2460.0	5.9	0.8	0.14	673	52318.91	717.14	65399	-
2470.0	27.9	10.8	0.49	3110	53839.35	152.04	4985.13	-
2470.7	32.7	11.5	0.52	3291	53930.06	129.58	4689.57	-

BIT NUMBER	7	IADC CODE	517	INTERVAL	2470.7-2769.8
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.8	BIT RUN	299.1
TOTAL HOURS	30.31	TOTAL TURNS	141892	CONDITION	T7 B8 G0.250

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2480.0	14.5	9.3	0.64	2856	42589.42	292.65	4579.51	-
2490.0	17.4	19.3	1.22	5448	45032.71	244.33	2333.30	-
2500.0	13.6	29.3	1.95	8763	48156.91	312.42	1643.58	-
2510.0	21.7	39.3	2.42	10837	50111.30	195.44	1275.10	-
2520.0	20.6	49.3	2.90	13022	52170.55	205.92	1058.23	-
2530.0	16.8	59.3	3.50	15702	54696.30	252.58	922.37	-
2540.0	19.6	69.3	4.01	18001	56862.74	216.64	820.53	-
2550.0	18.1	79.3	4.56	20492	59210.61	234.79	746.67	-
2560.0	15.8	89.3	5.19	23469	61891.52	268.09	693.07	-
2570.0	17.4	99.3	5.77	25909	64326.23	243.47	647.80	-
2580.0	11.1	109.3	6.67	29702	68156.22	383.00	623.57	-
2590.0	12.7	119.3	7.46	33118	71490.25	333.40	599.25	-
2600.0	12.7	129.3	8.24	36895	74827.91	333.77	578.72	-
2610.0	13.2	139.3	9.00	40760	78042.83	321.49	560.25	-
2620.0	8.4	149.3	10.19	46458	83077.84	503.50	556.45	-
2630.0	8.3	159.3	11.39	52214	88163.50	508.57	553.44	-
2640.0	9.8	169.3	12.41	57097	92477.54	431.40	546.23	-
2650.0	9.9	179.3	13.42	61953	96767.70	429.02	539.70	-
2660.0	11.0	189.3	14.33	66317	100623.74	385.60	531.56	-
2670.0	8.4	199.3	15.51	72018	105661.10	503.74	530.16	-
2680.0	7.0	209.3	16.94	78884	111726.91	606.58	533.81	+
2690.0	10.9	219.3	17.86	83293	115622.74	389.58	527.24	-
2700.0	10.4	229.3	18.83	87926	119716.48	409.37	522.10	-
2710.0	7.2	239.3	20.22	94600	125612.65	589.62	524.92	+
2720.0	5.0	249.3	22.24	104296	134179.47	856.68	538.22	+
2730.0	4.4	259.3	24.50	113985	143767.66	958.82	554.45	+
2740.0	7.3	269.3	25.87	120554	149571.94	580.43	555.41	+
2750.0	6.1	279.3	27.51	128434	156534.25	696.23	560.45	+
2760.0	9.4	289.3	28.57	133514	161022.64	448.84	556.59	
2769.8	5.6	299.1	30.31	141892	168424.71	755.31	563.11	+

BIT NUMBER	8	IADC CODE	517	INTERVAL	2769.8-2918.0
HTC J22		SIZE	12.250	NOZZLES	18 16 16
COST	6788.00	TRIP TIME	8.2	BIT RUN	148.2
TOTAL HOURS	37.34	TOTAL TURNS	119776	CONDITION	T4 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2770.0	1.5	0.2	0.13	624	42115.53	2756.65	210578	-
2780.0	4.7	10.2	2.25	7302	51107.63	899.21	5010.55	-
2790.0	5.5	20.2	4.08	13892	58871.01	776.34	2914.41	-
2800.0	10.3	30.2	5.05	17390	62991.85	412.08	2085.82	-
2810.0	7.0	40.2	6.49	22557	69079.26	608.74	1718.39	-
2820.0	8.1	50.2	7.73	27769	74341.63	526.24	1480.91	-
2830.0	10.0	60.2	8.73	31974	78587.61	424.60	1305.44	-
2840.0	11.1	70.2	9.63	35758	82409.22	382.16	1173.92	-
2850.0	7.5	80.2	10.96	40553	88058.00	564.88	1097.98	-
2860.0	3.6	90.2	13.73	50215	99787.89	1172.99	1106.30	+
2870.0	2.6	100.2	17.55	62900	116000.29	1621.24	1157.69	+
2880.0	2.1	110.2	22.32	74338	136212.92	2021.26	1236.05	+
2890.0	2.5	120.2	26.35	84027	153333.60	1712.07	1275.65	+
2900.0	2.5	130.2	30.34	95593	170250.48	1691.69	1307.61	+
2910.0	3.4	140.2	33.28	105278	182696.63	1244.62	1303.11	-
2918.0	2.0	148.2	37.34	119776	199912.74	2152.01	1348.94	+

BIT NUMBER	9	IADC CODE	537	INTERVAL	2918.0-3178.7
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	8.7	BIT RUN	260.7
TOTAL HOURS	51.23	TOTAL TURNS	183290	CONDITION	T4 B5 G0.250

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2920.0	0.8	2.0	2.53	7969	54244.24	5355.27	27122	-
2930.0	2.3	12.0	6.80	23341	72353.65	1810.94	6029.47	-
2940.0	5.2	22.0	8.74	30329	80585.90	823.23	3663.00	-
2950.0	6.3	32.0	10.32	36039	87312.60	672.67	2728.52	-
2960.0	6.9	42.0	11.77	41264	93467.94	615.53	2225.43	-
2970.0	7.7	52.0	13.07	45934	98969.46	550.15	1903.26	-
2980.0	14.8	62.0	13.75	48370	101839.20	286.97	1642.57	-
2990.0	10.8	72.0	14.67	51699	105760.95	392.17	1468.90	-
3000.0	12.1	82.0	15.50	54683	109276.27	351.53	1332.64	-
3010.0	9.2	92.0	16.59	58583	113870.69	459.44	1237.72	-
3020.0	8.6	102.0	17.75	62775	118809.09	493.84	1164.80	-
3030.0	12.7	112.0	18.54	65606	122144.17	333.51	1090.57	-
3040.0	5.3	122.0	20.41	72365	130106.94	796.28	1066.45	-
3050.0	3.9	132.0	22.96	81535	140909.71	1080.28	1067.50	+
3060.0	3.7	142.0	25.64	91198	152292.38	1138.27	1072.48	+
3070.0	6.7	152.0	27.15	96610	158668.01	637.56	1043.87	
3080.0	5.0	162.0	29.16	103869	167219.52	855.15	1032.22	-
3090.0	4.0	172.0	31.67	112885	177840.87	1062.13	1033.96	+
3100.0	5.4	182.0	33.52	119556	185699.68	785.88	1020.33	-
3110.0	6.6	192.0	35.03	124997	192109.48	640.98	1000.57	-
3120.0	5.6	202.0	36.82	131430	199687.91	757.84	988.55	-
3130.0	3.0	212.0	40.20	143588	214010.71	1432.28	1009.48	+
3140.0	5.3	222.0	42.08	150361	221989.68	797.90	999.95	-
3150.0	5.5	232.0	43.89	156881	229670.60	768.09	989.96	-
3160.0	3.8	242.0	46.53	166376	240856.24	1118.56	995.27	+
3170.0	4.7	252.0	48.65	174010	249849.51	899.33	991.47	-
3178.7	3.4	260.7	51.23	183290	260781.87	1256.59	1000.31	+

BIT NUMBER	10	IADC CODE	537	INTERVAL	3178.7-3371.3
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	9.2	BIT RUN	192.6
TOTAL HOURS	40.38	TOTAL TURNS	143960	CONDITION	T7 B8 G0.250

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
3180.0	3.4	1.3	0.38	1147	47275.71	1247.32	36366	-
3190.0	4.5	11.3	2.59	7932	56645.97	937.03	5012.92	-
3200.0	4.8	21.3	4.68	15452	65504.95	885.90	3075.35	-
3210.0	6.6	31.3	6.19	20891	71912.39	640.74	2297.52	-
3220.0	9.3	41.3	7.27	24764	76474.76	456.24	1851.69	-
3230.0	7.4	51.3	8.62	29647	82227.21	575.24	1602.87	-
3240.0	4.0	61.3	11.11	38597	92770.81	1054.36	1513.39	-
3250.0	3.7	71.3	13.84	48441	104367.59	1159.68	1463.78	-
3260.0	5.0	81.3	15.83	55576	112773.01	840.54	1387.12	-
3270.0	7.5	91.3	17.16	60363	118412.36	563.94	1296.96	-
3280.0	6.1	101.3	18.79	66236	125331.08	691.87	1237.23	-
3290.0	4.7	111.3	20.90	73835	134283.13	895.20	1206.50	-
3300.0	4.7	121.3	23.02	81456	143261.09	897.80	1181.05	-
3310.0	5.1	131.3	24.98	88542	151608.79	834.77	1154.67	-
3320.0	5.1	141.3	26.93	95536	159848.11	823.93	1131.27	-
3330.0	5.0	151.3	28.94	102796	168400.79	855.27	1113.03	-
3340.0	6.3	161.3	30.54	108553	175182.86	678.21	1086.07	-
3350.0	4.7	171.3	32.65	116142	184123.12	894.03	1074.86	-
3360.0	3.1	181.3	35.91	127882	197953.50	1383.04	1091.86	+
3370.0	2.5	191.3	39.92	142317	214958.73	1700.52	1123.67	+
3371.3	2.8	192.6	40.38	143960	216894.27	1488.88	1126.14	+

(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	100.3-239.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.5	BIT RUN	138.7
TOTAL HOURS	3.62	TOTAL TURNS	14080	CONDITION	T2 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
110.0	364	210.0	124.2	59.1	26	0.05	206	39
120.0	397	230.0	147.1	63.9	34	0.06	244	42
130.0	517	430.0	249.9	58.1	75	0.14	415	55
140.0	480	440.0	215.6	49.0	60	0.11	358	51
150.0	519	470.0	251.9	53.6	76	0.14	418	55
160.0	508	420.0	241.2	57.4	71	0.13	400	54
170.0	518	450.0	251.1	55.8	76	0.14	417	55
180.0	514	450.0	247.1	54.9	74	0.14	410	54
190.0	504	440.0	237.2	53.9	70	0.13	394	53
200.0	504	450.0	237.3	52.7	70	0.13	394	53
210.0	508	460.0	241.5	52.5	72	0.13	401	54
220.0	503	460.0	236.4	51.4	69	0.13	392	53
230.0	508	520.0	241.1	46.4	71	0.13	400	54
239.0	505	530.0	238.3	45.0	70	0.13	396	53

BIT NUMBER	2	IADC CODE	111	INTERVAL	239.0-828.0
HTC OSC3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	3.8	BIT RUN	589.0
TOTAL HOURS	9.26	TOTAL TURNS	83317	CONDITION	T2 B5 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
240.0	773	1039.9	565.5	54.4	255	1.06	939	82
260.0	785	1212.6	582.4	48.0.	267	1.11	967	83
270.0	815	1167.0	627.8	53.8	298	1.24	1042	86
280.0	812	1193.3	624.1	52.3	296	1.23	1036	86
290.0	658	849.0	409.4	48.2	157	0.65	680	70
300.0	774	1112.5	566.8	50.9	256	1.06	941	82
310.0	765	1072.0	553.2	51.6	247	1.03	918	81
320.0	796	1155.6	599.0	51.8	278	1.16	994	84
330.0	907	1494.0	786.4	52.6	416	1.73	1306	96
340.0	888	1437.8	754.5	52.5	391	1.63	1253	94
350.0	867	1413.2	719.2	50.9	364	1.51	1194	92
360.0	912	1505.8	795.2	52.8	423	1.76	1320	97
370.0	849	1348.1	689.1	51.1	341	1.42	1144	90
380.0	788	1166.6	594.6	51.0	273	1.14	987	84
390.0	865	1144.3	716.2	62.6	362	1.50	1189	92
400.0	965	1627.6	890.2	54.7	501	2.08	1478	102
410.0	926	1558.8	820.4	52.6	443	1.84	1362	98
420.0	896	878.9	768.5	87.4	402	1.67	1276	95
430.0	872	1347.3	727.7	54.0	370	1.54	1208	92
440.0	895	1540.0	766.3	49.8	400	1.66	1272	95
450.0	865	1407.5	724.6	51.5	366	1.52	1203	92
460.0	817	1284.6	645.9	50.3	308	1.28	1072	87
470.0	809	1264.0	633.4	50.1	299	1.24	1051	86
480.0	966	1677.5	903.5	53.9	509	2.12	1500	102
490.0	967	1670.3	904.8	54.2	510	2.12	1502	102
500.0	968	1723.8	906.8	52.6	512	2.13	1505	103
510.0	948	1712.2	869.2	50.8	481	2.00	1443	100
520.0	634	928.2	388.6	41.9	144	0.60	645	67
530.0	942	1699.0	858.8	50.5	472	1.96	1426	100
540.0	938	1610.6	852.2	52.9	467	1.94	1415	99
550.0	948	1678.1	869.8	51.8	481	2.00	1444	100
560.0	944	1681.6	861.7	51.2	474	1.97	1431	100
570.0	936	1676.0	848.2	50.6	463	1.93	1408	99
580.0	939	1679.7	853.5	50.8	468	1.94	1417	100
590.0	928	1695.8	833.6	49.2	451	1.88	1384	98
600.0	933	1710.4	842.5	49.3	459	1.91	1399	99
610.0	941	1738.9	857.4	49.3	471	1.96	1423	100
620.0	947	1731.5	867.5	50.1	479	1.99	1440	100
630.0	948	1757.0	869.0	49.5	481	2.00	1443	100
640.0	945	1741.7	864.0	49.6	476	1.98	1434	100
650.0	946	1754.7	865.2	49.3	477	1.98	1436	100
660.0	958	1760.8	887.3	50.4	496	2.06	1473	101
670.0	934	1742.7	844.6	48.5	460	1.91	1402	99

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
680.0	963	1820.4	898.1	49.3	505	2.10	1491	102
690.0	955	1901.5	882.4	46.4	492	2.04	1465	101
700.0	957	1844.1	896.9	48.6	501	2.08	1489	101
710.0	952	1844.4	886.7	48.1	492	2.05	1472	101
720.0	954	1869.1	891.1	47.7	496	2.06	1479	101
730.0	955	1851.2	891.7	48.2	497	2.06	1480	101
740.0	960	1864.5	901.8	48.4	505	2.10	1497	102
750.0	957	1847.3	895.3	48.5	500	2.08	1486	101
760.0	957	1868.3	905.5	48.5	505	2.10	1503	101
770.0	952	1870.2	897.4	48.0	499	2.07	1490	101
780.0	954	1867.2	900.0	48.2	501	2.08	1494	101
790.0	953	1887.0	898.1	47.6	499	2.08	1491	101
800.0	962	1916.4	916.5	47.8	515	2.14	1521	102
810.0	958	1946.9	917.4	47.1	513	2.13	1523	101
820.0	957	1938.7	916.3	47.3	512	2.13	1521	101
828.0	954	1940.9	910.1	46.9	507	2.11	1511	101

BIT NUMBER	3	IADC CODE	114	INTERVAL	828.0-1296.0
HTC X3A		SIZE	12.250	NOZZLES	18 18 16
COST	2201.00	TRIP TIME	4.7	BIT RUN	468.0
TOTAL HOURS	20.76	TOTAL TURNS	179081	CONDITION	T5 B5 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
830.0	940	2580.0	1522.2	59.0	835	7.08	1904	132
840.0	894	2431.5	1377.1	56.6	718	6.09	1722	126
850.0	929	2549.1	1487.1	58.3	806	6.84	1860	131
860.0	945	2640.0	1538.5	58.3	848	7.19	1924	133
870.0	942	2644.1	1530.7	57.9	841	7.14	1914	133
880.0	977	2808.3	1645.8	58.6	938	7.96	2058	137
890.0	951	2759.4	1558.7	56.5	865	7.34	1949	134
900.0	964	2910.0	1603.5	55.1	902	7.65	2005	136
910.0	955	2924.5	1572.8	53.8	876	7.44	1967	134
920.0	960	2912.3	1588.7	54.6	890	7.55	1987	135
930.0	960	2922.0	1587.6	54.3	889	7.54	1986	135
940.0	962	2904.9	1594.1	54.9	894	7.59	1994	135
950.0	962	2938.1	1594.5	54.3	895	7.59	1994	135
960.0	961	2937.5	1593.2	54.2	893	7.58	1992	135
970.0	931	2950.4	1493.8	50.6	811	6.88	1868	131
980.0	956	2941.3	1576.6	53.6	880	7.46	1972	135
990.0	950	2932.6	1557.1	53.1	863	7.33	1947	134
1000.0	962	2935.0	1596.6	54.4	896	7.61	1997	135
1010.0	946	2873.4	1544.1	53.7	853	7.23	1931	133
1020.0	943	2878.9	1532.3	53.2	843	7.15	1916	133
1030.0	941	2873.9	1527.4	53.1	839	7.12	1910	132
1040.0	938	2877.0	1516.4	52.7	830	7.04	1896	132
1050.0	930	2898.8	1492.8	51.5	810	6.88	1867	131
1060.0	933	2883.6	1499.7	52.0	816	6.92	1876	131
1070.0	936	2910.5	1512.0	52.0	826	7.01	1891	132
1080.0	934	2925.0	1505.2	51.5	821	6.96	1882	131
1090.0	933	2916.6	1502.2	51.5	818	6.94	1879	131
1100.0	938	2929.7	1518.1	51.8	831	7.05	1899	132
1110.0	943	2796.5	1533.1	54.8	843	7.16	1917	133
1120.0	941	2861.4	1527.3	53.4	839	7.12	1910	132
1130.0	946	2759.8	1544.0	55.9	852	7.23	1931	133
1140.0	941	2795.2	1528.1	54.7	839	7.12	1911	132
1150.0	940	2820.0	1522.2	54.0	835	7.08	1904	132
1160.0	940	2780.0	1522.2	54.8	835	7.08	1904	132
1170.0	940	2820.0	1522.2	54.0	835	7.08	1904	132
1180.0	940	2830.0	1522.2	53.8	835	7.08	1904	132
1190.0	940	2790.0	1522.2	54.6	835	7.08	1904	132
1200.0	940	2790.0	1522.2	54.6	835	7.08	1904	132
1210.0	940	2800.0	1522.2	54.4	835	7.08	1904	132
1220.0	940	2800.0	1522.2	54.4	835	7.08	1904	132
1230.0	940	2800.0	1522.2	54.4	835	7.08	1904	132
1240.0	940	2800.0	1522.2	54.4	835	7.08	1904	132
1250.0	940	2780.0	1522.2	54.8	835	7.08	1904	132

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1260.0	940	2780.0	1522.2	54.8	835	7.08	1904	132
1270.0	940	2820.0	1539.2	54.6	844	7.16	1925	132
1280.0	940	2950.0	1539.2	52.2	844	7.16	1925	132
1290.0	952	2957.2	1579.3	53.4	877	7.44	1975	134
1296.0	937	2955.2	1531.7	51.8	838	7.11	1916	132

BIT NUMBER	4	IADC CODE	114	INTERVAL	1296.0-1724.4
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	5.7	BIT RUN	428.4
TOTAL HOURS	26.07	TOTAL TURNS	238949	CONDITION	T5 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1300.0	930	2880.9	1305.5	45.3	709	6.01	1756	122
1310.0	943	2919.5	1341.8	46.0	738	6.27	1804	123
1320.0	941	2896.9	1336.5	46.1	734	6.23	1797	123
1330.0	943	2923.5	1340.9	45.9	738	6.26	1803	123
1340.0	938	2867.7	1326.2	46.2	726	6.16	1783	123
1350.0	919	2885.2	1274.7	44.2	684	5.80	1714	120
1360.0	932	2890.3	1310.2	45.3	713	6.05	1762	122
1370.0	930	2883.2	1305.5	45.3	709	6.01	1756	122
1390.0	930	2900.0	1303.2	44.9	707	6.00	1752	122
1400.0	930	2920.0	1303.2	44.6	707	6.00	1752	122
1410.0	930	2890.0	1303.2	45.1	707	6.00	1752	122
1420.0	930	2890.0	1303.2	45.1	707	6.00	1752	122
1430.0	940	2890.0	1331.3	46.1	730	6.19	1790	123
1440.0	940	2890.0	1331.3	46.1	730	6.19	1790	123
1450.0	940	2890.0	1331.3	46.1	730	6.19	1790	123
1460.0	940	2890.0	1331.3	46.1	730	6.19	1790	123
1470.0	940	2890.0	1331.3	46.1	730	6.19	1790	123
1480.0	926	2881.8	1293.9	44.9	699	5.93	1740	121
1490.0	929	2801.1	1315.4	47.0	713	6.05	1769	122
1500.0	938	2717.6	1340.5	49.3	733	6.22	1803	123
1510.0	601	1259.5	549.8	43.7	193	1.63	739	79
1520.0	924	2856.6	1302.3	45.6	702	5.96	1751	121
1530.0	928	2830.6	1313.3	46.4	711	6.03	1766	121
1540.0	927	2873.9	1309.7	45.6	708	6.01	1761	121
1550.0	918	2900.3	1285.9	44.3	689	5.85	1729	120
1560.0	923	2919.6	1299.0	44.5	700	5.94	1747	121
1570.0	928	2894.4	1313.5	45.4	711	6.04	1766	121
1580.0	930	2954.2	1318.8	44.6	716	6.07	1773	122
1590.0	922	2913.6	1297.0	44.5	698	5.92	1744	121
1600.0	919	2921.3	1287.5	44.1	690	5.86	1731	120
1610.0	927	2919.7	1295.4	44.4	701	5.94	1742	121
1620.0	914	2901.4	1261.1	43.5	673	5.71	1696	120
1630.0	923	2936.4	1285.6	43.8	693	5.88	1729	121
1640.0	922	2946.0	1280.7	43.5	689	5.84	1722	121
1650.0	913	2867.4	1256.5	43.8	669	5.68	1690	119
1660.0	913	2889.9	1256.7	43.5	669	5.68	1690	119
1670.0	907	2860.8	1239.4	43.3	656	5.56	1667	119
1680.0	910	2888.7	1249.5	43.3	664	5.63	1680	119
1690.0	916	2966.4	1264.9	42.6	676	5.73	1701	120
1700.0	912	2905.8	1255.2	43.2	668	5.67	1688	119
1710.0	908	2927.1	1242.6	42.5	658	5.58	1671	119
1720.0	905	2918.6	1234.2	42.3	651	5.53	1660	118
1724.4	891	2868.1	1197.7	41.8	623	5.28	1611	117

BIT NUMBER	5	IADC CODE	114	INTERVAL	1724.4-2239.4		
HTC X3A		SIZE	12.250	NOZZLES	18 18 18		
COST	2201.00	TRIP TIME	6.5	BIT RUN	515.0		
TOTAL HOURS	24.27	TOTAL TURNS	222918	CONDITION	T5 B8 G0.000		

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1730.0	874	2912.8	1163.8	40.0	593	5.03	1565	114
1740.0	892	2956.7	1211.9	41.0	630	5.35	1630	117
1750.0	870	2869.0	1155.0	40.3	587	4.98	1553	114
1760.0	877	2883.8	1172.3	40.7	600	5.09	1576	115
1770.0	878	2887.9	1176.0	40.7	603	5.11	1581	115
1780.0	880	2938.1	1180.9	40.2	606	5.14	1588	115
1790.0	865	2954.1	1139.4	38.6	575	4.88	1532	113
1800.0	868	2915.2	1149.0	39.4	582	4.94	1545	114
1810.0	863	2903.7	1136.3	39.1	572	4.86	1528	113
1820.0	868	2909.6	1149.3	39.5	582	4.94	1545	114
1830.0	867	2894.2	1145.2	39.6	579	4.91	1540	113
1840.0	864	2894.3	1137.5	39.3	573	4.86	1530	113
1850.0	864	2908.6	1139.3	39.2	575	4.88	1532	113
1860.0	866	2934.7	1142.4	38.9	577	4.90	1536	113
1870.0	872	2963.4	1158.5	39.1	589	5.00	1558	114
1880.0	867	2945.8	1144.8	38.9	579	4.91	1539	113
1890.0	867	2933.7	1146.0	39.1	580	4.92	1541	113
1900.0	855	2933.9	1113.6	38.0	555	4.71	1497	112
1910.0	872	2968.3	1159.5	39.1	590	5.01	1559	114
1920.0	867	2900.1	1145.5	39.5	579	4.92	1540	113
1930.0	867	2925.8	1145.7	39.2	579	4.92	1541	113
1940.0	865	2906.5	1140.4	39.2	575	4.88	1533	113
1950.0	856	2914.7	1117.2	38.3	558	4.73	1502	112
1960.0	855	2948.9	1114.1	37.8	556	4.71	1498	112
1970.0	853	2913.5	1109.9	38.1	552	4.69	1492	112
1980.0	858	2944.3	1121.7	38.1	561	4.76	1508	112
1990.0	858	2965.5	1121.8	37.8	561	4.76	1509	112
2000.0	855	2929.5	1114.2	38.0	556	4.72	1498	112
2010.0	852	2927.7	1107.9	37.8	551	4.68	1490	112
2020.0	730	2204.7	813.3	36.9	347	2.94	1094	96
2030.0	844	2953.1	1085.5	36.8	534	4.53	1460	110
2040.0	568	1430.2	492.2	34.4	163	1.38	662	74
2050.0	555	1390.7	469.9	33.8	152	1.29	632	73
2060.0	835	2875.8	1063.9	37.0	519	4.40	1431	109
2070.0	841	2915.9	1078.1	37.0	529	4.49	1450	110
2080.0	843	2954.0	1082.9	36.7	532	4.52	1456	110
2090.0	813	2930.9	1008.6	34.4	479	4.06	1356	106
2100.0	833	2877.1	1057.8	36.8	514	4.36	1422	109
2110.0	832	2825.8	1056.5	37.4	513	4.35	1421	109
2120.0	835	2944.1	1064.0	36.1	519	4.40	1431	109
2130.0	831	2902.3	1054.0	36.3	511	4.34	1417	109
2140.0	833	2883.2	1058.7	36.7	515	4.37	1424	109
2150.0	838	2916.0	1069.6	36.7	523	4.44	1438	110

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2160.0	826	2822.2	1040.7	36.9	502	4.26	1399	108
2170.0	835	2933.4	1063.1	36.2	518	4.39	1430	109
2180.0	833	2998.9	1057.9	35.3	514	4.36	1423	109
2190.0	816	2933.0	1014.5	34.6	483	4.10	1364	107
2200.0	806	2911.6	991.3	34.0	466	3.96	1333	105
2210.0	801	2894.9	979.1	33.8	458	3.88	1317	105
2220.0	815	2907.7	1013.4	34.9	482	4.09	1363	107
2230.0	814	2915.3	1008.9	34.6	479	4.06	1357	106
2239.4	805	2920.0	987.1	33.8	463	3.93	1327	105

BIT NUMBER	6	IADC CODE	437	INTERVAL	2239.4-2459.2
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.2	BIT RUN	219.8
TOTAL HOURS	28.13	TOTAL TURNS	155751	CONDITION	T3 B5 G0.063

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2240.0	798	2884.1	980.8	34.0	456	3.87	1319	104
2250.0	810	2885.7	1011.1	35.0	478	4.05	1360	106
2260.0	809	2913.9	1009.4	34.6	477	4.04	1357	106
2270.0	803	2884.3	993.0	34.4	465	3.95	1335	105
2280.0	802	2854.7	991.6	34.7	464	3.94	1333	105
2290.0	806	2870.7	1001.1	34.9	471	3.99	1346	105
2300.0	811	2928.8	1014.8	34.6	480	4.08	1365	106
2310.0	784	2747.9	947.2	34.5	433	3.68	1274	103
2320.0	806	2876.6	1001.3	34.8	471	4.00	1347	105
2330.0	808	2894.5	1005.2	34.7	474	4.02	1352	106
2340.0	805	2902.0	999.2	34.4	469	3.98	1344	105
2350.0	800	2850.7	987.1	34.6	461	3.91	1327	105
2360.0	797	2840.4	979.7	34.5	456	3.87	1317	104
2370.0	805	2904.2	998.2	34.4	469	3.98	1342	105
2380.0	800	2913.6	985.2	33.8	460	3.90	1325	105
2390.0	800	2924.6	986.9	33.7	461	3.91	1327	105
2400.0	803	2886.6	993.0	34.4	465	3.95	1335	105
2410.0	800	2885.0	985.5	34.2	460	3.90	1325	105
2420.0	795	2879.2	972.9	33.8	451	3.83	1308	104
2430.0	795	2879.2	972.9	33.8	451	3.83	1308	104
2440.0	811	2972.9	1013.7	34.1	480	4.07	1363	106
2450.0	801	2965.7	989.6	33.4	463	3.93	1331	105
2459.2	810	2989.8	1010.1	33.8	477	4.05	1358	106

BIT NUMBER	6	IADC CODE	4	INTERVAL	2459.2-2470.7
CHRIS RC4		SIZE	9.675	NOZZLES	15 15 14
COST	21210.00	TRIP TIME	7.2	BIT RUN	11.5
TOTAL HOURS	0.52	TOTAL TURNS	3271	CONDITION	T0 B0 G0.200

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2460.0	227	749.1	180.0	24.0	24	0.32	161	45
2470.0	199	738.6	137.6	18.6	16	0.22	123	39
2470.7	140	612.0	68.3	11.2	6	0.08	61	28

BIT NUMBER	7	IADC CODE	517	INTERVAL	2470.7-2769.E
HTC J22		SIZE	12.250	NOZZLES	18 18 1E
COST	6788.00	TRIP TIME	7.8	BIT RUN	299.1
TOTAL HOURS	30.31	TOTAL TURNS	141892	CONDITION	T7 B8 G0.250

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2480.0	795	2859.4	974.8	34.1	452	3.84	1311	10
2490.0	799	2909.7	984.1	33.8	459	3.89	1323	105
2500.0	801	2900.1	989.8	34.1	463	3.93	1331	105
2510.0	800	2882.6	985.5	34.2	460	3.90	1325	105
2520.0	800	2916.9	987.3	33.8	461	3.91	1328	105
2530.0	801	2912.2	988.8	34.0	462	3.92	1330	105
2540.0	804	2878.2	995.1	34.6	466	3.96	1338	105
2550.0	802	2885.5	991.5	34.4	464	3.94	1333	105
2560.0	809	2873.1	1009.3	35.1	477	4.04	1357	106
2570.0	810	2858.3	1011.9	35.4	478	4.06	1361	106
2580.0	812	2831.2	1015.8	35.9	481	4.08	1366	106
2590.0	811	2896.9	1013.8	35.0	480	4.07	1363	106
2600.0	808	2866.6	1006.1	35.1	474	4.02	1353	106
2610.0	806	2901.1	1001.9	34.5	471	4.00	1347	105
2620.0	804	2865.3	995.7	34.8	467	3.96	1339	105
2630.0	811	2877.5	1012.7	35.2	479	4.06	1362	106
2640.0	806	2875.2	1000.5	34.8	470	3.99	1345	105
2650.0	800	2900.0	985.5	34.0	460	3.90	1325	105
2660.0	806	2919.5	1000.9	34.3	471	3.99	1346	105
2670.0	809	2917.6	1008.7	34.6	476	4.04	1356	106
2680.0	814	2955.5	1021.4	34.6	485	4.12	1373	107
2690.0	815	2973.7	1022.9	34.4	486	4.13	1376	107
2700.0	807	2926.3	1003.2	34.3	472	4.01	1349	106
2710.0	804	2936.2	995.6	33.9	467	3.96	1339	105
2720.0	809	2953.6	1019.2	34.5	481	4.08	1371	106
2730.0	805	2943.9	1008.9	34.3	474	4.02	1357	105
2740.0	793	2883.4	969.9	33.6	449	3.81	1304	104
2750.0	798	2918.0	981.2	33.6	457	3.88	1319	104
2760.0	789	2881.0	959.9	33.3	442	3.75	1291	103
2769.8	790	2881.0	961.0	33.4	443	3.76	1292	103

BIT NUMBER	8	IADC CODE	517	INTERVAL	2769.8-2918.0
HTC J22		SIZE	12.250	NOZZLES	18 16 16
COST	6788.00	TRIP TIME	8.2	BIT RUN	148.2
TOTAL HOURS	37.34	TOTAL TURNS	119776	CONDITION	T4 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2770.0	757	2992.8	1194.0	39.9	527	4.47	1381	115
2780.0	739	2848.9	1136.5	39.9	490	4.16	1314	112
2790.0	743	2857.5	1162.1	40.7	504	4.27	1344	113
2800.0	742	2862.2	1158.0	40.5	501	4.25	1339	113
2810.0	745	2880.6	1170.0	40.6	509	4.32	1353	113
2820.0	749	2923.7	1182.1	40.4	517	4.38	1367	114
2830.0	743	2874.6	1149.6	40.0	498	4.23	1330	113
2840.0	744	2910.8	1152.9	39.6	500	4.25	1333	113
2850.0	742	2903.0	1147.4	39.5	497	4.22	1327	113
2860.0	744	2880.8	1153.5	40.0	501	4.25	1334	113
2870.0	748	2921.3	1165.8	39.9	509	4.32	1348	114
2880.0	743	2853.3	1151.4	40.4	499	4.24	1332	113
2890.0	743	2860.5	1149.0	40.2	498	4.22	1329	113
2900.0	745	2875.4	1156.6	40.2	503	4.27	1338	113
2910.0	573	1796.8	676.7	37.7	226	1.92	783	87
2918.0	748	2903.1	1153.7	39.7	504	4.27	1334	114

BIT NUMBER	9	IADC CODE	537	INTERVAL	2918.0-3178.7
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	8.7	BIT RUN	260.7
TOTAL HOURS	51.23	TOTAL TURNS	183290	CONDITION	T4 B5 G0.250

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2920.0	679	2925.7	1457.8	49.8	578	4.90	1361	128
2930.0	667	2839.0	1406.9	49.6	548	4.65	1314	126
2940.0	676	2922.7	1446.4	49.5	571	4.84	1351	127
2950.0	673	2921.9	1449.1	49.6	569	4.83	1353	127
2960.0	671	2902.3	1438.9	49.6	563	4.78	1344	126
2970.0	673	2924.2	1446.5	49.5	568	4.82	1351	127
2980.0	669	2943.4	1429.8	48.6	558	4.73	1335	126
2990.0	663	2866.7	1403.4	49.0	543	4.60	1311	125
3000.0	665	2915.7	1412.8	48.5	548	4.65	1319	125
3010.0	673	2945.1	1447.8	49.2	569	4.82	1352	127
3020.0	671	2946.8	1422.9	48.3	557	4.73	1329	126
3030.0	667	2960.8	1405.9	47.5	547	4.64	1313	126
3040.0	671	2950.2	1423.2	48.2	557	4.73	1329	126
3050.0	669	2945.3	1414.5	48.0	552	4.68	1321	126
3060.0	675	2972.0	1441.3	48.5	568	4.82	1346	127
3070.0	667	2930.7	1405.7	48.0	547	4.64	1313	126
3080.0	566	2191.5	1013.6	46.3	335	2.84	947	107
3090.0	664	2931.7	1395.6	47.6	541	4.59	1303	125
3100.0	666	2929.1	1403.6	47.9	546	4.63	1311	126
3110.0	665	2932.6	1399.3	47.7	543	4.61	1307	125
3120.0	668	2958.0	1410.6	47.7	550	4.66	1317	126
3130.0	669	2927.7	1414.6	48.3	552	4.68	1321	126
3140.0	666	2911.6	1415.5	48.6	550	4.66	1322	125
3150.0	557	2079.7	990.7	47.6	322	2.73	925	105
3160.0	670	2942.8	1433.6	48.7	560	4.75	1339	126
3170.0	669	2922.5	1431.4	49.0	559	4.74	1337	126
3178.7	669	2930.1	1429.4	48.8	558	4.73	1335	126

BIT NUMBER	10	IADC CODE	537	INTERVAL	3178.7-3371.3
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	9.2	BIT RUN	192.6
TOTAL HOURS	40.38	TOTAL TURNS	143960	CONDITION	T7 B8 G0.250

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
3180.0	658	2935.8	1381.7	47.1	530	4.50	1290	124
3190.0	653	2908.8	1362.4	46.8	519	4.40	1272	123
3200.0	659	2915.1	1386.1	47.5	533	4.52	1294	124
3210.0	658	2910.5	1381.7	47.5	530	4.50	1290	124
3220.0	666	2872.4	1418.5	49.4	551	4.68	1325	126
3230.0	664	2876.2	1409.5	49.0	546	4.63	1316	125
3240.0	658	2884.0	1384.6	48.0	532	4.51	1293	124
3250.0	654	2891.4	1365.6	47.2	521	4.42	1275	123
3260.0	657	2912.2	1381.1	47.4	530	4.49	1290	124
3270.0	660	2966.8	1390.6	46.9	535	4.54	1299	124
3280.0	656	2910.1	1375.4	47.3	526	4.47	1284	124
3290.0	656	2939.2	1374.7	46.8	526	4.46	1284	124
3300.0	654	2947.5	1366.4	46.4	521	4.42	1276	123
3310.0	655	2937.9	1369.7	46.6	523	4.44	1279	123
3320.0	659	2891.0	1388.3	48.0	534	4.53	1296	124
3330.0	665	2916.7	1413.0	48.4	548	4.65	1319	125
3340.0	659	2875.4	1386.8	48.2	533	4.52	1295	124
3350.0	654	2802.1	1365.2	48.7	521	4.42	1275	123
3360.0	653	2915.1	1364.7	46.8	520	4.41	1274	123
3370.0	660	2983.4	1392.0	46.7	536	4.55	1300	124
3371.3	660	2973.5	1391.8	46.8	536	4.55	1300	124

(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	100.3-239.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.5	BIT RUN	138.7
TOTAL HOURS	3.62	TOTAL TURNS	14080	CONDITION	T2 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
110.0	73	0	364	4	0	4	0	0	0	0
120.0	79	0	397	5	0	5	0	0	0	0
130.0	55	48	517	6	0	6	0	0	0	0
140.0	51	45	480	6	0	6	0	0	0	0
150.0	50	53	519	6	0	6	0	0	0	0
160.0	51	50	508	6	0	6	0	0	0	0
170.0	53	51	518	6	0	6	0	0	0	0
180.0	52	51	514	6	0	6	0	6	0	0
190.0	52	49	504	6	0	6	0	6	0	0
200.0	52	49	504	6	0	6	0	6	0	0
210.0	51	51	508	6	0	6	0	6	0	0
220.0	52	49	503	6	0	6	0	6	0	0
230.0	53	49	508	6	0	6	0	6	0	0
239.0	53	48	505	6	0	6	0	6	0	0

BIT NUMBER	2	IADC CODE	111	INTERVAL	239.0-828.0
HTC OSC3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	3.8	BIT RUN	589.0
TOTAL HOURS	9.26	TOTAL TURNS	83317	CONDITION	T2 B5 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
240.0	76	79	773	0	19	0	17	0	0	14
260.0	75	82	785	24	19	0	17	0	0	14
270.0	79	84	815	25	20	0	18	0	0	15
280.0	79	84	812	25	20	0	18	0	0	15
290.0	66	65	658	20	16	0	14	0	0	12
300.0	77	78	774	24	19	0	17	0	0	14
310.0	78	75	765	24	19	0	17	0	17	14
320.0	79	80	796	25	20	0	17	0	17	14
330.0	89	92	907	28	22	0	20	0	20	16
340.0	88	89	888	27	22	0	19	0	19	16
350.0	83	90	867	27	0	23	19	0	19	16
360.0	90	92	912	28	0	24	20	0	20	16
370.0	82	87	849	26	0	23	19	0	19	15
380.0	77	81	788	24	0	21	17	0	17	14
390.0	84	89	865	27	0	23	19	0	19	16
400.0	91	102	965	30	0	26	21	0	21	17
410.0	88	97	926	29	0	25	20	0	20	17
420.0	86	93	896	28	0	24	20	0	20	16
430.0	84	90	872	27	0	23	0	23	19	16
440.0	87	92	895	28	0	24	0	24	20	16
450.0	85	88	865	27	0	23	0	23	19	16
460.0	80	84	817	25	0	22	0	22	18	15
470.0	81	80	809	25	0	21	0	21	18	15
480.0	96	97	966	30	0	26	0	26	21	17
490.0	96	97	967	30	0	26	0	26	21	17
500.0	96	97	968	30	0	26	0	26	21	17
510.0	94	96	948	29	0	25	0	25	21	17
520.0	96	31	634	20	0	17	0	17	14	11
530.0	94	94	942	29	0	25	0	25	21	17
540.0	94	94	938	29	0	25	0	25	21	17
550.0	94	96	948	29	0	25	0	25	21	17
560.0	94	95	944	29	0	25	0	25	21	17
570.0	94	94	936	29	0	25	0	25	21	17
580.0	94	94	939	29	0	25	0	25	21	17
590.0	93	93	928	29	0	25	0	25	20	17
600.0	93	93	933	29	0	25	0	25	20	17
610.0	94	94	941	29	0	25	0	25	21	17
620.0	95	94	947	29	0	25	0	25	21	17
630.0	96	94	948	29	0	25	0	25	21	17
640.0	94	95	945	29	0	25	0	25	21	17
650.0	94	95	946	29	0	25	0	25	21	17
660.0	97	95	958	30	0	25	0	25	21	17
670.0	94	93	934	29	0	25	0	25	20	17

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
680.0	98	95	963	30	0	26	0	26	21	17
690.0	97	94	955	29	0	25	0	25	21	17
700.0	97	94	957	30	0	25	0	25	21	17
710.0	96	94	952	29	0	25	0	25	21	17
720.0	96	95	954	29	0	25	0	25	21	17
730.0	96	95	955	29	0	25	0	25	21	17
740.0	96	96	960	30	0	26	0	26	21	17
750.0	97	95	957	30	0	25	0	25	21	17
760.0	97	94	957	30	0	25	0	25	21	17
770.0	96	95	952	29	0	25	0	25	21	17
780.0	96	95	954	29	0	25	0	25	21	17
790.0	96	95	953	29	0	25	0	25	21	17
800.0	97	96	962	30	0	26	0	26	21	17
810.0	97	94	958	30	0	25	0	25	21	17
820.0	98	94	957	30	0	25	0	25	21	17
828.0	97	94	954	29	0	25	0	25	21	17

BIT NUMBER	3	IADC CODE	114	INTERVAL	828.0-1296.0
HTC X3A		SIZE	12.250	NOZZLES	18 18 16
COST	2201.00	TRIP TIME	4.7	BIT RUN	468.1
TOTAL HOURS	20.76	TOTAL TURNS	179081	CONDITION	T5 B5 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
830.0	97	91	940	82	74	0	52	0	52	17
840.0	90	89	894	78	70	0	50	0	50	16
850.0	96	90	929	81	73	0	52	0	52	17
860.0	96	93	945	82	74	0	53	0	53	17
870.0	96	92	942	82	74	0	52	0	52	17
880.0	100	95	977	85	77	0	54	0	54	18
890.0	97	93	951	83	75	0	53	0	53	17
900.0	98	95	964	84	76	0	54	0	54	17
910.0	97	94	955	83	75	0	53	0	53	17
920.0	98	94	960	83	75	0	53	0	53	17
930.0	97	95	960	83	75	0	53	0	53	17
940.0	97	96	962	84	76	0	54	0	54	17
950.0	98	95	962	84	76	0	54	0	54	17
960.0	97	96	961	83	76	0	54	0	54	17
970.0	97	89	931	81	73	0	52	0	52	17
980.0	96	95	956	83	75	0	53	0	53	17
990.0	96	94	950	83	0	57	53	0	53	17
1000.0	98	95	962	84	0	58	54	0	54	17
1010.0	92	97	946	82	0	57	53	0	53	17
1020.0	93	96	943	82	0	56	53	0	53	17
1030.0	91	97	941	82	0	56	52	0	52	17
1040.0	92	96	938	81	0	56	52	0	52	17
1050.0	90	96	930	81	0	56	0	56	52	17
1060.0	92	95	933	81	0	56	0	56	52	17
1070.0	91	96	936	81	0	56	0	56	52	17
1080.0	91	96	934	81	0	56	0	56	52	17
1090.0	91	96	933	81	0	56	0	56	52	17
1100.0	92	96	938	81	0	56	0	56	52	17
1110.0	92	97	943	82	0	56	0	56	53	17
1120.0	92	97	941	82	0	56	0	56	52	17
1130.0	92	98	946	82	0	57	0	57	53	17
1140.0	92	96	941	82	0	56	0	56	52	17
1150.0	92	96	940	82	0	56	0	56	52	17
1160.0	92	96	940	82	0	56	0	56	52	17
1170.0	92	96	940	82	0	56	0	56	52	17
1180.0	92	96	940	82	0	56	0	56	52	17
1190.0	92	96	940	82	0	56	0	56	52	17
1200.0	92	96	940	82	0	56	0	56	52	17
1210.0	92	96	940	82	0	56	0	56	52	17
1220.0	92	96	940	82	0	56	0	56	52	17
1230.0	92	96	940	82	0	56	0	56	52	17
1240.0	92	96	940	82	0	56	0	56	52	17
1250.0	92	96	940	82	0	56	0	56	52	17

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1260.0	92	96	940	82	0	56	0	56	52	17
1270.0	92	96	940	82	0	56	0	56	52	17
1280.0	92	96	940	82	0	56	0	56	52	17
1290.0	92	98	952	83	0	57	0	57	53	17
1296.0	92	95	937	81	0	56	0	56	52	17

BIT NUMBER	4	IADC CODE	114	INTERVAL	1296.0-1724.
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	5.7	BIT RUN	428.
TOTAL HOURS	26.07	TOTAL TURNS	238949	CONDITION	T5 B8 G0.00

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP. RIS
1300.0	92	94	930	81	0	56	0	56	52	17
1310.0	92	96	943	82	0	56	0	56	53	17
1320.0	93	95	941	82	0	56	0	56	52	17
1330.0	93	96	943	82	0	56	0	56	53	17
1340.0	92	96	938	81	0	56	0	56	52	17
1350.0	92	92	919	80	0	55	0	55	51	17
1360.0	91	95	932	81	0	56	0	56	52	17
1370.0	92	94	930	81	0	56	0	56	52	17
1390.0	92	94	930	81	0	56	0	56	52	17
1400.0	92	94	930	81	0	56	0	56	52	17
1410.0	92	94	930	81	0	56	0	56	52	17
1420.0	92	94	930	81	0	56	0	56	52	17
1430.0	92	96	940	82	0	56	0	56	52	17
1440.0	92	96	940	82	0	56	0	56	52	17
1450.0	92	96	940	82	0	56	0	56	52	17
1460.0	92	96	940	82	0	56	0	56	52	17
1470.0	92	96	940	82	0	56	0	56	52	17
1480.0	92	93	926	80	0	55	0	55	52	17
1490.0	94	92	929	81	0	56	0	56	52	17
1500.0	94	93	938	81	0	56	0	56	52	17
1510.0	115	5	601	52	0	36	0	36	33	11
1520.0	93	92	924	80	0	55	0	55	51	17
1530.0	93	92	928	81	0	55	0	55	52	17
1540.0	93	92	927	80	0	55	0	55	52	17
1550.0	92	92	918	80	0	55	0	55	51	17
1560.0	92	92	923	80	0	55	0	55	51	17
1570.0	93	93	928	81	0	55	0	55	52	17
1580.0	93	93	930	81	0	56	0	56	52	17
1590.0	93	92	922	80	0	55	0	55	51	17
1600.0	92	92	919	80	0	55	0	55	51	17
1610.0	93	92	927	80	0	55	0	55	52	17
1620.0	93	90	914	79	0	55	0	55	51	16
1630.0	93	92	923	80	0	55	0	55	51	17
1640.0	93	92	922	80	0	55	0	55	51	17
1650.0	92	91	913	79	0	55	0	55	51	16
1660.0	91	92	913	79	0	55	0	55	51	16
1670.0	90	91	907	79	0	54	0	54	51	16
1680.0	91	91	910	79	0	54	0	54	51	16
1690.0	92	91	916	80	0	55	0	55	51	16
1700.0	92	90	912	79	0	55	0	55	51	16
1710.0	91	91	908	79	0	54	0	54	51	16
1720.0	91	90	905	79	0	54	0	54	50	16
1724.4	90	88	891	77	0	53	0	53	50	16

BIT NUMBER	5	IADC CODE	114	INTERVAL	1724.4-2239.4
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	6.5	BIT RUN	515.0
TOTAL HOURS	24.27	TOTAL TURNS	222918	CONDITION	T5 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1730.0	83	92	874	76	0	52	0	52	49	16
1740.0	85	93	892	77	0	53	0	53	50	16
1750.0	86	88	870	76	0	52	0	52	48	16
1760.0	87	88	877	76	0	52	0	52	49	16
1770.0	88	87	878	76	0	52	0	52	49	16
1780.0	88	88	880	76	0	53	0	53	49	16
1790.0	87	86	865	75	0	52	0	52	48	16
1800.0	87	87	868	75	0	52	0	52	48	16
1810.0	86	87	863	75	0	52	0	52	48	16
1820.0	87	87	868	75	0	52	0	52	48	16
1830.0	86	87	867	75	0	52	0	52	48	16
1840.0	86	87	864	75	0	52	0	52	48	16
1850.0	86	87	864	75	0	52	0	52	48	16
1860.0	86	87	866	75	0	52	0	52	48	16
1870.0	86	88	872	76	0	52	0	52	49	16
1880.0	87	86	867	75	0	52	0	52	48	16
1890.0	87	87	867	75	0	52	0	52	48	16
1900.0	85	86	855	74	0	51	0	51	48	15
1910.0	87	87	872	76	0	52	0	52	49	16
1920.0	86	87	867	75	0	52	0	52	48	16
1930.0	87	87	867	75	0	52	0	52	48	16
1940.0	86	87	865	75	0	52	0	52	48	16
1950.0	85	86	856	74	0	51	0	51	48	15
1960.0	85	86	855	74	0	51	0	51	48	15
1970.0	85	85	853	74	0	51	0	51	48	15
1980.0	85	87	858	74	0	51	0	51	48	15
1990.0	85	86	858	74	0	51	0	51	48	15
2000.0	85	86	855	74	0	51	0	51	48	15
2010.0	86	85	852	74	0	51	0	51	47	15
2020.0	54	92	730	63	0	44	0	44	41	13
2030.0	84	85	844	73	0	50	0	50	47	15
2040.0	114	0	568	49	0	34	0	34	32	10
2050.0	111	0	555	48	0	33	0	33	31	10
2060.0	85	82	835	73	0	50	0	50	47	15
2070.0	84	84	841	73	0	50	0	50	47	15
2080.0	84	84	843	73	0	50	0	50	47	15
2090.0	84	78	813	71	0	49	0	49	45	15
2100.0	84	82	833	72	0	50	0	50	46	15
2110.0	84	83	832	72	0	50	0	50	46	15
2120.0	84	83	835	73	0	50	0	50	47	15
2130.0	83	83	831	72	0	50	0	50	46	15
2140.0	84	83	833	72	0	50	0	50	46	15
2150.0	85	82	838	73	0	50	0	50	47	15

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2160.0	84	81	826	72	0	49	0	49	46	15
2170.0	84	83	835	73	0	50	0	50	47	15
2180.0	84	82	833	72	0	50	0	50	46	15
2190.0	81	82	816	71	0	49	0	49	45	15
2200.0	83	79	806	70	0	48	0	48	45	14
2210.0	82	79	801	70	0	48	0	48	45	14
2220.0	82	81	815	71	0	49	0	49	45	15
2230.0	83	80	814	71	0	49	0	49	45	15
2239.4	82	79	805	70	0	48	0	48	45	14

BIT NUMBER	6	IADC CODE	437	INTERVAL	2239.4-2459.2
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.2	BIT RUN	219.8
TOTAL HOURS	28.13	TOTAL TURNS	155751	CONDITION	T3 B5 G0.063

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2240.0	80	79	798	69	0	48	0	48	44	14
2250.0	80	82	810	70	0	48	0	48	45	15
2260.0	80	82	809	70	0	48	0	48	45	15
2270.0	80	80	803	70	0	48	0	48	45	14
2280.0	79	81	802	70	0	48	0	48	45	14
2290.0	79	82	806	70	0	48	0	48	45	14
2300.0	81	81	811	70	0	48	0	48	45	15
2310.0	77	80	784	68	0	47	0	47	44	14
2320.0	79	82	806	70	0	48	0	48	45	14
2330.0	80	81	808	70	0	48	0	48	45	15
2340.0	79	82	805	70	0	48	0	48	45	14
2350.0	79	81	800	70	0	48	0	48	45	14
2360.0	78	81	797	69	0	48	0	48	44	14
2370.0	79	82	805	70	0	48	0	48	45	14
2380.0	79	81	800	69	0	48	0	48	45	14
2390.0	78	82	800	69	0	48	0	48	45	14
2400.0	78	82	803	70	0	48	0	48	45	14
2410.0	78	82	800	69	0	48	0	48	45	14
2420.0	77	82	795	69	0	47	0	47	44	14
2430.0	77	82	795	69	0	47	0	47	44	14
2440.0	80	82	811	70	0	48	0	48	45	15
2450.0	78	82	801	70	0	48	0	48	45	14
2459.2	81	81	810	70	0	48	0	48	45	15

BIT NUMBER	6	IADC CODE	4	INTERVAL	2459.2-2470.7
CHRIS RC4		SIZE	9.675	NOZZLES	15 15 1
COST	21210.00	TRIP TIME	7.2	BIT RUN	11..
TOTAL HOURS	0.52	TOTAL TURNS	3271	CONDITION	TO B0 G0.20

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP. RIS
2460.0	45	0	227	57	0	0	0	0	13	
2470.0	40	0	199.	50	0	0	0	0	11	
2470.7	28	0	140	35	0	0	0	0	8	

BIT NUMBER	7	IADC CODE	517	INTERVAL	2470.7-2769.8
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.8	BIT RUN	299.1
TOTAL HOURS	30.31	TOTAL TURNS	141892	CONDITION	T7 B8 G0.250

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2480.0	78	81	795	69	0	48	0	48	44	14
2490.0	78	82	799	69	0	48	0	48	45	14
2500.0	80	81	801	70	0	48	0	48	45	14
2510.0	79	81	800	69	0	48	0	48	45	14
2520.0	78	82	800	70	0	48	0	48	45	14
2530.0	78	82	801	70	0	48	0	48	45	14
2540.0	79	82	804	70	0	48	0	48	45	14
2550.0	79	82	802	70	0	48	0	48	45	14
2560.0	79	83	809	70	0	48	0	48	45	15
2570.0	79	83	810	70	0	48	0	48	45	15
2580.0	79	83	812	71	0	49	0	49	45	15
2590.0	80	82	811	70	0	48	0	48	45	15
2600.0	79	83	808	70	0	48	0	48	45	15
2610.0	79	83	806	70	0	48	0	48	45	14
2620.0	79	82	804	70	0	48	0	48	45	14
2630.0	79	83	811	70	0	48	0	48	45	15
2640.0	79	82	806	70	0	48	0	48	45	14
2650.0	78	82	800	69	0	48	0	48	45	14
2660.0	79	82	806	70	0	48	0	48	45	14
2670.0	80	82	809	70	0	48	0	48	45	15
2680.0	81	81	814	71	0	49	0	49	45	15
2690.0	79	84	815	71	0	49	0	49	45	15
2700.0	77	84	807	70	0	48	0	48	45	14
2710.0	78	82	804	70	0	48	0	48	45	14
2720.0	80	82	809	70	0	48	0	48	45	15
2730.0	80	81	805	70	0	48	0	48	45	14
2740.0	77	82	793	69	0	47	0	47	44	14
2750.0	76	84	798	69	0	48	0	48	44	14
2760.0	76	82	789	69	0	47	0	47	44	14
2769.8	76	82	790	69	0	47	0	47	44	14

BIT NUMBER	8	IADC CODE	517	INTERVAL	2769.8-2918.0
HTC J22		SIZE	12.250	NOZZLES	18 16 16
COST	6788.00	TRIP TIME	8.2	BIT RUN	148.2
TOTAL HOURS	37.34	TOTAL TURNS	119776	CONDITION	T4 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2770.0	73	79	757	66	0	45	0	45	42	14
2780.0	77	71	739	64	0	44	0	44	41	13
2790.0	76	73	743	65	0	44	0	44	41	13
2800.0	76	72	742	64	0	44	0	44	41	13
2810.0	76	73	745	65	0	45	0	45	42	13
2820.0	76	74	749	65	0	45	0	45	42	13
2830.0	75	74	743	65	0	44	0	44	41	13
2840.0	76	73	744	65	0	44	0	44	41	13
2850.0	76	73	742	64	0	44	0	44	41	13
2860.0	76	73	744	65	0	44	0	44	41	13
2870.0	76	74	748	65	0	45	0	45	42	13
2880.0	75	74	743	65	0	44	0	44	41	13
2890.0	75	74	743	64	0	44	0	44	41	13
2900.0	76	73	745	65	0	45	0	45	42	13
2910.0	115	0	573	50	0	34	0	34	32	10
2918.0	77	73	748	65	0	45	0	45	42	13

BIT NUMBER	9	IADC CODE	537	INTERVAL	2918.0-3178.7
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	8.7	BIT RUN	260.7
TOTAL HOURS	51.23	TOTAL TURNS	183290	CONDITION	T4 B5 G0.25

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2920.0	66	69	679	59	0	41	0	41	38	12
2930.0	65	68	667	58	0	40	0	40	37	12
2940.0	66	69	676	59	0	40	0	40	38	12
2950.0	66	69	673	58	0	40	0	40	38	12
2960.0	67	68	671	58	0	40	0	40	37	12
2970.0	67	68	673	58	0	40	0	40	37	12
2980.0	67	66	669	58	0	40	0	40	37	12
2990.0	62	71	663	58	0	40	0	40	37	12
3000.0	66	67	665	58	0	40	0	40	37	12
3010.0	66	69	673	58	0	40	0	40	38	12
3020.0	67	67	671	58	0	40	0	40	37	12
3030.0	67	67	667	58	0	40	0	40	37	12
3040.0	67	67	671	58	0	40	0	40	37	12
3050.0	67	67	669	58	0	40	0	40	37	12
3060.0	67	68	675	59	0	40	0	40	38	12
3070.0	66	68	667	58	0	40	0	40	37	12
3080.0	14	100	566	49	0	34	0	34	32	11
3090.0	66	67	664	58	0	40	0	40	37	12
3100.0	66	67	666	58	0	40	0	40	37	12
3110.0	66	67	665	58	0	40	0	40	37	12
3120.0	67	67	668	58	0	40	0	40	37	12
3130.0	66	68	669	58	0	40	0	40	37	12
3140.0	67	66	666	58	0	40	0	40	37	12
3150.0	7	105	557	48	0	33	0	33	31	10
3160.0	67	67	670	58	0	40	0	40	37	12
3170.0	67	67	669	58	0	40	0	40	37	12
3178.7	66	67	669	58	0	40	0	40	37	12

BIT NUMBER	10	IADC CODE	537	INTERVAL	3178.7-3371.3		
HTC J33		SIZE	12.250	NOZZLES	15 15 15		
COST	6637.00	TRIP TIME	9.2	BIT RUN	192.6		
TOTAL HOURS	40.38	TOTAL TURNS	143960	CONDITION	T7 B8 G0.250		

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
3180.0	66	66	658	57	0	39	0	39	37	12
3190.0	67	64	653	57	0	39	0	39	36	12
3200.0	67	65	659	57	0	39	0	39	37	12
3210.0	68	64	658	57	0	39	0	39	37	12
3220.0	68	65	666	58	0	40	0	40	37	12
3230.0	68	65	664	58	0	40	0	40	37	12
3240.0	67	65	658	57	0	39	0	39	37	12
3250.0	68	63	654	57	0	39	0	39	36	12
3260.0	67	64	657	57	0	39	0	39	37	12
3270.0	68	64	660	57	0	39	0	39	37	12
3280.0	68	63	656	57	0	39	0	39	37	12
3290.0	67	64	656	57	0	39	0	39	37	12
3300.0	68	63	654	57	0	39	0	39	36	12
3310.0	67	64	655	57	0	39	0	39	36	12
3320.0	68	64	659	57	0	39	0	39	37	12
3330.0	68	65	665	58	0	40	0	40	37	12
3340.0	68	64	659	57	0	39	0	39	37	12
3350.0	67	64	654	57	0	39	0	39	36	12
3360.0	67	64	653	57	0	39	0	39	36	12
3370.0	68	64	660	57	0	39	0	39	37	12
3371.3	68	64	660	57	0	39	0	39	37	12

COMPUTER DATA LISTINGS

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

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

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

The following data lists have been made for this well :

(a). Bit record and bit initialization data

(b). Hydraulic analyses

(c). Data list A

(d). Data list B

(e). Data list C

(f). Data list D

COMPUTER PLOTS

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

GEOPLOT - 1:5000 SCALE - 2m averages

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

(a). BIT RECORD AND BIT INITIALIZATION DATA

BIT SIZE . . . . . Inches

BIT COST . . . . . Australian dollars

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

DEPTHS . . . . . Metres

HOLE MADE. . . . . Metres

DRILLING TIME. . . . . Hours

AVERAGE ROP. . . . . Metres/hour

AVERAGE COST/METRE . . Australian dollars

BIT CONDITION. . . . . Teeth

Bearings

Gauge . . . . Inches

WELL: TERAGLIN # 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	100.3	239.0	138.7	3.62	38.3	2.5	187.13	14080	2	2	0.000
2	111	HTC OSC3AJ	17.500	4442.00	20 20 20	239.0	828.0	589.0	9.26	63.6	3.8	101.58	83317	2	5	0.000
3	114	HTC X3A	12.250	2201.00	18 18 16	828.0	1296.0	468.0	20.76	22.5	4.7	235.42	179081	5	5	0.125
4	114	HTC X3A	12.250	2201.00	18 18 18	1296.0	1724.4	428.4	26.07	16.4	5.7	319.65	238949	5	8	0.000
5	114	HTC X3A	12.250	2201.00	18 18 18	1724.4	2239.4	515.0	24.27	21.2	6.5	257.66	222918	5	8	0.000
6	437	HTC J11	12.250	6788.00	18 18 18	2239.4	2459.2	219.8	28.13	7.8	7.2	712.57	155751	3	5	0.063
6	4	CHRIS RC4	9.675	21210.00	15 15 14	2459.2	2470.7	11.5	0.52	22.1	7.2	4691.35	3271	0	0	0.200

WELL: TERAGLIN # 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
7	517	HTC J22	12.250	6788.00	18 18 18	2470.7	2769.8	299.1	30.31	9.9	7.8	563.06	141892	7	8	0.250
8	517	HTC J22	12.250	6788.00	18 16 16	2769.8	2918.0	148.2	37.34	4.0	8.2	1349.01	119776	4	4	0.000
9	537	HTC J33	12.250	6637.00	15 15 15	2918.0	3178.7	260.7	51.23	5.1	8.7	1000.38	183290	4	5	0.250
10	537	HTC J33	12.250	6637.00	15 15 15	3178.7	3371.3	192.6	40.38	4.8	9.2	1126.20	143960	7	8	0.250

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

STARTING DEPTH, TVD	100.3	100.3	
BIT COST, RIG COST/HOUR	0.00	4241.00	
TRIP TIME	2.5		
BIT DIAMETER	26.000		
NOZZLES	20	20	20
HW DRILL COLLAR LENGTH, OD, ID	23.36	9.750	3.000
DRILL COLLAR LENGTH, OD, ID	65.50	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	83.28	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	0.48		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	4.0	1.50	
FINISHING DEPTH	239.0		
CUMULATIVE HOURS, TURNS	3.6	14080	
BIT CONDITION OUT	T 2	B 2	G 0.000

BIT NUMBER: 2 IADC CODE 111 HTC OSC3AJ

STARTING DEPTH, TVD	239.0	239.0	
BIT COST, RIG COST/HOUR	4442.00	4241.00	
TRIP TIME	3.8		
BIT DIAMETER	17.500		
NOZZLES	20	20	20
HW DRILL COLLAR LENGTH, OD, ID	21.52	9.750	3.000
DRILL COLLAR LENGTH, OD, ID	95.07	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	83.28	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	224.00	19.124	
RISER LENGTH, ID	100.28	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.48		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	5.0	2.00	
FINISHING DEPTH	828.0		
CUMULATIVE HOURS, TURNS	9.3	83317	
BIT CONDITION OUT	T 2	B 5	G 0.000

BIT NUMBER: 3 IADC CODE 114 HTC X3A			
STARTING DEPTH, TVD	828.0	828.0	
BIT COST, RIG COST/HOUR	2201.00	4241.00	
TRIP TIME	4.7		
BIT DIAMETER	12.250		
NOZZLES	18	18	16
DRILL COLLAR LENGTH, OD, ID	173.37	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	55.40	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	814.00	12.615	
RISER LENGTH, ID	100.28	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.48		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.20	
FINISHING DEPTH	1296.0		
CUMULATIVE HOURS, TURNS	20.8	179081	
BIT CONDITION OUT	T 5	B 5	G 0.125

BIT NUMBER: 4 IADC CODE 114 HTC X3A			
STARTING DEPTH, TVD	1296.0	1296.0	
BIT COST, RIG COST/HOUR	2201.00	4241.00	
TRIP TIME	5.7		
BIT DIAMETER	12.250		
NOZZLES	18	18	18
DRILL COLLAR LENGTH, OD, ID	173.37	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	55.40	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	814.00	12.615	
RISER LENGTH, ID	100.28	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.48		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.20	
FINISHING DEPTH	1724.4		
CUMULATIVE HOURS, TURNS	26.1	238949	
BIT CONDITION OUT	T 5	B 8	G 0.000

BIT NUMBER: 5 IADC CODE 114 HTC X3A			
STARTING DEPTH, TVD.....	1724.4	1724.3	
BIT COST, RIG COST/HOUR.....	2201.00	4241.00	
TRIP TIME.....	6.5		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	173.37	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	55.40	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	814.00	12.615	
RISER LENGTH, ID.....	100.28	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.20	
FINISHING DEPTH.....	2239.4		
CUMULATIVE HOURS, TURNS.....	24.3	222918	
BIT CONDITION OUT.....	T 5	B 8	G 0.000

BIT NUMBER: 6 IADC CODE 437 HTC J11			
STARTING DEPTH, TVD.....	2239.4	2239.1	
BIT COST, RIG COST/HOUR.....	6788.00	4241.00	
TRIP TIME.....	7.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.77	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	56.64	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	814.00	12.615	
RISER LENGTH, ID.....	100.28	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.40	
FINISHING DEPTH.....	2459.2		
CUMULATIVE HOURS, TURNS.....	28.1	155751	
BIT CONDITION OUT.....	T 3	B 5	G 0.063

BIT NUMBER: 6 IADC CODE 4 CHRIS RC4

STARTING DEPTH, TVD.....	2459.2	2458.9	
BIT COST, RIG COST/HOUR.....	21210.00	4241.00	
TRIP TIME.....	7.2		
BIT DIAMETER.....	9.675		
NOZZLES.....	15	15	14
DRILL COLLAR LENGTH, OD, ID.....	162.50	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	56.64	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
LINER DEPTH, TOP, ID.....	2459.20	814.00	12.250
CASING ID.....		12.615	
RISER LENGTH, ID.....	100.28	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.40	
FINISHING DEPTH.....	2470.7		
CUMULATIVE HOURS, TURNS.....	0.5	3271	
BIT CONDITION OUT.....	T 0	B 0	G 0.200

BIT NUMBER: 7 IADC CODE 517 HTC J22			
STARTING DEPTH, TVD.....	2470.7	2470.4	
BIT COST, RIG COST/HOUR.....	6788.00	4241.00	
TRIP TIME.....	7.8		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	172.77	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	56.64	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	814.00	12.615	
RISER LENGTH, ID.....	100.28	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	2769.8		
CUMULATIVE HOURS, TURNS.....	30.3	141892	
BIT CONDITION OUT.....	T 7	B 8	G 0.250

BIT NUMBER: 8 IADC CODE 517 HTC J22			
STARTING DEPTH, TVD.....	2769.8	2769.5	
BIT COST, RIG COST/HOUR.....	6788.00	4241.00	
TRIP TIME.....	8.2		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	16	16
DRILL COLLAR LENGTH, OD, ID.....	172.77	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	56.64	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	814.00	12.615	
RISER LENGTH, ID.....	100.28	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.48		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.5	2.50	
FINISHING DEPTH.....	2918.0		
CUMULATIVE HOURS, TURNS.....	37.3	119776	
BIT CONDITION OUT.....	T 4	B 4	G 0.000

BIT NUMBER: 9	IADC CODE 537	HTC J33		
STARTING DEPTH, TVD		2918.0	2917.7	
BIT COST, RIG COST/HOUR		6637.00	4241.00	
TRIP TIME		8.7		
BIT DIAMETER		12.250		
NOZZLES		15	15	15
DRILL COLLAR LENGTH, OD, ID		191.59	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID		56.64	5.000	3.125
DRILL PIPE OD, ID			5.000	4.276
CASING DEPTH, ID		814.00	12.615	
RISER LENGTH, ID		100.28	21.000	
PUMP VOLUMES 1 AND 2		0.119	0.119	
PORE PRESSURE CALC EXPONENT		1.20		
NORMAL PORE PRESSURE		8.4		
OVERBURDEN GRADIENT MODIFIER		0.00		
STRESS RATIO MODIFIER		0.48		
"d" EXPONENT CORRECTION FACTOR		10.0		
CUTTINGS DIAMETER, DENSITY		2.5	2.50	
FINISHING DEPTH		3178.7		
CUMULATIVE HOURS, TURNS		51.2	183290	
BIT CONDITION OUT		T 4	B 5	G 0.250

BIT NUMBER: 10	IADC CODE 537	HTC J33		
STARTING DEPTH, TVD		3178.7	3178.3	
BIT COST, RIG COST/HOUR		6637.00	4241.00	
TRIP TIME		9.2		
BIT DIAMETER		12.250		
NOZZLES		15	15	15
DRILL COLLAR LENGTH, OD, ID		191.59	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID		56.64	5.000	3.125
DRILL PIPE OD, ID			5.000	4.276
CASING DEPTH, ID		814.00	12.615	
RISER LENGTH, ID		100.28	21.000	
PUMP VOLUMES 1 AND 2		0.119	0.119	
PORE PRESSURE CALC EXPONENT		1.20		
NORMAL PORE PRESSURE		8.4		
OVERBURDEN GRADIENT MODIFIER		0.00		
STRESS RATIO MODIFIER		0.48		
"d" EXPONENT CORRECTION FACTOR		10.0		
CUTTINGS DIAMETER, DENSITY		2.5	2.60	
FINISHING DEPTH		3371.3		
CUMULATIVE HOURS, TURNS		40.4	143960	
BIT CONDITION OUT		T 7	B 8	G 0.250

(b). HYDRAULIC ANALYSIS

Data listed from the data 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
ASCEND VELOCITY. . . .	The rate of ascent of cuttings in the annulus under laminar flow
PRESSURE UNITS	Pounds per square inch
IMPACT FORCE	The impact force at the bit, in foot-pounds per second squared
H.H.P.	Hydraulic horsepower at the bit
JET VELOCITY	The velocity of mud through the bit nozzles, in metres per second
DENSITY UNITS.	Pounds per gallon

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 200.0 AND TVD 200.0

SPM 1 52 SPM 2 49 FLOW RATE 504

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	6	0	TURBULENT			0.0
DC/OH	1.950	128	6	0	TURBULENT			0.0
HWDP/OH	2.074	173	6	0	TURBULENT			0.0
DP/OH	2.074	58	6	0	TURBULENT			0.0
TOTAL VOLUME		401					TOTAL PRESSURE DROP	0.0

LAG: 33.5 MINUTES 1736 STROKES #1 AND 1638 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	237.3	HHP	70	IMPACT FORCE	394
% SURFACE PRESSURE	52.7	HHP/sqin	0.13	JET VELOCITY	53

PRESSURE BREAKDOWN:

SURFACE	16.8				
STRING	98.6				
BIT	237.3				
ANNULUS	0.0				
TOTAL	352.7	PUMP PRESSURE	450.0	% DIFFERENCE	21.6

BOTTOM HOLE PRESSURES:

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 77 SPM 2 78 FLOW RATE 774

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	27	123	LAMINAR	1	27	0.3
DC/OH	0.772	42	24	122	LAMINAR	0	23	0.6
DC/CSG	0.961	39	19	121	LAMINAR	0	19	0.4
HWDP/CSG	1.085	90	17	120	LAMINAR	0	17	0.5
HWDP/RIS	1.325	0	14	119	LAMINAR	0	14	0.0
DP/RIS	1.325	133	14	119	LAMINAR	0	14	0.5
TOTAL VOLUME		319			TOTAL PRESSURE DROP			2.4

LAG: 17.3 MINUTES 1334 STROKES #1 AND 1344 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	566.8	HHP	256	IMPACT FORCE	941
% SURFACE PRESSURE	50.9	HHP/sqin	1.06	JET VELOCITY	82

PRESSURE BREAKDOWN:

SURFACE	48.4				
STRING	363.3				
BIT	566.8				
ANNULUS	2.4				
TOTAL	980.8	PUMP PRESSURE	1112.5	% DIFFERENCE	11.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.70	HYDROSTATIC PRESSURE	445.3
CIRCULATING:	ECD	8.75	CIRCULATING PRESSURE	447.7
PULLING OUT:	TRIP MARGIN	0.09	ESTIMATED SWAB	4.8
	EFFECTIVE MUD WEIGHT	8.61	BOTTOM HOLE PRESSURE	440.

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 91 SPM 2 102 FLOW RATE 965

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	34	122	LAMINAR	1	33	0.4
DC/OH	0.772	73	30	121	LAMINAR	0	29	1.2
HWDP/OH	0.896	53	26	119	LAMINAR	0	25	0.5
HWDP/CSG	1.085	26	21	119	LAMINAR	0	21	0.2
DP/CSG	1.085	108	21	119	LAMINAR	0	21	0.7
DP/RIS	1.325	133	17	118	LAMINAR	0	17	0.6
TOTAL VOLUME		408			TOTAL PRESSURE DROP			3.4

LAG: 17.8 MINUTES 1618 STROKES #1 AND 1813 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	890.2	HHP	501	IMPACT FORCE	1478
% SURFACE PRESSURE	54.7	HHP/sqin	2.08	JET VELOCITY	102

PRESSURE BREAKDOWN:

SURFACE	72.5				
STRING	586.6				
BIT	890.2				
ANNULUS	3.4				
TOTAL	1552.8	PUMP PRESSURE	1627.6	% DIFFERENCE	4.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.80	HYDROSTATIC PRESSURE	600.5
CIRCULATING:	ECD	8.85	CIRCULATING PRESSURE	604.1
PULLING OUT:	TRIP MARGIN	0.10	ESTIMATED SWAB	6.9
	EFFECTIVE MUD WEIGHT	8.70	BOTTOM HOLE PRESSURE	593.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 96 SPM 2 97 FLOW RATE 968

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	34	121	LAMINAR	1	34	0.4
DC/OH	0.772	73	30	120	LAMINAR	0	29	1.2
HWDP/OH	0.896	75	26	119	LAMINAR	0	25	0.7
DP/OH	0.896	68	26	119	LAMINAR	0	25	0.6
DP/CSG	1.085	134	21	118	LAMINAR	0	21	0.8
DP/RIS	1.325	133	17	118	LAMINAR	0	17	0.6
TOTAL VOLUME		498			TOTAL PRESSURE DROP			4.3

LAG: 21.6 MINUTES 2082 STROKES #1 AND 2101 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	906.8	HHP	512	IMPACT FORCE	1505
% SURFACE PRESSURE	52.6	HHP/sqin	2.13	JET VELOCITY	103

PRESSURE BREAKDOWN:

SURFACE	73.7				
STRING	638.2				
BIT	906.8				
ANNULUS	4.3				
TOTAL	1623.0	PUMP PRESSURE	1723.8	% DIFFERENCE	5.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	759.2
CIRCULATING:	ECD	8.95	CIRCULATING PRESSURE	763.5
PULLING OUT:	TRIP MARGIN	0.10	ESTIMATED SWAB	8.5
	EFFECTIVE MUD WEIGHT	8.80	BOTTOM HOLE PRESSURE	750.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 93 SPM 2 93 FLOW RATE 933

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	121	LAMINAR	1	32	0.4
DC/OH	0.772	73	29	120	LAMINAR	0	28	1.2
HWDP/OH	0.896	75	25	119	LAMINAR	0	24	0.7
DP/OH	0.896	158	25	119	LAMINAR	0	24	1.5
DP/CSG	1.085	134	20	118	LAMINAR	0	20	0.8
DP/RIS	1.325	133	17	118	LAMINAR	0	17	0.6
TOTAL VOLUME		587				TOTAL PRESSURE DROP		5.1

LAG: 26.4 MINUTES 2468 STROKES #1 AND 2469 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	842.5	HHP	459	IMPACT FORCE	1399
% SURFACE PRESSURE	49.3	HHP/sqin	1.91	JET VELOCITY	99

PRESSURE BREAKDOWN:

SURFACE	69.0		
STRING	637.1		
BIT	842.5		
ANNULUS	5.1		
TOTAL	1553.5	PUMP PRESSURE 1710.4	% DIFFERENCE 9.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	911.0
CIRCULATING:	ECD	8.95	CIRCULATING PRESSURE	916.1
PULLING OUT:	TRIP MARGIN	0.10	ESTIMATED SWAB	10.1
	EFFECTIVE MUD WEIGHT	8.80	BOTTOM HOLE PRESSURE	900.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 97 SPM 2 94 FLOW RATE 957

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	34	120	LAMINAR	1	33	0.4
DC/OH	0.772	73	30	119	LAMINAR	0	29	1.2
HWDP/OH	0.896	75	25	118	LAMINAR	0	25	0.7
DP/OH	0.896	247	25	118	LAMINAR	0	25	2.3
DP/CSG	1.085	134	21	118	LAMINAR	0	21	0.8
DP/RIS	1.325	133	17	117	LAMINAR	0	17	0.6
TOTAL VOLUME		677			TOTAL PRESSURE DROP			5.9

LAG: 29.7 MINUTES 2884 STROKES #1 AND 2805 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	896.9	HHP	501	IMPACT FORCE	1489
% SURFACE PRESSURE	48.6	HHP/sqin	2.08	JET VELOCITY	101

PRESSURE BREAKDOWN:

SURFACE	72.9				
STRING	715.3				
BIT	896.9				
ANNULUS	5.9				
TOTAL	1691.0	PUMP PRESSURE	1844.1	% DIFFERENCE	8.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1074.8
CIRCULATING:	ECD	9.05	CIRCULATING PRESSURE	1080.7
PULLING OUT:	TRIP MARGIN	0.10	ESTIMATED SWAB	11.9
	EFFECTIVE MUD WEIGHT	8.90	BOTTOM HOLE PRESSURE	1062.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 97 SPM 2 96 FLOW RATE 962

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	34	120	LAMINAR	1	33	0.4
DC/OH	0.772	73	30	119	LAMINAR	0	29	1.2
HWDP/OH	0.896	75	26	117	LAMINAR	0	25	0.7
DP/OH	0.896	337	26	117	LAMINAR	0	25	3.2
DP/CSG	1.085	134	21	117	LAMINAR	0	21	0.8
DP/RIS	1.325	133	17	116	LAMINAR	0	17	0.6
TOTAL VOLUME		767				TOTAL PRESSURE DROP		6.8

LAG: 33.5 MINUTES 3245 STROKES #1 AND 3197 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	916.5	HHP	515	IMPACT FORCE	1521
% SURFACE PRESSURE	47.8	HHP/sqin	2.14	JET VELOCITY	102

PRESSURE BREAKDOWN:

SURFACE	74.2
STRING	771.2
BIT	916.5
ANNULUS	6.8
TOTAL	1768.7

PUMP PRESSURE 1916.4 % DIFFERENCE 7.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1242.0
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	1248.8
PULLING OUT:	TRIP MARGIN	0.10	ESTIMATED SWAB	13.6
	EFFECTIVE MUD WEIGHT	9.00	BOTTOM HOLE PRESSURE	1228.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 98 SPM 2 95 FLOW RATE 964

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	24	84	133	LAMINAR	1	83	4.3
DC/CSG	0.303	26	76	132	LAMINAR	1	75	3.9
HWDP/CSG	0.427	24	54	131	LAMINAR	0	53	1.2
DP/CSG	0.427	244	54	131	LAMINAR	0	53	12.6
DP/RIS	1.325	133	17	128	LAMINAR	0	17	0.7
TOTAL VOLUME		451				TOTAL PRESSURE DROP		22.7

LAG: 19.6 MINUTES 1917 STROKES #1 AND 1870 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1603.5	HHP	902	IMPACT FORCE	2005
% SURFACE PRESSURE	55.1	HHP/sqin	7.65	JET VELOCITY	136

PRESSURE BREAKDOWN:

SURFACE	73.8				
STRING	942.5				
BIT	1603.5				
ANNULUS	22.7				
TOTAL	2642.5	PUMP PRESSURE	2910.0	% DIFFERENCE	9.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1381.9
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	1404.6
PULLING OUT:	TRIP MARGIN	0.30	ESTIMATED SWAB	45.4
	EFFECTIVE MUD WEIGHT	8.70	BOTTOM HOLE PRESSURE	1336.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 98 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	48	84	133	LAMINAR	1	83	8.8
HWDP/OH	0.398	5	58	131	LAMINAR	0	57	0.3
HWDP/CSG	0.427	18	54	131	LAMINAR	0	53	0.9
DP/CSG	0.427	287	54	131	LAMINAR	0	53	14.8
DP/RIS	1.325	133	17	128	LAMINAR	0	17	0.7
TOTAL VOLUME		490			TOTAL PRESSURE DROP			25.4

LAG: 21.4 MINUTES 2098 STROKES #1 AND 2024 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1596.6	HHP	896	IMPACT FORCE	1997
% SURFACE PRESSURE	54.4	HHP/sqin	7.61	JET VELOCITY	135

PRESSURE BREAKDOWN:

SURFACE	73.5				
STRING	981.2				
BIT	1596.6				
ANNULUS	25.4				
TOTAL	2676.8	PUMP PRESSURE	2935.0	% DIFFERENCE	8.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1535.4
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	1560.8
PULLING OUT:	TRIP MARGIN	0.30	ESTIMATED SWAB	50.8
	EFFECTIVE MUD WEIGHT	8.70	BOTTOM HOLE PRESSURE	1484.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 92 SPM 2 96 FLOW RATE 938

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	81	133	LAMINAR	1	81	8.7
HWDP/OH	0.398	22	56	131	LAMINAR	0	56	1.3
DP/OH	0.398	23	56	131	LAMINAR	0	56	1.4
DP/CSG	0.427	305	52	131	LAMINAR	0	52	15.6
DP/RIS	1.325	133	17	128	LAMINAR	0	17	0.7
TOTAL VOLUME		530			TOTAL PRESSURE DROP			27.6

LAG: 23.7 MINUTES 2189 STROKES #1 AND 2268 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1518.1	HHP	831	IMPACT FORCE	1899
% SURFACE PRESSURE	51.8	HHP/sqin	7.05	JET VELOCITY	132

PRESSURE BREAKDOWN:

SURFACE	70.3				
STRING	978.2				
BIT	1518.1				
ANNULUS	27.6				
TOTAL	2594.3	PUMP PRESSURE	2929.7	% DIFFERENCE	11.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1689.0
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	1716.6
PULLING OUT:	TRIP MARGIN	0.29	ESTIMATED SWAB	55.3
	EFFECTIVE MUD WEIGHT	8.71	BOTTOM HOLE PRESSURE	1633.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 92 SPM 2 96 FLOW RATE 940

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	82	130	LAMINAR	1	81	8.6
HWDP/OH	0.398	22	56	126	LAMINAR	0	56	1.3
DP/OH	0.398	63	56	126	LAMINAR	0	56	3.5
DP/CSG	0.427	305	52	126	LAMINAR	0	52	14.8
DP/RIS	1.325	133	17	121	LAMINAR	0	17	0.6
TOTAL VOLUME		570				TOTAL PRESSURE DROP		28.9

LAG: 25.5 MINUTES 2345 STROKES #1 AND 2446 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1522.2	HHP	835	IMPACT FORCE	1904
% SURFACE PRESSURE	54.6	HHP/sqin	7.08	JET VELOCITY	132

PRESSURE BREAKDOWN:

SURFACE	73.7				
STRING	1067.8				
BIT	1522.2				
ANNULUS	28.9				
TOTAL	2692.6	PUMP PRESSURE	2790.0	% DIFFERENCE	3.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1842.5
CIRCULATING:	ECD	9.14	CIRCULATING PRESSURE	1871.4
PULLING OUT:	TRIP MARGIN	0.28	ESTIMATED SWAB	57.7
	EFFECTIVE MUD WEIGHT	8.72	BOTTOM HOLE PRESSURE	1784.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1300.0

SPM 1 92 SPM 2 94 FLOW RATE 930

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	81	65	TURBULENT			3.8
HWDP/OH	0.398	22	56	60	LAMINAR	1	55	0.4
DP/OH	0.398	102	56	60	LAMINAR	1	55	1.7
DP/CSG	0.427	305	52	59	LAMINAR	1	51	4.2
DP/RIS	1.325	133	17	53	LAMINAR	0	17	0.1
TOTAL VOLUME		610			TOTAL PRESSURE DROP			10.2

LAG: 27.5 MINUTES 2544 STROKES #1 AND 2582 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1305.5	HHP	709	IMPACT FORCE	1756
% SURFACE PRESSURE	45.3	HHP/sqin	6.01	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	65.9				
STRING	993.7				
BIT	1305.5				
ANNULUS	10.2				
TOTAL	2375.4	PUMP PRESSURE	2880.9	% DIFFERENCE	17.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	2018.2
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	2028.5
PULLING OUT:	TRIP MARGIN	0.09	ESTIMATED SWAB	20.5
	EFFECTIVE MUD WEIGHT	9.01	BOTTOM HOLE PRESSURE	1997.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 92 SPM 2 94 FLOW RATE 930

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	81	65	TURBULENT			3.8
HWDP/OH	0.398	22	56	60	LAMINAR	1	55	0.4
DP/OH	0.398	142	56	60	LAMINAR	1	55	2.3
DP/CSG	0.427	305	52	59	LAMINAR	1	51	4.2
DP/RIS	1.325	133	17	53	LAMINAR	0	17	0.1
TOTAL VOLUME		650			TOTAL PRESSURE DROP			10.9

LAG: 29.4 MINUTES 2701 STROKES #1 AND 2760 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1303.2	HHP	707	IMPACT FORCE	1752
% SURFACE PRESSURE	44.6	HHP/sqin	6.00	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	65.8
STRING	1030.0
BIT	1303.2
ANNULUS	10.9
TOTAL	2409.9

PUMP PRESSURE 2920.0 % DIFFERENCE 17.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	2173.5
CIRCULATING:	ECD	9.15	CIRCULATING PRESSURE	2184.4
PULLING OUT:	TRIP MARGIN	0.09	ESTIMATED SWAB	21.8
	EFFECTIVE MUD WEIGHT	9.01	BOTTOM HOLE PRESSURE	2151.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1500.0

SPM 1 94 SPM 2 93 FLOW RATE 938

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	81	107	LAMINAR	1	80	6.2
HWDP/OH	0.398	22	56	103	LAMINAR	0	56	0.9
DP/OH	0.398	182	56	103	LAMINAR	0	56	7.3
DP/CSG	0.427	305	52	103	LAMINAR	0	52	10.4
DP/RIS	1.325	133	17	97	LAMINAR	0	17	0.4
TOTAL VOLUME		690			TOTAL PRESSURE DROP			25.2

LAG: 30.9 MINUTES 2910 STROKES #1 AND 2885 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1340.5	HHP	733	IMPACT FORCE	1803
% SURFACE PRESSURE	49.3	HHP/sqin	6.22	JET VELOCITY	123

PRESSURE BREAKDOWN:

SURFACE	71.4				
STRING	1159.1				
BIT	1340.5				
ANNULUS	25.2				
TOTAL	2596.3	PUMP PRESSURE	2717.6	% DIFFERENCE	4.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	2354.3
CIRCULATING:	ECD	9.30	CIRCULATING PRESSURE	2379.5
PULLING OUT:	TRIP MARGIN	0.20	ESTIMATED SWAB	50.4
	EFFECTIVE MUD WEIGHT	9.00	BOTTOM HOLE PRESSURE	2303.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1600.0

SPM 1 92 SPM 2 92 FLOW RATE 919

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	80	107	LAMINAR	1	79	6.2
HWDP/OH	0.398	22	55	103	LAMINAR	0	55	0.9
DP/OH	0.398	222	55	103	LAMINAR	0	55	8.8
DP/CSG	0.427	305	51	103	LAMINAR	0	51	10.4
DP/RIS	1.325	133	17	97	LAMINAR	0	16	0.4
TOTAL VOLUME		729			TOTAL PRESSURE DROP			26.6

LAG: 33.3 MINUTES 3068 STROKES #1 AND 3062 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1287.5	HHP	690	IMPACT FORCE	1731
% SURFACE PRESSURE	44.1	HHP/sqin	5.86	JET VELOCITY	120

PRESSURE BREAKDOWN:

SURFACE	68.9		
STRING	1157.4		
BIT	1287.5		
ANNULUS	26.6		
TOTAL	2540.4	PUMP PRESSURE 2921.3	% DIFFERENCE 13.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	2511.2
CIRCULATING:	ECD	9.30	CIRCULATING PRESSURE	2537.9
PULLING OUT:	TRIP MARGIN	0.20	ESTIMATED SWAB	53.3
	EFFECTIVE MUD WEIGHT	9.00	BOTTOM HOLE PRESSURE	2457.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1699.9

SPM 1 92 SPM 2 90 FLOW RATE 912

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	79	111	LAMINAR	1	78	6.2
HWDP/OH	0.398	22	55	109	LAMINAR	0	54	0.9
DP/OH	0.398	262	55	109	LAMINAR	0	54	11.1
DP/CSG	0.427	305	51	109	LAMINAR	0	50	11.1
DP/RIS	1.325	133	16	107	LAMINAR	0	16	0.5
TOTAL VOLUME		769			TOTAL PRESSURE DROP			29.8

LAG: 35.4 MINUTES 3271 STROKES #1 AND 3194 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1255.2	HHP	668	IMPACT FORCE	1688
% SURFACE PRESSURE	43.2	HHP/sqin	5.67	JET VELOCITY	119

PRESSURE BREAKDOWN:

SURFACE	63.6				
STRING	1105.9				
BIT	1255.2				
ANNULUS	29.8				
TOTAL	2454.4	PUMP PRESSURE	2905.8	% DIFFERENCE	15.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	2639.2
CIRCULATING:	ECD	9.20	CIRCULATING PRESSURE	2668.9
PULLING OUT:	TRIP MARGIN	0.21	ESTIMATED SWAB	59.6
	EFFECTIVE MUD WEIGHT	8.89	BOTTOM HOLE PRESSURE	2579.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1799.9

SPM 1 87 SPM 2 87 FLOW RATE 868

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	75	128	LAMINAR	1	75	8.4
HWDP/OH	0.398	22	52	125	LAMINAR	0	52	1.2
DP/OH	0.398	302	52	125	LAMINAR	0	52	16.7
DP/CSG	0.427	305	48	124	LAMINAR	0	48	14.5
DP/RIS	1.325	133	16	119	LAMINAR	0	16	0.6
TOTAL VOLUME		809			TOTAL PRESSURE DROP			41.5

LAG: 39.1 MINUTES 3399 STROKES #1 AND 3401 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1149.0	HHP	582	IMPACT FORCE	1545
% SURFACE PRESSURE	39.4	HHP/sqin	4.94	JET VELOCITY	114

PRESSURE BREAKDOWN:

SURFACE	65.0
STRING	1167.4
BIT	1149.0
ANNULUS	41.5
TOTAL	2422.9

PUMP PRESSURE 2915.2 % DIFFERENCE 16.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	2825.0
CIRCULATING:	ECD	9.34	CIRCULATING PRESSURE	2866.4
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	82.9
	EFFECTIVE MUD WEIGHT	8.93	BOTTOM HOLE PRESSURE	2742.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1899.8

SPM 1 85 SPM 2 86 FLOW RATE 855

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	74	128	LAMINAR	1	74	8.4
HWDP/OH	0.398	22	51	125	LAMINAR	0	51	1.2
DP/OH	0.398	342	51	125	LAMINAR	0	51	18.8
DP/CSG	0.427	305	48	124	LAMINAR	0	47	14.4
DP/RIS	1.325	133	15	119	LAMINAR	0	15	0.6
TOTAL VOLUME		849			TOTAL PRESSURE DROP			43.5

LAG: 41.7 MINUTES 3561 STROKES #1 AND 3574 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1113.6	HHP	555	IMPACT FORCE	1497
% SURFACE PRESSURE	38.0	HHP/sqin	4.71	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	63.2		
STRING	1171.4		
BIT	1113.6		
ANNULUS	43.5		
TOTAL	2391.6	PUMP PRESSURE 2933.9	% DIFFERENCE 18.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	2981.9
CIRCULATING:	ECD	9.33	CIRCULATING PRESSURE	3025.4
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	86.9
	EFFECTIVE MUD WEIGHT	8.93	BOTTOM HOLE PRESSURE	2895.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 1999.8

SPM 1 85 SPM 2 86 FLOW RATE 855

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	74	128	LAMINAR	1	74	8.4
HWDP/OH	0.398	22	51	125	LAMINAR	0	51	1.2
DP/OH	0.398	381	51	125	LAMINAR	0	51	21.0
DP/CSG	0.427	305	48	124	LAMINAR	0	47	14.4
DP/RIS	1.325	133	15	119	LAMINAR	0	15	0.6
TOTAL VOLUME		889			TOTAL PRESSURE DROP			45.7

LAG: 43.7 MINUTES 3711 STROKES #1 AND 3758 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1114.2	HHP	556	IMPACT FORCE	1498
% SURFACE PRESSURE	38.0	HHP/sqin	4.72	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	63.3		
STRING	1208.5		
BIT	1114.2		
ANNULUS	45.7		
TOTAL	2431.6	PUMP PRESSURE 2929.5	% DIFFERENCE 17.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	3138.8
CIRCULATING:	ECD	9.33	CIRCULATING PRESSURE	3184.5
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	91.3
	EFFECTIVE MUD WEIGHT	8.93	BOTTOM HOLE PRESSURE	3047.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2099.8

SPM 1 84 SPM 2 82 FLOW RATE 833

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	72	128	LAMINAR	1	72	8.3
HWDP/OH	0.398	22	50	125	LAMINAR	0	50	1.2
DP/OH	0.398	421	50	125	LAMINAR	0	50	23.1
DP/CSG	0.427	305	46	124	LAMINAR	0	46	14.3
DP/RIS	1.325	133	15	119	LAMINAR	0	15	0.6
TOTAL VOLUME		929			TOTAL PRESSURE DROP			47.5

LAG: 46.8 MINUTES 3952 STROKES #1 AND 3852 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1057.8	HHP	514	IMPACT FORCE	1422
% SURFACE PRESSURE	36.8	HHP/sqin	4.36	JET VELOCITY	109

PRESSURE BREAKDOWN:

SURFACE	60.4
STRING	1188.1
BIT	1057.8
ANNULUS	47.5
TOTAL	2353.8

PUMP PRESSURE 2877.1 % DIFFERENCE 18.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	3295.7
CIRCULATING:	ECD	9.33	CIRCULATING PRESSURE	3343.2
PULLING OUT:	TRIP MARGIN	0.27	ESTIMATED SWAB	95.0
	EFFECTIVE MUD WEIGHT	8.93	BOTTOM HOLE PRESSURE	3200.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2199.7

SPM 1 83 SPM 2 79 FLOW RATE 806

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	48	70	153	LAMINAR	0	70	11.2
HWDP/OH	0.398	22	48	151	LAMINAR	0	48	1.7
DP/OH	0.398	461	48	151	LAMINAR	0	48	35.7
DP/CSG	0.427	305	45	151	LAMINAR	0	45	20.4
DP/RIS	1.325	133	14	149	LAMINAR	0	14	0.9
TOTAL VOLUME		969					TOTAL PRESSURE DROP	69.9

LAG: 50.4 MINUTES 4175 STROKES #1 AND 3964 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	991.3	HHP	466	IMPACT FORCE	1333
% SURFACE PRESSURE	34.0	HHP/sqin	3.96	JET VELOCITY	105

PRESSURE BREAKDOWN:

SURFACE	56.9		
STRING	1153.4		
BIT	991.3		
ANNULUS	69.9		
TOTAL	2271.5	PUMP PRESSURE 2911.6	% DIFFERENCE 22.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	3452.6
CIRCULATING:	ECD	9.39	CIRCULATING PRESSURE	3522.5
PULLING OUT:	TRIP MARGIN	0.37	ESTIMATED SWAB	139.7
	EFFECTIVE MUD WEIGHT	8.83	BOTTOM HOLE PRESSURE	3312.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2299.7

SPM 1 81 SPM 2 81 FLOW RATE 811

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	70	93	LAMINAR	1	69	5.3
HWDP/OH	0.398	23	48	83	LAMINAR	0	48	0.7
DP/OH	0.398	501	48	83	LAMINAR	0	48	14.6
DP/CSG	0.427	305	45	82	LAMINAR	0	45	7.4
DP/RIS	1.325	133	15	70	LAMINAR	0	15	0.2
TOTAL VOLUME		1008				TOTAL PRESSURE DROP		28.2

LAG: 52.2 MINUTES 4231 STROKES #1 AND 4244 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1014.8	HHP	480	IMPACT FORCE	1365
% SURFACE PRESSURE	34.6	HHP/sqin	4.08	JET VELOCITY	106

PRESSURE BREAKDOWN:

SURFACE	63.8		
STRING	1329.7		
BIT	1014.8		
ANNULUS	28.2		
TOTAL	2436.4	PUMP PRESSURE 2928.8	% DIFFERENCE 16.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	3648.7
CIRCULATING:	ECD	9.37	CIRCULATING PRESSURE	3676.9
PULLING OUT:	TRIP MARGIN	0.14	ESTIMATED SWAB	56.4
	EFFECTIVE MUD WEIGHT	9.16	BOTTOM HOLE PRESSURE	3592.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2399.7

SPM 1 78 SPM 2 82 FLOW RATE 803

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	70	127	LAMINAR	1	69	8.5
HWDP/OH	0.398	23	48	119	LAMINAR	0	48	1.2
DP/OH	0.398	540	48	119	LAMINAR	0	48	27.8
DP/CSG	0.427	305	45	118	LAMINAR	0	44	13.3
DP/RIS	1.325	133	14	108	LAMINAR	0	14	0.4
TOTAL VOLUME		1048				TOTAL PRESSURE DROP		51.1

LAG: 54.8 MINUTES 4303 STROKES #1 AND 4506 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	993.0	HHP	465	IMPACT FORCE	1335
% SURFACE PRESSURE	34.4	HHP/sqin	3.95	JET VELOCITY	105

PRESSURE BREAKDOWN:

SURFACE	62.6
STRING	1340.0
BIT	993.0
ANNULUS	51.1
TOTAL	2446.8

PUMP PRESSURE 2886.6 % DIFFERENCE 15.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	3807.4
CIRCULATING:	ECD	9.42	CIRCULATING PRESSURE	3858.5
PULLING OUT:	TRIP MARGIN	0.25	ESTIMATED SWAB	102.2
	EFFECTIVE MUD WEIGHT	9.05	BOTTOM HOLE PRESSURE	3705.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2499.7

SPM 1 80 SPM 2 81 FLOW RATE 801

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DRO
DC/OH	0.274	47	70	153	LAMINAR	1	69	11.7
HWDP/OH	0.398	23	48	146	LAMINAR	0	48	1.7
DP/OH	0.398	580	48	146	LAMINAR	0	48	42.9
DP/CSG	0.427	305	45	145	LAMINAR	0	44	19.2
DP/RIS	1.325	133	14	136	LAMINAR	0	14	0.7
TOTAL VOLUME		1088			TOTAL PRESSURE DROP			76.2

LAG: 57.0 MINUTES 4539 STROKES #1 AND 4605 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	989.8	HHP	463	IMPACT FORCE	1331
% SURFACE PRESSURE	34.1	HHP/sqin	3.93	JET VELOCITY	105

PRESSURE BREAKDOWN:

SURFACE	63.9		
STRING	1404.8		
BIT	989.8		
ANNULUS	76.2		
TOTAL	2534.7	PUMP PRESSURE 2900.1	% DIFFERENCE 12.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	3966.0
CIRCULATING:	ECD	9.48	CIRCULATING PRESSURE	4042.3
PULLING OUT:	TRIP MARGIN	0.36	ESTIMATED SWAB	152.5
	EFFECTIVE MUD WEIGHT	8.94	BOTTOM HOLE PRESSURE	3813.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2599.7

SPM 1 79 SPM 2 83 FLOW RATE 808

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	70	161	LAMINAR	1	70	12.8
HWDP/OH	0.398	23	48	156	LAMINAR	0	48	1.9
DP/OH	0.398	620	48	156	LAMINAR	0	48	52.0
DP/CSG	0.427	305	45	156	LAMINAR	0	45	21.9
DP/RIS	1.325	133	15	149	LAMINAR	0	14	0.9

TOTAL VOLUME 1128 TOTAL PRESSURE DROP 89.5

LAG: 58.6 MINUTES 4638 STROKES #1 AND 4841 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1006.1	HHP	474	IMPACT FORCE	1353
% SURFACE PRESSURE	35.1	HHP/sqin	4.02	JET VELOCITY	106

PRESSURE BREAKDOWN:

SURFACE	63.3				
STRING	1428.9				
BIT	1006.1				
ANNULUS	89.5				
TOTAL	2587.9	PUMP PRESSURE	2866.6	% DIFFERENCE	9.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	4124.7
CIRCULATING:	ECD	9.50	CIRCULATING PRESSURE	4214.2
PULLING OUT:	TRIP MARGIN	0.40	ESTIMATED SWAB	179.0
	EFFECTIVE MUD WEIGHT	8.90	BOTTOM HOLE PRESSURE	3945.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2700.0 AND TVD 2699.7

SPM 1 77 SPM 2 84 FLOW RATE 807

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	70	161	LAMINAR	1	70	12.8
HWDP/OH	0.398	23	48	156	LAMINAR	0	48	1.9
DP/OH	0.398	660	48	156	LAMINAR	0	48	55.3
DP/CSG	0.427	305	45	156	LAMINAR	0	45	21.9
DP/RIS	1.325	133	14	149	LAMINAR	0	14	0.9
TOTAL VOLUME		1168			TOTAL PRESSURE DROP			92.8

LAG: 60.8 MINUTES 4707 STROKES #1 AND 5106 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1003.2	HHP	472	IMPACT FORCE	1349
% SURFACE PRESSURE	34.3	HHP/sqin	4.01	JET VELOCITY	106

PRESSURE BREAKDOWN:

SURFACE	63.2		
STRING	1461.6		
BIT	1003.2		
ANNULUS	92.8		
TOTAL	2620.8	PUMP PRESSURE 2926.3	% DIFFERENCE 10.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	4283.4
CIRCULATING:	ECD	9.50	CIRCULATING PRESSURE	4376.2
PULLING OUT:	TRIP MARGIN	0.40	ESTIMATED SWAB	185.6
	EFFECTIVE MUD WEIGHT	8.90	BOTTOM HOLE PRESSURE	4097.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2800.0 AND TVD 2799.7

SPM 1 76 SPM 2 72 FLOW RATE 742

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	64	147	LAMINAR	1	64	10.8
HWDP/OH	0.398	23	44	137	LAMINAR	0	44	1.5
DP/OH	0.398	700	44	137	LAMINAR	0	44	45.3
DP/CSG	0.427	305	41	136	LAMINAR	0	41	16.8
DP/RIS	1.325	133	13	123	LAMINAR	0	13	0.5
TOTAL VOLUME		1208				TOTAL PRESSURE DROP		74.9

LAG: 68.4 MINUTES 5215 STROKES #1 AND 4933 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1158.0	HHP	501	IMPACT FORCE	1339
% SURFACE PRESSURE	40.5	HHP/sqin	4.25	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	58.3				
STRING	1383.5				
BIT	1158.0				
ANNULUS	74.9				
TOTAL	2674.8	PUMP PRESSURE	2862.2	% DIFFERENCE	6.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.40	HYDROSTATIC PRESSURE	4489.8
CIRCULATING:	ECD	9.56	CIRCULATING PRESSURE	4564.7
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	149.8
	EFFECTIVE MUD WEIGHT	9.09	BOTTOM HOLE PRESSURE	4340.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2900.0 AND TVD 2899.7

SPM 1 76 SPM 2 73 FLOW RATE 745

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	47	65	147	LAMINAR	1	64	10.6
HWDP/OH	0.398	23	45	140	LAMINAR	0	44	1.5
DP/OH	0.398	740	45	140	LAMINAR	0	44	49.8
DP/CSG	0.427	305	42	140	LAMINAR	0	41	17.5
DP/RIS	1.325	133	13	132	LAMINAR	0	13	0.6
TOTAL VOLUME		1248				TOTAL PRESSURE DROP		80.1

LAG: 70.3 MINUTES 5338 STROKES #1 AND 5145 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1156.6	HHP	503	IMPACT FORCE	1338
% SURFACE PRESSURE	40.2	HHP/sqin	4.27	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	54.7		
STRING	1329.6		
BIT	1156.6		
ANNULUS	80.1		
TOTAL	2621.1	PUMP PRESSURE 2875.4	% DIFFERENCE 8.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	4600.7
CIRCULATING:	ECD	9.46	CIRCULATING PRESSURE	4680.8
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	160.2
	EFFECTIVE MUD WEIGHT	8.98	BOTTOM HOLE PRESSURE	4440.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3000.0 AND TVD 2999.7

SPM 1 66 SPM 2 67 FLOW RATE 665

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	53	58	147	LAMINAR	0	57	11.3
HWDP/OH	0.398	23	40	140	LAMINAR	0	40	1.5
DP/OH	0.398	772	40	140	LAMINAR	0	40	50.1
DP/CSG	0.427	305	37	140	LAMINAR	0	37	16.9
DP/RIS	1.325	133	12	132	LAMINAR	0	12	0.6
TOTAL VOLUME		1285				TOTAL PRESSURE DROP		80.4

LAG: 81.2 MINUTES 5357 STROKES #1 AND 5441 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1412.8	HHP	548	IMPACT FORCE	1319
% SURFACE PRESSURE	48.5	HHP/sqin	4.65	JET VELOCITY	125

PRESSURE BREAKDOWN:

SURFACE	44.6		
STRING	1140.2		
BIT	1412.8		
ANNULUS	80.4		
TOTAL	2678.0	PUMP PRESSURE 2915.7	% DIFFERENCE 8.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	4759.3
CIRCULATING:	ECD	9.46	CIRCULATING PRESSURE	4839.7
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	160.9
	EFFECTIVE MUD WEIGHT	8.99	BOTTOM HOLE PRESSURE	4598.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3100.0 AND TVD 3099.6

SPM 1 66 SPM 2 67 FLOW RATE 666

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	53	58	151	LAMINAR	0	57	11.9
HWDP/OH	0.398	23	40	145	LAMINAR	0	40	1.5
DP/OH	0.398	812	40	145	LAMINAR	0	40	55.6
DP/CSG	0.427	305	37	145	LAMINAR	0	37	17.9
DP/RIS	1.325	133	12	137	LAMINAR	0	12	0.7
TOTAL VOLUME		1325				TOTAL PRESSURE DROP		87.5

LAG: 83.5 MINUTES 5518 STROKES #1 AND 5616 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1403.6	HHP	546	IMPACT FORCE	1311
% SURFACE PRESSURE	47.9	HHP/sqin	4.63	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	44.4
STRING	1160.3
BIT	1403.6
ANNULUS	87.5
TOTAL	2695.8

PUMP PRESSURE 2929.1 % DIFFERENCE 8.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	4865.0
CIRCULATING:	ECD	9.37	CIRCULATING PRESSURE	4952.6
PULLING OUT:	TRIP MARGIN	0.33	ESTIMATED SWAB	175.1
	EFFECTIVE MUD WEIGHT	8.87	BOTTOM HOLE PRESSURE	4690.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3200.0 AND TVD 3199.6

SPM 1 67 SPM 2 65 FLOW RATE 659

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	53	57	150	LAMINAR	1	57	11.8
HWDP/OH	0.398	23	39	144	LAMINAR	0	39	1.5
DP/OH	0.398	852	39	144	LAMINAR	0	39	58.1
DP/CSG	0.427	305	37	144	LAMINAR	0	37	17.8
DP/RIS	1.325	133	12	136	LAMINAR	0	12	0.7
TOTAL VOLUME		1365				TOTAL PRESSURE DROP		89.9

LAG: 87.0 MINUTES 5804 STROKES #1 AND 5664 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1386.1	HHP	533	IMPACT FORCE	1294
% SURFACE PRESSURE	47.5	HHP/sqin	4.52	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	43.8				
STRING	1171.3				
BIT	1386.1				
ANNULUS	89.9				
TOTAL	2691.2	PUMP PRESSURE	2915.1	% DIFFERENCE	7.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	5076.5
CIRCULATING:	ECD	9.46	CIRCULATING PRESSURE	5166.4
PULLING OUT:	TRIP MARGIN	0.33	ESTIMATED SWAB	179.9
	EFFECTIVE MUD WEIGHT	8.97	BOTTOM HOLE PRESSURE	4896.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3300.0 AND TVD 3299.6

SPM 1 68 SPM 2 63 FLOW RATE 654

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	53	57	146	LAMINAR	1	56	11.1
HWDP/OH	0.398	23	39	138	LAMINAR	0	39	1.4
DP/OH	0.398	892	39	138	LAMINAR	0	39	55.5
DP/CSG	0.427	305	36	137	LAMINAR	0	36	16.2
DP/RIS	1.325	133	12	127	LAMINAR	0	12	0.6
TOTAL VOLUME		1405				TOTAL PRESSURE DROP		84.8

LAG: 90.2 MINUTES 6129 STROKES #1 AND 5674 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1366.4	HHP	521	IMPACT FORCE	1276
% SURFACE PRESSURE	46.4	HHP/sqin	4.42	JET VELOCITY	123

PRESSURE BREAKDOWN:

SURFACE	44.3				
STRING	1209.4				
BIT	1366.4				
ANNULUS	84.8				
TOTAL	2704.9	PUMP PRESSURE	2947.5	% DIFFERENCE	8.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	5235.1
CIRCULATING:	ECD	9.45	CIRCULATING PRESSURE	5319.9
PULLING OUT:	TRIP MARGIN	0.30	ESTIMATED SWAB	169.6
	EFFECTIVE MUD WEIGHT	9.00	BOTTOM HOLE PRESSURE	5065.5

(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 A 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	100.3-239.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.5	BIT RUN	138.7
TOTAL HOURS	3.62	TOTAL TURNS	14080	CONDITION	T2 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
105.0	24.1	1.0	7	8.6	0.26	0.20	86	175.97	2432	8.2	14.7
110.0	92.3	1.0	38	8.6	0.31	0.25	211	45.94	1202	8.2	14.7
115.0	30.6	1.0	56	8.6	0.53	0.41	756	138.52	840.27	8.2	14.7
120.0	56.4	1.0	57	8.6	0.44	0.50	1058	75.16	646.08	8.2	14.7
125.0	68.0	1.0	70	8.6	0.44	0.57	1367	62.32	527.91	8.2	14.7
130.0	47.6	1.0	71	8.6	0.50	0.68	1814	89.06	454.03	8.2	14.8
135.0	29.9	2.0	69	8.6	0.62	0.85	2507	141.99	409.07	8.2	14.8
140.0	43.5	1.0	69	8.6	0.51	0.96	2983	97.54	369.83	8.2	14.8
145.0	38.1	1.0	69	8.6	0.53	1.09	3527	111.40	340.92	8.2	14.8
150.0	30.4	1.0	70	8.6	0.57	1.26	4218	139.48	320.66	8.2	14.9
155.0	15.1	1.0	71	8.6	0.67	1.59	5626	280.38	316.98	8.2	14.9
160.0	17.9	1.0	70	8.6	0.65	1.87	6798	236.79	310.26	8.2	14.9
165.0	26.7	3.0	70	8.6	0.68	2.05	7585	158.80	298.56	8.2	14.9
170.0	35.8	3.0	70	8.6	0.63	2.19	8171	118.51	285.64	8.2	14.9
175.0	36.7	4.0	71	8.6	0.66	2.33	8751	115.45	274.25	8.2	15.0
180.0	46.8	5.0	72	8.6	0.64	2.44	9213	90.71	262.73	8.2	15.0
185.0	47.5	5.0	70	8.6	0.63	2.54	9655	89.30	252.50	8.2	15.0
190.0	40.6	5.0	69	8.6	0.66	2.67	10165	104.38	244.24	8.2	15.0
195.0	77.3	5.0	69	8.6	0.53	2.73	10433	54.90	234.24	8.2	15.1
200.0	116.1	5.0	71	8.6	0.46	2.77	10616	36.52	224.33	8.2	15.1
205.0	80.0	7.0	71	8.6	0.57	2.84	10882	53.01	216.15	8.2	15.1
210.0	51.9	9.0	69	8.6	0.68	2.93	11282	81.76	210.02	8.2	15.1
215.0	49.2	9.0	69	8.6	0.69	3.03	11702	86.23	204.62	8.2	15.1
220.0	52.0	9.0	69	8.6	0.68	3.13	12100	81.52	199.48	8.2	15.2
225.0	51.4	8.0	72	8.6	0.67	3.23	12520	82.46	194.79	8.2	15.2
230.0	16.8	8.0	66	8.6	0.89	3.52	13698	252.34	197.01	8.2	15.2
235.0	146.3	8.0	66	8.6	0.44	3.56	13834	28.98	190.77	8.2	15.2
239.0	63.3	9.0	65	8.6	0.62	3.62	14080	67.00	187.20	8.2	15.2

BIT NUMBER	2	IADC CODE	111	INTERVAL	239.0-828.0
HTC OSC3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	3.8	BIT RUN	589.0
TOTAL HOURS	9.26	TOTAL TURNS	83317	CONDITION	T2 B5 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FC
240.0	183.8	5.0	150	8.7	0.55	0.01	49	23.07	20581	8.2	15.2
245.0	142.1	5.0	150	8.7	0.60	0.04	366	29.84	3455	8.2	15.3
255.0	169.4	5.0	150	8.7	0.56	0.10	897	25.03	1311	8.2	15.3
260.0	120.0	5.0	150	8.7	0.63	0.14	1272	35.34	1007	8.2	15.3
265.0	253.3	5.0	150	8.7	0.48	0.16	1450	16.74	816.96	8.2	15.3
270.0	360.0	6.0	150	8.7	0.42	0.17	1575	11.78	687.09	8.2	15.4
275.0	209.3	6.0	150	8.7	0.54	0.20	1790	20.26	594.47	8.2	15.4
280.0	268.7	6.0	150	8.7	0.49	0.22	1957	15.79	523.90	8.2	15.4
290.0	63.5	6.0	150	8.7	0.79	0.37	3374	66.76	434.27	8.2	15.4
295.0	86.5	8.0	150	8.7	0.76	0.43	3894	49.01	399.87	8.2	15.5
300.0	81.1	9.0	150	8.7	0.80	0.49	4449	52.31	371.38	8.2	15.5
305.0	155.2	9.0	150	8.7	0.65	0.53	4739	27.33	345.31	8.2	15.5
310.0	126.8	8.5	150	8.7	0.69	0.57	5094	33.46	323.35	8.2	15.5
315.0	145.2	8.0	150	8.7	0.65	0.60	5404	29.22	304.00	8.2	15.5
320.0	181.8	9.3	150	8.7	0.62	0.63	5651	23.33	286.68	8.2	15.6
325.0	281.3	12.4	150	8.8	0.54	0.65	5811	15.08	270.89	8.2	15.6
330.0	298.3	11.3	150	8.8	0.52	0.66	5962	14.22	256.78	8.2	15.6
335.0	264.7	12.5	150	8.8	0.56	0.68	6132	16.02	244.24	8.2	15.6
340.0	246.6	12.4	150	8.8	0.57	0.70	6315	17.20	233.00	8.2	15.6
345.0	257.1	13.1	150	8.8	0.57	0.72	6490	16.49	222.79	8.2	15.7
350.0	230.8	10.8	150	8.8	0.57	0.74	6685	18.38	213.58	8.2	15.7
355.0	253.5	11.6	150	8.8	0.56	0.76	6862	16.73	205.10	8.2	15.7
360.0	236.8	10.5	150	8.8	0.56	0.78	7052	17.91	197.36	8.2	15.7
365.0	300.0	11.3	150	8.8	0.52	0.80	7202	14.14	190.09	8.2	15.7
370.0	227.8	10.2	150	8.8	0.57	0.82	7400	18.61	183.55	8.2	15.8
375.0	260.9	13.2	150	8.8	0.57	0.84	7572	16.26	177.40	8.2	15.8
380.0	211.8	13.8	150	8.8	0.62	0.86	7785	20.03	171.82	8.2	15.8
390.0	215.6	16.0	150	8.8	0.64	0.91	8202	19.67	161.74	8.2	15.8
395.0	180.0	17.0	150	8.8	0.70	0.94	8452	23.56	157.31	8.2	15.9
400.0	264.7	18.2	150	8.8	0.61	0.96	8622	16.02	152.92	8.2	15.9
405.0	151.3	17.9	150	8.8	0.75	0.99	8920	28.04	149.16	8.2	15.9
410.0	257.1	19.9	150	8.8	0.63	1.01	9095	16.49	145.28	8.2	15.9
415.0	166.7	15.6	150	8.8	0.70	1.04	9365	25.45	141.88	8.2	15.9
420.0	193.5	22.2	150	8.8	0.72	1.07	9597	21.91	138.56	8.2	16.0
425.0	178.2	21.0	150	8.8	0.73	1.09	9850	23.80	135.48	8.2	16.0
430.0	187.5	20.3	150	8.8	0.71	1.12	10090	22.62	132.52	8.2	16.0
435.0	257.1	15.2	150	8.8	0.59	1.14	10265	16.49	129.56	8.2	16.0
440.0	240.0	17.4	150	8.8	0.62	1.16	10452	17.67	126.78	8.2	16.0
445.0	74.7	7.0	150	8.9	0.76	1.23	11055	56.78	125.08	8.2	16.1
450.0	78.6	7.2	150	8.9	0.75	1.29	11627	53.95	123.40	8.2	16.1
455.0	47.6	3.4	150	8.9	0.75	1.40	12572	89.06	122.60	8.2	16.1
460.0	45.2	4.9	150	8.9	0.81	1.51	13567	93.77	121.95	8.2	16.1
465.0	31.4	4.4	150	8.9	0.87	1.67	15000	135.01	122.24	8.2	16.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
470.0	24.9	3.3	150	8.9	0.87	1.87	16805	170.11	123.27	8.2	16.1
475.0	31.5	6.1	150	8.9	0.92	2.03	18232	134.53	123.51	8.2	16.2
480.0	51.0	9.5	150	8.9	0.89	2.12	19114	83.12	122.68	8.2	16.2
485.0	187.5	17.3	150	8.9	0.68	2.15	19354	22.62	120.64	8.2	16.2
490.0	144.0	14.3	150	8.9	0.72	2.19	19666	29.45	118.83	8.2	16.2
495.0	222.2	11.6	150	8.9	0.58	2.21	19869	19.08	116.88	8.2	16.2
500.0	150.0	11.0	150	8.9	0.67	2.24	20169	28.27	115.18	8.2	16.3
505.0	133.3	12.7	150	8.9	0.72	2.28	20506	31.81	113.61	8.2	16.3
510.0	81.8	7.9	150	8.9	0.76	2.34	21056	51.83	112.47	8.2	16.3
515.0	72.3	6.4	150	8.9	0.75	2.41	21679	58.67	111.50	8.2	16.3
520.0	51.3	6.4	150	8.9	0.82	2.51	22556	82.70	110.99	8.2	16.3
525.0	49.2	6.5	150	8.9	0.84	2.61	23471	86.23	110.55	8.2	16.3
530.0	49.6	7.6	150	8.9	0.86	2.71	24379	85.53	110.12	8.2	16.4
535.0	31.8	7.1	150	8.9	0.94	2.87	25794	133.36	110.52	8.2	16.4
540.0	50.3	15.3	150	8.9	0.99	2.97	26689	84.35	110.08	8.2	16.4
544.0	42.6	15.3	150	8.9	1.03	3.06	27534	99.55	109.94	8.2	16.4
545.0	100.0	14.1	150	8.9	0.80	3.07	27624	42.41	109.72	8.2	16.4
546.0	33.3	13.3	150	8.9	1.05	3.10	27894	127.23	109.78	8.2	16.4
547.0	42.4	17.6	150	8.9	1.06	3.12	28106	100.13	109.75	8.2	16.4
548.0	21.2	16.8	150	8.9	1.22	3.17	28531	200.27	110.04	8.2	16.4
549.0	87.8	16.1	150	8.9	0.86	3.18	28634	48.30	109.84	8.2	16.4
550.0	21.8	16.9	150	8.9	1.22	3.23	29046	194.38	110.11	8.2	16.4
552.0	37.1	15.7	150	8.9	1.07	3.28	29531	114.27	110.14	8.2	16.4
553.0	66.7	18.7	150	8.9	0.96	3.30	29666	63.62	109.99	8.2	16.4
554.0	67.9	14.6	150	8.9	0.90	3.31	29799	62.44	109.84	8.2	16.4
555.0	38.3	15.6	150	8.9	1.06	3.34	30034	110.74	109.84	8.2	16.4
556.0	47.4	11.5	150	8.9	0.94	3.36	30224	89.53	109.78	8.2	16.4
557.0	87.8	14.9	150	8.9	0.84	3.37	30326	48.30	109.59	8.2	16.5
558.0	59.0	10.0	150	8.9	0.87	3.39	30479	71.86	109.47	8.2	16.5
559.0	60.0	13.4	150	8.9	0.92	3.40	30629	70.68	109.35	8.2	16.5
560.0	27.5	15.6	150	8.9	1.14	3.44	30956	154.33	109.49	8.2	16.5
561.0	41.4	13.6	150	8.9	1.01	3.46	31174	102.49	109.46	8.2	16.5
562.0	92.3	11.0	150	8.9	0.78	3.47	31271	45.94	109.27	8.2	16.5
563.0	22.1	12.4	150	8.9	1.14	3.52	31679	192.02	109.52	8.2	16.5
564.0	144.0	12.1	150	8.9	0.69	3.53	31741	29.45	109.28	8.2	16.5
565.0	75.0	13.3	150	8.9	0.86	3.54	31861	56.55	109.12	8.2	16.5
566.0	60.0	14.0	150	8.9	0.92	3.56	32011	70.68	109.00	8.2	16.5
567.0	60.0	12.8	150	8.9	0.91	3.57	32161	70.68	108.88	8.2	16.5
568.0	29.8	13.6	150	8.9	1.09	3.61	32464	142.54	108.98	8.2	16.5
569.0	100.0	13.3	150	8.9	0.79	3.62	32554	42.41	108.78	8.2	16.5
570.0	29.5	13.6	150	8.9	1.09	3.65	32859	143.72	108.89	8.2	16.5
571.0	51.4	15.7	150	8.9	0.99	3.67	33034	82.46	108.81	8.2	16.5
572.0	60.0	13.1	150	8.9	0.91	3.69	33184	70.68	108.69	8.2	16.5
573.0	80.0	12.3	150	8.9	0.83	3.70	33296	53.01	108.53	8.2	16.5
574.0	73.5	16.2	150	8.9	0.90	3.71	33419	57.72	108.37	8.2	16.5
575.0	92.3	13.6	150	8.9	0.82	3.72	33516	45.94	108.19	8.2	16.5
576.0	83.7	13.7	150	8.9	0.84	3.74	33624	50.66	108.02	8.2	16.5
577.0	45.6	8.5	150	8.9	0.89	3.76	33821	93.07	107.97	8.2	16.5
578.0	87.8	14.2	150	8.9	0.83	3.77	33924	48.30	107.80	8.2	16.5
579.0	75.0	12.5	150	8.9	0.85	3.78	34044	56.55	107.65	8.2	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
580.0	55.4	12.5	150	8.9	0.92	3.80	34206	76.57	107.56	8.2	16.5
581.0	67.9	13.9	150	8.9	0.89	3.82	34339	62.44	107.42	8.2	16.5
583.0	84.7	8.1	150	8.9	0.75	3.84	34551	50.07	107.09	8.2	16.5
584.0	144.0	11.1	150	8.9	0.68	3.85	34614	29.45	106.87	8.2	16.5
585.0	59.0	16.2	150	8.9	0.96	3.86	34766	71.86	106.76	8.2	16.5
586.0	50.7	15.5	150	8.9	0.99	3.88	34944	83.64	106.70	8.2	16.6
587.0	62.1	14.8	150	8.9	0.93	3.90	35089	68.33	106.59	8.2	16.6
588.0	73.5	14.9	150	8.9	0.89	3.91	35211	57.72	106.45	8.2	16.6
589.0	66.7	13.9	150	8.9	0.90	3.93	35346	63.62	106.33	8.2	16.6
590.0	58.1	11.0	150	8.9	0.89	3.94	35501	73.04	106.23	8.2	16.6
591.0	62.1	14.6	150	8.9	0.93	3.96	35646	68.33	106.12	8.2	16.6
592.0	75.0	15.0	150	8.9	0.88	3.97	35766	56.55	105.98	8.2	16.6
593.0	72.0	13.2	150	8.9	0.87	3.99	35891	58.90	105.85	8.2	16.6
594.0	69.2	13.5	150	8.9	0.88	4.00	36021	61.26	105.72	8.2	16.6
595.0	81.8	13.2	150	8.9	0.84	4.01	36131	51.83	105.57	8.2	16.6
596.0	83.7	12.0	150	8.9	0.82	4.03	36239	50.66	105.42	8.2	16.6
597.0	56.2	12.6	150	8.9	0.92	4.04	36399	75.40	105.33	8.2	16.6
598.0	67.9	13.6	150	8.9	0.89	4.06	36531	62.44	105.22	8.2	16.6
599.0	78.3	13.5	150	8.9	0.85	4.07	36646	54.19	105.07	8.2	16.6
600.0	58.1	12.3	150	8.9	0.91	4.09	36801	73.04	104.98	8.2	16.6
601.0	51.4	9.1	150	8.9	0.88	4.11	36976	82.46	104.92	8.2	16.6
602.0	55.4	7.9	150	8.9	0.84	4.13	37139	76.57	104.84	8.2	16.6
603.0	87.8	14.0	150	8.9	0.83	4.14	37241	48.30	104.69	8.2	16.6
604.0	73.5	11.7	150	8.9	0.84	4.15	37364	57.72	104.56	8.2	16.6
605.0	90.0	12.5	150	8.9	0.81	4.16	37464	47.12	104.40	8.2	16.6
606.0	105.9	12.4	150	8.9	0.77	4.17	37549	40.05	104.23	8.2	16.6
607.0	52.2	12.7	150	8.9	0.94	4.19	37721	81.29	104.17	8.2	16.6
608.0	94.7	12.4	150	8.9	0.79	4.20	37816	44.77	104.00	8.2	16.6
609.0	100.0	13.6	150	8.9	0.80	4.21	37906	42.41	103.84	8.2	16.6
610.0	72.0	12.6	150	8.9	0.86	4.23	38031	58.90	103.72	8.2	16.6
611.0	62.1	10.4	150	8.9	0.86	4.24	38176	68.33	103.62	8.2	16.6
612.0	76.6	9.0	150	8.9	0.79	4.25	38294	55.37	103.49	8.2	16.6
613.0	70.6	15.7	150	8.9	0.91	4.27	38421	60.08	103.38	8.2	16.6
614.0	70.6	13.8	150	8.9	0.88	4.28	38549	60.08	103.26	8.2	16.6
615.0	52.2	11.8	150	8.9	0.92	4.30	38721	81.29	103.20	8.2	16.6
616.0	55.4	13.2	150	8.9	0.93	4.32	38884	76.57	103.13	8.2	16.7
617.0	56.2	13.3	150	8.9	0.93	4.34	39044	75.40	103.06	8.2	16.7
618.0	50.7	12.6	150	8.9	0.94	4.36	39221	83.64	103.01	8.2	16.7
619.0	60.0	12.7	150	8.9	0.91	4.37	39371	70.68	102.92	8.2	16.7
620.0	53.7	12.3	150	8.9	0.93	4.39	39539	78.93	102.86	8.2	16.7
621.0	51.4	15.9	150	8.9	0.99	4.41	39714	82.46	102.81	8.2	16.7
622.0	48.0	13.6	150	8.9	0.97	4.43	39901	88.35	102.77	8.2	16.7
623.0	59.0	14.0	150	8.9	0.93	4.45	40054	71.86	102.69	8.2	16.7
624.0	66.7	14.0	150	8.9	0.90	4.47	40189	63.62	102.59	8.2	16.7
625.0	73.5	11.8	150	8.9	0.85	4.48	40311	57.72	102.47	8.2	16.7
626.0	65.5	13.0	150	8.9	0.89	4.49	40449	64.79	102.37	8.2	16.7
627.0	63.2	13.4	150	8.9	0.90	4.51	40591	67.15	102.28	8.2	16.7
628.0	73.5	11.3	150	8.9	0.84	4.52	40714	57.72	102.17	8.2	16.7
629.0	63.2	11.4	150	8.9	0.87	4.54	40856	67.15	102.08	8.2	16.7
630.0	92.3	11.2	150	8.9	0.78	4.55	40954	45.94	101.93	8.2	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
631.0	116.1	16.6	150	8.9	0.79	4.56	41031	36.52	101.77	8.2	16.7
632.0	42.9	16.9	150	8.9	1.05	4.58	41241	98.96	101.76	8.2	16.7
633.0	64.3	10.4	150	8.9	0.85	4.60	41381	65.97	101.67	8.2	16.7
634.0	50.7	13.2	150	8.9	0.95	4.62	41559	83.64	101.62	8.2	16.7
635.0	46.2	12.9	150	8.9	0.97	4.64	41754	91.89	101.60	8.2	16.7
636.0	49.3	18.8	150	8.9	1.04	4.66	41936	86.00	101.56	8.2	16.7
637.0	46.2	17.7	150	8.9	1.04	4.68	42131	91.89	101.54	8.2	16.7
638.0	47.4	15.8	150	8.9	1.01	4.70	42321	89.53	101.51	8.2	16.7
639.0	60.0	14.9	150	8.9	0.94	4.72	42471	70.68	101.43	8.2	16.7
640.0	47.4	17.6	150	8.9	1.03	4.74	42661	89.53	101.40	8.2	16.7
641.0	43.9	16.6	150	8.9	1.04	4.76	42866	96.60	101.39	8.2	16.7
642.0	39.6	17.4	150	8.9	1.08	4.79	43094	107.20	101.40	8.2	16.7
643.0	54.5	16.6	150	8.9	0.98	4.81	43259	77.75	101.34	8.2	16.7
644.0	52.9	15.6	150	8.9	0.98	4.83	43429	80.11	101.29	8.2	16.7
645.0	39.6	16.1	150	8.9	1.06	4.85	43656	107.20	101.30	8.2	16.7
646.0	57.1	16.5	150	8.9	0.97	4.87	43814	74.22	101.24	8.2	16.8
647.0	48.0	15.8	150	8.9	1.00	4.89	44001	88.35	101.21	8.2	16.8
648.0	45.0	16.4	150	8.9	1.03	4.91	44201	94.24	101.19	8.2	16.8
649.0	52.2	16.2	150	8.9	0.99	4.93	44374	81.29	101.14	8.2	16.8
650.0	70.6	19.3	150	8.9	0.95	4.94	44501	60.08	101.04	8.2	16.8
651.0	49.3	19.1	150	8.9	1.04	4.96	44684	86.00	101.00	8.2	16.8
652.0	73.5	19.6	150	8.9	0.94	4.98	44806	57.72	100.90	8.2	16.8
653.0	50.0	18.8	150	8.9	1.03	5.00	44986	84.82	100.86	8.2	16.8
654.0	65.5	19.0	150	8.9	0.97	5.01	45124	64.79	100.77	8.2	16.8
655.0	51.4	18.7	150	8.9	1.03	5.03	45299	82.46	100.73	8.2	16.8
656.0	50.0	18.4	150	8.9	1.03	5.05	45479	84.82	100.69	8.2	16.8
657.0	40.9	18.1	150	8.9	1.08	5.08	45699	103.67	100.70	8.2	16.8
658.0	57.1	15.8	150	8.9	0.96	5.10	45856	74.22	100.64	8.2	16.8
659.0	90.0	17.6	150	8.9	0.87	5.11	45956	47.12	100.51	8.2	16.8
660.0	76.6	19.4	150	8.9	0.93	5.12	46074	55.37	100.40	8.2	16.8
661.0	83.7	18.1	150	8.9	0.89	5.13	46181	50.66	100.28	8.2	16.8
662.0	66.7	19.1	150	8.9	0.96	5.15	46316	63.62	100.20	8.2	16.8
663.0	73.5	17.7	150	8.9	0.92	5.16	46439	57.72	100.10	8.2	16.8
664.0	57.1	17.8	150	8.9	0.99	5.18	46596	74.22	100.04	8.2	16.8
665.0	80.0	18.2	150	8.9	0.91	5.19	46709	53.01	99.93	8.2	16.8
666.0	78.3	17.7	150	8.9	0.91	5.20	46824	54.19	99.82	8.2	16.8
667.0	43.4	16.8	150	8.9	1.04	5.23	47031	97.78	99.81	8.2	16.8
668.0	63.2	16.1	150	8.9	0.94	5.24	47174	67.15	99.74	8.2	16.8
669.0	72.0	19.4	150	8.9	0.95	5.26	47299	58.90	99.64	8.2	16.8
670.0	66.7	17.6	150	8.9	0.95	5.27	47434	63.62	99.56	8.2	16.8
671.0	80.0	17.8	150	8.9	0.90	5.28	47546	53.01	99.45	8.2	16.8
672.0	64.3	17.1	150	8.9	0.95	5.30	47686	65.97	99.37	8.2	16.8
673.0	50.0	18.1	150	8.9	1.03	5.32	47866	84.82	99.34	8.2	16.8
674.0	48.6	19.1	150	8.9	1.04	5.34	48051	87.18	99.31	8.2	16.8
675.0	83.7	18.6	150	8.9	0.90	5.35	48159	50.66	99.20	8.2	16.8
676.0	53.7	17.8	150	8.9	1.00	5.37	48326	78.93	99.15	8.2	16.8
677.0	43.4	17.9	150	8.9	1.06	5.39	48534	97.78	99.15	8.2	16.9
678.0	60.0	17.8	150	8.9	0.97	5.41	48684	70.68	99.09	8.2	16.9
679.0	62.1	18.7	150	8.9	0.98	5.43	48829	68.33	99.02	8.2	16.9
680.0	42.9	19.0	150	8.9	1.08	5.45	49039	98.96	99.02	8.2	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
681.0	52.2	18.3	150	8.9	1.02	5.47	49211	81.29	98.98	8.2	16.9
682.0	51.4	18.7	150	8.9	1.03	5.49	49386	82.46	98.94	8.2	16.9
683.0	58.1	18.6	150	8.9	0.99	5.50	49541	73.04	98.88	8.2	16.9
684.0	66.7	18.6	150	8.9	0.96	5.52	49676	63.62	98.80	8.2	16.9
685.0	92.3	15.9	150	8.9	0.84	5.53	49774	45.94	98.68	8.2	16.9
686.0	48.6	17.2	150	8.9	1.02	5.55	49959	87.18	98.66	8.2	16.9
687.0	47.4	19.1	150	8.9	1.05	5.57	50149	89.53	98.64	8.2	16.9
688.0	36.7	19.2	150	8.9	1.12	5.60	50394	115.45	98.67	8.2	16.9
689.0	65.5	18.7	150	8.9	0.96	5.61	50531	64.79	98.60	8.2	16.9
690.0	50.7	18.5	150	8.9	1.03	5.63	50709	83.64	98.57	8.2	16.9
691.0	31.9	19.1	150	8.9	1.16	5.67	50991	133.12	98.64	8.2	16.9
692.0	41.4	19.5	150	8.9	1.09	5.69	51209	102.49	98.65	8.2	16.9
693.0	38.3	18.3	150	8.9	1.10	5.72	51444	110.74	98.68	8.2	16.9
694.0	23.7	19.8	150	8.9	1.24	5.76	51824	179.06	98.85	8.2	16.9
695.0	46.2	20.1	150	8.9	1.07	5.78	52019	91.89	98.84	8.2	16.9
696.0	31.3	17.6	150	9.0	1.12	5.81	52306	135.48	98.92	8.2	16.9
697.0	36.7	19.4	150	9.0	1.11	5.84	52551	115.45	98.95	8.2	16.9
698.0	37.5	22.5	150	9.0	1.14	5.87	52791	113.09	98.99	8.2	16.9
699.0	36.4	23.3	150	9.0	1.16	5.89	53039	116.63	99.02	8.2	16.9
700.0	37.5	22.7	150	9.0	1.15	5.92	53279	113.09	99.05	8.2	16.9
701.0	33.6	23.0	150	9.0	1.18	5.95	53546	126.05	99.11	8.2	16.9
702.0	31.0	22.1	150	9.0	1.19	5.98	53836	136.65	99.19	8.2	16.9
703.0	37.1	22.9	150	9.0	1.15	6.01	54079	114.27	99.23	8.2	16.9
704.0	43.9	23.6	150	9.0	1.11	6.03	54284	96.60	99.22	8.2	16.9
705.0	41.9	23.6	150	9.0	1.13	6.06	54499	101.31	99.23	8.2	16.9
706.0	27.9	21.9	150	9.0	1.21	6.09	54821	151.97	99.34	8.2	16.9
707.0	37.1	23.7	150	9.0	1.16	6.12	55064	114.27	99.37	8.2	16.9
708.0	45.0	23.5	150	9.0	1.11	6.14	55264	94.24	99.36	8.2	16.9
709.0	37.5	23.5	150	9.0	1.16	6.17	55504	113.09	99.39	8.2	17.0
710.0	43.9	24.0	150	9.0	1.12	6.19	55709	96.60	99.38	8.2	17.0
711.0	36.4	24.1	150	9.0	1.17	6.22	55956	116.63	99.42	8.2	17.0
712.0	46.2	23.8	150	9.0	1.10	6.24	56151	91.89	99.40	8.2	17.0
713.0	41.4	23.3	150	9.0	1.13	6.26	56369	102.49	99.41	8.2	17.0
714.0	28.6	23.3	150	9.0	1.23	6.30	56684	148.44	99.51	8.2	17.0
715.0	35.6	22.5	150	9.0	1.16	6.33	56936	118.98	99.55	8.2	17.0
716.0	35.6	19.1	150	9.0	1.11	6.35	57189	118.98	99.59	8.2	17.0
717.0	51.4	22.0	150	9.0	1.05	6.37	57364	82.46	99.56	8.2	17.0
718.0	48.6	22.4	150	9.0	1.07	6.39	57549	87.18	99.53	8.2	17.0
719.0	56.2	22.1	150	9.0	1.03	6.41	57709	75.40	99.48	8.2	17.0
720.0	57.1	22.9	150	9.0	1.04	6.43	57866	74.22	99.43	8.2	17.0
721.0	45.6	23.2	150	9.0	1.10	6.45	58064	93.07	99.42	8.2	17.0
722.0	46.8	23.2	150	9.0	1.09	6.47	58256	90.71	99.40	8.2	17.0
723.0	48.0	23.1	150	9.0	1.08	6.49	58444	88.35	99.38	8.2	17.0
724.0	44.4	24.2	150	9.0	1.12	6.52	58646	95.42	99.37	8.2	17.0
725.0	42.4	21.7	150	9.0	1.10	6.54	58859	100.13	99.37	8.2	17.0
726.0	52.2	22.4	150	9.0	1.05	6.56	59031	81.29	99.33	8.2	17.0
727.0	61.0	22.9	150	9.0	1.02	6.58	59179	69.51	99.27	8.2	17.0
728.0	65.5	22.9	150	9.0	1.00	6.59	59316	64.79	99.20	8.2	17.0
729.0	60.0	22.8	150	9.0	1.02	6.61	59466	70.68	99.14	8.2	17.0
730.0	61.0	23.5	150	9.0	1.02	6.62	59614	69.51	99.08	8.2	17.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
731.0	48.6	23.3	150	9.0	1.08	6.64	59799	87.18	99.06	8.2	17.0
732.0	40.0	24.7	150	9.0	1.15	6.67	60024	106.03	99.07	8.2	17.0
733.0	39.6	24.2	150	9.0	1.15	6.69	60251	107.20	99.09	8.2	17.0
734.0	35.6	22.7	150	9.0	1.16	6.72	60504	118.98	99.13	8.2	17.0
735.0	33.0	24.5	150	9.0	1.20	6.75	60776	128.41	99.19	8.2	17.0
736.0	41.9	23.2	150	9.0	1.12	6.78	60991	101.31	99.19	8.2	17.0
737.0	31.6	25.6	150	9.0	1.23	6.81	61276	134.30	99.26	8.2	17.0
738.0	30.8	23.7	150	9.0	1.21	6.84	61569	137.83	99.34	8.2	17.0
739.0	37.9	22.1	150	9.0	1.14	6.87	61806	111.92	99.36	8.2	17.0
740.0	34.6	21.5	150	9.0	1.15	6.90	62066	122.52	99.41	8.2	17.0
741.0	23.7	21.8	150	9.0	1.26	6.94	62446	179.06	99.57	8.2	17.1
742.0	21.6	23.0	150	9.0	1.30	6.98	62864	196.74	99.76	8.2	17.1
743.0	23.2	22.8	150	9.0	1.27	7.03	63251	182.60	99.93	8.2	17.1
744.0	34.6	24.7	150	9.0	1.19	7.06	63511	122.52	99.97	8.2	17.1
745.0	40.4	24.0	150	9.0	1.14	7.08	63734	104.85	99.98	8.2	17.1
746.0	59.0	25.2	150	9.0	1.05	7.10	63886	71.86	99.93	8.2	17.1
747.0	51.4	24.2	150	9.0	1.08	7.12	64061	82.46	99.89	8.2	17.1
748.0	67.9	25.9	150	9.0	1.02	7.13	64194	62.44	99.82	8.2	17.1
749.0	48.0	24.7	150	9.0	1.10	7.15	64381	88.35	99.80	8.2	17.1
750.0	51.4	25.8	150	9.0	1.10	7.17	64556	82.46	99.76	8.2	17.1
751.0	54.5	25.1	150	9.0	1.07	7.19	64721	77.75	99.72	8.2	17.1
752.0	52.9	25.6	150	9.0	1.08	7.21	64891	80.11	99.68	8.2	17.1
753.0	37.5	23.2	150	9.1	1.14	7.24	65131	113.09	99.71	8.2	17.1
754.0	48.0	23.8	150	9.1	1.08	7.26	65319	88.35	99.68	8.2	17.1
755.0	37.1	23.4	150	9.1	1.14	7.28	65561	114.27	99.71	8.2	17.1
756.0	48.0	24.2	150	9.1	1.08	7.31	65749	88.35	99.69	8.2	17.1
757.0	40.9	24.4	150	9.1	1.13	7.33	65969	103.67	99.70	8.2	17.1
758.0	32.1	25.3	150	9.1	1.21	7.36	66249	131.94	99.76	8.2	17.1
759.0	30.0	25.7	150	9.1	1.23	7.39	66549	141.37	99.84	8.2	17.1
760.0	30.8	26.3	150	9.1	1.23	7.43	66841	137.83	99.91	8.2	17.1
761.0	37.1	26.4	150	9.1	1.18	7.45	67084	114.27	99.94	8.2	17.1
762.0	33.3	26.6	150	9.1	1.21	7.48	67354	127.23	99.99	8.2	17.1
763.0	36.7	24.2	150	9.1	1.16	7.51	67599	115.45	100.02	8.2	17.1
764.0	37.5	24.2	150	9.1	1.15	7.54	67839	113.09	100.05	8.2	17.1
765.0	40.4	24.4	150	9.1	1.13	7.56	68061	104.85	100.06	8.2	17.1
766.0	38.7	24.3	150	9.1	1.14	7.59	68294	109.56	100.07	8.2	17.1
767.0	41.4	23.9	150	9.1	1.12	7.61	68511	102.49	100.08	8.2	17.1
768.0	36.7	25.1	150	9.1	1.17	7.64	68756	115.45	100.11	8.2	17.1
769.0	35.3	24.5	150	9.1	1.17	7.67	69011	120.16	100.15	8.2	17.1
770.0	30.3	24.9	150	9.1	1.22	7.70	69309	140.19	100.22	8.2	17.1
774.0	78.3	23.0	150	9.1	0.94	7.75	69769	54.19	99.88	8.2	17.2
775.0	78.0	23.5	150	9.1	0.95	7.76	69884	54.37	99.79	8.2	17.2
776.0	31.2	23.5	150	9.1	1.19	7.80	70173	136.07	99.86	8.2	17.2
777.0	63.2	22.5	150	9.1	0.99	7.81	70316	67.15	99.80	8.2	17.2
778.0	33.0	21.6	150	9.1	1.15	7.84	70588	128.41	99.85	8.2	17.2
779.0	46.8	22.4	150	9.1	1.07	7.86	70781	90.71	99.84	8.2	17.2
780.0	69.2	22.5	150	9.1	0.97	7.88	70911	61.26	99.76	8.2	17.2
783.0	46.3	21.9	150	9.1	1.07	7.94	71494	91.63	99.72	8.2	17.2
784.0	28.6	22.6	150	9.1	1.20	7.98	71809	148.44	99.81	8.2	17.2
785.0	44.4	22.0	150	9.1	1.08	8.00	72011	95.42	99.80	8.2	17.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
786.0	31.3	23.0	150	9.1	1.18	8.03	72299	135.48	99.87	8.2	17.2
787.0	61.0	22.9	150	9.1	1.01	8.05	72446	69.51	99.81	8.2	17.2
789.0	52.6	22.6	150	9.1	1.04	8.09	72789	80.70	99.74	8.2	17.2
790.0	26.9	21.3	150	9.1	1.20	8.12	73124	157.86	99.85	8.2	17.2
791.0	80.0	22.3	150	9.1	0.93	8.14	73236	53.01	99.76	8.2	17.2
792.0	17.1	22.2	150	9.1	1.33	8.20	73764	248.57	100.03	8.2	17.2
793.0	61.0	22.9	150	9.1	1.01	8.21	73911	69.51	99.98	8.2	17.2
794.0	56.2	21.9	150	9.1	1.02	8.23	74071	75.40	99.93	8.2	17.2
795.0	48.0	22.0	150	9.1	1.06	8.25	74259	88.35	99.91	8.2	17.2
796.0	28.8	21.8	150	9.1	1.19	8.29	74571	147.26	100.00	8.2	17.2
798.0	98.6	21.6	150	9.1	0.87	8.31	74754	43.00	99.79	8.2	17.2
800.0	51.4	21.4	150	9.1	1.04	8.34	75104	82.46	99.73	8.2	17.2
801.0	28.3	21.6	150	9.1	1.19	8.38	75421	149.61	99.82	8.2	17.2
802.0	27.3	22.8	150	9.1	1.22	8.42	75751	155.50	99.92	8.2	17.2
803.0	26.1	22.0	150	9.1	1.22	8.46	76096	162.57	100.03	8.2	17.2
804.0	38.7	21.8	150	9.1	1.11	8.48	76329	109.56	100.05	8.2	17.2
805.0	62.0	22.0	150	9.2	0.98	8.50	76474	68.40	99.99	8.2	17.2
806.0	33.0	21.8	150	9.2	1.14	8.53	76747	128.41	100.04	8.2	17.2
807.0	20.6	21.1	150	9.2	1.26	8.58	77184	206.16	100.23	8.2	17.3
808.0	39.6	20.9	150	9.2	1.09	8.60	77412	107.20	100.24	8.2	17.3
809.0	28.0	20.0	150	9.2	1.16	8.64	77733	151.46	100.33	8.2	17.3
810.0	22.9	19.1	150	9.2	1.20	8.68	78127	185.54	100.48	8.2	17.3
811.0	58.1	20.8	150	9.2	0.99	8.70	78282	73.04	100.43	8.2	17.3
812.0	33.0	21.2	150	9.2	1.13	8.73	78554	128.41	100.48	8.2	17.3
813.0	32.7	21.4	150	9.2	1.14	8.76	78829	129.59	100.53	8.2	17.3
814.0	22.6	21.1	150	9.2	1.23	8.80	79227	187.31	100.68	8.2	17.3
815.0	33.3	21.9	150	9.2	1.14	8.83	79497	127.23	100.73	8.2	17.3
816.0	26.7	21.6	150	9.2	1.20	8.87	79834	159.04	100.83	8.2	17.3
817.0	31.9	21.2	150	9.2	1.14	8.90	80117	133.12	100.88	8.2	17.3
818.0	31.9	22.4	150	9.2	1.16	8.93	80399	133.12	100.94	8.2	17.3
819.0	28.6	20.4	150	9.2	1.16	8.97	80714	148.44	101.02	8.2	17.3
820.0	24.2	21.1	150	9.2	1.21	9.01	81087	175.53	101.15	8.2	17.3
821.0	33.3	21.4	150	9.2	1.14	9.04	81357	127.23	101.19	8.2	17.3
822.0	31.6	21.7	150	9.2	1.15	9.07	81642	134.30	101.25	8.2	17.3
823.0	82.0	22.0	150	9.2	0.91	9.08	81752	51.72	101.17	8.2	17.3
824.0	27.3	21.8	150	9.2	1.19	9.12	82082	155.50	101.26	8.2	17.3
825.0	63.2	21.4	150	9.2	0.97	9.14	82224	67.15	101.20	8.2	17.3
826.0	34.0	21.0	150	9.2	1.13	9.17	82489	124.74	101.24	8.2	17.3
827.0	30.1	21.2	150	9.2	1.16	9.20	82787	140.78	101.31	8.2	17.3
828.0	17.0	22.2	150	9.2	1.32	9.26	83317	249.75	101.56	8.2	17.3

BIT NUMBER	3	IADC CODE	114	INTERVAL	828.0- 1296.0
HTC X3A		SIZE	12.250	NOZZLES	18 18 16
COST	2201.00	TRIP TIME	4.7	BIT RUN	468.0
TOTAL HOURS	20.76	TOTAL TURNS	179081	CONDITION	T5 B5 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
829.0	112.0	11.0	50	9.0	0.51	0.01	27	38	22172	8.2	17.3
830.0	161.0	12.0	50	9.0	0.43	0.02	45	26	11099	8.2	17.3
831.0	51.2	12.0	50	9.0	0.72	0.03	104	83	7427	8.2	17.3
832.0	21.7	20.0	50	9.0	1.06	0.08	242	195	5619	8.2	17.3
833.0	10.5	20.0	50	9.0	1.26	0.18	528	404	4576	8.2	17.3
834.0	36.7	22.4	60	9.0	0.99	0.20	626	115	3833	8.2	17.3
835.0	41.4	22.5	60	9.0	0.96	0.23	713	102	3300	8.2	17.3
836.0	29.8	22.1	60	9.0	1.05	0.26	834	143	2905	8.2	17.3
837.0	62.1	29.1	100	9.0	1.06	0.28	931	68	2590	8.2	17.3
838.0	69.2	30.3	140	9.0	1.14	0.29	1052	61	2337	8.2	17.3
839.0	70.6	29.1	140	9.0	1.12	0.31	1171	60	2130	8.2	17.3
840.0	85.7	27.1	140	9.0	1.04	0.32	1269	49	1957	8.2	17.3
841.0	78.3	29.3	140	9.0	1.09	0.33	1376	54	1810	8.2	17.4
842.0	67.9	28.7	140	9.0	1.13	0.34	1500	62	1685	8.2	17.4
843.0	65.5	28.8	140	9.0	1.14	0.36	1628	65	1577	8.2	17.4
844.0	67.9	28.4	140	9.0	1.13	0.37	1752	62	1483	8.2	17.4
845.0	64.3	29.7	140	9.0	1.16	0.39	1883	66	1399	8.2	17.4
846.0	50.7	27.2	140	9.0	1.20	0.41	2048	84	1326	8.2	17.4
847.0	70.6	29.0	140	9.0	1.12	0.42	2167	60	1260	8.2	17.4
848.0	69.2	28.0	140	9.0	1.12	0.44	2289	61	1200	8.2	17.4
849.0	73.5	31.4	140	9.0	1.13	0.45	2403	58	1145	8.2	17.4
850.0	66.7	31.5	140	9.0	1.17	0.47	2529	64	1096	8.2	17.4
851.0	70.6	29.6	140	9.0	1.13	0.48	2648	60	1051	8.2	17.4
852.0	63.2	28.4	140	9.0	1.15	0.50	2781	67	1010	8.2	17.4
853.0	73.5	29.1	140	9.0	1.11	0.51	2895	57.72	972.03	8.2	17.4
854.0	73.5	28.0	140	9.0	1.10	0.52	3010	57.70	936.87	8.2	17.4
855.0	65.5	28.0	140	9.0	1.13	0.54	3138	64.75	904.57	8.2	17.4
856.0	59.4	29.0	140	9.0	1.17	0.56	3279	71.40	874.81	8.2	17.4
857.0	78.2	28.0	140	9.0	1.08	0.57	3387	54.23	846.51	8.2	17.4
858.0	69.1	27.0	140	9.0	1.10	0.58	3508	61.37	820.34	8.2	17.4
859.0	72.3	30.0	140	9.0	1.12	0.60	3624	58.66	795.77	8.2	17.4
860.0	73.7	29.0	140	9.0	1.11	0.61	3738	57.54	772.70	8.2	17.4
861.0	72.2	28.0	140	9.0	1.10	0.63	3855	58.74	751.07	8.2	17.4
862.0	67.0	28.0	140	9.0	1.13	0.64	3980	63.30	730.84	8.2	17.4
863.0	73.1	27.0	140	9.0	1.09	0.65	4095	58.02	711.62	8.2	17.4
864.0	82.3	28.0	140	9.0	1.06	0.67	4197	51.53	693.28	8.2	17.4
865.0	56.4	28.0	140	9.0	1.18	0.68	4346	75.20	676.57	8.2	17.4
866.0	70.4	28.0	140	9.0	1.11	0.70	4465	60.21	660.35	8.2	17.4
867.0	65.5	29.0	140	9.0	1.14	0.71	4594	64.79	645.08	8.2	17.4
868.0	67.9	28.2	140	9.0	1.12	0.73	4717	62.44	630.52	8.2	17.4
869.0	78.3	27.9	140	9.0	1.08	0.74	4825	54.19	616.46	8.2	17.4
870.0	69.2	28.6	140	9.0	1.12	0.76	4946	61.26	603.24	8.2	17.4
871.0	53.7	28.8	140	9.0	1.20	0.77	5102	78.93	591.05	8.2	17.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
872.0	50.7	29.1	140	9.0	1.23	0.79	5268	83.64	579.52	8.2	17.4
873.0	46.2	29.0	140	9.0	1.25	0.82	5450	91.89	568.68	8.2	17.4
874.0	41.4	29.2	140	9.0	1.29	0.84	5653	102.49	558.55	8.2	17.4
875.0	36.7	25.9	140	9.0	1.28	0.87	5882	115.45	549.12	8.2	17.4
876.0	73.5	28.7	140	9.0	1.11	0.88	5996	57.72	538.88	8.2	17.5
877.0	60.0	27.8	140	9.0	1.16	0.90	6136	70.68	529.33	8.2	17.5
878.0	75.0	28.8	140	9.0	1.10	0.91	6248	56.55	519.87	8.2	17.5
879.0	75.0	30.4	140	9.0	1.12	0.92	6360	56.55	510.79	8.2	17.5
880.0	69.2	30.3	140	9.0	1.14	0.94	6481	61.26	502.14	8.2	17.5
881.0	65.5	30.5	140	9.0	1.16	0.95	6610	64.79	493.89	8.2	17.5
882.0	66.7	30.0	140	9.0	1.15	0.97	6736	63.62	485.92	8.2	17.5
883.0	75.0	29.6	140	9.0	1.11	0.98	6848	56.55	478.11	8.2	17.5
884.0	75.0	31.8	140	9.0	1.13	0.99	6960	56.55	470.59	8.2	17.5
885.0	55.4	30.9	150	9.0	1.24	1.01	7122	76.57	463.67	8.2	17.5
886.0	66.7	30.1	150	9.0	1.17	1.03	7257	63.62	456.78	8.2	17.5
887.0	64.3	30.7	150	9.0	1.19	1.04	7397	65.97	450.15	8.2	17.5
888.0	67.9	30.3	150	9.0	1.17	1.06	7530	62.44	443.69	8.2	17.5
889.0	60.0	30.0	150	9.0	1.20	1.07	7680	70.68	437.58	8.2	17.5
890.0	65.5	29.3	150	9.0	1.17	1.09	7817	64.79	431.56	8.2	17.5
891.0	56.2	29.1	150	9.0	1.21	1.11	7977	75.40	425.91	8.2	17.5
892.0	67.9	29.8	150	9.0	1.16	1.12	8110	62.44	420.23	8.2	17.5
893.0	64.3	30.1	150	9.0	1.18	1.14	8250	65.97	414.78	8.2	17.5
894.0	48.6	24.3	150	9.0	1.20	1.16	8435	87.18	409.82	8.2	17.5
895.0	65.5	28.2	150	9.0	1.16	1.17	8572	64.79	404.67	8.2	17.5
896.0	72.0	28.5	150	9.0	1.13	1.19	8697	58.90	399.58	8.2	17.5
897.0	57.1	26.7	150	9.0	1.18	1.21	8855	74.22	394.87	8.2	17.5
898.0	67.9	28.1	150	9.0	1.14	1.22	8987	62.44	390.12	8.2	17.5
899.0	54.5	29.6	150	9.0	1.23	1.24	9152	77.75	385.72	8.2	17.5
900.0	59.0	29.7	150	9.0	1.21	1.26	9305	71.86	381.36	8.2	17.5
901.0	73.5	29.0	150	9.0	1.13	1.27	9427	57.72	376.93	8.2	17.5
902.0	62.1	28.2	150	9.0	1.17	1.29	9572	68.33	372.76	8.2	17.5
903.0	45.6	28.6	150	9.0	1.27	1.31	9770	93.07	369.03	8.2	17.5
904.0	59.0	27.7	150	9.0	1.18	1.32	9922	71.86	365.12	8.2	17.5
905.0	75.0	27.7	150	9.0	1.11	1.34	10042	56.55	361.11	8.2	17.5
906.0	67.9	27.8	150	9.0	1.14	1.35	10175	62.44	357.28	8.2	17.5
907.0	63.2	29.2	150	9.0	1.18	1.37	10317	67.15	353.61	8.2	17.5
908.0	64.3	27.6	150	9.0	1.16	1.38	10457	65.97	350.01	8.2	17.5
909.0	30.8	29.4	150	9.0	1.41	1.42	10750	137.83	347.39	8.2	17.5
910.0	28.8	29.7	150	9.0	1.43	1.45	11062	147.26	344.95	8.2	17.5
911.0	58.1	29.4	150	9.0	1.21	1.47	11217	73.04	341.68	8.2	17.5
912.0	62.1	30.3	150	9.0	1.20	1.48	11362	68.33	338.42	8.2	17.6
913.0	53.7	28.6	150	9.0	1.22	1.50	11530	78.93	335.37	8.2	17.6
914.0	40.0	21.1	150	9.0	1.21	1.53	11755	106.03	332.70	8.2	17.6
915.0	44.4	29.5	150	9.0	1.29	1.55	11957	95.42	329.97	8.2	17.6
916.0	46.2	29.2	150	9.0	1.28	1.57	12152	91.89	327.27	8.2	17.6
917.0	45.0	29.3	150	9.0	1.29	1.59	12352	94.24	324.65	8.2	17.6
918.0	46.2	32.2	150	9.0	1.31	1.62	12547	91.89	322.06	8.2	17.6
919.0	43.9	36.4	150	9.0	1.38	1.64	12752	96.60	319.59	8.2	17.6
920.0	30.0	35.6	150	9.0	1.49	1.67	13052	141.37	317.65	8.2	17.6
921.0	44.9	35.0	150	9.0	1.35	1.69	13253	94.45	315.25	8.2	17.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
922.0	36.4	33.1	150	9.0	1.40	1.72	13500	116.63	313.14	8.2	17.6
923.0	41.9	33.5	150	9.0	1.36	1.75	13715	101.31	310.91	8.2	17.6
924.0	33.6	34.3	150	9.0	1.44	1.78	13983	126.05	308.98	8.2	17.6
925.0	33.0	33.8	150	9.0	1.44	1.81	14255	128.41	307.12	8.2	17.6
926.0	34.6	34.3	150	9.0	1.43	1.83	14515	122.52	305.24	8.2	17.6
927.0	33.3	34.4	150	9.0	1.45	1.86	14785	127.23	303.44	8.2	17.6
928.0	34.0	34.0	150	9.0	1.43	1.89	15050	124.87	301.65	8.2	17.6
929.0	36.0	33.6	150	9.0	1.41	1.92	15300	117.81	299.83	8.2	17.6
930.0	24.8	33.6	150	9.0	1.53	1.96	15663	170.82	298.57	8.2	17.6
931.0	31.1	34.0	150	9.0	1.46	1.99	15952	136.37	296.99	8.2	17.6
932.0	29.4	34.0	150	9.0	1.48	2.03	16258	144.25	295.52	8.2	17.6
933.0	27.9	33.6	150	9.0	1.49	2.06	16580	151.84	294.16	8.2	17.6
934.0	25.2	34.2	150	9.0	1.54	2.10	16938	168.46	292.97	8.2	17.6
935.0	26.3	35.1	150	9.0	1.53	2.14	17280	161.39	291.74	8.2	17.6
936.0	22.9	35.3	150	9.0	1.58	2.19	17673	184.95	290.75	8.2	17.6
937.0	26.7	35.6	150	9.0	1.53	2.22	18010	159.04	289.54	8.2	17.6
938.0	24.8	36.0	150	9.0	1.56	2.26	18373	170.82	288.46	8.2	17.6
939.0	23.7	35.8	150	9.0	1.58	2.31	18753	179.06	287.48	8.2	17.6
940.0	26.9	35.9	150	9.0	1.54	2.34	19088	157.86	286.32	8.2	17.6
941.0	23.1	35.5	150	9.0	1.58	2.39	19478	183.78	285.41	8.2	17.6
942.0	23.8	35.0	150	9.0	1.56	2.43	19855	177.89	284.47	8.2	17.6
943.0	23.8	35.2	150	9.0	1.57	2.47	20233	177.89	283.54	8.2	17.6
944.0	34.6	35.0	150	9.0	1.44	2.50	20493	122.52	282.15	8.2	17.6
945.0	39.1	34.5	150	9.0	1.39	2.52	20723	108.38	280.67	8.2	17.6
946.0	51.4	34.4	150	9.0	1.30	2.54	20898	82.46	278.99	8.2	17.6
947.0	57.1	33.4	150	9.0	1.26	2.56	21055	74.22	277.27	8.2	17.6
948.0	52.9	34.0	150	9.0	1.29	2.58	21225	80.11	275.63	8.2	17.7
949.0	29.8	33.1	150	9.0	1.47	2.61	21528	142.54	274.53	8.2	17.7
950.0	45.0	35.9	150	9.0	1.36	2.64	21728	94.24	273.05	8.2	17.7
951.0	16.0	36.5	150	9.0	1.72	2.70	22290	265.06	272.98	8.2	17.7
952.0	29.5	35.7	150	9.0	1.50	2.73	22595	143.72	271.94	8.2	17.7
953.0	27.7	35.4	150	9.0	1.52	2.77	22920	153.15	270.99	8.2	17.7
954.0	26.1	35.7	150	9.0	1.54	2.81	23265	162.57	270.13	8.2	17.7
955.0	42.4	33.9	150	9.0	1.36	2.83	23478	100.13	268.79	8.2	17.7
956.0	53.7	34.9	150	9.0	1.29	2.85	23645	78.93	267.31	8.2	17.7
957.0	25.2	34.8	150	9.0	1.54	2.89	24003	168.46	266.54	8.2	17.7
958.0	33.3	35.1	150	9.0	1.45	2.92	24273	127.23	265.47	8.2	17.7
959.0	39.1	34.4	150	9.0	1.39	2.94	24503	108.38	264.27	8.2	17.7
960.0	47.4	34.1	150	9.0	1.33	2.97	24693	89.53	262.95	8.2	17.7
961.0	32.1	37.8	150	9.0	1.50	3.00	24973	131.94	261.96	8.2	17.7
962.0	27.3	42.1	150	9.0	1.61	3.03	25303	155.50	261.17	8.2	17.7
963.0	31.6	42.3	140	9.0	1.53	3.06	25569	134.30	260.23	8.2	17.7
964.0	30.8	41.8	140	9.0	1.54	3.10	25842	137.83	259.33	8.2	17.7
965.0	23.8	41.1	140	9.0	1.62	3.14	26194	177.89	258.73	8.2	17.7
966.0	18.0	40.5	140	9.0	1.71	3.19	26661	235.61	258.57	8.2	17.7
967.0	30.0	39.6	140	9.0	1.52	3.23	26941	141.37	257.72	8.2	17.7
968.0	37.9	39.0	140	9.0	1.43	3.25	27162	111.92	256.68	8.2	17.7
969.0	44.4	39.9	140	9.0	1.39	3.28	27351	95.42	255.54	8.2	17.7
970.0	57.1	39.6	140	9.0	1.30	3.29	27498	74.22	254.26	8.2	17.7
971.0	56.2	39.7	140	9.0	1.31	3.31	27648	75.40	253.01	8.2	17.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
972.0	49.3	37.3	140	9.0	1.33	3.33	27818	86.00	251.85	8.2	17.7
973.0	42.9	39.8	140	9.0	1.40	3.36	28014	98.96	250.80	8.2	17.7
974.0	38.3	39.0	140	9.0	1.43	3.38	28233	110.74	249.84	8.2	17.7
975.0	35.6	38.7	140	9.0	1.45	3.41	28469	118.98	248.95	8.2	17.7
976.0	35.3	38.8	140	9.0	1.46	3.44	28707	120.16	248.08	8.2	17.7
977.0	27.3	39.4	140	9.0	1.55	3.47	29015	155.50	247.46	8.2	17.7
978.0	28.8	41.6	140	9.0	1.56	3.51	29307	147.26	246.79	8.2	17.7
979.0	29.8	42.5	140	9.0	1.56	3.54	29589	142.54	246.10	8.2	17.7
980.0	42.4	39.2	140	9.0	1.40	3.57	29787	100.13	245.14	8.2	17.7
981.0	58.1	39.4	140	9.0	1.29	3.58	29932	73.04	244.01	8.2	17.7
982.0	49.3	39.9	140	9.0	1.35	3.60	30102	86.00	242.99	8.2	17.7
983.0	55.4	40.2	140	9.0	1.32	3.62	30254	76.57	241.91	8.2	17.7
984.0	39.1	40.4	140	9.0	1.44	3.65	30469	108.38	241.06	8.2	17.7
985.0	36.4	40.4	140	9.0	1.46	3.68	30700	116.63	240.26	8.2	17.7
986.0	36.0	41.5	140	9.0	1.48	3.70	30933	117.81	239.49	8.2	17.8
987.0	30.3	39.4	140	9.0	1.52	3.74	31211	140.19	238.86	8.2	17.8
988.0	46.8	40.6	140	9.0	1.38	3.76	31390	90.71	237.94	8.2	17.8
989.0	43.4	39.8	140	9.0	1.40	3.78	31584	97.78	237.07	8.2	17.8
990.0	29.8	40.2	140	9.0	1.53	3.81	31866	142.54	236.48	8.2	17.8
991.0	30.3	40.2	140	9.0	1.52	3.85	32144	140.19	235.89	8.2	17.8
992.0	40.4	39.5	140	9.0	1.42	3.87	32352	104.85	235.09	8.2	17.8
993.0	45.0	39.7	140	9.0	1.38	3.89	32538	94.24	234.24	8.2	17.8
994.0	28.6	38.1	140	9.0	1.52	3.93	32832	148.44	233.72	8.2	17.8
995.0	39.1	39.2	140	9.0	1.42	3.95	33047	108.38	232.97	8.2	17.8
996.0	38.3	39.0	140	9.0	1.43	3.98	33266	110.74	232.25	8.2	17.8
997.0	49.3	39.4	140	9.0	1.35	4.00	33437	86.00	231.38	8.2	17.8
998.0	59.0	38.7	140	9.0	1.28	4.02	33579	71.86	230.44	8.2	17.8
999.0	49.3	38.6	140	9.0	1.34	4.04	33749	86.00	229.60	8.2	17.8
1000.0	43.9	38.6	140	9.0	1.38	4.06	33941	96.60	228.82	8.2	17.8
1002.0	47.9	38.0	140	9.0	1.34	4.10	34291	88.47	227.21	8.2	17.8
1003.0	42.9	38.5	140	9.0	1.39	4.13	34487	98.96	226.48	8.2	17.8
1004.0	48.6	38.2	140	9.0	1.34	4.15	34660	87.18	225.69	8.2	17.8
1005.0	40.9	36.2	140	9.0	1.38	4.17	34865	103.67	225.00	8.2	17.8
1006.0	42.9	38.6	140	9.0	1.39	4.19	35061	98.96	224.29	8.2	17.8
1007.0	64.3	38.1	140	9.0	1.25	4.21	35192	65.97	223.40	8.2	17.8
1008.0	35.3	38.7	135	9.0	1.44	4.24	35421	120.16	222.83	8.2	17.8
1009.0	32.7	42.7	135	9.0	1.51	4.27	35669	129.59	222.32	8.2	17.8
1010.0	32.7	41.6	135	9.0	1.50	4.30	35916	129.59	221.81	8.2	17.8
1011.0	27.9	45.2	135	9.0	1.60	4.34	36207	151.97	221.42	8.2	17.8
1012.0	34.6	48.6	135	9.0	1.56	4.36	36441	122.52	220.89	8.2	17.8
1013.0	29.0	46.2	135	9.0	1.60	4.40	36720	146.08	220.48	8.2	17.8
1014.0	29.3	45.6	135	9.0	1.58	4.43	36996	144.90	220.08	8.2	17.8
1015.0	40.4	46.6	135	9.0	1.48	4.46	37197	104.85	219.46	8.2	17.8
1016.0	39.1	47.0	135	9.0	1.50	4.48	37404	108.38	218.87	8.2	17.8
1017.0	43.9	46.4	135	9.0	1.45	4.51	37588	96.60	218.22	8.2	17.8
1018.0	41.9	46.1	135	9.0	1.46	4.53	37782	101.31	217.61	8.2	17.8
1019.0	52.9	46.4	135	9.0	1.38	4.55	37935	80.11	216.89	8.2	17.8
1020.0	38.3	46.8	135	9.0	1.50	4.57	38146	110.74	216.33	8.2	17.8
1021.0	58.1	48.1	135	9.0	1.36	4.59	38286	73.04	215.59	8.2	17.8
1022.0	46.2	47.2	135	9.0	1.44	4.61	38461	91.89	214.95	8.2	17.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1023.0	52.2	46.2	135	9.0	1.38	4.63	38616	81.29	214.27	8.2	17.8
1024.0	43.4	47.5	135	9.0	1.46	4.66	38803	97.78	213.67	8.2	17.9
1025.0	38.7	45.5	135	9.0	1.48	4.68	39012	109.56	213.15	8.2	17.9
1026.0	50.0	47.2	135	9.0	1.41	4.70	39174	84.82	212.50	8.2	17.9
1027.0	36.0	47.3	135	9.0	1.53	4.73	39399	117.81	212.02	8.2	17.9
1028.0	31.6	48.2	135	9.0	1.59	4.76	39656	134.30	211.63	8.2	17.9
1029.0	35.3	47.9	135	9.0	1.54	4.79	39885	120.16	211.18	8.2	17.9
1030.0	39.6	49.0	135	9.0	1.51	4.81	40090	107.20	210.66	8.2	17.9
1031.0	50.0	48.8	135	9.0	1.43	4.83	40252	84.82	210.04	8.2	17.9
1032.0	38.3	48.4	135	9.0	1.52	4.86	40464	110.74	209.56	8.2	17.9
1033.0	40.0	47.6	135	9.0	1.49	4.89	40666	106.03	209.05	8.2	17.9
1034.0	33.6	46.8	135	9.0	1.55	4.92	40907	126.05	208.65	8.2	17.9
1035.0	32.4	47.3	135	9.0	1.57	4.95	41157	130.76	208.27	8.2	17.9
1036.0	30.8	47.1	135	9.0	1.58	4.98	41420	137.83	207.93	8.2	17.9
1037.0	30.8	47.8	135	9.0	1.59	5.01	41683	137.83	207.60	8.2	17.9
1038.0	44.4	47.5	135	9.0	1.46	5.03	41865	95.42	207.06	8.2	17.9
1039.0	55.4	48.4	135	9.0	1.38	5.05	42012	76.57	206.45	8.2	17.9
1040.0	46.8	48.1	135	9.0	1.44	5.07	42185	90.71	205.90	8.2	17.9
1041.0	45.6	47.7	135	9.0	1.45	5.10	42363	93.07	205.37	8.2	17.9
1042.0	43.9	47.8	135	9.0	1.46	5.12	42547	96.60	204.86	8.2	17.9
1043.0	44.4	48.3	135	9.0	1.46	5.14	42729	95.42	204.35	8.2	17.9
1044.0	34.3	47.9	135	9.0	1.55	5.17	42966	123.70	203.98	8.2	17.9
1045.0	34.0	47.1	135	9.0	1.55	5.20	43204	124.87	203.61	8.2	17.9
1046.0	32.4	47.2	135	9.0	1.57	5.23	43454	130.76	203.28	8.2	17.9
1047.0	31.6	46.9	135	9.0	1.57	5.26	43710	134.30	202.97	8.2	17.9
1048.0	20.5	46.4	135	9.0	1.72	5.31	44106	207.34	202.99	8.2	17.9
1049.0	25.4	46.2	135	9.0	1.64	5.35	44426	167.28	202.82	8.2	17.9
1050.0	36.0	44.5	135	9.0	1.50	5.38	44651	117.81	202.44	8.2	17.9
1051.0	38.7	46.2	135	9.0	1.49	5.40	44860	109.56	202.02	8.2	17.9
1052.0	36.4	45.6	135	9.0	1.51	5.43	45083	116.63	201.64	8.2	17.9
1053.0	36.4	47.5	135	9.0	1.53	5.46	45306	116.63	201.27	8.2	17.9
1054.0	28.3	46.0	135	9.0	1.60	5.49	45591	149.61	201.04	8.2	17.9
1055.0	33.0	43.2	135	9.0	1.52	5.52	45837	128.41	200.72	8.2	17.9
1056.0	29.5	41.8	135	9.0	1.54	5.56	46111	143.72	200.47	8.2	17.9
1057.0	37.9	39.2	135	9.0	1.42	5.58	46325	111.92	200.08	8.2	17.9
1058.0	42.9	38.3	135	9.0	1.37	5.61	46514	98.96	199.64	8.2	17.9
1059.0	37.5	39.4	135	9.0	1.43	5.63	46730	113.09	199.27	8.2	17.9
1060.0	36.0	38.5	135	9.0	1.43	5.66	46955	117.81	198.91	8.2	17.9
1061.0	34.0	39.8	135	9.0	1.47	5.69	47193	124.87	198.60	8.2	17.9
1062.0	37.5	39.6	135	9.0	1.43	5.72	47409	113.09	198.23	8.2	17.9
1063.0	53.7	39.4	135	9.0	1.31	5.74	47560	78.93	197.72	8.2	18.0
1064.0	38.7	39.4	135	9.0	1.42	5.76	47769	109.56	197.35	8.2	18.0
1065.0	24.5	40.2	135	9.0	1.58	5.80	48100	173.17	197.25	8.2	18.0
1066.0	40.0	39.6	135	9.0	1.41	5.83	48303	106.03	196.87	8.2	18.0
1067.0	29.5	42.7	135	9.0	1.55	5.86	48577	143.72	196.64	8.2	18.0
1068.0	30.0	42.2	135	9.0	1.54	5.90	48847	141.37	196.41	8.2	18.0
1069.0	28.1	43.4	135	9.0	1.57	5.93	49135	150.79	196.22	8.2	18.0
1070.0	28.8	40.8	135	9.0	1.54	5.97	49416	147.26	196.02	8.2	18.0
1071.0	46.2	42.3	135	9.0	1.39	5.99	49592	91.89	195.59	8.2	18.0
1072.0	40.4	41.6	135	9.0	1.43	6.01	49792	104.85	195.22	8.2	18.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1073.0	48.6	40.0	135	9.0	1.35	6.03	49959	87.18	194.78	8.2	18.0
1074.0	51.4	41.4	135	9.0	1.34	6.05	50116	82.46	194.32	8.2	18.0
1075.0	31.0	41.5	135	9.0	1.52	6.08	50377	136.65	194.09	8.2	18.0
1076.0	30.3	41.3	135	9.0	1.52	6.12	50645	140.19	193.87	8.2	18.0
1077.0	34.0	40.5	135	9.0	1.48	6.15	50883	124.87	193.59	8.2	18.0
1078.0	54.5	41.6	135	9.0	1.32	6.17	51032	77.75	193.13	8.2	18.0
1079.0	49.3	41.8	135	9.0	1.36	6.19	51196	86.00	192.70	8.2	18.0
1080.0	41.4	41.4	135	9.0	1.42	6.21	51392	102.49	192.35	8.2	18.0
1081.0	38.7	42.0	135	9.0	1.45	6.24	51601	109.56	192.02	8.2	18.0
1082.0	33.3	41.4	135	9.0	1.49	6.27	51844	127.23	191.76	8.2	18.0
1083.0	24.0	40.5	135	9.0	1.60	6.31	52182	176.71	191.71	8.2	18.0
1084.0	25.9	41.9	135	9.0	1.59	6.35	52494	163.75	191.60	8.2	18.0
1085.0	35.1	42.0	135	9.0	1.48	6.37	52725	120.83	191.32	8.2	18.0
1086.0	37.9	40.7	135	9.0	1.44	6.40	52939	111.92	191.01	8.2	18.0
1087.0	31.9	40.5	135	9.0	1.50	6.43	53193	133.12	190.79	8.2	18.0
1088.0	32.7	40.6	135	9.0	1.49	6.46	53441	129.59	190.55	8.2	18.0
1089.0	15.6	41.0	135	9.0	1.75	6.53	53960	272.13	190.87	8.2	18.0
1090.0	24.8	40.3	135	9.0	1.58	6.57	54287	170.82	190.79	8.2	18.0
1091.0	36.0	40.4	135	9.0	1.45	6.60	54512	117.81	190.51	8.2	18.0
1092.0	41.4	40.0	135	9.0	1.40	6.62	54707	102.49	190.18	8.2	18.0
1093.0	29.0	39.7	135	9.0	1.52	6.65	54986	146.08	190.01	8.2	18.0
1094.0	32.1	37.8	135	9.0	1.46	6.69	55238	131.94	189.79	8.2	18.0
1095.0	34.3	38.2	135	9.0	1.45	6.71	55475	123.70	189.55	8.2	18.0
1096.0	24.0	39.3	135	9.0	1.58	6.76	55812	176.71	189.50	8.2	18.0
1097.0	31.0	38.6	135	9.0	1.48	6.79	56073	136.65	189.30	8.2	18.0
1098.0	31.3	38.5	135	9.0	1.48	6.82	56332	135.48	189.10	8.2	18.0
1099.0	21.2	39.1	135	9.0	1.62	6.87	56714	200.27	189.14	8.2	18.0
1100.0	17.6	38.4	135	9.0	1.68	6.92	57176	241.50	189.34	8.2	18.0
1101.0	19.0	38.7	135	9.0	1.65	6.98	57601	222.65	189.46	8.2	18.0
1102.0	19.4	38.5	135	9.0	1.64	7.03	58019	219.12	189.57	8.2	18.0
1103.0	31.6	38.6	135	9.0	1.48	7.06	58276	134.30	189.37	8.2	18.1
1104.0	20.0	39.7	135	9.0	1.65	7.11	58681	212.05	189.45	8.2	18.1
1105.0	20.7	38.8	135	9.0	1.63	7.16	59072	204.98	189.50	8.2	18.1
1106.0	19.1	38.8	135	9.0	1.65	7.21	59495	221.47	189.62	8.2	18.1
1107.0	22.1	39.2	135	9.0	1.61	7.26	59862	192.02	189.63	8.2	18.1
1108.0	24.2	38.8	135	9.0	1.57	7.30	60197	175.53	189.58	8.2	18.1
1109.0	27.1	39.1	135	9.0	1.54	7.33	60497	156.68	189.46	8.2	18.1
1110.0	30.0	39.7	135	9.0	1.51	7.37	60767	141.37	189.29	8.2	18.1
1111.0	29.3	39.6	135	9.0	1.52	7.40	61043	144.90	189.13	8.2	18.1
1112.0	28.8	40.4	135	9.0	1.53	7.44	61325	147.26	188.99	8.2	18.1
1113.0	18.9	39.6	140	9.0	1.68	7.49	61768	223.83	189.11	8.2	18.1
1114.0	22.9	38.3	140	9.0	1.60	7.53	62134	184.95	189.09	8.2	18.1
1115.0	20.7	38.8	140	9.0	1.64	7.58	62540	204.98	189.15	8.2	18.1
1116.0	21.3	38.3	140	9.0	1.62	7.63	62935	199.09	189.18	8.2	18.1
1117.0	20.0	38.9	140	9.0	1.65	7.68	63355	212.05	189.26	8.2	18.1
1118.0	22.2	38.3	140	9.0	1.61	7.72	63733	190.85	189.27	8.2	18.1
1119.0	24.0	38.5	140	9.0	1.58	7.76	64083	176.71	189.22	8.2	18.1
1120.0	22.9	38.6	140	9.0	1.60	7.81	64449	184.95	189.21	8.2	18.1
1121.0	22.9	38.8	140	9.0	1.60	7.85	64815	184.95	189.20	8.2	18.1
1122.0	18.7	39.0	140	9.0	1.68	7.91	65266	227.36	189.33	8.2	18.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1123.0	23.5	38.6	140	9.0	1.59	7.95	65623	180.24	189.29	8.2	18.1
1124.0	23.5	37.1	140	9.0	1.57	7.99	65980	180.24	189.26	8.2	18.1
1125.0	19.6	38.1	140	9.0	1.65	8.04	66409	216.76	189.36	8.2	18.1
1126.0	22.4	37.9	140	9.0	1.60	8.09	66785	189.67	189.36	8.2	18.1
1127.0	24.0	37.6	140	9.0	1.57	8.13	67135	176.71	189.32	8.2	18.1
1128.0	32.7	37.6	140	9.0	1.47	8.16	67391	129.59	189.12	8.2	18.1
1129.0	32.4	36.0	140	9.0	1.45	8.19	67650	130.76	188.92	8.2	18.1
1130.0	27.1	36.8	140	9.0	1.52	8.23	67961	156.68	188.82	8.2	18.1
1131.0	19.3	36.5	140	9.0	1.63	8.28	68397	220.30	188.92	8.2	18.1
1132.0	16.4	36.7	140	9.0	1.69	8.34	68910	259.17	189.15	8.2	18.1
1133.0	15.3	38.7	140	9.0	1.74	8.40	69459	276.84	189.44	8.2	18.1
1134.0	8.9	38.4	140	9.0	1.92	8.52	70406	478.29	190.38	8.2	18.1
1135.0	20.2	36.6	140	9.0	1.62	8.57	70821	209.69	190.45	8.2	18.1
1136.0	13.6	37.6	145	9.0	1.77	8.64	71459	311.01	190.84	8.2	18.1
1137.0	14.7	36.8	145	9.0	1.74	8.71	72051	288.62	191.15	8.2	18.1
1138.0	16.9	37.2	145	9.0	1.70	8.77	72566	250.93	191.35	8.2	18.1
1139.0	16.4	36.5	145	9.0	1.70	8.83	73095	257.99	191.56	8.2	18.1
1140.0	14.0	36.3	145	9.0	1.75	8.90	73717	302.76	191.92	8.2	18.1
1141.0	15.4	35.7	145	9.0	1.71	8.96	74282	275.67	192.18	8.2	18.1
1142.0	15.0	40.7	145	9.0	1.79	9.03	74862	282.73	192.47	8.2	18.1
1146.0	26.0	45.0	145	9.0	1.65	9.19	76200	163.12	192.10	8.2	18.2
1147.0	20.0	45.0	145	9.0	1.74	9.24	76635	212.05	192.17	8.2	18.2
1148.0	13.4	45.0	145	9.0	1.88	9.31	77285	316.49	192.55	8.2	18.2
1149.0	17.2	45.0	145	9.0	1.79	9.37	77791	246.57	192.72	8.2	18.2
1150.0	14.4	45.0	145	9.0	1.86	9.44	78395	294.51	193.04	8.2	18.2
1151.0	15.6	45.0	145	9.0	1.83	9.50	78952	271.86	193.28	8.2	18.2
1152.0	17.1	45.0	145	9.0	1.80	9.56	79461	248.01	193.45	8.2	18.2
1153.0	14.4	45.0	145	9.0	1.86	9.63	80065	294.51	193.76	8.2	18.2
1154.0	13.4	45.0	145	9.0	1.88	9.70	80715	316.49	194.14	8.2	18.2
1155.0	10.0	45.0	145	9.0	1.99	9.80	81585	424.10	194.84	8.2	18.2
1156.0	20.1	45.0	145	9.0	1.74	9.85	82017	211.00	194.89	8.2	18.2
1157.0	12.4	45.0	145	9.0	1.91	9.93	82719	342.02	195.34	8.2	18.2
1158.0	12.3	45.0	145	9.0	1.91	10.02	83426	344.80	195.79	8.2	18.2
1159.0	15.4	45.0	145	9.0	1.83	10.08	83991	275.39	196.03	8.2	18.2
1160.0	14.3	45.0	145	9.0	1.86	10.15	84600	296.57	196.33	8.2	18.2
1161.0	20.2	45.0	145	9.0	1.74	10.20	85030	209.95	196.38	8.2	18.2
1162.0	15.4	45.0	145	9.0	1.83	10.27	85595	275.39	196.61	8.2	18.2
1163.0	20.7	45.0	145	9.0	1.73	10.31	86016	204.88	196.64	8.2	18.2
1164.0	20.0	45.0	145	9.0	1.74	10.36	86451	212.05	196.68	8.2	18.2
1165.0	25.7	45.0	145	9.0	1.65	10.40	86789	165.02	196.59	8.2	18.2
1166.0	14.1	45.0	145	9.0	1.86	10.47	87406	300.78	196.90	8.2	18.2
1167.0	16.0	45.0	145	9.0	1.82	10.54	87950	265.06	197.10	8.2	18.2
1168.0	15.0	45.0	145	9.0	1.84	10.60	88530	282.73	197.35	8.2	18.2
1169.0	20.0	45.0	145	9.0	1.74	10.65	88965	212.05	197.39	8.2	18.2
1170.0	18.0	45.0	145	9.0	1.78	10.71	89448	235.61	197.51	8.2	18.2
1171.0	20.0	45.0	145	9.0	1.74	10.76	89883	212.05	197.55	8.2	18.2
1172.0	18.0	45.0	145	9.0	1.78	10.81	90367	235.61	197.66	8.2	18.2
1173.0	18.0	45.0	145	9.0	1.78	10.87	90850	235.61	197.77	8.2	18.2
1174.0	13.6	45.0	145	9.0	1.88	10.94	91490	311.84	198.10	8.2	18.2
1175.0	16.4	45.0	145	9.0	1.81	11.00	92020	258.60	198.27	8.2	18.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1176.0	13.3	45.0	145	9.0	1.88	11.08	92674	318.87	198.62	8.2	18.2
1177.0	12.5	47.0	145	9.0	1.93	11.16	93370	339.28	199.02	8.2	18.2
1178.0	12.8	48.0	145	9.0	1.94	11.24	94050	331.33	199.40	8.2	18.2
1179.0	12.4	48.0	145	9.0	1.95	11.32	94752	342.02	199.81	8.2	18.2
1180.0	16.4	48.0	145	9.0	1.85	11.38	95282	258.60	199.97	8.2	18.2
1181.0	24.7	48.0	145	9.0	1.70	11.42	95634	171.70	199.89	8.2	18.2
1182.0	13.0	48.0	145	9.0	1.93	11.50	96303	326.23	200.25	8.2	18.2
1183.0	11.8	48.0	145	9.0	1.97	11.58	97041	359.41	200.70	8.2	18.2
1184.0	16.2	48.0	145	9.0	1.85	11.64	97578	261.79	200.87	8.2	18.2
1185.0	10.7	48.0	145	9.0	2.00	11.74	98391	396.36	201.42	8.2	18.2
1186.0	12.0	48.0	145	9.0	1.96	11.82	99116	353.42	201.84	8.2	18.3
1187.0	12.0	48.0	150	9.0	1.97	11.90	99866	353.42	202.26	8.2	18.3
1188.0	18.1	48.0	150	9.0	1.82	11.96	100363	234.31	202.35	8.2	18.3
1189.0	11.3	48.0	150	9.0	2.00	12.05	101160	375.31	202.83	8.2	18.3
1190.0	16.1	48.0	150	9.0	1.87	12.11	101719	263.42	203.00	8.2	18.3
1191.0	15.0	48.0	150	9.0	1.89	12.18	102319	282.73	203.22	8.2	18.3
1192.0	13.7	48.0	150	9.0	1.93	12.25	102976	309.56	203.51	8.2	18.3
1193.0	15.0	48.0	150	9.0	1.89	12.31	103576	282.73	203.73	8.2	18.3
1194.0	12.0	48.0	150	9.0	1.97	12.40	104326	353.42	204.14	8.2	18.3
1195.0	14.1	45.0	150	9.0	1.88	12.47	104964	300.78	204.40	8.2	18.3
1196.0	12.6	45.0	150	9.0	1.92	12.55	105678	336.59	204.76	8.2	18.3
1197.0	13.0	45.0	150	9.0	1.90	12.63	106370	326.23	205.09	8.2	18.3
1198.0	13.7	45.0	150	9.0	1.89	12.70	107027	309.56	205.37	8.2	18.3
1199.0	13.9	45.0	150	9.0	1.88	12.77	107675	305.11	205.64	8.2	18.3
1200.0	14.4	45.0	150	9.0	1.87	12.84	108300	294.51	205.88	8.2	18.3
1201.0	12.4	45.0	150	9.0	1.92	12.92	109026	342.02	206.24	8.2	18.3
1202.0	14.4	45.0	150	9.0	1.87	12.99	109651	294.51	206.48	8.2	18.3
1203.0	18.5	45.0	150	9.0	1.78	13.04	110137	229.24	206.54	8.2	18.3
1204.0	12.2	45.0	150	9.0	1.93	13.13	110875	347.62	206.92	8.2	18.3
1205.0	12.0	45.0	150	9.0	1.93	13.21	111625	353.42	207.30	8.2	18.3
1206.0	12.5	45.0	150	9.0	1.92	13.29	112345	339.28	207.65	8.2	18.3
1207.0	12.0	45.0	150	9.0	1.93	13.37	113095	353.42	208.04	8.2	18.3
1208.0	12.0	45.0	150	9.0	1.93	13.46	113845	353.42	208.42	8.2	18.3
1209.0	11.4	45.0	150	9.0	1.95	13.54	114632	371.04	208.85	8.2	18.3
1210.0	14.4	45.0	150	9.0	1.87	13.61	115257	294.51	209.07	8.2	18.3
1211.0	14.7	45.0	150	9.0	1.86	13.68	115870	288.70	209.28	8.2	18.3
1212.0	11.4	45.0	150	9.0	1.95	13.77	116657	371.04	209.70	8.2	18.3
1213.0	14.7	45.0	150	9.0	1.86	13.84	117270	288.70	209.91	8.2	18.3
1214.0	13.0	45.0	150	9.0	1.91	13.91	117965	327.49	210.21	8.2	18.3
1215.0	10.7	45.0	150	9.0	1.98	14.01	118810	398.22	210.70	8.2	18.3
1216.0	11.3	45.0	150	9.0	1.96	14.10	119610	376.98	211.13	8.2	18.3
1217.0	11.4	45.0	150	9.0	1.95	14.18	120402	373.33	211.54	8.2	18.3
1218.0	14.8	45.0	150	9.0	1.86	14.25	121010	286.36	211.73	8.2	18.3
1219.0	14.3	45.0	150	9.0	1.87	14.32	121638	295.75	211.95	8.2	18.3
1220.0	14.5	45.0	150	9.0	1.87	14.39	122260	293.29	212.16	8.2	18.3
1221.0	10.9	45.0	150	9.0	1.97	14.48	123083	387.66	212.60	8.2	18.3
1222.0	12.9	45.0	150	9.0	1.91	14.56	123780	328.76	212.90	8.2	18.3
1223.0	13.8	45.0	150	9.0	1.88	14.63	124433	307.54	213.14	8.2	18.3
1224.0	19.7	45.0	150	9.0	1.76	14.68	124891	215.61	213.14	8.2	18.3
1225.0	13.7	45.0	150	9.0	1.89	14.76	125546	308.66	213.38	8.2	18.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1226.0	12.4	45.0	150	9.0	1.92	14.84	126271	341.74	213.71	8.2	18.3
1227.0	14.4	45.0	150	9.0	1.87	14.91	126896	294.51	213.91	8.2	18.3
1228.0	13.9	45.0	150	9.0	1.88	14.98	127546	306.21	214.14	8.2	18.3
1229.0	11.4	45.0	150	9.0	1.95	15.07	128338	373.33	214.54	8.2	18.4
1230.0	10.4	45.0	150	9.0	1.98	15.16	129201	406.62	215.02	8.2	18.4
1231.0	14.8	45.0	150	9.0	1.86	15.23	129808	286.36	215.19	8.2	18.4
1232.0	11.6	45.0	150	9.0	1.95	15.32	130584	365.29	215.56	8.2	18.4
1233.0	17.1	45.0	150	9.0	1.81	15.37	131109	247.43	215.64	8.2	18.4
1234.0	13.4	45.0	150	9.0	1.89	15.45	131781	316.97	215.89	8.2	18.4
1235.0	13.0	45.0	150	9.0	1.91	15.53	132475	326.73	216.16	8.2	18.4
1236.0	16.1	45.0	150	9.0	1.83	15.59	133032	262.76	216.28	8.2	18.4
1237.0	13.3	45.0	150	9.0	1.90	15.66	133708	318.15	216.53	8.2	18.4
1238.0	11.8	45.0	150	9.0	1.94	15.75	134470	359.41	216.88	8.2	18.4
1239.0	10.9	45.0	150	9.0	1.97	15.84	135296	389.08	217.30	8.2	18.4
1240.0	11.3	45.0	150	9.0	1.95	15.93	136092	375.31	217.68	8.2	18.4
1241.0	12.8	45.0	150	9.0	1.91	16.01	136796	331.33	217.95	8.2	18.4
1242.0	10.0	45.0	150	9.0	2.00	16.11	137696	424.10	218.45	8.2	18.4
1243.0	10.0	45.0	150	9.0	2.00	16.21	138596	424.10	218.95	8.2	18.4
1244.0	16.9	45.0	150	9.0	1.81	16.27	139128	250.95	219.02	8.2	18.4
1245.0	12.0	45.0	150	9.0	1.93	16.35	139878	353.42	219.35	8.2	18.4
1246.0	12.2	45.0	150	9.0	1.93	16.43	140616	347.62	219.65	8.2	18.4
1247.0	12.1	45.0	150	9.0	1.93	16.51	141360	350.50	219.97	8.2	18.4
1248.0	14.5	45.0	150	9.0	1.87	16.58	141980	292.48	220.14	8.2	18.4
1249.0	11.4	45.0	150	9.0	1.95	16.67	142770	372.02	220.50	8.2	18.4
1250.0	14.5	45.0	150	9.0	1.87	16.74	143390	292.48	220.67	8.2	18.4
1251.0	13.9	45.0	150	9.0	1.88	16.81	144038	305.11	220.87	8.2	18.4
1252.0	10.9	45.0	150	9.0	1.97	16.90	144864	389.08	221.27	8.2	18.4
1253.0	12.2	45.0	150	9.0	1.93	16.98	145601	347.62	221.56	8.2	18.4
1254.0	9.0	45.0	150	9.0	2.04	17.10	146601	471.22	222.15	8.2	18.4
1255.0	12.0	45.0	150	9.0	1.93	17.18	147351	353.42	222.46	8.2	18.4
1256.0	12.9	47.0	150	9.0	1.93	17.26	148049	328.76	222.71	8.2	18.4
1257.0	12.2	47.0	150	9.0	1.95	17.34	148787	347.62	223.00	8.2	18.4
1258.0	12.0	47.0	150	9.0	1.96	17.42	149537	353.42	223.30	8.2	18.4
1259.0	10.7	47.0	150	9.0	2.00	17.52	150378	396.36	223.70	8.2	18.4
1260.0	13.0	47.0	150	9.0	1.93	17.59	151070	326.23	223.94	8.2	18.4
1261.0	9.2	47.0	150	9.0	2.06	17.70	152048	460.98	224.49	8.2	18.4
1262.0	11.5	47.0	150	9.0	1.98	17.79	152831	368.78	224.82	8.2	18.4
1263.0	9.5	47.0	150	9.0	2.05	17.89	153778	446.42	225.33	8.2	18.4
1264.0	25.7	47.0	150	9.0	1.69	17.93	154129	165.02	225.19	8.2	18.4
1265.0	9.5	47.0	150	9.1	2.02	18.04	155076	446.42	225.70	8.2	18.4
1266.0	12.0	47.0	150	9.1	1.94	18.12	155826	353.42	225.99	8.2	18.4
1267.0	15.0	47.0	150	9.1	1.86	18.19	156426	282.73	226.12	8.2	18.4
1268.0	14.1	47.0	150	9.1	1.88	18.26	157064	300.78	226.29	8.2	18.4
1269.0	10.9	47.0	150	9.1	1.97	18.35	157890	389.08	226.66	8.2	18.4
1270.0	10.9	47.0	150	9.1	1.97	18.44	158716	389.08	227.02	8.2	18.4
1271.0	15.1	47.0	150	9.1	1.86	18.51	159312	280.86	227.14	8.2	18.4
1272.0	11.4	47.0	150	9.1	1.96	18.60	160101	372.02	227.47	8.2	18.4
1273.0	10.3	47.0	150	9.1	1.99	18.69	160975	411.75	227.88	8.2	18.4
1274.0	10.8	47.0	150	9.1	1.98	18.79	161808	392.69	228.25	8.2	18.5
1275.0	12.0	47.0	150	9.1	1.94	18.87	162558	353.42	228.53	8.2	18.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1276.0	12.3	47.0	150	9.1	1.93	18.95	163290	344.80	228.79	8.2	18.5
1277.0	9.8	47.0	150	9.1	2.01	19.05	164208	432.76	229.25	8.2	18.5
1278.0	11.9	47.0	150	9.1	1.94	19.14	164965	356.39	229.53	8.2	18.5
1279.0	11.3	47.0	150	9.1	1.96	19.22	165761	375.31	229.85	8.2	18.5
1280.0	10.3	47.0	150	9.1	1.99	19.32	166635	411.75	230.26	8.2	18.5
1281.0	11.0	47.0	150	9.1	1.97	19.41	167453	385.55	230.60	8.2	18.5
1282.0	11.3	47.0	150	9.1	1.96	19.50	168249	375.31	230.92	8.2	18.5
1283.0	12.2	47.0	150	9.1	1.93	19.58	168987	347.62	231.17	8.2	18.5
1284.0	15.7	45.0	150	9.1	1.82	19.65	169562	270.95	231.26	8.2	18.5
1285.0	16.4	44.3	150	9.1	1.79	19.71	170110	257.99	231.32	8.2	18.5
1286.0	13.0	42.2	150	9.1	1.85	19.78	170800	325.14	231.52	8.2	18.5
1287.0	12.7	39.1	150	9.1	1.81	19.86	171510	334.57	231.75	8.2	18.5
1288.0	11.4	44.9	140	9.1	1.90	19.95	172245	371.09	232.05	8.2	18.5
1289.0	10.9	42.5	140	9.1	1.89	20.04	173015	388.76	232.39	8.2	18.5
1290.0	10.7	42.8	140	9.1	1.90	20.14	173796	394.65	232.74	8.2	18.5
1291.0	10.4	42.8	140	9.1	1.91	20.23	174601	406.43	233.12	8.2	18.5
1292.0	10.5	43.3	140	9.1	1.91	20.33	175399	402.89	233.48	8.2	18.5
1293.0	9.9	43.7	140	9.1	1.94	20.43	176251	429.99	233.91	8.2	18.5
1294.0	7.9	43.7	140	9.1	2.02	20.55	177320	539.55	234.56	8.2	18.5
1295.0	11.1	42.8	140	9.1	1.89	20.65	178078	382.87	234.88	8.2	18.5
1296.0	8.4	43.0	140	9.1	1.99	20.76	179081	506.56	235.46	8.2	18.5

BIT NUMBER	4	IADC CODE	114	INTERVAL	1296.0- 1724.4
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	5.7	BIT RUN	428.4
TOTAL HOURS	26.07	TOTAL TURNS	238949	CONDITION	T5 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1297.0	17.1	35.7	121	9.1	1.59	0.07	429	248	26870	8.2	18.5
1298.0	12.6	35.1	100	9.1	1.62	0.15	906	337	13603	8.2	18.5
1299.0	12.0	35.2	100	9.1	1.64	0.23	1408	355	9187	8.2	18.5
1300.0	12.3	36.9	100	9.1	1.66	0.32	1894	344	6976	8.2	18.5
1301.0	13.7	36.2	120	9.1	1.67	0.39	2420	310	5643	8.2	18.5
1302.0	14.5	35.2	120	9.1	1.64	0.46	2916	292	4751	8.2	18.5
1303.0	14.3	35.0	120	9.1	1.64	0.53	3420	297	4115	8.2	18.5
1304.0	14.9	35.0	120	9.1	1.63	0.59	3904	285	3636	8.2	18.5
1305.0	14.9	35.8	120	9.1	1.64	0.66	4388	285	3264	8.2	18.5
1306.0	16.5	34.7	120	9.1	1.59	0.72	4824	257	2963	8.2	18.5
1307.0	24.2	37.3	120	9.1	1.50	0.76	5122	176	2710	8.2	18.5
1308.0	24.2	44.1	150	9.1	1.66	0.81	5495	176	2499	8.2	18.5
1309.0	25.5	45.9	150	9.1	1.66	0.84	5847	166	2319	8.2	18.5
1310.0	22.1	45.0	150	9.1	1.70	0.89	6255	192	2167	8.2	18.5
1311.0	19.6	46.2	150	9.1	1.75	0.94	6715	217	2037	8.2	18.5
1312.0	21.6	47.1	150	9.1	1.73	0.99	7132	197	1922	8.2	18.5
1313.0	14.8	33.3	150	9.1	1.68	1.05	7741	287	1826	8.2	18.5
1314.0	17.4	34.2	150	9.1	1.64	1.11	8258	244	1738	8.2	18.5
1315.0	14.8	34.4	150	9.1	1.69	1.18	8866	286	1662	8.2	18.5
1316.0	14.7	34.9	150	9.1	1.70	1.25	9478	289	1593	8.2	18.5
1317.0	12.4	35.7	150	9.1	1.77	1.33	10203	342	1533	8.2	18.5
1318.0	12.9	33.8	152	9.1	1.73	1.41	10907	327	1479	8.2	18.5
1319.0	13.6	33.2	152	9.1	1.71	1.48	11579	312	1428	8.2	18.6
1320.0	15.2	33.4	152	9.1	1.67	1.55	12179	279	1380	8.2	18.6
1321.0	16.2	35.0	152	9.1	1.68	1.61	12741	262	1335	8.2	18.6
1322.0	15.7	34.4	152	9.1	1.68	1.67	13322	270	1294	8.2	18.6
1323.0	17.6	39.8	155	9.1	1.72	1.73	13851	242	1255	8.2	18.6
1324.0	18.2	39.1	155	9.1	1.70	1.78	14363	233	1219	8.2	18.6
1325.0	21.4	38.7	155	9.1	1.64	1.83	14797	198	1184	8.2	18.6
1326.0	20.3	38.9	155	9.1	1.66	1.88	15254	209	1151	8.2	18.6
1327.0	21.7	38.4	155	9.1	1.63	1.92	15683	196	1120	8.2	18.6
1328.0	17.9	38.2	155	9.1	1.69	1.98	16202	237	1093	8.2	18.6
1329.0	17.6	37.9	155	9.1	1.69	2.04	16729	240	1067	8.2	18.6
1330.0	17.7	37.6	155	9.1	1.69	2.09	17253	239	1042	8.2	18.6
1331.0	19.6	34.6	155	9.1	1.61	2.14	17727	216	1019	8.2	18.6
1332.0	17.8	36.1	155	9.1	1.67	2.20	18249	237.97	997.17	8.2	18.6
1333.0	15.7	34.2	155	9.1	1.68	2.26	18840	269.77	977.51	8.2	18.6
1334.0	16.4	34.5	155	9.1	1.67	2.32	19406	257.99	958.58	8.2	18.6
1335.0	15.3	33.2	155	9.1	1.67	2.39	20013	276.84	941.10	8.2	18.6
1336.0	16.2	33.2	155	9.1	1.66	2.45	20587	261.53	924.11	8.2	18.6
1337.0	15.0	34.0	155	9.1	1.69	2.52	21207	282.73	908.46	8.2	18.6
1338.0	14.1	34.0	155	9.1	1.71	2.59	21868	301.58	894.02	8.2	18.6
1339.0	15.5	34.8	155	9.1	1.69	2.65	22470	274.49	879.61	8.2	18.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1340.0	12.4	35.5	155	9.1	1.78	2.74	23222	342.81	867.41	8.2	18.6
1341.0	19.6	39.3	155	9.1	1.68	2.79	23697	216.76	852.95	8.2	18.6
1342.0	20.8	41.2	155	9.1	1.68	2.83	24144	203.80	838.84	8.2	18.6
1343.0	19.8	41.7	155	9.1	1.71	2.88	24614	214.41	825.55	8.2	18.6
1344.0	19.9	41.7	155	9.1	1.70	2.94	25082	213.23	812.79	8.2	18.6
1345.0	21.2	41.7	155	9.1	1.68	2.98	25521	200.27	800.29	8.2	18.6
1346.0	22.0	41.7	155	9.1	1.67	3.03	25945	193.20	788.15	8.2	18.6
1347.0	22.9	42.0	155	9.1	1.66	3.07	26350	184.95	776.32	8.2	18.6
1348.0	24.3	41.7	155	9.1	1.63	3.11	26732	174.35	764.75	8.2	18.6
1349.0	24.7	42.3	155	9.1	1.64	3.15	27110	172.00	753.56	8.2	18.6
1350.0	19.9	40.1	155	9.1	1.68	3.20	27577	213.23	743.56	8.2	18.6
1351.0	22.4	39.7	155	9.1	1.64	3.25	27993	189.67	733.49	8.2	18.6
1352.0	23.4	40.3	155	9.1	1.63	3.29	28391	181.42	723.63	8.2	18.6
1353.0	21.4	40.2	155	9.1	1.66	3.34	28825	197.91	714.41	8.2	18.6
1354.0	22.8	40.4	155	9.1	1.64	3.38	29233	186.13	705.30	8.2	18.6
1355.0	22.4	40.1	155	9.1	1.64	3.43	29649	189.67	696.56	8.2	18.6
1356.0	22.6	39.4	155	9.1	1.63	3.47	30060	187.31	688.07	8.2	18.6
1357.0	21.4	39.1	155	9.1	1.65	3.52	30494	197.91	680.04	8.2	18.6
1358.0	22.2	39.5	155	9.1	1.64	3.56	30912	190.85	672.15	8.2	18.6
1359.0	23.4	38.7	155	9.1	1.61	3.60	31310	181.42	664.36	8.2	18.6
1360.0	33.3	38.0	155	9.1	1.48	3.63	31589	127.23	655.96	8.2	18.6
1361.0	25.5	42.4	155	9.1	1.63	3.67	31953	166.11	648.43	8.2	18.6
1362.0	27.5	42.9	155	9.1	1.61	3.71	32292	154.33	640.94	8.2	18.6
1363.0	27.5	44.4	155	9.1	1.63	3.75	32630	154.33	633.68	8.2	18.6
1364.0	27.9	44.0	155	9.1	1.62	3.78	32963	151.97	626.59	8.2	18.6
1365.0	27.3	44.0	155	9.1	1.62	3.82	33304	155.50	619.77	8.2	18.6
1366.0	25.0	44.0	155	9.1	1.65	3.86	33676	169.64	613.34	8.2	18.7
1367.0	27.7	43.7	155	9.1	1.61	3.90	34012	153.15	606.85	8.2	18.7
1368.0	28.3	43.4	155	9.1	1.60	3.93	34340	149.61	600.50	8.2	18.7
1369.0	48.0	41.8	155	9.1	1.40	3.95	34534	88.35	593.49	8.2	18.7
1370.0	25.2	39.0	155	9.1	1.59	3.99	34904	168.46	587.74	8.2	18.7
1371.0	24.5	40.2	155	9.1	1.61	4.03	35283	173.17	582.22	8.2	18.7
1372.0	25.4	39.9	155	9.1	1.60	4.07	35650	167.28	576.76	8.2	18.7
1373.0	26.3	39.7	155	9.1	1.58	4.11	36004	161.39	571.36	8.2	18.7
1374.0	26.3	40.6	155	9.1	1.59	4.15	36357	161.00	566.10	8.2	18.7
1375.0	26.3	39.9	155	9.1	1.59	4.19	36710	161.00	560.97	8.2	18.7
1381.0	20.0	40.0	155	9.1	1.68	4.49	39500	212.05	536.34	8.2	18.7
1382.0	19.7	40.0	155	9.1	1.69	4.54	39972	215.28	532.61	8.2	18.7
1383.0	22.2	40.0	155	9.1	1.65	4.58	40391	191.04	528.68	8.2	18.7
1384.0	21.3	40.0	155	9.1	1.66	4.63	40828	199.11	524.94	8.2	18.7
1385.0	23.3	40.0	155	9.1	1.63	4.67	41227	182.02	521.09	8.2	18.7
1386.0	9.0	40.0	155	9.1	1.95	4.78	42260	471.22	520.53	8.2	18.7
1387.0	16.5	40.0	155	9.1	1.75	4.84	42824	257.03	517.64	8.2	18.7
1388.0	20.3	40.0	155	9.1	1.68	4.89	43282	208.92	514.28	8.2	18.7
1389.0	16.9	40.0	155	9.1	1.74	4.95	43832	250.95	511.45	8.2	18.7
1390.0	20.0	40.0	155	9.1	1.68	5.00	44297	212.05	508.26	8.2	18.7
1391.0	18.0	40.0	155	9.1	1.72	5.06	44814	235.61	505.39	8.2	18.7
1392.0	15.9	40.0	155	9.1	1.76	5.12	45399	266.73	502.91	8.2	18.7
1393.0	21.4	40.0	155	9.1	1.66	5.17	45833	198.18	499.77	8.2	18.7
1394.0	18.8	40.0	155	9.1	1.70	5.22	46328	225.59	496.97	8.2	18.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1395.0	31.3	40.0	155	9.1	1.53	5.25	46625	135.50	493.32	8.2	18.7
1396.0	24.3	40.0	155	9.1	1.61	5.29	47008	174.53	490.13	8.2	18.7
1397.0	13.9	40.0	155	9.1	1.80	5.36	47677	305.11	488.30	8.2	18.7
1398.0	21.1	40.0	155	9.1	1.66	5.41	48118	201.00	485.48	8.2	18.7
1399.0	17.6	40.0	155	9.1	1.72	5.47	48646	240.97	483.11	8.2	18.7
1400.0	21.4	40.0	155	9.1	1.66	5.52	49081	198.18	480.37	8.2	18.7
1401.0	18.5	40.0	155	9.1	1.71	5.57	49584	229.24	477.98	8.2	18.7
1402.0	18.4	40.0	155	9.1	1.71	5.62	50089	230.49	475.64	8.2	18.7
1403.0	19.2	40.0	155	9.1	1.69	5.68	50573	220.89	473.26	8.2	18.7
1404.0	22.2	40.0	155	9.1	1.65	5.72	50992	191.04	470.65	8.2	18.7
1405.0	24.5	40.0	155	9.1	1.61	5.76	51372	173.10	467.92	8.2	18.7
1406.0	15.7	40.0	155	9.1	1.76	5.83	51964	270.13	466.12	8.2	18.7
1407.0	26.7	40.0	155	9.1	1.58	5.86	52313	158.84	463.35	8.2	18.7
1408.0	24.2	40.0	155	9.1	1.62	5.90	52697	175.25	460.78	8.2	18.7
1409.0	25.7	40.0	155	9.1	1.60	5.94	53059	165.02	458.16	8.2	18.7
1410.0	28.8	40.0	155	9.1	1.56	5.98	53382	147.26	455.43	8.2	18.7
1411.0	21.6	40.0	155	9.1	1.65	6.02	53812	196.34	453.18	8.2	18.7
1412.0	19.3	40.0	155	9.1	1.69	6.08	54294	219.74	451.17	8.2	18.7
1413.0	22.1	40.0	155	9.1	1.65	6.12	54715	191.90	448.95	8.2	18.7
1414.0	24.5	40.0	155	9.1	1.61	6.16	55094	173.10	446.61	8.2	18.8
1415.0	17.0	40.0	155	9.1	1.74	6.22	55641	249.47	444.96	8.2	18.8
1416.0	18.9	40.0	155	9.1	1.70	6.27	56134	224.39	443.12	8.2	18.8
1417.0	16.7	40.0	155	9.1	1.74	6.33	56690	253.95	441.56	8.2	18.8
1418.0	16.9	40.0	155	9.1	1.74	6.39	57241	250.95	439.99	8.2	18.8
1419.0	21.6	40.0	155	9.1	1.65	6.44	57671	196.34	438.01	8.2	18.8
1420.0	21.7	40.0	155	9.1	1.65	6.49	58100	195.44	436.06	8.2	18.8
1421.0	17.0	40.0	155	9.1	1.74	6.54	58647	249.47	434.56	8.2	18.8
1422.0	20.7	40.0	155	9.1	1.67	6.59	59096	204.88	432.74	8.2	18.8
1423.0	20.7	40.0	155	9.1	1.67	6.64	59545	204.88	430.95	8.2	18.8
1424.0	22.8	40.0	155	9.1	1.64	6.68	59953	186.01	429.03	8.2	18.8
1425.0	29.0	40.0	155	9.1	1.55	6.72	60274	146.24	426.84	8.2	18.8
1426.0	25.5	45.0	160	9.1	1.67	6.76	60651	166.31	424.84	8.2	18.8
1427.0	21.6	45.0	160	9.1	1.73	6.80	61095	196.34	423.09	8.2	18.8
1428.0	23.7	45.0	160	9.1	1.70	6.85	61500	178.95	421.24	8.2	18.8
1429.0	17.5	45.0	160	9.1	1.80	6.90	62049	242.34	419.90	8.2	18.8
1430.0	21.4	45.0	160	9.1	1.73	6.95	62497	198.18	418.24	8.2	18.8
1431.0	19.8	45.0	160	9.1	1.76	7.00	62982	214.19	416.73	8.2	18.8
1432.0	28.4	45.0	160	9.1	1.63	7.04	63320	149.33	414.77	8.2	18.8
1433.0	19.7	45.0	160	9.1	1.76	7.09	63807	215.28	413.31	8.2	18.8
1434.0	25.7	45.0	160	9.1	1.67	7.13	64181	165.02	411.51	8.2	18.8
1435.0	26.9	45.0	160	9.1	1.65	7.16	64538	157.66	409.68	8.2	18.8
1436.0	25.7	45.0	160	9.1	1.67	7.20	64911	165.02	407.94	8.2	18.8
1437.0	24.0	45.0	160	9.1	1.69	7.24	65311	176.71	406.30	8.2	18.8
1438.0	21.8	45.0	160	9.1	1.72	7.29	65752	194.54	404.81	8.2	18.8
1439.0	19.5	45.0	160	9.1	1.76	7.34	66244	217.49	403.50	8.2	18.8
1440.0	18.5	45.0	160	9.1	1.78	7.40	66763	229.24	402.29	8.2	18.8
1441.0	17.2	45.0	160	9.1	1.81	7.45	67321	246.57	401.21	8.2	18.8
1442.0	19.6	45.0	160	9.1	1.76	7.50	67811	216.38	399.95	8.2	18.8
1443.0	28.1	45.0	160	9.1	1.64	7.54	68153	150.93	398.25	8.2	18.8
1444.0	21.4	45.0	160	9.1	1.73	7.59	68601	198.18	396.90	8.2	18.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1445.0	21.8	45.0	160	9.1	1.72	7.63	69041	194.54	395.54	8.2	18.8
1446.0	15.3	45.0	160	9.1	1.85	7.70	69669	277.19	394.75	8.2	18.8
1447.0	18.8	45.0	160	9.1	1.78	7.75	70180	225.59	393.63	8.2	18.8
1448.0	16.4	45.0	160	9.1	1.82	7.81	70765	258.60	392.74	8.2	18.8
1449.0	16.7	45.0	160	9.1	1.82	7.87	71340	253.95	391.84	8.2	18.8
1450.0	20.4	45.0	160	9.1	1.75	7.92	71810	207.89	390.64	8.2	18.8
1451.0	20.4	45.0	160	9.1	1.75	7.97	72281	207.89	389.46	8.2	18.8
1452.0	22.5	45.0	160	9.1	1.71	8.01	72708	188.49	388.18	8.2	18.8
1453.0	19.1	45.0	160	9.1	1.77	8.07	73210	222.04	387.12	8.2	18.8
1454.0	15.9	45.0	160	9.1	1.84	8.13	73814	266.73	386.36	8.2	18.8
1455.0	15.9	45.0	160	9.1	1.84	8.19	74418	266.73	385.60	8.2	18.8
1456.0	20.8	45.0	160	9.1	1.74	8.24	74879	203.89	384.47	8.2	18.8
1457.0	19.6	45.0	160	9.1	1.76	8.29	75369	216.38	383.42	8.2	18.8
1458.0	24.5	45.0	160	9.1	1.68	8.33	75761	173.10	382.12	8.2	18.8
1459.0	20.5	45.0	160	9.1	1.75	8.38	76229	206.88	381.05	8.2	18.8
1460.0	23.7	45.0	160	9.1	1.70	8.42	76634	178.95	379.82	8.2	18.8
1461.0	22.6	45.0	160	9.1	1.71	8.47	77059	187.65	378.65	8.2	18.8
1462.0	25.2	45.0	160	9.1	1.67	8.51	77440	168.29	377.39	8.2	18.8
1463.0	23.2	45.0	160	9.1	1.70	8.55	77854	182.80	376.22	8.2	18.9
1464.0	9.4	45.0	160	9.1	2.02	8.66	78875	451.17	376.67	8.2	18.9
1465.0	22.8	45.0	160	9.1	1.71	8.70	79296	186.01	375.54	8.2	18.9
1466.0	14.9	45.0	160	9.1	1.86	8.77	79940	284.63	375.00	8.2	18.9
1467.0	10.2	45.0	160	9.1	1.99	8.87	80882	415.78	375.24	8.2	18.9
1468.0	13.2	45.0	160	9.1	1.90	8.94	81609	321.29	374.93	8.2	18.9
1469.0	13.3	45.0	160	9.1	1.90	9.02	82331	318.87	374.60	8.2	18.9
1470.0	16.1	45.0	160	9.1	1.83	9.08	82927	263.42	373.97	8.2	18.9
1471.0	13.5	45.0	160	9.1	1.89	9.15	83638	314.15	373.62	8.2	18.9
1472.0	25.7	45.0	160	9.1	1.67	9.19	84011	164.93	372.44	8.2	18.9
1473.0	16.4	47.1	155	9.1	1.84	9.25	84577	257.99	371.79	8.2	18.9
1474.0	17.4	47.7	155	9.1	1.83	9.31	85112	243.86	371.07	8.2	18.9
1475.0	16.0	47.2	155	9.1	1.85	9.37	85693	265.06	370.48	8.2	18.9
1476.0	17.3	47.2	155	9.1	1.82	9.43	86231	245.04	369.78	8.2	18.9
1477.0	17.7	46.7	155	9.1	1.81	9.49	86755	239.15	369.06	8.2	18.9
1478.0	20.5	46.9	155	9.1	1.76	9.54	87210	207.34	368.17	8.2	18.9
1479.0	20.1	46.9	155	9.1	1.77	9.59	87672	210.87	367.31	8.2	18.9
1480.0	22.1	46.9	155	9.1	1.73	9.63	88093	192.02	366.36	8.2	18.9
1481.0	22.9	45.5	155	9.2	1.68	9.67	88499	184.95	365.38	8.2	18.9
1482.0	23.7	47.4	155	9.2	1.69	9.72	88891	179.06	364.38	8.2	18.9
1483.0	17.6	47.8	155	9.2	1.80	9.77	89421	241.50	363.72	8.2	18.9
1484.0	22.1	46.3	155	9.2	1.71	9.82	89842	192.02	362.81	8.2	18.9
1485.0	16.4	50.4	155	9.2	1.86	9.88	90408	257.99	362.25	8.2	18.9
1486.0	10.7	42.6	155	9.2	1.91	9.97	91276	395.83	362.43	8.2	18.9
1487.0	10.5	39.1	155	9.2	1.87	10.07	92162	404.07	362.65	8.2	18.9
1488.0	11.1	40.4	155	9.2	1.86	10.16	92996	380.51	362.74	8.2	18.9
1489.0	12.4	40.7	155	9.2	1.83	10.24	93745	341.64	362.63	8.2	18.9
1490.0	14.1	40.8	155	9.2	1.79	10.31	94407	301.58	362.32	8.2	18.9
1491.0	19.9	40.5	155	9.2	1.67	10.36	94874	213.23	361.55	8.2	18.9
1492.0	15.3	43.9	155	9.2	1.80	10.43	95481	276.84	361.12	8.2	18.9
1493.0	20.1	45.7	155	9.2	1.73	10.47	95944	210.87	360.36	8.2	18.9
1494.0	19.5	46.1	155	9.2	1.75	10.53	96422	217.94	359.64	8.2	18.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1495.0	21.2	44.2	155	9.2	1.70	10.57	96861	200.27	358.84	8.2	18.9
1496.0	22.6	44.1	155	9.2	1.67	10.62	97272	187.31	357.98	8.2	18.9
1497.0	19.8	45.9	155	9.2	1.74	10.67	97742	214.41	357.27	8.2	18.9
1498.0	18.7	45.3	155	9.2	1.75	10.72	98240	227.36	356.62	8.2	18.9
1499.0	20.6	45.0	155	9.2	1.72	10.77	98693	206.16	355.88	8.2	18.9
1500.0	20.1	45.0	155	9.2	1.72	10.82	99155	210.87	355.17	8.2	18.9
1501.0	14.7	42.6	155	9.2	1.80	10.89	99788	288.62	354.85	8.2	18.9
1502.0	13.3	43.4	155	9.2	1.84	10.96	100485	318.08	354.67	8.2	18.9
1503.0	11.8	44.2	155	9.2	1.90	11.05	101271	358.13	354.68	8.2	18.9
1504.0	11.3	45.0	155	9.2	1.92	11.14	102092	374.62	354.78	8.2	18.9
1505.0	12.9	44.7	155	9.2	1.87	11.21	102813	328.68	354.66	8.2	18.9
1506.0	12.7	44.5	155	9.2	1.88	11.29	103544	333.39	354.55	8.2	18.9
1507.0	14.6	45.0	155	9.2	1.83	11.36	104180	289.80	354.25	8.2	18.9
1508.0	14.8	44.8	155	9.2	1.83	11.43	104810	287.45	353.93	8.2	18.9
1509.0	14.1	45.5	155	9.2	1.85	11.50	105471	301.58	353.69	8.2	18.9
1510.0	15.3	47.0	155	9.2	1.85	11.56	106081	278.02	353.33	8.2	18.9
1511.0	21.5	50.8	150	9.2	1.76	11.61	106500	197.65	352.61	8.2	18.9
1512.0	19.4	50.6	150	9.2	1.79	11.66	106965	219.12	351.99	8.2	18.9
1513.0	15.6	51.6	150	9.2	1.88	11.73	107543	272.13	351.62	8.2	18.9
1514.0	14.4	51.0	150	9.2	1.90	11.80	108168	294.51	351.36	8.2	19.0
1515.0	15.1	50.3	150	9.2	1.88	11.86	108765	281.56	351.04	8.2	19.0
1516.0	16.3	50.1	150	9.2	1.85	11.92	109318	260.35	350.63	8.2	19.0
1517.0	18.1	50.5	150	9.2	1.82	11.98	109815	234.43	350.10	8.2	19.0
1518.0	17.6	50.0	150	9.2	1.82	12.04	110325	240.32	349.61	8.2	19.0
1519.0	18.9	51.7	150	9.2	1.81	12.09	110800	223.83	349.05	8.2	19.0
1520.0	20.5	51.4	150	9.2	1.78	12.14	111240	207.34	348.41	8.2	19.0
1521.0	18.7	52.0	150	9.2	1.82	12.19	111723	227.36	347.87	8.2	19.0
1522.0	17.5	51.3	150	9.2	1.84	12.25	112238	242.68	347.41	8.2	19.0
1523.0	19.6	52.5	150	9.2	1.81	12.30	112698	216.76	346.83	8.2	19.0
1524.0	14.1	53.0	150	9.2	1.94	12.37	113338	301.58	346.64	8.2	19.0
1525.0	12.8	53.2	150	9.2	1.98	12.45	114043	332.21	346.57	8.2	19.0
1526.0	13.6	51.6	150	9.2	1.93	12.52	114705	312.18	346.42	8.2	19.0
1527.0	14.1	51.7	150	9.2	1.92	12.59	115343	300.40	346.22	8.2	19.0
1528.0	10.6	52.0	150	9.2	2.03	12.69	116190	399.36	346.45	8.2	19.0
1529.0	14.9	52.9	150	9.2	1.91	12.76	116793	283.91	346.18	8.2	19.0
1530.0	15.5	53.9	150	9.2	1.91	12.82	117375	274.49	345.88	8.2	19.0
1531.0	16.2	53.8	150	9.2	1.90	12.88	117930	261.53	345.52	8.2	19.0
1532.0	15.2	53.5	150	9.2	1.92	12.95	118523	279.20	345.24	8.2	19.0
1533.0	15.9	52.8	150	9.2	1.89	13.01	119090	267.42	344.91	8.2	19.0
1534.0	18.5	52.1	150	9.2	1.83	13.06	119578	229.72	344.43	8.2	19.0
1535.0	15.7	53.0	150	9.2	1.90	13.13	120150	269.77	344.11	8.2	19.0
1536.0	17.4	51.5	150	9.2	1.84	13.19	120668	243.86	343.70	8.2	19.0
1537.0	17.1	51.7	150	9.2	1.85	13.24	121193	247.39	343.30	8.2	19.0
1538.0	15.2	50.6	150	9.2	1.88	13.31	121787	279.79	343.03	8.2	19.0
1539.0	17.3	50.7	150	9.2	1.83	13.37	122307	245.04	342.63	8.2	19.0
1540.0	16.1	50.7	150	9.2	1.86	13.43	122867	263.88	342.31	8.2	19.0
1541.0	15.1	49.9	150	9.2	1.87	13.50	123462	280.38	342.05	8.2	19.0
1542.0	14.3	51.1	150	9.2	1.91	13.57	124089	295.69	341.87	8.2	19.0
1543.0	14.7	51.6	150	9.2	1.90	13.63	124702	288.62	341.65	8.2	19.0
1544.0	14.3	51.0	150	9.2	1.91	13.70	125329	295.69	341.47	8.2	19.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1545.0	15.9	51.2	150	9.2	1.87	13.77	125897	267.42	341.17	8.2	19.0
1546.0	15.3	49.6	150	9.2	1.87	13.83	126487	278.02	340.92	8.2	19.0
1547.0	14.8	47.7	150	9.2	1.85	13.90	127094	286.27	340.70	8.2	19.0
1548.0	18.5	49.2	150	9.2	1.79	13.95	127582	229.72	340.26	8.2	19.0
1549.0	16.9	49.7	150	9.2	1.83	14.01	128114	250.93	339.90	8.2	19.0
1550.0	14.7	50.6	150	9.2	1.89	14.08	128727	288.62	339.70	8.2	19.0
1551.0	14.0	47.6	150	9.2	1.87	14.15	129372	303.94	339.56	8.2	19.0
1552.0	14.8	47.1	150	9.2	1.84	14.22	129979	286.27	339.35	8.2	19.0
1553.0	12.5	47.0	150	9.2	1.90	14.30	130697	338.10	339.35	8.2	19.0
1554.0	14.8	47.6	150	9.2	1.85	14.37	131304	286.27	339.14	8.2	19.0
1555.0	14.6	47.4	150	9.2	1.85	14.44	131922	290.98	338.96	8.2	19.0
1556.0	11.2	46.2	150	9.2	1.93	14.53	132724	378.16	339.11	8.2	19.0
1557.0	15.3	48.7	150	9.2	1.85	14.59	133312	276.84	338.87	8.2	19.0
1558.0	16.2	48.1	150	9.2	1.83	14.65	133867	261.53	338.57	8.2	19.0
1559.0	16.1	48.6	150	9.2	1.83	14.71	134424	262.71	338.29	8.2	19.0
1560.0	16.6	48.3	150	9.2	1.82	14.77	134967	255.64	337.97	8.2	19.0
1561.0	16.7	48.3	150	9.2	1.82	14.83	135507	254.46	337.66	8.2	19.0
1562.0	18.1	48.8	150	9.2	1.80	14.89	136004	234.43	337.27	8.2	19.0
1563.0	16.7	48.4	150	9.2	1.82	14.95	136544	254.46	336.96	8.2	19.0
1564.0	18.2	48.8	150	9.2	1.79	15.00	137039	233.26	336.57	8.2	19.0
1565.0	11.8	48.9	150	9.2	1.95	15.09	137804	360.48	336.66	8.2	19.0
1566.0	17.8	48.7	150	9.2	1.80	15.15	138309	237.97	336.30	8.2	19.1
1567.0	18.3	49.1	150	9.2	1.79	15.20	138802	232.08	335.91	8.2	19.1
1568.0	18.9	48.9	150	9.2	1.78	15.25	139277	223.83	335.50	8.2	19.1
1569.0	18.6	47.9	150	9.2	1.77	15.31	139762	228.54	335.11	8.2	19.1
1570.0	17.6	48.7	150	9.2	1.80	15.36	140272	240.32	334.76	8.2	19.1
1571.0	18.4	49.2	150	9.2	1.79	15.42	140762	230.90	334.38	8.2	19.1
1572.0	17.7	48.9	150	9.2	1.80	15.47	141269	239.15	334.04	8.2	19.1
1573.0	17.4	49.1	150	9.2	1.81	15.53	141787	243.86	333.71	8.2	19.1
1574.0	17.1	49.6	150	9.2	1.83	15.59	142314	248.57	333.41	8.2	19.1
1575.0	12.8	50.6	150	9.2	1.94	15.67	143017	331.03	333.40	8.2	19.1
1576.0	16.5	48.9	150	9.2	1.83	15.73	143562	256.82	333.12	8.2	19.1
1577.0	16.7	49.6	150	9.2	1.83	15.79	144099	253.28	332.84	8.2	19.1
1578.0	16.6	50.3	150	9.2	1.84	15.85	144642	255.64	332.57	8.2	19.1
1579.0	17.1	50.0	150	9.2	1.83	15.91	145167	247.39	332.27	8.2	19.1
1580.0	18.0	50.2	150	9.2	1.81	15.96	145667	235.61	331.93	8.2	19.1
1581.0	19.0	49.9	150	9.2	1.79	16.02	146139	222.65	331.54	8.2	19.1
1582.0	17.4	50.0	150	9.2	1.82	16.07	146657	243.86	331.24	8.2	19.1
1583.0	15.3	48.4	150	9.2	1.85	16.14	147244	276.84	331.05	8.2	19.1
1584.0	16.5	46.4	150	9.2	1.80	16.20	147789	256.82	330.79	8.2	19.1
1585.0	16.4	49.0	150	9.2	1.83	16.26	148337	257.99	330.54	8.2	19.1
1586.0	16.2	49.1	150	9.2	1.84	16.32	148892	261.53	330.30	8.2	19.1
1587.0	16.6	49.5	150	9.2	1.84	16.38	149434	255.64	330.04	8.2	19.1
1588.0	15.3	49.1	150	9.2	1.86	16.45	150024	278.02	329.86	8.2	19.1
1589.0	15.3	49.2	150	9.2	1.86	16.51	150614	278.02	329.69	8.2	19.1
1590.0	14.8	48.6	150	9.2	1.87	16.58	151224	287.45	329.54	8.2	19.1
1591.0	15.9	49.2	150	9.2	1.85	16.64	151792	267.42	329.33	8.2	19.1
1592.0	14.8	49.0	150	9.2	1.87	16.71	152402	287.45	329.19	8.2	19.1
1593.0	14.8	48.8	150	9.2	1.87	16.78	153012	287.45	329.05	8.2	19.1
1594.0	14.8	47.7	150	9.2	1.85	16.85	153622	287.45	328.91	8.2	19.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1595.0	14.5	47.0	150	9.2	1.85	16.92	154244	293.34	328.79	8.2	19.1
1596.0	14.3	46.7	150	9.2	1.85	16.99	154872	295.69	328.68	8.2	19.1
1597.0	15.1	47.7	150	9.2	1.85	17.05	155469	281.56	328.52	8.2	19.1
1598.0	14.9	47.7	150	9.2	1.85	17.12	156074	285.09	328.38	8.2	19.1
1599.0	15.5	47.3	150	9.2	1.83	17.18	156657	274.49	328.20	8.2	19.1
1600.0	15.3	47.6	150	9.2	1.84	17.25	157244	276.84	328.03	8.2	19.1
1601.0	15.6	48.0	150	9.2	1.84	17.31	157821	271.86	327.85	8.2	19.1
1602.0	15.1	48.9	150	9.2	1.86	17.38	158417	280.86	327.70	8.2	19.1
1603.0	14.8	46.9	150	9.2	1.84	17.45	159025	286.66	327.56	8.2	19.1
1604.0	14.0	46.1	150	9.2	1.85	17.52	159670	303.94	327.49	8.2	19.1
1605.0	16.0	47.7	150	9.1	1.85	17.58	160233	265.06	327.28	8.2	19.1
1606.0	17.1	48.2	150	9.1	1.83	17.64	160760	248.57	327.03	8.2	19.1
1607.0	13.7	49.1	150	9.1	1.92	17.71	161415	308.65	326.97	8.2	19.1
1608.0	14.6	49.0	150	9.1	1.90	17.78	162033	290.98	326.86	8.2	19.1
1609.0	15.9	49.7	150	9.1	1.87	17.84	162598	266.24	326.66	8.2	19.1
1610.0	15.2	49.5	150	9.1	1.89	17.91	163190	279.20	326.51	8.2	19.1
1611.0	14.4	49.4	150	9.1	1.91	17.98	163815	294.51	326.41	8.2	19.1
1612.0	16.7	51.1	150	9.1	1.87	18.04	164355	254.46	326.18	8.2	19.1
1613.0	14.9	49.8	150	9.1	1.90	18.11	164960	285.09	326.05	8.2	19.1
1614.0	16.9	49.6	150	9.1	1.85	18.17	165493	250.93	325.82	8.2	19.1
1615.0	22.8	47.6	150	9.1	1.72	18.21	165888	186.13	325.38	8.2	19.1
1616.0	18.8	48.2	150	9.1	1.79	18.26	166368	226.19	325.07	8.2	19.1
1617.0	22.1	49.2	150	9.1	1.75	18.31	166775	192.02	324.65	8.2	19.1
1618.0	20.9	49.3	150	9.1	1.77	18.36	167205	202.63	324.27	8.2	19.1
1619.0	19.9	47.9	150	9.1	1.77	18.41	167658	213.23	323.93	8.2	19.1
1620.0	21.6	47.1	150	9.1	1.73	18.45	168075	196.74	323.54	8.2	19.2
1621.0	23.1	47.2	150	9.1	1.71	18.50	168465	183.78	323.11	8.2	19.2
1622.0	20.9	47.1	150	9.1	1.74	18.54	168895	202.63	322.74	8.2	19.2
1623.0	15.1	47.0	150	9.1	1.86	18.61	169490	280.38	322.61	8.2	19.2
1624.0	24.3	45.7	150	9.1	1.67	18.65	169860	174.35	322.16	8.2	19.2
1625.0	15.5	46.6	150	9.1	1.84	18.72	170440	273.31	322.01	8.2	19.2
1626.0	11.7	47.5	150	9.1	1.96	18.80	171213	364.02	322.14	8.2	19.2
1627.0	17.1	47.3	150	9.1	1.82	18.86	171738	247.39	321.91	8.2	19.2
1628.0	17.2	45.9	150	9.1	1.80	18.92	172260	246.21	321.68	8.2	19.2
1629.0	14.5	45.1	150	9.1	1.85	18.99	172883	293.34	321.60	8.2	19.2
1630.0	9.6	46.0	150	9.1	2.01	19.09	173823	442.95	321.96	8.2	19.2
1631.0	10.2	44.8	150	9.1	1.97	19.19	174708	417.03	322.24	8.2	19.2
1632.0	18.8	44.8	150	9.1	1.75	19.24	175185	225.01	321.95	8.2	19.2
1633.0	18.6	45.4	150	9.1	1.76	19.30	175670	228.54	321.68	8.2	19.2
1634.0	18.4	45.4	150	9.1	1.77	19.35	176160	230.90	321.41	8.2	19.2
1635.0	17.9	44.8	150	9.1	1.77	19.41	176663	236.79	321.16	8.2	19.2
1636.0	16.4	45.2	150	9.1	1.81	19.47	177213	259.17	320.98	8.2	19.2
1637.0	17.9	44.9	150	9.1	1.77	19.52	177715	236.79	320.73	8.2	19.2
1638.0	16.6	44.9	150	9.1	1.80	19.58	178258	255.64	320.54	8.2	19.2
1639.0	16.7	45.4	150	9.1	1.80	19.64	178795	253.28	320.34	8.2	19.2
1640.0	14.1	43.8	150	9.1	1.84	19.72	179435	301.58	320.29	8.2	19.2
1641.0	18.2	44.5	150	9.1	1.76	19.77	179930	233.26	320.04	8.2	19.2
1642.0	16.6	45.5	150	9.1	1.80	19.83	180473	255.64	319.85	8.2	19.2
1643.0	16.4	46.1	150	9.1	1.82	19.89	181023	259.17	319.68	8.2	19.2
1644.0	18.0	45.9	150	9.1	1.78	19.95	181523	235.61	319.43	8.2	19.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1645.0	18.7	47.7	150	9.1	1.79	20.00	182005	227.36	319.17	8.2	19.2
1646.0	17.3	47.1	150	9.1	1.81	20.06	182525	245.04	318.96	8.2	19.2
1647.0	17.6	47.2	150	9.1	1.81	20.12	183038	241.50	318.74	8.2	19.2
1648.0	18.8	47.6	150	9.1	1.79	20.17	183515	225.01	318.47	8.2	19.2
1649.0	14.8	47.4	150	9.1	1.87	20.24	184123	286.27	318.38	8.2	19.2
1650.0	13.1	48.0	150	9.1	1.92	20.31	184810	323.97	318.40	8.2	19.2
1651.0	14.7	48.9	150	9.1	1.89	20.38	185423	288.62	318.31	8.2	19.2
1652.0	12.5	47.2	150	9.1	1.93	20.46	186143	339.28	318.37	8.2	19.2
1653.0	17.3	47.8	150	9.1	1.82	20.52	186663	245.04	318.17	8.2	19.2
1654.0	18.0	47.3	150	9.1	1.80	20.57	187163	235.61	317.94	8.2	19.2
1655.0	19.4	47.5	150	9.1	1.77	20.63	187628	219.12	317.66	8.2	19.2
1656.0	16.4	47.9	150	9.1	1.84	20.69	188175	257.99	317.49	8.2	19.2
1657.0	17.8	48.0	150	9.1	1.81	20.74	188680	237.97	317.27	8.2	19.2
1658.0	15.6	48.4	150	9.1	1.86	20.81	189258	272.13	317.15	8.2	19.2
1659.0	14.7	46.5	150	9.1	1.86	20.87	189870	288.62	317.07	8.2	19.2
1660.0	14.5	45.9	150	9.1	1.86	20.94	190490	292.16	317.00	8.2	19.2
1661.0	10.6	47.7	150	9.1	1.99	21.04	191338	399.36	317.23	8.2	19.2
1662.0	10.5	48.6	150	9.1	2.01	21.13	192198	405.25	317.47	8.2	19.2
1663.0	9.1	48.0	150	9.1	2.05	21.24	193183	464.15	317.87	8.2	19.2
1664.0	12.2	46.8	150	9.1	1.93	21.32	193920	347.53	317.95	8.2	19.2
1665.0	10.8	46.8	150	9.1	1.97	21.42	194755	393.47	318.15	8.2	19.2
1666.0	12.7	47.8	150	9.1	1.93	21.50	195465	334.57	318.20	8.2	19.2
1667.0	12.6	48.6	150	9.1	1.94	21.58	196178	335.75	318.24	8.2	19.2
1668.0	11.4	47.0	150	9.1	1.96	21.66	196965	371.09	318.39	8.2	19.2
1669.0	13.6	44.9	150	9.1	1.87	21.74	197625	311.01	318.37	8.2	19.2
1670.0	15.9	45.2	150	9.1	1.81	21.80	198190	266.24	318.23	8.2	19.2
1671.0	13.6	44.9	150	9.1	1.87	21.87	198853	312.18	318.21	8.2	19.2
1672.0	13.0	44.4	150	9.1	1.87	21.95	199543	325.14	318.23	8.2	19.2
1673.0	12.9	45.3	150	9.1	1.89	22.03	200240	328.68	318.26	8.2	19.2
1674.0	11.4	45.0	150	9.1	1.93	22.11	201030	372.27	318.40	8.2	19.2
1675.0	11.1	44.7	150	9.1	1.94	22.21	201843	382.87	318.57	8.2	19.3
1676.0	9.8	43.7	150	9.1	1.97	22.31	202763	433.52	318.87	8.2	19.3
1677.0	12.0	44.7	150	9.1	1.91	22.39	203513	353.42	318.96	8.2	19.3
1678.0	7.6	45.4	150	9.1	2.08	22.52	204695	557.22	319.59	8.2	19.3
1679.0	6.0	44.3	165	9.1	2.18	22.69	206343	705.66	320.60	8.2	19.3
1680.0	5.4	41.9	165	9.1	2.18	22.87	208185	789.30	321.82	8.2	19.3
1681.0	10.3	37.8	165	9.1	1.89	22.97	209148	412.32	322.05	8.2	19.3
1682.0	11.5	38.0	165	9.1	1.86	23.06	210006	367.55	322.17	8.2	19.3
1683.0	12.0	37.7	165	9.1	1.84	23.14	210833	354.59	322.25	8.2	19.3
1684.0	11.1	37.8	165	9.1	1.87	23.23	211724	381.69	322.41	8.2	19.3
1685.0	11.0	37.5	165	9.1	1.87	23.32	212621	384.05	322.56	8.2	19.3
1686.0	12.5	37.9	165	9.1	1.83	23.40	213410	338.10	322.60	8.2	19.3
1687.0	9.9	37.6	165	9.1	1.91	23.50	214414	429.99	322.88	8.2	19.3
1688.0	15.3	41.2	165	9.1	1.81	23.57	215063	278.02	322.76	8.2	19.3
1689.0	15.5	42.7	165	9.1	1.83	23.63	215704	274.49	322.64	8.2	19.3
1690.0	17.1	41.8	165	9.1	1.78	23.69	216281	247.39	322.45	8.2	19.3
1691.0	17.2	42.1	165	9.1	1.78	23.75	216856	246.21	322.26	8.2	19.3
1692.0	18.8	44.9	165	9.1	1.79	23.80	217384	226.19	322.02	8.2	19.3
1693.0	17.9	43.9	165	9.1	1.79	23.86	217937	236.79	321.80	8.2	19.3
1694.0	18.1	43.1	165	9.1	1.78	23.91	218484	234.43	321.58	8.2	19.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1695.0	15.7	44.5	165	9.1	1.85	23.98	219116	270.95	321.45	8.2	19.3
1696.0	15.8	44.6	165	9.1	1.84	24.04	219743	268.60	321.32	8.2	19.3
1697.0	16.2	44.1	165	9.1	1.83	24.10	220354	261.53	321.17	8.2	19.3
1698.0	18.7	43.3	165	9.1	1.77	24.16	220885	227.36	320.94	8.2	19.3
1699.0	22.6	45.1	165	9.1	1.72	24.20	221322	187.31	320.61	8.2	19.3
1700.0	18.8	46.8	165	9.1	1.81	24.25	221850	226.19	320.37	8.2	19.3
1701.0	17.5	46.4	165	9.1	1.83	24.31	222416	242.68	320.18	8.2	19.3
1702.0	15.2	46.7	165	9.1	1.89	24.38	223068	279.20	320.08	8.2	19.3
1703.0	13.0	46.8	165	9.1	1.94	24.45	223830	326.32	320.10	8.2	19.3
1704.0	14.3	46.9	165	9.1	1.91	24.52	224520	295.69	320.04	8.2	19.3
1705.0	16.2	46.9	165	9.1	1.86	24.59	225131	261.53	319.89	8.2	19.3
1706.0	16.4	46.9	155	9.1	1.84	24.65	225696	257.99	319.74	8.2	19.3
1707.0	18.9	48.0	155	9.1	1.80	24.70	226187	223.83	319.51	8.2	19.3
1708.0	19.4	49.1	155	9.1	1.81	24.75	226668	219.12	319.27	8.2	19.3
1709.0	22.2	47.9	155	9.1	1.74	24.80	227086	190.85	318.96	8.2	19.3
1710.0	18.8	46.2	155	9.1	1.78	24.85	227582	226.19	318.73	8.2	19.3
1711.0	20.3	47.6	155	9.1	1.77	24.90	228039	208.52	318.47	8.2	19.3
1712.0	14.6	47.3	155	9.1	1.88	24.97	228675	289.80	318.40	8.2	19.3
1713.0	15.2	47.3	155	9.1	1.87	25.03	229287	279.20	318.30	8.2	19.3
1714.0	15.2	47.3	155	9.1	1.87	25.10	229899	279.20	318.21	8.2	19.3
1715.0	14.2	47.9	155	9.1	1.90	25.17	230553	298.05	318.16	8.2	19.3
1716.0	14.5	46.6	155	9.1	1.88	25.24	231194	292.16	318.10	8.2	19.3
1717.0	11.8	49.6	155	9.1	1.99	25.32	231984	360.48	318.20	8.2	19.3
1718.0	10.7	49.8	155	9.1	2.03	25.42	232852	395.83	318.38	8.2	19.3
1719.0	12.8	49.3	155	9.1	1.96	25.49	233581	332.21	318.42	8.2	19.3
1720.0	13.5	49.2	155	9.1	1.94	25.57	234268	313.36	318.40	8.2	19.3
1721.0	15.1	49.2	155	9.1	1.90	25.63	234883	280.38	318.31	8.2	19.3
1722.0	12.3	49.0	155	9.1	1.97	25.72	235640	345.17	318.38	8.2	19.3
1723.0	6.7	48.0	155	9.1	2.17	25.87	237027	632.62	319.11	8.2	19.3
1724.0	7.7	50.3	155	9.1	2.16	25.99	238231	548.97	319.65	8.2	19.3
1724.4	5.2	49.1	155	9.1	2.28	26.07	238949	818.75	320.12	8.2	19.3

BIT NUMBER	5	IADC CODE	114	INTERVAL	1724.4- 2239.4
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	6.5	BIT RUN	515.0
TOTAL HOURS	24.27	TOTAL TURNS	222918	CONDITION	T5 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1725.0	17.5	33.2	155	9.1	1.63	0.03	319	243	49855	8.2	19.3
1726.0	12.3	34.1	145	9.1	1.74	0.12	1027	345	18911	8.2	19.3
1727.0	11.4	37.7	145	9.1	1.82	0.20	1793	373	11781	8.2	19.3
1728.0	19.1	48.1	145	9.1	1.77	0.26	2248	221	8570	8.2	19.3
1729.0	24.2	42.1	150	9.2	1.61	0.30	2620	176	6745	8.2	19.3
1730.0	24.8	42.5	150	9.2	1.61	0.34	2983	171	5571	8.2	19.3
1731.0	22.4	42.5	150	9.2	1.65	0.38	3385	190	4756	8.2	19.3
1732.0	19.4	41.6	150	9.2	1.68	0.43	3850	219	4159	8.2	19.4
1733.0	20.5	42.3	150	9.2	1.67	0.48	4290	207	3699	8.2	19.4
1734.0	19.8	41.9	150	9.2	1.68	0.53	4745	214	3336	8.2	19.4
1735.0	14.8	43.1	150	9.2	1.79	0.60	5355	287	3049	8.2	19.4
1736.0	16.4	43.3	150	9.2	1.76	0.66	5903	258	2808	8.2	19.4
1737.0	20.6	40.2	150	9.2	1.64	0.71	6340	206	2602	8.2	19.4
1738.0	20.3	41.7	150	9.2	1.67	0.76	6783	209	2426	8.2	19.4
1739.0	20.8	43.5	150	9.2	1.68	0.81	7215	204	2274	8.2	19.4
1740.0	19.0	40.1	150	9.2	1.67	0.86	7688	223	2142	8.2	19.4
1741.0	19.8	41.7	150	9.2	1.68	0.91	8143	214	2026	8.2	19.4
1742.0	18.9	40.7	150	9.2	1.68	0.96	8618	224	1924	8.2	19.4
1743.0	19.1	43.5	150	9.2	1.71	1.02	9088	221	1832	8.2	19.4
1744.0	14.0	41.4	150	9.2	1.79	1.09	9733	304	1754	8.2	19.4
1745.0	23.8	45.8	150	9.2	1.66	1.13	10110	178	1678	8.2	19.4
1746.0	22.9	43.5	150	9.2	1.65	1.17	10503	185	1608	8.2	19.4
1747.0	20.0	42.9	150	9.2	1.69	1.22	10953	212	1547	8.2	19.4
1748.0	18.8	38.7	150	9.2	1.65	1.28	11430	225	1491	8.2	19.4
1749.0	20.2	42.3	150	9.2	1.68	1.33	11875	210	1439	8.2	19.4
1750.0	19.4	45.0	150	9.2	1.72	1.38	12340	219	1391	8.2	19.4
1751.0	19.5	45.0	150	9.2	1.72	1.43	12803	218	1347	8.2	19.4
1752.0	18.9	45.0	150	9.2	1.73	1.48	13278	224	1306	8.2	19.4
1753.0	10.7	45.0	150	9.2	1.93	1.57	14118	396	1274	8.2	19.4
1754.0	13.7	45.0	150	9.2	1.85	1.65	14775	310	1242	8.2	19.4
1755.0	14.2	45.0	150	9.2	1.83	1.72	15408	298	1211	8.2	19.4
1756.0	15.3	45.0	150	9.2	1.81	1.78	15998	278	1181	8.2	19.4
1757.0	14.7	45.0	150	9.2	1.82	1.85	16610	289	1154	8.2	19.4
1758.0	16.7	45.0	150	9.2	1.78	1.91	17148	253	1127	8.2	19.4
1759.0	14.8	45.0	150	9.2	1.82	1.98	17755	286	1103	8.2	19.4
1760.0	16.7	45.0	150	9.2	1.78	2.04	18295	254	1079	8.2	19.4
1761.0	16.4	45.0	150	9.2	1.78	2.10	18845	259	1057	8.2	19.4
1762.0	17.8	45.0	150	9.2	1.75	2.16	19350	238	1035	8.2	19.4
1763.0	15.9	45.0	150	9.2	1.79	2.22	19915	266	1015	8.2	19.4
1764.0	22.8	45.0	150	9.2	1.67	2.26	20310	186.13	994.06	8.2	19.4
1765.0	23.8	45.0	150	9.2	1.65	2.30	20688	177.89	973.95	8.2	19.4
1766.0	23.4	45.0	150	9.2	1.66	2.35	21073	181.42	954.90	8.2	19.4
1767.0	18.6	45.0	150	9.2	1.74	2.40	21558	228.54	937.85	8.2	19.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1768.0	23.7	45.0	150	9.2	1.65	2.44	21938	179.06	920.45	8.2	19.4
1769.0	12.6	45.0	150	9.2	1.87	2.52	22653	336.92	907.37	8.2	19.4
1770.0	19.8	45.0	150	9.2	1.72	2.57	23108	214.41	892.17	8.2	19.4
1771.0	17.9	45.0	150	9.2	1.75	2.63	23610	236.79	878.10	8.2	19.4
1772.0	12.8	45.0	150	9.2	1.87	2.71	24315	332.21	866.64	8.2	19.4
1773.0	20.0	45.0	150	9.2	1.71	2.76	24765	212.05	853.17	8.2	19.4
1774.0	17.9	45.0	150	9.2	1.75	2.81	25268	236.79	840.74	8.2	19.4
1775.0	20.5	45.0	150	9.2	1.71	2.86	25708	207.34	828.22	8.2	19.4
1776.0	18.5	45.0	150	9.2	1.74	2.92	26195	229.72	816.62	8.2	19.4
1777.0	20.7	45.0	150	9.2	1.70	2.97	26630	204.98	805.00	8.2	19.4
1778.0	19.6	45.0	150	9.2	1.72	3.02	27090	216.76	794.02	8.2	19.4
1779.0	18.8	45.0	150	9.2	1.74	3.07	27570	226.19	783.62	8.2	19.4
1780.0	16.8	45.0	150	9.2	1.77	3.13	28105	252.10	774.06	8.2	19.4
1781.0	19.5	45.0	150	9.2	1.72	3.18	28568	217.94	764.24	8.2	19.4
1782.0	17.7	45.0	150	9.2	1.76	3.24	29075	239.15	755.12	8.2	19.4
1783.0	14.9	45.0	150	9.2	1.82	3.30	29678	283.91	747.08	8.2	19.4
1784.0	17.0	45.0	150	9.2	1.77	3.36	30208	249.75	738.73	8.2	19.4
1785.0	17.0	45.0	150	9.2	1.77	3.42	30738	249.75	730.67	8.2	19.4
1786.0	17.8	45.0	150	9.2	1.75	3.48	31243	237.97	722.67	8.2	19.4
1787.0	16.9	45.0	150	9.2	1.77	3.54	31775	250.93	715.13	8.2	19.4
1788.0	17.8	45.0	150	9.2	1.75	3.59	32280	237.97	707.63	8.2	19.4
1789.0	17.3	45.0	150	9.2	1.76	3.65	32800	245.04	700.47	8.2	19.4
1790.0	17.9	45.0	150	9.2	1.75	3.71	33303	236.79	693.40	8.2	19.4
1791.0	18.9	45.0	150	9.2	1.73	3.76	33778	223.83	686.35	8.2	19.5
1792.0	18.2	45.0	150	9.2	1.75	3.81	34273	233.26	679.65	8.2	19.5
1793.0	19.0	45.0	150	9.2	1.73	3.87	34745	222.65	672.98	8.2	19.5
1794.0	20.5	45.0	150	9.2	1.71	3.92	35185	207.34	666.29	8.2	19.5
1795.0	20.8	45.0	150	9.2	1.70	3.96	35618	203.80	659.74	8.2	19.5
1796.0	22.8	45.0	150	9.2	1.67	4.01	36013	186.13	653.13	8.2	19.5
1797.0	16.7	45.0	150	9.2	1.78	4.07	36553	254.46	647.64	8.2	19.5
1798.0	18.9	45.0	150	9.2	1.73	4.12	37028	223.83	641.88	8.2	19.5
1799.0	20.9	45.0	150	9.2	1.70	4.17	37458	202.63	635.99	8.2	19.5
1800.0	20.3	45.0	150	9.2	1.71	4.22	37900	208.52	630.34	8.2	19.5
1801.0	21.1	45.0	150	9.2	1.70	4.26	38328	201.45	624.74	8.2	19.5
1802.0	15.5	45.0	150	9.2	1.80	4.33	38910	274.49	620.22	8.2	19.5
1803.0	20.5	45.0	150	9.2	1.71	4.38	39350	207.34	614.97	8.2	19.5
1804.0	22.2	45.0	150	9.2	1.68	4.42	39755	190.85	609.64	8.2	19.5
1805.0	20.9	45.0	150	9.2	1.70	4.47	40185	202.63	604.59	8.2	19.5
1806.0	20.6	45.0	150	9.2	1.70	4.52	40623	206.16	599.71	8.2	19.5
1807.0	21.3	45.0	150	9.2	1.69	4.57	41045	199.09	594.86	8.2	19.5
1808.0	20.8	45.0	150	9.2	1.70	4.61	41478	203.80	590.18	8.2	19.5
1809.0	21.7	45.0	150	9.2	1.69	4.66	41893	195.56	585.52	8.2	19.5
1810.0	20.8	45.0	150	9.2	1.70	4.71	42325	203.80	581.06	8.2	19.5
1811.0	20.6	45.0	150	9.2	1.70	4.76	42763	206.16	576.73	8.2	19.5
1812.0	17.3	45.0	150	9.2	1.76	4.82	43283	245.04	572.94	8.2	19.5
1813.0	19.5	45.0	150	9.2	1.72	4.87	43745	217.94	568.94	8.2	19.5
1814.0	20.3	45.0	150	9.2	1.71	4.92	44188	208.52	564.91	8.2	19.5
1815.0	18.8	45.0	150	9.2	1.73	4.97	44665	225.01	561.16	8.2	19.5
1816.0	21.2	45.0	150	9.2	1.69	5.02	45090	200.27	557.22	8.2	19.5
1817.0	17.6	45.0	150	9.2	1.76	5.07	45603	241.50	553.81	8.2	19.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1818.0	19.9	45.0	150	9.2	1.72	5.12	46055	213.23	550.17	8.2	19.5
1819.0	21.4	45.0	150	9.2	1.69	5.17	46475	197.91	546.45	8.2	19.5
1820.0	14.6	45.0	150	9.2	1.82	5.24	47093	290.98	543.78	8.2	19.5
1821.0	20.7	45.0	150	9.2	1.70	5.29	47528	204.98	540.27	8.2	19.5
1822.0	20.0	45.0	150	9.2	1.71	5.34	47978	212.05	536.91	8.2	19.5
1823.0	20.8	45.0	150	9.2	1.70	5.39	48410	203.80	533.53	8.2	19.5
1824.0	21.2	45.0	150	9.2	1.69	5.43	48835	200.27	530.18	8.2	19.5
1825.0	21.4	45.0	150	9.2	1.69	5.48	49255	197.91	526.88	8.2	19.5
1826.0	20.1	45.0	150	9.2	1.71	5.53	49703	210.87	523.77	8.2	19.5
1827.0	21.2	45.0	150	9.2	1.69	5.58	50128	200.27	520.62	8.2	19.5
1828.0	18.9	45.0	150	9.2	1.73	5.63	50603	223.83	517.75	8.2	19.5
1829.0	20.8	45.0	150	9.2	1.70	5.68	51035	203.80	514.75	8.2	19.5
1830.0	18.8	45.0	150	9.2	1.74	5.73	51515	226.19	512.02	8.2	19.5
1831.0	20.9	45.0	150	9.2	1.70	5.78	51945	202.63	509.12	8.2	19.5
1832.0	20.3	45.0	150	9.2	1.71	5.83	52388	208.52	506.32	8.2	19.5
1833.0	20.8	45.0	150	9.2	1.70	5.88	52820	203.80	503.54	8.2	19.5
1834.0	21.6	45.0	150	9.2	1.69	5.92	53238	196.74	500.74	8.2	19.5
1835.0	16.7	45.0	150	9.2	1.78	5.98	53775	253.28	498.50	8.2	19.5
1836.0	21.3	45.0	150	9.2	1.69	6.03	54198	199.09	495.82	8.2	19.5
1837.0	19.9	45.0	150	9.2	1.72	6.08	54650	213.23	493.31	8.2	19.5
1838.0	19.6	45.0	150	9.2	1.72	6.13	55110	216.76	490.87	8.2	19.5
1839.0	19.8	45.0	150	9.2	1.72	6.18	55565	214.41	488.46	8.2	19.5
1840.0	17.2	45.0	150	9.2	1.77	6.24	56088	246.21	486.37	8.2	19.5
1841.0	22.4	45.0	150	9.2	1.67	6.28	56490	189.67	483.82	8.2	19.5
1842.0	20.8	45.0	150	9.2	1.70	6.33	56923	203.80	481.44	8.2	19.5
1843.0	22.4	45.0	150	9.2	1.67	6.38	57325	189.67	478.98	8.2	19.5
1844.0	19.7	45.0	150	9.2	1.72	6.43	57783	215.58	476.78	8.2	19.5
1845.0	21.4	45.0	150	9.2	1.69	6.47	58203	197.91	474.46	8.2	19.5
1846.0	21.1	45.0	150	9.2	1.70	6.52	58630	201.45	472.22	8.2	19.5
1847.0	20.5	45.0	150	9.2	1.71	6.57	59070	207.34	470.06	8.2	19.5
1848.0	23.4	45.0	150	9.2	1.66	6.61	59455	181.42	467.72	8.2	19.5
1849.0	19.1	45.0	150	9.2	1.73	6.66	59925	221.47	465.75	8.2	19.5
1850.0	21.8	45.0	150	9.2	1.68	6.71	60338	194.38	463.59	8.2	19.5
1851.0	16.5	45.0	150	9.2	1.78	6.77	60883	256.82	461.95	8.2	19.6
1852.0	20.7	45.0	150	9.2	1.70	6.82	61318	204.98	459.94	8.2	19.6
1853.0	22.9	45.0	150	9.2	1.67	6.86	61710	184.95	457.80	8.2	19.6
1854.0	20.5	45.0	150	9.2	1.71	6.91	62150	207.34	455.87	8.2	19.6
1855.0	17.1	45.0	150	9.2	1.77	6.97	62678	248.57	454.28	8.2	19.6
1856.0	18.2	45.0	150	9.2	1.75	7.03	63173	233.26	452.60	8.2	19.6
1857.0	24.3	45.0	150	9.2	1.65	7.07	63543	174.35	450.50	8.2	19.6
1858.0	20.0	45.0	150	9.2	1.71	7.12	63993	212.05	448.72	8.2	19.6
1859.0	18.0	45.0	150	9.2	1.75	7.17	64493	235.61	447.14	8.2	19.6
1860.0	19.1	45.0	150	9.2	1.73	7.22	64963	221.47	445.47	8.2	19.6
1861.0	19.5	45.0	150	9.2	1.72	7.28	65425	217.94	443.81	8.2	19.6
1862.0	18.7	45.0	150	9.2	1.74	7.33	65908	227.36	442.23	8.2	19.6
1863.0	20.1	45.0	150	9.2	1.71	7.38	66355	210.87	440.56	8.2	19.6
1864.0	18.5	45.0	150	9.2	1.74	7.43	66843	229.72	439.05	8.2	19.6
1865.0	18.8	45.0	150	9.2	1.74	7.49	67323	226.19	437.54	8.2	19.6
1866.0	19.6	45.0	150	9.2	1.72	7.54	67783	216.76	435.98	8.2	19.6
1867.0	18.3	45.0	150	9.2	1.74	7.59	68275	232.08	434.55	8.2	19.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1868.0	15.6	45.0	150	9.2	1.80	7.66	68853	272.13	433.42	8.2	19.6
1869.0	16.7	45.0	150	9.2	1.78	7.72	69393	254.46	432.18	8.2	19.6
1870.0	20.0	45.0	150	9.2	1.71	7.77	69843	212.05	430.67	8.2	19.6
1871.0	23.2	45.0	150	9.2	1.66	7.81	70230	182.60	428.98	8.2	19.6
1872.0	21.3	45.0	150	9.2	1.69	7.86	70653	199.09	427.42	8.2	19.6
1873.0	22.4	45.0	150	9.2	1.67	7.90	71055	189.67	425.82	8.2	19.6
1874.0	18.7	45.0	150	9.2	1.74	7.95	71538	227.36	424.49	8.2	19.6
1875.0	19.9	45.0	150	9.2	1.72	8.01	71990	213.23	423.09	8.2	19.6
1876.0	21.4	45.0	150	9.2	1.69	8.05	72410	197.91	421.61	8.2	19.6
1877.0	20.1	45.0	150	9.2	1.71	8.10	72858	210.87	420.22	8.2	19.6
1878.0	18.8	45.0	150	9.2	1.73	8.15	73335	225.01	418.95	8.2	19.6
1879.0	22.0	45.0	150	9.2	1.68	8.20	73745	193.20	417.49	8.2	19.6
1880.0	22.1	45.0	150	9.2	1.68	8.25	74153	192.02	416.04	8.2	19.6
1881.0	18.7	45.0	150	9.2	1.74	8.30	74635	227.36	414.84	8.2	19.6
1882.0	16.9	45.0	150	9.2	1.77	8.36	75168	250.93	413.80	8.2	19.6
1883.0	17.6	45.0	150	9.2	1.76	8.42	75680	241.50	412.71	8.2	19.6
1884.0	17.6	45.0	150	9.2	1.76	8.47	76190	240.32	411.63	8.2	19.6
1885.0	17.6	45.0	150	9.2	1.76	8.53	76703	241.50	410.57	8.2	19.6
1886.0	18.7	45.0	150	9.2	1.74	8.58	77185	227.36	409.44	8.2	19.6
1887.0	19.1	45.0	150	9.2	1.73	8.63	77655	221.47	408.28	8.2	19.6
1888.0	19.8	45.0	150	9.2	1.72	8.69	78110	214.41	407.10	8.2	19.6
1889.0	25.2	45.0	150	9.2	1.63	8.72	78468	168.46	405.65	8.2	19.6
1890.0	22.8	45.0	150	9.2	1.67	8.77	78863	186.13	404.32	8.2	19.6
1891.0	24.7	45.0	150	9.2	1.64	8.81	79228	172.00	402.93	8.2	19.6
1892.0	23.5	45.0	150	9.2	1.66	8.85	79610	180.24	401.60	8.2	19.6
1893.0	23.1	45.0	150	9.2	1.66	8.90	80000	183.78	400.31	8.2	19.6
1894.0	22.5	45.0	150	9.2	1.67	8.94	80400	188.49	399.06	8.2	19.6
1895.0	21.1	45.0	150	9.2	1.70	8.99	80828	201.45	397.90	8.2	19.6
1896.0	20.3	45.0	150	9.2	1.71	9.04	81270	208.52	396.80	8.2	19.6
1897.0	17.0	45.0	150	9.2	1.77	9.10	81800	249.47	395.94	8.2	19.6
1898.0	22.2	45.0	155	9.2	1.69	9.14	82218	190.85	394.76	8.2	19.6
1899.0	23.1	45.0	155	9.2	1.68	9.18	82621	183.78	393.55	8.2	19.6
1900.0	21.4	45.0	155	9.2	1.70	9.23	83055	197.91	392.44	8.2	19.6
1901.0	24.0	45.0	155	9.2	1.66	9.27	83443	176.71	391.22	8.2	19.6
1902.0	22.1	45.0	155	9.2	1.69	9.32	83864	192.02	390.10	8.2	19.6
1903.0	21.7	45.0	155	9.2	1.70	9.36	84293	195.56	389.01	8.2	19.6
1904.0	21.2	45.0	155	9.2	1.71	9.41	84732	200.27	387.96	8.2	19.6
1905.0	24.5	45.0	155	9.2	1.65	9.45	85112	173.17	386.77	8.2	19.6
1906.0	18.4	45.0	155	9.2	1.75	9.51	85617	230.49	385.91	8.2	19.6
1907.0	21.6	45.0	155	9.2	1.70	9.55	86048	196.74	384.87	8.2	19.6
1908.0	19.1	45.0	155	9.2	1.74	9.60	86534	221.47	383.98	8.2	19.6
1909.0	19.3	45.0	155	9.2	1.74	9.66	87017	220.30	383.09	8.2	19.6
1910.0	18.8	45.0	155	9.2	1.75	9.71	87513	226.19	382.25	8.2	19.6
1911.0	20.0	45.0	155	9.2	1.72	9.76	87978	212.05	381.34	8.2	19.6
1912.0	20.7	45.0	155	9.2	1.71	9.81	88428	204.98	380.40	8.2	19.6
1913.0	21.2	45.0	155	9.2	1.71	9.86	88867	200.27	379.44	8.2	19.7
1914.0	21.7	45.0	155	9.2	1.70	9.90	89296	195.56	378.47	8.2	19.7
1915.0	20.3	45.0	155	9.2	1.72	9.95	89753	208.52	377.58	8.2	19.7
1916.0	16.5	45.0	155	9.2	1.79	10.01	90317	257.03	376.95	8.2	19.7
1917.0	21.4	45.0	155	9.2	1.70	10.06	90751	197.91	376.02	8.2	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1918.0	21.8	45.0	155	9.2	1.69	10.10	91177	194.38	375.08	8.2	19.7
1919.0	19.5	45.0	155	9.2	1.73	10.15	91655	217.94	374.27	8.2	19.7
1920.0	21.2	45.0	155	9.2	1.71	10.20	92094	200.27	373.39	8.2	19.7
1921.0	18.8	45.0	155	9.2	1.75	10.26	92587	225.01	372.63	8.2	19.7
1922.0	18.9	45.0	155	9.2	1.74	10.31	93078	223.83	371.88	8.2	19.7
1923.0	18.8	45.0	155	9.2	1.75	10.36	93574	226.19	371.14	8.2	19.7
1924.0	19.8	45.0	155	9.2	1.73	10.41	94044	214.41	370.36	8.2	19.7
1925.0	14.3	45.0	155	9.2	1.84	10.48	94695	296.57	369.99	8.2	19.7
1926.0	19.6	45.0	155	9.2	1.73	10.53	95170	216.76	369.23	8.2	19.7
1927.0	17.9	45.0	155	9.2	1.76	10.59	95689	236.79	368.58	8.2	19.7
1928.0	19.7	45.0	155	9.2	1.73	10.64	96162	215.58	367.83	8.2	19.7
1929.0	19.4	45.0	155	9.2	1.74	10.69	96642	219.12	367.10	8.2	19.7
1930.0	20.2	45.0	155	9.2	1.72	10.74	97102	209.69	366.33	8.2	19.7
1931.0	20.5	45.0	155	9.2	1.72	10.79	97557	207.34	365.56	8.2	19.7
1932.0	21.2	45.0	155	9.2	1.71	10.84	97996	200.27	364.77	8.2	19.7
1933.0	19.4	45.0	155	9.2	1.74	10.89	98477	219.12	364.07	8.2	19.7
1934.0	22.5	45.0	155	9.2	1.68	10.93	98890	188.49	363.23	8.2	19.7
1935.0	18.3	45.0	155	9.2	1.76	10.99	99398	231.75	362.61	8.2	19.7
1936.0	21.7	45.0	155	9.2	1.70	11.03	99827	195.56	361.82	8.2	19.7
1937.0	20.8	45.0	155	9.2	1.71	11.08	100274	203.80	361.07	8.2	19.7
1938.0	20.8	45.0	155	9.2	1.71	11.13	100721	203.80	360.34	8.2	19.7
1939.0	21.7	45.0	155	9.2	1.70	11.18	101150	195.56	359.57	8.2	19.7
1940.0	16.7	45.0	155	9.2	1.79	11.24	101705	253.28	359.08	8.2	19.7
1941.0	16.2	45.0	155	9.2	1.80	11.30	102279	261.53	358.63	8.2	19.7
1942.0	17.8	45.0	155	9.2	1.77	11.35	102800	237.97	358.07	8.2	19.7
1943.0	17.9	45.0	155	9.2	1.76	11.41	103320	236.79	357.52	8.2	19.7
1944.0	17.9	45.0	155	9.2	1.76	11.46	103839	236.93	356.97	8.2	19.7
1945.0	19.5	45.0	155	9.2	1.73	11.52	104317	217.94	356.34	8.2	19.7
1946.0	20.9	45.0	155	9.2	1.71	11.56	104761	202.63	355.64	8.2	19.7
1947.0	18.3	45.9	155	9.2	1.77	11.62	105270	232.08	355.09	8.2	19.7
1948.0	17.6	45.3	155	9.2	1.77	11.68	105797	240.32	354.58	8.2	19.7
1949.0	19.5	44.0	155	9.2	1.72	11.73	106275	217.94	353.97	8.2	19.7
1950.0	20.5	44.8	155	9.2	1.71	11.78	106730	207.34	353.32	8.2	19.7
1951.0	17.3	45.0	155	9.2	1.77	11.83	107267	245.04	352.84	8.2	19.7
1952.0	18.3	45.7	155	9.2	1.76	11.89	107776	232.08	352.31	8.2	19.7
1953.0	21.2	46.0	155	9.2	1.72	11.94	108215	200.27	351.64	8.2	19.7
1954.0	21.1	44.7	155	9.2	1.70	11.98	108657	201.45	350.99	8.2	19.7
1955.0	24.5	45.2	155	9.2	1.66	12.02	109037	173.17	350.22	8.2	19.7
1956.0	23.8	46.3	155	9.2	1.68	12.07	109427	177.89	349.48	8.2	19.7
1957.0	24.5	46.1	155	9.2	1.67	12.11	109807	173.17	348.72	8.2	19.7
1958.0	25.4	45.3	155	9.2	1.65	12.15	110174	167.28	347.94	8.2	19.7
1959.0	23.1	45.3	155	9.2	1.68	12.19	110577	183.78	347.24	8.2	19.7
1960.0	27.5	44.8	155	9.2	1.61	12.23	110915	154.33	346.42	8.2	19.7
1961.0	29.5	44.4	155	9.2	1.58	12.26	111230	143.72	345.57	8.2	19.7
1962.0	25.0	45.2	155	9.2	1.65	12.30	111602	169.64	344.82	8.2	19.7
1963.0	18.6	44.6	155	9.2	1.75	12.35	112103	228.54	344.34	8.2	19.7
1964.0	24.0	44.3	155	9.2	1.65	12.40	112491	176.71	343.64	8.2	19.7
1965.0	22.1	45.4	155	9.2	1.69	12.44	112912	192.02	343.01	8.2	19.7
1966.0	21.8	45.2	155	9.2	1.70	12.49	113338	194.38	342.39	8.2	19.7
1967.0	23.4	45.9	155	9.2	1.68	12.53	113736	181.42	341.73	8.2	19.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1968.0	25.2	45.5	155	9.2	1.65	12.57	114105	168.46	341.02	8.2	19.7
1969.0	26.5	46.2	155	9.2	1.64	12.61	114457	160.22	340.28	8.2	19.7
1970.0	25.5	46.3	155	9.2	1.65	12.65	114821	166.11	339.57	8.2	19.7
1971.0	26.1	46.4	155	9.2	1.65	12.68	115177	162.57	338.85	8.2	19.7
1972.0	26.5	46.2	155	9.2	1.64	12.72	115529	160.22	338.13	8.2	19.7
1973.0	26.7	44.1	155	9.2	1.61	12.76	115877	158.84	337.41	8.2	19.7
1974.0	25.5	45.1	155	9.2	1.64	12.80	116241	166.11	336.72	8.2	19.7
1975.0	26.1	44.6	155	9.2	1.63	12.84	116598	162.57	336.03	8.2	19.7
1976.0	24.7	45.0	155	9.2	1.65	12.88	116975	172.00	335.38	8.2	19.7
1977.0	23.7	44.8	155	9.2	1.66	12.92	117368	179.06	334.76	8.2	19.8
1978.0	22.2	44.9	155	9.2	1.69	12.96	117786	190.85	334.19	8.2	19.8
1979.0	23.1	44.8	155	9.2	1.67	13.01	118189	183.78	333.60	8.2	19.8
1980.0	20.6	45.0	155	9.2	1.71	13.06	118641	206.16	333.10	8.2	19.8
1981.0	21.8	45.5	155	9.2	1.70	13.10	119068	194.38	332.56	8.2	19.8
1982.0	13.1	44.8	155	9.2	1.87	13.18	119778	323.97	332.53	8.2	19.8
1983.0	23.8	45.6	155	9.2	1.67	13.22	120168	177.89	331.93	8.2	19.8
1984.0	22.0	45.4	155	9.2	1.70	13.27	120592	193.20	331.39	8.2	19.8
1985.0	20.7	45.1	155	9.2	1.71	13.31	121041	204.98	330.91	8.2	19.8
1986.0	23.1	45.8	155	9.2	1.69	13.36	121444	183.78	330.35	8.2	19.8
1987.0	21.2	45.8	155	9.2	1.72	13.41	121883	200.27	329.85	8.2	19.8
1988.0	21.4	45.6	155	9.2	1.71	13.45	122317	197.91	329.35	8.2	19.8
1989.0	23.2	45.7	155	9.2	1.68	13.49	122718	182.60	328.80	8.2	19.8
1990.0	22.2	45.4	155	9.2	1.69	13.54	123136	190.85	328.28	8.2	19.8
1991.0	23.0	45.0	155	9.2	1.68	13.58	123541	184.39	327.74	8.2	19.8
1992.0	22.0	45.0	155	9.2	1.69	13.63	123963	192.77	327.23	8.2	19.8
1993.0	31.3	45.5	155	9.2	1.57	13.66	124260	135.48	326.52	8.2	19.8
1994.0	23.7	46.2	155	9.2	1.68	13.70	124653	179.06	325.97	8.2	19.8
1995.0	24.2	47.2	155	9.2	1.68	13.74	125038	175.53	325.42	8.2	19.8
1996.0	19.6	47.0	155	9.2	1.76	13.80	125513	216.76	325.02	8.2	19.8
1997.0	21.6	46.6	155	9.2	1.72	13.84	125945	196.74	324.54	8.2	19.8
1998.0	22.0	45.9	155	9.2	1.70	13.89	126368	193.20	324.06	8.2	19.8
1999.0	19.1	46.2	155	9.2	1.75	13.94	126854	221.47	323.69	8.2	19.8
2000.0	18.8	45.4	155	9.2	1.75	13.99	127350	226.19	323.34	8.2	19.8
2001.0	16.1	43.2	155	9.2	1.78	14.06	127930	264.22	323.12	8.2	19.8
2002.0	23.5	44.5	155	9.2	1.66	14.10	128325	180.24	322.61	8.2	19.8
2003.0	22.1	48.5	155	9.2	1.73	14.14	128746	192.02	322.14	8.2	19.8
2004.0	25.2	48.6	155	9.2	1.69	14.18	129115	168.46	321.59	8.2	19.8
2005.0	22.8	49.6	155	9.2	1.73	14.23	129523	186.13	321.11	8.2	19.8
2006.0	26.5	50.9	155	9.2	1.69	14.26	129875	160.22	320.54	8.2	19.8
2007.0	26.7	50.2	155	9.2	1.68	14.30	130224	159.04	319.97	8.2	19.8
2008.0	27.5	52.1	155	9.2	1.69	14.34	130562	154.33	319.38	8.2	19.8
2009.0	23.1	50.6	155	9.2	1.74	14.38	130965	183.78	318.90	8.2	19.8
2010.0	21.7	44.7	155	9.2	1.69	14.43	131394	195.56	318.47	8.2	19.8
2011.0	19.4	45.2	155	9.2	1.74	14.48	131874	219.12	318.13	8.2	19.8
2012.0	19.6	43.1	155	9.2	1.71	14.53	132350	216.76	317.77	8.2	19.8
2013.0	18.8	43.2	155	9.2	1.73	14.58	132846	226.19	317.46	8.2	19.8
2014.0	18.8	43.3	155	9.2	1.72	14.64	133339	225.01	317.14	8.2	19.8
2015.0	19.9	46.6	155	9.2	1.75	14.69	133807	213.23	316.78	8.2	19.8
2016.0	21.3	45.1	155	9.2	1.70	14.73	134243	199.09	316.38	8.2	19.8
2017.0	25.4	45.3	155	9.2	1.65	14.77	134610	167.28	315.87	8.2	19.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2018.0	25.2	46.4	155	9.2	1.66	14.81	134979	168.46	315.36	8.2	19.8
2019.0	22.0	46.8	155	9.2	1.71	14.86	135403	193.20	314.95	8.2	19.8
2020.0	23.1	45.6	155	9.2	1.68	14.90	135806	183.78	314.51	8.2	19.8
2021.0	29.3	44.3	155	9.2	1.58	14.94	136124	144.90	313.93	8.2	19.8
2022.0	28.6	44.6	155	9.2	1.60	14.97	136449	148.44	313.38	8.2	19.8
2023.0	26.3	44.9	155	9.2	1.63	15.01	136803	161.39	312.87	8.2	19.8
2024.0	27.9	45.3	155	9.2	1.61	15.05	137137	151.97	312.33	8.2	19.8
2025.0	25.7	45.0	155	9.2	1.64	15.08	137498	164.93	311.84	8.2	19.8
2026.0	24.3	45.1	155	9.2	1.66	15.13	137881	174.35	311.39	8.2	19.8
2027.0	27.7	47.1	155	9.2	1.63	15.16	138216	153.15	310.86	8.2	19.8
2028.0	21.4	47.4	155	9.2	1.73	15.21	138650	197.91	310.49	8.2	19.8
2029.0	21.3	47.3	155	9.2	1.73	15.26	139087	199.11	310.12	8.2	19.8
2030.0	21.1	45.1	155	9.2	1.71	15.30	139529	201.45	309.77	8.2	19.8
2031.0	26.5	46.0	155	9.2	1.64	15.34	139880	160.22	309.28	8.2	19.8
2032.0	24.0	46.1	155	9.2	1.67	15.38	140268	176.71	308.85	8.2	19.8
2033.0	22.1	45.9	155	9.2	1.70	15.43	140689	192.02	308.47	8.2	19.8
2034.0	22.4	49.1	155	9.2	1.73	15.47	141105	189.67	308.09	8.2	19.8
2035.0	23.7	49.3	155	9.2	1.72	15.51	141497	179.06	307.67	8.2	19.8
2036.0	23.4	48.7	155	9.2	1.71	15.56	141895	181.42	307.27	8.2	19.8
2037.0	21.6	47.8	155	9.2	1.73	15.60	142326	196.74	306.91	8.2	19.8
2038.0	20.9	46.5	155	9.2	1.73	15.65	142771	202.63	306.58	8.2	19.8
2039.0	21.3	45.0	155	9.2	1.70	15.70	143207	199.11	306.24	8.2	19.8
2040.0	19.6	43.2	155	9.2	1.71	15.75	143683	216.76	305.96	8.2	19.8
2041.0	20.0	45.0	155	9.2	1.73	15.80	144148	212.05	305.66	8.2	19.8
2042.0	19.9	44.8	155	9.2	1.72	15.85	144615	213.23	305.37	8.2	19.9
2043.0	14.5	44.2	155	9.2	1.83	15.92	145259	293.34	305.33	8.2	19.9
2044.0	23.2	43.8	155	9.2	1.66	15.96	145659	182.60	304.95	8.2	19.9
2045.0	23.4	44.1	155	9.2	1.66	16.00	146057	181.42	304.56	8.2	19.9
2046.0	25.4	44.1	155	9.2	1.63	16.04	146424	167.28	304.13	8.2	19.9
2047.0	24.7	44.5	155	9.2	1.65	16.08	146801	172.00	303.73	8.2	19.9
2048.0	24.3	43.9	155	9.2	1.64	16.13	147183	174.35	303.33	8.2	19.9
2049.0	23.8	45.0	155	9.2	1.66	16.17	147574	178.19	302.94	8.2	19.9
2050.0	28.1	44.3	155	9.2	1.60	16.20	147905	150.79	302.47	8.2	19.9
2051.0	23.4	44.1	155	9.2	1.66	16.25	148302	181.42	302.10	8.2	19.9
2052.0	26.1	44.2	155	9.2	1.62	16.28	148659	162.57	301.68	8.2	19.9
2053.0	26.9	43.7	155	9.2	1.61	16.32	149005	157.86	301.24	8.2	19.9
2054.0	25.7	43.6	155	9.2	1.62	16.36	149367	164.93	300.82	8.2	19.9
2055.0	24.8	44.5	155	9.2	1.64	16.40	149741	170.82	300.43	8.2	19.9
2056.0	26.7	44.1	155	9.2	1.61	16.44	150090	159.04	300.01	8.2	19.9
2057.0	27.1	45.3	155	9.2	1.62	16.48	150434	156.68	299.57	8.2	19.9
2058.0	25.2	44.3	155	9.2	1.64	16.51	150803	168.46	299.18	8.2	19.9
2059.0	19.7	44.5	155	9.2	1.72	16.57	151276	215.58	298.93	8.2	19.9
2060.0	27.3	46.5	155	9.2	1.63	16.60	151617	155.50	298.50	8.2	19.9
2061.0	23.5	45.5	155	9.2	1.67	16.64	152012	180.24	298.15	8.2	19.9
2062.0	26.1	47.4	155	9.2	1.66	16.68	152369	162.57	297.75	8.2	19.9
2063.0	22.6	45.8	155	9.2	1.69	16.73	152779	187.31	297.42	8.2	19.9
2064.0	24.0	45.7	155	9.2	1.67	16.77	153167	176.71	297.07	8.2	19.9
2065.0	24.7	46.3	155	9.2	1.67	16.81	153544	172.00	296.70	8.2	19.9
2066.0	24.3	46.1	155	9.2	1.67	16.85	153926	174.35	296.34	8.2	19.9
2067.0	23.8	46.2	155	9.2	1.68	16.89	154316	177.89	296.00	8.2	19.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2068.0	18.1	44.4	155	9.2	1.75	16.95	154830	234.31	295.82	8.2	19.9
2069.0	26.9	45.6	155	9.2	1.63	16.99	155176	157.86	295.42	8.2	19.9
2070.0	25.4	45.7	155	9.2	1.65	17.02	155543	167.28	295.05	8.2	19.9
2071.0	27.9	46.3	155	9.2	1.62	17.06	155876	151.97	294.63	8.2	19.9
2072.0	28.3	46.5	155	9.2	1.62	17.10	156205	149.61	294.22	8.2	19.9
2073.0	26.1	46.1	155	9.2	1.65	17.13	156561	162.57	293.84	8.2	19.9
2074.0	25.5	45.5	155	9.2	1.65	17.17	156925	166.11	293.47	8.2	19.9
2075.0	27.3	47.6	155	9.2	1.65	17.21	157266	155.50	293.08	8.2	19.9
2076.0	24.7	46.9	155	9.2	1.67	17.25	157643	172.00	292.74	8.2	19.9
2077.0	21.3	46.3	155	9.2	1.72	17.30	158080	199.11	292.47	8.2	19.9
2078.0	23.4	46.3	155	9.2	1.69	17.34	158478	181.42	292.16	8.2	19.9
2079.0	23.5	46.6	155	9.2	1.69	17.38	158873	180.24	291.84	8.2	19.9
2080.0	26.7	46.3	155	9.2	1.64	17.42	159222	159.04	291.47	8.2	19.9
2081.0	26.3	45.8	155	9.2	1.64	17.46	159576	161.39	291.10	8.2	19.9
2082.0	26.9	45.7	155	9.2	1.63	17.50	159922	157.86	290.73	8.2	19.9
2083.0	26.9	45.3	155	9.2	1.63	17.53	160268	157.86	290.36	8.2	19.9
2084.0	25.0	45.9	155	9.2	1.66	17.57	160640	169.64	290.02	8.2	19.9
2085.0	27.5	44.6	155	9.2	1.61	17.61	160979	154.33	289.65	8.2	19.9
2086.0	27.1	44.5	155	9.2	1.61	17.65	161322	156.68	289.28	8.2	19.9
2087.0	28.4	44.0	155	9.2	1.59	17.68	161650	149.33	288.89	8.2	19.9
2088.0	29.3	44.9	155	9.2	1.59	17.72	161967	144.90	288.50	8.2	19.9
2089.0	29.5	45.1	155	9.2	1.59	17.75	162283	143.72	288.10	8.2	19.9
2090.0	26.1	46.6	155	9.2	1.65	17.79	162639	162.57	287.76	8.2	19.9
2091.0	26.1	45.8	155	9.2	1.64	17.83	162996	162.57	287.42	8.2	19.9
2092.0	29.0	45.0	155	9.2	1.59	17.86	163316	146.08	287.03	8.2	19.9
2093.0	23.5	45.3	155	9.2	1.67	17.90	163711	180.24	286.74	8.2	19.9
2094.0	24.8	45.7	155	9.2	1.66	17.94	164086	170.82	286.43	8.2	19.9
2095.0	22.8	45.6	155	9.2	1.69	17.99	164494	186.13	286.16	8.2	19.9
2096.0	24.7	45.3	155	9.2	1.66	18.03	164871	172.00	285.85	8.2	19.9
2097.0	21.7	46.8	155	9.2	1.72	18.07	165300	195.44	285.61	8.2	19.9
2098.0	25.4	46.0	155	9.2	1.65	18.11	165666	167.28	285.29	8.2	19.9
2099.0	23.1	44.8	155	9.2	1.67	18.16	166069	183.78	285.02	8.2	19.9
2100.0	24.0	44.4	155	9.2	1.65	18.20	166457	176.71	284.73	8.2	19.9
2101.0	21.7	44.4	155	9.2	1.69	18.24	166886	195.56	284.50	8.2	19.9
2102.0	20.8	44.9	155	9.2	1.71	18.29	167333	203.80	284.28	8.2	19.9
2103.0	22.9	44.9	155	9.2	1.68	18.34	167738	184.95	284.02	8.2	19.9
2104.0	22.1	44.4	155	9.2	1.68	18.38	168159	192.02	283.78	8.2	19.9
2105.0	20.8	44.4	155	9.2	1.70	18.43	168606	203.80	283.57	8.2	19.9
2106.0	25.0	43.7	155	9.2	1.63	18.47	168978	169.64	283.27	8.2	19.9
2107.0	20.5	45.2	155	9.2	1.72	18.52	169433	207.34	283.07	8.2	19.9
2108.0	23.7	45.3	155	9.2	1.67	18.56	169826	179.06	282.80	8.2	19.9
2109.0	24.8	45.1	155	9.2	1.65	18.60	170200	170.82	282.51	8.2	20.0
2110.0	24.2	45.1	155	9.2	1.66	18.64	170585	175.53	282.23	8.2	20.0
2111.0	25.5	45.4	155	9.2	1.64	18.68	170949	166.11	281.93	8.2	20.0
2112.0	22.5	45.2	155	9.2	1.69	18.73	171363	188.49	281.69	8.2	20.0
2113.0	23.4	44.4	155	9.2	1.66	18.77	171761	181.42	281.43	8.2	20.0
2114.0	22.8	44.6	155	9.2	1.68	18.81	172169	186.13	281.19	8.2	20.0
2115.0	25.0	45.2	155	9.2	1.65	18.85	172541	169.64	280.90	8.2	20.0
2116.0	20.5	45.4	155	9.2	1.72	18.90	172994	206.88	280.71	8.2	20.0
2117.0	23.2	46.7	155	9.2	1.69	18.94	173395	182.60	280.46	8.2	20.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2118.0	23.2	46.8	155	9.2	1.69	18.99	173795	182.60	280.21	8.2	20.0
2119.0	24.5	46.7	155	9.2	1.67	19.03	174175	173.17	279.94	8.2	20.0
2120.0	25.4	46.9	155	9.2	1.66	19.07	174542	167.28	279.66	8.2	20.0
2121.0	18.1	45.6	155	9.2	1.77	19.12	175056	234.43	279.54	8.2	20.0
2122.0	22.0	45.0	155	9.2	1.69	19.17	175480	193.20	279.33	8.2	20.0
2123.0	19.6	44.6	155	9.2	1.73	19.22	175955	216.76	279.17	8.2	20.0
2124.0	24.2	45.1	155	9.2	1.66	19.26	176340	175.53	278.91	8.2	20.0
2125.0	20.5	45.1	155	9.2	1.72	19.31	176793	206.88	278.73	8.2	20.0
2126.0	21.8	44.6	155	9.2	1.69	19.36	177220	194.38	278.52	8.2	20.0
2127.0	21.1	45.5	155	9.2	1.71	19.40	177661	201.45	278.33	8.2	20.0
2128.0	24.0	45.1	155	9.2	1.66	19.44	178049	176.71	278.08	8.2	20.0
2129.0	21.4	45.1	155	9.2	1.70	19.49	178483	197.91	277.88	8.2	20.0
2130.0	18.8	45.5	155	9.2	1.75	19.54	178976	225.01	277.75	8.2	20.0
2131.0	21.1	45.3	155	9.2	1.71	19.59	179418	201.45	277.56	8.2	20.0
2132.0	22.9	46.0	155	9.2	1.69	19.64	179824	184.95	277.33	8.2	20.0
2133.0	20.5	45.9	155	9.2	1.73	19.68	180278	207.34	277.16	8.2	20.0
2134.0	22.9	45.3	155	9.2	1.68	19.73	180684	184.95	276.94	8.2	20.0
2135.0	22.1	44.9	155	9.2	1.69	19.77	181105	192.02	276.73	8.2	20.0
2136.0	23.8	44.3	155	9.2	1.66	19.82	181496	178.19	276.49	8.2	20.0
2137.0	19.9	44.8	155	9.2	1.72	19.87	181963	213.23	276.34	8.2	20.0
2138.0	25.9	45.1	155	9.2	1.64	19.90	182322	163.75	276.06	8.2	20.0
2139.0	23.8	45.3	155	9.2	1.67	19.95	182713	177.89	275.83	8.2	20.0
2140.0	26.5	44.6	155	9.2	1.62	19.98	183064	160.22	275.55	8.2	20.0
2141.0	27.1	45.0	155	9.2	1.62	20.02	183407	156.68	275.26	8.2	20.0
2142.0	25.9	44.7	155	9.2	1.63	20.06	183767	163.75	275.00	8.2	20.0
2143.0	25.0	45.0	155	9.2	1.65	20.10	184139	169.64	274.75	8.2	20.0
2144.0	25.4	45.0	155	9.2	1.64	20.14	184505	167.28	274.49	8.2	20.0
2145.0	19.8	46.6	155	9.2	1.75	20.19	184975	214.19	274.35	8.2	20.0
2146.0	23.5	44.8	155	9.2	1.67	20.23	185370	180.24	274.12	8.2	20.0
2147.0	22.9	45.7	155	9.2	1.69	20.28	185776	184.95	273.91	8.2	20.0
2148.0	22.1	45.5	155	9.2	1.70	20.32	186197	192.02	273.72	8.2	20.0
2149.0	19.8	44.7	155	9.2	1.73	20.37	186667	214.41	273.58	8.2	20.0
2150.0	21.3	45.4	155	9.2	1.71	20.42	187104	199.09	273.40	8.2	20.0
2151.0	16.4	46.0	155	9.2	1.81	20.48	187672	259.17	273.37	8.2	20.0
2152.0	23.7	46.4	155	9.2	1.68	20.52	188065	179.06	273.15	8.2	20.0
2153.0	24.2	45.8	155	9.2	1.67	20.56	188450	175.53	272.92	8.2	20.0
2154.0	19.3	44.8	155	9.2	1.74	20.61	188933	220.30	272.80	8.2	20.0
2155.0	24.7	44.8	155	9.2	1.65	20.66	189310	172.00	272.57	8.2	20.0
2156.0	23.2	44.7	155	9.2	1.67	20.70	189710	182.60	272.36	8.2	20.0
2157.0	24.2	44.7	155	9.2	1.66	20.74	190095	175.53	272.13	8.2	20.0
2158.0	26.1	45.5	155	9.2	1.64	20.78	190452	162.57	271.88	8.2	20.0
2159.0	27.9	45.1	155	9.2	1.61	20.81	190785	151.97	271.60	8.2	20.0
2160.0	30.8	44.6	155	9.2	1.57	20.85	191087	137.83	271.30	8.2	20.0
2161.0	27.5	44.8	155	9.2	1.61	20.88	191426	154.33	271.03	8.2	20.0
2162.0	23.8	45.1	155	9.2	1.67	20.92	191816	177.89	270.82	8.2	20.0
2163.0	20.9	44.9	155	9.2	1.71	20.97	192260	202.63	270.66	8.2	20.0
2164.0	28.8	45.6	155	9.2	1.60	21.01	192583	147.26	270.38	8.2	20.0
2165.0	24.7	45.5	155	9.2	1.66	21.05	192960	172.00	270.16	8.2	20.0
2166.0	30.8	45.8	155	9.2	1.58	21.08	193262	137.83	269.86	8.2	20.0
2167.0	30.5	46.6	155	9.2	1.60	21.11	193567	139.01	269.56	8.2	20.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2168.0	23.8	45.7	155	9.2	1.67	21.16	193957	177.89	269.36	8.2	20.0
2169.0	30.8	44.8	155	9.2	1.57	21.19	194260	137.83	269.06	8.2	20.0
2170.0	27.7	45.5	155	9.2	1.62	21.22	194595	153.15	268.80	8.2	20.0
2171.0	26.3	46.5	155	9.2	1.65	21.26	194949	161.39	268.56	8.2	20.0
2172.0	24.2	47.1	155	9.2	1.68	21.30	195334	175.53	268.35	8.2	20.0
2173.0	19.9	47.1	155	9.2	1.75	21.35	195802	213.12	268.23	8.2	20.0
2174.0	25.0	47.2	155	9.2	1.67	21.39	196174	169.64	268.01	8.2	20.0
2175.0	31.9	46.9	155	9.2	1.58	21.42	196465	133.12	267.71	8.2	20.0
2176.0	23.2	46.9	155	9.2	1.70	21.47	196866	182.60	267.52	8.2	20.0
2177.0	24.8	46.8	155	9.2	1.67	21.51	197240	170.82	267.31	8.2	20.0
2178.0	24.2	46.4	155	9.2	1.68	21.55	197625	175.53	267.11	8.2	20.1
2179.0	36.7	45.0	155	9.2	1.51	21.58	197879	115.45	266.77	8.2	20.1
2180.0	33.3	45.3	155	9.2	1.55	21.61	198158	127.23	266.47	8.2	20.1
2181.0	29.5	45.5	155	9.2	1.60	21.64	198473	143.72	266.20	8.2	20.1
2182.0	26.3	46.1	155	9.2	1.64	21.68	198827	161.39	265.97	8.2	20.1
2183.0	26.7	45.9	155	9.2	1.64	21.72	199175	159.04	265.73	8.2	20.1
2184.0	28.1	44.7	155	9.2	1.60	21.75	199506	150.79	265.48	8.2	20.1
2185.0	23.5	45.4	155	9.2	1.67	21.79	199901	180.24	265.30	8.2	20.1
2186.0	25.0	45.5	155	9.2	1.65	21.83	200273	169.64	265.09	8.2	20.1
2187.0	24.3	43.6	155	9.2	1.64	21.88	200656	174.35	264.90	8.2	20.1
2188.0	26.5	44.6	155	9.2	1.62	21.91	201007	160.22	264.67	8.2	20.1
2189.0	26.5	45.9	155	9.2	1.64	21.95	201358	160.22	264.44	8.2	20.1
2190.0	24.5	46.2	155	9.2	1.67	21.99	201738	173.17	264.25	8.2	20.1
2191.0	22.5	45.5	155	9.2	1.69	22.04	202151	188.49	264.09	8.2	20.1
2192.0	20.1	45.2	155	9.2	1.73	22.09	202614	211.00	263.97	8.2	20.1
2193.0	27.9	43.5	155	9.2	1.59	22.12	202947	151.97	263.73	8.2	20.1
2194.0	32.1	44.4	155	9.2	1.55	22.15	203237	131.94	263.45	8.2	20.1
2195.0	30.3	44.3	155	9.2	1.57	22.19	203544	140.19	263.19	8.2	20.1
2196.0	29.3	44.2	155	9.2	1.58	22.22	203862	144.90	262.94	8.2	20.1
2197.0	27.5	44.2	155	9.2	1.61	22.26	204200	154.33	262.71	8.2	20.1
2198.0	27.7	43.9	155	9.2	1.60	22.29	204536	153.15	262.48	8.2	20.1
2199.0	30.5	44.5	155	9.2	1.57	22.33	204841	139.01	262.22	8.2	20.1
2200.0	24.8	45.4	155	9.2	1.65	22.37	205216	170.82	262.03	8.2	20.1
2201.0	25.5	44.9	155	9.2	1.64	22.40	205580	166.11	261.83	8.2	20.1
2202.0	45.0	44.9	155	9.2	1.44	22.43	205786	94.24	261.47	8.2	20.1
2203.0	32.1	43.3	155	9.2	1.54	22.46	206076	131.94	261.20	8.2	20.1
2204.0	30.8	43.9	155	9.2	1.56	22.49	206378	137.83	260.95	8.2	20.1
2205.0	26.3	44.2	155	9.2	1.62	22.53	206732	161.39	260.74	8.2	20.1
2206.0	28.3	44.0	155	9.2	1.59	22.56	207060	149.61	260.51	8.2	20.1
2207.0	25.5	44.3	155	9.2	1.63	22.60	207424	166.11	260.31	8.2	20.1
2208.0	25.2	44.8	155	9.2	1.64	22.64	207794	168.46	260.12	8.2	20.1
2209.0	23.4	44.7	155	9.2	1.67	22.69	208192	181.42	259.96	8.2	20.1
2210.0	19.7	44.8	155	9.2	1.73	22.74	208664	215.58	259.87	8.2	20.1
2211.0	22.5	46.3	155	9.2	1.70	22.78	209078	188.49	259.72	8.2	20.1
2212.0	27.7	47.9	155	9.2	1.64	22.82	209413	153.15	259.50	8.2	20.1
2213.0	24.8	51.6	155	9.2	1.72	22.86	209788	170.82	259.32	8.2	20.1
2214.0	22.1	48.7	155	9.2	1.73	22.90	210209	192.02	259.19	8.2	20.1
2215.0	31.0	46.7	155	9.2	1.59	22.93	210509	136.65	258.94	8.2	20.1
2216.0	20.8	49.1	155	9.2	1.76	22.98	210956	203.80	258.82	8.2	20.1
2217.0	25.4	48.5	155	9.2	1.68	23.02	211323	167.28	258.64	8.2	20.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2218.0	17.7	49.1	155	9.2	1.82	23.08	211847	239.15	258.60	8.2	20.1
2219.0	23.1	48.5	155	9.2	1.72	23.12	212250	183.78	258.45	8.2	20.1
2220.0	20.5	48.6	155	9.2	1.76	23.17	212705	207.34	258.34	8.2	20.1
2221.0	20.6	47.7	155	9.2	1.75	23.22	213157	206.16	258.24	8.2	20.1
2222.0	19.5	48.8	155	9.2	1.78	23.27	213635	217.94	258.16	8.2	20.1
2223.0	23.4	48.7	155	9.2	1.71	23.31	214032	181.42	258.00	8.2	20.1
2224.0	22.1	48.6	155	9.2	1.73	23.36	214454	192.02	257.87	8.2	20.1
2225.0	23.1	48.1	155	9.2	1.71	23.40	214857	183.78	257.72	8.2	20.1
2226.0	18.8	46.3	155	9.2	1.76	23.46	215351	225.59	257.66	8.2	20.1
2227.0	23.7	47.0	155	9.2	1.69	23.50	215744	179.06	257.50	8.2	20.1
2228.0	23.5	47.2	155	9.2	1.69	23.54	216139	180.24	257.35	8.2	20.1
2229.0	18.9	48.3	155	9.2	1.78	23.59	216630	223.83	257.28	8.2	20.1
2230.0	19.4	48.0	155	9.2	1.77	23.64	217110	219.12	257.21	8.2	20.1
2231.0	13.5	48.0	155	9.2	1.90	23.72	217799	314.15	257.32	8.2	20.1
2232.0	15.6	46.0	155	9.2	1.82	23.78	218395	271.86	257.35	8.2	20.1
2233.0	13.9	46.0	155	9.2	1.86	23.85	219065	305.11	257.44	8.2	20.1
2234.0	13.7	47.0	155	9.2	1.88	23.93	219743	309.56	257.55	8.2	20.1
2235.0	14.9	46.0	155	9.2	1.84	23.99	220368	284.63	257.60	8.2	20.1
2236.0	17.6	46.0	155	9.2	1.78	24.05	220896	240.97	257.57	8.2	20.1
2237.0	15.6	45.0	155	9.2	1.81	24.12	221492	271.86	257.59	8.2	20.1
2238.0	17.8	46.0	155	9.2	1.78	24.17	222015	238.26	257.56	8.2	20.1
2239.0	15.3	47.0	155	9.2	1.84	24.24	222622	277.19	257.59	8.2	20.1
2239.4	12.6	45.0	155	9.2	1.89	24.27	222918	336.59	257.66	8.2	20.1

BIT NUMBER	6	IADC CODE	437	INTERVAL	2239.4- 2459.2
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.2	BIT RUN	219.8
TOTAL HOURS	28.13	TOTAL TURNS	155751	CONDITION	T3 B5 G0.063

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2240.0	4.4	25.0	120	9.3	1.80	0.14	991	973	63178	8.2	20.1
2241.0	5.1	25.0	120	9.3	1.76	0.33	2405	833	24212	8.2	20.1
2242.0	6.5	25.0	120	9.3	1.69	0.49	3510	651	15150	8.2	20.1
2243.0	8.3	30.0	120	9.3	1.70	0.61	4378	511	11084	8.2	20.1
2244.0	7.8	27.5	120	9.3	1.68	0.74	5298	542	8792	8.2	20.1
2245.0	5.2	30.0	120	9.3	1.85	0.93	6696	823	7369	8.2	20.1
2246.0	5.8	31.8	120	9.3	1.84	1.10	7948	737	6364	8.2	20.1
2247.0	6.4	36.0	120	9.3	1.88	1.26	9072	662	5614	8.2	20.1
2248.0	7.8	40.7	100	9.3	1.82	1.39	9838	542	5024	8.2	20.1
2249.0	5.4	42.6	100	9.3	1.97	1.57	10948	785	4583	8.2	20.2
2250.0	5.7	39.7	100	9.3	1.91	1.75	12000	743	4220	8.2	20.2
2251.0	8.0	36.9	95	9.3	1.74	1.87	12716	532	3902	8.2	20.2
2252.0	7.3	37.2	95	9.3	1.78	2.01	13499	583	3639	8.2	20.2
2253.0	6.7	38.8	95	9.3	1.83	2.16	14354	636	3418	8.2	20.2
2254.0	7.0	38.5	95	9.3	1.81	2.30	15167	604	3226	8.2	20.2
2255.0	8.0	39.1	95	9.3	1.77	2.43	15878	529	3053	8.2	20.2
2256.0	6.6	43.0	110	9.3	1.94	2.58	16882	646	2908	8.2	20.2
2257.0	5.4	41.3	110	9.3	1.98	2.76	18098	781	2787	8.2	20.2
2258.0	6.9	39.2	110	9.3	1.87	2.91	19057	616	2670	8.2	20.2
2259.0	5.7	38.6	110	9.3	1.93	3.09	20224	750	2572	8.2	20.2
2260.0	4.1	45.0	70	9.3	1.98	3.33	21243	1028	2497	8.2	20.2
2261.0	7.9	50.0	70	9.3	1.81	3.46	21776	538	2407	8.2	20.2
2262.0	8.9	51.3	70	9.3	1.79	3.57	22247	476	2321	8.2	20.2
2263.0	8.3	51.1	70	9.3	1.81	3.69	22754	511	2244	8.2	20.2
2264.0	8.6	51.2	90	9.3	1.89	3.80	23379	491	2173	8.2	20.2
2265.0	8.3	52.0	90	9.3	1.91	3.92	24027	509	2108	8.2	20.2
2266.0	7.7	50.7	90	9.3	1.92	4.05	24729	551	2050	8.2	20.2
2267.0	6.6	50.8	90	9.3	1.98	4.21	25548	643	1999	8.2	20.2
2268.0	8.3	51.6	90	9.3	1.91	4.33	26198	510	1947	8.2	20.2
2269.0	6.0	50.9	90	9.3	2.01	4.49	27098	707	1905	8.2	20.2
2270.0	7.2	50.1	90	9.3	1.94	4.63	27849	590	1862	8.2	20.2
2271.0	7.2	51.3	70	9.3	1.86	4.77	28434	590	1822	8.2	20.2
2272.0	7.3	51.1	70	9.3	1.86	4.91	29009	581	1783	8.2	20.2
2273.0	11.3	50.8	70	9.3	1.69	5.00	29380	375	1742	8.2	20.2
2274.0	6.2	51.1	70	9.3	1.91	5.16	30057	683	1711	8.2	20.2
2275.0	8.0	51.0	70	9.3	1.82	5.28	30580	529	1678	8.2	20.2
2276.0	7.5	51.5	70	9.3	1.85	5.42	31144	569	1647	8.2	20.2
2277.0	7.5	51.0	70	9.3	1.84	5.55	31703	564	1619	8.2	20.2
2278.0	6.2	51.6	70	9.3	1.92	5.71	32382	686	1594	8.2	20.2
2279.0	6.9	51.4	70	9.3	1.88	5.86	32993	617	1570	8.2	20.2
2280.0	14.3	45.8	95	9.3	1.66	5.93	33392	297	1538	8.2	20.2
2281.0	7.0	46.5	95	9.3	1.92	6.07	34206	606	1516	8.2	20.2
2282.0	8.6	46.4	95	9.3	1.85	6.19	34866	491	1492	8.2	20.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2283.0	8.8	46.3	95	9.3	1.84	6.30	35511	479	1469	8.2	20.2
2284.0	10.0	45.8	95	9.3	1.79	6.40	36081	424	1445	8.2	20.2
2285.0	7.0	44.8	95	9.3	1.89	6.54	36890	602	1427	8.2	20.2
2286.0	9.2	44.3	95	9.3	1.80	6.65	37507	459	1406	8.2	20.2
2287.0	7.8	45.5	95	9.3	1.87	6.78	38237	543	1388	8.2	20.2
2288.0	6.0	45.8	95	9.3	1.97	6.94	39190	709	1374	8.2	20.2
2289.0	8.1	46.8	95	9.3	1.87	7.07	39893	523	1357	8.2	20.2
2290.0	12.2	47.8	95	9.3	1.74	7.15	40362	349	1337	8.2	20.2
2291.0	6.5	48.8	95	9.3	1.98	7.30	41239	653	1324	8.2	20.2
2292.0	7.0	52.7	95	9.3	2.00	7.45	42058	609	1310	8.2	20.2
2293.0	12.8	54.0	95	9.3	1.80	7.53	42504	332	1292	8.2	20.2
2294.0	7.0	53.2	95	9.3	2.01	7.67	43318	606	1279	8.2	20.2
2295.0	10.1	53.7	95	9.3	1.88	7.77	43880	418	1264	8.2	20.2
2296.0	8.9	51.7	95	9.3	1.90	7.88	44523	478	1250	8.2	20.2
2297.0	6.5	52.4	95	9.3	2.02	8.03	45402	654	1240	8.2	20.2
2298.0	7.0	53.7	95	9.3	2.01	8.18	46215	606	1229	8.2	20.2
2299.0	8.1	52.4	95	9.3	1.95	8.30	46923	527	1217	8.2	20.2
2300.0	6.3	51.4	95	9.3	2.02	8.46	47824	670	1208	8.2	20.2
2301.0	5.1	52.0	95	9.3	2.11	8.66	48945	834	1202	8.2	20.2
2302.0	7.0	51.4	95	9.3	1.98	8.80	49754	602	1192	8.2	20.2
2303.0	5.7	50.8	95	9.3	2.05	8.97	50763	750	1185	8.2	20.2
2304.0	8.0	50.0	95	9.3	1.92	9.10	51474	529	1175	8.2	20.2
2305.0	6.6	49.9	95	9.3	1.98	9.25	52332	639	1167	8.2	20.2
2306.0	6.1	48.4	70	9.3	1.89	9.42	53026	701	1160	8.2	20.2
2307.0	5.9	49.9	70	9.3	1.92	9.59	53744	725	1154	8.2	20.2
2308.0	4.7	46.2	70	9.3	1.95	9.80	54637	902	1150	8.2	20.2
2309.0	8.1	41.6	95	9.3	1.80	9.92	55340	523	1141	8.2	20.2
2310.0	6.6	43.6	80	9.3	1.84	10.07	56067	642	1134	8.2	20.2
2311.0	7.1	44.3	80	9.3	1.82	10.21	56739	594	1126	8.2	20.2
2312.0	7.9	43.5	80	9.3	1.78	10.34	57350	540	1118	8.2	20.2
2313.0	7.8	44.3	80	9.3	1.80	10.47	57967	545	1110	8.2	20.2
2314.0	4.7	49.3	50	9.3	1.87	10.68	58599	894	1107	8.2	20.2
2315.0	3.8	49.7	50	9.3	1.96	10.95	59398	1129	1108	8.2	20.2
2316.0	6.2	48.5	55	9.3	1.79	11.11	59927	680	1102	8.2	20.2
2317.0	4.4	48.1	55	9.3	1.91	11.33	60677	965	1100	8.2	20.2
2318.0	7.1	49.0	90	9.3	1.93	11.48	61442	601	1094	8.2	20.2
2319.0	7.4	47.4	90	9.3	1.89	11.61	62173	574	1088	8.2	20.2
2320.0	6.6	47.3	90	9.3	1.93	11.76	62987	640	1082	8.2	20.2
2321.0	5.6	46.5	90	9.3	1.98	11.94	63959	763	1078	8.2	20.2
2322.0	5.2	48.0	90	9.3	2.03	12.14	65003	820	1075	8.2	20.3
2323.0	6.2	47.0	90	9.3	1.95	12.30	65870	681	1070	8.2	20.3
2324.0	8.2	47.0	90	9.3	1.85	12.42	66526	515	1064	8.2	20.3
2325.0	5.4	46.4	90	9.3	1.99	12.60	67517	779	1060	8.2	20.3
2326.0	5.6	46.2	90	9.3	1.97	12.78	68483	759	1057	8.2	20.3
2327.0	6.7	46.2	80	9.3	1.87	12.93	69203	636	1052	8.2	20.3
2328.0	6.3	46.8	80	9.3	1.90	13.09	69962	670	1048	8.2	20.3
2329.0	5.6	46.9	80	9.3	1.94	13.27	70819	757	1044	8.2	20.3
2330.0	8.0	46.7	80	9.3	1.82	13.39	71422	532	1039	8.2	20.3
2331.0	8.4	46.6	100	9.3	1.88	13.51	72140	508	1033	8.2	20.3
2332.0	5.9	50.0	100	9.3	2.05	13.68	73160	721	1030	8.2	20.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2333.0	7.6	50.0	100	9.3	1.95	13.81	73947	556	1025	8.2	20.3
2334.0	8.3	50.0	100	9.3	1.92	13.93	74667	509	1019	8.2	20.3
2335.0	8.2	50.0	100	9.3	1.93	14.06	75400	518	1014	8.2	20.3
2336.0	6.8	50.0	100	9.3	1.99	14.20	76280	622	1010	8.2	20.3
2337.0	6.6	50.0	100	9.3	2.01	14.35	77194	646	1006	8.2	20.3
2338.0	7.5	50.0	100	9.3	1.96	14.49	77994	565	1002	8.2	20.3
2339.0	9.1	50.0	100	9.3	1.89	14.60	78650	464.15	996.27	8.2	20.3
2340.0	8.5	50.0	100	9.3	1.91	14.71	79354	497.14	991.31	8.2	20.3
2341.0	3.6	50.0	80	9.3	2.14	14.99	80670	1163	993	8.2	20.3
2342.0	5.4	50.0	80	9.3	2.00	15.17	81555	782.23	990.94	8.2	20.3
2343.0	5.2	50.0	80	9.3	2.01	15.37	82484	821.10	989.30	8.2	20.3
2344.0	8.8	50.0	100	9.3	1.90	15.48	83168	483.00	984.46	8.2	20.3
2345.0	8.4	50.0	100	9.3	1.92	15.60	83881	504.21	979.92	8.2	20.3
2346.0	8.3	50.0	110	9.3	1.96	15.72	84680	513.63	975.54	8.2	20.3
2347.0	8.9	50.0	110	9.3	1.93	15.83	85423	477.11	970.91	8.2	20.3
2348.0	8.2	50.0	110	9.3	1.96	15.95	86228	517.17	966.73	8.2	20.3
2349.0	8.1	50.0	110	9.3	1.97	16.08	87045	525.41	962.70	8.2	20.3
2350.0	5.2	50.0	95	9.3	2.07	16.27	88133	809.32	961.32	8.2	20.3
2351.0	6.8	50.0	95	9.3	1.98	16.42	88977	627.90	958.33	8.2	20.3
2352.0	6.9	50.0	95	9.3	1.97	16.56	89799	611.41	955.25	8.2	20.3
2353.0	7.9	50.0	95	9.3	1.92	16.69	90518	534.84	951.55	8.2	20.3
2354.0	6.7	50.0	95	9.3	1.98	16.84	91366	631.44	948.75	8.2	20.3
2355.0	6.8	50.0	95	9.3	1.98	16.98	92210	627.90	945.98	8.2	20.3
2356.0	8.0	48.9	95	9.3	1.90	17.11	92920	527.77	942.39	8.2	20.3
2357.0	7.6	48.1	95	9.3	1.91	17.24	93672	559.58	939.14	8.2	20.3
2358.0	6.7	48.7	95	9.3	1.97	17.39	94523	633.79	936.56	8.2	20.3
2359.0	8.4	49.4	95	9.3	1.89	17.51	95200	503.03	932.94	8.2	20.3
2360.0	6.3	48.2	95	9.3	1.98	17.67	96107	675.03	930.80	8.2	20.3
2361.0	7.5	47.3	95	9.3	1.91	17.80	96872	569.00	927.82	8.2	20.3
2362.0	6.3	49.0	95	9.3	1.99	17.96	97772	670.31	925.72	8.2	20.3
2363.0	7.7	47.3	95	9.3	1.90	18.09	98517	553.69	922.71	8.2	20.3
2364.0	7.5	47.4	95	9.3	1.91	18.22	99277	565.47	919.85	8.2	20.3
2365.0	8.6	47.1	95	9.3	1.86	18.34	99940	493.61	916.45	8.2	20.3
2366.0	6.1	47.2	95	9.3	1.97	18.50	100869	691.52	914.68	8.2	20.3
2367.0	6.5	47.7	95	9.3	1.96	18.66	101743	650.29	912.60	8.2	20.3
2368.0	7.7	47.4	95	9.3	1.90	18.79	102483	550.15	909.79	8.2	20.3
2369.0	6.9	47.8	95	9.3	1.94	18.93	103314	618.48	907.54	8.2	20.3
2370.0	7.7	48.2	95	9.3	1.91	19.06	104057	552.51	904.82	8.2	20.3
2371.0	8.1	48.0	95	9.3	1.89	19.19	104760	523.58	901.92	8.2	20.3
2372.0	7.2	48.3	95	9.3	1.93	19.32	105550	587.26	899.55	8.2	20.3
2373.0	9.0	47.7	95	9.3	1.85	19.44	106185	472.40	896.35	8.2	20.3
2374.0	5.4	48.9	95	9.3	2.04	19.62	107236	782.23	895.50	8.2	20.3
2375.0	7.7	46.9	95	9.3	1.89	19.75	107980	553.69	892.98	8.2	20.3
2376.0	7.0	47.5	95	9.3	1.93	19.89	108789	601.99	890.85	8.2	20.3
2377.0	9.2	47.7	95	9.3	1.84	20.00	109408	460.62	887.73	8.2	20.3
2378.0	5.7	46.8	95	9.3	2.00	20.18	110414	748.07	886.72	8.2	20.3
2379.0	13.5	47.7	95	9.3	1.70	20.25	110835	313.36	882.61	8.2	20.3
2380.0	6.1	47.1	95	9.3	1.97	20.42	111767	693.87	881.27	8.2	20.3
2381.0	6.0	47.7	95	9.3	1.99	20.58	112725	712.72	880.08	8.2	20.3
2382.0	6.6	47.5	95	9.3	1.95	20.74	113588	642.04	878.41	8.2	20.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2383.0	9.1	48.6	95	9.3	1.85	20.85	114215	466.04	875.54	8.2	20.3
2384.0	6.3	47.4	95	9.3	1.97	21.00	115117	671.49	874.13	8.2	20.3
2385.0	13.3	46.4	95	9.3	1.69	21.08	115545	318.08	870.31	8.2	20.3
2386.0	12.3	46.4	95	9.3	1.72	21.16	116007	343.99	866.72	8.2	20.3
2387.0	6.9	47.4	95	9.3	1.94	21.30	116834	614.95	865.01	8.2	20.3
2388.0	8.0	46.2	95	9.3	1.87	21.43	117546	530.13	862.76	8.2	20.3
2389.0	7.5	47.5	95	9.3	1.91	21.56	118306	565.47	860.77	8.2	20.3
2390.0	7.7	47.7	95	9.3	1.90	21.69	119049	552.51	858.72	8.2	20.3
2391.0	8.4	47.6	95	9.3	1.87	21.81	119726	504.21	856.39	8.2	20.3
2392.0	7.4	47.4	95	9.3	1.91	21.95	120497	573.71	854.53	8.2	20.3
2393.0	12.6	47.0	95	9.3	1.72	22.03	120950	336.59	851.16	8.2	20.3
2394.0	6.9	47.3	95	9.3	1.94	22.17	121778	616.52	849.64	8.2	20.3
2395.0	7.3	46.3	95	9.3	1.90	22.31	122556	578.43	847.90	8.2	20.3
2396.0	6.4	47.0	95	9.3	1.96	22.46	123442	659.71	846.70	8.2	20.4
2397.0	8.0	46.6	95	9.3	1.88	22.59	124159	533.07	844.71	8.2	20.4
2398.0	7.1	47.3	95	9.3	1.93	22.73	124966	600.81	843.17	8.2	20.4
2399.0	7.4	49.1	95	9.3	1.93	22.87	125736	572.54	841.48	8.2	20.4
2400.0	6.1	50.1	95	9.3	2.02	23.03	126670	695.05	840.56	8.2	20.4
2401.0	8.4	50.3	95	9.3	1.90	23.15	127349	505.39	838.49	8.2	20.4
2402.0	6.7	50.1	95	9.3	1.98	23.30	128204	636.15	837.25	8.2	20.4
2403.0	9.0	49.2	95	9.3	1.87	23.41	128841	473.58	835.02	8.2	20.4
2404.0	7.6	50.3	95	9.3	1.94	23.54	129590	557.22	833.33	8.2	20.4
2405.0	6.6	50.2	95	9.3	1.99	23.69	130453	642.04	832.18	8.2	20.4
2406.0	12.0	49.0	95	9.3	1.76	23.78	130928	353.42	829.31	8.2	20.4
2407.0	9.7	49.4	95	9.3	1.84	23.88	131513	435.29	826.95	8.2	20.4
2408.0	8.0	50.2	95	9.3	1.92	24.01	132228	532.48	825.21	8.2	20.4
2409.0	7.3	46.9	95	9.3	1.91	24.14	133004	577.25	823.75	8.2	20.4
2410.0	9.1	46.0	95	9.3	1.82	24.25	133631	466.04	821.65	8.2	20.4
2411.0	8.2	47.0	95	9.3	1.87	24.37	134325	516.58	819.87	8.2	20.4
2412.0	5.9	46.5	95	9.3	1.98	24.54	135286	715.08	819.26	8.2	20.4
2413.0	9.0	47.7	95	9.3	1.85	24.65	135916	468.87	817.25	8.2	20.4
2414.0	6.9	47.8	95	9.3	1.94	24.80	136738	611.41	816.07	8.2	20.4
2415.0	5.9	48.1	95	9.3	2.00	24.97	137707	720.97	815.53	8.2	20.4
2416.0	10.9	47.7	95	9.3	1.78	25.06	138228	387.58	813.10	8.2	20.4
2417.0	7.0	46.7	95	9.3	1.92	25.20	139037	601.99	811.91	8.2	20.4
2418.0	9.0	46.4	95	9.3	1.83	25.31	139667	468.87	809.99	8.2	20.4
2419.0	10.1	46.0	95	9.3	1.79	25.41	140231	419.90	807.82	8.2	20.4
2420.0	22.0	46.5	95	9.3	1.52	25.45	140491	193.20	804.42	8.2	20.4
2421.0	6.8	43.0	95	9.3	1.88	25.60	141330	624.37	803.43	8.2	20.4
2422.0	9.5	41.7	95	9.3	1.75	25.71	141930	446.48	801.47	8.2	20.4
2423.0	8.6	42.7	95	9.3	1.80	25.82	142591	491.25	799.78	8.2	20.4
2424.0	27.5	41.7	95	9.3	1.39	25.86	142798	154.33	796.29	8.2	20.4
2425.0	18.3	40.8	95	9.3	1.52	25.91	143110	232.08	793.25	8.2	20.4
2426.0	14.0	41.8	95	9.3	1.62	25.99	143518	303.94	790.62	8.2	20.4
2427.0	20.5	42.4	95	9.3	1.50	26.03	143797	207.34	787.51	8.2	20.4
2428.0	11.0	43.9	95	9.3	1.73	26.13	144315	385.22	785.38	8.2	20.4
2429.0	37.0	44.0	95	9.3	1.32	26.15	144469	114.62	781.84	8.2	20.4
2430.0	22.0	46.5	95	9.3	1.52	26.20	144728	192.77	778.75	8.2	20.4
2431.0	6.8	43.0	95	9.3	1.88	26.35	145567	624.37	777.95	8.2	20.4
2432.0	9.5	41.7	95	9.3	1.75	26.45	146167	446.48	776.23	8.2	20.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2433.0	8.6	42.7	95	9.3	1.80	26.57	146827	491.25	774.75	8.2	20.4
2434.0	27.5	41.7	95	9.3	1.39	26.60	147035	154.33	771.57	8.2	20.4
2435.0	18.3	40.8	95	9.3	1.52	26.66	147347	232.08	768.81	8.2	20.4
2436.0	14.0	41.8	95	9.3	1.62	26.73	147755	303.94	766.44	8.2	20.4
2437.0	20.5	42.4	95	9.3	1.50	26.78	148034	207.34	763.61	8.2	20.4
2438.0	11.0	43.9	95	9.3	1.73	26.87	148552	385.22	761.71	8.2	20.4
2439.0	37.0	44.0	95	9.3	1.32	26.90	148706	114.62	758.47	8.2	20.4
2440.0	18.1	42.8	95	9.3	1.55	26.95	149021	234.43	755.85	8.2	20.4
2441.0	8.3	44.1	95	9.3	1.83	27.07	149705	508.92	754.63	8.2	20.4
2442.0	9.8	44.1	95	9.3	1.77	27.17	150289	434.70	753.05	8.2	20.4
2443.0	10.8	43.5	95	9.3	1.73	27.27	150816	392.29	751.28	8.2	20.4
2444.0	21.4	42.5	95	9.3	1.49	27.31	151082	197.91	748.57	8.2	20.4
2445.0	9.0	43.4	95	9.3	1.79	27.42	151714	470.04	747.22	8.2	20.4
2446.0	8.5	46.8	95	9.3	1.86	27.54	152387	500.67	746.03	8.2	20.4
2447.0	13.5	41.8	95	9.3	1.63	27.62	152808	313.36	743.94	8.2	20.4
2448.0	11.4	42.0	95	9.3	1.69	27.70	153307	371.09	742.15	8.2	20.4
2449.0	18.8	43.2	95	9.3	1.54	27.76	153609	225.01	739.69	8.2	20.4
2450.0	40.0	38.1	95	9.3	1.23	27.78	153752	106.03	736.68	8.2	20.4
2451.0	23.4	33.1	95	9.3	1.35	27.82	153996	181.42	734.05	8.2	20.4
2452.0	22.4	30.9	95	9.3	1.34	27.87	154251	189.67	731.49	8.2	20.4
2453.0	34.6	35.4	95	9.3	1.25	27.90	154415	122.52	728.64	8.2	20.4
2454.0	36.0	39.5	95	9.3	1.28	27.93	154574	117.81	725.80	8.2	20.4
2455.0	18.7	36.6	95	9.3	1.47	27.98	154879	227.36	723.48	8.2	20.4
2456.0	31.6	35.9	95	9.3	1.29	28.01	155060	134.30	720.76	8.2	20.4
2457.0	19.9	39.5	95	9.3	1.48	28.06	155346	213.23	718.43	8.2	20.4
2458.0	31.0	37.0	95	9.3	1.31	28.09	155530	136.65	715.77	8.2	20.4
2459.0	34.6	37.0	95	9.3	1.27	28.12	155695	122.52	713.07	8.2	20.4
2459.2	20.2	41.5	95	9.3	1.50	28.13	155751	210.09	712.61	8.2	20.4

BIT NUMBER	6	IADC CODE	4	INTERVAL	2459.2- 2470.7
CHRIS RC4		SIZE	9.675	NOZZLES	15 15 14
COST	21210.00	TRIP TIME	7.2	BIT RUN	11.5
TOTAL HOURS	0.52	TOTAL TURNS	3271	CONDITION	T0 B0 G0.200

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2459.4	2.1	5.0	80	9.3	1.39	0.10	464	2050	260776	8.2	20.4
2459.6	10.6	7.0	80	9.3	1.12	0.12	555	401	130588	8.2	20.4
2459.8	20.6	8.0	100	9.3	1.05	0.13	613	206	87128	8.2	20.4
2460.0	20.0	9.0	100	9.3	1.08	0.14	673	212	65399	8.2	20.4
2460.2	13.3	10.0	100	9.3	1.21	0.15	763	319	52383	8.2	20.4
2460.4	24.4	10.0	100	9.3	1.06	0.16	812	174	43681	8.2	20.4
2460.6	34.3	10.0	100	9.3	0.97	0.16	847	124	37459	8.2	20.4
2460.8	22.5	10.0	100	9.3	1.08	0.17	901	188	32800	8.2	20.4
2461.0	31.3	10.0	100	9.3	1.00	0.18	939	135	29171	8.2	20.4
2461.2	24.0	10.0	100	9.3	1.06	0.19	989	177	26271	8.2	20.4
2461.4	22.5	10.0	100	9.3	1.08	0.20	1042	188	23900	8.2	20.4
2461.6	24.8	10.0	100	9.3	1.05	0.20	1091	171	21923	8.2	20.4
2461.8	28.8	8.2	100	9.3	0.97	0.21	1132	147	20248	8.2	20.4
2462.0	37.9	8.1	100	9.3	0.91	0.22	1164	112	18809	8.2	20.4
2462.2	21.8	9.0	100	9.3	1.06	0.23	1219	194	17568	8.2	20.4
2462.4	27.7	8.0	100	9.3	0.98	0.23	1262	153	16480	8.2	20.4
2462.6	22.5	8.4	100	9.3	1.04	0.24	1316	188	15522	8.2	20.4
2462.8	18.9	9.5	100	9.3	1.11	0.25	1379	224	14672	8.2	20.4
2463.0	16.0	9.2	100	9.3	1.14	0.27	1454	265	13913	8.2	20.4
2463.2	21.2	7.6	100	9.3	1.03	0.27	1511	200	13228	8.2	20.4
2463.4	18.9	5.8	100	9.3	1.00	0.29	1574	224	12609	8.2	20.4
2463.6	25.7	6.7	100	9.3	0.96	0.29	1621	165	12043	8.2	20.4
2463.8	20.6	7.7	100	9.3	1.04	0.30	1679	206	11528	8.2	20.4
2464.0	24.8	10.2	125	9.3	1.11	0.31	1739	171	11055	8.2	20.4
2464.2	32.7	11.3	125	9.3	1.07	0.32	1785	130	10618	8.2	20.4
2464.4	34.3	10.9	125	9.3	1.05	0.32	1829	124	10214	8.2	20.4
2464.6	28.8	9.6	125	9.3	1.06	0.33	1881	147	9842	8.2	20.4
2464.8	28.8	8.5	125	9.3	1.03	0.34	1933	147	9495	8.2	20.4
2465.0	36.0	9.5	125	9.3	1.01	0.34	1975	118	9172	8.2	20.4
2465.2	32.7	11.0	125	9.3	1.06	0.35	2021	130	8871	8.2	20.4
2465.4	45.0	10.0	125	9.3	0.96	0.35	2054	94	8587	8.2	20.4
2465.6	26.7	9.6	125	9.3	1.08	0.36	2110	159	8324	8.2	20.4
2465.8	27.7	9.6	125	9.3	1.07	0.37	2164	153	8076	8.2	20.4
2466.0	36.0	9.1	125	9.3	1.00	0.37	2206	118	7842	8.2	20.4
2466.2	30.0	9.6	125	9.3	1.05	0.38	2256	141	7622	8.2	20.4
2466.4	36.0	9.3	125	9.3	1.00	0.39	2298	118	7414	8.2	20.4
2466.6	40.0	9.2	125	9.3	0.97	0.39	2335	106	7216	8.2	20.4
2466.8	27.7	8.8	125	9.3	1.05	0.40	2389	153	7030	8.2	20.4
2467.0	30.0	9.3	125	9.3	1.04	0.40	2439	141	6854	8.2	20.4
2467.2	36.0	8.8	125	9.3	0.99	0.41	2481	118	6685	8.2	20.4
2467.4	40.0	8.8	125	9.3	0.96	0.41	2519	106	6525	8.2	20.4
2467.6	34.3	9.1	125	9.3	1.01	0.42	2562	124	6373	8.2	20.4
2467.8	34.3	8.1	125	9.3	0.98	0.43	2606	124	6227	8.2	20.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2468.0	32.7	9.7	125	9.3	1.03	0.43	2652	130	6089	8.2	20.4
2468.2	30.0	8.2	125	9.3	1.02	0.44	2702	141	5956	8.2	20.4
2468.4	45.0	9.2	125	9.3	0.94	0.44	2735	94	5829	8.2	20.4
2468.6	28.8	8.0	125	9.3	1.02	0.45	2787	147	5708	8.2	20.4
2468.8	48.0	8.5	125	9.3	0.91	0.45	2819	88	5591	8.2	20.4
2469.0	31.3	7.5	125	9.3	0.99	0.46	2867	135	5480	8.2	20.4
2469.2	28.8	9.3	125	9.3	1.05	0.47	2919	147	5373	8.2	20.4
2469.4	31.3	8.8	125	9.3	1.02	0.47	2967	135	5270	8.2	20.4
2469.6	36.0	10.1	125	9.3	1.02	0.48	3008	118	5171	8.2	20.4
2469.8	31.3	10.1	125	9.3	1.05	0.49	3056	135	5076	8.2	20.4
2470.0	27.7	9.0	125	9.3	1.06	0.49	3110	153	4985	8.2	20.4
2470.2	34.3	8.8	125	9.3	1.00	0.50	3154	124	4897	8.2	20.4
2470.4	34.3	8.4	125	9.3	0.99	0.51	3198	124	4812	8.2	20.4
2470.6	32.7	8.0	125	9.3	0.99	0.51	3244	130	4729	8.2	20.4
2470.7	27.7	9.6	125	9.3	1.07	0.52	3271	153	4690	8.2	20.4

BIT NUMBER	7		IADC CODE	517		INTERVAL	2470.7- 2769.8						
HTC J22			SIZE	12.250		NOZZLES	18 18 18						
COST	6788.00		TRIP TIME	7.8		BIT RUN	299.1						
TOTAL HOURS	30.31		TOTAL TURNS	141892		CONDITION	T7 B8 G0.250						

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2471.0	7.7	46.7	84	9.3	1.84	0.03	178	551	135278	8.2	20.4
2472.0	17.0	30.0	70	9.3	1.32	0.09	425	249	31410	8.2	20.5
2473.0	13.0	29.1	70	9.3	1.39	0.17	748	326	17895	8.2	20.5
2474.0	16.1	27.3	70	9.3	1.30	0.23	1009	264	12552	8.2	20.5
2475.0	17.6	28.2	70	9.3	1.28	0.28	1247	240	9689	8.2	20.5
2476.0	15.2	28.4	75	9.3	1.35	0.35	1543	279	7914	8.2	20.5
2477.0	18.7	28.4	75	9.3	1.29	0.40	1785	227	6694	8.2	20.5
2478.0	18.4	27.7	75	9.3	1.29	0.46	2030	231	5808	8.2	20.5
2479.0	8.4	24.1	75	9.3	1.46	0.58	2565	504	5169	8.2	20.5
2480.0	15.5	29.1	75	9.3	1.36	0.64	2856	274	4643	8.2	20.5
2481.0	18.8	32.3	75	9.3	1.34	0.69	3095	225	4214	8.2	20.5
2482.0	20.0	36.3	75	9.3	1.36	0.74	3320	212	3860	8.2	20.5
2483.0	19.9	34.7	75	9.3	1.35	0.80	3546	213	3563	8.2	20.5
2484.0	10.6	45.0	75	9.3	1.68	0.89	3972	402	3326	8.2	20.5
2485.0	19.6	44.0	75	9.3	1.45	0.94	4202	217	3108	8.2	20.5
2486.0	18.2	42.0	75	9.3	1.46	1.00	4450	233	2920	8.2	20.5
2487.0	22.0	43.1	75	9.3	1.41	1.04	4655	193	2753	8.2	20.5
2488.0	20.5	42.4	75	9.3	1.42	1.09	4875	207	2606	8.2	20.5
2489.0	29.5	44.4	75	9.3	1.32	1.12	5027	144	2471	8.2	20.5
2490.0	10.7	44.8	75	9.3	1.67	1.22	5448	397	2364	8.2	20.5
2491.0	6.2	42.4	75	9.3	1.83	1.38	6178	688	2281	8.2	20.5
2492.0	8.5	39.9	75	9.3	1.69	1.50	6706	497	2198	8.2	20.5
2493.0	8.1	40.7	75	9.3	1.71	1.62	7262	524	2123	8.2	20.5
2494.0	24.2	40.6	75	9.3	1.35	1.66	7448	176	2039	8.2	20.5
2495.0	22.9	40.0	75	9.3	1.36	1.71	7645	185	1963	8.2	20.5
2496.0	22.4	39.7	75	9.3	1.36	1.75	7846	190	1893	8.2	20.5
2497.0	24.0	38.4	75	9.3	1.33	1.79	8033	177	1827	8.2	20.5
2498.0	22.4	39.5	75	9.3	1.36	1.84	8235	190	1767	8.2	20.5
2499.0	15.3	39.4	75	9.3	1.49	1.90	8530	278	1715	8.2	20.5
2500.0	19.3	39.3	75	9.3	1.41	1.95	8763	220	1664	8.2	20.5
2501.0	22.9	39.4	75	9.3	1.35	2.00	8960	185	1615	8.2	20.5
2502.0	21.3	37.0	75	9.3	1.35	2.05	9171	199	1570	8.2	20.5
2503.0	23.7	39.3	75	9.3	1.34	2.09	9361	179	1527	8.2	20.5
2504.0	22.8	40.5	75	9.3	1.37	2.13	9558	186	1486	8.2	20.5
2505.0	22.6	40.2	75	9.3	1.36	2.18	9757	187	1449	8.2	20.5
2506.0	20.1	40.8	75	9.3	1.41	2.23	9981	211	1413	8.2	20.5
2507.0	27.1	42.8	75	9.3	1.33	2.26	10147	157	1379	8.2	20.5
2508.0	18.8	45.7	75	9.3	1.48	2.32	10386	225	1348	8.2	20.5
2509.0	19.9	44.7	75	9.3	1.46	2.37	10612	213	1318	8.2	20.5
2510.0	20.0	44.5	75	9.3	1.45	2.42	10837	212	1290	8.2	20.5
2511.0	20.7	44.2	75	9.3	1.44	2.46	11055	205	1263	8.2	20.5
2512.0	20.7	43.9	75	9.3	1.43	2.51	11272	205	1238	8.2	20.5
2513.0	17.2	44.4	75	9.3	1.50	2.57	11533	246	1214	8.2	20.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2514.0	21.1	44.7	75	9.3	1.44	2.62	11747	201	1191	8.2	20.5
2515.0	19.1	44.8	75	9.3	1.47	2.67	11982	221	1169	8.2	20.5
2516.0	19.3	45.0	75	9.3	1.47	2.72	12216	220	1148	8.2	20.5
2517.0	25.2	45.0	75	9.3	1.38	2.76	12395	168	1127	8.2	20.5
2518.0	23.1	37.5	75	9.3	1.33	2.80	12590	184	1107	8.2	20.5
2519.0	26.5	38.8	75	9.3	1.30	2.84	12760	160	1087	8.2	20.5
2520.0	17.1	39.6	75	9.3	1.45	2.90	13022	247	1070	8.2	20.5
2521.0	17.2	39.7	75	9.3	1.45	2.96	13283	246	1054	8.2	20.5
2522.0	16.0	40.3	75	9.3	1.48	3.02	13565	265	1038	8.2	20.5
2523.0	11.3	40.0	75	9.3	1.59	3.11	13962	375	1026	8.2	20.5
2524.0	11.4	39.5	75	9.3	1.58	3.20	14357	372	1013	8.2	20.5
2525.0	13.7	43.4	75	9.3	1.57	3.27	14686	310	1001	8.2	20.5
2526.0	18.5	44.0	75	9.3	1.47	3.32	14930	229.72	986.59	8.2	20.5
2527.0	25.5	42.0	75	9.3	1.34	3.36	15106	166.11	972.02	8.2	20.5
2528.0	19.0	43.6	75	9.3	1.46	3.42	15342	222.65	958.94	8.2	20.5
2529.0	24.7	43.6	75	9.3	1.37	3.46	15525	172.00	945.44	8.2	20.5
2530.0	25.4	43.3	75	9.3	1.36	3.50	15702	167.28	932.32	8.2	20.5
2531.0	24.0	43.9	75	9.3	1.38	3.54	15890	176.71	919.79	8.2	20.5
2532.0	20.8	46.3	75	9.3	1.46	3.59	16106	203.80	908.11	8.2	20.5
2533.0	20.9	46.1	75	9.3	1.45	3.63	16321	202.63	896.78	8.2	20.5
2534.0	18.4	45.8	75	9.3	1.49	3.69	16566	230.90	886.26	8.2	20.5
2535.0	22.5	45.8	75	9.3	1.42	3.73	16766	188.49	875.41	8.2	20.5
2536.0	18.2	45.2	75	9.3	1.49	3.79	17013	233.26	865.58	8.2	20.5
2537.0	20.2	46.5	75	9.3	1.47	3.84	17236	209.69	855.69	8.2	20.5
2538.0	16.4	46.5	75	9.3	1.54	3.90	17511	259.17	846.82	8.2	20.5
2539.0	18.3	46.1	75	9.3	1.50	3.95	17757	232.08	837.82	8.2	20.5
2540.0	18.5	45.1	75	9.3	1.49	4.01	18001	229.72	829.05	8.2	20.5
2541.0	16.8	45.6	75	9.3	1.52	4.07	18268	252.10	820.84	8.2	20.5
2542.0	23.1	44.2	75	9.3	1.40	4.11	18463	183.78	811.91	8.2	20.5
2543.0	22.8	44.6	75	9.3	1.41	4.15	18661	186.13	803.25	8.2	20.5
2544.0	21.3	44.8	75	9.3	1.43	4.20	18872	199.09	795.01	8.2	20.5
2545.0	12.0	45.6	75	9.3	1.64	4.28	19248	354.59	789.08	8.2	20.5
2546.0	19.0	44.8	75	9.3	1.47	4.34	19485	222.65	781.56	8.2	20.5
2547.0	19.0	45.4	75	9.3	1.48	4.39	19721	222.65	774.23	8.2	20.5
2548.0	18.7	44.6	75	9.3	1.48	4.44	19962	227.36	767.16	8.2	20.5
2549.0	19.3	43.6	75	9.3	1.45	4.50	20196	220.30	760.17	8.2	20.5
2550.0	15.2	44.4	75	9.3	1.54	4.56	20492	279.20	754.11	8.2	20.6
2551.0	8.0	44.8	75	9.3	1.77	4.69	21055	530.13	751.32	8.2	20.6
2552.0	15.1	44.5	75	9.3	1.55	4.75	21352	280.38	745.53	8.2	20.6
2553.0	8.4	45.2	80	9.3	1.78	4.87	21921	503.03	742.58	8.2	20.6
2554.0	19.8	43.7	80	9.3	1.47	4.92	22164	214.41	736.24	8.2	20.6
2555.0	20.5	42.4	80	9.3	1.44	4.97	22398	207.00	729.96	8.2	20.6
2556.0	22.8	42.4	80	9.3	1.41	5.01	22609	186.13	723.59	8.2	20.6
2557.0	20.5	43.9	80	9.3	1.46	5.06	22844	207.34	717.60	8.2	20.6
2558.0	23.2	44.2	80	9.3	1.42	5.11	23050	182.60	711.48	8.2	20.6
2559.0	20.9	43.5	80	9.3	1.45	5.15	23280	202.63	705.71	8.2	20.6
2560.0	25.4	44.2	80	9.3	1.39	5.19	23469	167.28	699.68	8.2	20.6
2561.0	20.6	43.2	80	9.3	1.45	5.24	23702	206.16	694.22	8.2	20.6
2562.0	20.2	43.2	70	9.3	1.41	5.29	23910	209.69	688.91	8.2	20.6
2563.0	19.5	42.5	70	9.3	1.42	5.34	24126	217.94	683.81	8.2	20.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2564.0	15.9	43.4	70	9.3	1.49	5.41	24389	265.90	679.33	8.2	20.6
2565.0	17.9	42.5	70	9.3	1.44	5.46	24624	236.79	674.64	8.2	20.6
2566.0	15.5	42.4	70	9.3	1.49	5.53	24896	274.49	670.44	8.2	20.6
2567.0	19.7	42.4	70	9.3	1.41	5.58	25109	215.58	665.71	8.2	20.6
2568.0	20.2	42.8	70	9.3	1.41	5.63	25317	209.69	661.03	8.2	20.6
2569.0	17.4	42.9	70	9.3	1.46	5.68	25558	243.86	656.78	8.2	20.6
2570.0	12.0	43.8	70	9.3	1.60	5.77	25909	354.59	653.74	8.2	20.6
2571.0	17.3	43.4	70	9.3	1.46	5.82	26152	245.04	649.67	8.2	20.6
2572.0	14.1	44.4	70	9.3	1.55	5.90	26450	300.40	646.22	8.2	20.6
2573.0	11.3	43.5	70	9.3	1.61	5.98	26822	375.80	643.57	8.2	20.6
2574.0	12.0	41.9	70	9.3	1.57	6.07	27173	354.73	640.78	8.2	20.6
2575.0	9.0	42.8	70	9.3	1.68	6.18	27637	468.87	639.13	8.2	20.6
2576.0	10.3	41.5	70	9.3	1.62	6.28	28047	413.50	636.99	8.2	20.6
2577.0	9.6	43.8	70	9.3	1.67	6.38	28485	442.95	635.16	8.2	20.6
2578.0	12.5	46.4	70	9.3	1.61	6.46	28823	340.46	632.42	8.2	20.6
2579.0	8.8	43.4	70	9.3	1.70	6.57	29300	481.82	631.02	8.2	20.6
2580.0	10.4	40.0	70	9.3	1.60	6.67	29702	406.43	628.97	8.2	20.6
2581.0	9.9	41.2	70	9.3	1.63	6.77	30127	428.81	627.16	8.2	20.6
2582.0	8.1	40.9	70	9.3	1.69	6.89	30643	520.70	626.20	8.2	20.6
2583.0	11.2	39.7	70	9.3	1.57	6.98	31018	379.33	624.00	8.2	20.6
2584.0	12.0	45.8	70	9.3	1.62	7.07	31370	354.73	621.62	8.2	20.6
2585.0	17.1	44.1	70	9.3	1.48	7.13	31615	247.39	618.35	8.2	20.6
2586.0	14.7	45.4	70	9.3	1.54	7.19	31900	288.62	615.49	8.2	20.6
2587.0	13.6	45.4	70	9.3	1.57	7.27	32208	311.01	612.87	8.2	20.6
2588.0	14.8	45.5	80	9.3	1.59	7.33	32532	286.27	610.09	8.2	20.6
2589.0	14.3	49.2	80	9.3	1.64	7.40	32868	296.87	607.44	8.2	20.6
2590.0	19.3	48.1	80	9.3	1.52	7.46	33118	220.30	604.19	8.2	20.6
2591.0	12.7	49.6	80	9.3	1.69	7.54	33496	334.57	601.95	8.2	20.6
2592.0	13.0	49.4	80	9.3	1.68	7.61	33864	325.14	599.67	8.2	20.6
2594.0	11.7	46.5	80	9.3	1.68	7.78	34685	362.37	595.82	8.2	20.6
2595.0	11.8	40.0	80	9.3	1.60	7.87	35091	359.31	593.92	8.2	20.6
2596.0	13.0	40.0	80	9.3	1.57	7.94	35459	325.14	591.77	8.2	20.6
2597.0	13.2	40.0	80	9.3	1.56	8.02	35823	321.61	589.64	8.2	20.6
2598.0	13.6	30.0	80	9.3	1.43	8.09	36177	312.18	587.46	8.2	20.6
2599.0	14.2	30.0	80	9.3	1.41	8.16	36515	299.23	585.21	8.2	20.6
2600.0	12.6	28.0	80	9.3	1.42	8.24	36895	335.75	583.28	8.2	20.6
2601.0	11.2	28.0	100	9.3	1.52	8.33	37430	378.16	581.71	8.2	20.6
2602.0	10.1	50.0	100	9.3	1.85	8.43	38024	419.39	580.47	8.2	20.6
2603.0	7.5	50.0	80	9.3	1.88	8.57	38665	566.64	580.37	8.2	20.6
2604.0	13.8	50.0	80	9.3	1.66	8.64	39013	307.47	578.32	8.2	20.6
2605.0	20.3	50.0	80	9.3	1.52	8.69	39249	208.52	575.56	8.2	20.6
2606.0	16.1	50.0	80	9.3	1.61	8.75	39546	262.71	573.25	8.2	20.6
2607.0	14.1	50.0	80	9.3	1.65	8.82	39886	300.40	571.25	8.2	20.6
2608.0	16.4	50.0	80	9.3	1.60	8.88	40180	259.17	568.98	8.2	20.6
2609.0	15.4	50.0	80	9.3	1.62	8.95	40492	275.67	566.86	8.2	20.6
2610.0	17.9	50.0	80	9.3	1.57	9.00	40760	236.79	564.49	8.2	20.6
2611.0	14.5	50.0	80	9.3	1.65	9.07	41092	293.34	562.55	8.2	20.6
2612.0	9.5	50.0	80	9.3	1.79	9.18	41594	444.13	561.72	8.2	20.6
2613.0	11.3	49.0	80	9.3	1.72	9.26	42021	376.98	560.42	8.2	20.6
2614.0	11.0	50.6	80	9.3	1.75	9.36	42457	385.22	559.20	8.2	20.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2615.0	12.9	50.3	80	9.3	1.69	9.43	42830	329.86	557.61	8.2	20.6
2616.0	9.3	50.4	80	9.3	1.81	9.54	43346	455.91	556.91	8.2	20.6
2617.0	5.9	49.6	80	9.3	1.96	9.71	44158	717.44	558.00	8.2	20.6
2618.0	4.6	48.0	80	9.3	2.03	9.93	45200	920.06	560.46	8.2	20.6
2619.0	8.1	49.5	80	9.3	1.85	10.05	45790	521.88	560.20	8.2	20.6
2620.0	7.2	49.6	80	9.3	1.89	10.19	46458	590.21	560.40	8.2	20.6
2621.0	10.5	50.6	80	9.3	1.77	10.28	46914	402.89	559.35	8.2	20.6
2622.0	10.4	49.1	80	9.3	1.75	10.38	47377	408.79	558.36	8.2	20.6
2623.0	8.8	48.9	80	9.3	1.81	10.49	47922	481.82	557.86	8.2	20.6
2624.0	5.9	48.8	80	9.3	1.95	10.66	48732	715.08	558.88	8.2	20.6
2625.0	6.9	48.3	80	9.3	1.89	10.81	49426	613.77	559.24	8.2	20.6
2626.0	4.8	50.4	80	9.3	2.04	11.01	50421	878.83	561.30	8.2	20.6
2627.0	7.2	49.1	80	9.3	1.88	11.15	51090	591.38	561.49	8.2	20.6
2628.0	11.0	48.9	80	9.3	1.73	11.24	51528	386.40	560.38	8.2	20.6
2629.0	12.9	49.7	80	9.3	1.68	11.32	51901	329.86	558.92	8.2	20.7
2630.0	15.3	49.4	80	9.3	1.62	11.39	52214	276.84	557.15	8.2	20.7
2631.0	18.7	48.6	80	9.3	1.54	11.44	52472	227.36	555.09	8.2	20.7
2632.0	9.9	51.2	80	9.3	1.80	11.54	52958	429.99	554.32	8.2	20.7
2633.0	17.6	48.7	80	9.3	1.56	11.60	53230	240.32	552.38	8.2	20.7
2634.0	17.1	49.3	80	9.3	1.58	11.66	53510	247.39	550.51	8.2	20.7
2635.0	17.8	49.6	80	9.3	1.57	11.71	53780	237.97	548.61	8.2	20.7
2636.0	11.2	49.6	80	9.3	1.73	11.80	54208	378.16	547.58	8.2	20.7
2637.0	11.2	49.0	80	9.3	1.73	11.89	54636	378.16	546.56	8.2	20.7
2638.0	9.1	50.5	80	9.3	1.82	12.00	55161	464.15	546.07	8.2	20.7
2639.0	6.1	50.0	80	9.3	1.95	12.16	55942	690.34	546.93	8.2	20.7
2640.0	4.2	50.2	80	9.3	2.09	12.41	57097	1020	550	8.2	20.7
2641.0	6.1	49.8	80	9.3	1.95	12.57	57881	692.70	550.56	8.2	20.7
2642.0	8.1	49.5	80	9.3	1.85	12.69	58473	523.06	550.40	8.2	20.7
2643.0	5.8	50.0	80	9.3	1.97	12.86	59298	729.22	551.44	8.2	20.7
2644.0	7.7	49.6	80	9.3	1.86	12.99	59920	548.97	551.42	8.2	20.7
2645.0	14.9	49.2	80	9.3	1.63	13.06	60241	283.91	549.89	8.2	20.7
2646.0	14.5	49.5	80	9.3	1.64	13.13	60572	292.16	548.42	8.2	20.7
2647.0	14.2	48.9	80	9.3	1.64	13.20	60909	298.05	547.00	8.2	20.7
2648.0	14.0	49.2	80	9.3	1.65	13.27	61253	303.94	545.63	8.2	20.7
2649.0	14.3	49.1	80	9.3	1.64	13.34	61589	296.87	544.23	8.2	20.7
2650.0	13.2	50.0	80	9.3	1.68	13.42	61953	321.29	542.99	8.2	20.7
2651.0	13.7	48.5	80	9.3	1.65	13.49	62302	308.91	541.69	8.2	20.7
2652.0	10.6	45.0	80	9.3	1.70	13.58	62757	401.72	540.92	8.2	20.7
2653.0	12.4	45.2	80	9.3	1.65	13.66	63144	341.64	539.83	8.2	20.7
2654.0	14.9	46.2	80	9.3	1.59	13.73	63466	285.09	538.44	8.2	20.7
2655.0	8.3	43.0	80	9.3	1.76	13.85	64044	510.10	538.28	8.2	20.7
2656.0	8.8	38.5	80	9.3	1.68	13.97	64586	479.47	537.96	8.2	20.7
2657.0	11.4	40.4	80	9.3	1.62	14.05	65009	373.44	537.08	8.2	20.7
2658.0	10.4	42.5	80	9.3	1.67	14.15	65472	408.79	536.40	8.2	20.7
2659.0	12.1	45.4	80	9.3	1.66	14.23	65868	349.88	535.41	8.2	20.7
2660.0	10.7	43.1	80	9.3	1.67	14.33	66317	397.00	534.67	8.2	20.7
2661.0	11.2	44.2	80	9.3	1.67	14.42	66745	378.16	533.85	8.2	20.7
2662.0	21.2	41.1	80	9.3	1.42	14.46	66972	200.27	532.11	8.2	20.7
2663.0	14.3	41.2	80	9.3	1.55	14.53	67306	295.69	530.88	8.2	20.7
2664.0	13.4	35.7	80	9.3	1.50	14.61	67664	315.72	529.77	8.2	20.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2665.0	17.3	41.3	80	9.3	1.49	14.66	67941	245.04	528.30	8.2	20.7
2666.0	5.5	45.6	80	9.3	1.93	14.85	68810	768.09	529.53	8.2	20.7
2667.0	7.5	43.7	80	9.3	1.80	14.98	69449	564.29	529.71	8.2	20.7
2668.0	7.0	43.7	80	9.3	1.82	15.12	70130	601.99	530.07	8.2	20.7
2669.0	4.6	44.4	80	9.3	1.97	15.34	71166	915.35	532.01	8.2	20.7
2670.0	5.6	45.3	80	9.3	1.92	15.51	72018	752.78	533.12	8.2	20.7
2671.0	5.3	46.7	80	9.3	1.96	15.70	72920	796.37	534.44	8.2	20.7
2672.0	5.4	47.0	80	9.3	1.95	15.89	73802	779.87	535.66	8.2	20.7
2673.0	5.3	47.7	80	9.3	1.97	16.07	74704	796.37	536.94	8.2	20.7
2674.0	13.3	47.8	80	9.3	1.65	16.15	75065	319.25	535.87	8.2	20.7
2675.0	6.1	47.8	80	9.3	1.92	16.31	75849	692.70	536.64	8.2	20.7
2676.0	5.9	47.9	80	9.3	1.94	16.48	76662	718.61	537.53	8.2	20.7
2677.0	9.1	48.1	80	9.3	1.79	16.59	77188	464.15	537.17	8.2	20.7
2678.0	8.6	50.1	80	9.3	1.83	16.71	77745	492.43	536.96	8.2	20.7
2679.0	7.4	50.6	80	9.3	1.89	16.84	78392	571.36	537.12	8.2	20.7
2680.0	9.8	48.3	80	9.3	1.77	16.94	78884	434.70	536.63	8.2	20.7
2681.0	11.1	47.9	80	9.3	1.72	17.03	79317	382.87	535.90	8.2	20.7
2682.0	11.5	48.0	80	9.3	1.70	17.12	79733	367.55	535.10	8.2	20.7
2683.0	10.7	48.4	80	9.3	1.73	17.21	80180	394.65	534.44	8.2	20.7
2684.0	11.3	48.6	80	9.3	1.72	17.30	80604	374.62	533.69	8.2	20.7
2685.0	10.3	48.5	80	9.3	1.75	17.40	81069	411.14	533.12	8.2	20.7
2686.0	10.7	48.1	80	9.3	1.73	17.49	81516	394.65	532.48	8.2	20.7
2687.0	12.0	48.3	80	9.3	1.69	17.58	81914	352.24	531.65	8.2	20.7
2688.0	12.0	48.1	80	9.3	1.69	17.66	82314	353.42	530.82	8.2	20.7
2689.0	10.2	47.9	80	9.3	1.75	17.76	82785	415.85	530.30	8.2	20.7
2690.0	9.4	47.4	80	9.3	1.77	17.86	83293	448.84	529.93	8.2	20.7
2691.0	21.1	47.0	80	9.3	1.48	17.91	83521	201.45	528.44	8.2	20.7
2692.0	23.2	46.4	80	9.3	1.44	17.95	83728	182.60	526.87	8.2	20.7
2693.0	7.0	46.5	80	9.3	1.86	18.10	84410	603.16	527.22	8.2	20.7
2694.0	6.9	49.6	80	9.3	1.90	18.24	85106	614.95	527.61	8.2	20.7
2695.0	6.3	47.7	80	9.3	1.91	18.40	85862	667.96	528.23	8.2	20.7
2696.0	8.3	47.8	80	9.3	1.82	18.52	86444	513.63	528.17	8.2	20.7
2697.0	17.9	47.3	80	9.3	1.54	18.57	86712	236.79	526.88	8.2	20.7
2698.0	16.0	47.0	80	9.3	1.58	18.64	87012	265.06	525.73	8.2	20.7
2699.0	17.1	48.2	80	9.3	1.57	18.70	87293	248.57	524.52	8.2	20.7
2700.0	7.6	48.0	80	9.3	1.85	18.83	87926	559.58	524.67	8.2	20.7
2701.0	8.3	47.6	80	9.3	1.81	18.95	88506	512.45	524.62	8.2	20.7
2702.0	17.5	48.9	80	9.3	1.57	19.01	88781	242.68	523.40	8.2	20.7
2703.0	14.6	48.5	80	9.3	1.63	19.07	89110	290.98	522.40	8.2	20.7
2704.0	18.8	48.1	80	9.3	1.53	19.13	89366	226.19	521.13	8.2	20.7
2705.0	9.0	48.3	80	9.3	1.80	19.24	89901	472.40	520.92	8.2	20.7
2706.0	7.8	48.5	80	9.3	1.85	19.37	90518	545.44	521.02	8.2	20.7
2707.0	4.3	49.7	80	9.3	2.08	19.60	91644	994.28	523.03	8.2	20.7
2708.0	3.9	49.4	80	9.3	2.11	19.86	92880	1092	525	8.2	20.7
2709.0	5.0	48.7	80	9.3	2.01	20.06	93840	848.20	526.78	8.2	20.8
2710.0	6.3	48.5	80	9.3	1.92	20.22	94600	671.49	527.38	8.2	20.8
2711.0	7.6	48.5	80	9.3	1.85	20.35	95228	554.86	527.50	8.2	20.8
2712.0	8.1	48.5	80	9.3	1.83	20.47	95817	520.70	527.47	8.2	20.8
2713.0	3.6	49.1	80	9.3	2.13	20.75	97156	1183	530	8.2	20.8
2714.0	4.7	48.3	80	9.4	2.00	20.96	98177	902.39	531.70	8.2	20.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2715.0	4.0	48.4	80	9.4	2.05	21.21	99362	1047	534	8.2	20.8
2716.0	4.8	49.2	80	9.4	2.01	21.42	100369	889.43	535.26	8.2	20.8
2717.0	8.2	50.6	80	9.4	1.84	21.54	100956	518.34	535.20	8.2	20.8
2718.0	4.6	43.9	80	9.4	1.95	21.76	102004	925.95	536.78	8.2	20.8
2719.0	4.5	47.5	80	9.4	2.00	21.98	103065	937.73	538.39	8.2	20.8
2720.0	3.9	47.4	80	9.4	2.05	22.24	104296	1087	541	8.2	20.8
2721.0	2.6	45.3	80	9.4	2.16	22.62	106114	1607	545	8.2	20.8
2722.0	3.1	49.0	80	9.4	2.16	22.94	107684	1387	548	8.2	20.8
2723.0	3.6	47.7	80	9.4	2.09	23.22	109021	1182	551	8.2	20.8
2724.0	10.7	47.7	80	9.4	1.71	23.32	109468	394.65	550.10	8.2	20.8
2725.0	1.9	48.9	80	9.4	2.33	23.85	112046	2278	557	8.2	20.8
2726.0	3.1	47.5	50	9.4	1.97	24.18	113022	1380	560	8.2	20.8
2727.0	13.2	48.1	50	9.4	1.48	24.25	113250	321.61	559.18	8.2	20.8
2728.0	16.3	47.9	50	9.4	1.40	24.32	113434	260.35	558.02	8.2	20.8
2729.0	9.6	48.2	50	9.4	1.59	24.42	113747	442.95	557.58	8.2	20.8
2730.0	12.6	47.7	50	9.4	1.49	24.50	113985	335.75	556.72	8.2	20.8
2731.0	11.1	51.0	80	9.3	1.75	24.59	114415	380.51	556.04	8.2	20.8
2732.0	9.4	49.0	80	9.3	1.79	24.70	114926	451.20	555.64	8.2	20.8
2733.0	11.5	47.4	80	9.3	1.70	24.78	115345	369.91	554.94	8.2	20.8
2734.0	11.9	47.6	80	9.3	1.69	24.87	115749	356.95	554.18	8.2	20.8
2735.0	15.8	48.2	80	9.3	1.59	24.93	116053	268.60	553.10	8.2	20.8
2736.0	7.1	48.5	80	9.3	1.88	25.07	116730	598.45	553.27	8.2	20.8
2737.0	5.0	49.6	80	9.3	2.02	25.27	117683	842.31	554.36	8.2	20.8
2738.0	4.3	49.3	80	9.3	2.07	25.50	118795	982.50	555.96	8.2	20.8
2739.0	4.9	49.3	80	9.3	2.02	25.71	119778	868.23	557.12	8.2	20.8
2740.0	6.2	49.2	80	9.3	1.94	25.87	120554	685.63	557.60	8.2	20.8
2741.0	4.6	49.6	80	9.3	2.05	26.08	121590	915.35	558.93	8.2	20.8
2742.0	5.5	49.7	80	9.3	1.99	26.27	122470	777.52	559.73	8.2	20.8
2743.0	5.8	48.4	80	9.3	1.95	26.44	123294	728.04	560.35	8.2	20.8
2744.0	5.4	47.9	80	9.3	1.97	26.62	124175	778.69	561.15	8.2	20.8
2745.0	5.6	50.4	80	9.3	1.99	26.80	125034	758.67	561.87	8.2	20.8
2746.0	4.9	49.1	80	9.3	2.02	27.01	126018	869.41	562.99	8.2	20.8
2747.0	6.0	48.4	80	9.3	1.94	27.17	126821	709.19	563.51	8.2	20.8
2748.0	7.0	47.7	80	9.3	1.87	27.32	127502	601.99	563.65	8.2	20.8
2749.0	10.5	47.6	80	9.3	1.73	27.41	127959	404.07	563.08	8.2	20.8
2750.0	10.1	48.1	80	9.3	1.75	27.51	128434	419.39	562.57	8.2	20.8
2751.0	10.4	47.5	80	9.3	1.73	27.61	128895	407.61	562.01	8.2	20.8
2752.0	7.9	47.5	80	9.3	1.83	27.73	129499	533.66	561.91	8.2	20.8
2753.0	4.7	48.4	80	9.3	2.02	27.94	130518	900.03	563.11	8.2	20.8
2754.0	6.1	48.5	80	9.3	1.93	28.11	131301	691.52	563.56	8.2	20.8
2755.0	12.1	48.3	80	9.3	1.69	28.19	131698	351.06	562.82	8.2	20.8
2756.0	15.6	48.9	80	9.3	1.61	28.25	132006	272.13	561.80	8.2	20.8
2757.0	11.8	46.8	80	9.3	1.68	28.34	132414	360.48	561.09	8.2	20.8
2758.0	12.5	47.2	80	9.3	1.66	28.42	132797	338.10	560.32	8.2	20.8
2759.0	13.1	46.9	80	9.3	1.65	28.49	133163	323.97	559.50	8.2	20.8
2760.0	13.7	47.5	80	9.3	1.64	28.57	133514	309.83	558.63	8.2	20.8
2761.0	12.7	47.5	80	9.3	1.66	28.65	133891	333.39	557.86	8.3	20.8
2762.0	16.3	47.3	80	9.3	1.57	28.71	134186	260.35	556.84	8.3	20.8
2763.0	13.8	47.3	80	9.3	1.63	28.78	134533	306.29	555.98	8.3	20.8
2764.0	17.3	46.9	80	9.3	1.55	28.84	134810	245.04	554.92	8.3	20.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2765.0	5.7	46.5	80	9.3	1.93	29.01	135654	745.71	555.57	8.3	20.8
2766.0	7.8	46.0	80	9.3	1.82	29.14	136269	543.72	555.53	8.3	20.8
2768.0	4.9	49.5	80	9.3	2.02	29.55	138229	865.51	557.61	8.3	20.8
2769.0	3.8	49.8	80	9.3	2.12	29.81	139492	1116	559	8.3	20.8
2769.8	1.6	47.9	80	9.3	2.40	30.31	141892	2651	565	8.3	20.8

BIT NUMBER	8	IADC CODE	517	INTERVAL	2769.8- 2918.0
HTC J22		SIZE	12.250	NOZZLES	18 16 16
COST	6788.00	TRIP TIME	8.2	BIT RUN	148.2
TOTAL HOURS	37.34	TOTAL TURNS	119776	CONDITION	T4 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2770.0	1.5	19.0	80	9.3	1.85	0.13	624	2757	210578	8.3	20.8
2771.0	1.6	19.4	40	9.3	1.67	0.77	2155	2706	37351	8.3	20.8
2772.0	3.2	27.6	50	9.3	1.69	1.08	3103	1339	20982	8.3	20.8
2773.0	5.4	38.3	60	9.3	1.74	1.27	3767	782	14670	8.3	20.8
2774.0	5.4	37.7	60	9.3	1.73	1.45	4430	781	11363	8.3	20.8
2775.0	12.1	42.8	60	9.3	1.53	1.54	4727	350	9245	8.3	20.8
2776.0	10.1	40.9	60	9.3	1.57	1.63	5082	418	7821	8.3	20.8
2777.0	12.0	41.6	60	9.3	1.52	1.72	5381	352	6784	8.3	20.8
2778.0	7.5	45.7	60	9.3	1.72	1.85	5859	563	6025	8.3	20.8
2779.0	4.9	44.0	60	9.3	1.85	2.05	6598	871	5465	8.3	20.8
2780.0	5.1	43.1	60	9.3	1.82	2.25	7302	829	5011	8.3	20.8
2781.0	3.6	43.0	60	9.3	1.94	2.53	8311	1189	4669	8.3	20.8
2782.0	5.0	40.2	60	9.3	1.79	2.73	9031	848	4356	8.3	20.8
2783.0	5.3	44.4	60	9.4	1.81	2.92	9713	803	4087	8.3	20.8
2784.0	5.2	44.3	60	9.4	1.81	3.11	10400	809	3856	8.3	20.8
2785.0	4.5	43.6	60	9.4	1.85	3.33	11199	941	3664	8.3	20.8
2786.0	5.6	42.1	60	9.4	1.76	3.51	11842	757	3485	8.3	20.8
2787.0	12.4	42.0	60	9.4	1.49	3.59	12132	342	3302	8.3	20.8
2788.0	8.3	43.6	60	9.4	1.65	3.71	12566	511	3149	8.3	20.8
2789.0	5.2	42.9	60	9.4	1.80	3.91	13259	816	3027	8.3	20.8
2790.0	5.7	44.3	60	9.4	1.78	4.08	13892	746	2914	8.3	20.8
2791.0	12.8	44.5	60	9.4	1.51	4.16	14174	332	2793	8.3	20.8
2792.0	12.8	42.7	60	9.4	1.49	4.24	14456	332	2682	8.3	20.8
2793.0	16.7	44.2	60	9.4	1.42	4.30	14672	254	2577	8.3	20.8
2794.0	7.7	43.7	60	9.4	1.67	4.43	15140	551	2493	8.3	20.8
2795.0	8.8	43.7	60	9.4	1.63	4.54	15548	481	2414	8.3	20.8
2796.0	6.6	43.6	60	9.4	1.72	4.69	16091	640	2346	8.3	20.8
2797.0	12.0	43.1	60	9.4	1.52	4.78	16392	355	2273	8.3	20.8
2798.0	14.8	42.8	60	9.4	1.44	4.84	16636	287	2202	8.3	20.8
2799.0	12.8	42.8	60	9.4	1.49	4.92	16918	332	2138	8.3	20.8
2800.0	7.6	43.6	60	9.4	1.68	5.05	17390	556	2086	8.3	20.8
2801.0	7.7	42.8	60	9.4	1.66	5.18	17858	551	2037	8.3	20.8
2802.0	4.2	43.9	60	9.4	1.88	5.42	18714	1008	2005	8.3	20.8
2803.0	5.0	43.5	60	9.4	1.82	5.62	19433	847	1970	8.3	20.8
2804.0	4.9	42.8	60	9.4	1.81	5.82	20166	864	1937	8.3	20.8
2805.0	7.0	43.6	60	9.4	1.71	5.97	20682	608	1900	8.3	20.8
2806.0	7.1	42.6	60	9.4	1.69	6.11	21190	598	1864	8.3	20.8
2807.0	6.4	42.4	60	9.4	1.72	6.26	21749	659	1831	8.3	20.8
2808.0	12.4	42.0	60	9.4	1.49	6.34	22039	342	1792	8.3	20.8
2809.0	12.3	42.2	60	9.4	1.50	6.43	22332	346	1755	8.3	20.8
2810.0	16.0	42.7	60	9.4	1.42	6.49	22557	265	1718	8.3	20.8
2811.0	17.0	47.2	70	9.4	1.50	6.55	22804	250	1683	8.3	20.8
2812.0	16.5	47.7	70	9.4	1.51	6.61	23059	257	1649	8.3	20.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2813.0	14.9	47.0	70	9.4	1.54	6.67	23340	284	1617	8.3	20.8
2814.0	5.1	45.8	70	9.4	1.89	6.87	24161	829	1600	8.3	20.9
2815.0	4.5	46.2	70	9.4	1.94	7.09	25098	946	1585	8.3	20.9
2816.0	8.4	45.9	70	9.4	1.72	7.21	25597	504	1562	8.3	20.9
2817.0	10.9	43.7	70	9.4	1.61	7.30	25984	390	1537	8.3	20.9
2818.0	9.4	43.4	70	9.4	1.66	7.41	26430	451	1514	8.3	20.9
2819.0	8.0	43.7	70	9.4	1.71	7.54	26955	530	1494	8.3	20.9
2820.0	5.2	45.0	70	9.4	1.88	7.73	27769	821	1481	8.3	20.9
2821.0	8.1	44.4	70	9.4	1.72	7.85	28289	525	1462	8.3	20.9
2822.0	5.6	43.7	70	9.4	1.83	8.03	29034	753	1449	8.3	20.9
2823.0	4.9	44.3	70	9.4	1.88	8.23	29887	861	1438	8.3	20.9
2824.0	5.4	43.9	70	9.4	1.85	8.42	30671	792	1426	8.3	20.9
2825.0	18.6	42.5	70	9.4	1.42	8.47	30898	229	1404	8.3	20.9
2826.0	20.9	41.9	70	9.4	1.37	8.52	31098	203	1383	8.3	20.9
2827.0	26.1	42.2	70	9.3	1.31	8.56	31259	163	1361	8.3	20.9
2828.0	22.5	41.2	70	9.3	1.35	8.60	31446	188	1341	8.3	20.9
2829.0	14.9	43.1	70	9.3	1.51	8.67	31729	285	1323	8.3	20.9
2830.0	17.1	44.6	70	9.3	1.48	8.73	31974	247	1305	8.3	20.9
2831.0	15.7	43.8	70	9.3	1.50	8.79	32241	270	1289	8.3	20.9
2832.0	15.1	44.1	70	9.3	1.52	8.86	32520	282	1272	8.3	20.9
2833.0	14.7	43.9	70	9.3	1.53	8.93	32805	289	1257	8.3	20.9
2834.0	16.8	43.7	70	9.3	1.48	8.99	33055	252	1241	8.3	20.9
2835.0	20.6	42.8	70	9.3	1.40	9.04	33259	206	1225	8.3	20.9
2836.0	21.2	43.9	70	9.3	1.40	9.08	33458	200	1210	8.3	20.9
2837.0	22.1	43.5	70	9.3	1.38	9.13	33648	192	1195	8.3	20.9
2838.0	8.0	44.2	70	9.3	1.74	9.25	34174	531	1185	8.3	20.9
2839.0	4.3	43.7	70	9.3	1.94	9.49	35148	984	1182	8.3	20.9
2840.0	6.9	43.5	70	9.3	1.78	9.63	35758	616	1174	8.3	20.9
2841.0	30.5	41.9	60	9.3	1.21	9.66	35876	139	1159	8.3	20.9
2842.0	17.3	42.7	60	9.3	1.41	9.72	36084	245	1147	8.3	20.9
2843.0	13.1	43.4	60	9.3	1.51	9.80	36359	324	1135	8.3	20.9
2844.0	5.0	44.2	60	9.3	1.85	10.00	37078	847	1132	8.3	20.9
2845.0	3.1	44.4	60	9.3	2.01	10.32	38221	1347	1134	8.3	20.9
2846.0	10.2	44.0	60	9.3	1.60	10.41	38575	417	1125	8.3	20.9
2847.0	10.7	44.6	60	9.3	1.59	10.51	38911	396	1116	8.3	20.9
2848.0	5.1	45.0	60	9.3	1.85	10.70	39616	831	1112	8.3	20.9
2849.0	7.1	43.5	60	9.3	1.72	10.84	40125	600	1105	8.3	20.9
2850.0	8.4	44.6	60	9.3	1.67	10.96	40553	504	1098	8.3	20.9
2851.0	5.7	44.1	60	9.3	1.80	11.14	41180	739	1094	8.3	20.9
2852.0	5.7	45.5	60	9.3	1.82	11.31	41812	745	1089	8.3	20.9
2853.0	4.3	46.9	60	9.3	1.93	11.55	42649	986	1088	8.3	20.9
2854.0	5.3	46.5	60	9.3	1.85	11.73	43322	793	1085	8.3	20.9
2855.0	6.2	45.9	60	9.3	1.80	11.89	43903	684	1080	8.3	20.9
2856.0	5.4	46.1	60	9.3	1.85	12.08	44575	792	1077	8.3	20.9
2857.0	2.6	46.1	60	9.3	2.10	12.47	45972	1646	1083	8.3	20.9
2858.0	2.6	45.1	60	9.3	2.09	12.86	47370	1647	1089	8.3	20.9
2859.0	2.6	44.6	60	9.3	2.07	13.24	48739	1613	1095	8.3	20.9
2860.0	2.0	47.7	50	9.3	2.14	13.73	50215	2086	1106	8.3	20.9
2861.0	1.9	51.4	50	9.3	2.22	14.26	51797	2236	1119	8.3	20.9
2862.0	5.0	50.9	70	9.3	1.99	14.46	52633	845	1116	8.3	20.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2863.0	5.7	49.4	60	9.3	1.87	14.63	53270	750	1112	8.3	20.9
2864.0	3.8	49.6	60	9.3	2.02	14.90	54226	1126	1112	8.3	20.9
2865.0	2.4	49.2	40	9.3	2.03	15.31	55220	1755	1119	8.3	20.9
2866.0	4.8	48.9	40	9.3	1.78	15.52	55718	881	1116	8.3	20.9
2867.0	1.5	49.5	70	9.3	2.39	16.17	58462	2771	1133	8.3	20.9
2868.0	1.6	48.9	70	9.3	2.37	16.80	61094	2658	1149	8.3	20.9
2869.0	1.8	48.2	40	9.3	2.12	17.36	62449	2394	1161	8.3	20.9
2870.0	5.3	48.0	40	9.3	1.73	17.55	62900	796	1158	8.3	20.9
2871.0	1.2	48.9	40	9.3	2.28	18.41	64952	3627	1182	8.3	20.9
2872.0	1.0	46.3	40	9.3	2.28	19.37	67266	4088	1211	8.3	20.9
2873.0	2.3	44.7	40	9.3	1.98	19.81	68317	1858	1217	8.3	20.9
2874.0	2.6	47.8	40	9.3	1.98	20.19	69240	1631	1221	8.3	20.9
2875.0	2.6	47.2	40	9.3	1.98	20.58	70175	1653	1225	8.3	20.9
2876.0	2.2	46.0	40	9.3	2.01	21.03	71251	1901	1231	8.3	20.9
2877.0	3.3	45.8	40	9.3	1.87	21.33	71979	1285	1232	8.3	20.9
2878.0	2.8	43.8	40	9.3	1.90	21.69	72831	1507	1234	8.3	20.9
2879.0	2.8	45.1	40	9.3	1.92	22.04	73681	1502	1237	8.3	20.9
2880.0	3.7	45.0	40	9.3	1.83	22.32	74338	1160	1236	8.3	20.9
2881.0	3.7	46.8	40	9.3	1.85	22.59	74991	1153	1235	8.3	20.9
2882.0	3.1	44.6	40	9.3	1.87	22.91	75754	1349	1236	8.3	20.9
2883.0	3.3	48.3	40	9.3	1.90	23.21	76472	1269	1237	8.3	20.9
2884.0	2.9	49.4	40	9.3	1.96	23.55	77286	1438	1238	8.3	20.9
2885.0	2.4	51.0	40	9.3	2.06	23.97	78307	1804	1243	8.3	20.9
2886.0	2.3	47.1	40	9.3	2.02	24.41	79354	1851	1249	8.3	20.9
2887.0	2.2	45.9	40	9.3	2.02	24.87	80466	1965	1255	8.3	20.9
2888.0	2.0	46.8	40	9.3	2.07	25.38	81695	2172	1262	8.3	20.9
2889.0	1.8	46.7	40	9.3	2.09	25.93	83005	2315	1271	8.3	20.9
2890.0	2.3	46.2	40	9.3	1.99	26.35	84027	1805	1276	8.3	20.9
2891.0	1.8	46.4	40	9.3	2.09	26.91	85351	2341	1284	8.3	20.9
2892.0	2.4	47.9	40	9.3	2.01	27.32	86343	1753	1288	8.3	20.9
2893.0	2.5	51.4	40	9.3	2.04	27.72	87298	1687	1292	8.3	20.9
2894.0	2.4	51.8	40	9.3	2.06	28.13	88285	1744	1295	8.3	20.9
2895.0	2.7	54.0	55	9.3	2.17	28.50	89525	1594	1298	8.3	20.9
2896.0	2.5	51.3	55	9.3	2.16	28.90	90845	1696	1301	8.3	20.9
2897.0	3.0	50.8	55	9.3	2.09	29.24	91963	1437	1302	8.3	20.9
2898.0	2.8	50.6	55	9.3	2.11	29.61	93163	1542	1304	8.3	21.0
2899.0	2.1	50.2	55	9.3	2.20	30.08	94725	2007	1309	8.3	21.0
2900.0	3.8	49.7	55	9.3	1.98	30.34	95593	1116	1308	8.3	21.0
2901.0	4.2	50.2	55	9.3	1.96	30.58	96381	1012	1305	8.3	21.0
2902.0	5.1	50.2	55	9.3	1.89	30.78	97030	834	1302	8.3	21.0
2903.0	3.6	51.2	55	9.2	2.03	31.05	97934	1163	1301	8.3	21.0
2904.0	4.4	51.2	55	9.2	1.97	31.28	98679	957	1298	8.3	21.0
2905.0	4.6	49.2	55	9.2	1.93	31.49	99391	915	1295	8.3	21.0
2906.0	2.9	50.3	55	9.2	2.11	31.84	100537	1473	1297	8.3	21.0
2907.0	3.5	49.3	55	9.2	2.03	32.13	101489	1224	1296	8.3	21.0
2908.0	2.2	52.7	55	9.2	2.24	32.58	102972	1906	1301	8.3	21.0
2909.0	2.4	52.2	55	9.2	2.21	32.99	104341	1759	1304	8.3	21.0
2910.0	3.5	49.9	55	9.2	2.04	33.28	105278	1204	1303	8.3	21.0
2911.0	1.7	49.7	57	9.2	2.30	33.86	107257	2468	1311	8.3	21.0
2912.0	1.9	50.8	60	9.2	2.31	34.40	109195	2283	1318	8.3	21.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2913.0	3.6	53.2	60	9.2	2.11	34.68	110209	1195	1317	8.3	21.0
2914.0	2.4	55.5	60	9.2	2.29	35.10	111720	1780	1321	8.3	21.0
2915.0	1.9	55.9	60	9.2	2.39	35.64	113651	2275	1327	8.3	21.0
2916.0	1.7	54.8	60	9.2	2.40	36.21	115733	2453	1335	8.3	21.0
2917.0	1.8	55.5	60	9.2	2.40	36.78	117776	2407	1342	8.3	21.0
2918.0	1.8	54.7	60	9.2	2.38	37.34	119776	2356	1349	8.3	21.0

BIT NUMBER	9	IADC CODE	537	INTERVAL	2918.0- 3178.7
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	8.7	BIT RUN	260.7
TOTAL HOURS	51.23	TOTAL TURNS	183290	CONDITION	T4 B5 G0.250

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2919.0	1.6	29.3	45	9.2	1.90	0.98	2389	2587	48707	8.3	21.0
2920.0	0.6	38.0	60	9.2	2.46	2.53	7969	6574	27640	8.3	21.0
2921.0	0.7	38.1	60	9.2	2.44	3.99	13231	6199	20493	8.3	21.0
2922.0	0.8	50.0	60	9.2	2.60	5.24	17743	5315	16699	8.3	21.0
2923.0	4.7	51.2	60	9.2	1.98	5.46	18515	909	13541	8.3	21.0
2924.0	5.0	56.0	60	9.2	2.02	5.66	19239	853	11426	8.3	21.0
2925.0	4.1	58.5	60	9.2	2.12	5.90	20114	1031	9941	8.3	21.0
2926.0	5.5	59.1	60	9.2	2.02	6.08	20765	767	8794	8.3	21.0
2927.0	5.7	59.0	60	9.2	2.01	6.26	21396	743	7900	8.3	21.0
2928.0	5.2	59.8	60	9.2	2.05	6.45	22092	820	7192	8.3	21.0
2929.0	5.8	59.2	60	9.2	2.00	6.62	22710	728	6604	8.3	21.0
2930.0	5.7	59.3	60	9.2	2.01	6.80	23341	743	6116	8.3	21.0
2931.0	6.3	58.3	60	9.2	1.96	6.96	23917	679	5698	8.3	21.0
2932.0	6.2	57.1	60	9.2	1.95	7.12	24498	684	5340	8.3	21.0
2933.0	7.2	59.6	60	9.2	1.92	7.26	24995	585	5023	8.3	21.0
2934.0	6.1	59.5	60	9.2	1.99	7.42	25586	696	4752	8.3	21.0
2935.0	5.9	58.4	60	9.2	1.98	7.59	26194	716	4515	8.3	21.0
2936.0	3.8	59.2	60	9.2	2.16	7.85	27133	1106	4325	8.3	21.0
2937.0	3.6	60.5	60	9.2	2.20	8.13	28139	1185	4160	8.3	21.0
2938.0	3.6	60.7	60	9.2	2.21	8.41	29147	1187	4012	8.3	21.0
2939.0	4.8	61.6	60	9.2	2.11	8.62	29902	889	3863	8.3	21.0
2940.0	8.4	60.8	60	9.2	1.88	8.74	30329	503	3710	8.3	21.0
2941.0	6.3	60.3	60	9.2	1.98	8.90	30902	675	3578	8.3	21.0
2942.0	8.0	59.6	60	9.2	1.88	9.02	31352	530	3451	8.3	21.0
2943.0	6.3	59.5	60	9.2	1.98	9.18	31927	677	3340	8.3	21.0
2944.0	6.3	58.8	60	9.2	1.97	9.34	32501	676	3238	8.3	21.0
2945.0	7.0	59.5	60	9.2	1.93	9.48	33016	607	3140	8.3	21.0
2946.0	6.9	60.4	60	9.2	1.95	9.63	33540	617	3050	8.3	21.0
2947.0	5.1	59.2	60	9.2	2.05	9.82	34243	828	2974	8.3	21.0
2948.0	6.4	57.2	60	9.2	1.94	9.98	34808	666	2897	8.3	21.0
2949.0	6.6	57.3	60	9.3	1.91	10.13	35355	644	2824	8.3	21.0
2950.0	5.3	57.7	60	9.3	2.00	10.32	36039	806	2761	8.3	21.0
2951.0	5.8	58.2	60	9.3	1.97	10.49	36656	727	2699	8.3	21.0
2952.0	5.7	59.3	60	9.3	1.99	10.67	37288	745	2642	8.3	21.0
2953.0	6.4	60.4	60	9.3	1.95	10.83	37848	660	2585	8.3	21.0
2954.0	6.6	58.4	60	9.3	1.92	10.98	38393	642	2531	8.3	21.0
2955.0	7.2	58.4	60	9.3	1.89	11.12	38891	587	2479	8.3	21.0
2956.0	12.0	57.9	60	9.3	1.69	11.20	39190	352	2423	8.3	21.0
2957.0	13.0	57.4	60	9.3	1.66	11.28	39467	326	2369	8.3	21.0
2958.0	5.8	57.8	60	9.3	1.97	11.45	40091	735	2328	8.3	21.0
2959.0	5.7	58.5	60	9.3	1.98	11.62	40723	745	2289	8.3	21.0
2960.0	6.7	59.0	60	9.3	1.93	11.77	41264	637	2250	8.3	21.0
2961.0	6.6	59.8	60	9.3	1.94	11.93	41810	643	2213	8.3	21.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2962.0	15.0	58.8	60	9.3	1.62	11.99	42050	283	2169	8.3	21.0
2963.0	9.3	59.1	60	9.3	1.80	12.10	42438	457	2131	8.3	21.0
2964.0	6.4	59.0	60	9.3	1.94	12.26	42997	659	2099	8.3	21.0
2965.0	6.7	60.2	60	9.3	1.94	12.40	43533	631	2068	8.3	21.0
2966.0	9.7	60.2	60	9.3	1.80	12.51	43904	437	2034	8.3	21.0
2967.0	7.9	60.4	60	9.3	1.88	12.63	44362	540	2003	8.3	21.0
2968.0	4.5	60.5	60	9.3	2.09	12.85	45154	933	1982	8.3	21.0
2969.0	7.6	58.8	60	9.3	1.87	12.99	45625	555	1954	8.3	21.0
2970.0	11.7	57.2	60	9.3	1.70	13.07	45934	364	1923	8.3	21.0
2971.0	13.6	56.2	60	9.3	1.63	13.15	46199	312	1893	8.3	21.0
2972.0	14.2	58.0	60	9.3	1.63	13.22	46452	298	1863	8.3	21.0
2973.0	16.5	58.0	60	9.3	1.57	13.28	46670	257	1834	8.3	21.0
2974.0	15.6	58.0	60	9.3	1.60	13.34	46901	272	1806	8.3	21.0
2975.0	16.1	55.7	60	9.3	1.56	13.40	47124	263	1779	8.3	21.0
2976.0	13.4	54.8	60	9.3	1.62	13.48	47393	317	1754	8.3	21.0
2977.0	13.0	54.5	60	9.3	1.63	13.55	47669	325	1730	8.3	21.0
2978.0	16.2	55.8	60	9.3	1.56	13.62	47891	262	1705	8.3	21.0
2979.0	16.1	55.4	60	9.3	1.56	13.68	48115	264	1682	8.3	21.0
2980.0	14.1	54.9	60	9.3	1.60	13.75	48370	300	1659	8.3	21.0
2981.0	13.7	54.8	60	9.3	1.61	13.82	48633	310	1638	8.3	21.0
2982.0	10.9	53.7	60	9.3	1.68	13.91	48962	388	1618	8.3	21.0
2983.0	11.4	57.0	60	9.3	1.70	14.00	49279	373	1599	8.3	21.0
2984.0	11.7	57.9	60	9.3	1.70	14.09	49588	364	1580	8.3	21.1
2985.0	12.3	57.4	60	9.3	1.68	14.17	49881	345	1562	8.3	21.1
2986.0	12.0	59.7	60	9.3	1.71	14.25	50180	352	1544	8.3	21.1
2987.0	10.1	59.8	60	9.3	1.78	14.35	50538	422	1528	8.3	21.1
2988.0	9.8	58.1	60	9.3	1.77	14.45	50904	431	1512	8.3	21.1
2989.0	10.9	59.5	60	9.3	1.74	14.54	51234	389	1496	8.3	21.1
2990.0	7.7	60.3	60	9.3	1.88	14.67	51699	548	1483	8.3	21.1
2991.0	9.3	59.9	60	9.3	1.81	14.78	52086	456	1469	8.3	21.1
2992.0	10.5	59.5	60	9.3	1.76	14.88	52429	404	1455	8.3	21.1
2993.0	9.7	59.7	60	9.3	1.79	14.98	52801	438	1441	8.3	21.1
2994.0	13.6	56.7	60	9.3	1.63	15.05	53066	312	1426	8.3	21.1
2995.0	10.4	57.4	60	9.3	1.74	15.15	53413	409	1413	8.3	21.1
2996.0	14.1	58.8	60	9.3	1.64	15.22	53668	300	1399	8.3	21.1
2997.0	13.2	59.1	60	9.3	1.67	15.30	53941	322	1385	8.3	21.1
2998.0	13.5	58.6	60	9.3	1.66	15.37	54208	315	1372	8.3	21.1
2999.0	16.7	58.5	60	9.3	1.57	15.43	54423	253	1358	8.3	21.1
3000.0	13.8	58.0	60	9.3	1.64	15.50	54683	306	1345	8.3	21.1
3001.0	5.7	58.0	60	9.3	1.97	15.68	55317	747	1338	8.3	21.1
3002.0	4.6	58.0	60	9.3	2.05	15.89	56096	918	1333	8.3	21.1
3003.0	4.7	58.0	60	9.3	2.04	16.11	56862	902	1328	8.3	21.1
3004.0	11.1	58.0	60	9.3	1.72	16.20	57186	382	1317	8.3	21.1
3005.0	17.7	58.0	60	9.3	1.55	16.25	57389	239	1305	8.3	21.1
3006.0	16.5	58.0	60	9.3	1.57	16.31	57607	257	1293	8.3	21.1
3007.0	20.0	58.0	60	9.3	1.50	16.36	57787	212	1281	8.3	21.1
3008.0	13.4	58.0	60	9.3	1.65	16.44	58055	316	1270	8.3	21.1
3009.0	12.0	58.0	60	9.3	1.69	16.52	58354	352	1260	8.3	21.1
3010.0	15.7	58.0	60	9.3	1.59	16.59	58583	270	1249	8.3	21.1
3011.0	11.4	58.0	60	9.3	1.71	16.67	58899	372	1240	8.3	21.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3012.0	12.0	58.0	60	9.3	1.69	16.76	59200	355	1230	8.3	21.1
3013.0	13.0	58.0	60	9.3	1.66	16.83	59477	326	1221	8.3	21.1
3014.0	12.5	58.0	60	9.2	1.70	16.91	59766	340	1211	8.3	21.1
3015.0	11.6	58.0	60	9.2	1.72	17.00	60076	365	1203	8.3	21.1
3016.0	10.4	58.0	60	9.2	1.77	17.10	60423	409	1195	8.3	21.1
3017.0	11.4	58.0	60	9.2	1.73	17.18	60739	372	1186	8.3	21.1
3018.0	4.1	58.0	60	9.2	2.12	17.43	61619	1037	1185	8.3	21.1
3019.0	4.7	58.0	60	9.2	2.07	17.64	62382	899	1182	8.3	21.1
3020.0	9.2	58.0	60	9.2	1.81	17.75	62775	463	1175	8.3	21.1
3021.0	12.6	58.0	60	9.2	1.69	17.83	63061	337	1167	8.3	21.1
3022.0	14.2	58.0	60	9.2	1.65	17.90	63314	298	1158	8.3	21.1
3023.0	12.3	58.0	60	9.2	1.70	17.98	63606	344	1151	8.3	21.1
3024.0	11.0	58.0	60	9.2	1.74	18.07	63932	384	1143	8.3	21.1
3025.0	10.3	58.0	60	9.2	1.77	18.17	64283	413	1137	8.3	21.1
3026.0	13.7	58.0	60	9.2	1.66	18.24	64546	310	1129	8.3	21.1
3027.0	15.5	58.0	60	9.2	1.62	18.31	64779	274	1121	8.3	21.1
3028.0	14.0	58.0	60	9.2	1.65	18.38	65037	304	1114	8.3	21.1
3029.0	12.0	58.0	60	9.2	1.71	18.46	65338	355	1107	8.3	21.1
3030.0	13.4	58.0	60	9.2	1.67	18.54	65606	316	1100	8.3	21.1
3031.0	14.6	58.0	60	9.2	1.64	18.60	65853	291	1093	8.3	21.1
3032.0	10.0	58.0	60	9.2	1.78	18.70	66213	424	1087	8.3	21.1
3033.0	5.0	59.8	60	9.2	2.06	18.90	66933	848	1085	8.4	21.1
3034.0	4.0	59.3	60	9.2	2.14	19.15	67833	1060	1085	8.4	21.1
3035.0	5.7	59.4	60	9.2	2.01	19.33	68469	750	1082	8.4	21.1
3036.0	5.0	57.6	60	9.2	2.04	19.53	69185	843	1080	8.4	21.1
3037.0	3.9	57.9	60	9.2	2.13	19.78	70098	1076	1080	8.4	21.1
3038.0	4.0	56.6	60	9.2	2.11	20.04	71004	1067	1080	8.4	21.1
3039.0	9.9	57.2	60	9.2	1.78	20.14	71369	430	1074	8.4	21.1
3040.0	3.6	57.5	60	9.2	2.16	20.41	72365	1173	1075	8.4	21.1
3041.0	7.2	57.3	60	9.2	1.90	20.55	72863	587	1071	8.4	21.1
3042.0	14.5	57.6	60	9.2	1.64	20.62	73112	293	1065	8.4	21.1
3043.0	13.3	57.8	60	9.2	1.67	20.70	73383	319	1059	8.4	21.1
3044.0	2.8	56.3	60	9.2	2.24	21.05	74673	1520	1062	8.4	21.1
3045.0	4.0	59.6	60	9.2	2.15	21.31	75584	1073	1062	8.4	21.1
3046.0	2.8	59.8	60	9.2	2.29	21.67	76876	1522	1066	8.4	21.1
3047.0	3.4	58.5	60	9.2	2.20	21.96	77942	1256	1068	8.4	21.1
3048.0	3.4	58.4	60	9.2	2.20	22.26	79009	1257	1069	8.4	21.1
3049.0	2.7	58.8	60	9.2	2.29	22.63	80343	1572	1073	8.4	21.1
3050.0	3.0	58.7	60	9.2	2.24	22.96	81535	1404	1075	8.4	21.1
3051.0	2.9	58.3	60	9.2	2.25	23.30	82771	1456	1078	8.4	21.1
3052.0	4.4	58.7	60	9.2	2.10	23.53	83591	966	1077	8.4	21.1
3053.0	4.0	57.4	60	9.2	2.12	23.78	84497	1067	1077	8.4	21.1
3054.0	3.3	57.8	60	9.2	2.20	24.09	85597	1296	1079	8.4	21.1
3055.0	3.1	57.2	60	9.2	2.21	24.41	86746	1354	1081	8.4	21.1
3056.0	2.8	58.1	60	9.2	2.26	24.77	88032	1515	1084	8.4	21.1
3057.0	7.1	59.0	60	9.2	1.92	24.91	88539	596	1081	8.4	21.1
3058.0	3.0	57.2	60	9.2	2.22	25.24	89724	1396	1083	8.4	21.1
3059.0	3.6	60.2	60	9.2	2.20	25.51	90722	1176	1083	8.4	21.1
3060.0	7.6	57.1	60	9.2	1.88	25.64	91198	561	1080	8.4	21.1
3061.0	11.2	57.6	60	9.2	1.73	25.73	91519	378	1075	8.4	21.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3062.0	10.1	59.0	60	9.2	1.79	25.83	91875	419	1070	8.4	21.1
3063.0	10.3	57.9	60	9.2	1.77	25.93	92223	410	1066	8.4	21.1
3064.0	9.7	57.9	60	9.2	1.79	26.03	92594	437	1061	8.4	21.1
3065.0	10.3	58.6	60	9.2	1.77	26.13	92942	410	1057	8.4	21.1
3066.0	13.7	59.1	60	9.2	1.67	26.20	93205	310	1052	8.4	21.1
3067.0	3.5	55.2	60	9.2	2.14	26.49	94236	1215	1053	8.4	21.1
3068.0	3.3	57.7	60	9.2	2.19	26.79	95312	1268	1055	8.4	21.1
3069.0	4.5	56.1	60	9.2	2.06	27.01	96119	951	1054	8.4	21.1
3070.0	7.3	56.1	60	9.2	1.88	27.15	96610	578	1051	8.4	21.1
3071.0	3.4	56.8	60	9.2	2.18	27.45	97682	1263	1052	8.4	21.1
3072.0	5.2	54.8	60	9.2	1.99	27.64	98374	815	1051	8.4	21.1
3073.0	10.8	55.4	60	9.2	1.72	27.73	98706	391	1046	8.4	21.1
3074.0	8.6	53.8	60	9.2	1.79	27.85	99125	494	1043	8.4	21.1
3075.0	9.5	54.4	60	9.2	1.76	27.95	99505	448	1039	8.4	21.1
3076.0	5.8	54.9	60	9.2	1.95	28.12	100126	732	1037	8.4	21.1
3077.0	6.2	55.9	60	9.2	1.94	28.29	100709	687	1035	8.4	21.1
3078.0	3.9	58.5	60	9.2	2.14	28.54	101623	1077	1035	8.4	21.1
3079.0	3.7	58.3	60	9.2	2.16	28.81	102585	1133	1036	8.4	21.1
3080.0	2.8	58.7	60	9.2	2.27	29.16	103869	1513	1039	8.4	21.1
3081.0	3.5	59.5	60	9.2	2.20	29.45	104906	1222	1040	8.4	21.1
3082.0	4.0	59.7	60	9.2	2.15	29.70	105803	1057	1040	8.4	21.1
3083.0	2.6	60.4	60	9.2	2.33	30.09	107209	1656	1044	8.4	21.1
3084.0	3.4	61.0	60	9.2	2.23	30.39	108280	1262	1045	8.4	21.1
3085.0	3.9	60.6	60	9.2	2.17	30.65	109209	1094	1045	8.4	21.1
3086.0	4.0	60.5	60	9.2	2.16	30.90	110109	1060	1045	8.4	21.1
3087.0	4.9	60.2	60	9.2	2.08	31.10	110845	867	1044	8.4	21.1
3088.0	3.4	59.2	60	9.2	2.20	31.39	111889	1230	1045	8.4	21.1
3089.0	6.0	59.2	60	9.2	1.99	31.56	112490	708	1043	8.4	21.1
3090.0	9.1	58.8	60	9.2	1.82	31.67	112885	465	1040	8.4	21.1
3091.0	10.5	58.4	60	9.2	1.77	31.76	113228	404	1036	8.4	21.1
3092.0	4.2	59.0	60	9.2	2.12	32.00	114079	1003	1036	8.4	21.1
3093.0	5.7	59.0	60	9.2	2.00	32.18	114710	743	1034	8.4	21.1
3094.0	4.2	59.0	60	9.2	2.12	32.41	115563	1005	1034	8.4	21.1
3095.0	4.1	59.1	60	9.2	2.13	32.66	116442	1036	1034	8.4	21.2
3096.0	10.0	59.5	60	9.2	1.79	32.76	116801	423	1031	8.4	21.2
3097.0	8.0	58.7	60	9.2	1.87	32.88	117251	530	1028	8.4	21.2
3098.0	9.4	58.8	60	9.2	1.81	32.99	117634	451	1025	8.4	21.2
3099.0	4.8	59.1	60	9.2	2.07	33.19	118378	876	1024	8.4	21.2
3100.0	3.1	59.4	60	9.2	2.25	33.52	119556	1388	1026	8.4	21.2
3101.0	2.7	60.1	60	9.2	2.31	33.90	120904	1588	1029	8.4	21.2
3102.0	5.0	59.2	60	9.2	2.06	34.10	121627	852	1028	8.4	21.2
3103.0	10.4	59.0	60	9.2	1.78	34.19	121973	408	1025	8.4	21.2
3104.0	9.2	58.8	60	9.2	1.82	34.30	122365	462	1022	8.4	21.2
3105.0	10.0	59.4	60	9.2	1.80	34.40	122725	424	1019	8.4	21.2
3106.0	9.0	58.9	60	9.2	1.83	34.51	123127	474	1016	8.4	21.2
3107.0	8.0	59.3	60	9.2	1.88	34.64	123579	532	1013	8.4	21.2
3108.0	7.3	59.6	60	9.2	1.92	34.78	124071	580	1011	8.4	21.2
3109.0	7.8	60.0	60	9.2	1.90	34.90	124531	542	1008	8.4	21.2
3110.0	7.7	59.9	60	9.2	1.90	35.03	124997	549	1006	8.4	21.2
3111.0	8.3	59.1	60	9.2	1.86	35.15	125432	512	1003	8.4	21.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3112.0	10.8	59.0	60	9.2	1.76	35.25	125766	393	1000	8.4	21.2
3113.0	8.5	58.9	60	9.2	1.85	35.36	126189	498.32	997.69	8.4	21.2
3114.0	9.1	59.1	60	9.2	1.83	35.47	126585	466.51	994.98	8.4	21.2
3115.0	11.6	61.9	60	9.2	1.76	35.56	126895	365.20	991.79	8.4	21.2
3116.0	10.3	60.3	60	9.2	1.79	35.66	127245	412.32	988.86	8.4	21.2
3117.0	3.5	60.5	60	9.2	2.22	35.95	128287	1228	990	8.4	21.2
3118.0	4.5	60.2	60	9.2	2.11	36.17	129089	944.80	989.83	8.4	21.2
3119.0	3.3	60.9	60	9.2	2.24	36.47	130175	1279	991	8.4	21.2
3120.0	2.9	60.6	60	9.2	2.29	36.82	131430	1478	994	8.4	21.2
3121.0	2.6	59.8	60	9.2	2.31	37.20	132789	1601	997	8.4	21.2
3122.0	3.3	59.1	60	9.2	2.22	37.50	133890	1297	998	8.4	21.2
3123.0	3.3	58.9	60	9.2	2.21	37.81	134986	1291	1000	8.4	21.2
3124.0	2.2	58.9	60	9.2	2.36	38.26	136604	1906	1004	8.4	21.2
3125.0	1.5	63.8	60	9.2	2.58	38.92	138992	2813	1013	8.4	21.2
3126.0	3.1	64.7	60	9.2	2.32	39.25	140162	1378	1014	8.4	21.2
3127.0	4.4	65.1	60	9.2	2.18	39.47	140975	958	1014	8.4	21.2
3128.0	5.1	65.1	60	9.2	2.12	39.67	141678	828	1013	8.4	21.2
3129.0	3.5	65.0	60	9.2	2.27	39.95	142705	1210	1014	8.4	21.2
3130.0	4.1	64.8	60	9.2	2.21	40.20	143588	1040	1014	8.4	21.2
3131.0	5.3	66.2	60	9.2	2.12	40.39	144268	801	1013	8.4	21.2
3132.0	6.9	67.3	60	9.2	2.03	40.53	144790	615	1012	8.4	21.2
3133.0	4.2	67.2	60	9.2	2.23	40.77	145653	1017	1012	8.4	21.2
3134.0	4.7	63.1	60	9.2	2.13	40.98	146421	905	1011	8.4	21.2
3135.0	9.9	61.4	60	9.3	1.80	41.09	146784	428	1008	8.4	21.2
3136.0	3.5	60.6	60	9.3	2.19	41.37	147809	1208	1009	8.4	21.2
3137.0	10.4	60.7	60	9.3	1.77	41.47	148155	408	1007	8.4	21.2
3138.0	8.1	61.6	60	9.3	1.88	41.59	148602	527	1004	8.4	21.2
3139.0	4.9	62.0	60	9.3	2.08	41.79	149339	868	1004	8.4	21.2
3140.0	3.5	63.2	60	9.3	2.22	42.08	150361	1204	1005	8.4	21.2
3141.0	5.4	61.3	60	9.3	2.03	42.26	151031	789	1004	8.4	21.2
3142.0	6.4	62.5	60	9.3	1.98	42.42	151596	666	1002	8.4	21.2
3143.0	6.4	62.5	60	9.3	1.98	42.58	152157	661	1001	8.4	21.2
3144.0	6.4	59.4	60	9.3	1.94	42.73	152719	662.07	999.13	8.4	21.2
3145.0	3.8	59.9	60	9.3	2.15	43.00	153662	1111	1000	8.4	21.2
3146.0	5.0	59.7	60	9.3	2.04	43.20	154385	851.73	998.98	8.4	21.2
3147.0	5.2	59.0	60	9.3	2.02	43.39	155077	815.21	998.18	8.4	21.2
3148.0	9.0	58.7	60	9.3	1.81	43.50	155477	471.22	995.88	8.4	21.2
3149.0	4.8	58.6	60	9.3	2.04	43.71	156230	887.08	995.41	8.4	21.2
3150.0	5.5	59.0	60	9.3	2.00	43.89	156881	766.91	994.43	8.4	21.2
3151.0	4.7	58.3	60	9.3	2.05	44.10	157646	901.21	994.03	8.4	21.2
3152.0	4.7	58.7	60	9.3	2.05	44.31	158409	898.86	993.62	8.4	21.2
3153.0	5.3	57.5	60	9.3	1.99	44.50	159084	795.19	992.78	8.4	21.2
3154.0	3.4	57.2	60	9.3	2.16	44.80	160158	1265	994	8.4	21.2
3155.0	2.6	56.9	60	9.3	2.25	45.18	161539	1627	997	8.4	21.2
3156.0	3.3	55.8	60	9.3	2.14	45.48	162617	1270	998	8.4	21.2
3157.0	4.0	56.6	60	9.3	2.09	45.74	163524	1068	998	8.4	21.2
3158.0	2.9	58.1	60	9.3	2.23	46.08	164780	1480	1000	8.4	21.2
3159.0	3.8	56.8	60	9.3	2.11	46.35	165728	1117	1001	8.4	21.2
3160.0	5.6	56.9	60	9.3	1.97	46.53	166376	763.38	999.56	8.4	21.2
3161.0	3.8	57.2	60	9.3	2.11	46.79	167313	1104	1000	8.4	21.2

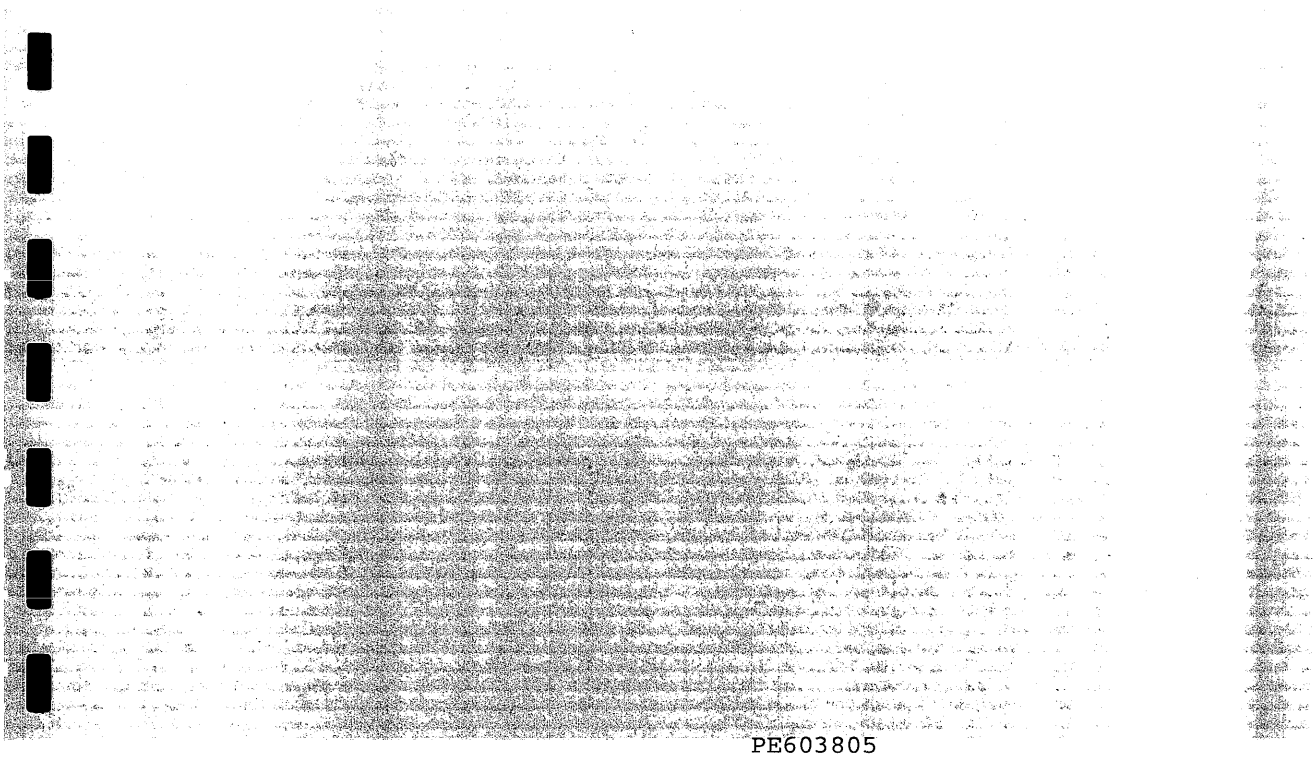
DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3162.0	9.9	56.3	60	9.3	1.75	46.89	167677	428.81	997.65	8.4	21.2
3163.0	12.2	56.3	60	9.3	1.67	46.97	167971	346.35	994.99	8.4	21.2
3164.0	3.8	58.2	60	9.3	2.12	47.23	168910	1106	995	8.4	21.2
3165.0	3.0	58.8	60	9.3	2.22	47.56	170094	1395	997	8.4	21.2
3166.0	3.5	59.4	60	9.3	2.18	47.85	171131	1222	998	8.4	21.2
3167.0	5.2	60.9	60	9.3	2.04	48.04	171818	809.32	997.20	8.4	21.2
3168.0	9.7	61.4	60	9.3	1.81	48.14	172190	438.24	994.97	8.4	21.2
3169.0	4.6	60.7	60	9.3	2.09	48.36	172976	925.95	994.69	8.4	21.2
3170.0	3.5	58.2	60	9.3	2.16	48.65	174010	1218	996	8.4	21.2
3171.0	8.5	59.3	60	9.3	1.84	48.77	174432	497.14	993.61	8.4	21.2
3172.0	3.4	61.3	60	9.3	2.20	49.06	175481	1236	995	8.4	21.2
3173.0	2.7	60.8	60	9.3	2.29	49.42	176802	1556	997	8.4	21.2
3174.0	4.7	59.0	60	9.3	2.06	49.64	177573	908.28	996.42	8.4	21.2
3175.0	3.7	58.2	60	9.3	2.14	49.91	178548	1149	997	8.4	21.2
3176.0	3.0	59.6	60	9.3	2.24	50.25	179765	1434	999	8.4	21.2
3177.0	3.1	61.6	60	9.3	2.25	50.57	180937	1381	1000	8.4	21.2
3178.0	2.6	61.4	60	9.3	2.32	50.96	182348	1662	1003	8.4	21.2
3178.7	2.7	64.5	60	9.3	2.34	51.23	183290	1585	1004	8.4	21.2

BIT NUMBER	10	IADC CODE	537	INTERVAL	3178.7- 3371.3
HTC J33		SIZE	12.250	NOZZLES	15 15 15
COST	6637.00	TRIP TIME	9.2	BIT RUN	192.6
TOTAL HOURS	40.38	TOTAL TURNS	143960	CONDITION	T7 B8 G0.250

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3179.0	3.8	45.0	50	9.3	1.89	0.08	237	1116	153297	8.4	21.2
3180.0	3.3	50.0	50	9.3	2.01-	0.38	1147	1287	36366	8.4	21.2
3181.0	3.8	50.0	50	9.3	1.96	0.65	1940	1122	21042	8.4	21.2
3182.0	4.0	50.0	50	9.3	1.93	0.89	2681	1047	14983	8.4	21.2
3183.0	4.0	55.0	50	9.3	2.00	1.15	3436	1067	11747	8.4	21.3
3184.0	3.8	55.0	50	9.3	2.02	1.41	4229	1120	9742	8.4	21.3
3185.0	3.0	55.0	50	9.3	2.10	1.74	5223	1405	8419	8.4	21.3
3186.0	5.3	55.0	50	9.3	1.89	1.93	5784	793	7374	8.4	21.3
3187.0	7.5	55.0	50	9.3	1.77	2.06	6186	569	6554	8.4	21.3
3188.0	3.7	55.0	50	9.3	2.03	2.33	6992	1139	5972	8.4	21.3
3189.0	6.2	60.0	60	9.3	1.97	2.49	7577	689	5459	8.4	21.3
3190.0	10.1	60.0	60	9.3	1.78	2.59	7932	418	5013	8.4	21.3
3191.0	9.2	60.0	60	9.3	1.82	2.70	8325	463	4643	8.4	21.3
3192.0	3.7	60.0	60	9.3	2.16	2.97	9288	1134	4379	8.4	21.3
3193.0	4.2	60.0	60	9.3	2.11	3.20	10136	999	4143	8.4	21.3
3194.0	4.5	60.0	60	9.3	2.09	3.43	10938	945	3934	8.4	21.3
3195.0	6.5	60.0	60	9.3	1.95	3.58	11496	657	3733	8.4	21.3
3196.0	4.7	60.0	60	9.3	2.07	3.80	12265	906	3569	8.4	21.3
3197.0	4.1	60.0	60	9.3	2.12	4.04	13148	1040	3431	8.4	21.3
3198.0	3.9	60.0	60	9.3	2.14	4.29	14062	1077	3309	8.4	21.3
3199.0	4.3	60.0	60	9.3	2.10	4.53	14897	984	3195	8.4	21.3
3200.0	6.5	60.0	60	9.3	1.95	4.68	15452	654	3075	8.4	21.3
3201.0	7.7	60.0	60	9.3	1.88	4.81	15922	554	2962	8.4	21.3
3202.0	6.7	60.0	60	9.3	1.94	4.96	16463	637	2862	8.4	21.3
3203.0	4.7	60.0	60	9.3	2.07	5.17	17226	899	2782	8.4	21.3
3204.0	9.3	60.0	60	9.3	1.81	5.28	17612	455	2690	8.4	21.3
3205.0	4.3	60.0	60	9.3	2.10	5.51	18446	982	2625	8.4	21.3
3206.0	3.9	60.0	60	9.3	2.14	5.77	19381	1101	2569	8.4	21.3
3207.0	11.5	60.0	60	9.3	1.73	5.86	19694	369	2491	8.4	21.3
3208.0	10.7	60.0	60	9.3	1.76	5.95	20029	395	2420	8.4	21.3
3209.0	8.2	60.0	60	9.3	1.86	6.07	20466	515	2357	8.4	21.3
3210.0	8.5	60.0	60	9.3	1.85	6.19	20891	501	2298	8.4	21.3
3212.0	9.9	60.0	60	9.3	1.79	6.39	21617	428	2185	8.4	21.3
3213.0	15.5	60.0	60	9.3	1.62	6.46	21849	273	2129	8.4	21.3
3214.0	13.1	60.0	60	9.3	1.68	6.53	22123	323	2078	8.4	21.3
3215.0	11.7	60.0	60	9.3	1.72	6.62	22432	364	2031	8.4	21.3
3216.0	11.4	60.0	60	9.3	1.73	6.71	22748	372	1987	8.4	21.3
3217.0	13.0	60.0	60	9.3	1.68	6.78	23024	325	1943	8.4	21.3
3218.0	7.2	60.0	60	9.3	1.91	6.92	23525	590	1909	8.4	21.3
3219.0	4.2	60.0	60	9.3	2.11	7.16	24388	1017	1887	8.4	21.3
3220.0	9.6	60.0	60	9.3	1.80	7.27	24764	443	1852	8.4	21.3
3221.0	13.3	60.0	60	9.3	1.67	7.34	25034	318	1815	8.4	21.3
3222.0	11.5	60.0	60	9.3	1.73	7.43	25346	368	1782	8.4	21.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3223.0	14.6	60.0	60	9.3	1.64	7.50	25593	291	1748	8.4	21.3
3224.0	7.8	60.0	60	9.3	1.88	7.63	26054	543	1722	8.4	21.3
3225.0	15.1	60.0	60	9.3	1.63	7.69	26292	280	1691	8.4	21.3
3226.0	11.8	60.0	60	9.3	1.72	7.78	26596	358	1662	8.4	21.3
3227.0	4.6	60.0	60	9.3	2.08	7.99	27376	919	1647	8.4	21.3
3228.0	5.9	60.0	60	9.3	1.98	8.16	27983	715	1628	8.4	21.3
3229.0	4.5	60.0	60	9.3	2.08	8.38	28782	941	1614	8.4	21.3
3230.0	4.2	60.0	60	9.3	2.12	8.62	29647	1019	1603	8.4	21.3
3231.0	3.5	59.7	60	9.3	2.17	8.91	30668	1203	1595	8.4	21.3
3232.0	4.0	55.6	60	9.3	2.08	9.16	31577	1071	1585	8.4	21.3
3233.0	3.9	55.5	60	9.3	2.09	9.42	32508	1097	1576	8.4	21.3
3234.0	4.1	56.4	60	9.3	2.07	9.66	33384	1032	1567	8.4	21.3
3235.0	4.2	57.2	60	9.3	2.08	9.90	34250	1020	1557	8.4	21.3
3236.0	5.0	56.8	60	9.3	2.00	10.10	34964	841	1544	8.4	21.3
3237.0	5.5	56.3	60	9.3	1.97	10.28	35618	770	1531	8.4	21.3
3238.0	3.7	56.2	60	9.3	2.11	10.55	36590	1145	1525	8.4	21.3
3239.0	2.5	57.5	60	9.3	2.27	10.95	38015	1679	1527	8.4	21.3
3240.0	6.2	61.1	60	9.3	1.98	11.11	38597	686	1513	8.4	21.3
3241.0	4.3	60.1	60	9.3	2.10	11.34	39436	988	1505	8.4	21.3
3242.0	4.3	61.8	60	9.3	2.13	11.58	40277	991	1497	8.4	21.3
3243.0	3.2	60.1	60	9.3	2.22	11.89	41411	1336	1494	8.4	21.3
3244.0	3.5	57.9	60	9.3	2.15	12.18	42438	1210	1490	8.4	21.3
3245.0	7.5	56.7	60	9.3	1.85	12.31	42917	564	1476	8.4	21.3
3246.0	3.4	59.8	60	9.3	2.19	12.61	43984	1257	1473	8.4	21.3
3247.0	3.4	60.8	60	9.3	2.20	12.90	45038	1242	1469	8.4	21.3
3248.0	3.2	61.7	60	9.3	2.23	13.21	46159	1321	1467	8.4	21.3
3249.0	3.5	59.6	60	9.3	2.18	13.50	47188	1212	1464	8.4	21.3
3250.0	2.9	58.4	60	9.3	2.23	13.84	48441	1476	1464	8.4	21.3
3251.0	3.4	58.1	60	9.3	2.17	14.14	49506	1255	1461	8.4	21.3
3252.0	3.8	58.0	60	9.3	2.13	14.40	50457	1120	1456	8.4	21.3
3253.0	6.9	57.0	60	9.3	1.89	14.55	50976	611	1445	8.4	21.3
3254.0	5.2	58.0	60	9.3	2.01	14.74	51668	815	1437	8.4	21.3
3255.0	4.5	58.4	60	9.3	2.06	14.96	52462	935	1430	8.4	21.3
3256.0	6.4	56.6	60	9.3	1.91	15.12	53023	661	1420	8.4	21.3
3257.0	3.9	60.5	60	9.3	2.15	15.37	53951	1093	1416	8.4	21.3
3258.0	5.2	62.5	60	9.3	2.06	15.57	54638	809	1408	8.4	21.3
3259.0	5.9	61.2	60	9.3	2.00	15.74	55248	719	1400	8.4	21.3
3260.0	11.0	59.2	60	9.3	1.74	15.83	55576	386	1387	8.4	21.3
3261.0	5.0	59.3	60	9.3	2.04	16.03	56296	848	1381	8.4	21.3
3262.0	4.9	60.5	60	9.3	2.06	16.23	57035	871	1374	8.4	21.3
3263.0	4.4	61.4	60	9.3	2.11	16.46	57857	968	1370	8.4	21.3
3264.0	9.8	59.1	60	9.3	1.78	16.56	58223	431	1359	8.4	21.3
3265.0	10.3	59.5	60	9.3	1.77	16.66	58573	412	1348	8.4	21.3
3266.0	8.0	59.6	60	9.3	1.86	16.78	59024	531	1338	8.4	21.3
3267.0	11.3	55.9	60	9.3	1.69	16.87	59343	376	1327	8.4	21.3
3268.0	15.1	57.5	60	9.3	1.60	16.94	59582	282	1316	8.4	21.3
3269.0	11.7	58.5	60	9.3	1.71	17.02	59890	363	1305	8.4	21.3
3270.0	7.6	59.2	60	9.3	1.88	17.16	60363	557	1297	8.4	21.3
3271.0	7.9	59.4	60	9.3	1.87	17.28	60819	537	1289	8.4	21.3
3272.0	12.8	59.7	60	9.3	1.69	17.36	61100	331	1278	8.4	21.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
3273.0	13.3	58.3	60	9.3	1.66	17.44	61371	319	1268	8.4	21.4
3274.0	12.7	59.5	60	9.3	1.69	17.51	61654	333	1258	8.4	21.4
3275.0	11.4	61.3	60	9.3	1.75	17.60	61971	373	1249	8.4	21.4
3276.0	5.0	58.8	60	9.3	2.03	17.80	62691	848	1245	8.4	21.4
3277.0	3.2	62.9	60	9.3	2.25	18.11	63804	1311	1246	8.4	21.4
3278.0	5.5	60.1	60	9.3	2.01	18.29	64456	768	1241	8.4	21.4
3279.0	3.9	59.2	60	9.3	2.13	18.55	65389	1099	1240	8.4	21.4
3280.0	4.3	58.4	60	9.3	2.09	18.79	66236	998	1237	8.4	21.4
3281.0	5.0	58.0	60	9.3	2.02	18.99	66953	845	1233	8.4	21.4
3282.0	6.2	57.9	60	9.3	1.94	19.15	67534	684	1228	8.4	21.4
3283.0	5.2	58.2	60	9.3	2.01	19.34	68225	814	1224	8.4	21.4
3284.0	3.9	62.5	60	9.3	2.17	19.60	69156	1097	1223	8.4	21.4
3285.0	3.0	61.2	60	9.3	2.25	19.93	70354	1411	1225	8.4	21.4
3286.0	3.9	59.1	60	9.3	2.13	20.19	71269	1078	1223	8.4	21.4
3287.0	4.4	58.9	60	9.3	2.08	20.41	72088	965	1221	8.4	21.4
3288.0	3.9	59.1	60	9.3	2.13	20.67	73015	1092	1220	8.4	21.4
3289.0	12.9	59.1	60	9.3	1.68	20.75	73295	330	1212	8.4	21.4
3290.0	6.7	58.9	60	9.3	1.92	20.90	73835	636	1206	8.4	21.4
3291.0	3.6	60.0	60	9.3	2.17	21.18	74847	1192	1206	8.4	21.4
3292.0	3.5	60.0	60	9.3	2.18	21.47	75878	1215	1206	8.4	21.4
3293.0	5.0	60.0	60	9.3	2.04	21.67	76597	847	1203	8.4	21.4
3294.0	4.1	60.0	60	9.3	2.12	21.91	77472	1031	1202	8.4	21.4
3295.0	5.2	60.0	60	9.3	2.03	22.10	78159	809	1198	8.4	21.4
3296.0	3.5	60.0	60	9.3	2.19	22.39	79200	1226	1199	8.4	21.4
3297.0	4.6	60.0	60	9.3	2.07	22.60	79975	913	1196	8.4	21.4
3298.0	4.7	60.0	60	9.3	2.07	22.82	80742	904	1194	8.4	21.4
3299.0	11.2	60.0	60	9.3	1.74	22.91	81063	378	1187	8.4	21.4
3300.0	9.2	60.0	60	9.3	1.82	23.02	81456	463	1181	8.4	21.4
3301.0	6.9	60.0	60	9.3	1.92	23.16	81976	613	1176	8.4	21.4
3302.0	7.5	60.0	60	9.3	1.89	23.29	82459	569	1171	8.4	21.4
3303.0	4.2	60.0	60	9.3	2.11	23.53	83315	1008	1170	8.4	21.4
3304.0	7.0	60.0	60	9.3	1.92	23.67	83831	608	1166	8.4	21.4
3305.0	8.6	60.0	60	9.3	1.84	23.79	84249	492	1160	8.4	21.4
3306.0	4.0	60.0	60	9.3	2.13	24.04	85147	1058	1160	8.4	21.4
3307.0	4.3	60.0	60	9.3	2.10	24.27	85984	986	1158	8.4	21.4
3308.0	3.1	60.0	60	9.3	2.23	24.60	87163	1389	1160	8.4	21.4
3309.0	4.1	60.0	60	9.3	2.12	24.84	88042	1036	1159	8.4	21.4
3310.0	7.2	60.0	60	9.3	1.91	24.98	88542	589	1155	8.4	21.4
3311.0	9.6	60.0	60	9.3	1.80	25.09	88917	442	1149	8.4	21.4
3312.0	5.8	60.0	60	9.3	1.99	25.26	89536	729	1146	8.4	21.4
3313.0	9.7	60.0	60	9.3	1.80	25.36	89909	439	1141	8.4	21.4
3314.0	9.8	60.0	60	9.3	1.79	25.46	90275	431	1136	8.4	21.4
3315.0	4.2	60.0	60	9.3	2.11	25.70	91129	1006	1135	8.4	21.4
3316.0	3.4	60.0	60	9.3	2.19	26.00	92186	1245	1135	8.4	21.4
3317.0	6.3	60.0	60	9.3	1.96	26.16	92761	677	1132	8.4	21.4
3318.0	4.0	60.0	60	9.3	2.13	26.41	93670	1071	1132	8.4	21.4
3319.0	3.2	60.0	60	9.3	2.22	26.72	94810	1343	1133	8.4	21.4
3320.0	5.0	60.0	60	9.3	2.05	26.93	95536	855	1131	8.4	21.4
3321.0	2.4	60.0	60	9.3	2.32	27.34	97036	1767	1136	8.4	21.4
3322.0	5.4	60.0	60	9.3	2.01	27.53	97697	779	1133	8.4	21.4



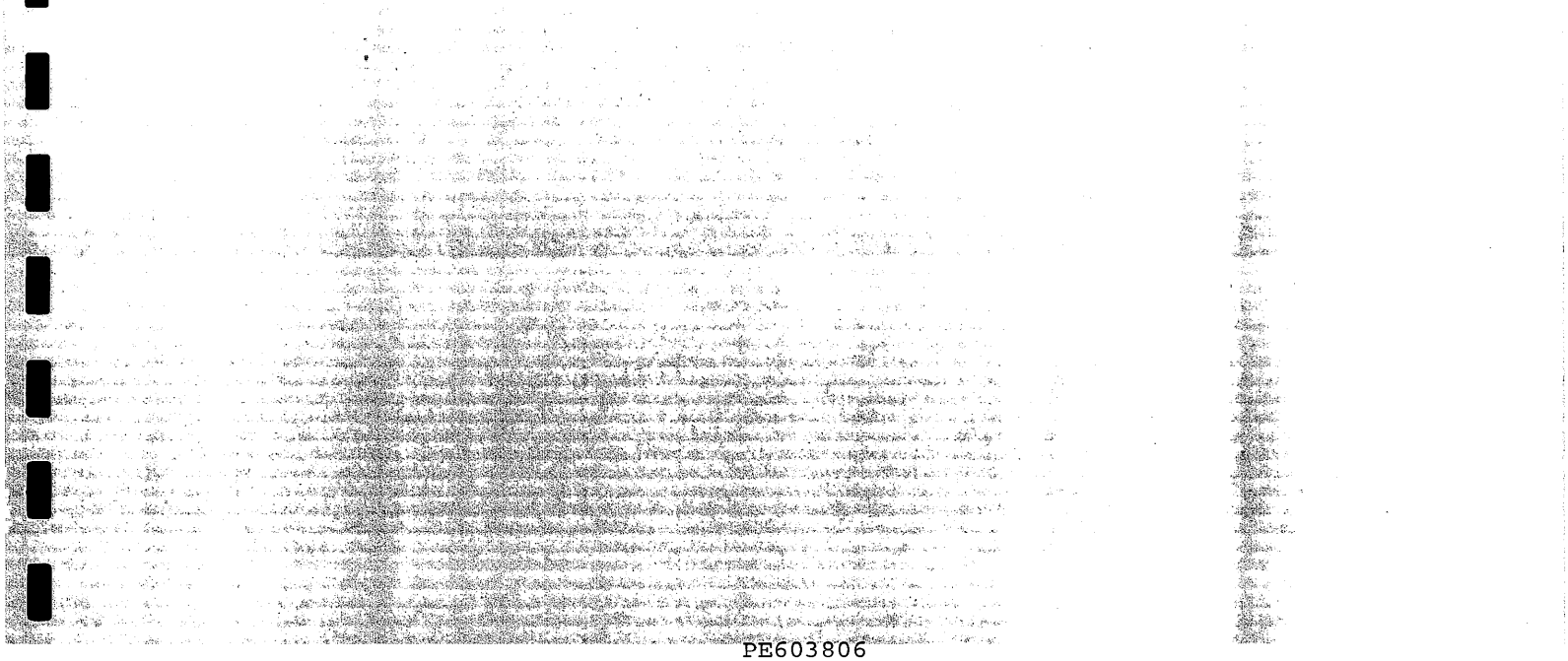
PE603805

This is an enclosure indicator page.
The enclosure PE603805 is enclosed within the container PE906424 at this location in this document.

The enclosure PE603805 has the following characteristics:

ITEM_BARCODE	= PE603805
CONTAINER_BARCODE	= PE906424
NAME	= Drill Data Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Drill Data Log for Teraglin-1
REMARKS	=
DATE_CREATED	= 26/05/83
DATE_RECEIVED	= 5/09/83
W_NO	= W814
WELL_NAME	= TERAGLIN-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



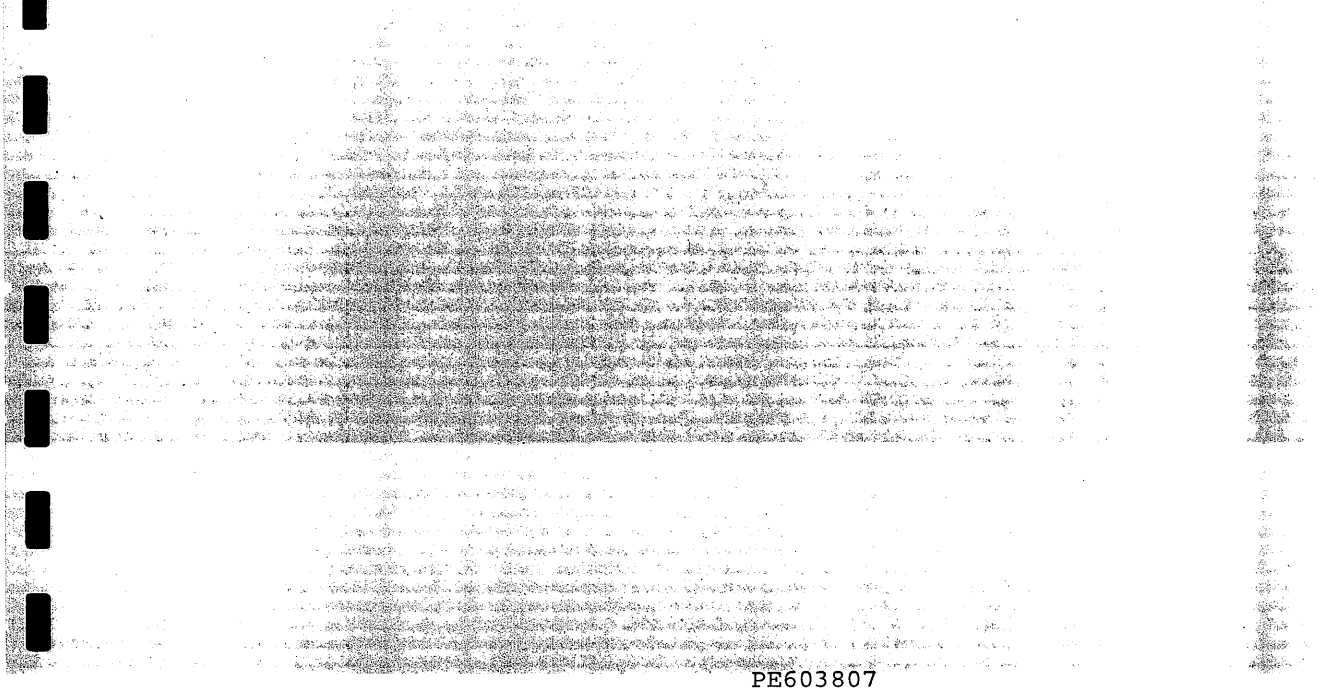
PE603806

This is an enclosure indicator page.
The enclosure PE603806 is enclosed within the container PE906424 at this location in this document.

The enclosure PE603806 has the following characteristics:

ITEM_BARCODE	= PE603806
CONTAINER_BARCODE	= PE906424
NAME	= Temperature Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Temperature Log for Teraglin-1
REMARKS	=
DATE_CREATED	= 26/05/83
DATE_RECEIVED	= 5/09/83
W_NO	= W814
WELL_NAME	= TERAGLIN-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



PE603807

This is an enclosure indicator page.
The enclosure PE603807 is enclosed within the container PE906424 at this location in this document.

The enclosure PE603807 has the following characteristics:

ITEM_BARCODE	= PE603807
CONTAINER_BARCODE	= PE906424
NAME	= Pressure Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Pressure Log for Teraglin-1
REMARKS	=
DATE_CREATED	= 26/05/83
DATE_RECEIVED	= 5/09/83
W_NO	= W814
WELL_NAME	= TERAGLIN-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

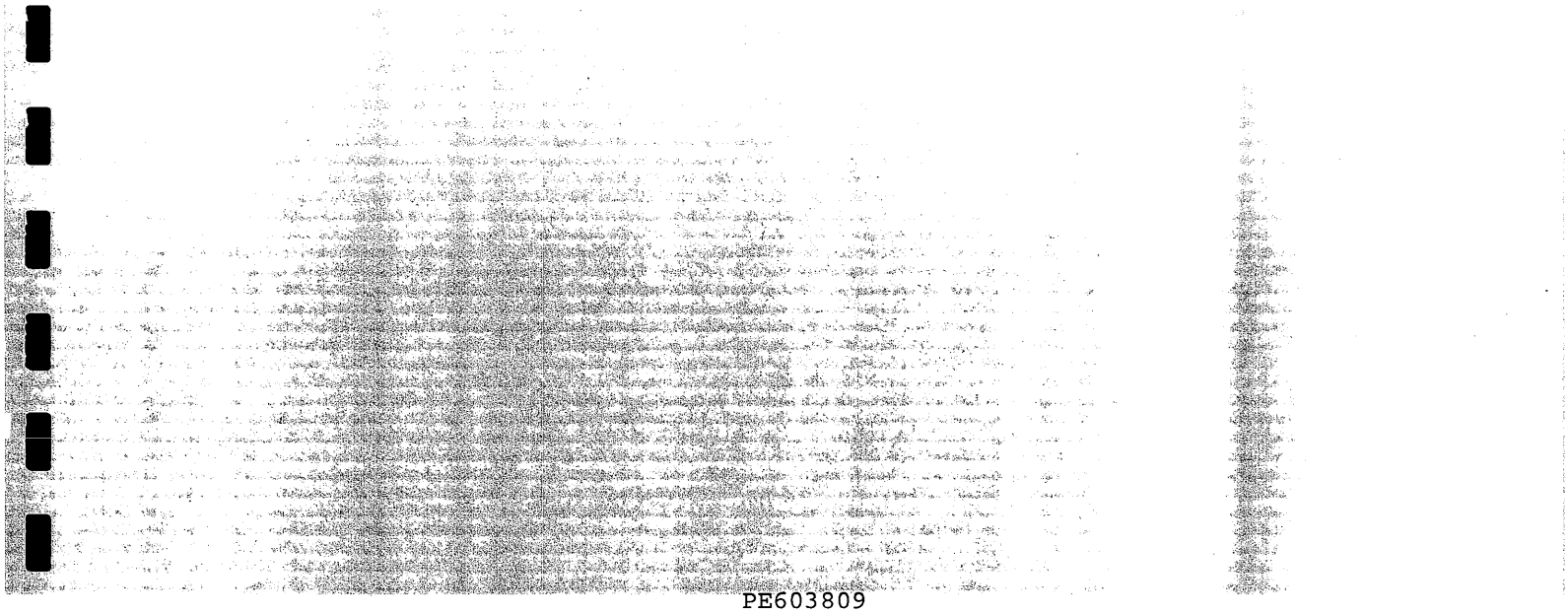
PE603808

This is an enclosure indicator page.
The enclosure PE603808 is enclosed within the container PE906424 at this location in this document.

The enclosure PE603808 has the following characteristics:

ITEM_BARCODE	= PE603808
CONTAINER_BARCODE	= PE906424
NAME	= Geo-Plot Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Geo-Plot Log for Teraglin-1
REMARKS	=
DATE_CREATED	= 26/05/83
DATE_RECEIVED	= 5/09/83
W_NO	= W814
WELL_NAME	= TERAGLIN-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



PE603809

This is an enclosure indicator page.
The enclosure PE603809 is enclosed within the container PE906424 at this location in this document.

The enclosure PE603809 has the following characteristics:

ITEM_BARCODE	= PE603809
CONTAINER_BARCODE	= PE906424
NAME	= Mud Log (Grapholog)
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Mud Log (Grapholog) for Teraglin-1
REMARKS	=
DATE_CREATED	= 26/05/83
DATE_RECEIVED	= 5/09/83
W_NO	= W814
WELL_NAME	= TERAGLIN-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)