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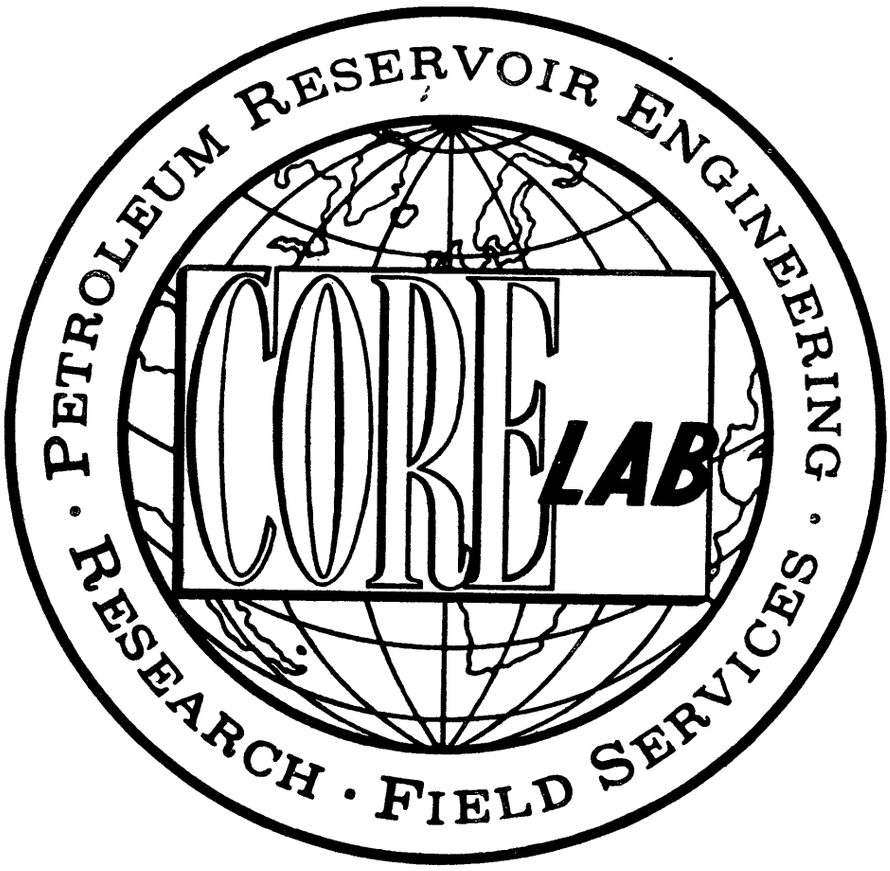
ES WELL REPORT ATTACHMENT TO WCR WHITING-1 (W807)



ES WELL REPORT

ESSO AUSTRALIA LTD.

WHITING 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.

7 July 1983

ESSO AUSTRALIA LTD.
Esso House
127 Kent Street
Sydney
N.S.W. 2001

ATTENTION: MR. K. KUTTAN

Dear Mr. Kuttan,

Please find enclosed five (5) copies plus the original well report for WHITING NO. 1.

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

Yours very truly
CORE LABORATORIES INTERNATIONAL LTD.

for
M. MOWATT
UNIT SUPERVISOR

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

INDEX

1. INTRODUCTION

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

Well co-ordinates:

Latitude	:	38° 14' 11.77" S
Longitude	:	147° 53' 00.93" 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.

WHITING NO. 1 was spudded on 6th March 1983 and reached a total depth of 3011m on 5th April 1983, a total drilling time of 31 days. The Main objective of the well was to test the hydrocarbon potential of an intra-Latrobe Group closure between Barracouta and Snapper. The well was production-tested at the top of the Latrobe Formation (1483-1486 metres).

Elevations were:

Kelly bushings to mean sea level	21m
Water depth	53m
Kelly bushings to mean sea bed	74m

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 WHITING NO. 1 were as follows:

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

2. RIG SPECIFICATIONS

CORE LAB

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL WHITING 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 000psi 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

CORE LAB

WELL INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL WHITING NO. 1

Sheet No. 1

WELL NAME	WHITING 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° 14' 11.77" S	LONGITUDE (Y)	147° 53' 0.93" 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	53M	RKB to Water Level	21M
DATES	SPUD	6TH MARCH 1983	TOTAL DEPTH	5TH MARCH 1983

HOLE SIZES

Depth From	Depth To	Bit Size	No. of Bits	No. of Reamers	Date From	Date To	Cased	Logged
74.24	211	26"	1	-	6/3/83	7/3/83	7/3/83	NO
211	800	17½"	1	-	8/3/83	9/3/83	10/3/83	YES
800	3011	12¼"	10	-	13/3/83	5/4/83	10/3/83	YES

DRILLING FLUID

Depth From	Depth To	Weights	Type
74	211	8.6 TO 8.6	SEAWATER
211	800	8.6 TO 9.6	SEAWATER GEL
800	3011	9.0 TO 9.6	SEAWATER PREHYDRATED GEL
		TO	
		TO	
		TO	
		TO	
		TO	

WIRELINE LOGGING

Depth From	Depth To	Hole Size	Date Run	Logs Run
800	196	17½"	9/3/83	BHC/GR/CAL
3011	778	12¼"	6/4/83	DLL-MSFL-GR
3011	778	12¼"	7/4/83	LDL-CN LG-GR
3011	778	12¼"	7/4/83	BHC-GR
2997	1200	12¼"	7/4/83	HDT
-	-	12¼"	9/4/83	RFT NOS 1, 2
-	-	12¼"	11/4/83	RFT NOS 3, 4, 5
-	-	12¼"	12/4/83	RFT NO. 6

RISER, CASING & LINER

Depth From	Depth To	OD	ID	Weight	Grade	Threads	Date Run	Cement	Stages	Excess
2	74	21.5"	21"	----------		RISER	----------			
74	196	20.0"	19.124"	94.4	X-52	JV BOX	7/3/83	"G"	1	-
74	778	13-3/8"	12.615"	54.5	K-55	BUTT	10/3/83	"G"	1	-
74	2972	9-5/8"	8.861"	47.0	N 80	BUTT	15/4/83	"G"	2	-

CORE LAB

COMPANY ESSO AUSTRALIA LTD.
WELL WHITING NO. 1

WELL INFORMATION SHEET
(SUPPLEMENTARY)

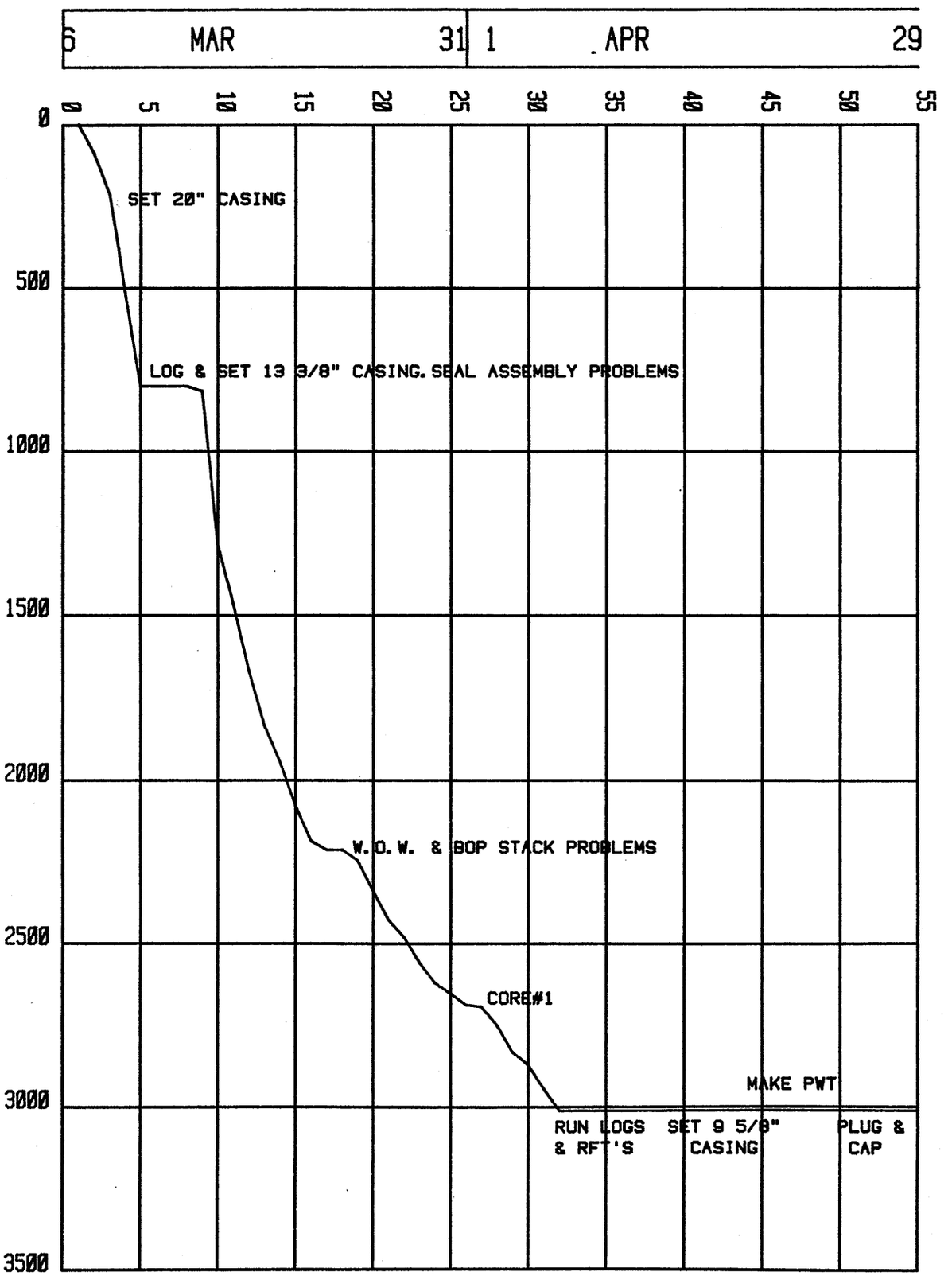
Sheet No. 2

WIRELINE LOGGING (continued)

Depth from	Depth to	Hole size	Date run	Logs run
-	-	12¼"	13/4/83	CST 1, 2
-	-	12¼"	14/4/83	CST 3
2972		8.681"	19/4/83	CBL/CCL
1483	1486	8.681"	21/4/83	PWT 1

PROGRESS LOG
ESSO AUSTRALIA LTD.

WHITING No. 1



WELL HISTORY

6th March 1983. Towed to new location, 38° 14' 11.77" S and 147° 53' 0.93" E. Set anchors and ballasted rig. Spudded WHITING NO. 1 at 22:05 hours. Drilled to 86m.

7th March 1983. Drilled ahead to 211m. POOH and made wiper trip. POOH and ran 20" casing, setting it at 196m. Cemented the casing. Rigged up to run the stack.

8th March 1983. Ran stack and riser. Nippled up diverter. Made up new BHA, RIH, and tagged CMT at 190m. Tested diverter system and then drilled cement and new hole at 511m.

9th March 1983. Drilled 17½" hole from 511m to 800m, circulated bottoms up, dropped survey and POOH to shoe. Background gas rose from 5 units to 40 units in this interval, and was predominantly C_1 with trace C_2-C_4. The survey was recovered (3/4°) and then RIH (3m fill). Circulated bottoms up, 0.9/62/9 units trip gas. POOH.

10th March 1983. Continued POOH then ran Schlumberger (BHC/GR/CAL). Some tight spots were encountered during the logging run. A wiper trip was then made, and the pipe had to be washed down from 701m to 719m, RIH to 800m and circulated bottoms up with 0.9/25/9 units trip gas. POOH. 59 joints of 13-3/8" casing were run, the circulating head rigged up and 3200 strokes circulated through the casing.

11th March 1983. The casing was then cemented at 778m. The wellhead was then washed from 68m to 73m. POOH and RIH to set the seal assembly. The seal assembly and BOP were tested from 200 psi to 5000 psi. POOH. Seal assembly was still on the cup tester tool. Ran the Cameron wash tool and washed from 66m to 72m. POOH, attempted to set seal assembly unsuccessfully. Recovered seal assembly fish. Washed riser down to 13-3/8" hanger and attempted to run seal assembly with no success. RIH and flushed riser. Attempted to set seal assembly.

12th March 1983. Attempted to run seal assembly with no success.

13th March 1983. Run seal assembly on specially made running tool, as casing hanger suspected of being out of true. Tested seal assembly and BOP's successfully then RIH with No. 3 (HTC X3A), tagging cement at 742m. Drilled cement to 800m and then drilled 5m new hole and made PIT (13.5 ppg). Drilled ahead to 815m (trace gas levels).

14th March 1983. Drilled ahead in Gippsland limestone and through a gradational change into the Lakes Entrace formation and then the Gurnard formation. Background gas rose from 0.2 units to 0.5 units after 1220m, with a maximum of 1.3 units from 1230m. The average hole diameter calculated from a carbide lag check at 1184m was 13". Drilling continued to a midnight depth of 1280m.

15th March 1983. Drilling continued into the Latrobe formation, samples were circulated up at 1287m and 1297m. After flow checks (negative) no shows were seen and gas levels were 0.6/3.7/0.5 units from 1287m, and 0.6/2.0/0.4 units from 1297m. Drill rates had increased from 20m/hour to 160m/hour in these breaks. The bit was pulled at 1339m after severe torque increase having been on bottom for 19.2 hours and 176000 turns. No. 4 (HTC J22) was RIH; a tight spot was encountered

at 1312m and the hole was reamed to 1339m. Trip gas was masked by Gumbo. Drilling continued with samples circulated out at 1368m (gas 2.0/2.6/1.1 units), 1398m (gas 0.2/0.5/0.1 units) and 1457m (gas 0.5/1.2/0.5 units) after flow checks. No shows were evident in the samples. Background gas levels were 0.5 units, with a maximum of 6 units from 1371m.

16th March 1983. Drilled ahead, conducting flow checks at 1465m (-ve), 1480m (-ve), 1506m (-ve) and 1558m (-ve), with high torque at 1496m, 1547m and 1587m. Background gas was 0.2-0.5 units, with peaks of 7.5 from 1470m, 11.1 units from 1480m, 20 units from 1530m and 18 units from 1657m. The formation consisted of interbedded sandstone, siltstone and coal.

17th March 1983. Drilled on to 1668.2m, where the bit was pulled, due to low ROP's, after 25 on bottom hours and 120000 turns. There were no teeth left when it reached the surface. Tight hole was encountered on POOH at 1278-1364m and up to 100 000 lbs overpull was required. RIH with No. 5 (HTC J44) and reamed from 1278-1364m. RIH and drilled ahead. Flow checked (-ve) at KD 1675m after ROP's increased from 3,/hr to 60m/hr. It proved to be a coarse grained loose sandstone when a sample was caught. The ROP continued at 30-50m/hr to 1700m, and a gas peak of 44 units was detected from a coal at 1695m. The drilling rate then dropped down to 5-10m/hr. A flow check was conducted at 1715m, no flow was detected and samples were circulated out. The BU sample had no show and gas levels increased only slightly, 2.6/4.2/0.9 units. Flow checks were conducted after drilling breaks at 1733m, 1742m, 1781m and 1827m, no flow was detected. Gas levels rose with peaks of 136 units (1723m), 20 units (1731m), 102 units (1742m), 39 units (1750m), 53 units (1790m), 38 units (1802m) and 11 units (1832m). Some of these coincided with connections, but all came from coals and so the possibility of connection gas, although considered, was disregarded.

18th March 1983. Drilled ahead from 1833 to 1849m where a flow check was made (no flow) and drilling resumed. At 1877m another flow check was made (no flow) - samples were circulated up at 1878m when the drilling break continued, BU gas was 2/49/1.5 units, with no show in the sample. Further flow checks were made, after drilling breaks at 1894m and 1897m (no flow). The bit was pulled at 1942m, due to increased torque. The bit had drilled 274m in 31 hours. It was graded 3,8,I. Background gas for the day was 1-2 units with peaks from coals at 1832m (11 units), 1848m (15 units), 1876m (49 units), 1897m (10 units).

19th March 1983. RIH with No. 6 (HTC J22), having picked up a shock-sub in the BHA. Drilled 12½" hole down to 2078m. Drill-breaks were associated with coals predominantly. Maximum gas came from a coal at 1957m (27 units), and the background gas was 2 units.

20th March 1983. Drilled to 2185m, at which point the bit was pulled due to decreased ROP's (below 2m/hr). Flow checks had been made at the following depths: 2084, 2113, 2126 and 2143m, all proving negative. Maximum gas in the drilled interval was 28 units (from Coal at 2113m), and the BG remained steady at 2 units. On pulling out, overpull was experienced between 2100 and 2130m.

21st March 1983. RIH with bit No. 7 (HTC J11, 12¼" 3x18), reaming the tight sections. Drilled to 2211m, at which point it was decided to POOH to the shoe, due to inclement weather. The mud pits were emptied, and the riser unlatched from the lower section of the

stack, and pulled to the surface. Waited on weather - high seas and strong winds expected.

22nd March 1983. Waited on weather - rig on red alert. Ran the upper stack and riser.

23rd March 1983. Tested the stack. Pulled Bit No. 7, which had been hung off in the rams for 2 days; then RIH with Bit No. 8 (J22, 12¼", 3x18), and drilled to 2245m. Trip gas was 51 units, maximum drill gas was 10 units (from coal at 2219m) and BG was 0.2 units. Traces of CO_2 were detected between 2211 and 2230m.

24th March 1983. Drilled to 2338m at 3-4m/hr on average. (Formation consisted of interbedded Siltstones, Claystones, Coals and Sands). Maximum gas was 26 units (Coal 2325m) and the background was 1 unit.

25th March 1983. Drilled to 2428m at 3-5m/hr, with 9-15m/hr through coals. Gas peaks of 40 to 100 units were observed from the coals over a BG of 2 to 4 units. Maximum gas was 103 units (Coal, 2400m). High gas peaks were observed as drilling continued through interbedded sand and carbonaceous siltstones below 2400m.but although sand content increased from 10 to 50%, only very rare fluorescence (weak crush cut) was evident. The bit was pulled at 2428m, due to low ROP's, after dropping a survey (1^{o} when retrieved) and BCO was 2,3,I.

26th March 1983. Running in hole with Bit No. 9 (12¼" HTC J22), TG was 2.1/44/4.2 units as drilling continued. Maximum gas was 31.5 units (Coal, 2438m) over background of 2 units and other peaks, also from coal were 29.5 units, 2441m and 25.5 units, 2443m . The average ROP was 3-6 m/hr (10m/hr in coals) to 2462m, increasing to 8m/hr below that point. 20.9 units and 27.1 units of gas were recorded from sands at 2462m and 2469m respectively, interbedded with 60% siltstone. Drilling continued to 2480m.

27th March 1983. Drilled to 2557m at an average ROP of 2-3m/hr (8-10m/hr in coals) with background gas of 0.5-10 units. Maximum gas was 9.7 units (sandstone, 2490m) and a 5-stand wiper trip was conducted at 2551m which yielded 3.0/4.1/1.6 units of WTG on returning to bottom.

28th March 1983. Drilled ahead to 2619m at a steady ROP of 2.4-3.0 m/hr with occasional 4.5-5m/hr. Maximum gas was 10.5 units (Coal, 2565m) over a background level of 1.0-1.5 units. Sands at 2577m and 2594m respectively yielded 4.2 and 2.7 units of gas. A drilling break of 3.8-7.2m/hr was circulated out at 2619m but maximum gas at BU was 1.9/3.0/1.6 units with only a trace of sand in predominantly siltstone.

29th March 1983. Drilling to 2634m (average ROP of 2.5m/hr), maximum gas was 6.7 units from coal at 2627m and background gas was 1.0-1.3 units. Tripped to change the bit at 2634m, after dropping a survey (misrun), the bit condition out was 6-2-I. Running in with Bit No. 10 (HTC J33), trip gas was 0.8/32.3/1.0 units and drilling continued to 2652m at an average ROP of 2.0-3.0m/hr.

30th March 1983. Drilling to 2674m, the section 2652m - 2674m was then reamed after high torque before continuing ahead to 2681m. Maximum gas was 24 units (sand, 2666m) and background gas was 1-2 units. After a drilling break of 3-9.2m/hr and flow check (-ve) at 2681m the well was circulated out indicating 2.4/19.0/2.5 units of gas from a sandstone (bright yellow fluorescence with slow streaming

cut). Dropping a survey (misrun) and POOH, the core barrel was made up and RIH. Trip gas was only 2.6/3.0/2.4 units and Core No. 1 was cut from 2681 to 2687m.

31st March 1983. Cutting Core No. 1 to 2693.6m, recovery was 9.57m out of 12.6m cut (76%) and maximum gas while coring was 4.6 units (2688.4m). The BOP stack was then tested prior to RIH with Bit No. 11 (HTC J22) and the section 2645m to 2658m was reamed. Core bit condition out was 5% worn.

1st April 1983. Reaming continued from 2658m to the top of the rat hole at 2681m and maximum gas while reaming was 2.6/18/5.0 units. Completing reaming of the core hole to 2693m, trip gas to surface was 3/34.6/4 units and drilling of 12¼" hole proceeded to 2748m. Average ROP was 3-4m/hr and a drilling break of 4.4 -- 9.8m/hr at 2744m was flow checked (-ve), with maximum gas also coming from this break, 14.7/46.4/24.2 units (coal) over background gas of 2-5 units. (Lithology immediately below the cored section was mainly volcanic rock, grading back to normal sediments by 2725m). A flow check (-ve) was also conducted at 2718m after a small pit gain.

2nd April 1983. Drilling ahead to 2777m, a drilling break of 5 - 9.6m/hr was flow checked (-ve) and circulating out gave 29.6 units of gas from a sand. A break of 5.5 -- 12.1m/hr at 2753m was flow checked (-ve) but not circulated out, and maximum gas for the day of 8/67/9 units was from a sand at 2753m. Drilling continued at an average ROP of 3-5m/hr to 2810m where a 5-stand wiper trip was conducted (no drag). Drilling ahead to 2830m, wiper trip gas was negligible, and another break of 2.6-13.7m/hr was flow checked (-ve) and circulated out yielding 29 units of gas from a sand. Background gas was still 2-5 units.

3rd April 1983. Drilling ahead to 2840m (average ROP 2-3m/hr), the bit was pulled when the ROP dropped below 2m/hr. A survey was dropped (0^{o}) and POOH, bit condition out was 3-3-I. RIH with Bit No. 12 (HTC J22), drilling continued to 2870m with trip gas to surface of 3.3/5.3/2.0 units. Background gas was 2-4 units and a drilling break of 4.9 -- 13.6m/hr, flow checked (-ve), produced the maximum gas for the day of 4.1/10.3/3.6 units at 2860m (sand with trace fluorescence and no cut). Another flow check at 2865m after a small pit gain indicated no flow.

4th April 1983. Drilling ahead to 2943m (average ROP of 2-3m/hr), flow checks were made (both negative) at 2900m and 2903m, the latter being circulated out after a drilling break of 4-16.1m/hr (maximum gas 1.6 units, sand.) Other breaks observed were from coals that drilled at up to 16m/hr yielding up to 19 units of gas over a background of 3-5 units. (2878m, 2923m and 2931m) Maximum gas for the day was 2.2/19.3/3.3 units from the coal at 2931m.

5th April 1983. Drilling continued to 3011m where increasing winds, gusting up to 100 knots, forced commencement of POOH. Average ROP to 3011m was 3m/hr and a flow check (-ve) was conducted at 2981m after a drilling break of 4-17.7m/hr. (1.6/8.8/0.7 units of gas in a sandstone with 10% fluorescence, no cut.) Maximum gas for the day was 4.3/11.4/4.7 units at 2964m (sand) and background levels were 2-4 units on average.

6th April 1983. POOH into the casing, the pipe was hung off the top rams and backed off at the hang-off tool. After closing the shear rams and displacing the riser, POOH was completed to WOW. Weather

subsiding by 09:30 hours and RIH, the riser was displaced with mud and the well monitored through the kill line prior to opening the shear rams. Screwing into the hang-off tool, the remaining pipe in the casing was POOH. Retrieving a survey, deviation was 1° and bit condition out was 4-2-¼. Schlumberger were then rigged up and RIH. Schlumberger logging - DLL-MSFL-GR (3011m - 778m)

7th April 1983. Schlumberger logging:

LDL-CNLG-GR	(3011 - 778m)
BHC-GR	(3013 - 778m)
HDT	(2997 - 1200m)

8th April 1983. Made a wiper trip, washing and reaming to bottom. There was 6m of fill. Circulated and conditioned the mud to 9.7 ppg (T.G. was 1-30-4 units). No drag was experienced when POOH. Further Schlumberger logs were run:

EPT	(3009 - 1200m)
Velocity Survey	

9th April 1983. Continued running the velocity survey, then RFT run No. 1 (pretests) was made. Problems occurred with the tool associated with the head, and shear pin. Ran RFT No. 2 (pretests). Hole took 29½ bbls today.

10th April 1983. Completed RFT No. 2 (pretests). Conducted a wiper trip. Maximum trip gas was 111 units. The hole took an extra 14 bbls on the trip out.

11th April 1983. Schlumberger ran RFT No. 3 (from 1482m), 4 (from 2801.5m), 5 (pretests).

12th April 1983. Completed RFT No. 5 by taking a sample from 2418.0m. Conducted a wiper trip. Ran RFT No. 6, recovering samples from 1401m. Attempted to run sidewall core tool but the tool became stuck at 2060m.

13th April 1983. Freed the CST tool and retrieved same. Conducted a wiper trip (trip gas was 4-48-4 units). Schlumberger made two sidewall core runs.

14th April 1983. Schlumberger made a third sidewall core run. Performed a wiper trip. Wiper trip gas was 7-14-2 units. 26m of fill was encountered during the wiper trip. Due to inclement weather, pipe was RIH and mud circulated.

15th April 1983. Continued circulating then POOH and ran 9-5/8" casing.

16th April 1983. Continued running 9-5/8" casing, circulated through the casing. BU gas was 0.2-5.6-1.5 units. A 50 bbls water spacer was pumped prior to 146 bbls of cement slurry (15.8 ppg) which was then displaced, maximum gas was 4 units. Circulation then commenced through the DV collar whilst WOC. BU gas was 1.5-4-1 units. The second cement stage was then completed with a maximum of 2 units gas during displacement. The casing running string was retrieved and then the seal assembly was run but could not be inserted.

17th April 1983. POOH with seal assembly and inspected same. RIH and washed hanger whilst modifying the running tool. The seal

assembly was successfully run and BOP's tested from 200 to 5000 psi. The 8" drill collars were then laid down, as were 10 joints of HWDP and the core barrel prior to running an 8½" HTC 3AJ bit. Cement was tagged at 2091m, and drilled to 2099m, where the "DV" tool was encountered and drilled out. Continued RIH to 2919m whre cement was tagged. Circulated to clean the hole before POOH.

18th April 1983. Continued POOH and then rigged up Schlumberger to run CBL/CLL. Due to excessive casing scale this was unsuccessful and Schlumberger POOH and rigged down. RIH with a casing scraper to2919m and circulated to condition mud, then POOH. Schlumberger then attempted to run CBL/CLL again, but the previous problem persisted, so Schlumberger rigged down and a 7" magnet was RIH to pick up up casing scale.

19th April 1983. POOH with magnet from 1583m. Rigged up Schlumberger and ran GBL-VD-GR-CCL from 1100 - 1550m. The casing was then tested against the shear rams from 200 - 3500 psi successfully. A gauge ring and junk basket were then run to 1525m. Having cleaned the casing the packer, Baker model "D", was run and set at 1460m. The production tubing was then run.

20th April 1983. Continued running tubing and rigged up the test equipment. Stabbed packer and pressure tested the lower annular preventer to 200/1500 psi. The tubing was stabbed into the packer and landed, then rigged up test and kill lines to STT and pressure tested annulus to 200 - 1500 psi, then the tubing. Pressure testing continued with the STT and choke manifold. A safety meeting was then held. The lines to the burner were tested as was the OTIS burner. BOP's and lubricators were tested then waited on daylight.

21st April 1983. Still waiting on daylight to perforate. After the annulus was pressure tested (200 - 1500psi) tubing was displaced with 40 bbls diesel, giving 800 psi on the tube which was bled off and 250 psi was maintained on the annulus. The well was then perforated between 1483 - 1486m. The perforating gun was laid down and the well flowed for 1 hour before being shut in. The well flowed 58° API oil. Due to Schlumberger HP tool failure, Schlumberger was rigged down.

22nd April 1983. Rigged down Schlumberger and rigged up OTIS surface lubricator and pressure tested to 2000 psi. Made up and RIH 2 Amerada gauges to 1478m. The well was then flowed and burnt for 7 hours. 100% oil was recovered with a 58° API, and a GOR of approximately 230. The well stabilised and flowed at a rate of 5000 bpd. The well was then shut in. Due to the OTIS cables snapping the well was shut in on the SSTT and operations waited on daylight and new tools.

23rd April 1983. Still waiting on new tool.s A decision had been made to reperforate the zone and repeat the test. Schlumberger was rigged up and perforations made between 1483m and 1486m at daylight. After Schlumberger rigged down the well was flowed for one hour, oil recovered was 58° API, and then shut in whilst Schlumberger rigged up and ran their HP tool. The well was then flowed again. Oil and gas samples were taken from the choke manifold and separator. The oil had a specific gravity of 58°, gas samples had an H_2S content of, on average, 10 ppm with a maximum of 25 ppm.

24th April 1983. Flow continued from the well until downhole pressure stabilised and final samples taken. The rate of flow was just over

5000 BOPD and approximately 1.2 MMCFD gas, with a GOR in the low 200's. The well was then shut in prior to making a pressure gradient survey with the HP gauge. When the HP gauge was recovered the well was killed, having unstabbed the tubing by reverse circulating, 50 bbls of 9.7 ppg mud. Normal circulation then commenced with a BU gas of 0-280-85 units, this gas largely consisted of 'heavies' and was probably due to oil contamination in the mud. The test trees were then rigged down and the tubing POOH.

25th April 1983. Continued laying down tubing. Schlumberger then set a bridge plug at 1440m. DP was RIH open-ended and a cement plug set on the bridge plug. 6 stands of DP were POOH and mud was reverse - circulated with gas levels of 50-330-50 units. DP was then POOH and laid down. RIH with open-ended DP to 205m and pumped 100 sacks of Blue Circle 101 cement with 12 bbls seawater and displaced with 2 bbls water and 4 bbls mud. POOH to 80m and washed stack and riser The remaining drill pipe was laid down other than that required for retrieving the wear bushing; preparations were then made to pull the BOP stack.

26th April 1983. The BOP stack and riser were pulled and preparations made to pull the anchors. Attempts were made to fit the corrosion caps, however it was the wrong size. A replacement corrosion cap was made up and fitted.

27th April 1983. Pulled anchors and proceeded on tow to location of TERAGLIN NO. 1.

4. LITHOLOGY AND CORE-O-GRAPHS

LITHOLOGICAL SUMMARY

The primary objective of WHITING NO. 1 was to assess the hydrocarbon potential of an intra-Latrobe Group closure between Barracouta and Snapper. No closure was expected at the Top of the Latrobe.

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

GIPPSLAND LIMESTONES (74m - 920m)

The Gippsland Limestone encountered was a medium to light grey, well sorted, biosparite. The top of this interval was a fossiliferous calcarenite to calcirudite, being dominated by micro-fossils of Foramifera, Echinodermata, Gastropoda, Bryazoa and assorted broken shell fragments.

Gas in this top section was 1-5 units with a chromatograph breakdown of C_1 and C_2.

The formation became progressively softer, finer grained (micritic) and had a higher clay content (most of which washed out of the sample). Fewer fossils were found and traces of Glauconite were evident.

A minor sandstone unit was encountered at the base of this formation. It exhibited 50% patchy, dull straw mineral fluorescence from a cream, well rounded, well sorted, medium grained quartz sand.

Gas levels increased to 10 - 50 units up to 800m, but then dropped off to a steady 0.5 to 1 units for the remainder of the Gippsland Limestone, breaking down to C_1 to C_2, with traces of C_3 and C_4.

LAKES ENTRANCE FORMATION (920m - 1288m)

The Gippsland Limestone graded into a medium to light grey, highly calcareous, siltstone in the Lakes Entrance Formation. It was a soft to firm and generally well sorted with traces of glauconite, foramifera and Echinodermata common.

Gas in this formation was between 0.5 and 1 unit, consisting of C_1 only.

LATROBE GROUP (1288m - 3011m)

The top of the Latrobe was dominated by a coarse-grained sandstone with minor coals.

The sandstone was clear to frosted grains, coarse to very coarse grained being subangular to subrounded in general. It was generally well sorted with a dolomite cement and a good visual porosity. The sand displayed traces of mineral fluorescence and rarely a weak streaming cut.

Interbedded with the sandstone were minor siltstones and a small amount of calcisiltite. Coal in this section was typically black, very angular, vitreous and moderately hard. Background gas levels were 3-5 units with peaks up to 10 units associated with coals and some sands. Chromatographic breakdown yielded C_1 to C_5 with C_1 to C_3 prevalent.

1840m marked the change to a siltstone - dominant section, with interbedded sands, coals and minor claystone.

The siltstone was generally light to medium grey, red-brown and buff; soft and carbonaceous in part with traces of orange-brown spotty dull flourescence.

Gas in this lower section varied from 50 units to 0.1 units, with occasional higher peaks associated with coals and sandstones. The gas generally broke down to C_1 to C_3. Between 2693m and 2720m, a green-grey to medium grey, very hard crystalline, medium to coarse grained quartzose unit was encountered, which was thought to be volcanics.

Sandstones in this lower section between 2670m and 2775m commonly exhibited a bright yellow flourescence with a slow streaming cut.

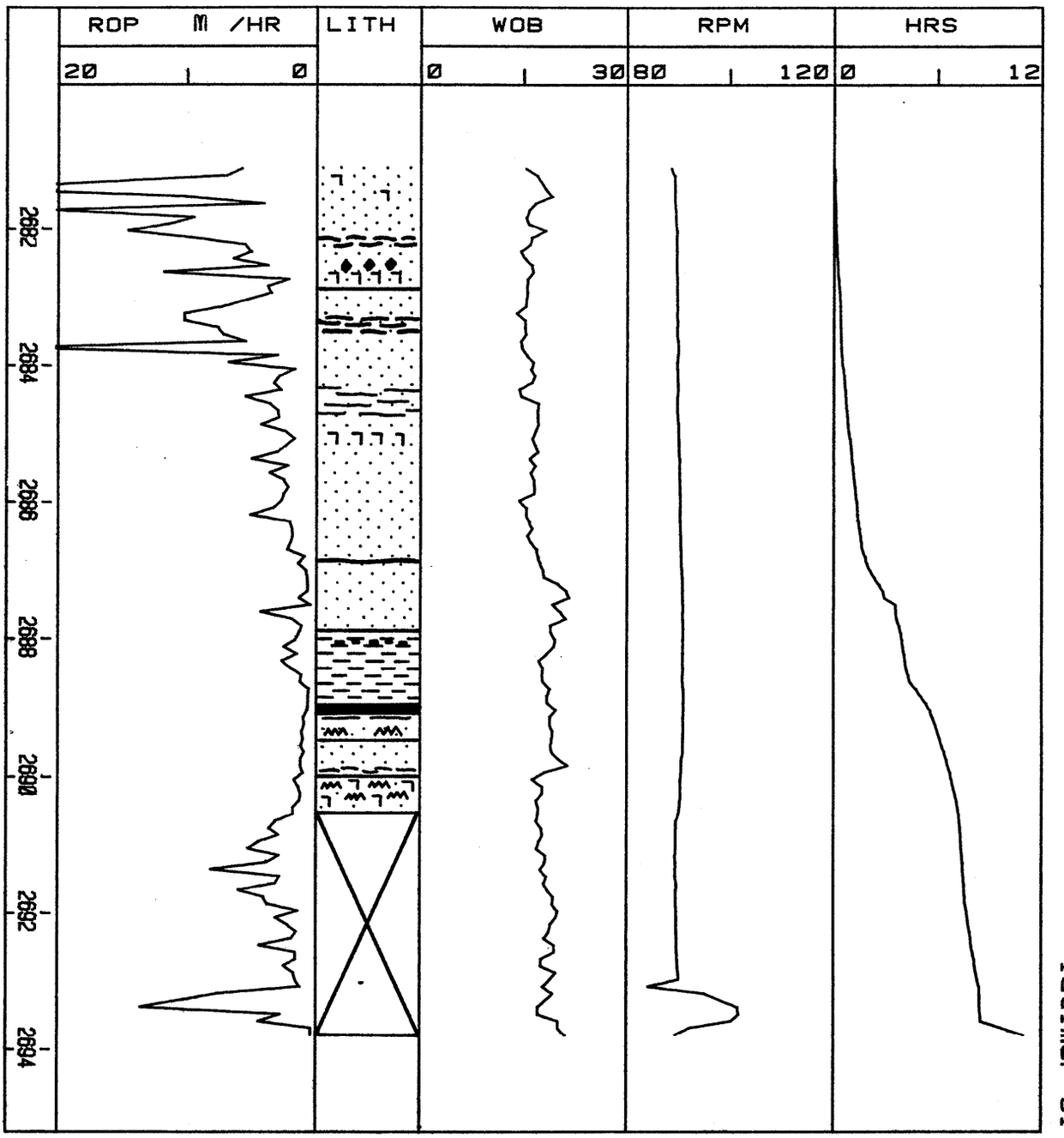
The sandstoneswere of two types. There was a loose medium to coarse grained, sub angular to sub rounded quartz sand, with no show; and a clear to translucent, fine to very fine grained, friable, sub rounded to rounded, well-sorted quartz sand with a white argillaceous matrix and occasional black inclusions, which had the show.

The shale which was seen towards T.D. was medium to dark grey, sub fissile to fissile, friable to hard, and carbonaceous.

One core was cut in this well. It contained an immature sandstone with interbedded shale, coal and siltstone.

CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	WHITING #1
CORE NO.:	1
INTERVAL CORED FROM	2681.0m. TO 2693.6m.
CUT: 12.6 m.	RECOVERED: 9.6m. (76.0%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRISTENSEN C-20
CORE BARREL SIZE:	6.75in. x 4.00in. x 19.66m.
BIT SIZE: 8.47	MUD WT.: 9.9



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

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

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

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

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

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

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 report includes a sample hydraulics for each 100 metres.

GAS COMPOSITION ANALYSIS

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

1. Log plot

2. Triangulation plot

Both plots are included in this report.

GRAPHOLOG

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

MISCELLANEOUS

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

CORE LABORATORIES EQUIPMENT

Core Laboratories Field Laboratory 802 monitoring equipment includes the following :

A. MUD LOGGING

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

B. INTERMEDIATE EXTENDED SERVICE PACKAGE

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

CORE LABORATORIES MONITORING EQUIPMENT

DEPTH

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

WEIGHT-ON-BIT

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

ROTARY SPEED

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

PUMP PRESSURE

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

PIT VOLUME

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

PUMP STROKES

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

ROTARY TORQUE

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

MUD TEMPERATURE

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

MUD CONDUCTIVITY

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

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

CUTTINGS

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

GAS

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

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

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

SHALE DENSITY

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

6. ESP PLOT DISCUSSIONS AND CONCLUSIONS

ESP PLOT DISCUSSIONS AND CONCLUSIONS

WHITING NO. 1 was drilled in the Gippsland Basin, Bass Strait. From the numerous data obtained from adjacent wells it was correctly deduced that the section drilled was normally pressured to T.D., with an increased likelihood of encountering higher pressures approaching T.D., as on the WIRRAH wells. Core Laboratories Field Laboratory 802 continuously monitored and calculated various pressure detection parameters, the primary factors being plotted on the "Drill Data Plot" (see appended plots).

The "Drill Data Plot" shows the d'c' exponent trend. This appears fairly scattered from the sea-bed down to a depth of 520m. This pattern is typical of the poorly consolidated limestone encountered in this area, where drilling is achieved more by extrusion due to the jetting action rather than rotation of the bit. A normal trend is, however, established down to 1070m, with a 'normal', or increased, deflection to the right which is caused by lithological change from limestone to calcareous siltstone/mudstone.

An abnormal trend exists between 1070m and 1240m; a drill-off is noticeable despite the increase in mud weight to 10 ppg. This mud weight increase masked gas indications of overpressure, but is thought to have enhanced the 'drillability' of the formation by keeping the hole in a more stable condition, contrary to normal expectations where increased mud weight reduces drillability due to increased 'chip hold down' effect. The reversal in d'c' trend is commonly seen in the Gippsland Basin and generally is throught to reflect the increasing grain size and decreasing calcareous cement bonding in the formation.

From 1240m down to T.D. (3011m) the d'c' exponents manifest a scattered (but generally normal) trend, with the degree of scattering decreasing with depth, resulting in a tapered morphology to the d'c' plot. The scattering is caused by the interbedded nature of the lithology, being siltstones, sandstones, claystones, coals and occasional shales. So the indication is one of normal formation pressure in this interval.

The ROP track of the Drill Data Plot shows a drill-off trend between 2640 and 2750m, coinciding with an increase in background gas from less than 1 unit to as high as 9 units. Thus, the indication here would be that the pore pressure has increased, and this is confirmed by Repeat Formation Tests run by Schlumberger. The latter revealed that, in the interval mentioned, the formation pressure increased from 8.5 to 8.8 ppg E.M.W. Certain connection gas was not detected at any point in the well.

Another noticeable increase in background gas occurred between 2320 and 2450m, rising to 20 units at times, from 1 unit. This also coincided with a localised increase in pore pressure from 8.4 to 8.8 ppg over the interval, as verified by RFT data. Thus a curve representing formation pressure was drawn, fashioned by the pretest data from the Repeat Formation Tests, and the curve can be seen on both the Geoplot and Pressure Plot (see the appendices at the end of this well report).

No shale density measurements were made as there were no beds of true shales encountered.

No reliable conclusions can be drawn from the temperature plot due to

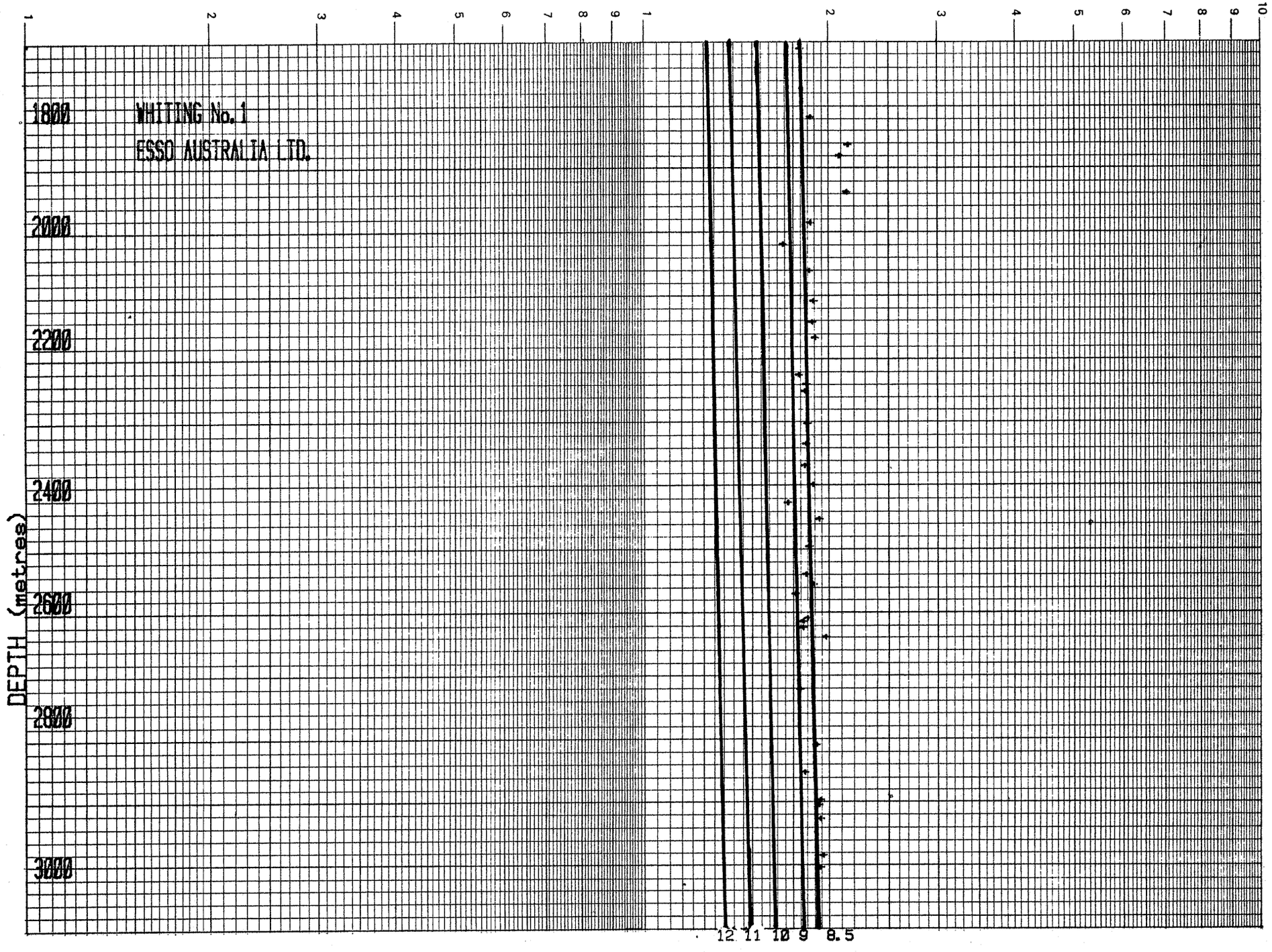
the periodic treatment of the mud system masking any temperature changes which might be attributed to geothermal trends. The thermal gradient of WHITING NO. 1 was calculated to be 1.61°C/ 100 feet, and the bottomhole temperature at 3011m was extrapolated to 135.4°C.

A "Wireline Plot" was not drawn as this log plots shale parameters, and the lack of shale points encountered did not facilitate an objective plot.

Overburden gradient calculations and a plot of the gradient are included in the report. It was not possible to derive a true fracture gradient as no L.O.T.'s were performed. One PIT was made just below the 13-3/8" casing shoe (13.5 ppg E.M.W. at 805m). L.O.T.'s were not required as high mud weights were not anticipated.

Based on the information above, the fracture gradient on the pressure plot was drawn, the shape of which in turn was based on data from wells in the U.S. Gulf Coast Basin. The curve was then offset to match local data. A true fracture gradient for the Gippsland Basin cannot be drawn until further leak-off data is available.

"d"c PLOT FROM SELECTED POINTS BASED ON "SHALY" LITHOLOGY.



CORE LAB

STRAIGHT LINE LEAST SQUARES BEST FIT

DEPTH ON A LINEAR SCALE AGAINST
d'c EXPONENT ON A LOGARITHMIC SCALE

ENTERED DATA:

DATA SET #	DEPTH	d'c EXPONENT
1	1704	1.80
2	1812	1.87
3	1856	2.15
4	1874	2.08
5	1932	2.14
6	1980	1.87
7	2014	1.69
8	2056	1.86
9	2104	1.89
10	2138	1.88
11	2163	1.90
12	2222	1.79
13	2237	1.84
14	2248	1.83
15	2300	1.85
16	2332	1.84
17	2367	1.83
18	2397	1.89
19	2425	1.72
20	2451	1.93
21	2495	1.86
22	2539	1.84
23	2555	1.89
24	2570	1.77
25	2609	1.85
26	2614	1.82
27	2624	1.82
28	2639	1.78
29	2721	1.80
30	2809	1.91

CORE LAB
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STRAIGHT LINE LEAST SQUARES BEST FIT

DEPTH ON A LINEAR SCALE AGAINST
d'c EXPONENT ON A LOGARITHMIC SCALE

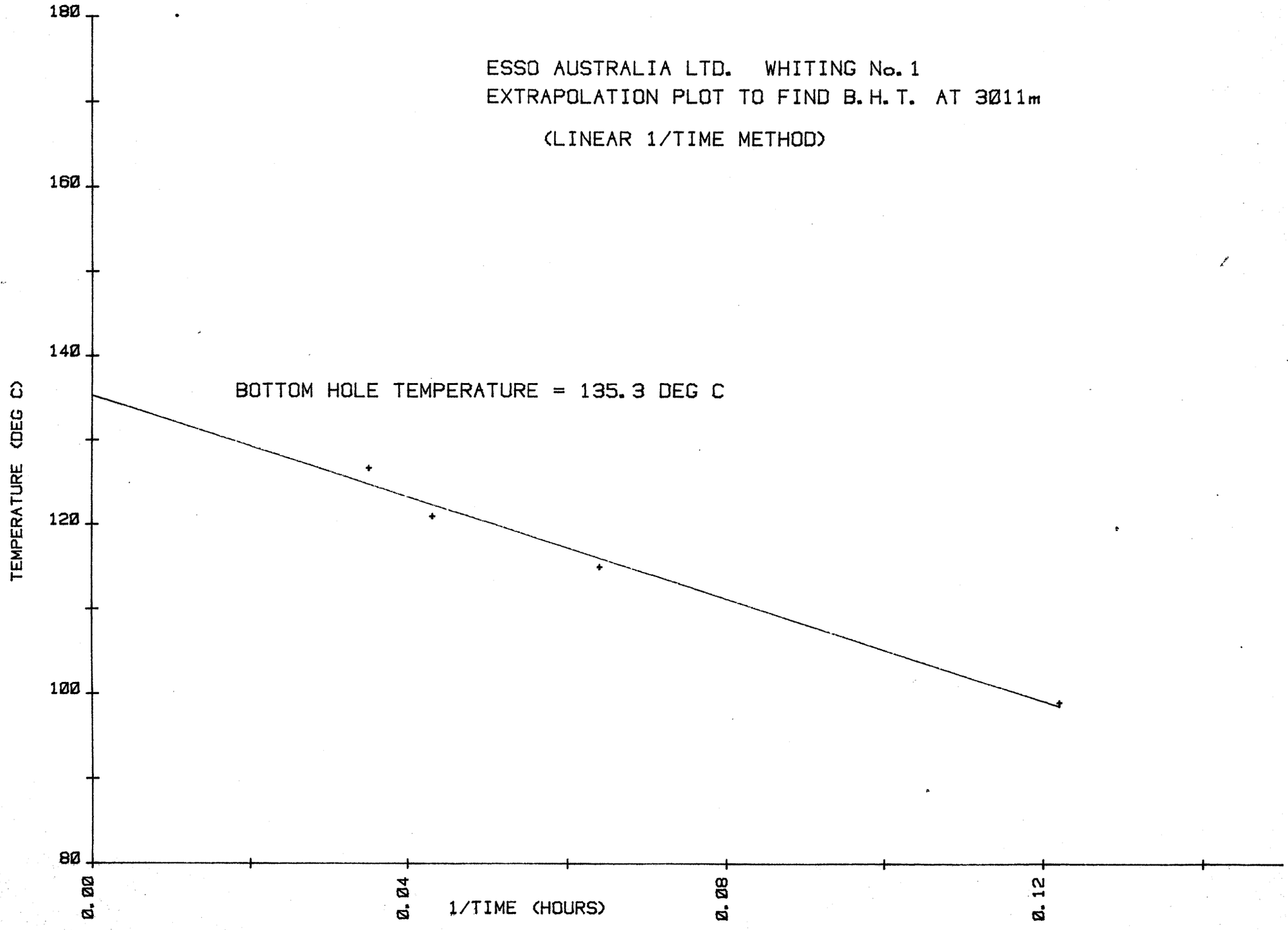
ENTERED DATA:

DATA SET #	DEPTH	d'c EXPONENT
31	2853	1.83
32	2897	1.94
33	2905	1.93
34	2927	1.94
35	2985	1.96
36	3004	1.94

COEFFICIENT & CONSTANT:

log(Y) = m.X + c where m = -3.8168404E-06 and c = 2.8308584E-01

7. B.H.T. ESTIMATION


ESSO AUSTRALIA LTD. WHITING No. 1
EXTRAPOLATION PLOT TO FIND B.H.T. AT 3011m
(LINEAR 1/TIME METHOD)
BOTTOM HOLE TEMPERATURE = 135.3 DEG C
TEMPERATURE (DEG C)
180
160
140
120
100
80
0.00
0.04
0.08
0.12
1/TIME (HOURS)

CORE LAB

STRAIGHT LINE LEAST SQUARES BEST FIT

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

ENTERED DATA:

DATA SET #	1/TIME	TEMPERATURE
1	0.12	99.0
2	0.06	115.0
3	0.04	121.0
4	0.04	126.7

COEFFICIENT & CONSTANT:

Y = m.X + c where m = -3.0166307E 02 and c = 1.3533476E 02

INTERPOLATED DATA:

1/TIME	TEMPERATURE
0.00	135.3

8. OVERBURDEN GRADIENT CALCULATIONS AND PLOT

OVERBURDEN GRADIENT CALCULATIONS

DEPTH . . . . . .metres

BULK DENSITY . . . . . .gm/cc

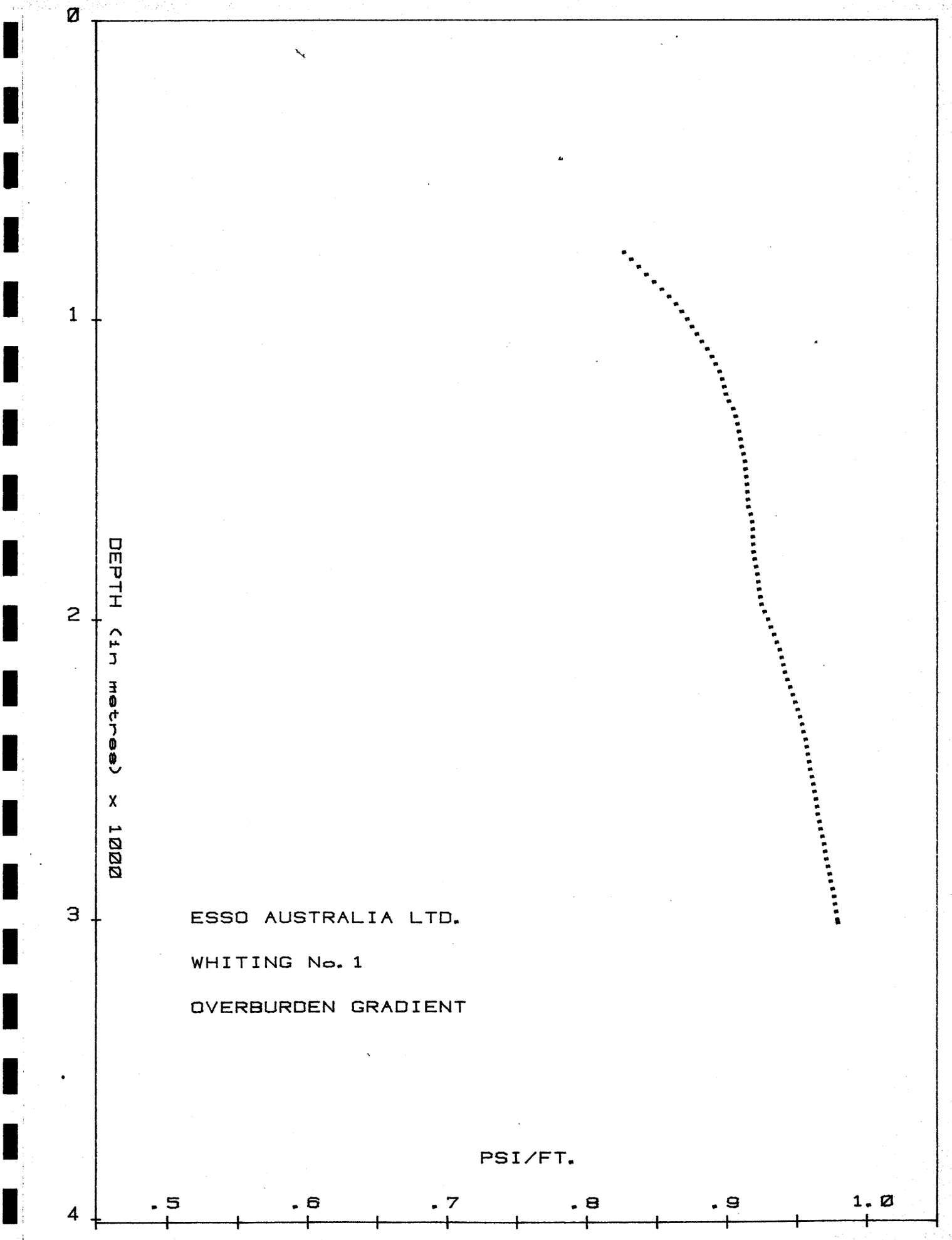
OVERBURDEN PRESSURE INCREMENT. .psi

CUMULATIVE OVERBURDEN PRESSURE .psi

OVERBURDEN PRESSURE GRADIENT . .psi/m

OVERBURDEN EQUIVALENT DENSITY. .Pounds per gallon

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


0
1
2
3
4
DEPTH (in metres) X 1000
ESSO AUSTRALIA LTD.
WHITING No. 1
OVERBURDEN GRADIENT
PSI/FT.
.5
.6
.7
.8
.9
1.0

OVERBURDEN GRADIENT CALCULATIONS

DEPTH from	DEPTH to	AVR.BULK DENSITY	O/BURDEN INCR.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
feet	feet	gms/cc	psi.	psi	psi/ft	ppg
0	74	1.02	32.68	32.68	0.442	8.49
74	776	2.00	607.93	640.61	0.826	15.88
776	800	2.30	23.90	664.52	0.831	15.97
800	825	2.33	25.22	689.74	0.836	16.08
825	850	2.35	25.44	715.18	0.841	16.18
850	875	2.38	25.76	740.94	0.847	16.28
875	900	2.42	26.20	767.14	0.852	16.39
900	925	2.41	26.09	793.23	0.858	16.49
925	950	2.40	25.98	819.21	0.862	16.58
950	975	2.37	25.66	844.86	0.867	16.66
975	1000	2.36	25.55	870.41	0.870	16.74
1000	1025	2.33	25.22	895.63	0.874	16.80
1025	1050	2.36	25.55	921.18	0.877	16.87
1050	1075	2.38	25.76	946.94	0.881	16.94
1075	1100	2.42	26.20	973.14	0.885	17.01
1100	1125	2.40	25.98	999.12	0.888	17.08
1125	1150	2.33	25.22	1024.34	0.891	17.13
1150	1175	2.36	25.55	1049.89	0.894	17.18
1175	1200	2.27	24.57	1074.46	0.895	17.22
1200	1225	2.24	24.25	1098.71	0.897	17.25
1225	1250	2.20	23.82	1122.52	0.898	17.27
1250	1275	2.33	25.22	1147.74	0.900	17.31
1275	1300	2.44	26.41	1174.16	0.903	17.37
1300	1325	2.31	25.01	1199.16	0.905	17.40
1325	1350	2.25	24.36	1223.52	0.906	17.43
1350	1375	2.23	24.14	1247.66	0.907	17.45
1375	1400	2.22	24.03	1271.69	0.908	17.47
1400	1425	2.20	23.82	1295.51	0.909	17.48
1425	1450	2.28	24.68	1320.19	0.910	17.51
1450	1475	2.24	24.25	1344.43	0.911	17.53
1475	1500	2.18	23.60	1368.03	0.912	17.54
1500	1525	2.19	23.71	1391.74	0.913	17.55
1525	1550	2.17	23.49	1415.23	0.913	17.56
1550	1575	2.16	23.38	1438.61	0.913	17.57
1575	1600	2.17	23.49	1462.10	0.914	17.57
1600	1625	2.17	23.49	1485.59	0.914	17.58
1625	1650	2.37	25.66	1511.25	0.916	17.61
1650	1675	2.27	24.57	1535.82	0.917	17.63
1675	1700	2.20	23.82	1559.64	0.917	17.64
1700	1725	2.11	22.84	1582.48	0.917	17.64
1725	1750	2.16	23.38	1605.86	0.918	17.65
1750	1775	2.17	23.49	1629.35	0.918	17.65
1775	1800	2.26	24.46	1653.81	0.919	17.67
1800	1825	2.30	24.90	1678.71	0.920	17.69
1825	1850	2.29	24.79	1703.50	0.921	17.71
1850	1875	2.22	24.03	1727.53	0.921	17.72
1875	1900	2.24	24.25	1751.78	0.922	17.73
1900	1925	2.27	24.57	1776.35	0.923	17.75
1925	1950	2.28	24.68	1801.03	0.924	17.76
1950	1975	2.55	27.60	1828.64	0.926	17.81

DEPTH from	DEPTH to	AVR.BULK DENSITY	O/BURDEN INCR.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
feet	feet	gms/cc	psi	psi	psi/ft	ppg
1975	2000	2.56	27.71	1856.35	0.928	17.85
2000	2025	2.54	27.50	1883.84	0.930	17.89
2025	2050	2.56	27.71	1911.56	0.932	17.93
2050	2075	2.53	27.39	1938.94	0.934	17.97
2075	2100	2.59	28.04	1966.98	0.937	18.01
2100	2125	2.42	26.20	1993.18	0.938	18.04
2125	2150	2.41	26.09	2019.27	0.939	18.06
2150	2175	2.39	25.87	2045.14	0.940	18.08
2175	2200	2.57	27.82	2072.96	0.942	18.12
2200	2225	2.58	27.93	2100.89	0.944	18.16
2225	2250	2.57	27.82	2128.71	0.946	18.19
2250	2275	2.54	27.50	2156.20	0.948	18.23
2275	2300	2.56	27.71	2183.91	0.950	18.26
2300	2325	2.56	27.71	2211.63	0.951	18.29
2325	2350	2.51	27.17	2238.80	0.953	18.32
2350	2375	2.40	25.98	2264.78	0.954	18.34
2375	2400	2.57	27.82	2292.60	0.955	18.37
2400	2425	2.38	25.76	2318.36	0.956	18.39
2425	2450	2.39	25.87	2344.23	0.957	18.40
2450	2475	2.40	25.98	2370.21	0.958	18.42
2475	2500	2.39	25.87	2396.08	0.958	18.43
2500	2525	2.50	27.06	2423.15	0.960	18.46
2525	2550	2.45	26.52	2449.67	0.961	18.47
2550	2575	2.42	26.20	2475.86	0.962	18.49
2575	2600	2.46	26.63	2502.49	0.962	18.51
2600	2625	2.40	25.98	2528.47	0.963	18.52
2625	2650	2.35	25.44	2553.91	0.964	18.53
2650	2675	2.54	27.50	2581.41	0.965	18.56
2675	2700	2.43	26.30	2607.71	0.966	18.57
2700	2725	2.57	27.82	2635.53	0.967	18.60
2725	2750	2.51	27.17	2662.70	0.968	18.62
2750	2775	2.45	26.52	2689.22	0.969	18.64
2775	2800	2.46	26.63	2715.85	0.970	18.65
2800	2825	2.57	27.82	2743.67	0.971	18.68
2825	2850	2.56	27.71	2771.39	0.972	18.70
2850	2875	2.44	26.41	2797.80	0.973	18.71
2875	2900	2.62	28.36	2826.16	0.975	18.74
2900	2925	2.52	27.28	2853.44	0.976	18.76
2925	2950	2.45	26.52	2879.96	0.976	18.77
2950	2975	2.48	26.85	2906.81	0.977	18.79
2975	3000	2.47	26.74	2933.54	0.978	18.80
3000	3011	2.56	12.19	2945.74	0.978	18.81

9. GAS ANALYSES

GAS COMPOSITION ANALYSIS

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

LOG PLOT

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

1. Productive dry gas zones may show only C1, but abnormally high shows of C1 are usually indicative of saltwater.

2. A ratio of C1/C2 between approximately 2 and 15 indicates oil and between 15 and 65, gas. If the C1/C2 ratio is below about 2, or above about 65, the zone is probably non-productive.

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

3. If the C1/C2 ratio is low in the oil section and the C1/C4 ratio is high in the gas section, the zone is probably non-productive.

4. If any ratio (with the exception of C1/C5, if oil is used in the mud) is lower than the preceding ratio, the zone is probably non-productive.

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

TRIANGULATION PLOT

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

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

GAS ANALYSIS

1480m. This analysis was made from gas liberated from a clear-frosted, coarse-grained, sub-angular - sub rounded well sorted quartz sand. A trace yellow, mineral fluorescence was associated with this sample.

1531m. The gas from which this analysis was made originated in a fine to medium grained, sub angular - sub rounded moderately well sorted sandstone, which exhibited a yellow-gold mineral fluorescence

1723m. The analysis from this depth indicated a coal gas. The sample contained coal as well as a medium-coarse grained sandstone which contained 5% spotty dull orange yellow fluorescence with a slow weak streaming cut.

1802m. The medium-coarse and very fine grained, moderately sorted sandstone with which this analysis was associated was bimodal, well sorted with trace dolomite fluorescence.

2026m. A fine - very fine grained, sub-angular-angular, moderately well sorted, quartz sandstone was the origin of the gas for this interpretation.

2346m. This plot was made from gas released from a white/buff, quartzose, fine grained sandstone.

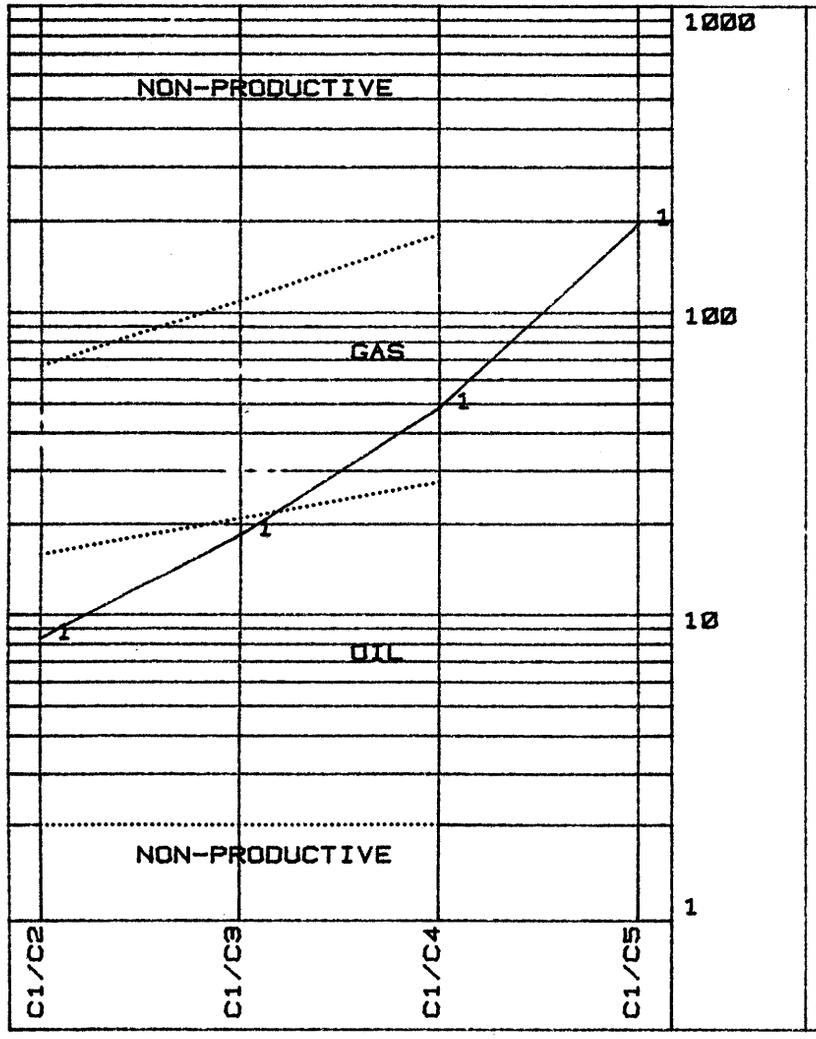
2411m. A trace dull to bright gold fluorescence with a trace milky white cut in a fine grained, moderately well sorted sandstone was associated with this analysis.

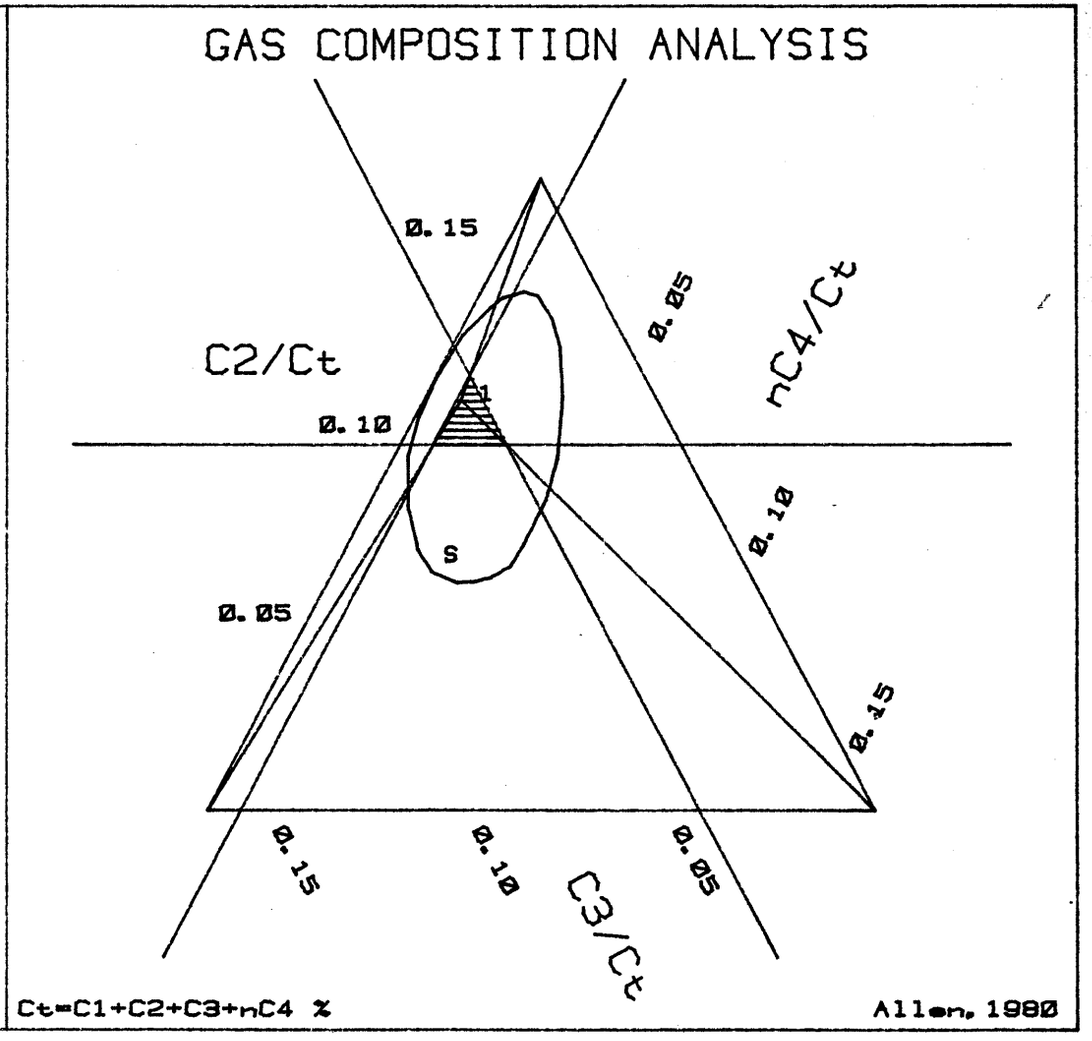
2742m. Two types of sandstone were present in the samples from which the gas emanated for this plot. One was a medium-coarse grained, loose quartz; the other was fine grained, and well sorted with 5% bright white fluorescence and a fast dull white crush cut.

2752m. The sample associated with this analysis was similar to the one at 2742m.

2829m. This plot was made from a gas which originated in a clear, fine to medium grained sandstone with trace bright yellow fluorescence and yellow crush cut.

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

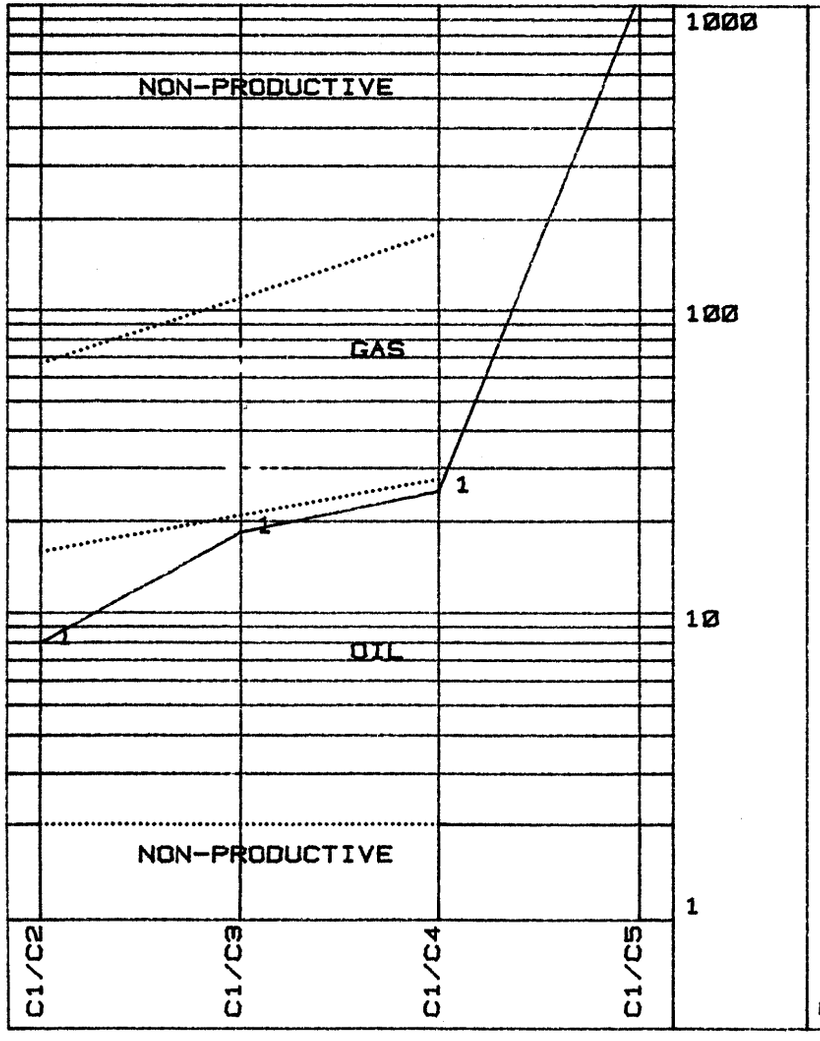


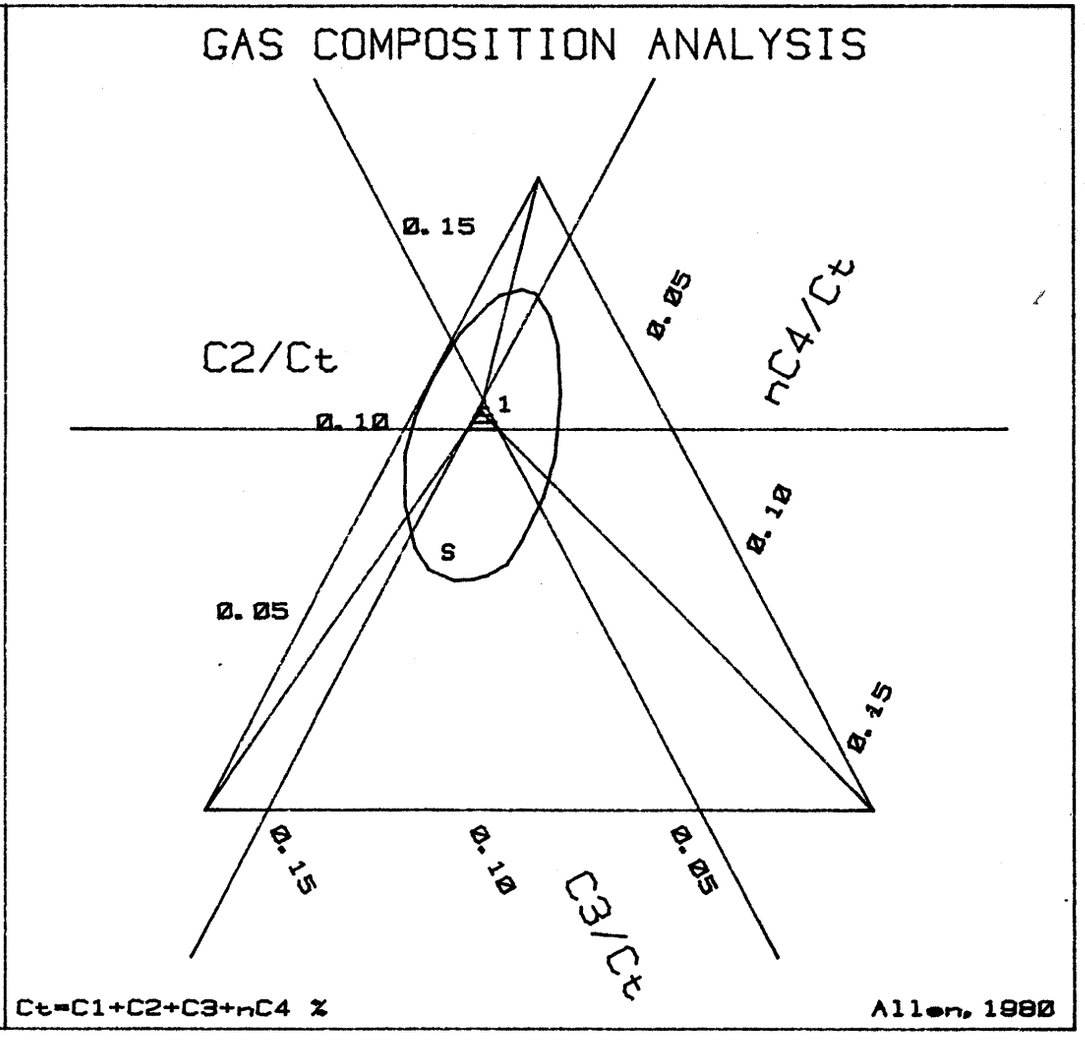


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2828	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.007	8	18	49	196

CONCLUSION: WET GAS

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

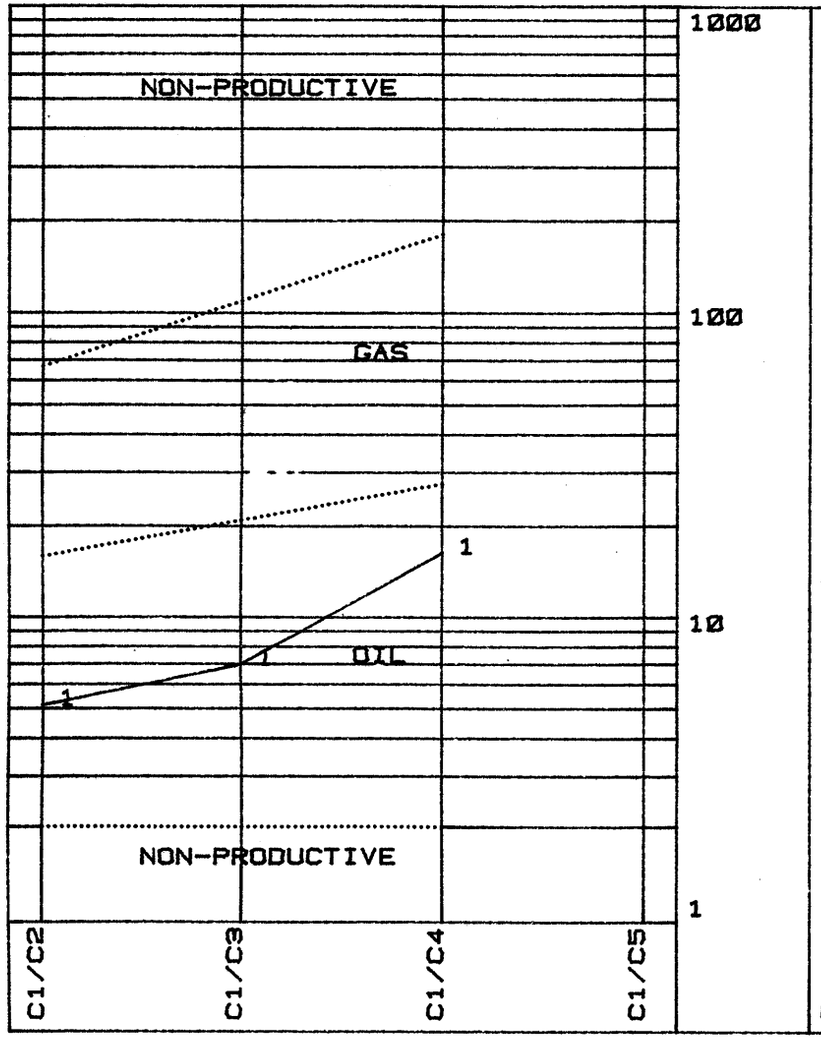


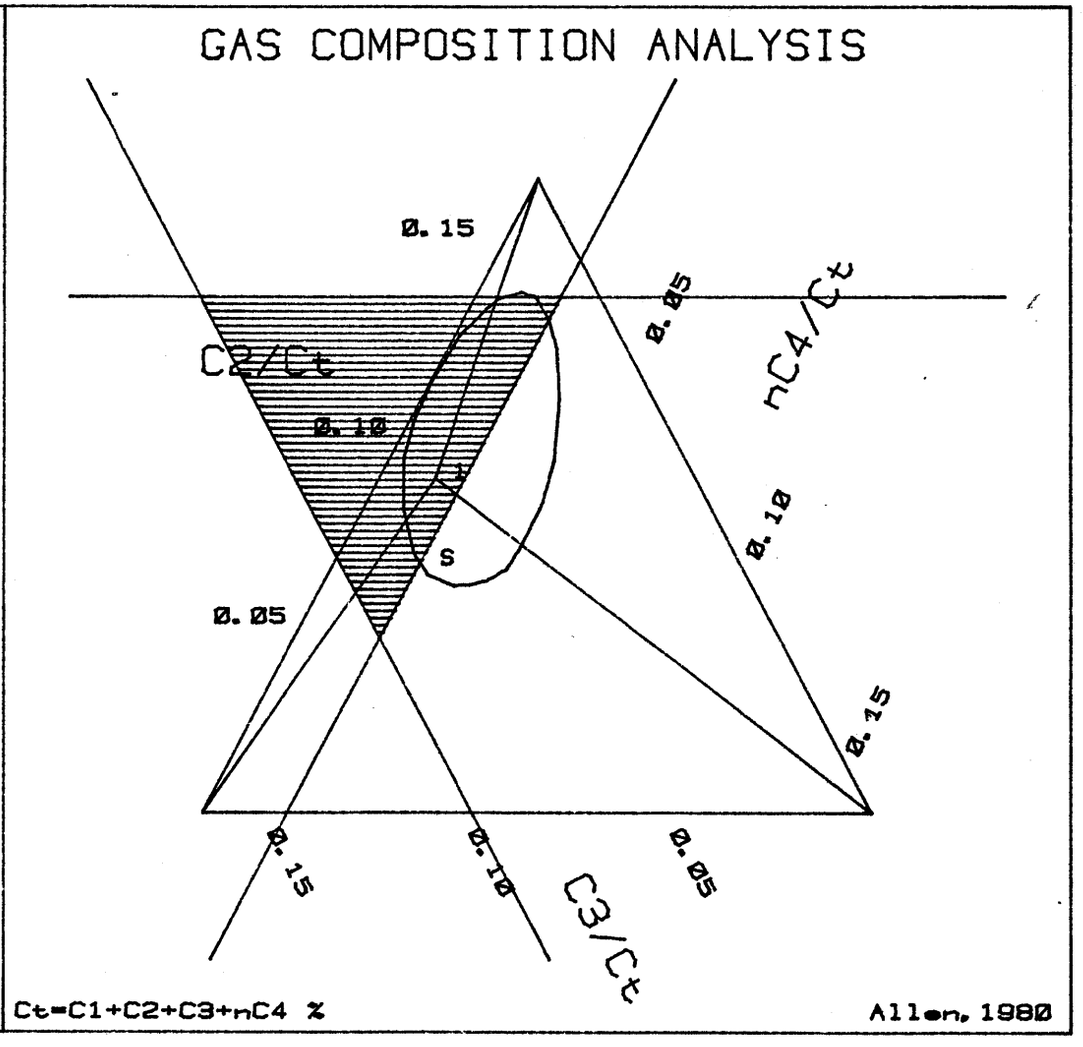


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2752	0.010	0.001	0.001	0.000	0.000	0.000	0.000	0.012	8	18	25	1089

CONCLUSION: WET GAS

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

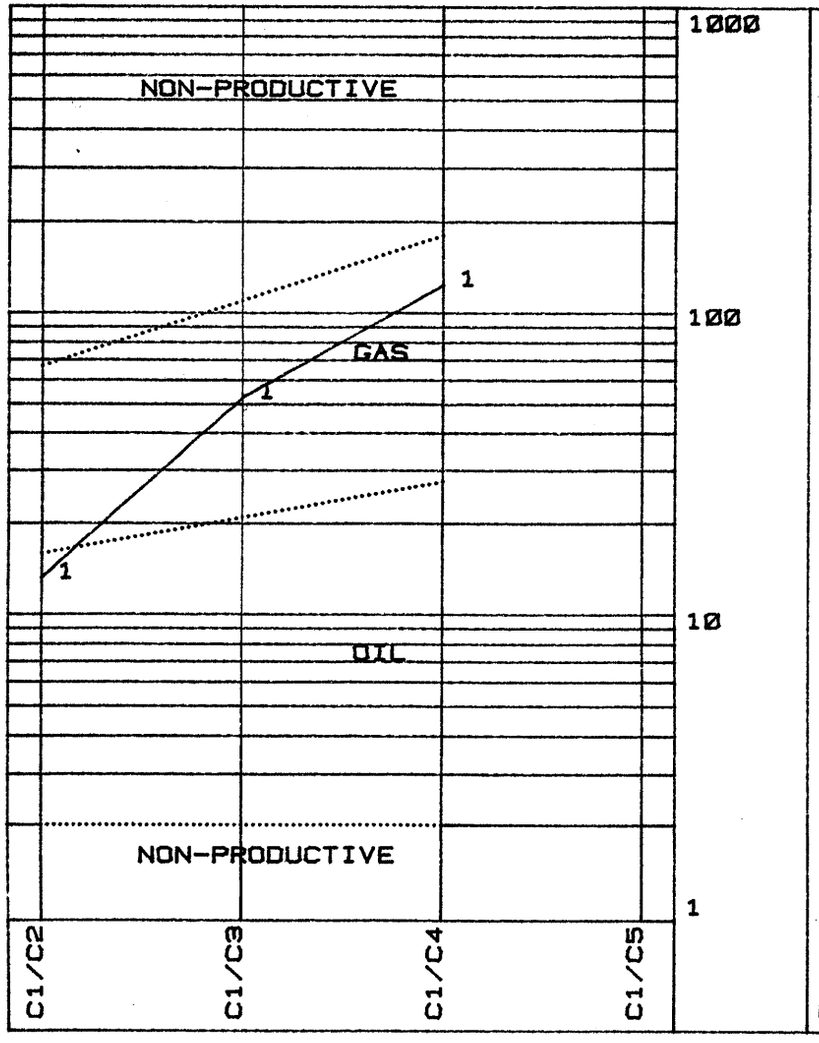


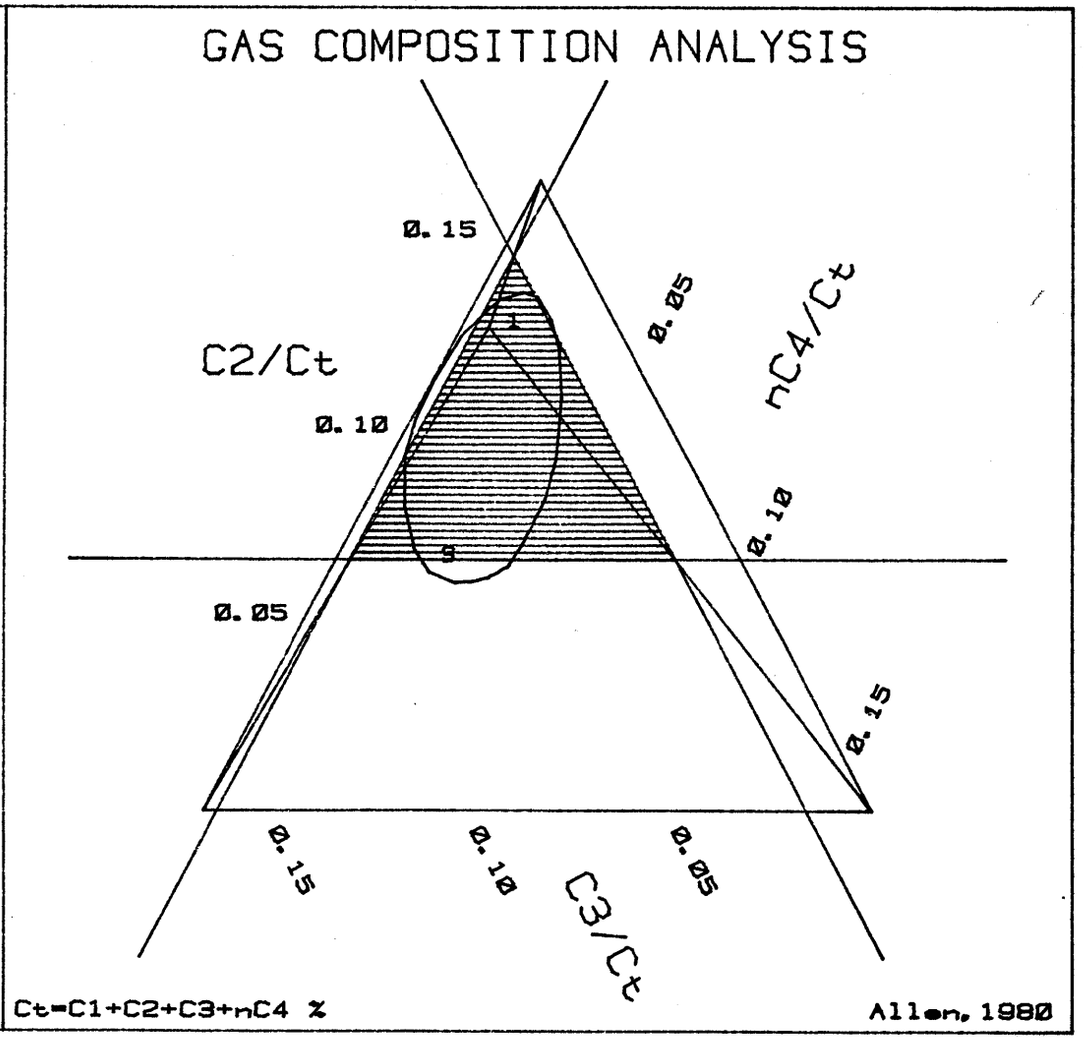


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2742	0.008	0.002	0.001	0.000	0.000	0.000	0.000	0.011	5	7	16	

CONCLUSION: PROBABLE OIL PRODUCER

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

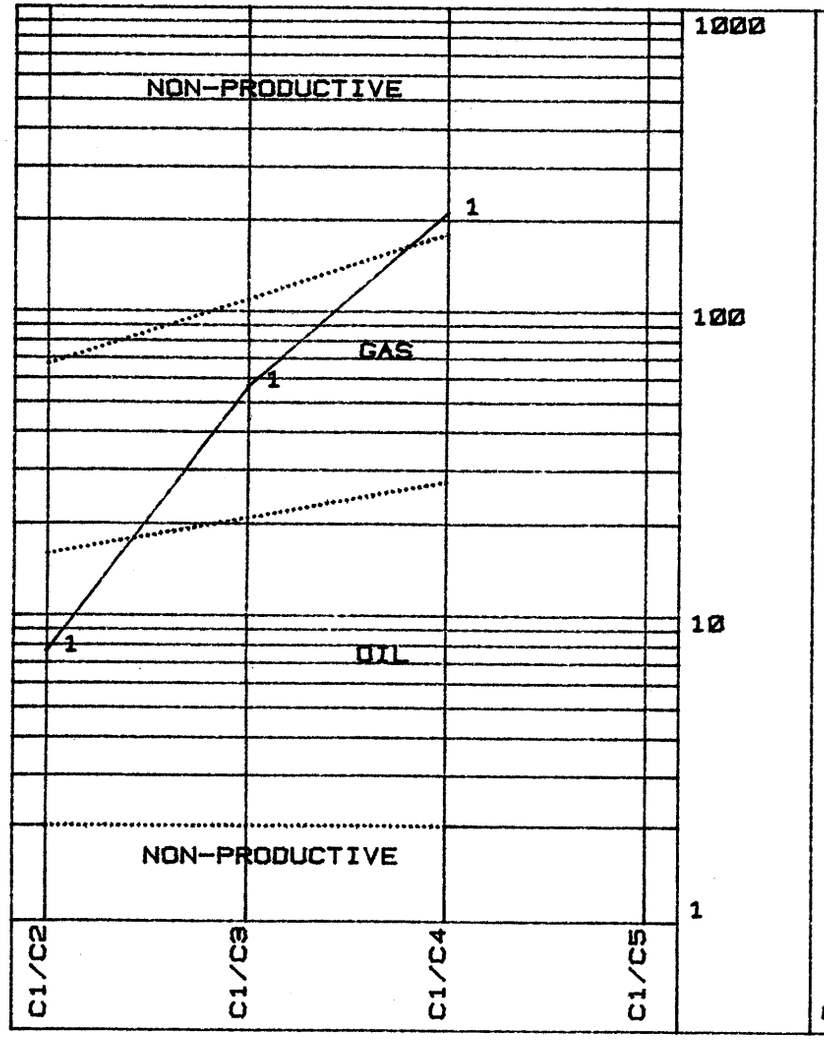


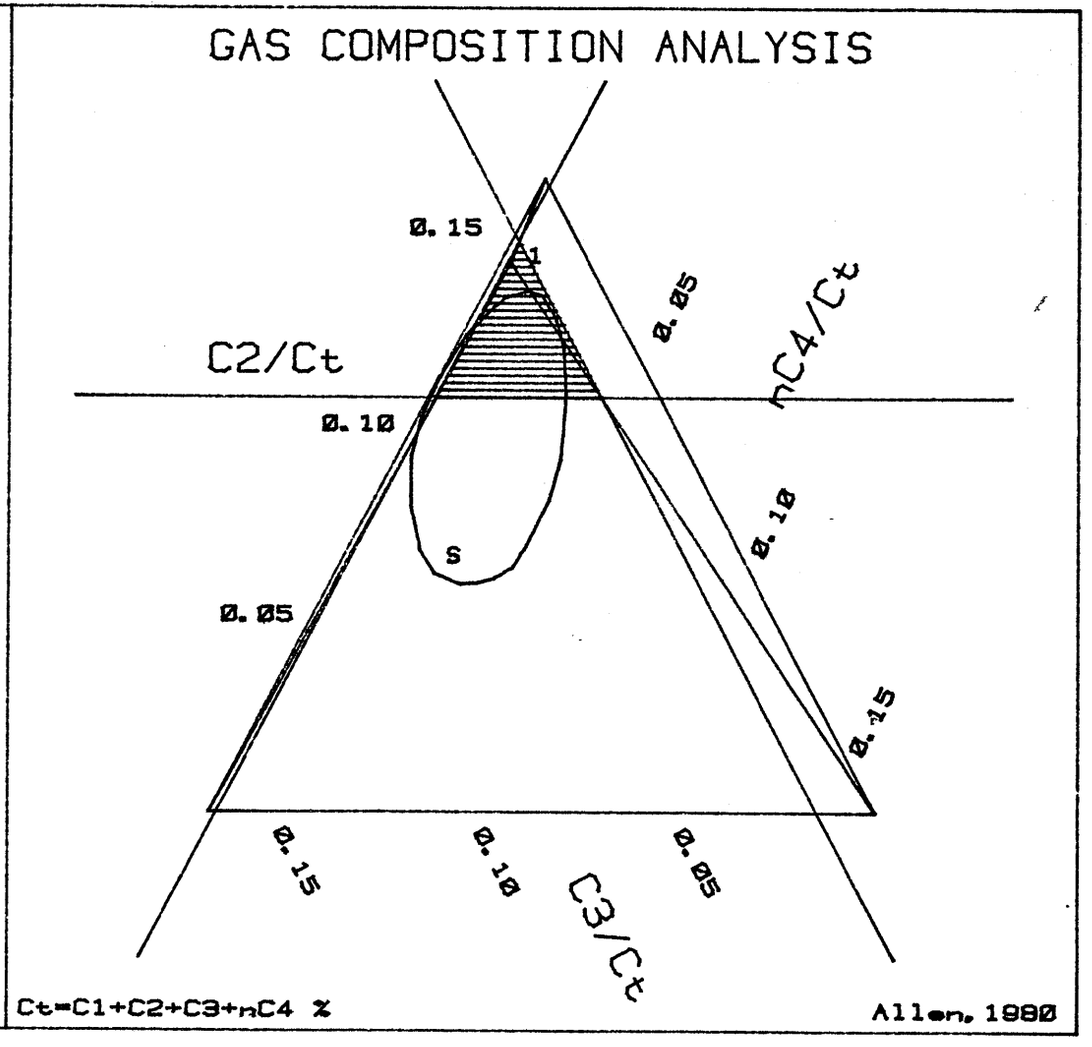


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2411	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.015	13	53	124	

CONCLUSION: GAS ZONE

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

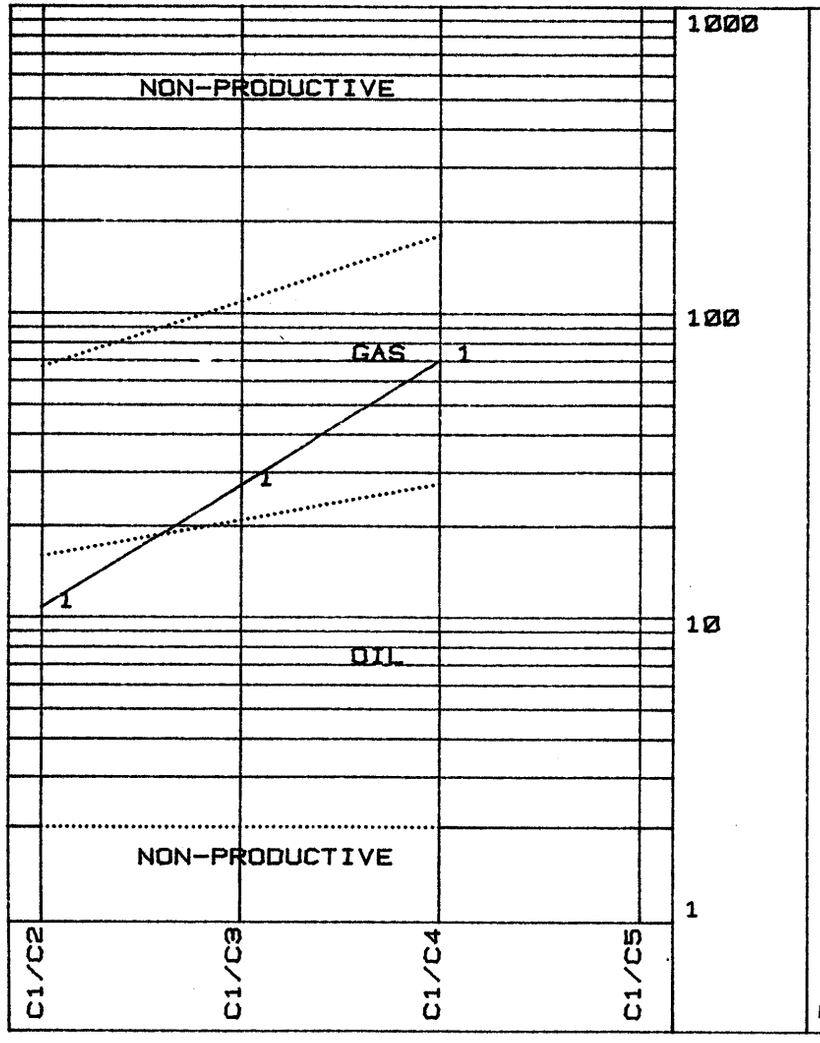


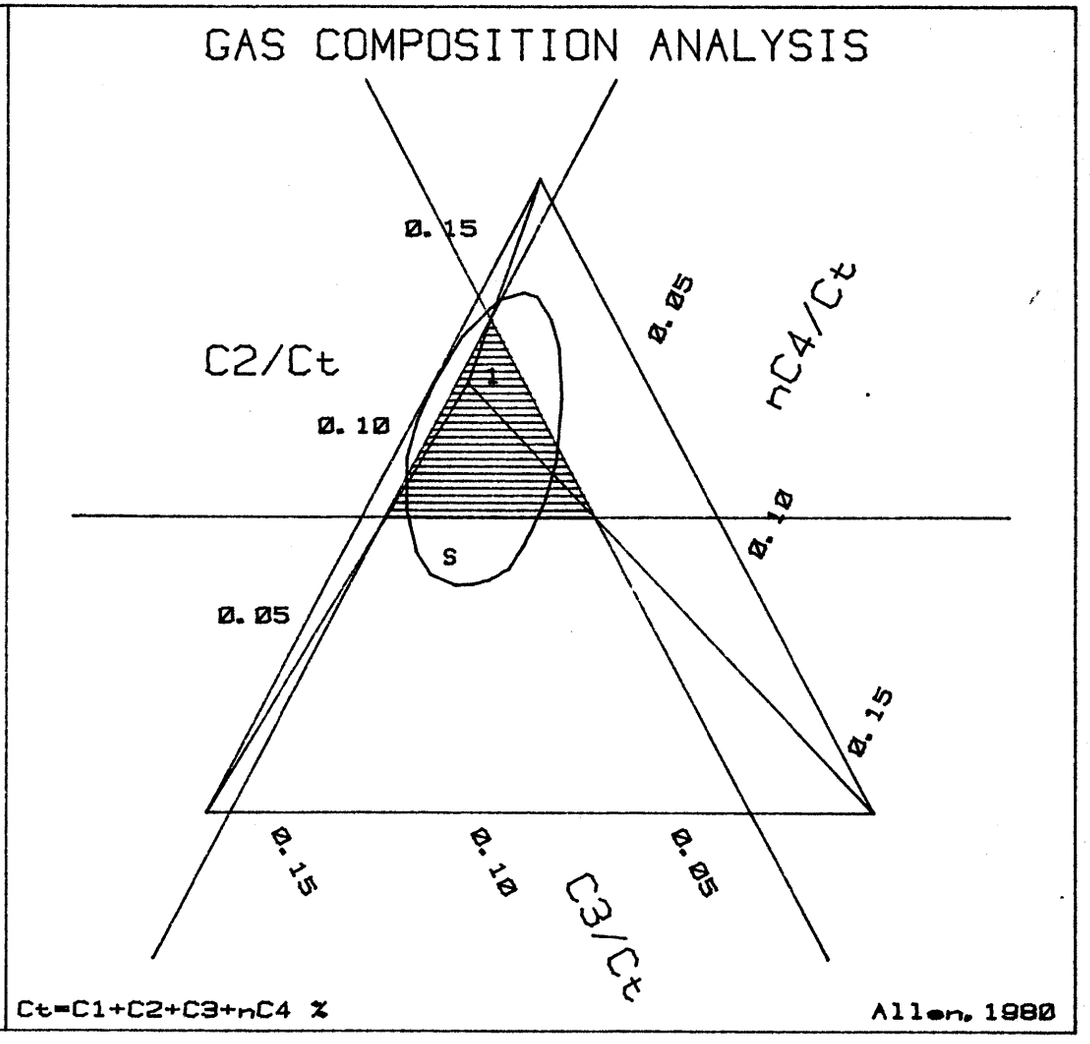


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2346	0.011	0.002	0.000	0.000	0.000	0.000	0.000	0.013	8	57	212	

CONCLUSION: NON-PRODUCTIVE WET GAS

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

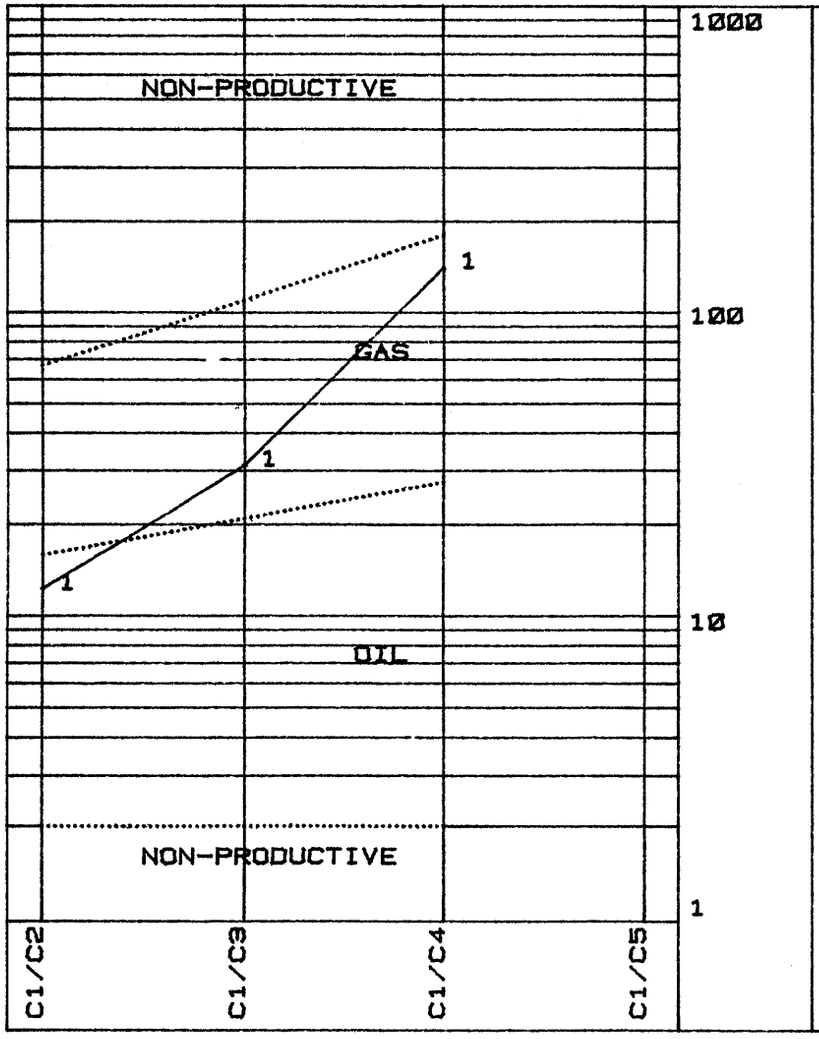


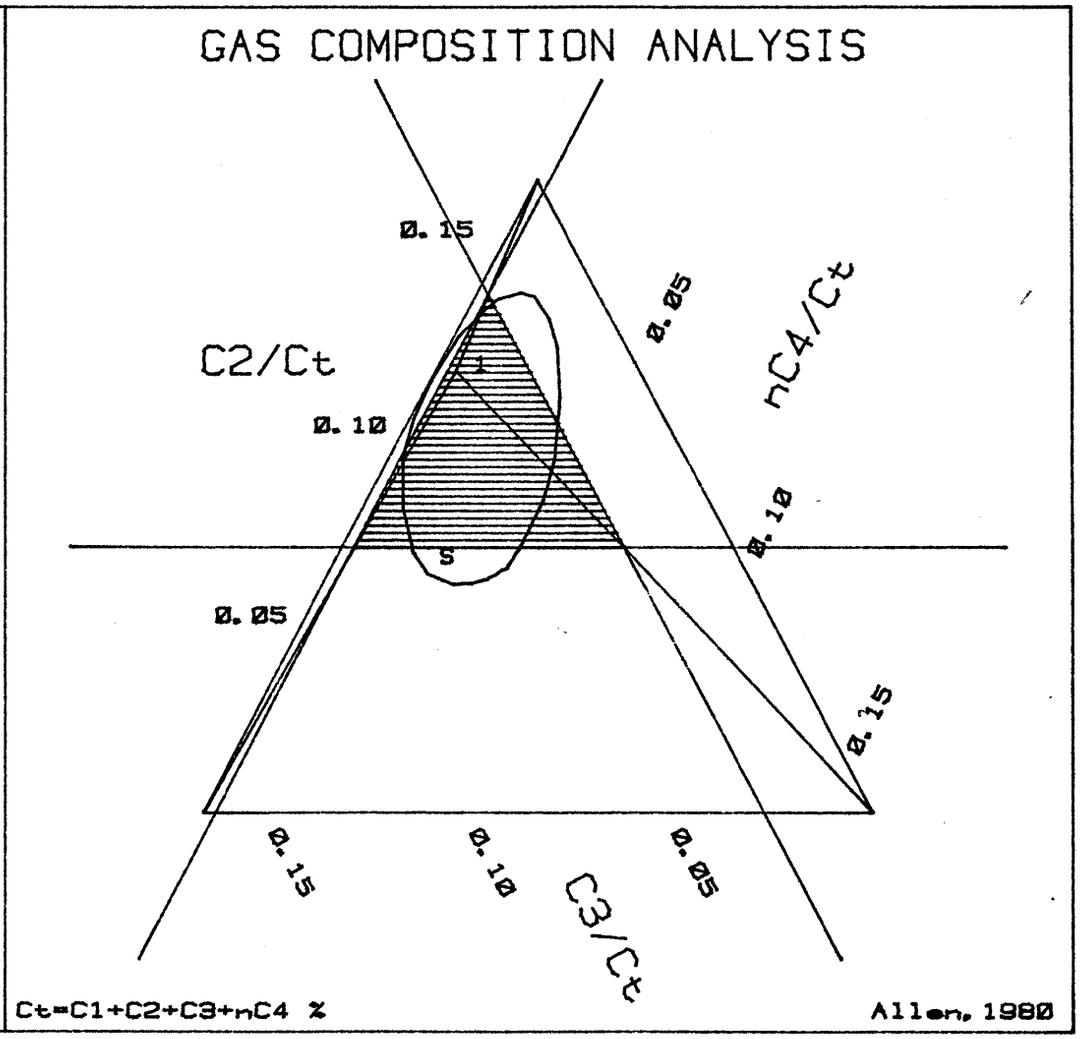


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2026	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.007	11	27	70	

CONCLUSION: PROBABLE WET GAS

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

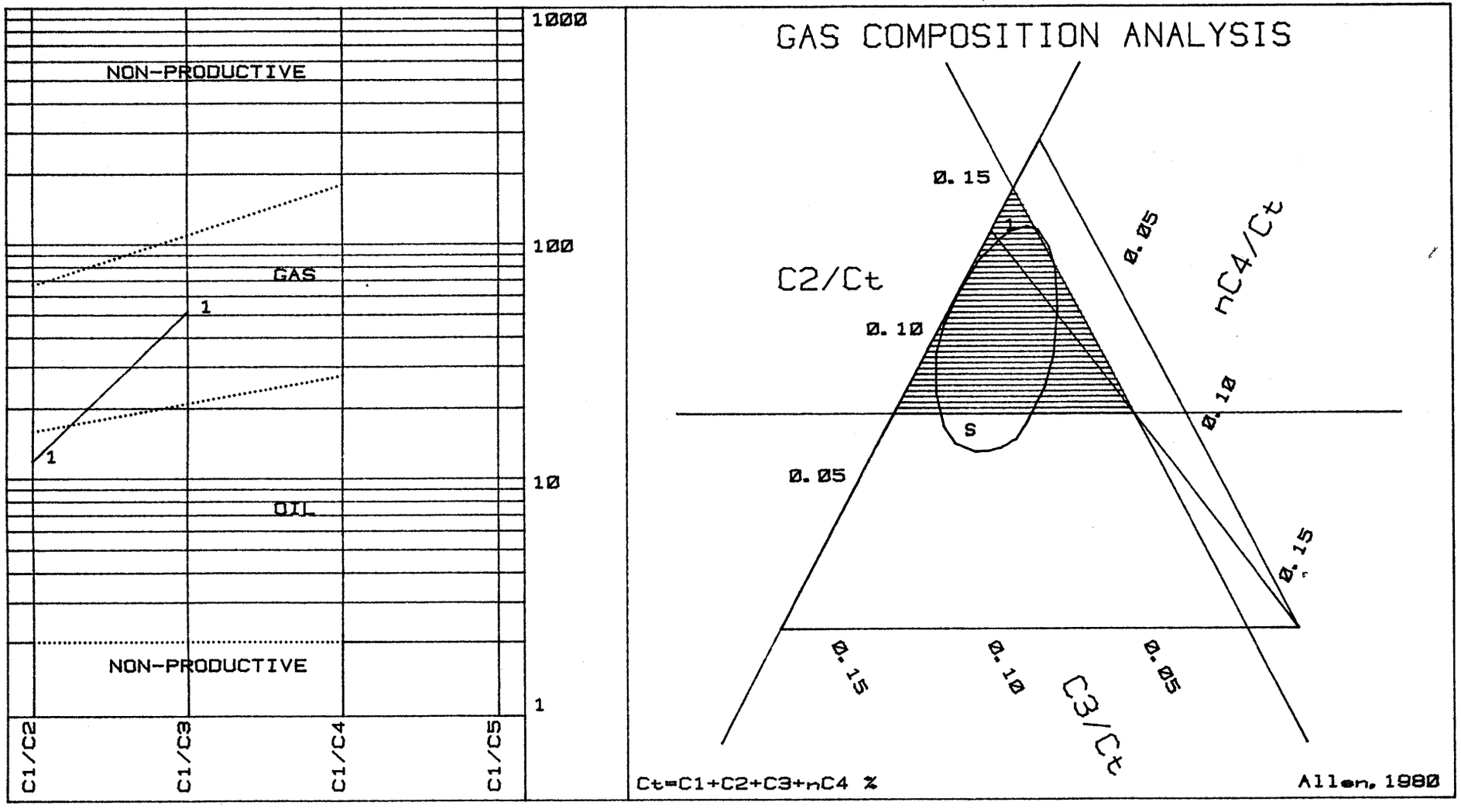




NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1802	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006	12	31	141	

CONCLUSION: POSSIBLE GAS ZONE (WET?)

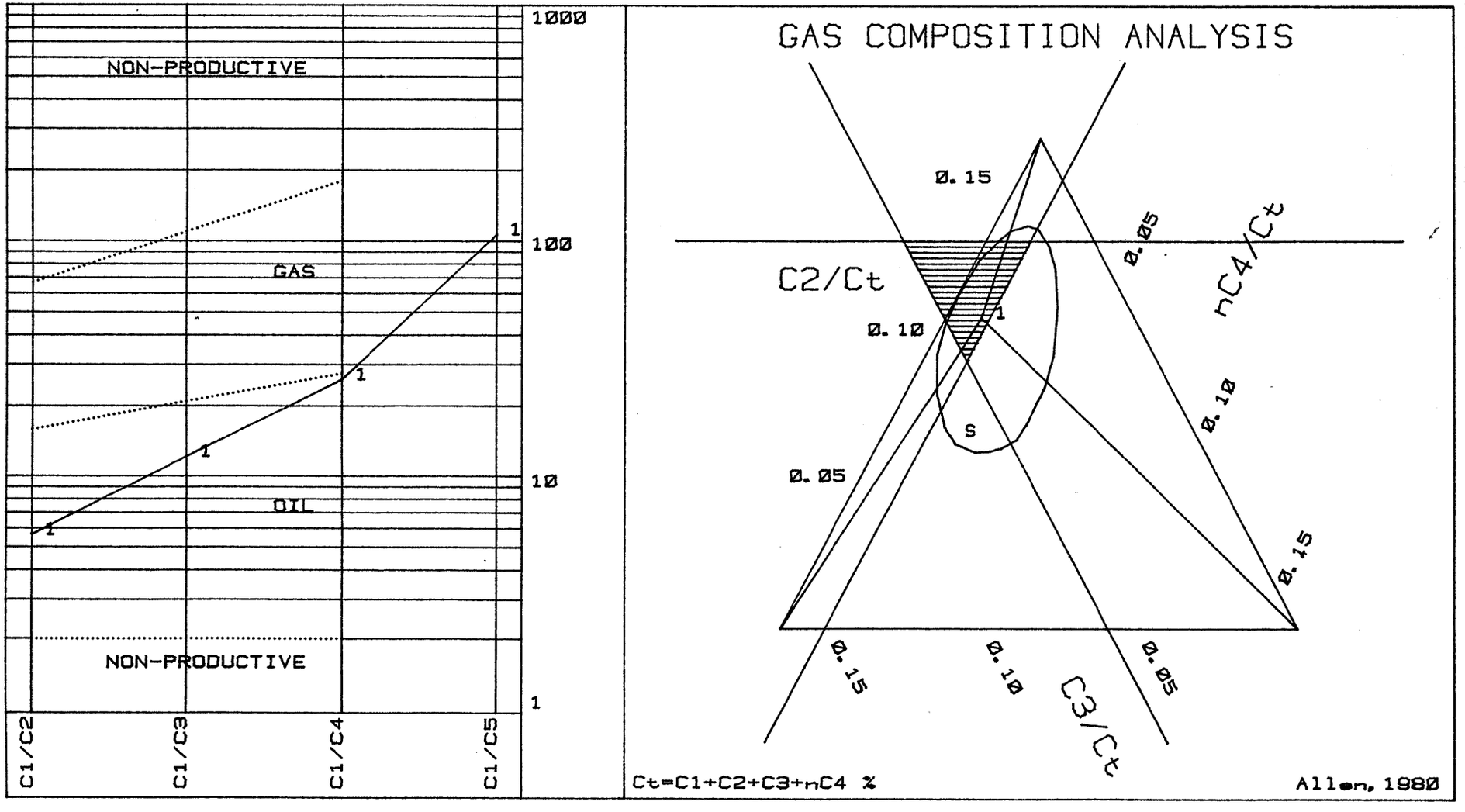
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: WHITING No. 1



NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1723	Ø.022	Ø.002	Ø.000	Ø.000	Ø.000	Ø.000	Ø.000	Ø.025	12	52		

CONCLUSION: COAL GAS

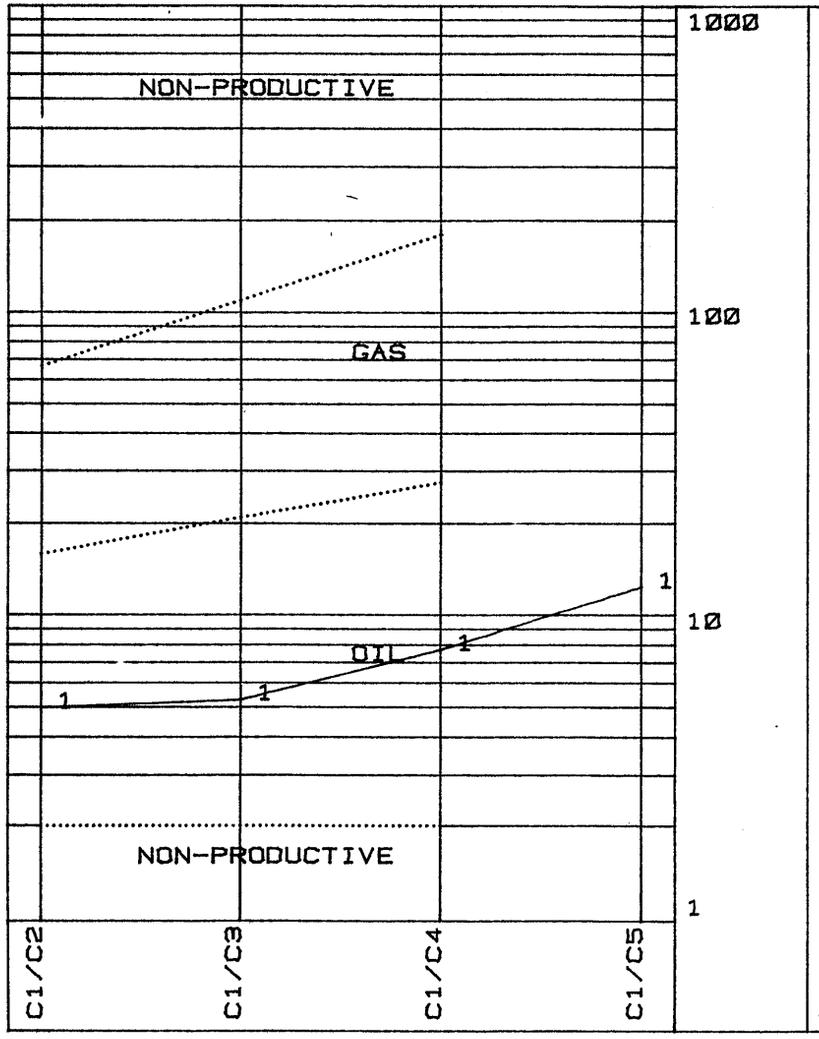
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: WHITING No. 1

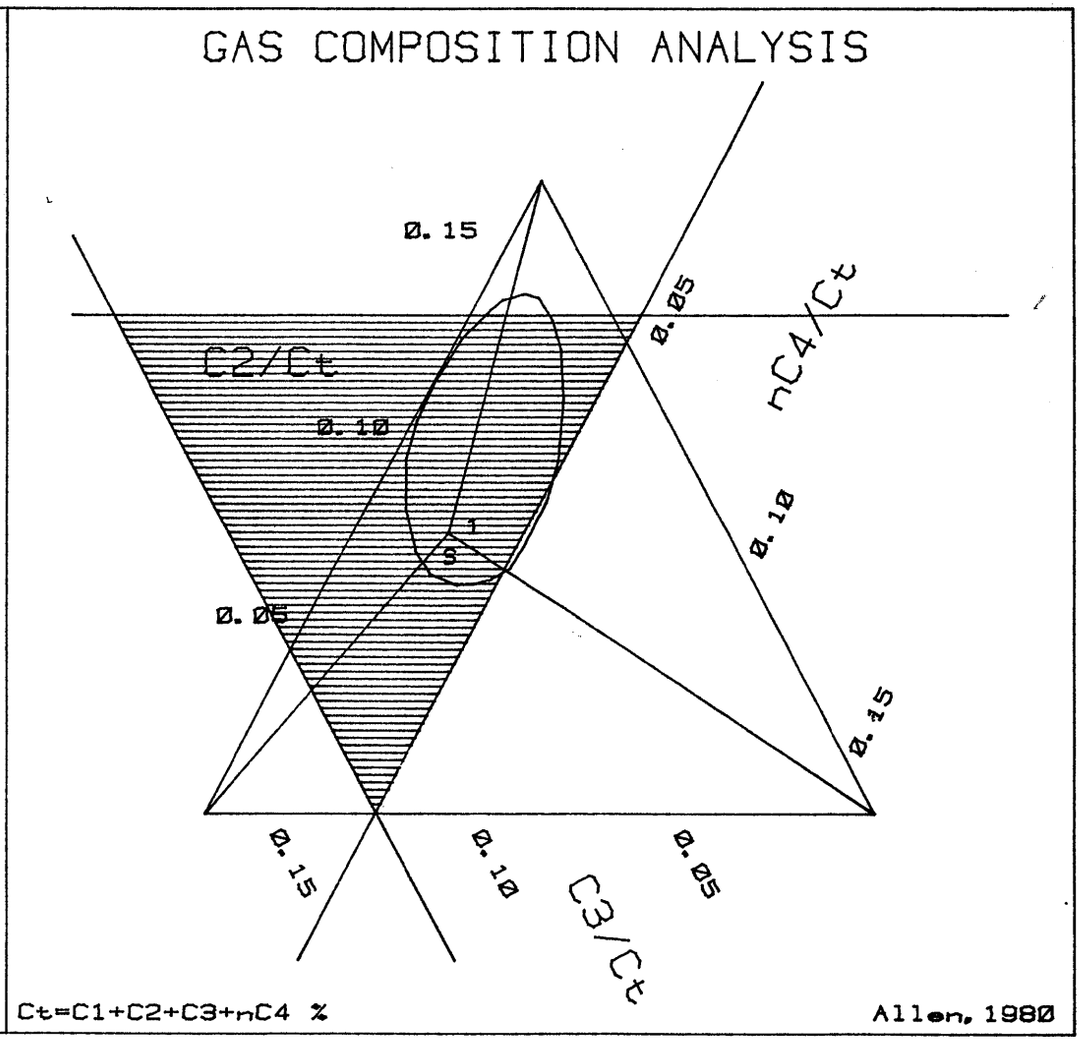


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 +	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1531	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	6	12	26	107

CONCLUSION: PROBABLE NON-PRODUCTIVE OIL ZONE

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





NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1480	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	5	5	8	12

CONCLUSION: LOW GOR OIL PRODUCER

CORE LAB

SIDEWALL CORE GAS ANALYSIS DATA SHEET

SHEET # 1

COMPANY ESSO AUSTRALIA LTD.

LOGGING SUITE NO. CST NO. 2

WELL WHITING NO. 1

NO.	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
107	2801.5	26	-	-	-	-	-	NO APPRECIABLE GAS READINGS WERE OBTAINED FROM THE FOLLOWING CORE NOS: 51-57, 59 62, 63, 65, 103, 104, 106, 109, 110, 112, 114, 122, 128.

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 WHITING NO. 1

Sheet No. 1

S/NO	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
295 SR	RR 1	HTC	OSC 3AJ+ 26" H/O	111 –	17½ 26	20/20/20	74	137	8½	5.98	17	2-4-I	POOH FOR 20" CSG.	–
MJ 888	2	HTC	OSC 3AJ	111	17½	20/20/20	211	589	26¼	19.13	155	2-2-I	POOH AT 13-3/8" CSG PT.	4442
299 UK	3	HTC	X3A	114	12¼	18/18/18	800	539	27	19.23	178	7-4-1/8	POOH DUE TO HIGH TOROUE.	2201
923 HS	4	HTC	J22	517	12¼	18/18/18	1339	329.2	31¼	24.87	120	8-3-1/8	PULLED DUE TO LOW ROP'S	6788
072 NK	5	HTC	J44	617	12¼	18/18/18	1668.2	273.8	35¾	32.21	140	3-8-I	PULLED DUE TO HIGH TOROUE.	4919
268 HK	6	HTC	J22	517	12¼	18/18/18	1942	243	39½	34.07	138	3-7-1/8	PULLED DUE TO DECREASED ROP'S.	6788
319 X3	7	HTC	J11	437	12¼	18/18/18	2185	26.5	4¼	3.84	17	4-2-I	PULLED TO TEST STACKS.	6788
148 WK	8	HTC	J22	517	12¼	18/18/18	2111.5	216.5	56¾	50.47	158	2-3-I	PULLED DUE TO LOW ROP'S.	6788
142 WK	9	HTC	J22	517	12¼	16/16/18	2428	206	63½	58.59	181	6-2-I	PULLED DUE TO LOW ROP'S.	6788
767 BE	10	HTC	J33	537	12¼	16/16/18	2634	47	18	15.91	45	1-1-I	PULLED TO CORE.	6637
81E 0919	10	CHRIS	C-20	4	8 15/32	TFA 46 14/14/13	2681	12.6	11½	10.94	59	5% WN	CORE NO: 1 (RECOVERY 9.57M = 76%)	13000
149 WK	11	HTC	J22	517	12½	16/16/18	2693.6	146.9	54¼	39.58	116	3-3-I	PULLED DUE TO LOW ROP'S.	6788
150 WK	12	HTC	J22	517	12¼	16/16/18	2840.5	170.5	52½	48.33	139	4-2-¼	10M EARLY DUE TO T.D. (WEATHER.)	6788

7520-487 (CL 1153)

CORE LAB

BIT RECORD

COMPANY ESSO AUSTRALIA LTD.

WELL WHITING NO. 1

Sheet No. 1

S/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
295 SR	RR 1	HTC	OSC 3AJ+ 26" H/O	111 –	17½ 26	–	20/20/20	74.0	211.0	137.0	8½	5.98	17	22.7	325.08	2-4-I
MJ 888	2	HTC	OSC 3AJ	111	17½	4442	20/20/20	211.0	800.0	589.0	26¼	19.13	155	30.8	207.67	2-2-I
229 UK	3	HTC	X3A	114	12¼	2201	18/18/18	800.0	1339.0	539.0	27	19.23	178	28.0	242.08	7-4-1/8
923 HS	4	HTC	J22	517	12¼	6788	18/18/18	1339.0	1668.2	329.2	31¼	24.87	120	13.2	515.73	8-3-1/8
072 NK	5	HTC	J44	617	12¼	4919	18/18/18	1668.2	1942.0	273.8	35¾	32.21	140	8.5	786.03	3-8-I
268 HK	6	HTC	J22	517	12¼	6788	18/18/18	1942.0	2185.0	243.0	39⅓	34.07	138	7.1	944.26	3-7-I
319 X3	7	HTC	J11	437	12¼	6788	18/18/18	2185.0	2211.5	26.5	4¼	3.84	17	6.9	2433.75	4-2-I
148 WK	8	HTC	J22	517	12¼	6788	18/18/18	2211.5	2428.0	216.5	56¾	50.47	158	4.3	1487.22	2-3-I
142 WK	9	HTC	J22	517	12¼	6788	16/16/18	2428.0	2643.0	206.0	63½	58.59	181	3.5	1792.13	6-2-I
767 BE	10	HTC	J33	537	12¼	6637	16/16/18	2634.0	2681.0	47.0	18	15.91	45	3.0	2891.12	1-1-I
81E 0919	10	CHRIS	C-20	4	8 15/32	13000	EQUIVALENT 14/14/13	2681.0	2693.6	12.6	11½	10.94	59	1.2	9131.27	5%
149 WK	11	HTC	J22	517	12¼	6788	16/16/18	2693.6	2840.5	146.9	52¼	39.58	116	3.7	1819.53	3-3-I
150 WK	12	HTC	J22	517	12¼	6788	16/16/18	2840.5	3011.0	170.5	52⅓	48.33	139	3.5	1861.49	4-2-1/4

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 WHITING NO. 1

Sheet No. 1

DEPTH (M)			511	800	800	800	800
DATE	6/3/83	7/3/83	8/3/83	9/3/83	10/3/83	11/3/83	12/3/83
TIME	S		24:00	23:00	23:30	22:00	22:00
WEIGHT	E	8.6+	9.2	9.3	9.6	9.5	9.3
FUNNEL VISCOSITY		200	42	33	34	31	28
PV/YP	A		6/53	4/18	5/16	3/19	3/5
N/K	W		.14/24.7	.24/4.9	.31/3.08	.18/6.97	.46/.46
GEL: INITIAL/10 MIN			40/36	10/22	9/18	9/16	4/9
pH	A		9.0	9.0	9.0	9.1	8.6
FILTRATE: API/API HTHP	T		N/C	N/C	N/C	N/C	N/C
CAKE			4	4	5	N/C	N/C
SALINITY (PPM)	E		15000	16000	18000	13000	11000
SAND	R		TR	TR	TR	TR	TR
SOLIDS			6	6	8	7	5
OIL			0	0	0	0	0

REMARKS:

DRILLED 26" HOLE

SET 20" CSG @ 196M

DRILLED 17½" HOLE

LOG RUN 13-3/8" CSG.

DIFFICULTIES WITH SEAL ASSEMBLY.

DEPTH (M)	806	1230	1457	1664	1847	1942	1973
DATE	13/3/83	14/3/83	15/3/83	16/3/83	17/3/83	18/3/83	19/3/83
TIME	23:00	21:00	23:00	22:00	14:30	20:00	09:00
WEIGHT	9.0	10.0+	10.0+	9.7	9.8+	9.7+	9.8
FUNNEL VISCOSITY	32	57	49	49	51	43	50
PV/YP	4/12	12/23	10/18	12/19	14/16	13/16	13/18
N/K	.32/2.15	.43/2.47	.44/1.80	.47/1.64	.55/.96	.53/1.04	.50/1.33
GEL: INITIAL/10 MIN	4/8	8/28	10/28	11/30	9/32	10/26	8/26
pH	10.4	10.8	10.6	10.4	10.7	10.6	10.5
FILTRATE: API/API HTHP	N/C	6.2/16.8	6.4/15.9	7.2/17.6	6.2/16.0	6.4/16.2	6.0/16.2
CAKE	N/C	2	2	2	2	2	2
SALINITY (PPM)	15000	15000	13000	14000	16000	16000	16000
SAND	TR	TR	TR	½	½	½	½
SOLIDS	5	12	12	9	10	10	10
OIL	0	0	0	0	0	0	0
NITRATES (PPM)		80	200	120	110	200	180

REMARKS:

DRILLED 12½" HOLE

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL WHITING NO. 1

Sheet No. 2

DEPTH (M)	2109	2199	2211	2241	2287	2383	2476
DATE	20/3/83	21/3/83	22/3/83	23/3/83	24/3/83	25/3/83	26/3/83
TIME	06:00	10:00	02:00	22:30	10:00	10:30	23:00
WEIGHT	9.8	9.8+	9.8	9.8	9.8	9.8	9.9
FUNNEL VISCOSITY	46	49	48	42	46	55	47
PV/YP	12/18	13/19	9/18	13/18	13/19	14/22	14/22
N/K	.49/1.46	.49/1.49	.41/2.03	.50/1.33	.49/1.49	.47/1.88	.47/1.88
GEL: INITIAL/10 MIN	6/25	6/24	3/12	6/16	6/18	9/32	8/28
pH	10.6	10.5	10.4	10.6	10.4	10.5	10.4
FILTRATE: API/API HTHP	6.4/17.2	5.8/16.2	7.2/19.8	6.0/16.4	6.2/15.8	5.8/16.4	5.4/16.2
CAKE	2	2	2	2	2	2	2
SALINITY (PPM)	17000	17000	14000	14000	14000	15000	17000
SAND	½	½	0	½	½	½	¼
SOLIDS	9	9	7	9	9	10	9
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	160	140	120	200	200	200	160

REMARKS:

DRILLED 12¼" HOLE W.O.W. DRILLED 12¼" HOLE

DEPTH (M)	2531	2616	2647	2681	2693	2740	2825
DATE	27/3/83	28/3/83	29/3/83	30/3/83	31/3/83	1/4/83	2/4/83
TIME	14:00	22:15	22:00	09:45	10:00	22:00	22:00
WEIGHT	9.9	9.9	9.9	9.9	9.9	9.9	9.8+
FUNNEL VISCOSITY	50	51	42	41	43	43	40
PV/YP	13/20	22/28	13/20	15/20	15/20	12/25	10/20
N/K	.48/1.67	.53/1.88	.48/1.67	.51/1.42	.51/1.42	.41/2.96	.41/2.26
GEL: INITIAL/10 MIN	8/28	15/33	10/25	10/29	12/30	18/28	15/26
pH	10.3	10.7	10.5	10.3	10.1	10.4	10.3
FILTRATE: API/API HTHP	5.2/16.0	5.8/17.7	6.7/19.1	7.3/19.6	8.5/22.4	9.8/24.3	9.6/24.1
CAKE	2	2	2	2	2	2	2
SALINITY (PPM)	17000	18400	18000	17400	18100	17800	18500
SAND	¼	¼	TR	TR	TR	TR	TR
SOLIDS	9	9	8	8	8	8	7
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	200	160	160	200	160	200	160

REMARKS:

DRILLED 12¼" HOLE

7520-492 (CL 1158)

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL WHITING NO. 1

Sheet No. 3

DEPTH (M)	2865	2934	3011	3011	3011	3011	3011
DATE	3/4/83	4/4/83	5/4/83	6/4/83	7/4/83	8/4/83	9/4/83
TIME	22:00	21:45	21:30	16:00	19:00	09:00	24:00
WEIGHT	9.9	9.9	9.8	9.9	9.7	9.7	9.7
FUNNEL VISCOSITY	36	40	39	41	39	40	39
PV/YP	9/14	14/20	11/20	10/20	12/10	10/15	8/14
N/K	.48/1.18	.5/1.53	.44/2.02	.41/2.02	.63/.44	.49/1.21	.45/1.35
GEL: INITIAL/10 MIN	11/20	16/30	15/27	17/30	7/18	10/24	6/20
pH	10.1	10.4	10.2	10.3	9.8	10.1	9.9
FILTRATE: API/API HTHP	9.4/23.8	8.5/22.4	8.3/23.2	8.5/23.6	9.3/-	11.7/26.4	11.8/27.4
CAKE	2	2	2	2	2	2	2
SALINITY (PPM)	18500	18400	18700	18400	18200	18400	18200
SAND	TR	TR	TR	TR	TR	TR	TR
SOLIDS	8	8	8	8	7	7	7
OIL	0	0	0	0	0	0	0
NITRATES (PPM)	180	300	160	160	140	TR	TR

REMARKS:

DRILLED 12¼" HOLE

T.D.

LOGGING

DEPTH (M)	3011	3011	3011	3011	3011	3011	3011
DATE	10/4/83	11/4/83	12/4/83	13/4/83	14/4/83	15/4/83	16/4/83
TIME	19:00	22:30	12:00	11:30	23:30	20:30	23:00
WEIGHT	9.7	9.6	9.7+	9.7	9.8	9.8	9.8
FUNNEL VISCOSITY	38	42	41	46	48	47	43
PV/YP	7/12	8/18	9/12	12/16	15/20	14/17	14/15
N/K	.45/1.13	.39/2.33	.51/.85				
GEL: INITIAL/10 MIN	7/15	8/14	6/15	8/20	8/20	8/20	7/18
pH	10.7	10.2	10.1	10.6	10.5	10.2	10.0
FILTRATE: API/API HTHP	14.2/30.1	13.9/26.2	14.4/28.2	10.1/22.4	9.6/20.4	9.8/22.0	10/22.4
CAKE	2	2	2	2	2	2	2
SALINITY (PPM)	17800	16000	17500	18000	18000	18000	18000
SAND	TR	TR	TR	TR	0.25	TR	TR
SOLIDS	7	6	7	7	8	8	8
OIL	0	0	TR	TR	TR	TR	TR
NITRATES (PPM)	TR	TR	50	30	TR	TR	TR

REMARKS:

LOGGING

WIPER TRIP

WIPER TRIP

WIPER TRIP

RAN 9-5/8" CSG.

WIPER TRIP

PRODUCTION TEST FROM 19/4/83

7520-492 (CL 1158)

CORE LAB

PORE PRESSURE DATA SHEET

DATA FROM: RFT NOS: 1 & 2

COMPANY: ESSO AUSTRALIA LTD.

WELL : WHITING 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)
2987.5	2966.5	4879.6	9.642*	1.645
2871.0	2850.0	4243.0	8.727	1.489
2801.5	2780.5	4150.2	8.749	1.493
2688.0	2667.0	3908.5	8590	1.466
2537.0	2516.0	3645.6	8.493	1.449
2481.7	2460.7	3550.9	8.459	1.433
2467.0	2446.0	3542.3	8.489	1.448
2451.0	2430.0	3537.4	8.533	1.456
2441.7	2420.7	3536.6	8.564	1.461
2428.0	2407.0	3618.0	8.811	1.503
2418.0	2397.0	3526.7	8.624	1.471
2403.6	2382.6	3536.2	8.700	1.484
2354.0	2333.0	3421.4	8.596	1.467
2346.5	2325.5	4319.3	8.619	1.470
2300.0	2279.0	3322.6	8.546	1.458
2259.0	2238.0	3231.8	8.464	1.444
2238.0	2217.0	3204.4	8.472	1.445
2203.2	2182.2	3168.7	8.511	1.452
2193.0	2172.0	3167.0	8.547	1.458
2157.5	2136.5	3091.4	8.481	1.447

CORE LAB

PORE PRESSURE DATA SHEET

DATA FROM: RFT NOS: 1 & 2

COMPANY: ESSO AUSTRALIA LTD.

WELL : WHITING 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)
2147.2	2126.2	3081.1	8.494	1.449
2124.2	2103.2	3053.1	8.509	1.452
2115.4	2094.4	3051.9	8.541	1.457
2006.0	1985.0	2860.2	8.446	1.441
1946.0	1925.0	2773.4	8.445	1.441
1921.0	1900.0	2736.1	8.441	1.440
1910.0	1889.0	2721.2	8.444	1.441
1901.0	1880.0	2717.0	8.471	1.445
1880.0	1859.0	2713.4	8.556	1.460
1825.0	1804.0	2591.9	8.422	1.437
1812.5	1791.5	2581.2	8.445	1.441
1807.0	1786.0	2580.8	8.470	1.445
1771.0	1750.0	2517.1	8.431	1.438
1745.0	1724.0	2477.8	8.425	1.437
1718.0	1697.0	2451.8	8.469	1.445
1659.0	1638.0	2357.6	8.437	1.439
1575.0	1554.0	2227.0	8.400	1.433
1500.0	1479.0	2124.4	8.419	1.436
1493.5	1472.5	2115.4	8.421	1.437
1486.0	1465.0	2109.0	8.438	1.440

CORE LAB

PORE PRESSURE DATA SHEET

DATA FROM: RFT NOS: 2 & 5

COMPANY: ESSO AUSTRALIA LTD.

WELL : WHITING 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)
1482.0	1461.0	2105.1	8.446	1.441
1401.0	1380.0	1987.7	8.443	1.440
2910.0	2889.0	4311.2	8.747	1.492
2836.0	2815.0	4261.0	8.873*	1.514
2785.0	2764.0	4140.1	8.780	1.498
2701.0	2680.0	3937.7	8.612	1.469
2623.5	2602.5	3970.3	8.942*	1.526
2603.0	2582.0	3730.5	8.469	1.445
2537.0	2516.0	3647.5	8.468	1.450
2494.0	2473.0	3569.7	8.461	1.443
2428.0	2407.0	3637.8	8.859	1.511
2418.0	2397.0	3524.6	8.619	1.470
* INDICATES POSSIBLE SUPERCHARGING.				

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

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

RUN No. : 3 PRESSURE GAUGE TYPE : HP

CHAMBER No.	1	2
CHAMBER CAPACITY (LITRES)	22.7	3.78
CHOKE SIZE (SQ.INS.)	.03	.03
SEAT No.	3/44	3/44
DEPTH (M) (from RKB)	1482	1482
A RECORDING TIMES		
TOOL SET (HRS:MINS)	03:35	
PRETEST OPEN	03:35	-
TIME OPEN	:06	-
CHAMBER OPEN	03:41	03:56
CHAMBER FULL	03:49	03:57
FILL TIME	:08	:01
START BUILD UP	03:49	03:57
FINISH BUILD UP	03:55	04:00
BUILD UP TIME	:06	:03
SEAL CHAMBER	03:55	04:00
TOOL RETRACT	-	04:01
TOTAL TIME		:26
B SAMPLE PRESSURES		
IHP (PSIA)	2525.7	-
ISIP (PSIA)	2105.4	-
IFP (PSIA)	2003.2	1987.8
FFP (PSIA)	1942.1	1991.8
FSIP (PSIA)	2105.1	2105.0
FHP (PSIA)	-	2524.1
TEMP. CORR. ( )		
COMMENTS		
C TEMPERATURE		
DEPTH TOOL REACHED (M)	1510	1510
MAX. REC. TEMP. (°C)	75	75
TIME CIRC. STOPPED	19:30 10/4/83	19:30 10/4/83
TIME SINCE CIRC.	8:30	8:30
D SAMPLE RECOVERY		
SURFACE PRESSURE (PSIG)	320	
VOL. GAS (CUFT)	15.3	
VOL. OIL (CC)	16850	P
VOL. WATER (CC)	NIL	R
VOL. FILTRATE ( )		E
VOL. CONDENSATE ( )		S
VOL. OTHER MUD (CC)	650	E
E SAMPLE PROPERTIES		R
(a) GAS c1 (PPM)	59187	V
GAS c2 (PPM)	3738	E
GAS c3 (PPM)	1690	D
GAS c4 (PPM)	243	
GAS c5 (PPM)	40	
GAS c6+ (PPM)	38	
GAS CO_2 (%)	0.4	
GAS H_2S (PPM)	TR	
(b) OIL PROPERTIES		
DENSITY: ( ) HYDROMETER	58.5@16°C	
DENSITY: ( ) REFRACTOMETER		
REFRACTIVE INDEX		
COLOUR	DK RED-BROWN	
FLUORESCENCE	BRT BLUE-WH	
G.O.R. (SCF/STB)	144	

OIL PROPERTIES CONT.		
ODOUR		
POUR POINT (°)		
COMMENTS		
(c) WATER PROPERTIES		
RESISTIVITY ( )		
Cl (frm. resis.)( )		
Cl (frm. titrat)( )		
NO_3 ( )		
pH		
OTHER TRACERS ( )		
DENSITY ( )		
FLUORESCENCE		
COLOUR		
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		

F MUD PROPERTIES		
TYPE	SWG	SWG
RESISTIVITY (M)	.192@34°C	.192@34°C
Cl (frm.resis.)(PPM)	28K	28K
Cl (frm.titrat)(PPM)	17.8K	17.8K
NO_3 Drld/1st.circ( )		
pH		
OTHER TRACERS ( )		
DENSITY ( )		

G GENERAL COMMENTS

THE MUD COVERED FROM pH 8.5

CHAMBER NO. 1 HAD THE
RESISTIVITY ..... 0.33@ 20°C

FOLLOWING PROPERTIES:
NaCl EQUIVALENT ..... 20K PPM
Cl TITRATED ..... 8K PPM
NO_3 ..... 66 PPM

THE LOWER CHAMBER HAD A SMALL LEAK IN THE TRANSPORT VALVE.

THE UPPER CHAMBER WAS SEALED FOR ANALYSIS.

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

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

RUN No. : 4 PRESSURE GAUGE TYPE : HP

		1	2
CHAMBER No.		1	2
CHAMBER CAPACITY (LITRES)		22.7	10.4
CHOKE SIZE (SQ. INS.)		.03	.03
SEAT No.		4/45	4/45
DEPTH (M) (from RKB)		2801.5	2801.5
A RECORDING TIMES			
	TOOL SET (HRS:MINS)	08:43	
	PRETEST OPEN	08:43	
	TIME OPEN	:05	
	CHAMBER OPEN	08:48	
	CHAMBER FULL	10:13	11:03
	FILL TIME	1:25	:36
	START BUILD UP	10:13	11:03
	FINISH BUILD UP	10:27	11:07
	BUILD UP TIME	:14	:04
	SEAL CHAMBER	10:13	11:03
	TOOL RETRACT	-	11:07
	TOTAL TIME	1:30	:54
B SAMPLE PRESSURES			
	IHP (PSIA)	4721.5	
	ISIP (PSIA)	4151.3	
	IFP (PSIA)	111.8	529.6
	FFP (PSIA)	2173.7	3821
	FSIP (PSIA)	4151.2	4150.3
	FHP (PSIA)		
	TEMP. CORR. ( )		
	COMMENTS		
C TEMPERATURE			
	DEPTH TOOL REACHED(M)	2810	2810
	MAX.REC.TEMP.(°C)	110	110
	TIME CIRC. STOPPED	19:30 10/4/83	19:30 10/4/83
	TIME SINCE CIRC.	13:30	13:30
D SAMPLE RECOVERY			
	SURFACE PRESSURE(PSIG)	0	0
	VOL. GAS (CUFT)	0.66	0.38
	VOL. OIL (CC)	NIL	NIL
	VOL. WATER (CC)	19500	9000
	VOL. FILTRATE ( )		
	VOL. CONDENSATE ( )		
	VOL. OTHER ( )		
E SAMPLE PROPERTIES			
(a) GAS	c1 (PPM)	55751	99306
	c2 (PPM)	47002	14100
	c3 (PPM)	38356	11081
	c4 (PPM)	10680	3944
	c5 (PPM)	1598	1318
	c6+ (PPM)	77	288
	CO_2 (%)	0	4
	H_2S (PPM)	0	0
(b)OIL PROPERTIES			
DENSITY: ( )	HYDROMETER		
	REFRACTOMETER		
REFRACTIVE INDEX			
COLOUR			
FLUORESCENCE			
G.O.R. ( )			

OIL PROPERTIES CONT.			
	ODOUR		
	POUR POINT (°)		
	COMMENTS		
(c)WATER PROPERTIES			
	RESISTIVITY (M)	.133@22°C	.122@24°C
	Cl (frm. resis.)(PPM)	55K	49K
	Cl (frm. titrat)(PPM)	15K	15.5K
	NO_3 (PPM)	22	30
	pH	8.0	8.0
	OTHER TRACERS ( )		
	DENSITY ( )		
	FLUORESCENCE		
	COLOUR		
	COMMENTS		
(d)OTHER SAMPLE PROPERTIES			

F MUD PROPERTIES		
	TYPE	SWG
	RESISTIVITY (M)	.192@34°C
	Cl (frm.resis.)(PPM)	28K
	Cl (frm.titrat)(PPM)	17.8K
	NO_3 Drld/1st.circ( )	
	pH	
	OTHER TRACERS ( )	
	DENSITY ( )	

G GENERAL COMMENTS

THE LOWER CHAMBER LEAKED FROM the transport valve.

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

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

RUN No. : 5 PRESSURE GAUGE TYPE : HP

CHAMBER No.	1	2
CHAMBER CAPACITY (LITRES)	22.7	3.78
CHOKE SIZE (SQ.INS.)	.03	.03
SEAT No.	5/55	5/55
DEPTH (M) (from RKB)	2418	2418
A RECORDING TIMES		
TOOL SET (HRS:MINS)	:22	
PRETEST OPEN	:22	
TIME OPEN	:30	
CHAMBER OPEN	:30	:42
CHAMBER FULL	:35	:43
FILL TIME	:05	:01
START BUILD UP	:35	:43
FINISH BUILD UP	:41	:46
BUILD UP TIME	:06	:03
SEAL CHAMBER	:41	:46
TOOL RETRACT	-	:47
TOTAL TIME	:19	:06
B SAMPLE PRESSURES		
IHP (PSIA)	4083.6	4083.6
ISIP (PSIA)	3524.6	3525.0
IFP (PSIA)	3407.9	3325
FFP (PSIA)	3366.0	3416
FSIP (PSIA)	3525.0	3525.2
FHP (PSIA)		4085.7
TEMP. CORR. ( )		
COMMENTS		
C TEMPERATURE		
DEPTH TOOL REACHED(M)	2935	2935
MAX.REC.TEMP.(°C)	116	116
TIME CIRC. STOPPED	19:30 10/4/83	19:30 10/4/83
TIME SINCE CIRC.	29:00	29:00
D SAMPLE RECOVERY		
SURFACE PRESSURE(PSIG)	1800	
VOL. GAS (CUFT)	124.1	
VOL. OIL (CC)	NIL	
VOL. WATER (CC)	1300	
VOL. FILTRATE ( )		
VOL. CONDENSATE (CC)	430	
VOL. OTHER ( )		
E SAMPLE PROPERTIES		
(a) GAS COMPOSITION c1 (PPM)	219341	
c2 (PPM)	19155	P
c3 (PPM)	11827	R
c4 (PPM)	3040	
c5 (PPM)	599	E
c6+ (PPM)	77	S
CO_2 (%)	0.3	
H_2S (PPM)	TR	E
(b)OIL PROPERTIES		R
DENSITY: ( ) HYDROMETER	53@ 16°C	
REFRACTOMETER		V
REFRACTIVE INDEX		E
COLOUR	COLOURLESS	
FLUORESCENCE	BLUE-WH	D
G.O.R. (bbl/cuft	21.8	

OIL PROPERTIES CONT.		
ODOUR		
POUR POINT (°)		
COMMENTS		
(c)WATER PROPERTIES		
RESISTIVITY (M)	.92@19°C	
Cl (frm. resis.)(PPM)	7000	
Cl (frm. titrat)(MG/L)	3500	
NO_3 (MG/L)	8	
pH	7.5	
OTHER TRACERS ( )		
DENSITY ( )		
FLUORESCENCE		
COLOUR		
COMMENTS		
(d)OTHER SAMPLE PROPERTIES		

F MUD PROPERTIES	
TYPE	SWG
RESISTIVITY (M)	.192 @ 34°C
Cl (frm.resis.)(PPM)	28000
Cl (frm.titrat)(PPM)	17800
NO_3 Drld/1st.circ( )	
pH	
OTHER TRACERS ( )	
DENSITY ( )	

G GENERAL COMMENTS

UPPER CHAMBER WAS PRESERVED.

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

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

RUN No. : 6 PRESSURE GAUGE TYPE : HP

		1	2
CHAMBER No.		1	2
CHAMBER CAPACITY (LITRES)		22.7	10.4
CHOKE SIZE (SQ.INS.)		.03	.03
SEAT No.		6/56	6/56
DEPTH (M) (from RKB)		1401	1401
A RECORDING TIMES			
	TOOL SET (HRS:MINS)	19:03	
	PRETEST OPEN	19:03	
	TIME OPEN	:04	
	CHAMBER OPEN	19:07	19:19
	CHAMBER FULL	19:14	19:22
	FILL TIME	:07	:03
	START BUILD UP	19:14	19:22
	FINISH BUILD UP	19:17	19:25
	BUILD UP TIME	:03	:03
	SEAL CHAMBER	19:17	19:25
	TOOL RETRACT		19:26
	TOTAL TIME	:14	:09
B SAMPLE PRESSURES			
	IHP (PSIA)	2352.0	
	ISIP (PSIA)	1988.7	1988.5
	IFP (PSIA)	1973	1972.2
	FFP (PSIA)	1974	1974.2
	FSIP (PSIA)	1988.5	1988.5
	FHP (PSIA)		2350.6
	TEMP. CORR. ( )		
	COMMENTS		
C TEMPERATURE			
	DEPTH TOOL REACHED(M)	1503	1503
	MAX.REC.TEMP.(°C)	76	76
	TIME CIRC. STOPPED	11:45 1274783	11:45 1274783
	TIME SINCE CIRC.	7:00	7:00
D SAMPLE RECOVERY			
	SURFACE PRESSURE(PSIG)	590	200
	VOL. GAS (CU FT)	0.85	0.37
	VOL. OIL ( )	NIL	NIL
	VOL. WATER (CC)	21300	10000
	VOL. FILTRATE ( )		
	VOL. CONDENSATE ( )		
	VOL. OTHER ( )		
E SAMPLE PROPERTIES			
(a) GAS	c1 (PPM)	54447	
	c2 (PPM)	16268	
	c3 (PPM)	14515	
	c4 (PPM)	2909	
	c5 (PPM)	268	
	c6+ (PPM)	TR	
	CO_2 (%)	2	
	H_2S (PPM)	50	

(b)OIL PROPERTIES

DENSITY: ( )	HYDROMETER		
	REFRACTOMETER		
REFRACTIVE INDEX			
COLOUR			
FLUORESCENCE			
G.O.R. ( )			

OIL PROPERTIES CONT.			
	ODOUR		
	POUR POINT (°)		
	COMMENTS		
(c)WATER PROPERTIES			
	RESISTIVITY (M)	.493@21°C	.718@ 21°C
	Cl (frm. resis.)(PPM)	13000	8500
	Cl (frm. titrat)(PPM)	6000	4300
	NO_3 (PPM)	TR	0
	pH	8.5	7.5
	OTHER TRACERS ( )		
	DENSITY ( )		
	FLUORESCENCE		
	COLOUR		
	COMMENTS		
	(d)OTHER SAMPLE PROPERTIES	FILTRATE	FORMATION WATER

F MUD PROPERTIES		
	TYPE	SWG
	RESISTIVITY (M)	.145 @ 17°C
	Cl (frm.resis.)(PPM)	58000
	Cl (frm.titrat)(PPM)	17500
	NO_3 Drld/1st.circ( )	
	pH	
	OTHER TRACERS ( )	
	DENSITY ( )	

G GENERAL COMMENTS

THERE WAS AN INSUFFICIENT GAS SAMPLE FROM THE UPPER CHAMBER TO FACILITATE A A MEANINGFUL ANALYSIS.

WHITING NO. 1 - PRODUCTION TEST

The sand between 1483-1486 metres was production tested. 10 perforations were made in this zone for PWT No. 1. The initial flow period was one hour and gas samples were analysed from the choke manifold every 15 minutes once oil reached the surface. An oil sample was tested for API gravity (58°API). The well was then shut in. The shut in period was longer than anticipated due to a malfunction of the HP gauge; eventually this was rigged down and OTIS Ameradas were run. The well was finally opened at 04:00 hours on 22nd April 1983 and oil/gas flared off. Gas samples were analysed for chromatographic breakdown, CO_2 and H_2S every 15 minutes, initially from the choke manifold, then after one and a half hours of flow, when the sediment content of the oil had dropped sufficiently, from the separator. Maximum H_2S from the gas samples was 9 ppm, and maximum CO_2 was 1.8%. Oil gravity remained relatively constant at 58° API.

The well was shut in at 11:00 hours on 22nd April 1983. Unfortunately the OTIS Wireline broke and so no record was available of down-hole pressure. The decision was then made to reperforate and rerun the test.

Ten perforations were made over the same zone (1483-1486m), for PWT No. IR. Similar samples were taken as for PWT No. 1. Oil gravity remained constant at 58° API, maximum H_2S concentrations in the gas stream were 25 ppm and a maximum CO_2 content of 2.0% was recorded. Oil flowed at a rate just over 5000 BOPD, and gas flowed at 1.2 MMCFD with a GOR in the low 200's.

CORE LAB — PRODUCTION WELL TEST DATA SHEET — SHEET # 1/2

COMPANY ESSO AUSTRALIA LTD.

WELL WHITING NO. 1 PWT # 1

PERFORATIONS 1483-1486M (FM, RKB)

DATE 21-22 APRIL 1983

TIME	SAMPLING POINT	C1	C2	C3	C4	C5	C6	CO2	H2S	
HH:MM		PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	
09:15	CHOKE MANIFOLD	358400	149811	181094	97280	3794		1.1	0	INITIAL FLOW
09:30	"	2240	7338	6288	6080	10226		0.6	0	
04:00	"	134400	48154	60364	30400	17050		0.7	0	FINAL FLOW
04:15	"	268800	74900	90550	53200	36900		0.8	0	
04:30	"	313600	101660	110670	66120	5000		1.6	0	
04:45	"	322560	96300	110670	63080	36000		1.7	0	
05:00	"	367360	107000	110670	54720	34300		1.7	0	
05:15	"	538400	107100	110670	58520	41300		1.8	0	
05:30	"	340480	101650	105640	61560	42450		1.8	0	
05:45	SEPARATOR	430800	80260	55330	19760	12110		1.3	0	
06:00	"	448000	80260	55330	21280	11280		1.2	0	
06:15	"	421120	85600	57850	23560	11280		1.3	0	
06:30	"	439040	85600	60365	24320	12330		1.3	0	
06:45	"	430080	85606	60364	23560	14892		1.3	8	
07:00	"	430080	85606	61622	25080	12096		1.3	8	
07:15	"	412160	85600	60360	25840	11960		1.3	7	
07:30	"	439040	85600	62880	26600	12900		1.3	3	
07:45	"	430080	85500	65390	27360	12900		1.2	7	
08:00	"	430080	85600	65400	26600	12560		1.3	4	
08:15	"	430080	85600	62880	24320	14580		1.3	8	
08:30	"	430080	85600	62880	26600	12500		1.3	9	
08:45	"	448000	90960	62880	28120	19500		1.3	8	
09:00	"	439040	85600	65400	30400	17260		1.3	4	

NO MORE SAMPLES FOR IMMEDIATE ANALYSIS WERE TAKEN, AS SAMPLES WERE BEING TAKEN FOR LABORATORY ANALYSIS.

CORE LAB. PRODUCTION WELL TEST DATA SHEET SHEET # 2/2

COMPANY ESSO AUSTRALIA LTD. DATE 21-22 APRIL 1983

WELL WHITING NO. 1 PWT# 1

PERFORATIONS 1483-1486M (FM, RKB)

RATHOLE FLUID: TYPE _____ RES. Ω m _____ ° _____ PH _____ Cl (TITRAT) _____ PPM

NO3 _____ PPM DENSITY _____

CUSHION FLUID: TYPE _____ RES. Ω m _____ ° _____ PH _____

Cl (TITRAT) _____ PPM DENSITY _____

TIME HH:MM	SAMPLING POINT	NO.	SHAKE OUT % OIL	SHAKE OUT % H2O	SHAKE OUT % SLDS	API @ TEMP —	API @ TEMP ° F	COLOUR OIL	POUR POINT °	WATER RES @ TEMP Ω-m	WATER RES @ TEMP °	Cl PPM	NO3 PPM	PH	COMMENTS
09:40	CHOKE					58	72								INITIAL FLOW
04:00	"					58.1	63								FINAL FLOW
04:15	"					57.9	65								
04:30	"					57.9	71								
04:45	"					57.7	72								
05:00	"					57.2	72								
05:15	"					57.6	75								
05:30	"					58.4	81								
06:00	"					58.5	82								
06:30	"					58.2	82								
07:00	"					57.8	79								
07:30	"					57.9	82								
08:00	"					58.2	82								
08:30	"					58.7	82								
09:00	"					58.5	82								
09:30	"					58.2	82								
10:00	"					58.3	83								
10:30	"					57.7	80								
11:00	"					57.5	80								

CORE LAB — PRODUCTION WELL TEST DATA SHEET — SHEET # 1/2

COMPANY ESSO AUSTRALIA LTD.

WELL WHITING NO. 1 PWT # 1R

PERFORATIONS 1483-1486M (FM. RKB) DATE 23 APRIL 1983

TIME	SAMPLING POINT	C1	C2	C3	C4	C5	C6	CO2	H2S	
HH:MM		PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	
08:35	CHOKE	241920	90560	90550	40280	21900		1.3	0	INITIAL FLOW
08:45	"	250880	80260	88030	38000	23500		1.3	0	
09:00	"	233000	96300	108150	50160	32930		2.0	3	
09:15	"	259840	74900	88030	45600	32930		1.8	8	
14:45	"	286720	77580	65395	32680	25000		1.5	0	FINAL FLOW
15:00	"	259840	74910	72940	36480	39010		1.5	0	
15:15	"	161280	48150	55330	34960	31560		1.1	3	
15:30	"	179200	53500	60360	36480	32150		1.3	6	
15:45	"	219520	66880	72940	41040	33150		1.7	10	
16:00	SEPARATOR	282240	42800	25150	9120	6650		1.1	6	
16:30	"	295680	46820	26400	9880	6900		1.1	4	
	WELL SHUT IN DUE TO FLARE NOZZLE BLOCKAGE.									
18:00	SEPARATOR	259840	52170	32700	14820	12360		1.3	14	
18:30	"	259840	50830	30180	13300	10720		1.2	4	
19:00	"	250880	50830	30180	15200	12070		1.2	10	
19:30	"	255360	50830	30180	13300	11270		1.2	19	
20:00	"	268800	53500	30180	12920	8630		1.1	20	
20:30	"	268800	50830	30180	13300	10220		1.1	14	
21:00	"	259840	50830	30180	13300	10470		1.1	15	
21:30	"	255360	49490	28920	12920	9131		1.1	16	
22:00	"	268800	52200	31440	14060	11820		1.2	20	
22:30	"	264320	50830	30180	14060	11520		1.1	25	

NO MORE SAMPLES WERE TAKEN FOR IMMEDIATE ANALYSIS AS SAMPLES WERE BEING BOTTLED FOR LABORATORY ANALYSIS.

CORE LAB. **PRODUCTION WELL TEST DATA SHEET** SHEET# 2/2

COMPANY ESSO AUSTRALIA LTD. DATE 23-24 APRIL 1983

WELL WHITING NO. 1 PWT# 1R

PERFORATIONS 1483-1486M (FM, RKB)

RATHOLE FLUID: TYPE _____ RES. Ω m _____ ° _____ PH _____ Cl (TITRAT) _____ PPM

NO3 _____ PPM DENSITY _____

CUSHION FLUID: TYPE _____ RES. Ω m _____ ° _____ PH _____

Cl (TITRAT) _____ PPM DENSITY _____

TIME HH:MM	SAMPLING POINT	NO.	SHAKE OUT % OIL	SHAKE OUT % H2O	SHAKE OUT % SLDS	API @ TEMP —	API @ TEMP °	COLOUR OIL	POUR POINT °	WATER RES @ TEMP Ω-m	WATER RES @ TEMP °	Cl PPM	NO3 PPM	PH	COMMENTS
08:35	CHOKE					59.6	61								INITIAL FLOW
09:00	"					58.6	72								
09:30	"														
10:00	"														
14:45	"					58.2	57								FINAL FLOW
15:00	"					58.0	70								
15:15	"					57.8	76								
15:30	"					57.4	75								
15:45	"					57.4	83								
16:00	"					57.3	84								
16:30	"					57.9	89								
	SHUT IN AT 16:47 - 18:00 HOURS.														
18:00	CHOKE					58.0	85								
18:30	"					57.5	95								
19:00	"					57.9	93								
19:30	"					57.8	90								
20:00	"					58.0	95								
20:30	"					57.9	99								
21:00	"					57.7	96								
21:30	"					57.7	99								
22:00	"					58.0	96								
22:30	"					57.5	103								
23:00	"					57.8	100								
23:30	"					57.5	103								
00:00	"					58.1	97								
00:30	"					57.6	102								

APPENDICES

COMPUTER DATA LISTINGS

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

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

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

the following data lists have been made for this well :

(a). Bit record and bit initialization data

(b). Hydraulic analyses

(c). Data list A

(d). Data list B

(e). Data list C

(f). Data list D

COMPUTER PLOTS

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

GEOPLOT - 1:5000 SCALE - 2m averages

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

(a). BIT RECORD AND BIT INITIALIZATION DATA

BIT SIZE . . . . . Inches

BIT COST . . . . . Australian dollars

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

DEPTHS . . . . . Metres

HOLE MADE. . . . . Metres

DRILLING TIME. . . . . Hours

AVERAGE ROP. . . . . Metres/hour

AVERAGE COST/METRE . . Australian dollars

BIT CONDITION. . . . . Teeth

Bearings

Gauge . . . . Inches

WELL: WHITING No.1 BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
1	111	HTC OSC3AJ&26"HO	26.000	0.00	20 20 20	74.0	211.0	137.0	6.03	22.7	2.1	325.08	17485	2	4	0.001
2	111	OSC 3AJ	17.500	4442.00	20 20 20	211.0	800.0	589.0	19.13	30.8	2.4	207 67	155173	2	2	0.000
3	114	HTC X3A	12.250	2201.00	18 18 18	800.0	1339.0	539.0	19.23	28.0	4.2	242.08	177615	7	4	0.125
4	517	HTC J22	12.250	6788.00	18 18 18	1339.0	1668.2	329.2	24.87	13.2	4.9	515.73	119781	8	3	0.125
5	617	HTC J44	12.250	4919.00	18 18 18	1668.2	1942.0	273.8	32.21	8.5	6.2	786 03	140419	3	8	0.000
6	517	HTC J22	12.250	6788.00	18 18 18	1942.0	2185.0	243.0	34.07	7.1	6.6	944.26	137842	3	7	0.125

WELL: WHITING NO.1 BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
7	437	HTC J11	12.250	6788.00	18 18 18	2185.0	2211.5	26.5	3.84	6.9	6.7	2433.75	17534	4	2	0.001
8	517	HTC J22	12.250	6788.00	18 18 18	2211.5	2428.0	216.5	50.47	4.3	7.1	1487.22	158096	2	3	0.000
9	517	HTC J22	12.250	6788.00	16 16 18	2428.0	2634.0	206.0	58.59	3.5	7.6	1792.13	180906	6	2	0.000
10	537	HTC J33	12.250	6637.00	16 16 18	2634.0	2681.0	47.0	15.91	3.0	7.7	2891.12	45492	1	1	0.000
10	A	CHRIS C-20	8.469	13000.00	14 14 13	2681.0	2693.6	12.6	10.94	1.2	7.7	9131.27	59389	0	0	0.050
11	517	HTC J22	12.250	6788.00	16 16 18	2693.6	2840.5	146.9	39.58	3.7	8.0	1819 53	115791	3	3	0.000
12	517	HTC J22	12.250	6788.00	16 16 18	2840.5	3011.0	170.5	48.33	3.5	8.4	1861 49	139280	4	2	0.250

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

STARTING DEPTH, TVD.....	74.0	74.0	
BIT COST, RIG COST/HOUR.....	0.00	5475.00	
TRIP TIME.....	2.1		
BIT DIAMETER.....	26.000		
NOZZLES.....	20	20	20
HW DRILL COLLAR LENGTH, OD, ID....	22.59	9.750	3.000
DRILL COLLAR LENGTH, OD, ID.	38.37	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	27.83	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	0.00	0.000	
RISER LENGTH, ID.....	74.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER....	0.00		
STRESS RATIO MODIFIER.....	0.10		
"d" EXPONENT CORRECTION FACTOR...	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.0	2.00	
FINISHING DEPTH.....	211.0		
CUMULATIVE HOURS, TURNS.....	6.0	17485	
BIT CONDITION OUT.....	T 2	B 4	G 0.000

BIT NUMBER: 2 IADC CODE 111 HTC SAJ

STARTING DEPTH, TVD.....	211.0	211.0	
BIT COST, RIG COST/HOUR.....	5475.00	5475.00	
TRIP TIME.....	2.4		
BIT DIAMETER.....	17.500		
NOZZLES.....	20	20	20
HW DRILL COLLAR LENGTH, OD, ID....	21.22	9.750	3.000
DRILL COLLAR LENGTH, OD, ID.	24.25	7.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	17.12	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	196.30	19.124	
RISER LENGTH, ID.....	23.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER....	0.00		
STRESS RATIO MODIFIER.....	0.10		
"d" EXPONENT CORRECTION FACTOR...	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.0	2.10	
FINISHING DEPTH.....	700.0		
CUMULATIVE HOURS, TURNS.....	19.1	155173	
BIT CONDITION OUT.....	T 2	R 2	G 0.000

BIT NUMBER: 3	IADC CODE 114	HTC X3A		
STARTING DEPTH, TVD.....	800.0	800.0		
BIT COST, RIG COST/HOUR.....	2201.00	5475.00		
TRIP TIME.....	4.2			
BIT DIAMETER.....	12.250			
NOZZLES.....	18	18	18	
DRILL COLLAR LENGTH, OD, ID.....	131.10	8.000	2.813	
4W DRILL PIPE LENGTH, OD, ID.....	90.27	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	778.00	12.615		
RISER LENGTH, ID.....	71.00	21.000		
PUMP VOLUMES 1 AND 2.....	0.119	0.119		
PORE PRESSURE CALC EXPONENT.....	1.20			
NORMAL PORE PRESSURE.....	8.4			
OVERBURDEN GRADIENT MODIFIER.....	0.00			
STRESS RATIO MODIFIER.....	0.10			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.5	2.20		
FINISHING DEPTH.....	1339.0			
CUMULATIVE HOURS, TURNS.....	19.2	177615		
BIT CONDITION OUT.....	T 7	B 4	G 0.125	

BIT NUMBER: 4	IADC CODE 517	HTC J22		
STARTING DEPTH, TVD.....	1339.0	1339.0		
BIT COST, RIG COST/HOUR.....	6788.00	5475.00		
TRIP TIME.....	4.9			
BIT DIAMETER.....	12.250			
NOZZLES.....	18	18	18	
DRILL COLLAR LENGTH, OD, ID.....	159.17	8.000	2.813	
4W DRILL PIPE LENGTH, OD, ID.....	90.27	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	778.00	12.615		
RISER LENGTH, ID.....	71.00	21.000		
PUMP VOLUMES 1 AND 2.....	0.119	0.119		
PORE PRESSURE CALC EXPONENT.....	1.20			
NORMAL PORE PRESSURE.....	8.4			
OVERBURDEN GRADIENT MODIFIER.....	0.00			
STRESS RATIO MODIFIER.....	0.10			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.5	2.30		
FINISHING DEPTH.....	1648.2			
CUMULATIVE HOURS, TURNS.....	24.9	119781		
BIT CONDITION OUT.....	T 8	B 3	G 0.125	

BIT NUMBER: 5 IADC CODE 617 HTC J44			
STARTING DEPTH, TVD	1668.2	1668.2	
BIT COST, RIG COST/HOUR	4919.00	5475.00	
TRIP TIME	6.2		
BIT DIAMETER	12.250		
NOZZLES	18	18	18
DRILL COLLAR LENGTH, OD, ID	159.88	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	90.27	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	778.00	12.615	
RISER LENGTH, ID	71.00	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.10		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.40	
FINISHING DEPTH	1942.0		
CUMULATIVE HOURS, TURNS	32.2	140419	
BIT CONDITION OUT	T 3	B 8	G 0.000

BIT NUMBER: 6 IADC CODE 517 HTC J22			
STARTING DEPTH, TVD	1942.0	1942.0	
BIT COST, RIG COST/HOUR	4788.00	5475.00	
TRIP TIME	6.6		
BIT DIAMETER	12.250		
NOZZLES	18	18	18
DRILL COLLAR LENGTH, OD, ID	163.31	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	90.27	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	778.00	12.615	
RISER LENGTH, ID	71.00	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.10		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.40	
FINISHING DEPTH	2185.0		
CUMULATIVE HOURS, TURNS	34.1	137842	
BIT CONDITION OUT	T 3	B 7	G 0.125

BIT NUMBER: 7 IADC CODE 437 HTC J11

STARTING DEPTH, TVD.....	2185.0	2185.0	
BIT COST, RIG COST/HOUR.....	6788.00	5475.00	
TRIP TIME.....	6.7		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	163.31	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	90.27	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	778.00	12.615	
RISER LENGTH, ID.....	74.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.10		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.3	2.41	
FINISHING DEPTH.....	2211.5		
CUMULATIVE HOURS, TURNS.....	3.8	17534	
BIT CONDITION OUT.....	T 4	B 2	G 0.000

BIT NUMBER: 8 IADC CODE 517 HTC J22

STARTING DEPTH, TVD.....	2211.5	2211.5	
BIT COST, RIG COST/HOUR.....	6788.00	5475.00	
TRIP TIME.....	7.1		
BIT DIAMETER.....	12.250		
NOZZLES.....	18	18	18
DRILL COLLAR LENGTH, OD, ID.....	164.02	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	90.27	5.000	3.125
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	778.00	12.615	
RISER LENGTH, ID.....	74.00	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.4		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.10		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	2.2	2.46	
FINISHING DEPTH.....	2428.0		
CUMULATIVE HOURS, TURNS.....	50.5	158096	
BIT CONDITION OUT.....	T 2	B 3	G 0.000

BIT NUMBER: 9	IADC CODE 517	HTC J22		
STARTING DEPTH, TVD.....	2428.0	2428.0		
BIT COST, RIG COST/HOUR.....	6788.00	5475.00		
TRIP TIME.....	7.6			
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	18	
DRILL COLLAR LENGTH, OD, ID.....	163.31	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	90.27	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	778.00	12.615		
RISER LENGTH, ID.....	74.00	21.000		
PUMP VOLUMES 1 AND 2.....	0.119	0.119		
PORE PRESSURE CALC EXPONENT.....	1.20			
NORMAL PORE PRESSURE.....	8.4			
OVERBURDEN GRADIENT MODIFIER.....	0.00			
STRESS RATIO MODIFIER.....	0.10			
"d" EXPONENT CORRECTION FACTOR....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.2	2.46		
FINISHING DEPTH.....	2634.0			
CUMULATIVE HOURS, TURNS.....	58.6	180906		
BIT CONDITION OUT.....	T 6	B 2	G 0.000	

BIT NUMBER: 10	IADC CODE 537	HTC J33		
STARTING DEPTH, TVD.....	2634.0	2635.0		
BIT COST, RIG COST/HOUR.....	6637.00	5475.00		
TRIP TIME.....	7.7			
BIT DIAMETER.....	12.250			
NOZZLES.....	16	16	18	
DRILL COLLAR LENGTH, OD, ID.....	163.31	8.000	2.813	
HW DRILL PIPE LENGTH, OD, ID.....	90.27	5.000	3.125	
DRILL PIPE OD, ID.....		5.000	4.276	
CASING DEPTH, ID.....	778.00	12.615		
RISER LENGTH, ID.....	74.00	21.000		
PUMP VOLUMES 1 AND 2.....	0.119	0.119		
PORE PRESSURE CALC EXPONENT.....	1.20			
NORMAL PORE PRESSURE.....	8.4			
OVERBURDEN GRADIENT MODIFIER.....	0.00			
STRESS RATIO MODIFIER.....	0.10			
"d" EXPONENT CORRECTION FACTOR.....	10.0			
CUTTINGS DIAMETER, DENSITY.....	2.6	2.55		
FINISHING DEPTH.....	2681.0			
CUMULATIVE HOURS, TURNS.....	15.9	45492		
BIT CONDITION OUT.....	T 1	B 1	G 0.000	

BIT NUMBER: 10 IADC CODE 4 CHRIS C-20

STARTING DEPTH, TVD	2681.0	2681.0	
BIT COST, RIG COST/HOUR	13000.00	5475.00	
TRIP TIME	7.7		
BIT DIAMETER	8.469		
NOZZLES	14	14	13
DRILL COLLAR LENGTH, OD, ID	152.02	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	88.87	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
LINER DEPTH, TOP, ID	2681.00	778.00	12.250
CASING ID		12.615	
RISER LENGTH, ID	74.00	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.10		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	3.0	2.40	
FINISHING DEPTH	2693.6		
CUMULATIVE HOURS, TURNS	10.9	59389	
BIT CONDITION OUT	T 0	B 0	G 0.050

BIT NUMBER: 11 IADC CODE 517 HTC J22

STARTING DEPTH, TVD	2693.6	2693.6	
BIT COST, RIG COST/HOUR	6788.00	5475.00	
TRIP TIME	9.1		
BIT DIAMETER	12.250		
NOZZLES	16	16	18
DRILL COLLAR LENGTH, OD, ID	164.57	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	92.87	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	778.00	12.615	
RISER LENGTH, ID	74.00	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.10		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.2	2.46	
FINISHING DEPTH	2840.5		
CUMULATIVE HOURS, TURNS	39.6	115791	
BIT CONDITION OUT	T 3	B 3	G 0.000

BIT NUMBER: 12 IADC CODE 517 HTC J22

STARTING DEPTH, TVD	2840.5	2840.0	
BIT COST, RIG COST/HOUR	6788.00	5475.00	
TRIP TIME	8.4		
BIT DIAMETER	12.250		
NOZZLES	16	16	18
DRILL COLLAR LENGTH, OD, ID	160.57	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	88.87	5.000	3.125
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	778.00	12.615	
RISER LENGTH, ID	74.00	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.4		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.10		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.2	2.46	
FINISHING DEPTH	3011.0		
CUMULATIVE HOURS, TURNS	48.3	139280	
BIT CONDITION OUT	T 4	B 2	G 0.250

(b). HYDRAULIC ANALYSIS

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

DEPTH.	Metres
FLOW RATE.	Rate of mud flow into the well, in gallons per minute.
ANNULAR VOLUMES. . . .	Barrels, Barrels/metre
ANNULAR VELOCITIES . .	Metres/minute
CRITICAL VELOCITIES. .	The annular velocity above which the flow becomes turbulent
SLIP VELOCITY.	The rate of slip of cuttings in the annulus under laminar flow
ASCENT VELOCITY. . . .	The rate of ascent of cuttings in the annulus under laminar flow
PRESSURE UNITS	Pounds per square inch
IMPACT FORCE	The impact force at the bit, in foot-pounds per second squared.
H.H.P.	Hydraulic horsepower at the bit
JET VELOCITY	The velocity of mud through the bit nozzles, in metres per second.
DENSITY UNITS.	Pounds per gallon

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 100.0 AND TVD 100.0

SPM 1 65 SPM 2 59 FLOW RATE 620

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	1.851	42	8	0	TURBULENT			0.0
DC/OH	1.950	7	8	0	TURBULENT			0.0
DC/RIS	1.201	42	12	1	TURBULENT			0.0
HWDP/RIS	1.325	37	11	0	TURBULENT			0.0
DP/RIS	1.325	15	11	0	TURBULENT			0.0
TOTAL VOLUME		142			TOTAL PRESSURE DROP			0.0

LAG: 9.6 MINUTES 626 STROKES #1 AND 568 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	359.1	HHP	130	IMPACT FORCE	596
% SURFACE PRESSURE	108.8	HHP/sqin	0.24	JET VELOCITY	66

PRESSURE BREAKDOWN:

SURFACE	24.3				
STRING	76.7				
BIT	359.1				
ANNULUS	0.0				
TOTAL	460.2	PUMP PRESSURE	330.0	% DIFFERENCE	39.5

BOTTOM HOLE PRESSURES:

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 200.0 AND TVD 200.0

SPM 1 65 SPM 2 59 FLOW RATE 620

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	1.851	42	8	0	TURBULENT			0.0
DC/OH	1.950	75	8	0	TURBULENT			0.0
HWDP/OH	2.074	58	7	0	TURBULENT			0.0
DP/OH	2.074	77	7	0	TURBULENT			0.0
DP/RIS	1.325	98	11	0	TURBULENT			0.0
TOTAL VOLUME		350			TOTAL PRESSURE DROP			0.0

LAG: 23.7 MINUTES 1540 STROKES #1 AND 1398 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	359.1	HHP	130	IMPACT FORCE	596
% SURFACE PRESSURE	90.9	HHP/sqin	0.24	JET VELOCITY	66

PRESSURE BREAKDOWN:

SURFACE	24.3				
STRING	90.7				
BIT	359.1				
ANNULUS	0.0				
TOTAL	474.2	PUMP PRESSURE	395.0	% DIFFERENCE	20.1

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 95 SPM 2 97 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	149	LAMINAR	0	34	0.5
DC/OH	0.772	64	30	150	LAMINAR	0	30	1.5
DC/CSG	0.961	12	24	150	LAMINAR	0	24	0.2
HWDP/CSG	1.085	87	21	151	LAMINAR	0	21	0.9
DP/CSG	1.085	33	21	151	LAMINAR	0	21	0.3
DP/RIS	1.325	97	17	151	LAMINAR	0	17	0.7
TOTAL VOLUME		307			TOTAL PRESSURE DROP			4.1

LAG: 13.4 MINUTES 1274 STROKES #1 AND 1305 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	866.2	HHP	486	IMPACT FORCE	1438
% SURFACE PRESSURE	48.1	HHP/sqin	2.02	JET VELOCITY	102

PRESSURE BREAKDOWN:

SURFACE	67.0		
STRING	497.8		
BIT	866.2		
ANNULUS	4.1		
TOTAL	1435.0	PUMP PRESSURE 1800.0	% DIFFERENCE 20.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.60	HYDROSTATIC PRESSURE	440.2
CIRCULATING:	ECD	8.68	CIRCULATING PRESSURE	444.2
PULLING OUT:	TRIP MARGIN	0.16	ESTIMATED SWAB	8.1
	EFFECTIVE MUD WEIGHT	8.44	BOTTOM HOLE PRESSURE	432.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 96 SPM 2 97 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	131	LAMINAR	0	34	0.4
DC/OH	0.772	73	30	129	LAMINAR	0	30	1.4
HWDP/OH	0.896	72	26	127	LAMINAR	0	25	0.8
DP/OH	0.896	7	26	127	LAMINAR	0	25	0.1
DP/CSG	1.085	134	21	126	LAMINAR	0	21	1.0
DP/RIS	1.325	97	17	125	LAMINAR	0	17	0.5
TOTAL VOLUME		396			TOTAL PRESSURE DROP			4.0

LAG: 17.3 MINUTES 1657 STROKES #1 AND 1675 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	905.9	HHP	509	IMPACT FORCE	1504
% SURFACE PRESSURE	48.7	HHP/scin	2.11	JET VELOCITY	102

PRESSURE BREAKDOWN:

SURFACE	79.7
STRING	638.7
BIT	905.9
ANNULUS	4.0
TOTAL	1628.4

PUMP PRESSURE 1840.0 % DIFFERENCE 12.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	614.2
CIRCULATING:	ECD	9.06	CIRCULATING PRESSURE	618.2
PULLING OUT:	TRIP MARGIN	0.12	ESTIMATED SWAB	8.0
	EFFECTIVE MUD WEIGHT	8.88	BOTTOM HOLE PRESSURE	606.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 94 SPM 2 91 FLOW RATE 922

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	131	LAMINAR	0	32	0.4
DC/OH	0.772	73	28	129	LAMINAR	0	28	1.3
HWDP/OH	0.896	72	25	127	LAMINAR	0	24	0.8
DP/OH	0.896	96	25	127	LAMINAR	0	24	1.0
DP/CSG	1.085	134	20	126	LAMINAR	0	20	0.9
DP/RIS	1.325	97	17	125	LAMINAR	0	17	0.4
TOTAL VOLUME		486			TOTAL PRESSURE DROP			4.9

LAG: 22.1 MINUTES 2076 STROKES #1 AND 2008 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	832.6	HHP	448	IMPACT FORCE	1382
% SURFACE PRESSURE	47.1	HHP/sqin	1.86	JET VELOCITY	98

PRESSURE BREAKDOWN:

SURFACE	73.9
STRING	634.6
BIT	832.6
ANNULUS	4.9
TOTAL	1546.0

PUMP PRESSURE 1768.2 % DIFFERENCE 12.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	767.7
CIRCULATING:	ECD	9.06	CIRCULATING PRESSURE	772.6
PULLING OUT:	TRIP MARGIN	0.12	ESTIMATED SWAB	9.8
	EFFECTIVE MUD WEIGHT	8.88	BOTTOM HOLE PRESSURE	757.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 95 SPM 2 92 FLOW RATE 932

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	168	LAMINAR	0	33	0.7
DC/OH	0.772	73	29	168	LAMINAR	0	29	2.4
HWDP/OH	0.896	72	25	167	LAMINAR	0	25	1.4
DP/OH	0.896	186	25	167	LAMINAR	0	25	3.6
DP/CSG	1.085	134	20	167	LAMINAR	0	20	1.7
DP/RIS	1.325	97	17	167	LAMINAR	0	17	0.9
TOTAL VOLUME		576			TOTAL PRESSURE DROP			10.6

LAG: 25.9 MINUTES 2460 STROKES #1 AND 2377 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	887.7	HHP	483	IMPACT FORCE	1474
% SURFACE PRESSURE	48.0	HHP/sqin	2.01	JET VELOCITY	99

PRESSURE BREAKDOWN:

SURFACE	78.0
STRING	714.3
BIT	887.7
ANNULUS	10.6
TOTAL	1690.5

PUMP PRESSURE 1850.0 % DIFFERENCE 8.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.40	HYDROSTATIC PRESSURE	962.2
CIRCULATING:	ECD	9.50	CIRCULATING PRESSURE	972.8
PULLING OUT:	TRIP MARGIN	0.21	ESTIMATED SWAB	21.2
	EFFECTIVE MUD WEIGHT	9.19	BOTTOM HOLE PRESSURE	941.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 94 SPM 2 91 FLOW RATE 922

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	167	LAMINAR	0	33	0.7
DC/OH	0.772	73	28	167	LAMINAR	0	28	2.4
HWDP/OH	0.896	72	25	166	LAMINAR	0	24	1.4
DP/OH	0.896	276	25	166	LAMINAR	0	24	5.3
DP/CSG	1.085	134	20	166	LAMINAR	0	20	1.7
DP/RIS	1.325	97	17	166	LAMINAR	0	17	0.9
TOTAL VOLUME		665				TOTAL PRESSURE DROP		12.3

LAG: 30.3 MINUTES 2839 STROKES #1 AND 2751 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	878.2	HHP	472	IMPACT FORCE	1458
% SURFACE PRESSURE	46.0	HHP/sqin	1.96	JET VELOCITY	98

PRESSURE BREAKDOWN:

SURFACE	77.1				
STRING	751.1				
BIT	878.2				
ANNULUS	12.3				
TOTAL	1718.8	PUMP PRESSURE	1910.0	% DIFFERENCE	10.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	1134.5
CIRCULATING:	ECD	9.60	CIRCULATING PRESSURE	1146.8
PULLING OUT:	TRIP MARGIN	0.21	ESTIMATED SWAB	24.6
	EFFECTIVE MUD WEIGHT	9.29	BOTTOM HOLE PRESSURE	1109.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 93 SPM 2 91 FLOW RATE 922

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	169	LAMINAR	0	33	0.7
DC/OH	0.772	73	28	169	LAMINAR	0	28	2.4
HWDP/OH	0.896	72	25	168	LAMINAR	0	24	1.4
DP/OH	0.896	365	25	168	LAMINAR	0	24	7.0
DP/CSG	1.085	134	20	168	LAMINAR	0	20	1.7
DP/RIS	1.325	97	17	168	LAMINAR	0	17	0.9
TOTAL VOLUME		755				TOTAL PRESSURE DROP		14.0

LAG: 34.4 MINUTES 3199 STROKES #1 AND 3144 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	859.8	HHP	4.3	IMPACT FORCE	1427
% SURFACE PRESSURE	41.9	HHP/sqin	1.92	JET VELOCITY	98

PRESSURE BREAKDOWN:

SURFACE	75.8				
STRING	782.2				
BIT	859.8				
ANNULUS	14.0				
TOTAL	1731.8	PUMP PRESSURE	2050.0	% DIFFERENCE	15.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	1269.3
CIRCULATING:	ECD	9.40	CIRCULATING PRESSURE	1283.3
PULLING OUT:	TRIP MARGIN	0.21	ESTIMATED SWAB	28.1
	EFFECTIVE MUD WEIGHT	9.09	BOTTOM HOLE PRESSURE	1241.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 102 SPM 2 95 FLOW RATE 985

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	33	86	103	LAMINAR	1	84	4.1
DC/CSG	0.303	3	77	102	LAMINAR	1	76	0.3
HWDP/CSG	0.427	39	55	98	LAMINAR	0	54	1.2
DP/CSG	0.427	260	55	98	LAMINAR	0	54	8.2
DP/RIS	1.325	94	18	92	LAMINAR	0	18	0.2
TOTAL VOLUME		429				TOTAL PRESSURE DROP		14.0

LAG: 18.3 MINUTES 1869 STROKES #1 AND 1732 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1447.1	HHP	832	IMPACT FORCE	1946
% SURFACE PRESSURE	51.3	HHP/sqin	7.06	JET VELOCITY	129

PRESSURE BREAKDOWN:

SURFACE	76.7				
STRING	912.4				
BIT	1447.1				
ANNULUS	14 0				
TOTAL	2450.1	PUMP PRESSURE	2819.8	% DIFFERENCE	13.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1381.9
CIRCULATING:	ECD	9.09	CIRCULATING PRESSURE	1395.9
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	28.0
	EFFECTIVE MUD WEIGHT	8.82	BOTTOM HOLE PRESSURE	1353.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 106 SPM 2 96 FLOW RATE 1013

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	36	88	103	LAMINAR	1	87	4.4
HWDP/OH	0.398	36	61	98	LAMINAR	0	60	1.3
DP/OH	0.398	0	61	98	LAMINAR	0	60	0.0
DP/CSG	0.427	302	56	98	LAMINAR	0	56	9.6
DP/RIS	1.325	94	18	92	LAMINAR	0	18	0.3
TOTAL VOLUME		468			TOTAL PRESSURE DROP			15.6

LAG: 19.4 MINUTES 2066 STROKES #1 AND 1870 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1531.3	HHP	905	IMPACT FORCE	2059
% SURFACE PRESSURE	53.1	HHP/sqin	7.68	JET VELOCITY	133

PRESSURE BREAKDOWN:

SURFACE	80.7				
STRING	1006.6				
BIT	1531.3				
ANNULUS	15.6				
TOTAL	2634.2	PUMP PRESSURE	2894.7	% DIFFERENCE	8.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1535.4
CIRCULATING:	ECD	9.09	CIRCULATING PRESSURE	1551.0
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	31.3
	EFFECTIVE MUD WEIGHT	8.82	BOTTOM HOLE PRESSURE	1504.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 97 SPM 2 92 FLOW RATE 945

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	36	82	101	LAMINAR	1	81	4.3
HWDP/OH	0.398	36	56	96	LAMINAR	0	56	1.3
DP/OH	0.398	40	56	96	LAMINAR	0	56	1.5
DP/CSG	0.427	302	53	96	LAMINAR	0	52	9.4
DP/RIS	1.325	94	17	90	LAMINAR	0	17	0.2
TOTAL VOLUME		508					TOTAL PRESSURE DROP	16.7

LAG: 22.6 MINUTES 2201 STROKES #1 AND 2070 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1376.7	HHP	759	IMPACT FORCE	1851
% SURFACE PRESSURE	47.4	HHP/sqin	6.44	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	73.1		
STRING	953.8		
BIT	1376.7		
ANNULUS	16.7		
TOTAL	2420.4	PUMP PRESSURE 2901.8	% DIFFERENCE 16.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.30	HYDROSTATIC PRESSURE	1745.2
CIRCULATING:	ECD	9.39	CIRCULATING PRESSURE	1762.0
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	33.5
	EFFECTIVE MUD WEIGHT	9.12	BOTTOM HOLE PRESSURE	1711.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 91 SPM 2 88 FLOW RATE 891

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	36	77	121	LAMINAR	1	77	6.4
HWDP/OH	0.398	36	53	116	LAMINAR	0	53	1.9
DP/OH	0.398	80	53	116	LAMINAR	0	53	4.3
DP/CSG	0.427	302	50	115	LAMINAR	0	49	13.8
DP/RIS	1.325	94	16	108	LAMINAR	0	16	0.4
TOTAL VOLUME		548			TOTAL PRESSURE DROP			26.8

LAG: 25.8 MINUTES 2340 STROKES #1 AND 2265 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1316.6	HHP	685	IMPACT FORCE	1770
% SURFACE PRESSURE	46.0	HHP/sqin	5.81	JET VELOCITY	117

PRESSURE BREAKDOWN:

SURFACE	75.6				
STRING	1030.0				
BIT	1316.6				
ANNULUS	26.8				
TOTAL	2449.0	PUMP PRESSURE	2863.9	% DIFFERENCE	14.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.00	HYDROSTATIC PRESSURE	2047.2
CIRCULATING:	ECD	10.13	CIRCULATING PRESSURE	2073.9
PULLING OUT:	TRIP MARGIN	0.26	ESTIMATED SWAB	53.5
	EFFECTIVE MUD WEIGHT	9.74	BOTTOM HOLE PRESSURE	1993.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1300.0

SPM 1 84 SPM 2 87 FLOW RATE 858

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	36	74	134	LAMINAR	0	74	7.9
HWDP/OH	0.398	36	51	123	LAMINAR	0	51	2.2
DP/OH	0.398	120	51	123	LAMINAR	0	51	7.2
DP/CSG	0.427	302	48	122	LAMINAR	0	48	15.4
DP/RIS	1.325	94	15	108	LAMINAR	0	15	0.3
TOTAL VOLUME		588			TOTAL PRESSURE DROP			33.1

LAG: 28.9 MINUTES 2432 STROKES #1 AND 2508 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1219.1	HHP	610	IMPACT FORCE	1639
% SURFACE PRESSURE	44.3	HHP/sqin	5.10	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	81.0				
STRING	1150.7				
BIT	1219.1				
ANNULUS	33.1				
TOTAL	2484.0	PUMP PRESSURE	2751.0	% DIFFERENCE	9.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.00	HYDROSTATIC PRESSURE	2217.8
CIRCULATING:	ECD	10.15	CIRCULATING PRESSURE	2250.9
PULLING OUT:	TRIP MARGIN	0.30	ESTIMATED SWAB	66.2
	EFFECTIVE MUD WEIGHT	9.70	BOTTOM HOLE PRESSURE	2151.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 85 SPM 2 85 FLOW RATE 853

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	74	134	LAMINAR	1	74	9.6
HWDP/OH	0.398	36	51	123	LAMINAR	0	51	2.2
DP/OH	0.398	148	51	123	LAMINAR	0	51	9.0
DP/CSG	0.427	302	48	122	LAMINAR	0	47	15.4
DP/RIS	1.325	94	15	108	LAMINAR	0	15	0.3
TOTAL VOLUME		624				TOTAL PRESSURE DROP		36.4

LAG: 30 8 MINUTES 2619 STROKES #1 AND 2627 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1192.5	HHP	593	IMPACT FORCE	1604
% SURFACE PRESSURE	41.7	HHP/sqin	5.03	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	79.5		
STRING	1258.2		
BIT	1192.5		
ANNULUS	36.4		
TOTAL	2566.7	PUMP PRESSURE 2860.0	% DIFFERENCE 10.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	2364.6
CIRCULATING:	ECD	10.05	CIRCULATING PRESSURE	2401.0
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	72.9
	EFFECTIVE MUD WEIGHT	9.59	BOTTOM HOLE PRESSURE	2291.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1500.0

SPM 1 87 SPM 2 82 FLOW RATE 842

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	73	115	LAMINAR	1	72	7.5
HWDP/OH	0.398	36	50	105	LAMINAR	0	50	1.7
DP/OH	0.398	188	50	105	LAMINAR	0	50	8.7
DP/CSG	0.427	302	47	104	LAMINAR	0	47	11.8
DP/RIS	1.325	94	15	91	LAMINAR	0	15	0.2
TOTAL VOLUME		664				TOTAL PRESSURE DROP		29.9

LAG: 33.1 MINUTES 2877 STROKES #1 AND 2703 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1174.1	HHP	577	IMPACT FORCE	1579
% SURFACE PRESSURE	43.4	HHP/sq.in	4.89	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	75.5
STRING	1238.7
BIT	1174.1
ANNULUS	29.9
TOTAL	2518.2

PUMP PRESSURE 2703.1 % DIFFERENCE 6.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.00	HYDROSTATIC PRESSURE	2559.0
CIRCULATING:	ECD	10.12	CIRCULATING PRESSURE	2588.9
PULLING OUT:	TRIP MARGIN	0.23	ESTIMATED SWAB	59.7
	EFFECTIVE MUD WEIGHT	9.77	BOTTOM HOLE PRESSURE	2499.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1600.0

SPM 1 87 SPM 2 79 FLOW RATE 830

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	72	115	LAMINAR	1	71	7.4
HWDP/OH	0.398	36	50	105	LAMINAR	0	49	1.7
DP/OH	0.398	228	50	105	LAMINAR	0	49	10.5
DP/CSG	0.427	302	46	104	LAMINAR	0	46	11.7
DP/RIS	1.325	94	15	91	LAMINAR	0	15	0.2
TOTAL VOLUME		704				TOTAL PRESSURE DROP		31.5

LAG: 35.6 MINUTES 3100 STROKES #1 AND 2815 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1140.6	HHP	552	IMPACT FORCE	1534
% SURFACE PRESSURE	42.7	HHP/sqin	4.68	JET VELOCITY	109

PRESSURE BREAKDOWN:

SURFACE	73.6
STRING	1249.2
BIT	1140.6
ANNULUS	31.5
TOTAL	2495.0

PUMP PRESSURE 2670.0 % DIFFERENCE 6.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	10.00	HYDROSTATIC PRESSURE	2729.7
CIRCULATING:	ECD	10.12	CIRCULATING PRESSURE	2761.2
PULLING OUT:	TRIP MARGIN	0.23	ESTIMATED SWAB	63.0
	EFFECTIVE MUD WEIGHT	9.77	BOTTOM HOLE PRESSURE	2666.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1700.0

SPM 1 88 SPM 2 83 FLOW RATE 850

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	74	120	LAMINAR	1	73	8.0
HWDP/OH	0.398	36	51	108	LAMINAR	0	51	1.7
DP/OH	0.398	268	51	108	LAMINAR	0	51	12.8
DP/CSG	0.427	302	47	107	LAMINAR	0	47	12.1
DP/RIS	1.325	94	15	92	LAMINAR	0	15	0.2
TOTAL VOLUME		744			TOTAL PRESSURE DROP			34.8

LAG: 36.7 MINUTES 3218 STROKES #1 AND 3031 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1161.7	HHP	576	IMPACT FORCE	1562
% SURFACE PRESSURE	40.0	HHP/sqin	4.89	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	77.8				
STRING	1368.1				
BIT	1161.7				
ANNULUS	34.8				
TOTAL	2642.3	PUMP PRESSURE	2902.6	% DIFFERENCE	9.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.70	HYDROSTATIC PRESSURE	2813.2
CIRCULATING:	ECD	9.82	CIRCULATING PRESSURE	2848.0
PULLING OUT:	TRIP MARGIN	0.24	ESTIMATED SWAB	69.5
	EFFECTIVE MUD WEIGHT	9.46	BOTTOM HOLE PRESSURE	2743.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1800.0

SPM 1 87 SPM 2 84 FLOW RATE 853

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	74	107	LAMINAR	1	73	6.7
HWDP/OH	0.398	36	51	95	LAMINAR	0	51	1.4
DP/OH	0.398	308	51	95	LAMINAR	0	51	12.2
DP/CSG	0.427	302	48	94	LAMINAR	0	47	10.0
DP/RIS	1.325	94	15	80	LAMINAR	0	15	0.2
TOTAL VOLUME		784					TOTAL PRESSURE DROP	30.5

LAG: 38.6 MINUTES 3345 STROKES #1 AND 3239 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1182.9	HHP	589	IMPACT FORCE	1591
% SURFACE PRESSURE	40.4	HHP/sqin	5.00	JET VELOCITY	112

PRESSURE BREAKDOWN:

SURFACE	77.7
STRING	1409.9
BIT	1182.9
ANNULUS	30.5
TOTAL	2701.0

PUMP PRESSURE 2929.8 % DIFFERENCE 7.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3009.4
CIRCULATING:	ECD	9.90	CIRCULATING PRESSURE	3039.9
PULLING OUT:	TRIP MARGIN	0.20	ESTIMATED SWAB	61.0
	EFFECTIVE MUD WEIGHT	9.60	BOTTOM HOLE PRESSURE	2948.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1899.9

SPM 1 87 SPM 2 83 FLOW RATE 847

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	74	115	LAMINAR	1	73	7.6
HWDP/OH	0.398	36	51	100	LAMINAR	0	50	1.6
DP/OH	0.398	347	51	100	LAMINAR	0	50	15.1
DP/CSG	0.427	302	47	99	LAMINAR	0	47	10.9
DP/RIS	1.325	94	15	82	LAMINAR	0	15	0.2
TOTAL VOLUME		823				TOTAL PRESSURE DROP		35.3

LAG: 40.8 MINUTES 3534 STROKES #1 AND 3385 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1165.8	HHP	976	IMPACT FORCE	1568
% SURFACE PRESSURE	39.5	HHP/sqin	4.89	JET VELOCITY	111

PRESSURE BREAKDOWN:

SURFACE	80.4
STRING	1506.6
BIT	1165.8
ANNULUS	35.3
TOTAL	2788.1

PUMP PRESSURE 2953.0 % DIFFERENCE 5.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3176.5
CIRCULATING:	ECD	9.91	CIRCULATING PRESSURE	3211.8
PULLING OUT:	TRIP MARGIN	0.22	ESTIMATED SWAB	70.6
	EFFECTIVE MUD WEIGHT	9.58	BOTTOM HOLE PRESSURE	3105.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 2000.0

SPM 1 85 SPM 2 83 FLOW RATE 840

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	73	115	LAMINAR	1	72	7.7
HWDP/OH	0.398	36	50	101	LAMINAR	0	50	1.6
DP/OH	0.398	386	50	101	LAMINAR	0	50	16.9
DP/CSG	0.427	302	47	100	LAMINAR	0	47	11.0
DP/RIS	1.325	94	15	84	LAMINAR	0	15	0.2
TOTAL VOLUME		863			TOTAL PRESSURE DROP			37.4

LAG: 43.1 MINUTES 3660 STROKES #1 AND 3590 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1146.7	HHP	562	IMPACT FORCE	1542
% SURFACE PRESSURE	39.1	HHP/sqin	4.77	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	78.1				
STRING	1517.6				
BIT	1146.7				
ANNULUS	37.4				
TOTAL	2779.7	PUMP PRESSURE	2936.4	% DIFFERENCE	5.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3343.8
CIRCULATING:	ECD	9.91	CIRCULATING PRESSURE	3381.2
PULLING OUT:	TRIP MARGIN	0.22	ESTIMATED SWAB	74.8
	EFFECTIVE MUD WEIGHT	9.58	BOTTOM HOLE PRESSURE	3269.0

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2100.0

SPM 1 82 SPM 2 83 FLOW RATE 821

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	71	115	LAMINAR	1	71	7.6
HWDP/OH	0.398	36	49	101	LAMINAR	0	49	1.6
DP/OH	0.398	426	49	101	LAMINAR	0	49	18.4
DP/CSG	0.427	302	46	100	LAMINAR	0	46	10.9
DP/RIS	1.325	94	15	84	LAMINAR	0	15	0.2
TOTAL VOLUME		903			TOTAL PRESSURE DROP			38.7

LAG: 46.2 MINUTES 3764 STROKES #1 AND 3821 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1095.5	HHP	525	IMPACT FORCE	1473
% SURFACE PRESSURE	37.9	HHP/sqin	4.45	JET VELOCITY	107

PRESSURE BREAKDOWN:

SURFACE	74.9				
STRING	1499.7				
BIT	1095.5				
ANNULUS	38.7				
TOTAL	2708.8	PUMP PRESSURE	2894.1	% DIFFERENCE	6.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3511.0
CIRCULATING:	ECD	9.91	CIRCULATING PRESSURE	3549.6
PULLING OUT:	TRIP MARGIN	0.22	ESTIMATED SWAB	77.3
	EFFECTIVE MUD WEIGHT	9.58	BOTTOM HOLE PRESSURE	3433.6

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2200.0

SPM 1 82 SPM 2 81 FLOW RATE 814

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	71	122	LAMINAR	1	70	8.4
HWDP/OH	0.398	36	49	108	LAMINAR	0	48	1.7
DP/OH	0.398	466	49	108	LAMINAR	0	48	22.4
DP/CSG	0.427	301	45	107	LAMINAR	0	45	12.1
DP/RIS	1.325	98	15	90	LAMINAR	0	15	0.2
TOTAL VOLUME		945			TOTAL PRESSURE DROP			44.9

LAG: 48.8 MINUTES 3989 STROKES #1 AND 3953 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1085.9	HHP	515	IMPACT FORCE	1460
% SURFACE PRESSURE	36.2	HHP/sqin	4.37	JET VELOCITY	106

PRESSURE BREAKDOWN:

SURFACE	75.4				
STRING	1551.9				
BIT	1085.9				
ANNULUS	44.9				
TOTAL	2758.0	PUMP PRESSURE	3001.2	% DIFFERENCE	8.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	3715.7
CIRCULATING:	ECD	10.02	CIRCULATING PRESSURE	3760.6
PULLING OUT:	TRIP MARGIN	0.24	ESTIMATED SWAB	89.7
	EFFECTIVE MUD WEIGHT	9.66	BOTTOM HOLE PRESSURE	3626.0

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2300.0

SPM 1 83 SPM 2 77 FLOW RATE 801

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	70	119	LAMINAR	1	69	7.9
HWDP/OH	0.398	36	48	106	LAMINAR	0	48	1.6
DP/OH	0.398	505	48	106	LAMINAR	0	48	23.0
DP/CSG	0.427	301	45	105	LAMINAR	0	44	11.5
DP/RIS	1.325	98	14	89	LAMINAR	0	14	0.2
TOTAL VOLUME		985			TOTAL PRESSURE DROP			44.3

LAG: 51.6 MINUTES 4308 STROKES #1 AND 3968 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1042.9	HHP	488	IMPACT FORCE	1402
% SURFACE PRESSURE	35.2	HHP/sqin	4.14	JET VELOCITY	105

PRESSURE BREAKDOWN:

SURFACE	71.7		
STRING	1519.2		
BIT	1042.9		
ANNULUS	44.3		
TOTAL	2678.1	PUMP PRESSURE 2964.9	% DIFFERENCE 9.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	3845.4
CIRCULATING:	ECD	9.91	CIRCULATING PRESSURE	3889.7
PULLING OUT:	TRIP MARGIN	0.23	ESTIMATED SWAB	88.6
	EFFECTIVE MUD WEIGHT	9.57	BOTTOM HOLE PRESSURE	3756.8

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2400.0

SPM 1 82 SPM 2 72 FLOW RATE 770

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	67	131	LAMINAR	0	66	9.0
HWDP/OH	0.398	36	46	117	LAMINAR	0	46	1.9
DP/OH	0.398	545	46	117	LAMINAR	0	46	28.7
DP/CSG	0.427	301	43	116	LAMINAR	0	43	13.3
DP/RIS	1.325	98	14	99	LAMINAR	0	14	0.3
TOTAL VOLUME		1025			TOTAL PRESSURE DROP			53.1

LAG: 55.9 MINUTES 4574 STROKES #1 AND 4037 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	962.2	HHP	432	IMPACT FORCE	1294
% SURFACE PRESSURE	33.6	HHP/sqin	3.67	JET VELOCITY	101

PRESSURE BREAKDOWN:

SURFACE	67.7		
STRING	1473.1		
BIT	962.2		
ANNULUS	53.1		
TOTAL	2556.1	PUMP PRESSURE 2861.2	% DIFFERENCE 10.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	4012.6
CIRCULATING:	ECD	9.93	CIRCULATING PRESSURE	4065.7
PULLING OUT:	TRIP MARGIN	0.26	ESTIMATED SWAB	106.2
	EFFECTIVE MUD WEIGHT	9.54	BOTTOM HOLE PRESSURE	3906.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2500.0

SPM 1 80 SPM 2 68 FLOW RATE 740

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	64	130	LAMINAR	0	64	8.8
HWDP/OH	0.398	36	44	116	LAMINAR	0	44	1.9
DP/OH	0.398	585	44	116	LAMINAR	0	44	30.2
DP/CSG	0.427	301	41	115	LAMINAR	0	41	13.0
DP/RIS	1.325	98	13	99	LAMINAR	0	13	0.3
TOTAL VOLUME		1065				TOTAL PRESSURE DROP		54.2

LAG: 60.4 MINUTES 4845 STROKES #1 AND 4102 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1213.9	HHP	524	IMPACT FORCE	1404
% SURFACE PRESSURE	41.6	HHP/sqin	4.45	JET VELOCITY	113

PRESSURE BREAKDOWN:

SURFACE	63.5				
STRING	1417.8				
BIT	1213.9				
ANNULUS	54.2				
TOTAL	2749.4	PUMP PRESSURE	2918.9	% DIFFERENCE	5.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	4222.4
CIRCULATING:	ECD	10.03	CIRCULATING PRESSURE	4276.6
PULLING OUT:	TRIP MARGIN	0.25	ESTIMATED SWAB	108.3
	EFFECTIVE MUD WEIGHT	9.65	BOTTOM HOLE PRESSURE	4114.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2600.0 AND TVD 2600.0

SPM 1 73 SPM 2 73 FLOW RATE 726

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	45	63	122	LAMINAR	0	63	8.0
HWDP/OH	0.398	36	43	103	LAMINAR	0	43	1.5
DP/OH	0.398	625	43	103	LAMINAR	0	43	26.6
DP/CSG	0.427	301	40	102	LAMINAR	0	40	10.6
DP/RIS	1.325	98	13	80	LAMINAR	0	13	0.2
TOTAL VOLUME		1105			TOTAL PRESSURE DROP			46.9

LAG: 63.9 MINUTES 4636 STROKES #1 AND 4646 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1168.3	HHP	495	IMPACT FORCE	1351
% SURFACE PRESSURE	40.9	HHP/sqin	4.20	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	65.9				
STRING	1509.0				
BIT	1168.3				
ANNULUS	46.9				
TOTAL	2790.1	PUMP PRESSURE	2857.5	% DIFFERENCE	2.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	4391.3
CIRCULATING:	ECD	10.01	CIRCULATING PRESSURE	4438.2
PULLING OUT:	TRIP MARGIN	0.21	ESTIMATED SWAB	93.9
	EFFECTIVE MUD WEIGHT	9.69	BOTTOM HOLE PRESSURE	4297.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2700.0 AND TVD 2700.0

SPM 1 72 SPM 2 72 FLOW RATE 716

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	62	122	LAMINAR	0	62	7.7
HWDP/OH	0.398	35	43	108	LAMINAR	0	43	1.6
DP/OH	0.398	666	43	108	LAMINAR	0	43	30.1
DP/CSG	0.427	301	40	107	LAMINAR	0	40	11.4
DP/RIS	1.325	98	13	90	LAMINAR	0	13	0.2

TOTAL VOLUME 1145 TOTAL PRESSURE DROP 51.0

LAG: 67.2 MINUTES 4803 STROKES #1 AND 4816 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1136.0	HHP	474	IMPACT FORCE	1314
% SURFACE PRESSURE	39.5	HHP/sqin	4.02	JET VELOCITY	109

PRESSURE BREAKDOWN:

SURFACE	59.8				
STRING	1396.9				
BIT	1136.0				
ANNULUS	51.0				
TOTAL	2643.7	PUMP PRESSURE	2876.5	% DIFFERENCE	8.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	4560.2
CIRCULATING:	ECD	10.01	CIRCULATING PRESSURE	4611.2
PULLING OUT:	TRIP MARGIN	0.22	ESTIMATED SWAB	102.0
	EFFECTIVE MUD WEIGHT	9.68	BOTTOM HOLE PRESSURE	4458.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2800.0 AND TVD 2800.0

SPM 1 72 SPM 2 72 FLOW RATE 723

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	63	142	LAMINAR	0	62	9.9
HWDP/OH	0.398	35	43	131	LAMINAR	0	43	2.2
DP/OH	0.398	706	43	131	LAMINAR	0	43	44.2
DP/CSG	0.427	301	40	130	LAMINAR	0	40	15.9
DP/RIS	1.325	98	13	117	LAMINAR	0	13	0.4
TOTAL VOLUME		1185			TOTAL PRESSURE DROP			72.6

LAG: 68.8 MINUTES 4974 STROKES #1 AND 4980 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1159.2	HHP	489	IMPACT FORCE	1341
% SURFACE PRESSURE	40.5	HHP/sqin	3.15	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	59.1
STRING	1413.4
BIT	1159.2
ANNULUS	72.6
TOTAL	2704.3

PUMP PRESSURE 2864.8 % DIFFERENCE 5.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	4729.1
CIRCULATING:	ECD	10.05	CIRCULATING PRESSURE	4801.7
PULLING OUT:	TRIP MARGIN	0.30	ESTIMATED SWAB	145.2
	EFFECTIVE MUD WEIGHT	9.60	BOTTOM HOLE PRESSURE	4583.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2900.0 AND TVD 2900.0

SPM 1 73 SPM 2 72 FLOW RATE 726

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	63	99	LAMINAR	1	62	5.5
HWDP/OH	0.398	35	43	88	LAMINAR	0	43	1.1
DP/OH	0.398	746	43	88	LAMINAR	0	43	24.2
DP/CSG	0.427	301	40	87	LAMINAR	0	40	8.2
DP/RIS	1.325	98	13	75	LAMINAR	0	13	0.2
TOTAL VOLUME		1224				TOTAL PRESSURE DROP		39.2

LAG: 70.9 MINUTES 5156 STROKES #1 AND 5133 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1167.4	HHP	494	IMPACT FORCE	1350
% SURFACE PRESSURE	40.8	HHP/sqin	4.19	JET VELOCITY	110

PRESSURE BREAKDOWN:

SURFACE	56.1
STRING	1375.2
BIT	1167.4
ANNULUS	39.2
TOTAL	2637.9

PUMP PRESSURE 2860.0 % DIFFERENCE 7.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.90	HYDROSTATIC PRESSURE	4898.0
CIRCULATING:	ECD	9.98	CIRCULATING PRESSURE	4937.2
PULLING OUT:	TRIP MARGIN	0.16	ESTIMATED SWAB	78.4
	EFFECTIVE MUD WEIGHT	9.74	BOTTOM HOLE PRESSURE	4819.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 3000.0 AND TVD 3000.0

SPM 1 72 SPM 2 71 FLOW RATE 713

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	44	62	123	LAMINAR	0	61	7.7
HWDP/OH	0.398	35	43	109	LAMINAR	0	42	1.6
DP/OH	0.398	786	43	109	LAMINAR	0	42	35.4
DP/CSG	0.427	301	40	108	LAMINAR	0	40	11.3
DP/RIS	1.325	98	13	91	LAMINAR	0	13	0.2
TOTAL VOLUME		1264			TOTAL PRESSURE DROP			56.3

LAG: 74.5 MINUTES 5369 STROKES #1 AND 5255 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1116.1	HHP	464	IMPACT FORCE	1291
% SURFACE PRESSURE	39.7	HHP/sqin	3.94	JET VELOCITY	108

PRESSURE BREAKDOWN:

SURFACE	59.0
STRING	1478.1
BIT	1116.1
ANNULUS	56.3
TOTAL	2709.5

PUMP PRESSURE 2807.9 % DIFFERENCE 3.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	5015.7
CIRCULATING:	ECD	9.91	CIRCULATING PRESSURE	5072.0
PULLING OUT:	TRIP MARGIN	0.22	ESTIMATED SWAB	112.6
	EFFECTIVE MUD WEIGHT	9.58	BOTTOM HOLE PRESSURE	4903.1

(c). COMPUTER DATA LISTING : LIST A

INTERVAL	All depth records (data not averaged)
DEPTH.	Well depth, in metres
ROP.	Rate of penetration, in metres/hour
WOB.	Weight-on-bit, in thousands of pounds
RPM.	Rotary speed, in revolutions per minute
MW	Mud weight in, in pounds per gallon
'dc'	Calculated 'd' exponent, corrected for variations in mud weight in, using a correction factor of 10 ppg.
HOURS.	Cumulative bit hours. The number of hours that the bit has actually been on bottom, recorded in decimal hours.
TURNS.	Cumulative bit turns. The number of turns made by the bit, while actually on bottom
ICOST.	Incremental cost per metre, calculated from the rate of penetration, in Australian dollars.
CCOST.	Cumulative cost per metre, calculated from the drilling time, in A dollars.
PP	Pore pressure gradient, in equivalent pounds per gallon. The pressure exerted by the fluid in the pore spaces of the formation.
FG	Fracture gradient, in equivalent pounds per gallon. The pressure required to fracture the formation, calculated by the DRILL program using Eaton's equation. It is dependent on the pore pressure, the overburden gradient and the matrix stress. this value may be modified by leak-off information.

BIT NUMBER	1	IADC CODE	111	INTERVAL	74.0- 211.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.1	BIT RUN	137.0
TOTAL HOURS	6.03	TOTAL TURNS	17485	CONDITION	T2 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
80.0	12.4	2.0	73	8.6	0.78	0.48	2112	442	2358	8.4	11.6
90.0	7.3	2.0	63	8.6	0.84	1.85	7256	746	1351	8.4	11.6
100.0	14.1	2.0	52	8.6	0.70	2.55	9478	387.05	980.14	8.4	11.6
110.0	17.1	2.0	37	8.6	0.61	3.14	10766	319.55	796.64	8.4	11.7
120.0	34.2	2.0	63	8.6	0.59	3.43	11874	160.01	658.24	8.4	11.7
130.0	26.7	2.0	38	8.6	0.54	3.81	12726	205.33	577.37	8.4	11.8
140.0	35.2	2.0	28	8.6	0.45	4.09	13206	155.41	513.43	8.4	11.8
150.0	47.1	2.1	36	8.6	0.44	4.30	13669	116.29	461.18	8.4	11.9
160.0	42.4	2.0	30	8.6	0.43	4.54	14095	129.24	422.58	8.4	11.9
170.0	34.2	2.0	33	8.6	0.48	4.83	14682	159.99	395.23	8.4	11.9
180.0	39.3	2.0	36	8.6	0.47	5.08	15237	139.37	371.09	8.4	12.0
190.0	44.0	2.0	49	8.6	0.50	5.31	15910	124.54	349.84	8.4	12.0
200.0	35.4	2.0	44	8.6	0.52	5.59	16649	154.84	334.36	8.4	12.0
210.0	28.2	2.0	35	8.6	0.52	5.95	17383	193.83	324.03	8.4	12.1
211.0	40.4	2.0	37	8.6	0.47	5.97	17438	135.52	322.65	8.4	12.1

BIT NUMBER	2	IADC CODE	111	INTERVAL	211.0- 800.0
OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	2.4	BIT RUN	589.0
TOTAL HOURS	19.13	TOTAL TURNS	155173	CONDITION	T2 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
215.0	364.6	3.0	129	8.6	0.35	0.01	85	15	4411	8.4	12.1
220.0	283.9	3.0	142	8.6	0.42	0.03	235	19	1971	8.4	12.1
225.0	500.0	3.0	142	8.6	0.31	0.04	321	11	1271	8.4	12.1
230.0	235.1	3.0	142	8.6	0.45	0.06	502	23.29	942.61	8.4	12.2
235.0	301.7	3.0	141	8.6	0.40	0.08	642	18.15	750.02	8.4	12.2
240.0	240.0	3.0	138	8.6	0.44	0.10	815	22.81	624.64	8.4	12.2
245.0	236.3	3.0	128	8.6	0.43	0.12	977	23.17	536.19	8.4	12.2
250.0	201.1	3.0	142	8.6	0.48	0.14	1189	27.22	470.93	8.4	12.2
255.0	188.5	3.0	127	8.6	0.47	0.17	1392	29.05	420.72	8.4	12.3
260.0	148.8	3.0	128	8.6	0.52	0.20	1650	36.80	381.54	8.4	12.3
265.0	67.5	3.0	146	8.6	0.69	0.28	2300	81.06	353.72	8.4	12.3
270.0	49.9	3.0	143	8.6	0.74	0.38	3162	109.80	333.05	8.4	12.3
275.0	69.8	5.4	139	8.6	0.75	0.45	3759	78.48	313.16	8.4	12.3
280.0	115.0	9.0	126	8.6	0.69	0.49	4088	47.60	293.92	8.4	12.4
285.0	73.8	9.0	138	8.6	0.81	0.56	4651	74.22	279.07	8.4	12.4
290.0	115.4	9.5	135	8.6	0.71	0.60	5003	47.45	264.41	8.4	12.4
295.0	72.9	11.4	150	8.6	0.87	0.67	5619	75.13	253.15	8.4	12.4
300.0	90.0	12.0	148	8.6	0.82	0.73	6112	60.83	242.34	8.4	12.4
305.0	62.3	13.7	148	8.6	0.94	0.81	6825	87.90	234.13	8.4	12.4
310.0	79.3	14.0	148	8.6	0.88	0.87	7385	69.05	225.79	8.4	12.5
315.0	68.6	14.0	148	8.7	0.91	0.94	8033	79.87	218.78	8.4	12.5
320.0	90.0	14.0	148	8.7	0.84	1.00	8526	60.83	211.53	8.4	12.5
325.0	78.9	14.0	148	8.7	0.87	1.06	9088	69.35	205.29	8.4	12.5
330.0	52.8	14.0	139	8.7	0.96	1.16	9879	103.72	201.03	8.4	12.5
335.0	47.7	14.0	138	8.7	0.98	1.26	10746	114.67	197.54	8.4	12.6
340.0	47.6	14.0	148	8.7	1.00	1.37	11678	114.98	194.34	8.4	12.6
345.0	41.0	14.0	148	8.9	1.02	1.49	12761	133.53	192.07	8.4	12.6
350.0	28.1	14.0	148	8.9	1.10	1.67	14342	194.97	192.18	8.4	12.6
355.0	69.2	14.0	148	8.9	0.89	1.74	14984	79.08	188.25	8.4	12.6
360.0	72.0	14.0	148	8.9	0.88	1.81	15600	76.04	184.49	8.4	12.6
365.0	69.5	19.5	137	8.9	0.93	1.88	16192	78.78	181.05	8.4	12.7
370.0	63.2	28.0	120	8.9	1.01	1.96	16762	86.69	178.09	8.4	12.7
375.0	62.5	28.0	120	8.9	1.01	2.04	17338	87.60	175.33	8.4	12.7
380.0	54.4	29.2	120	8.9	1.06	2.13	18000	100.68	173.12	8.4	12.7
385.0	43.5	29.1	120	8.9	1.13	2.25	18828	125.93	171.76	8.4	12.7
390.0	40.5	28.5	120	8.9	1.14	2.37	19716	135.05	170.74	8.4	12.7
395.0	58.4	27.8	122	9.0	1.03	2.46	20344	93.68	168.64	8.4	12.8
400.0	62.1	26.5	132	9.0	1.01	2.54	20982	88.21	166.52	8.4	12.8
405.0	60.8	25.5	132	9.0	1.01	2.62	21633	90.03	164.55	8.4	12.8
410.0	46.6	24.6	132	9.0	1.07	2.73	22483	117.41	163.36	8.4	12.8
415.0	66.2	28.4	132	9.0	1.02	2.80	23081	82.73	161.38	8.4	12.8
420.0	51.1	29.0	132	9.0	1.09	2.90	23855	107.07	160.09	8.4	12.8
425.0	48.5	26.2	132	9.0	1.08	3.00	24672	112.85	158.98	8.4	12.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
430.0	69.5	26.3	132	9.0	0.98	3.07	25241	78.78	157.15	8.4	12.9
435.0	38.8	20.9	136	9.0	1.09	3.20	26292	141.02	156.79	8.4	12.9
440.0	61.0	19.7	136	9.0	0.96	3.29	26959	89.73	155.33	8.4	12.9
445.0	44.9	19.9	150	8.9	1.07	3.40	27961	121.85	154.61	8.4	12.9
450.0	35.1	20.0	150	9.0	1.13	3.54	29244	156.17	154.64	8.4	12.9
455.0	36.7	20.0	150	9.0	1.12	3.68	30472	149.35	154.53	8.4	13.0
460.0	35.7	24.4	150	9.0	1.18	3.82	31732	153.30	154.51	8.4	13.0
465.0	55.7	23.0	150	9.0	1.04	3.91	32539	98.25	153.40	8.4	13.0
470.0	38.5	27.8	150	9.0	1.20	4.04	33707	142.05	153.18	8.4	13.0
475.0	34.4	20.7	150	9.0	1.14	4.18	35017	159.38	153.30	8.4	13.0
480.0	52.2	20.3	150	9.0	1.03	4.28	35879	104.94	152.40	8.4	13.0
485.0	41.9	25.4	150	9.0	1.15	4.40	36954	130.79	152.01	8.4	13.1
490.0	24.6	26.1	150	9.0	1.30	4.60	38787	222.95	153.28	8.4	13.1
495.0	27.1	29.5	150	9.0	1.31	4.78	40444	201.66	154.13	8.4	13.1
500.0	31.8	24.2	150	9.0	1.21	4.94	41859	172.16	154.44	8.4	13.1
505.0	33.5	24.5	156	9.0	1.21	5.09	43255	163.64	154.60	8.4	13.1
510.0	45.0	21.1	153	9.0	1.08	5.20	44276	121.67	154.05	8.4	13.1
515.0	32.4	23.1	128	9.0	1.15	5.36	45458	169.12	154.30	8.4	13.2
520.0	24.5	26.0	130	9.0	1.26	5.56	47056	223.56	155.42	8.4	13.2
525.0	30.8	23.6	130	9.0	1.17	5.72	48318	177.63	155.77	8.4	13.2
530.0	25.4	25.2	128	9.0	1.24	5.92	49830	215.35	156.70	8.4	13.2
535.0	19.3	23.8	130	9.0	1.30	6.18	51854	283.48	158.66	8.4	13.2
540.0	24.1	23.6	132	9.0	1.24	6.39	53494	227.21	159.70	8.4	13.2
545.0	22.0	25.2	132	9.0	1.29	6.61	55293	249.42	161.05	8.4	13.3
550.0	19.7	24.9	133	9.1	1.30	6.87	57316	277.70	162.77	8.4	13.3
555.0	24.8	27.1	130	9.2	1.24	7.07	58885	220.83	163.61	8.4	13.3
560.0	24.9	25.5	127	9.2	1.22	7.27	60414	219.61	164.41	8.4	13.3
565.0	24.6	24.6	130	9.2	1.22	7.47	61995	222.65	165.24	8.4	13.3
570.0	24.7	25.0	125	9.2	1.21	7.67	63515	221.74	166.02	8.4	13.3
575.0	18.8	24.5	132	9.3	1.27	7.94	65621	290.78	167.74	8.4	13.3
580.0	21.9	24.8	132	9.4	1.23	8.17	67432	250.33	168.85	8.4	13.4
585.0	28.1	24.7	131	9.4	1.16	8.35	68827	194.67	169.20	8.4	13.4
590.0	21.1	23.2	130	9.4	1.21	8.58	70668	259.45	170.39	8.4	13.4
595.0	22.3	23.0	130	9.4	1.20	8.81	72417	245.46	171.37	8.4	13.4
600.0	22.2	21.5	130	9.4	1.18	9.03	74179	246.38	172.33	8.4	13.4
605.0	19.6	22.1	136	9.4	1.23	9.29	76261	279.22	173.69	8.4	13.4
610.0	19.7	21.4	132	9.3	1.22	9.54	78277	277.70	174.99	8.4	13.4
615.0	18.6	21.0	130	9.3	1.23	9.81	80371	293.83	176.46	8.4	13.5
620.0	20.9	19.6	137	9.3	1.19	10.05	82334	261.89	177.51	8.4	13.5
625.0	25.8	20.2	133	9.3	1.14	10.24	83878	212.31	177.93	8.4	13.5
630.0	23.7	21.2	133	9.3	1.18	10.45	85571	231.47	178.57	8.4	13.5
635.0	16.0	21.7	134	9.3	1.29	10.77	88095	343.10	180.51	8.4	13.5
640.0	18.3	20.5	136	9.3	1.24	11.04	90322	298.69	181.88	8.4	13.5
645.0	20.1	19.4	132	9.3	1.19	11.29	92294	272.23	182.93	8.4	13.6
650.0	18.8	18.3	137	9.3	1.20	11.55	94472	290.48	184.15	8.4	13.6
655.0	18.1	22.6	135	9.3	1.27	11.83	96703	301.73	185.47	8.4	13.6
660.0	16.8	23.8	130	9.3	1.30	12.13	99036	326.68	187.05	8.4	13.6
665.0	19.5	23.3	132	9.3	1.25	12.39	101064	281.35	188.09	8.4	13.6
670.0	16.0	22.8	130	9.3	1.29	12.70	103503	342.49	189.77	8.4	13.6
675.0	20.4	28.7	141	9.3	1.33	12.94	105582	268.28	190.61	8.4	13.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
680.0	18.4	31.7	143	9.3	1.39	13.21	107912	297.47	191.75	8.4	13.7
685.0	22.9	31.0	146	9.3	1.33	13.43	109820	238.77	192.25	8.4	13.7
690.0	14.8	29.9	154	9.3	1.45	13.77	112933	368.95	194.09	8.4	13.7
695.0	16.7	29.1	159	9.3	1.42	14.07	115784	327.28	195.47	8.4	13.7
700.0	14.7	28.8	177	9.3	1.47	14.41	119395	372.60	197.28	8.4	13.7
705.0	17.5	28.4	158	9.5	1.36	14.69	122089	312.08	198.44	8.4	13.7
710.0	21.5	31.0	110	9.5	1.24	14.93	123627	255.20	199.01	8.4	13.7
715.0	21.1	31.4	110	9.5	1.25	15.16	125191	259.45	199.61	8.4	13.8
720.0	20.7	30.7	110	9.5	1.25	15.41	126788	264.93	200.25	8.4	13.8
725.0	19.3	33.0	110	9.5	1.29	15.66	128495	283.18	201.06	8.4	13.8
730.0	19.2	28.5	110	9.5	1.24	15.92	130211	284.70	201.86	8.4	13.8
735.0	22.9	32.0	110	9.4	1.24	16.14	131654	239.38	202.22	8.4	13.8
740.0	19.4	30.8	110	9.4	1.28	16.40	133353	281.96	202.98	8.4	13.8
745.0	16.7	32.5	114	9.4	1.35	16.70	135408	327.59	204.14	8.4	13.8
750.0	23.1	30.0	120	9.4	1.25	16.92	136968	237.25	204.45	8.4	13.8
755.0	24.2	28.8	120	9.4	1.22	17.12	138456	226.30	204.65	8.4	13.9
760.0	23.6	30.4	142	9.4	1.29	17.33	140257	231.77	204.90	8.4	13.9
765.0	24.9	30.2	133	9.3	1.27	17.54	141857	219.91	205.03	8.4	13.9
770.0	23.2	34.1	138	9.3	1.34	17.75	143644	235.73	205.31	8.4	13.9
775.0	22.7	32.3	132	9.3	1.32	17.97	145392	241.20	205.63	8.4	13.9
780.0	22.1	29.9	139	9.3	1.31	18.20	147286	248.20	206.00	8.4	13.9
785.0	23.8	30.1	132	9.3	1.28	18.41	148954	229.95	206.21	8.4	13.9
790.0	20.9	29.5	142	9.3	1.33	18.65	151004	262.50	206.69	8.4	14.0
795.0	21.2	30.4	141	9.3	1.33	18.88	153005	258.24	207.14	8.4	14.0
800.0	20.3	32.4	147	9.3	1.38	19.13	155173	269.19	207.66	8.4	14.0

BIT NUMBER	3		IADC CODE	114		INTERVAL	800.0- 1339.0					
HTC X3A			SIZE	12.250		NOZZLES	18 18 18					
COST	2201.00		TRIP TIME	4.2		BIT RUN	539.0					
TOTAL HOURS	19.23		TOTAL TURNS	177615		CONDITION	T7 B4 G0.125					

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
801.0	24.5	30.0	140	9.0	1.46	0.04	343	224	25420	8.4	14.0
802.0	21.2	30.0	140	9.0	1.51	0.09	740	259	12839	8.4	14.0
803.0	17.7	30.0	140	9.0	1.57	0.14	1213	309	8662	8.4	14.0
804.0	24.0	30.0	140	9.0	1.47	0.19	1563	228	6554	8.4	14.0
805.0	29.0	30.0	140	9.0	1.41	0.22	1853	189	5281	8.4	14.0
806.0	21.6	30.0	140	9.0	1.50	0.27	2242	253	4443	8.4	14.0
807.0	34.3	35.0	147	9.0	1.44	0.30	2498	160	3831	8.4	14.0
808.0	29.0	25.9	120	9.0	1.31	0.33	2746	189	3376	8.4	14.0
809.0	28.3	27.2	120	9.0	1.33	0.37	3000	193	3022	8.4	14.0
810.0	26.7	27.0	120	9.0	1.35	0.40	3270	205	2740	8.4	14.0
811.0	18.9	20.3	140	9.0	1.39	0.46	3714	289	2518	8.4	14.0
812.0	27.7	25.3	140	9.0	1.36	0.49	4017	198	2324	8.4	14.0
813.0	30.0	28.2	140	9.0	1.38	0.53	4297	183	2159	8.4	14.0
814.0	29.5	28.6	140	9.0	1.39	0.56	4582	186	2018	8.4	14.0
815.0	16.6	27.7	140	9.0	1.55	0.62	5088	330	1906	8.4	14.0
816.0	30.9	25.1	140	9.0	1.32	0.65	5360	177	1798	8.4	14.0
817.0	31.9	26.0	140	9.0	1.33	0.68	5624	172	1702	8.4	14.0
818.0	31.3	29.2	140	9.0	1.38	0.72	5892	175	1617	8.4	14.0
819.0	31.3	30.1	140	9.0	1.39	0.75	6161	175	1541	8.4	14.0
820.0	22.4	27.4	140	9.0	1.46	0.79	6536	245	1477	8.4	14.0
821.0	29.3	29.4	140	9.0	1.40	0.83	6823	187	1415	8.4	14.0
822.0	32.1	30.1	140	9.0	1.38	0.86	7085	170	1359	8.4	14.0
823.0	39.6	30.8	140	9.0	1.32	0.88	7297	138	1306	8.4	14.0
824.0	33.3	33.5	140	9.0	1.41	0.91	7549	164	1258	8.4	14.0
825.0	25.5	31.2	120	9.0	1.42	0.95	7831	215	1216	8.4	14.0
826.0	34.6	29.5	120	9.0	1.30	0.98	8039	158	1176	8.4	14.1
827.0	34.3	31.1	120	9.0	1.32	1.01	8249	160	1138	8.4	14.1
828.0	38.7	32.7	120	9.0	1.30	1.04	8435	141	1102	8.4	14.1
829.0	40.4	32.7	120	9.0	1.29	1.06	8613	135	1069	8.4	14.1
830.0	40.0	32.4	120	9.0	1.29	1.09	8793	137	1038	8.4	14.1
831.0	44.4	33.1	120	9.0	1.26	1.11	8955	123	1008	8.4	14.1
832.0	40.9	33.7	120	9.0	1.30	1.13	9131	133.83	981.11	8.4	14.1
833.0	43.9	32.9	120	9.0	1.27	1.16	9295	124.71	955.16	8.4	14.1
834.0	41.9	33.5	120	9.0	1.29	1.18	9467	130.79	930.91	8.4	14.1
835.0	42.9	32.9	154	9.0	1.35	1.20	9683	127.75	907.97	8.4	14.1
836.0	48.6	32.1	159	9.0	1.31	1.22	9878	112.54	885.87	8.4	14.1
837.0	47.4	32.5	159	9.0	1.33	1.24	10079	115.58	865.05	8.4	14.1
838.0	50.7	34.7	159	9.0	1.33	1.26	10267	107.98	845.13	8.4	14.1
839.0	44.4	34.6	159	9.0	1.37	1.29	10481	123.19	826.62	8.4	14.1
840.0	46.2	34.9	159	9.0	1.36	1.31	10688	118.63	808.92	8.4	14.1
841.0	45.6	35.1	159	9.0	1.37	1.33	10897	120.15	792.12	8.4	14.1
842.0	40.4	35.7	159	9.0	1.42	1.35	11133	135.35	776.48	8.4	14.1
843.0	38.3	34.7	159	9.0	1.42	1.38	11382	142.96	761.75	8.4	14.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
844.0	32.4	33.6	157	9.0	1.46	1.41	11672	168.81	748.27	8.4	14.1
845.0	41.9	34.4	157	9.0	1.39	1.44	11898	130.79	734.55	8.4	14.1
846.0	37.9	33.3	157	9.0	1.41	1.46	12146	144.48	721.72	8.4	14.1
847.0	39.6	33.7	157	9.0	1.40	1.49	12385	138.40	709.31	8.4	14.1
848.0	38.3	33.6	157	9.0	1.41	1.51	12632	142.96	697.51	8.4	14.1
849.0	43.9	35.0	157	9.0	1.38	1.54	12847	124.71	685.82	8.4	14.1
850.0	40.9	34.8	157	9.0	1.40	1.56	13078	133.83	674.78	8.4	14.1
851.0	40.4	33.9	158	9.0	1.39	1.59	13311	135.35	664.21	8.4	14.1
852.0	44.4	35.5	158	9.0	1.38	1.61	13524	123.19	653.80	8.4	14.1
853.0	35.3	35.0	155	9.0	1.45	1.64	13788	155.13	644.39	8.4	14.1
854.0	41.4	35.6	154	9.0	1.40	1.66	14012	132.31	634.91	8.4	14.1
855.0	40.9	37.9	155	9.0	1.43	1.68	14240	133.83	625.80	8.4	14.1
856.0	42.4	37.9	155	9.0	1.42	1.71	14460	129.27	616.93	8.4	14.1
857.0	34.3	37.5	155	9.0	1.49	1.74	14731	159.69	608.91	8.4	14.1
858.0	35.0	38.1	155	9.0	1.49	1.77	14998	156.65	601.11	8.4	14.1
859.0	39.6	38.4	157	9.0	1.45	1.79	15236	138.40	593.27	8.4	14.1
860.0	33.6	37.4	158	9.0	1.50	1.82	15517	162.73	586.10	8.4	14.1
861.0	28.3	35.9	158	9.0	1.53	1.86	15852	193.15	579.65	8.4	14.1
862.0	30.0	33.3	156	9.0	1.48	1.89	16164	182.50	573.25	8.4	14.1
863.0	29.3	35.1	153	9.0	1.50	1.92	16478	187.06	567.12	8.4	14.1
864.0	29.3	34.0	157	9.0	1.50	1.96	16800	187.06	561.18	8.4	14.1
865.0	30.0	32.9	157	9.0	1.48	1.99	17113	182.50	555.35	8.4	14.1
866.0	26.9	34.6	157	9.0	1.53	2.03	17464	203.79	550.03	8.4	14.2
867.0	25.5	34.8	157	9.0	1.55	2.07	17833	214.44	545.02	8.4	14.2
868.0	27.7	33.5	157	9.0	1.51	2.10	18174	197.71	539.91	8.4	14.2
869.0	29.8	34.4	157	9.0	1.50	2.14	18491	184.02	534.75	8.4	14.2
870.0	31.3	34.9	157	9.0	1.49	2.17	18792	174.90	529.61	8.4	14.2
871.0	27.5	34.0	157	9.0	1.52	2.21	19135	199.23	524.96	8.4	14.2
872.0	31.0	32.9	152	9.0	1.45	2.24	19428	176.42	520.12	8.4	14.2
873.0	25.4	29.8	152	9.0	1.48	2.28	19787	215.96	515.95	8.4	14.2
874.0	31.6	33.5	158	9.0	1.47	2.31	20087	173.38	511.32	8.4	14.2
875.0	39.6	35.0	159	9.0	1.42	2.33	20329	138.40	506.35	8.4	14.2
876.0	34.6	35.1	159	9.0	1.46	2.36	20605	158.17	501.77	8.4	14.2
877.0	34.6	37.5	159	9.0	1.49	2.39	20881	158.17	497.31	8.4	14.2
878.0	37.1	36.4	159	9.0	1.45	2.42	21138	147.52	492.82	8.4	14.2
879.0	33.3	36.1	160	9.0	1.49	2.45	21425	164.25	488.66	8.4	14.2
880.0	41.9	36.8	159	9.0	1.42	2.47	21654	130.79	484.19	8.4	14.2
881.0	38.3	36.4	160	9.0	1.44	2.50	21904	142.96	479.98	8.4	14.2
882.0	32.1	35.9	155	9.0	1.49	2.53	22194	170.33	476.20	8.4	14.2
883.0	39.6	38.6	157	9.0	1.45	2.56	22432	138.40	472.13	8.4	14.2
884.0	32.4	37.9	157	9.0	1.51	2.59	22722	168.81	468.52	8.4	14.2
885.0	29.0	38.5	157	9.0	1.56	2.62	23047	188.58	465.23	8.4	14.2
886.0	32.1	37.5	157	9.0	1.51	2.65	23341	170.33	461.80	8.4	14.2
887.0	52.2	35.4	157	9.0	1.33	2.67	23521	104.94	457.70	8.4	14.2
888.0	44.4	36.8	157	9.0	1.39	2.69	23733	123.19	453.89	8.4	14.2
889.0	50.7	36.0	157	9.0	1.34	2.71	23920	107.98	450.01	8.4	14.2
890.0	43.4	35.4	157	9.0	1.39	2.74	24137	126.23	446.41	8.4	14.2
891.0	29.3	33.3	143	9.0	1.46	2.77	24431	187.06	443.56	8.4	14.2
892.0	50.0	36.7	155	9.0	1.35	2.79	24617	109.50	439.93	8.4	14.2
893.0	45.0	36.5	157	9.0	1.39	2.81	24826	121.67	436.51	8.4	14.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
894.0	53.7	36.3	157	9.0	1.32	2.83	25001	101.90	432.95	8.4	14.2
895.0	47.4	35.8	157	9.0	1.36	2.85	25200	115.58	429.61	8.4	14.2
896.0	32.7	36.4	157	9.0	1.49	2.88	25489	167.29	426.87	8.4	14.2
897.0	39.6	35.1	157	9.0	1.41	2.91	25727	138.40	423.90	8.4	14.2
898.0	37.9	36.9	157	9.0	1.45	2.93	25976	144.48	421.05	8.4	14.2
899.0	28.8	36.3	158	9.0	1.53	2.97	26305	190.10	418.72	8.4	14.2
900.0	25.7	34.9	156	9.0	1.55	3.01	26669	212.92	416.66	8.4	14.2
901.0	31.3	33.9	159	9.0	1.48	3.04	26974	174.90	414.26	8.4	14.2
902.0	31.6	33.2	159	9.0	1.47	3.07	27276	173.38	411.90	8.4	14.2
903.0	37.5	35.5	159	9.0	1.44	3.10	27530	146.00	409.32	8.4	14.2
904.0	28.3	35.3	159	9.0	1.53	3.13	27867	193.15	407.24	8.4	14.2
905.0	34.0	33.9	159	9.0	1.45	3.16	28149	161.21	404.90	8.4	14.2
906.0	34.6	34.4	159	9.0	1.45	3.19	28425	158.17	402.57	8.4	14.3
907.0	31.3	35.9	159	9.0	1.50	3.22	28730	174.90	400.44	8.4	14.3
908.0	22.1	36.2	160	9.0	1.63	3.27	29165	247.90	399.03	8.4	14.3
909.0	29.0	33.7	160	9.0	1.50	3.30	29494	188.58	397.10	8.4	14.3
910.0	27.3	32.7	156	9.0	1.50	3.34	29837	200.75	395.32	8.4	14.3
911.0	31.3	32.9	157	9.0	1.46	3.37	30137	174.90	393.33	8.4	14.3
912.0	69.2	32.8	156	9.0	1.20	3.39	30273	79.08	390.52	8.4	14.3
913.0	56.2	29.6	157	9.0	1.23	3.40	30440	97.33	387.93	8.4	14.3
914.0	51.4	33.8	156	9.0	1.31	3.42	30622	106.46	385.46	8.4	14.3
915.0	29.0	34.1	157	9.0	1.50	3.46	30946	188.58	383.75	8.4	14.3
916.0	51.4	33.3	157	9.0	1.31	3.48	31130	106.46	381.36	8.4	14.3
917.0	35.6	33.9	157	9.0	1.43	3.51	31394	153.60	379.41	8.4	14.3
918.0	54.5	31.8	157	9.0	1.27	3.52	31567	100.38	377.05	8.4	14.3
919.0	35.6	33.2	149	9.0	1.41	3.55	31818	153.60	375.17	8.4	14.3
920.0	52.9	30.5	149	9.0	1.25	3.57	31987	103.42	372.90	8.4	14.3
921.0	47.4	33.4	150	9.0	1.32	3.59	32177	115.58	370.78	8.4	14.3
922.0	35.3	33.3	151	9.0	1.41	3.62	32434	155.13	369.01	8.4	14.3
923.0	22.6	33.3	151	9.0	1.56	3.66	32835	241.81	367.98	8.4	14.3
924.0	28.8	33.3	151	9.0	1.48	3.70	33150	190.10	366.54	8.4	14.3
925.0	27.3	32.2	151	9.0	1.49	3.74	33483	200.75	365.22	8.4	14.3
926.0	30.3	33.0	151	9.0	1.46	3.77	33783	180.98	363.75	8.4	14.3
927.0	19.4	34.0	152	9.0	1.62	3.82	34253	282.88	363.12	8.4	14.3
928.0	35.3	30.8	151	9.0	1.39	3.85	34510	155.13	361.49	8.4	14.3
929.0	25.5	32.5	146	9.0	1.50	3.89	34852	214.44	360.35	8.4	14.3
930.0	31.0	32.4	150	9.0	1.44	3.92	35142	176.42	358.94	8.4	14.3
931.0	17.9	33.2	151	9.0	1.63	3.98	35649	305.69	358.53	8.4	14.3
932.0	28.3	23.8	152	9.0	1.36	4.01	35971	193.15	357.28	8.4	14.3
933.0	20.1	33.3	152	9.0	1.60	4.06	36426	272.23	356.64	8.4	14.3
934.0	40.0	32.3	152	9.0	1.36	4.09	36654	136.88	355.00	8.4	14.3
935.0	38.3	34.7	152	9.0	1.41	4.11	36892	142.96	353.43	8.4	14.3
936.0	38.7	33.9	156	9.0	1.40	4.14	37134	141.44	351.87	8.4	14.3
937.0	37.9	29.8	157	9.0	1.36	4.16	37382	144.48	350.35	8.4	14.3
938.0	47.6	33.7	143	9.0	1.30	4.19	37562	114.91	348.65	8.4	14.3
939.0	34.3	33.9	155	9.0	1.44	4.21	37833	159.69	347.29	8.4	14.3
940.0	39.1	34.4	156	9.0	1.41	4.24	38072	139.92	345.81	8.4	14.3
941.0	30.0	33.3	156	9.0	1.48	4.27	38384	182.50	344.65	8.4	14.3
942.0	26.5	33.5	156	9.0	1.52	4.31	38737	206.83	343.68	8.4	14.3
943.0	40.4	33.4	156	9.0	1.38	4.34	38969	135.35	342.22	8.4	14.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
944.0	36.0	34.0	156	9.0	1.43	4.36	39229	152.08	340.90	8.4	14.3
945.0	33.3	34.3	155	9.0	1.46	4.39	39509	164.25	339.68	8.4	14.3
946.0	22.0	34.3	156	9.0	1.59	4.44	39934	249.42	339.06	8.4	14.3
947.0	19.6	32.5	151	9.0	1.59	4.49	40397	279.83	338.66	8.4	14.4
948.0	43.4	33.1	153	9.0	1.35	4.51	40609	126.23	337.23	8.4	14.4
949.0	38.3	32.6	155	9.0	1.39	4.54	40852	142.96	335.92	8.4	14.4
950.0	39.6	31.6	156	9.0	1.37	4.57	41088	138.40	334.61	8.4	14.4
951.0	34.3	33.7	156	9.0	1.44	4.59	41362	159.69	333.45	8.4	14.4
952.0	35.6	33.3	156	9.0	1.42	4.62	41625	153.60	332.26	8.4	14.4
953.0	35.0	32.7	157	9.0	1.42	4.65	41894	156.65	331.12	8.4	14.4
954.0	38.7	33.7	157	9.0	1.40	4.68	42137	141.44	329.88	8.4	14.4
955.0	40.4	33.3	157	9.0	1.38	4.70	42369	135.35	328.63	8.4	14.4
956.0	31.6	33.6	157	9.0	1.47	4.73	42668	173.38	327.63	8.4	14.4
957.0	27.3	32.8	156	9.0	1.50	4.77	43010	200.75	326.83	8.4	14.4
958.0	40.0	31.2	155	9.0	1.36	4.79	43243	136.88	325.62	8.4	14.4
959.0	40.0	32.1	155	9.0	1.37	4.82	43476	136.88	324.44	8.4	14.4
960.0	40.0	34.3	155	9.0	1.39	4.84	43708	136.88	323.26	8.4	14.4
961.0	25.7	34.2	155	9.0	1.54	4.88	44070	212.92	322.58	8.4	14.4
962.0	36.0	34.2	155	9.0	1.43	4.91	44328	152.08	321.53	8.4	14.4
963.0	25.5	34.6	155	9.0	1.55	4.95	44692	214.44	320.87	8.4	14.4
964.0	30.5	34.0	155	9.0	1.48	4.98	44997	179.46	320.01	8.4	14.4
965.0	26.7	34.2	155	9.0	1.53	5.02	45346	205.31	319.31	8.4	14.4
966.0	24.0	32.0	149	9.0	1.52	5.06	45718	228.13	318.76	8.4	14.4
967.0	27.7	34.7	155	9.0	1.52	5.10	46054	197.71	318.04	8.4	14.4
968.0	22.5	31.5	156	9.0	1.55	5.14	46470	243.33	317.59	8.4	14.4
969.0	25.7	32.4	156	9.0	1.52	5.18	46834	212.92	316.97	8.4	14.4
970.0	26.5	30.3	156	9.0	1.48	5.22	47188	206.83	316.33	8.4	14.4
971.0	37.9	32.1	156	9.0	1.39	5.25	47436	144.48	315.32	8.4	14.4
972.0	28.3	30.9	156	9.0	1.47	5.28	47766	193.15	314.61	8.4	14.4
973.0	28.6	30.8	156	9.0	1.46	5.32	48095	191.63	313.90	8.4	14.4
974.0	34.0	30.3	157	9.0	1.40	5.35	48372	161.21	313.02	8.4	14.4
975.0	35.6	31.3	157	9.0	1.40	5.37	48636	153.60	312.11	8.4	14.4
976.0	27.5	31.4	150	9.0	1.47	5.41	48963	199.23	311.47	8.4	14.4
977.0	32.4	30.6	153	9.0	1.41	5.44	49246	168.81	310.66	8.4	14.4
978.0	24.0	30.9	153	9.0	1.51	5.48	49629	228.13	310.20	8.4	14.4
979.0	20.2	31.3	154	9.0	1.57	5.53	50086	270.71	309.98	8.4	14.4
980.0	27.1	30.8	154	9.0	1.47	5.57	50428	202.27	309.38	8.4	14.4
981.0	22.4	31.2	154	9.0	1.54	5.61	50840	244.85	309.03	8.4	14.4
982.0	30.3	30.4	154	9.0	1.43	5.65	51145	180.98	308.32	8.4	14.4
983.0	22.8	30.9	154	9.0	1.53	5.69	51550	240.29	307.95	8.4	14.4
984.0	20.9	30.6	154	9.0	1.55	5.74	51991	261.58	307.70	8.4	14.4
985.0	19.4	31.8	148	9.0	1.58	5.79	52451	282.88	307.56	8.4	14.4
986.0	28.3	30.6	152	9.0	1.45	5.83	52773	193.15	306.95	8.4	14.4
987.0	30.0	31.4	152	9.0	1.45	5.86	53077	182.50	306.28	8.4	14.4
988.0	25.2	31.6	152	9.0	1.50	5.90	53440	217.48	305.81	8.4	14.4
989.0	18.0	32.9	152	9.0	1.63	5.95	53948	304.17	305.80	8.4	14.5
990.0	26.1	33.4	153	9.0	1.52	5.99	54299	209.88	305.30	8.4	14.5
991.0	24.5	32.9	153	9.0	1.53	6.03	54673	223.56	304.87	8.4	14.5
992.0	21.3	33.7	153	9.0	1.59	6.08	55105	257.02	304.62	8.4	14.5
993.0	19.9	33.2	152	9.0	1.60	6.13	55564	275.27	304.47	8.4	14.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
994.0	20.0	33.2	152	9.0	1.60	6.18	56021	273.75	304.31	8.4	14.5
995.0	13.7	30.8	152	9.0	1.68	6.25	56686	399.98	304.80	8.4	14.5
996.0	17.6	31.7	154	9.0	1.62	6.31	57208	310.25	304.83	8.4	14.5
997.0	22.0	31.1	154	9.0	1.54	6.36	57628	249.42	304.55	8.4	14.5
998.0	18.4	30.6	154	9.0	1.59	6.41	58129	298.08	304.51	8.4	14.5
999.0	15.2	30.2	154	9.0	1.65	6.48	58737	360.44	304.80	8.4	14.5
1000.0	16.1	29.6	155	9.0	1.62	6.54	59312	339.15	304.97	8.4	14.5
1001.0	20.3	31.3	154	9.0	1.57	6.59	59765	269.19	304.79	8.4	14.5
1002.0	17.4	30.2	154	9.0	1.61	6.64	60296	314.81	304.84	8.4	14.5
1003.0	21.3	31.2	154	9.0	1.56	6.69	60729	257.02	304.60	8.4	14.5
1004.0	22.1	32.8	153	9.0	1.57	6.74	61146	247.90	304.32	8.4	14.5
1005.0	25.7	31.2	160	9.0	1.51	6.78	61519	212.92	303.88	8.4	14.5
1006.0	27.1	30.6	160	9.0	1.48	6.81	61874	202.27	303.39	8.4	14.5
1007.0	18.9	30.6	160	9.0	1.60	6.87	62381	288.96	303.32	8.4	14.5
1008.0	20.7	32.1	160	9.0	1.59	6.91	62845	264.63	303.13	8.4	14.5
1009.0	28.3	31.0	160	9.0	1.47	6.95	63183	193.15	302.60	8.4	14.5
1010.0	24.3	30.7	160	9.0	1.52	6.99	63578	225.08	302.23	8.4	14.5
1011.0	18.4	31.1	160	9.0	1.61	7.04	64101	298.08	302.22	8.4	14.5
1012.0	17.6	31.2	160	9.0	1.63	7.10	64645	310.25	302.25	8.4	14.5
1013.0	12.7	30.9	154	9.0	1.72	7.18	65373	431.92	302.86	8.4	14.5
1014.0	14.2	30.6	154	9.0	1.68	7.25	66025	384.77	303.24	8.4	14.5
1015.0	19.7	30.8	155	9.0	1.58	7.30	66496	278.31	303.13	8.4	14.5
1016.0	13.8	32.0	155	9.0	1.71	7.37	67169	396.94	303.56	8.4	14.5
1017.0	18.3	31.0	154	9.0	1.60	7.43	67675	299.60	303.54	8.4	14.5
1018.0	20.5	32.9	154	9.0	1.59	7.48	68126	267.67	303.38	8.4	14.5
1019.0	20.7	32.7	154	9.0	1.59	7.53	68572	264.63	303.20	8.4	14.5
1020.0	20.3	33.8	154	9.0	1.61	7.58	69027	269.19	303.05	8.4	14.5
1021.0	21.7	34.8	154	9.0	1.60	7.62	69453	252.46	302.82	8.4	14.5
1022.0	19.1	33.1	154	9.0	1.62	7.67	69935	285.92	302.74	8.4	14.5
1023.0	17.7	35.8	159	9.0	1.69	7.73	70474	308.73	302.77	8.4	14.5
1024.0	20.5	41.2	160	9.0	1.72	7.78	70943	267.67	302.61	8.4	14.5
1025.0	23.1	39.4	160	9.0	1.65	7.82	71359	237.25	302.32	8.4	14.5
1026.0	19.6	39.9	160	9.0	1.72	7.87	71850	279.83	302.22	8.4	14.5
1027.0	28.3	40.0	160	9.0	1.59	7.91	72188	193.15	301.74	8.4	14.5
1028.0	25.2	40.1	160	9.0	1.63	7.95	72570	217.48	301.37	8.4	14.5
1029.0	27.7	42.8	160	9.0	1.63	7.98	72916	197.71	300.92	8.4	14.5
1030.0	16.3	41.1	160	9.1	1.78	8.05	73504	336.10	301.07	8.4	14.5
1031.0	25.0	41.1	160	9.1	1.63	8.09	73888	219.00	300.72	8.4	14.5
1032.0	17.1	39.9	158	9.1	1.74	8.14	74440	319.37	300.80	8.4	14.5
1033.0	13.4	37.5	160	9.1	1.79	8.22	75153	407.58	301.26	8.4	14.6
1034.0	16.7	35.3	159	9.1	1.69	8.28	75726	328.50	301.37	8.4	14.6
1035.0	20.8	35.6	159	9.1	1.62	8.33	76185	263.10	301.21	8.4	14.6
1036.0	20.8	36.5	159	9.1	1.63	8.37	76644	263.10	301.05	8.4	14.6
1037.0	18.8	35.4	159	9.1	1.65	8.43	77150	290.48	301.00	8.4	14.6
1038.0	10.3	38.0	159	9.1	1.88	8.52	78073	530.77	301.97	8.4	14.6
1039.0	22.9	36.4	158	9.1	1.59	8.57	78486	238.77	301.71	8.4	14.6
1040.0	23.7	37.9	158	9.1	1.60	8.61	78886	231.17	301.41	8.4	14.6
1041.0	21.2	36.0	158	9.1	1.62	8.66	79334	258.54	301.23	8.4	14.6
1042.0	12.9	40.6	156	9.1	1.84	8.73	80058	422.79	301.74	8.4	14.6
1043.0	17.6	40.7	157	9.1	1.74	8.79	80592	310.25	301.77	8.4	14.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1044.0	17.8	41.6	157	9.1	1.74	8.85	81121	307.21	301.79	8.4	14.6
1045.0	18.8	42.3	157	9.1	1.74	8.90	81621	290.48	301.75	8.4	14.6
1046.0	13.7	41.3	158	9.1	1.83	8.97	82309	398.46	302.14	8.4	14.6
1047.0	15.7	43.0	157	9.1	1.81	9.04	82913	349.79	302.33	8.4	14.6
1048.0	18.2	42.2	157	9.1	1.75	9.09	83432	301.13	302.33	8.4	14.6
1049.0	30.0	41.3	157	9.1	1.56	9.13	83746	182.50	301.85	8.4	14.6
1050.0	19.0	40.8	157	9.1	1.71	9.18	84241	287.44	301.79	8.4	14.6
1051.0	16.0	40.5	157	9.1	1.77	9.24	84831	342.19	301.95	8.4	14.6
1052.0	16.5	41.1	155	9.1	1.76	9.30	85395	331.54	302.07	8.4	14.6
1053.0	24.3	43.5	157	9.1	1.66	9.34	85783	225.08	301.76	8.4	14.6
1054.0	20.3	43.0	157	9.1	1.72	9.39	86247	269.19	301.64	8.4	14.6
1055.0	25.9	43.2	157	9.1	1.64	9.43	86611	211.40	301.28	8.4	14.6
1056.0	28.1	41.3	157	9.1	1.59	9.47	86947	194.67	300.86	8.4	14.6
1057.0	31.9	40.5	158	9.1	1.53	9.50	87243	171.85	300.36	8.4	14.6
1058.0	29.3	40.4	158	9.1	1.56	9.53	87567	187.06	299.92	8.4	14.6
1059.0	32.1	43.5	157	9.1	1.57	9.56	87860	170.33	299.42	8.4	14.6
1060.0	28.3	42.0	158	9.1	1.59	9.60	88194	193.15	299.01	8.4	14.6
1061.0	17.2	40.4	157	9.1	1.74	9.66	88740	317.85	299.09	8.4	14.6
1062.0	19.5	41.7	157	9.1	1.72	9.71	89225	281.35	299.02	8.4	14.6
1063.0	20.2	42.6	158	9.1	1.72	9.76	89692	270.71	298.91	8.4	14.6
1064.0	24.0	43.2	158	9.1	1.66	9.80	90086	228.13	298.64	8.4	14.6
1065.0	21.6	41.1	158	9.1	1.68	9.84	90525	253.98	298.47	8.4	14.6
1066.0	24.5	42.9	157	9.1	1.65	9.89	90911	223.56	298.19	8.4	14.6
1067.0	17.9	42.6	158	9.1	1.76	9.94	91439	305.69	298.22	8.4	14.6
1068.0	19.9	44.0	158	9.1	1.74	9.99	91915	275.27	298.14	8.4	14.6
1069.0	18.4	43.6	158	9.1	1.76	10.05	92430	298.08	298.14	8.4	14.6
1070.0	17.5	45.2	156	9.1	1.80	10.10	92964	313.29	298.19	8.4	14.6
1071.0	13.7	42.8	159	9.1	1.86	10.18	93659	398.46	298.56	8.4	14.6
1072.0	20.2	42.7	161	9.1	1.72	10.23	94135	270.71	298.46	8.4	14.6
1073.0	22.5	43.6	160	9.1	1.70	10.27	94563	243.33	298.26	8.4	14.6
1074.0	18.5	43.9	160	9.1	1.77	10.32	95084	296.56	298.25	8.4	14.6
1075.0	23.1	42.9	161	9.1	1.68	10.37	95502	237.25	298.03	8.4	14.6
1076.0	18.5	42.5	161	9.1	1.75	10.42	96024	296.56	298.02	8.4	14.6
1077.0	13.4	44.8	161	9.1	1.89	10.50	96742	407.58	298.42	8.4	14.6
1078.0	14.3	43.2	161	9.1	1.85	10.57	97416	381.73	298.72	8.4	14.7
1079.0	19.0	40.6	161	9.1	1.72	10.62	97922	287.44	298.68	8.4	14.7
1080.0	21.1	40.8	158	9.3	1.64	10.67	98374	260.06	298.54	8.4	14.7
1081.0	27.1	42.7	158	9.3	1.58	10.70	98724	202.27	298.20	8.4	14.7
1082.0	29.3	42.3	158	9.3	1.55	10.74	99047	187.06	297.80	8.4	14.7
1083.0	26.9	42.6	158	9.3	1.58	10.77	99401	203.79	297.47	8.4	14.7
1084.0	21.1	43.3	158	9.3	1.68	10.82	99852	260.06	297.34	8.4	14.7
1085.0	25.9	43.1	158	9.3	1.60	10.86	100219	211.40	297.04	8.4	14.7
1086.0	28.3	42.2	158	9.3	1.56	10.90	100553	193.15	296.68	8.4	14.7
1087.0	25.2	40.9	159	9.3	1.59	10.94	100931	217.48	296.40	8.4	14.7
1088.0	39.1	43.7	158	9.3	1.47	10.96	101173	139.92	295.86	8.4	14.7
1089.0	38.3	43.5	158	9.3	1.47	10.99	101421	142.96	295.33	8.4	14.7
1090.0	23.7	40.9	155	9.3	1.60	11.03	101812	231.17	295.11	8.4	14.7
1091.0	19.7	42.3	155	9.3	1.68	11.08	102286	278.31	295.05	8.4	14.7
1092.0	30.8	42.6	155	9.3	1.53	11.11	102587	177.94	294.65	8.4	14.7
1093.0	31.9	39.9	155	9.3	1.49	11.14	102879	171.85	294.23	8.4	14.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1094.0	26.9	40.9	155	9.3	1.56	11.18	103225	203.79	293.92	8.4	14.7
1095.0	33.0	40.9	155	9.3	1.49	11.21	103506	165.77	293.49	8.4	14.7
1096.0	28.8	43.3	155	9.3	1.56	11.25	103829	190.10	293.14	8.4	14.7
1097.0	30.0	42.4	155	9.3	1.54	11.28	104139	182.50	292.76	8.4	14.7
1098.0	40.9	42.9	155	9.3	1.44	11.30	104366	133.83	292.23	8.4	14.7
1099.0	42.9	41.0	155	9.3	1.40	11.33	104583	127.75	291.68	8.4	14.7
1100.0	25.2	39.9	155	9.3	1.57	11.37	104952	217.48	291.43	8.4	14.7
1101.0	33.3	40.5	159	9.3	1.49	11.40	105237	164.25	291.01	8.4	14.7
1102.0	39.6	40.5	159	9.3	1.43	11.42	105479	138.40	290.51	8.4	14.7
1103.0	36.0	39.0	159	9.3	1.45	11.45	105744	152.08	290.05	8.4	14.7
1104.0	28.6	41.5	159	9.3	1.55	11.48	106078	191.63	289.72	8.4	14.7
1105.0	27.7	41.8	159	9.5	1.53	11.52	106423	197.71	289.42	8.4	14.7
1106.0	20.2	40.3	159	9.5	1.62	11.57	106896	270.71	289.36	8.4	14.7
1107.0	27.7	39.7	160	9.5	1.51	11.61	107242	197.71	289.06	8.4	14.7
1108.0	23.5	39.9	156	9.5	1.56	11.65	107639	232.69	288.88	8.4	14.7
1109.0	28.6	38.9	157	9.5	1.49	11.68	107970	191.63	288.57	8.4	14.7
1110.0	25.2	41.1	158	9.5	1.55	11.72	108346	217.48	288.34	8.4	14.7
1111.0	27.5	41.8	158	9.5	1.53	11.76	108691	199.23	288.05	8.4	14.7
1112.0	28.1	41.0	158	9.5	1.52	11.80	109028	194.67	287.75	8.4	14.7
1113.0	30.8	40.0	158	9.5	1.48	11.83	109337	177.94	287.40	8.4	14.7
1114.0	33.0	41.2	158	9.5	1.47	11.86	109624	165.77	287.01	8.4	14.7
1115.0	39.1	38.9	158	9.5	1.39	11.88	109867	139.92	286.55	8.4	14.7
1116.0	31.6	39.2	158	9.5	1.46	11.92	110168	173.38	286.19	8.4	14.7
1117.0	27.3	39.9	158	9.5	1.51	11.95	110516	200.75	285.92	8.4	14.7
1118.0	9.6	37.7	98	9.5	1.67	12.06	111126	568.79	286.81	8.4	14.7
1119.0	31.6	41.1	158	9.5	1.48	12.09	111426	173.38	286.45	8.4	14.7
1120.0	31.6	39.4	160	9.5	1.46	12.12	111730	173.38	286.10	8.4	14.7
1121.0	36.7	41.7	160	9.5	1.44	12.15	111991	149.04	285.67	8.4	14.7
1122.0	42.4	41.1	160	9.5	1.39	12.17	112217	129.27	285.19	8.4	14.7
1123.0	46.8	42.0	159	9.5	1.36	12.19	112421	117.10	284.67	8.4	14.7
1124.0	42.4	38.9	160	9.5	1.36	12.22	112648	129.27	284.19	8.4	14.8
1125.0	43.9	42.5	160	9.5	1.39	12.24	112866	124.71	283.69	8.4	14.8
1126.0	42.4	42.9	160	9.5	1.41	12.26	113092	129.27	283.22	8.4	14.8
1127.0	30.8	43.1	159	9.7	1.48	12.29	113402	177.94	282.90	8.4	14.8
1128.0	36.7	39.9	155	9.7	1.38	12.32	113655	149.04	282.49	8.4	14.8
1129.0	41.9	40.4	157	9.7	1.35	12.35	113879	130.79	282.03	8.4	14.8
1130.0	40.9	41.4	157	9.7	1.37	12.37	114110	133.83	281.58	8.4	14.8
1131.0	45.0	41.2	157	9.7	1.34	12.39	114319	121.67	281.10	8.4	14.8
1132.0	40.4	40.7	158	9.7	1.36	12.42	114553	135.35	280.66	8.4	14.8
1133.0	40.4	40.9	158	9.7	1.37	12.44	114787	135.35	280.22	8.4	14.8
1134.0	39.1	41.2	158	9.7	1.38	12.47	115028	139.92	279.80	8.4	14.8
1135.0	40.0	42.1	157	9.7	1.38	12.49	115264	136.88	279.38	8.4	14.8
1136.0	39.1	41.6	157	9.7	1.38	12.52	115506	139.92	278.96	8.4	14.8
1137.0	34.0	37.8	153	9.7	1.38	12.55	115776	161.21	278.61	8.4	14.8
1138.0	29.3	42.1	159	9.7	1.49	12.58	116102	187.06	278.34	8.4	14.8
1139.0	29.0	43.5	160	9.7	1.51	12.62	116432	188.58	278.08	8.4	14.8
1140.0	28.3	43.5	160	9.7	1.51	12.65	116770	193.15	277.83	8.4	14.8
1141.0	31.6	43.4	160	9.7	1.48	12.68	117073	173.38	277.52	8.4	14.8
1142.0	37.1	42.5	159	9.7	1.42	12.71	117331	147.52	277.14	8.4	14.8
1143.0	52.2	40.0	160	9.7	1.28	12.73	117515	104.94	276.64	8.4	14.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1144.0	37.9	43.3	157	9.7	1.41	12.76	117764	144.48	276.25	8.4	14.8
1145.0	44.4	45.3	154	9.7	1.37	12.78	117972	123.19	275.81	8.4	14.8
1146.0	29.0	42.5	139	9.7	1.45	12.81	118259	188.58	275.56	8.4	14.8
1147.0	40.9	42.6	150	9.7	1.36	12.84	118479	133.83	275.15	8.4	14.8
1148.0	42.9	42.9	154	9.7	1.36	12.86	118694	127.75	274.73	8.4	14.8
1149.0	40.0	43.3	154	9.7	1.39	12.88	118925	136.88	274.33	8.4	14.8
1150.0	45.6	44.2	154	9.7	1.35	12.91	119128	120.15	273.89	8.4	14.8
1151.0	44.4	40.8	154	9.7	1.33	12.93	119336	123.19	273.46	8.4	14.8
1152.0	42.9	39.9	155	9.7	1.33	12.95	119552	127.75	273.05	8.4	14.8
1153.0	42.9	41.9	154	9.8	1.34	12.98	119768	127.75	272.64	8.4	14.8
1154.0	32.4	43.4	155	9.8	1.44	13.01	120054	168.81	272.34	8.4	14.8
1155.0	40.4	41.7	155	9.8	1.36	13.03	120284	135.35	271.96	8.4	14.8
1156.0	43.4	41.9	154	9.8	1.33	13.05	120497	126.23	271.55	8.4	14.8
1157.0	40.9	37.8	154	9.8	1.31	13.08	120723	133.83	271.16	8.4	14.8
1158.0	40.9	39.3	155	9.8	1.33	13.10	120950	133.83	270.78	8.4	14.8
1159.0	36.0	38.3	155	9.8	1.36	13.13	121208	152.08	270.45	8.4	14.8
1160.0	38.3	38.3	155	9.8	1.34	13.16	121451	142.96	270.09	8.4	14.8
1161.0	44.4	39.4	154	9.8	1.30	13.18	121659	123.19	269.69	8.4	14.8
1162.0	41.4	38.9	155	9.8	1.32	13.20	121883	132.31	269.31	8.4	14.8
1163.0	37.5	39.3	155	9.8	1.36	13.23	122131	146.00	268.97	8.4	14.8
1164.0	43.9	39.2	155	9.8	1.30	13.25	122343	124.71	268.57	8.4	14.8
1165.0	38.3	37.8	155	9.8	1.33	13.28	122585	142.96	268.23	8.4	14.8
1166.0	25.4	37.3	135	9.8	1.41	13.32	122905	215.96	268.08	8.4	14.8
1167.0	41.9	36.6	154	9.8	1.29	13.34	123125	130.79	267.71	8.4	14.8
1168.0	33.0	38.3	153	9.8	1.38	13.37	123403	165.77	267.43	8.4	14.8
1169.0	32.4	40.0	153	9.8	1.40	13.40	123686	168.81	267.16	8.4	14.8
1170.0	38.3	38.3	153	9.8	1.33	13.43	123925	142.96	266.83	8.4	14.8
1171.0	32.7	36.4	155	9.8	1.37	13.46	124209	167.29	266.56	8.4	14.8
1172.0	26.3	39.1	154	9.8	1.46	13.50	124561	208.35	266.40	8.4	14.9
1173.0	25.4	40.6	153	9.8	1.49	13.54	124924	215.96	266.27	8.4	14.9
1174.0	28.6	39.1	155	9.8	1.44	13.57	125250	191.63	266.07	8.4	14.9
1175.0	19.4	37.7	151	10.0	1.50	13.62	125717	282.88	266.11	8.4	14.9
1176.0	20.7	40.2	155	10.0	1.52	13.67	126166	264.63	266.11	8.4	14.9
1177.0	27.7	39.7	155	10.0	1.42	13.71	126502	197.71	265.93	8.4	14.9
1178.0	26.9	40.9	155	10.0	1.45	13.75	126847	203.79	265.76	8.4	14.9
1179.0	33.0	39.9	154	10.0	1.37	13.78	127127	165.77	265.50	8.4	14.9
1180.0	19.7	41.1	155	10.0	1.55	13.83	127599	278.31	265.53	8.4	14.9
1181.0	36.0	39.0	154	10.0	1.34	13.86	127857	152.08	265.24	8.4	14.9
1182.0	36.7	39.4	155	10.0	1.33	13.88	128109	149.04	264.93	8.4	14.9
1183.0	40.0	39.3	154	10.0	1.31	13.91	128340	136.88	264.60	8.4	14.9
1184.0	40.4	40.5	153	10.0	1.31	13.93	128567	135.35	264.26	8.4	14.9
1185.0	32.1	39.2	148	10.0	1.36	13.96	128844	170.33	264.02	8.4	14.9
1186.0	37.9	40.4	151	10.0	1.33	13.99	129084	144.48	263.71	8.4	14.9
1187.0	46.2	40.8	152	10.0	1.27	14.01	129282	118.63	263.33	8.4	14.9
1188.0	38.3	40.9	152	10.0	1.33	14.04	129520	142.96	263.02	8.4	14.9
1189.0	39.6	40.4	152	10.0	1.32	14.06	129750	138.40	262.70	8.4	14.9
1190.0	41.4	40.7	152	10.0	1.31	14.09	129971	132.31	262.37	8.4	14.9
1191.0	48.0	40.2	154	10.0	1.26	14.11	130163	114.06	261.99	8.4	14.9
1192.0	48.0	41.2	153	10.0	1.27	14.13	130354	114.06	261.61	8.4	14.9
1193.0	45.6	40.1	151	10.0	1.27	14.15	130553	120.15	261.25	8.4	14.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1194.0	14.8	15.2	48	10.0	0.97	14.22	130746	369.56	261.53	8.4	14.9
1195.0	40.9	37.0	152	10.0	1.27	14.24	130969	133.83	261.20	8.4	14.9
1196.0	45.6	37.5	153	10.0	1.25	14.26	131171	120.15	260.85	8.4	14.9
1197.0	39.1	36.2	153	10.0	1.28	14.29	131406	139.92	260.54	8.4	14.9
1198.0	40.0	36.1	154	10.0	1.27	14.32	131637	136.88	260.23	8.4	14.9
1199.0	38.7	38.4	154	10.0	1.31	14.34	131876	141.44	259.93	8.4	14.9
1200.0	46.2	39.5	153	10.0	1.26	14.36	132075	118.63	259.58	8.4	14.9
1201.0	40.9	39.1	154	10.0	1.30	14.39	132301	133.83	259.27	8.4	14.9
1202.0	43.4	39.3	154	10.0	1.28	14.41	132513	126.23	258.94	8.4	14.9
1203.0	34.7	39.0	153	10.0	1.34	14.44	132778	157.79	258.69	8.4	14.9
1204.0	35.0	39.0	154	10.0	1.34	14.47	133042	156.43	258.43	8.4	14.9
1205.0	42.0	40.0	153	10.0	1.30	14.49	133260	130.36	258.12	8.4	14.9
1206.0	34.6	36.6	154	10.0	1.32	14.52	133526	158.17	257.87	8.4	14.9
1207.0	38.3	37.4	153	10.0	1.30	14.55	133767	142.96	257.59	8.4	14.9
1208.0	41.9	35.9	154	10.0	1.26	14.57	133987	130.79	257.28	8.4	14.9
1209.0	32.1	37.0	155	10.0	1.35	14.60	134276	170.33	257.06	8.4	14.9
1210.0	49.3	39.5	153	10.0	1.24	14.62	134462	111.02	256.71	8.4	14.9
1211.0	42.9	40.2	153	10.0	1.29	14.65	134676	127.75	256.39	8.4	14.9
1212.0	33.3	39.2	153	10.0	1.36	14.68	134952	164.25	256.17	8.4	14.9
1213.0	38.7	37.8	148	10.0	1.29	14.70	135181	141.44	255.89	8.4	14.9
1214.0	46.8	36.2	150	10.0	1.22	14.72	135374	117.10	255.56	8.4	14.9
1215.0	40.4	37.1	153	10.0	1.28	14.75	135601	135.35	255.27	8.4	14.9
1216.0	50.0	36.8	153	10.0	1.21	14.77	135785	109.50	254.92	8.4	14.9
1217.0	36.7	37.8	153	10.0	1.31	14.79	136034	149.04	254.66	8.4	14.9
1218.0	43.4	37.1	153	10.0	1.26	14.82	136246	126.23	254.36	8.4	14.9
1219.0	40.4	36.5	154	10.0	1.27	14.84	136474	135.35	254.07	8.4	14.9
1220.0	37.5	34.9	155	10.0	1.28	14.87	136721	146.00	253.81	8.4	14.9
1221.0	32.7	38.0	154	10.0	1.35	14.90	137003	167.29	253.61	8.4	15.0
1222.0	35.6	37.6	152	10.0	1.32	14.93	137259	153.60	253.37	8.4	15.0
1223.0	34.6	34.8	142	10.0	1.28	14.96	137505	158.17	253.15	8.4	15.0
1224.0	35.3	35.8	153	10.0	1.31	14.98	137765	155.13	252.92	8.4	15.0
1225.0	48.6	36.4	153	10.0	1.21	15.01	137953	112.54	252.59	8.4	15.0
1226.0	36.4	36.5	153	10.0	1.30	15.03	138206	150.56	252.35	8.4	15.0
1227.0	42.9	35.1	154	10.0	1.24	15.06	138421	127.75	252.05	8.4	15.0
1228.0	34.0	37.9	153	10.0	1.34	15.09	138691	161.21	251.84	8.4	15.0
1229.0	40.9	38.6	153	10.0	1.29	15.11	138915	133.83	251.57	8.4	15.0
1230.0	34.0	38.6	154	10.0	1.35	15.14	139187	161.21	251.36	8.4	15.0
1231.0	40.0	38.6	153	10.0	1.30	15.16	139417	136.88	251.09	8.4	15.0
1232.0	40.9	37.7	153	10.0	1.28	15.19	139642	133.83	250.82	8.4	15.0
1233.0	40.9	38.0	151	10.0	1.28	15.21	139863	133.83	250.55	8.4	15.0
1234.0	36.4	38.7	151	10.0	1.32	15.24	140113	150.56	250.32	8.4	15.0
1235.0	37.9	37.9	153	10.0	1.31	15.27	140355	144.48	250.08	8.4	15.0
1236.0	43.9	36.1	153	10.0	1.24	15.29	140563	124.71	249.79	8.4	15.0
1237.0	45.0	37.2	153	10.0	1.25	15.31	140767	121.67	249.50	8.4	15.0
1238.0	43.9	38.4	151	10.0	1.26	15.33	140974	124.71	249.21	8.4	15.0
1239.0	38.3	38.9	152	10.0	1.31	15.36	141212	142.96	248.97	8.4	15.0
1240.0	46.2	39.4	151	10.0	1.26	15.38	141408	118.63	248.67	8.4	15.0
1241.0	40.0	38.8	150	10.0	1.29	15.41	141633	136.88	248.42	8.4	15.0
1242.0	44.4	38.8	152	10.0	1.26	15.43	141838	123.19	248.14	8.4	15.0
1243.0	44.4	37.2	153	10.0	1.25	15.45	142044	123.19	247.85	8.4	15.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1244.0	38.7	37.4	154	10.0	1.30	15.48	142282	141.44	247.61	8.4	15.0
1245.0	30.8	37.2	154	10.0	1.36	15.51	142583	177.94	247.46	8.4	15.0
1246.0	36.0	38.4	153	10.0	1.33	15.54	142838	152.08	247.24	8.4	15.0
1247.0	43.9	38.6	153	10.0	1.27	15.56	143047	124.71	246.97	8.4	15.0
1248.0	40.4	38.9	152	10.0	1.29	15.59	143272	135.35	246.72	8.4	15.0
1249.0	35.3	39.2	152	10.0	1.34	15.61	143531	155.13	246.52	8.4	15.0
1250.0	36.0	38.7	152	10.0	1.33	15.64	143784	152.08	246.31	8.4	15.0
1251.0	31.3	37.0	147	10.0	1.34	15.67	144067	174.90	246.15	8.4	15.0
1252.0	25.0	38.6	158	10.0	1.45	15.71	144445	219.00	246.09	8.4	15.0
1253.0	36.4	37.6	157	10.0	1.32	15.74	144704	150.56	245.88	8.4	15.0
1254.0	29.3	38.7	158	10.0	1.40	15.78	145027	187.06	245.75	8.4	15.0
1255.0	37.9	38.8	157	10.0	1.32	15.80	145276	144.48	245.52	8.4	15.0
1256.0	31.0	38.2	158	10.0	1.38	15.83	145581	176.42	245.37	8.4	15.0
1257.0	34.3	38.0	158	10.0	1.35	15.86	145857	159.69	245.19	8.4	15.0
1258.0	30.3	37.5	158	10.0	1.38	15.90	146170	180.98	245.05	8.4	15.0
1259.0	34.3	38.5	157	10.0	1.35	15.93	146445	159.69	244.86	8.4	15.0
1260.0	34.6	38.8	157	10.0	1.35	15.95	146717	158.17	244.67	8.4	15.0
1261.0	22.2	36.8	154	10.0	1.46	16.00	147132	246.38	244.67	8.4	15.0
1262.0	24.5	37.3	153	10.0	1.43	16.04	147506	223.56	244.63	8.4	15.0
1263.0	24.7	35.0	154	10.0	1.41	16.08	147881	222.04	244.58	8.4	15.0
1264.0	24.5	36.4	154	10.0	1.42	16.12	148257	223.56	244.53	8.4	15.0
1265.0	24.3	38.5	157	10.0	1.45	16.16	148644	225.08	244.49	8.4	15.0
1266.0	23.2	37.4	157	10.0	1.46	16.21	149049	235.73	244.47	8.4	15.0
1267.0	19.9	37.6	154	10.0	1.50	16.26	149514	275.27	244.54	8.4	15.0
1268.0	19.4	36.6	156	10.0	1.50	16.31	149999	282.88	244.62	8.4	15.0
1269.0	17.3	38.2	156	10.0	1.55	16.37	150541	316.33	244.77	8.4	15.0
1270.0	18.4	34.7	155	10.0	1.49	16.42	151047	298.08	244.89	8.4	15.0
1271.0	20.9	35.2	155	10.0	1.46	16.47	151492	261.58	244.92	8.4	15.0
1272.0	22.5	35.9	154	10.0	1.44	16.51	151904	243.33	244.92	8.4	15.1
1273.0	18.7	36.6	156	10.0	1.51	16.57	152405	293.52	245.02	8.4	15.1
1274.0	17.7	36.3	157	10.0	1.52	16.62	152936	308.73	245.16	8.4	15.1
1275.0	17.5	35.6	158	10.0	1.52	16.68	153477	313.29	245.30	8.4	15.1
1276.0	18.4	34.9	157	10.0	1.50	16.73	153990	298.08	245.41	8.4	15.1
1277.0	13.4	35.3	158	10.0	1.60	16.81	154694	407.58	245.75	8.4	15.1
1278.0	14.2	38.7	157	10.0	1.62	16.88	155360	386.29	246.05	8.4	15.1
1279.0	19.3	39.3	156	10.0	1.54	16.93	155847	284.40	246.13	8.4	15.1
1280.0	19.6	40.1	158	10.0	1.54	16.98	156331	279.83	246.20	8.4	15.1
1281.0	22.2	41.1	157	10.0	1.51	17.03	156754	246.38	246.20	8.4	15.1
1282.0	24.5	40.3	156	10.0	1.47	17.07	157136	223.56	246.15	8.4	15.1
1283.0	30.5	40.7	157	10.0	1.41	17.10	157443	179.46	246.01	8.4	15.1
1284.0	42.4	40.3	157	10.0	1.30	17.12	157666	129.27	245.77	8.4	15.1
1285.0	40.0	40.7	157	10.0	1.33	17.15	157901	136.88	245.55	8.4	15.1
1286.0	50.7	41.6	156	10.0	1.26	17.17	158087	107.98	245.26	8.4	15.1
1287.0	48.6	41.2	157	10.0	1.27	17.19	158280	112.54	244.99	8.4	15.1
1288.0	34.1	34.4	163	10.0	1.32	17.22	158567	160.77	244.82	8.4	15.1
1289.0	45.6	35.3	154	10.0	1.22	17.24	158769	120.15	244.56	8.4	15.1
1290.0	100.0	33.8	144	10.0	0.96	17.25	158856	54.75	244.18	8.4	15.1
1291.0	105.9	33.0	151	10.0	0.95	17.26	158941	51.71	243.78	8.4	15.1
1292.0	100.0	30.1	153	10.0	0.94	17.27	159033	54.75	243.40	8.4	15.1
1293.0	163.6	32.2	154	10.0	0.82	17.28	159090	33.46	242.97	8.4	15.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1294.0	163.6	35.3	155	10.0	0.85	17.28	159146	33.46	242.55	8.4	15.1
1295.0	171.4	34.9	158	10.0	0.84	17.29	159202	31.94	242.12	8.4	15.1
1296.0	156.5	34.7	160	10.0	0.86	17.30	159263	34.98	241.71	8.4	15.1
1297.0	124.1	34.2	161	10.0	0.93	17.30	159341	44.10	241.31	8.4	15.1
1298.0	76.6	32.9	158	10.0	1.06	17.32	159465	71.48	240.97	8.4	15.1
1299.0	100.0	35.0	154	10.0	0.99	17.33	159557	54.75	240.59	8.4	15.1
1300.0	92.3	35.1	155	10.0	1.02	17.34	159658	59.31	240.23	8.4	15.1
1301.0	102.9	34.7	157	10.0	0.98	17.35	159749	53.23	239.86	8.4	15.1
1302.0	102.9	34.5	161	10.0	0.99	17.36	159843	53.23	239.49	8.4	15.1
1303.0	120.0	33.8	163	10.0	0.94	17.36	159925	45.63	239.10	8.4	15.1
1304.0	171.4	33.6	164	10.0	0.84	17.37	159982	31.94	238.69	8.4	15.1
1305.0	163.6	34.0	164	10.0	0.85	17.38	160042	33.46	238.28	8.4	15.1
1306.0	189.5	33.4	164	10.0	0.81	17.38	160094	28.90	237.87	8.4	15.1
1307.0	156.5	33.7	163	10.0	0.86	17.39	160156	34.98	237.47	8.4	15.1
1308.0	100.0	32.7	147	10.0	0.96	17.40	160244	54.75	237.11	8.4	15.1
1309.0	92.3	29.5	139	10.0	0.94	17.41	160335	59.31	236.76	8.4	15.1
1310.0	109.1	30.0	158	10.0	0.93	17.42	160421	50.19	236.39	8.4	15.1
1311.0	12.9	34.4	163	10.0	1.60	17.50	161176	422.79	236.76	8.4	15.1
1312.0	11.1	34.2	160	10.0	1.64	17.59	162039	492.75	237.26	8.4	15.1
1313.0	4.9	34.8	160	10.0	1.89	17.79	163993	1112	239	8.4	15.1
1314.0	6.1	36.9	156	10.0	1.85	17.95	165521	894.25	240.24	8.4	15.1
1315.0	90.0	35.8	160	10.0	1.04	17.96	165628	60.83	239.89	8.4	15.1
1316.0	144.0	36.2	159	10.0	0.90	17.97	165694	38.02	239.50	8.4	15.1
1317.0	73.5	37.6	155	10.0	1.11	17.98	165820	74.52	239.18	8.4	15.1
1318.0	64.3	37.5	155	10.0	1.15	18.00	165965	85.17	238.88	8.4	15.1
1319.0	48.6	37.1	157	10.0	1.23	18.02	166159	112.54	238.64	8.4	15.1
1320.0	55.4	36.9	158	10.0	1.19	18.04	166330	98.85	238.37	8.4	15.1
1321.0	64.3	36.1	156	10.0	1.14	18.05	166475	85.17	238.08	8.4	15.1
1322.0	83.7	34.3	158	10.0	1.04	18.07	166588	65.40	237.75	8.4	15.1
1323.0	120.0	35.2	158	10.0	0.95	18.07	166667	45.63	237.38	8.4	15.1
1324.0	124.1	35.1	156	10.0	0.93	18.08	166743	44.10	237.01	8.4	15.2
1325.0	100.0	35.1	155	10.0	0.99	18.09	166836	54.75	236.66	8.4	15.2
1326.0	62.1	34.6	156	10.0	1.13	18.11	166987	88.21	236.38	8.4	15.2
1327.0	45.0	36.0	150	10.0	1.23	18.13	167187	121.67	236.16	8.4	15.2
1328.0	58.1	35.9	154	10.0	1.16	18.15	167346	94.29	235.89	8.4	15.2
1329.0	51.4	35.4	159	10.0	1.20	18.17	167532	106.46	235.65	8.4	15.2
1330.0	33.3	30.9	150	10.0	1.26	18.20	167802	164.25	235.51	8.4	15.2
1331.0	31.0	31.7	145	10.0	1.28	18.23	168082	176.42	235.40	8.4	15.2
1333.0	35.5	13.8	142	10.0	1.00	18.29	168561	154.36	235.10	8.4	15.2
1334.0	102.9	7.4	161	10.0	0.68	18.30	168655	53.23	234.76	8.4	15.2
1336.0	3.0	2.4	164	10.0	1.14	18.96	175210	1825	241	8.4	15.2
1337.0	22.4	14.7	162	10.0	1.15	19.01	175645	244.85	240.70	8.4	15.2
1338.0	18.1	15.2	146	10.0	1.19	19.06	176130	302.65	240.82	8.4	15.2
1339.0	5.9	1.7	147	10.0	0.96	19.23	177615	924.67	242.08	8.4	15.2

BIT NUMBER	4	IADC CODE	517	INTERVAL	1339.0- 1668.2				
HTC J22		SIZE	12.250	NOZZLES	18 18 18				
COST	6788.00	TRIP TIME	4.9	BIT RUN	329.2				
TOTAL HOURS	24.87	TOTAL TURNS	119781	CONDITION	T8 B3 G0.125				

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1340.0	6.8	14.7	197	10.0	1.48	0.15	1744	809	34425	8.4	15.2
1341.0	10.7	26.1	191	9.9	1.60	0.24	2816	513	17469	8.4	15.2
1342.0	12.8	40.3	166	9.9	1.71	0.32	3593	427	11788	8.4	15.2
1343.0	12.5	45.0	90	9.9	1.58	0.40	4023	436	8950	8.4	15.2
1344.0	23.4	45.0	90	9.9	1.38	0.44	4254	234	7207	8.4	15.2
1345.0	18.4	45.0	90	9.9	1.45	0.50	4548	298	6056	8.4	15.2
1346.0	36.7	45.0	90	9.9	1.23	0.52	4695	149	5212	8.4	15.2
1347.0	14.9	45.0	90	9.9	1.52	0.59	5058	368	4606	8.4	15.2
1348.0	58.1	45.0	90	9.9	1.08	0.61	5151	94	4105	8.4	15.2
1349.0	25.9	45.0	90	9.9	1.34	0.65	5360	211	3716	8.4	15.2
1350.0	64.3	45.0	90	9.9	1.05	0.66	5444	85	3386	8.4	15.2
1351.0	116.1	45.0	90	9.9	0.86	0.67	5490	47	3107	8.4	15.2
1352.0	90.0	45.0	90	9.9	0.94	0.68	5550	61	2873	8.4	15.2
1353.0	39.1	45.0	90	9.9	1.21	0.71	5688	140	2678	8.4	15.2
1354.0	25.7	45.0	90	9.9	1.35	0.75	5898	213	2513	8.4	15.2
1355.0	14.8	45.0	90	9.9	1.52	0.81	6263	370	2379	8.4	15.2
1356.0	50.7	45.0	90	9.9	1.13	0.83	6369	108	2246	8.4	15.2
1357.0	59.0	45.0	90	9.9	1.08	0.85	6461	93	2126	8.4	15.2
1358.0	69.2	45.0	90	9.9	1.03	0.87	6539	79	2019	8.4	15.2
1359.0	100.0	45.0	90	9.9	0.91	0.88	6593	55	1920	8.4	15.2
1360.0	73.5	45.0	90	9.9	1.01	0.89	6666	75	1832	8.4	15.2
1361.0	55.4	45.0	90	9.9	1.10	0.91	6764	99	1754	8.4	15.2
1362.0	92.3	45.0	90	10.0	0.92	0.92	6822	59	1680	8.4	15.2
1363.0	100.0	45.0	90	10.0	0.90	0.93	6876	55	1612	8.4	15.2
1364.0	19.7	45.0	90	10.0	1.42	0.98	7151	278	1559	8.4	15.2
1365.0	22.6	45.0	90	10.0	1.37	1.02	7389	242	1508	8.4	15.2
1366.0	87.8	45.0	90	10.0	0.94	1.03	7451	62	1455	8.4	15.2
1367.0	102.9	45.0	90	10.0	0.89	1.04	7503	53	1405	8.4	15.2
1368.0	144.0	45.0	90	10.0	0.78	1.05	7541	38	1358	8.4	15.2
1369.0	124.0	45.0	90	10.0	0.83	1.06	7584	44	1314	8.4	15.2
1370.0	42.1	45.0	90	10.0	1.17	1.08	7712	130	1276	8.4	15.2
1371.0	18.7	45.0	90	10.0	1.44	1.14	8002	294	1245	8.4	15.2
1372.0	25.4	45.0	90	10.0	1.34	1.18	8215	216	1214	8.4	15.2
1373.0	83.7	45.0	90	10.0	0.95	1.19	8279	65	1180	8.4	15.2
1374.0	22.4	45.0	90	10.0	1.38	1.23	8521	245	1153	8.4	15.2
1375.0	25.4	45.0	90	10.0	1.34	1.27	8734	216	1127	8.4	15.2
1376.0	15.7	45.0	90	10.0	1.49	1.34	9077	348	1106	8.4	15.2
1377.0	29.3	45.0	90	10.0	1.29	1.37	9262	187	1082	8.4	15.2
1378.0	69.2	45.0	90	10.0	1.02	1.38	9340	79	1056	8.4	15.3
1379.0	37.1	45.0	90	10.0	1.21	1.41	9485	148	1033	8.4	15.3
1380.0	57.1	45.0	90	10.0	1.08	1.43	9580	96	1011	8.4	15.3
1381.0	52.2	45.0	90	10.0	1.11	1.45	9683	104.94	989.05	8.4	15.3
1382.0	40.0	45.0	90	10.0	1.19	1.47	9818	136.88	969.23	8.4	15.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1383.0	16.5	45.0	90	10.0	1.47	1.53	10145	331.54	954.74	8.4	15.3
1384.0	8.5	45.0	90	10.0	1.69	1.65	10781	644.83	947.85	8.4	15.3
1385.0	54.5	45.0	90	10.0	1.09	1.67	10880	100.38	929.43	8.4	15.3
1386.0	34.0	45.0	90	9.9	1.26	1.70	11039	161.21	913.09	8.4	15.3
1387.0	39.1	45.0	90	9.9	1.21	1.72	11177	139.92	896.98	8.4	15.3
1388.0	28.3	45.0	90	9.9	1.31	1.76	11368	193.15	882.61	8.4	15.3
1389.0	25.7	45.0	90	9.9	1.35	1.80	11578	212.92	869.22	8.4	15.3
1390.0	39.1	45.0	90	9.9	1.21	1.82	11716	139.92	854.92	8.4	15.3
1391.0	12.9	45.0	90	9.9	1.57	1.90	12133	422.79	846.61	8.4	15.3
1392.0	33.3	45.0	90	9.9	1.26	1.93	12295	164.25	833.74	8.4	15.3
1393.0	23.2	45.0	90	9.9	1.38	1.97	12527	235.73	822.66	8.4	15.3
1394.0	22.9	45.0	90	9.9	1.38	2.02	12763	238.77	812.04	8.4	15.3
1395.0	13.4	45.0	90	9.9	1.56	2.09	13166	409.10	804.85	8.4	15.3
1396.0	13.4	45.0	90	9.9	1.56	2.17	13570	409.10	797.91	8.4	15.3
1397.0	163.6	45.0	90	9.9	0.75	2.17	13603	33.46	784.73	8.4	15.3
1398.0	80.0	45.0	90	10.0	0.97	2.19	13670	68.44	772.59	8.4	15.3
1399.0	54.0	45.0	90	9.9	1.11	2.20	13770	101.39	761.40	8.4	15.3
1400.0	63.5	45.0	90	9.9	1.05	2.22	13855	86.18	750.33	8.4	15.3
1401.0	54.5	45.0	90	9.9	1.10	2.24	13954	100.38	739.85	8.4	15.3
1402.0	156.5	45.0	90	9.9	0.76	2.24	13989	34.98	728.66	8.4	15.3
1403.0	22.8	45.0	90	9.9	1.38	2.29	14226	240.29	721.03	8.4	15.3
1404.0	15.7	45.0	90	9.9	1.51	2.35	14571	349.79	715.32	8.4	15.3
1405.0	25.7	45.0	90	9.9	1.35	2.39	14781	212.92	707.70	8.4	15.3
1406.0	13.7	45.0	90	9.9	1.55	2.46	15175	399.98	703.11	8.4	15.3
1407.0	34.6	45.0	90	9.9	1.25	2.49	15331	158.17	695.10	8.4	15.3
1408.0	35.0	45.0	90	9.9	1.25	2.52	15486	156.65	687.29	8.4	15.3
1409.0	24.2	45.0	90	9.9	1.37	2.56	15709	226.60	680.71	8.4	15.3
1410.0	50.0	45.0	90	9.9	1.13	2.58	15817	109.50	672.67	8.4	15.3
1411.0	33.6	45.0	90	9.9	1.26	2.61	15978	162.73	665.58	8.4	15.3
1412.0	33.0	45.0	90	9.9	1.26	2.64	16141	165.77	658.74	8.4	15.3
1413.0	48.6	45.0	90	9.9	1.14	2.66	16252	112.54	651.36	8.4	15.3
1414.0	42.4	45.0	90	9.9	1.18	2.69	16380	129.27	644.40	8.4	15.3
1415.0	50.0	45.0	90	9.9	1.13	2.71	16488	109.50	637.36	8.4	15.3
1416.0	9.1	45.0	90	9.9	1.68	2.82	17083	603.77	636.92	8.4	15.3
1417.0	8.2	45.0	90	9.9	1.71	2.94	17739	664.60	637.28	8.4	15.3
1418.0	14.8	45.0	90	10.0	1.51	3.01	18103	369.56	633.89	8.4	15.3
1419.0	7.5	45.0	90	10.0	1.73	3.14	18825	731.52	635.11	8.4	15.3
1420.0	6.8	45.0	90	10.0	1.76	3.29	19623	809.08	637.26	8.4	15.3
1421.0	26.3	45.0	90	10.0	1.33	3.33	19828	208.35	632.03	8.4	15.3
1422.0	22.5	45.0	90	10.0	1.38	3.37	20068	243.33	627.34	8.4	15.3
1423.0	21.2	45.0	90	10.0	1.39	3.42	20323	258.54	622.95	8.4	15.3
1424.0	17.1	45.0	90	10.0	1.46	3.48	20640	320.90	619.40	8.4	15.3
1425.0	25.9	45.0	90	10.0	1.33	3.52	20848	211.40	614.65	8.4	15.3
1426.0	35.3	45.0	90	10.0	1.23	3.54	21001	155.13	609.37	8.4	15.3
1427.0	23.2	45.0	90	10.0	1.36	3.59	21234	235.73	605.13	8.4	15.3
1428.0	31.3	45.0	90	10.0	1.27	3.62	21406	174.90	600.29	8.4	15.3
1429.0	29.3	45.0	90	10.0	1.29	3.65	21591	187.06	595.70	8.4	15.3
1430.0	26.9	45.0	90	10.0	1.32	3.69	21792	203.79	591.39	8.4	15.3
1431.0	23.8	45.0	90	10.0	1.36	3.73	22018	229.65	587.46	8.4	15.3
1432.0	26.1	45.0	90	10.0	1.33	3.77	22225	209.88	583.40	8.4	15.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1433.0	12.7	45.0	90	10.0	1.56	3.85	22651	431.92	581.79	8.4	15.3
1434.0	24.7	45.0	90	10.0	1.35	3.89	22870	222.04	578.00	8.4	15.4
1435.0	35.3	45.0	90	10.0	1.23	3.92	23023	155.13	573.60	8.4	15.4
1436.0	14.2	45.0	90	10.0	1.52	3.99	23404	386.29	571.67	8.4	15.4
1437.0	15.4	31.0	88	10.0	1.33	4.05	23747	354.86	569.46	8.4	15.4
1438.0	14.4	35.5	81	10.0	1.38	4.12	24086	380.21	567.54	8.4	15.4
1439.0	22.1	31.8	81	10.0	1.21	4.17	24307	247.90	564.35	8.4	15.4
1440.0	15.3	40.0	92	10.0	1.45	4.23	24670	358.92	562.31	8.4	15.4
1441.0	35.6	31.9	81	10.0	1.08	4.26	24808	153.98	558.31	8.4	15.4
1442.0	20.5	39.0	95	10.0	1.36	4.31	25085	267.67	555.49	8.4	15.4
1443.0	14.8	43.4	95	10.0	1.51	4.38	25470	371.08	553.72	8.4	15.4
1444.0	15.5	43.7	93	10.0	1.49	4.44	25831	354.35	551.82	8.4	15.4
1445.0	26.1	42.9	91	10.0	1.31	4.48	26041	209.88	548.59	8.4	15.4
1446.0	23.5	43.1	93	10.0	1.35	4.52	26278	232.69	545.64	8.4	15.4
1447.0	22.6	42.7	94	10.0	1.36	4.57	26526	241.81	542.83	8.4	15.4
1448.0	12.9	43.9	93	10.0	1.55	4.65	26962	425.83	541.75	8.4	15.4
1449.0	15.5	44.7	95	10.0	1.51	4.71	27332	354.35	540.05	8.4	15.4
1450.0	12.7	44.4	90	10.0	1.55	4.79	27756	430.40	539.06	8.4	15.4
1451.0	9.8	44.5	93	10.0	1.64	4.89	28323	558.15	539.23	8.4	15.4
1452.0	12.1	44.1	92	10.0	1.57	4.97	28779	451.69	538.46	8.4	15.4
1453.0	13.5	44.1	91	10.0	1.53	5.05	29185	404.54	537.28	8.4	15.4
1454.0	15.6	43.9	92	10.0	1.49	5.11	29539	351.31	535.66	8.4	15.4
1455.0	22.2	42.9	92	10.0	1.37	5.16	29788	246.38	533.17	8.4	15.4
1456.0	54.5	42.7	93	10.0	1.08	5.17	29890	100.38	529.47	8.4	15.4
1457.0	49.3	43.0	92	10.0	1.11	5.20	30003	111.02	525.92	8.4	15.4
1458.0	36.7	36.0	57	10.0	1.00	5.22	30095	149.04	522.76	8.4	15.4
1459.0	80.9	47.3	81	10.0	0.95	5.23	30155	67.68	518.97	8.4	15.4
1460.0	14.3	50.6	89	10.0	1.57	5.30	30526	381.73	517.83	8.4	15.4
1461.0	6.1	48.4	90	10.0	1.84	5.47	31413	903.37	520.99	8.4	15.4
1462.0	6.1	47.0	66	10.0	1.72	5.63	32064	892.73	524.01	8.4	15.4
1463.0	19.7	47.5	63	10.0	1.33	5.68	32256	278.31	522.03	8.4	15.4
1464.0	56.2	46.0	62	10.0	0.97	5.70	32322	97.33	518.63	8.4	15.4
1465.0	51.4	48.7	68	10.0	1.05	5.72	32402	106.46	515.36	8.4	15.4
1466.0	20.6	31.2	74	10.0	1.20	5.77	32619	266.15	513.40	8.4	15.4
1467.0	76.6	40.3	95	10.0	0.97	5.78	32693	71.48	509.95	8.4	15.4
1468.0	69.2	43.6	93	10.0	1.02	5.80	32774	79.08	506.61	8.4	15.4
1469.0	29.5	46.2	82	10.0	1.27	5.83	32942	185.54	504.14	8.4	15.4
1470.0	32.1	46.0	95	10.0	1.29	5.86	33119	170.33	501.59	8.4	15.4
1471.0	24.5	46.6	71	10.0	1.29	5.90	33293	223.56	499.48	8.4	15.4
1472.0	29.0	46.4	61	10.0	1.18	5.94	33420	188.58	497.15	8.4	15.4
1473.0	22.6	46.9	60	10.0	1.26	5.98	33579	241.81	495.24	8.4	15.4
1474.0	13.4	47.5	61	10.0	1.44	6.06	33854	409.10	494.60	8.4	15.4
1475.0	5.8	47.9	63	10.0	1.73	6.23	34500	936.83	497.86	8.4	15.4
1476.0	6.9	50.4	71	10.0	1.74	6.37	35116	787.79	499.97	8.4	15.4
1477.0	23.4	51.2	71	10.0	1.34	6.41	35299	234.21	498.05	8.4	15.4
1478.0	43.9	43.5	63	10.0	1.03	6.44	35385	124.71	495.36	8.4	15.4
1479.0	43.9	46.7	82	10.0	1.14	6.46	35497	124.71	492.71	8.4	15.4
1480.0	70.6	47.2	91	10.0	1.03	6.47	35574	77.56	489.77	8.4	15.4
1481.0	53.7	44.8	90	10.0	1.10	6.49	35674	101.90	487.04	8.4	15.4
1482.0	24.3	45.0	83	10.0	1.33	6.53	35880	225.08	485.20	8.4	15.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1483.0	37.1	45.0	78	10.0	1.17	6.56	36005	147.52	482.86	8.4	15.4
1484.0	16.4	45.0	86	10.0	1.46	6.62	36321	334.58	481.84	8.4	15.4
1485.0	27.1	30.0	90	10.0	1.16	6.66	36520	202.03	479.92	8.4	15.4
1486.0	10.9	32.8	87	10.0	1.45	6.75	37000	502.29	480.07	8.4	15.4
1487.0	14.0	27.6	93	10.0	1.33	6.82	37399	391.07	479.47	8.4	15.4
1488.0	12.2	33.7	85	10.0	1.42	6.90	37816	448.65	479.26	8.4	15.4
1489.0	35.6	35.3	88	10.0	1.13	6.93	37964	153.60	477.09	8.4	15.4
1490.0	69.2	35.0	89	10.0	0.94	6.95	38041	79.08	474.46	8.4	15.4
1491.0	85.7	35.0	89	10.0	0.87	6.96	38104	63.88	471.76	8.4	15.4
1492.0	60.0	35.0	83	10.0	0.96	6.97	38186	91.25	469.27	8.4	15.5
1493.0	69.2	35.0	85	10.0	0.92	6.99	38260	79.08	466.74	8.4	15.5
1494.0	70.6	45.0	88	10.0	1.00	7.00	38335	77.56	464.22	8.4	15.5
1495.0	62.1	45.0	89	10.0	1.04	7.02	38421	88.21	461.81	8.4	15.5
1496.0	60.0	45.0	89	10.0	1.06	7.04	38509	91.25	459.45	8.4	15.5
1497.0	48.6	45.0	87	10.0	1.12	7.06	38616	112.54	457.26	8.4	15.5
1498.0	24.3	45.0	67	10.0	1.25	7.10	38781	225.08	455.80	8.4	15.5
1499.0	10.4	45.0	68	10.0	1.53	7.19	39171	524.69	456.23	8.4	15.5
1500.0	21.3	45.0	87	10.0	1.38	7.24	39417	257.02	454.99	8.4	15.5
1501.0	18.5	20.0	91	10.0	1.14	7.29	39712	296.56	454.01	8.4	15.5
1502.0	11.4	20.0	77	10.0	1.23	7.38	40119	480.58	454.18	8.4	15.5
1503.0	31.6	20.0	86	10.0	0.99	7.41	40282	173.38	452.46	8.4	15.5
1504.0	18.3	20.0	92	10.0	1.15	7.47	40583	299.60	451.54	8.4	15.5
1505.0	21.1	13.0	101	10.0	1.03	7.52	40870	260.06	450.38	8.4	15.5
1506.0	31.9	13.0	98	10.0	0.92	7.55	41055	171.85	448.72	8.4	15.5
1507.0	45.0	13.0	88	10.0	0.82	7.57	41172	121.67	446.77	8.4	15.5
1508.0	38.3	13.0	77	10.0	0.83	7.60	41293	142.96	444.97	8.4	15.5
1509.0	13.6	13.0	84	10.0	1.08	7.67	41660	401.50	444.72	8.4	15.5
1510.0	65.5	5.0	85	10.0	0.60	7.68	41738	83.59	442.60	8.4	15.5
1511.0	13.1	5.0	80	10.0	0.89	7.76	42105	417.94	442.46	8.4	15.5
1512.0	17.8	5.0	85	10.0	0.84	7.82	42391	307.58	441.68	8.4	15.5
1513.0	17.0	13.0	82	10.0	1.03	7.88	42681	322.06	440.99	8.4	15.5
1514.0	15.0	5.0	85	10.0	0.87	7.94	43019	365.00	440.56	8.4	15.5
1515.0	11.0	5.0	85	10.0	0.93	8.03	43485	497.73	440.88	8.4	15.5
1516.0	9.0	5.0	78	10.0	0.95	8.14	44008	608.33	441.83	8.4	15.5
1517.0	46.8	5.0	89	10.0	0.67	8.17	44122	116.99	440.01	8.4	15.5
1518.0	44.4	45.0	88	10.0	1.15	8.19	44241	123.19	438.24	8.4	15.5
1519.0	23.2	45.0	85	10.0	1.35	8.23	44460	235.73	437.11	8.4	15.5
1520.0	11.9	45.0	89	10.0	1.57	8.31	44907	459.29	437.23	8.4	15.5
1521.0	52.9	45.0	86	10.0	1.09	8.33	45005	103.42	435.40	8.4	15.5
1522.0	34.3	45.0	79	10.0	1.20	8.36	45143	159.69	433.89	8.4	15.5
1523.0	32.4	45.0	85	10.0	1.24	8.39	45301	168.81	432.45	8.4	15.5
1524.0	16.1	45.0	88	10.0	1.47	8.46	45626	339.15	431.95	8.4	15.5
1525.0	11.8	45.0	89	10.0	1.58	8.54	46076	463.85	432.12	8.4	15.5
1526.0	15.2	45.0	87	10.0	1.49	8.61	46421	360.44	431.74	8.4	15.5
1527.0	10.8	40.0	89	10.0	1.55	8.70	46915	506.44	432.13	8.4	15.5
1528.0	16.5	45.0	92	10.0	1.48	8.76	47248	331.54	431.60	8.4	15.5
1529.0	15.6	40.0	81	10.0	1.41	8.82	47560	351.31	431.18	8.4	15.5
1530.0	22.0	40.0	94	10.0	1.35	8.87	47819	249.42	430.23	8.4	15.5
1531.0	27.7	40.0	96	10.0	1.28	8.91	48028	197.71	429.02	8.4	15.5
1532.0	12.7	40.0	92	10.0	1.51	8.98	48461	430.40	429.02	8.4	15.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1533.0	31.3	40.0	94	10.0	1.24	9.02	48642	174.90	427.71	8.4	15.5
1534.0	22.9	40.0	74	10.0	1.26	9.06	48834	238.77	426.74	8.4	15.5
1535.0	20.7	40.0	68	10.0	1.26	9.11	49031	264.63	425.92	8.4	15.5
1536.0	27.9	40.0	87	10.0	1.25	9.14	49218	196.19	424.75	8.4	15.5
1537.0	27.9	40.0	91	10.0	1.26	9.18	49415	196.19	423.60	8.4	15.5
1538.0	21.3	40.0	94	10.0	1.35	9.23	49678	257.02	422.76	8.4	15.5
1539.0	14.3	40.0	84	10.0	1.44	9.30	50031	383.25	422.56	8.4	15.5
1540.0	30.5	40.0	89	10.0	1.23	9.33	50206	179.46	421.35	8.4	15.5
1541.0	46.2	40.0	90	10.0	1.10	9.35	50323	118.63	419.85	8.4	15.5
1542.0	42.9	40.0	90	10.0	1.13	9.37	50449	127.75	418.41	8.4	15.5
1543.0	45.6	40.0	90	10.0	1.11	9.40	50568	120.15	416.95	8.4	15.5
1544.0	46.2	40.2	90	10.0	1.11	9.42	50685	118.63	415.50	8.4	15.5
1545.0	51.4	39.5	88	10.0	1.06	9.44	50788	106.46	414.00	8.4	15.5
1546.0	69.2	37.3	92	10.0	0.96	9.45	50868	79.08	412.38	8.4	15.5
1547.0	61.0	33.8	86	10.0	0.95	9.47	50953	89.73	410.83	8.4	15.5
1548.0	20.5	16.6	80	10.0	1.04	9.52	51187	267.67	410.14	8.4	15.5
1549.0	50.7	27.9	91	10.0	0.97	9.54	51295	107.98	408.70	8.4	15.5
1550.0	66.7	21.8	87	10.0	0.83	9.55	51374	82.13	407.16	8.4	15.5
1551.0	17.5	22.8	111	10.0	1.25	9.61	51757	313.29	406.71	8.4	15.5
1552.0	17.1	24.3	110	10.0	1.27	9.67	52141	319.37	406.30	8.4	15.6
1553.0	28.6	21.5	70	10.0	0.99	9.70	52289	191.63	405.30	8.4	15.6
1554.0	27.3	17.9	80	10.0	0.98	9.74	52465	200.75	404.35	8.4	15.6
1555.0	57.1	33.0	85	10.0	0.96	9.76	52554	95.81	402.92	8.4	15.6
1556.0	39.1	30.0	85	10.0	1.04	9.78	52684	139.92	401.71	8.4	15.6
1557.0	60.0	27.6	84	10.0	0.90	9.80	52769	91.25	400.28	8.4	15.6
1558.0	80.0	26.5	85	10.0	0.81	9.81	52832	68.44	398.77	8.4	15.6
1559.0	50.0	24.5	86	10.0	0.92	9.83	52935	109.50	397.45	8.4	15.6
1560.0	87.8	29.3	77	10.0	0.78	9.84	52988	62.35	395.94	8.4	15.6
1561.0	53.7	32.5	85	10.0	0.97	9.86	53082	101.90	394.61	8.4	15.6
1562.0	53.7	34.9	82	10.0	0.99	9.88	53174	101.90	393.30	8.4	15.6
1563.0	20.2	37.9	86	10.0	1.32	9.93	53430	270.71	392.75	8.4	15.6
1564.0	48.0	46.1	85	10.0	1.12	9.95	53535	114.06	391.51	8.4	15.6
1565.0	48.6	45.1	86	10.0	1.12	9.97	53642	112.54	390.28	8.4	15.6
1566.0	54.5	46.8	85	10.0	1.09	9.99	53735	100.38	389.00	8.4	15.6
1567.0	58.1	46.0	84	10.0	1.06	10.01	53822	94.29	387.71	8.4	15.6
1568.0	65.5	43.5	85	10.0	1.00	10.02	53900	83.65	386.38	8.4	15.6
1569.0	67.9	43.8	86	10.0	1.00	10.04	53975	80.60	385.05	8.4	15.6
1570.0	55.4	43.6	85	10.0	1.06	10.05	54067	98.85	383.81	8.4	15.6
1571.0	48.0	44.7	85	10.0	1.11	10.07	54173	114.06	382.65	8.4	15.6
1572.0	44.4	42.7	79	10.0	1.10	10.10	54280	123.19	381.54	8.4	15.6
1573.0	11.0	43.7	85	10.0	1.57	10.19	54743	495.79	382.03	8.4	15.6
1574.0	7.1	46.6	108	10.0	1.82	10.33	55661	774.10	383.69	8.4	15.6
1575.0	11.7	47.7	111	10.0	1.68	10.41	56227	466.90	384.05	8.4	15.6
1576.0	34.6	42.5	108	10.0	1.27	10.44	56414	158.17	383.09	8.4	15.6
1577.0	31.6	42.5	109	10.0	1.30	10.48	56620	173.38	382.21	8.4	15.6
1578.0	32.1	42.5	106	10.0	1.29	10.51	56818	170.33	381.33	8.4	15.6
1579.0	29.8	40.7	103	10.0	1.29	10.54	57026	184.02	380.50	8.4	15.6
1580.0	25.9	40.3	99	10.0	1.31	10.58	57255	211.40	379.80	8.4	15.6
1581.0	27.1	39.2	102	10.0	1.30	10.62	57481	202.27	379.07	8.4	15.6
1582.0	22.1	35.0	94	10.0	1.29	10.66	57737	247.90	378.53	8.4	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1583.0	29.5	42.5	104	10.0	1.31	10.69	57949	185.54	377.74	8.4	15.6
1584.0	30.8	42.8	104	10.0	1.30	10.73	58152	177.94	376.92	8.4	15.6
1585.0	19.4	44.2	103	10.0	1.46	10.78	58473	282.88	376.54	8.4	15.6
1586.0	9.2	45.2	107	10.0	1.72	10.89	59173	596.17	377.43	8.4	15.6
1587.0	12.8	26.3	96	10.0	1.35	10.97	59622	428.88	377.64	8.4	15.6
1588.0	26.7	32.3	92	10.0	1.20	11.00	59829	205.31	376.95	8.4	15.6
1589.0	36.0	34.6	94	10.0	1.14	11.03	59985	152.08	376.05	8.4	15.6
1590.0	31.9	21.1	95	10.0	1.03	11.06	60164	171.85	375.23	8.4	15.6
1591.0	31.6	38.8	99	10.0	1.24	11.09	60352	173.38	374.43	8.4	15.6
1592.0	34.3	36.0	103	10.0	1.20	11.12	60532	159.69	373.58	8.4	15.6
1593.0	36.4	34.6	110	10.0	1.18	11.15	60713	150.56	372.70	8.4	15.6
1594.0	40.9	32.8	110	10.0	1.13	11.18	60874	133.83	371.77	8.4	15.6
1595.0	30.8	30.9	110	10.0	1.20	11.21	61090	177.94	371.01	8.4	15.6
1596.0	33.6	32.3	110	10.0	1.19	11.24	61287	162.73	370.20	8.4	15.6
1597.0	35.3	33.8	110	10.0	1.19	11.27	61474	155.13	369.37	8.4	15.6
1598.0	34.6	35.2	110	10.0	1.21	11.29	61666	158.17	368.55	8.4	15.6
1599.0	36.0	34.6	110	10.0	1.19	11.32	61849	152.08	367.72	8.4	15.6
1600.0	10.0	35.0	83	10.0	1.49	11.42	62347	547.50	368.41	8.4	15.6
1601.0	11.4	38.5	87	10.0	1.51	11.51	62806	479.91	368.83	8.4	15.6
1602.0	6.9	37.8	84	10.0	1.64	11.65	63531	789.31	370.43	8.4	15.6
1603.0	13.7	44.6	88	10.0	1.52	11.73	63915	399.98	370.54	8.4	15.6
1604.0	14.6	46.3	90	10.0	1.53	11.80	64286	375.65	370.56	8.4	15.6
1605.0	33.3	44.8	97	10.0	1.27	11.83	64460	164.25	369.79	8.4	15.6
1606.0	12.0	45.6	89	10.0	1.58	11.91	64903	456.25	370.11	8.4	15.6
1607.0	20.8	47.4	93	10.0	1.44	11.96	65172	263.10	369.71	8.4	15.6
1608.0	32.1	47.1	104	10.0	1.32	11.99	65366	170.33	368.97	8.4	15.6
1609.0	11.3	48.3	93	10.0	1.64	12.08	65856	483.62	369.40	8.4	15.6
1610.0	61.0	37.1	76	10.0	0.94	12.09	65931	89.73	368.36	8.4	15.6
1611.0	25.4	36.4	99	10.0	1.28	12.13	66164	215.96	367.80	8.4	15.6
1612.0	34.0	37.4	109	10.0	1.23	12.16	66358	161.21	367.05	8.4	15.6
1613.0	28.3	38.1	105	10.0	1.28	12.20	66579	193.15	366.41	8.4	15.6
1614.0	22.9	34.8	99	10.0	1.29	12.24	66838	238.77	365.95	8.4	15.7
1615.0	25.4	33.6	103	10.0	1.26	12.28	67083	215.96	365.40	8.4	15.7
1616.0	31.0	36.5	110	10.0	1.25	12.31	67297	176.42	364.72	8.4	15.7
1617.0	26.7	36.0	111	10.0	1.30	12.35	67547	205.31	364.15	8.4	15.7
1618.0	5.6	37.9	112	10.0	1.79	12.53	68752	982.46	366.36	8.4	15.7
1619.0	16.0	46.5	111	10.0	1.57	12.59	69169	342.19	366.28	8.4	15.7
1620.0	12.8	46.9	111	10.0	1.64	12.67	69688	428.88	366.50	8.4	15.7
1621.0	5.9	46.7	106	10.0	1.88	12.84	70763	924.67	368.48	8.4	15.7
1622.0	3.0	45.7	73	10.0	1.96	13.17	72228	1827	374	8.4	15.7
1623.0	2.9	48.3	59	10.0	1.94	13.52	73445	1890	379	8.4	15.7
1624.0	3.1	45.8	58	10.0	1.88	13.85	74580	1793	384	8.4	15.7
1625.0	2.7	45.5	59	10.0	1.92	14.21	75881	1997	390	8.4	15.7
1626.0	3.3	45.2	58	10.0	1.85	14.51	76934	1643	394	8.4	15.7
1627.0	2.4	46.4	58	10.0	1.98	14.93	78416	2319	401	8.4	15.7
1628.0	2.7	47.0	75	10.0	2.02	15.30	80078	2021	406	8.4	15.7
1629.0	3.5	48.8	75	10.0	1.96	15.59	81364	1565	410	8.4	15.7
1630.0	2.5	44.9	75	10.0	2.02	15.99	83168	2195	416	8.4	15.7
1631.0	2.5	46.3	75	10.0	2.04	16.39	84955	2175	422	8.4	15.7
1632.0	11.2	50.0	75	10.0	1.59	16.48	85356	488.19	422.61	8.4	15.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1633.0	15.8	50.0	75	10.0	1.48	16.54	85641	346.75	422.35	8.4	15.7
1634.0	8.0	50.0	75	10.0	1.71	16.66	86204	684.38	423.24	8.4	15.7
1635.0	11.4	50.0	75	10.0	1.59	16.75	86600	482.10	423.44	8.4	15.7
1636.0	21.3	50.0	75	10.0	1.38	16.80	86811	257.02	422.88	8.4	15.7
1637.0	15.2	50.0	75	10.0	1.49	16.87	87108	360.44	422.67	8.4	15.7
1638.0	11.7	50.0	75	10.0	1.58	16.95	87493	468.42	422.82	8.4	15.7
1639.0	12.8	50.0	75	10.0	1.55	17.03	87844	427.35	422.83	8.4	15.7
1640.0	7.2	50.0	75	10.0	1.74	17.17	88466	757.38	423.95	8.4	15.7
1641.0	4.1	50.0	75	10.0	1.92	17.41	89556	1326	427	8.4	15.7
1642.0	7.3	50.0	75	10.0	1.74	17.55	90176	754.33	428.01	8.4	15.7
1643.0	7.7	50.0	75	10.0	1.72	17.68	90761	711.75	428.95	8.4	15.7
1644.0	7.4	50.0	75	10.0	1.73	17.81	91371	742.17	429.97	8.4	15.7
1645.0	6.6	50.0	75	10.0	1.77	17.96	92049	824.29	431.26	8.4	15.7
1646.0	6.7	50.0	75	10.0	1.76	18.11	92720	816.69	432.52	8.4	15.7
1647.0	5.6	50.0	75	10.0	1.82	18.29	93521	974.85	434.28	8.4	15.7
1648.0	7.0	50.0	75	10.0	1.75	18.43	94165	783.23	435.41	8.4	15.7
1649.0	1.8	50.0	75	10.0	2.20	18.99	96665	3042	444	8.4	15.7
1650.0	2.8	50.0	75	9.8	2.10	19.35	98272	1955	449	8.4	15.7
1651.0	3.5	50.0	75	9.8	2.02	19.63	99558	1564	452	8.4	15.7
1652.0	5.5	50.0	75	9.8	1.87	19.81	100376	995.45	453.99	8.4	15.7
1653.0	2.3	50.0	75	9.8	2.16	20.25	102333	2380	460	8.4	15.7
1654.0	6.2	50.0	75	9.8	1.83	20.41	103059	883.06	461.46	8.4	15.7
1655.0	13.4	50.0	75	9.8	1.57	20.48	103394	408.58	461.30	8.4	15.7
1656.0	15.6	50.0	75	9.8	1.51	20.55	103683	350.96	460.95	8.4	15.7
1657.0	12.6	50.0	75	9.8	1.59	20.63	104040	434.52	460.87	8.4	15.7
1658.0	8.0	50.0	75	9.8	1.74	20.75	104601	682.85	461.56	8.4	15.7
1659.0	2.4	50.0	75	9.8	2.15	21.17	106466	2269	467	8.4	15.7
1660.0	1.2	50.0	75	9.8	2.37	21.98	110119	4444	480	8.4	15.7
1661.0	1.8	50.0	75	9.8	2.25	22.55	112675	3110	488	8.4	15.7
1662.0	4.6	50.0	75	9.8	1.93	22.76	113649	1185	490	8.4	15.7
1663.0	10.1	50.0	75	9.8	1.66	22.86	114096	544.46	490.09	8.4	15.7
1664.0	7.1	50.0	75	9.8	1.78	23.00	114729	769.54	490.95	8.4	15.7
1665.0	6.3	47.0	67	9.7	1.76	23.16	115365	869.92	492.12	8.4	15.7
1666.0	6.9	43.7	42	9.7	1.54	23.31	115731	787.79	493.02	8.4	15.7
1667.0	1.8	44.9	43	9.7	2.01	23.88	117185	3121	501	8.4	15.7
1668.0	1.2	44.7	45	9.7	2.15	24.71	119411	4563	513	8.4	15.7
1668.2	1.3	45.0	39	9.7	2.09	24.87	119781	4372	516	8.4	15.7

BIT NUMBER	5	IADC CODE	617	INTERVAL	1668.2- 1942.0				
HTC J44		SIZE	12.250	NOZZLES	18 18 18				
COST	4919.00	TRIP TIME	6.2	BIT RUN	273.8				
TOTAL HOURS	32.21	TOTAL TURNS	140419	CONDITION	T3 B8 G0.000				

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1669.0	1.9	40.3	65	9.7	2.05	0.42	1637	2867	51447	8.4	15.7
1670.0	2.9	43.8	80	9.7	2.04	0.76	3288	1878	23909	8.4	15.7
1671.0	4.1	41.1	108	9.7	1.98	1.01	4875	1338	15848	8.4	15.7
1672.0	3.3	40.1	109	9.7	2.04	1.31	6854	1659	12114	8.4	15.7
1673.0	12.4	46.5	78	9.7	1.58	1.39	7231	442	9682	8.4	15.7
1674.0	23.0	46.2	64	9.7	1.31	1.43	7398	238	8054	8.4	15.7
1675.0	28.6	39.8	63	9.7	1.18	1.47	7530	192	6898	8.4	15.7
1676.0	55.4	50.1	64	9.7	1.04	1.49	7599	99	6026	8.4	15.7
1677.0	40.9	49.4	70	9.7	1.17	1.51	7701	134	5356	8.4	15.7
1678.0	33.0	51.0	76	9.7	1.29	1.54	7840	166	4827	8.4	15.8
1679.0	40.9	50.2	77	9.7	1.21	1.57	7953	134	4392	8.4	15.8
1680.0	49.3	50.0	77	9.7	1.15	1.59	8047	111	4029	8.4	15.8
1681.0	51.4	50.0	77	9.7	1.13	1.61	8137	106	3723	8.4	15.8
1682.0	53.7	50.6	77	9.7	1.12	1.62	8223	102	3461	8.4	15.8
1683.0	41.9	51.7	77	9.7	1.21	1.65	8334	131	3236	8.4	15.8
1684.0	39.6	49.7	77	9.7	1.22	1.67	8450	138	3040	8.4	15.8
1685.0	43.4	47.6	67	9.7	1.12	1.70	8543	126	2866	8.4	15.8
1686.0	36.7	50.1	73	9.7	1.23	1.72	8662	149	2714	8.4	15.8
1687.0	34.6	48.5	76	9.7	1.25	1.75	8794	158	2578	8.4	15.8
1688.0	37.9	48.8	76	9.7	1.22	1.78	8914	144	2455	8.4	15.8
1689.0	40.4	48.9	76	9.7	1.20	1.80	9028	135	2343	8.4	15.8
1690.0	40.9	47.7	76	9.7	1.19	1.83	9140	134	2242	8.4	15.8
1691.0	29.5	49.3	76	9.7	1.31	1.86	9295	186	2152	8.4	15.8
1692.0	25.2	50.3	76	9.7	1.37	1.90	9477	217	2070	8.4	15.8
1693.0	27.3	48.7	76	9.7	1.33	1.94	9644	201	1995	8.4	15.8
1694.0	34.6	50.1	76	9.7	1.26	1.97	9776	158	1924	8.5	15.8
1695.0	28.8	48.0	72	9.7	1.29	2.00	9926	190	1859	8.5	15.8
1696.0	30.3	47.0	76	9.7	1.28	2.03	10077	181	1799	8.5	15.8
1697.0	26.1	48.0	76	9.7	1.34	2.07	10253	210	1744	8.5	15.8
1698.0	26.5	47.3	76	9.7	1.33	2.11	10425	207	1692	8.5	15.8
1699.0	27.9	46.3	76	9.7	1.30	2.15	10589	196	1643	8.5	15.8
1700.0	14.2	46.2	76	9.7	1.53	2.22	10911	385	1604	8.5	15.8
1701.0	26.5	45.4	76	9.7	1.31	2.25	11084	207	1561	8.5	15.8
1702.0	12.6	47.6	77	9.7	1.58	2.33	11448	433	1528	8.5	15.8
1703.0	4.9	47.9	77	9.7	1.90	2.54	12382	1112	1516	8.5	15.8
1704.0	7.0	49.1	77	9.7	1.80	2.68	13042	786	1496	8.5	15.8
1705.0	4.0	48.7	78	9.7	1.99	2.93	14213	1369	1492	8.5	15.8
1706.0	4.6	48.3	77	9.6	1.95	3.15	15209	1179	1484	8.5	15.8
1707.0	17.0	46.9	77	9.6	1.49	3.20	15481	322	1454	8.5	15.8
1708.0	9.0	47.2	77	9.6	1.71	3.32	15993	608	1433	8.5	15.8
1709.0	24.0	43.7	77	9.6	1.35	3.36	16186	228	1403	8.5	15.8
1710.0	7.5	47.6	77	9.6	1.78	3.49	16798	725	1387	8.5	15.8
1711.0	2.5	48.3	77	9.6	2.17	3.90	18686	2233	1407	8.5	15.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1712.0	3.3	47.7	77	9.6	2.06	4.20	20088	1656	1412	8.5	15.8
1713.0	9.8	47.4	77	9.6	1.69	4.30	20560	558	1393	8.5	15.8
1714.0	27.7	46.0	69	9.6	1.28	4.34	20709	198	1367	8.5	15.8
1715.0	38.3	43.7	72	9.6	1.17	4.36	20822	143	1341	8.5	15.8
1716.0	42.4	41.7	56	9.6	1.04	4.39	20901	129	1316	8.5	15.8
1717.0	38.7	45.9	61	9.6	1.13	4.41	20995	141	1292	8.5	15.8
1718.0	21.2	45.7	72	9.6	1.38	4.46	21199	259	1271	8.5	15.8
1719.0	17.7	46.1	75	9.6	1.46	4.52	21452	309	1252	8.5	15.8
1720.0	27.5	46.1	75	9.6	1.32	4.55	21616	199	1232	8.5	15.8
1721.0	2.5	47.0	66	9.6	2.08	4.95	23159	2147	1249	8.5	15.8
1722.0	1.8	48.1	51	9.6	2.13	5.50	24861	3051	1282	8.5	15.8
1723.0	6.0	49.1	57	9.6	1.77	5.67	25435	913	1276	8.5	15.8
1724.0	5.0	46.8	75	9.6	1.90	5.87	26336	1095	1272	8.5	15.8
1725.0	10.7	48.3	70	9.6	1.63	5.96	26727	509	1259	8.5	15.8
1726.0	8.0	48.4	75	9.6	1.76	6.09	27292	684	1249	8.5	15.8
1727.0	6.0	46.7	74	9.6	1.83	6.25	28036	913	1243	8.4	15.8
1728.0	9.0	48.0	76	9.6	1.72	6.37	28541	608	1233	8.4	15.8
1729.0	6.3	48.1	76	9.6	1.84	6.52	29265	869	1227	8.4	15.8
1730.0	7.0	46.6	76	9.6	1.79	6.67	29919	782	1220	8.4	15.8
1731.0	16.0	46.3	76	9.6	1.50	6.73	30204	342	1206	8.4	15.8
1732.0	22.0	44.4	76	9.6	1.38	6.78	30411	249	1191	8.4	15.8
1733.0	25.0	44.5	74	9.6	1.33	6.82	30589	219	1176	8.4	15.8
1734.0	35.0	44.2	76	9.6	1.22	6.84	30719	156	1160	8.4	15.8
1735.0	35.0	44.5	76	9.6	1.22	6.87	30849	156	1145	8.4	15.8
1736.0	50.2	36.8	64	9.6	0.99	6.89	30925	109	1130	8.4	15.8
1737.0	49.3	47.7	67	9.6	1.09	6.91	31006	111	1115	8.4	15.8
1738.0	45.6	45.0	76	9.6	1.14	6.93	31107	120	1101	8.4	15.8
1739.0	42.4	46.6	77	9.6	1.18	6.96	31215	129	1087	8.4	15.8
1740.0	62.1	43.2	77	9.6	1.03	6.97	31289	88	1073	8.4	15.8
1741.0	38.3	45.2	66	9.6	1.15	7.00	31392	143	1060	8.4	15.8
1742.0	51.4	38.6	75	9.6	1.04	7.02	31479	106	1047	8.4	15.8
1743.0	27.9	45.1	75	9.6	1.30	7.06	31641	196	1036	8.4	15.8
1744.0	18.8	45.0	76	9.6	1.43	7.11	31882	290	1026	8.4	15.8
1745.0	10.8	45.1	76	9.6	1.62	7.20	32304	508	1019	8.4	15.9
1746.0	23.7	44.0	76	9.6	1.35	7.24	32496	231	1009	8.4	15.9
1747.0	19.9	43.2	76	9.6	1.40	7.29	32725	275.27	1000.00	8.4	15.9
1748.0	3.6	44.8	73	9.6	1.97	7.57	33923	1503	1006	8.4	15.9
1749.0	4.0	46.0	76	9.6	1.97	7.82	35063	1369	1011	8.4	15.9
1750.0	21.0	41.0	75	9.6	1.35	7.87	35277	261	1002	8.4	15.9
1751.0	7.0	44.6	75	9.6	1.76	8.01	35922	782.14	998.96	8.4	15.9
1752.0	5.0	43.6	74	9.6	1.85	8.21	36806	1095	1000	8.4	15.9
1753.0	16.0	43.5	66	9.6	1.43	8.27	37055	342.19	992.35	8.4	15.9
1754.0	18.0	45.6	72	9.6	1.44	8.33	37296	304.17	984.33	8.4	15.9
1755.0	23.0	44.4	76	9.6	1.36	8.37	37495	238.04	975.73	8.4	15.9
1756.0	23.0	47.5	76	9.6	1.39	8.41	37694	238.04	967.33	8.4	15.9
1757.0	19.0	45.4	76	9.6	1.44	8.47	37935	288.16	959.68	8.4	15.9
1758.0	22.0	43.5	76	9.6	1.37	8.51	38143	248.86	951.77	8.4	15.9
1759.0	26.0	43.4	76	9.6	1.31	8.55	38320	210.58	943.60	8.4	15.9
1760.0	24.0	41.6	77	9.6	1.32	8.59	38511	228.13	935.81	8.4	15.9
1761.0	8.0	43.6	74	9.6	1.69	8.72	39065	684.38	933.10	8.4	15.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1762.0	20.9	44.4	76	9.6	1.40	8.77	39284	261.58	925.94	8.4	15.9
1763.0	22.6	44.9	76	9.6	1.37	8.81	39486	241.81	918.72	8.4	15.9
1764.0	20.7	44.7	76	9.6	1.40	8.86	39708	264.63	911.90	8.4	15.9
1765.0	22.5	43.8	76	9.6	1.37	8.90	39912	243.33	904.99	8.4	15.9
1766.0	41.4	43.8	77	9.6	1.17	8.93	40023	132.31	897.09	8.4	15.9
1767.0	37.1	42.7	77	9.6	1.19	8.95	40147	147.52	889.50	8.4	15.9
1768.0	29.3	43.7	77	9.6	1.28	8.99	40304	187.06	882.46	8.4	15.9
1769.0	26.1	43.5	77	9.6	1.32	9.03	40480	209.88	875.79	8.4	15.9
1770.0	25.4	43.3	74	9.6	1.31	9.07	40654	215.96	869.31	8.4	15.9
1771.0	27.5	42.7	75	9.6	1.28	9.10	40818	199.23	862.79	8.4	15.9
1772.0	26.9	44.8	76	9.6	1.32	9.14	40989	203.79	856.44	8.4	15.9
1773.0	32.1	45.3	76	9.6	1.26	9.17	41131	170.33	849.90	8.4	15.9
1774.0	10.8	46.1	74	9.6	1.62	9.26	41541	506.44	846.65	8.4	15.9
1775.0	6.2	44.9	74	9.6	1.80	9.42	42258	880.56	846.97	8.4	15.9
1776.0	5.4	44.6	73	9.6	1.83	9.61	43064	1008	848	8.4	15.9
1777.0	8.7	45.4	73	9.6	1.68	9.72	43569	632.67	846.48	8.4	15.9
1778.0	6.3	47.0	73	9.6	1.81	9.88	44262	869.92	846.69	8.4	15.9
1779.0	5.5	47.3	75	9.6	1.87	10.06	45077	993.10	848.02	8.4	15.9
1780.0	17.3	46.6	73	9.6	1.47	10.12	45330	316.33	843.26	8.4	15.9
1781.0	20.0	47.4	76	9.6	1.44	10.17	45558	273.75	838.21	8.4	15.9
1782.0	25.0	45.0	75	9.6	1.34	10.21	45738	219.00	832.77	8.4	15.9
1783.0	28.1	42.6	75	9.6	1.28	10.25	45898	194.67	827.21	8.4	15.9
1784.0	24.5	42.5	76	9.6	1.32	10.29	46084	223.56	822.00	8.4	15.9
1785.0	28.6	43.0	76	9.6	1.28	10.32	46243	191.63	816.60	8.4	15.9
1786.0	27.3	43.7	76	9.6	1.30	10.36	46410	200.75	811.37	8.4	15.9
1787.0	22.5	42.3	76	9.6	1.35	10.40	46613	243.33	806.59	8.4	15.9
1788.0	25.5	44.7	76	9.6	1.33	10.44	46791	214.44	801.65	8.4	15.9
1789.0	21.4	44.1	76	9.6	1.38	10.49	47004	255.50	797.13	8.4	15.9
1790.0	25.7	45.4	74	9.6	1.33	10.53	47177	212.92	792.33	8.4	15.9
1791.0	32.1	44.8	76	9.6	1.25	10.56	47319	170.33	787.27	8.4	15.9
1792.0	14.6	45.7	76	9.6	1.53	10.63	47631	374.12	783.93	8.4	15.9
1793.0	4.7	46.5	75	9.6	1.92	10.84	48601	1176	787	8.4	15.9
1794.0	9.3	46.4	75	9.6	1.68	10.95	49087	591.60	785.51	8.4	15.9
1795.0	11.3	43.7	75	9.6	1.59	11.04	49487	486.67	783.16	8.5	15.9
1796.0	5.2	44.7	75	9.6	1.86	11.23	50351	1051	785	8.5	15.9
1797.0	5.1	44.8	75	9.6	1.87	11.43	51240	1080	788	8.5	15.9
1798.0	6.4	44.7	75	9.8	1.75	11.58	51945	854.71	788.06	8.5	15.9
1799.0	3.0	43.9	73	9.8	1.98	11.92	53406	1825	796	8.5	15.9
1800.0	12.0	42.7	76	9.8	1.53	12.00	53788	456.25	793.41	8.5	15.9
1801.0	15.0	41.7	76	9.8	1.45	12.07	54093	365.00	790.18	8.5	16.0
1802.0	17.0	43.2	76	9.8	1.42	12.13	54362	322.06	786.68	8.5	16.0
1803.0	21.0	42.6	76	9.8	1.35	12.17	54579	260.71	782.78	8.5	16.0
1804.0	24.0	42.7	76	9.8	1.31	12.22	54770	228.13	778.70	8.5	16.0
1805.0	26.0	41.3	76	9.8	1.27	12.25	54946	210.58	774.54	8.5	16.0
1806.0	23.1	41.5	76	9.8	1.31	12.30	55144	237.25	770.64	8.5	16.0
1807.0	21.8	41.8	76	9.8	1.33	12.34	55354	250.94	766.90	8.5	16.0
1808.0	23.4	42.8	74	9.8	1.31	12.39	55544	234.21	763.09	8.5	16.0
1809.0	18.0	45.0	75	9.8	1.42	12.44	55794	304.17	759.83	8.5	16.0
1810.0	6.7	45.4	76	9.8	1.75	12.59	56471	815.17	760.22	8.4	15.9
1811.0	5.6	46.3	75	9.8	1.82	12.77	57284	985.50	761.80	8.4	15.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1812.0	4.3	43.6	75	9.8	1.87	13.01	58338	1287	765	8.4	15.9
1813.0	4.2	44.6	74	9.8	1.89	13.25	59408	1311	769	8.4	15.9
1814.0	2.7	43.4	75	9.8	2.01	13.61	61040	1992	778	8.4	16.0
1815.0	11.0	42.1	75	9.8	1.54	13.70	61450	497.73	775.70	8.4	16.0
1816.0	14.7	42.4	75	9.8	1.46	13.77	61756	372.60	772.97	8.4	16.0
1817.0	25.2	41.7	75	9.8	1.27	13.81	61935	217.48	769.24	8.4	16.0
1818.0	20.9	43.0	72	9.8	1.34	13.86	62142	261.58	765.85	8.4	16.0
1819.0	23.4	42.1	76	9.8	1.31	13.90	62337	234.21	762.32	8.4	16.0
1820.0	25.9	40.3	76	9.8	1.26	13.94	62513	211.40	758.69	8.4	16.0
1821.0	32.7	40.8	76	9.8	1.19	13.97	62653	167.29	754.82	8.4	16.0
1822.0	28.1	41.1	76	9.8	1.24	14.00	62815	194.67	751.18	8.4	16.0
1823.0	29.8	45.3	76	9.8	1.26	14.04	62969	184.02	747.52	8.4	16.0
1824.0	29.0	46.3	76	9.8	1.28	14.07	63126	188.58	743.93	8.4	16.0
1825.0	33.0	47.8	76	9.8	1.25	14.10	63264	165.77	740.24	8.4	16.0
1826.0	32.4	50.6	76	9.8	1.28	14.13	63405	168.81	736.62	8.4	16.0
1827.0	29.5	50.5	76	9.8	1.31	14.17	63559	185.54	733.15	8.4	16.0
1828.0	23.4	50.4	75	9.8	1.38	14.21	63752	234.21	730.03	8.4	16.0
1829.0	24.7	50.8	76	9.8	1.37	14.25	63936	222.04	726.87	8.4	16.0
1830.0	10.0	51.4	76	9.8	1.69	14.35	64395	547.50	725.76	8.4	16.0
1831.0	6.8	50.5	76	9.8	1.81	14.50	65069	804.52	726.24	8.4	16.0
1832.0	19.3	49.0	76	9.8	1.44	14.55	65307	284.40	723.55	8.4	16.0
1833.0	18.8	48.1	76	9.8	1.44	14.60	65550	290.48	720.92	8.4	16.0
1834.0	3.0	49.8	77	9.8	2.08	14.94	67085	1827	728	8.4	16.0
1835.0	3.9	49.8	77	9.8	1.99	15.19	68264	1401	732	8.4	16.0
1836.0	10.5	50.1	77	9.8	1.66	15.29	68704	523.17	730.38	8.4	16.0
1837.0	4.9	51.6	76	9.8	1.93	15.49	69642	1119	733	8.4	16.0
1838.0	4.1	51.7	77	9.8	2.00	15.74	70776	1343	736	8.4	16.0
1839.0	4.2	51.5	77	9.8	1.99	15.97	71873	1296	740	8.4	16.0
1840.0	7.9	51.0	77	9.8	1.77	16.10	72459	693.50	739.29	8.5	16.0
1841.0	8.8	51.1	77	9.8	1.73	16.21	72987	625.06	738.62	8.5	16.0
1842.0	7.6	51.8	77	9.8	1.79	16.35	73596	720.88	738.52	8.5	16.0
1843.0	5.5	51.9	77	9.8	1.90	16.53	74440	997.67	740.00	8.5	16.0
1844.0	6.1	51.3	77	9.8	1.86	16.69	75197	894.25	740.88	8.5	16.0
1845.0	5.5	51.3	77	9.8	1.90	16.87	76046	1002	742	8.5	16.0
1846.0	6.4	52.4	77	9.8	1.86	17.03	76774	860.79	743.03	8.5	16.0
1847.0	12.5	51.8	77	9.8	1.62	17.11	77145	439.52	741.33	8.5	16.0
1848.0	13.5	49.0	74	9.8	1.55	17.19	77474	406.06	739.46	8.5	16.0
1849.0	28.6	46.3	76	9.8	1.28	17.22	77633	191.63	736.43	8.5	16.0
1850.0	13.8	46.7	65	9.8	1.47	17.29	77916	395.42	734.56	8.5	16.0
1851.0	11.9	48.6	76	9.8	1.59	17.38	78298	460.81	733.06	8.5	16.0
1852.0	17.1	47.6	75	9.8	1.46	17.44	78563	320.90	730.82	8.5	16.0
1853.0	8.1	48.9	76	9.8	1.73	17.56	79127	679.81	730.54	8.5	16.0
1854.0	2.6	49.1	76	9.8	2.12	17.95	80896	2122	738	8.5	16.0
1855.0	4.6	49.9	76	9.8	1.93	18.17	81895	1201	741	8.5	16.0
1856.0	3.0	51.6	76	9.8	2.10	18.50	83417	1825	746	8.5	16.0
1857.0	2.0	49.6	75	9.8	2.20	19.00	85657	2738	757	8.5	16.0
1858.0	14.0	46.7	75	9.8	1.51	19.07	85976	391.07	754.90	8.5	16.0
1859.0	6.0	48.2	75	9.8	1.81	19.24	86723	912.50	755.73	8.5	16.0
1860.0	18.5	47.2	74	9.8	1.43	19.29	86965	296.56	753.34	8.5	16.0
1861.0	7.0	47.4	75	9.8	1.75	19.44	87606	782.14	753.49	8.5	16.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1862.0	3.0	48.0	75	9.8	2.04	19.77	89104	1825	759	8.5	16.0
1863.0	3.5	48.2	75	9.8	1.99	20.05	90375	1544	763	8.5	16.0
1864.0	7.0	46.9	75	9.8	1.75	20.19	91020	782.14	763.14	8.5	16.0
1865.0	3.0	47.8	75	9.8	2.04	20.53	92520	1825	769	8.5	16.0
1866.0	2.4	48.5	75	9.8	2.13	20.94	94390	2281	776	8.5	16.0
1867.0	2.5	48.8	73	9.8	2.11	21.34	96136	2190	783	8.5	16.0
1868.0	5.0	48.6	52	9.8	1.76	21.54	96760	1095	785	8.5	16.0
1869.0	2.4	49.6	67	9.8	2.11	21.96	98447	2304	792	8.5	16.0
1870.0	6.0	48.2	74	9.8	1.81	22.13	99188	912.50	793.02	8.5	16.0
1871.0	2.0	50.0	74	9.8	2.20	22.63	101412	2730	803	8.5	16.0
1872.0	1.9	49.5	42	9.8	2.02	23.15	102733	2859	813	8.5	16.0
1873.0	2.4	48.5	42	9.8	1.93	23.57	103789	2281	820	8.5	16.1
1874.0	2.4	50.0	78	9.8	2.16	23.99	105744	2281	827	8.5	16.1
1875.0	3.0	51.1	77	9.8	2.10	24.32	107288	1833	832	8.5	16.1
1876.0	22.5	49.4	75	9.8	1.39	24.36	107488	243.33	828.96	8.5	16.1
1877.0	24.0	48.8	75	9.8	1.36	24.41	107677	228.13	826.08	8.5	16.1
1878.0	22.0	51.1	74	9.8	1.40	24.45	107879	248.86	823.33	8.5	16.1
1879.0	20.6	44.4	74	9.9	1.35	24.50	108096	266.15	820.69	8.5	16.1
1880.0	5.0	50.2	67	9.9	1.85	24.70	108906	1095	822	8.5	16.1
1881.0	2.7	51.1	59	9.9	2.02	25.07	110206	2015	828	8.5	16.1
1882.0	2.6	49.6	76	9.9	2.10	25.45	111954	2091	834	8.5	16.1
1883.0	2.3	51.2	76	9.9	2.17	25.89	113984	2426	841	8.5	16.1
1884.0	2.6	51.6	77	9.9	2.12	26.27	115731	2084	847	8.5	16.1
1885.0	2.4	48.9	69	9.9	2.08	26.69	117442	2258	853	8.5	16.1
1886.0	5.0	48.4	76	9.9	1.87	26.89	118357	1095	854	8.5	16.1
1887.0	13.0	47.0	76	9.9	1.53	26.96	118709	421.15	852.31	8.5	16.1
1888.0	9.0	50.1	76	9.9	1.69	27.07	119216	608.33	851.20	8.5	16.1
1889.0	5.0	50.2	77	9.9	1.89	27.27	120134	1095	852	8.5	16.1
1890.0	3.0	48.5	77	9.9	2.04	27.61	121664	1825	857	8.5	16.1
1891.0	3.2	46.4	77	9.9	1.99	27.92	123103	1696	860	8.5	16.1
1892.0	5.0	49.2	77	9.9	1.88	28.12	124026	1095	862	8.5	16.1
1893.0	10.0	48.4	64	9.8	1.59	28.22	124411	547.50	860.11	8.5	16.1
1894.0	15.0	48.4	76	9.8	1.52	28.28	124717	365.00	857.92	8.5	16.1
1895.0	17.0	48.4	77	9.8	1.48	28.34	124987	322.06	855.56	8.5	16.1
1896.0	24.8	50.2	77	9.8	1.37	28.38	125173	220.52	852.77	8.5	16.1
1897.0	29.0	49.6	77	9.8	1.31	28.42	125332	188.79	849.87	8.5	16.1
1898.0	19.0	44.5	76	9.8	1.40	28.47	125571	288.16	847.42	8.5	16.1
1899.0	26.0	51.9	76	9.8	1.36	28.51	125747	210.58	844.66	8.5	16.1
1900.0	28.0	51.2	76	9.8	1.33	28.54	125910	195.54	841.86	8.5	16.1
1901.0	29.0	51.9	76	9.8	1.33	28.58	126067	188.58	839.06	8.5	16.1
1902.0	27.1	50.6	76	9.8	1.34	28.62	126236	202.27	836.33	8.5	16.1
1903.0	26.9	50.5	76	9.8	1.34	28.65	126406	203.79	833.64	8.5	16.1
1904.0	30.0	51.2	71	9.8	1.28	28.69	126548	182.50	830.88	8.5	16.1
1905.0	27.1	51.8	75	9.8	1.34	28.72	126715	202.27	828.22	8.4	16.1
1906.0	23.1	51.4	75	9.8	1.40	28.77	126911	237.25	825.74	8.4	16.1
1907.0	19.7	51.5	75	9.8	1.45	28.82	127140	278.31	823.44	8.4	16.1
1908.0	25.0	51.5	75	9.8	1.37	28.86	127321	219.00	820.92	8.4	16.1
1909.0	25.7	53.4	75	9.8	1.38	28.90	127497	212.92	818.40	8.4	16.1
1910.0	21.4	58.0	75	9.8	1.48	28.94	127707	255.50	816.07	8.4	16.1
1911.0	21.7	56.4	76	9.8	1.46	28.99	127916	252.46	813.75	8.4	16.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1912.0	21.4	56.3	75	9.8	1.46	29.04	128127	255.50	811.46	8.4	16.1
1913.0	19.9	55.5	75	9.8	1.49	29.09	128354	275.27	809.27	8.4	16.1
1914.0	17.5	55.2	73	9.8	1.52	29.14	128605	313.29	807.25	8.4	16.1
1915.0	30.0	54.7	77	9.8	1.34	29.18	128758	182.50	804.72	8.4	16.1
1916.0	26.3	54.0	76	9.8	1.38	29.21	128933	208.35	802.31	8.4	16.1
1917.0	25.2	52.6	77	9.8	1.38	29.25	129115	217.48	799.96	8.4	16.1
1918.0	23.7	52.6	77	9.8	1.40	29.30	129309	231.17	797.69	8.4	16.1
1919.0	30.3	55.2	77	9.8	1.34	29.33	129461	180.98	795.23	8.4	16.1
1920.0	14.9	54.6	73	9.8	1.57	29.40	129758	368.04	793.53	8.4	16.1
1921.0	17.5	54.6	76	9.8	1.52	29.45	130019	313.29	791.63	8.4	16.1
1922.0	10.3	54.6	75	9.8	1.71	29.55	130458	532.29	790.61	8.4	16.1
1923.0	19.0	53.4	75	9.8	1.48	29.60	130694	287.44	788.63	8.4	16.1
1924.0	14.3	53.4	76	9.8	1.58	29.67	131013	381.73	787.04	8.4	16.1
1925.0	21.2	53.9	76	9.8	1.45	29.72	131230	258.54	784.99	8.4	16.1
1926.0	20.6	54.3	76	9.8	1.47	29.77	131453	266.15	782.97	8.4	16.1
1927.0	21.2	53.7	76	9.8	1.45	29.82	131669	258.54	780.95	8.4	16.1
1928.0	22.0	54.2	76	9.8	1.44	29.86	131878	249.42	778.90	8.4	16.1
1929.0	28.6	53.4	76	9.8	1.34	29.90	132038	191.63	776.65	8.4	16.1
1930.0	24.7	53.5	76	9.8	1.40	29.94	132224	222.04	774.53	8.4	16.1
1931.0	8.3	53.5	77	9.8	1.78	30.06	132779	660.04	774.09	8.4	16.1
1932.0	3.2	55.8	77	9.8	2.14	30.37	134215	1709	778	8.4	16.1
1933.0	2.4	55.1	76	9.8	2.22	30.78	136104	2263	783	8.4	16.1
1934.0	3.4	52.8	60	9.8	1.99	31.08	137165	1609	786	8.4	16.1
1935.0	5.1	51.7	54	9.8	1.80	31.28	137800	1081	787	8.4	16.1
1936.0	13.0	51.7	47	9.8	1.43	31.35	138015	419.75	786.09	8.4	16.1
1937.0	14.1	51.7	47	9.8	1.41	31.42	138214	389.33	784.61	8.4	16.1
1938.0	14.5	51.6	47	9.8	1.39	31.49	138408	377.17	783.10	8.4	16.1
1939.0	15.0	51.1	47	9.8	1.38	31.56	138596	365.00	781.56	8.4	16.1
1940.0	15.1	51.1	47	9.8	1.38	31.62	138782	363.48	780.02	8.4	16.1
1941.0	17.3	50.9	47	9.8	1.33	31.68	138944	316.33	778.32	8.4	16.1
1942.0	1.9	50.0	47	9.8	2.07	32.21	140419	2882	786	8.4	16.1

BIT NUMBER	6	IADC CODE	517	INTERVAL	1942.0- 2185.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.6	BIT RUN	243.0
TOTAL HOURS	34.07	TOTAL TURNS	137842	CONDITION	T3 B7 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1943.0	2.3	36.1	57	9.8	1.87	0.44	1519	2433	45356	8.4	16.1
1944.0	2.7	38.0	57	9.8	1.84	0.81	2768	1994	23675	8.4	16.1
1945.0	5.7	46.3	65	9.8	1.76	0.98	3454	966	16105	8.4	16.1
1946.0	5.4	45.1	66	9.8	1.77	1.17	4187	1011	12332	8.4	16.1
1947.0	5.9	51.2	66	9.8	1.82	1.34	4859	925	10050	8.4	16.1
1948.0	6.0	50.6	66	9.8	1.80	1.50	5521	909	8527	8.4	16.1
1949.0	5.9	49.5	66	9.8	1.79	1.67	6194	925	7441	8.4	16.1
1950.0	5.8	50.0	67	9.8	1.81	1.85	6886	947	6629	8.4	16.1
1951.0	6.6	50.2	74	9.8	1.80	2.00	7553	827	5985	8.4	16.1
1952.0	6.0	50.9	80	9.8	1.87	2.16	8354	911	5477	8.4	16.1
1953.0	6.1	50.2	80	9.8	1.86	2.33	9148	902	5061	8.4	16.1
1954.0	6.9	51.3	80	9.8	1.83	2.47	9841	788	4705	8.4	16.1
1955.0	10.9	50.4	77	9.8	1.65	2.56	10262	502	4382	8.4	16.1
1956.0	8.8	52.7	81	9.8	1.76	2.68	10814	622	4113	8.4	16.1
1957.0	42.4	51.5	81	9.8	1.21	2.70	10928	129	3848	8.4	16.1
1958.0	12.9	51.5	75	9.8	1.60	2.78	11278	424	3634	8.4	16.1
1959.0	6.3	53.1	80	9.8	1.88	2.94	12036	864	3471	8.4	16.2
1960.0	5.8	51.9	79	9.8	1.89	3.11	12855	946	3330	8.4	16.2
1961.0	6.8	52.6	77	9.8	1.83	3.26	13533	806	3198	8.4	16.2
1962.0	6.8	52.8	77	9.8	1.84	3.40	14209	803	3078	8.4	16.2
1963.0	6.0	52.8	78	9.8	1.89	3.57	14995	916	2975	8.4	16.2
1964.0	6.5	51.2	79	9.8	1.84	3.73	15728	844	2878	8.4	16.2
1965.0	6.9	50.9	77	9.8	1.81	3.87	16397	788	2787	8.4	16.2
1966.0	5.9	49.3	81	9.8	1.86	4.04	17218	926	2710	8.4	16.2
1967.0	10.9	48.5	81	9.8	1.64	4.13	17662	502	2621	8.4	16.2
1968.0	19.3	49.2	81	9.8	1.46	4.18	17913	284	2531	8.4	16.2
1969.0	21.8	51.3	79	9.8	1.43	4.23	18130	251	2447	8.4	16.2
1970.0	17.4	48.9	71	9.8	1.45	4.29	18374	315	2371	8.4	16.2
1971.0	16.6	50.6	73	9.8	1.49	4.35	18638	330	2300	8.4	16.2
1972.0	13.1	51.0	72	9.8	1.57	4.42	18965	417	2238	8.4	16.2
1973.0	15.3	52.8	76	9.8	1.55	4.49	19263	357	2177	8.4	16.2
1974.0	14.3	52.1	76	9.8	1.57	4.56	19582	382	2121	8.4	16.2
1975.0	11.7	53.1	74	9.8	1.64	4.64	19958	467	2071	8.4	16.2
1976.0	12.9	53.1	76	9.8	1.61	4.72	20310	423	2022	8.4	16.2
1977.0	7.2	53.8	77	9.8	1.83	4.86	20948	757	1986	8.4	16.2
1978.0	7.2	53.7	77	9.8	1.83	5.00	21587	757	1952	8.4	16.2
1979.0	9.2	53.4	75	9.8	1.73	5.10	22080	598	1915	8.4	16.2
1980.0	5.9	52.3	74	9.8	1.87	5.27	22832	925	1889	8.4	16.2
1981.0	6.3	49.3	66	9.8	1.77	5.43	23464	868	1863	8.4	16.2
1982.0	6.0	50.2	66	9.8	1.80	5.60	24133	920	1840	8.4	16.2
1983.0	7.0	50.0	68	9.8	1.75	5.74	24710	777	1814	8.4	16.2
1984.0	7.3	49.5	68	9.8	1.73	5.88	25272	748	1788	8.4	16.2
1985.0	7.6	48.8	71	9.8	1.72	6.01	25832	718	1763	8.4	16.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1986.0	9.2	48.1	71	9.8	1.65	6.12	26291	593	1737	8.4	16.2
1987.0	9.9	48.9	71	9.8	1.64	6.22	26721	555	1711	8.4	16.2
1988.0	6.2	49.2	73	9.8	1.80	6.38	27419	878	1692	8.4	16.2
1989.0	4.9	48.7	72	9.8	1.88	6.59	28309	1124	1680	8.4	16.2
1990.0	6.0	50.3	71	9.8	1.82	6.75	29015	909	1664	8.4	16.2
1991.0	6.7	51.4	70	9.8	1.80	6.90	29648	820	1647	8.4	16.2
1992.0	8.2	50.8	70	9.8	1.72	7.02	30163	668	1627	8.4	16.2
1993.0	6.6	51.2	73	9.8	1.81	7.17	30827	830	1612	8.4	16.2
1994.0	8.4	48.9	66	9.8	1.67	7.29	31299	655	1593	8.4	16.2
1995.0	7.2	50.3	69	9.8	1.75	7.43	31875	765	1578	8.4	16.2
1996.0	7.8	50.0	69	9.8	1.72	7.56	32404	703	1562	8.4	16.2
1997.0	11.4	48.8	68	9.8	1.58	7.65	32765	481	1542	8.4	16.2
1998.0	26.1	47.1	68	9.8	1.28	7.69	32921	210	1518	8.4	16.2
1999.0	19.9	48.7	68	9.8	1.39	7.74	33127	275	1496	8.4	16.2
2000.0	10.4	50.3	69	9.8	1.63	7.84	33526	528	1480	8.4	16.2
2001.0	5.9	50.5	68	9.8	1.82	8.01	34217	931	1470	8.4	16.2
2002.0	12.2	50.1	64	9.8	1.55	8.09	34534	449	1453	8.4	16.2
2003.0	23.7	48.9	69	9.8	1.33	8.13	34708	231	1433	8.4	16.2
2004.0	34.0	48.7	69	9.8	1.21	8.16	34829	161	1413	8.4	16.2
2005.0	32.7	48.7	68	9.8	1.22	8.19	34954	167	1393	8.4	16.2
2006.0	2.8	50.3	72	9.8	2.08	8.54	36468	1924	1401	8.4	16.2
2007.0	4.2	50.5	51	9.8	1.83	8.78	37197	1294	1400	8.4	16.2
2008.0	8.6	51.7	50	9.8	1.60	8.89	37547	639	1388	8.4	16.2
2009.0	12.8	52.5	50	9.8	1.47	8.97	37782	427	1374	8.4	16.2
2010.0	13.7	53.1	49	9.8	1.44	9.05	37997	400	1359	8.4	16.2
2011.0	8.5	50.2	52	9.8	1.60	9.16	38362	645	1349	8.4	16.2
2012.0	5.0	49.7	50	9.8	1.75	9.36	38951	1086	1345	8.4	16.2
2013.0	10.8	49.3	56	9.8	1.53	9.45	39261	505	1334	8.4	16.2
2014.0	8.3	49.3	75	9.8	1.72	9.57	39799	657	1324	8.4	16.2
2015.0	11.3	49.3	77	9.8	1.62	9.66	40204	484	1313	8.4	16.2
2016.0	7.4	49.3	76	9.8	1.76	9.80	40822	738	1305	8.4	16.2
2017.0	8.5	49.0	77	9.8	1.72	9.91	41366	648	1296	8.4	16.2
2018.0	10.0	49.3	76	9.8	1.66	10.01	41823	546	1286	8.5	16.2
2019.0	7.7	49.4	77	9.8	1.75	10.15	42422	715	1279	8.5	16.2
2020.0	17.9	48.6	76	9.8	1.46	10.20	42678	306	1266	8.5	16.2
2021.0	10.8	49.1	76	9.8	1.63	10.29	43102	506	1257	8.5	16.2
2022.0	12.1	49.0	70	9.8	1.57	10.38	43449	452	1247	8.5	16.2
2023.0	8.6	49.2	75	9.8	1.71	10.49	43977	639	1239	8.5	16.3
2024.0	7.3	49.0	77	9.8	1.76	10.63	44603	745	1233	8.5	16.3
2025.0	9.2	51.2	77	9.8	1.72	10.74	45106	598	1225	8.5	16.3
2026.0	13.7	51.2	77	9.8	1.58	10.81	45440	398	1216	8.5	16.3
2027.0	28.8	49.3	76	9.8	1.31	10.85	45600	190	1204	8.5	16.3
2028.0	8.9	51.5	77	9.8	1.73	10.96	46118	617	1197	8.5	16.3
2029.0	8.6	51.3	77	9.8	1.74	11.07	46652	636	1190	8.5	16.3
2030.0	12.3	50.6	77	9.8	1.61	11.16	47027	446	1182	8.5	16.3
2031.0	10.7	50.3	77	9.8	1.65	11.25	47458	511	1174	8.5	16.3
2032.0	7.9	50.9	76	9.8	1.76	11.38	48039	695	1169	8.5	16.3
2033.0	6.3	51.5	76	9.8	1.84	11.53	48760	865	1166	8.5	16.3
2034.0	10.6	51.2	76	9.8	1.66	11.63	49192	517	1159	8.5	16.3
2035.0	7.5	51.7	76	9.8	1.79	11.76	49799	725	1154	8.5	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2036.0	9.2	51.5	76	9.8	1.71	11.87	50295	593	1148	8.5	16.3
2037.0	6.8	51.8	76	9.8	1.82	12.02	50965	800	1144	8.5	16.3
2038.0	6.9	51.6	76	9.8	1.82	12.16	51632	797	1141	8.5	16.3
2039.0	6.2	51.6	76	9.8	1.85	12.32	52371	884	1138	8.5	16.3
2040.0	6.4	50.5	76	9.8	1.83	12.48	53084	853	1135	8.5	16.3
2041.0	6.5	51.3	72	9.8	1.81	12.63	53753	847	1132	8.5	16.3
2042.0	5.2	52.5	58	9.8	1.83	12.82	54419	1043	1131	8.5	16.3
2043.0	5.9	52.7	59	9.8	1.79	12.99	55015	923	1129	8.5	16.3
2044.0	10.5	50.7	59	9.8	1.57	13.09	55351	520	1123	8.5	16.3
2045.0	9.5	51.6	59	9.8	1.62	13.19	55725	578	1118	8.5	16.3
2046.0	11.7	51.4	59	9.8	1.55	13.28	56029	470	1112	8.5	16.3
2047.0	18.4	49.9	59	9.8	1.38	13.33	56222	298	1104	8.5	16.3
2048.0	7.7	50.8	59	9.8	1.68	13.46	56681	709	1100	8.5	16.3
2049.0	4.5	51.2	57	9.8	1.85	13.68	57431	1209	1101	8.5	16.3
2050.0	5.2	51.3	59	9.8	1.83	13.88	58121	1060	1101	8.5	16.3
2051.0	6.5	51.7	69	9.8	1.80	14.03	58757	841	1099	8.5	16.3
2052.0	6.7	51.4	76	9.8	1.82	14.18	59433	815	1096	8.5	16.3
2053.0	7.2	51.8	76	9.8	1.80	14.32	60068	765	1093	8.5	16.3
2054.0	6.3	51.7	76	9.8	1.85	14.48	60793	873	1091	8.5	16.3
2055.0	6.8	51.5	76	9.8	1.82	14.62	61459	801	1088	8.5	16.3
2056.0	6.1	51.7	76	9.8	1.86	14.79	62207	900	1087	8.5	16.3
2057.0	6.3	51.2	72	9.8	1.82	14.95	62895	873	1085	8.5	16.3
2058.0	6.3	51.8	75	9.8	1.84	15.11	63612	870	1083	8.5	16.3
2059.0	6.5	51.5	75	9.8	1.83	15.26	64310	846	1081	8.5	16.3
2060.0	6.5	50.9	75	9.8	1.82	15.42	64998	841	1079	8.5	16.3
2061.0	9.2	50.4	75	9.8	1.70	15.52	65485	595	1075	8.5	16.3
2062.0	19.4	51.2	75	9.8	1.45	15.58	65716	283	1068	8.5	16.3
2063.0	25.0	49.2	75	9.8	1.35	15.62	65895	219	1061	8.5	16.3
2064.0	22.2	47.9	65	9.8	1.33	15.66	66071	246	1055	8.5	16.3
2065.0	9.4	50.9	77	9.8	1.71	15.77	66564	582	1051	8.5	16.3
2066.0	8.8	51.7	77	9.8	1.74	15.88	67091	621	1047	8.5	16.3
2067.0	9.0	51.5	78	9.8	1.73	15.99	67607	608	1044	8.5	16.3
2068.0	6.2	52.1	78	9.8	1.86	16.15	68356	879	1043	8.5	16.3
2069.0	7.8	52.5	78	9.8	1.79	16.28	68955	703	1040	8.5	16.3
2070.0	17.2	50.4	75	9.8	1.48	16.34	69215	318	1034	8.5	16.3
2071.0	26.7	50.9	75	9.8	1.34	16.38	69383	205	1028	8.5	16.3
2072.0	9.3	51.6	72	9.8	1.69	16.48	69847	590	1024	8.5	16.3
2073.0	12.7	51.8	76	9.8	1.61	16.56	70207	430	1020	8.5	16.3
2074.0	22.0	51.4	76	9.8	1.41	16.61	70413	249	1014	8.5	16.3
2075.0	19.7	51.1	76	9.8	1.45	16.66	70644	278	1008	8.5	16.3
2076.0	22.0	50.9	76	9.8	1.41	16.70	70851	249	1003	8.5	16.3
2077.0	12.6	52.0	76	9.8	1.61	16.78	71213	434.96	998.63	8.5	16.3
2078.0	4.1	52.0	77	9.8	2.00	17.03	72335	1332	1001	8.5	16.3
2079.0	2.7	50.0	57	9.8	2.01	17.40	73590	2024	1009	8.5	16.3
2080.0	4.4	42.7	55	9.8	1.75	17.62	74340	1241	1010	8.5	16.3
2081.0	4.7	48.7	60	9.7	1.85	17.84	75114	1177	1011	8.5	16.3
2082.0	12.5	49.5	60	9.7	1.52	17.92	75403	440	1007	8.5	16.3
2083.0	15.8	49.7	59	9.7	1.44	17.98	75628	347	1003	8.5	16.3
2084.0	16.7	49.7	60	9.7	1.43	18.04	75842	326.98	997.91	8.5	16.3
2085.0	8.0	48.3	57	9.7	1.65	18.17	76272	682.85	995.70	8.5	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2086.0	7.4	49.5	58	9.7	1.70	18.30	76748	743.69	993.95	8.5	16.3
2087.0	5.8	49.6	58	9.7	1.78	18.47	77349	939.88	993.58	8.5	16.3
2088.0	5.2	50.4	58	9.7	1.82	18.67	78021	1054	994	8.5	16.3
2089.0	4.3	50.8	59	9.7	1.90	18.90	78846	1267	996	8.5	16.3
2090.0	6.1	51.4	65	9.7	1.82	19.06	79482	897.29	995.18	8.5	16.3
2091.0	5.5	52.2	65	9.7	1.86	19.24	80189	996.15	995.19	8.5	16.3
2092.0	5.5	51.7	65	9.7	1.86	19.43	80897	997.67	995.21	8.5	16.3
2093.0	6.9	51.9	65	9.7	1.78	19.57	81460	793.88	993.87	8.5	16.3
2094.0	10.1	51.3	65	9.7	1.64	19.67	81843	539.90	990.89	8.5	16.3
2095.0	6.5	50.5	64	9.7	1.78	19.82	82435	837.98	989.89	8.5	16.3
2096.0	4.7	50.5	64	9.8	1.88	20.04	83260	1170	991	8.5	16.3
2097.0	5.0	50.5	64	9.8	1.85	20.23	84027	1086	992	8.5	16.3
2098.0	4.4	51.4	64	9.8	1.90	20.46	84884	1230	993	8.5	16.3
2099.0	6.3	50.7	64	9.8	1.78	20.62	85497	868.40	992.40	8.5	16.3
2100.0	4.9	51.2	64	9.8	1.87	20.82	86281	1112	993	8.5	16.3
2101.0	3.1	50.6	64	9.8	2.02	21.14	87526	1764	998	8.5	16.3
2102.0	6.5	47.9	64	9.8	1.73	21.30	88120	841.53	997.03	8.5	16.3
2103.0	9.3	48.0	64	9.8	1.61	21.40	88533	587.04	994.48	8.5	16.4
2104.0	5.0	48.9	64	9.8	1.83	21.60	89300	1086	995	8.5	16.4
2105.0	4.5	48.7	64	9.8	1.87	21.83	90167	1227	996	8.5	16.4
2106.0	4.8	48.4	62	9.8	1.83	22.04	90952	1151	997	8.5	16.4
2107.0	5.3	48.5	64	9.8	1.81	22.23	91675	1037	998	8.5	16.4
2108.0	4.4	48.5	60	9.8	1.84	22.45	92480	1233	999	8.5	16.4
2109.0	5.3	47.6	57	9.8	1.76	22.64	93129	1037	999	8.5	16.4
2110.0	13.2	46.6	57	9.8	1.44	22.72	93387	413.67	995.82	8.5	16.4
2111.0	13.5	47.0	57	9.8	1.44	22.79	93640	404.54	992.32	8.5	16.4
2112.0	15.2	46.8	58	9.8	1.40	22.86	93868	360.44	988.60	8.5	16.4
2113.0	13.6	47.9	58	9.8	1.45	22.93	94123	401.50	985.17	8.5	16.4
2114.0	13.5	47.5	56	9.8	1.44	23.00	94371	406.06	981.80	8.5	16.4
2115.0	14.0	48.0	56	9.8	1.43	23.08	94610	392.38	978.39	8.5	16.4
2116.0	16.2	49.4	55	9.8	1.39	23.14	94814	337.63	974.71	8.5	16.4
2117.0	13.8	49.8	57	9.8	1.46	23.21	95060	395.42	971.40	8.5	16.4
2118.0	14.1	49.9	56	9.8	1.45	23.28	95301	389.33	968.09	8.5	16.4
2119.0	15.1	49.4	60	9.8	1.44	23.35	95540	363.48	964.68	8.5	16.4
2120.0	13.6	49.3	60	9.8	1.48	23.42	95805	403.02	961.52	8.5	16.4
2121.0	4.7	51.0	61	9.8	1.86	23.64	96587	1177	963	8.5	16.4
2122.0	4.7	51.2	63	9.8	1.88	23.85	97391	1163	964	8.5	16.4
2123.0	5.7	49.9	62	9.8	1.79	24.02	98040	958.12	963.81	8.5	16.4
2124.0	4.6	50.4	59	9.8	1.85	24.24	98805	1194	965	8.5	16.4
2125.0	4.9	49.8	57	9.8	1.81	24.45	99507	1118	966	8.5	16.4
2126.0	5.0	47.4	63	9.8	1.81	24.65	100265	1103	967	8.5	16.4
2127.0	5.3	47.5	58	9.8	1.76	24.83	100916	1027	967	8.5	16.4
2128.0	5.8	51.6	64	9.8	1.82	25.01	101583	947.48	966.87	8.5	16.4
2129.0	6.8	51.6	64	9.8	1.76	25.15	102147	804.52	966.00	8.5	16.4
2130.0	6.4	52.1	64	9.8	1.79	25.31	102745	851.67	965.39	8.5	16.4
2131.0	7.1	49.5	64	9.8	1.72	25.45	103289	774.10	964.38	8.5	16.4
2132.0	11.8	49.5	64	9.8	1.55	25.54	103615	463.85	961.75	8.5	16.4
2133.0	5.3	50.5	64	9.8	1.83	25.73	104346	1039	962	8.5	16.4
2134.0	6.2	50.4	64	9.8	1.78	25.89	104964	879.04	961.72	8.5	16.4
2135.0	6.0	50.6	69	9.8	1.81	26.05	105650	907.94	961.44	8.5	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2136.0	4.7	48.0	72	9.8	1.88	26.26	106563	1153	962	8.5	16.4
2137.0	6.2	39.6	92	9.8	1.76	26.42	107450	880.56	962.01	8.5	16.4
2138.0	5.7	44.3	75	9.8	1.78	26.60	108239	956.60	961.98	8.5	16.4
2139.0	5.1	50.5	65	9.8	1.85	26.79	109004	1072	963	8.5	16.4
2140.0	7.3	49.2	65	9.8	1.71	26.93	109537	752.81	961.48	8.5	16.4
2141.0	6.7	49.2	62	9.8	1.73	27.08	110093	815.17	960.74	8.5	16.4
2142.0	17.5	49.6	64	9.8	1.42	27.14	110312	313.29	957.51	8.5	16.4
2143.0	20.8	49.9	64	9.8	1.36	27.19	110496	263.10	954.05	8.5	16.4
2144.0	15.1	48.5	61	9.8	1.44	27.25	110738	361.96	951.12	8.5	16.4
2145.0	16.1	49.9	64	9.8	1.45	27.31	110976	340.67	948.11	8.5	16.4
2146.0	19.8	49.6	64	9.8	1.38	27.36	111170	276.79	944.82	8.5	16.4
2147.0	11.6	48.8	64	9.8	1.55	27.45	111500	471.46	942.51	8.5	16.4
2148.0	23.4	51.0	63	9.8	1.33	27.49	111662	234.21	939.08	8.5	16.4
2149.0	17.1	49.6	64	9.8	1.43	27.55	111886	320.90	936.09	8.5	16.4
2150.0	14.7	49.7	61	9.8	1.46	27.62	112135	372.60	933.38	8.5	16.4
2151.0	19.5	50.9	63	9.8	1.39	27.67	112330	281.35	930.26	8.5	16.4
2152.0	16.6	51.2	64	9.8	1.45	27.73	112560	330.02	927.40	8.5	16.4
2153.0	19.9	50.2	64	9.8	1.38	27.78	112752	275.27	924.31	8.5	16.4
2154.0	20.6	50.6	63	9.8	1.37	27.83	112937	266.15	921.21	8.5	16.4
2155.0	8.8	50.3	64	9.8	1.66	27.94	113374	622.02	919.80	8.5	16.4
2156.0	11.0	50.1	64	9.8	1.58	28.04	113722	497.31	917.83	8.5	16.4
2157.0	4.9	51.0	64	9.8	1.86	28.24	114505	1119	919	8.5	16.4
2158.0	4.2	50.0	63	9.8	1.90	28.48	115401	1300	921	8.5	16.4
2159.0	4.4	49.6	50	9.8	1.80	28.71	116089	1255	922	8.5	16.4
2160.0	4.7	48.7	51	9.8	1.77	28.92	116737	1160	923	8.5	16.4
2161.0	5.2	49.5	51	9.8	1.75	29.11	117333	1059	924	8.5	16.4
2162.0	5.2	51.8	49	9.8	1.76	29.30	117899	1045	924	8.5	16.4
2163.0	3.8	52.1	52	9.8	1.90	29.57	118725	1451	927	8.5	16.4
2164.0	4.4	51.6	67	9.8	1.93	29.80	119642	1250	928	8.5	16.4
2165.0	4.5	51.1	63	9.8	1.89	30.02	120483	1220	929	8.5	16.4
2166.0	5.7	50.7	63	9.8	1.80	30.19	121142	955.08	929.59	8.5	16.4
2167.0	12.8	48.5	63	9.8	1.51	30.27	121436	428.88	927.37	8.5	16.4
2168.0	7.7	48.9	62	9.8	1.67	30.40	121917	707.19	926.39	8.5	16.4
2169.0	5.2	50.8	69	9.8	1.87	30.59	122710	1049	927	8.5	16.4
2170.0	4.4	50.5	75	9.8	1.95	30.82	123732	1244	928	8.5	16.4
2171.0	4.9	50.4	73	9.8	1.90	31.02	124628	1121	929	8.5	16.4
2172.0	4.1	48.4	79	9.8	1.97	31.27	125797	1351	931	8.5	16.4
2173.0	4.8	45.8	87	9.8	1.91	31.48	126884	1142	932	8.5	16.4
2174.0	4.8	50.1	73	9.8	1.91	31.69	127801	1142	933	8.5	16.4
2175.0	4.9	51.1	75	9.8	1.92	31.89	128708	1110	934	8.5	16.4
2176.0	8.1	49.7	75	9.8	1.73	32.01	129264	678.29	932.49	8.5	16.4
2177.0	9.3	50.4	76	9.8	1.70	32.12	129756	587.04	931.02	8.5	16.4
2178.0	6.2	49.1	76	9.8	1.82	32.28	130500	888.17	930.84	8.5	16.4
2179.0	5.6	48.4	75	9.8	1.85	32.46	131314	985.50	931.07	8.5	16.4
2180.0	5.5	46.9	75	9.8	1.83	32.65	132140	1004	931	8.5	16.4
2181.0	5.3	47.5	75	9.8	1.85	32.84	132995	1042	932	8.5	16.4
2182.0	4.8	46.5	75	9.8	1.87	33.05	133943	1147	933	8.5	16.4
2183.0	4.5	47.2	75	9.8	1.90	33.27	134950	1220	934	8.5	16.4
2184.0	3.6	48.9	62	9.8	1.93	33.55	135991	1541	936	8.5	16.4
2185.0	1.9	48.7	60	9.8	2.12	34.07	137842	2824	944	8.5	16.5

BIT NUMBER	7	IADC CODE	437	INTERVAL	2185.0- 2211.5
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.7	BIT RUN	26.5
TOTAL HOURS	3.84	TOTAL TURNS	17534	CONDITION	T4 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2186.0	7.0	30.5	91	9.8	1.59	0.14	776	782	44253	8.5	16.5
2187.0	13.6	29.9	91	9.8	1.39	0.22	1176	403	22328	8.5	16.5
2188.0	10.0	31.1	90	9.8	1.49	0.32	1719	548	15068	8.5	16.5
2189.0	5.9	32.2	91	9.8	1.67	0.49	2641	928	11533	8.5	16.5
2190.0	7.0	32.7	91	9.8	1.62	0.63	3419	782	9383	8.5	16.5
2191.0	6.5	32.2	91	9.8	1.64	0.78	4256	842	7959	8.5	16.5
2192.0	7.2	31.9	91	9.9	1.59	0.92	5013	760	6931	8.5	16.5
2193.0	6.8	26.5	89	9.9	1.51	1.07	5794	805	6165	8.5	16.5
2194.0	15.3	31.1	91	9.9	1.36	1.13	6151	358	5520	8.5	16.5
2195.0	6.9	31.2	91	9.9	1.59	1.28	6945	797	5048	8.5	16.5
2196.0	7.9	31.5	90	9.9	1.55	1.41	7627	694	4652	8.5	16.5
2197.0	5.0	30.6	84	9.9	1.65	1.61	8642	1104	4356	8.5	16.5
2198.0	11.8	30.4	66	9.9	1.33	1.69	8981	465	4057	8.5	16.5
2199.0	13.2	30.6	67	9.9	1.30	1.77	9282	414	3797	8.5	16.5
2200.0	14.8	30.6	66	9.9	1.27	1.84	9552	371	3568	8.5	16.5
2201.0	12.9	31.1	67	9.9	1.32	1.91	9861	424	3372	8.5	16.5
2202.0	6.7	32.1	66	9.9	1.52	2.06	10451	814	3221	8.5	16.5
2203.0	4.8	30.1	65	9.9	1.58	2.27	11265	1145	3106	8.5	16.5
2204.0	5.2	32.5	63	9.9	1.59	2.46	11998	1057	2998	8.5	16.5
2205.0	4.6	32.0	65	9.9	1.62	2.68	12856	1198	2908	8.5	16.5
2206.0	6.9	32.3	65	9.9	1.51	2.83	13420	789	2807	8.5	16.5
2207.0	6.5	32.5	65	9.8	1.54	2.98	14026	847	2718	8.5	16.5
2208.0	4.7	31.6	66	9.8	1.63	3.20	14868	1170	2651	8.5	16.5
2209.0	4.9	31.7	73	9.8	1.65	3.40	15770	1127	2587	8.5	16.5
2210.0	5.4	31.7	66	9.8	1.59	3.59	16508	1022	2525	8.5	16.5
2211.0	6.0	32.0	68	9.8	1.57	3.75	17192	913	2463	8.5	16.5
2211.5	5.8	32.4	66	9.8	1.58	3.84	17534	940	2434	8.5	16.5

BIT NUMBER	8	IADC CODE	517	INTERVAL	2211.5- 2428.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.1	BIT RUN	216.5
TOTAL HOURS	50.47	TOTAL TURNS	158096	CONDITION	T2 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2212.0	14.6	24.0	39	9.8	1.06	0.03	79	376	91697	8.5	16.5
2213.0	2.4	28.6	49	9.8	1.69	0.44	1286	2243	32061	8.5	16.5
2214.0	3.3	34.5	52	9.8	1.71	0.75	2248	1673	19906	8.5	16.5
2215.0	3.3	36.7	53	9.8	1.74	1.05	3208	1643	14688	8.5	16.5
2216.0	3.3	36.2	53	9.8	1.74	1.35	4177	1653	11791	8.5	16.5
2217.0	4.0	38.8	55	9.8	1.72	1.60	4995	1370	9896	8.5	16.5
2218.0	5.8	37.8	58	9.8	1.61	1.77	5593	944	8519	8.5	16.5
2219.0	5.2	40.6	58	9.8	1.68	1.97	6261	1054	7524	8.5	16.5
2220.0	8.8	41.3	58	9.8	1.52	2.08	6657	625	6712	8.5	16.5
2221.0	6.9	41.3	58	9.8	1.60	2.23	7159	789	6089	8.5	16.5
2222.0	4.5	41.7	58	9.8	1.74	2.45	7938	1224	5625	8.5	16.5
2223.0	3.7	42.5	54	9.8	1.80	2.72	8821	1486	5266	8.5	16.5
2224.0	4.5	44.9	50	9.8	1.74	2.94	9491	1212	4941	8.5	16.5
2225.0	3.3	44.6	51	9.8	1.84	3.24	10408	1644	4697	8.5	16.5
2226.0	3.6	44.9	51	9.8	1.81	3.52	11243	1504	4477	8.5	16.5
2227.0	4.3	42.6	50	9.8	1.72	3.75	11947	1271	4270	8.5	16.5
2228.0	3.9	45.0	51	9.8	1.79	4.00	12725	1398	4096	8.5	16.5
2229.0	3.9	45.9	51	9.8	1.81	4.26	13522	1416	3943	8.5	16.5
2230.0	4.5	46.3	51	9.8	1.76	4.48	14200	1211	3795	8.5	16.5
2231.0	5.5	46.5	51	9.8	1.70	4.67	14762	1004	3652	8.5	16.5
2232.0	6.1	46.6	51	9.8	1.66	4.83	15265	894	3517	8.5	16.5
2233.0	13.4	47.3	51	9.8	1.41	4.90	15492	408	3373	8.5	16.5
2234.0	5.6	44.3	50	9.8	1.66	5.08	16024	973	3266	8.5	16.5
2235.0	4.0	45.2	49	9.8	1.77	5.33	16751	1352	3185	8.5	16.5
2236.0	3.7	44.9	47	9.8	1.78	5.60	17522	1483	3115	8.5	16.5
2237.0	3.4	45.3	47	9.8	1.81	5.89	18351	1603	3056	8.5	16.5
2238.0	3.0	45.6	47	9.8	1.86	6.23	19291	1820	3009	8.5	16.5
2239.0	3.2	45.9	47	9.8	1.84	6.53	20162	1688	2961	8.5	16.5
2240.0	3.2	46.0	47	9.8	1.84	6.84	21042	1699	2917	8.5	16.5
2241.0	3.6	45.3	47	9.8	1.80	7.12	21836	1528	2870	8.5	16.5
2242.0	3.0	45.7	48	9.8	1.87	7.46	22802	1855	2837	8.5	16.5
2243.0	2.8	46.1	48	9.8	1.89	7.82	23832	1977	2809	8.5	16.5
2244.0	4.0	46.0	46	9.8	1.77	8.08	24533	1384	2765	8.5	16.5
2245.0	3.2	44.5	45	9.8	1.80	8.39	25368	1703	2734	8.5	16.5
2246.0	3.3	44.7	51	9.8	1.84	8.69	26289	1662	2703	8.5	16.5
2247.0	3.8	44.1	51	9.8	1.78	8.95	27079	1425	2667	8.5	16.5
2248.0	3.3	43.9	51	9.8	1.83	9.25	28001	1658	2639	8.5	16.5
2249.0	3.9	42.8	53	9.8	1.77	9.51	28814	1407	2606	8.5	16.5
2250.0	3.9	42.5	55	9.8	1.78	9.77	29662	1408	2575	8.5	16.5
2251.0	7.2	42.1	54	9.8	1.58	9.91	30117	762	2529	8.5	16.5
2252.0	6.0	42.6	52	9.8	1.63	10.07	30633	911	2489	8.5	16.5
2253.0	13.6	43.2	53	9.8	1.38	10.15	30867	403	2439	8.5	16.5
2254.0	17.9	43.5	54	9.8	1.30	10.20	31048	306	2389	8.5	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2255.0	18.5	44.1	54	9.8	1.29	10.26	31225	297	2341	8.5	16.5
2256.0	10.1	44.4	54	9.8	1.49	10.36	31547	540	2300	8.5	16.5
2257.0	6.4	44.3	55	9.8	1.64	10.51	32063	861	2269	8.5	16.5
2258.0	6.5	44.8	55	9.8	1.65	10.67	32571	846	2238	8.5	16.5
2259.0	10.6	44.0	55	9.8	1.48	10.76	32881	516	2202	8.5	16.5
2260.0	4.3	45.8	55	9.8	1.79	10.99	33645	1270	2183	8.5	16.5
2261.0	3.7	46.6	55	9.8	1.85	11.26	34537	1481	2168	8.5	16.5
2262.0	3.5	46.6	54	9.8	1.87	11.55	35481	1585	2157	8.5	16.5
2263.0	4.3	46.1	55	9.8	1.79	11.78	36236	1259	2139	8.5	16.5
2264.0	3.4	46.3	54	9.8	1.88	12.08	37203	1624	2130	8.5	16.5
2265.0	3.2	45.7	55	9.8	1.89	12.39	38229	1688	2121	8.5	16.5
2266.0	3.9	43.7	56	9.8	1.80	12.64	39083	1402	2108	8.5	16.5
2267.0	3.0	43.0	56	9.8	1.88	12.98	40201	1833	2103	8.5	16.5
2268.0	5.5	43.3	56	9.8	1.69	13.16	40810	998	2084	8.5	16.5
2269.0	4.1	43.6	56	9.8	1.78	13.40	41617	1320	2070	8.5	16.6
2270.0	3.8	45.5	56	9.8	1.84	13.67	42506	1455	2060	8.5	16.6
2271.0	4.0	45.5	56	9.8	1.82	13.92	43346	1376	2048	8.5	16.6
2272.0	3.9	44.2	56	9.8	1.81	14.18	44214	1405	2038	8.5	16.6
2273.0	6.3	42.3	57	9.8	1.64	14.34	44761	876	2019	8.5	16.6
2274.0	8.5	41.7	57	9.8	1.54	14.46	45164	648	1997	8.5	16.6
2275.0	12.2	41.1	57	9.8	1.41	14.54	45442	447	1972	8.5	16.6
2276.0	7.2	42.7	57	9.8	1.60	14.68	45918	765	1954	8.5	16.6
2277.0	4.8	43.0	57	9.8	1.73	14.88	46623	1130	1941	8.5	16.6
2278.0	3.5	42.7	57	9.8	1.83	15.17	47604	1568	1936	8.5	16.6
2279.0	3.6	42.7	57	9.8	1.82	15.44	48542	1503	1929	8.5	16.6
2280.0	3.2	43.0	54	9.8	1.85	15.76	49562	1709	1926	8.5	16.6
2281.0	3.5	43.4	54	9.8	1.82	16.04	50477	1550	1920	8.5	16.6
2282.0	4.4	42.8	53	9.8	1.74	16.27	51204	1243	1911	8.5	16.6
2283.0	9.7	42.9	55	9.8	1.50	16.37	51548	567	1892	8.5	16.6
2284.0	4.8	43.0	55	9.8	1.72	16.58	52239	1138	1882	8.5	16.6
2285.0	3.5	43.3	53	9.8	1.82	16.86	53153	1560	1877	8.5	16.6
2286.0	3.7	43.2	55	9.8	1.81	17.13	54049	1490	1872	8.5	16.6
2287.0	4.1	43.7	55	9.8	1.78	17.38	54858	1351	1865	8.5	16.6
2288.0	3.7	45.6	55	9.8	1.84	17.65	55739	1466	1860	8.5	16.6
2289.0	3.4	44.5	55	9.8	1.85	17.94	56713	1618	1857	8.5	16.6
2290.0	3.5	43.5	55	9.8	1.83	18.23	57656	1563	1853	8.5	16.6
2291.0	5.4	43.0	55	9.8	1.69	18.42	58271	1022	1843	8.5	16.6
2292.0	10.3	42.6	55	9.8	1.47	18.51	58589	529	1826	8.5	16.6
2293.0	14.3	41.9	55	9.8	1.36	18.58	58819	383	1809	8.5	16.6
2294.0	17.3	42.3	55	9.8	1.30	18.64	59008	316	1791	8.5	16.6
2295.0	16.3	43.3	55	9.8	1.33	18.70	59210	336	1773	8.5	16.6
2296.0	14.0	44.4	55	9.8	1.39	18.77	59445	392	1757	8.5	16.6
2297.0	4.2	44.5	55	9.8	1.79	19.01	60232	1306	1752	8.5	16.6
2298.0	6.2	44.4	55	9.8	1.66	19.18	60768	890	1742	8.5	16.6
2299.0	3.1	45.7	53	9.8	1.89	19.50	61807	1776	1742	8.5	16.6
2300.0	3.2	47.0	46	9.8	1.85	19.81	62666	1705	1742	8.5	16.6
2301.0	3.8	43.8	51	9.8	1.78	20.07	63471	1428	1738	8.5	16.6
2302.0	3.1	42.9	53	9.8	1.85	20.39	64484	1761	1738	8.5	16.6
2303.0	3.7	43.9	53	9.8	1.81	20.66	65344	1484	1736	8.5	16.6
2304.0	3.6	46.9	53	9.8	1.85	20.94	66217	1504	1733	8.5	16.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2305.0	3.3	49.7	53	9.8	1.92	21.24	67179	1664	1732	8.5	16.6
2306.0	3.5	48.5	55	9.8	1.90	21.53	68130	1565	1731	8.5	16.6
2307.0	4.1	46.1	53	9.8	1.80	21.77	68907	1328	1726	8.6	16.6
2308.0	2.9	49.7	45	9.8	1.90	22.12	69832	1881	1728	8.6	16.6
2309.0	3.4	47.2	52	9.8	1.87	22.41	70747	1606	1727	8.6	16.6
2310.0	4.5	46.3	52	9.8	1.77	22.63	71442	1223	1722	8.6	16.6
2311.0	3.4	47.3	52	9.8	1.87	22.93	72366	1611	1720	8.6	16.6
2312.0	2.9	46.4	53	9.8	1.92	23.27	73463	1904	1722	8.6	16.6
2313.0	3.5	46.2	52	9.8	1.85	23.56	74370	1579	1721	8.6	16.6
2314.0	3.6	45.2	52	9.8	1.83	23.84	75245	1522	1719	8.6	16.6
2315.0	4.1	46.3	53	9.8	1.80	24.09	76020	1346	1715	8.6	16.6
2316.0	3.1	45.9	53	9.8	1.88	24.40	77022	1738	1716	8.6	16.6
2317.0	3.2	46.6	53	9.8	1.89	24.72	78021	1731	1716	8.6	16.6
2318.0	3.4	47.0	53	9.8	1.87	25.02	78955	1623	1715	8.6	16.6
2319.0	3.5	46.0	53	9.8	1.85	25.30	79872	1577	1714	8.6	16.6
2320.0	3.5	47.7	54	9.8	1.88	25.59	80788	1544	1712	8.6	16.6
2321.0	4.1	48.0	54	9.8	1.84	25.83	81590	1351	1709	8.6	16.6
2322.0	3.9	49.6	54	9.8	1.87	26.09	82418	1395	1706	8.6	16.6
2323.0	3.1	50.3	54	9.8	1.96	26.41	83473	1776	1706	8.6	16.6
2324.0	3.7	50.6	54	9.8	1.90	26.68	84351	1480	1704	8.6	16.6
2325.0	3.8	47.4	53	9.8	1.84	26.95	85195	1443	1702	8.6	16.6
2326.0	5.3	45.2	53	9.8	1.71	27.13	85795	1034	1696	8.6	16.6
2327.0	11.4	44.8	53	9.8	1.45	27.22	86073	481	1686	8.6	16.6
2328.0	7.5	44.3	53	9.8	1.58	27.36	86497	728	1678	8.6	16.6
2329.0	4.9	43.0	50	9.8	1.69	27.56	87115	1118	1673	8.6	16.6
2330.0	4.5	43.2	51	9.8	1.72	27.78	87787	1212	1669	8.6	16.6
2331.0	3.2	43.3	51	9.8	1.83	28.10	88740	1722	1669	8.6	16.6
2332.0	3.4	45.7	50	9.8	1.84	28.39	89621	1600	1669	8.6	16.6
2333.0	3.6	46.9	50	9.8	1.84	28.67	90460	1527	1668	8.6	16.6
2334.0	3.8	48.0	50	9.9	1.81	28.93	91250	1440	1666	8.6	16.6
2335.0	4.1	47.9	50	9.9	1.78	29.17	91973	1320	1663	8.6	16.6
2336.0	5.4	46.4	50	9.9	1.68	29.36	92528	1011	1658	8.6	16.6
2337.0	5.5	46.1	50	9.9	1.67	29.54	93079	1002	1652	8.6	16.6
2338.0	8.5	44.0	50	9.9	1.50	29.66	93434	648	1645	8.6	16.6
2339.0	6.6	43.3	51	9.9	1.58	29.81	93900	835	1638	8.6	16.6
2340.0	9.4	41.7	52	9.9	1.46	29.92	94233	582	1630	8.6	16.6
2341.0	11.7	43.4	52	9.9	1.41	30.00	94499	468	1621	8.6	16.6
2342.0	4.4	43.9	52	9.9	1.73	30.23	95221	1256	1618	8.6	16.6
2343.0	2.1	44.2	50	9.9	1.94	30.70	96604	2549	1625	8.6	16.6
2344.0	2.8	44.8	53	9.9	1.89	31.05	97735	1939	1628	8.6	16.6
2345.0	13.1	43.8	55	9.9	1.39	31.13	97989	418	1619	8.6	16.7
2346.0	13.5	42.9	55	9.9	1.38	31.20	98235	406	1610	8.6	16.7
2347.0	12.0	43.7	55	9.9	1.42	31.28	98513	458	1601	8.6	16.7
2348.0	15.1	43.7	54	9.9	1.34	31.35	98728	362	1592	8.6	16.7
2349.0	15.1	44.0	54	9.9	1.34	31.42	98944	362	1583	8.6	16.7
2350.0	8.2	45.1	55	9.9	1.56	31.54	99344	668	1576	8.6	16.7
2351.0	6.2	45.8	55	9.9	1.65	31.70	99874	885	1571	8.6	16.7
2352.0	6.8	45.3	55	9.9	1.62	31.85	100357	806	1566	8.6	16.7
2353.0	4.3	45.7	55	9.9	1.77	32.08	101119	1270	1564	8.6	16.7
2354.0	4.3	44.7	55	9.9	1.76	32.31	101881	1268	1562	8.6	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2355.0	4.3	44.8	55	9.9	1.76	32.54	102650	1278	1560	8.6	16.7
2356.0	5.1	45.1	55	9.9	1.71	32.74	103297	1077	1557	8.6	16.7
2357.0	8.5	44.3	55	9.9	1.53	32.86	103683	642	1550	8.6	16.7
2358.0	13.0	42.9	53	9.9	1.38	32.94	103929	421	1543	8.6	16.7
2359.0	4.7	45.2	56	9.9	1.74	33.15	104643	1171	1540	8.6	16.7
2360.0	3.1	45.9	55	9.9	1.89	33.48	105725	1782	1542	8.6	16.7
2361.0	2.8	46.7	55	9.9	1.92	33.83	106894	1928	1544	8.6	16.7
2362.0	6.7	46.2	55	9.9	1.64	33.98	107392	821	1539	8.6	16.7
2363.0	3.9	46.5	56	9.9	1.82	34.23	108241	1396	1539	8.6	16.7
2364.0	3.7	45.9	56	9.9	1.83	34.51	109154	1497	1538	8.6	16.7
2365.0	3.7	45.9	56	9.9	1.83	34.78	110065	1493	1538	8.6	16.7
2366.0	3.6	46.1	56	9.9	1.84	35.06	110994	1521	1538	8.6	16.7
2367.0	3.6	46.3	54	9.9	1.83	35.33	111898	1524	1538	8.6	16.7
2368.0	3.7	44.8	55	9.9	1.81	35.60	112776	1468	1537	8.6	16.7
2369.0	3.4	44.9	54	9.9	1.83	35.90	113732	1624	1538	8.6	16.7
2370.0	3.3	45.0	53	9.8	1.86	36.20	114709	1667	1539	8.6	16.7
2371.0	3.4	44.6	54	9.8	1.85	36.50	115666	1629	1539	8.6	16.7
2372.0	3.3	46.1	54	9.8	1.88	36.81	116659	1681	1540	8.6	16.7
2373.0	3.4	46.3	56	9.8	1.88	37.10	117650	1621	1541	8.6	16.7
2374.0	5.2	46.0	56	9.8	1.74	37.30	118296	1059	1538	8.6	16.7
2375.0	3.7	46.2	56	9.8	1.85	37.57	119206	1490	1537	8.6	16.7
2376.0	2.6	45.7	56	9.8	1.97	37.96	120510	2131	1541	8.6	16.7
2377.0	2.4	41.3	53	9.8	1.91	38.38	121830	2278	1545	8.6	16.7
2378.0	2.7	40.3	53	9.8	1.86	38.75	123022	2042	1548	8.6	16.7
2379.0	3.5	40.1	54	9.8	1.78	39.03	123946	1559	1548	8.6	16.7
2380.0	3.0	41.3	54	9.8	1.84	39.37	125028	1823	1550	8.6	16.7
2381.0	2.8	39.4	54	9.8	1.84	39.72	126197	1960	1553	8.6	16.7
2382.0	5.4	38.8	54	9.8	1.63	39.91	126801	1013	1549	8.6	16.7
2383.0	3.9	39.1	54	9.8	1.73	40.16	127634	1395	1548	8.7	16.7
2384.0	8.4	39.1	54	9.8	1.49	40.28	128023	652	1543	8.7	16.7
2385.0	5.3	38.4	54	9.8	1.63	40.47	128640	1034	1540	8.7	16.7
2386.0	2.6	46.3	54	9.8	1.96	40.86	129901	2119	1544	8.7	16.7
2387.0	2.4	45.1	47	9.8	1.93	41.28	131103	2327	1548	8.7	16.7
2388.0	3.6	44.4	47	9.8	1.79	41.56	131897	1536	1548	8.7	16.7
2389.0	2.3	45.6	47	9.8	1.94	41.99	133103	2339	1552	8.7	16.7
2390.0	2.1	44.9	47	9.8	1.97	42.48	134475	2658	1559	8.7	16.7
2391.0	2.6	45.3	44	9.8	1.88	42.86	135493	2117	1562	8.7	16.7
2392.0	3.6	48.0	51	9.8	1.85	43.14	136342	1525	1562	8.7	16.7
2393.0	3.0	47.6	51	9.8	1.90	43.47	137338	1796	1563	8.7	16.7
2394.0	3.8	46.5	51	9.8	1.82	43.74	138145	1454	1562	8.7	16.7
2395.0	5.7	45.5	51	9.8	1.67	43.91	138682	967	1559	8.7	16.7
2396.0	6.0	43.7	50	9.8	1.63	44.08	139183	913	1556	8.7	16.7
2397.0	3.0	45.9	53	9.8	1.89	44.41	140221	1804	1557	8.7	16.7
2398.0	3.3	47.7	52	9.8	1.88	44.71	141160	1635	1557	8.7	16.7
2399.0	7.3	44.7	52	9.8	1.59	44.84	141586	745	1553	8.7	16.7
2400.0	6.1	44.4	52	9.8	1.64	45.01	142098	894	1549	8.7	16.7
2401.0	6.9	45.2	52	9.8	1.61	45.15	142552	795	1545	8.7	16.7
2402.0	5.0	45.0	52	9.8	1.71	45.35	143174	1087	1543	8.7	16.7
2403.0	6.1	45.3	52	9.8	1.66	45.51	143689	898	1540	8.7	16.7
2404.0	6.3	45.3	52	9.8	1.64	45.67	144182	864	1536	8.7	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2405.0	7.2	47.9	52	9.8	1.63	45.81	144617	763	1532	8.7	16.7
2406.0	8.0	46.7	51	9.8	1.57	45.94	145000	681	1528	8.7	16.7
2407.0	8.2	46.9	51	9.8	1.57	46.06	145373	669	1523	8.7	16.7
2408.0	9.9	49.1	51	9.8	1.53	46.16	145680	554	1519	8.7	16.7
2409.0	8.3	47.7	51	9.8	1.57	46.28	146046	662	1514	8.7	16.7
2410.0	5.2	46.1	45	9.8	1.67	46.47	146561	1051	1512	8.7	16.7
2411.0	7.4	46.8	48	9.8	1.58	46.61	146949	736	1508	8.7	16.7
2412.0	6.8	47.5	48	9.8	1.62	46.75	147372	803	1504	8.7	16.7
2413.0	8.3	46.9	48	9.8	1.55	46.87	147720	660	1500	8.6	16.7
2414.0	9.8	47.5	48	9.8	1.50	46.98	148016	560	1496	8.6	16.7
2415.0	5.5	47.0	48	9.8	1.68	47.16	148543	996	1493	8.6	16.7
2416.0	3.4	47.0	49	9.8	1.84	47.45	149399	1604	1494	8.6	16.7
2417.0	3.0	47.0	49	9.8	1.88	47.78	150360	1799	1495	8.6	16.7
2418.0	2.9	47.6	49	9.8	1.91	48.13	151386	1918	1497	8.6	16.7
2419.0	5.6	49.0	49	9.8	1.70	48.31	151906	976	1495	8.6	16.7
2420.0	5.4	46.9	48	9.8	1.69	48.49	152440	1005	1492	8.6	16.7
2421.0	7.0	46.6	48	9.8	1.60	48.63	152852	779	1489	8.7	16.7
2422.0	6.1	45.4	48	9.8	1.63	48.80	153325	893	1486	8.7	16.7
2423.0	6.6	44.1	48	9.8	1.59	48.95	153764	826	1483	8.7	16.8
2424.0	7.6	43.9	48	9.8	1.54	49.08	154147	724	1479	8.7	16.8
2425.0	5.1	45.4	53	9.8	1.72	49.28	154769	1067	1477	8.8	16.8
2426.0	2.4	45.9	48	9.8	1.94	49.69	155962	2275	1481	8.8	16.8
2427.0	2.5	45.8	44	9.9	1.88	50.10	157029	2214	1485	8.8	16.8
2428.0	2.7	47.5	48	9.9	1.91	50.47	158096	2047	1487	8.8	16.8

BIT NUMBER	9	IADC CODE	517	INTERVAL	2428.0- 2634.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	7.6	BIT RUN	206.0
TOTAL HOURS	58.59	TOTAL TURNS	180906	CONDITION	T6 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2429.0	1.7	22.0	33	9.9	1.55	0.59	1162	3224	51622	8.8	16.8
2430.0	1.5	25.2	34	9.9	1.64	1.25	2504	3600	27611	8.8	16.8
2431.0	2.0	29.1	40	9.9	1.68	1.74	3699	2719	19314	8.7	16.8
2432.0	3.4	30.4	43	9.9	1.56	2.04	4457	1626	14892	8.7	16.8
2433.0	5.3	37.0	48	9.9	1.56	2.23	4999	1040	12121	8.7	16.8
2434.0	3.6	42.3	52	9.9	1.77	2.51	5874	1533	10357	8.7	16.8
2435.0	5.9	38.9	46	9.9	1.53	2.68	6340	924	9009	8.7	16.8
2436.0	9.5	41.8	50	9.9	1.45	2.78	6660	578	7955	8.6	16.8
2437.0	8.0	42.6	50	9.9	1.51	2.91	7037	681	7147	8.6	16.8
2438.0	7.4	43.0	51	9.9	1.54	3.04	7450	744	6507	8.6	16.8
2439.0	7.2	45.3	51	9.9	1.58	3.18	7875	763	5985	8.6	16.8
2440.0	10.5	45.5	51	9.9	1.46	3.28	8165	520	5529	8.6	16.8
2441.0	9.4	45.5	51	9.9	1.49	3.39	8491	586	5149	8.6	16.8
2442.0	9.7	45.5	51	9.9	1.48	3.49	8805	563	4821	8.6	16.8
2443.0	10.4	46.9	51	9.9	1.47	3.58	9097	525	4535	8.6	16.8
2444.0	5.4	44.9	50	9.9	1.66	3.77	9658	1014	4315	8.6	16.8
2445.0	9.8	43.6	51	9.9	1.46	3.87	9970	558	4094	8.5	16.7
2446.0	8.6	43.3	51	9.9	1.50	3.99	10327	637	3902	8.5	16.8
2447.0	4.3	44.8	52	9.9	1.74	4.22	11038	1259	3763	8.5	16.8
2448.0	3.0	44.9	51	9.9	1.86	4.55	12057	1807	3665	8.5	16.8
2449.0	3.9	44.6	52	9.9	1.77	4.81	12859	1420	3558	8.5	16.8
2450.0	2.8	44.6	52	9.9	1.88	5.17	13971	1963	3486	8.5	16.8
2451.0	2.4	44.6	52	9.9	1.93	5.58	15271	2286	3433	8.5	16.8
2452.0	2.8	44.7	52	9.9	1.88	5.94	16379	1960	3372	8.5	16.8
2453.0	3.0	44.5	52	9.9	1.86	6.28	17421	1846	3311	8.5	16.8
2454.0	3.3	44.3	52	9.9	1.82	6.58	18356	1655	3247	8.5	16.8
2455.0	2.9	44.2	52	9.9	1.87	6.93	19438	1913	3198	8.5	16.8
2456.0	2.7	44.9	49	9.9	1.88	7.30	20545	2046	3157	8.5	16.8
2457.0	3.0	45.7	51	9.9	1.86	7.64	21552	1813	3110	8.5	16.8
2458.0	3.1	45.9	50	9.9	1.85	7.95	22508	1744	3065	8.5	16.8
2459.0	2.7	46.2	51	9.9	1.90	8.32	23621	1997	3030	8.5	16.8
2460.0	2.9	46.7	51	9.9	1.89	8.66	24677	1874	2994	8.5	16.8
2461.0	4.3	46.0	51	9.9	1.75	8.89	25387	1259	2942	8.5	16.8
2462.0	10.8	44.3	51	9.9	1.44	8.98	25671	506	2870	8.5	16.8
2463.0	8.4	42.6	50	9.9	1.49	9.10	26032	654	2807	8.5	16.8
2464.0	11.5	41.6	53	9.9	1.40	9.19	26308	478	2742	8.5	16.8
2465.0	10.1	42.6	53	9.9	1.45	9.29	26623	544	2683	8.5	16.8
2466.0	9.0	43.0	53	9.9	1.49	9.40	26975	608	2628	8.5	16.8
2467.0	5.8	43.4	53	9.9	1.64	9.57	27526	947	2585	8.5	16.8
2468.0	6.8	42.6	53	9.9	1.58	9.72	27996	808	2541	8.5	16.8
2469.0	8.3	41.8	53	9.9	1.50	9.84	28379	659	2495	8.5	16.8
2470.0	11.0	41.7	53	9.9	1.41	9.93	28668	497	2447	8.5	16.8
2471.0	9.6	43.7	53	9.9	1.48	10.04	28998	569	2403	8.5	16.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2472.0	8.2	43.1	53	9.9	1.52	10.16	29383	665	2364	8.5	16.8
2473.0	8.5	42.9	52	9.9	1.50	10.28	29748	645	2326	8.5	16.8
2474.0	7.7	42.9	52	9.9	1.53	10.40	30150	709	2291	8.5	16.8
2475.0	7.3	41.9	52	9.9	1.54	10.54	30573	747	2258	8.5	16.8
2476.0	7.9	41.4	52	9.9	1.51	10.67	30966	692	2225	8.5	16.8
2477.0	7.9	42.1	52	9.9	1.51	10.79	31357	689	2194	8.5	16.8
2478.0	8.9	42.5	52	9.9	1.48	10.91	31706	617	2162	8.5	16.8
2479.0	3.9	44.3	52	9.9	1.77	11.16	32509	1410	2147	8.5	16.8
2480.0	3.2	45.0	52	9.9	1.84	11.48	33487	1719	2139	8.5	16.8
2481.0	2.9	44.2	52	9.9	1.87	11.83	34580	1913	2135	8.5	16.8
2482.0	4.0	43.9	51	9.9	1.75	12.08	35350	1370	2121	8.5	16.8
2483.0	4.1	43.1	51	9.9	1.73	12.32	36093	1337	2107	8.5	16.8
2484.0	4.7	43.9	52	9.9	1.71	12.54	36758	1170	2090	8.5	16.8
2485.0	8.6	43.3	52	9.9	1.50	12.65	37117	634	2064	8.5	16.8
2486.0	9.1	44.0	51	9.9	1.49	12.76	37455	601	2039	8.5	16.8
2487.0	9.5	42.1	52	9.9	1.46	12.87	37779	573	2014	8.5	16.8
2488.0	10.4	41.5	51	9.9	1.42	12.96	38075	525	1989	8.5	16.8
2489.0	8.9	42.2	51	9.9	1.48	13.07	38423	617	1967	8.5	16.8
2490.0	10.1	41.6	51	9.9	1.43	13.17	38729	543	1944	8.5	16.8
2491.0	7.4	41.6	52	9.9	1.53	13.31	39145	736	1925	8.5	16.8
2492.0	7.5	43.5	50	9.9	1.54	13.44	39543	732	1906	8.5	16.8
2493.0	7.2	42.7	51	9.9	1.55	13.58	39972	762	1888	8.5	16.8
2494.0	8.4	43.7	51	9.9	1.51	13.70	40338	649	1870	8.5	16.8
2495.0	3.0	44.5	52	9.9	1.86	14.04	41386	1843	1869	8.5	16.8
2496.0	2.6	43.6	52	9.9	1.88	14.41	42564	2074	1872	8.5	16.8
2497.0	2.9	43.6	50	9.9	1.85	14.76	43616	1906	1873	8.5	16.8
2498.0	3.5	43.3	51	9.9	1.79	15.05	44498	1563	1868	8.5	16.8
2499.0	3.1	43.6	51	9.9	1.83	15.37	45503	1782	1867	8.5	16.8
2500.0	2.9	43.5	51	9.9	1.85	15.72	46573	1896	1868	8.5	16.8
2501.0	4.3	42.9	49	9.9	1.70	15.95	47262	1279	1860	8.5	16.8
2502.0	5.3	42.8	52	9.9	1.65	16.14	47850	1037	1848	8.5	16.8
2503.0	5.9	41.9	52	9.9	1.61	16.31	48375	923	1836	8.5	16.8
2504.0	5.5	42.4	52	9.9	1.64	16.49	48942	996	1825	8.5	16.8
2505.0	4.8	42.5	52	9.9	1.68	16.70	49595	1145	1816	8.5	16.8
2506.0	4.6	42.3	52	9.9	1.69	16.92	50271	1185	1808	8.5	16.8
2507.0	3.5	42.5	52	9.9	1.78	17.20	51160	1556	1805	8.5	16.8
2508.0	4.7	42.2	51	9.9	1.67	17.41	51806	1157	1797	8.5	16.8
2509.0	3.5	42.3	53	9.9	1.79	17.70	52719	1583	1794	8.5	16.8
2510.0	3.7	43.0	52	9.9	1.77	17.97	53566	1474	1790	8.5	16.8
2511.0	3.1	43.0	51	9.9	1.82	18.29	54551	1758	1790	8.5	16.8
2512.0	3.9	42.4	52	9.9	1.75	18.55	55353	1404	1785	8.5	16.8
2513.0	2.9	42.5	52	9.9	1.84	18.90	56440	1909	1787	8.5	16.8
2514.0	4.6	42.2	53	9.9	1.69	19.12	57121	1182	1780	8.5	16.8
2515.0	3.8	42.4	52	9.9	1.75	19.38	57938	1424	1776	8.5	16.8
2516.0	7.7	42.6	51	9.9	1.52	19.51	58332	712	1764	8.5	16.8
2517.0	6.7	42.8	48	9.9	1.55	19.65	58765	820	1753	8.5	16.8
2518.0	6.7	42.5	51	9.9	1.57	19.80	59224	820	1743	8.5	16.8
2519.0	4.2	43.2	52	9.9	1.73	20.04	59963	1299	1738	8.5	16.8
2520.0	2.9	41.9	52	9.9	1.83	20.38	61022	1869	1739	8.5	16.8
2521.0	2.7	40.9	51	9.9	1.84	20.76	62171	2038	1742	8.5	16.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2522.0	2.5	40.8	51	9.9	1.86	21.15	63391	2170	1747	8.5	16.8
2523.0	3.3	41.8	52	9.9	1.79	21.46	64346	1674	1746	8.5	16.8
2524.0	2.7	41.5	53	9.9	1.85	21.82	65512	2011	1749	8.5	16.8
2525.0	2.7	43.6	53	9.9	1.89	22.20	66700	2030	1752	8.5	16.8
2526.0	2.8	41.7	53	9.9	1.85	22.55	67837	1950	1754	8.5	16.8
2527.0	2.7	43.0	53	9.9	1.88	22.92	69022	2042	1757	8.5	16.8
2528.0	2.8	43.9	53	9.9	1.88	23.28	70165	1968	1759	8.5	16.8
2529.0	3.2	42.6	53	9.9	1.82	23.60	71161	1708	1758	8.5	16.8
2530.0	6.7	39.2	53	9.9	1.54	23.75	71632	815	1749	8.5	16.8
2531.0	6.9	39.2	53	9.9	1.53	23.89	72093	789	1740	8.5	16.8
2532.0	7.0	40.5	53	9.9	1.54	24.03	72546	777	1730	8.5	16.8
2533.0	5.8	40.0	53	9.9	1.60	24.20	73096	938	1723	8.5	16.8
2534.0	3.0	40.5	54	9.9	1.81	24.53	74161	1808	1724	8.5	16.8
2535.0	4.9	41.0	54	9.9	1.67	24.74	74821	1124	1718	8.5	16.8
2536.0	3.8	40.4	54	9.9	1.74	25.00	75679	1458	1716	8.5	16.8
2537.0	3.1	41.2	52	9.9	1.81	25.33	76696	1787	1716	8.5	16.8
2538.0	2.4	40.0	47	9.9	1.83	25.74	77871	2260	1721	8.5	16.9
2539.0	2.7	41.4	51	9.9	1.84	26.12	79008	2042	1724	8.5	16.9
2540.0	2.9	40.1	52	9.9	1.81	26.46	80081	1889	1726	8.5	16.9
2541.0	2.7	41.2	52	9.9	1.84	26.83	81233	2021	1728	8.5	16.9
2542.0	3.2	40.2	52	9.9	1.78	27.15	82225	1734	1728	8.5	16.9
2543.0	10.0	38.8	52	9.9	1.41	27.25	82536	546	1718	8.5	16.9
2544.0	4.0	38.7	52	9.9	1.69	27.50	83319	1363	1715	8.5	16.9
2545.0	2.7	39.5	52	9.9	1.83	27.87	84490	2059	1718	8.5	16.9
2546.0	2.5	41.5	51	9.9	1.86	28.27	85695	2176	1722	8.5	16.9
2547.0	4.4	41.6	50	9.9	1.69	28.50	86383	1249	1718	8.5	16.9
2548.0	2.8	41.7	50	9.9	1.83	28.85	87455	1941	1720	8.5	16.9
2549.0	2.6	41.6	51	9.9	1.86	29.24	88637	2106	1723	8.5	16.9
2550.0	2.8	40.9	52	9.9	1.83	29.59	89750	1953	1725	8.5	16.9
2551.0	3.7	40.7	52	9.9	1.74	29.87	90600	1492	1723	8.5	16.9
2552.0	2.4	39.1	52	9.9	1.86	30.29	91925	2312	1728	8.5	16.9
2553.0	2.4	39.0	52	9.9	1.85	30.70	93211	2243	1732	8.5	16.9
2554.0	2.7	40.4	52	9.9	1.84	31.07	94387	2050	1734	8.5	16.9
2555.0	2.3	40.7	52	9.9	1.89	31.51	95757	2389	1739	8.5	16.9
2556.0	2.5	40.4	52	9.9	1.86	31.91	97017	2193	1743	8.5	16.9
2557.0	2.2	39.8	53	9.9	1.89	32.36	98433	2458	1749	8.5	16.9
2558.0	2.3	39.0	53	9.9	1.87	32.80	99828	2421	1754	8.5	16.9
2559.0	2.4	38.3	52	9.9	1.84	33.22	101128	2286	1758	8.5	16.9
2560.0	3.7	38.4	52	9.9	1.71	33.49	101969	1471	1756	8.5	16.9
2561.0	2.1	37.5	52	9.9	1.87	33.96	103446	2573	1762	8.5	16.9
2562.0	2.4	38.3	53	9.9	1.84	34.37	104750	2246	1765	8.5	16.9
2563.0	2.4	38.9	53	9.9	1.85	34.78	106060	2266	1769	8.5	16.9
2564.0	2.2	38.5	53	9.9	1.87	35.23	107491	2476	1774	8.5	16.9
2565.0	2.4	38.1	53	9.9	1.84	35.65	108815	2292	1778	8.5	16.9
2566.0	5.0	37.5	52	9.9	1.60	35.85	109437	1086	1773	8.5	16.9
2567.0	3.5	37.9	53	9.9	1.73	36.14	110347	1574	1772	8.5	16.9
2568.0	2.8	37.6	53	9.9	1.79	36.49	111471	1941	1773	8.5	16.9
2569.0	2.6	38.4	50	9.9	1.81	36.88	112628	2115	1775	8.5	16.9
2570.0	2.9	37.6	53	9.9	1.77	37.22	113706	1869	1776	8.5	16.9
2571.0	2.2	37.3	52	9.9	1.86	37.68	115143	2503	1781	8.5	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2572.0	2.6	38.2	52	9.9	1.81	38.06	116340	2082	1783	8.5	16.9
2573.0	2.6	37.9	52	9.9	1.82	38.45	117562	2125	1785	8.5	16.9
2574.0	2.6	37.8	53	9.9	1.82	38.83	118789	2128	1788	8.5	16.9
2575.0	2.5	37.5	53	9.9	1.82	39.24	120073	2222	1791	8.5	16.9
2576.0	2.4	37.6	53	9.9	1.83	39.65	121374	2251	1794	8.5	16.9
2577.0	4.8	37.6	52	9.9	1.62	39.86	122028	1142	1789	8.5	16.9
2578.0	3.0	38.5	52	9.9	1.78	40.20	123074	1852	1790	8.5	16.9
2579.0	2.3	40.2	53	9.9	1.89	40.64	124461	2401	1794	8.5	16.9
2580.0	2.5	40.3	53	9.9	1.86	41.04	125734	2205	1797	8.5	16.9
2581.0	3.0	39.9	53	9.9	1.80	41.38	126804	1851	1797	8.5	16.9
2582.0	2.1	40.0	53	9.9	1.91	41.84	128282	2547	1802	8.5	16.9
2583.0	2.8	39.8	53	9.9	1.83	42.21	129435	1989	1803	8.5	16.9
2584.0	2.4	39.8	53	9.9	1.87	42.63	130770	2309	1806	8.5	16.9
2585.0	1.7	40.7	51	9.9	1.97	43.21	132547	3182	1815	8.5	16.9
2586.0	3.4	40.1	52	9.9	1.75	43.50	133447	1588	1814	8.5	16.9
2587.0	2.7	40.1	51	9.9	1.82	43.86	134572	1994	1815	8.5	16.9
2588.0	2.5	39.6	52	9.9	1.85	44.26	135818	2173	1817	8.5	16.9
2589.0	3.4	39.4	52	9.9	1.75	44.55	136730	1591	1816	8.5	16.9
2590.0	3.9	39.8	52	9.9	1.72	44.81	137544	1420	1813	8.5	16.9
2591.0	3.0	39.6	52	9.9	1.79	45.14	138587	1817	1813	8.5	16.9
2592.0	2.4	39.4	52	9.9	1.86	45.55	139886	2260	1816	8.5	16.9
2593.0	3.2	40.6	52	9.9	1.79	45.87	140885	1737	1815	8.5	16.9
2594.0	3.0	40.8	52	9.9	1.81	46.21	141935	1825	1815	8.5	16.9
2595.0	3.1	41.9	52	9.9	1.81	46.53	142955	1776	1815	8.5	16.9
2596.0	5.3	41.4	52	9.9	1.63	46.72	143540	1025	1811	8.5	16.9
2597.0	4.9	40.2	52	9.9	1.64	46.92	144171	1108	1806	8.5	16.9
2598.0	4.3	39.8	52	9.9	1.68	47.15	144901	1274	1803	8.5	16.9
2599.0	2.9	40.6	52	9.9	1.81	47.49	145977	1872	1804	8.5	16.9
2600.0	3.4	40.7	52	9.9	1.76	47.78	146891	1589	1802	8.5	16.9
2601.0	3.1	41.5	52	9.9	1.81	48.10	147900	1757	1802	8.5	16.9
2602.0	2.8	41.6	52	9.9	1.84	48.46	149026	1959	1803	8.5	16.9
2603.0	2.6	40.8	53	9.9	1.85	48.84	150219	2071	1805	8.5	16.9
2604.0	2.9	40.5	53	9.9	1.81	49.18	151296	1871	1805	8.5	16.9
2605.0	2.7	41.9	52	9.9	1.85	49.55	152446	2012	1806	8.5	16.9
2606.0	2.9	42.3	52	9.9	1.84	49.90	153523	1892	1807	8.5	16.9
2607.0	3.1	41.4	52	9.9	1.81	50.22	154540	1791	1807	8.5	16.9
2608.0	3.0	42.1	52	9.9	1.83	50.56	155584	1836	1807	8.5	16.9
2609.0	2.8	42.0	52	9.9	1.85	50.92	156702	1960	1808	8.5	16.9
2610.0	3.0	41.7	52	9.9	1.82	51.25	157732	1810	1808	8.5	16.9
2611.0	3.1	41.0	52	9.9	1.80	51.57	158729	1746	1807	8.5	16.9
2612.0	3.2	40.9	52	9.9	1.79	51.88	159713	1729	1807	8.5	16.9
2613.0	3.0	41.7	52	9.9	1.82	52.22	160768	1855	1807	8.5	16.9
2614.0	2.9	41.3	52	9.9	1.82	52.56	161824	1858	1807	8.5	16.9
2615.0	3.3	41.4	52	9.9	1.79	52.87	162778	1682	1807	8.5	16.9
2616.0	6.5	39.0	51	9.9	1.54	53.02	163251	847	1802	8.5	16.9
2617.0	3.7	39.2	52	9.9	1.72	53.29	164084	1463	1800	8.5	16.9
2618.0	5.2	38.2	52	9.9	1.60	53.48	164682	1048	1796	8.5	16.9
2619.0	7.0	35.5	52	9.9	1.48	53.62	165127	782	1790	8.5	16.9
2620.0	3.3	38.1	54	9.9	1.75	53.93	166102	1663	1790	8.5	16.9
2621.0	2.9	38.0	53	9.9	1.79	54.27	167214	1898	1790	8.5	16.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2622.0	3.3	38.8	54	9.9	1.76	54.58	168199	1677	1790	8.5	16.9
2623.0	3.0	39.6	54	9.9	1.80	54.91	169259	1805	1790	8.5	16.9
2624.0	2.5	37.3	54	9.9	1.82	55.31	170535	2172	1792	8.5	16.9
2625.0	2.8	37.3	54	9.9	1.79	55.66	171673	1938	1793	8.5	16.9
2626.0	3.0	36.5	53	9.9	1.75	56.00	172736	1834	1793	8.5	16.9
2627.0	2.7	34.5	52	9.9	1.75	56.36	173889	2015	1794	8.5	16.9
2628.0	4.2	35.1	52	9.9	1.62	56.60	174630	1291	1791	8.5	16.9
2629.0	3.6	35.8	52	9.9	1.69	56.88	175512	1535	1790	8.5	16.9
2630.0	3.5	36.7	52	9.9	1.71	57.17	176420	1580	1789	8.5	16.9
2631.0	3.0	37.0	53	9.9	1.76	57.50	177468	1819	1789	8.5	16.9
2632.0	3.0	36.2	53	9.9	1.74	57.83	178515	1819	1789	8.5	17.0
2633.0	2.8	36.4	52	9.9	1.77	58.19	179642	1959	1790	8.5	17.0
2634.0	2.5	36.9	52	9.9	1.81	58.59	180906	2199	1792	8.5	17.0

BIT NUMBER	10	IADC CODE	537	INTERVAL	2634.0- 2681.0
HTC J33		SIZE	12.250	NOZZLES	16 16 18
COST	6637.00	TRIP TIME	7.7	BIT RUN	47.0
TOTAL HOURS	15.91	TOTAL TURNS	45492	CONDITION	T1 B1 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2635.0	2.0	35.9	53	9.9	1.87	0.50	1590	2738	51532	8.5	17.0
2636.0	2.7	31.7	47	9.9	1.68	0.87	2633	2038	26785	8.6	17.0
2637.0	2.2	35.6	53	9.9	1.83	1.33	4072	2492	18687	8.6	17.0
2638.0	2.0	39.2	53	9.9	1.92	1.84	5686	2786	14712	8.6	17.0
2639.0	1.7	41.9	50	9.9	1.98	2.41	7403	3134	12396	8.6	17.0
2640.0	2.3	42.9	47	9.9	1.89	2.84	8624	2374	10726	8.6	17.0
2641.0	3.2	41.1	52	9.9	1.79	3.16	9609	1722	9440	8.6	17.0
2642.0	2.3	55.6	50	9.9	2.08	3.59	10913	2380	8557	8.6	17.0
2643.0	2.6	55.7	44	9.9	1.99	3.98	11932	2134	7844	8.6	17.0
2644.0	3.0	55.7	44	9.9	1.94	4.32	12809	1836	7243	8.6	17.0
2645.0	2.4	53.9	47	9.9	2.02	4.73	13973	2274	6791	8.6	17.0
2646.0	3.0	55.3	47	9.9	1.96	5.07	14922	1851	6379	8.6	17.0
2647.0	2.9	56.1	47	9.9	1.98	5.42	15902	1918	6036	8.6	17.0
2648.0	3.0	54.9	47	9.9	1.96	5.76	16847	1848	5737	8.6	17.0
2649.0	3.1	54.7	47	9.9	1.94	6.08	17744	1750	5471	8.6	17.0
2650.0	2.6	53.8	47	9.9	1.99	6.46	18824	2103	5261	8.6	17.0
2651.0	3.1	53.0	47	9.9	1.92	6.79	19739	1779	5056	8.6	17.0
2652.0	2.0	53.3	47	9.9	2.07	7.28	21128	2675	4924	8.6	17.0
2653.0	3.7	54.6	48	9.9	1.88	7.54	21896	1471	4742	8.6	17.0
2654.0	2.7	53.2	48	9.9	1.97	7.91	22940	1997	4605	8.6	17.0
2655.0	3.2	53.5	49	9.9	1.93	8.22	23851	1694	4466	8.6	17.0
2656.0	3.0	53.2	44	9.9	1.91	8.55	24725	1828	4346	8.6	17.0
2657.0	3.6	53.6	43	9.9	1.85	8.83	25443	1512	4223	8.6	17.0
2658.0	4.0	52.2	43	9.9	1.80	9.08	26100	1384	4105	8.6	17.0
2659.0	2.7	53.7	42	9.9	1.94	9.46	27037	2059	4023	8.6	17.0
2660.0	2.8	54.2	43	9.9	1.94	9.81	27958	1951	3943	8.6	17.0
2661.0	2.8	55.1	46	9.9	1.98	10.17	28950	1955	3870	8.6	17.0
2662.0	2.6	55.4	47	9.9	2.01	10.55	30024	2105	3807	8.6	17.0
2663.0	2.7	53.9	46	9.9	1.97	10.92	31041	1997	3744	8.6	17.0
2664.0	3.9	50.1	47	9.9	1.81	11.17	31761	1389	3666	8.6	17.0
2665.0	3.8	51.0	48	9.9	1.83	11.44	32521	1442	3594	8.6	17.0
2666.0	4.2	51.4	48	9.9	1.81	11.68	33215	1308	3522	8.6	17.0
2667.0	3.5	50.4	48	9.9	1.86	11.96	34041	1564	3463	8.6	17.0
2668.0	3.0	52.3	49	9.9	1.93	12.29	35009	1820	3415	8.6	17.0
2669.0	3.3	52.1	49	9.9	1.90	12.59	35886	1644	3364	8.6	17.0
2670.0	4.8	51.1	49	9.9	1.76	12.80	36491	1136	3302	8.6	17.0
2671.0	2.5	52.0	46	9.9	1.97	13.20	37576	2167	3272	8.6	17.0
2672.0	2.9	53.0	46	9.9	1.93	13.54	38519	1884	3235	8.6	17.0
2673.0	2.4	52.5	45	9.9	1.98	13.95	39617	2237	3210	8.6	17.0
2674.0	3.0	52.4	48	9.9	1.93	14.29	40584	1846	3175	8.6	17.0
2675.0	4.1	53.1	51	9.9	1.85	14.53	41322	1331	3130	8.6	17.0
2676.0	3.5	54.6	50	9.9	1.92	14.82	42180	1559	3093	8.6	17.0
2677.0	3.6	53.1	51	9.9	1.89	15.09	43017	1510	3056	8.6	17.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2678.0	3.1	53.4	51	9.9	1.95	15.42	44001	1775	3027	8.6	17.0
2679.0	3.6	51.6	51	9.9	1.87	15.69	44835	1503	2993	8.6	17.0
2680.0	9.2	51.9	50	9.9	1.56	15.80	45165	598	2941	8.6	17.0
2681.0	9.3	53.5	51	9.9	1.58	15.91	45492	590	2891	8.6	17.0

BIT NUMBER	10	IADC CODE	4	INTERVAL	2681.0- 2693.6
CHRIS C-20		SIZE	8.469	NOZZLES	14 14 13
COST	13000.00	TRIP TIME	7.7	BIT RUN	12.6
TOTAL HOURS	10.94	TOTAL TURNS	59389	CONDITION	T0 B0 G0.050

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2681.2	6.1	16.3	89	9.9	1.50	0.03	176	905	276692	8.6	17.0
2681.4	26.7	18.5	89	9.9	1.14	0.04	216	205	138449	8.6	17.0
2681.6	5.5	17.5	89	9.9	1.56	0.08	411	996	92631	8.6	17.0
2681.8	12.6	15.7	89	9.9	1.29	0.09	496	433	69582	8.6	17.0
2682.0	12.6	17.0	90	9.9	1.32	0.11	581	433	55752	8.6	17.0
2682.2	6.7	16.1	89	9.9	1.47	0.14	742	821	46597	8.6	17.0
2682.4	5.4	15.0	89	9.9	1.50	0.18	940	1011	40085	8.6	17.0
2682.6	5.4	16.4	89	9.9	1.54	0.21	1140	1019	35202	8.6	17.0
2682.8	2.4	15.7	90	9.9	1.73	0.30	1587	2274	31543	8.6	17.0
2683.0	4.0	15.6	90	9.9	1.60	0.35	1859	1384	28527	8.6	17.0
2683.2	8.3	14.9	90	9.9	1.38	0.37	1989	662	25994	8.6	17.0
2683.4	8.5	15.4	90	9.9	1.39	0.39	2116	646	23881	8.6	17.0
2683.6	6.0	15.1	90	9.9	1.48	0.43	2297	920	22115	8.6	17.0
2683.8	4.8	15.6	90	9.9	1.55	0.47	2520	1133	20616	8.6	17.0
2684.0	2.3	16.3	90	9.9	1.76	0.56	2992	2403	19402	8.6	17.0
2684.2	2.8	16.6	90	9.9	1.72	0.63	3380	1969	18313	8.6	17.0
2684.4	3.3	14.7	90	9.9	1.62	0.69	3705	1650	17333	8.6	17.0
2684.6	3.0	17.3	90	9.9	1.72	0.76	4069	1855	16473	8.6	17.0
2684.8	3.2	17.3	90	9.9	1.70	0.82	4411	1734	15697	8.6	17.0
2685.0	1.7	16.6	90	9.9	1.86	0.94	5056	3270	15076	8.6	17.0
2685.2	2.4	17.1	90	9.9	1.78	1.02	5514	2319	14468	8.6	17.0
2685.4	2.7	16.7	90	9.9	1.73	1.10	5910	2008	13902	8.6	17.0
2685.6	2.7	16.5	90	9.9	1.73	1.17	6314	2046	13386	8.6	17.0
2685.8	2.1	16.7	90	9.9	1.80	1.27	6833	2623	12938	8.6	17.0
2686.0	2.7	15.0	90	9.9	1.68	1.34	7227	1992	12500	8.6	17.0
2686.2	2.6	15.9	90	9.9	1.72	1.42	7645	2114	12101	8.6	17.0
2686.4	1.6	16.1	90	9.9	1.86	1.54	8330	3460	11781	8.6	17.0
2686.6	1.8	16.7	90	9.9	1.83	1.65	8918	2966	11466	8.6	17.0
2686.8	0.8	17.5	91	9.9	2.08	1.90	10268	6806	11305	8.6	17.0
2687.0	0.4	18.2	91	9.9	2.27	2.35	12697	12220	11336	8.6	17.0
2687.2	0.4	20.8	91	9.9	2.39	2.85	15443	13809	11415	8.6	17.0
2687.4	0.3	19.8	91	9.9	2.46	3.58	19390	19824	11678	8.6	17.0
2687.6	2.3	21.2	91	9.9	1.90	3.67	19873	2426	11398	8.6	17.0
2687.8	0.9	19.2	91	9.9	2.10	3.88	21043	5878	11235	8.6	17.0
2688.0	1.7	19.7	91	9.9	1.95	4.00	21689	3247	11007	8.6	17.0
2688.2	1.6	18.2	91	9.9	1.92	4.12	22374	3445	10797	8.6	17.0
2688.4	1.2	18.0	91	9.9	2.00	4.30	23315	4730	10633	8.6	17.0
2688.6	0.4	18.8	91	9.9	2.29	4.75	25785	12402	10680	8.6	17.0
2688.8	0.4	18.7	91	9.9	2.35	5.31	28844	15345	10799	8.6	17.0
2689.0	0.5	19.6	91	9.9	2.26	5.68	30863	10136	10783	8.6	17.0
2689.2	0.7	19.2	91	9.9	2.16	5.95	32331	7376	10700	8.6	17.0
2689.4	0.8	19.2	91	9.9	2.14	6.20	33677	6768	10606	8.6	17.0
2689.6	0.8	19.7	91	9.9	2.16	6.46	35076	7041	10523	8.6	17.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2689.8	0.8	19.7	90	9.9	2.15	6.70	36403	6692	10436	8.6	17.0
2690.0	1.2	17.3	90	9.9	1.97	6.86	37294	4502	10304	8.6	17.0
2690.2	1.0	17.5	90	9.9	2.03	7.07	38415	5665	10203	8.6	17.0
2690.4	1.5	17.3	90	9.9	1.91	7.20	39134	3642	10064	8.6	17.0
2690.6	3.1	17.4	89	9.9	1.71	7.27	39479	1764	9891	8.6	17.0
2690.8	3.2	17.8	89	9.9	1.71	7.33	39815	1711	9724	8.6	17.0
2691.0	3.4	18.0	89	9.9	1.70	7.39	40130	1612	9562	8.6	17.0
2691.2	4.9	18.1	89	9.9	1.60	7.43	40349	1118	9396	8.6	17.0
2691.4	2.7	18.4	90	9.9	1.78	7.51	40752	2053	9255	8.6	17.0
2691.6	4.5	19.3	89	9.9	1.65	7.55	40989	1209	9103	8.6	17.0
2691.8	1.7	20.1	90	9.9	1.96	7.67	41640	3315	8996	8.6	17.0
2692.0	2.3	19.5	90	9.9	1.85	7.76	42116	2426	8876	8.6	17.0
2692.2	1.4	18.6	90	9.9	1.97	7.91	42899	3985	8789	8.6	17.0
2692.4	2.0	19.7	90	9.9	1.90	8.01	43451	2806	8684	8.6	17.0
2692.6	1.6	17.7	90	9.9	1.90	8.13	44120	3399	8593	8.6	17.0
2692.8	1.3	19.5	90	9.9	2.00	8.28	44926	4083	8517	8.6	17.0
2693.0	1.7	18.2	85	9.9	1.89	8.40	45542	3293	8429	8.6	17.0
2693.2	13.3	17.3	102	9.9	1.35	8.42	45633	411	8298	8.6	17.0
2693.4	3.1	18.5	101	9.9	1.78	8.48	46032	1795	8193	8.6	17.0
2693.6	0.1	20.8	91	9.9	2.84	10.94	59389	67175	9129	8.6	17.0

BIT NUMBER	11	IADC CODE	517	INTERVAL	2693.6- 2840.5
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.0	BIT RUN	146.9
TOTAL HOURS	39.58	TOTAL TURNS	115791	CONDITION	T3 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2694.0	3.1	8.1	62	9.9	1.23	0.13	479	1758	128228	8.6	17.0
2695.0	7.7	19.9	55	9.9	1.25	0.26	909	712	37145	8.6	17.0
2696.0	9.2	38.3	53	9.9	1.43	0.37	1252	595	21916	8.6	17.0
2697.0	2.9	37.8	52	9.9	1.78	0.71	2333	1881	16023	8.6	17.0
2698.0	2.8	38.0	52	9.9	1.79	1.06	3442	1933	12821	8.6	17.0
2699.0	3.4	40.8	52	9.9	1.77	1.36	4360	1614	10746	8.6	17.0
2700.0	3.0	50.3	48	9.9	1.91	1.70	5334	1843	9355	8.6	17.0
2701.0	2.9	48.7	48	9.9	1.90	2.04	6323	1874	8344	8.6	17.0
2702.0	3.4	48.6	48	9.9	1.84	2.33	7164	1594	7540	8.6	17.0
2703.0	2.7	48.9	48	9.9	1.93	2.70	8246	2046	6956	8.6	17.0
2704.0	4.0	51.3	48	9.9	1.82	2.95	8973	1372	6419	8.6	17.0
2705.0	2.9	49.1	48	9.9	1.91	3.30	9987	1918	6024	8.6	17.0
2706.0	2.1	48.6	49	9.9	2.00	3.77	11352	2550	5744	8.6	17.0
2707.0	3.6	48.4	53	9.9	1.85	4.04	12219	1506	5427	8.6	17.0
2708.0	5.2	45.8	52	9.9	1.69	4.23	12819	1046	5123	8.6	17.0
2709.0	3.8	50.4	52	9.9	1.86	4.50	13658	1460	4885	8.6	17.0
2710.0	4.4	49.7	53	9.9	1.80	4.73	14367	1232	4663	8.6	17.0
2711.0	3.2	49.5	53	9.9	1.90	5.04	15354	1709	4493	8.6	17.0
2712.0	2.9	53.1	53	9.9	1.99	5.39	16459	1921	4353	8.6	17.0
2713.0	2.8	54.6	52	9.9	2.01	5.74	17562	1924	4228	8.6	17.0
2714.0	2.9	54.9	52	9.9	2.01	6.09	18649	1898	4114	8.6	17.0
2715.0	3.9	53.7	52	9.9	1.88	6.34	19446	1389	3986	8.6	17.0
2716.0	2.6	54.3	53	9.9	2.04	6.73	20677	2132	3904	8.6	17.0
2717.0	3.1	53.6	51	9.9	1.95	7.05	21650	1746	3811	8.6	17.0
2718.0	3.1	53.5	50	9.9	1.95	7.37	22614	1761	3727	8.6	17.1
2719.0	3.4	53.3	48	9.9	1.91	7.67	23476	1632	3645	8.6	17.1
2720.0	3.1	53.2	48	9.9	1.93	7.99	24414	1772	3574	8.6	17.1
2721.0	4.2	51.0	48	9.9	1.80	8.23	25108	1306	3491	8.6	17.1
2722.0	2.2	50.0	49	9.9	2.01	8.69	26434	2491	3456	8.7	17.1
2723.0	2.8	43.7	51	9.9	1.86	9.04	27515	1925	3404	8.7	17.1
2724.0	2.6	40.7	47	9.8	1.83	9.42	28580	2082	3360	8.7	17.1
2725.0	3.6	44.9	46	9.8	1.78	9.69	29347	1513	3302	8.7	17.1
2726.0	3.2	46.7	47	9.8	1.85	10.01	30237	1717	3253	8.7	17.1
2727.0	2.8	47.0	48	9.8	1.91	10.37	31278	1968	3214	8.7	17.1
2728.0	3.6	46.0	48	9.8	1.81	10.65	32084	1522	3165	8.7	17.1
2729.0	4.1	44.9	48	9.8	1.76	10.89	32798	1346	3114	8.7	17.1
2730.0	8.9	43.8	48	9.8	1.49	11.00	33123	614	3045	8.7	17.1
2731.0	3.2	46.1	48	9.8	1.85	11.31	34016	1688	3009	8.7	17.1
2732.0	3.0	46.3	48	9.9	1.86	11.65	34997	1854	2979	8.7	17.1
2733.0	8.6	45.1	48	9.9	1.50	11.77	35333	634	2919	8.7	17.1
2734.0	3.1	46.7	48	9.9	1.85	12.09	36273	1770	2891	8.7	17.1
2735.0	3.2	49.1	48	9.9	1.87	12.40	37163	1703	2862	8.7	17.1
2736.0	3.5	50.4	48	9.9	1.86	12.69	37997	1580	2832	8.7	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2737.0	3.6	50.9	48	9.9	1.85	12.97	38803	1531	2802	8.7	17.1
2738.0	2.9	50.1	48	9.9	1.92	13.32	39814	1916	2782	8.7	17.1
2739.0	5.5	51.8	48	9.9	1.72	13.50	40336	995	2742	8.7	17.1
2740.0	3.7	53.0	48	9.9	1.87	13.77	41113	1478	2715	8.7	17.1
2741.0	3.4	53.0	49	9.9	1.90	14.07	41981	1633	2692	8.7	17.1
2742.0	4.4	52.1	49	9.9	1.81	14.30	42653	1246	2662	8.7	17.1
2743.0	9.8	52.5	49	9.9	1.54	14.40	42951	557	2620	8.7	17.1
2744.0	9.2	47.6	49	9.9	1.51	14.51	43270	593	2580	8.7	17.1
2745.0	7.2	49.5	50	9.9	1.62	14.65	43692	763	2544	8.7	17.1
2746.0	7.2	48.1	51	9.9	1.61	14.78	44118	757	2510	8.7	17.1
2747.0	3.5	46.6	49	9.9	1.81	15.07	44953	1550	2492	8.7	17.1
2748.0	4.9	45.1	48	9.9	1.68	15.27	45547	1124	2467	8.7	17.1
2749.0	4.2	45.8	48	9.9	1.74	15.51	46233	1296	2446	8.7	17.1
2750.0	5.5	45.4	48	9.9	1.65	15.69	46762	1001	2420	8.7	17.1
2751.0	6.4	45.0	49	9.9	1.60	15.85	47221	855	2393	8.7	17.1
2752.0	7.9	44.0	48	9.9	1.51	15.98	47587	696	2364	8.7	17.1
2753.0	12.1	47.2	48	9.9	1.41	16.06	47823	452	2332	8.7	17.1
2754.0	4.5	47.8	50	9.9	1.75	16.28	48488	1221	2313	8.7	17.1
2755.0	8.4	47.7	53	9.9	1.56	16.40	48866	654	2286	8.7	17.1
2756.0	4.2	48.1	53	9.9	1.80	16.64	49622	1308	2271	8.7	17.1
2757.0	3.9	48.4	53	9.9	1.83	16.90	50443	1419	2257	8.7	17.1
2758.0	3.7	50.1	53	9.9	1.86	17.17	51288	1463	2245	8.7	17.1
2759.0	3.1	49.1	53	9.9	1.91	17.49	52303	1757	2237	8.7	17.1
2760.0	4.3	49.4	53	9.9	1.81	17.72	53049	1288	2223	8.7	17.1
2761.0	4.2	50.4	53	9.9	1.83	17.96	53812	1319	2210	8.7	17.1
2762.0	4.0	49.2	53	9.9	1.83	18.21	54600	1357	2197	8.7	17.1
2763.0	3.4	48.6	53	9.9	1.87	18.50	55525	1592	2189	8.7	17.1
2764.0	2.9	49.4	53	9.9	1.94	18.85	56615	1890	2184	8.7	17.1
2765.0	7.0	48.7	53	9.9	1.64	18.99	57068	786	2165	8.7	17.1
2766.0	3.5	49.2	52	9.9	1.87	19.28	57968	1568	2156	8.7	17.1
2767.0	3.3	48.9	52	9.9	1.88	19.58	58917	1652	2150	8.7	17.1
2768.0	2.8	48.9	45	9.9	1.89	19.94	59892	1959	2147	8.7	17.1
2769.0	3.0	48.1	45	9.9	1.86	20.27	60801	1834	2143	8.7	17.1
2770.0	4.1	48.5	45	9.9	1.76	20.52	61459	1337	2132	8.7	17.1
2771.0	6.9	47.9	44	9.9	1.57	20.66	61837	791	2115	8.7	17.1
2772.0	6.8	49.1	44	9.9	1.59	20.81	62223	809	2098	8.7	17.1
2773.0	7.0	49.5	43	9.9	1.58	20.95	62597	785	2082	8.8	17.1
2774.0	4.7	46.3	43	9.9	1.67	21.16	63146	1156	2070	8.8	17.1
2775.0	9.5	43.3	46	9.9	1.43	21.27	63436	576	2052	8.8	17.1
2776.0	8.2	45.6	46	9.9	1.50	21.39	63769	665	2035	8.8	17.1
2777.0	9.4	45.5	46	9.9	1.46	21.49	64059	579	2018	8.8	17.1
2778.0	5.9	43.7	46	9.9	1.59	21.66	64523	921	2005	8.8	17.1
2779.0	7.3	44.7	46	9.9	1.53	21.80	64901	753	1990	8.8	17.1
2780.0	5.5	46.1	45	9.9	1.63	21.98	65387	996	1978	8.8	17.1
2781.0	7.9	46.7	47	9.9	1.54	22.11	65746	695	1964	8.8	17.1
2782.0	7.3	48.6	47	9.9	1.58	22.25	66132	748	1950	8.8	17.1
2783.0	8.6	46.2	47	9.9	1.50	22.36	66461	637	1935	8.8	17.1
2784.0	4.8	47.7	46	9.9	1.70	22.57	67037	1139	1927	8.8	17.1
2785.0	4.2	48.7	47	9.9	1.77	22.81	67716	1316	1920	8.8	17.1
2786.0	3.1	48.2	48	9.9	1.87	23.13	68656	1770	1918	8.8	17.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2787.0	2.4	50.2	48	9.9	1.97	23.55	69841	2254	1922	8.8	17.1
2788.0	2.5	49.6	44	9.9	1.93	23.95	70903	2207	1925	8.8	17.1
2789.0	4.1	49.5	44	9.9	1.76	24.19	71538	1322	1919	8.8	17.1
2790.0	3.4	48.0	44	9.9	1.80	24.48	72312	1611	1915	8.8	17.1
2791.0	6.3	48.5	44	9.9	1.61	24.64	72728	870	1905	8.8	17.1
2792.0	5.1	48.1	44	9.9	1.67	24.84	73244	1074	1896	8.8	17.1
2793.0	5.5	47.4	51	9.9	1.69	25.02	73795	989	1887	8.8	17.1
2794.0	4.3	48.6	49	9.9	1.77	25.25	74475	1262	1881	8.8	17.1
2795.0	6.7	48.8	49	9.9	1.63	25.40	74915	814	1870	8.8	17.1
2796.0	7.7	49.4	50	9.9	1.59	25.53	75306	715	1859	8.8	17.2
2797.0	7.0	49.0	50	9.9	1.62	25.67	75735	782	1849	8.8	17.2
2798.0	4.4	49.2	50	9.9	1.78	25.90	76418	1245	1843	8.7	17.1
2799.0	3.2	49.5	50	9.9	1.89	26.21	77368	1723	1842	8.7	17.1
2800.0	2.8	49.2	50	9.9	1.93	26.57	78437	1947	1843	8.7	17.1
2801.0	4.6	49.7	49	9.9	1.76	26.79	79071	1180	1836	8.7	17.1
2802.0	3.4	52.9	49	9.9	1.90	27.08	79929	1591	1834	8.7	17.1
2803.0	5.6	54.5	48	9.9	1.74	27.26	80446	981	1826	8.7	17.1
2804.0	3.7	51.5	48	9.9	1.85	27.53	81226	1481	1823	8.7	17.1
2805.0	3.6	43.1	48	9.9	1.76	27.81	82041	1538	1821	8.7	17.1
2806.0	3.2	41.5	48	9.9	1.77	28.12	82943	1703	1820	8.7	17.2
2807.0	4.1	41.0	48	9.9	1.69	28.36	83652	1338	1815	8.7	17.2
2808.0	3.7	42.0	47	9.9	1.72	28.63	84408	1474	1812	8.7	17.2
2809.0	2.5	47.0	46	9.9	1.91	29.03	85511	2172	1816	8.7	17.2
2810.0	3.7	42.2	46	9.9	1.73	29.30	86267	1490	1813	8.7	17.2
2811.0	2.4	42.3	46	9.9	1.86	29.72	87425	2285	1817	8.7	17.2
2812.0	3.8	42.2	49	9.9	1.73	29.98	88196	1423	1813	8.7	17.2
2813.0	3.0	41.6	48	9.9	1.79	30.31	89156	1807	1813	8.7	17.2
2814.0	4.1	41.1	49	9.9	1.70	30.55	89878	1344	1810	8.7	17.2
2815.0	3.0	42.3	49	9.9	1.81	30.89	90853	1822	1810	8.7	17.2
2816.0	3.3	42.0	49	9.9	1.78	31.19	91751	1673	1809	8.7	17.2
2817.0	3.6	40.6	49	9.9	1.72	31.47	92557	1501	1806	8.7	17.2
2818.0	3.1	41.1	49	9.9	1.79	31.79	93523	1793	1806	8.7	17.2
2819.0	3.9	40.5	49	9.9	1.70	32.05	94272	1390	1803	8.7	17.2
2820.0	4.3	41.1	49	9.9	1.68	32.28	94964	1285	1798	8.7	17.2
2821.0	2.6	40.7	49	9.9	1.83	32.66	96081	2067	1801	8.7	17.2
2822.0	2.6	40.2	48	9.9	1.82	33.04	97184	2105	1803	8.7	17.2
2823.0	2.6	39.4	48	9.9	1.80	33.43	98276	2088	1805	8.7	17.2
2824.0	3.1	44.2	48	9.9	1.81	33.74	99182	1738	1805	8.7	17.2
2825.0	3.6	49.6	48	9.9	1.84	34.02	99985	1538	1803	8.7	17.2
2826.0	2.4	49.6	47	9.9	1.96	34.43	101145	2245	1806	8.7	17.2
2827.0	2.6	42.4	52	9.9	1.87	34.82	102345	2125	1808	8.7	17.2
2828.0	7.7	42.3	54	9.9	1.54	34.95	102772	715	1800	8.7	17.2
2829.0	7.9	43.5	54	9.9	1.55	35.08	103185	693	1792	8.7	17.2
2830.0	13.7	43.0	54	9.9	1.37	35.15	103423	400	1782	8.7	17.2
2831.0	6.2	43.3	44	9.9	1.56	35.31	103849	890	1775	8.7	17.2
2832.0	3.0	44.5	42	9.9	1.79	35.65	104702	1846	1776	8.7	17.2
2833.0	2.6	44.6	42	9.9	1.84	36.04	105682	2109	1778	8.7	17.2
2834.0	2.5	43.0	45	9.9	1.85	36.44	106751	2182	1781	8.7	17.2
2835.0	2.1	41.6	44	9.9	1.89	36.92	108047	2658	1787	8.7	17.2
2836.0	2.0	41.6	43	9.9	1.88	37.42	109329	2728	1794	8.7	17.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2837.0	2.1	38.8	49	9.9	1.87	37.89	110722	2576	1799	8.7	17.2
2838.0	1.9	43.4	50	9.9	1.97	38.40	112253	2815	1806	8.7	17.2
2839.0	3.0	43.0	50	9.9	1.82	38.74	113251	1836	1807	8.7	17.2
2840.0	1.9	44.1	51	9.9	1.99	39.27	114873	2908	1814	8.7	17.2
2840.5	1.6	43.9	49	9.9	2.03	39.58	115791	3410	1820	8.7	17.2

BIT NUMBER	12	IADC CODE	517	INTERVAL	2840.5- 3011.0		
HTC J22		SIZE	12.250	NOZZLES	16 16 18		
COST	6788.00	TRIP TIME	8.4	BIT RUN	170.5		
TOTAL HOURS	48.33	TOTAL TURNS	139280	CONDITION	T4 B2 G0.250		

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2841.0	3.3	27.6	51	9.9	1.57	0.15	457	1636	107192	8.7	17.2
2842.0	3.0	43.7	47	9.9	1.81	0.48	1378	1801	36931	8.7	17.2
2843.0	3.6	47.6	47	9.9	1.80	0.75	2151	1506	22761	8.7	17.2
2844.0	3.2	48.4	47	9.9	1.85	1.06	3031	1705	16745	8.7	17.2
2845.0	2.8	48.2	47	9.9	1.90	1.42	4039	1942	13455	8.7	17.2
2846.0	3.1	47.2	43	9.9	1.82	1.74	4867	1778	11332	8.7	17.2
2847.0	2.8	47.7	47	9.9	1.88	2.10	5860	1936	9887	8.7	17.2
2848.0	2.8	46.9	47	9.9	1.88	2.46	6884	1976	8832	8.7	17.2
2849.0	2.8	47.7	47	9.9	1.89	2.81	7896	1945	8022	8.7	17.2
2850.0	3.9	47.8	47	9.9	1.78	3.07	8625	1402	7325	8.7	17.2
2851.0	3.6	47.3	47	9.9	1.81	3.35	9420	1528	6773	8.7	17.2
2852.0	3.4	48.0	47	9.9	1.82	3.64	10234	1597	6323	8.7	17.2
2853.0	3.3	48.4	45	9.9	1.83	3.94	11053	1665	5950	8.7	17.2
2854.0	3.6	47.8	46	9.9	1.80	4.23	11829	1542	5624	8.7	17.2
2855.0	6.3	48.4	46	9.9	1.62	4.38	12263	864	5295	8.7	17.2
2856.0	4.5	48.3	45	9.9	1.72	4.60	12863	1205	5031	8.7	17.2
2857.0	5.8	47.4	48	9.9	1.65	4.78	13359	949	4784	8.7	17.2
2858.0	5.0	45.4	48	9.9	1.68	4.98	13939	1100	4573	8.7	17.2
2859.0	4.9	46.1	48	9.9	1.69	5.18	14524	1107	4386	8.7	17.2
2860.0	13.6	46.8	48	9.9	1.37	5.25	14737	403	4182	8.7	17.2
2861.0	16.1	46.6	46	9.9	1.30	5.32	14910	341	3994	8.7	17.2
2862.0	11.9	47.0	46	9.9	1.39	5.40	15140	459	3830	8.7	17.2
2863.0	9.7	46.8	46	9.9	1.46	5.50	15423	566	3685	8.7	17.2
2864.0	8.2	46.4	46	9.9	1.51	5.63	15758	671	3557	8.7	17.2
2865.0	8.5	47.0	46	9.9	1.50	5.74	16079	642	3438	8.7	17.2
2866.0	3.1	46.9	46	9.9	1.84	6.07	16972	1787	3373	8.7	17.2
2867.0	3.8	46.0	46	9.9	1.76	6.33	17703	1449	3300	8.7	17.2
2868.0	3.1	46.5	46	9.9	1.83	6.65	18582	1740	3244	8.7	17.2
2869.0	3.0	46.7	46	9.9	1.84	6.98	19490	1801	3193	8.7	17.2
2870.0	2.5	45.5	44	9.9	1.88	7.39	20574	2227	3160	8.7	17.2
2871.0	2.5	45.5	42	9.9	1.85	7.79	21567	2179	3128	8.7	17.2
2872.0	2.7	45.8	41	9.9	1.84	8.16	22494	2041	3094	8.7	17.2
2873.0	2.7	47.2	41	9.9	1.86	8.53	23424	2053	3062	8.7	17.2
2874.0	2.6	45.3	41	9.9	1.84	8.93	24394	2144	3034	8.7	17.2
2875.0	2.7	45.1	41	9.9	1.83	9.30	25328	2061	3006	8.7	17.2
2876.0	2.2	46.2	40	9.9	1.90	9.76	26427	2493	2992	8.7	17.2
2877.0	3.6	44.7	41	9.9	1.72	10.03	27110	1515	2951	8.7	17.2
2878.0	10.6	42.3	42	9.9	1.36	10.13	27348	516	2886	8.7	17.2
2879.0	3.4	47.5	42	9.9	1.79	10.42	28093	1603	2853	8.7	17.2
2880.0	3.6	48.8	42	9.9	1.78	10.70	28800	1519	2819	8.7	17.2
2881.0	3.7	50.5	42	9.9	1.79	10.97	29485	1483	2786	8.7	17.2
2882.0	2.4	50.3	41	9.9	1.93	11.39	30508	2301	2774	8.7	17.2
2883.0	2.0	49.1	36	9.9	1.93	11.89	31579	2754	2774	8.7	17.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2884.0	2.4	48.0	37	9.9	1.87	12.32	32508	2319	2763	8.7	17.2
2885.0	2.2	48.0	41	9.9	1.93	12.78	33633	2523	2758	8.7	17.2
2886.0	2.6	48.0	40	9.9	1.87	13.16	34562	2099	2744	8.7	17.2
2887.0	2.9	48.0	41	9.9	1.83	13.50	35388	1857	2724	8.7	17.2
2888.0	3.3	48.0	41	9.9	1.80	13.81	36141	1684	2703	8.7	17.2
2889.0	2.8	48.0	40	9.9	1.84	14.16	36995	1925	2687	8.7	17.2
2890.0	2.7	46.5	40	9.9	1.84	14.53	37894	2027	2673	8.7	17.2
2891.0	2.8	46.3	40	9.9	1.82	14.88	38751	1931	2659	8.7	17.2
2892.0	2.6	47.6	40	9.9	1.86	15.26	39674	2081	2647	8.7	17.2
2893.0	2.7	47.7	43	9.9	1.87	15.63	40619	2001	2635	8.7	17.2
2894.0	2.8	47.8	45	9.9	1.88	15.99	41588	1969	2623	8.7	17.2
2895.0	2.7	50.1	45	9.9	1.92	16.36	42587	2021	2612	8.7	17.2
2896.0	3.5	51.0	46	9.9	1.85	16.64	43371	1562	2593	8.7	17.2
2897.0	2.7	51.5	46	9.9	1.94	17.01	44395	2039	2583	8.7	17.2
2898.0	2.9	51.8	46	9.9	1.93	17.36	45365	1906	2571	8.7	17.2
2899.0	3.1	52.1	49	9.9	1.93	17.69	46327	1776	2557	8.7	17.2
2900.0	3.2	51.8	50	9.9	1.91	18.00	47253	1702	2543	8.7	17.2
2901.0	4.0	51.9	49	9.9	1.84	18.25	48000	1382	2524	8.7	17.2
2902.0	9.0	46.9	49	9.9	1.51	18.36	48329	608	2493	8.7	17.2
2903.0	16.1	46.8	48	9.9	1.31	18.42	48508	340	2458	8.7	17.2
2904.0	8.7	46.4	47	9.9	1.50	18.54	48830	631	2430	8.7	17.2
2905.0	2.8	48.0	52	9.9	1.93	18.90	49952	1963	2422	8.7	17.2
2906.0	4.6	48.2	52	9.9	1.76	19.11	50633	1189	2403	8.7	17.2
2907.0	3.2	47.4	52	9.9	1.87	19.42	51605	1694	2393	8.7	17.3
2908.0	3.3	47.8	52	9.9	1.87	19.73	52569	1677	2382	8.7	17.3
2909.0	3.1	47.4	53	9.9	1.88	20.05	53573	1743	2373	8.7	17.3
2910.0	3.0	47.5	52	9.9	1.90	20.39	54639	1854	2365	8.7	17.3
2911.0	2.9	47.9	52	9.9	1.92	20.73	55728	1898	2359	8.7	17.3
2912.0	2.7	48.4	52	9.9	1.94	21.10	56884	2012	2354	8.7	17.3
2913.0	2.8	47.8	52	9.9	1.93	21.46	58015	1965	2349	8.7	17.3
2914.0	3.5	47.7	53	9.9	1.86	21.75	58928	1585	2338	8.7	17.3
2915.0	2.8	48.9	53	9.9	1.94	22.10	60066	1942	2333	8.7	17.3
2916.0	3.9	48.2	54	9.9	1.83	22.36	60894	1404	2321	8.7	17.3
2917.0	2.9	47.9	53	9.9	1.92	22.71	61998	1898	2315	8.7	17.3
2918.0	3.2	48.3	53	9.9	1.89	23.02	62996	1719	2307	8.7	17.3
2919.0	3.1	47.8	52	9.9	1.89	23.34	64000	1757	2300	8.7	17.3
2920.0	3.0	47.8	51	9.9	1.90	23.68	65042	1854	2295	8.7	17.3
2921.0	4.0	46.2	51	9.9	1.78	23.93	65807	1360	2283	8.7	17.3
2922.0	6.6	47.0	51	9.9	1.62	24.08	66271	826	2265	8.7	17.3
2923.0	8.5	46.6	51	9.9	1.54	24.20	66629	646	2246	8.7	17.3
2924.0	3.7	46.6	51	9.9	1.81	24.47	67451	1474	2236	8.7	17.3
2925.0	3.2	47.2	52	9.9	1.87	24.78	68409	1696	2230	8.7	17.3
2926.0	3.3	46.7	52	9.9	1.85	25.08	69351	1667	2223	8.7	17.3
2927.0	2.6	47.0	52	9.9	1.94	25.47	70556	2128	2222	8.7	17.3
2928.0	4.3	45.8	45	9.9	1.71	25.70	71183	1273	2211	8.7	17.3
2929.0	8.7	45.4	54	9.9	1.54	25.82	71556	628	2194	8.7	17.3
2930.0	7.9	44.7	54	9.9	1.56	25.94	71967	690	2177	8.7	17.3
2931.0	11.4	46.0	54	9.9	1.46	26.03	72253	481	2158	8.7	17.3
2932.0	10.9	45.0	54	9.9	1.46	26.12	72552	502	2140	8.7	17.3
2933.0	7.5	44.5	53	9.9	1.56	26.25	72970	725	2125	8.7	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2934.0	5.4	48.7	53	9.9	1.72	26.44	73554	1013	2113	8.7	17.3
2935.0	2.8	56.3	53	9.9	2.04	26.80	74694	1976	2111	8.7	17.3
2936.0	3.2	56.2	52	9.9	1.99	27.12	75681	1728	2107	8.7	17.3
2937.0	3.1	55.4	52	9.9	1.98	27.43	76670	1744	2103	8.7	17.3
2938.0	3.5	47.7	52	9.9	1.84	27.72	77547	1545	2098	8.7	17.3
2939.0	5.3	44.9	52	9.9	1.68	27.90	78131	1028	2087	8.7	17.3
2940.0	7.7	44.6	52	9.9	1.55	28.03	78531	707	2073	8.7	17.3
2941.0	8.9	44.8	51	9.9	1.50	28.15	78871	613	2058	8.7	17.3
2942.0	9.3	45.1	54	9.9	1.51	28.25	79220	592	2044	8.7	17.3
2943.0	9.3	44.5	50	9.9	1.48	28.36	79546	590	2030	8.7	17.3
2944.0	3.3	45.1	50	9.9	1.82	28.66	80453	1650	2026	8.7	17.3
2945.0	2.8	44.7	50	9.9	1.87	29.02	81523	1939	2025	8.7	17.3
2946.0	3.5	45.0	50	9.9	1.81	29.31	82396	1582	2021	8.7	17.3
2947.0	3.9	44.1	50	9.9	1.76	29.57	83181	1420	2015	8.7	17.3
2948.0	2.8	45.3	50	9.9	1.88	29.92	84250	1935	2015	8.7	17.3
2949.0	4.1	45.1	50	9.9	1.75	30.16	84986	1334	2008	8.7	17.3
2950.0	5.8	44.8	50	9.9	1.64	30.33	85507	941	1999	8.7	17.3
2951.0	3.3	43.8	51	9.9	1.81	30.64	86428	1664	1996	8.7	17.3
2952.0	1.8	46.0	47	9.9	2.01	31.20	88013	3083	2005	8.7	17.3
2953.0	2.6	46.1	48	9.9	1.90	31.58	89109	2094	2006	8.7	17.3
2954.0	4.1	45.8	48	9.9	1.74	31.83	89802	1326	2000	8.7	17.3
2955.0	3.5	45.0	48	9.9	1.79	32.11	90623	1571	1996	8.7	17.3
2956.0	7.4	45.3	48	9.9	1.55	32.25	91010	741	1986	8.7	17.3
2957.0	5.3	45.5	48	9.9	1.66	32.44	91553	1040	1977	8.7	17.3
2958.0	7.1	45.7	48	9.9	1.56	32.58	91955	770	1967	8.7	17.3
2959.0	5.3	48.9	48	9.9	1.70	32.77	92497	1039	1959	8.7	17.3
2960.0	2.4	50.1	48	9.9	1.98	33.19	93712	2324	1962	8.7	17.3
2961.0	2.7	50.4	48	9.9	1.94	33.57	94776	2036	1963	8.7	17.3
2962.0	2.6	51.5	47	9.9	1.97	33.96	95891	2146	1965	8.7	17.3
2963.0	3.4	51.7	48	9.9	1.88	34.25	96741	1630	1962	8.7	17.3
2964.0	3.4	52.8	47	9.9	1.89	34.55	97583	1627	1959	8.7	17.3
2965.0	4.9	52.2	47	9.9	1.76	34.76	98164	1121	1952	8.7	17.3
2966.0	2.5	52.7	47	9.9	1.99	35.15	99285	2166	1954	8.7	17.3
2967.0	3.3	51.9	47	9.9	1.89	35.45	100139	1653	1952	8.7	17.3
2968.0	4.9	51.9	47	9.9	1.75	35.66	100719	1122	1945	8.7	17.3
2969.0	2.1	50.7	47	9.9	2.02	36.13	102046	2569	1950	8.7	17.3
2970.0	2.1	52.3	47	9.9	2.05	36.61	103424	2663	1956	8.7	17.3
2971.0	2.6	51.4	47	9.9	1.96	36.99	104494	2076	1956	8.7	17.3
2972.0	3.1	51.0	48	9.9	1.90	37.32	105422	1760	1955	8.7	17.3
2973.0	3.2	50.0	48	9.9	1.88	37.63	106325	1720	1953	8.7	17.3
2974.0	3.2	51.6	48	9.9	1.90	37.94	107227	1722	1951	8.7	17.3
2975.0	2.2	50.3	48	9.9	2.01	38.40	108548	2522	1956	8.7	17.3
2976.0	3.1	50.7	48	9.9	1.90	38.73	109469	1757	1954	8.7	17.3
2977.0	3.5	51.2	48	9.9	1.87	39.01	110297	1576	1951	8.7	17.3
2978.0	3.1	51.3	48	9.9	1.91	39.34	111241	1795	1950	8.7	17.3
2979.0	4.0	49.1	48	9.9	1.79	39.59	111955	1358	1946	8.7	17.3
2980.0	11.1	50.1	48	9.9	1.46	39.68	112213	494	1936	8.7	17.3
2981.0	17.7	49.8	48	9.9	1.31	39.74	112377	310	1924	8.7	17.3
2982.0	11.8	47.5	49	9.9	1.42	39.82	112626	462	1914	8.7	17.3
2983.0	4.4	49.9	52	9.9	1.79	40.05	113327	1235	1909	8.7	17.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2984.0	2.6	49.6	52	9.9	1.97	40.43	114536	2122	1910	8.7	17.3
2985.0	2.8	50.4	52	9.9	1.96	40.80	115661	1980	1911	8.7	17.3
2986.0	2.7	50.6	51	9.9	1.96	41.16	116787	2014	1912	8.7	17.3
2987.0	4.8	49.2	51	9.9	1.76	41.37	117428	1145	1906	8.7	17.3
2988.0	3.0	50.4	51	9.9	1.93	41.70	118443	1816	1906	8.7	17.3
2989.0	4.6	49.0	51	9.9	1.77	41.92	119115	1201	1901	8.7	17.3
2990.0	2.9	48.6	51	9.9	1.92	42.27	120178	1889	1901	8.7	17.3
2991.0	7.9	47.8	52	9.9	1.58	42.40	120575	695	1893	8.7	17.3
2992.0	9.8	47.7	52	9.9	1.51	42.50	120893	557	1884	8.7	17.3
2993.0	11.4	47.9	52	9.9	1.46	42.58	121168	482	1875	8.7	17.3
2994.0	4.5	47.7	52	9.9	1.76	42.81	121859	1206	1871	8.7	17.3
2995.0	2.4	48.1	52	9.8	2.00	43.22	123147	2245	1873	8.7	17.3
2996.0	2.9	48.1	52	9.8	1.94	43.56	124233	1895	1873	8.7	17.3
2997.0	2.3	48.6	52	9.8	2.01	43.99	125572	2334	1876	8.7	17.3
2998.0	2.9	49.2	52	9.8	1.95	44.33	126648	1878	1876	8.7	17.3
2999.0	3.1	48.8	52	9.8	1.93	44.66	127668	1779	1876	8.7	17.3
3000.0	2.9	47.8	53	9.8	1.94	45.00	128761	1895	1876	8.7	17.3
3001.0	3.1	48.1	53	9.8	1.91	45.32	129773	1755	1875	8.7	17.3
3002.0	3.1	48.1	53	9.8	1.92	45.65	130808	1793	1874	8.7	17.3
3003.0	3.1	48.8	53	9.8	1.92	45.97	131822	1754	1874	8.7	17.3
3004.0	2.8	47.4	53	9.8	1.94	46.32	132940	1933	1874	8.7	17.3
3005.0	3.3	47.9	53	9.8	1.89	46.63	133898	1655	1873	8.7	17.3
3006.0	3.9	48.1	53	9.8	1.84	46.88	134703	1395	1870	8.7	17.3
3007.0	3.3	47.8	53	9.8	1.89	47.18	135659	1656	1868	8.7	17.3
3008.0	2.8	47.2	53	9.8	1.94	47.54	136790	1957	1869	8.7	17.3
3009.0	6.6	47.1	53	9.8	1.65	47.69	137266	824	1863	8.7	17.4
3010.0	3.2	52.4	53	9.8	1.97	48.01	138271	1731	1862	8.7	17.4
3011.0	3.1	52.5	52	9.8	1.97	48.33	139280	1772	1862	8.7	17.4

(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	74.0-211.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.1	BIT RUN	137.0
TOTAL HOURS	6.03	TOTAL TURNS	17485	CONDITION	T2 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
80.0	12.4	6.0	0.48	2112	14150.13	442.11	2358.36	-
90.0	7.3	16.0	1.85	7256	21613.14	746.30	1350.82	-
100.0	14.1	26.0	2.55	9478	25483.64	387.05	980.14	-
110.0	17.1	36.0	3.14	10766	28679.16	319.55	796.64	-
120.0	34.2	46.0	3.43	11874	30279.25	160.01	658.24	-
130.0	26.7	56.0	3.81	12726	32332.58	205.33	577.37	-
140.0	35.2	66.0	4.09	13206	33886.71	155.41	513.43	-
150.0	47.1	76.0	4.30	13669	35049.64	116.29	461.18	-
160.0	42.4	86.0	4.54	14095	36341.99	129.24	422.58	-
170.0	34.2	96.0	4.83	14682	37941.87	159.99	395.23	-
180.0	39.3	106.0	5.08	15237	39335.60	139.37	371.09	-
190.0	44.0	116.0	5.31	15910	40580.95	124.54	349.84	-
200.0	35.4	126.0	5.59	16649	42129.37	154.84	334.36	-
210.0	28.2	136.0	5.95	17383	44067.66	193.83	324.03	-
211.0	40.4	137.0	5.97	17438	44203.18	135.52	322.65	-

BIT NUMBER	2	IADC CODE	111	INTERVAL	211.0-800.0
OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	2.4	BIT RUN	589.0
TOTAL HOURS	19.13	TOTAL TURNS	155173	CONDITION	T2 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
220.0	314.8	9.0	0.03	235	17738.50	17.39	1970.94	-
230.0	319.8	19.0	0.06	502	17909.68	17.12	942.61	-
240.0	267.3	29.0	0.10	815	18114.49	20.48	624.64	-
250.0	217.3	39.0	0.14	1189	18366.44	25.20	470.93	-
260.0	166.3	49.0	0.20	1650	18695.70	32.93	381.54	-
270.0	57.4	59.0	0.38	3162	19650.02	95.43	333.05	-
280.0	86.9	69.0	0.49	4088	20280.41	63.04	293.92	-
290.0	90.0	79.0	0.60	5003	20888.74	60.83	264.41	-
300.0	80.5	89.0	0.73	6112	21568.55	67.98	242.34	-
310.0	69.8	99.0	0.87	7385	22353.30	78.47	225.79	-
320.0	77.8	109.0	1.00	8526	23056.80	70.35	211.53	-
330.0	63.3	119.0	1.16	9879	23922.15	86.54	201.03	-
340.0	47.7	129.0	1.37	11678	25070.38	114.82	194.34	-
350.0	33.3	139.0	1.67	14342	26712.88	164.25	192.18	-
360.0	70.6	149.0	1.81	15600	27488.50	77.56	184.49	-
370.0	66.2	159.0	1.96	16762	28315.84	82.73	178.09	-
380.0	58.2	169.0	2.13	18000	29257.23	94.14	173.12	-
390.0	42.0	179.0	2.37	19716	30562.11	130.49	170.74	-
400.0	60.2	189.0	2.54	20982	31471.57	90.95	166.52	-
410.0	52.8	199.0	2.73	22483	32508.78	103.72	163.36	-
420.0	57.7	209.0	2.90	23855	33457.78	94.90	160.09	-
430.0	57.1	219.0	3.07	25341	34415.90	95.81	157.15	-
440.0	47.5	229.0	3.29	24959	35569.66	115.38	155.33	-
450.0	39.4	239.0	3.54	27144	36959.75	139.01	154.64	-
460.0	36.2	249.0	3.82	31782	38472.98	151.32	154.51	-
470.0	45.6	259.0	4.04	33707	39674.44	120.15	153.18	-
480.0	41.4	269.0	4.28	35879	40996.04	132.16	152.40	-
490.0	31.0	279.0	4.60	38707	42764.77	176.87	153.28	+
500.0	29.3	289.0	4.94	41859	44633.87	186.91	154.44	+
510.0	38.4	299.0	5.20	44276	46060.42	142.65	154.05	-
520.0	27.9	309.0	5.56	47056	48023.81	196.34	155.42	+
530.0	27.9	319.0	5.92	49830	49988.73	196.49	156.70	+
540.0	21.4	329.0	6.39	53494	52542.21	255.35	159.70	+
550.0	20.8	339.0	6.87	57316	55177.81	263.56	162.77	+
560.0	24.9	349.0	7.27	60414	57379.98	220.22	164.41	+
570.0	24.6	359.0	7.67	63515	59601.92	222.19	166.02	+
580.0	20.2	369.0	8.17	67432	62307.48	270.56	168.85	+
590.0	24.1	379.0	8.58	70668	64578.08	227.06	170.39	+
600.0	22.3	389.0	9.03	74179	67037.27	245.92	172.33	+
610.0	19.7	399.0	9.54	78277	69821.92	278.46	174.99	+
620.0	19.7	409.0	10.05	82334	72600.48	277.86	177.51	+
630.0	24.7	419.0	10.45	85571	74819.37	221.89	178.57	+
640.0	17.1	429.0	11.04	90322	78028.33	320.90	181.88	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
650.0	19.5	439.0	11.55	94472	80841.87	281.35	184.15	+
660.0	17.4	449.0	12.13	99036	83983.92	314.20	187.05	+
670.0	17.6	459.0	12.70	103503	87103.14	311.92	189.77	
680.0	19.4	469.0	13.21	107912	89931.89	282.88	191.75	+
690.0	18.0	479.0	13.77	112933	92970.52	303.86	194.09	+
700.0	15.6	489.0	14.41	119395	96469.96	349.94	197.28	+
710.0	19.3	499.0	14.93	123627	99306.31	283.64	199.01	+
720.0	20.9	509.0	15.41	126788	101928.23	262.19	200.25	+
730.0	19.3	519.0	15.92	130211	104767.62	283.94	201.86	+
740.0	21.0	529.0	16.40	133353	107374.33	260.67	202.98	+
750.0	19.4	539.0	16.92	136968	110198.52	282.42	204.45	+
760.0	23.9	549.0	17.33	140257	112488.89	229.04	204.90	+
770.0	24.0	559.0	17.75	143644	114767.10	227.82	205.31	+
780.0	22.4	569.0	18.20	147286	117214.12	244.70	206.00	+
790.0	22.2	579.0	18.65	151004	119676.35	246.22	206.69	+
800.0	20.8	589.0	19.13	155173	122313.48	263.71	207.66	+

BIT NUMBER	3	IADC CODE	114	INTERVAL	800.0-1339.0
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	4.2	BIT RUN	539.0
TOTAL HOURS	19.23	TOTAL TURNS	177615	CONDITION	T7 B4 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
810.0	24.8	10.0	0.40	3270	27403.74	220.77	2740.37	-
820.0	25.7	20.0	0.79	6536	29532.40	212.87	1476.62	-
830.0	34.1	30.0	1.09	8793	31138.57	160.62	1037.95	-
840.0	44.9	40.0	1.31	10688	32356.76	121.82	808.92	-
850.0	39.6	50.0	1.56	13078	33739.20	138.24	674.78	-
860.0	38.4	60.0	1.82	15517	35165.74	142.65	586.10	-
870.0	28.7	70.0	2.17	18792	37072.86	190.71	529.61	-
880.0	32.9	80.0	2.47	21654	38735.13	166.23	484.19	-
890.0	38.0	90.0	2.74	24137	40176.88	144.18	446.41	-
900.0	36.8	100.0	3.01	26669	41665.78	148.89	416.66	-
910.0	30.1	110.0	3.34	29837	43484.70	181.89	395.32	-
920.0	43.3	120.0	3.57	31987	44748.51	126.38	372.90	-
930.0	28.6	130.0	3.92	35142	46661.72	191.32	358.94	-
940.0	31.3	140.0	4.24	38072	48413.04	175.13	345.81	-
950.0	30.8	150.0	4.57	41088	50190.90	177.79	334.61	-
960.0	35.7	160.0	4.84	43708	51722.37	153.15	323.26	-
970.0	26.7	170.0	5.22	47188	53775.50	205.31	316.33	-
980.0	28.6	180.0	5.57	50428	55688.71	191.32	309.38	-
990.0	23.6	190.0	5.99	54299	58006.46	231.78	305.30	-
1000.0	18.3	200.0	6.54	59312	60993.37	298.69	304.97	-
1010.0	22.1	210.0	6.99	63578	63469.29	247.59	302.23	-
1020.0	17.1	220.0	7.58	69027	66670.65	320.14	303.05	+
1030.0	21.3	230.0	8.05	73504	69246.94	257.63	301.07	-
1040.0	17.7	240.0	8.61	78806	72338.79	309.19	301.41	+
1050.0	17.6	250.0	9.18	84241	75447.37	310.86	301.79	+
1060.0	23.8	260.0	9.60	88194	77743.83	229.65	299.01	-
1070.0	19.8	270.0	10.10	92964	80511.75	276.79	298.19	-
1080.0	17.8	280.0	10.67	98374	83591.44	307.97	298.54	+
1090.0	27.5	290.0	11.03	101812	85580.69	198.93	295.11	-
1100.0	29.6	300.0	11.37	104952	87430.02	184.93	291.43	-
1110.0	28.0	310.0	11.72	108346	89384.29	195.43	288.34	-
1120.0	25.3	320.0	12.12	111730	91551.48	216.72	286.10	-
1130.0	40.0	330.0	12.37	114110	92921.75	137.03	281.58	-
1140.0	35.6	340.0	12.65	116770	94460.83	153.91	277.83	-
1150.0	39.1	350.0	12.91	119128	95861.52	140.07	273.89	-
1160.0	39.9	360.0	13.16	121451	97233.31	137.18	270.09	-
1170.0	36.7	370.0	13.43	123925	98726.77	149.35	266.83	-
1180.0	25.2	380.0	13.83	127599	100903.08	217.63	265.53	-
1190.0	38.5	390.0	14.09	129971	102323.54	142.05	262.37	-
1200.0	36.3	400.0	14.36	132075	103832.21	150.87	259.58	-
1210.0	38.6	410.0	14.62	134462	105250.11	141.79	256.71	-
1220.0	40.5	420.0	14.87	136721	106602.13	135.20	253.81	-
1230.0	37.0	430.0	15.14	139187	108083.43	148.13	251.36	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1240.0	41.1	440.0	15.38	141408	109415.68	133.23	248.67	-
1250.0	38.5	450.0	15.64	143784	110837.66	142.20	246.31	-
1260.0	32.0	460.0	15.95	146717	112548.59	171.09	244.67	-
1270.0	21.5	470.0	16.42	151047	115097.51	254.89	244.89	+
1280.0	17.8	480.0	16.98	156331	118174.16	307.66	246.20	+
1290.0	37.2	490.0	17.25	158856	119645.89	147.17	244.18	-
1300.0	116.5	500.0	17.34	159658	120115.83	46.99	240.23	-
1310.0	122.9	510.0	17.42	160421	120561.43	44.56	236.39	-
1320.0	16.1	520.0	18.04	166330	123952.89	339.15	238.37	+
1330.0	62.9	530.0	18.20	167802	124822.80	86.99	235.51	-
1339.0	8.7	539.0	19.23	177615	130483.35	628.95	242.08	+

BIT NUMBER	4	IADC CODE	517	INTERVAL	1339.0-1668.2
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	4.9	BIT RUN	329.2
TOTAL HOURS	24.87	TOTAL TURNS	119781	CONDITION	T8 B3 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1340.0	6.8	1.0	0.15	1744	34424.92	809.42	34425	-
1350.0	19.4	11.0	0.66	5444	37241.50	281.66	3385.59	-
1360.0	44.2	21.0	0.89	6666	38480.98	123.95	1832.43	-
1370.0	51.6	31.0	1.08	7712	39541.81	106.08	1275.54	-
1380.0	28.9	41.0	1.43	9580	41435.25	189.34	1010.62	-
1390.0	25.3	51.0	1.82	11716	43600.92	216.57	854.92	-
1400.0	25.2	61.0	2.22	13855	45770.13	216.92	750.33	-
1410.0	27.5	71.0	2.58	15817	47759.38	198.93	672.67	-
1420.0	14.2	81.0	3.29	19623	51617.74	385.84	637.26	-
1430.0	24.9	91.0	3.69	21792	53816.86	219.91	591.39	-
1440.0	18.4	101.0	4.23	24670	56793.64	297.68	562.31	-
1450.0	18.0	111.0	4.79	27756	59835.69	304.20	539.06	-
1460.0	19.4	121.0	5.30	30526	62657.59	282.19	517.83	-
1470.0	17.9	131.0	5.86	33119	65708.39	305.08	501.59	-
1480.0	16.3	141.0	6.47	35574	69057.26	334.89	489.77	-
1490.0	21.2	151.0	6.95	38041	71643.07	258.58	474.46	-
1500.0	34.0	161.0	7.24	39417	73253.63	161.06	454.99	-
1510.0	22.5	171.0	7.68	41738	75685.39	243.18	442.60	-
1520.0	15.9	181.0	8.31	44907	79139.23	345.38	437.23	-
1530.0	18.0	191.0	8.87	47819	82173.29	303.41	430.23	-
1540.0	21.7	201.0	9.33	50206	84691.79	251.85	421.35	
1550.0	44.9	211.0	9.55	51374	85909.98	121.82	407.16	-
1560.0	34.4	221.0	9.84	52988	87502.29	159.23	395.94	-
1570.0	47.2	231.0	10.05	54067	88661.16	115.89	383.81	-
1580.0	19.1	241.0	10.58	57255	91532.50	287.13	379.80	-
1590.0	20.7	251.0	11.06	60164	94183.31	265.08	375.23	-
1600.0	27.8	261.0	11.42	62347	96154.31	197.10	368.41	-
1610.0	14.9	271.0	12.09	65931	99826.45	367.21	368.36	-
1620.0	17.3	281.0	12.67	69688	102986.74	316.03	366.50	-
1630.0	3.0	291.0	15.99	83168	121160.70	1817.40	416.36	+
1640.0	8.5	301.0	17.17	88466	127607.51	644.68	423.95	+
1650.0	4.6	311.0	19.35	98272	139538.01	1193.05	448.68	+
1660.0	3.8	321.0	21.98	110119	153951.13	1441.31	479.60	+
1668.2	2.8	329.2	24.87	119781	169775.40	1929.79	515.72	+

BIT NUMBER	5	IADC CODE	617	INTERVAL	1668.2-1942.0
HTC J44		SIZE	12.250	NOZZLES	18 18 18
COST	4919.00	TRIP TIME	6.2	BIT RUN	273.8
TOTAL HOURS	32.21	TOTAL TURNS	140419	CONDITION	T3 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1670.0	2.4	1.8	0.76	3288	43035.65	2317.58	23909	-
1680.0	12.1	11.8	1.59	8047	47547.58	451.19	4029.46	-
1690.0	41.3	21.8	1.83	9140	48872.23	132.46	2241.85	-
1700.0	25.7	31.8	2.22	10911	51002.92	213.07	1603.87	-
1710.0	7.9	41.8	3.49	16798	57972.54	696.96	1386.90	
1720.0	9.4	51.8	4.55	21616	63797.33	582.48	1231.61	-
1730.0	4.7	61.8	6.67	29919	75368.92	1157.16	1219.56	-
1740.0	32.6	71.8	6.97	31289	77049.46	168.05	1073.11	-
1750.0	11.2	81.8	7.87	35277	81931.99	488.25	1001.61	-
1760.0	13.8	91.8	8.59	38511	85907.30	397.53	935.81	-
1770.0	21.2	101.8	9.07	40654	88495.76	258.85	869.31	-
1780.0	9.5	111.8	10.12	45330	94276.44	578.07	843.26	-
1790.0	24.6	121.8	10.53	47177	96505.98	222.95	792.33	-
1800.0	6.8	131.8	12.00	53788	104570.96	806.50	793.41	+
1810.0	17.0	141.8	12.59	56471	107799.17	322.82	760.22	-
1820.0	7.4	151.8	13.94	62513	115169.54	737.04	758.69	-
1830.0	24.2	161.8	14.35	64395	117427.98	225.84	725.76	-
1840.0	5.7	171.8	16.10	72459	127009.23	958.13	739.29	+
1850.0	8.4	181.8	17.29	77916	133542.73	653.35	734.56	-
1860.0	5.0	191.8	19.29	86965	144489.90	1094.72	753.34	+
1870.0	3.5	201.8	22.13	99188	160030.65	1554.07	793.02	+
1880.0	3.9	211.8	24.70	108906	174096.28	1406.56	821.98	+
1890.0	3.4	221.8	27.61	121664	190014.73	1591.84	856.69	+
1900.0	10.7	231.8	28.54	125910	195143.60	512.89	841.86	-
1910.0	25.1	241.8	28.94	127707	197326.00	218.24	816.07	-
1920.0	22.0	251.8	29.40	129758	199811.04	248.50	793.53	-
1930.0	18.5	261.8	29.94	132224	202772.10	296.11	774.53	-
1940.0	5.9	271.8	31.62	138782	212009.64	923.75	780.02	+
1942.0	3.4	273.8	32.21	140419	215207.55	1598.96	786.00	+

BIT NUMBER	6	IADC CODE	517	INTERVAL	1942.0-2185.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.6	BIT RUN	243.0
TOTAL HOURS	34.07	TOTAL TURNS	137842	CONDITION	T3 B7 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1950.0	4.3	8.0	1.85	6886	53033.50	1263.81	6629.19	-
1960.0	7.9	18.0	3.11	12855	59948.73	691.52	3330.48	-
1970.0	8.5	28.0	4.29	18374	66383.38	643.46	2370.83	-
1980.0	10.1	38.0	5.27	22832	71796.02	541.26	1889.37	-
1990.0	6.8	48.0	6.75	29015	79886.85	809.08	1664.31	-
2000.0	9.2	58.0	7.84	33526	85821.15	593.43	1479.67	-
2010.0	8.3	68.0	9.05	37997	92444.38	662.32	1359.48	-
2020.0	8.7	78.0	10.20	42678	98772.56	632.82	1266.31	-
2030.0	10.5	88.0	11.16	47027	103999.67	522.71	1181.81	-
2040.0	7.6	98.0	12.48	53084	111240.35	724.07	1135.11	-
2050.0	7.1	108.0	13.88	58121	118897.75	765.74	1100.91	-
2060.0	6.5	118.0	15.42	64998	127323.17	842.54	1079.01	-
2070.0	10.8	128.0	16.34	69215	132376.90	505.37	1034.19	-
2080.0	7.8	138.0	17.62	74340	139412.27	703.54	1010.23	-
2090.0	7.0	148.0	19.06	79482	147287.15	787.49	995.18	-
2100.0	5.7	158.0	20.82	86281	156918.58	963.14	993.16	-
2110.0	5.3	168.0	22.72	93387	167297.26	1037.87	995.82	+
2120.0	14.2	178.0	23.42	95805	171151.05	385.38	961.52	-
2130.0	5.3	188.0	25.31	102745	181494.24	1034.32	965.39	+
2140.0	6.2	198.0	26.93	109537	190372.86	887.86	961.48	-
2150.0	14.5	208.0	27.62	112135	194143.01	377.01	933.38	-
2160.0	7.7	218.0	28.92	116737	201249.86	710.69	923.16	-
2170.0	5.3	228.0	30.82	123732	211658.44	1040.96	928.33	+
2180.0	5.5	238.0	32.65	132140	221667.05	1000.86	931.37	+
2185.0	3.5	243.0	34.07	137842	229440.25	1554.64	944.20	+

BIT NUMBER	7	IADC CODE	437	INTERVAL	2185.0-2211.5
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.7	BIT RUN	26.5
TOTAL HOURS	3.84	TOTAL TURNS	17534	CONDITION	T4 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2190.0	8.0	5.0	0.63	3419	46912.83	688.47	9382.57	-
2200.0	8.3	15.0	1.84	9552	53523.21	661.04	3568.21	-
2210.0	5.7	25.0	3.59	16508	63116.62	959.34	2524.66	-
2211.5	5.9	26.5	3.84	17534	64499.06	921.62	2433.93	-

BIT NUMBER	8	IADC CODE	517	INTERVAL	2211.5-2428.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.1	BIT RUN	216.5
TOTAL HOURS	50.47	TOTAL TURNS	158096	CONDITION	T2 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2220.0	4.1	8.5	2.08	6657	57053.93	1340.40	6712.23	-
2230.0	4.2	18.5	4.48	14200	70209.14	1315.52	3795.09	-
2240.0	4.2	28.5	6.84	21042	83133.18	1292.40	2916.95	-
2250.0	3.4	38.5	9.77	29662	99141.47	1600.83	2575.10	-
2260.0	8.2	48.5	10.99	33645	105851.39	670.99	2182.50	-
2270.0	3.7	58.5	13.67	42506	120497.01	1464.56	2059.78	-
2280.0	4.8	68.5	15.76	49562	131924.56	1142.75	1925.91	-
2290.0	4.0	78.5	18.23	57656	145470.62	1354.61	1853.13	-
2300.0	6.3	88.5	19.81	62666	154127.20	865.66	1741.55	-
2310.0	3.5	98.5	22.63	71442	169571.26	1544.41	1721.54	-
2320.0	3.4	108.5	25.59	80788	185745.33	1617.41	1711.94	-
2330.0	4.6	118.5	27.78	87787	197762.95	1201.76	1668.89	-
2340.0	4.7	128.5	29.92	94233	209450.56	1168.76	1629.97	-
2350.0	6.2	138.5	31.54	99344	218337.29	888.67	1576.44	-
2360.0	5.2	148.5	33.48	105725	228937.50	1060.02	1541.67	-
2370.0	3.7	158.5	36.20	114709	243876.65	1493.91	1538.65	-
2380.0	3.2	168.5	39.37	125028	261189.81	1731.32	1550.09	+
2390.0	3.2	178.5	42.48	134475	278223.15	1703.33	1558.67	+
2400.0	4.0	188.5	45.01	142098	292073.38	1385.02	1549.46	-
2410.0	6.8	198.5	46.47	146561	300098.31	802.49	1511.83	-
2420.0	5.0	208.5	48.49	152440	311156.29	1105.80	1492.36	-
2428.0	4.0	216.5	50.47	158096	321980.71	1353.05	1487.21	-

BIT NUMBER	9	IADC CODE	517	INTERVAL	2428.0-2634.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	7.6	BIT RUN	206.0
TOTAL HOURS	58.59	TOTAL TURNS	180906	CONDITION	T6 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2430.0	1.6	2.0	1.25	2504	55221.98	3411.99	27611	-
2440.0	4.9	12.0	3.28	8165	66350.68	1112.87	5529.22	-
2450.0	5.3	22.0	5.17	13971	76683.22	1033.25	3485.60	-
2460.0	2.9	32.0	8.66	24677	95816.82	1913.36	2994.28	-
2470.0	7.9	42.0	9.93	28668	102777.68	696.09	2447.09	-
2480.0	6.5	52.0	11.48	33487	111238.07	846.04	2139.19	-
2490.0	5.9	62.0	13.17	38729	120521.24	928.32	1943.89	-
2500.0	3.9	72.0	15.72	46573	134465.76	1394.45	1867.58	-
2510.0	4.4	82.0	17.97	53566	146801.24	1233.55	1790.26	-
2520.0	4.1	92.0	20.38	61022	159995.99	1319.48	1739.09	-
2530.0	3.0	102.0	23.75	71632	178402.20	1840.62	1749.04	+
2540.0	3.7	112.0	26.46	80081	193275.95	1487.38	1725.68	-
2550.0	3.2	122.0	29.59	89750	210423.35	1714.74	1724.78	-
2560.0	2.6	132.0	33.49	101969	231737.83	2131.45	1755.59	+
2570.0	2.7	142.0	37.22	113706	252176.31	2043.85	1775.89	+
2580.0	2.6	152.0	41.04	125734	273087.76	2091.15	1796.63	+
2590.0	2.7	162.0	44.81	137544	293731.56	2064.38	1813.16	+
2600.0	3.4	172.0	47.78	146891	310015.62	1628.41	1802.42	-
2610.0	2.9	182.0	51.25	157732	328973.57	1895.79	1807.55	+
2620.0	3.7	192.0	53.93	166102	343646.57	1467.30	1789.83	-
2630.0	3.1	202.0	57.17	176420	361391.66	1774.51	1789.07	-
2634.0	2.8	206.0	58.59	180906	369187.45	1948.95	1792.17	+

BIT NUMBER	10	IADC CODE	537	INTERVAL	2634.0-2681.0
HTC J33		SIZE	12.250	NOZZLES	16 16 18
COST	6637.00	TRIP TIME	7.7	BIT RUN	47.0
TOTAL HOURS	15.91	TOTAL TURNS	45492	CONDITION	T1 B1 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2640.0	2.1	6.0	2.84	8624	64356.17	2593.61	10726	-
2650.0	2.8	16.0	6.46	18824	84171.95	1981.58	5260.75	-
2660.0	3.0	26.0	9.81	27958	102522.32	1835.04	3943.17	-
2670.0	3.3	36.0	12.80	36491	118882.87	1636.05	3302.30	-
2680.0	3.3	46.0	15.80	45165	135292.66	1640.98	2941.14	-
2681.0	9.3	47.0	15.91	45492	135882.74	590.08	2891.12	-

BIT NUMBER	10	IADC CODE	4	INTERVAL	2681.0-2693.6
CHRIS C-20		SIZE	8.469	NOZZLES	14 14 13
COST	13000.00	TRIP TIME	7.7	BIT RUN	12.6
TOTAL HOURS	10.94	TOTAL TURNS	59389	CONDITION	T0 B0 G0.050

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2690.0	1.3	9.0	6.86	37294	92737.29	4175.53	10304	-
2693.6	0.9	12.6	10.94	59389	115029.67	6192.33	9129.34	-

BIT NUMBER	11	IADC CODE	517	INTERVAL	2693.6-2840.5
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.0	BIT RUN	146.9
TOTAL HOURS	39.58	TOTAL TURNS	115791	CONDITION	T3 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2700.0	3.8	6.4	1.70	5334	59869.10	1450.17	9354.55	-
2710.0	3.3	16.4	4.73	14367	76465.96	1659.69	4662.56	-
2720.0	3.1	26.4	7.99	24414	94349.44	1788.35	3573.84	-
2730.0	3.3	36.4	11.00	33123	110835.27	1648.58	3044.92	-
2740.0	3.6	46.4	13.77	41113	125985.81	1515.05	2715.21	-
2750.0	5.2	56.4	15.69	46762	136504.55	1051.87	2420.29	-
2760.0	4.9	66.4	17.72	53049	147617.28	1111.27	2223.15	-
2770.0	3.6	76.4	20.52	61459	162910.78	1529.35	2132.34	-
2780.0	6.8	86.4	21.98	65387	170941.62	803.08	1978.49	-
2790.0	4.0	96.4	24.48	72312	184639.77	1369.81	1915.35	-
2800.0	4.8	106.4	26.57	78437	196058.69	1141.89	1842.66	-
2810.0	3.7	116.4	29.30	86267	211006.96	1494.83	1812.77	-
2820.0	3.4	126.4	32.28	94964	227330.39	1632.34	1798.50	-
2830.0	3.5	136.4	35.15	103423	243043.18	1571.28	1781.84	-
2840.0	2.4	146.4	39.27	114873	265592.57	2254.94	1814.16	+
2840.5	1.6	146.9	39.58	115791	267297.43	3409.71	1819.59	+

BIT NUMBER	12	IADC CODE	517	INTERVAL	2840.5-3011.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.4	BIT RUN	170.5
TOTAL HOURS	48.33	TOTAL TURNS	139280	CONDITION	T4 B2 G0.250

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2850.0	3.1	9.5	3.07	8625	69585.91	1769.25	7324.83	-
2860.0	4.6	19.5	5.25	14737	81545.75	1195.98	4181.83	-
2870.0	4.7	29.5	7.39	20574	93227.27	1168.15	3160.25	-
2880.0	3.0	39.5	10.70	28800	111351.04	1812.38	2819.01	-
2890.0	2.6	49.5	14.53	37894	132323.33	2097.23	2673.20	-
2900.0	2.9	59.5	18.00	47253	151312.45	1898.91	2543.07	-
2910.0	4.2	69.5	20.39	54639	164395.58	1308.31	2365.40	-
2920.0	3.0	79.5	23.68	65042	182428.10	1803.25	2294.69	-
2930.0	4.4	89.5	25.94	71967	194815.29	1238.72	2176.71	-
2940.0	4.8	99.5	28.03	78531	206264.12	1144.88	2073.01	-
2950.0	4.3	109.5	30.33	85507	218859.66	1259.55	1998.72	-
2960.0	3.5	119.5	33.19	93712	234510.56	1565.09	1962.43	-
2970.0	2.9	129.5	36.61	103424	253244.18	1873.36	1955.55	-
2980.0	3.3	139.5	39.68	112213	270022.02	1677.78	1935.64	
2990.0	3.9	149.5	42.27	120178	284195.80	1417.38	1900.98	-
3000.0	3.7	159.5	45.00	128761	299162.32	1496.65	1875.63	-
3010.0	3.3	169.5	48.01	138271	315614.32	1645.20	1862.03	-
3011.0	3.1	170.5	48.33	139280	317386.09	1771.77	1861.50	-

(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	74.0-211.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.1	BIT RUN	137.0
TOTAL HOURS	6.03	TOTAL TURNS	17485	CONDITION	T2 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
80.0	625	330.0	364.9	110.6	133	0.25	606	66
90.0	620	330.0	359.1	108.8	130	0.24	596	66
100.0	620	330.0	359.1	108.8	130	0.24	596	66
110.0	620	330.0	359.1	108.8	130	0.24	596	66
120.0	630	380.0	370.8	97.6	136	0.26	616	67
130.0	630	380.0	370.8	97.6	136	0.26	616	67
140.0	630	380.0	370.8	97.6	136	0.26	616	67
150.0	630	380.0	370.8	97.6	136	0.26	616	67
160.0	630	380.0	370.8	97.6	136	0.26	616	67
170.0	630	380.0	370.8	97.6	136	0.26	616	67
180.0	630	380.0	370.8	97.6	136	0.26	616	67
190.0	630	380.0	370.8	97.6	136	0.26	616	67
200.0	620	395.0	359.1	90.9	130	0.24	596	66
210.0	620	395.0	359.1	90.9	130	0.24	596	66
211.0	620	395.0	359.1	90.9	130	0.24	596	66

BIT NUMBER	2	IADC CODE	111	INTERVAL	211.0-800.0
OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	4442.00	TRIP TIME	2.4	BIT RUN	589.0
TOTAL HOURS	19.13	TOTAL TURNS	155173	CONDITION	T2 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
220.0	965	1780.0	870.0	48.9	490	2.04	1444	102
230.0	965	1780.0	870.0	48.9	490	2.04	1444	102
240.0	971	1842.4	882.2	47.9	500	2.08	1465	103
250.0	912	1734.1	777.4	44.8	414	1.72	1291	97
260.0	1004	1800.0	941.6	52.3	551	2.29	1563	106
270.0	980	1800.0	897.5	49.9	513	2.13	1490	104
280.0	973	1800.0	884.3	49.1	502	2.09	1468	103
290.0	966	1800.0	872.1	48.4	491	2.04	1448	102
300.0	962	1800.0	866.2	48.1	486	2.02	1438	102
310.0	965	1800.0	870.0	48.3	490	2.04	1444	102
320.0	967	1800.0	884.8	49.2	499	2.08	1469	102
330.0	955	1800.0	861.8	47.9	480	2.00	1431	101
340.0	982	1800.0	911.3	50.6	522	2.17	1513	104
350.0	981	1800.0	932.0	51.8	534	2.22	1547	104
360.0	979	1800.0	928.3	51.6	531	2.21	1541	104
370.0	952	1800.0	877.6	48.8	488	2.03	1457	101
380.0	841	1800.0	684.8	38.0	336	1.40	1137	89
390.0	846	1800.0	693.1	38.5	342	1.42	1151	90
400.0	962	1860.0	905.9	48.7	509	2.11	1504	102
410.0	895	1860.0	784.0	42.2	409	1.70	1302	95
420.0	975	1800.0	929.4	51.6	528	2.20	1543	103
430.0	543	630.0	288.2	45.7	91	0.38	478	58
440.0	519	650.0	263.5	40.5	80	0.33	437	55
450.0	540	650.0	284.9	43.8	90	0.37	473	57
460.0	968	1800.0	917.2	51.0	518	2.15	1523	103
470.0	957	1892.4	896.4	47.4	501	2.08	1488	101
480.0	810	1723.1	642.4	37.3	304	1.26	1066	86
490.0	832	1660.9	676.9	40.8	328	1.37	1124	88
500.0	922	1768.2	832.6	47.1	448	1.86	1382	98
510.0	927	1910.0	841.1	44.0	455	1.89	1396	98
520.0	937	1910.0	858.3	44.9	469	1.95	1425	99
530.0	927	1910.0	840.0	44.0	454	1.89	1395	98
540.0	916	1830.0	820.5	44.8	438	1.82	1362	97
550.0	921	1830.0	849.0	46.4	456	1.90	1409	98
560.0	923	1830.0	852.9	46.6	459	1.91	1416	98
570.0	936	1830.0	877.1	47.9	479	1.99	1456	99
580.0	924	1830.0	873.0	47.7	471	1.96	1449	98
590.0	929	1850.0	881.6	47.7	478	1.99	1464	98
600.0	932	1850.0	887.7	48.0	483	2.01	1474	99
610.0	921	1850.0	857.1	46.3	460	1.91	1423	98
620.0	933	1210.0	879.5	72.7	479	1.99	1460	99
630.0	922	1880.0	859.7	45.7	462	1.92	1427	98
640.0	924	1880.0	862.4	45.9	465	1.93	1432	98

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
650.0	924	1880.0	864.0	46.0	466	1.94	1434	98
660.0	916	1880.0	848.8	45.2	454	1.89	1409	97
670.0	924	1880.0	863.9	46.0	466	1.94	1434	98
680.0	918	1880.0	852.0	45.3	456	1.90	1414	97
690.0	916	1910.0	848.9	44.4	454	1.89	1409	97
700.0	922	1910.0	878.2	46.0	472	1.96	1458	98
710.0	928	1910.0	889.3	46.6	481	2.00	1476	98
720.0	922	1910.0	878.5	46.0	473	1.97	1458	98
730.0	917	2050.0	868.6	42.4	465	1.93	1442	97
740.0	923	2050.0	871.0	42.5	469	1.95	1446	98
750.0	913	2050.0	851.8	41.6	454	1.89	1414	97
760.0	917	2050.0	859.5	41.9	460	1.91	1427	97
770.0	918	2050.0	851.5	41.5	456	1.90	1414	97
780.0	921	2050.0	857.6	41.8	461	1.92	1424	98
790.0	924	2050.0	863.0	42.1	465	1.93	1433	98
800.0	922	2050.0	859.8	41.9	463	1.92	1427	98

BIT NUMBER	3	IADC CODE	114	INTERVAL	800.0-1339.0		
HTC X3A		SIZE	12.250	NOZZLES	18 18 18		
COST	2201.00	TRIP TIME	4.2	BIT RUN	539.0		
TOTAL HOURS	19.23	TOTAL TURNS	177615	CONDITION	T7 B4 G0.125		

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
810.0	984	2815.0	1445.2	51.3	830	7.04	1943	129
820.0	983	2812.6	1440.0	51.2	826	7.00	1936	129
830.0	984	2796.9	1444.7	51.7	830	7.04	1943	129
840.0	995	2824.2	1477.2	52.3	858	7.28	1986	130
850.0	984	2823.0	1445.1	51.2	830	7.04	1943	129
860.0	992	2797.8	1467.4	52.4	849	7.21	1973	130
870.0	577	1080.1	496.6	46.0	167	1.42	668	75
880.0	994	2844.8	1473.1	51.8	854	7.25	1981	130
890.0	980	2810.8	1431.3	50.9	818	6.94	1925	128
900.0	985	2819.8	1447.1	51.3	832	7.06	1946	129
910.0	972	2803.5	1408.9	50.3	799	6.78	1895	127
920.0	975	2802.3	1417.4	50.6	806	6.84	1906	128
930.0	970	2846.2	1403.1	49.3	794	6.74	1887	127
940.0	976	2835.3	1421.3	50.1	810	6.87	1911	128
950.0	971	2815.6	1406.9	50.0	797	6.76	1892	127
960.0	974	2831.0	1414.8	50.0	804	6.82	1903	127
970.0	969	2818.4	1400.9	49.7	792	6.72	1884	127
980.0	966	2844.0	1391.5	48.9	784	6.65	1871	126
990.0	983	2833.4	1441.8	50.9	827	7.02	1939	129
1000.0	1013	2884.7	1531.3	53.1	905	7.68	2059	133
1010.0	983	2899.4	1440.4	49.7	826	7.01	1937	129
1020.0	973	2902.6	1411.8	48.6	801	6.80	1898	127
1030.0	964	2872.8	1400.5	48.7	787	6.68	1883	126
1040.0	961	2877.4	1392.1	48.4	780	6.62	1872	126
1050.0	965	2871.7	1404.8	48.9	791	6.71	1889	126
1060.0	960	2867.8	1390.2	48.5	779	6.61	1869	126
1070.0	927	2661.0	1296.7	48.7	702	5.95	1744	121
1080.0	959	2867.2	1416.5	49.4	792	6.72	1905	125
1090.0	962	2871.6	1425.2	49.6	800	6.79	1917	126
1100.0	945	2901.8	1376.7	47.4	759	6.44	1851	124
1110.0	942	2909.2	1397.4	48.0	768	6.52	1879	123
1120.0	923	2821.7	1342.0	47.6	723	6.13	1805	121
1130.0	918	2874.3	1354.0	47.1	725	6.15	1821	120
1140.0	928	2884.3	1384.1	48.0	749	6.36	1861	121
1150.0	910	2837.1	1330.0	46.9	706	5.99	1788	119
1160.0	897	2830.5	1306.1	46.1	683	5.80	1756	117
1170.0	891	2845.9	1288.4	45.3	670	5.68	1732	117
1180.0	886	2822.3	1301.7	46.1	673	5.71	1750	116
1190.0	885	2829.3	1297.7	45.9	670	5.68	1745	116
1200.0	891	2863.9	1316.6	46.0	685	5.81	1770	117
1210.0	890	2877.8	1312.7	45.6	682	5.78	1765	116
1220.0	888	2883.5	1305.8	45.3	676	5.74	1756	116
1230.0	889	2869.6	1308.2	45.6	678	5.75	1759	116

DEPTH	RATE	PSP	PBIT	%PSP	HHP	sqin	FORCE	VELOCITY
1240.0	878	2783.3	1276.0	45.8	653	5.54	1716	115
1250.0	876	2771.0	1271.3	45.9	650	5.51	1710	115
1260.0	869	2764.1	1252.3	45.3	635	5.39	1684	114
1270.0	784	2416.6	1017.8	42.1	465	3.95	1369	103
1280.0	864	2773.4	1237.2	44.6	624	5.29	1664	113
1290.0	854	2740.7	1207.2	44.0	601	5.10	1623	112
1300.0	858	2751.0	1219.1	44.3	610	5.18	1639	112
1310.0	868	2829.7	1248.9	44.1	633	5.37	1679	114
1320.0	860	2827.2	1226.1	43.4	615	5.22	1649	113
1330.0	850	2814.0	1198.1	42.6	594	5.04	1611	111
1339.0	851	2744.4	1200.6	43.7	596	5.06	1614	111

BIT NUMRER	4	IADC CODE	517	INTERVAL	1339.0-1668.2
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	4.9	BIT RUN	329.2
TOTAL HOURS	24.87	TOTAL TURNS	119781	CONDITION	T8 B3 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1340.0	857	2821.3	1217.6	43.2	609	5.17	1637	112
1350.0	862	2790.0	1218.1	43.7	612	5.20	1638	113
1360.0	860	2787.4	1212.6	43.5	608	5.16	1631	112
1370.0	872	2824.9	1259.2	44.6	640	5.43	1693	114
1380.0	860	2782.6	1225.9	44.1	615	5.22	1649	113
1390.0	861	2870.1	1216.2	42.4	611	5.18	1635	113
1400.0	853	2860.0	1192.5	41.7	593	5.03	1604	112
1410.0	849	2805.7	1183.0	42.2	586	4.97	1591	111
1420.0	838	2783.2	1164.7	41.8	570	4.83	1566	110
1430.0	841	2783.2	1172.3	42.1	575	4.88	1576	110
1440.0	847	2803.5	1187.9	42.4	587	4.98	1597	111
1450.0	845	2794.2	1183.4	42.4	583	4.95	1591	111
1460.0	835	2668.8	1156.2	43.3	563	4.78	1555	109
1470.0	828	2646.9	1135.1	42.9	548	4.65	1526	108
1480.0	841	2707.4	1171.6	43.3	575	4.88	1575	110
1490.0	863	2815.5	1233.4	43.8	621	5.27	1659	113
1500.0	842	2703.1	1174.1	43.4	577	4.89	1579	110
1510.0	845	2738.0	1182.2	43.2	583	4.94	1590	111
1520.0	848	2753.4	1190.4	43.2	589	4.99	1601	111
1530.0	596	1480.9	588.6	39.7	205	1.74	792	78
1540.0	852	2798.0	1203.1	43.0	598	5.07	1618	111
1550.0	835	2677.3	1154.2	43.1	562	4.77	1552	109
1560.0	833	2723.7	1149.4	42.2	558	4.74	1546	109
1570.0	835	2758.9	1154.2	41.8	562	4.77	1552	109
1580.0	529	1219.9	464.5	38.1	143	1.22	625	69
1590.0	828	2692.8	1136.7	42.2	549	4.66	1529	108
1600.0	830	2670.0	1140.6	42.7	552	4.68	1534	109
1610.0	835	2711.7	1154.2	42.6	562	4.77	1552	109
1620.0	836	2749.2	1157.6	42.1	564	4.79	1557	109
1630.0	839	2743.2	1166.8	42.5	571	4.85	1569	110
1640.0	837	2728.1	1159.7	42.5	566	4.80	1559	109
1650.0	843	2701.1	1152.9	42.7	567	4.81	1550	110
1660.0	506	2014.2	416.4	20.7	123	1.04	560	66
1668.2	852	2732.1	1167.2	42.7	580	4.92	1570	111

BIT NUMBER	5	IADC CODE	617	INTERVAL	1668.2-1942.0
HTC J44		SIZE	12.250	NOZZLES	18 18 18
COST	4919.00	TRIP TIME	6.2	BIT RUN	273.8
TOTAL HOURS	32.21	TOTAL TURNS	140419	CONDITION	T3 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1670.0	847	2908.4	1152.9	39.6	570	4.83	1550	111
1680.0	855	2930.7	1175.0	40.1	586	4.97	1580	112
1690.0	858	2926.7	1184.2	40.5	593	5.03	1592	112
1700.0	850	2902.6	1161.7	40.0	576	4.89	1562	111
1710.0	855	2931.8	1162.3	39.6	580	4.92	1563	112
1720.0	862	2878.5	1181.3	41.0	594	5.04	1589	113
1730.0	875	2972.8	1217.5	41.0	621	5.27	1637	114
1740.0	867	2966.7	1195.7	40.3	605	5.13	1608	113
1750.0	586	1538.7	547.1	35.6	187	1.59	736	77
1760.0	581	1557.6	537.3	34.5	182	1.55	723	76
1770.0	865	2956.0	1189.3	40.2	600	5.09	1599	113
1780.0	868	2972.6	1198.2	40.3	607	5.15	1611	114
1790.0	871	2976.8	1207.3	40.6	614	5.21	1624	114
1800.0	853	2929.8	1182.9	40.4	589	5.00	1591	112
1810.0	845	2916.9	1159.2	39.7	571	4.85	1559	111
1820.0	845	2934.4	1158.5	39.5	571	4.84	1558	111
1830.0	845	2954.4	1159.5	39.2	572	4.85	1559	111
1840.0	824	2814.7	1103.9	39.2	531	4.51	1484	108
1850.0	824	2828.7	1101.3	38.9	529	4.49	1481	108
1860.0	789	2642.7	1011.7	38.3	466	3.95	1360	103
1870.0	778	2521.4	983.2	39.0	446	3.79	1322	102
1880.0	852	2906.3	1192.0	41.0	593	5.03	1603	112
1890.0	855	2899.5	1198.5	41.3	598	5.07	1612	112
1900.0	847	2953.0	1165.8	39.5	576	4.89	1568	111
1910.0	851	2877.6	1175.4	40.8	583	4.95	1581	111
1920.0	845	2916.8	1159.3	39.7	571	4.85	1559	111
1930.0	847	2953.2	1165.0	39.4	576	4.88	1567	111
1940.0	827	2995.9	1111.9	37.1	537	4.55	1495	108
1942.0	859	3002.2	1197.0	39.9	600	5.09	1610	112

BIT NUMBER	6	IADC CODE	517	INTERVAL	1942.0-2185.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.6	BIT RUN	243.0
TOTAL HOURS	34:07	TOTAL TURNS	137842	CONDITION	T3 B7 G0.125

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1950.0	841	2956.3	1149.2	38.9	564	4.79	1545	110
1960.0	839	2940.0	1144.0	38.9	560	4.75	1538	110
1970.0	557	1444.2	504.3	34.9	164	1.39	678	73
1980.0	835	2901.6	1132.6	39.0	552	4.68	1523	109
1990.0	842	2934.9	1150.9	39.2	565	4.80	1548	110
2000.0	840	2936.4	1146.7	39.1	562	4.77	1542	110
2010.0	837	2913.1	1138.7	39.1	556	4.72	1531	110
2020.0	837	2997.3	1138.9	38.0	556	4.72	1531	110
2030.0	841	2994.5	1148.0	38.3	563	4.78	1544	110
2040.0	562	1537.7	513.0	33.4	168	1.43	690	74
2050.0	833	2943.0	1127.3	38.3	548	4.65	1516	109
2060.0	827	2943.1	1110.0	37.7	535	4.54	1493	108
2070.0	831	2957.3	1120.5	37.9	543	4.61	1507	109
2080.0	826	2961.1	1109.0	37.5	535	4.54	1491	108
2090.0	824	2877.7	1091.4	37.9	525	4.45	1468	108
2100.0	821	2894.1	1095.5	37.9	525	4.45	1473	107
2110.0	825	2877.1	1104.2	38.4	531	4.51	1485	108
2120.0	548	1474.7	488.3	33.1	156	1.33	657	72
2130.0	813	2935.4	1073.4	36.6	509	4.32	1443	106
2140.0	819	2989.6	1089.8	36.5	521	4.42	1465	107
2150.0	821	3016.7	1094.7	36.3	524	4.45	1472	107
2160.0	826	3038.5	1107.3	36.4	533	4.53	1489	108
2170.0	821	3063.9	1095.8	35.8	525	4.46	1474	107
2180.0	551	1591.9	492.8	31.0	158	1.34	663	72
2185.0	404	2998.0	265.6	8.9	63	0.53	357	53

BIT NUMBER	7	IADC CODE	437	INTERVAL	2185.0-2211.5
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.7	BIT RUN	26.5
TOTAL HOURS	3.84	TOTAL TURNS	19534	CONDITION	T4 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2190.0	815	3017.5	1079.9	35.8	514	4.36	1452	107
2200.0	814	3001.2	1085.9	36.2	515	4.37	1460	106
2210.0	797	2961.5	1030.3	34.8	479	4.06	1385	104
2211.5	798	2951.6	1034.4	35.0	482	4.09	1391	104

BIT NUMBER	8	IADC CODE	517	INTERVAL	2211.5-2428.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.1	BIT RUN	216.5
TOTAL HOURS	50.47	TOTAL TURNS	158096	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2220.0	767	2775.2	954.4	34.4	427	3.62	1283	100
2230.0	768	2755.3	958.1	34.8	429	3.64	1288	100
2240.0	554	1575.6	497.9	31.6	161	1.36	670	72
2250.0	821	3085.9	1094.1	35.5	524	4.45	1471	107
2260.0	813	2999.7	1073.9	35.8	510	4.32	1444	106
2270.0	815	3024.1	1078.3	35.7	513	4.35	1450	107
2280.0	814	3017.1	1076.3	35.7	511	4.34	1447	107
2290.0	808	3014.9	1059.9	35.2	500	4.24	1425	106
2300.0	801	2964.9	1042.9	35.2	488	4.14	1402	105
2310.0	784	2865.3	997.6	34.8	456	3.87	1342	103
2320.0	785	2875.0	1000.0	34.8	458	3.88	1345	103
2330.0	779	2867.9	986.4	34.4	449	3.81	1326	102
2340.0	778	2870.8	993.5	34.6	451	3.83	1336	102
2350.0	771	2861.3	975.6	34.1	439	3.72	1312	101
2360.0	561	1666.9	516.8	31.0	169	1.44	695	73
2370.0	783	2923.6	996.6	34.1	455	3.86	1340	102
2380.0	572	1758.2	531.2	30.2	177	1.50	714	75
2390.0	572	1758.8	531.5	30.2	177	1.51	715	75
2400.0	770	2861.2	962.2	33.6	432	3.67	1294	101
2410.0	545	1757.7	482.7	27.5	154	1.30	649	71
2420.0	770	2874.9	962.8	33.5	433	3.67	1295	101
2428.0	750	2772.7	922.5	33.3	404	3.42	1240	98

BIT NUMBER	9	IADC CODE	517	INTERVAL	2428.0-2634.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	7.6	BIT RUN	206.0
TOTAL HOURS	58.59	TOTAL TURNS	180906	CONDITION	T6 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2430.0	724	2906.1	1162.0	40.0	491	4.16	1344	110
2440.0	731	2924.7	1184.0	40.5	505	4.28	1369	111
2450.0	724	2854.4	1163.7	40.8	492	4.17	1346	110
2460.0	739	2923.7	1212.3	41.5	523	4.44	1402	112
2470.0	731	2868.8	1184.4	41.3	505	4.28	1370	111
2480.0	738	2923.0	1206.8	41.3	519	4.41	1396	112
2490.0	743	2948.5	1224.9	41.5	531	4.51	1417	113
2500.0	740	2918.9	1213.9	41.6	524	4.45	1404	113
2510.0	743	2915.3	1224.0	42.0	531	4.50	1416	113
2520.0	744	2929.7	1227.8	41.9	533	4.52	1420	113
2530.0	746	2907.2	1235.2	42.5	538	4.56	1429	114
2540.0	741	2898.3	1216.3	42.0	526	4.46	1407	113
2550.0	742	2911.7	1221.8	42.0	529	4.49	1413	113
2560.0	747	2954.1	1238.8	41.9	540	4.58	1433	114
2570.0	658	2425.9	961.5	39.6	369	3.13	1112	100
2580.0	733	2905.4	1192.8	41.1	510	4.33	1380	112
2590.0	730	2868.3	1180.7	41.2	503	4.26	1366	111
2600.0	726	2857.5	1168.3	40.9	495	4.20	1351	110
2610.0	722	2885.5	1155.2	40.0	486	4.13	1336	110
2620.0	726	2897.7	1169.8	40.4	496	4.21	1353	110
2630.0	716	2853.0	1136.5	39.8	475	4.03	1314	109
2634.0	717	2840.5	1140.8	40.2	477	4.05	1319	109

BIT NUMBER	10	IADC CODE	537	INTERVAL	2634.0-2681.0
HTC J33		SIZE	12.250	NOZZLES	16 16 18
COST	6637.00	TRIP TIME	7.7	BIT RUN	47.0
TOTAL HOURS	15.91	TOTAL TURNS	45492	CONDITION	T1 B1 G0.000

DEPTH	FLOW RATE	PSP	PBIT	XPSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2640.0	722	2909.5	1156.7	39.8	487	4.14	1338	110
2650.0	716	2842.5	1135.4	39.9	474	4.02	1313	109
2660.0	730	2915.6	1180.4	40.5	502	4.26	1365	111
2670.0	720	2922.8	1149.5	39.3	483	4.10	1329	110
2680.0	724	2919.3	1161.6	39.8	490	4.16	1343	110
2681.0	725	2914.0	1167.1	40.1	494	4.19	1350	110

BIT NUMBER	10	IADC CODE	4	INTERVAL	2681.0-2693.6
CHRIS C-20		SIZE	8.469	NOZZLES	14 14 13
COST	13000.00	TRIP TIME	7.7	BIT RUN	12.6
TOTAL HOURS	10.94	TOTAL TURNS	59389	CONDITION	T0 B0 G0.050

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2690.0	299	1103.6	440.2	39.9	77	1.36	342	68
2693.6	304	743.2	454.2	61.1	80	1.43	353	69

BIT NUMBER	11	IADC CODE	517	INTERVAL	2693.6-2840.5
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.0	BIT RUN	146.9
TOTAL HOURS	39.58	TOTAL TURNS	115791	CONDITION	T3 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2700.0	716	2876.5	1136.0	39.5	474	4.02	1314	109
2710.0	730	2923.9	1182.0	40.4	503	4.27	1367	111
2720.0	748	2927.3	1241.4	42.4	542	4.60	1436	114
2730.0	731	2925.2	1173.2	40.1	500	4.25	1357	111
2740.0	595	2041.2	784.9	38.5	272	2.31	908	90
2750.0	726	2874.5	1169.4	40.7	495	4.20	1352	110
2760.0	728	2865.6	1176.0	41.0	500	4.24	1360	111
2770.0	724	2880.7	1161.1	40.3	490	4.16	1343	110
2780.0	651	2517.9	940.6	37.4	357	3.03	1088	99
2790.0	724	2864.2	1161.7	40.6	491	4.16	1344	110
2800.0	723	2864.8	1159.2	40.5	489	4.15	1341	110
2810.0	725	2873.8	1165.7	40.6	493	4.18	1348	110
2820.0	728	2876.5	1174.2	40.8	498	4.23	1358	111
2830.0	730	2884.6	1183.0	41.0	504	4.28	1368	111
2840.0	721	2857.5	1151.4	40.3	484	4.11	1332	110
2840.5	727	2907.0	1170.6	40.3	496	4.21	1354	111

BIT NUMBER	12	IADC CODE	517	INTERVAL	2840.5-3011.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.4	BIT RUN	170.5
TOTAL HOURS	48.33	TOTAL TURNS	139280	CONDITION	T4 B2 G0.250

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2850.0	723	2888.1	1159.1	40.1	489	4.15	1341	110
2860.0	726	2850.0	1168.5	41.0	495	4.20	1351	110
2870.0	729	2861.8	1179.1	41.2	502	4.26	1364	111
2880.0	721	2828.8	1152.9	40.8	485	4.12	1333	110
2890.0	725	2824.9	1165.2	41.2	493	4.18	1348	110
2900.0	726	2860.0	1167.4	40.8	494	4.19	1350	110
2910.0	719	2822.3	1146.5	40.6	481	4.08	1326	109
2920.0	717	2829.6	1140.4	40.3	477	4.05	1319	109
2930.0	719	2816.6	1145.3	40.7	480	4.07	1325	109
2940.0	720	2834.1	1149.3	40.6	483	4.10	1329	110
2950.0	725	2854.3	1164.2	40.8	492	4.18	1346	110
2960.0	724	2871.3	1163.7	40.5	492	4.17	1346	110
2970.0	712	2832.0	1122.7	39.6	466	3.95	1298	108
2980.0	721	2891.8	1151.7	39.8	484	4.11	1332	110
2990.0	715	2845.9	1135.1	39.9	474	4.02	1313	109
3000.0	713	2807.9	1116.1	39.7	464	3.94	1291	108
3010.0	712	2832.4	1114.1	39.3	463	3.93	1288	108
3011.0	713	2816.8	1115.4	39.6	464	3.94	1290	108

(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	74.0-211.0
HTC OSC3AJ&26"HO		SIZE	26.000	NOZZLES	20 20 20
COST	0.00	TRIP TIME	2.1	BIT RUN	137.0
TOTAL HOURS	6.03	TOTAL TURNS	17485	CONDITION	T2 B4 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
80.0	65	60	625	0	0	0	0	0	0	0
90.0	65	59	620	0	0	0	0	0	0	11
100.0	65	59	620	8	0	0	0	0	0	11
110.0	65	59	620	8	0	0	0	0	0	11
120.0	65	61	630	8	0	0	0	0	0	11
130.0	65	61	630	8	0	0	0	0	0	11
140.0	65	61	630	8	0	7	0	0	0	11
150.0	65	61	630	8	0	7	0	0	0	11
160.0	65	61	630	8	0	7	0	0	0	11
170.0	65	61	630	8	0	7	0	7	0	11
180.0	65	61	630	8	0	7	0	7	0	11
190.0	65	61	630	8	0	7	0	7	0	11
200.0	65	59	620	8	0	7	0	7	0	11
210.0	65	59	620	8	0	7	0	7	0	11
211.0	65	59	620	8	0	7	0	7	0	11

BIT NUMBER	2	IADC CODE	111	INTERVAL	211.0-800.0		
OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20		
COST	4442.00	TRIP TIME	2.4	BIT RUN	589.0		
TOTAL HOURS	19.13	TOTAL TURNS	155173	CONDITION	T2 B2 G0.000		

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
220.0	93	100	965	30	24	0	21	0	0	17
230.0	93	100	965	30	24	0	21	0	0	17
240.0	94	100	971	30	24	0	21	0	0	17
250.0	97	85	912	28	23	0	20	0	0	16
260.0	97	103	1004	31	25	0	22	0	0	18
270.0	100	96	980	30	24	0	21	0	21	18
280.0	95	100	973	30	24	0	21	0	21	17
290.0	97	96	966	30	24	0	21	0	21	17
300.0	95	97	962	30	24	0	21	0	21	17
310.0	95	98	965	30	24	0	21	0	21	17
320.0	90	103	967	30	0	26	21	0	21	17
330.0	96	95	955	29	0	25	21	0	21	17
340.0	95	101	982	30	0	26	22	0	22	18
350.0	97	100	981	30	0	26	22	0	22	18
360.0	97	99	979	30	0	26	21	0	21	18
370.0	97	94	952	29	0	25	21	0	21	17
380.0	80	88	841	26	0	22	18	0	18	15
390.0	92	77	846	26	0	22	19	0	19	15
400.0	96	97	962	30	0	26	0	26	21	17
410.0	97	82	895	28	0	24	0	24	20	16
420.0	97	98	975	30	0	26	0	26	21	18
430.0	109	0	543	17	0	14	0	14	12	10
440.0	104	0	519	16	0	14	0	14	11	9
450.0	108	0	540	17	0	14	0	14	12	10
460.0	96	97	968	30	0	26	0	26	21	17
470.0	94	98	957	30	0	25	0	25	21	17
480.0	94	68	810	25	0	22	0	22	18	15
490.0	93	74	832	26	0	22	0	22	18	15
500.0	94	91	922	28	0	25	0	25	20	17
510.0	94	91	927	29	0	25	0	25	20	17
520.0	93	95	937	29	0	25	0	25	21	17
530.0	95	90	927	29	0	25	0	25	20	17
540.0	94	89	916	28	0	24	0	24	20	16
550.0	93	91	921	28	0	24	0	24	20	17
560.0	94	91	923	28	0	25	0	25	20	17
570.0	94	93	936	29	0	25	0	25	21	17
580.0	94	91	924	29	0	25	0	25	20	17
590.0	94	92	929	29	0	25	0	25	20	17
600.0	95	92	932	29	0	25	0	25	20	17
610.0	94	90	921	28	0	24	0	24	20	17
620.0	94	93	933	29	0	25	0	25	20	17
630.0	93	91	922	28	0	25	0	25	20	17
640.0	94	91	924	28	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
650.0	95	90	924	29	0	25	0	25	20	17
660.0	93	90	916	28	0	24	0	24	20	16
670.0	94	91	924	29	0	25	0	25	20	17
680.0	94	90	918	28	0	24	0	24	20	16
690.0	93	90	916	28	0	24	0	24	20	16
700.0	94	91	922	28	0	25	0	25	20	17
710.0	94	91	928	29	0	25	0	25	20	17
720.0	94	91	922	28	0	25	0	25	20	17
730.0	94	89	917	28	0	24	0	24	20	16
740.0	94	91	923	28	0	25	0	25	20	17
750.0	93	89	913	28	0	24	0	24	20	16
760.0	93	90	917	28	0	24	0	24	20	16
770.0	93	90	918	28	0	24	0	24	20	16
780.0	94	90	921	28	0	24	0	24	20	17
790.0	93	92	924	29	0	25	0	25	20	17
800.0	93	91	922	28	0	25	0	25	20	17

BIT NUMBER	3	IADC CODE	114	INTERVAL	800.0-1339.0
HTC X3A		SIZE	12.250	NOZZLES	18 18 18
COST	2201.00	TRIP TIME	4.2	BIT RUN	539.0
TOTAL HOURS	19.23	TOTAL TURNS	177615	CONDITION	T7 B4 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
810.0	97	100	984	85	77	0	55	0	55	18
820.0	99	97	983	85	77	0	55	0	55	18
830.0	99	98	984	85	77	0	55	0	55	18
840.0	102	97	995	86	78	0	55	0	55	18
850.0	101	96	984	85	77	0	55	0	55	18
860.0	103	96	992	86	78	0	55	0	55	18
870.0	115	0	577	50	45	0	32	0	32	10
880.0	102	97	994	86	78	0	55	0	55	18
890.0	102	94	980	85	77	0	55	0	55	18
900.0	102	95	985	86	77	0	55	0	55	18
910.0	99	96	972	84	0	58	54	0	54	17
920.0	102	93	975	85	0	58	54	0	54	18
930.0	100	94	970	84	0	58	54	0	54	17
940.0	102	93	976	85	0	58	54	0	54	18
950.0	100	95	971	84	0	58	54	0	54	17
960.0	101	94	974	85	0	58	54	0	54	17
970.0	98	96	969	84	0	58	54	0	54	17
980.0	99	94	966	84	0	58	54	0	54	17
990.0	102	95	983	85	0	59	55	0	55	18
1000.0	106	96	1013	88	0	61	0	61	56	18
1010.0	101	96	983	85	0	59	0	59	55	18
1020.0	98	96	973	84	0	58	0	58	54	17
1030.0	98	94	964	84	0	58	0	58	54	17
1040.0	100	93	961	83	0	57	0	57	54	17
1050.0	100	93	965	84	0	58	0	58	54	17
1060.0	101	92	960	83	0	57	0	57	53	17
1070.0	94	92	927	81	0	55	0	55	52	17
1080.0	100	92	959	83	0	57	0	57	53	17
1090.0	100	93	962	84	0	57	0	57	54	17
1100.0	97	92	945	82	0	56	0	56	53	17
1110.0	98	90	942	82	0	56	0	56	52	17
1120.0	93	92	923	80	0	55	0	55	51	17
1130.0	91	92	918	80	0	55	0	55	51	16
1140.0	94	92	928	81	0	55	0	55	52	17
1150.0	93	89	910	79	0	54	0	54	51	16
1160.0	92	87	897	78	0	54	0	54	50	16
1170.0	89	89	891	77	0	53	0	53	50	16
1180.0	91	87	886	77	0	53	0	53	49	16
1190.0	91	86	885	77	0	53	0	53	49	16
1200.0	91	88	891	77	0	53	0	53	50	16
1210.0	91	87	890	77	0	53	0	53	50	16
1220.0	90	88	888	77	0	53	0	53	49	16
1230.0	91	87	889	77	0	53	0	53	50	16

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1240.0	88	88	878	76	0	52	0	52	49	16
1250.0	88	88	876	76	0	52	0	52	49	16
1260.0	88	86	869	75	0	52	0	52	48	16
1270.0	96	61	784	68	0	47	0	47	44	14
1280.0	86	86	864	75	0	52	0	52	48	16
1290.0	85	86	854	74	0	51	0	51	48	15
1300.0	84	87	858	74	0	51	0	51	48	15
1310.0	86	88	868	75	0	52	0	52	48	16
1320.0	86	86	860	75	0	51	0	51	48	15
1330.0	85	85	850	74	0	51	0	51	47	15
1339.0	85	85	851	74	0	51	0	51	47	15

BIT NUMBER	4	IADC CODE	517	INTERVAL	1339.0-1668.2
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	4.9	BIT RUN	329.2
TOTAL HOURS	24.87	TOTAL TURNS	119781	CONDITION	T8 B3 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1340.0	86	86	857	74	0	51	0	51	48	15
1350.0	88	85	862	75	0	51	0	51	48	15
1360.0	86	86	860	75	0	51	0	51	48	15
1370.0	88	86	872	76	0	52	0	52	49	16
1380.0	86	86	860	75	0	51	0	51	48	15
1390.0	87	86	861	75	0	51	0	51	48	15
1400.0	85	85	853	74	0	51	0	51	48	15
1410.0	89	81	849	74	0	51	0	51	47	15
1420.0	87	81	838	73	0	50	0	50	47	15
1430.0	88	81	841	73	0	50	0	50	47	15
1440.0	88	81	847	74	0	51	0	51	47	15
1450.0	88	81	845	73	0	51	0	51	47	15
1460.0	88	80	835	73	0	50	0	50	47	15
1470.0	86	80	828	72	0	49	0	49	46	15
1480.0	87	81	841	73	0	50	0	50	47	15
1490.0	88	85	863	75	0	52	0	52	48	15
1500.0	87	82	842	73	0	50	0	50	47	15
1510.0	87	82	845	73	0	50	0	50	47	15
1520.0	88	82	848	74	0	51	0	51	47	15
1530.0	119	0	596	52	0	36	0	36	33	11
1540.0	87	83	852	74	0	51	0	51	47	15
1550.0	88	79	835	72	0	50	0	50	47	15
1560.0	87	80	833	72	0	50	0	50	46	15
1570.0	87	80	835	72	0	50	0	50	47	15
1580.0	106	0	529	46	0	32	0	32	30	1
1590.0	87	79	828	72	0	49	0	49	46	15
1600.0	87	79	830	72	0	50	0	50	46	15
1610.0	87	80	835	72	0	50	0	50	47	15
1620.0	88	80	836	73	0	50	0	50	47	15
1630.0	82	86	839	73	0	50	0	50	47	15
1640.0	81	86	837	73	0	50	0	50	47	15
1650.0	82	86	843	73	0	50	0	50	47	15
1660.0	101	0	506	44	0	30	0	30	28	9
1668.2	83	88	852	74	0	51	0	51	47	15

BIT NUMBER	5	IADC CODE	617	INTERVAL	1668.2-1942.0
HTC J44		SIZE	12.250	NOZZLES	18 18 18
COST	4919.00	TRIP TIME	6.2	BIT RUN	273.8
TOTAL HOURS	32.21	TOTAL TURNS	140419	CONDITION	T3 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1670.0	86	84	847	74	0	51	0	51	47	15
1680.0	87	84	855	74	0	51	0	51	48	15
1690.0	88	84	858	75	0	51	0	51	48	15
1700.0	88	83	850	74	0	51	0	51	47	15
1710.0	86	85	855	74	0	51	0	51	48	15
1720.0	87	85	862	75	0	51	0	51	48	15
1730.0	88	87	875	76	0	52	0	52	49	16
1740.0	87	87	867	75	0	52	0	52	48	16
1750.0	0	117	586	51	0	35	0	35	33	11
1760.0	0	116	581	50	0	35	0	35	32	10
1770.0	85	88	865	75	0	52	0	52	48	16
1780.0	86	88	868	75	0	52	0	52	48	16
1790.0	87	87	871	76	0	52	0	52	49	16
1800.0	87	84	853	74	0	51	0	51	48	15
1810.0	87	82	845	73	0	50	0	50	47	15
1820.0	87	82	845	73	0	50	0	50	47	15
1830.0	87	82	845	73	0	50	0	50	47	15
1840.0	84	81	824	72	0	49	0	49	46	15
1850.0	87	78	824	72	0	49	0	49	46	15
1860.0	80	78	789	69	0	47	0	47	44	14
1870.0	78	78	778	68	0	47	0	47	43	14
1880.0	87	83	852	74	0	51	0	51	47	15
1890.0	88	83	855	74	0	51	0	51	48	15
1900.0	87	83	847	74	0	51	0	51	47	15
1910.0	88	82	851	74	0	51	0	51	47	15
1920.0	87	82	845	73	0	50	0	50	47	15
1930.0	88	81	847	74	0	51	0	51	47	15
1940.0	88	78	827	72	0	49	0	49	46	15
1942.0	88	84	859	75	0	51	0	51	48	15

BIT NUMBER	6	IADC CODE	517	INTERVAL	1942.0-2185.0		
HTC J22		SIZE	12.250	NOZZLES	18 18 18		
COST	6788.00	TRIP TIME	6.6	BIT RUN	243.0		
TOTAL HOURS	34.07	TOTAL TURNS	137842	CONDITION	T3 B7 G0.125		

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1950.0	85	83	841	73	0	50	0	50	47	15
1960.0	86	82	839	73	0	50	0	50	47	15
1970.0	111	0	557	48	0	33	0	33	31	10
1980.0	86	81	835	73	0	50	0	50	47	15
1990.0	85	83	842	73	0	50	0	50	47	15
2000.0	85	83	840	73	0	50	0	50	47	15
2010.0	85	82	837	73	0	50	0	50	47	15
2020.0	85	82	837	73	0	50	0	50	47	15
2030.0	86	82	841	73	0	50	0	50	47	15
2040.0	1	111	562	49	0	34	0	34	31	10
2050.0	85	82	833	72	0	50	0	50	46	15
2060.0	84	82	827	72	0	49	0	49	46	15
2070.0	83	83	831	72	0	50	0	50	46	15
2080.0	83	82	826	72	0	49	0	49	46	15
2090.0	83	82	824	72	0	49	0	49	46	15
2100.0	82	83	821	71	0	49	0	49	46	15
2110.0	82	83	825	72	0	49	0	49	46	15
2120.0	110	0	548	48	0	33	0	33	31	10
2130.0	82	80	813	71	0	49	0	49	45	15
2140.0	82	82	819	71	0	49	0	49	46	15
2150.0	83	81	821	71	0	49	0	49	46	15
2160.0	83	82	826	72	0	49	0	49	46	15
2170.0	83	82	821	71	0	49	0	49	46	15
2180.0	0	110	551	48	0	33	0	33	31	10
2185.0	0	81	404	35	0	24	0	24	23	7

BIT NUMBER	7	IADC CODE	437	INTERVAL	2185.0-2211.5
HTC J11		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	6.7	BIT RUN	26.5
TOTAL HOURS	3.84	TOTAL TURNS	17534	CONDITION	T4 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2190.0	81	82	815	71	0	49	0	49	45	15
2200.0	82	81	814	71	0	49	0	49	45	15
2210.0	80	79	797	69	0	48	0	48	44	14
2211.5	80	79	798	69	0	48	0	48	44	14

BIT NUMBER	8	IADC CODE	517	INTERVAL	2211.5-2428.0
HTC J22		SIZE	12.250	NOZZLES	18 18 18
COST	6788.00	TRIP TIME	7.1	BIT RUN	216.5
TOTAL HOURS	50.47	TOTAL TURNS	158096	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2220.0	79	75	767	67	0	46	0	46	43	14
2230.0	78	76	768	67	0	46	0	46	43	14
2240.0	111	0	554	48	0	33	0	33	31	10
2250.0	84	80	821	71	0	49	0	49	46	15
2260.0	83	80	813	71	0	49	0	49	45	15
2270.0	83	80	815	71	0	49	0	49	45	15
2280.0	84	79	814	71	0	49	0	49	45	15
2290.0	84	78	808	70	0	48	0	48	45	15
2300.0	83	77	801	70	0	48	0	48	45	14
2310.0	81	76	784	68	0	47	0	47	44	14
2320.0	81	76	785	68	0	47	0	47	44	14
2330.0	81	75	779	68	0	47	0	47	43	14
2340.0	78	78	778	68	0	47	0	47	43	14
2350.0	78	77	771	67	0	46	0	46	43	14
2360.0	112	0	561	49	0	34	0	34	31	10
2370.0	82	74	783	68	0	47	0	47	44	14
2380.0	0	114	572	50	0	34	0	34	32	10
2390.0	0	114	572	50	0	34	0	34	32	10
2400.0	82	72	770	67	0	46	0	46	43	14
2410.0	21	88	545	47	0	33	0	33	30	10
2420.0	84	70	770	67	0	46	0	46	43	14
2428.0	79	71	750	65	0	45	0	45	42	13

BIT NUMBER	9	IADC CODE	517	INTERVAL	2428.0-2634.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	7.6	BIT RUN	206.0
TOTAL HOURS	58.59	TOTAL TURNS	180906	CONDITION	T6 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2430.0	76	69	724	63	0	43	0	43	40	13
2440.0	78	68	731	63	0	44	0	44	41	13
2450.0	77	68	724	63	0	43	0	43	40	13
2460.0	80	68	739	64	0	44	0	44	41	13
2470.0	77	69	731	63	0	44	0	44	41	13
2480.0	80	68	738	64	0	44	0	44	41	13
2490.0	81	68	743	65	0	44	0	44	41	13
2500.0	80	68	740	64	0	44	0	44	41	13
2510.0	80	68	743	65	0	44	0	44	41	13
2520.0	81	68	744	65	0	44	0	44	41	13
2530.0	80	69	746	65	0	45	0	45	42	13
2540.0	80	68	741	64	0	44	0	44	41	13
2550.0	77	71	742	64	0	44	0	44	41	13
2560.0	73	77	747	65	0	45	0	45	42	13
2570.0	85	46	658	57	0	39	0	39	37	12
2580.0	73	73	733	64	0	44	0	44	41	13
2590.0	73	73	730	63	0	44	0	44	41	13
2600.0	73	73	726	63	0	43	0	43	40	13
2610.0	72	72	722	63	0	43	0	43	40	13
2620.0	73	72	726	63	0	43	0	43	40	13
2630.0	70	73	716	62	0	43	0	43	40	13
2634.0	70	73	717	62	0	43	0	43	40	13

BIT NUMBER	10	IADC CODE	537	INTERVAL	2634.0-2681.0
HTC J33		SIZE	12.250	NOZZLES	16 16 16
COST	6637.00	TRIP TIME	7.7	BIT RUN	47.0
TOTAL HOURS	15.91	TOTAL TURNS	45492	CONDITION	T1 B1 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2640.0	72	72	722	63	0	43	0	43	40	13
2650.0	71	72	716	62	0	43	0	43	40	13
2660.0	74	72	730	63	0	44	0	44	41	13
2670.0	72	72	720	63	0	43	0	43	40	13
2680.0	72	73	724	63	0	43	0	43	40	13
2681.0	72	73	725	63	0	43	0	43	40	13

BIT NUMBER	10	JADC CODE	4	INTERVAL	2681.0-2693.6
CHRIS C-20		SIZE	8.469	NOZZLES	14 14 13
COST	13000.00	TRIP TIME	7.7	BIT RUN	12.6
TOTAL HOURS	10.94	TOTAL TURNS	59389	CONDITION	T0 B0 G0.050

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2690.0	60	0	299	289	0	0	0	0	17	5
2693.6	0	61	304	294	0	0	0	0	17	5

BIT NUMBER	11	IADC CODE	517	INTERVAL	2693.6-2840.5
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.0	BIT RUN	146.9
TOTAL HOURS	39.58	TOTAL TURNS	115791	CONDITION	T3 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2700.0	72	72	716	62	0	43	0	43	40	13
2710.0	73	73	730	63	0	44	0	44	41	13
2720.0	77	73	748	65	0	45	0	45	42	13
2730.0	72	74	731	63	0	44	0	44	41	13
2740.0	95	24	595	52	0	36	0	36	33	11
2750.0	73	73	726	63	0	43	0	43	40	13
2760.0	72	73	728	63	0	44	0	44	41	13
2770.0	72	72	724	63	0	43	0	43	40	13
2780.0	59	72	651	57	0	39	0	39	36	12
2790.0	72	73	724	63	0	43	0	43	40	13
2800.0	72	72	723	63	0	43	0	43	40	13
2810.0	72	73	725	63	0	43	0	43	40	13
2820.0	72	73	728	63	0	43	0	43	41	13
2830.0	72	74	730	63	0	44	0	44	41	13
2840.0	72	72	721	63	0	43	0	43	40	13
2840.5	73	73	727	63	0	43	0	43	40	13

BIT NUMBER	12	IADC CODE	517	INTERVAL	2840.5-3011.0
HTC J22		SIZE	12.250	NOZZLES	16 16 18
COST	6788.00	TRIP TIME	8.4	BIT RUN	170.5
TOTAL HOURS	48.33	TOTAL TURNS	139280	CONDITION	T4 B2 G0.250

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2850.0	72	73	723	63	0	43	0	43	40	13
2860.0	72	73	726	63	0	43	0	43	40	13
2870.0	73	73	729	63	0	44	0	44	41	13
2880.0	73	71	721	63	0	43	0	43	40	13
2890.0	72	73	725	63	0	43	0	43	40	13
2900.0	73	72	726	63	0	43	0	43	40	13
2910.0	72	72	719	62	0	43	0	43	40	13
2920.0	72	72	717	62	0	43	0	43	40	13
2930.0	71	73	719	62	0	43	0	43	40	13
2940.0	72	72	720	63	0	43	0	43	40	13
2950.0	73	72	725	63	0	43	0	43	40	13
2960.0	72	72	724	63	0	43	0	43	40	13
2970.0	68	75	712	62	0	43	0	43	40	13
2980.0	72	72	721	63	0	43	0	43	40	13
2990.0	72	71	715	62	0	43	0	43	40	13
3000.0	72	71	713	62	0	43	0	43	40	13
3010.0	72	71	712	62	0	43	0	43	40	13
3011.0	72	71	713	62	0	43	0	43	40	13

PE603939

This is an enclosure indicator page.
The enclosure PE603939 is enclosed within the container PE905520 at this location in this document.

The enclosure PE603939 has the following characteristics:

ITEM_BARCODE	= PE603939
CONTAINER_BARCODE	= PE905520
NAME	= Drill Data Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L2
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Drill Data Plot (from E.S Final Well Report) for Whiting-1
REMARKS	=
DATE_CREATED	= 5/04/83
DATE_RECEIVED	= 5/09/83
W_NO	= W807
WELL_NAME	= WHITING-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603939

DRILL DATA PLOT

PE603940

This is an enclosure indicator page.
The enclosure PE603940 is enclosed within the container PE905520 at this location in this document.

The enclosure PE603940 has the following characteristics:

ITEM_BARCODE	= PE603940
CONTAINER_BARCODE	= PE905520
NAME	= Geoplot
BASIN	= GIPPSLAND
PERMIT	= VIC/L2
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= GeoPlot (from E.S Final Well Report) for Whiting-1
REMARKS	=
DATE_CREATED	= 5/04/83
DATE_RECEIVED	= 5/09/83
W_NO	= W807
WELL_NAME	= WHITING-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603940

GEO - PLOT

PE603941

This is an enclosure indicator page.
The enclosure PE603941 is enclosed within the container PE905520 at this location in this document.

The enclosure PE603941 has the following characteristics:

ITEM_BARCODE	= PE603941
CONTAINER_BARCODE	= PE905520
NAME	= Temperature Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L2
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Temperature Plot (from E.S Final Well Report) for Whiting-1
REMARKS	=
DATE_CREATED	= 5/04/83
DATE_RECEIVED	= 5/09/83
W_NO	= W807
WELL_NAME	= WHITING-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603941

TEMPERATURE PLOT

PE603942

This is an enclosure indicator page.
The enclosure PE603942 is enclosed within the container PE905520 at this location in this document.

The enclosure PE603942 has the following characteristics:

ITEM_BARCODE	= PE603942
CONTAINER_BARCODE	= PE905520
NAME	= Pessure Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L2
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Pressure Plot (from E.S Final Well Report) for Whiting-1
REMARKS	=
DATE_CREATED	= 5/04/83
DATE_RECEIVED	= 5/09/83
W_NO	= W807
WELL_NAME	= WHITING-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

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PE603942

PRESSURE PLOT

PE603943

This is an enclosure indicator page.
The enclosure PE603943 is enclosed within the container PE905520 at this location in this document.

The enclosure PE603943 has the following characteristics:

ITEM_BARCODE	= PE603943
CONTAINER_BARCODE	= PE905520
NAME	= Mud Log (Grapholog)
BASIN	= GIPPSLAND
PERMIT	= VIC/L2
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Mud Log (from E.S Final Well Report) for Whiting-1
REMARKS	=
DATE_CREATED	= 5/04/83
DATE_RECEIVED	= 5/09/83
W_NO	= W807
WELL_NAME	= WHITING-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603943
GRAPHOLOG