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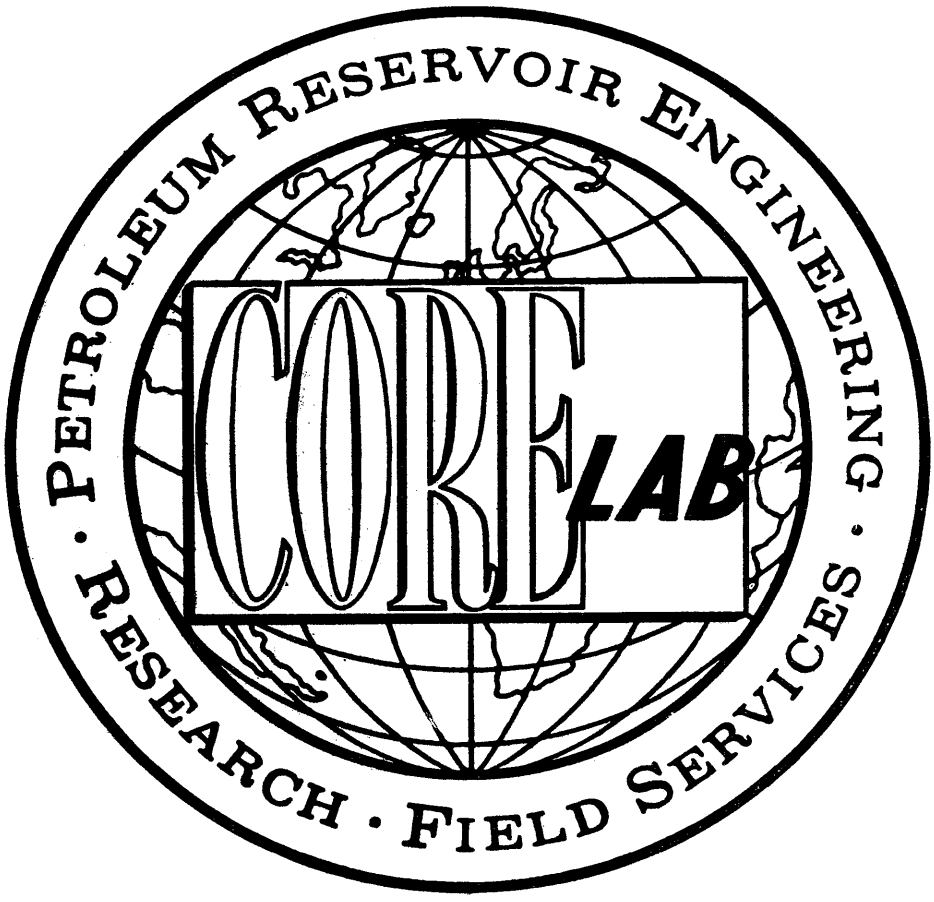
ATTACHMENT TO WCR FINAL WELL REPORT (MUDLOGGING REPORT) YELLOWTAIL-1 (W756)



BASIC

IES WELL REPORT
Yellowtail No 1
ESSO AUSTRALIA LTD 29 APR 1982

CORE LABORATORIES AUSTRALIA (QLD.) LTD.

Petroleum Reservoir Engineering
AUSTRALIA

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

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

1st April, 1982.

Esso Australia Ltd
127 Kent Street
SYDNEY. N.S.W. 2000.

ATTENTION MR K. KUTTAN.

Dear Sir

Please find enclosed copies of the well report for Yellowtail No. 1.

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

Yours very truly
CORE LABORATORIES AUSTRALIA (QLD) LTD.

A. DODSON
Signed by in A. Dodson's absence.

--Jan 1982

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

Dear Sir,

Core Laboratories Intermediate Extended Service Well Logging Unit FL802 was in use during the drilling of YELLOWTAIL # 1 from surface to a total depth of 2571 metres.

Please find enclosed the IES well report,appended drilling parameter logs and the Corelab grapholog for your reference.

We appreciated being of assistance during the drilling operations and look forward to continuing our association on future wells.

If you require clarification of this report,please do not hesitate to contact us.

Yours very truly,
CORE LABORATORIES INTERNATIONAL Ltd.

A.Dodson
Unit supervisor

INDEX.

1 INTRODUCTION.

Yellowtail No. 1 was drilled by ESSO Australia Ltd. in the Bass Strait, Australia.

Well co-ordinates were:

Latitude	:	38^{o} 31' 34.67"S
Longtitude	:	148^{o} 16' 27.34"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.

Yellowtail No. 1 was spudded on 17th October, 1981 and reached a total depth of 2571 metres on 1st November, 1981, a total drilling time of 16 days. The main objective of the well was to assess the hydrocarbon potential of a low relief erosional high at the top of the Latrobe, (2389m RKB) southwest of the Mackeral oil field and north-east of the Kingfish oil field.

Elevations were: 21m Kelly bushings to mean seal level
77m Water depth
98m Kelly bushings to mud line.

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

Core Laboratories personnel involved in the logging were as follows:

A. Dodson	-	Unit Supervisor
J. Ots	-	Pressure Engineer
K. Breakwell	-	Pressure Engineer
N. Danker	-	Logging Crew Chief
B. Giftson	-	Well Logger
A. McConville	-	Well Logger
J. Lang	-	Well Logger
R. Bickerstaff	-	Well Logger

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 dislay
6. Pit volume totalizer,display and recorder
7. Digital depth counter
7. Two integrated pump stroke counters,with digital display
9. Ultra-violet fluoroscope
10. Binocular microscope

B. INTERMEDIATE EXTENDED SERVICE PACKAGE

1. Hewlett Packard 9825B desktop computer
2. Hewlett Packard 9872B plotter
3. Hewlett Packard 2631A printer
4. Two Hewlett Packard 2621P visual display units,(one located in the client's office)
5. Hookload/weight on bit transducer and recorder
6. Rotary speed tachogenerator and recorder
7. Standpipe pump pressure transducer and recorder
8. Mud flow out sensor and recorder
9. Mud temperature sensors and recorder (in and out)
10. Mud conductivity sensors end recorder (in and out)
11. Rotary torque sensor and recorder
12. Shale density apperatus
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 0.2 m 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 digital meter and recorder chart.

PUMP PRESSURE

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

MUD CONDUCTIVITY

A Balsbaugh electrode-less conductivity sensor measures the current in a closed loop of solution coupling a pair of toroidal transformer coils.
The conductivity in and out is displayed on analog and digital meters, and recorder chart.

All the sensors are 5 to 24 v DC powered with the exception of the air driven gas trap.Along with monitoring and maintaining the above equipment ,Core Lab furnished and operated certain other items.

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 column.

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 programmes for the wellsite 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 a conclusion log,therefore the information may be modified by results from formation drill stem tests,data from adjacent wells,kicks, and formation breakdown tests.

CORELAB 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 :

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

Deviations from the normal "dcs" trend may be interpretated as being due to a change in formation pore pressure.An equation derived by Eaton is used in an attempt to evaluate pore pressure form deviations in the "dcs" 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 'dcs' 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 density solution.

An interpreted lithology column is also includedon the log, as is a plot of mud density in,to assist in interpretation.All relavant 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,breakeven analysis,formation pore pressure,mud density in and formation fracture pressure.
Two Geo-plots are included in this report,at scales of 1:2000 and 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.Continous observation of flowline temperature may indicate an increase in geothermal gradient.Factors affecting temperature are noted on the log,such as new bit runs,changes in the circulation rates,circulating cuttings out and the addition of water and chemicals to the active mud system.Since the goal of the end-to-end plot is to provide a representation of the geothermal gradient,all surface changes which would cause artificial changes in the flowline temperature are disregarded.

ELECTRIC LOG PLOT

A plot of shale resistivity (ohm-metres squared/metre),sonic travel time (microseconds per foot),bulk density (gm./cc)and neutron porosity (%),is made,using data supplied by Schlumberger.Two-cycle semilog paper is used,with a vertical scale of 1:10,000.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 m.

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 relavant 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 appropiate.

RIG INFORMATION SHEET.

CORE LAB

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL YELLOWTAIL 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.
TRAVELLING 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 VALCRON 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

WELL INFORMATION SHEET.

WELL INFORMATION SHEET

CORE LAB

COMPANY ESSO AUSTRALIA LTD.

WELL YELLOWTAIL No. 1

Sheet No. 1

WELL NAME	YELLOWTAIL No. 1			
OPERATOR	ESSO EXPLORATION LTD.			
PARTNERS	B.H.P.			
RIG	OWNER	SOUTH SEAS DRILLING COMPANY		
	NAME OR NUMBER	SOUTHERN CROSS		
	TYPE	SEMI-SUBMERSIBLE		
LOCATION	LATITUDE (X)	38° 31', 34.67" S	LONGITUDE (Y)	148° 16' 27.34" E
	FIELD	GIPPSLAND BASIN	AREA	BASS STRAIT
	COUNTY	VICTORIA	STATE	
	COUNTRY	AUSTRALIA		
	DESCRIPTION	EVALUATION		
DATUM POINTS	Ground Elevation	-	RKB to Ground Level	-
	Mean Water Depth	77	RKB to Water Level	21
DATES	SPUD	17th OCT 1981	TOTAL DEPTH	1st NOV 1981

HOLE SIZES

Depth From	Depth To	Bit Size	No. Of Bits	No. of Reamers	Date From	Date To	Cased	Logged
98	235	26"	1	0	17-10-81	18-10-81	20	N
235	818	15"	1	0	20-10-81	21-10-81	10¾	Y
818	2571	9 7/8"	?	0	23-10-81	1-11-81	-	Y

DRILLING FLUID

Depth From	Depth To	Weights	Type
235	818	TO	SEAWATER
818	2571	TO	SEAWATER GEL
		TO	
		TO	
		TO	
		TO	
		TO	
		TO	

WIRELINE LOGGING

Depth From	Depth To	Hole Size"	Date Run	Logs Run
816	98	15	21-10-81	ISF-BHC-MSFL-GR
2565	804	9 7/8	1-11-81	DLL-MSFL-GR
2565	804	9 7/8	2-11-81	LDT-CNL-GR
2565	804	9 7/8	2-11-81	ISF-BHC-MSFL-GR-CAL
2565	804	9 7/8	2-11-81	HDT
-	-	9 7/8	2/3-11-81	VELOCITY SURVEY
-	-	9 7/8	3/6-11-81	RFT
-	-	9 7/8	6-11-81	CSTx2

RISER, CASING & LINER

Depth From	Depth To	OD "	ID "	Weight	Grade	Threads	Date Run	Cement	Stages	Excess
0	98	23	21	-	-	RISER	- - -	-	-	
98	229	20	19.124	94	K55	BUTT	19 OCT 81	"N"	1	-
98	804	10¾	9.875	45.5	K55	BUTT	22 OCT 81	"N"	1	-

WELL HISTORY.

WELL HISTORY.

Yellowtail No. 1.

17/10/81 Spudded in repositioned rig to wash hole to centre of T.G.B. drilled 26" hole to 235m.

18/10/81 Circulated 150 bbls. hi-vis mud. Dropped a survey at 235m (misrun). Flushed the hole with salt water. POOH - 80,000 lbs. of pull between 220m and 104 metres. Retrieved survey on wire line. Attempted to R.I.H., but the hole was blocked off. Reamed and washed the well-bore to the bottom. Spotted 20 bbls of hi-vis pills. Circulated out. Circulated 150 bbls of hi-vis mud. Dropped a survey, then spotted a second 150 bbls of hi-vis mud. POOH to 104 metres. Retrived survey on wire line (0^{o} at 235m). Attempted to R.I.H., but got blocked off at 107 metres. Washed to 137m. Spotted 30 bbls of high-vis mud and worked pipe for 30 minutes. Reamed and washed to 155 metres. R.I.H. to bottom. Circulated, then pumped 300 bbls of hi-vis mud. POOH to 141 metres, then pumped 50 bbls of hi-vis mud. POOH broke out the 26" hole opener and $17\frac{1}{2}$" bit. Ran 20" casing. Made up the cement stinger and landing string. Landed the 20" casing in the 4-poster guide frame and bolted in place. Circulated and filled the 20" casing with sea water.

19/10/81 Ran 20" casing to 226 metres. Rigged up Chicksans. Washed down 3 metres to land casing. The cement lines were tested to 2000 PSI, and were found to be OK. The casing was set at 229 metres. Cement was mixed and pumped as follows: 627 sacks of class "N" cement, 2263 lbs pre-hydrated gel, 194 bbls water, and 1179 lbs of Calcium chloride. The slurry weight was 12.3 ppg. Tailed with 350 sacks class "N" cement mixed with 43 1/3 bbls of sea water. (The average slurry weight was 15.6 ppg).
Displaced with 15 bbls of sea water. Rigged down Chicksans, and backed out the running tool. Strapped out of the hole (well-head at 96.24 metres). The well-head was washed. Made up the riser. Tested choke and kill lines to 5000 PSI and function tested the BOP with both pods. Hooked up choke and kill lines, the rucker lines were seated, and the stack was latched.

20/10/81 RIH with test plug. Tested upper pipe rams, choke and kill lines (all OK). A full function test was carried out with both pods. Pulled test plug free and POOH. The wear bushing was set. POOH made up B.H.A., R.I.H., and tagged cement at 220 metres. Drilled cement from 220 to 239 metres. Drilled 15" hole from 239 to 718 metres. 45 units of gas was circulated up at 509 metres, and 70 units at 699 metres. This was suspected to be connection gas because of the short time to drill a kelly.

21/10/81 Drilled 15" hole from 718 to 818 metres, with back-ground gas of 15-20 units. Connection gas reached 53 units at 803 units. The lithology for the interval was Calcarenite. 50 bbls of hi-vis mud were circulated. Dropped a survey and pumped slug. POOH to shoe. Retrieved survey at the shoe ($3/4^{o}$).
RIH (tight hole at 719m) reamed between 719 - 727 metres.
RIH to bottom at 818 metres. Circulated out 11 units of gas.
Pumped slug and POOH strapped out. Schlumberger RIH with ISF, BHC, MSFL, and GR. Made up hanger. RIH circulated out, then POOH.

22/10/81 Retrived wear bushing. Ran 10 3/4" casing comprising 60 joints of K55, 45.5 lbs/ft, 706 metres in length, and set at 804 metres. Rigged up HANCO lines. Circulated bottoms up, yielding 2.8 units of gas. Repaired leaks in cement lines. Pumped 30 bbls of fresh water ahead of the cement mixture of 850 sacks cement and 105 bbls of fresh water (slurry weight 15.6 ppg). This was followed by 200 sacks of cement mixed with 25 bbls of sea water (slurry weight 15.6 ppg). Dropped a dart. Pumped 10 bbls of fresh water. The above was displaced with 216 bbls of mud POOH. RIH with wash-tool and wash hanger. POOH. RIH with a seal assembly. Tested the BOP to 5000 PSI. POOH. Made up the BHA.

23/10/81 RIH tagged cement at 765m. Drilled out cement float and shoe, and washed the hole to 818 metres. Drilled 9 7/8" hole from 818 - 824 metres with flow checks. Circulated and conditioned mud for PIT. Run Pit with equivalent mud weight of 13.6 ppg (620 psi with 9.1 mud). Drilled gas increase during the interval, with the peak of 32 units occurring at 1135 metres. There was no sign of connection gas.

24/10/81 Drilled from 1176 to 1298 metres with flow checks, and flushed the riser. Background gas was 5 units in this interval, and the lithology was limestone. Circulated bottoms up at 1298m. Dropped a survey and pumped slug. POOH. Recovered survey (3^{o}). Made up BHA, then RIH to shoe at 804m. RIH with NB No. 4 and drilled 9 7/8" hole from 1298 to 1402 metres. Trip gas at 1298 metres was 28 units. Gas peaks generally increased towards the bottom of the interval, with 83 units originating from 1378m (including traces of C_2, C_3, and C_4). There was an isolated occurrence of connection gas (24 units) at 1384m.

25/10/81 Drilled 9 7/8" hole from 1402 to 1496 metres. Spotted 60 bbls of hi-vis mud. Flushed the riser at intervals. Circulated out. Dropped a survey. (Lithology was Calcarenite, silty in part, with an average background gas of 5 units). SCR at 1412m with 9.1 ppg mud. (Pump 1 : 30 spm = 440 psi; 40 spm = 650 psi;
Pump 2 : 30 spm = 440 psi; 40 spm = 620 psi). POOH.
Retrieved survey at the shoe: misrun. POOH. Changed the bit due to low ROP's and RIH to the shoe with bit No. 5 (9 7/8", HTC x 3A, 11, 11, 11). "Slip and cut" the drilling line. Broke circulation. RIH. Broke circulation, then drilled 9 7/8" hole from 1496 to 1506m. Circulated out. Drilled from 1506 to 1510 m. The blocks were dropped and the drilling line was untangled.

26/10/81 Cut the drilling line. POOH, inspected the drill pipe, and then broke out the bit. The damaged kelly was changed out, and the drill collars were inspected. Repaired the rig. RIH with bit No. 6, and all the connections were torqued. The hole was good - no tight spots. Fill was tagged at 1492 metres

27/10/81 Broke circulation and washed the hole from 1492 to 1510m. Trip gas was 80 units. Temporary power failure. Drilled 9 7/8" hole from 1510 - 1618 metres. The hole was tight at each connection, therefore the driller reamed and worked pipe (using 200 bbls of hi-vis mud). SCR at 1580m using 9.0 ppg mud (Pump No. 1 : 40 spm = 540 psi, 30 spm = 360 psi). Calcarenite was the lithology and yielded a background gas of 5 to 10 units. Drilled 9 7/8" hole to 1527m at which depth the pipe got stuck. Worked pipe (maximum overpull was 220,000 lbs). Flushed the riser, and circulated bottoms up (20 units of gas obtained). Pumped slug. Continued drilling the 9 7/8" hole down to 1666 metres. (The background gas varied between 5 and 10 units, with maximum drilled gas of 17 units at 1633m). The hole was tight at each connection (reamed and worked pipe, and spotted hi-vis mud at each connection). Spotted 50 bbls of hi-vis mud. Circulated bottoms up (7 units of gas). The riser was flushed. A survey was dropped at 1666 metres. Pumped a slug and POOH to the shoe at 804m. The hole was good. Overshot the survey with a wireline ($\frac{1}{2}^{o}$). POOH. The pipe was hung off the pipe rams, and the BOP stack was function tested.

28/10/81 Finished POOH and broke out the bit. Made up the BHA and ran in the hole to the shoe at 804m. Hung off the drill pipe and filled it. Finished running in the hole. Broke circulation and washed to the bottom of the well (where there was a 2 metre fill). Drilled 9 7/8" hole to 1675 metres. The hole was tight during connections, so the pipe was worked. Continued drilling down to 1771m (20 bbls of Gel mud was spotted prior to each connection). SCR at 1703 metres. Drilling was continued to 2021m, spotting hi-vis mud as necessary. Another SCR routine was carried out at 2021 metres. Background gas over the interval 1666 - 2021m was 5 to 10 units and the lithology was Calcareous silt-stone. Gas peaks were all below 30 units.

29/10/81 Drilled 9 7/8" hole from 2021 to 2187 metres, spotting hi-vis mud as needed. At 2187m it was decided to pull the bit due to a steady decrease in the average rate-of-penetration over the previous 50 metres, from 30m/hr to 20m/hr. Dropped survey, pumped slug, and POOH. Retrieved survey (2^{o} at T.D.). This drilled interval was Calcareous silt-stone yielding 5-12 units background gas (C_1 with a -race of C_2). Made up wear bushing running tool and RIH. Tested the pipe rams and Hydrils. Tested choke and kill valves and lines. RIH with wear bushing, and set same. POOH. RIH with bit No. 8 (9 7/8" HTC x 3A, 13 x 2, 1 x 14) to 2176 metres. Filled pipe at shoe. Picked up kelly, broke circulation, and washed the hole from 2176 to 2187m (there was a 6m fill). The trip gas was 56 units. Drilled 9 7/8" hole from 2187 to 2231 metres. (Background gas in this interval was 5 - 10 units).

30/10/81 Drilled 9 7/8" hole from 2231 - 2414 metres with flow checks. Samples were circulated up at 2393m, 2398m, 2404m, 2407m (no significant gas readings) and 2414m (62 units of gas). Dropped survey at 2414m, and pumped slug. SCR at 2290m. Strapped out of hole since the core point had been reached at 2414m.

31/10/81 RIH with core barrel (Christensen C-22, 8 15/22"). Broke circulation and tagged bottom at 2414m. Circulated out. Cut core No. 1 : 2414 - 2424m. Circulated out (maximum gas was 16 units over a background of 11 units). Pumped slug and POOH. Retrieved core No. 1 (71%). The core was 100% sandstone with oil fluorescence throughout. Serviced core barrel and changed the core bit (Christensen C-22, 8 15/22"). RIH to shoe. "Slip and cut" the drilling line. Serviced the rig. RIH to 2407m. Picked up kelly, washed and reamed from 2407 - 2424m. Cut core No. 2 from 2424 - 2437.5m (100% sandstone). Pumped slug. POOH using Varco spinning wrench. Recovered core (74%). Serviced core barrel RIH with Bit No. 11 (HTC x 3A, 9 7/8", 3 x 13).

1/11/81 Broke out Drillco mud check valve from Kelly. Filled pipe at the shoe. Finished RIH. Washed and reamed from 2409m to 2414m. Reamed core hole from 2414 to 2437 metres. Drilled 9 7/8" hole 2437 - 2571 metres. Trip gas was 15 units. In this sandstone interval, gas peaked at only 16 units over a background of 3 units. Circulated bottoms up. Dropped survey at 2571 metres (TD). Pumped slug. POOH to shoe, and recovered the survey (2^{o}). RIH to 2559m. Circulated bottoms up (there was a 4 metre fill). Pumped slug. POOH using Varco spinning wrench to the shoe. Rigged up Schlumberger.

2/11/81 Ran Schlumberger logs:

Run No. 1	:	DLL . MSFL . GR
Run No. 2	:	LDT . CNL
Run No. 3	:	BHC . ISF . SP . GR
Run No. 4	:	HDT

Ran in Schlumberger velocity survey - the line jammed in the sheaves - freed it by splicing.

3/11/81 Rigged up and ran velocity survey (Run No. 5). Rigged down velocity survey. Made up bit RR No. 11. RIH to 800 metres. The Hydrils were function tested on the yellow pod. RIH to 2563m. Picked up kelly, broke circulation, and washed to bottom (1 metre fill). Circulated and conditioned the hole. Pumped slug, and POOH. Hole was tight at 2503m. Worked pipe, pulled back to 2473m. Picked up Kelly, broke circulation and worked pipe. Pulled tight pipe to 2158m. RIH to bottom, 2571m. Circulated and conditioned the hole POOH. Rigged up Schlumberger.

4/11/81 Ran Schlumberger logs:

Run No. 6 : WST
Run No. 7 : First RFT (using 3 check tool). Recovered sample, serviced RFT tool.
Run No. 8 : Second RFT
Run No. 9 : Third RFT. Rigged down Schlumberger. RIH.

5/11/81 RIH to 1142m. Picked up Kelly, broke circulation. RIH to 2539m. Tight hole. Laid down 2 singles. Picked up Kelly, broke circulation, and washed and reamed from 2539 - 2571 metres. Circulated bottoms up. Pumped slug. POOH. Hole was tight from 2427 to 2418 metres. POOH using Varco spinning wrench. Schlumberger run No. 10, 4th RFT. Rig down Schl umberger. RIH to 2360m. Reamed bridge 2371 - 2435 metres. Reamed 2551 - 2571m (20 metres of fill). Circulated out. POOH (2571 - 2416 metres, the hole was tight). Worked pipe free. POOH to 2228m. RIH to 2400m. Reamed from 2400 - 2418m.

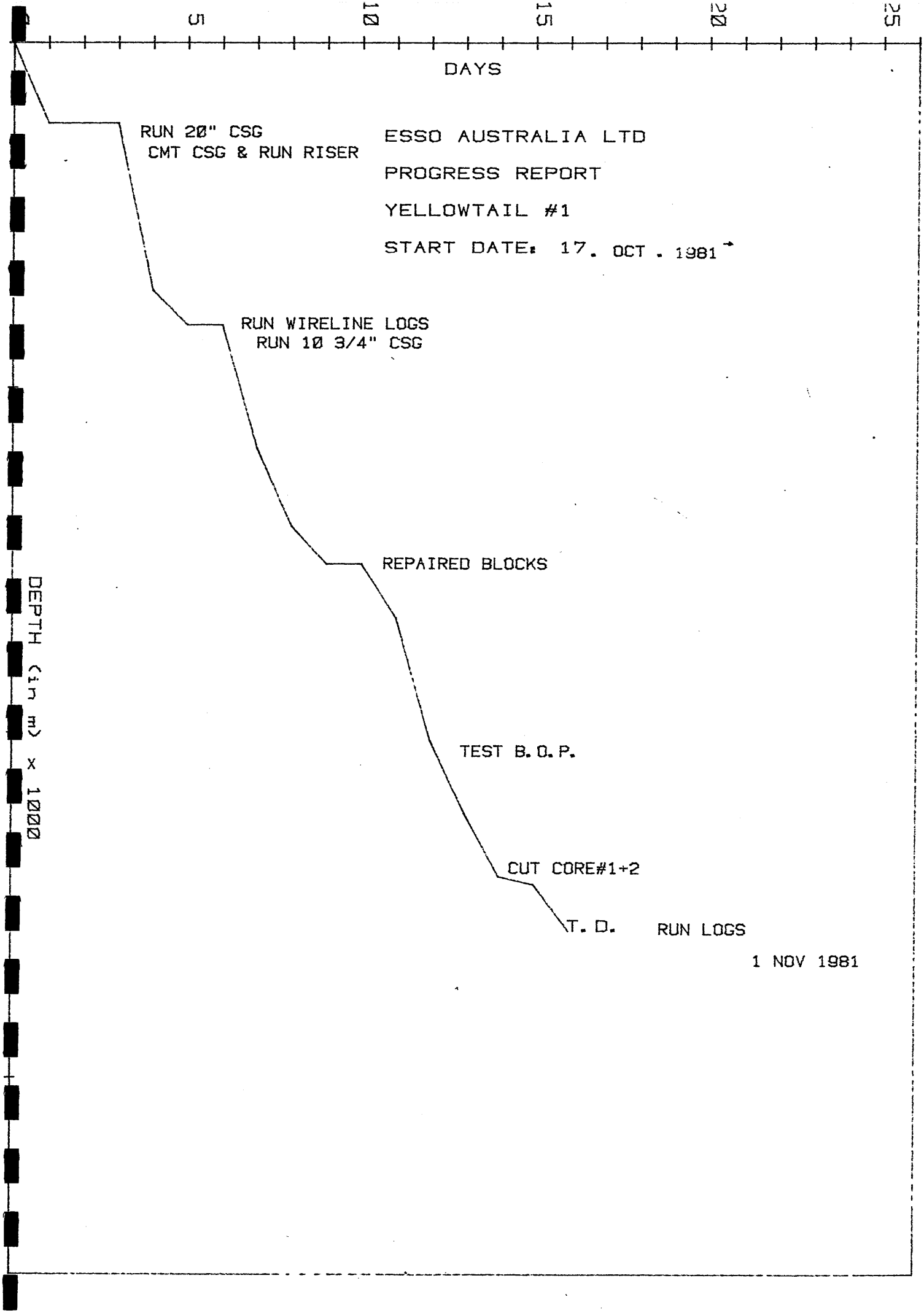
6/11/81 Reamed from 2418 - 2502m. Broke off Kelly : RIH to 2549m. Picked up Kelly, and reamed from 2549 - 2571 metres. Circulated out. Pumped 50 bbls of hi-vis slug. Circulated bottoms up. Flushed to riser. Spotted 50 bbls hi-weight. Hi-vis slug from 2450 - 2289m. POOH (tight spot at 2414m). Rigged up Schlumberger. Re-run No. 10 (4th RFT). Recovered sample. Rigged up and ran : CST Run No. 1. Cst Run No. 2. Rigged down Schlumberger. RIH to 800m. "Slip and cut" 104 feet of drilling line. Picked up and ran 20 joints of drill pipe. RIH to plug and abandon.

7/11/81 RIH to 2455m. Rigged up cement lines. Circulated bottoms up. (2.5 units of gas). Tested cement lines - OK to 3000 psi. Pumped cement plug No. 1. Pumped 10 bbls of water ahead of 176 sacks of cement mixed with water, and then displaced by 135 bbls of mud. POOH to 2300m. Circulated bottoms up (trace of cement). POOH to 662m. RIH to the shoe. Waited on cement (serviced blocks, draw-works and drill collars). RIH to 2340 and lagged cement. POOH to 835m. Set No. 2 plug at 835m with 202 sacks of class "N" cement. Pulled back to 650m and circulated out. Circulated and cleaned hole. POOH and rigged up Schlumberger. RIH with gauge ring. Schlumberger RIH with bridge plug and set it at 620m.

8/11/81 POOH, and rigged up a perforating gun. RIH with the perforator at 180m. POOH. Closed shear rams, attempted to establish injection rate, but failed. Rigged up and RIH with the perforating gun. Second shot at 180m. POOH, and established injection rate of 8 bbl/min at 750 psi. Rigged up and RIH with the cement retainer, set at 165m. POOH. Tagged stinger at 165m. Rigged up Halliburton, established the injection rate, squeezed cement (328 sacks of cement mixed with 47 bbls of seawater, followed by 68 sacks mixed with water above the retainer. POOH to 105m, displacing the cement with seawater. POOH. Tagged in the hole with wear brushing tool, retrieved it, and POOH. Pulled up and rigged down slip joint tool. Disconnected stack. Pulled riser and stack. Rigged up ballast. Made up shot can. RIH and jayed in to base plate. Run wire line primer through drill pipe. Shot. Pulled primer cord out of pipe. Base plate came free - pulled to surface. Put on the spider beam.

9/11/81 Pulled and laid down stringer joint and pipe joint. Rigged down guide frame. Pulled up out of moon pool. Pulled anchors. Towed to next location.

PROGRESS REPORT.


0
5
10
15
20
25
DAYS
RUN 20" CSG
CMT CSG & RUN RISER
ESSO AUSTRALIA LTD
PROGRESS REPORT
YELLOWTAIL #1
START DATE: 17. OCT . 1981
RUN WIRELINE LOGS
RUN 10 3/4" CSG
REPAIRED BLOCKS
TEST B.O.P.
CUT CORE#1+2
T. D.
RUN LOGS
1 NOV 1981
DEPTH (in m) x 1000

BIT RECORD

BIT SIZE . . . . . inches

BIT COST . . . . . A dollars

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

DEPTHS . . . . . Metres

HOLE MADE. . . . . Metres

DRILLING TIME. . . . . Hours

AVERAGE ROP. . . . . Metres/hour

AVERAGE COST/METRE . . A dollars

BIT CONDITION. . . . . Teeth

Bearings

Gauge . . . . inches

BIT RECORD

COMPANY ESSO AUSTRALIA LTD.

WELL YELLOWTAIL No. 1

Sheet No.

Serial NO.	Bit No.	Make	Type	IADC Code	Size "	Jets 1"/32	Depth In m	Hole Made m	Drilling Time	On Bottom Hours K	Turns	Condition T B G	Remarks	A$ Cost
MJ 804	1	HTC	OSC 3AJ	111	17½ 26	20 20 20 20 20 20	98	137	8.0	-	-	-	Out for 20" Csg	
NX 229	2	HTC	OSC 3AJ	111	15	20 20 18	235	583	16.5	7.5	75	3 6 I	Out for 10¾" Csg	2000
SN 968	3	HTC	X3A	114	9 7/8	11 11 11	818	480	21.0	13.2	117	5 6 1/8		900
SM 399	4	HTC	X3A	114	9 7/8	11 11 11	1298	198	22.0	17.9	165	3 5 I	Broken tooth	900
SM 728	5	HTC	X3A	114	9 7/8	11 11 11	1496	14	2.0	1.2	10	2 3 Pncd.	Dropped blocks damaging Kelly	900
SM 299	6	HTC	X3A	114	9 7/8	11 11 11	1510	156	16.7	10.0	75	2 5 I	Tight hole 1627m	900
SN 171	7	HTC	X3A	114	9 7/8	13 13 13	1666	521	28.0	19.5	149	4 5 I		900
SP 019	8	HTC	X3A	114	9 7/8	13 13 14	2187	227	14.2	9.7	74	7 8 I	Out for Core No. 1	900
81E-0981	9	CHRIS	C-22 FD	4	8 15/32	TFA 0.42	2414	10.6	1.8	1.8	11	80%	71% Recovery	15000
81E-096	10	CHRIS	C-22 FD	4	8 15/32	TFA 0.42	2424.6	13.0	1.5	1.5	9	80%	74% Recovery	15000
WW 379	11	HTC	X3A	114	9 7/8	13 13 13	2437.6	133.4	8.0	5.6	42	4 3 I	Out for wireline logs	900
							2571							

[redacted] 7 (C[redacted])

BIT RECORD

CORE LAB

COMPANY ESSO AUSTRALIA LTD

WELL YELLOWTAIL No. 1

Sheet No. _____

Serial No.	Bit No.	Make	Type	IADC Code	Size "	A Cost $	Jets 1/32"	m Depth In	m Depth Out	Hole m Made	Drilling Time	On Bottom Hours	K Turns	Average ROP	A Average $ Cost/	Condition T B G
MJ 804	1	HTC	OSC 3AJ	111	17½ 26		20 20 20 20 20 20	98	235	137	8.0	-	-	-	-	-
NX 229	2	HTC	OSC 3AJ	111	15	2000	20 20 18	235	818	583	16.5	7.5	75	77.9	56.67	3 6 I
SN 968	3	HTC	X3A	114	9 7/8	900	11 11 11	818	1298	480	21.0	13.2	117	36.2	114.27	5 6 1/8
SM 399	4	HTC	X3A	114	9 7/8	900	11 11 11	1298	1496	198	22.0	17.9	165	11.0	371.05	3 5 I
SM 728	5	HTC	X3A	114	9 7/8	900	11 11 11	1496	1510	14	2.0	1.2	10	11.6	1077.60	2 3 Pncd.
SM 299	6	HTC	X3A	114	9 7/8	900	11 11 11	1510	1666	156	16.7	10.0	75	15.6	297.12	2 5 I
SN 171	7	HTC	X3A	114	9 7/8	900	13 13 13	1666	2187	521	28.0	19.5	149	26.7	154.62	4 5 I
SP 019	8	HTC	X3A	114	9 7/8	900	13 13 14	2187	2414	227	14.2	9.7	74	23.2	213.43	7 8 I
81E-0981	9	CHRIS	C-22 FD	4	8 15/32	15000	TFA 0.42	2414	2425	10.6	1.8	1.8	11	5.4	3589.60	80%
81E-096	10	CHRIS	C-22 FD	4	8 15/32	15000	TFA 0.42	2425	2438	13	1.5	1.5	9	8.7	2627.73	80%
WW 379	11	HTC	X3A	114	9 7/8	900	13 13 13	2438	2571	133	8.0	5.6	42	23.6	260.79	4 3 I

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. cc

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 YELLOWTAIL No. 1

Sheet No. 1

DEPTH	235	718	818	906	1150	1314	1402
DATE	18/10	20/10	21/10	23/10	23/10	24/10	24/10
TIME			06:45	13:00	22:30	14:00	23:00
WEIGHT	8.6	8.6	9.0	9.0	9.1	9.1	9.3
FUNNEL VISCOSITY			33	45	33	30	33
PV/YP	S	S	5/15	4/22	4/19	4/13	5/16
N/K	E	E	-	-	-	-	-
GEL: INITIAL/10 MIN	A	A	10/11	11/31	9/22	7/18	9/18
pH	W	W	9.0	9.1	8.8	8.2	8.3
FILTRATE: API/API HTHP	A	A	-	-	-	-	-
CAKE	T	T	-	-	-	-	-
SALINITY	E	E	11K	14K	13.5K	13.5K	-
SAND	R	R	-	Tr	0.25	0.25	0.25
SOLIDS			-	4	4	4	5
OIL			-	-	-	-	-
Ca^{++} PPM			720	-	-	-	-

REMARKS:

DEPTH	1450	1512	1512	1665	2020	2205	2300
DATE	25/10	25/10	26/10	27/10	28/10	29/10	30/10
TIME	09:15	23:30	24:00	21:00	22:00	23:15	08:30
WEIGHT	9.3	9.0	9.0	8.8	8.8	8.9	9.5
FUNNEL VISCOSITY	34	34	32	27	27	33	42
PV/YP	5/15	6/16	4/16	S	S	5/12	10/15
N/K	-	-	-	E	E	-	-
GEL: INITIAL/10 MIN	8/18	8/18	8/18	A	A	4/10	4/17
pH	10.1	10.0	10.0	W	W	4.2	10.8
FILTRATE: API/API HTHP	-	-	-	A	A	4.4	8.4
CAKE	-	-	-	T	T	3	1
SALINITY	14.5K	15K	15K	E	E	18.2K	16.5K
SAND	0.25	0.25	0.25	R	R	0.25	Tr
SOLIDS	4	4	5			5	7
OIL	-	-	-	G	G	-	-
Ca^{++} PPM	420	520	540	E	E	800	120
				L	L		

REMARKS:

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL YELLOWTAIL No. 1

Sheet No. 2

DEPTH	2407	2421	2432	2534			
DATE	30/10	31/10	31/10	1/11			
TIME	15:00	04:00	16:30	10:30			
WEIGHT	9.5	9.5	9.5	9.5			
FUNNEL VISCOSITY	45	46	44	42			
PV/YP	12/18	11/17	11/15	10/15			
N/K	-	-	-	-			
GEL: INITIAL/10 MIN	7/25	4/22	3/18	4/17			
pH	10.7	10.5	10.0	10.7			
FILTRATE: API/API HTHP	7.4	7.5/15	7/14.2	7.6/14.8			
CAKE	1	1-3	1-3	1-3			
SALINITY	15.5K	15.5K	15.2K	15.2K			
SAND	Tr	Tr	Tr	0.25			
SOLIDS	8	7	7	7			
OIL	-	-	-	-			
Ca^{++} PPM	120	120	160	120			

REMARKS:

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

REMARKS:

GEOLOGICAL SUMMARY.

WELL : - YELLOWTAIL 1.

GEOLOGICAL PROFILE.

The main objective of the well was to asses the hydrocarbon potential of a low relief erosional high at the top of the Latrobe (2389m RKB) southwest of the Macheral Oil Field and north-east of the King Fish Oil Field.

(Note: All depths are from RKB)

GIPPSLAND FORMATION 98m - 1634m.

As predicted the predominant lithology in this section was found to be limestone. The limestone was formed to be calcaranitic, light to dark grey, occasionally tan, firm to medium grained, occasionally sandy to silty in part, and slightly carbonaceous, and with abundant traces of shell fragments at the top of this section, and gradually diminishing in part towards the lower part of this section. Fossils were quite apparent to a minor extent, and traces of dolomite and glauconite were also observed. The other major lithology in this section was sandstone, occuring as minor stringers from 300m, and steadily increasing in thickness to 325m. The sandstone was formed to be clear to white, occasionally light brownish-yellow, grading from medium to coarse grains, well rounded, poorly sorted, and with traces of shell fragments and fossils. Background gas averaged from 2 to 15 units. The maximum gas was about 100 units at 1269 metres.

LAKES ENTRANCE 1634 metres to 2405 metres.

The top portion of this section was found to be limestone, which was quite similar to those described in the Gippsland Formation. Siltstone was encountered as thin seams, and gradually increasing in thickness with depth. The siltstone was light grey to grey, sticky, blocky, very calcaneous, moderately hard, fissile to sub-fissile, and occasionally with either a carbonaceous or sandy matrix. Traces of pyrite and gelauconite, forams were present throughout this section. Towards the base of this zone at 2400m - 2405m, sandstone was present. The sandstone being clear to smoky, coarse to very coarse grained, sub-rounded, moderately sorted, unconsolidated, with moderate intergranular porosity. Background gas averaged about 10 units and the maximum gas was about 60 units at 2405m, C1 to C6 were also present towards the base of this section, and a bright white to pale yellow fluorescence with a fast streaming white cut was observed.

TOP OF GURNARD FORMATION 2405m to 2410m.

Sandstone was the predominant lithology encountered in this section. The sandstone was found to be similar to those described in the above sections. The gas reading was about 50 to 60 units, with C1 to C6 present throughout and the fluorescence was very similar to those of the above section.

TOP OF CLUSTIC TO T.D. 2410m to 2571m.

Two cores were cut consecutively in this zone, the first core was from 2413.6m to 2422.5m and the second was from 2422.5m to 2437.5m and details of the recovery can be found at the tail end of the grapholog. Drilling resumed after coring and major lithologies encountered were sandstone, siltstone and shale. Sandstone was clear to light grey, coarse to very coarse grained, sub-angular to sub-rounded, well sorted and with minor traces of pyrite. Siltstone was similar to those of the above section, and slowly becoming more shaly with depth. Shale was gray to dark gray, slightly calcaveous, sub-fissile, firm to very hard. Average background gas was about 2 - 6 units and the maximum gas in this section was about 15 units @ 2541m, with no significant shows.

OVERBURDEN GRADIENT CALCULATIONS

DEPTH . . . . . .metres

BULK DENSITY . . . . . .gm/cc

OVERBURDEN PRESSURE INCREMENT .psi

CUMULATIVE OVERBURDEN PRESSURE .psi

OVERBURDEN PRESSURE GRADIENT . .psi/ft

OVERBURDEN EQUIVILANT DENSITY .Pounds per gallon

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

CORE LAB

OVERBURDEN AND STRESS RATIO WORK SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL YELLOWTAIL NO.1

Sheet No. 1

DEPTH From	DEPTH To	Average Bulk Density	Overburden Pressure Increment	Cumulative Overburden Pressure	Overburden Pressure Gradient	Overburden Equivalent Density	Fracture Equivalent Density	Pore Pressure Equivalent Density	Stress Ratio
M	M	gm/cc	PSI	PSI	PSI/FT	ppg EMW			
0	98	1.02	43.28	43.28	.442	8.49			
98	350	2.0	218.23	262.51	.750	14.42			
350	500	2.15	139.64	402.15	.804	15.46			
500	600	2.18	94.394	496.54	.827	15.91			
600	700	2.21	95.693	592.23	.846	16.27			
700	818	2.25	114.96	707.19	.864	16.62			
818	825	2.28	6.910	714.90	.865	16.64			
825	850	2.28	24.681	738.81	.869	16.71			
850	895	2.31	45.01	783.82	.875	16.84			
895	900	2.27	24.57	808.39	.898	17.27			
900	925	2,26	24.46	832.85	.900	17.31			
925	950	2.26	24.46	857.31	.902	17.35			
950	975	2.27	24.57	881.88	.904	17.39			
975	1000	2.29	24.78	906.66	.906	17.43			
1000	1025	2.30	24.89	931.55	.908	17.47			
1025	1050	2.30	24.89	956.44	.910	17.51			
1050	1075	2.31	25.00	981.44	.912	17.55			
1075	1100	2.33	25.22	1006.66	.915	17.59			
1100	1125	2.34	25.33	1031.99	.917	17.64			
1125	1150	2.32	25.11	1057.10	.919	17.67			
1150	1175	2.33	25.22	1082.32	.921	17.71			
1175	1200	2.34	25.33	1107.65	.923	17.75			
1200	1225	2.36	25.54	1133.19	.925	17.78			
1225	1250	2.39	25.87	1159.06	.927	17.83			
1250	1275	2.41	26.08	1185.14	.929	17.87			
1275	1300	2.42	24.10	1209.24	.930	17.88			
1300	1325	2,44	26.41	1235.65	.932	17.93			
1325	1350	2.45	26.52	1232.17	.934	17.97			
1350	1375	2.45	26.52	1258.69	.915	17.60			
1375	1400	2.45	26.52	1285.21	.918	17.65			
1400	1425	2.45	26.52	1311,73	.920	17.70			
1425	1450	2.46	26.62	1338.35	.923	17.75			

OVERBURDEN AND STRESS RATIO WORK SHEET

CORE LAB

COMPANY ESSO AUSTRALIA LTD.

WELL YELLOWTAIL NO.1

Sheet No. 2

DEPTH From	DEPTH To	Average Bulk Density	Overburden Pressure Increment	Cumulative Overburden Pressure	Overburden Pressure Gradient	Overburden Equivalent Density	Fracture Equivalent Density	Pore Pressure Equivalent Density	Stress Ratio
M	M	gm/cc	PSI	PSI	PSI/FT	ppg EMW			
1450	1475	2.46	26.62	1364.97	.925	17.79			
1475	1500	2,47	26.73	1391.70	.927	17.84			
1500	1525	2.46	26.62	1418.29	.930	17.88			
1525	1550	2.45	26.52	1444.81	.932	17.92			
1550	1575	2.46	26.62	1471.43	.934	17.96			
1575	1600	2.47	26.73	1498.16	.936	18.00			
1600	1625	2.47	26.73	1528.89	.940	18.09			
1625	1650	2.47	26.73	1551.62	.940	18.00			
1650	1675	2.46	26.62	1578.23	.942	18.11			
1675	1700	2.43	26.30	1640.53	.943	18.15			
1700	1725	2.43	26.30	1630.83	.945	18.18			
1725	1750	2.45	26.52	1657.35	.947	18.21			
1750	1775	2.42	26.19	1683.54	.962	18.50			
1775	1800	2.44	26.41	1709.95	.949	18.26			
1800	1825	2.46	26.62	1736.57	.951	18.29			
1825	1850	2.46	26.62	1763.19	.953	18.32			
1850	1875	2.46	26.62	1789.81	.954	18.35			
1875	1900	2.46	26.62	1816.43	.956	18.38			
1900	1925	2.46	26.62	1843.05	.957	18.41			
1925	1950	2.47	26.73	1869.78	.958	18.43			
1950	1975	2.47	26.73	1896.51	.960	18.46			
1975	2000	2.47	26.73	1923.24	.961	18.49			
2000	2025	2.47	26.73	1949.97	.962	18.51			
2025	2050	2.47	26.73	1976.70	.964	18.54			
2050	2075	2.48	26.84	2003.54	.965	18.56			
2075	2100	2.41	26.08	2029.62	.966	18.58			
2100	2125	2.16	23.08	2053.80	.966	18.57			
2125	2150	2.13	23.05	2076.05	.965	18.56			
2150	2175	2.33	25.22	2101.27	.966	18.57			
2175	2200	2.26	24.46	2125.73	.966	18.58			
2200	2225	2.20	23.81	2149.54	.966	18.57			
2225	2250	2.30	24.89	2174.43	.966	18.68			

CORE LAB

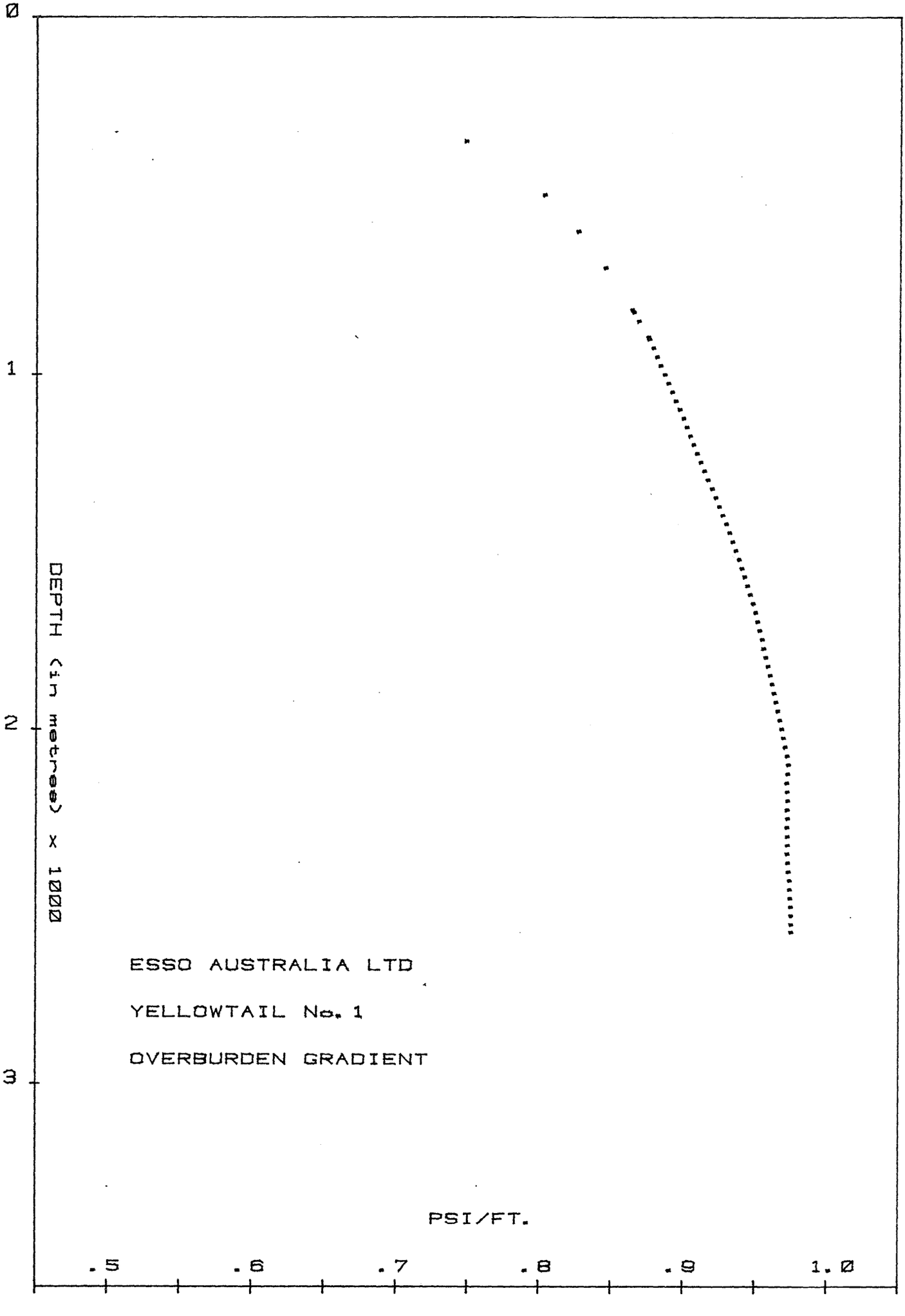
OVERBURDEN AND STRESS RATIO WORK SHEET

COMPANY ESSO AUSTRALIA LTD.

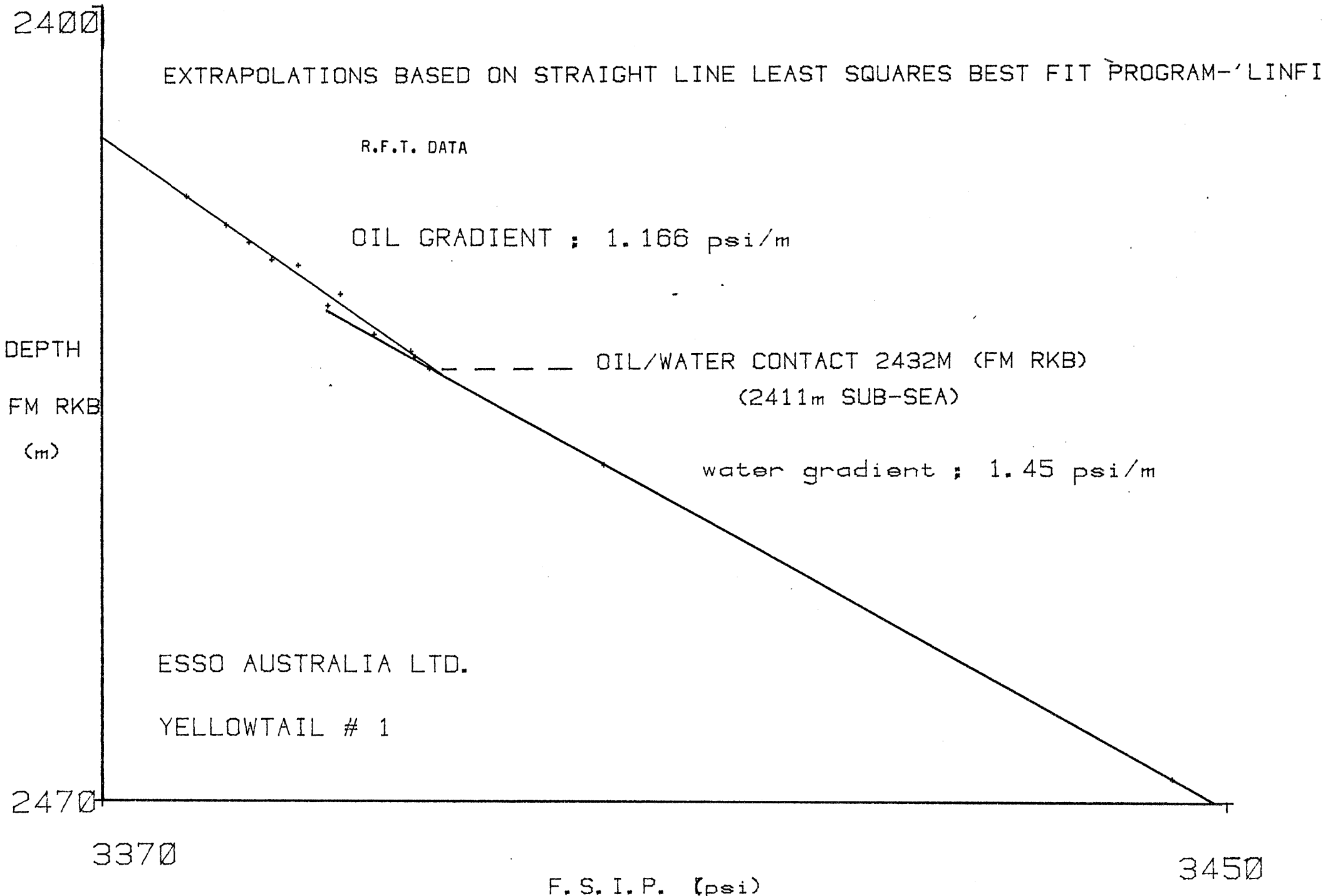
WELL YELLOWTAIL NO.1

Sheet No. 3

DEPTH From	DEPTH To	Average Bulk Density	Overburden Pressure Increment	Cumulative Overburden Pressure	Overburden Pressure Gradient	Overburden Equivalent Density	Fracture Equivalent Density	Pore Pressure Equivalent Density	Stress Ratio
M	M	gm/cc	PSI	PSI	PSI/FT	ppg EMW			
2250	2275	2.20	23.81	2198.24	.966	18.58			
2275	2300	2.26	24.46	2222.70	.966	18.58			
2300	2325	2.26	24.46	2247.16	.966	18.58			
2325	2350	2.22	24.03	2271.19	.966	18.58			
2350	2375	2.31	25.00	2296.19	.966	18.58			
2375	2400	2.36	25.54	2321.73	.967	18.60			
2400	2425	2.43	26.30	2348.03	.968	18.62			
2425	2450	2.27	24.57	2372.60	.968	18.62			
2450	2475	2.33	25.22	2397.82	.968	18.62			
2475	2500	2.30	24.89	2422.71	.969	18.63			
2500	2525	2.31	25.00	2447.71	.969	18.63			
2525	2550	2.28	24.68	2472.39	.969	18.63			
2550	2571	2.27	20.64	2493.03	.969	18.63			


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

R.F.T. DATA.


2400
EXTRAPOLATIONS BASED ON STRAIGHT LINE LEAST SQUARES BEST FIT PROGRAM-'LINFIT
R.F.T. DATA
OIL GRADIENT : 1.166 psi/m
DEPTH
FM RKB
(m)
OIL/WATER CONTACT 2432M (FM RKB)
(2411m SUB-SEA)
water gradient : 1.45 psi/m
ESSO AUSTRALIA LTD.
YELLOWTAIL # 1
2470
3370
3450
F. S. I. P. (psi)

COPE LABORATORIES INTERNATIONAL

PORE PRESSURE DATA SHEET

DATA FROM R.F.T. PRETESTS

COMPANY : ESSO AUSTRALIA LTD.

WELL : YELLOWTAIL No 1

DEPTH (FROM RKB)	DEPTH (FROM MSL)	PORE PRESSURE	PORE PRESSURE GRADIENT E.M.W.(MSL)	PORE PRESSURE GRADIENT
m	m	P.S.I.A.	P.P.G. E.M.W	P.S.I./FT.
2468.0	2447.0	3450.1	8.26	.429
2440.5	2419.5	3203.9	7.76	.403
2432.0	2411.0	3385.2	8.23	.428
2431.0	2410.0	3388.5	8.23	.428
2429.0	2408.0	3467.2	8.43	.439
2426.5	2405.5	3337.2	8.13	.423
2422.5	2401.5	3309.6	8.10	.420
2421.0	2400.0	3361.6	8.21	.427
2419.5	2398.5	3376.8	8.26	.429
2417.0	2396.0	3357.8	8.21	.427
2430.5	2409.5	3393.3	8.25	.429
2425.5	2404.5	3387.0	8.25	.429

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

COMPANY ESSO AUSTRALIA LTD. WELL YELLOWTAIL No 1

RUN No. 1 PRESSURE GAUGE TYPE H.P.

		1.	2.
CHAMBER No.			
CHAMBER CAPACITY	(gal)	2.75	1
CHOKE SIZE	( )		
SEAT No.		11	11
DEPTH (m) (frm.RKB)		2417	2417
A. RECORDING TIMES		HH:MM:SS	HH:MM:SS
TOOL SET		: :	: :
PRETEST OPEN		06: 00:	: :
TIME OPEN		00: 03:	00:01:
CHAMBER OPEN		06: 05:	06:11:
CHAMBER FULL		06: 10:	06:14:
FILL TIME		00: 05:	00:03:
START BUILD UP		06: 08:	06:13:
FINISH BUILD UP		06: 09:	06:14:
BUILD UP TIME		00: 01:	00:01:
SEAL CHAMBER		06: 10:	06:17:
TOOL RETRACT		06: 10:	06:19:
TOTAL TIME		00: 10:	00:08:
B. SAMPLE PRESSURES			
IHP	(psia)	3950	
ISIP	(psia)	3371.5	
IFP	(psia)	2462	2998
FFP	(psia)	3370	2892
FSIP	(psia)	3375.5	3376.0
FHP	(psia)		3954
TEMP. CORR. if app.	( )		
COMMENTS			
C. TEMPERATURE			
DEPTH TOOL REACHED	( )		
MAX. REC. TEMP.	(°C)	88	88
TIME CIRC. STOPPED		: /	: /
TIME SINCE CIRC.		:	:
D. SAMPLE RECOVERY			
SURFACE PRESSURE	(psig)	80	
VOL. GAS	(cf)	1,5	
VOL. OIL	(L)	2.15	
VOL. WATER	(L)	2.0	
VOL. FILTRATE	( )		
VOL. CONDENSATE	( )		
VOL. OTHER	( )		
E. SAMPLE PROPERTIES			
(a) GAS COMP. C_1	(ppm)	69 120	
C_2	(ppm)	80 819	
C_3	(ppm)	9 873	
C_4	(ppm)	1 886	
C_5	(ppm)	96	
C_6 +	(ppm)	12	
CO_2	(%)	3.0	
H_2S	(ppm)	NIL	
(b) OIL PROPERTIES			
DENSITY: HYDROMETER		47.1@60°F	@ °
(A.P.I.) REFRACTOMETER		@ °	@ °
COLOUR			
FLUORESCENCE		white	
G.O.R.	(cf/bbl)	111	

	CHAMB. 1.	CHAMB. 2.
OIL PROPERTIES CONT.:		
SMELL		
POUR POINT (°)		
COMMENTS		
(c) WATER PROPERTIES:		
RESISTIVITY (Ω m)	0.3 @ 21°C	@ °
Cl (frm. resis.) (ppm)	14.5 K	
Cl (frm. titrat.) (ppm)	14.2 K	
NO_3 (ppm)	30	
pH		
OTHR. TRACERS ( )		
DENSITY ( )		
FLUORESCENCE		
COLOUR		
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		
E. MUD PROPERTIES:		
TYPE		
RESISTIVITY (Ω)	@ °	@ °
Cl (frm.resis.) ( )		
Cl (frm.titrat.) ( )		
NO_3 Drld/1st. circ ( )	/	/
pH		
OTHER TRACERS ( )		
DENSITY ( )		
F. GENERAL COMMENTS		

NOTE: Gas volume does not take liquid displacement into account, unless noted.

Take mud nitrates when tested zone was drilled and last circulation.

Unless otherwise noted, pressures are temperature corrected.

Chamber 1 is the first chamber to be opened.

CORE LABORATORIES — F.I.T/R.F.T. DATA SHEET - SAMPLING DATA

COMPANY ESSO AUSTRALIA LTD WELL YELLOWTAIL No 1

RUN No. 2 PRESSURE GAUGE TYPE H.P.

		CHAMBER No.	1.	2.
		CHAMBER CAPACITY (gall)	2¾	2¾
		CHOKE SIZE (sqin)		
		SEAT No.	13	14
		DEPTH (m) (frm.RKB)	2430.5	2425.5
A.		RECORDING TIMES	HH:MM:SS	HH:MM:SS
		TOOL SET	: :	: :
		PRETEST OPEN	13 :50:	14 :27:
		TIME OPEN	00:01:	00:01:
		CHAMBER OPEN	13:56:	14 :28:
		CHAMBER FULL	14 :02:	14 :34:
		FILL TIME	00:06:	00:06:
		START BUILD UP	14 :02:	14 :34:
		FINISH BUILD UP	14 :04:	14 :36:
		BUILD UP TIME	00:02:	00:02:
		SEAL CHAMBER	14 :04:	14 :34:
		TOOL RETRACT	14 :05:	14 :37:
		TOTAL TIME	: :	: :
B.		SAMPLE PRESSURES		
		IHP (psig)	3964	3966
		ISIP (psia)	3393.3	3387.0
		IFP (psia)	2592	167
		FFP (psia)	3215	2029.7
		FSIP (psia)	3392.6	3387.0
		FHP (psia)	3974.	3965
		TEMP. CORR. if app ( )		
		COMMENTS		
C.		TEMPERATURE		
		DEPTH TOOL REACHED ( )		
		MAX. REC. TEMP. (°C)	93	93
		TIME CIRC. STOPPED	: /	: /
		TIME SINCE CIRC.	:	:
D.		SAMPLE RECOVERY		
		SURFACE PRESSURE (psig)	0	20
		VOL. GAS (cf)	0.16	0.50
		VOL. OIL ( )		
		VOL. WATER (L)	10.4	9.4
		VOL. FILTRATE ( )		
		VOL. CONDENSATE ( )		
		VOL. OTHER ( )		
E.		SAMPLE PROPERTIES		
	(a)	GAS COMP. C_1 (ppm)	42 458	
		C_2 (ppm)	25 976	
		C_3 (ppm)	35 824	
		C_4 (ppm)	20 474	
		C_5 (ppm)	4 124	
		C_6 + (ppm)	12	
		CO_2 (%)	14	1
		H_2S (ppm)	NIL	NIL
	(b)	OIL PROPERTIES		
		DENSITY: HYDROMETER	@ °	@ °
		( ) REFRACTOMETER	@ °	@ °
		COLOUR		
		FLUORESCENCE		
		G.O.R. ( )		

			CHAMB. 1.	CHAMB. 2.
		OIL PROPERTIES CONT.:		
		SMELL		
		POUR POINT (°)		
		COMMENTS		
	(c)	WATER PROPERTIES:		
		RESISTIVITY (Ω)	@ °	@ °
		Cl (frm. resis.) ( )		
		Cl (frm. titrat.) (ppm)	14 600	17 800
		NO_3 (ppm)	25	0
		pH		
		OTHR. TRACERS ( )		
		DENSITY ( )		
		FLUORESCENCE		
		COLOUR		
		COMMENTS		
	(d)	OTHER SAMPLE PROPERTIES		
E.		MUD PROPERTIES:		
		TYPE		
		RESISTIVITY (Ω)	@ °	@ °
		Cl (frm.resis.) ( )		
		Cl (frm.titrat.) ( )		
		NO_3 Drlg/1st. circ ( )	/	/
		pH		
		OTHER TRACERS ( )		
		DENSITY ( )		
F.		GENERAL COMMENTS		

HAD PARTIAL PLUGGING PROBLEMS

NOTE: Gas volume does not take liquid displacement into account, unless noted.

Take mud nitrates when tested zone was drilled and last circulation.

Unless otherwise noted, pressures are temperature corrected.

Chamber 1 is the first chamber to be opened.

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

COMPANY ESSO AUSTRALIA LTD WELL YELLOWTAIL No 1

RUN No. 3 PRESSURE GAUGE TYPE H.P.

CHAMBER No.		1.	2.		CHAMB. 1.	CHAMB. 2.
CHAMBER CAPACITY	gal	2¾	2¾			
CHOKE SIZE	sqin	.020	.030			
SEAT No.		15	16			
DEPTH (m) (frm.RKB)		2427	2423.5			
A. RECORDING TIMES		HH:MM:SS	HH:MM:SS			
TOOL SET		19:05:	1918:			
PRETEST OPEN		19:05:	19:18:			
TIME OPEN		00:04:	00:03:			
CHAMBER OPEN		19:09:	19:24:			
CHAMBER FULL		19:19:	19:32:			
FILL TIME		00:04:	00:07:			
START BUILD UP		19:13:	19:32:			
FINISH BUILD UP		19:15:	19:35:			
BUILD UP TIME		00:02:	00:03:			
SEAL CHAMBER		1915:	19:36:			
TOOL RETRACT		19:15:	19:37:			
TOTAL TIME		: :	: :			
B. SAMPLE PRESSURES						
IHP	psig	3956	3952			
ISIP	psia	3382	3380			
IFP	psia	2607	44			
FFP	psia		1622			
FSIP	psia	3384.6	3381.6			
FHP	psig	3955	3950			
TEMP. CORR. if app	( )					
COMMENTS						
C. TEMPERATURE						
DEPTH TOOL REACHED	m					
MAX. REC. TEMP.	°C	93	93			
TIME CIRC. STOPPED		: /	: /			
TIME SINCE CIRC.		:	:			
D. SAMPLE RECOVERY						
SURFACE PRESSURE	psig	70	10			
VOL. GAS	cf	.50	.45			
VOL. OIL	L	9.9	9.5			
VOL. WATER						
VOL. FILTRATE						
VOL. CONDENSATE						
VOL. OTHER						
E. SAMPLE PROPERTIES						
(a) GAS COMP. C_1	ppm	20 655	16 826			
C_2	ppm	11 835	10 014			
C_3	ppm	14 244	11 782			
C_4	ppm	8 130	6 581			
C_5	ppm	1 747	1 478			
C_6 +	ppm	10	10			
CO_2	%					
H_2S	ppm	200 +	6			
(b) OIL PROPERTIES						
DENSITY: HYDROMETER		@ °C	@ °C			
( ) REFRACTOMETER		@ °C	@ °C			
COLOUR						
FLUORESCENCE						
G.O.R.	( )					

OIL PROPERTIES CONT.:			
SMELL			
POUR POINT	°C		
COMMENTS			
(c) WATER PROPERTIES:			
RESISTIVITY	Ω m	0.3 @ 70°F	0.30 @ 70°F
Cl (frm. resis.)	ppm	14.4 K	14 .8 K
Cl (frm. titrat.)	ppm	14.2 K	14.8 K
NO_3	ppm	15	15
pH		8.1	7.3
OTHR. TRACERS	( )		
DENSITY	( )		
FLUORESCENCE			
COLOUR			
COMMENTS		FILTRATE	FILTRATE
(d) OTHER SAMPLE PROPERTIES			
E. MUD PROPERTIES:			
TYPE			
RESISTIVITY	Ω	@ °C	@ °C
Cl (frm.resis.)	( )		
Cl (frm.titrat.)	( )		
NO_3 Drlg/1st. circ	( )	/	/
pH			
OTHER TRACERS	( )		
DENSITY	( )		
F. GENERAL COMMENTS			

NOTE: Gas volume does not take liquid displacement into account, unless noted.

Take mud nitrates when tested zone was drilled and last circulation.

Unless otherwise noted, pressures are temperature corrected.

Chamber 1 is the first chamber to be opened.

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

COMPANY ESSO AUSTRALIA LTD. WELL YELLOWTAIL No 1

RUN No. 4 PRESSURE GAUGE TYPE H.P.

CHAMBER No.	1	2.
CHAMBER CAPACITY (gal)	6.0	2.75
CHOKE SIZE (sqin)	0.040	0.020
SEAT No.	17	17
DEPTH (m) (frm.RKB)	2425.7	2425.7
A. RECORDING TIMES	HH:MM:SS	HH:MM:SS
TOOL SET	09:37:	: :
PRETEST OPEN	09:40:	: :
TIME OPEN	00:02:	00 01
CHAMBER OPEN	09:44:	10:05:
CHAMBER FULL	09 48 :	10:14:
FILL TIME	00:04:	00:12:
START BUILD UP	09:48:	10:14:
FINISH BUILD UP	09:50:	10:19:
BUILD UP TIME	00:02:	00:01:
SEAL CHAMBER	09:50:	10:20:
TOOL RETRACT	: :	10:20:
TOTAL TIME	: :	: :
B. SAMPLE PRESSURES		
IHP (psia)	4045.8	
ISIP (psia)	3384.4	
IFP (psia)	1894	568
FFP (psia)	1632	890
FSIP (psia)	3384.2	3384.6
FHP (psia)		4045.9
TEMP. CORR. if app ( )		
COMMENTS		
C. TEMPERATURE		
DEPTH TOOL REACHED ( )		
MAX. REC. TEMP. (°C)		87
TIME CIRC. STOPPED	: /	: /
TIME SINCE CIRC.	:	:
D. SAMPLE RECOVERY		
SURFACE PRESSURE (psig)	150	160
VOL. GAS (cf)	6.5	4.62
VOL. OIL (L)	5.5	8.70
VOL. WATER (L)	0	0
VOL. FILTRATE (L)	6.75	0
VOL. CONDENSATE (L)	0	0
VOL. OTHER ( )		
E. SAMPLE PROPERTIES		
(a) GAS COMP. C_1 (ppm)	204 375	38 012
C_2 (ppm)	122 358	11 712
C_3 (ppm)	689 664	8 906
C_4 (ppm)	19 614	1 840
C_5 (ppm)	2 693	NIL
C_6 + (ppm)	20	NIL
CO_2 (%)	20 +	1.25
H_2S (ppm)	NIL	NIL
(b) OIL PROPERTIES		
DENSITY: HYDROMETER	46.7 @ 60°F	45.3@60°F
(A.P.I.) REFRACTOMETER	@ °	@ °
COLOUR	DK BRN	dk BRN
FLUORESCENCE	wh/	BRT WH/
G.O.R. (cf/bbl)	188	84

	CHAMB. 1.	CHAMB. 2.
OIL PROPERTIES CONT.:		
SMELL		
POUR POINT (°C)		
COMMENTS		
(c) WATER PROPERTIES:		
RESISTIVITY (Ω)	@ °	@ °
Cl (frm. resis.) ( )		
Cl (frm. titrat.) ( )		
NO_3 ( )		
pH		
OTHR. TRACERS ( )		
DENSITY ( )		
FLUORESCENCE		
COLOUR		
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		
E. MUD PROPERTIES:		
TYPE		
RESISTIVITY (Ω^m)	0.34@21°C	@ °
Cl (frm.resis.) ( )		
Cl (frm.titrat.) ( )		
NO_3 Drld/1st. circ ( )	/	/
pH		
OTHER TRACERS ( )		
DENSITY ( )		
F. GENERAL COMMENTS		

NOTE: Gas volume does not take liquid displacement into account, unless noted.

Take mud nitrates when tested zone was drilled and last circulation.

Unless otherwise noted, pressures are temperature corrected.

Chamber 1 is the first chamber to be opened.

CORE LAB

STRAIGHT LINE LEAST SQUARES BEST FIT

ISIP (PSI) ON A LINEAR SCALE AGAINST DEPTH (M) ON A LINEAR SCALE

ENTERED DATA: **DATA FOR OIL GRADIENT**

DATA SET #	ISIP (PSI)	DEPTH (M)
1	3376.1	2417.0
2	3378.9	2419.5
3	3380.5	2421.0
4	3382.1	2422.5
5	3384.0	2423.0
6	3387.0	2425.5
7	3386.1	2426.5
8	3389.4	2429.0
9	3392.0	2430.5
10	3392.3	2431.0

COEFFICIENT & CONSTANT:

Y = m.X + c where m = 3.5751273E-01 and c = -4.7799284E 02

$$\frac{1}{m} = 1.16 \text{ psi/m}$$

CORE LAB

STRAIGHT LINE LEAST SQUARES BEST FIT

FSIP (PSI) ON A LINEAR SCALE AGAINST DEPTH (M) ON A LINEAR SCALE

ENTERED DATA: **DATA FOR WATER GRADIENT**

DATA SET #	FSIP (PSI)	DEPTH (M)
1	3393.3	2432.0
2	3405.3	2440.5
3	3445.7	2468.0

COEFFICIENT & CONSTANT:

Y = m.X + c where m = 6.8701207E-01 and c = 1.0077180E 02

$\frac{1}{m}$ = **1.46 psi/m**

SIDEWALL CORE GAS ANALYSIS.

CORE LAB

SIDEWALL CORE GAS ANALYSIS DATA SHEET

SHEET #

COMPANY _____

WELL _____

Nº	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
		PPM	PPM	PPM	PPM	PPM	PPM	
	2431	1584	1915	3276	1258	118	–	
	2430	936	3557	5400	2496	504	36	
	2429	360	4469	10080	6400	1904	144	
	2428	1459	3240	3160	680	144	–	
	2427	1380	2124	1056	204	11	–	
	2426	1610	3456	2560	1428	144	–	
	2425	3600	6992	2736	1056	204	–	
	2424	1728	966	3240	2368	1734	180	
	2223	1116	3312	3456	656	162	–	
	2422	1476	4232	4032	1408	136	–	
	2421	1440	3956	2736	256	–	–	
	2420	11808	17848	8568	2240	102	–	
	2419	N O	S A M P L E				–	
	2418	3456	2760	7488	5888	2448	216	
	2417	1152	736	1296	384	136	–	
	2416	576	2208	2016	640	102	–	
	2415	3312	5060	3024	320	16	–	
	2414	2304	5520	4032	1344	170	–	
	2413	2880	1472	5832	3968	320	18	
	2412	23040	14720	22752	11520	1768	144	
	2411	6336	3496	8640	7680	3672	360	
	2410	1152	736	4896	5248	1088	252	
	2409 *	144	92	864	1344	1344	252	
	* Sample opened prior to Analysis.							

GAS COMPOSITION ANALYSIS

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

LOG PLOT

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

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

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

   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 triangular 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 nC4).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 COMPOSITION ANALYSES : - Yellowtail No. 1.

Gas composition analyses were made whilst drilling Yellowtail No. 1 for zones producing gas fractions having butane or heavier.

Analyses were made at the following depths:- (all depths are from RKB).

2414m - This gas sample was taken while cutting core No. 1 after detecting 62u of gas from the drilling break at 2413m. This plot suggested that the reservoir fluid was low G.O.R. oil;- at the top of the reservoir; this was later verified by R.F.T. runs.

2415m - This sample was also taken whilst coring, the plot suggested a low G.O.R. oil.

2417m - This sample was taken whilst coring, it again suggests a low G.O.R. oil.

2419m - This sample was again taken whilst cutting core No. 1. The plot predicts a low G.O.R. oil and good permeability.

No analyses could be made from 2419m to 2439m as this interval was cored and due to the low circulation rates the gas from this interval was not circulated out whilst coring.

2439m - This plot suggests that the reservoir fluid at this depth is no longer oil but gas or water.

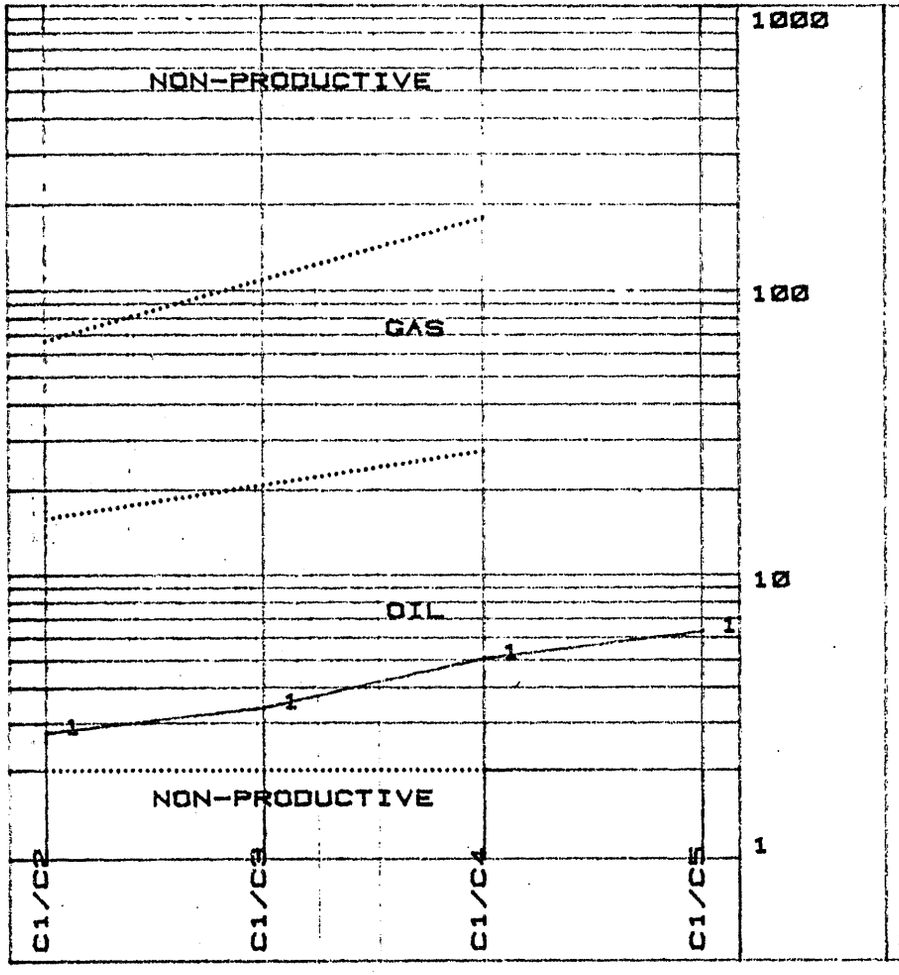
2450m - This plot again suggests that the reservoir fluid is water or gas.

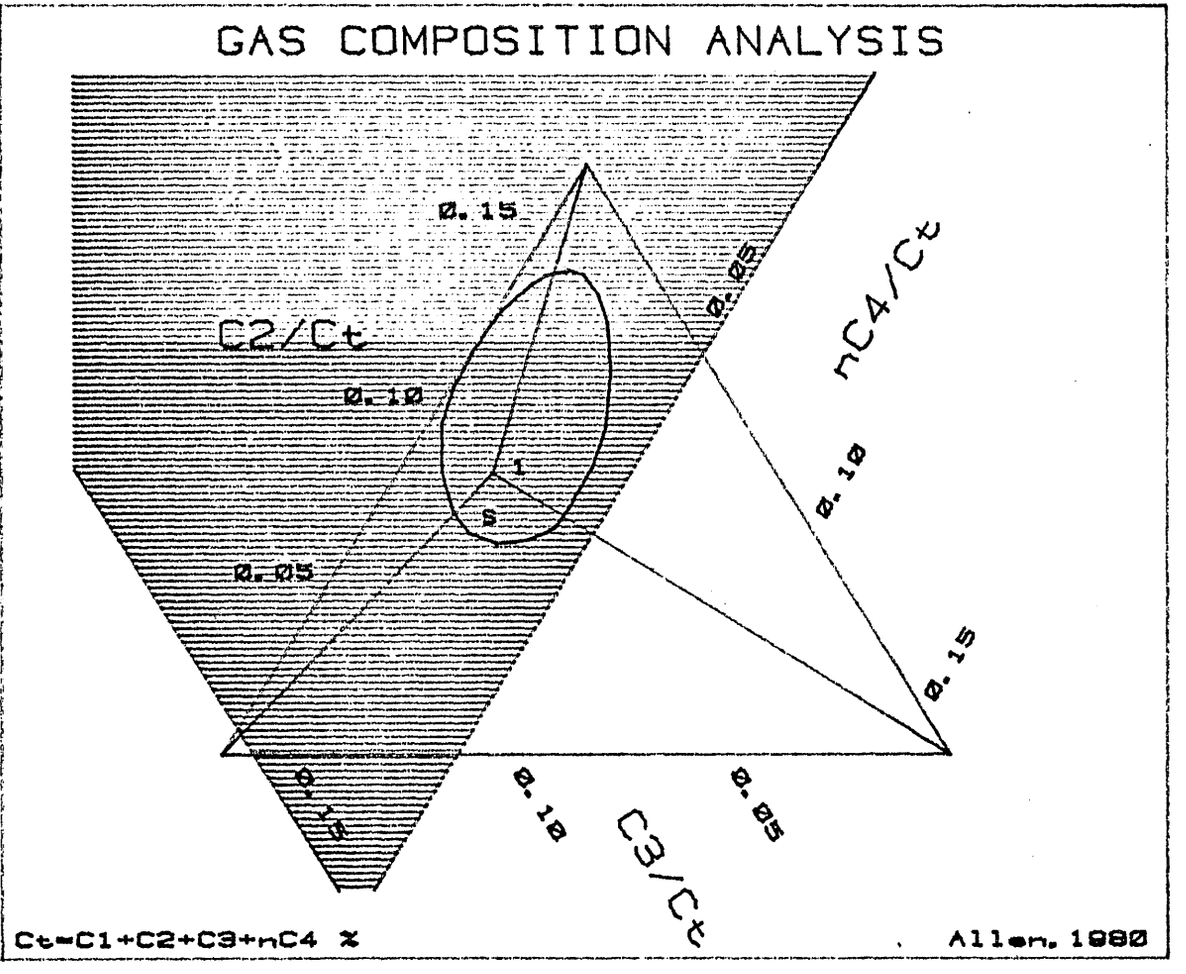
2462m - This plot suggests that the reservoir fluid is water or gas.

2474m - This plot suggests that the reservoir fluid is water or gas.

2520m - This plot suggests that the reservoir fluid is dry gas.

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

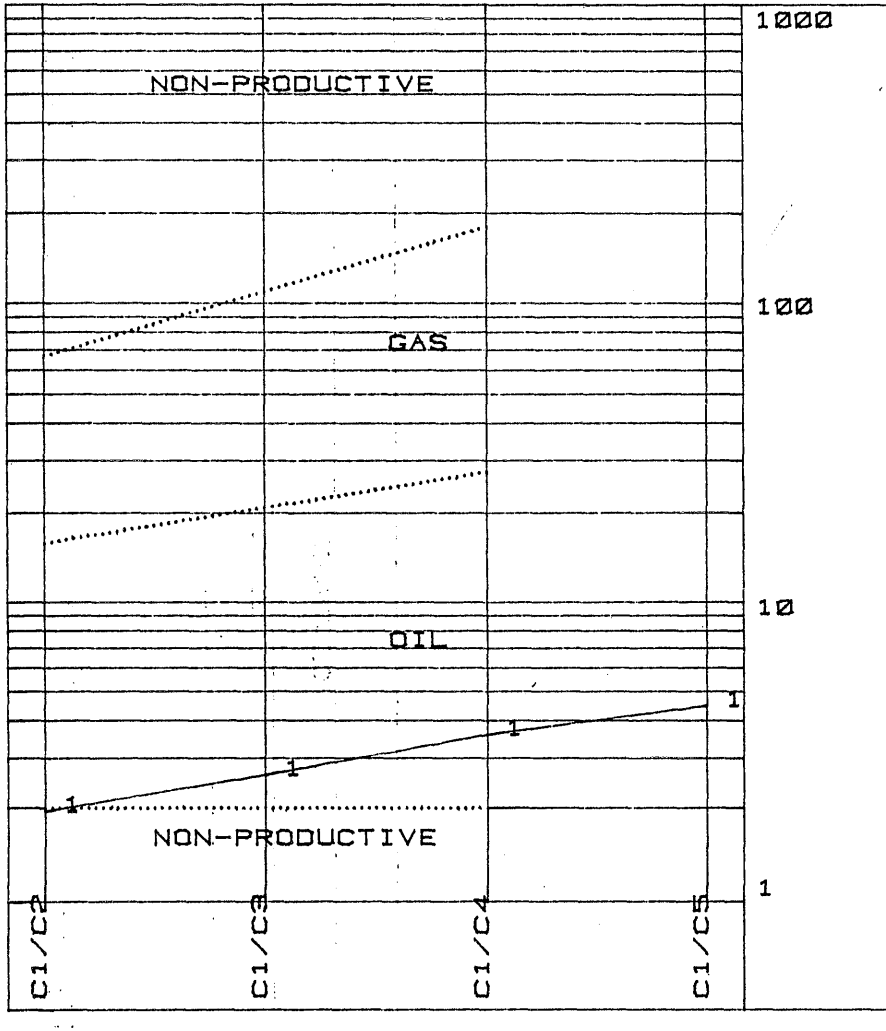


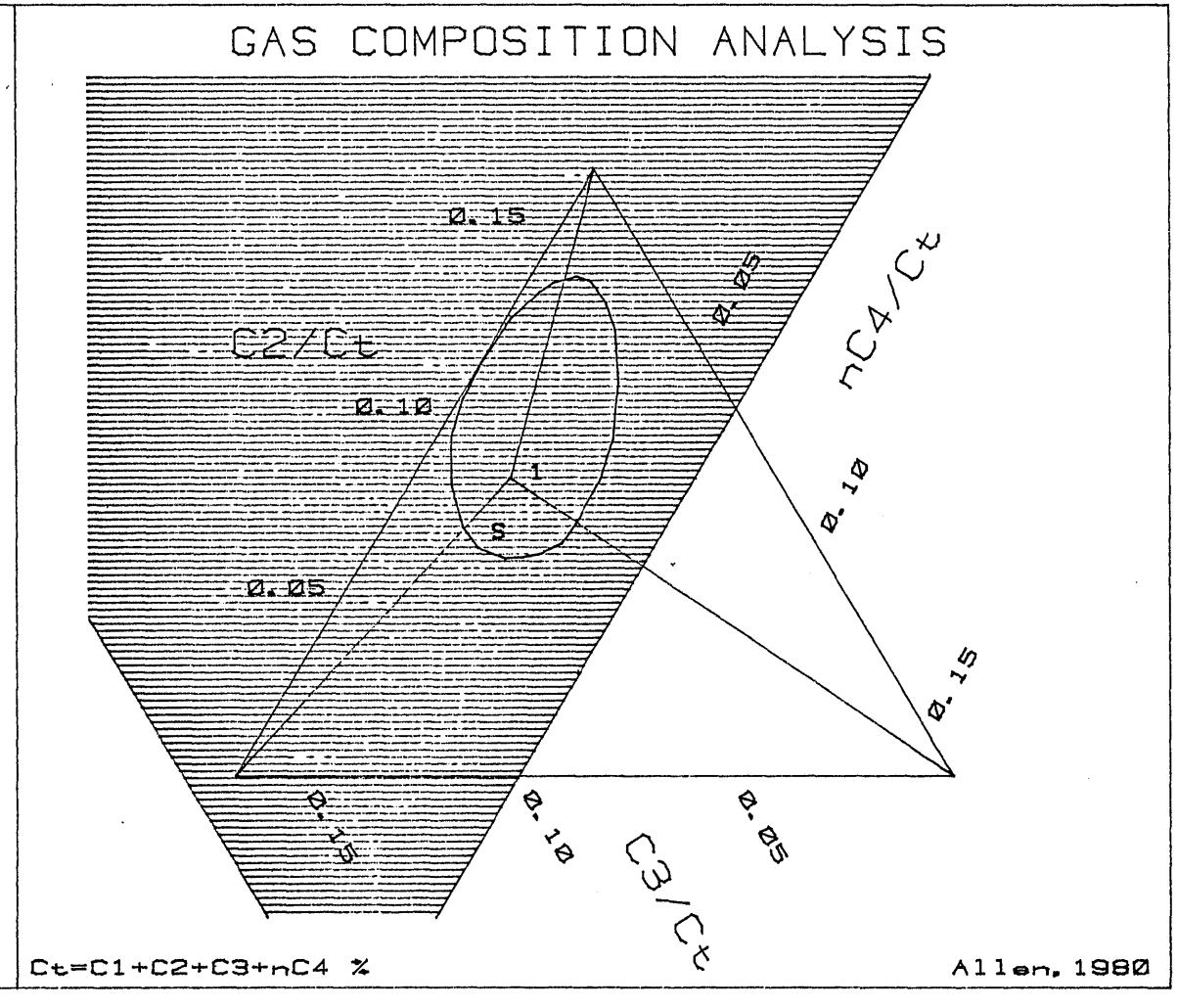


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2414	Ø.150	Ø.Ø54	Ø.Ø44	Ø.Ø15	Ø.Ø15	Ø.Ø24	Ø.Ø34	Ø.283	3	3	5	8

CONCLUSION: LOW GOR OIL

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

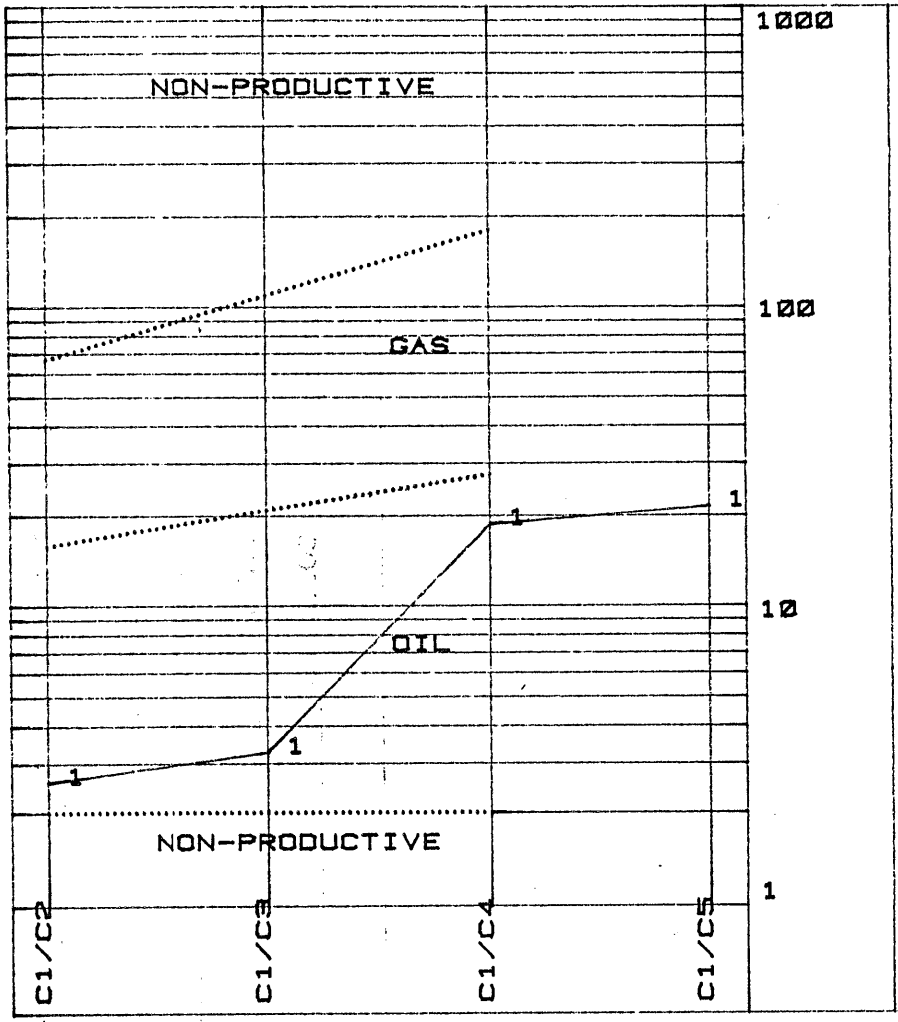


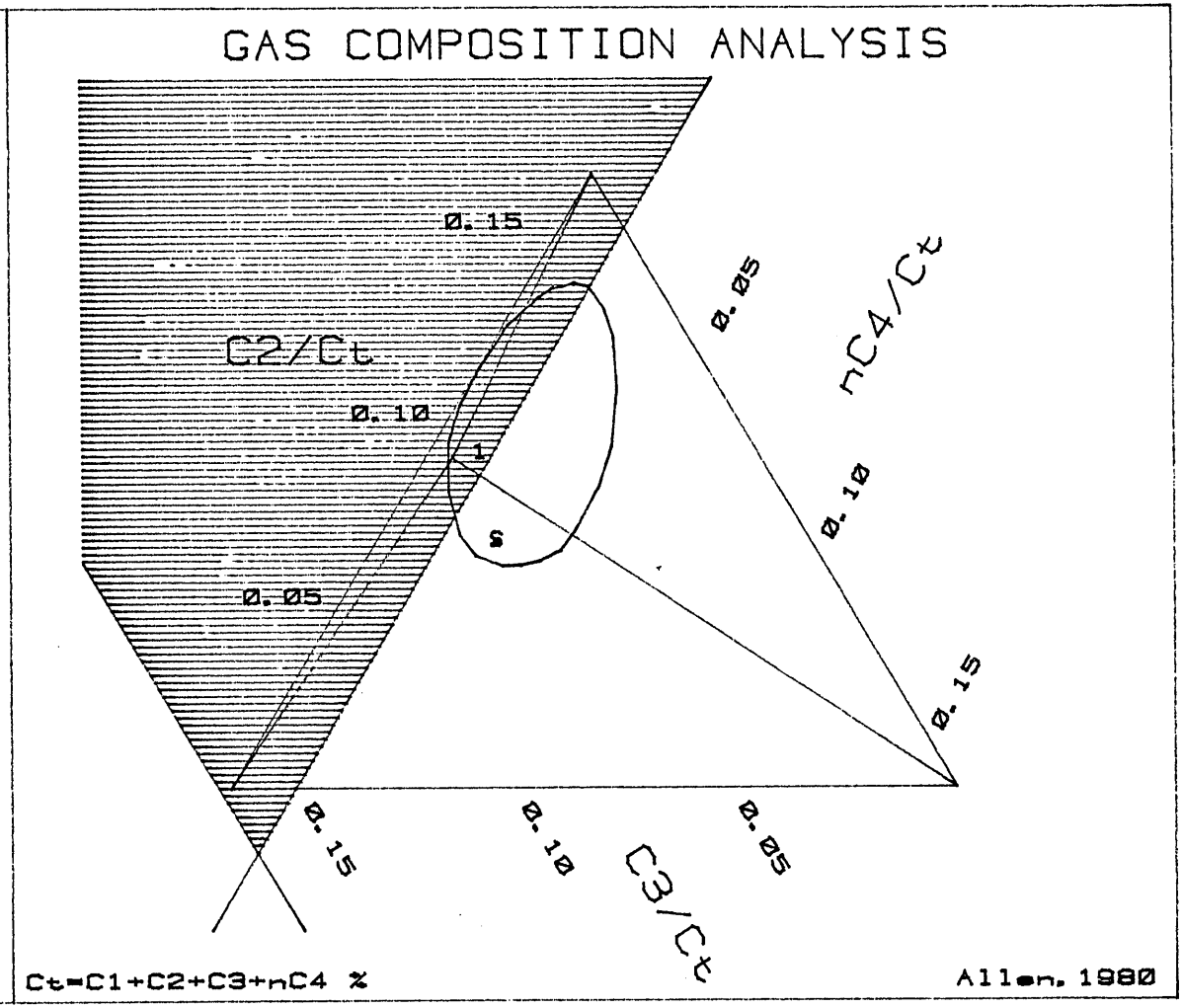


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2415	0.160	0.080	0.061	0.022	0.022	0.036	0.033	0.323	2	3	4	4

CONCLUSION: LOW GOR OIL

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

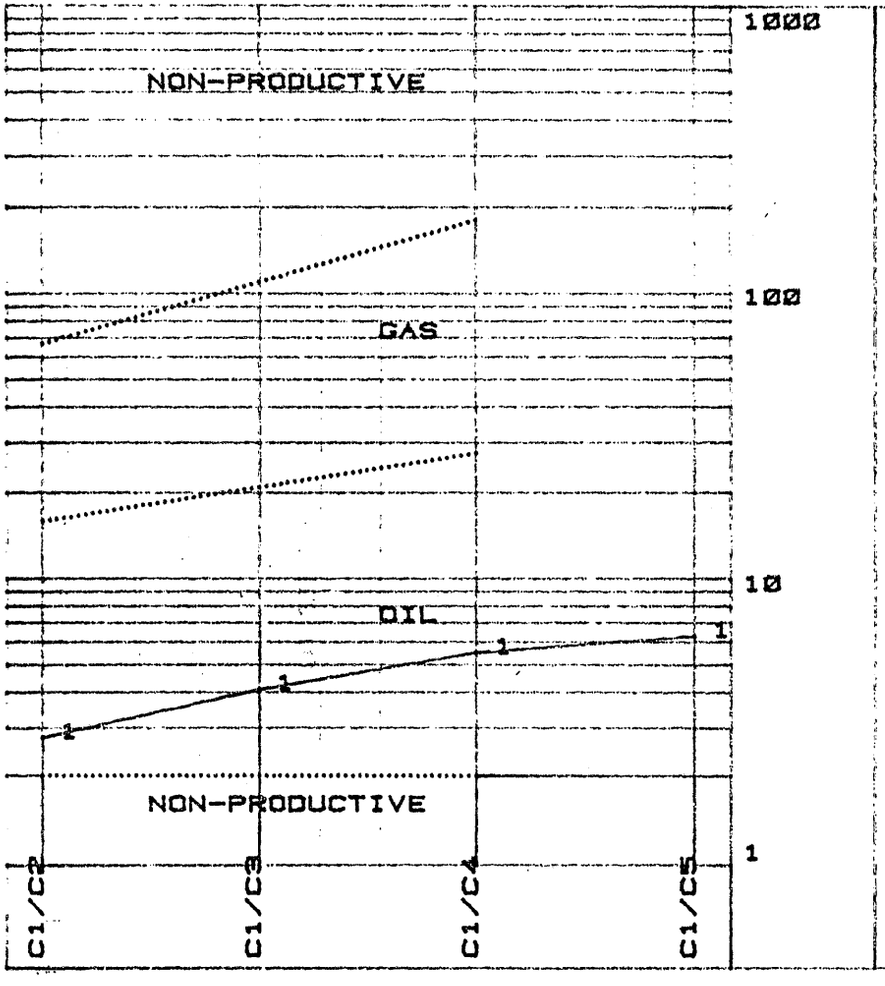


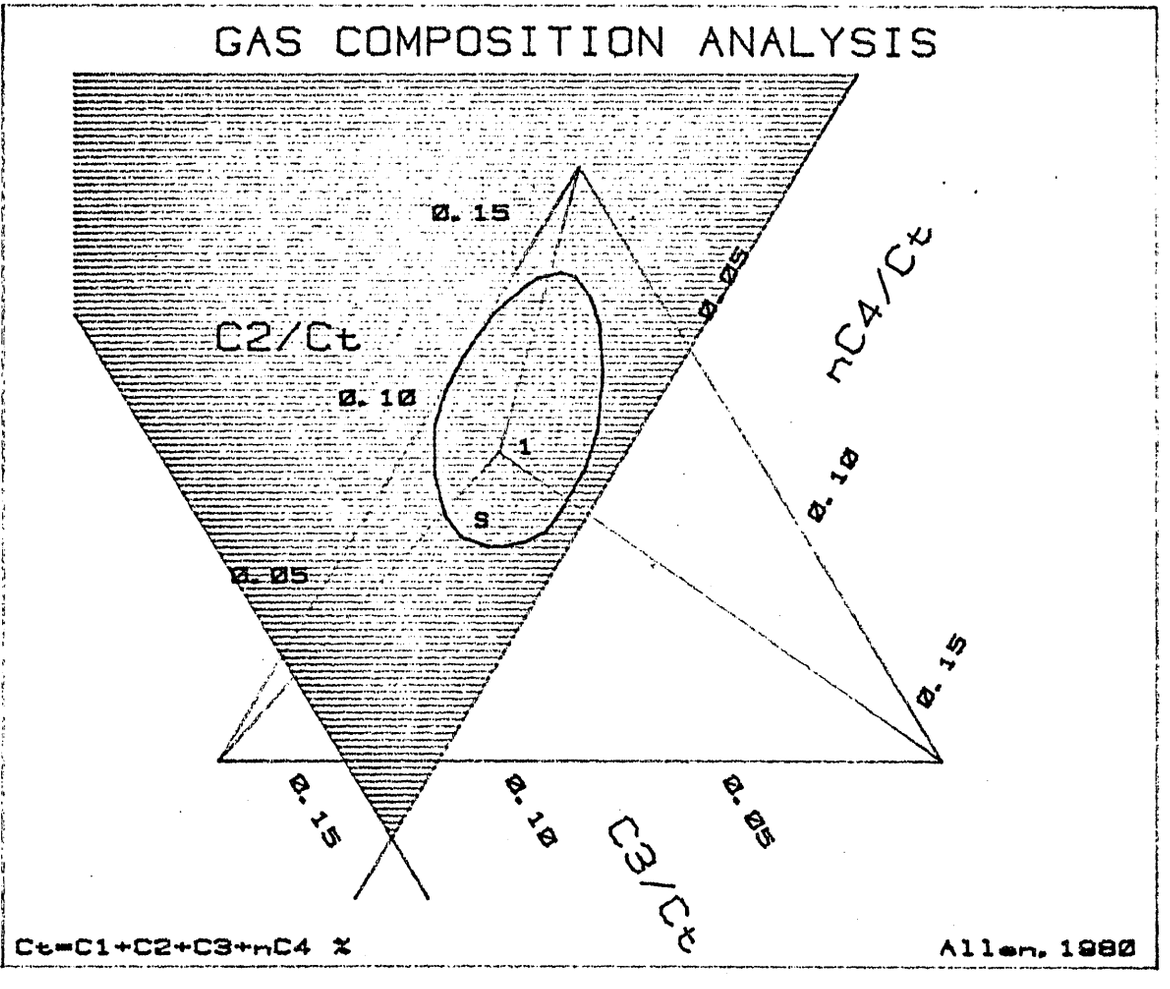


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2417	0.180	0.060	0.055	0.005	0.005	0.008	0.008	0.309	3	3	19	21

CONCLUSION: LOW GOR OIL OR POSS. UNREPRESENTATIVE GAS SAMPLE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

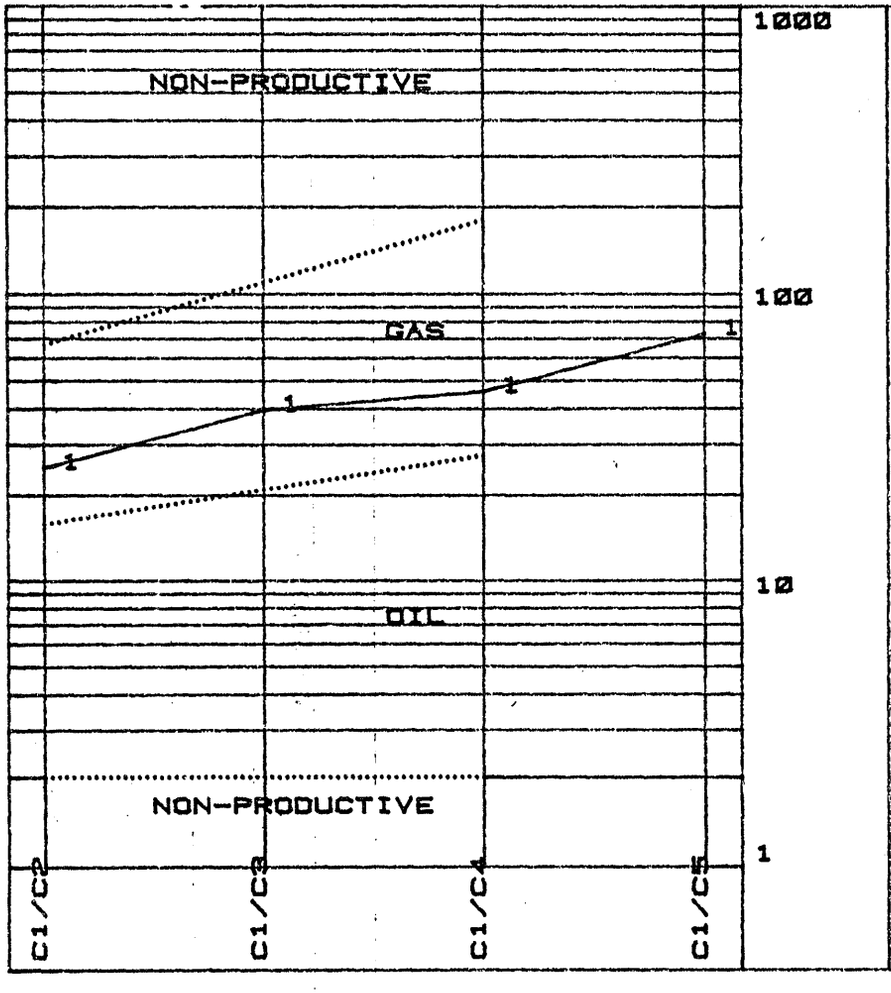


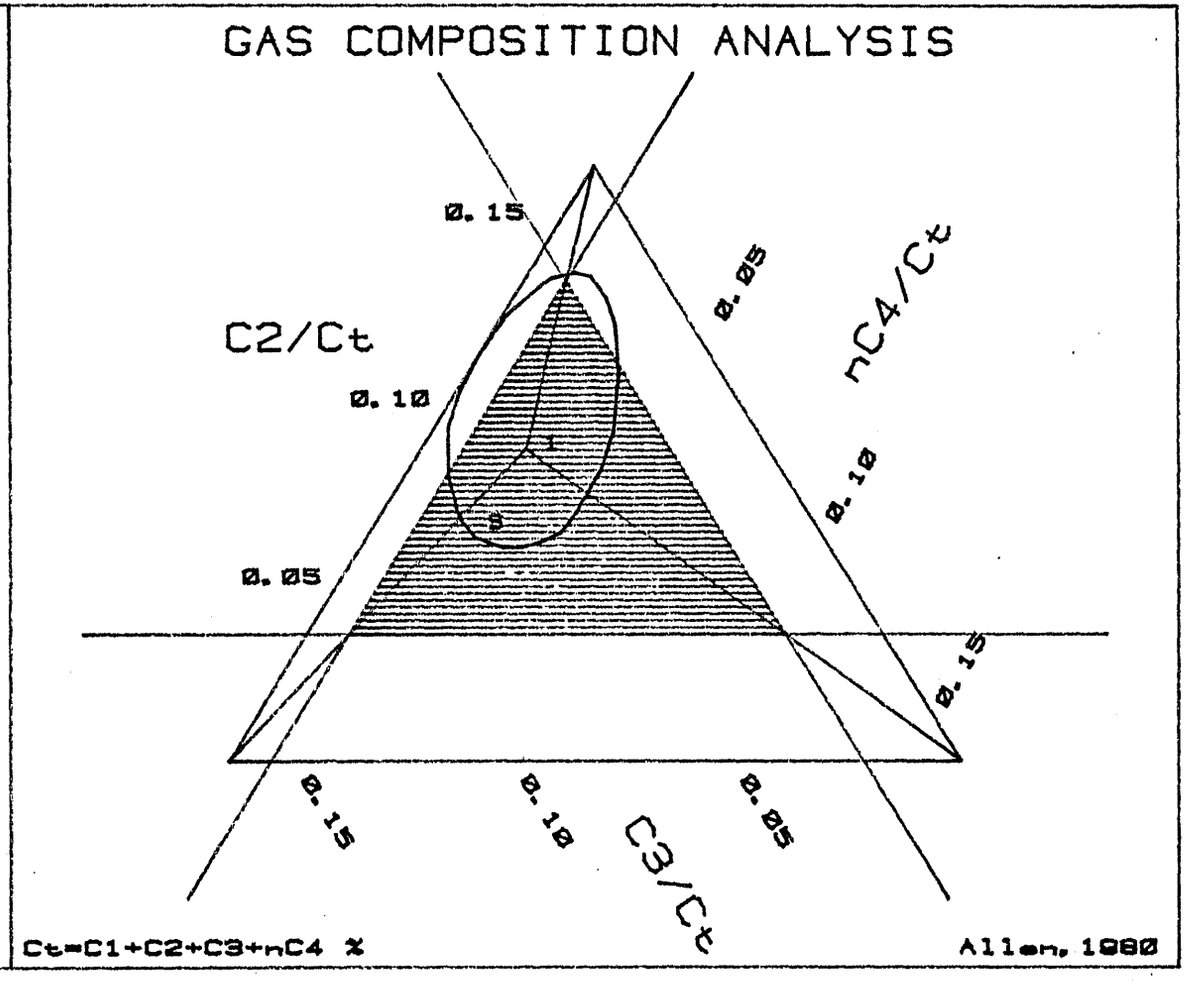


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2418	0.180	0.065	0.044	0.018	0.018	0.020	0.033	0.305	3	4	6	6

CONCLUSION: LOW GOR OIL

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

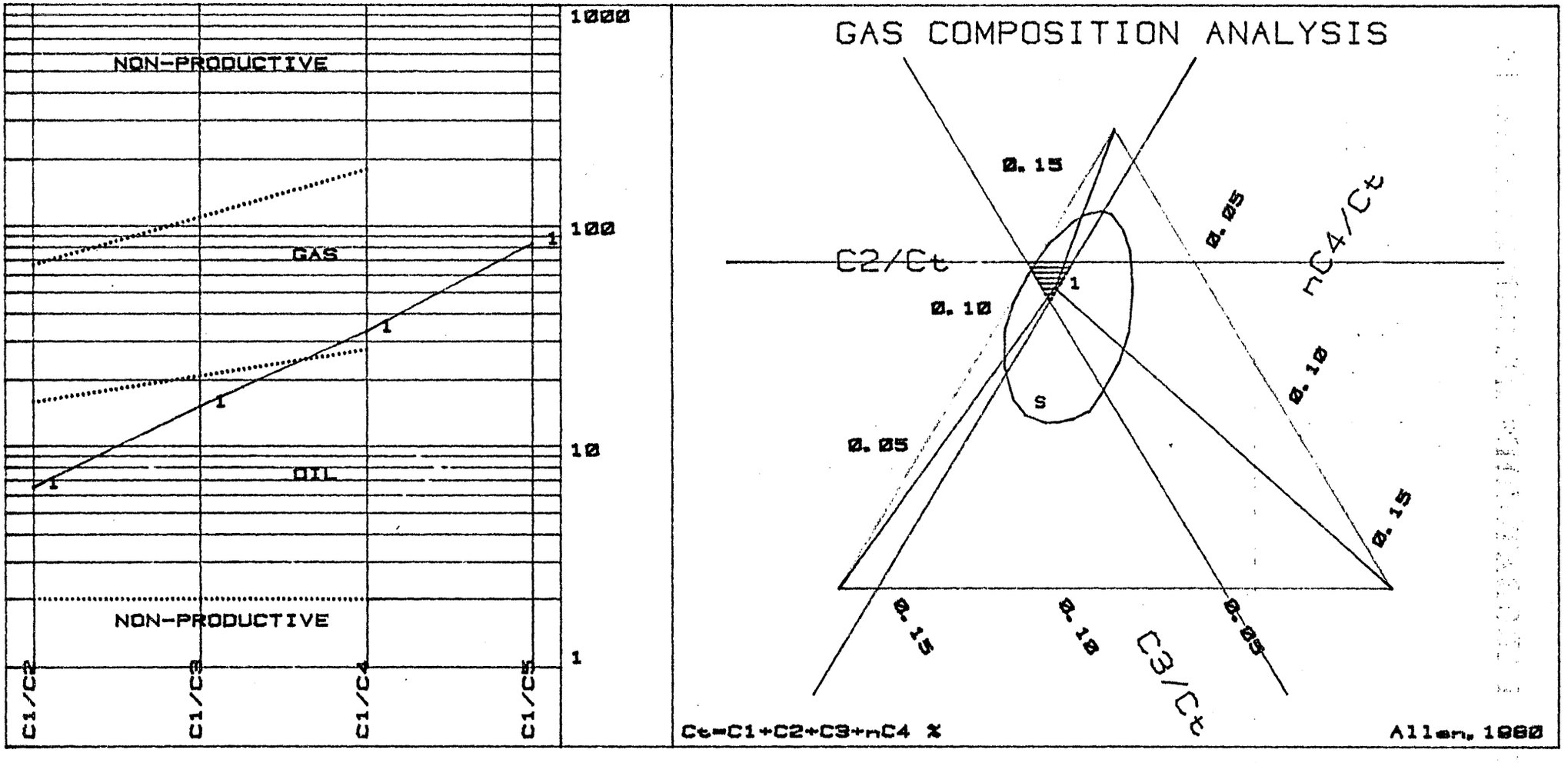




NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2439	0.087	0.004	0.002	0.001	0.001	0.001	0.003	0.094	25	40	48	73

CONCLUSION: DRY GAS

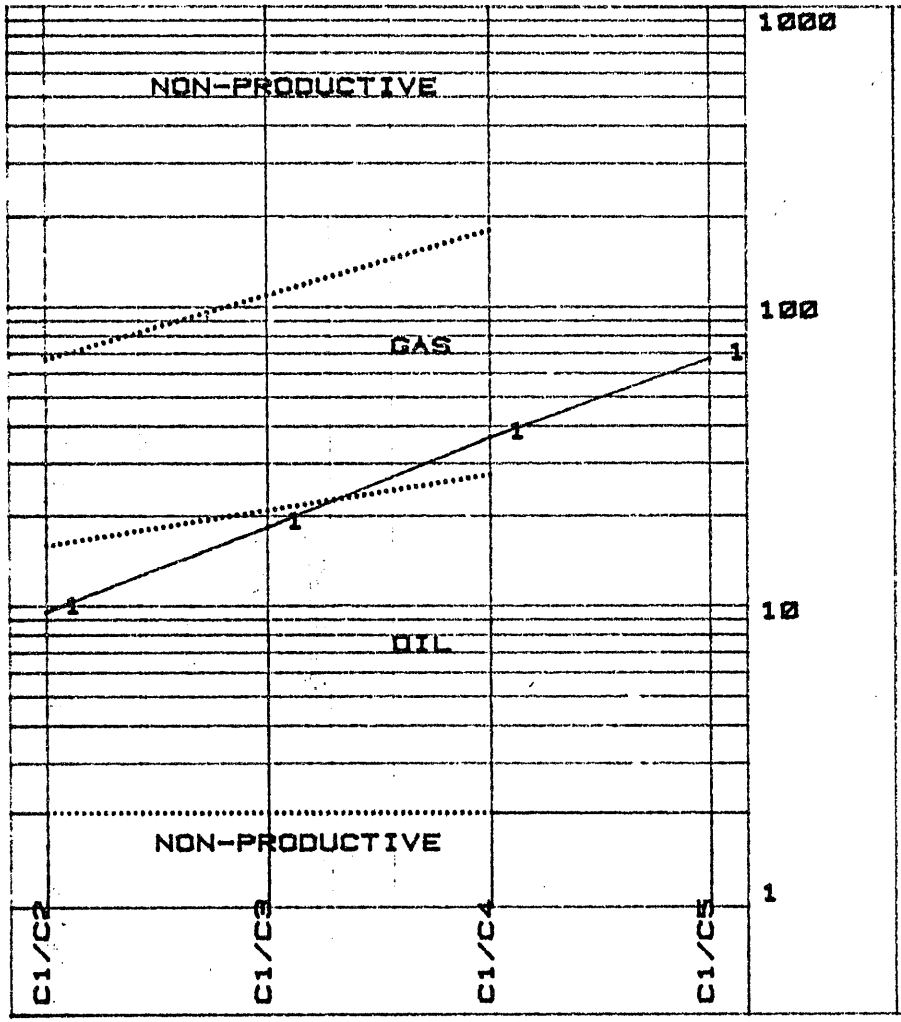
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

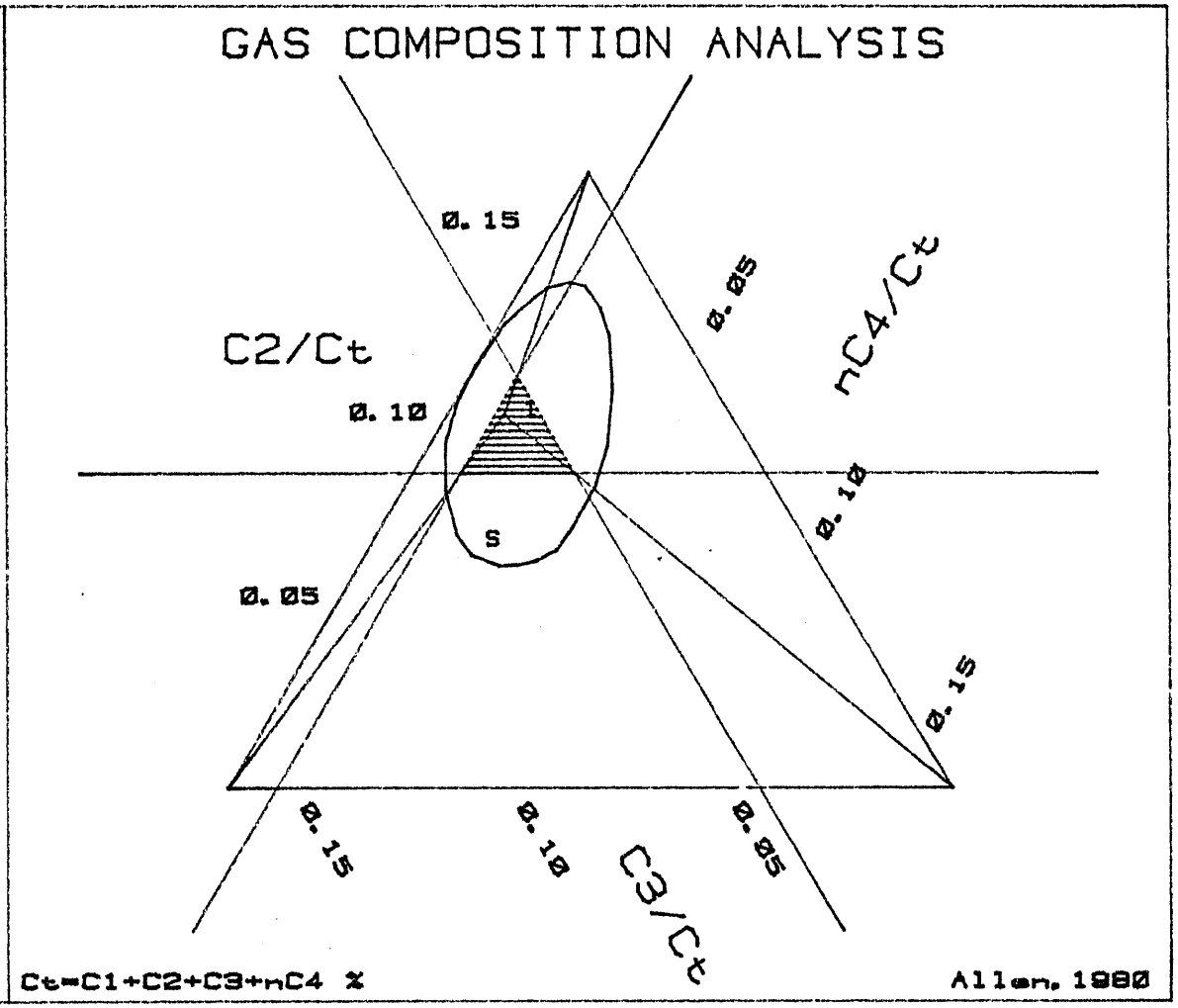


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	8450	0.100	0.015	0.007	0.002	0.002	0.001	0.003	0.124	7	15	33	84

CONCLUSION: WET GAS /

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

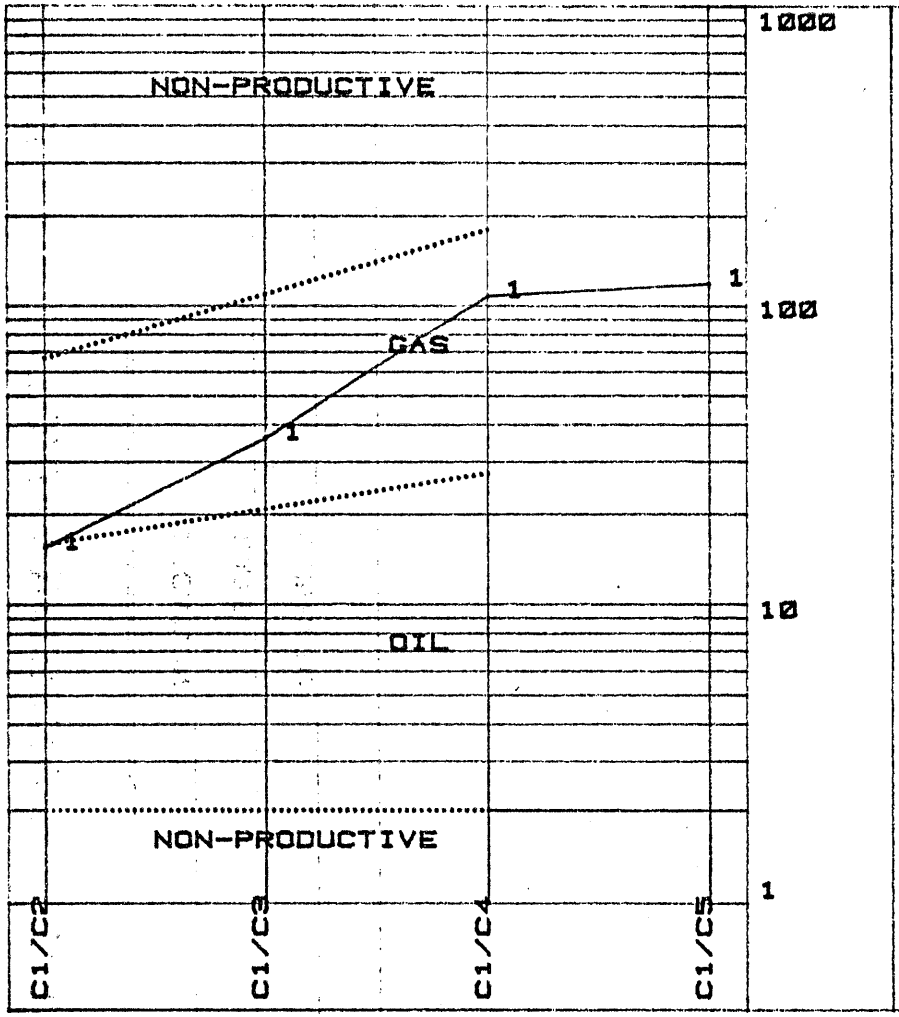


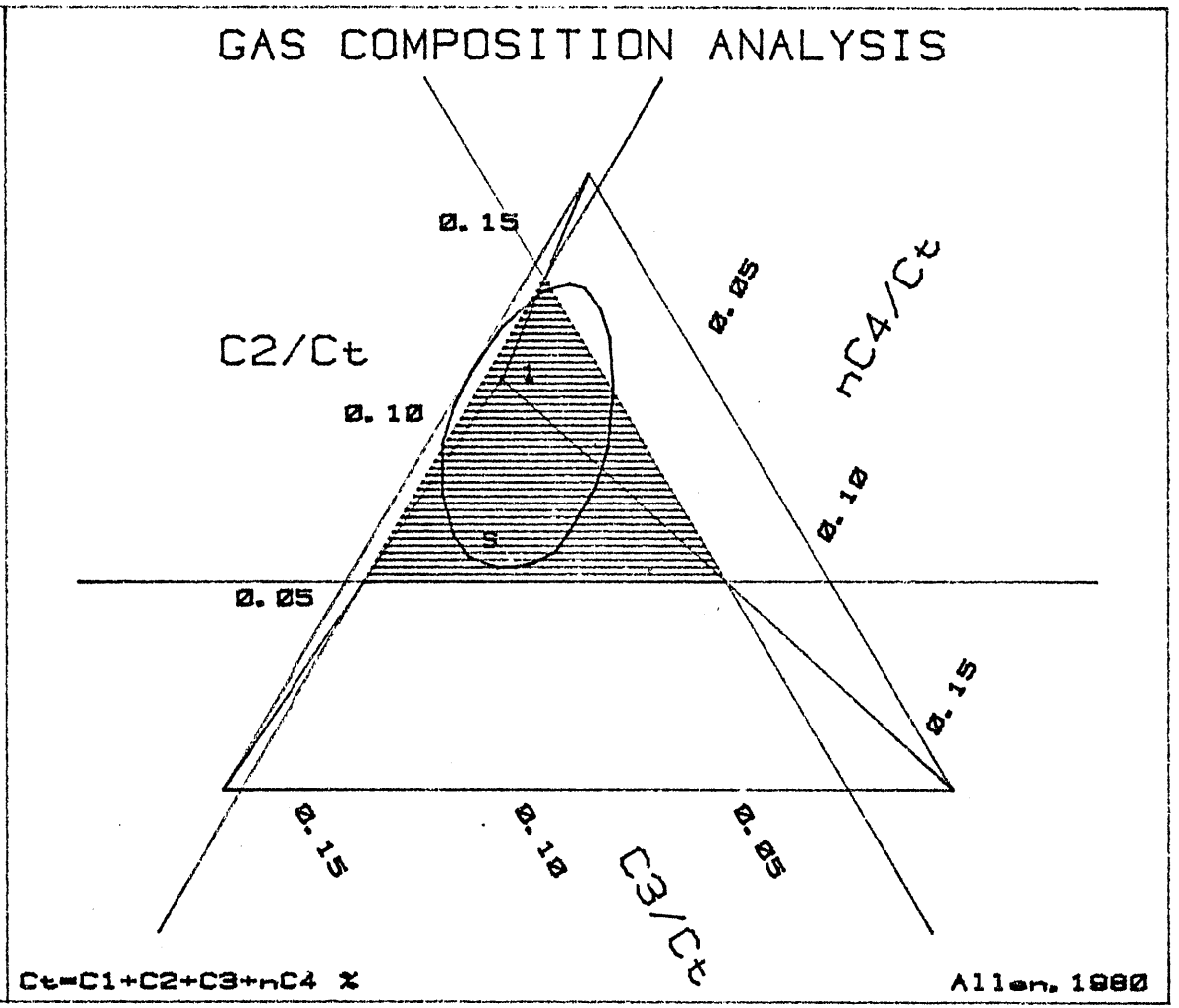


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2482	Ø.181	Ø.017	Ø.009	Ø.002	Ø.002	Ø.002	Ø.007	Ø.189	10	18	37	87

CONCLUSION: WET GAS /

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1

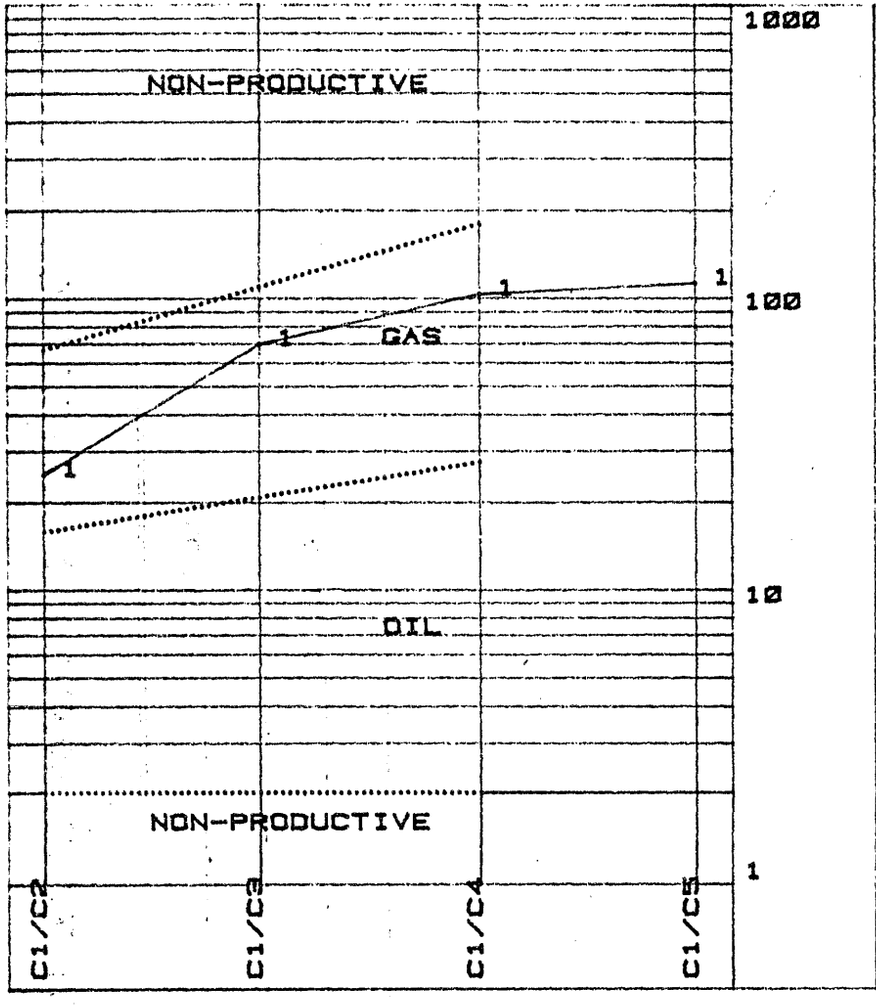


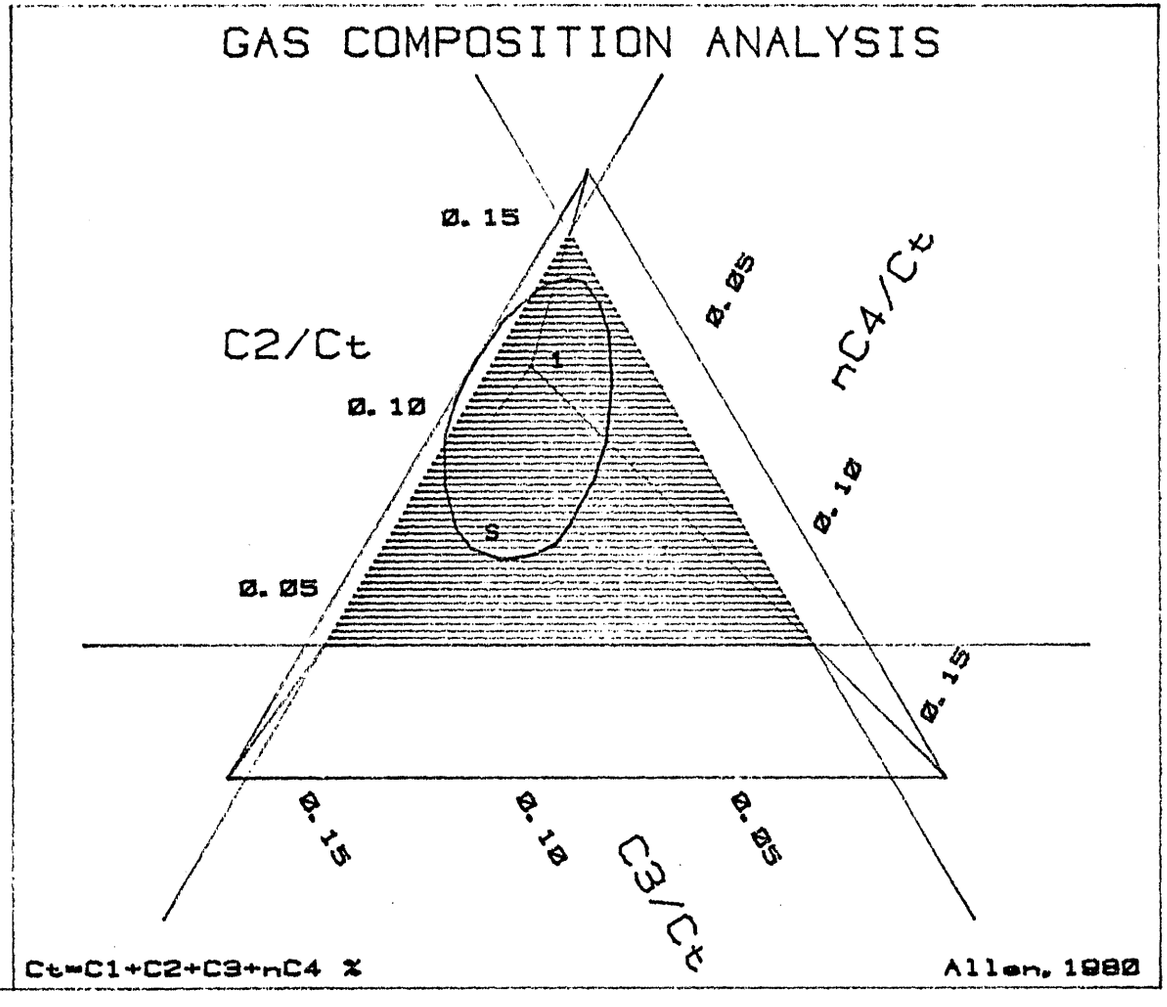


NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2474	0.119	0.008	0.003	0.001	0.001	0.001	0.001	0.131	15	36	108	119

CONCLUSION: GAS ZONE

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: YELLOWTAIL # 1





NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	2520	0.384	0.015	0.006	0.002	0.002	0.003	0.003	0.406	25	70	104	113

CONCLUSION: DRY GAS

CORE - O - GRAPHS.

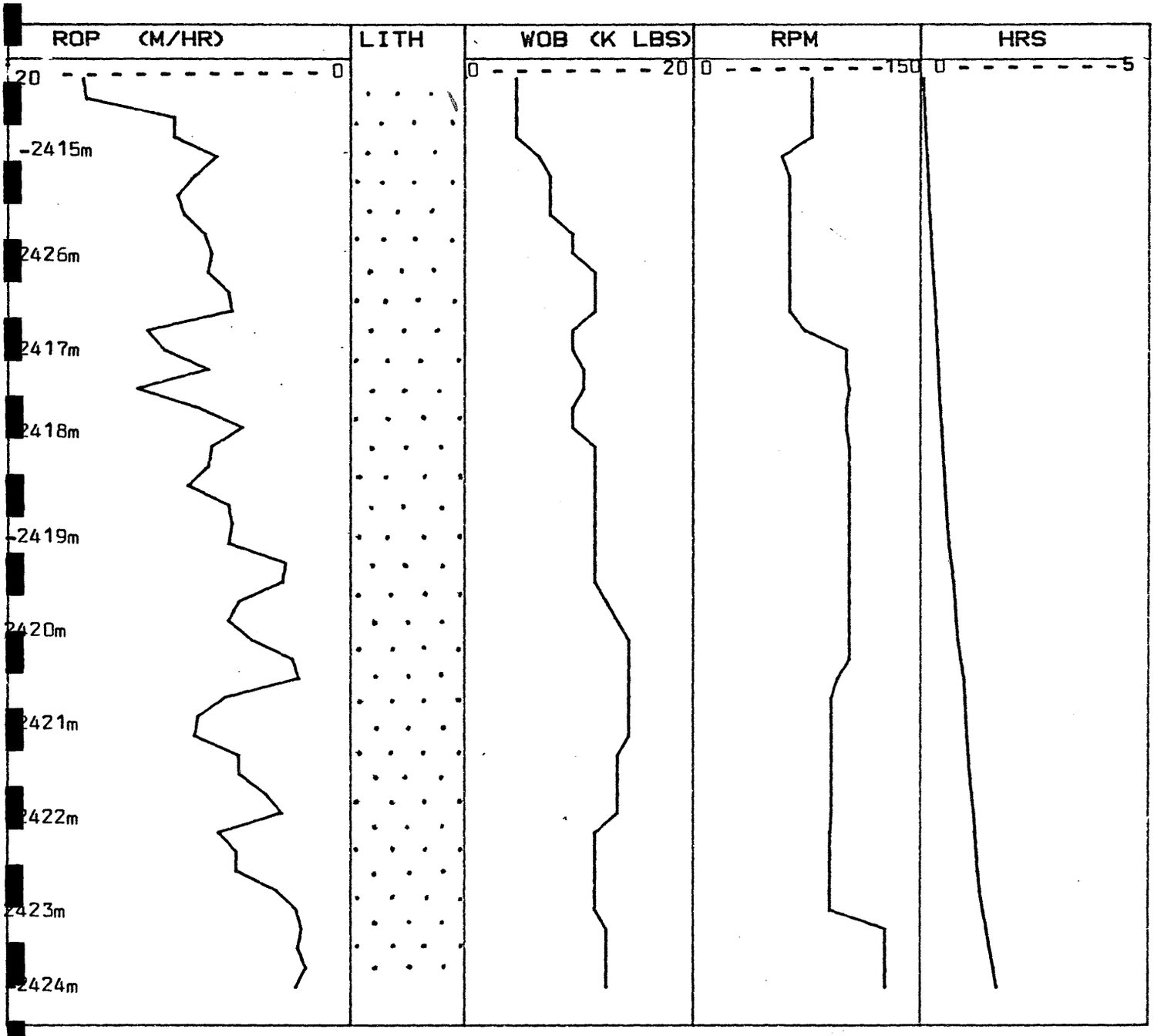
CORE-O-GRAPH

LIENT: ESSO AUSTRALIA LTD.
CORE NO. 1
ELL: YELLOWTAIL No 1
NTERVAL CORED: 2413.6 - 2424.5 m
UT : 10.9 m
ECOVERED : 7.8 m (72 %)

FORMATION GROUP : LATROBE

IT MAKE & TYPE : CHRISTENSEN C-22

BIT SIZE : 8 15/32 "
MUD WT. 9.5 ppg



CORE-O-GRAPH

CLIENT: ESSO AUSTRALIA LTD.

CORE NO. 2

WELL: YELLOWTAIL No 1

INTERVAL CORED: 2424.5 - 2437.5 m

CUT : 13.0 m

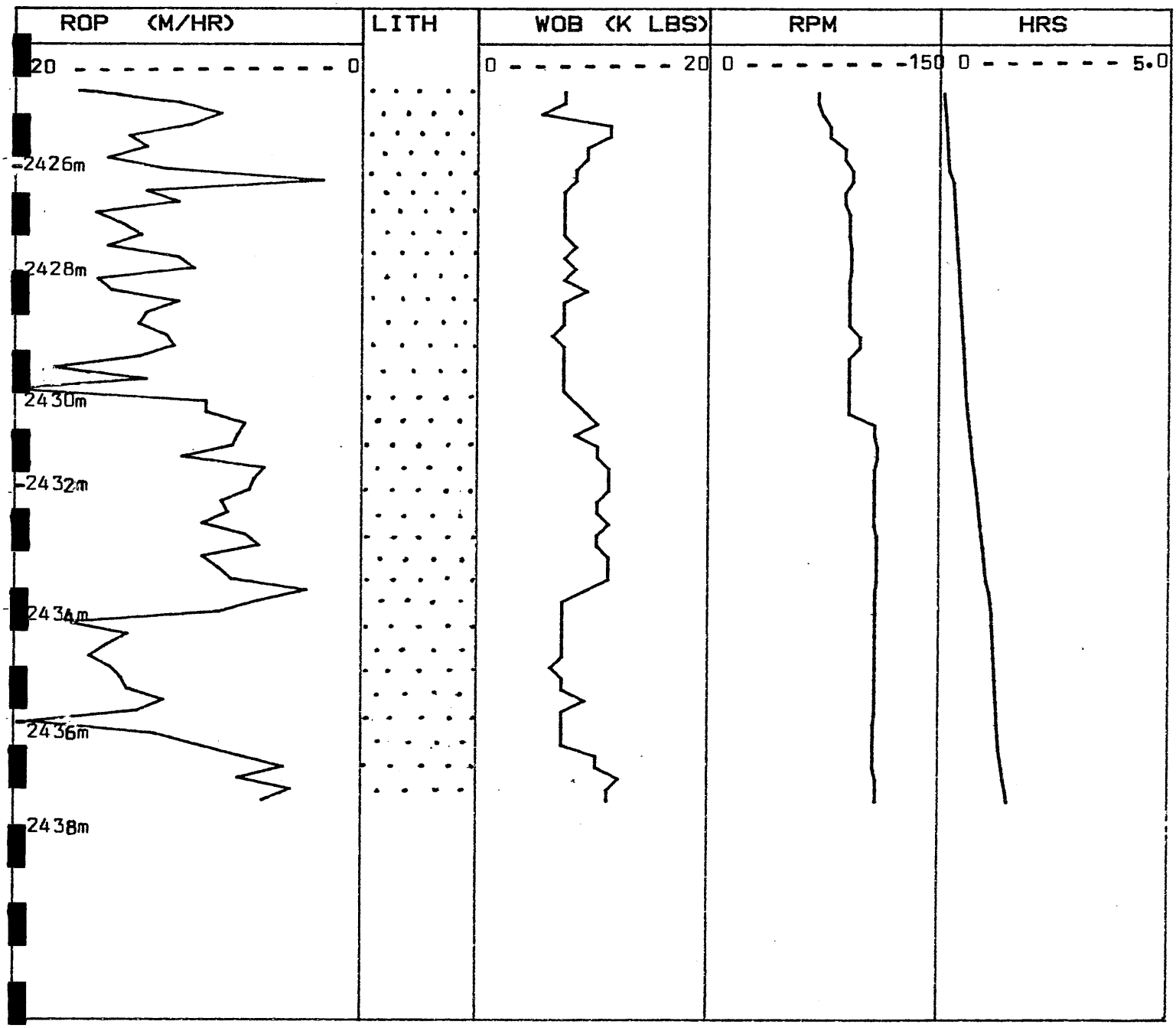
RECOVERED : 9.6 m (74%)

FORMATION GROUP : LATROBE

BIT MAKE & TYPE : CHRISTENSEN C-22

BIT SIZE : 8 15/32

MUD WT. 9.5 ppg



PORE PRESSURE SUMMARY AND LEAK-OFF / P.I.T. DATA.

Yellowtail No. 1 was drilled in the Gippsland Basin region of the Bass Strait. It was correctly thought that this basin is normally pressured and abnormal pressure was therefore not expected. Core Laboratories unit FL 802 monitored and calculated various parameters associated with pressure detection, the primary means of detection being the Drill Data Plot. (See plots at end of report).

The Drill Data Plot shows amongst other information, the d'c exponent trend. As can be seen from the plot a good trend does not develop until around 750m. The calcarenite is still fairly unconsolidated at this depth however, and the normal trend only develops at around 1150m. This normal trend is followed until 1480m where it deviates away from the trend; this could be due to the lowering of the mud weight from 9.4 ppg to 8.8 ppg between 1450m and 1160m. The normal trend is followed again from 1690m to 2185m, the mud weight was uniform throughout this section. Although a change in lithology is noted on the log at 1650m, there is no step in the d'c trend; this is because the lithology change is transitional in reality. At 2190m the d'c trend has a lateral shift; this could again be due to a mud weight change as the mud weight was increased from 8.8 ppg to 9.5 ppg over the interval 2190m to 2380m. This increase in mud weight was a precautionary measure before entering the Coarse Clastics zone. At around 2410m there is a lithology change as the Latrobe Formation is entered; this is a predominantly sand section and the d'c trend is scattered.

No abnormalities in the mud gas plot can be seen. The background gas is considerably higher in the 450m to 800m section; but this is due to the lithology as the calcarenite here was fairly sticky; this raised the yield point of the mud and a greater swabbing action occurs.

No shale density measurements were made as only then isolated beds of true shales occured.

As may be expected from the above discussions, the temperature plot does not show any deviations away from the normal.

A "Wireline Plot" was not drawn as this log plots shale parameters, and the few shale points encountered in the well were insufficient to facilitate an objective plot.

The "Pressure Plot" is the pressure conclusion log for the well. As can be seen it shows that the formations encountered during the drilling of Yellowtail No. 1 are believed to be normally pressured throughout the qualitative data for this log is from is from the R.F.T. tests, and the normal pore pre-sure is around 8.5 ppg, RKB, EMW or 8.3 ppg MSL, EMW.

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 insufficient L.O.T.'s were taken. In fact only 1 P.I.T. was made:- at the $10\frac{3}{4}$" casing shoe. L.O.T.'s were not required as high mud weights were not anticipated. The P.I.T. that was carried out gave a value of 13.6 ppg EMW. Bared on this information the fracture gradient on the pressure plot was drawn. The shape of this curve is based on data from wells in the U.S. Gulf Coast basin. The curve is then offset to match local data. A true fracture gradient for the Gippsland Basin cannot be drawn until further leak-off data is available.

COMPUTER DATA LISTINGS

Data is fed to the computer while drilling is in progress,using the Drill program and is stored on the tape at 10,1,or 0.2 m 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 & Bit initialization data

b. Hydraulic analyses

c. Data list A

d. Data list B

e. Data list C

f. Data list D

COMPUTER PLOTS

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

GEOPLOT - 1:5000 SCALE - 2m average

GEOPLOT 1:2000 SCALE - 2m average

DRILLING PARAMETER PLOT - 1:5000 SCALE - 2m average

COST ANALYSIS PLOT - 1:2000 SCALE - 2m average

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

BIT RECORD

BIT SIZE . . . . . Inches

BIT COST . . . . . A dollars

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

DEPTHS . . . . . Metres

BIT RUN (HOLE MADE). . Metres

TOTAL HOURS. . . . . Hours (the time the bit was actually drilling)

AVERAGE ROP. . . . . Metres/hour

CUMULATIVE COST/METRE. A dollars

BIT CONDITION : Teeth

Bearings

Gauge . . . Inches

WELL: YELLOWTAIL # 1

BIT RECORD

BIT No.	IADC CODE	MAKE & TYPE	SIZE	COST	NOZZLES	DEPTH IN	DEPTH OUT	BIT RUN	TOTAL HOURS	TRIP AROP	TRIP TIME	CCOST	TOTAL TURNS	CONDITION T	B	G
2	111	HUGHES OSC-3AJ	15.000	2000.00	20 20 18	235.0	818.0	583.0	7.48	77.9	4.0	73.19	75478	3	6	0.00
3	114	HUGHES X3A	9.875	900.00	11 11 11	818.0	1298.0	480.0	13.25	36.2	5.7	141.71	117216	5	6	0.125
4	114	HUGHES X3A	9.875	900.00	11 11 11	1298.0	1496.0	198.0	17.93	11.0	6.4	439.78	165110	3	5	0.000
5	114	HUGHES X3A	9.875	900.00	11 11 11	1496.0	1510.0	14.0	1.21	11.6	6.4	1990.16	9592	2	3	0.000
6	114	HUGHES X3A	9.875	900.00	11 11 11	1510.0	1666.0	156.0	10.02	15.6	7.0	392.32	74837	2	5	0.000
7	114	HUGHES X3A	9.875	900.00	13 13 13	1666.0	2187.0	521.0	19.49	26.7	8.0	188.62	149236	4	5	0.000
8	114	HUGHES X3A	9.875	900.00	13 13 14	2187.0	2413.0	226.0	9.74	23.2	9.8	310.21	73672	7	8	0.000
9	4	CHRISTENSEN C-22	8.469	15000.00	23 0 0	2414.0	2423.8	9.8	1.80	5.4	9.8	5723.18	10896	0	0	0.800
10	4	CHRISTENSEN C-22	8.469	15000.00	23 0 0	2424.6	2437.6	13.0	1.50	8.7	9.8	4232.66	9282	0	0	0.800
11	114	HUGHES X3A	9.875	900.00	13 13 13	2437.6	2571.0	133.4	5.64	23.6	10.3	430.06	41606	4	3	0.000

BIT NUMBER: 2 IADC CODE 111 HUGHES OSC-3AJ

STARTING DEPTH.....	235.0		
BIT COST, RIG COST/HOUR.....	2000.00	3542.00	
TRIP TIME.....	4.0		
BIT DIAMETER.....	15.000		
NOZZLES.....	20	20	18
HW DRILL COLLAR LENGTH, OD, ID....	2151.00	9.750	3.062
DRILL COLLAR LENGTH, OD, ID.....	68.19	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.03	5.000	3.000
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	235.00	19.240	
RISER LENGTH, ID.....	96.24	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.5		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.08		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.0	2.00	
FINISHING DEPTH.....	818.0		
CUMULATIVE HOURS, TURNS.....	7.48	75478	
BIT CONDITION OUT.....	T 3	B 6	G 0.000

BIT NUMBER: 3 IADC CODE 114 HUGHES X3A

STARTING DEPTH.....	818.0		
BIT COST, RIG COST/HOUR.....	900.00	3542.00	
TRIP TIME.....	5.7		
BIT DIAMETER.....	9.875		
NOZZLES.....	11	11	11
DRILL COLLAR LENGTH, OD, ID.....	205.00	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.03	5.000	3.000
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	804.00	9.950	
RISER LENGTH, ID.....	96.24	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.5		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.08		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	5.0	2.50	
FINISHING DEPTH.....	1298.0		
CUMULATIVE HOURS, TURNS.....	13.25	117216	
BIT CONDITION OUT.....	T 5	B 6	G 0.125

BIT NUMBER: 4 IADC CODE 114 HUGHES X3A

STARTING DEPTH.....	1298.0		
BIT COST, RIG COST/HOUR.....	900.00	3542.00	
TRIP TIME.....	6.4		
BIT DIAMETER.....	9.875		
NOZZLES.....	11	11	11
DRILL COLLAR LENGTH, OD, ID.....	205.00	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.03	5.000	3.000
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	804.00	9.950	
RISER LENGTH, ID.....	96.24	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.5		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.08		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	5.0	2.50	
FINISHING DEPTH.....	1496.0		
CUMULATIVE HOURS, TURNS.....	17.93	165110	
BIT CONDITION OUT.....	T 3	B 5	G 0.000

BIT NUMBER: 5 IADC CODE 114 HUGHES X3A

STARTING DEPTH.....	1496.0		
BIT COST, RIG COST/HOUR.....	900.00	3543.00	
TRIP TIME.....	6.4		
BIT DIAMETER.....	9.875		
NOZZLES.....	11	11	11
DRILL COLLAR LENGTH, OD, ID.....	205.00	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.03	5.000	3.000
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	804.00	9.950	
RISER LENGTH, ID.....	96.24	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.5		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.08		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	5.0	2.50	
FINISHING DEPTH.....	1510.0		
CUMULATIVE HOURS, TURNS.....	1.21	9592	
BIT CONDITION OUT.....	T 2	B 3	G 0.000

BIT NUMBER: 6 IADC CODE 114 HUGHES X3A

STARTING DEPTH.....	1510.0		
BIT COST, RIG COST/HOUR.....	900.00	3543.00	
TRIP TIME.....	7.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	11	11	11
DRILL COLLAR LENGTH, OD, ID.....	202.21	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.03	5.000	3.000
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	804.00	9.950	
RISER LENGTH, ID.....	96.24	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.5		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.08		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	5.0	2.50	
FINISHING DEPTH.....	1666.0		
CUMULATIVE HOURS, TURNS.....	10.02	74837	
BIT CONDITION OUT.....	T 2	B 5	G 0.000

BIT NUMBER: 7 IADC CODE 114 HUGHES X3A

STARTING DEPTH.....	1666.0		
BIT COST, RIG COST/HOUR.....	900.00	3542.00	
TRIP TIME.....	8.0		
BIT DIAMETER.....	9.875		
NOZZLES.....	13	13	13
DRILL COLLAR LENGTH, OD, ID.....	202.21	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID.....	83.03	5.000	3.000
DRILL PIPE OD, ID.....		5.000	4.276
CASING DEPTH, ID.....	804.00	9.950	
RISER LENGTH, ID.....	96.24	21.000	
PUMP VOLUMES 1 AND 2.....	0.119	0.119	
PORE PRESSURE CALC EXPONENT.....	1.20		
NORMAL PORE PRESSURE.....	8.5		
OVERBURDEN GRADIENT MODIFIER.....	0.00		
STRESS RATIO MODIFIER.....	0.08		
"d" EXPONENT CORRECTION FACTOR....	10.0		
CUTTINGS DIAMETER, DENSITY.....	3.0	2.50	
FINISHING DEPTH.....	2187.0		
CUMULATIVE HOURS, TURNS.....	19.49	149236	
BIT CONDITION OUT.....	T 4	B 5	G 0.000

BIT NUMBER: 8 IADC CODE 114 HUGHES X3A

STARTING DEPTH	2187.0		
BIT COST, RIG COST/HOUR	900.00	3542.00	
TRIP TIME	9.8		
BIT DIAMETER	9.875		
NOZZLES	13	13	14
DRILL COLLAR LENGTH, OD, ID	202.21	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.03	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	804.00	9.950	
RISER LENGTH, ID	96.24	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.5		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.08		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	3.0	2.50	
FINISHING DEPTH	2413.0		
CUMULATIVE HOURS, TURNS	9.74	73672	
BIT CONDITION OUT	T 7	B 8	G 0.000

BIT NUMBER: 9 IADC CODE 4 CHRISTENSEN C-22

STARTING DEPTH	2414.0		
BIT COST, RIG COST/HOUR	15000.00	3542.00	
TRIP TIME	9.8		
BIT DIAMETER	8.469		
NOZZLES	23	0	0
DRILL COLLAR LENGTH, OD, ID	306.08	6.500	2.813
HW DRILL PIPE LENGTH, OD, ID	83.03	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	804.00	9.950	
RISER LENGTH, ID	96.24	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.5		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.08		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	0.5	2.65	
FINISHING DEPTH	2423.8		
CUMULATIVE HOURS, TURNS	1.80	10896	
BIT CONDITION OUT	T 0	B 0	G 0.800

BIT NUMBER: 10 IADC CODE 4 CHRISTENSEN C-22

STARTING DEPTH	2424.6		
BIT COST, RIG COST/HOUR	15000.00	3542.00	
TRIP TIME	9.8		
BIT DIAMETER	8.469		
NOZZLES	23	0	0
DRILL COLLAR LENGTH, OD, ID	223.05	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.03	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	804.00	9.950	
RISER LENGTH, ID	96.24	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.5		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.08		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	0.5	2.65	
FINISHING DEPTH	2437.6		
CUMULATIVE HOURS, TURNS	1.50	9282	
BIT CONDITION OUT	T 0	B 0	G 0.800

BIT NUMBER: 11 IADC CODE 114 HUGHES X3A

STARTING DEPTH	2437.6		
BIT COST, RIG COST/HOUR	900.00	3542.00	
TRIP TIME	10.3		
BIT DIAMETER	9.875		
NOZZLES	13	13	13
DRILL COLLAR LENGTH, OD, ID	205.60	6.250	2.813
HW DRILL PIPE LENGTH, OD, ID	83.03	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	804.00	9.950	
RISER LENGTH, ID	96.24	21.000	
PUMP VOLUMES 1 AND 2	0.119	0.119	
PORE PRESSURE CALC EXPONENT	1.20		
NORMAL PORE PRESSURE	8.5		
OVERBURDEN GRADIENT MODIFIER	0.00		
STRESS RATIO MODIFIER	0.08		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	3.0	2.50	
FINISHING DEPTH	2571.0		
CUMULATIVE HOURS, TURNS	5.64	41606	
BIT CONDITION OUT	T 4	B 3	G 0.000

HYDRAULIC ANALYSIS

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

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 110 SPM 2 110 FLOW RATE 1100

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.414	27	63	28	TURBULENT			0.6
HWDC/CSG	0.876	122	30	23	TURBULENT			0.2
HWDC/RIS	1.102	106	24	22	TURBULENT			0.1
TOTAL VOLUME		255					TOTAL PRESSURE DROP	0.9

LAG: 9.7 MINUTES 1070 STROKES #1 AND 1070 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1288.5	HHP	827	IMPACT FORCE	2004
% SURFACE PRESSURE	59.9	HHP/sqin	4.68	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	78.5				
STRING	674.2				
BIT	1288.5				
ANNULUS	0.9				
TOTAL	2042.0	PUMP PRESSURE	2150.0	% DIFFERENCE	5.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.60	HYDROSTATIC PRESSURE	440.2
CIRCULATING:	ECD	8.62	CIRCULATING PRESSURE	441.0
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	1.7
	EFFECTIVE MUD WEIGHT	8.57	BOTTOM HOLE PRESSURE	438.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 100 SPM 2 115 FLOW RATE 1075

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.414	68	62	28	TURBULENT			1.5
HWDC/CSG	0.876	122	29	23	TURBULENT			0.2
HWDC/RIS	1.102	106	23	22	TURBULENT			0.1
TOTAL VOLUME		296					TOTAL PRESSURE DROP	1.8

LAG: 11.6 MINUTES 1157 STROKES #1 AND 1330 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1230.6	HHP	771	IMPACT FORCE	1914
% SURFACE PRESSURE	60.9	HHP/sqin	4.37	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	75.3
STRING	862.4
BIT	1230.6
ANNULUS	1.8
TOTAL	2170.1

PUMP PRESSURE 2020.0 % DIFFERENCE 7.4

BOTTOM HOLE PRESSURES:

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 110 SPM 2 105 FLOW RATE 1075

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.414	110	62	28	TURBULENT			2.5
HWDC/CSG	0.876	122	29	23	TURBULENT			0.2
HWDC/RIS	1.102	106	23	22	TURBULENT			0.1
TOTAL VOLUME		337					TOTAL PRESSURE DROP	2.7

LAG: 13.2 MINUTES 1450 STROKES #1 AND 1385 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1230.6	HHP	771	IMPACT FORCE	1914
% SURFACE PRESSURE	57.2	HHP/sqin	4.37	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	75.3				
STRING	1078.1				
BIT	1230.6				
ANNULUS	2.7				
TOTAL	2386.6	PUMP PRESSURE	2150.0	% DIFFERENCE	11.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.60	HYDROSTATIC PRESSURE	733.6
CIRCULATING:	ECD	8.63	CIRCULATING PRESSURE	736.3
PULLING OUT:	TRIP MARGIN	0.06	ESTIMATED SWAB	5.4
	EFFECTIVE MUD WEIGHT	8.54	BOTTOM HOLE PRESSURE	728.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 110 SPM 2 105 FLOW RATE 1075

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.414	151	62	28	TURBULENT			3.4
HWDC/CSG	0.876	122	29	23	TURBULENT			0.2
HWDC/RIS	1.102	106	23	22	TURBULENT			0.1
TOTAL VOLUME		379					TOTAL PRESSURE DROP	3.6

LAG: 14.8 MINUTES 1628 STROKES #1 AND 1554 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1230.6	HHP	771	IMPACT FORCE	1914
% SURFACE PRESSURE	55.9	HHP/sqin	4.37	JET VELOCITY	122

PRESSURE BREAKDOWN:

SURFACE	75.3				
STRING	1293.7				
BIT	1230.6				
ANNULUS	3.6				
TOTAL	2603.2	PUMP PRESSURE	2200.0	% DIFFERENCE	18.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.60	HYDROSTATIC PRESSURE	880.3
CIRCULATING:	ECD	8.64	CIRCULATING PRESSURE	883.9
PULLING OUT:	TRIP MARGIN	0.07	ESTIMATED SWAB	7.2
	EFFECTIVE MUD WEIGHT	8.53	BOTTOM HOLE PRESSURE	873.1

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 110 SPM 2 110 FLOW RATE 1100

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.414	192	63	28	TURBULENT			4.5
HWDC/CSG	0.876	122	30	23	TURBULENT			0.2
HWDC/RIS	1.102	106	24	22	TURBULENT			0.1
TOTAL VOLUME		420					TOTAL PRESSURE DROP	4.7

LAG: 16.0 MINUTES 1765 STROKES #1 AND 1765 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1288.5	HHP	827	IMPACT FORCE	2004
% SURFACE PRESSURE	59.1	HHP/sqin	4.68	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	78.5
STRING	1573.0
BIT	1288.5
ANNULUS	4.7
TOTAL	2944.7

PUMP PRESSURE 2180.0 % DIFFERENCE 35.1

BOTTOM HOLE PRESSURES:

	DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.60	HYDROSTATIC PRESSURE 1027.0
CIRCULATING:	ECD	8.64	CIRCULATING PRESSURE 1031.8
PULLING OUT:	TRIP MARGIN	0.08	ESTIMATED SWAB 9.5
	EFFECTIVE MUD WEIGHT	8.52	BOTTOM HOLE PRESSURE 1017.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 110 SPM 2 112 FLOW RATE 1110

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.414	234	64	27	TURBULENT			5.7
HWDC/CSG	0.876	122	30	22	TURBULENT			0.2
HWDC/RIS	1.102	106	24	21	TURBULENT			0.1
TOTAL VOLUME		462					TOTAL PRESSURE DROP	6.0

LAG: 17.5 MINUTES 1922 STROKES #1 AND 1957 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1357.8	HHP	879	IMPACT FORCE	2111
% SURFACE PRESSURE	57.0	HHP/sqin	4.97	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	82.0		
STRING	1878.1		
BIT	1357.8		
ANNULUS	6.0		
TOTAL	3323.8	PUMP PRESSURE 2380.0	% DIFFERENCE 39.7

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	1214.7
CIRCULATING:	ECD	8.94	CIRCULATING PRESSURE	1220.6
PULLING OUT:	TRIP MARGIN	0.09	ESTIMATED SWAB	11.9
	EFFECTIVE MUD WEIGHT	8.81	BOTTOM HOLE PRESSURE	1202.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 0 SPM 2 110 FLOW RATE 550

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	18	70	117	LAMINAR	5	66	4.7
DC/CSG	0.191	21	69	117	LAMINAR	4	64	5.1
HWDP/CSG	0.236	20	56	114	LAMINAR	3	53	2.5
DP/CSG	0.236	122	56	114	LAMINAR	3	53	15.4
DP/RIS	1.325	128	10	104	LAMINAR	0	10	0.3
TOTAL VOLUME		307				TOTAL PRESSURE DROP		28.0

LAG: 23.5 MINUTES 0 STROKES #1 AND 2583 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	3232.1	HHP	1037	IMPACT FORCE	1623
% SURFACE PRESSURE	100.4	HHP/sqin	13.54	JET VELOCITY	193

PRESSURE BREAKDOWN:

SURFACE	28.1				
STRING	420.2				
BIT	3232.1				
ANNULUS	28.0				
TOTAL	3708.3	PUMP PRESSURE	3220.0	% DIFFERENCE	15.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1381.9
CIRCULATING:	ECD	9.18	CIRCULATING PRESSURE	1409.8
PULLING OUT:	TRIP MARGIN	0.36	ESTIMATED SWAB	55.9
	EFFECTIVE MUD WEIGHT	8.64	BOTTOM HOLE PRESSURE	1325.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 50 SPM 2 55 FLOW RATE 525

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	36	67	150	LAMINAR	3	64	14.1
DC/CSG	0.191	2	65	150	LAMINAR	3	63	0.6
HWDP/CSG	0.236	20	53	149	LAMINAR	2	51	3.9
DP/CSG	0.236	145	53	149	LAMINAR	2	51	28.9
DP/RIS	1.325	128	9	149	LAMINAR	0	9	0.8
TOTAL VOLUME		330			TOTAL PRESSURE DROP			48.3

LAG: 26.4 MINUTES 1322 STROKES #1 AND 1455 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2944.9	HHP	902	IMPACT FORCE	1479
% SURFACE PRESSURE	96.6	HHP/sqin	11.77	JET VELOCITY	184

PRESSURE BREAKDOWN:

SURFACE	24.7				
STRING	383.9				
BIT	2944.9				
ANNULUS	48.3				
TOTAL	3401.7	PUMP PRESSURE	3050.0	% DIFFERENCE	11.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1535.4
CIRCULATING:	ECD	9.28	CIRCULATING PRESSURE	1583.7
PULLING OUT:	TRIP MARGIN	0.57	ESTIMATED SWAB	96.6
	EFFECTIVE MUD WEIGHT	8.43	BOTTOM HOLE PRESSURE	1438.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 58 SPM 2 51 FLOW RATE 545

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	70	137	LAMINAR	4	66	12.8
HWDP/OH	0.231	19	56	136	LAMINAR	2	54	3.4
DP/OH	0.231	2	56	136	LAMINAR	2	54	0.3
DP/CSG	0.236	167	55	136	LAMINAR	2	53	28.4
DP/RIS	1.325	128	10	133	LAMINAR	0	10	0.6
TOTAL VOLUME		354			TOTAL PRESSURE DROP			45.5

LAG: 27.3 MINUTES 1581 STROKES #1 AND 1390 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	3208.8	HHP	1020	IMPACT FORCE	1611
% SURFACE PRESSURE	108.8	HHP/sqin	13.32	JET VELOCITY	191

PRESSURE BREAKDOWN:

SURFACE	26.6
STRING	429.6
BIT	3208.8
ANNULUS	45.5
TOTAL	3710.6

PUMP PRESSURE 2950.0 % DIFFERENCE 25.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1707.7
CIRCULATING:	ECD	9.34	CIRCULATING PRESSURE	1753.2
PULLING OUT:	TRIP MARGIN	0.49	ESTIMATED SWAB	91.1
	EFFECTIVE MUD WEIGHT	8.61	BOTTOM HOLE PRESSURE	1616.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 58 SPM 2 53 FLOW RATE 555

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	71	137	LAMINAR	4	67	12.8
HWDP/OH	0.231	19	57	136	LAMINAR	2	55	3.4
DP/OH	0.231	25	57	136	LAMINAR	2	55	4.5
DP/CSG	0.236	167	56	136	LAMINAR	2	54	28.5
DP/RIS	1.325	128	10	133	LAMINAR	0	10	0.6
TOTAL VOLUME		377			TOTAL PRESSURE DROP			49.8

LAG: 28.5 MINUTES 1654 STROKES #1 AND 1511 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	3327.7	HHP	1077	IMPACT FORCE	1671
% SURFACE PRESSURE	112.8	HHP/sqin	14.06	JET VELOCITY	194

PRESSURE BREAKDOWN:

SURFACE	27.5		
STRING	459.7		
BIT	3327.7		
ANNULUS	49.8		
TOTAL	3864.8	PUMP PRESSURE 2950.0	% DIFFERENCE 31.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	1863.0
CIRCULATING:	ECD	9.34	CIRCULATING PRESSURE	1912.8
PULLING OUT:	TRIP MARGIN	0.49	ESTIMATED SWAB	99.7
	EFFECTIVE MUD WEIGHT	8.61	BOTTOM HOLE PRESSURE	1763.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1300.0 AND TVD 1300.0

SPM 1 100 SPM 2 0 FLOW RATE 500

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	64	109	LAMINAR	5	59	8.4
HWDP/OH	0.231	19	52	107	LAMINAR	3	49	2.2
DP/OH	0.231	48	52	107	LAMINAR	3	49	5.4
DP/CSG	0.236	167	50	106	LAMINAR	3	48	18.0
DP/RIS	1.325	128	9	98	LAMINAR	0	9	0.3
TOTAL VOLUME		400			TOTAL PRESSURE DROP			34.3

LAG: 33.6 MINUTES 3360 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2700.8	HHP	788	IMPACT FORCE	1356
% SURFACE PRESSURE	86.6	HHP/sqin	10.28	JET VELOCITY	175

PRESSURE BREAKDOWN:

SURFACE	22.8				
STRING	394.2				
BIT	2700.8				
ANNULUS	34.3				
TOTAL	3152.0	PUMP PRESSURE	3120.0	% DIFFERENCE	1.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	2018.2
CIRCULATING:	ECD	9.25	CIRCULATING PRESSURE	2052.5
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	68.5
	EFFECTIVE MUD WEIGHT	8.79	BOTTOM HOLE PRESSURE	1949.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 50 SPM 2 50 FLOW RATE 500

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	64	109	LAMINAR	5	59	8.4
HWDP/OH	0.231	19	52	107	LAMINAR	3	49	2.2
DP/OH	0.231	71	52	107	LAMINAR	3	49	8.0
DP/CSG	0.236	167	50	106	LAMINAR	3	48	18.0
DP/RIS	1.325	128	9	98	LAMINAR	0	9	0.3
TOTAL VOLUME		423			TOTAL PRESSURE DROP			36.9

LAG: 35.5 MINUTES 1777 STROKES #1 AND 1777 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2700.8	HHP	788	IMPACT FORCE	1356
% SURFACE PRESSURE	93.1	HHP/sqin	10.28	JET VELOCITY	175

PRESSURE BREAKDOWN:

SURFACE	22.8		
STRING	407.3		
BIT	2700.8		
ANNULUS	36.9		
TOTAL	3167.8	PUMP PRESSURE 2900.0	% DIFFERENCE 9.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	2173.5
CIRCULATING:	ECD	9.25	CIRCULATING PRESSURE	2210.3
PULLING OUT:	TRIP MARGIN	0.31	ESTIMATED SWAB	73.7
	EFFECTIVE MUD WEIGHT	8.79	BOTTOM HOLE PRESSURE	2099.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1500.0 AND TVD 1500.0

SPM 1 50 SPM 2 50 FLOW RATE 500

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	64	120	LAMINAR	4	60	10.2
HWDP/OH	0.231	19	52	117	LAMINAR	2	49	2.6
DP/OH	0.231	94	52	117	LAMINAR	2	49	12.7
DP/CSG	0.236	167	50	117	LAMINAR	2	48	21.4
DP/RIS	1.325	128	9	104	LAMINAR	0	9	0.3
TOTAL VOLUME		446			TOTAL PRESSURE DROP			47.2

LAG: 37.5 MINUTES 1874 STROKES #1 AND 1874 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2671.1	HHP	779	IMPACT FORCE	1341
% SURFACE PRESSURE	90.5	HHP/sqin	10.17	JET VELOCITY	175

PRESSURE BREAKDOWN:

SURFACE	24.5				
STRING	452.0				
BIT	2671.1				
ANNULUS	47.2				
TOTAL	3194.8	PUMP PRESSURE	2950.0	% DIFFERENCE	8.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	2303.1
CIRCULATING:	ECD	9.18	CIRCULATING PRESSURE	2350.4
PULLING OUT:	TRIP MARGIN	0.37	ESTIMATED SWAB	94.5
	EFFECTIVE MUD WEIGHT	8.63	BOTTOM HOLE PRESSURE	2208.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1600.0

SPM 1 110 SPM 2 0 FLOW RATE 550

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	70	121	LAMINAR	4	66	10.4
HWDP/OH	0.231	19	57	118	LAMINAR	3	54	2.7
DP/OH	0.231	118	57	118	LAMINAR	3	54	16.4
DP/CSG	0.236	167	56	117	LAMINAR	3	53	22.1
DP/RIS	1.325	128	10	104	LAMINAR	0	10	0.3
TOTAL VOLUME		469			TOTAL PRESSURE DROP			52.0

LAG: 35.8 MINUTES 3943 STROKES #1 AND 0 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	3196.1	HHP	1025	IMPACT FORCE	1605
% SURFACE PRESSURE	108.0	HHP/sqin	13.39	JET VELOCITY	193

PRESSURE BREAKDOWN:

SURFACE	28.9		
STRING	545.4		
BIT	3196.1		
ANNULUS	52.0		
TOTAL	3822.4	PUMP PRESSURE 2960.0	% DIFFERENCE 29.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	2429.4
CIRCULATING:	ECD	9.09	CIRCULATING PRESSURE	2481.3
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	104.0
	EFFECTIVE MUD WEIGHT	8.52	BOTTOM HOLE PRESSURE	2325.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1700.0

SPM 1 68 SPM 2 71 FLOW RATE 695

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	89	121	LAMINAR	2	87	11.3
HWDP/OH	0.231	19	72	118	LAMINAR	1	70	2.9
DP/OH	0.231	141	72	118	LAMINAR	1	70	21.3
DP/CSG	0.236	167	70	117	LAMINAR	1	69	24.0
DP/RIS	1.325	128	12	104	LAMINAR	0	12	0.4
TOTAL VOLUME		492			TOTAL PRESSURE DROP			59.9

LAG: 29.8 MINUTES 2024 STROKES #1 AND 2113 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2616.2	HHP	1060	IMPACT FORCE	1835
% SURFACE PRESSURE	88.7	HHP/sqin	13.85	JET VELOCITY	174

PRESSURE BREAKDOWN:

SURFACE	44.0				
STRING	856.4				
BIT	2616.2				
ANNULUS	59.9				
TOTAL	3576.4	PUMP PRESSURE	2950.0	% DIFFERENCE	21.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	2581.2
CIRCULATING:	ECD	9.11	CIRCULATING PRESSURE	2641.1
PULLING OUT:	TRIP MARGIN	0.41	ESTIMATED SWAB	119.7
	EFFECTIVE MUD WEIGHT	8.49	BOTTOM HOLE PRESSURE	2461.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1800.0

SPM 1 69 SPM 2 71 FLOW RATE 700

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	89	122	LAMINAR	2	88	11.4
HWDP/OH	0.231	19	72	118	LAMINAR	1	71	2.9
DP/OH	0.231	164	72	118	LAMINAR	1	71	24.8
DP/CSG	0.236	167	71	118	LAMINAR	1	70	24.1
DP/RIS	1.325	128	13	105	LAMINAR	0	13	0.4
TOTAL VOLUME		515			TOTAL PRESSURE DROP			63.5

LAG: 30.9 MINUTES 2135 STROKES #1 AND 2197 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2624.1	HHP	1071	IMPACT FORCE	1841
% SURFACE PRESSURE	89.0	HHP/sqin	13.99	JET VELOCITY	176

PRESSURE BREAKDOWN:

SURFACE	44.1				
STRING	885.2				
BIT	2624.1				
ANNULUS	63.5				
TOTAL	3617.0	PUMP PRESSURE	2950.0	% DIFFERENCE	22.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.80	HYDROSTATIC PRESSURE	2702.3
CIRCULATING:	ECD	9.01	CIRCULATING PRESSURE	2765.8
PULLING OUT:	TRIP MARGIN	0.41	ESTIMATED SWAB	127.0
	EFFECTIVE MUD WEIGHT	8.39	BOTTOM HOLE PRESSURE	2575.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1900.0

SPM 1 0 SPM 2 111 FLOW RATE 555

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	71	122	LAMINAR	2	69	10.5
HWDP/OH	0.231	19	57	118	LAMINAR	1	56	2.7
DP/OH	0.231	187	57	118	LAMINAR	1	56	26.1
DP/CSG	0.236	167	56	118	LAMINAR	1	55	22.2
DP/RIS	1.325	128	10	105	LAMINAR	0	10	0.3
TOTAL VOLUME		539			TOTAL PRESSURE DROP			61.8

LAG: 40.8 MINUTES 0 STROKES #1 AND 4525 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1649.6	HHP	534	IMPACT FORCE	1157
% SURFACE PRESSURE	84.2	HHP/sqin	6.97	JET VELOCITY	139

PRESSURE BREAKDOWN:

SURFACE	29.1		
STRING	599.6		
BIT	1649.6		
ANNULUS	61.8		
TOTAL	2340.1	PUMP PRESSURE 1960.0	% DIFFERENCE 19.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.80	HYDROSTATIC PRESSURE	2852.5
CIRCULATING:	ECD	8.99	CIRCULATING PRESSURE	2914.3
PULLING OUT:	TRIP MARGIN	0.38	ESTIMATED SWAB	123.6
	EFFECTIVE MUD WEIGHT	8.42	BOTTOM HOLE PRESSURE	2728.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 2000.0

SPM 1 70 SPM 2 65 FLOW RATE 675

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	86	122	LAMINAR	2	84	11.2
HWDP/OH	0.231	19	70	118	LAMINAR	1	68	2.9
DP/OH	0.231	210	70	118	LAMINAR	1	68	31.4
DP/CSG	0.236	167	68	118	LAMINAR	1	67	23.8
DP/RIS	1.325	128	12	105	LAMINAR	0	12	0.4
TOTAL VOLUME		562			TOTAL PRESSURE DROP			69.6

LAG: 35.0 MINUTES 2447 STROKES #1 AND 2272 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2440.0	HHP	961	IMPACT FORCE	1711
% SURFACE PRESSURE	83.0	HHP/sqin	12.54	JET VELOCITY	169

PRESSURE BREAKDOWN:

SURFACE	41.3				
STRING	876.8				
BIT	2440.0				
ANNULUS	69.6				
TOTAL	3427.8	PUMP PRESSURE	2940.0	% DIFFERENCE	16.6

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.80	HYDROSTATIC PRESSURE	3002.6
CIRCULATING:	ECD	9.00	CIRCULATING PRESSURE	3072.2
PULLING OUT:	TRIP MARGIN	0.41	ESTIMATED SWAB	139.2
	EFFECTIVE MUD WEIGHT	8.39	BOTTOM HOLE PRESSURE	2863.3

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2100.0 AND TVD 2100.0

SPM 1 65 SPM 2 72 FLOW RATE 685

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	88	122	LAMINAR	2	86	11.3
HWDP/OH	0.231	19	71	118	LAMINAR	1	69	2.9
DP/OH	0.231	233	71	118	LAMINAR	1	69	35.1
DP/CSG	0.236	167	69	118	LAMINAR	1	68	23.9
DP/RIS	1.325	128	12	105	LAMINAR	0	12	0.4
TOTAL VOLUME		585			TOTAL PRESSURE DROP			73.4

LAG: 35.9 MINUTES 2331 STROKES #1 AND 2582 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2512.9	HHP	1004	IMPACT FORCE	1763
% SURFACE PRESSURE	87.0	HHP/sqin	13.11	JET VELOCITY	172

PRESSURE BREAKDOWN:

SURFACE	42.5				
STRING	924.7				
BIT	2512.9				
ANNULUS	73.4				
TOTAL	3553.5	PUMP PRESSURE	2890.0	% DIFFERENCE	23.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.80	HYDROSTATIC PRESSURE	3152.7
CIRCULATING:	ECD	9.01	CIRCULATING PRESSURE	3226.2
PULLING OUT:	TRIP MARGIN	0.41	ESTIMATED SWAB	146.9
	EFFECTIVE MUD WEIGHT	8.39	BOTTOM HOLE PRESSURE	3005.8

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2200.0 AND TVD 2200.0

SPM 1 0 SPM 2 110 FLOW RATE 550

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	70	102	LAMINAR	2	68	7.8
HWDP/OH	0.231	19	57	99	LAMINAR	1	55	2.0
DP/OH	0.231	257	57	99	LAMINAR	1	55	26.4
DP/CSG	0.236	167	56	99	LAMINAR	1	54	16.3
DP/RIS	1.325	128	10	86	LAMINAR	0	10	0.2
TOTAL VOLUME		608			TOTAL PRESSURE DROP			52.8

LAG: 46.4 MINUTES 0 STROKES #1 AND 5108 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1476.9	HHP	474	IMPACT FORCE	1091
% SURFACE PRESSURE	70.3	HHP/sqin	6.19	JET VELOCITY	131

PRESSURE BREAKDOWN:

SURFACE	27.8				
STRING	622.1				
BIT	1476.9				
ANNULUS	52.8				
TOTAL	2179.6	PUMP PRESSURE	2100.0	% DIFFERENCE	3.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	3340.4
CIRCULATING:	ECD	9.04	CIRCULATING PRESSURE	3393.1
PULLING OUT:	TRIP MARGIN	0.28	ESTIMATED SWAB	105.5
	EFFECTIVE MUD WEIGHT	8.62	BOTTOM HOLE PRESSURE	3234.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2300.0 AND TVD 2300.0

SPM 1 67 SPM 2 66 FLOW RATE 665

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	85	101	LAMINAR	2	83	8.4
HWDP/OH	0.231	19	69	97	LAMINAR	1	67	2.1
DP/OH	0.231	280	69	97	LAMINAR	1	67	30.9
DP/CSG	0.236	167	67	97	LAMINAR	1	66	17.5
DP/RIS	1.325	128	12	84	LAMINAR	0	12	0.3
TOTAL VOLUME		631			TOTAL PRESSURE DROP			59.2

LAG: 39.9 MINUTES 2671 STROKES #1 AND 2631 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2231.9	HHP	866	IMPACT FORCE	1649
% SURFACE PRESSURE	74.9	HHP/sqin	11.30	JET VELOCITY	158

PRESSURE BREAKDOWN:

SURFACE	40.2				
STRING	922.3				
BIT	2231.9				
ANNULUS	59.2				
TOTAL	3253.5	PUMP PRESSURE	2980.0	% DIFFERENCE	9.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	3609.9
CIRCULATING:	ECD	9.35	CIRCULATING PRESSURE	3669.1
PULLING OUT:	TRIP MARGIN	0.30	ESTIMATED SWAB	118.3
	EFFECTIVE MUD WEIGHT	8.90	BOTTOM HOLE PRESSURE	3491.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2400.0 AND TVD 2400.0

SPM 1 0 SPM 2 110 FLOW RATE 550

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	70	99	LAMINAR	2	68	7.8
HWDP/OH	0.231	19	57	95	LAMINAR	1	55	2.0
DP/OH	0.231	303	57	95	LAMINAR	1	55	31.1
DP/CSG	0.236	167	56	95	LAMINAR	1	54	16.3
DP/RIS	1.325	128	10	83	LAMINAR	0	10	0.2
TOTAL VOLUME		654			TOTAL PRESSURE DROP			57.5

LAG: 50.0 MINUTES 0 STROKES #1 AND 5496 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1576.5	HHP	506	IMPACT FORCE	1165
% SURFACE PRESSURE	70.4	HHP/sqin	6.60	JET VELOCITY	131

PRESSURE BREAKDOWN:

SURFACE	29.3				
STRING	689.2				
BIT	1576.5				
ANNULUS	57.5				
TOTAL	2352.5	PUMP PRESSURE	2240.0	% DIFFERENCE	5.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3889.7
CIRCULATING:	ECD	9.64	CIRCULATING PRESSURE	3947.2
PULLING OUT:	TRIP MARGIN	0.28	ESTIMATED SWAB	115.0
	EFFECTIVE MUD WEIGHT	9.22	BOTTOM HOLE PRESSURE	3774.7

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2500.0 AND TVD 2500.0

SPM 1 60 SPM 2 60 FLOW RATE 600

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.186	38	77	122	LAMINAR	1	75	12.5
HWDP/OH	0.231	19	62	114	LAMINAR	1	61	2.9
DP/OH	0.231	325	62	114	LAMINAR	1	61	49.7
DP/CSG	0.236	167	61	114	LAMINAR	1	60	24.2
DP/RIS	1.325	128	11	88	LAMINAR	0	11	0.2
TOTAL VOLUME		677			TOTAL PRESSURE DROP			89.6

LAG: 47.4 MINUTES 2844 STROKES #1 AND 2844 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	2081.3	HHP	728	IMPACT FORCE	1460
% SURFACE PRESSURE	72.8	HHP/sqin	9.51	JET VELOCITY	150

PRESSURE BREAKDOWN:

SURFACE	40.8
STRING	989.0
BIT	2081.3
ANNULUS	89.6
TOTAL	3200.7

PUMP PRESSURE 2860.0 % DIFFERENCE 11.9

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	4051.8
CIRCULATING:	ECD	9.71	CIRCULATING PRESSURE	4141.3
DRILLING OUT:	TRIP MARGIN	0.42	ESTIMATED SWAB	179.1
	EFFECTIVE MUD WEIGHT	9.08	BOTTOM HOLE PRESSURE	3872.7

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 revoloutions per minute

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

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

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

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

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

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

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

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

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

BIT NUMBER	2	IADC CODE	111	INTERVAL	235.0- 818.0
HUGHES OSC-3AJ		SIZE	15.000	NOZZLES	20 20 18
COST	2000.00	TRIP TIME	4.0	BIT RUN	583.0
TOTAL HOURS	7.48	TOTAL TURNS	75478	CONDITION	T3 B6 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
245.0	500.0	12.0	80	8.6	0.27	0.02	96	7	1624	8.5	12.1
250.0	500.0	14.0	80	8.6	0.28	0.03	144	7	1085	8.5	12.1
255.0	500.0	12.0	80	8.6	0.27	0.04	192	7.08	815.48	8.5	12.2
260.0	454.0	12.0	80	8.6	0.29	0.05	245	7.80	653.95	8.5	12.2
265.0	400.0	12.0	80	8.6	0.32	0.06	305	8.86	546.43	8.5	12.2
270.0	474.0	13.0	99	8.6	0.34	0.07	368	7.47	469.44	8.5	12.2
275.0	400.0	10.0	99	8.6	0.36	0.09	442	8.86	411.87	8.5	12.2
280.0	380.0	6.0	100	8.6	0.34	0.10	521	9.32	367.14	8.5	12.2
285.0	380.0	7.0	100	8.6	0.35	0.11	600	9.32	331.36	8.5	12.3
290.0	370.0	6.0	100	8.6	0.35	0.13	681	9.57	302.10	8.5	12.3
295.0	430.0	7.0	100	8.6	0.32	0.14	751	8.24	277.61	8.5	12.3
300.0	500.0	7.0	145	8.6	0.37	0.15	838	7.08	256.80	8.5	12.3
305.0	340.0	7.0	140	8.6	0.45	0.16	961	10.42	239.21	8.5	12.3
310.0	430.0	7.0	155	8.6	0.42	0.17	1069	8.24	223.81	8.5	12.4
315.0	500.0	7.0	155	8.6	0.39	0.18	1162	7.08	210.26	8.5	12.4
320.0	500.0	8.0	160	8.6	0.41	0.19	1258	7.08	198.31	8.5	12.4
325.0	500.0	8.0	160	8.6	0.41	0.20	1354	7.08	187.69	8.5	12.4
330.0	340.0	9.0	160	8.6	0.51	0.22	1495	10.42	178.36	8.5	12.4
335.0	400.0	9.0	160	8.6	0.47	0.23	1615	8.86	169.88	8.5	12.4
340.0	300.0	10.0	145	8.6	0.52	0.25	1760	11.81	162.35	8.5	12.5
345.0	313.0	10.0	160	8.6	0.54	0.26	1914	11.32	155.49	8.5	12.5
350.0	304.0	9.0	165	8.6	0.54	0.28	2077	11.65	149.24	8.5	12.5
355.0	270.0	10.0	165	8.6	0.58	0.30	2260	13.12	143.56	8.5	12.5
360.0	300.0	11.0	160	8.6	0.56	0.32	2420	11.81	138.29	8.5	12.5
365.0	340.0	10.0	165	8.6	0.53	0.33	2565	10.42	133.38	8.5	12.5
370.0	250.0	9.0	165	8.6	0.59	0.35	2763	14.17	128.96	8.5	12.6
375.0	220.0	8.0	165	8.6	0.60	0.37	2988	16.10	124.93	8.5	12.6
380.0	210.0	10.0	150	8.6	0.62	0.40	3203	16.87	121.20	8.5	12.6
385.0	270.0	11.0	150	8.6	0.57	0.42	3369	13.12	117.60	8.5	12.6
390.0	200.0	10.0	165	8.6	0.65	0.44	3617	17.71	114.38	8.5	12.6
395.0	180.0	10.0	165	8.6	0.68	0.47	3892	19.68	111.42	8.5	12.6
400.0	220.0	11.0	170	8.6	0.65	0.49	4124	16.10	108.53	8.5	12.7
405.0	180.0	11.0	170	8.6	0.70	0.52	4407	19.68	105.92	8.5	12.7
410.0	280.0	12.0	170	8.6	0.60	0.54	4589	12.65	103.25	8.5	12.7
415.0	200.0	11.0	170	8.6	0.67	0.56	4844	17.71	100.88	8.5	12.7
420.0	240.0	16.0	180	8.6	0.70	0.58	5069	14.76	98.55	8.5	12.7
425.0	180.0	16.0	180	8.6	0.81	0.61	5407	22.14	96.54	8.5	12.7
430.0	220.0	18.0	170	8.6	0.73	0.64	5639	16.10	94.48	8.5	12.8
435.0	150.0	17.0	160	8.6	0.80	0.67	5959	23.61	92.70	8.5	12.8
440.0	225.0	18.0	148	8.6	0.68	0.69	6156	15.74	90.83	8.5	12.8
445.0	300.0	18.0	150	8.6	0.61	0.71	6306	11.81	88.95	8.5	12.8
450.0	190.0	15.0	155	8.6	0.71	0.74	6551	18.64	87.31	8.5	12.8
455.0	130.0	15.0	130	8.6	0.76	0.77	6851	27.25	85.94	8.5	12.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
460.0	180.0	14.0	145	8.6	0.70	0.80	7092	19.68	84.47	8.5	12.9
465.0	145.0	18.0	145	8.6	0.80	0.84	7392	24.43	83.17	8.5	12.9
470.0	170.0	18.0	150	8.6	0.76	0.87	7657	20.84	81.84	8.5	12.9
475.0	95.0	17.0	150	8.6	0.91	0.92	8131	37.28	80.91	8.5	12.9
480.0	100.0	17.0	150	8.6	0.90	0.97	8581	35.42	79.98	8.5	12.9
485.0	250.0	17.0	150	8.6	0.65	0.99	8761	14.17	78.67	8.5	12.9
490.0	230.0	17.0	150	8.6	0.67	1.01	8956	15.40	77.43	8.5	13.0
495.0	350.0	17.0	155	8.6	0.57	1.02	9089	10.12	76.13	8.5	13.0
500.0	120.0	22.0	146	8.6	0.89	1.07	9454	29.52	75.25	8.5	13.0
505.0	95.0	22.0	146	8.6	0.96	1.12	9915	37.28	74.55	8.5	12.3
510.0	85.0	22.0	146	8.6	0.99	1.18	10431	41.67	73.95	8.5	13.0
515.0	90.0	18.0	160	8.6	0.95	1.23	10964	39.36	73.33	8.5	13.0
520.0	72.0	16.0	155	8.6	0.98	1.30	11610	49.19	72.91	8.5	13.1
525.0	72.0	16.0	155	8.6	0.98	1.37	12256	49.19	72.50	8.5	13.1
530.0	68.0	16.0	155	8.6	1.00	1.44	12939	52.09	72.16	8.5	13.1
535.0	72.0	16.0	155	8.6	0.98	1.51	13585	49.19	71.77	8.5	13.1
540.0	54.0	16.0	155	8.6	1.06	1.61	14446	65.59	71.67	8.5	13.1
545.0	58.0	18.0	155	8.6	1.07	1.69	15248	61.07	71.50	8.5	13.1
550.0	129.0	19.0	165	8.6	0.88	1.73	15632	27.46	70.80	8.5	13.1
555.0	69.0	21.0	165	8.6	1.08	1.80	16349	51.33	70.50	8.5	13.2
560.0	60.0	20.0	170	8.6	1.11	1.89	17199	59.03	70.32	8.5	13.2
565.0	69.0	20.0	165	8.6	1.06	1.96	17917	51.33	70.03	8.5	13.2
570.0	78.0	19.0	165	8.6	1.02	2.02	18551	45.41	69.67	8.5	13.2
575.0	140.0	20.0	170	8.6	0.87	2.06	18915	25.30	69.01	8.5	13.2
580.0	130.0	20.0	170	8.6	0.89	2.10	19308	27.25	68.41	8.5	13.2
585.0	43.0	20.0	170	8.6	1.20	2.21	20494	82.37	68.61	8.5	13.2
590.0	50.0	21.0	170	8.6	1.18	2.31	21514	70.84	68.64	8.5	13.3
595.0	78.0	21.0	170	8.6	1.05	2.38	22168	45.41	68.32	8.5	13.3
600.0	120.0	23.0	180	8.6	0.96	2.42	22618	29.52	67.79	8.5	13.3
605.0	68.0	23.0	180	8.6	1.13	2.49	23412	52.09	67.57	8.5	13.3
610.0	88.0	21.0	180	8.6	1.03	2.55	24025	40.25	67.21	8.5	13.3
615.0	75.0	21.0	180	8.6	1.08	2.62	24745	47.23	66.95	8.5	13.3
620.0	50.0	20.0	179	8.6	1.18	2.72	25819	70.84	67.00	8.5	13.4
625.0	68.0	20.0	179	8.6	1.09	2.79	26609	52.09	66.81	8.5	13.4
630.0	85.0	22.0	179	8.6	1.05	2.85	27241	41.67	66.49	8.5	13.4
635.0	88.0	21.0	179	8.6	1.03	2.91	27851	40.25	66.16	8.5	13.4
640.0	63.0	21.0	185	8.6	1.13	2.99	28732	56.22	66.04	8.5	13.4
645.0	83.0	21.0	185	8.6	1.06	3.05	29401	42.67	65.75	8.5	13.4
650.0	80.0	19.0	190	8.6	1.05	3.11	30113	44.28	65.49	8.5	13.4
655.0	79.0	19.0	190	8.6	1.05	3.17	30835	44.84	65.25	8.5	13.5
660.0	83.0	20.0	180	8.6	1.03	3.23	31485	42.67	64.98	8.5	13.5
665.0	60.0	20.0	180	8.6	1.13	3.32	32385	59.03	64.91	8.5	13.5
670.0	88.0	21.0	175	8.6	1.02	3.37	32982	40.25	64.63	8.5	13.5
675.0	75.0	21.0	175	8.6	1.07	3.44	33682	47.23	64.43	8.5	13.5
680.0	89.0	20.0	180	8.6	1.02	3.50	34289	39.80	64.15	8.5	13.5
685.0	82.0	20.0	180	8.6	1.04	3.56	34947	43.20	63.92	8.5	13.5
690.0	62.0	19.0	180	8.6	1.10	3.64	35818	57.13	63.85	8.5	13.6
695.0	57.0	19.0	180	8.6	1.13	3.72	36766	62.14	63.83	8.5	13.6
700.0	70.0	17.0	180	8.6	1.04	3.80	37537	50.60	63.69	8.5	13.6
705.0	55.0	19.0	180	8.6	1.14	3.89	38519	64.40	63.69	8.5	13.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
710.0	67.0	19.0	180	8.6	1.08	3.96	39325	52.87	63.58	8.5	13.6
715.0	55.0	19.0	180	8.6	1.14	4.05	40307	64.40	63.59	8.5	13.0
720.0	69.0	16.0	180	8.6	1.03	4.13	41089	51.33	63.46	8.5	13.6
725.0	58.0	16.0	180	8.6	1.08	4.21	42020	61.07	63.44	8.5	13.6
730.0	36.0	14.0	164	8.9	1.11	4.35	43387	98.39	63.79	8.5	13.7
735.0	28.0	15.0	165	8.9	1.19	4.53	45155	126.50	64.42	8.5	13.7
740.0	26.0	19.0	170	8.9	1.28	4.72	47116	136.23	65.13	8.5	13.7
745.0	26.0	19.0	170	8.9	1.28	4.91	49078	136.23	65.83	8.5	13.7
750.0	29.0	21.0	190	8.9	1.32	5.09	51043	122.14	66.37	8.5	13.7
755.0	35.0	21.0	190	8.9	1.26	5.23	52672	101.20	66.71	8.5	13.7
760.0	35.0	23.0	170	8.9	1.26	5.37	54129	101.20	67.04	8.5	13.7
765.0	43.0	23.0	170	8.9	1.20	5.49	55315	82.37	67.18	8.5	13.8
770.0	28.0	21.0	170	8.9	1.30	5.67	57137	126.50	67.73	8.5	13.8
775.0	26.0	21.0	170	8.9	1.32	5.86	59098	136.23	68.37	8.5	13.8
780.0	22.5	20.0	170	8.9	1.34	6.08	61365	157.42	69.19	8.5	13.8
785.0	25.0	22.0	170	8.9	1.34	6.28	63405	141.68	69.85	8.5	13.8
790.0	22.4	21.0	168	8.9	1.35	6.50	65655	158.13	70.64	8.5	13.8
795.0	27.0	20.0	160	8.9	1.27	6.69	67432	131.19	71.18	8.5	13.8
800.0	39.0	20.0	175	8.9	1.20	6.82	68779	90.82	71.35	8.5	13.8
805.0	34.0	20.0	175	8.9	1.23	6.96	70323	104.18	71.64	8.5	13.9
810.0	25.6	18.0	160	8.9	1.26	7.16	72198	138.36	72.22	8.5	13.9
815.0	26.0	18.0	170	8.9	1.27	7.35	74159	136.23	72.77	8.5	13.9
818.0	23.2	18.0	170	8.9	1.30	7.48	75478	152.67	73.19	8.5	13.9

BIT NUMBER	3	IADC CODE	114	INTERVAL	818.0- 1298.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	5.7	BIT RUN	480.0
TOTAL HOURS	13.25	TOTAL TURNS	117216	CONDITION	T5 B6 G0.125

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
820.0	39.7	22.0	122	9.0	1.24	0.05	369	89	10634	8.5	13.9
821.0	39.8	22.0	122	9.0	1.24	0.08	553	89	7119	8.5	13.9
822.0	28.0	22.0	122	9.0	1.34	0.11	814	127	5371	8.5	13.9
823.0	28.4	22.0	122	9.0	1.34	0.15	1072	125	4322	8.5	13.9
824.0	36.2	22.0	122	9.0	1.26	0.17	1274	98	3618	8.5	13.9
825.0	34.6	22.0	122	9.0	1.28	0.20	1486	102	3115	8.5	13.9
826.0	13.6	18.0	95	9.0	1.41	0.28	1905	260	2759	8.5	13.9
827.0	28.4	18.0	95	9.0	1.20	0.31	2105	125	2466	8.5	13.9
828.0	24.0	18.0	95	9.0	1.24	0.35	2343	148	2234	8.5	13.9
829.0	25.9	18.0	95	9.0	1.22	0.39	2563	137	2043	8.5	13.9
830.0	34.5	18.0	95	9.0	1.14	0.42	2728	103	1882	8.5	13.9
831.0	33.0	21.0	80	9.0	1.15	0.45	2874	107	1745	8.5	13.9
832.0	23.3	21.0	80	9.0	1.25	0.49	3080	152	1631	8.5	13.9
833.0	28.0	21.0	110	9.0	1.29	0.53	3315	127	1531	8.5	13.9
834.0	31.2	21.0	110	9.0	1.26	0.56	3527	114	1442	8.5	13.9
835.0	20.3	22.0	110	9.0	1.41	0.61	3852	174	1368	8.5	13.9
836.0	43.5	21.0	112	9.0	1.17	0.63	4007	81	1296	8.5	13.9
837.0	39.8	21.0	112	9.0	1.19	0.66	4175	89	1233	8.5	13.9
838.0	49.0	22.0	110	9.0	1.14	0.68	4310	72	1175	8.5	13.9
839.0	44.3	22.0	110	9.0	1.17	0.70	4459	80	1123	8.5	13.9
840.0	25.9	21.0	110	9.0	1.32	0.74	4714	137	1078	8.5	14.0
841.0	37.9	21.0	110	9.0	1.20	0.77	4888	93	1035	8.5	14.0
842.0	37.9	22.0	110	9.0	1.22	0.79	5062	93.46	995.86	8.5	14.0
843.0	41.9	22.0	110	9.0	1.19	0.82	5220	84.53	959.41	8.5	14.0
844.0	29.1	21.0	155	9.0	1.39	0.85	5539	121.72	927.19	8.5	14.0
845.0	35.6	21.0	155	9.0	1.33	0.88	5801	99.49	896.53	8.5	14.0
846.0	28.7	21.0	155	9.0	1.39	0.91	6125	123.41	868.92	8.5	14.0
847.0	41.9	19.0	155	9.0	1.24	0.94	6347	84.53	841.87	8.5	14.0
848.0	37.9	19.0	155	9.0	1.27	0.97	6592	93.46	816.93	8.5	14.0
849.0	34.5	19.0	155	9.0	1.30	0.99	6861	102.67	793.89	8.5	14.0
850.0	23.5	19.0	155	9.0	1.41	1.04	7257	150.72	773.79	8.5	14.0
851.0	33.5	18.0	140	9.0	1.26	1.07	7508	105.73	753.54	8.5	14.0
852.0	34.0	20.0	140	9.0	1.29	1.10	7755	104.18	734.44	8.5	14.0
853.0	34.4	20.0	140	9.0	1.29	1.12	7999	102.97	716.40	8.5	14.0
854.0	36.7	20.0	140	9.0	1.27	1.15	8228	96.51	699.18	8.5	14.0
855.0	55.9	20.0	140	9.0	1.14	1.17	8378	63.36	682.00	8.5	14.0
856.0	52.4	20.0	140	9.0	1.16	1.19	8539	67.60	665.83	8.5	14.0
857.0	49.0	19.0	140	9.0	1.17	1.21	8710	72.29	650.61	8.5	14.0
858.0	29.7	18.0	140	9.0	1.30	1.24	8993	119.26	637.33	8.5	14.0
859.0	48.0	19.0	140	9.0	1.17	1.26	9168	73.79	623.58	8.5	14.0
860.0	35.6	20.0	140	9.0	1.28	1.29	9404	99.49	611.10	8.5	14.0
861.0	34.5	20.0	140	9.0	1.29	1.32	9647	102.67	599.28	8.5	14.0
862.0	30.9	18.0	140	9.0	1.28	1.35	9919	114.63	588.26	8.5	14.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
863.0	31.7	18.0	140	9.0	1.28	1.39	10184	111.74	577.67	8.5	14.0
864.0	28.4	21.0	140	9.0	1.36	1.42	10480	124.72	567.83	8.5	14.0
865.0	38.5	20.0	140	9.0	1.25	1.45	10698	92.00	557.70	8.5	14.0
866.0	24.6	18.0	120	9.0	1.31	1.49	10991	143.98	549.08	8.5	14.0
867.0	36.7	20.0	120	9.0	1.22	1.51	11187	96.51	539.85	8.5	14.0
868.0	31.7	20.0	120	9.0	1.27	1.55	11414	111.74	531.29	8.5	14.0
869.0	34.0	20.0	110	9.0	1.22	1.58	11608	104.18	522.91	8.5	14.0
870.0	39.8	21.0	110	9.0	1.19	1.60	11774	88.99	514.57	8.5	14.0
871.0	40.2	24.0	155	9.0	1.34	1.63	12005	88.11	506.52	8.5	14.0
872.0	38.8	23.0	155	9.0	1.33	1.65	12245	91.29	498.83	8.5	14.0
873.0	51.2	23.0	155	9.0	1.25	1.67	12427	69.18	491.02	8.5	14.0
874.0	45.2	24.0	155	9.0	1.30	1.69	12633	78.36	483.65	8.5	14.0
875.0	45.2	24.0	155	9.0	1.30	1.71	12838	78.36	476.54	8.5	14.0
876.0	50.1	24.0	155	9.0	1.27	1.73	13024	70.70	469.54	8.5	14.0
877.0	53.6	25.0	155	9.0	1.26	1.75	13197	66.08	462.70	8.5	14.0
878.0	43.5	25.0	155	9.0	1.33	1.78	13411	81.43	456.35	8.5	14.0
879.0	78.0	25.0	155	9.0	1.14	1.79	13530	45.41	449.61	8.5	14.0
880.0	88.0	24.0	155	9.0	1.09	1.80	13636	40.25	443.01	8.5	14.1
881.0	95.7	23.0	155	9.0	1.05	1.81	13733	37.01	436.57	8.5	14.1
882.0	92.0	24.0	155	9.0	1.08	1.82	13834	38.50	430.35	8.5	14.1
883.0	84.2	24.0	155	9.0	1.11	1.83	13945	42.07	424.37	8.5	14.1
884.0	91.1	24.0	155	9.0	1.08	1.84	14047	38.88	418.53	8.5	14.1
885.0	61.7	24.0	155	9.0	1.20	1.86	14198	57.41	413.14	8.5	14.1
886.0	58.2	24.0	155	9.0	1.22	1.88	14357	60.86	407.96	8.5	14.1
887.0	76.5	24.0	155	9.0	1.14	1.89	14479	46.30	402.72	8.5	14.1
888.0	78.0	24.0	155	9.0	1.13	1.90	14598	45.41	397.62	8.5	14.1
889.0	84.5	23.0	155	9.0	1.09	1.92	14708	41.92	392.61	8.5	14.1
890.0	84.6	23.0	155	9.0	1.09	1.93	14818	41.87	387.73	8.5	14.1
891.0	82.4	24.0	140	9.0	1.08	1.94	14920	42.99	383.01	8.5	14.1
892.0	45.2	24.0	140	9.0	1.27	1.96	15106	78.36	378.89	8.5	14.1
893.0	81.7	24.0	140	9.0	1.08	1.97	15209	43.35	374.42	8.5	14.1
894.0	76.5	24.0	140	9.0	1.10	1.99	15319	46.30	370.10	8.5	14.1
895.0	59.1	24.0	140	9.0	1.18	2.00	15461	59.93	366.08	8.5	14.1
896.0	56.2	23.0	140	9.0	1.19	2.02	15610	63.02	362.19	8.5	14.1
897.0	71.9	23.0	140	9.0	1.11	2.04	15727	49.26	358.23	8.5	14.1
898.0	76.5	23.0	140	9.0	1.09	2.05	15837	46.30	354.33	8.5	14.1
899.0	66.9	23.0	140	9.0	1.13	2.06	15962	52.94	350.61	8.5	14.1
900.0	66.9	23.0	140	9.0	1.13	2.08	16088	52.94	346.98	8.5	14.1
901.0	45.2	22.0	140	9.0	1.24	2.10	16274	78.36	343.74	8.5	14.1
902.0	84.6	22.0	140	9.0	1.05	2.11	16373	41.87	340.15	8.5	14.1
903.0	81.2	22.0	140	9.0	1.06	2.12	16477	43.62	336.66	8.5	14.1
904.0	84.6	22.0	140	9.0	1.05	2.14	16576	41.87	333.23	8.5	14.1
905.0	68.8	22.0	140	9.0	1.11	2.15	16698	51.48	329.99	8.5	14.1
906.0	71.9	21.0	140	9.0	1.08	2.17	16815	49.26	326.80	8.5	14.1
907.0	58.6	22.0	140	9.0	1.16	2.18	16958	60.44	323.81	8.5	14.1
908.0	47.2	22.0	140	9.0	1.23	2.20	17136	75.04	321.05	8.5	14.1
909.0	61.7	23.0	140	9.0	1.16	2.22	17272	57.41	318.15	8.5	14.1
910.0	61.6	23.0	140	9.0	1.16	2.24	17409	57.50	315.32	8.5	14.1
911.0	35.9	23.0	140	9.0	1.33	2.26	17643	98.66	312.99	8.5	14.1
912.0	71.9	24.0	140	9.0	1.12	2.28	17759	49.26	310.18	8.5	14.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
913.0	62.4	24.0	140	9.0	1.17	2.29	17894	56.76	307.51	8.5	14.1
914.0	73.1	25.0	135	9.0	1.12	2.31	18005	48.45	304.82	8.5	14.1
915.0	64.0	24.0	135	9.0	1.15	2.32	18131	55.34	302.24	8.5	14.1
916.0	68.8	24.0	135	9.0	1.13	2.34	18249	51.48	299.68	8.5	14.1
917.0	73.1	23.0	135	9.0	1.09	2.35	18360	48.45	297.15	8.5	14.1
918.0	68.8	23.0	135	9.0	1.11	2.37	18478	51.48	294.69	8.5	14.1
919.0	63.3	23.0	140	9.0	1.15	2.38	18610	55.96	292.33	8.5	14.1
920.0	64.3	24.0	140	9.0	1.16	2.40	18741	55.09	290.00	8.5	14.1
921.0	42.7	22.0	140	9.0	1.26	2.42	18938	82.95	287.99	8.5	14.1
922.0	78.0	22.0	140	9.0	1.07	2.43	19045	45.41	285.66	8.5	14.2
923.0	71.8	23.0	140	9.0	1.11	2.45	19162	49.33	283.41	8.5	14.2
924.0	66.9	22.0	140	9.0	1.12	2.46	19288	52.94	281.23	8.5	14.2
925.0	66.9	22.0	140	9.0	1.12	2.48	19414	52.94	279.10	8.5	14.2
926.0	68.8	22.0	140	9.0	1.11	2.49	19536	51.48	276.99	8.5	14.2
927.0	66.9	22.0	140	9.0	1.12	2.51	19661	52.94	274.94	8.5	14.2
928.0	63.3	22.0	140	9.0	1.14	2.52	19794	55.96	272.95	8.5	14.2
929.0	58.6	22.0	140	9.0	1.16	2.54	19937	60.44	271.03	8.5	14.2
930.0	37.9	24.0	140	9.0	1.32	2.57	20159	93.46	269.45	8.5	14.2
931.0	38.8	24.0	140	9.0	1.32	2.59	20375	91.29	267.87	8.5	14.2
932.0	71.9	23.0	140	9.0	1.11	2.61	20492	49.26	265.95	8.5	14.2
933.0	68.8	23.0	140	9.0	1.12	2.62	20614	51.48	264.09	8.5	14.2
934.0	66.9	23.0	140	9.0	1.13	2.64	20740	52.94	262.27	8.5	14.2
935.0	63.3	24.0	140	9.0	1.16	2.65	20873	55.96	260.50	8.5	14.2
936.0	73.1	23.0	140	9.0	1.10	2.66	20987	48.45	258.71	8.5	14.2
937.0	66.8	22.0	140	9.0	1.12	2.68	21113	53.02	256.98	8.5	14.2
938.0	66.8	22.0	140	9.0	1.12	2.69	21239	53.02	255.28	8.5	14.2
939.0	56.2	26.0	140	9.0	1.23	2.71	21388	63.02	253.69	8.5	14.2
940.0	51.2	25.0	140	9.0	1.24	2.73	21552	69.18	252.18	8.5	14.2
941.0	78.0	24.0	140	9.0	1.10	2.74	21660	45.41	250.50	8.5	14.2
942.0	37.9	25.0	140	9.0	1.34	2.77	21882	93.46	249.23	8.5	14.2
943.0	66.9	25.0	140	9.0	1.16	2.79	22007	52.94	247.66	8.5	14.2
944.0	71.9	25.0	140	9.0	1.14	2.80	22124	49.26	246.08	8.5	14.2
945.0	66.9	24.0	140	9.0	1.15	2.81	22250	52.94	244.56	8.5	14.2
946.0	71.9	23.0	140	9.0	1.11	2.83	22367	49.26	243.04	8.5	14.2
947.0	66.9	25.0	140	9.0	1.16	2.84	22492	52.94	241.56	8.5	14.2
948.0	68.2	25.0	140	9.0	1.15	2.86	22615	51.94	240.11	8.5	14.2
949.0	62.1	24.0	138	9.0	1.16	2.87	22749	57.04	238.71	8.5	14.2
950.0	51.5	23.0	138	9.0	1.21	2.89	22909	68.78	237.42	8.5	14.2
951.0	64.5	23.0	138	9.0	1.14	2.91	23038	54.91	236.05	8.5	14.2
952.0	61.7	25.0	138	9.0	1.18	2.93	23172	57.41	234.72	8.5	14.2
953.0	64.0	25.0	138	9.0	1.17	2.94	23301	55.34	233.39	8.5	14.2
954.0	66.9	25.0	138	9.0	1.15	2.96	23425	52.94	232.06	8.5	14.2
955.0	58.6	23.0	138	9.0	1.17	2.97	23566	60.44	230.81	8.5	14.2
956.0	63.3	23.0	138	9.0	1.14	2.99	23697	55.96	229.54	8.5	14.2
957.0	73.1	23.0	138	9.0	1.10	3.00	23811	48.45	228.24	8.5	14.2
958.0	71.9	23.0	138	9.0	1.11	3.02	23926	49.26	226.96	8.5	14.2
959.0	66.9	23.0	138	9.0	1.13	3.03	24049	52.94	225.73	8.5	14.2
960.0	42.7	25.0	140	9.0	1.30	3.05	24246	82.95	224.72	8.5	14.2
961.0	68.8	25.0	140	9.0	1.15	3.07	24368	51.48	223.51	8.5	14.2
962.0	37.9	26.0	140	9.0	1.35	3.10	24590	93.46	222.61	8.5	14.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
963.0	44.3	26.0	140	9.0	1.30	3.12	24780	79.95	221.62	8.5	14.2
964.0	58.6	27.0	140	9.0	1.23	3.14	24923	60.44	220.52	8.5	14.3
965.0	51.2	26.0	140	9.0	1.26	3.16	25087	69.18	219.49	8.5	14.3
966.0	61.7	26.0	140	9.0	1.20	3.17	25223	57.41	218.39	8.5	14.3
967.0	58.6	27.0	140	9.0	1.23	3.19	25366	60.44	217.33	8.5	14.3
968.0	81.7	27.0	140	9.0	1.12	3.20	25469	43.35	216.17	8.5	14.3
969.0	35.6	27.0	140	9.0	1.39	3.23	25705	99.49	215.40	8.5	14.3
970.0	41.9	23.0	135	9.0	1.27	3.25	25898	84.53	214.54	8.5	14.3
971.0	35.6	23.0	135	9.0	1.32	3.28	26126	99.49	213.79	8.5	14.3
972.0	63.3	20.0	150	9.0	1.13	3.30	26268	55.96	212.76	8.5	14.3
973.0	55.9	19.0	150	9.0	1.15	3.31	26429	63.36	211.80	8.5	14.3
974.0	47.0	20.0	150	9.0	1.22	3.34	26621	75.36	210.92	8.5	14.3
975.0	44.3	20.0	150	9.0	1.23	3.36	26824	79.95	210.09	8.5	14.3
976.0	55.9	20.0	150	9.0	1.16	3.38	26985	63.36	209.16	8.5	14.3
977.0	58.6	19.0	140	9.0	1.11	3.39	27128	60.44	208.23	8.5	14.3
978.0	31.2	22.0	140	9.0	1.35	3.43	27397	113.53	207.63	8.5	14.3
979.0	45.2	24.0	140	9.0	1.27	3.45	27583	78.36	206.83	8.5	14.3
980.0	40.2	22.0	140	9.0	1.27	3.47	27792	88.11	206.10	8.5	14.3
981.0	44.3	23.0	140	9.0	1.26	3.49	27982	79.95	205.32	8.5	14.3
982.0	42.7	21.0	140	9.0	1.24	3.52	28179	82.95	204.58	8.5	14.3
983.0	37.9	21.0	140	9.0	1.28	3.54	28400	93.46	203.90	8.5	14.3
984.0	41.5	22.0	140	9.0	1.26	3.57	28603	85.35	203.19	8.5	14.3
985.0	41.9	21.0	140	9.0	1.25	3.59	28803	84.53	202.48	8.5	14.3
986.0	42.7	21.0	140	9.0	1.24	3.62	29000	82.95	201.77	8.5	14.3
987.0	34.5	21.0	140	9.0	1.30	3.64	29243	102.67	201.18	8.5	14.3
988.0	45.2	21.0	140	9.0	1.22	3.67	29429	78.36	200.46	8.5	14.3
989.0	45.2	22.0	140	9.0	1.24	3.69	29615	78.36	199.75	8.5	14.3
990.0	44.3	22.0	140	9.0	1.24	3.71	29805	79.95	199.05	8.5	14.3
991.0	48.0	22.0	140	9.0	1.22	3.73	29980	73.79	198.32	8.5	14.3
992.0	51.2	22.0	140	9.0	1.20	3.75	30144	69.18	197.58	8.5	14.3
993.0	48.0	22.0	140	9.0	1.22	3.77	30319	73.79	196.88	8.5	14.3
994.0	47.0	22.0	140	9.0	1.23	3.79	30497	75.36	196.18	8.5	14.3
995.0	50.1	22.0	140	9.0	1.21	3.81	30665	70.70	195.48	8.5	14.3
996.0	25.9	22.0	140	9.0	1.41	3.85	30989	136.76	195.15	8.5	14.3
997.0	49.0	24.0	140	9.0	1.24	3.87	31161	72.29	194.46	8.5	14.3
998.0	46.1	24.0	140	9.0	1.26	3.89	31343	76.83	193.81	8.5	14.3
999.0	50.1	22.0	140	9.0	1.21	3.91	31511	70.70	193.13	8.5	14.3
1000.0	55.9	23.0	140	9.0	1.19	3.93	31661	63.36	192.41	8.5	14.3
1001.0	47.0	23.0	140	9.0	1.24	3.95	31840	75.36	191.77	8.5	14.3
1002.0	53.6	23.0	140	9.0	1.20	3.97	31996	66.08	191.09	8.5	14.3
1003.0	50.1	23.0	140	9.0	1.22	3.99	32164	70.70	190.44	8.5	14.3
1004.0	52.4	23.0	140	9.0	1.21	4.01	32324	67.60	189.78	8.5	14.3
1005.0	34.2	23.0	140	9.0	1.34	4.04	32570	103.57	189.32	8.5	14.3
1006.0	33.0	23.0	140	9.0	1.35	4.07	32824	107.33	188.88	8.5	14.3
1007.0	24.0	23.0	140	9.0	1.45	4.11	33174	147.58	188.66	8.5	14.3
1008.0	38.0	23.0	140	9.0	1.31	4.14	33396	93.21	188.16	8.5	14.4
1009.0	38.1	23.0	140	9.0	1.31	4.17	33616	92.97	187.66	8.5	14.4
1010.0	49.0	23.0	140	9.0	1.23	4.19	33787	72.29	187.06	8.5	14.4
1011.0	53.4	23.0	140	9.0	1.20	4.20	33945	66.33	186.44	8.5	14.4
1012.0	51.2	23.0	140	9.0	1.22	4.22	34109	69.18	185.83	8.5	14.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1013.0	49.0	23.0	140	9.0	1.23	4.24	34280	72.29	185.25	8.5	14.4
1014.0	30.9	23.0	140	9.0	1.37	4.28	34552	114.63	184.89	8.5	14.4
1015.0	48.0	23.0	140	9.0	1.24	4.30	34727	73.79	184.33	8.5	14.4
1016.0	25.9	23.0	140	9.0	1.43	4.34	35051	136.76	184.09	8.5	14.4
1017.0	47.0	23.0	140	9.0	1.24	4.36	35230	75.36	183.54	8.5	14.4
1018.0	51.2	22.0	145	9.0	1.21	4.38	35400	69.18	182.97	8.5	14.4
1019.0	52.4	22.0	145	9.0	1.20	4.40	35566	67.60	182.39	8.5	14.4
1020.0	55.9	22.0	145	9.0	1.18	4.41	35722	63.36	181.80	8.5	14.4
1021.0	51.2	21.0	145	9.0	1.20	4.43	35892	69.18	181.25	8.5	14.4
1022.0	52.4	21.0	145	9.0	1.19	4.45	36058	67.60	180.69	8.5	14.4
1023.0	33.0	24.0	145	9.0	1.38	4.48	36321	107.33	180.33	8.5	14.4
1024.0	51.2	22.0	145	9.0	1.21	4.50	36491	69.18	179.79	8.5	14.4
1025.0	51.2	22.0	145	9.0	1.21	4.52	36661	69.18	179.26	8.5	14.4
1026.0	52.4	22.0	145	9.0	1.20	4.54	36827	67.60	178.72	8.5	14.4
1027.0	53.0	22.0	145	9.0	1.20	4.56	36991	66.83	178.19	8.5	14.4
1028.0	51.2	22.0	145	9.0	1.21	4.58	37161	69.18	177.67	8.5	14.4
1029.0	55.9	22.0	145	9.0	1.18	4.60	37317	63.36	177.13	8.5	14.4
1030.0	47.0	22.0	145	9.0	1.24	4.62	37502	75.36	176.65	8.5	14.4
1031.0	49.0	22.0	145	9.0	1.22	4.64	37680	72.29	176.16	8.5	14.4
1032.0	50.1	22.0	145	9.0	1.22	4.66	37853	70.70	175.66	8.5	14.4
1033.0	42.7	23.0	140	9.0	1.27	4.68	38050	82.95	175.23	8.5	14.4
1034.0	52.4	23.0	140	9.0	1.21	4.70	38210	67.60	174.73	8.5	14.4
1035.0	53.6	22.0	140	9.0	1.19	4.72	38367	66.08	174.23	8.5	14.4
1036.0	51.2	23.0	140	9.0	1.22	4.74	38531	69.18	173.75	8.5	14.4
1037.0	51.2	23.0	140	9.0	1.22	4.76	38695	69.18	173.27	8.5	14.4
1038.0	51.2	23.0	140	9.0	1.22	4.78	38859	69.18	172.80	8.5	14.4
1039.0	52.0	23.0	140	9.0	1.21	4.80	39021	68.12	172.33	8.5	14.4
1040.0	53.6	22.0	140	9.0	1.19	4.82	39177	66.08	171.85	8.5	14.4
1041.0	51.2	22.0	140	9.0	1.20	4.84	39341	69.18	171.39	8.5	14.4
1042.0	50.1	23.0	145	9.0	1.23	4.86	39515	70.70	170.94	8.5	14.4
1043.0	53.6	23.0	145	9.0	1.21	4.87	39677	66.08	170.47	8.5	14.4
1044.0	51.2	23.0	145	9.0	1.23	4.89	39847	69.18	170.02	8.5	14.4
1045.0	52.4	23.0	145	9.0	1.22	4.91	40013	67.60	169.57	8.5	14.4
1046.0	50.1	23.0	145	9.0	1.23	4.93	40187	70.70	169.14	8.5	14.4
1047.0	52.4	23.0	145	9.0	1.22	4.95	40353	67.60	168.70	8.5	14.4
1048.0	49.0	22.0	145	9.0	1.22	4.97	40531	72.29	168.28	8.5	14.4
1049.0	59.0	22.0	145	9.0	1.17	4.99	40678	60.03	167.81	8.5	14.4
1050.0	46.1	22.0	145	9.0	1.24	5.01	40867	76.83	167.42	8.5	14.4
1051.0	51.0	22.0	145	9.0	1.21	5.03	41037	69.45	167.00	8.5	14.4
1052.0	53.2	22.0	145	9.0	1.20	5.05	41201	66.58	166.57	8.5	14.5
1053.0	49.0	22.0	145	9.0	1.22	5.07	41378	72.29	166.17	8.5	14.5
1054.0	51.0	22.0	145	9.0	1.21	5.09	41549	69.45	165.76	8.5	14.5
1055.0	49.0	22.0	145	9.0	1.22	5.11	41727	72.29	165.36	8.5	14.5
1056.0	51.2	22.0	145	9.0	1.21	5.13	41897	69.18	164.96	8.5	14.5
1057.0	50.1	22.0	145	9.0	1.22	5.15	42070	70.70	164.56	8.5	14.5
1058.0	43.5	22.0	145	9.0	1.26	5.17	42270	81.43	164.22	8.5	14.5
1059.0	44.3	22.0	145	9.0	1.26	5.20	42467	79.95	163.87	8.5	14.5
1060.0	42.7	22.0	145	9.0	1.27	5.22	42670	82.95	163.53	8.5	14.5
1061.0	53.5	22.0	145	9.0	1.20	5.24	42833	66.21	163.13	8.5	14.5
1062.0	46.6	22.0	145	9.0	1.24	5.26	43020	76.01	162.78	8.5	14.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1063.0	44.0	22.0	145	9.0	1.26	5.28	43217	80.50	162.44	8.5	14.5
1064.0	45.2	22.0	145	9.0	1.25	5.30	43410	78.36	162.10	8.5	14.5
1065.0	44.3	21.0	150	9.0	1.25	5.33	43613	79.95	161.77	8.5	14.5
1066.0	45.2	21.0	150	9.0	1.24	5.35	43812	78.36	161.43	8.5	14.5
1067.0	50.1	22.0	150	9.0	1.23	5.37	43992	70.70	161.06	8.5	14.5
1068.0	52.4	22.0	150	9.0	1.21	5.39	44163	67.60	160.69	8.5	14.5
1069.0	40.2	20.0	150	9.0	1.26	5.41	44387	88.11	160.40	8.5	14.5
1070.0	32.6	23.0	153	9.0	1.38	5.44	44669	108.65	160.20	8.5	14.5
1071.0	51.2	22.0	153	9.0	1.23	5.46	44848	69.18	159.84	8.5	14.5
1072.0	48.0	22.0	153	9.0	1.25	5.48	45040	73.79	159.50	8.5	14.5
1073.0	40.2	20.0	145	9.0	1.25	5.51	45256	88.11	159.22	8.5	14.5
1074.0	50.1	25.0	155	9.0	1.28	5.53	45442	70.70	158.87	8.5	14.5
1075.0	44.3	25.0	155	9.0	1.32	5.55	45651	79.95	158.56	8.5	14.5
1076.0	40.2	25.0	155	9.0	1.35	5.58	45883	88.11	158.29	8.5	14.5
1077.0	16.8	25.0	155	9.1	1.61	5.64	46436	210.83	158.49	8.5	14.5
1078.0	25.1	25.0	155	9.1	1.49	5.68	46807	141.12	158.43	8.5	14.5
1079.0	41.9	25.0	155	9.1	1.33	5.70	47029	84.53	158.14	8.5	14.5
1080.0	40.5	25.0	145	9.1	1.32	5.72	47244	87.46	157.87	8.5	14.5
1081.0	34.5	25.0	145	9.1	1.37	5.75	47496	102.67	157.66	8.5	14.5
1082.0	26.0	24.0	140	9.1	1.43	5.79	47819	136.23	157.58	8.5	14.5
1083.0	37.9	24.0	140	9.1	1.31	5.82	48041	93.46	157.34	8.5	14.5
1084.0	40.2	24.0	140	9.1	1.29	5.84	48250	88.11	157.08	8.5	14.5
1085.0	40.5	25.0	140	9.1	1.30	5.87	48457	87.46	156.82	8.5	14.5
1086.0	34.0	25.0	140	9.1	1.36	5.90	48704	104.18	156.62	8.5	14.5
1087.0	37.2	25.0	140	9.1	1.33	5.92	48930	95.22	156.40	8.5	14.5
1088.0	37.9	25.0	140	9.1	1.33	5.95	49151	93.46	156.16	8.5	14.5
1089.0	34.0	25.0	140	9.1	1.36	5.98	49399	104.18	155.97	8.5	14.5
1090.0	36.7	25.0	140	9.1	1.34	6.01	49627	96.51	155.75	8.5	14.5
1091.0	35.0	25.0	140	9.1	1.35	6.04	49867	101.20	155.55	8.5	14.5
1092.0	31.2	25.0	140	9.1	1.39	6.07	50137	113.53	155.40	8.5	14.5
1093.0	34.1	25.0	140	9.1	1.36	6.10	50383	103.87	155.21	8.5	14.5
1094.0	34.5	25.0	140	9.1	1.35	6.13	50626	102.67	155.02	8.5	14.5
1095.0	30.3	25.0	140	9.1	1.40	6.16	50904	116.90	154.88	8.5	14.5
1096.0	32.1	25.0	140	9.1	1.38	6.19	51165	110.34	154.72	8.5	14.5
1097.0	30.9	25.0	140	9.1	1.39	6.22	51437	114.63	154.58	8.5	14.5
1098.0	30.9	25.0	140	9.1	1.39	6.25	51709	114.63	154.44	8.5	14.5
1099.0	30.3	25.0	140	9.1	1.40	6.29	51986	116.90	154.30	8.5	14.6
1100.0	27.7	25.0	140	9.1	1.42	6.32	52290	127.87	154.21	8.5	14.6
1101.0	32.1	27.0	140	9.1	1.41	6.35	52551	110.34	154.05	8.5	14.6
1102.0	30.9	27.0	140	9.1	1.42	6.39	52823	114.63	153.92	8.5	14.6
1103.0	30.9	27.0	140	9.1	1.42	6.42	53095	114.63	153.78	8.5	14.6
1104.0	34.5	27.0	140	9.1	1.39	6.45	53338	102.67	153.60	8.5	14.6
1105.0	27.7	27.0	140	9.1	1.46	6.48	53642	127.87	153.51	8.5	14.6
1106.0	38.5	27.0	140	9.1	1.35	6.51	53860	92.00	153.30	8.5	14.6
1107.0	37.9	25.0	140	9.1	1.33	6.54	54081	93.46	153.09	8.5	14.6
1108.0	25.1	25.0	140	9.1	1.45	6.58	54416	141.12	153.05	8.5	14.6
1109.0	16.3	25.0	140	9.1	1.59	6.64	54931	217.30	153.27	8.5	14.6
1110.0	24.0	25.0	145	9.1	1.48	6.68	55294	147.58	153.25	8.5	14.6
1111.0	22.6	25.0	145	9.1	1.50	6.72	55679	156.73	153.26	8.5	14.6
1112.0	44.3	25.0	145	9.1	1.29	6.75	55875	79.95	153.01	8.5	14.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1113.0	28.3	24.0	145	9.1	1.41	6.78	56183	125.16	152.92	8.5	14.6
1114.0	21.5	24.0	145	9.1	1.50	6.83	56587	164.74	152.96	8.5	14.6
1115.0	29.5	25.0	140	9.1	1.40	6.86	56872	120.07	152.85	8.5	14.6
1116.0	29.1	23.0	140	9.1	1.38	6.90	57161	121.72	152.74	8.5	14.6
1117.0	35.1	26.0	140	9.1	1.36	6.93	57400	100.91	152.57	8.5	14.6
1118.0	35.0	26.0	140	9.1	1.37	6.95	57640	101.20	152.40	8.5	14.6
1119.0	28.7	26.0	140	9.1	1.43	6.99	57933	123.41	152.30	8.5	14.6
1120.0	32.6	25.0	140	9.1	1.37	7.02	58190	108.65	152.16	8.5	14.6
1121.0	51.2	25.0	140	9.1	1.23	7.04	58354	69.18	151.88	8.5	14.6
1122.0	47.0	26.0	140	9.1	1.27	7.06	58533	75.36	151.63	8.5	14.6
1123.0	32.1	27.0	140	9.1	1.41	7.09	58795	110.34	151.50	8.5	14.6
1124.0	44.3	27.0	140	9.1	1.30	7.11	58985	79.95	151.26	8.5	14.6
1125.0	44.2	27.0	140	9.1	1.31	7.14	59175	80.14	151.03	8.5	14.6
1126.0	45.2	27.0	140	9.1	1.30	7.16	59360	78.36	150.79	8.5	14.6
1127.0	37.9	27.0	140	9.1	1.35	7.18	59582	93.46	150.61	8.5	14.6
1128.0	38.1	27.0	140	9.1	1.35	7.21	59802	92.97	150.42	8.5	14.6
1129.0	12.5	27.0	140	9.1	1.71	7.29	60474	283.36	150.85	8.5	14.6
1130.0	42.7	29.0	140	9.1	1.34	7.31	60671	82.95	150.63	8.5	14.6
1131.0	47.0	27.0	140	9.1	1.29	7.34	60850	75.36	150.39	8.5	14.6
1132.0	51.2	27.0	140	9.1	1.26	7.36	61014	69.18	150.13	8.5	14.6
1133.0	46.1	27.0	140	9.1	1.29	7.38	61196	76.83	149.90	8.5	14.6
1134.0	47.0	26.0	140	9.1	1.27	7.40	61375	75.36	149.66	8.5	14.6
1135.0	49.0	27.0	140	9.1	1.27	7.42	61546	72.29	149.42	8.5	14.6
1136.0	37.9	27.0	165	9.1	1.41	7.45	61808	93.46	149.24	8.5	14.6
1137.0	39.8	27.0	165	9.1	1.39	7.47	62056	88.99	149.06	8.5	14.6
1138.0	37.0	27.0	165	9.1	1.42	7.50	62324	95.73	148.89	8.5	14.6
1139.0	51.0	27.0	165	9.1	1.31	7.52	62518	69.45	148.64	8.5	14.6
1140.0	49.0	27.0	165	9.1	1.33	7.54	62720	72.29	148.40	8.5	14.6
1141.0	50.1	27.0	165	9.1	1.32	7.56	62918	70.70	148.16	8.5	14.6
1142.0	48.5	26.0	165	9.1	1.31	7.58	63122	73.03	147.93	8.5	14.6
1143.0	46.8	28.0	165	9.1	1.35	7.60	63333	75.68	147.71	8.5	14.6
1144.0	45.5	27.0	165	9.1	1.35	7.62	63551	77.85	147.50	8.5	14.6
1145.0	43.5	27.0	165	9.1	1.36	7.64	63778	81.43	147.29	8.5	14.6
1146.0	39.8	26.0	140	9.1	1.32	7.67	63990	88.99	147.12	8.5	14.7
1147.0	27.7	32.0	165	9.1	1.59	7.71	64347	127.87	147.06	8.5	14.7
1148.0	52.4	31.0	165	9.1	1.36	7.72	64536	67.60	146.82	8.5	14.7
1149.0	56.3	30.0	165	9.1	1.32	7.74	64712	62.91	146.56	8.5	14.7
1150.0	55.1	32.0	165	9.1	1.35	7.76	64891	64.28	146.32	8.5	14.7
1151.0	52.4	31.0	165	9.1	1.36	7.78	65080	67.60	146.08	8.5	14.7
1152.0	47.0	30.0	165	9.1	1.38	7.80	65291	75.36	145.87	8.5	14.7
1153.0	42.0	31.0	165	9.1	1.43	7.82	65527	84.33	145.68	8.5	14.7
1154.0	42.7	31.0	165	9.1	1.43	7.85	65759	82.95	145.50	8.5	14.7
1155.0	40.2	31.0	165	9.1	1.45	7.87	66005	88.11	145.33	8.5	14.7
1156.0	39.8	29.0	160	9.1	1.41	7.90	66246	88.99	145.16	8.5	14.7
1157.0	32.6	28.0	140	9.1	1.42	7.93	66504	108.65	145.05	8.5	14.7
1158.0	39.8	28.0	140	9.1	1.35	7.95	66715	88.99	144.89	8.5	14.7
1159.0	40.5	28.0	140	9.1	1.35	7.98	66922	87.46	144.72	8.5	14.7
1160.0	38.5	28.0	140	9.1	1.36	8.00	67140	92.00	144.56	8.5	14.7
1161.0	43.5	27.0	140	9.1	1.31	8.03	67333	81.43	144.38	8.5	14.7
1162.0	40.2	27.0	140	9.1	1.34	8.05	67542	88.11	144.22	8.5	14.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1163.0	47.0	28.0	140	9.1	1.30	8.07	67721	75.36	144.02	8.5	14.7
1164.0	46.1	28.0	140	9.1	1.31	8.10	67903	76.83	143.82	8.5	14.7
1165.0	38.1	28.0	140	9.1	1.37	8.12	68124	92.97	143.68	8.5	14.7
1166.0	42.1	28.0	140	9.1	1.34	8.15	68323	84.13	143.51	8.5	14.7
1167.0	25.9	27.0	140	9.1	1.48	8.18	68648	136.76	143.49	8.5	14.7
1168.0	48.0	27.0	140	9.1	1.28	8.20	68823	73.79	143.29	8.5	14.7
1169.0	49.0	27.0	140	9.1	1.27	8.23	68994	72.29	143.08	8.5	14.7
1170.0	48.0	27.0	140	9.1	1.28	8.25	69169	73.79	142.89	8.5	14.7
1171.0	53.6	27.0	180	9.1	1.32	8.26	69371	66.08	142.67	8.5	14.7
1172.0	55.9	28.0	180	9.1	1.32	8.28	69564	63.36	142.45	8.5	14.7
1173.0	43.5	26.0	180	9.1	1.38	8.31	69812	81.43	142.27	8.5	14.7
1174.0	41.9	25.0	180	9.1	1.37	8.33	70070	84.53	142.11	8.5	14.7
1175.0	49.0	26.0	180	9.1	1.34	8.35	70290	72.29	141.92	8.5	14.7
1176.0	42.6	26.0	180	9.1	1.38	8.37	70544	83.15	141.75	8.5	14.7
1177.0	38.1	27.0	130	9.1	1.33	8.40	70748	92.97	141.62	8.5	14.7
1178.0	49.0	27.0	130	9.1	1.25	8.42	70908	72.29	141.42	8.5	14.7
1179.0	41.9	29.0	130	9.1	1.33	8.44	71094	84.53	141.27	8.5	14.7
1180.0	46.1	29.0	130	9.1	1.30	8.47	71263	76.83	141.09	8.5	14.7
1181.0	27.7	29.0	130	9.1	1.46	8.50	71545	127.87	141.05	8.5	14.7
1182.0	34.2	27.0	135	9.1	1.38	8.53	71781	103.57	140.95	8.5	14.7
1183.0	33.5	27.0	135	9.1	1.38	8.56	72023	105.73	140.85	8.5	14.7
1184.0	36.7	27.0	135	9.1	1.35	8.59	72244	96.51	140.73	8.5	14.7
1185.0	36.2	27.0	135	9.1	1.36	8.62	72468	97.85	140.61	8.5	14.7
1186.0	27.3	27.0	135	9.1	1.45	8.65	72764	129.74	140.58	8.5	14.7
1187.0	47.0	26.0	170	9.1	1.33	8.67	72981	75.36	140.41	8.5	14.7
1188.0	46.1	26.0	175	9.1	1.35	8.70	73209	76.83	140.24	8.5	14.7
1189.0	45.2	26.0	175	9.1	1.36	8.72	73441	78.36	140.07	8.5	14.7
1190.0	40.2	26.0	175	9.1	1.39	8.74	73703	88.11	139.93	8.5	14.7
1191.0	34.5	25.0	175	9.1	1.42	8.77	74007	102.67	139.83	8.5	14.7
1192.0	32.6	25.0	175	9.1	1.44	8.80	74329	108.65	139.75	8.5	14.7
1193.0	31.2	25.0	175	9.1	1.46	8.83	74666	113.53	139.68	8.5	14.7
1194.0	29.5	25.0	175	9.1	1.47	8.87	75022	120.07	139.62	8.5	14.7
1195.0	27.7	25.0	175	9.1	1.49	8.90	75401	127.87	139.59	8.5	14.8
1196.0	31.2	25.0	175	9.1	1.46	8.94	75737	113.53	139.52	8.5	14.8
1197.0	35.6	25.0	175	9.1	1.41	8.96	76032	99.49	139.42	8.5	14.8
1198.0	37.3	25.0	175	9.1	1.40	8.99	76314	94.96	139.30	8.5	14.8
1199.0	37.9	25.0	175	9.1	1.40	9.02	76591	93.46	139.18	8.5	14.8
1200.0	43.5	25.0	175	9.1	1.35	9.04	76832	81.43	139.03	8.5	14.8
1201.0	40.2	25.0	175	9.1	1.38	9.07	77093	88.11	138.90	8.5	14.8
1202.0	43.5	25.0	175	9.1	1.35	9.09	77335	81.43	138.75	8.5	14.8
1203.0	44.3	25.0	175	9.1	1.35	9.11	77572	79.95	138.59	8.5	14.8
1204.0	38.1	23.0	175	9.1	1.36	9.14	77847	92.97	138.48	8.5	14.8
1205.0	35.1	23.0	175	9.1	1.39	9.17	78146	100.91	138.38	8.5	14.8
1206.0	33.2	23.0	175	9.1	1.40	9.20	78463	106.69	138.30	8.5	14.8
1207.0	33.0	23.0	175	9.1	1.41	9.23	78781	107.33	138.22	8.5	14.8
1208.0	32.1	23.0	175	9.1	1.41	9.26	79108	110.34	138.15	8.5	14.8
1209.0	35.6	24.0	175	9.1	1.40	9.28	79403	99.49	138.05	8.5	14.8
1210.0	32.1	25.0	175	9.1	1.45	9.32	79730	110.34	137.98	8.5	14.8
1211.0	36.2	25.0	175	9.1	1.41	9.34	80020	97.85	137.88	8.5	14.8
1212.0	30.3	26.0	175	9.1	1.48	9.38	80367	116.90	137.82	8.5	14.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1213.0	33.0	26.0	175	9.1	1.46	9.41	80685	107.33	137.74	8.5	14.8
1214.0	32.0	26.0	175	9.1	1.46	9.44	81013	110.69	137.68	8.5	14.8
1215.0	35.2	26.0	175	9.1	1.43	9.47	81311	100.63	137.58	8.5	14.8
1216.0	40.5	24.0	175	9.1	1.36	9.49	81570	87.46	137.46	8.5	14.8
1217.0	36.2	24.0	175	9.1	1.39	9.52	81860	97.85	137.36	8.5	14.8
1218.0	33.5	23.0	165	9.1	1.38	9.55	82156	105.73	137.28	8.5	14.8
1219.0	29.5	23.0	165	9.1	1.42	9.58	82492	120.07	137.24	8.5	14.8
1220.0	24.6	23.0	165	9.1	1.48	9.62	82894	143.98	137.25	8.5	14.8
1221.0	22.6	24.0	165	9.1	1.52	9.67	83332	156.73	137.30	8.5	14.8
1222.0	28.0	24.0	165	9.1	1.45	9.70	83686	126.50	137.27	8.5	14.8
1223.0	27.3	24.0	165	9.1	1.46	9.74	84048	129.74	137.26	8.5	14.8
1224.0	29.5	24.0	165	9.1	1.44	9.77	84384	120.07	137.21	8.5	14.8
1225.0	29.1	24.0	150	9.1	1.41	9.81	84693	121.72	137.18	8.5	14.8
1226.0	27.0	24.0	150	9.1	1.44	9.85	85026	131.19	137.16	8.5	14.8
1227.0	29.7	24.0	150	9.1	1.41	9.88	85330	119.26	137.12	8.5	14.8
1228.0	29.1	24.0	150	9.1	1.41	9.91	85639	121.72	137.08	8.5	14.8
1229.0	26.7	24.0	150	9.1	1.44	9.95	85976	132.66	137.07	8.5	14.8
1230.0	27.7	23.0	150	9.1	1.41	9.99	86301	127.87	137.05	8.5	14.8
1231.0	25.4	23.0	155	9.1	1.45	10.03	86667	139.45	137.05	8.5	14.8
1232.0	25.4	23.0	155	9.1	1.45	10.07	87033	139.45	137.06	8.5	14.8
1233.0	28.7	23.0	155	9.1	1.41	10.10	87357	123.41	137.03	8.5	14.8
1234.0	27.3	23.0	155	9.1	1.43	10.14	87698	129.74	137.01	8.5	14.8
1235.0	21.7	23.0	155	9.1	1.50	10.18	88126	163.23	137.07	8.5	14.8
1236.0	21.7	23.0	155	9.1	1.50	10.23	88555	163.23	137.13	8.5	14.8
1237.0	21.1	23.0	155	9.1	1.51	10.28	88996	167.87	137.21	8.5	14.8
1238.0	20.1	22.0	155	9.1	1.50	10.33	89458	176.22	137.30	8.5	14.8
1239.0	22.1	22.0	155	9.1	1.47	10.37	89879	160.27	137.35	8.5	14.8
1240.0	23.3	23.0	155	9.1	1.47	10.41	90278	152.02	137.39	8.5	14.8
1241.0	24.3	23.0	155	9.1	1.46	10.46	90661	145.76	137.41	8.5	14.8
1242.0	23.0	23.0	155	9.1	1.48	10.50	91065	154.00	137.45	8.5	14.8
1243.0	26.0	23.0	155	9.1	1.44	10.54	91423	136.23	137.44	8.5	14.8
1244.0	24.0	23.0	155	9.1	1.47	10.58	91811	147.58	137.47	8.5	14.8
1245.0	27.3	26.0	155	9.1	1.48	10.62	92151	129.74	137.45	8.5	14.8
1246.0	23.5	26.0	155	9.1	1.52	10.66	92547	150.72	137.48	8.5	14.9
1247.0	23.0	28.0	163	9.1	1.58	10.70	92972	154.00	137.52	8.5	14.9
1248.0	24.8	28.0	163	9.1	1.56	10.74	93367	142.82	137.53	8.5	14.9
1249.0	22.6	28.0	163	9.1	1.59	10.79	93799	156.73	137.58	8.5	14.9
1250.0	23.1	25.0	163	9.1	1.53	10.83	94223	153.33	137.61	8.5	14.9
1251.0	22.2	25.0	163	9.1	1.54	10.87	94663	159.55	137.66	8.5	14.9
1252.0	15.8	25.0	163	9.1	1.65	10.94	95282	224.18	137.86	8.5	14.9
1253.0	22.3	25.0	163	9.1	1.54	10.98	95721	158.83	137.91	8.5	14.9
1254.0	21.1	27.0	163	9.1	1.59	11.03	96184	167.87	137.98	8.5	14.9
1255.0	24.3	27.0	163	9.1	1.55	11.07	96587	145.76	138.00	8.5	14.9
1256.0	23.1	27.0	163	9.1	1.56	11.11	97010	153.33	138.03	8.5	14.9
1257.0	25.4	27.0	163	9.1	1.53	11.15	97395	139.45	138.04	8.5	14.9
1258.0	29.7	27.0	163	9.1	1.48	11.19	97724	119.26	137.99	8.5	14.9
1259.0	21.3	27.0	163	9.1	1.59	11.23	98184	166.29	138.06	8.5	14.9
1260.0	22.1	27.0	163	9.1	1.58	11.28	98626	160.27	138.11	8.5	14.9
1261.0	22.6	27.0	163	9.1	1.57	11.32	99059	156.73	138.15	8.5	14.9
1262.0	22.6	27.0	163	9.1	1.57	11.37	99492	156.73	138.19	8.5	14.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1263.0	23.0	26.0	160	9.1	1.54	11.41	99909	154.00	138.23	8.5	14.9
1264.0	19.9	26.0	160	9.1	1.59	11.46	100391	177.99	138.32	8.5	14.9
1265.0	20.5	26.0	160	9.1	1.58	11.51	100860	172.78	138.39	8.5	14.9
1266.0	21.5	26.0	160	9.1	1.56	11.56	101306	164.74	138.45	8.5	14.9
1267.0	18.1	26.0	160	9.1	1.62	11.61	101837	195.69	138.58	8.5	14.9
1268.0	21.3	26.0	160	9.1	1.57	11.66	102287	166.29	138.64	8.5	14.9
1269.0	19.9	26.0	160	9.1	1.59	11.71	102770	177.99	138.73	8.5	14.9
1270.0	17.9	26.0	160	9.1	1.62	11.77	103306	197.88	138.86	8.5	14.9
1271.0	13.1	26.0	160	9.1	1.72	11.84	104039	270.38	139.15	8.5	14.9
1272.0	17.6	26.0	160	9.1	1.63	11.90	104584	201.25	139.29	8.5	14.9
1273.0	15.8	26.0	160	9.1	1.66	11.96	105192	224.18	139.47	8.5	14.9
1274.0	16.3	26.0	160	9.1	1.65	12.02	105781	217.30	139.64	8.5	14.9
1275.0	16.3	25.0	160	9.1	1.63	12.09	106370	217.30	139.81	8.5	14.9
1276.0	15.7	25.0	160	9.1	1.64	12.15	106981	225.61	140.00	8.5	14.9
1277.0	13.6	25.0	160	9.1	1.69	12.22	107687	260.44	140.26	8.5	14.9
1278.0	17.0	26.0	155	9.1	1.63	12.28	108234	208.35	140.41	8.5	14.9
1279.0	16.8	26.0	155	9.1	1.63	12.34	108788	210.83	140.56	8.5	14.9
1280.0	17.9	26.0	155	9.1	1.61	12.40	109307	197.88	140.69	8.5	14.9
1281.0	22.0	26.0	155	9.1	1.55	12.44	109730	161.00	140.73	8.5	14.9
1282.0	22.9	27.0	155	9.1	1.55	12.49	110136	154.67	140.76	8.5	14.9
1283.0	21.1	26.0	155	9.1	1.56	12.53	110577	167.87	140.82	8.5	14.9
1284.0	21.3	26.0	155	9.1	1.56	12.58	111014	166.29	140.88	8.5	14.9
1285.0	18.7	26.0	155	9.1	1.60	12.63	111511	189.41	140.98	8.5	14.9
1286.0	21.7	26.0	155	9.1	1.55	12.68	111939	163.23	141.03	8.5	14.9
1287.0	24.0	26.0	155	9.1	1.52	12.72	112327	147.58	141.04	8.5	14.9
1288.0	20.7	26.0	155	9.1	1.56	12.77	112776	171.11	141.10	8.5	14.9
1289.0	21.5	26.0	155	9.1	1.55	12.82	113209	164.74	141.15	8.5	14.9
1290.0	17.3	24.0	155	9.1	1.59	12.87	113746	204.74	141.29	8.5	14.9
1291.0	21.3	26.0	155	9.1	1.56	12.92	114183	166.29	141.34	8.5	14.9
1292.0	26.7	25.0	155	9.1	1.47	12.96	114531	132.66	141.32	8.5	14.9
1293.0	15.8	25.0	155	9.1	1.63	13.02	115120	224.18	141.50	8.5	14.9
1294.0	16.3	25.0	155	9.1	1.62	13.08	115690	217.30	141.66	8.5	14.9
1295.0	23.5	25.0	155	9.1	1.51	13.13	116086	150.72	141.68	8.5	14.9
1296.0	28.0	25.0	155	9.1	1.45	13.16	116418	126.50	141.64	8.5	14.9
1297.0	20.0	25.0	155	9.1	1.56	13.21	116883	177.10	141.72	8.5	14.9
1298.0	28.0	25.0	155	9.1	1.45	13.25	117216	126.50	141.69	8.5	15.0

BIT NUMBER	4	IADC CODE	114	INTERVAL	1298.0- 1496.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	198.0
TOTAL HOURS	17.93	TOTAL TURNS	165110	CONDITION	T3 B5 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1299.0	19.0	24.0	130	9.1	1.50	0.05	411	186	23755	8.5	15.0
1300.0	17.6	24.0	130	9.1	1.53	0.11	854	201	11978	8.5	15.0
1301.0	18.1	24.0	140	9.1	1.54	0.16	1318	196	8051	8.5	15.0
1302.0	18.1	24.0	140	9.1	1.54	0.22	1782	196	6087	8.5	15.0
1303.0	28.0	23.0	140	9.1	1.39	0.26	2082	127	4895	8.5	15.0
1304.0	22.1	23.0	140	9.1	1.46	0.30	2462	160	4106	8.5	15.0
1305.0	23.5	23.0	140	9.1	1.44	0.34	2819	151	3541	8.5	15.0
1306.0	24.3	23.0	140	9.1	1.43	0.38	3165	146	3116	8.5	15.0
1307.0	23.8	25.0	140	9.1	1.47	0.43	3518	149	2787	8.5	15.0
1308.0	15.4	24.0	140	9.1	1.59	0.49	4063	230	2531	8.5	15.0
1309.0	20.9	23.0	140	9.1	1.48	0.54	4465	169	2316	8.5	15.0
1310.0	21.7	25.0	145	9.1	1.51	0.59	4866	163	2137	8.5	15.0
1311.0	22.6	24.0	145	9.1	1.48	0.63	5251	157	1985	8.5	15.0
1312.0	16.1	25.0	140	9.1	1.59	0.69	5773	220	1859	8.5	15.0
1313.0	21.1	23.0	152	9.1	1.50	0.74	6205	168	1746	8.5	15.0
1314.0	17.9	24.0	152	9.1	1.57	0.80	6715	198	1649	8.5	15.0
1315.0	17.6	24.0	152	9.1	1.57	0.85	7233	201	1564	8.5	15.0
1316.0	16.3	24.0	152	9.1	1.60	0.91	7792	217	1489	8.5	15.0
1317.0	19.4	23.0	152	9.1	1.53	0.96	8263	183	1420	8.5	15.0
1318.0	17.7	23.0	152	9.1	1.55	1.02	8778	200	1359	8.5	15.0
1319.0	20.7	24.0	152	9.1	1.52	1.07	9218	171	1303	8.5	15.0
1320.0	22.1	23.0	150	9.1	1.48	1.11	9626	160	1251	8.5	15.0
1321.0	19.8	25.0	150	9.1	1.55	1.17	10080	179	1204	8.5	15.0
1322.0	19.8	25.0	150	9.1	1.55	1.22	10535	179	1161	8.5	15.0
1323.0	19.2	24.0	152	9.1	1.55	1.27	11010	184	1122	8.5	15.0
1324.0	18.3	23.0	152	9.1	1.54	1.32	11508	194	1087	8.5	15.0
1325.0	15.5	23.0	152	9.1	1.59	1.39	12096	229	1055	8.5	15.0
1326.0	16.3	23.0	152	9.1	1.58	1.45	12656	217	1025	8.5	15.0
1327.0	17.9	23.0	152	9.1	1.55	1.50	13165	197.88	996.46	8.5	15.0
1328.0	16.1	22.0	152	9.1	1.56	1.57	13732	220.00	970.57	8.5	15.0
1329.0	15.3	22.0	152	9.1	1.58	1.63	14328	231.50	946.73	8.5	15.0
1330.0	19.4	22.0	152	9.1	1.51	1.68	14798	182.58	922.85	8.5	15.0
1331.0	15.8	22.0	152	9.1	1.57	1.75	15375	224.18	901.68	8.5	15.0
1332.0	15.5	22.0	152	9.1	1.57	1.81	15964	228.52	881.88	8.5	15.0
1333.0	16.0	21.0	152	9.1	1.55	1.87	16534	221.38	863.01	8.5	15.0
1334.0	18.1	21.0	152	9.1	1.51	1.93	17038	195.69	844.47	8.5	15.0
1335.0	17.4	22.0	152	9.1	1.54	1.99	17562	203.56	827.15	8.5	15.0
1336.0	19.8	22.0	152	9.1	1.50	2.04	18022	178.89	810.09	8.5	15.0
1337.0	16.4	21.0	152	9.1	1.54	2.10	18578	215.98	794.86	8.5	15.0
1338.0	21.7	21.0	152	9.1	1.45	2.14	18999	163.23	779.07	8.5	15.0
1339.0	18.0	20.0	152	9.1	1.49	2.20	19505	196.78	764.87	8.5	15.0
1340.0	18.8	20.0	152	9.1	1.48	2.25	19990	188.40	751.14	8.5	15.0
1341.0	20.3	21.0	152	9.1	1.47	2.30	20440	174.48	737.73	8.5	15.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1342.0	17.7	22.0	150	9.1	1.53	2.36	20948	200.11	725.51	8.5	15.0
1343.0	16.5	22.0	124	9.1	1.49	2.42	21399	214.67	714.16	8.5	15.0
1344.0	18.6	23.0	124	9.1	1.48	2.47	21799	190.43	702.77	8.5	15.0
1345.0	16.0	23.0	124	9.1	1.52	2.54	22264	221.38	692.53	8.5	15.0
1346.0	15.5	21.0	145	9.1	1.54	2.60	22825	228.52	682.86	8.5	15.0
1347.0	14.7	23.0	148	9.1	1.60	2.67	23429	240.95	673.85	8.5	15.0
1348.0	11.1	22.0	148	9.1	1.67	2.76	24229	319.10	666.75	8.5	15.0
1349.0	13.8	23.0	148	9.1	1.62	2.83	24873	256.67	658.71	8.5	15.0
1350.0	13.9	23.0	148	9.1	1.62	2.90	25512	254.82	650.94	8.5	15.0
1351.0	14.0	14.0	145	9.1	1.41	2.97	26133	253.00	643.43	8.5	15.0
1352.0	10.5	18.0	145	9.1	1.59	3.07	26962	337.33	637.77	8.5	15.1
1353.0	6.8	20.0	130	9.1	1.73	3.22	28109	520.88	635.64	8.5	15.1
1354.0	10.6	19.0	128	9.1	1.57	3.31	28833	334.15	630.26	8.5	15.1
1355.0	8.9	20.0	124	9.1	1.64	3.42	29669	397.98	626.18	8.5	15.1
1356.0	8.5	20.0	120	9.1	1.64	3.54	30516	416.71	622.57	8.5	15.1
1357.0	9.6	20.0	125	9.1	1.62	3.64	31298	368.96	618.27	8.5	15.1
1358.0	10.1	20.0	125	9.1	1.60	3.74	32040	350.69	613.81	8.5	15.1
1359.0	10.6	18.0	128	9.1	1.55	3.84	32765	334.15	609.23	8.5	15.1
1360.0	10.1	19.0	128	9.1	1.59	3.94	33525	350.69	605.06	8.5	15.1
1361.0	11.1	20.0	130	9.1	1.59	4.03	34228	319.10	600.52	8.5	15.1
1362.0	8.5	20.0	130	9.1	1.67	4.14	35146	416.71	597.65	8.5	15.1
1363.0	9.1	19.0	130	9.1	1.62	4.25	36003	389.23	594.44	8.5	15.1
1364.0	10.6	19.0	120	9.1	1.56	4.35	36682	334.15	590.50	8.5	15.1
1365.0	9.1	18.0	130	9.1	1.60	4.46	37539	389.23	587.49	8.5	15.1
1366.0	9.6	18.0	130	9.1	1.58	4.56	38352	368.96	584.28	8.5	15.1
1367.0	10.1	19.0	130	9.1	1.59	4.66	39124	350.69	580.89	8.5	15.1
1368.0	11.4	19.0	130	9.1	1.56	4.75	39808	310.70	577.03	8.5	15.1
1369.0	12.6	19.0	130	9.1	1.53	4.83	40427	281.11	572.87	8.5	15.1
1370.0	12.1	20.0	152	9.1	1.61	4.91	41181	292.73	568.97	8.5	15.1
1371.0	12.9	19.0	145	9.1	1.55	4.99	41855	274.57	564.94	8.5	15.1
1372.0	11.1	20.0	145	9.1	1.62	5.08	42639	319.10	561.62	8.5	15.1
1373.0	9.6	19.0	145	9.1	1.64	5.18	43545	368.96	559.05	8.5	15.1
1374.0	10.5	19.0	145	9.1	1.61	5.28	44374	337.33	556.13	8.5	15.1
1375.0	10.4	19.0	147	9.1	1.62	5.37	45222	340.58	553.33	8.5	15.1
1376.0	10.0	19.0	152	9.1	1.64	5.47	46134	354.20	550.78	8.5	15.1
1377.0	11.9	19.0	150	9.1	1.59	5.56	46890	297.65	547.58	8.5	15.1
1378.0	12.9	19.0	148	9.1	1.56	5.64	47579	274.57	544.16	8.5	15.1
1379.0	9.1	20.0	150	9.1	1.69	5.75	48568	389.23	542.25	8.5	15.1
1380.0	8.9	19.0	152	9.1	1.68	5.86	49592	397.98	540.49	8.5	15.1
1381.0	9.1	22.0	135	9.1	1.70	5.97	50482	389.23	538.67	8.5	15.1
1382.0	10.6	21.0	135	9.1	1.63	6.06	51247	334.15	536.23	8.5	15.1
1383.0	9.6	20.0	140	9.1	1.65	6.17	52122	368.96	534.27	8.5	15.1
1384.0	10.5	21.0	140	9.1	1.65	6.26	52922	337.33	531.98	8.5	15.1
1385.0	10.5	21.0	140	9.1	1.65	6.36	53722	337.33	529.74	8.5	15.1
1386.0	10.8	21.0	135	9.1	1.63	6.45	54472	327.96	527.45	8.5	15.1
1387.0	14.0	20.0	133	9.1	1.52	6.52	55042	253.00	524.36	8.5	15.1
1388.0	13.4	22.0	130	9.1	1.57	6.60	55624	264.33	521.47	8.5	15.1
1389.0	11.5	20.0	132	9.1	1.58	6.68	56312	308.00	519.13	8.5	15.1
1390.0	10.1	20.0	135	9.1	1.63	6.78	57114	350.69	517.30	8.5	15.1
1391.0	10.6	21.0	130	9.1	1.62	6.88	57850	334.15	515.33	8.5	15.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1392.0	8.9	19.0	130	9.1	1.63	6.99	58727	397.98	514.08	8.5	15.1
1393.0	9.6	20.0	130	9.1	1.63	7.09	59539	368.96	512.55	8.5	15.1
1394.0	9.8	21.0	132	9.1	1.65	7.20	60347	361.43	510.98	8.5	15.1
1395.0	10.8	20.0	140	9.1	1.62	7.29	61125	327.96	509.09	8.5	15.1
1396.0	11.0	21.0	145	9.1	1.64	7.38	61916	322.00	507.18	8.5	15.1
1397.0	10.6	21.0	145	9.1	1.65	7.47	62737	334.15	505.43	8.5	15.1
1398.0	8.9	20.0	145	9.1	1.68	7.59	63714	397.98	504.36	8.5	15.1
1399.0	9.6	21.0	140	9.1	1.67	7.69	64589	368.96	503.02	8.5	15.1
1400.0	8.9	21.0	140	9.1	1.70	7.80	65533	397.98	501.99	8.5	15.1
1401.0	9.1	19.0	130	9.1	1.62	7.91	66390	389.23	500.89	8.5	15.1
1402.0	8.2	20.0	132	9.1	1.68	8.03	67356	431.95	500.23	8.5	15.1
1403.0	9.1	20.0	130	9.1	1.65	8.14	68213	389.23	499.17	8.5	15.1
1404.0	10.5	20.0	145	9.1	1.64	8.24	69042	337.33	497.65	8.5	15.1
1405.0	11.2	19.0	145	9.1	1.59	8.33	69819	316.25	495.95	8.5	15.1
1406.0	11.2	19.0	145	9.1	1.59	8.42	70595	316.25	494.29	8.5	15.1
1407.0	10.6	20.0	142	9.1	1.63	8.51	71399	334.15	492.82	8.5	15.1
1408.0	10.0	19.0	145	9.1	1.63	8.61	72269	354.20	491.56	8.5	15.2
1409.0	9.6	18.0	148	9.1	1.62	8.72	73194	368.96	490.45	8.5	15.2
1410.0	9.1	18.0	152	9.1	1.64	8.83	74196	389.23	489.55	8.5	15.2
1411.0	9.1	23.0	155	9.1	1.76	8.94	75218	389.23	488.66	8.5	15.2
1412.0	8.9	20.0	150	9.1	1.69	9.05	76230	397.98	487.87	8.5	15.2
1413.0	8.9	20.0	150	9.1	1.69	9.16	77241	397.98	487.09	8.5	15.2
1414.0	9.1	20.0	150	9.1	1.69	9.27	78230	389.23	486.24	8.5	15.2
1415.0	8.9	23.0	143	9.1	1.75	9.38	79194	397.98	485.49	8.5	15.2
1416.0	10.5	23.0	143	9.1	1.69	9.48	80011	337.33	484.23	8.5	15.2
1417.0	10.6	23.0	143	9.2	1.67	9.57	80820	334.15	482.97	8.5	15.2
1418.0	8.5	23.0	143	9.2	1.74	9.69	81830	416.71	482.42	8.5	15.2
1419.0	9.1	23.0	163	9.2	1.76	9.80	82905	389.23	481.65	8.5	15.2
1420.0	9.1	23.0	163	9.2	1.76	9.91	83979	389.23	480.89	8.5	15.2
1421.0	9.6	22.0	163	9.2	1.72	10.01	84998	368.96	479.98	8.5	15.2
1422.0	10.0	22.0	163	9.2	1.71	10.11	85976	354.20	478.97	8.5	15.2
1423.0	8.6	23.0	167	9.2	1.78	10.23	87141	411.86	478.43	8.5	15.2
1424.0	8.9	24.0	165	9.2	1.79	10.34	88253	397.98	477.79	8.5	15.2
1425.0	8.9	24.0	165	9.2	1.79	10.45	89366	397.98	477.16	8.5	15.2
1426.0	8.9	24.0	165	9.2	1.79	10.57	90478	397.98	476.54	8.5	15.2
1427.0	9.5	25.0	170	9.2	1.80	10.67	91552	372.84	475.74	8.5	15.2
1428.0	12.4	31.0	165	9.2	1.82	10.75	92350	285.65	474.28	8.5	15.2
1429.0	12.4	30.0	170	9.2	1.81	10.83	93173	285.65	472.84	8.5	15.2
1430.0	14.1	30.0	170	9.2	1.77	10.90	93896	251.21	471.16	8.5	15.2
1431.0	12.3	30.0	170	9.2	1.82	10.99	94726	287.97	469.78	8.5	15.2
1432.0	12.8	30.0	170	9.2	1.80	11.06	95522	276.72	468.34	8.5	15.2
1433.0	12.8	30.0	170	9.2	1.80	11.14	96319	276.72	466.92	8.5	15.2
1434.0	11.2	30.0	170	9.2	1.85	11.23	97230	316.25	465.81	8.5	15.2
1435.0	11.0	31.0	170	9.2	1.87	11.32	98157	322.00	464.76	8.5	15.2
1436.0	11.9	31.0	170	9.2	1.84	11.41	99014	297.65	463.55	8.5	15.2
1437.0	13.1	29.0	170	9.2	1.78	11.48	99793	270.38	462.16	8.5	15.2
1438.0	10.4	29.0	170	9.2	1.85	11.58	100774	340.58	461.29	8.5	15.2
1439.0	11.2	29.0	170	9.2	1.83	11.67	101684	316.25	460.27	8.5	15.2
1440.0	11.9	29.0	170	9.2	1.81	11.75	102542	297.65	459.12	8.5	15.2
1441.0	13.6	28.0	170	9.2	1.75	11.83	103292	260.44	457.73	8.5	15.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1442.0	13.3	29.0	170	9.2	1.77	11.90	104059	266.32	456.40	8.5	15.2
1443.0	12.7	28.0	170	9.2	1.77	11.98	104862	278.90	455.18	8.5	15.2
1444.0	10.7	28.0	170	9.2	1.82	12.07	105815	331.03	454.33	8.5	15.2
1445.0	11.9	28.0	170	9.2	1.79	12.16	106672	297.65	453.26	8.5	15.2
1446.0	12.0	18.0	172	9.2	1.58	12.24	107532	295.17	452.19	8.5	15.2
1447.0	10.7	18.0	172	9.2	1.62	12.33	108497	331.03	451.38	8.5	15.2
1448.0	11.3	18.0	172	9.2	1.60	12.42	109410	313.45	450.46	8.5	15.2
1449.0	11.0	18.0	172	9.2	1.61	12.51	110348	322.00	449.61	8.5	15.2
1450.0	10.5	29.0	172	9.2	1.85	12.61	111331	337.33	448.87	8.5	15.2
1451.0	11.0	29.0	175	9.2	1.84	12.70	112285	322.00	448.04	8.5	15.2
1452.0	12.3	29.0	175	9.2	1.81	12.78	113139	287.97	447.00	8.5	15.2
1453.0	10.0	29.0	175	9.2	1.87	12.88	114189	354.20	446.40	8.5	15.2
1454.0	12.1	29.0	175	9.2	1.81	12.96	115057	292.73	445.42	8.5	15.2
1455.0	11.2	29.0	175	9.2	1.84	13.05	115994	316.25	444.60	8.5	15.2
1456.0	11.7	28.0	175	9.2	1.80	13.14	116892	302.74	443.70	8.5	15.2
1457.0	10.5	28.0	170	9.2	1.83	13.23	117863	337.33	443.03	8.5	15.2
1458.0	10.7	28.0	170	9.2	1.82	13.33	118817	331.03	442.33	8.5	15.2
1459.0	11.5	28.0	170	9.2	1.80	13.41	119703	308.00	441.50	8.5	15.2
1460.0	11.2	28.0	170	9.2	1.81	13.50	120614	316.25	440.72	8.5	15.2
1461.0	10.3	28.0	170	9.2	1.84	13.60	121604	343.88	440.13	8.5	15.2
1462.0	11.3	28.0	175	9.2	1.82	13.69	122534	313.45	439.36	8.5	15.2
1463.0	11.2	28.0	175	9.2	1.82	13.78	123471	316.25	438.61	8.5	15.2
1464.0	11.8	28.0	175	9.2	1.80	13.86	124361	300.17	437.78	8.5	15.2
1465.0	12.0	28.0	175	9.2	1.80	13.95	125236	295.17	436.92	8.5	15.2
1466.0	16.1	28.0	175	9.2	1.70	14.01	125888	220.00	435.63	8.5	15.3
1467.0	14.2	28.0	175	9.2	1.74	14.08	126628	249.44	434.53	8.5	15.3
1468.0	11.3	28.0	175	9.2	1.82	14.17	127557	313.45	433.82	8.5	15.3
1469.0	12.6	28.0	175	9.2	1.78	14.25	128390	281.11	432.92	8.5	15.3
1470.0	9.1	28.0	145	9.2	1.82	14.36	129346	389.23	432.67	8.5	15.3
1471.0	7.3	28.0	145	9.2	1.90	14.49	130538	485.21	432.97	8.5	15.3
1472.0	9.1	28.0	170	9.2	1.88	14.60	131659	389.23	432.72	8.5	15.3
1473.0	9.0	25.0	170	9.2	1.82	14.71	132792	393.56	432.50	8.5	15.3
1474.0	6.9	23.0	170	9.2	1.86	14.86	134270	513.33	432.96	8.5	15.3
1475.0	7.7	23.0	170	9.3	1.80	14.99	135595	460.00	433.11	8.5	15.3
1476.0	5.0	23.0	170	9.3	1.93	15.19	137635	708.40	434.66	8.5	15.3
1477.0	5.4	23.0	170	9.3	1.91	15.37	139524	655.93	435.89	8.5	15.3
1478.0	5.4	23.0	170	9.3	1.91	15.56	141413	655.93	437.11	8.5	15.3
1479.0	5.4	23.0	170	9.3	1.91	15.74	143302	655.93	438.32	8.5	15.3
1480.0	7.4	23.0	170	9.3	1.82	15.88	144680	478.65	438.55	8.5	15.3
1481.0	10.0	23.0	170	9.3	1.73	15.98	145700	354.20	438.08	8.5	15.3
1482.0	6.3	23.0	170	9.3	1.86	16.14	147319	562.22	438.76	8.5	15.3
1483.0	6.7	25.0	175	9.3	1.90	16.29	148886	528.66	439.25	8.5	15.3
1484.0	6.4	25.0	170	9.3	1.90	16.44	150480	553.44	439.86	8.5	15.3
1485.0	8.5	25.0	170	9.3	1.82	16.56	151680	416.71	439.74	8.5	15.3
1486.0	10.1	25.0	170	9.3	1.76	16.66	152690	350.69	439.26	8.5	15.3
1487.0	9.6	25.0	170	9.3	1.78	16.76	153753	368.96	438.89	8.5	15.3
1488.0	8.9	25.0	170	9.3	1.80	16.88	154899	397.98	438.67	8.5	15.3
1489.0	7.3	25.0	170	9.3	1.86	17.01	156296	485.21	438.92	8.5	15.3
1490.0	7.8	25.0	170	9.2	1.86	17.14	157604	454.10	439.00	8.5	15.3
1491.0	9.1	25.0	170	9.2	1.81	17.25	158724	389.23	438.74	8.5	15.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1492.0	10.6	23.0	170	9.2	1.73	17.35	159687	334.15	438.20	8.5	15.3
1493.0	9.6	23.0	170	9.2	1.76	17.45	160749	368.96	437.84	8.5	15.3
1494.0	6.4	23.0	170	9.2	1.88	17.61	162343	553.44	438.43	8.5	15.3
1495.0	8.2	23.0	145	9.2	1.76	17.73	163404	431.95	438.40	8.5	15.3
1496.0	5.1	20.0	145	9.2	1.83	17.93	165110	694.51	439.70	8.5	15.3

BIT NUMBER	5	IADC CODE	114	INTERVAL	1496.0- 1510.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	14.0
TOTAL HOURS	1.21	TOTAL TURNS	9592	CONDITION	T2 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1497.0	5.6	25.0	135	9.0	1.94	0.18	1446	633	24208	8.5	15.3
1498.0	10.1	27.0	132	9.0	1.78	0.28	2231	351	12279	8.5	15.3
1499.0	11.8	26.0	135	9.0	1.72	0.36	2917	300	8286	8.5	15.3
1500.0	15.0	26.0	135	9.0	1.64	0.43	3457	236	6274	8.5	15.3
1501.0	17.1	26.0	135	9.0	1.60	0.49	3931	207	5060	8.5	15.3
1502.0	12.0	26.0	140	9.0	1.72	0.57	4631	295	4266	8.5	15.3
1503.0	11.2	27.0	138	9.0	1.76	0.66	5370	316	3702	8.5	15.3
1504.0	10.2	27.0	138	9.0	1.79	0.76	6182	347	3283	8.5	15.3
1505.0	11.1	28.0	130	9.0	1.76	0.85	6884	319	2953	8.5	15.3
1506.0	12.7	28.0	132	9.0	1.72	0.93	7508	279	2686	8.5	15.3
1507.0	12.0	28.0	130	9.0	1.74	1.01	8158	295	2469	8.5	15.3
1508.0	14.5	34.0	120	9.0	1.75	1.08	8655	244	2283	8.5	15.3
1509.0	16.0	32.0	122	9.0	1.69	1.14	9112	221	2125	8.5	15.3
1510.0	15.0	33.0	120	9.0	1.72	1.21	9592	236	1990	8.5	15.3
1511.0	16.8	33.0	120	9.0	1.68	1.27	10021	211	1871	8.5	15.3
1512.0	12.6	33.0	120	9.0	1.78	1.35	10592	281	1772	8.5	15.3

BIT NUMBER	6	IADC CODE	114	INTERVAL	1510.0- 1666.0		
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11		
COST	900.00	TRIP TIME	7.0	BIT RUN	156.0		
TOTAL HOURS	10.02	TOTAL TURNS	74837	CONDITION	T2 B5 G0.000		

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1511.0	13.0	28.0	140	9.0	1.74	0.08	646	273	25974	8.5	15.3
1512.0	13.0	28.0	140	9.0	1.74	0.15	1292	273	13123	8.5	15.3
1513.0	12.8	28.0	140	9.0	1.74	0.23	1949	277	8841	8.5	15.3
1514.0	13.1	28.0	140	9.0	1.73	0.31	2590	270	6698	8.5	15.3
1515.0	13.4	28.0	140	9.0	1.73	0.38	3217	264	5412	8.5	15.3
1516.0	11.9	31.0	130	9.0	1.80	0.47	3872	298	4559	8.5	15.3
1517.0	14.4	31.0	130	9.0	1.73	0.54	4414	246	3943	8.5	15.3
1518.0	16.4	31.0	130	9.0	1.69	0.60	4889	216	3477	8.5	15.3
1519.0	16.1	32.0	130	9.0	1.71	0.66	5374	220	3115	8.5	15.3
1520.0	18.3	32.0	130	9.0	1.67	0.71	5800	194	2823	8.5	15.3
1521.0	17.4	32.0	120	9.0	1.66	0.77	6214	204	2585	8.5	15.3
1522.0	18.0	31.0	120	9.0	1.63	0.83	6614	197	2386	8.5	15.3
1523.0	18.3	28.0	120	9.0	1.57	0.88	7007	194	2217	8.5	15.3
1524.0	20.3	30.0	125	9.0	1.58	0.93	7377	175	2071	8.5	15.3
1525.0	13.1	16.0	115	9.0	1.43	1.01	7903	270	1951	8.5	15.3
1526.0	14.2	24.0	122	9.0	1.59	1.08	8419	250	1845	8.5	15.4
1527.0	13.2	25.0	120	9.0	1.63	1.15	8964	268	1752	8.5	15.4
1528.0	16.5	27.0	120	9.0	1.59	1.21	9401	215	1667	8.5	15.4
1529.0	17.6	28.0	120	9.0	1.59	1.27	9810	201	1590	8.5	15.4
1530.0	17.9	27.0	130	9.0	1.59	1.33	10246	198	1520	8.5	15.4
1531.0	16.1	29.0	120	9.0	1.63	1.39	10693	220	1458	8.5	15.4
1532.0	15.7	29.0	120	9.0	1.64	1.45	11151	226	1402	8.5	15.4
1533.0	17.4	29.0	120	9.0	1.61	1.51	11565	204	1350	8.5	15.4
1534.0	15.8	29.0	120	9.0	1.64	1.57	12021	224	1303	8.5	15.4
1535.0	20.3	29.0	120	9.0	1.56	1.62	12376	175	1258	8.5	15.4
1536.0	21.5	29.0	123	9.0	1.54	1.67	12719	165	1216	8.5	15.4
1537.0	17.0	30.0	120	9.0	1.63	1.73	13142	208	1179	8.5	15.4
1538.0	18.3	30.0	120	9.0	1.61	1.78	13536	194	1143	8.5	15.4
1539.0	19.2	30.0	120	9.0	1.59	1.83	13911	185	1110	8.5	15.4
1540.0	19.1	30.0	120	9.0	1.59	1.89	14288	185	1080	8.5	15.4
1541.0	20.1	28.0	120	9.0	1.54	1.94	14646	176	1050	8.5	15.4
1542.0	18.7	28.0	120	9.0	1.57	1.99	15031	189	1024	8.5	15.4
1543.0	22.6	28.0	120	9.0	1.50	2.03	15350	156.77	997.26	8.5	15.4
1544.0	21.1	27.0	120	9.0	1.51	2.08	15691	167.91	972.87	8.5	15.4
1545.0	24.3	28.0	120	9.0	1.48	2.12	15987	145.80	949.24	8.5	15.4
1546.0	16.5	27.0	120	9.0	1.59	2.18	16424	214.73	928.83	8.5	15.4
1547.0	14.4	29.0	120	9.0	1.67	2.25	16924	246.04	910.38	8.5	15.4
1548.0	15.1	27.0	120	9.0	1.62	2.32	17400	234.64	892.60	8.5	15.4
1549.0	14.2	29.0	120	9.0	1.67	2.39	17907	249.51	876.11	8.5	15.4
1550.0	15.8	30.0	120	9.0	1.66	2.45	18363	224.24	859.81	8.5	15.4
1551.0	12.3	31.0	120	9.0	1.76	2.53	18948	288.05	845.87	8.5	15.4
1552.0	15.0	29.0	120	9.0	1.66	2.60	19428	236.20	831.35	8.5	15.4
1553.0	11.5	30.0	120	9.0	1.76	2.69	20055	308.09	819.18	8.5	15.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1554.0	15.7	30.0	120	9.0	1.66	2.75	20513	225.67	805.69	8.5	15.4
1555.0	15.6	30.0	118	9.0	1.65	2.82	20967	227.12	792.84	8.5	15.4
1556.0	17.9	31.0	120	9.0	1.63	2.87	21369	197.93	779.90	8.5	15.4
1557.0	14.5	30.0	120	9.0	1.68	2.94	21866	244.34	768.51	8.5	15.4
1558.0	14.6	30.0	120	9.0	1.68	3.01	22359	242.67	757.55	8.5	15.4
1559.0	14.2	30.0	120	9.0	1.69	3.08	22866	249.51	747.18	8.5	15.4
1560.0	15.3	30.0	120	9.0	1.67	3.14	23337	231.57	736.87	8.5	15.4
1561.0	17.1	30.0	120	9.0	1.63	3.20	23758	207.19	726.49	8.5	15.4
1562.0	17.0	30.0	120	9.0	1.63	3.26	24181	208.41	716.52	8.5	15.4
1563.0	17.2	29.0	120	9.0	1.61	3.32	24600	205.99	706.89	8.5	15.4
1564.0	21.5	30.0	120	9.0	1.55	3.37	24935	164.79	696.85	8.5	15.4
1565.0	14.4	31.0	120	9.0	1.70	3.44	25435	246.04	688.66	8.5	15.4
1566.0	15.8	29.0	120	9.0	1.64	3.50	25890	224.24	680.36	8.5	15.4
1567.0	18.8	29.0	120	9.0	1.58	3.55	26273	188.46	671.73	8.5	15.4
1568.0	20.3	29.0	120	9.0	1.56	3.60	26628	174.53	663.16	8.5	15.4
1569.0	20.0	30.0	120	9.0	1.58	3.65	26988	177.15	654.92	8.5	15.4
1570.0	13.6	30.0	120	9.0	1.71	3.73	27517	260.51	648.35	8.5	15.4
1571.0	14.2	30.0	120	9.0	1.69	3.80	28024	249.51	641.81	8.5	15.4
1572.0	22.9	30.0	120	9.0	1.53	3.84	28339	154.72	633.95	8.5	15.4
1573.0	21.6	28.0	120	9.0	1.52	3.89	28672	164.03	626.50	8.5	15.4
1574.0	13.8	29.0	120	9.0	1.68	3.96	29194	256.74	620.72	8.5	15.4
1575.0	17.1	29.0	120	9.0	1.61	4.02	29615	207.19	614.36	8.5	15.4
1576.0	15.0	30.0	120	9.0	1.67	4.08	30095	236.20	608.63	8.5	15.4
1577.0	14.0	30.0	120	9.0	1.70	4.16	30609	253.07	603.32	8.5	15.4
1578.0	15.4	30.0	120	9.0	1.66	4.22	31077	230.06	597.83	8.5	15.4
1579.0	13.6	30.0	120	9.0	1.71	4.29	31606	260.51	592.94	8.5	15.4
1580.0	14.0	30.0	120	9.0	1.70	4.36	32120	253.07	588.09	8.5	15.4
1581.0	14.6	30.0	120	9.0	1.68	4.43	32614	242.67	583.22	8.5	15.4
1582.0	14.8	29.0	120	9.0	1.66	4.50	33100	239.39	578.45	8.5	15.4
1583.0	18.0	30.0	118	9.0	1.61	4.56	33493	196.83	573.22	8.5	15.4
1584.0	19.1	31.0	118	9.0	1.60	4.61	33864	185.50	567.98	8.5	15.4
1585.0	14.7	30.0	118	9.0	1.67	4.68	34346	241.02	563.62	8.5	15.4
1586.0	13.3	30.0	120	9.0	1.71	4.75	34887	266.39	559.71	8.5	15.4
1587.0	15.4	29.0	120	9.0	1.65	4.82	35355	230.06	555.43	8.5	15.4
1588.0	18.7	29.0	120	9.0	1.58	4.87	35740	189.47	550.74	8.5	15.5
1589.0	20.2	30.0	120	9.0	1.57	4.92	36096	175.40	545.98	8.5	15.5
1590.0	20.0	30.0	120	9.0	1.58	4.97	36456	177.15	541.37	8.5	15.5
1591.0	18.4	29.0	122	9.0	1.59	5.02	36854	192.55	537.07	8.5	15.5
1592.0	14.6	29.0	122	9.0	1.67	5.09	37355	242.67	533.48	8.5	15.5
1593.0	17.0	29.0	122	9.0	1.62	5.15	37786	208.41	529.56	8.5	15.5
1594.0	13.6	30.0	122	9.0	1.71	5.23	38324	260.51	526.36	8.5	15.5
1595.0	15.0	30.0	120	9.0	1.67	5.29	38804	236.20	522.94	8.5	15.5
1596.0	16.0	30.0	120	8.9	1.67	5.35	39254	221.44	519.44	8.5	15.5
1597.0	18.1	30.0	120	8.9	1.63	5.41	39652	195.75	515.72	8.5	15.5
1598.0	14.1	30.0	120	8.9	1.71	5.48	40163	251.28	512.71	8.5	15.5
1599.0	13.9	30.0	120	8.9	1.72	5.55	40681	254.89	509.82	8.5	15.5
1600.0	15.2	30.0	120	8.9	1.69	5.62	41154	233.09	506.74	8.5	15.5
1601.0	16.8	30.0	120	8.9	1.65	5.68	41583	210.89	503.49	8.5	15.5
1602.0	14.0	30.0	125	8.9	1.73	5.75	42119	253.07	500.77	8.5	15.5
1603.0	17.1	30.0	125	8.9	1.66	5.81	42557	207.19	497.61	8.5	15.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1604.0	14.8	30.0	125	8.9	1.71	5.88	43064	239.39	494.86	8.5	15.5
1605.0	15.7	28.0	133	8.9	1.68	5.94	43572	225.67	492.03	8.5	15.5
1606.0	15.7	28.0	132	8.9	1.67	6.00	44077	225.67	489.26	8.5	15.5
1607.0	17.0	28.0	132	8.9	1.65	6.06	44542	208.41	486.36	8.5	15.5
1608.0	19.1	29.0	135	8.9	1.63	6.11	44967	185.50	483.29	8.5	15.5
1609.0	20.7	29.0	135	8.9	1.61	6.16	45358	171.16	480.14	8.5	15.5
1610.0	17.1	29.0	135	8.9	1.67	6.22	45832	207.19	477.41	8.5	15.5
1611.0	14.5	27.0	135	8.9	1.69	6.29	46390	244.34	475.10	8.5	15.5
1612.0	17.3	27.0	135	8.9	1.63	6.35	46858	204.80	472.45	8.5	15.5
1613.0	17.4	27.0	135	8.9	1.63	6.40	47324	203.62	469.84	8.5	15.5
1614.0	16.9	27.0	135	8.9	1.64	6.46	47803	209.64	467.34	8.5	15.5
1615.0	18.1	26.0	135	8.9	1.60	6.52	48251	195.75	464.75	8.5	15.5
1616.0	18.7	27.0	135	8.9	1.61	6.57	48684	189.47	462.16	8.5	15.5
1617.0	17.7	27.0	135	8.9	1.62	6.63	49141	200.17	459.71	8.5	15.5
1618.0	17.7	27.0	135	8.9	1.62	6.69	49599	200.17	457.30	8.5	15.5
1619.0	7.9	22.0	120	8.9	1.75	6.81	50511	448.48	457.22	8.5	15.5
1620.0	10.2	20.0	130	8.9	1.65	6.91	51275	347.35	456.22	8.5	15.5
1621.0	9.6	20.0	135	8.9	1.68	7.01	52119	369.06	455.44	8.5	15.5
1622.0	9.6	20.0	135	8.9	1.68	7.12	52963	369.06	454.67	8.5	15.5
1623.0	10.3	21.0	135	8.9	1.68	7.22	53749	343.98	453.69	8.5	15.5
1624.0	10.6	22.0	132	8.9	1.68	7.31	54496	334.25	452.64	8.5	15.5
1625.0	12.4	22.0	132	8.9	1.64	7.39	55135	285.73	451.19	8.5	15.5
1626.0	12.8	23.0	135	8.9	1.65	7.47	55768	276.80	449.69	8.5	15.5
1627.0	14.3	25.0	135	8.9	1.66	7.54	56334	247.76	447.96	8.5	15.5
1628.0	15.2	30.0	125	8.9	1.70	7.60	56828	233.09	446.14	8.5	15.5
1629.0	14.4	32.0	130	8.9	1.77	7.67	57369	246.04	444.46	8.5	15.5
1630.0	14.8	31.0	132	8.9	1.75	7.74	57904	239.39	442.75	8.5	15.5
1631.0	16.4	32.0	128	8.9	1.72	7.80	58373	216.04	440.87	8.5	15.5
1632.0	13.2	30.0	130	8.9	1.76	7.88	58964	268.41	439.46	8.5	15.5
1633.0	12.3	30.0	124	8.9	1.77	7.96	59569	288.05	438.23	8.5	15.5
1634.0	15.9	31.0	124	8.9	1.70	8.02	60036	222.83	436.49	8.5	15.5
1635.0	13.2	32.0	128	8.9	1.79	8.10	60618	268.41	435.15	8.5	15.5
1636.0	16.8	31.0	125	8.9	1.68	8.16	61065	210.89	433.37	8.5	15.5
1637.0	16.9	33.0	132	8.9	1.73	8.22	61533	209.64	431.61	8.5	15.5
1638.0	18.4	34.0	130	8.9	1.71	8.27	61957	192.55	429.74	8.5	15.5
1639.0	20.1	35.0	120	8.9	1.67	8.32	62315	176.27	427.77	8.5	15.5
1640.0	15.5	33.0	120	8.9	1.73	8.39	62780	228.58	426.24	8.5	15.5
1641.0	15.3	33.0	122	8.9	1.74	8.45	63258	231.57	424.76	8.5	15.5
1642.0	23.3	33.0	124	8.9	1.60	8.49	63578	152.06	422.69	8.5	15.5
1643.0	19.1	35.0	132	8.9	1.72	8.55	63992	185.50	420.91	8.5	15.5
1644.0	19.9	35.0	122	8.9	1.68	8.60	64360	178.04	419.09	8.5	15.5
1645.0	16.6	35.0	124	8.9	1.75	8.66	64808	213.43	417.57	8.5	15.5
1646.0	22.6	34.0	126	8.9	1.63	8.70	65143	156.77	415.65	8.5	15.5
1647.0	14.6	29.0	125	8.9	1.70	8.77	65657	242.67	414.39	8.5	15.5
1648.0	11.7	28.0	120	8.9	1.74	8.86	66272	302.82	413.58	8.5	15.5
1649.0	11.8	28.0	120	8.9	1.74	8.94	66882	300.25	412.77	8.5	15.5
1650.0	11.3	21.0	122	8.9	1.62	9.03	67530	313.54	412.06	8.5	15.5
1651.0	14.1	22.0	124	8.9	1.58	9.10	68058	251.28	410.92	8.5	15.5
1652.0	12.6	24.0	120	8.9	1.64	9.18	68629	281.19	410.00	8.5	15.6
1653.0	14.8	24.0	124	8.9	1.60	9.25	69132	239.39	408.81	8.5	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1654.0	15.6	26.0	124	8.9	1.62	9.31	69609	227.12	407.55	8.5	15.6
1655.0	20.7	24.0	122	8.9	1.49	9.36	69962	171.16	405.92	8.5	15.6
1656.0	16.6	23.0	125	8.9	1.55	9.42	70414	213.43	404.60	8.5	15.6
1657.0	14.5	23.0	125	8.9	1.59	9.49	70931	244.34	403.51	8.5	15.6
1658.0	13.8	23.0	124	8.9	1.60	9.56	71471	256.74	402.52	8.5	15.6
1659.0	12.8	25.0	125	8.9	1.67	9.64	72056	276.80	401.68	8.5	15.6
1660.0	13.2	22.0	125	8.9	1.60	9.71	72625	268.41	400.79	8.5	15.6
1661.0	14.4	21.0	125	8.9	1.55	9.78	73145	246.04	399.76	8.5	15.6
1662.0	15.3	24.0	118	8.9	1.57	9.85	73608	231.57	398.66	8.5	15.6
1663.0	16.9	24.0	118	8.9	1.54	9.91	74027	209.64	397.42	8.5	15.6
1664.0	18.6	25.0	118	8.9	1.53	9.96	74408	190.48	396.08	8.5	15.6
1665.0	17.6	24.0	120	8.9	1.53	10.02	74817	201.31	394.82	8.5	15.6
1666.0	17.6	24.0	120	8.9	1.53	10.08	75226	201.31	393.58	8.5	15.6

BIT NUMBER	7	IADC CODE	114	INTERVAL	1666.0- 2187.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	8.0	BIT RUN	521.0
TOTAL HOURS	19.49	TOTAL TURNS	149236	CONDITION	T4 B5 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1667.0	19.9	25.0	135	8.9	1.55	0.05	407	178	29414	8.5	15.6
1668.0	18.1	25.0	135	8.9	1.58	0.11	855	196	14805	8.5	15.6
1669.0	21.3	25.0	135	8.9	1.53	0.15	1235	166	9925	8.5	15.6
1670.0	18.7	25.0	135	8.9	1.57	0.21	1668	189	7491	8.5	15.6
1671.0	15.3	25.0	135	8.9	1.63	0.27	2197	232	6039	8.5	15.6
1672.0	15.3	25.0	135	8.9	1.63	0.34	2727	232	5071	8.5	15.6
1673.0	18.1	25.0	135	8.9	1.58	0.39	3174	196	4375	8.5	15.6
1674.0	11.9	25.0	135	8.9	1.72	0.48	3855	298	3865	8.5	15.6
1675.0	15.2	25.0	120	8.9	1.60	0.54	4329	233	3462	8.5	15.6
1676.0	18.5	25.0	120	8.9	1.54	0.60	4718	191	3135	8.5	15.6
1677.0	19.2	25.0	120	8.9	1.52	0.65	5093	184	2866	8.5	15.6
1678.0	16.2	25.0	120	8.9	1.58	0.71	5537	219	2646	8.5	15.6
1679.0	21.7	25.0	120	8.9	1.48	0.76	5869	163	2455	8.5	15.6
1680.0	21.7	25.0	120	8.9	1.48	0.80	6201	163	2291	8.5	15.6
1681.0	18.3	25.0	120	8.9	1.54	0.86	6594	194	2151	8.5	15.6
1682.0	26.7	25.0	120	8.9	1.42	0.89	6864	133	2025	8.5	15.6
1683.0	17.9	25.0	120	8.9	1.55	0.95	7266	198	1918	8.5	15.6
1684.0	14.5	25.0	120	8.9	1.61	1.02	7763	244	1825	8.5	15.6
1685.0	23.5	25.0	120	8.9	1.46	1.06	8069	151	1737	8.5	15.6
1686.0	28.4	26.0	120	8.9	1.41	1.10	8323	125	1656	8.5	15.6
1687.0	24.6	26.0	120	8.9	1.46	1.14	8615	144	1584	8.5	15.6
1688.0	22.6	25.0	120	8.9	1.47	1.18	8934	157	1519	8.5	15.6
1689.0	19.6	25.0	120	8.9	1.52	1.23	9301	181	1461	8.5	15.6
1690.0	28.4	25.0	120	8.9	1.40	1.27	9555	125	1405	8.5	15.6
1691.0	22.9	25.0	120	8.9	1.47	1.31	9869	155	1355	8.5	15.6
1692.0	12.3	25.0	120	8.9	1.67	1.39	10455	288	1314	8.5	15.6
1693.0	17.7	25.0	120	8.9	1.55	1.45	10861	200	1273	8.5	15.6
1694.0	25.9	24.0	120	8.9	1.41	1.49	11139	137	1232	8.5	15.6
1695.0	19.6	24.0	120	8.9	1.50	1.54	11507	181	1196	8.5	15.6
1696.0	25.1	24.0	122	8.9	1.43	1.58	11798	141	1161	8.5	15.6
1697.0	22.9	25.0	122	8.9	1.47	1.62	12118	155	1128	8.5	15.6
1698.0	22.1	25.0	122	8.9	1.48	1.67	12449	160	1098	8.5	15.6
1699.0	19.9	25.0	122	8.9	1.52	1.72	12817	178	1070	8.5	15.6
1700.0	22.6	25.0	122	8.9	1.48	1.76	13141	157	1043	8.5	15.6
1701.0	17.7	25.0	122	8.9	1.56	1.82	13555	200	1019	8.5	15.6
1702.0	18.0	25.0	122	8.9	1.55	1.87	13961	196.78	996.49	8.5	15.6
1703.0	18.0	25.0	122	8.9	1.55	1.93	14368	196.78	974.88	8.5	15.6
1704.0	18.6	25.0	122	8.9	1.54	1.98	14761	190.43	954.23	8.5	15.6
1705.0	17.6	25.0	122	8.9	1.56	2.04	15177	201.25	934.93	8.5	15.6
1706.0	20.7	25.0	122	8.9	1.51	2.09	15531	171.11	915.83	8.5	15.6
1707.0	21.5	25.0	120	8.9	1.49	2.13	15866	164.74	897.51	8.5	15.6
1708.0	30.3	25.0	120	8.9	1.38	2.17	16103	116.90	878.92	8.5	15.6
1709.0	19.9	24.0	120	8.9	1.49	2.22	16465	177.99	862.62	8.5	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1710.0	20.7	24.0	120	8.9	1.48	2.27	16813	171.11	846.91	8.5	15.6
1711.0	20.7	24.0	120	8.9	1.48	2.31	17161	171.11	831.89	8.5	15.6
1712.0	19.2	24.0	120	8.9	1.51	2.37	17536	184.48	817.82	8.5	15.6
1713.0	21.7	24.0	120	8.9	1.47	2.41	17868	163.23	803.89	8.5	15.6
1714.0	20.5	24.0	120	8.9	1.49	2.46	18219	172.78	790.74	8.5	15.6
1715.0	19.4	24.0	120	8.9	1.50	2.51	18590	182.58	778.33	8.5	15.6
1716.0	21.1	24.0	130	8.9	1.50	2.56	18960	167.87	766.12	8.5	15.6
1717.0	22.1	24.0	130	8.8	1.50	2.61	19313	160.27	754.24	8.5	15.6
1718.0	23.3	27.0	125	8.8	1.53	2.65	19635	152.02	742.66	8.5	15.6
1719.0	28.0	27.0	125	8.8	1.46	2.68	19902	126.50	731.03	8.5	15.7
1720.0	22.6	27.0	125	8.8	1.54	2.73	20234	156.73	720.40	8.5	15.7
1721.0	22.1	30.0	130	8.8	1.61	2.77	20587	160.27	710.21	8.5	15.7
1722.0	21.3	30.0	130	8.8	1.62	2.82	20953	166.29	700.50	8.5	15.7
1723.0	20.5	30.0	130	8.8	1.63	2.87	21334	172.78	691.24	8.5	15.7
1724.0	27.0	30.0	130	8.8	1.54	2.91	21623	131.19	681.59	8.5	15.7
1725.0	24.3	30.0	130	8.8	1.57	2.95	21944	145.76	672.50	8.5	15.7
1726.0	25.1	30.0	130	8.8	1.56	2.99	22255	141.12	663.65	8.5	15.7
1727.0	26.3	29.0	130	8.8	1.53	3.03	22551	134.68	654.98	8.5	15.7
1728.0	21.7	30.0	132	8.8	1.62	3.07	22916	163.23	647.05	8.5	15.7
1729.0	26.3	29.0	132	8.8	1.54	3.11	23217	134.68	638.91	8.5	15.7
1730.0	27.7	30.0	130	8.8	1.53	3.15	23499	127.87	630.93	8.5	15.7
1731.0	20.9	31.0	130	8.8	1.64	3.19	23872	169.47	623.83	8.5	15.7
1732.0	24.2	30.0	130	8.8	1.57	3.24	24194	146.36	616.59	8.5	15.7
1733.0	26.3	30.0	130	8.8	1.55	3.27	24491	134.68	609.40	8.5	15.7
1734.0	25.1	30.0	130	8.8	1.56	3.31	24802	141.12	602.51	8.5	15.7
1735.0	27.0	30.0	130	8.8	1.54	3.35	25091	131.19	595.68	8.5	15.7
1736.0	29.1	35.0	130	8.8	1.58	3.38	25359	121.72	588.91	8.5	15.7
1737.0	28.4	35.0	130	8.8	1.59	3.42	25633	124.72	582.37	8.5	15.7
1738.0	28.0	35.0	130	8.8	1.60	3.46	25912	126.50	576.04	8.5	15.7
1739.0	34.0	35.0	130	8.8	1.53	3.48	26141	104.18	569.58	8.5	15.7
1740.0	31.2	34.0	130	8.8	1.55	3.52	26391	113.53	563.42	8.5	15.7
1741.0	27.3	34.0	130	8.8	1.59	3.55	26677	129.74	557.63	8.5	15.7
1742.0	31.7	34.0	130	8.8	1.54	3.59	26923	111.74	551.77	8.5	15.7
1743.0	27.7	35.0	135	8.8	1.62	3.62	27215	127.87	546.26	8.5	15.7
1744.0	29.5	35.0	135	8.8	1.59	3.66	27490	120.07	540.80	8.5	15.7
1745.0	35.6	35.0	135	8.8	1.53	3.68	27718	99.49	535.21	8.5	15.7
1746.0	32.1	35.0	135	8.8	1.56	3.71	27970	110.34	529.90	8.5	15.7
1747.0	31.2	34.0	140	8.8	1.57	3.75	28239	113.53	524.76	8.5	15.7
1748.0	30.3	34.0	140	8.8	1.58	3.78	28516	116.90	519.79	8.5	15.7
1749.0	35.1	35.0	140	8.8	1.54	3.81	28756	100.91	514.74	8.5	15.7
1750.0	34.0	35.0	140	8.8	1.56	3.84	29003	104.18	509.85	8.5	15.7
1751.0	28.4	35.0	140	8.8	1.62	3.87	29298	124.72	505.32	8.5	15.7
1752.0	33.0	35.0	130	8.8	1.54	3.90	29535	107.33	500.69	8.5	15.7
1753.0	35.1	34.0	130	8.8	1.50	3.93	29757	100.91	496.10	8.5	15.7
1754.0	35.6	34.0	130	8.8	1.50	3.96	29976	99.49	491.59	8.5	15.7
1755.0	36.7	34.0	130	8.8	1.49	3.99	30189	96.51	487.15	8.5	15.7
1756.0	31.7	34.0	130	8.8	1.54	4.02	30435	111.74	482.98	8.5	15.7
1757.0	36.2	34.0	130	8.8	1.49	4.05	30650	97.85	478.75	8.5	15.7
1758.0	31.2	34.0	130	8.8	1.55	4.08	30900	113.53	474.78	8.5	15.7
1759.0	36.7	34.0	130	8.8	1.49	4.11	31113	96.51	470.71	8.5	15.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1760.0	30.0	34.0	130	8.8	1.56	4.14	31373	118.07	466.96	8.5	15.7
1761.0	19.6	34.0	125	8.8	1.70	4.19	31755	180.71	463.95	8.5	15.7
1762.0	31.7	34.0	125	8.8	1.53	4.22	31992	111.74	460.28	8.5	15.7
1763.0	31.2	34.0	130	8.8	1.55	4.25	32242	113.53	456.70	8.5	15.7
1764.0	37.6	34.0	130	8.8	1.48	4.28	32449	94.20	453.00	8.5	15.7
1765.0	30.3	34.0	135	8.8	1.57	4.31	32717	116.90	449.61	8.5	15.7
1766.0	29.8	34.0	140	8.8	1.59	4.35	32999	118.86	446.30	8.5	15.7
1767.0	34.5	34.0	140	8.8	1.54	4.38	33242	102.67	442.90	8.5	15.7
1768.0	26.3	34.0	145	8.8	1.65	4.41	33573	134.68	439.88	8.5	15.7
1769.0	38.1	32.0	145	8.8	1.48	4.44	33801	92.97	436.51	8.5	15.7
1770.0	39.8	30.0	130	8.8	1.40	4.46	33997	88.99	433.17	8.5	15.7
1771.0	31.3	30.0	130	8.8	1.49	4.50	34246	113.16	430.12	8.5	15.7
1772.0	32.6	30.0	130	8.8	1.47	4.53	34486	108.65	427.09	8.5	15.7
1773.0	35.6	32.0	125	8.8	1.46	4.56	34696	99.49	424.03	8.5	15.7
1774.0	40.2	34.0	130	8.8	1.45	4.58	34890	88.11	420.92	8.5	15.7
1775.0	40.5	32.0	130	8.8	1.43	4.60	35083	87.46	417.86	8.5	15.7
1776.0	36.7	32.0	130	8.8	1.46	4.63	35296	96.51	414.93	8.5	15.7
1777.0	32.0	32.0	124	8.8	1.49	4.66	35528	110.69	412.19	8.5	15.7
1778.0	36.2	31.0	126	8.8	1.44	4.69	35737	97.85	409.39	8.5	15.7
1779.0	32.1	30.0	125	8.8	1.46	4.72	35971	110.34	406.74	8.5	15.7
1780.0	26.8	34.0	125	8.8	1.59	4.76	36250	132.16	404.33	8.5	15.7
1781.0	26.0	32.0	124	8.8	1.56	4.80	36537	136.23	402.00	8.5	15.7
1782.0	35.6	33.0	130	8.8	1.48	4.83	36756	99.49	399.39	8.5	15.7
1783.0	33.5	33.0	132	8.8	1.51	4.86	36992	105.73	396.88	8.5	15.7
1784.0	34.0	33.0	134	8.8	1.51	4.89	37229	104.18	394.40	8.5	15.7
1785.0	30.3	32.0	140	8.8	1.55	4.92	37506	116.90	392.07	8.5	15.7
1786.0	35.6	34.0	142	8.8	1.53	4.95	37745	99.49	389.63	8.5	15.7
1787.0	40.5	35.0	142	8.8	1.50	4.97	37955	87.46	387.14	8.5	15.7
1788.0	36.7	36.0	142	8.8	1.55	5.00	38188	96.51	384.75	8.5	15.8
1789.0	35.4	35.0	138	8.8	1.54	5.03	38422	100.06	382.44	8.5	15.8
1790.0	28.5	33.0	130	8.8	1.56	5.06	38695	124.28	380.36	8.5	15.8
1791.0	29.6	32.0	133	8.8	1.54	5.10	38965	119.66	378.27	8.5	15.8
1792.0	34.0	34.0	135	8.8	1.53	5.12	39203	104.18	376.10	8.5	15.8
1793.0	31.7	34.0	125	8.8	1.53	5.16	39440	111.74	374.01	8.5	15.8
1794.0	32.6	35.0	128	8.8	1.54	5.19	39675	108.65	371.94	8.5	15.8
1795.0	29.5	34.0	125	8.8	1.55	5.22	39929	120.07	369.99	8.5	15.8
1796.0	30.9	34.0	128	8.8	1.54	5.25	40178	114.63	368.02	8.5	15.8
1797.0	34.0	33.0	125	8.8	1.49	5.28	40399	104.18	366.01	8.5	15.8
1798.0	27.6	31.0	125	8.8	1.53	5.32	40670	128.33	364.21	8.5	15.8
1799.0	26.0	31.0	128	8.8	1.56	5.36	40966	136.23	362.50	8.5	15.8
1800.0	28.0	33.0	130	8.8	1.57	5.39	41244	126.50	360.73	8.5	15.8
1801.0	33.5	34.0	125	8.8	1.51	5.42	41468	105.73	358.85	8.5	15.8
1802.0	34.5	34.0	128	8.8	1.50	5.45	41691	102.67	356.96	8.5	15.8
1803.0	36.2	34.0	128	8.8	1.49	5.48	41903	97.85	355.07	8.5	15.8
1804.0	28.0	34.0	125	8.8	1.57	5.52	42171	126.50	353.41	8.5	15.8
1805.0	35.6	34.0	125	8.8	1.48	5.54	42381	99.49	351.59	8.5	15.8
1806.0	36.7	35.0	125	8.8	1.49	5.57	42586	96.51	349.77	8.5	15.8
1807.0	28.5	30.0	130	8.8	1.52	5.61	42859	124.28	348.17	8.5	15.8
1808.0	22.9	30.0	135	8.8	1.61	5.65	43213	154.67	346.80	8.5	15.8
1809.0	30.9	30.0	135	8.8	1.50	5.68	43475	114.63	345.18	8.5	15.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1810.0	29.7	33.0	132	8.8	1.55	5.72	43742	119.26	343.61	8.5	15.8
1811.0	35.1	34.0	128	8.8	1.50	5.74	43961	100.91	341.94	8.5	15.8
1812.0	30.9	32.0	129	8.8	1.52	5.78	44211	114.63	340.38	8.5	15.8
1813.0	32.6	33.0	126	8.8	1.50	5.81	44443	108.65	338.80	8.5	15.8
1814.0	31.2	32.0	130	8.8	1.52	5.84	44693	113.53	337.28	8.5	15.8
1815.0	31.7	32.0	134	8.8	1.52	5.87	44947	111.74	335.77	8.5	15.8
1816.0	33.0	32.0	132	8.8	1.50	5.90	45187	107.33	334.24	8.5	15.8
1817.0	30.9	33.0	132	8.8	1.54	5.93	45443	114.63	332.79	8.5	15.8
1818.0	28.9	32.0	130	8.8	1.54	5.97	45713	122.56	331.41	8.5	15.8
1819.0	26.0	33.0	132	8.8	1.60	6.01	46018	136.23	330.13	8.5	15.8
1820.0	28.4	32.0	130	8.8	1.55	6.04	46292	124.72	328.80	8.5	15.8
1821.0	31.7	33.0	130	8.8	1.53	6.07	46538	111.74	327.40	8.5	15.8
1822.0	31.7	33.0	130	8.8	1.53	6.10	46784	111.74	326.02	8.5	15.8
1823.0	29.7	33.0	130	8.8	1.55	6.14	47047	119.26	324.70	8.5	15.8
1824.0	28.4	32.0	134	8.8	1.56	6.17	47330	124.72	323.43	8.5	15.8
1825.0	34.0	34.0	128	8.8	1.51	6.20	47556	104.18	322.05	8.5	15.8
1826.0	35.1	33.0	126	8.8	1.48	6.23	47771	100.91	320.67	8.5	15.8
1827.0	32.6	33.0	128	8.8	1.51	6.26	48007	108.65	319.35	8.5	15.8
1828.0	23.0	28.0	136	8.8	1.57	6.31	48362	154.00	318.33	8.5	15.8
1829.0	26.3	33.0	126	8.8	1.58	6.34	48649	134.68	317.21	8.5	15.8
1830.0	34.0	34.0	125	8.8	1.50	6.37	48870	104.18	315.91	8.5	15.8
1831.0	36.2	34.0	125	8.8	1.48	6.40	49077	97.85	314.59	8.5	15.8
1832.0	31.2	34.0	128	8.8	1.54	6.43	49323	113.53	313.38	8.5	15.8
1833.0	31.2	33.0	125	8.8	1.52	6.46	49564	113.53	312.18	8.5	15.8
1834.0	35.6	33.0	125	8.8	1.47	6.49	49774	99.49	310.91	8.5	15.8
1835.0	35.6	35.0	120	8.8	1.48	6.52	49976	99.49	309.66	8.5	15.8
1836.0	31.7	34.0	124	8.8	1.52	6.55	50211	111.74	308.50	8.5	15.8
1837.0	27.3	28.0	132	8.8	1.51	6.59	50501	129.74	307.45	8.5	15.8
1838.0	29.1	30.0	128	8.8	1.51	6.62	50765	121.72	306.37	8.5	15.8
1839.0	39.8	32.0	128	8.8	1.43	6.65	50958	88.99	305.12	8.5	15.8
1840.0	27.3	33.0	132	8.8	1.58	6.69	51248	129.74	304.11	8.5	15.8
1841.0	34.5	30.0	132	8.8	1.46	6.71	51478	102.67	302.96	8.5	15.8
1842.0	31.7	31.0	134	8.8	1.51	6.75	51731	111.74	301.87	8.5	15.8
1843.0	34.5	31.0	134	8.8	1.48	6.77	51964	102.67	300.74	8.5	15.8
1844.0	33.0	32.0	134	8.8	1.51	6.80	52208	107.33	299.66	8.5	15.8
1845.0	31.2	31.0	132	8.8	1.51	6.84	52462	113.53	298.62	8.5	15.8
1846.0	31.2	29.0	132	8.8	1.48	6.87	52716	113.53	297.59	8.5	15.8
1847.0	30.3	32.0	132	8.8	1.53	6.90	52977	116.90	296.59	8.5	15.8
1848.0	30.8	30.0	125	8.8	1.48	6.93	53221	115.00	295.59	8.5	15.8
1849.0	31.7	31.0	125	8.8	1.48	6.97	53457	111.74	294.59	8.5	15.8
1850.0	34.0	32.0	125	8.8	1.47	7.00	53678	104.18	293.55	8.5	15.8
1851.0	35.1	32.0	128	8.8	1.47	7.02	53897	100.91	292.51	8.5	15.8
1852.0	34.5	34.0	128	8.8	1.50	7.05	54119	102.67	291.49	8.5	15.8
1853.0	29.5	33.0	128	8.8	1.55	7.09	54380	120.07	290.58	8.5	15.8
1854.0	27.7	32.0	135	8.8	1.57	7.12	54672	127.87	289.71	8.5	15.8
1855.0	28.6	32.0	135	8.8	1.56	7.16	54955	123.85	288.83	8.5	15.8
1856.0	31.7	32.0	128	8.8	1.51	7.19	55198	111.74	287.90	8.5	15.8
1857.0	31.7	32.0	128	8.8	1.51	7.22	55440	111.74	286.98	8.5	15.8
1858.0	35.1	33.0	120	8.8	1.46	7.25	55645	100.91	286.01	8.5	15.8
1859.0	32.1	34.0	122	8.8	1.51	7.28	55873	110.34	285.10	8.5	15.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1860.0	31.2	34.0	126	8.8	1.53	7.31	56115	113.53	284.21	8.5	15.9
1861.0	33.0	35.0	120	8.8	1.51	7.34	56333	107.33	283.31	8.5	15.9
1862.0	38.1	34.0	122	8.8	1.45	7.37	56526	92.97	282.34	8.5	15.9
1863.0	36.7	34.0	120	8.8	1.46	7.40	56722	96.51	281.39	8.5	15.9
1864.0	35.1	33.0	124	8.8	1.47	7.42	56934	100.91	280.48	8.5	15.9
1865.0	33.5	35.0	124	8.8	1.52	7.45	57156	105.73	279.60	8.5	15.9
1866.0	29.5	31.0	132	8.8	1.53	7.49	57424	120.07	278.81	8.5	15.9
1867.0	25.9	32.0	125	8.8	1.57	7.53	57714	136.76	278.10	8.5	15.9
1868.0	38.1	32.0	124	8.8	1.43	7.55	57909	92.97	277.18	8.5	15.9
1869.0	33.0	32.0	124	8.8	1.48	7.58	58135	107.33	276.35	8.5	15.9
1870.0	29.1	29.0	128	8.8	1.49	7.62	58399	121.72	275.59	8.5	15.9
1871.0	29.7	31.0	128	8.8	1.51	7.65	58657	119.26	274.83	8.5	15.9
1872.0	26.7	30.0	135	8.8	1.55	7.69	58960	132.66	274.14	8.5	15.9
1873.0	33.5	28.0	140	8.8	1.46	7.72	59211	105.73	273.32	8.5	15.9
1874.0	27.0	30.0	138	8.8	1.56	7.76	59518	131.19	272.64	8.5	15.9
1875.0	28.0	29.0	130	8.8	1.51	7.79	59796	126.50	271.94	8.5	15.9
1876.0	21.1	32.0	134	8.8	1.66	7.84	60178	167.87	271.44	8.5	15.9
1877.0	29.5	33.0	135	8.8	1.56	7.87	60452	120.07	270.73	8.5	15.9
1878.0	29.1	33.0	135	8.8	1.57	7.91	60730	121.72	270.02	8.5	15.9
1879.0	29.5	33.0	135	8.8	1.56	7.94	61005	120.07	269.32	8.5	15.9
1880.0	28.7	36.0	132	8.8	1.61	7.98	61281	123.41	268.64	8.5	15.9
1881.0	29.5	34.0	132	8.8	1.57	8.01	61549	120.07	267.95	8.5	15.9
1882.0	36.7	35.0	132	8.8	1.51	8.04	61765	96.51	267.15	8.5	15.9
1883.0	29.5	33.0	130	8.8	1.55	8.07	62030	120.07	266.47	8.5	15.9
1884.0	28.7	32.0	130	8.8	1.55	8.11	62301	123.41	265.82	8.5	15.9
1885.0	26.7	32.0	130	8.8	1.57	8.14	62594	132.66	265.21	8.5	15.9
1886.0	32.6	35.0	128	8.8	1.54	8.17	62829	108.65	264.50	8.5	15.9
1887.0	34.0	35.0	128	8.8	1.52	8.20	63055	104.18	263.77	8.5	15.9
1888.0	31.7	34.0	125	8.8	1.53	8.24	63292	111.74	263.09	8.5	15.9
1889.0	32.1	35.0	125	8.8	1.54	8.27	63525	110.34	262.40	8.5	15.9
1890.0	31.2	35.0	125	8.8	1.55	8.30	63766	113.53	261.74	8.5	15.9
1891.0	34.0	34.0	125	8.8	1.50	8.33	63986	104.18	261.04	8.5	15.9
1892.0	33.0	36.0	125	8.8	1.54	8.36	64214	107.33	260.36	8.5	15.9
1893.0	26.7	29.0	132	8.8	1.53	8.40	64510	132.66	259.80	8.5	15.9
1894.0	26.7	30.0	132	8.8	1.55	8.43	64807	132.66	259.24	8.5	15.9
1895.0	30.9	32.0	130	8.8	1.52	8.47	65059	114.63	258.61	8.5	15.9
1896.0	33.0	33.0	125	8.8	1.50	8.50	65286	107.33	257.95	8.5	15.9
1897.0	31.2	35.0	128	8.8	1.55	8.53	65533	113.53	257.32	8.5	15.9
1898.0	29.5	34.0	128	8.8	1.56	8.56	65793	120.07	256.73	8.5	15.9
1899.0	31.7	34.0	130	8.8	1.54	8.59	66039	111.74	256.11	8.5	15.9
1900.0	36.7	35.0	128	8.8	1.50	8.62	66248	96.51	255.43	8.5	15.9
1901.0	32.6	35.0	128	8.8	1.54	8.65	66484	108.65	254.80	8.5	15.9
1902.0	29.1	34.0	128	8.8	1.56	8.69	66748	121.72	254.24	8.5	15.9
1903.0	28.1	29.0	132	8.8	1.51	8.72	67030	126.05	253.70	8.5	15.9
1904.0	24.3	31.0	132	8.8	1.59	8.76	67356	145.76	253.25	8.5	15.9
1905.0	28.0	30.0	132	8.8	1.53	8.80	67638	126.50	252.71	8.5	15.9
1906.0	24.3	30.0	138	8.8	1.59	8.84	67979	145.76	252.27	8.5	15.9
1907.0	22.1	30.0	135	8.8	1.62	8.88	68346	160.27	251.89	8.5	15.9
1908.0	26.3	30.0	135	8.8	1.56	8.92	68654	134.68	251.40	8.5	15.9
1909.0	27.3	29.0	135	8.8	1.53	8.96	68950	129.74	250.90	8.5	15.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1910.0	26.3	29.0	135	8.8	1.54	9.00	69258	134.68	250.43	8.5	15.9
1911.0	23.3	28.0	132	8.8	1.56	9.04	69598	152.02	250.02	8.5	15.9
1912.0	24.6	29.0	138	8.8	1.57	9.08	69935	143.98	249.59	8.5	15.9
1913.0	19.2	30.0	130	8.8	1.65	9.13	70341	184.48	249.33	8.5	15.9
1914.0	28.0	30.0	126	8.8	1.51	9.17	70611	126.50	248.83	8.5	15.9
1915.0	29.1	30.0	130	8.8	1.51	9.20	70879	121.72	248.32	8.5	15.9
1916.0	23.0	30.0	128	8.8	1.59	9.25	71213	154.00	247.95	8.5	15.9
1917.0	31.7	32.0	128	8.8	1.51	9.28	71455	111.74	247.40	8.5	15.9
1918.0	28.7	29.0	128	8.8	1.49	9.31	71723	123.41	246.91	8.5	15.9
1919.0	28.0	30.0	132	8.8	1.53	9.35	72006	126.50	246.44	8.5	15.9
1920.0	22.9	31.0	124	8.8	1.59	9.39	72331	154.67	246.07	8.5	15.9
1921.0	28.7	30.0	126	8.8	1.50	9.43	72594	123.41	245.59	8.5	15.9
1922.0	28.9	31.0	120	8.8	1.50	9.46	72843	122.56	245.11	8.5	15.9
1923.0	29.1	34.0	122	8.8	1.55	9.50	73095	121.72	244.63	8.5	15.9
1924.0	35.6	35.0	120	8.8	1.48	9.52	73297	99.49	244.07	8.5	15.9
1925.0	32.6	35.0	120	8.8	1.51	9.55	73518	108.65	243.55	8.5	15.9
1926.0	35.1	33.0	120	8.8	1.46	9.58	73723	100.91	243.00	8.5	15.9
1927.0	35.1	34.0	122	8.8	1.48	9.61	73932	100.91	242.45	8.5	15.9
1928.0	34.5	33.0	122	8.8	1.47	9.64	74144	102.67	241.92	8.5	15.9
1929.0	33.0	33.0	122	8.8	1.49	9.67	74366	107.33	241.41	8.5	15.9
1930.0	32.4	33.0	122	8.8	1.50	9.70	74591	109.32	240.91	8.5	15.9
1931.0	32.1	30.0	135	8.8	1.49	9.73	74844	110.34	240.42	8.5	15.9
1932.0	29.5	30.0	132	8.8	1.51	9.77	75112	120.07	239.96	8.5	15.9
1933.0	29.1	33.0	128	8.8	1.55	9.80	75376	121.72	239.52	8.5	15.9
1934.0	32.6	34.0	128	8.8	1.52	9.83	75612	108.65	239.03	8.5	16.0
1935.0	33.5	34.0	128	8.8	1.51	9.86	75841	105.73	238.54	8.5	16.0
1936.0	34.0	33.0	122	8.8	1.48	9.89	76056	104.18	238.04	8.5	16.0
1937.0	24.3	34.0	125	8.8	1.62	9.93	76365	145.76	237.70	8.5	16.0
1938.0	30.3	34.0	125	8.8	1.54	9.97	76612	116.90	237.25	8.5	16.0
1939.0	36.7	33.0	126	8.8	1.46	9.99	76818	96.51	236.74	8.5	16.0
1940.0	35.1	33.0	126	8.8	1.48	10.02	77034	100.91	236.24	8.5	16.0
1941.0	27.8	30.0	125	8.8	1.51	10.06	77304	127.41	235.85	8.5	16.0
1942.0	24.3	30.0	125	8.8	1.56	10.10	77612	145.76	235.52	8.5	16.0
1943.0	31.2	31.0	125	8.8	1.49	10.13	77853	113.53	235.08	8.5	16.0
1944.0	42.7	32.0	126	8.8	1.40	10.15	78030	82.95	234.53	8.5	16.0
1945.0	30.3	32.0	126	8.8	1.52	10.19	78279	116.90	234.11	8.5	16.0
1946.0	34.0	31.0	120	8.8	1.44	10.22	78491	104.18	233.65	8.5	16.0
1947.0	37.8	32.0	120	8.8	1.42	10.24	78681	93.70	233.15	8.5	16.0
1948.0	38.1	32.0	120	8.8	1.42	10.27	78870	92.97	232.65	8.5	16.0
1949.0	33.5	31.0	122	8.8	1.46	10.30	79089	105.73	232.20	8.5	16.0
1950.0	32.1	28.0	130	8.8	1.45	10.33	79332	110.34	231.78	8.5	16.0
1951.0	33.5	28.0	130	8.8	1.43	10.36	79565	105.73	231.33	8.5	16.0
1952.0	28.4	30.0	134	8.8	1.53	10.39	79848	124.72	230.96	8.5	16.0
1953.0	32.6	30.0	125	8.8	1.46	10.43	80078	108.65	230.53	8.5	16.0
1954.0	31.7	31.0	125	8.8	1.48	10.46	80315	111.74	230.12	8.5	16.0
1955.0	27.7	32.0	125	8.8	1.54	10.49	80585	127.87	229.77	8.5	16.0
1956.0	26.0	31.0	128	8.8	1.56	10.53	80881	136.23	229.45	8.5	16.0
1957.0	27.0	32.0	122	8.8	1.54	10.57	81152	131.19	229.11	8.5	16.0
1958.0	28.0	31.0	124	8.8	1.52	10.60	81418	126.50	228.76	8.5	16.0
1959.0	26.0	28.0	135	8.8	1.53	10.64	81729	136.23	228.44	8.5	16.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1960.0	26.0	30.0	130	8.8	1.55	10.68	82029	136.23	228.13	8.5	16.0
1961.0	31.2	30.0	127	8.8	1.48	10.71	82273	113.53	227.74	8.5	16.0
1962.0	31.7	29.0	125	8.8	1.45	10.74	82510	111.74	227.35	8.5	16.0
1963.0	25.4	29.0	125	8.8	1.53	10.78	82805	139.45	227.05	8.5	16.0
1964.0	28.7	32.0	118	8.8	1.51	10.82	83052	123.41	226.70	8.5	16.0
1965.0	28.0	32.0	122	8.8	1.53	10.85	83313	126.50	226.37	8.5	16.0
1966.0	33.5	31.0	122	8.8	1.46	10.88	83532	105.73	225.97	8.5	16.0
1967.0	28.7	28.0	125	8.8	1.47	10.92	83793	123.41	225.62	8.5	16.0
1968.0	30.9	32.0	126	8.8	1.51	10.95	84038	114.63	225.26	8.5	16.0
1969.0	26.0	30.0	132	8.8	1.55	10.99	84342	136.23	224.96	8.5	16.0
1970.0	30.9	32.0	125	8.8	1.51	11.02	84585	114.63	224.60	8.5	16.0
1971.0	29.1	29.0	126	8.8	1.48	11.06	84845	121.72	224.26	8.5	16.0
1972.0	30.3	33.0	122	8.8	1.52	11.09	85086	116.90	223.91	8.5	16.0
1973.0	27.3	31.0	122	8.8	1.53	11.13	85355	129.74	223.61	8.5	16.0
1974.0	30.3	32.0	120	8.8	1.50	11.16	85592	116.90	223.26	8.5	16.0
1975.0	30.3	31.0	124	8.8	1.50	11.19	85838	116.90	222.91	8.5	16.0
1976.0	31.2	31.0	124	8.8	1.49	11.22	86076	113.53	222.56	8.5	16.0
1977.0	28.7	28.0	134	8.8	1.49	11.26	86356	123.41	222.24	8.5	16.0
1978.0	21.5	25.0	135	8.8	1.54	11.31	86733	164.74	222.06	8.5	16.0
1979.0	19.8	24.0	125	8.8	1.53	11.36	87112	178.89	221.92	8.5	16.0
1980.0	21.5	25.0	125	8.8	1.52	11.40	87461	164.74	221.74	8.5	16.0
1981.0	21.5	25.0	125	8.8	1.52	11.45	87810	164.74	221.56	8.5	16.0
1982.0	22.3	25.0	126	8.8	1.51	11.49	88149	158.83	221.36	8.5	16.0
1983.0	22.3	25.0	132	8.8	1.52	11.54	88504	158.83	221.16	8.5	16.0
1984.0	22.1	24.0	132	8.8	1.51	11.58	88862	160.27	220.97	8.5	16.0
1985.0	24.8	24.0	132	8.8	1.47	11.62	89181	142.82	220.73	8.5	16.0
1986.0	21.9	24.0	130	8.8	1.51	11.67	89538	161.74	220.54	8.5	16.0
1987.0	30.3	32.0	122	8.8	1.50	11.70	89779	116.90	220.22	8.5	16.0
1988.0	24.6	28.0	130	8.8	1.54	11.74	90096	143.98	219.98	8.5	16.0
1989.0	28.4	30.0	126	8.8	1.51	11.78	90362	124.72	219.69	8.5	16.0
1990.0	32.1	32.0	128	8.8	1.50	11.81	90602	110.34	219.35	8.5	16.0
1991.0	27.0	32.0	128	8.8	1.56	11.85	90886	131.19	219.08	8.5	16.0
1992.0	30.9	32.0	135	8.8	1.53	11.88	91148	114.63	218.76	8.5	16.0
1993.0	29.1	31.0	135	8.8	1.54	11.91	91427	121.72	218.46	8.5	16.0
1994.0	29.7	30.0	135	8.8	1.52	11.95	91699	119.26	218.16	8.5	16.0
1995.0	30.3	32.0	126	8.8	1.52	11.98	91949	116.90	217.85	8.5	16.0
1996.0	30.3	32.0	126	8.8	1.52	12.01	92198	116.90	217.54	8.5	16.0
1997.0	29.6	34.0	126	8.8	1.55	12.05	92454	119.66	217.25	8.5	16.0
1998.0	28.4	34.0	126	8.8	1.57	12.08	92720	124.72	216.97	8.5	16.0
1999.0	32.1	34.0	126	8.8	1.52	12.11	92956	110.34	216.65	8.5	16.0
2000.0	30.3	34.0	128	8.8	1.55	12.15	93209	116.90	216.35	8.5	16.0
2001.0	24.8	34.0	128	8.8	1.62	12.19	93519	142.82	216.13	8.5	16.0
2002.0	23.3	36.0	128	8.8	1.67	12.23	93848	152.02	215.94	8.5	16.0
2003.0	32.6	36.0	128	8.8	1.55	12.26	94084	108.65	215.62	8.5	16.0
2004.0	29.5	37.0	124	8.8	1.59	12.30	94336	120.07	215.34	8.5	16.0
2005.0	34.0	38.0	125	8.8	1.56	12.32	94557	104.18	215.01	8.5	16.0
2006.0	34.0	38.0	124	8.8	1.55	12.35	94775	104.18	214.69	8.5	16.0
2007.0	37.9	37.0	120	8.8	1.49	12.38	94965	93.46	214.33	8.5	16.0
2008.0	29.1	38.0	128	8.8	1.62	12.41	95229	121.72	214.06	8.5	16.0
2009.0	29.1	38.0	126	8.8	1.62	12.45	95489	121.72	213.79	8.5	16.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2010.0	27.7	38.0	126	8.8	1.63	12.49	95762	127.87	213.54	8.5	16.0
2011.0	29.7	38.0	120	8.8	1.59	12.52	96005	119.26	213.27	8.5	16.1
2012.0	27.7	37.0	120	8.8	1.60	12.55	96264	127.87	213.02	8.5	16.1
2013.0	30.3	38.0	122	8.8	1.59	12.59	96506	116.90	212.74	8.5	16.1
2014.0	29.1	38.0	122	8.8	1.60	12.62	96758	121.72	212.48	8.5	16.1
2015.0	29.1	38.0	122	8.8	1.60	12.66	97009	121.72	212.22	8.5	16.1
2016.0	21.9	39.0	120	8.8	1.72	12.70	97338	161.74	212.08	8.5	16.1
2017.0	24.6	38.0	122	8.8	1.67	12.74	97635	143.98	211.88	8.5	16.1
2018.0	28.7	38.0	122	8.8	1.61	12.78	97891	123.41	211.63	8.5	16.1
2019.0	21.9	38.0	122	8.8	1.71	12.82	98225	161.74	211.49	8.5	16.1
2020.0	29.5	38.0	122	8.8	1.60	12.86	98473	120.07	211.23	8.5	16.1
2021.0	30.3	38.0	122	8.8	1.59	12.89	98714	116.90	210.97	8.5	16.1
2022.0	28.7	37.0	122	8.8	1.59	12.93	98970	123.41	210.72	8.5	16.1
2023.0	29.5	37.0	122	8.8	1.58	12.96	99218	120.07	210.47	8.5	16.1
2024.0	29.1	37.0	122	8.8	1.59	12.99	99469	121.72	210.22	8.5	16.1
2025.0	27.3	37.0	122	8.8	1.61	13.03	99737	129.74	210.00	8.5	16.1
2026.0	27.7	38.0	125	8.8	1.63	13.07	100008	127.87	209.77	8.5	16.1
2027.0	33.5	38.0	125	8.8	1.56	13.10	100232	105.73	209.48	8.5	16.1
2028.0	31.7	38.0	125	8.8	1.58	13.13	100469	111.74	209.21	8.5	16.1
2029.0	32.1	38.0	125	8.8	1.58	13.16	100702	110.34	208.94	8.5	16.1
2030.0	27.0	38.0	125	8.8	1.64	13.20	100980	131.19	208.72	8.5	16.1
2031.0	27.7	38.0	125	8.8	1.63	13.23	101251	127.87	208.50	8.5	16.1
2032.0	29.5	38.0	125	8.8	1.61	13.27	101505	120.07	208.26	8.5	16.1
2033.0	30.9	38.0	125	8.8	1.59	13.30	101748	114.63	208.00	8.5	16.1
2034.0	30.9	38.0	125	8.8	1.59	13.33	101990	114.63	207.75	8.5	16.1
2035.0	31.2	38.0	125	8.8	1.59	13.36	102231	113.53	207.50	8.5	16.1
2036.0	28.4	38.0	125	8.8	1.62	13.40	102495	124.72	207.27	8.5	16.1
2037.0	26.7	37.0	125	8.8	1.63	13.44	102776	132.66	207.07	8.5	16.1
2038.0	26.0	37.0	125	8.8	1.64	13.47	103064	136.23	206.88	8.5	16.1
2039.0	28.0	37.0	125	8.8	1.61	13.51	103332	126.50	206.66	8.5	16.1
2040.0	28.0	37.0	125	8.8	1.61	13.55	103600	126.50	206.45	8.5	16.1
2041.0	30.3	39.0	125	8.8	1.61	13.58	103847	116.90	206.21	8.5	16.1
2042.0	32.1	39.0	125	8.8	1.59	13.61	104081	110.34	205.96	8.5	16.1
2043.0	32.6	40.0	125	8.8	1.60	13.64	104311	108.65	205.70	8.5	16.1
2044.0	29.7	40.0	125	8.8	1.63	13.67	104564	119.26	205.47	8.5	16.1
2045.0	25.4	40.0	125	8.8	1.69	13.71	104859	139.45	205.30	8.5	16.1
2046.0	31.2	40.0	125	8.8	1.61	13.74	105099	113.53	205.05	8.5	16.1
2047.0	31.2	40.0	125	8.8	1.61	13.78	105340	113.53	204.81	8.5	16.1
2048.0	32.6	40.0	125	8.8	1.60	13.81	105570	108.65	204.56	8.5	16.1
2049.0	33.9	39.0	125	8.8	1.57	13.84	105791	104.48	204.30	8.5	16.1
2050.0	31.7	39.0	125	8.8	1.59	13.87	106028	111.74	204.06	8.5	16.1
2051.0	31.2	39.0	125	8.8	1.60	13.90	106268	113.53	203.82	8.5	16.1
2052.0	33.0	40.0	125	8.8	1.59	13.93	106495	107.33	203.57	8.5	16.1
2053.0	31.2	41.0	130	8.8	1.64	13.96	106745	113.53	203.34	8.5	16.1
2054.0	31.2	41.0	150	8.8	1.70	14.00	107034	113.53	203.11	8.5	16.1
2055.0	31.2	41.0	150	8.8	1.70	14.03	107322	113.53	202.88	8.5	16.1
2056.0	24.3	38.0	135	8.8	1.71	14.07	107656	145.76	202.73	8.5	16.1
2057.0	24.3	37.0	130	8.8	1.68	14.11	107977	145.76	202.59	8.5	16.1
2058.0	27.3	37.0	130	8.8	1.64	14.15	108262	129.74	202.40	8.5	16.1
2059.0	26.0	36.0	130	8.8	1.64	14.18	108562	136.23	202.23	8.5	16.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2060.0	28.0	36.0	130	8.8	1.61	14.22	108841	126.50	202.04	8.5	16.1
2061.0	24.0	37.0	130	8.8	1.68	14.26	109166	147.58	201.90	8.5	16.1
2062.0	26.7	37.0	130	8.8	1.64	14.30	109458	132.66	201.73	8.5	16.1
2063.0	24.3	37.0	130	8.8	1.68	14.34	109779	145.76	201.59	8.5	16.1
2064.0	23.3	35.0	125	8.8	1.65	14.38	110101	152.02	201.46	8.5	16.1
2065.0	23.3	35.0	125	8.8	1.65	14.43	110423	152.02	201.34	8.5	16.1
2066.0	27.7	35.0	125	8.8	1.59	14.46	110694	127.87	201.16	8.5	16.1
2067.0	24.8	37.0	125	8.8	1.66	14.50	110996	142.82	201.01	8.5	16.1
2068.0	27.0	37.0	125	8.8	1.63	14.54	111274	131.19	200.84	8.5	16.1
2069.0	27.7	36.0	125	8.8	1.60	14.58	111544	127.87	200.66	8.5	16.1
2070.0	27.3	35.0	125	8.8	1.59	14.61	111819	129.74	200.48	8.5	16.1
2071.0	28.4	35.0	130	8.8	1.59	14.65	112094	124.72	200.29	8.5	16.1
2072.0	24.0	35.0	130	8.8	1.65	14.69	112419	147.58	200.16	8.5	16.1
2073.0	22.6	35.0	135	8.8	1.69	14.73	112777	156.73	200.06	8.5	16.1
2074.0	30.3	38.0	125	8.8	1.60	14.77	113025	116.90	199.85	8.5	16.1
2075.0	22.3	38.0	125	8.8	1.71	14.81	113361	158.83	199.75	8.5	16.1
2076.0	20.9	37.0	125	8.8	1.72	14.86	113720	169.47	199.68	8.5	16.1
2077.0	20.9	37.0	125	8.8	1.72	14.91	114079	169.47	199.61	8.5	16.1
2078.0	21.5	37.0	125	8.8	1.71	14.95	114428	164.74	199.52	8.5	16.1
2079.0	26.0	37.0	125	8.8	1.64	14.99	114716	136.23	199.37	8.5	16.1
2080.0	29.7	37.0	125	8.8	1.59	15.03	114969	119.26	199.17	8.5	16.1
2081.0	27.0	38.0	125	8.8	1.64	15.06	115246	131.19	199.01	8.5	16.1
2082.0	24.0	38.0	125	8.8	1.68	15.10	115559	147.58	198.89	8.5	16.1
2083.0	25.0	34.0	125	8.8	1.61	15.14	115859	141.68	198.75	8.5	16.1
2084.0	29.5	35.0	125	8.8	1.57	15.18	116113	120.07	198.56	8.5	16.1
2085.0	25.4	36.0	125	8.8	1.63	15.22	116408	139.45	198.42	8.5	16.1
2086.0	25.1	35.0	125	8.8	1.62	15.26	116707	141.12	198.28	8.5	16.1
2087.0	20.7	35.0	125	8.8	1.69	15.31	117070	171.11	198.22	8.5	16.1
2088.0	20.1	35.0	125	8.8	1.70	15.36	117443	176.22	198.17	8.5	16.1
2089.0	25.1	35.0	125	8.8	1.62	15.40	117741	141.12	198.03	8.5	16.1
2090.0	23.5	35.0	125	8.8	1.65	15.44	118061	150.72	197.92	8.5	16.1
2091.0	23.9	35.0	125	8.8	1.64	15.48	118374	148.20	197.80	8.5	16.2
2092.0	24.6	34.0	130	8.8	1.63	15.52	118692	143.98	197.68	8.5	16.2
2093.0	26.7	35.0	130	8.8	1.62	15.56	118984	132.66	197.52	8.5	16.2
2094.0	19.4	35.0	130	8.8	1.73	15.61	119386	182.58	197.49	8.5	16.2
2095.0	15.9	35.0	135	8.8	1.82	15.67	119895	222.77	197.55	8.5	16.2
2096.0	19.8	35.0	135	8.8	1.74	15.72	120304	178.89	197.51	8.5	16.2
2097.0	19.4	35.0	135	8.8	1.74	15.77	120722	182.58	197.47	8.5	16.2
2098.0	19.8	34.0	135	8.8	1.72	15.83	121131	178.89	197.43	8.5	16.2
2099.0	18.6	34.0	135	8.8	1.74	15.88	121566	190.43	197.41	8.5	16.2
2100.0	19.8	34.0	135	8.8	1.72	15.93	121975	178.89	197.37	8.5	16.2
2101.0	18.0	34.0	135	8.8	1.75	15.98	122425	196.78	197.37	8.5	16.2
2102.0	16.6	34.0	128	8.8	1.76	16.05	122888	213.37	197.40	8.5	16.2
2103.0	25.4	35.0	128	8.8	1.63	16.08	123190	139.45	197.27	8.5	16.2
2104.0	24.8	35.0	128	8.8	1.64	16.12	123500	142.82	197.15	8.5	16.2
2105.0	29.7	33.0	127	8.8	1.54	16.16	123757	119.26	196.97	8.5	16.2
2106.0	24.8	33.0	127	8.8	1.60	16.20	124064	142.82	196.85	8.5	16.2
2107.0	23.8	34.0	127	8.8	1.63	16.24	124384	148.82	196.74	8.5	16.2
2108.0	25.1	32.0	127	8.8	1.58	16.28	124688	141.12	196.61	8.5	16.2
2109.0	23.0	32.0	130	8.8	1.62	16.32	125027	154.00	196.52	8.5	16.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2110.0	23.0	32.0	130	8.8	1.62	16.37	125366	154.00	196.42	8.5	16.2
2111.0	24.3	35.0	130	8.8	1.65	16.41	125687	145.76	196.31	8.5	16.2
2112.0	32.1	35.0	130	8.8	1.55	16.44	125930	110.34	196.11	8.5	16.2
2113.0	28.0	35.0	130	8.8	1.60	16.48	126208	126.50	195.96	8.5	16.2
2114.0	32.1	35.0	130	8.8	1.55	16.51	126451	110.34	195.77	8.5	16.2
2115.0	29.7	35.0	130	8.8	1.58	16.54	126714	119.26	195.60	8.5	16.2
2116.0	26.0	35.0	130	8.8	1.63	16.58	127014	136.23	195.46	8.5	16.2
2117.0	40.5	40.0	130	8.8	1.53	16.60	127207	87.46	195.22	8.5	16.2
2118.0	30.9	40.0	130	8.8	1.63	16.64	127459	114.63	195.05	8.5	16.2
2119.0	35.1	40.0	130	8.8	1.58	16.66	127681	100.91	194.84	8.5	16.2
2120.0	35.1	40.0	130	8.8	1.58	16.69	127904	100.91	194.63	8.5	16.2
2121.0	34.2	39.0	125	8.8	1.57	16.72	128123	103.57	194.43	8.5	16.2
2122.0	33.5	39.0	125	8.8	1.57	16.75	128347	105.73	194.24	8.5	16.2
2123.0	31.7	40.0	125	8.8	1.61	16.78	128583	111.74	194.06	8.5	16.2
2124.0	29.1	40.0	125	8.8	1.64	16.82	128841	121.72	193.90	8.5	16.2
2125.0	24.8	40.0	125	8.8	1.70	16.86	129143	142.82	193.79	8.5	16.2
2126.0	29.7	40.0	125	8.8	1.63	16.89	129396	119.26	193.63	8.5	16.2
2127.0	26.0	40.0	125	8.8	1.68	16.93	129684	136.23	193.50	8.5	16.2
2128.0	29.1	37.0	125	8.8	1.60	16.96	129942	121.72	193.35	8.5	16.2
2129.0	27.7	40.0	125	8.8	1.66	17.00	130213	127.87	193.20	8.5	16.2
2130.0	30.0	40.0	125	8.8	1.63	17.03	130463	118.07	193.04	8.5	16.2
2131.0	26.0	43.0	125	8.8	1.72	17.07	130751	136.23	192.92	8.5	16.2
2132.0	30.3	43.0	125	8.8	1.66	17.11	130999	116.90	192.76	8.5	16.2
2133.0	38.1	43.0	125	8.8	1.58	17.13	131196	92.97	192.54	8.5	16.2
2134.0	31.7	41.0	125	8.8	1.62	17.16	131432	111.74	192.37	8.5	16.2
2135.0	23.3	41.0	125	8.8	1.74	17.21	131754	152.02	192.28	8.5	16.2
2136.0	24.6	40.0	125	8.8	1.70	17.25	132059	143.98	192.18	8.5	16.2
2137.0	31.7	40.0	125	8.8	1.61	17.28	132296	111.74	192.01	8.5	16.2
2138.0	29.5	40.0	125	8.8	1.63	17.31	132550	120.07	191.86	8.5	16.2
2139.0	29.1	38.0	125	8.8	1.61	17.35	132808	121.72	191.71	8.5	16.2
2140.0	29.0	40.0	125	8.8	1.64	17.38	133066	122.14	191.56	8.5	16.2
2141.0	29.1	40.0	130	8.8	1.65	17.42	133334	121.72	191.42	8.5	16.2
2142.0	32.1	40.0	130	8.8	1.62	17.45	133577	110.34	191.25	8.5	16.2
2143.0	26.7	40.0	130	8.8	1.69	17.48	133870	132.66	191.12	8.5	16.2
2144.0	31.2	40.0	130	8.8	1.63	17.52	134120	113.53	190.96	8.5	16.2
2145.0	31.2	40.0	130	8.8	1.63	17.55	134370	113.53	190.80	8.5	16.2
2146.0	33.0	41.0	135	8.8	1.63	17.58	134615	107.33	190.63	8.5	16.2
2147.0	27.7	41.0	135	8.8	1.70	17.61	134907	127.87	190.49	8.5	16.2
2148.0	35.6	41.0	135	8.8	1.61	17.64	135135	99.49	190.31	8.5	16.2
2149.0	24.0	41.0	135	8.8	1.76	17.68	135472	147.58	190.22	8.5	16.2
2150.0	21.9	41.0	125	8.8	1.76	17.73	135815	161.74	190.16	8.5	16.2
2151.0	23.3	42.0	125	8.8	1.75	17.77	136137	152.02	190.08	8.5	16.2
2152.0	19.9	42.0	125	8.8	1.81	17.82	136514	177.99	190.06	8.5	16.2
2153.0	17.3	43.0	125	8.8	1.88	17.88	136947	204.74	190.09	8.5	16.2
2154.0	23.3	43.0	125	8.8	1.77	17.92	137269	152.02	190.01	8.5	16.2
2155.0	18.7	43.0	125	8.8	1.85	17.98	137670	189.41	190.01	8.5	16.2
2156.0	21.5	43.0	125	8.8	1.80	18.02	138019	164.74	189.95	8.5	16.2
2157.0	20.7	42.0	125	8.8	1.80	18.07	138381	171.11	189.92	8.5	16.2
2158.0	23.0	42.0	125	8.8	1.76	18.12	138707	154.00	189.84	8.5	16.2
2159.0	22.1	41.0	126	8.8	1.76	18.16	139049	160.27	189.78	8.5	16.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2160.0	18.1	41.0	126	8.8	1.84	18.22	139467	195.69	189.80	8.5	16.2
2161.0	21.3	41.0	126	8.8	1.77	18.26	139822	166.29	189.75	8.5	16.2
2162.0	27.3	41.0	126	8.8	1.68	18.30	140099	129.74	189.63	8.5	16.2
2163.0	21.5	41.0	132	8.8	1.79	18.35	140467	164.74	189.58	8.5	16.2
2164.0	20.5	41.0	132	8.8	1.81	18.40	140854	172.78	189.54	8.5	16.2
2165.0	25.4	41.0	132	8.8	1.73	18.43	141166	139.45	189.44	8.5	16.2
2166.0	22.6	41.0	132	8.8	1.77	18.48	141516	156.73	189.38	8.5	16.2
2167.0	23.4	41.0	132	8.8	1.76	18.52	141854	151.37	189.30	8.5	16.2
2168.0	22.6	41.0	132	8.8	1.77	18.57	142205	156.73	189.24	8.5	16.2
2169.0	18.0	41.0	132	8.8	1.86	18.62	142645	196.78	189.25	8.5	16.2
2170.0	17.1	41.0	120	8.8	1.84	18.68	143066	207.13	189.29	8.5	16.2
2171.0	28.0	41.0	120	8.8	1.65	18.72	143323	126.50	189.16	8.5	16.2
2172.0	25.4	41.0	125	8.8	1.70	18.76	143618	139.45	189.06	8.5	16.2
2173.0	21.5	41.0	125	8.8	1.77	18.80	143967	164.74	189.02	8.5	16.3
2174.0	19.9	40.0	130	8.8	1.80	18.85	144359	177.99	188.99	8.5	16.3
2175.0	20.3	40.0	130	8.8	1.79	18.90	144743	174.48	188.97	8.5	16.3
2176.0	19.2	42.0	130	8.8	1.84	18.95	145150	184.48	188.96	8.5	16.3
2177.0	22.6	42.0	130	8.8	1.78	19.00	145495	156.73	188.89	8.5	16.3
2178.0	19.5	40.0	125	8.8	1.79	19.05	145879	181.64	188.88	8.5	16.3
2179.0	17.1	40.0	125	8.8	1.84	19.11	146318	207.13	188.92	8.5	16.3
2180.0	20.9	40.0	125	8.8	1.76	19.16	146677	169.47	188.88	8.5	16.3
2181.0	19.8	41.0	121	8.8	1.79	19.21	147043	178.89	188.86	8.5	16.3
2182.0	26.3	41.0	121	8.8	1.68	19.24	147320	134.68	188.75	8.5	16.3
2183.0	16.1	37.0	128	8.8	1.82	19.31	147797	220.00	188.81	8.5	16.3
2184.0	29.5	42.0	128	8.8	1.67	19.34	148057	120.07	188.68	8.5	16.3
2185.0	18.3	39.0	130	8.8	1.81	19.39	148483	193.55	188.69	8.5	16.3
2186.0	21.5	39.0	130	8.8	1.75	19.44	148846	164.74	188.64	8.5	16.3
2187.0	20.0	39.0	130	8.8	1.78	19.49	149236	177.10	188.62	8.5	16.3

BIT NUMBER	8	IADC CODE	114	INTERVAL	2187.0- 2413.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 14
COST	900.00	TRIP TIME	9.8	BIT RUN	226.0
TOTAL HOURS	9.74	TOTAL TURNS	73672	CONDITION	T7 B8 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2188.0	26.3	25.0	135	8.9	1.46	0.04	308	135	35746	8.5	16.3
2189.0	29.5	28.0	135	8.9	1.47	0.07	583	120	17933	8.5	16.3
2190.0	25.1	27.0	135	8.9	1.51	0.11	905	141	12002	8.5	16.3
2191.0	25.4	28.0	135	8.9	1.52	0.15	1224	139	9037	8.5	16.3
2192.0	21.5	29.0	135	8.9	1.59	0.20	1601	165	7262	8.5	16.3
2193.0	29.7	29.0	138	8.9	1.49	0.23	1880	119	6072	8.5	16.3
2194.0	16.8	28.0	138	8.9	1.67	0.29	2373	211	5235	8.5	16.3
2195.0	19.4	29.0	135	8.9	1.63	0.34	2790	183	4603	8.5	16.3
2196.0	20.6	28.0	135	8.9	1.59	0.39	3183	172	4111	8.5	16.3
2197.0	25.1	32.0	145	8.9	1.61	0.43	3530	141	3714	8.5	16.3
2198.0	37.9	32.0	150	8.9	1.48	0.46	3767	93	3385	8.5	16.3
2199.0	29.7	32.0	150	8.9	1.57	0.49	4070	119	3113	8.5	16.3
2200.0	36.7	31.0	150	8.9	1.48	0.52	4316	97	2881	8.5	16.3
2201.0	40.2	31.0	150	8.9	1.45	0.54	4540	88	2681	8.5	16.3
2202.0	34.0	33.0	140	8.9	1.51	0.57	4787	104	2509	8.5	16.3
2203.0	51.2	35.0	140	8.9	1.39	0.59	4951	69	2357	8.5	16.3
2204.0	44.3	35.0	140	8.9	1.44	0.61	5140	80	2223	8.5	16.3
2205.0	42.7	35.0	140	8.9	1.46	0.64	5337	83	2104	8.5	16.3
2206.0	32.0	35.0	140	8.9	1.56	0.67	5599	111	1999	8.5	16.3
2207.0	29.1	33.0	144	8.9	1.57	0.70	5896	122	1905	8.5	16.3
2208.0	38.8	34.0	140	8.9	1.48	0.73	6113	91	1819	8.5	16.3
2209.0	42.7	34.0	145	8.9	1.46	0.75	6317	83	1740	8.5	16.3
2210.0	31.2	34.0	145	8.9	1.57	0.78	6595	114	1669	8.5	16.3
2211.0	43.5	33.0	148	8.9	1.44	0.81	6800	81	1603	8.5	16.3
2212.0	30.9	35.0	148	8.9	1.59	0.84	7087	115	1543	8.5	16.3
2213.0	37.9	34.0	148	8.9	1.51	0.87	7321	93	1488	8.5	16.3
2214.0	29.7	35.0	130	8.9	1.56	0.90	7584	119	1437	8.5	16.3
2215.0	30.9	35.0	132	8.9	1.55	0.93	7840	115	1390	8.5	16.3
2216.0	29.6	35.0	135	8.9	1.57	0.97	8114	120	1346	8.5	16.3
2217.0	28.0	34.0	142	8.9	1.60	1.00	8418	127	1305	8.5	16.3
2218.0	32.1	34.0	142	8.9	1.55	1.03	8684	110	1267	8.5	16.3
2219.0	39.8	34.0	138	8.9	1.46	1.06	8892	89	1230	8.5	16.3
2220.0	28.4	35.0	140	8.9	1.60	1.09	9187	125	1197	8.5	16.3
2221.0	25.4	35.0	142	8.9	1.65	1.13	9523	139	1165	8.5	16.3
2222.0	27.3	35.0	138	8.9	1.61	1.17	9826	130	1136	8.5	16.3
2223.0	31.7	35.0	132	8.9	1.54	1.20	10076	112	1107	8.5	16.3
2224.0	24.6	34.0	130	8.9	1.61	1.24	10393	144	1081	8.5	16.3
2225.0	32.6	35.0	132	8.9	1.53	1.27	10636	109	1056	8.5	16.3
2226.0	33.5	35.0	132	8.9	1.52	1.30	10872	106	1031	8.5	16.3
2227.0	31.7	35.0	130	8.9	1.54	1.33	11118	112	1008	8.5	16.3
2228.0	30.9	35.0	130	8.9	1.55	1.37	11371	114.63	986.60	8.5	16.3
2229.0	27.0	34.0	128	8.9	1.57	1.40	11655	131.19	966.23	8.5	16.3
2230.0	21.9	35.0	126	8.9	1.66	1.45	12001	161.74	947.52	8.5	16.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2231.0	28.7	34.0	126	8.9	1.55	1.48	12264	123.41	928.79	8.5	16.3
2232.0	25.4	36.0	130	8.9	1.63	1.52	12571	139.45	911.25	8.5	16.3
2233.0	22.6	35.0	130	8.9	1.66	1.57	12916	156.73	894.85	8.5	16.3
2234.0	20.9	34.0	130	9.0	1.65	1.62	13289	169.47	879.41	8.5	16.3
2235.0	26.3	33.0	130	9.0	1.56	1.65	13586	134.68	863.90	8.5	16.3
2236.0	18.7	34.0	130	9.0	1.69	1.71	14003	189.41	850.13	8.5	16.3
2237.0	21.9	34.0	130	9.0	1.63	1.75	14359	161.74	836.36	8.5	16.3
2238.0	24.0	34.0	134	9.0	1.61	1.79	14694	147.58	822.86	8.5	16.3
2239.0	23.0	32.0	134	9.0	1.60	1.84	15044	154.00	810.00	8.5	16.3
2240.0	20.5	35.0	134	9.0	1.68	1.89	15436	172.78	797.97	8.5	16.3
2241.0	36.7	33.0	128	9.0	1.44	1.91	15645	96.51	784.98	8.5	16.3
2242.0	35.6	34.0	125	9.0	1.45	1.94	15856	99.49	772.52	8.5	16.3
2243.0	35.6	34.0	125	9.0	1.45	1.97	16067	99.49	760.50	8.5	16.3
2244.0	25.0	34.0	117	9.0	1.55	2.01	16347	141.68	749.65	8.5	16.3
2245.0	24.6	34.0	120	9.0	1.57	2.05	16640	143.98	739.20	8.5	16.3
2246.0	23.5	34.0	120	9.0	1.58	2.09	16946	150.72	729.23	8.5	16.3
2247.0	25.9	33.0	120	9.0	1.53	2.13	17224	136.76	719.35	8.5	16.3
2248.0	32.6	34.0	125	9.0	1.48	2.16	17455	108.65	709.34	8.5	16.3
2249.0	32.1	35.0	125	9.0	1.50	2.19	17688	110.34	699.68	8.5	16.3
2250.0	32.6	33.0	135	9.0	1.49	2.22	17937	108.65	690.30	8.5	16.3
2251.0	23.0	33.0	125	9.0	1.59	2.27	18263	154.00	681.92	8.5	16.3
2252.0	26.7	33.0	125	9.0	1.54	2.30	18544	132.66	673.47	8.5	16.3
2253.0	28.4	33.0	125	9.0	1.52	2.34	18808	124.72	665.16	8.5	16.3
2254.0	25.0	33.0	125	9.0	1.56	2.38	19108	141.68	657.34	8.5	16.3
2255.0	26.3	35.0	120	9.0	1.56	2.42	19381	134.68	649.66	8.5	16.3
2256.0	30.3	34.0	120	9.0	1.49	2.45	19619	116.90	641.93	8.5	16.3
2257.0	27.3	34.0	128	9.0	1.55	2.49	19900	129.74	634.62	8.5	16.3
2258.0	25.0	33.0	132	9.0	1.58	2.53	20217	141.68	627.68	8.5	16.4
2259.0	33.0	32.0	132	9.0	1.47	2.56	20457	107.33	620.45	8.5	16.4
2260.0	16.1	29.0	130	9.0	1.66	2.62	20942	220.00	614.96	8.5	16.4
2261.0	24.6	28.0	130	9.0	1.50	2.66	21259	143.98	608.60	8.5	16.4
2262.0	25.0	28.0	130	9.0	1.50	2.70	21571	141.68	602.37	8.5	16.4
2263.0	38.5	33.0	120	9.0	1.40	2.73	21758	92.00	595.66	8.5	16.4
2264.0	30.9	33.0	120	9.0	1.47	2.76	21991	114.63	589.41	8.5	16.4
2265.0	24.3	33.0	123	9.0	1.56	2.80	22294	145.76	583.72	8.5	16.4
2266.0	27.0	33.0	123	9.0	1.53	2.84	22568	131.19	577.99	8.5	16.4
2267.0	33.5	33.0	123	9.0	1.45	2.87	22788	105.73	572.09	8.5	16.4
2268.0	30.3	32.0	123	9.0	1.47	2.90	23032	116.90	566.47	8.5	16.4
2269.0	24.6	34.0	123	9.0	1.57	2.94	23332	143.98	561.32	8.5	16.4
2270.0	28.0	32.0	130	9.0	1.52	2.98	23610	126.50	556.08	8.5	16.4
2271.0	24.0	32.0	130	9.0	1.57	3.02	23935	147.58	551.22	8.5	16.4
2272.0	26.0	33.0	120	9.0	1.53	3.06	24212	136.23	546.33	8.5	16.4
2273.0	38.5	34.0	120	9.0	1.41	3.08	24399	92.00	541.05	8.5	16.4
2274.0	24.0	34.0	120	9.0	1.57	3.12	24699	147.58	536.53	8.5	16.4
2275.0	30.9	35.0	120	9.0	1.50	3.16	24932	114.63	531.73	8.5	16.4
2276.0	25.9	35.0	120	9.0	1.56	3.20	25210	136.76	527.30	8.5	16.4
2277.0	27.3	35.0	125	9.0	1.56	3.23	25485	129.74	522.88	8.5	16.4
2278.0	32.0	35.0	125	9.0	1.50	3.26	25719	110.69	518.35	8.5	16.4
2279.0	29.7	35.0	125	9.0	1.53	3.30	25972	119.26	514.01	8.5	16.4
2280.0	38.5	35.0	125	9.0	1.44	3.32	26167	92.00	509.47	8.5	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2281.0	32.0	35.0	115	9.1	1.46	3.35	26382	110.69	505.23	8.5	16.4
2282.0	26.7	35.0	120	9.1	1.53	3.39	26652	132.66	501.31	8.5	16.4
2283.0	27.0	34.0	120	9.1	1.52	3.43	26919	131.19	497.45	8.5	16.4
2284.0	32.1	35.0	126	9.1	1.49	3.46	27154	110.34	493.46	8.5	16.4
2285.0	22.9	32.0	126	9.1	1.56	3.50	27484	154.67	490.01	8.5	16.4
2286.0	30.9	35.0	120	9.1	1.48	3.54	27717	114.63	486.21	8.5	16.4
2287.0	24.0	25.0	120	9.1	1.42	3.58	28017	147.58	482.83	8.5	16.4
2288.0	25.1	34.0	120	9.1	1.54	3.62	28304	141.12	479.45	8.5	16.4
2289.0	30.3	33.0	120	9.1	1.46	3.65	28542	116.90	475.89	8.5	16.4
2290.0	35.1	35.0	120	9.1	1.44	3.68	28747	100.91	472.25	8.5	16.4
2291.0	24.0	35.0	120	9.1	1.57	3.72	29047	147.58	469.13	8.5	16.4
2292.0	21.5	35.0	125	9.1	1.62	3.77	29396	164.74	466.23	8.5	16.4
2293.0	28.4	34.0	125	9.1	1.51	3.80	29660	124.72	463.01	8.5	16.4
2294.0	20.7	34.0	125	9.1	1.62	3.85	30022	171.11	460.28	8.5	16.4
2295.0	22.9	34.0	125	9.1	1.59	3.89	30350	154.67	457.45	8.5	16.4
2296.0	21.7	34.0	125	9.1	1.61	3.94	30695	163.23	454.75	8.5	16.4
2297.0	21.5	35.0	120	9.2	1.59	3.99	31030	164.74	452.11	8.5	16.4
2298.0	24.3	35.0	125	9.2	1.56	4.03	31339	145.76	449.35	8.5	16.4
2299.0	21.0	35.0	125	9.2	1.61	4.08	31696	168.67	446.85	8.5	16.4
2300.0	22.9	35.0	125	9.2	1.58	4.12	32023	154.67	444.26	8.5	16.4
2301.0	25.2	35.0	120	9.2	1.54	4.16	32309	140.56	441.60	8.5	16.4
2302.0	22.6	35.0	120	9.2	1.58	4.20	32628	156.73	439.12	8.5	16.4
2303.0	21.7	35.0	120	9.2	1.59	4.25	32959	163.23	436.74	8.5	16.4
2304.0	22.9	35.0	120	9.2	1.57	4.29	33274	154.67	434.33	8.5	16.4
2305.0	24.8	35.0	120	9.2	1.54	4.33	33564	142.82	431.86	8.5	16.4
2306.0	26.0	35.0	120	9.2	1.53	4.37	33841	136.23	429.38	8.5	16.4
2307.0	21.5	37.0	120	9.2	1.62	4.42	34176	164.74	427.17	8.5	16.4
2308.0	23.8	35.0	125	9.3	1.55	4.46	34491	148.82	424.87	8.5	16.4
2309.0	24.6	36.0	125	9.3	1.56	4.50	34796	143.98	422.57	8.5	16.4
2310.0	24.6	36.0	125	9.3	1.56	4.54	35101	143.98	420.30	8.5	16.4
2311.0	21.5	35.0	125	9.3	1.59	4.59	35450	164.74	418.24	8.5	16.4
2312.0	21.5	35.0	125	9.3	1.59	4.63	35799	164.74	416.22	8.5	16.4
2313.0	24.8	35.0	125	9.3	1.54	4.67	36101	142.82	414.05	8.5	16.4
2314.0	19.4	34.0	125	9.3	1.61	4.73	36488	182.58	412.22	8.5	16.4
2315.0	20.5	35.0	120	9.3	1.59	4.78	36839	172.78	410.35	8.5	16.4
2316.0	21.9	35.0	120	9.3	1.57	4.82	37168	161.74	408.43	8.5	16.4
2317.0	26.7	35.0	120	9.3	1.50	4.86	37437	132.66	406.30	8.5	16.4
2318.0	21.7	35.0	120	9.3	1.57	4.90	37769	163.23	404.45	8.5	16.4
2319.0	21.7	35.0	120	9.3	1.57	4.95	38101	163.23	402.62	8.5	16.4
2320.0	17.3	33.0	110	9.3	1.59	5.01	38482	204.74	401.13	8.5	16.4
2321.0	18.6	33.0	112	9.3	1.57	5.06	38844	190.43	399.56	8.5	16.4
2322.0	22.1	32.0	115	9.3	1.51	5.11	39156	160.27	397.79	8.5	16.4
2323.0	19.4	34.0	120	9.3	1.60	5.16	39527	182.58	396.21	8.5	16.4
2324.0	17.9	34.0	110	9.3	1.59	5.21	39896	197.88	394.76	8.5	16.4
2325.0	19.6	34.0	110	9.3	1.56	5.27	40232	180.71	393.21	8.5	16.4
2326.0	19.9	32.0	110	9.3	1.53	5.32	40564	177.99	391.66	8.5	16.4
2327.0	21.3	32.0	108	9.3	1.50	5.36	40868	166.29	390.05	8.5	16.4
2328.0	20.0	32.0	108	9.3	1.52	5.41	41192	177.10	388.54	8.5	16.4
2329.0	19.8	33.0	110	9.3	1.54	5.46	41526	178.89	387.06	8.5	16.4
2330.0	18.9	33.0	110	9.3	1.56	5.52	41875	187.41	385.67	8.5	16.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2331.0	19.4	34.0	120	9.3	1.60	5.57	42246	182.58	384.26	8.5	16.4
2332.0	20.1	34.0	120	9.3	1.58	5.62	42604	176.22	382.82	8.5	16.4
2333.0	19.8	33.0	125	9.3	1.59	5.67	42983	178.89	381.42	8.5	16.4
2334.0	21.7	33.0	125	9.3	1.56	5.71	43329	163.23	379.94	8.5	16.4
2335.0	23.0	33.0	125	9.3	1.54	5.76	43655	154.00	378.41	8.5	16.4
2336.0	21.1	33.0	125	9.3	1.57	5.81	44010	167.87	377.00	8.5	16.4
2337.0	19.6	33.0	125	9.4	1.57	5.86	44393	180.71	375.69	8.5	16.4
2338.0	19.6	34.0	110	9.4	1.55	5.91	44730	180.71	374.40	8.5	16.4
2339.0	19.2	33.0	115	9.4	1.55	5.96	45089	184.48	373.15	8.5	16.4
2340.0	16.6	32.0	115	9.4	1.59	6.02	45505	213.37	372.11	8.5	16.4
2341.0	18.8	30.0	115	9.4	1.52	6.07	45872	188.40	370.91	8.5	16.4
2342.0	19.4	30.0	120	9.4	1.52	6.12	46243	182.58	369.70	8.5	16.4
2343.0	20.9	34.0	120	9.4	1.55	6.17	46587	169.47	368.42	8.5	16.4
2344.0	19.4	34.0	120	9.4	1.58	6.22	46958	182.58	367.23	8.5	16.4
2345.0	23.8	36.0	118	9.4	1.53	6.27	47256	148.82	365.85	8.5	16.4
2346.0	21.5	35.0	118	9.4	1.55	6.31	47585	164.74	364.58	8.5	16.5
2347.0	21.5	35.0	118	9.4	1.55	6.36	47914	164.74	363.34	8.5	16.5
2348.0	17.3	35.0	127	9.4	1.65	6.42	48355	204.74	362.35	8.5	16.5
2349.0	19.1	35.0	125	9.4	1.61	6.47	48748	185.45	361.26	8.5	16.5
2350.0	19.1	35.0	125	9.4	1.61	6.52	49140	185.45	360.18	8.5	16.5
2351.0	19.6	35.0	125	9.4	1.60	6.57	49523	180.71	359.09	8.5	16.5
2352.0	21.3	35.0	125	9.4	1.58	6.62	49875	166.29	357.92	8.5	16.5
2353.0	20.0	36.0	125	9.4	1.61	6.67	50250	177.10	356.83	8.5	16.5
2354.0	18.0	35.0	125	9.4	1.63	6.72	50667	196.78	355.87	8.5	16.5
2355.0	21.7	35.0	120	9.4	1.56	6.77	50998	163.23	354.72	8.5	16.5
2356.0	19.6	35.0	120	9.4	1.59	6.82	51366	180.71	353.69	8.5	16.5
2357.0	25.1	35.0	120	9.4	1.51	6.86	51653	141.12	352.44	8.5	16.5
2358.0	17.3	35.0	120	9.4	1.63	6.92	52069	204.74	351.58	8.5	16.5
2359.0	22.1	35.0	120	9.4	1.55	6.96	52395	160.27	350.47	8.5	16.5
2360.0	19.9	37.0	115	9.4	1.60	7.01	52741	177.99	349.47	8.5	16.5
2361.0	21.9	37.0	120	9.4	1.58	7.06	53070	161.74	348.39	8.5	16.5
2362.0	17.4	35.0	120	9.4	1.63	7.12	53484	203.56	347.56	8.5	16.5
2363.0	23.0	34.0	120	9.4	1.52	7.16	53797	154.00	346.46	8.5	16.5
2364.0	19.9	35.0	120	9.4	1.58	7.21	54159	177.99	345.51	8.5	16.5
2365.0	20.9	35.0	120	9.4	1.57	7.26	54503	169.47	344.52	8.5	16.5
2366.0	20.1	35.0	120	9.4	1.58	7.31	54861	176.22	343.58	8.5	16.5
2367.0	15.6	35.0	115	9.4	1.65	7.37	55304	227.05	342.93	8.5	16.5
2368.0	26.0	35.0	115	9.5	1.46	7.41	55569	136.23	341.79	8.5	16.5
2369.0	28.0	35.0	100	9.5	1.39	7.45	55783	126.50	340.61	8.5	16.5
2370.0	28.0	35.0	120	9.5	1.45	7.48	56041	126.50	339.44	8.5	16.5
2371.0	18.7	35.0	120	9.5	1.59	7.54	56426	189.41	338.62	8.5	16.5
2372.0	32.1	35.0	120	9.5	1.41	7.57	56650	110.34	337.39	8.5	16.5
2373.0	24.8	35.0	120	9.5	1.49	7.61	56940	142.82	336.34	8.5	16.5
2374.0	24.8	35.0	120	9.5	1.49	7.65	57231	142.82	335.31	8.5	16.5
2375.0	30.9	35.0	120	9.5	1.42	7.68	57464	114.63	334.14	8.5	16.5
2376.0	20.0	35.0	100	9.5	1.51	7.73	57764	177.10	333.30	8.5	16.5
2377.0	27.0	35.0	100	9.5	1.41	7.77	57986	131.19	332.24	8.5	16.5
2378.0	27.0	35.0	125	9.5	1.48	7.81	58264	131.19	331.19	8.5	16.5
2379.0	30.3	36.0	120	9.5	1.44	7.84	58501	116.90	330.07	8.5	16.5
2380.0	22.6	34.0	120	9.5	1.51	7.88	58820	156.73	329.17	8.5	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2381.0	35.6	34.0	120	9.5	1.36	7.91	59022	99.49	327.99	8.5	16.5
2382.0	27.7	35.0	115	9.5	1.44	7.95	59271	127.87	326.96	8.5	16.5
2383.0	22.1	35.0	120	9.5	1.53	7.99	59597	160.27	326.11	8.5	16.5
2384.0	29.7	34.0	120	9.5	1.42	8.03	59839	119.26	325.06	8.5	16.5
2385.0	27.7	34.0	120	9.5	1.44	8.06	60099	127.87	324.07	8.5	16.5
2386.0	29.1	35.0	120	9.5	1.44	8.10	60347	121.72	323.05	8.5	16.5
2387.0	28.5	35.0	120	9.5	1.45	8.13	60599	124.28	322.06	8.5	16.5
2388.0	27.0	35.0	120	9.5	1.47	8.17	60866	131.19	321.11	8.5	16.5
2389.0	27.6	35.0	120	9.5	1.46	8.20	61127	128.33	320.15	8.5	16.5
2390.0	16.8	35.0	125	9.5	1.64	8.26	61573	210.83	319.61	8.5	16.5
2391.0	23.5	35.0	130	9.5	1.54	8.31	61905	150.72	318.79	8.5	16.5
2392.0	17.0	35.0	140	9.5	1.67	8.37	62399	208.35	318.25	8.5	16.5
2393.0	20.0	35.0	135	9.5	1.61	8.42	62804	177.10	317.56	8.5	16.5
2394.0	11.0	35.0	140	9.5	1.82	8.51	63568	322.00	317.58	8.5	16.5
2395.0	12.6	35.0	140	9.5	1.77	8.59	64235	281.11	317.41	8.5	16.5
2396.0	14.3	35.0	140	9.5	1.73	8.66	64822	247.69	317.08	8.5	16.5
2397.0	13.0	35.0	133	9.5	1.74	8.73	65436	272.46	316.86	8.5	16.5
2398.0	12.3	37.0	130	9.5	1.79	8.81	66070	287.97	316.73	8.5	16.5
2399.0	13.8	37.0	130	9.5	1.75	8.89	66635	256.67	316.44	8.5	16.5
2400.0	13.2	33.0	137	9.5	1.72	8.96	67258	268.33	316.22	8.5	16.5
2401.0	11.7	39.0	133	9.5	1.84	9.05	67940	302.74	316.15	8.5	16.5
2402.0	11.3	37.0	143	9.5	1.85	9.14	68699	313.45	316.14	8.5	16.5
2403.0	11.2	37.0	143	9.5	1.85	9.23	69465	316.25	316.14	8.5	16.5
2404.0	10.5	38.0	140	9.5	1.88	9.32	70265	337.33	316.24	8.5	16.5
2405.0	13.2	38.0	127	9.5	1.77	9.40	70843	268.33	316.02	8.5	16.5
2406.0	38.1	38.0	127	9.5	1.41	9.42	71043	92.97	315.00	8.5	16.5
2407.0	15.3	41.0	135	9.5	1.78	9.49	71572	231.50	314.62	8.5	16.5
2408.0	16.6	36.0	135	9.5	1.68	9.55	72060	213.37	314.16	8.5	16.5
2409.0	18.6	36.0	135	9.5	1.64	9.60	72496	190.43	313.61	8.5	16.5
2410.0	27.7	36.0	135	9.5	1.51	9.64	72788	127.87	312.77	8.5	16.5
2411.0	14.8	35.0	145	9.5	1.73	9.71	73376	239.32	312.45	8.5	16.5
2412.0	61.7	40.0	145	9.5	1.31	9.72	73517	57.41	311.31	8.5	16.5
2413.0	55.9	40.0	145	9.5	1.34	9.74	73672	63.36	310.21	8.5	16.5

BIT NUMBER	9		IADC CODE	4		INTERVAL	2414.0- 2423.8					
CHRISTENSEN C-22			SIZE	8.469		NOZZLES	23 0 0					
COST	15000.00		TRIP TIME	9.8		BIT RUN	9.8					
TOTAL HOURS	1.80		TOTAL TURNS	10896		CONDITION	T0 B0 G0.800					

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2414.2	15.6	5.0	80	9.5	0.97	0.01	62	227	248785	8.5	16.5
2414.4	15.4	5.0	80	9.5	0.97	0.03	124	230	124508	8.5	16.5
2414.6	10.2	5.0	80	9.5	1.06	0.05	218	347	83121	8.5	16.5
2414.8	10.2	5.0	80	9.5	1.06	0.07	312	347	62427	8.5	16.5
2415.0	7.7	7.0	60	9.5	1.13	0.09	406	460	50034	8.5	16.5
2415.2	9.0	8.0	65	9.5	1.15	0.11	492	394	41761	8.5	16.5
2415.4	10.0	8.0	65	9.5	1.12	0.13	570	354	35845	8.5	16.5
2415.6	9.6	8.0	65	9.5	1.13	0.15	652	369	31411	8.5	16.5
2415.8	8.4	10.0	65	9.5	1.22	0.18	744	422	27968	8.5	16.5
2416.0	8.0	10.0	65	9.5	1.24	0.20	842	443	25215	8.5	16.5
2416.2	8.2	12.0	65	9.5	1.29	0.23	937	432	22962	8.5	16.5
2416.4	7.0	12.0	65	9.5	1.33	0.26	1048	506	21091	8.5	16.5
2416.6	6.8	12.0	65	9.5	1.33	0.29	1163	521	19508	8.5	16.5
2416.8	11.8	10.0	75	9.5	1.18	0.30	1239	300	18136	8.5	16.5
2417.0	10.8	10.0	103	9.5	1.28	0.32	1354	328	16949	8.5	16.5
2417.2	8.2	11.0	103	9.5	1.38	0.35	1505	432	15917	8.5	16.5
2417.4	12.4	11.0	105	9.5	1.28	0.36	1606	286	14997	8.5	16.5
2417.6	8.8	10.0	103	9.5	1.33	0.38	1747	403	14187	8.5	16.5
2417.8	6.2	10.0	103	9.5	1.41	0.42	1946	571	13470	8.5	16.5
2418.0	8.0	12.0	105	9.5	1.42	0.44	2104	443	12819	8.5	16.5
2418.2	8.2	12.0	105	9.5	1.41	0.47	2257	432	12229	8.5	16.5
2418.4	9.4	12.0	105	9.5	1.37	0.49	2391	377	11690	8.5	16.5
2418.6	7.0	12.0	105	9.5	1.45	0.52	2571	506	11204	8.5	16.5
2418.8	6.8	12.0	105	9.5	1.46	0.54	2757	521	10759	8.5	16.5
2419.0	7.0	12.0	105	9.5	1.45	0.57	2937	506	10349	8.5	16.5
2419.2	3.6	12.0	105	9.5	1.62	0.63	3287	984	9988	8.5	16.5
2419.4	3.8	12.0	105	9.5	1.61	0.68	3618	932	9653	8.5	16.5
2419.6	3.8	13.0	105	9.5	1.64	0.73	3946	922	9341	8.5	16.5
2419.8	6.4	14.0	105	9.5	1.53	0.76	4143	553	9038	8.5	16.5
2420.0	7.0	15.0	105	9.5	1.53	0.79	4323	506	8754	8.5	16.5
2420.2	5.6	15.0	105	9.5	1.60	0.83	4548	633	8492	8.5	16.5
2420.4	3.2	15.0	97	9.5	1.73	0.89	4912	1107	8261	8.5	16.5
2420.6	2.8	15.0	93	9.5	1.75	0.96	5310	1265	8049	8.5	16.5
2420.8	7.2	15.0	93	9.5	1.49	0.99	5465	492	7827	8.5	16.5
2421.0	8.8	15.0	93	9.5	1.44	1.01	5592	403	7615	8.5	16.5
2421.2	9.0	14.0	93	9.5	1.41	1.04	5716	394	7414	8.5	16.5
2421.4	6.3	14.0	93	9.5	1.50	1.07	5892	559	7229	8.5	16.5
2421.6	4.8	14.0	93	9.5	1.58	1.11	6125	738	7058	8.5	16.5
2421.8	3.8	14.0	93	9.5	1.64	1.16	6417	927	6901	8.5	16.5
2422.0	7.6	12.0	92	9.5	1.40	1.19	6563	467	6740	8.5	16.5
2422.2	8.0	12.0	92	9.5	1.38	1.21	6701	443	6586	8.5	16.5
2422.4	6.5	12.0	92	9.5	1.43	1.24	6870	543	6442	8.5	16.5
2422.6	4.1	12.0	92	9.5	1.55	1.29	7137	856	6312	8.5	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2422.8	3.0	12.0	92	9.5	1.64	1.36	7510	1197	6196	8.5	16.5
2423.0	2.7	13.0	129	9.5	1.79	1.43	8091	1332	6088	8.5	16.5
2423.2	2.9	13.0	129	9.5	1.77	1.50	8629	1230	5982	8.5	16.5
2423.4	3.0	13.0	129	9.5	1.76	1.57	9145	1181	5880	8.5	16.5
2423.6	2.4	13.0	129	9.5	1.82	1.65	9790	1476	5789	8.5	16.5
2423.8	1.4	13.0	129	9.5	1.96	1.80	10896	2530	5722	8.5	16.5

BIT NUMBER	10	IADC CODE	4	INTERVAL	2424.6- 2437.6
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	13.0
TOTAL HOURS	1.50	TOTAL TURNS	9282	CONDITION	T0 B0 G0.800

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2424.8	16.3	8.0	72	9.5	1.03	0.01	53	217	248775	8.5	16.5
2425.0	10.5	8.0	72	9.5	1.14	0.03	135	338	124556	8.5	16.5
2425.2	8.0	6.0	75	9.5	1.13	0.06	247	441	83184	8.5	16.5
2425.4	9.8	12.0	80	9.5	1.29	0.08	345	361	62479	8.5	16.5
2425.6	13.4	12.0	80	9.5	1.21	0.09	417	265	50036	8.5	16.5
2425.8	12.3	10.0	90	9.5	1.21	0.11	504	287	41744	8.5	16.5
2426.0	14.6	10.0	90	9.5	1.17	0.12	578	242	35816	8.5	16.5
2426.2	11.2	9.0	95	9.5	1.22	0.14	680	315	31378	8.5	16.5
2426.4	2.1	9.0	95	9.5	1.62	0.24	1228	1703	28081	8.5	16.5
2426.6	12.3	8.0	90	9.5	1.15	0.25	1315	287	25301	8.5	16.5
2426.8	10.5	8.0	90	9.5	1.19	0.27	1418	338	23032	8.5	16.5
2427.0	15.3	8.0	93	9.5	1.11	0.28	1491	232	21132	8.5	16.5
2427.2	13.8	8.0	93	9.5	1.13	0.30	1572	257	19526	8.5	16.5
2427.4	12.7	8.0	93	9.5	1.15	0.31	1661	280	18151	8.5	16.5
2427.6	14.6	9.0	94	9.5	1.15	0.33	1738	242	16958	8.5	16.5
2427.8	10.5	8.0	94	9.5	1.20	0.35	1845	338	15919	8.5	16.5
2428.0	9.6	9.0	94	9.5	1.25	0.37	1963	369	15004	8.5	16.5
2428.2	15.2	8.0	93	9.5	1.11	0.38	2036	233	14183	8.5	16.5
2428.4	14.4	10.0	93	9.5	1.18	0.39	2114	246	13450	8.5	16.5
2428.6	10.5	8.0	93	9.5	1.20	0.41	2220	338	12794	8.5	16.5
2428.8	12.3	8.0	93	9.5	1.16	0.43	2311	287	12199	8.5	16.5
2429.0	12.8	8.0	93	9.5	1.15	0.45	2398	277	11657	8.5	16.5
2429.2	11.2	7.0	100	9.5	1.16	0.46	2505	317	11164	8.5	16.5
2429.4	10.7	8.0	100	9.5	1.21	0.48	2617	330	10712	8.5	16.5
2429.6	12.8	8.0	93	9.5	1.15	0.50	2705	277	10295	8.5	16.5
2429.8	17.7	8.0	93	9.5	1.07	0.51	2767	200	9907	8.5	16.5
2430.0	12.3	8.0	93	9.5	1.16	0.53	2858	287	9550	8.5	16.5
2430.2	20.4	8.0	93	9.5	1.04	0.54	2913	174	9216	8.5	16.5
2430.4	8.9	9.0	93	9.5	1.27	0.56	3039	400	8912	8.5	16.5
2430.6	8.9	10.0	93	9.5	1.30	0.58	3164	400	8628	8.5	16.5
2430.8	6.6	11.0	110	9.5	1.45	0.61	3364	537	8367	8.5	16.5
2431.0	7.0	9.0	110	9.5	1.37	0.64	3553	505	8121	8.5	16.5
2431.2	7.3	11.0	112	9.5	1.42	0.67	3736	483	7890	8.5	16.5
2431.4	10.2	11.0	112	9.5	1.34	0.69	3867	346	7668	8.5	16.5
2431.6	5.5	12.0	110	9.5	1.53	0.72	4109	649	7467	8.5	16.5
2431.8	6.1	12.0	110	9.5	1.50	0.76	4326	584	7276	8.5	16.5
2432.0	6.3	12.0	110	9.5	1.49	0.79	4535	559	7094	8.5	16.5
2432.2	8.0	11.0	110	9.5	1.40	0.81	4700	445	6920	8.5	16.5
2432.4	7.6	11.0	110	9.5	1.41	0.84	4875	467	6754	8.5	16.5
2432.6	9.0	12.0	110	9.5	1.40	0.86	5021	392	6595	8.5	16.5
2432.8	6.5	11.0	112	9.5	1.45	0.89	5226	542	6447	8.5	16.5
2433.0	5.7	11.0	112	9.5	1.49	0.93	5460	617	6309	8.5	16.5
2433.2	9.0	12.0	112	9.5	1.40	0.95	5609	392	6171	8.5	16.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2433.4	8.1	12.0	112	9.5	1.43	0.97	5775	437	6041	8.5	16.5
2433.6	7.3	12.0	112	9.5	1.45	1.00	5958	483	5917	8.5	16.5
2433.8	3.0	10.0	111	9.5	1.61	1.07	6408	1197	5815	8.5	16.5
2434.0	5.8	8.0	111	9.5	1.38	1.10	6637	609	5704	8.5	16.5
2434.2	8.0	8.0	111	9.5	1.30	1.13	6803	441	5594	8.5	16.5
2434.4	16.9	8.0	111	9.5	1.12	1.14	6881	209	5484	8.5	16.5
2434.6	13.4	8.0	111	9.5	1.18	1.15	6981	265	5380	8.5	16.5
2434.8	14.6	8.0	111	9.5	1.16	1.17	7072	242	5279	8.5	16.5
2435.0	15.6	8.0	111	9.5	1.14	1.18	7157	227	5182	8.5	16.5
2435.2	14.4	7.0	111	9.5	1.13	1.19	7250	246	5089	8.5	16.5
2435.4	13.8	8.0	111	9.5	1.17	1.21	7347	257	4999	8.5	16.5
2435.6	13.4	8.0	111	9.5	1.18	1.22	7446	265	4913	8.5	16.5
2435.8	11.2	10.0	111	9.5	1.28	1.24	7565	315	4831	8.5	16.6
2436.0	12.8	8.0	111	9.5	1.19	1.26	7669	277	4751	8.5	16.6
2436.2	19.1	8.0	110	9.5	1.09	1.27	7738	185	4673	8.5	16.6
2436.4	11.8	8.0	110	9.5	1.21	1.28	7850	300	4598	8.5	16.6
2436.6	9.4	8.0	110	9.5	1.26	1.31	7990	377	4528	8.5	16.6
2436.8	6.9	11.0	110	9.5	1.44	1.33	8181	513	4462	8.5	16.6
2437.0	4.3	11.0	110	9.5	1.56	1.38	8491	831	4404	8.5	16.6
2437.2	6.9	13.0	112	9.5	1.50	1.41	8686	513	4342	8.5	16.6
2437.4	3.8	12.0	112	9.5	1.62	1.46	9036	922	4288	8.5	16.6
2437.6	5.5	12.0	112	9.5	1.53	1.50	9282	649	4232	8.5	16.6

BIT NUMBER	11	IADC CODE	114	INTERVAL	2437.6- 2571.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	10.3	BIT RUN	133.4
TOTAL HOURS	5.64	TOTAL TURNS	41606	CONDITION	T4 B3 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2438.0	21.9	10.0	110	9.5	1.08	0.02	121	162	93618	8.5	16.6
2439.0	34.0	10.0	110	9.5	0.97	0.05	315	104	26822	8.5	16.6
2440.0	59.0	10.0	90	9.5	0.79	0.06	406	60	15671	8.5	16.6
2441.0	37.0	10.0	90	9.5	0.91	0.09	552	96	11090	8.5	16.6
2442.0	33.5	20.0	118	9.5	1.18	0.12	763	106	8594	8.5	16.6
2443.0	35.0	20.0	118	9.5	1.17	0.15	966	101	7021	8.5	16.6
2444.0	37.0	20.0	118	9.5	1.15	0.18	1157	96	5939	8.5	16.6
2445.0	27.7	17.0	130	9.5	1.21	0.21	1439	128	5154	8.5	16.6
2446.0	27.7	17.0	130	9.5	1.21	0.25	1720	128	4555	8.5	16.6
2447.0	22.6	20.0	130	9.5	1.32	0.29	2065	157	4087	8.5	16.6
2448.0	24.0	20.0	130	9.5	1.30	0.34	2390	148	3709	8.5	16.6
2449.0	23.0	21.0	128	9.5	1.33	0.38	2724	154	3397	8.5	16.6
2450.0	19.0	21.0	128	9.5	1.38	0.43	3129	186	3138	8.5	16.6
2451.0	17.6	20.0	125	9.5	1.38	0.49	3555	201	2919	8.5	16.6
2452.0	9.6	20.0	125	9.5	1.55	0.59	4336	369	2742	8.5	16.6
2453.0	9.1	24.0	105	9.5	1.59	0.70	5028	389	2589	8.5	16.6
2454.0	21.5	24.0	105	9.5	1.34	0.75	5321	165	2441	8.5	16.6
2455.0	18.6	24.0	105	9.5	1.38	0.80	5660	190	2312	8.5	16.6
2456.0	24.0	23.0	126	9.5	1.34	0.84	5975	148	2194	8.5	16.6
2457.0	31.0	23.0	126	9.5	1.27	0.88	6219	114	2087	8.5	16.6
2458.0	24.0	23.0	126	9.5	1.34	0.92	6534	148	1992	8.5	16.6
2459.0	18.0	23.0	126	9.5	1.43	0.97	6954	197	1908	8.5	16.6
2460.0	15.0	25.0	125	9.5	1.51	1.04	7454	236	1833	8.5	16.6
2461.0	14.6	24.0	125	9.5	1.50	1.11	7968	243	1765	8.5	16.6
2462.0	24.3	24.0	125	9.5	1.35	1.15	8276	146	1699	8.5	16.6
2463.0	24.0	25.0	125	9.5	1.37	1.19	8589	148	1638	8.5	16.6
2464.0	26.0	24.0	125	9.5	1.33	1.23	8877	136	1581	8.5	16.6
2465.0	32.1	23.0	125	9.5	1.26	1.26	9111	110	1527	8.5	16.6
2466.0	38.5	23.0	125	9.5	1.20	1.29	9306	92	1477	8.5	16.6
2467.0	42.7	25.0	125	9.5	1.20	1.31	9481	83	1429	8.5	16.6
2468.0	19.9	25.0	125	9.5	1.43	1.36	9858	178	1388	8.5	16.6
2469.0	22.1	26.0	125	9.5	1.41	1.41	10197	160	1349	8.5	16.6
2470.0	20.1	26.0	125	9.5	1.44	1.46	10571	176	1313	8.5	16.6
2471.0	17.7	26.0	125	9.5	1.48	1.51	10994	200	1280	8.5	16.6
2472.0	28.0	26.0	125	9.5	1.34	1.55	11262	127	1246	8.5	16.6
2473.0	33.0	21.0	125	9.5	1.22	1.58	11489	107	1214	8.5	16.6
2474.0	25.4	25.0	125	9.5	1.36	1.62	11785	139	1184	8.5	16.6
2475.0	24.6	27.0	125	9.5	1.40	1.66	12090	144	1157	8.5	16.6
2476.0	25.0	28.0	125	9.5	1.41	1.70	12390	142	1130	8.5	16.6
2477.0	38.0	28.0	125	9.5	1.28	1.72	12587	93	1104	8.5	16.6
2478.0	42.7	28.0	125	9.5	1.24	1.75	12763	83	1079	8.5	16.6
2479.0	52.4	27.0	125	9.5	1.16	1.77	12906	68	1054	8.5	16.6
2480.0	27.3	27.0	125	9.5	1.36	1.80	13181	130	1032	8.5	16.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2481.0	25.4	28.0	125	9.5	1.40	1.84	13476	139	1012	8.5	16.6
2482.0	23.0	28.0	125	9.5	1.43	1.89	13802	154.00	992.46	8.5	16.6
2483.0	27.3	27.0	125	9.5	1.36	1.92	14077	129.74	973.46	8.5	16.6
2484.0	31.2	28.0	125	9.5	1.34	1.96	14317	113.53	954.93	8.5	16.6
2485.0	28.7	28.0	125	9.5	1.36	1.99	14578	123.41	937.38	8.5	16.6
2486.0	36.2	28.0	125	9.5	1.29	2.02	14785	97.85	920.04	8.5	16.6
2487.0	35.8	28.0	125	9.5	1.29	2.05	14995	98.94	903.42	8.5	16.6
2488.0	32.6	29.0	124	9.5	1.33	2.08	15223	108.65	887.65	8.5	16.6
2489.0	42.7	27.0	125	9.5	1.23	2.10	15399	82.95	871.99	8.5	16.6
2490.0	40.2	27.0	125	9.5	1.24	2.12	15585	88.11	857.03	8.5	16.6
2491.0	18.0	29.0	125	9.5	1.52	2.18	16002	196.78	844.67	8.5	16.6
2492.0	34.0	28.0	125	9.5	1.31	2.21	16223	104.18	831.06	8.5	16.6
2493.0	23.5	28.0	125	9.5	1.43	2.25	16542	150.72	818.77	8.5	16.6
2494.0	28.0	28.0	125	9.5	1.37	2.29	16810	126.50	806.50	8.5	16.6
2495.0	27.0	28.0	125	9.5	1.38	2.33	17087	131.19	794.74	8.5	16.6
2496.0	39.8	28.0	125	9.5	1.26	2.35	17276	88.99	782.65	8.5	16.6
2497.0	32.1	27.0	125	9.5	1.31	2.38	17510	110.34	771.33	8.5	16.6
2498.0	28.7	25.0	120	9.5	1.31	2.42	17760	123.41	760.61	8.5	16.6
2499.0	31.2	28.0	120	9.5	1.32	2.45	17991	113.53	750.07	8.5	16.6
2500.0	27.0	28.0	120	9.5	1.37	2.49	18258	131.19	740.15	8.5	16.6
2501.0	31.2	28.0	120	9.5	1.32	2.52	18489	113.53	730.27	8.5	16.6
2502.0	23.5	28.0	119	9.5	1.41	2.56	18792	150.72	721.27	8.5	16.6
2503.0	24.0	28.0	119	9.5	1.40	2.60	19090	147.58	712.49	8.5	16.6
2504.0	23.0	27.0	118	9.5	1.40	2.64	19398	154.00	704.08	8.5	16.6
2505.0	26.7	28.0	118	9.5	1.37	2.68	19663	132.66	695.60	8.5	16.6
2506.0	26.0	28.0	118	9.5	1.38	2.72	19935	136.23	687.43	8.5	16.6
2507.0	24.8	27.0	104	9.5	1.34	2.76	20187	142.82	679.58	8.5	16.6
2508.0	35.6	27.0	124	9.5	1.28	2.79	20396	99.49	671.34	8.5	16.6
2509.0	31.2	27.0	124	9.5	1.32	2.82	20634	113.53	663.53	8.5	16.6
2510.0	27.3	27.0	124	9.5	1.36	2.86	20907	129.74	656.15	8.5	16.6
2511.0	24.8	27.0	124	9.5	1.39	2.90	21207	142.82	649.16	8.5	16.6
2512.0	23.3	28.0	124	9.5	1.43	2.94	21526	152.02	642.48	8.5	16.6
2513.0	25.9	29.0	124	9.5	1.41	2.98	21813	136.76	635.77	8.5	16.6
2514.0	25.0	28.0	125	9.5	1.41	3.02	22113	141.68	629.30	8.5	16.6
2515.0	22.6	28.0	125	9.5	1.44	3.06	22445	156.73	623.20	8.5	16.6
2516.0	22.3	28.0	125	9.5	1.44	3.11	22782	158.83	617.28	8.5	16.6
2517.0	21.3	28.0	125	9.5	1.46	3.16	23134	166.29	611.60	8.5	16.6
2518.0	11.7	28.0	125	9.5	1.64	3.24	23775	302.74	607.75	8.5	16.6
2519.0	10.7	30.0	124	9.5	1.70	3.33	24470	331.03	604.35	8.5	16.6
2520.0	12.3	29.0	124	9.5	1.64	3.42	25075	287.97	600.52	8.5	16.6
2521.0	12.2	28.0	125	9.5	1.63	3.50	25690	290.33	596.80	8.5	16.6
2522.0	12.3	28.0	125	9.5	1.63	3.58	26299	287.97	593.14	8.5	16.6
2523.0	12.2	29.0	125	9.5	1.65	3.66	26914	290.33	589.59	8.5	16.6
2524.0	32.1	27.0	125	9.5	1.31	3.69	27148	110.34	584.04	8.5	16.6
2525.0	34.0	28.0	125	9.5	1.31	3.72	27368	104.18	578.55	8.5	16.6
2526.0	34.0	27.0	125	9.5	1.30	3.75	27589	104.18	573.19	8.5	16.6
2527.0	22.1	27.0	125	9.5	1.43	3.80	27928	160.27	568.57	8.5	16.6
2528.0	20.5	27.0	125	9.5	1.45	3.85	28294	172.78	564.19	8.5	16.6
2529.0	21.5	28.0	124	9.5	1.45	3.89	28640	164.74	559.82	8.5	16.7
2530.0	19.2	31.0	124	9.5	1.53	3.94	29028	184.48	555.76	8.5	16.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2531.0	21.1	30.0	124	9.5	1.49	3.99	29380	167.87	551.60	8.5	16.7
2532.0	19.9	31.0	124	9.5	1.52	4.04	29754	177.99	547.65	8.5	16.7
2533.0	21.5	28.0	124	9.5	1.45	4.09	30100	164.74	543.63	8.5	16.7
2534.0	22.6	28.0	124	9.5	1.43	4.13	30430	156.73	539.62	8.5	16.7
2535.0	26.3	30.0	124	9.5	1.42	4.17	30712	134.68	535.46	8.5	16.7
2536.0	26.3	30.0	124	9.5	1.42	4.21	30995	134.68	531.39	8.5	16.7
2537.0	21.9	32.0	124	9.5	1.50	4.25	31335	161.74	527.67	8.5	16.7
2538.0	22.6	29.0	124	9.5	1.45	4.30	31664	156.73	523.98	8.5	16.7
2539.0	26.0	29.0	124	9.5	1.41	4.34	31950	136.23	520.15	8.5	16.7
2540.0	27.0	28.0	124	9.5	1.38	4.37	32226	131.19	516.35	8.5	16.7
2541.0	32.0	28.0	124	9.5	1.33	4.41	32458	110.69	512.43	8.5	16.7
2542.0	25.9	28.0	124	9.5	1.39	4.44	32746	136.76	508.83	8.5	16.7
2543.0	38.1	28.0	124	9.5	1.27	4.47	32941	92.97	504.89	8.5	16.7
2544.0	40.5	27.0	124	9.5	1.24	4.49	33125	87.46	500.96	8.5	16.7
2545.0	28.7	27.0	123	9.5	1.34	4.53	33382	123.41	497.45	8.5	16.7
2546.0	14.4	27.0	123	9.5	1.56	4.60	33894	245.97	495.13	8.5	16.7
2547.0	21.1	26.0	123	9.5	1.42	4.65	34244	167.87	492.14	8.5	16.7
2548.0	19.6	26.0	123	9.5	1.45	4.70	34621	180.71	489.32	8.5	16.7
2549.0	17.3	26.0	123	9.5	1.48	4.76	35047	204.74	486.76	8.5	16.7
2550.0	18.8	26.0	123	9.5	1.46	4.81	35440	188.40	484.11	8.5	16.7
2551.0	26.7	28.0	123	9.5	1.38	4.85	35716	132.66	481.01	8.5	16.7
2552.0	24.8	30.0	123	9.5	1.43	4.89	36014	142.82	478.05	8.5	16.7
2553.0	24.8	30.0	122	9.5	1.43	4.93	36309	142.82	475.15	8.5	16.7
2554.0	20.5	29.0	122	9.5	1.48	4.98	36666	172.78	472.55	8.5	16.7
2555.0	30.3	28.0	122	9.5	1.34	5.01	36908	116.90	469.52	8.5	16.7
2556.0	37.9	28.0	122	9.5	1.27	5.03	37101	93.46	466.34	8.5	16.7
2557.0	31.7	28.0	122	9.5	1.32	5.07	37332	111.74	463.37	8.5	16.7
2558.0	28.0	28.0	122	9.5	1.36	5.10	37593	126.50	460.58	8.5	16.7
2559.0	29.5	29.0	120	9.5	1.36	5.14	37837	120.07	457.77	8.5	16.7
2560.0	29.5	30.0	120	9.5	1.37	5.17	38081	120.07	455.01	8.5	16.7
2561.0	27.3	29.0	120	9.5	1.38	5.21	38345	129.74	452.38	8.5	16.7
2562.0	22.1	30.0	120	9.5	1.46	5.25	38671	160.27	450.03	8.5	16.7
2563.0	26.3	29.0	125	9.5	1.40	5.29	38956	134.68	447.51	8.5	16.7
2564.0	21.9	29.0	125	9.5	1.46	5.34	39298	161.74	445.25	8.5	16.7
2565.0	24.0	30.0	125	9.5	1.45	5.38	39611	147.58	442.92	8.5	16.7
2566.0	20.9	31.0	125	9.5	1.51	5.42	39970	169.47	440.79	8.5	16.7
2567.0	22.6	30.0	125	9.5	1.47	5.47	40302	156.73	438.59	8.5	16.7
2568.0	20.3	30.0	125	9.5	1.50	5.52	40671	174.48	436.57	8.5	16.7
2569.0	27.0	32.0	125	9.5	1.44	5.56	40949	131.19	434.24	8.5	16.7
2570.0	25.1	30.0	125	9.5	1.43	5.60	41248	141.12	432.03	8.5	16.7
2571.0	20.9	29.0	125	9.5	1.48	5.64	41606	169.47	430.06	8.5	16.7

COMPUTER DATA LISTING : LIST B

INTERVAL	10 m average
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, this should change from negative to positive

BIT NUMBER	2	IADC CODE	111	INTERVAL	235.0- 818.0		
HUGHES OSC-3AJ		SIZE	15.000	NOZZLES	20 20 18		
COST	2000.00	TRIP TIME	4.0	BIT RUN	583.0		
TOTAL HOURS	7.48	TOTAL TURNS	75478	CONDITION	T3 B6 G0.000		

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
250.0	500.0	15.0	0.03	144	16274.26	7	1085	-
260.0	475.9	25.0	0.05	245	16348.69	7.44	653.95	-
270.0	433.9	35.0	0.07	368	16430.33	8.16	469.44	-
280.0	389.7	45.0	0.10	521	16521.21	9.09	367.14	-
290.0	374.9	55.0	0.13	681	16615.68	9.45	302.10	-
300.0	462.4	65.0	0.15	838	16692.28	7.66	256.80	-
310.0	379.7	75.0	0.17	1069	16785.56	9.33	223.81	-
320.0	500.0	85.0	0.19	1258	16856.40	7.08	198.31	-
330.0	404.8	95.0	0.22	1495	16943.91	8.75	178.36	-
340.0	342.9	105.0	0.25	1760	17047.21	10.33	162.35	-
350.0	308.4	115.0	0.28	2077	17162.05	11.48	149.24	-
360.0	284.2	125.0	0.32	2420	17286.68	12.46	138.29	-
370.0	288.1	135.0	0.35	2763	17409.61	12.29	128.96	-
380.0	214.9	145.0	0.40	3203	17574.44	16.48	121.20	-
390.0	229.8	155.0	0.44	3617	17728.58	15.41	114.38	-
400.0	198.0	165.0	0.49	4124	17907.47	17.89	108.53	-
410.0	219.1	175.0	0.54	4589	18069.11	16.16	103.25	-
420.0	218.2	185.0	0.58	5069	18231.45	16.23	98.55	-
430.0	185.3	195.0	0.64	5639	18422.64	19.12	94.48	-
440.0	180.0	205.0	0.69	6156	18619.42	19.68	90.83	-
450.0	232.7	215.0	0.74	6551	18771.66	15.22	87.31	-
460.0	151.0	225.0	0.80	7092	19006.28	23.46	84.47	-
470.0	156.5	235.0	0.87	7657	19232.59	22.63	81.84	-
480.0	97.4	245.0	0.97	8581	19596.12	36.35	79.98	-
490.0	239.6	255.0	1.01	8956	19743.96	14.78	77.43	-
500.0	178.7	265.0	1.07	9454	19942.14	19.82	75.25	-
510.0	89.7	275.0	1.18	10431	20336.91	39.48	73.95	-
520.0	80.0	285.0	1.30	11610	20779.66	44.28	72.91	-
530.0	69.9	295.0	1.44	12939	21286.08	50.64	72.16	-
540.0	61.7	305.0	1.61	14446	21860.01	57.39	71.67	-
550.0	80.0	315.0	1.73	15632	22302.64	44.26	70.80	-
560.0	64.2	325.0	1.89	17199	22854.48	55.18	70.32	-
570.0	73.2	335.0	2.02	18551	23338.19	48.37	69.67	-
580.0	134.8	345.0	2.10	19308	23600.93	26.27	68.41	-
590.0	46.2	355.0	2.31	21514	24366.99	76.61	68.64	+
600.0	94.5	365.0	2.42	22618	24741.62	37.46	67.79	-
610.0	76.7	375.0	2.55	24025	25203.31	46.17	67.21	-
620.0	60.0	385.0	2.72	25819	25793.64	59.03	67.00	-
630.0	75.6	395.0	2.85	27241	26262.44	46.88	66.49	-
640.0	73.4	405.0	2.99	28732	26744.80	48.24	66.04	-
650.0	81.5	415.0	3.11	30113	27179.55	43.47	65.49	-
660.0	81.0	425.0	3.23	31485	27617.10	43.76	64.98	-
670.0	71.4	435.0	3.37	32982	28113.52	49.64	64.63	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
680.0	81.4	445.0	3.50	34289	28548.64	43.51	64.15	-
690.0	70.6	455.0	3.64	35818	29050.26	50.16	63.85	-
700.0	62.8	465.0	3.80	37537	29613.96	56.37	63.69	-
710.0	60.4	475.0	3.96	39325	30200.29	58.63	63.58	-
720.0	61.2	485.0	4.13	41089	30778.96	57.87	63.46	-
730.0	44.4	495.0	4.35	43387	31576.25	79.73	63.79	+
740.0	27.0	505.0	4.72	47116	32889.90	131.37	65.13	+
750.0	27.4	515.0	5.09	51043	34181.74	129.18	66.37	+
760.0	35.0	525.0	5.37	54129	35193.74	101.20	67.04	+
770.0	33.9	535.0	5.67	57137	36238.10	104.44	67.73	+
780.0	24.1	545.0	6.08	61365	37706.37	146.83	69.19	+
790.0	23.6	555.0	6.50	65655	39205.39	149.90	70.64	+
800.0	31.9	565.0	6.82	68779	40315.42	111.00	71.35	+
810.0	29.2	575.0	7.16	72198	41528.10	121.27	72.22	+
818.0	24.9	583.0	7.48	75478	42667.27	142.40	73.19	+

BIT NUMBER	3	IADC CODE	114	INTERVAL	818.0- 1298.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	5.7	BIT RUN	480.0
TOTAL HOURS	13.25	TOTAL TURNS	117216	CONDITION	T5 B6 G0.125

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
820.0	39.7	2.0	0.05	369	21267.84	89	10634	-
830.0	27.0	12.0	0.42	2728	22580.43	131	1882	-
840.0	31.3	22.0	0.74	4714	23713.71	113	1078	-
850.0	33.8	32.0	1.04	7257	24761.17	104.75	773.79	-
860.0	39.1	42.0	1.29	9404	25666.34	90.52	611.10	-
870.0	32.5	52.0	1.60	11774	26757.49	109.12	514.57	-
880.0	49.9	62.0	1.80	13636	27466.66	70.92	443.01	-
890.0	78.7	72.0	1.93	14818	27916.88	45.02	387.73	-
900.0	66.2	82.0	2.08	16088	28452.29	53.54	346.98	-
910.0	63.6	92.0	2.24	17409	29009.15	55.69	315.32	-
920.0	62.0	102.0	2.40	18741	29580.10	57.09	290.00	-
930.0	59.2	112.0	2.57	20159	30177.96	59.79	269.45	-
940.0	60.3	122.0	2.73	21552	30765.60	58.76	252.18	-
950.0	61.7	132.0	2.89	22909	31339.58	57.40	237.42	-
960.0	62.1	142.0	3.05	24246	31910.20	57.06	224.72	-
970.0	50.6	152.0	3.25	25898	32609.95	69.98	214.54	-
980.0	45.5	162.0	3.47	27792	33387.89	77.79	206.10	-
990.0	41.7	172.0	3.71	29805	34236.43	84.85	199.05	-
1000.0	45.3	182.0	3.93	31661	35019.19	78.28	192.41	-
1010.0	39.5	192.0	4.19	33787	35915.87	89.67	187.06	-
1020.0	43.8	202.0	4.41	35722	36724.35	80.85	181.80	-
1030.0	48.9	212.0	4.62	37502	37449.14	72.48	176.65	-
1040.0	50.5	222.0	4.82	39177	38150.49	70.13	171.85	-
1050.0	51.3	232.0	5.01	40867	38840.68	69.02	167.42	-
1060.0	48.2	242.0	5.22	42670	39574.94	73.43	163.53	-
1070.0	44.6	252.0	5.44	44669	40369.39	79.44	160.20	-
1080.0	35.6	262.0	5.72	47244	41363.17	99.38	157.87	-
1090.0	35.4	272.0	6.01	49627	42364.63	100.15	155.75	-
1100.0	31.6	282.0	6.32	52290	43487.15	112.25	154.21	-
1110.0	28.1	292.0	6.68	55294	44748.74	126.16	153.25	-
1120.0	29.5	302.0	7.02	58190	45951.29	120.25	152.16	-
1130.0	33.9	312.0	7.31	60671	46997.36	104.61	150.63	-
1140.0	44.9	322.0	7.54	62720	47786.30	78.89	148.40	-
1150.0	44.8	332.0	7.76	64891	48576.64	79.03	146.32	-
1160.0	41.0	342.0	8.00	67140	49441.09	86.44	144.56	-
1170.0	41.4	352.0	8.25	69169	50296.54	85.55	142.89	-
1180.0	45.6	362.0	8.47	71263	51074.00	77.75	141.09	-
1190.0	36.1	372.0	8.74	73703	52053.94	97.99	139.93	-
1200.0	33.6	382.0	9.04	76832	53109.58	105.56	139.03	-
1210.0	36.2	392.0	9.32	79730	54087.15	97.76	137.98	-
1220.0	32.5	402.0	9.62	82894	55175.62	108.85	137.25	-
1230.0	27.5	412.0	9.99	86301	56463.07	128.74	137.05	-
1240.0	23.4	422.0	10.41	90278	57977.95	151.49	137.39	+

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1250.0	24.1	432.0	10.83	94223	59448.87	147.09	137.61	+
1260.0	22.2	442.0	11.28	98626	61043.67	159.48	138.11	+
1270.0	20.6	452.0	11.77	103306	62764.48	172.08	138.86	+
1280.0	15.9	462.0	12.40	109307	64998.00	223.35	140.69	+
1290.0	21.0	472.0	12.87	113746	66688.65	169.06	141.29	+
1298.0	21.4	480.0	13.25	117216	68009.90	165.16	141.69	+

BIT NUMBER	4	IADC CODE	114	INTERVAL	1298.0- 1496.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	198.0
TOTAL HOURS	17.93	TOTAL TURNS	165110	CONDITION	T3 B5 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1300.0	18.3	2.0	0.11	854	23956.47	194	11978	-
1310.0	21.0	12.0	0.59	4866	25642.63	169	2137	-
1320.0	18.9	22.0	1.11	9626	27517.73	188	1251	-
1330.0	17.6	32.0	1.68	14798	29531.31	201.36	922.85	-
1340.0	17.6	42.0	2.25	19990	31547.90	201.66	751.14	-
1350.0	15.4	52.0	2.90	25512	33849.02	230.11	650.94	-
1360.0	9.7	62.0	3.94	33525	37513.57	366.45	605.06	-
1370.0	10.3	72.0	4.91	41181	40966.18	345.26	568.97	-
1380.0	10.6	82.0	5.86	49592	44320.35	335.42	540.49	-
1390.0	10.8	92.0	6.78	57114	47591.34	327.10	517.30	-
1400.0	9.8	102.0	7.80	65533	51202.88	361.15	501.99	-
1410.0	9.8	112.0	8.83	74196	54829.67	362.68	489.55	-
1420.0	9.2	122.0	9.91	83979	58668.72	383.90	480.89	-
1430.0	10.1	132.0	10.90	93896	62193.00	352.43	471.16	-
1440.0	11.8	142.0	11.75	102542	65195.16	300.22	459.12	-
1450.0	11.7	152.0	12.61	111331	68228.47	303.33	448.87	-
1460.0	11.2	162.0	13.50	120614	71396.96	316.85	440.72	-
1470.0	11.7	172.0	14.36	129346	74419.11	302.22	432.67	-
1480.0	6.6	182.0	15.88	144680	79815.27	539.62	438.55	+
1490.0	7.9	192.0	17.14	157604	84287.42	447.22	439.00	+
1496.0	7.7	198.0	17.93	165110	87059.66	462.04	439.70	+

BIT NUMBER	5	IADC CODE	114	INTERVAL	1496.0- 1510.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	14.0
TOTAL HOURS	1.21	TOTAL TURNS	9592	CONDITION	T2 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1500.0	9.3	4.0	0.43	3457	25095.12	380	6274	-
1510.0	12.8	14.0	1.21	9592	27856.66	276	1990	-

BIT NUMBER	6	IADC CODE	114	INTERVAL	1510.0- 1666.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	7.0	BIT RUN	156.0
TOTAL HOURS	10.02	TOTAL TURNS	74837	CONDITION	T2 B5 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1520.0	14.0	10.0	0.71	5800	28231.21	253	2823	-
1530.0	16.3	20.0	1.33	10246	30402.15	217	1520	-
1540.0	17.8	30.0	1.89	14288	32387.11	198	1080	-
1550.0	17.7	40.0	2.45	18363	34392.48	200.54	859.81	-
1560.0	14.5	50.0	3.14	23337	36843.63	245.11	736.87	-
1570.0	17.2	60.0	3.73	27517	38900.95	205.73	648.35	-
1580.0	15.6	70.0	4.36	32120	41166.05	226.51	588.09	-
1590.0	16.5	80.0	4.97	36456	43309.93	214.39	541.37	-
1600.0	15.4	90.0	5.62	41154	45606.73	229.68	506.74	-
1610.0	16.6	100.0	6.22	45832	47740.88	213.41	477.41	-
1620.0	14.5	110.0	6.91	51275	50184.67	244.38	456.22	-
1630.0	12.0	120.0	7.74	57904	53129.83	294.52	442.75	-
1640.0	15.5	130.0	8.39	62780	55411.51	228.17	426.24	-
1650.0	15.6	140.0	9.03	67530	57688.16	227.67	412.06	-
1660.0	14.6	150.0	9.71	72625	60118.02	242.99	400.79	-
1666.0	16.6	156.0	10.08	75226	61398.37	213.39	393.58	-

BIT NUMBER	7	IADC CODE	114	INTERVAL	1666.0- 2187.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	8.0	BIT RUN	521.0
TOTAL HOURS	19.49	TOTAL TURNS	149236	CONDITION	T4 B5 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1670.0	17.4	4.0	0.21	1668	30457.33	204	7614	-
1680.0	16.8	14.0	0.80	6201	32567.73	211	2326	-
1690.0	21.5	24.0	1.27	9555	34217.68	165	1426	-
1700.0	20.2	34.0	1.76	13141	35968.68	175	1058	-
1710.0	19.8	44.0	2.27	16813	37755.88	178.72	858.09	-
1720.0	21.6	54.0	2.73	20234	39393.44	163.76	729.51	-
1730.0	24.0	64.0	3.15	23499	40871.29	147.79	638.61	-
1740.0	27.0	74.0	3.52	26391	42184.74	131.35	570.06	-
1750.0	31.2	84.0	3.84	29003	43319.51	113.48	515.71	-
1760.0	33.2	94.0	4.14	31373	44386.16	106.67	472.19	-
1770.0	30.7	104.0	4.46	33997	45541.40	115.52	437.90	-
1780.0	33.9	114.0	4.76	36250	46585.83	104.44	408.65	-
1790.0	33.1	124.0	5.06	38695	47656.16	107.03	384.32	-
1800.0	30.2	134.0	5.39	41244	48830.32	117.42	364.41	-
1810.0	31.0	144.0	5.72	43742	49971.91	114.16	347.03	-
1820.0	30.7	154.0	6.04	46292	51126.83	115.49	331.99	-
1830.0	30.2	164.0	6.37	48870	52300.87	117.40	318.91	-
1840.0	32.0	174.0	6.69	51248	53406.69	110.58	306.94	-
1850.0	32.2	184.0	7.00	53678	54505.95	109.93	296.23	-
1860.0	31.5	194.0	7.31	56115	55629.57	112.36	286.75	-
1870.0	32.7	204.0	7.62	58399	56711.86	108.23	278.00	-
1880.0	27.9	214.0	7.98	61281	57980.33	126.85	270.94	-
1890.0	31.0	224.0	8.30	63766	59121.48	114.12	263.94	-
1900.0	31.1	234.0	8.62	66248	60262.11	114.06	257.53	-
1910.0	26.6	244.0	9.00	69258	61595.92	133.38	252.44	-
1920.0	25.3	254.0	9.39	72331	62994.94	139.90	248.01	-
1930.0	32.3	264.0	9.70	74591	64091.93	109.70	242.77	-
1940.0	31.3	274.0	10.02	77034	65222.70	113.08	238.04	-
1950.0	32.4	284.0	10.33	79332	66316.16	109.35	233.51	-
1960.0	28.4	294.0	10.68	82029	67561.24	124.51	229.80	-
1970.0	29.3	304.0	11.02	84585	68770.50	120.93	226.22	-
1980.0	26.3	314.0	11.40	87461	70117.97	134.75	223.31	-
1990.0	24.5	324.0	11.81	90602	71561.16	144.32	220.87	-
2000.0	29.7	334.0	12.15	93209	72753.36	119.22	217.82	-
2010.0	29.6	344.0	12.49	95762	73950.04	119.67	214.97	-
2020.0	26.9	354.0	12.86	98473	75268.44	131.84	212.62	-
2030.0	29.5	364.0	13.20	100980	76467.14	119.87	210.07	-
2040.0	28.6	374.0	13.55	103600	77704.47	123.73	207.77	-
2050.0	30.9	384.0	13.87	106028	78850.99	114.65	205.34	-
2060.0	28.4	394.0	14.22	108841	80096.42	124.54	203.29	-
2070.0	25.5	404.0	14.61	111819	81485.95	138.95	201.70	-
2080.0	24.2	414.0	15.03	114969	82949.89	146.39	200.36	-
2090.0	24.3	424.0	15.44	118061	84410.14	146.02	199.08	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2100.0	20.4	434.0	15.93	121975	86150.01	173.99	198.50	-
2110.0	22.8	444.0	16.37	125366	87702.45	155.24	197.53	-
2120.0	30.7	454.0	16.69	127904	88854.79	115.23	195.72	-
2130.0	29.3	464.0	17.03	130463	90063.51	120.87	194.10	-
2140.0	28.8	474.0	17.38	133066	91293.00	122.95	192.60	-
2150.0	28.7	484.0	17.73	135815	92528.79	123.58	191.18	-
2160.0	20.6	494.0	18.22	139467	94250.78	172.20	190.79	-
2170.0	21.6	504.0	18.68	143066	95892.52	164.17	190.26	-
2180.0	21.1	514.0	19.16	146677	97575.14	168.26	189.83	-
2187.0	20.9	521.0	19.49	149236	98764.17	169.86	189.57	-

BIT NUMBER	8	IADC CODE	114	INTERVAL	2187.0- 2413.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 14
COST	900.00	TRIP TIME	9.8	BIT RUN	226.0
TOTAL HOURS	9.74	TOTAL TURNS	73672	CONDITION	T7 B8 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2190.0	26.8	3.0	0.11	905	36007.46	132	12002	-
2200.0	24.6	13.0	0.52	4316	37446.61	144	2881	-
2210.0	37.5	23.0	0.78	6595	38391.15	94	1669	-
2220.0	32.4	33.0	1.09	9187	39484.77	109	1197	-
2230.0	28.1	43.0	1.45	12001	40743.34	125.86	947.52	-
2240.0	22.9	53.0	1.89	15436	42292.59	154.93	797.97	-
2250.0	29.6	63.0	2.22	17937	43488.88	119.63	690.30	-
2260.0	25.2	73.0	2.62	20942	44892.27	140.34	614.96	-
2270.0	28.1	83.0	2.98	23610	46154.62	126.24	556.08	-
2280.0	28.9	93.0	3.32	26167	47381.09	122.65	509.47	-
2290.0	28.1	103.0	3.68	28747	48641.78	126.07	472.25	-
2300.0	22.7	113.0	4.12	32023	50201.67	155.99	444.26	-
2310.0	23.7	123.0	4.54	35101	51697.44	149.58	420.30	-
2320.0	21.4	133.0	5.01	38482	53350.70	165.33	401.13	-
2330.0	19.7	143.0	5.52	41875	55150.25	179.95	385.67	-
2340.0	19.9	153.0	6.02	45505	56932.30	178.21	372.11	-
2350.0	19.9	163.0	6.52	49140	58709.28	177.70	360.18	-
2360.0	20.3	173.0	7.01	52741	60458.22	174.89	349.47	-
2370.0	21.3	183.0	7.48	56041	62117.48	165.93	339.44	-
2380.0	25.1	193.0	7.88	58820	63530.60	141.31	329.17	-
2390.0	26.2	203.0	8.26	61573	64881.72	135.11	319.61	-
2400.0	14.3	213.0	8.96	67258	67354.13	247.24	316.22	-
2410.0	14.8	223.0	9.64	72788	69748.37	239.42	312.77	-
2413.0	29.5	226.0	9.74	73672	70108.47	120.03	310.21	-

BIT NUMBER	9	IADC CODE	4	INTERVAL	2414.0- 2423.8
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	9.8
TOTAL HOURS	1.80	TOTAL TURNS	10896	CONDITION	T0 B0 G0.800

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2420.0	7.6	6.0	0.79	4323	52522.25	468	8754	-
2423.8	3.8	9.8	1.80	10896	56076.17	935	5722	-

BIT NUMBER	10	IADC CODE	4	INTERVAL	2424.6- 2437.6
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	13.0
TOTAL HOURS	1.50	TOTAL TURNS	9282	CONDITION	T0 B0 G0.800

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2430.0	10.3	5.4	0.53	2858	51572.28	345	9550	-
2437.6	7.8	13.0	1.50	9282	55022.14	454	4232	-

BIT NUMBER	11	IADC CODE	114	INTERVAL	2437.6- 2571.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	10.3	BIT RUN	133.4
TOTAL HOURS	5.64	TOTAL TURNS	41606	CONDITION .	T4 B3 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
2440.0	37.1	2.4	0.06	406	37611.50	95	15671	-
2450.0	27.3	12.4	0.43	3129	38910.37	130	3138	-
2460.0	16.4	22.4	1.04	7454	41067.31	216	1833	-
2470.0	24.1	32.4	1.46	10571	42539.27	147	1313	-
2480.0	28.7	42.4	1.80	13181	43771.83	123	1032	-
2490.0	31.2	52.4	2.12	15585	44908.45	113.66	857.03	-
2500.0	27.7	62.4	2.49	18258	46185.28	127.68	740.15	-
2510.0	26.8	72.4	2.86	20907	47505.59	132.03	656.15	-
2520.0	17.9	82.4	3.42	25075	49482.45	197.69	600.52	-
2530.0	18.9	92.4	3.94	29028	51352.04	186.96	555.76	-
2540.0	23.3	102.4	4.37	32226	52874.60	152.26	516.35	-
2550.0	23.0	112.4	4.81	35440	54413.58	153.90	484.11	-
2560.0	27.7	122.4	5.17	38081	55693.39	127.98	455.01	-
2570.0	23.5	132.4	5.60	41248	57200.38	150.70	432.03	-
2571.0	20.9	133.4	5.64	41606	57369.85	169.47	430.06	-

COMPUTER DATA LISTING : LIST C

INTERVAL	10 m average
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
HHP	Bit hydraulic horsepower
HHP/SQ IN	Bit hydraulic horsepower per square inch of bit diameter
IMPACT FORCE	Bit impact force, in foot pound per second squared
JET VELOCITY	Mud velocity through the bit nozzles, in metres per second

BIT NUMBER	2	IADC CODE	111	INTERVAL	235.0- 818.0
HUGHES OSC-3AJ		SIZE	15.000	NOZZLES	20 20 18
COST	2000.00	TRIP TIME	4.0	BIT RUN	583.0
TOTAL HOURS	7.48	TOTAL TURNS	75478	CONDITION	T3 B6 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
250.0	100	100	1000		24		22			18
260.0	100	100	1000	46	24		22			18
270.0	100	100	1000	46	24		22		22	18
280.0	100	100	1000	46	24		22		22	18
290.0	110	110	1100	51	27		24		24	20
300.0	110	110	1100	51	27		24		24	20
310.0	100	110	1050	49	26		23		23	19
320.0	110	115	1125	52	27		24		24	20
330.0	110	115	1125	52		42	24		24	20
340.0	110	110	1100	51		41	24		24	20
350.0	110	110	1100	51		41	24		24	20
360.0	130	0	650	30		24	14		14	12
370.0	100	105	1025	48		38	22		22	18
380.0	100	105	1025	48		38	22		22	18
390.0	100	105	1025	48		38	22		22	18
400.0	100	115	1075	50		40	23		23	19
410.0	100	115	1075	50		40		40	23	19
420.0	100	115	1075	50		40		40	23	19
430.0	110	110	1100	51		41		41	24	20
440.0	110	110	1100	51		41		41	24	20
450.0	110	110	1100	51		41		41	24	20
460.0	110	110	1100	51		41		41	24	20
470.0	110	110	1100	51		41		41	24	20
480.0	110	110	1100	51		41		41	24	20
490.0	110	110	1100	51		41		41	24	20
500.0	110	105	1075	50		40		40	23	19
510.0	110	105	1075	50		40		40	23	19
520.0	110	105	1075	50		40		40	23	19
530.0	110	105	1075	50		40		40	23	19
540.0	110	105	1075	50		40		40	23	19
550.0	110	105	1075	50		40		40	23	19
560.0	110	105	1075	50		40		40	23	19
570.0	110	105	1075	50		40		40	23	19
580.0	110	105	1075	50		40		40	23	19
590.0	110	105	1075	50		40		40	23	19
600.0	110	105	1075	50		40		40	23	19
610.0	110	105	1075	50		40		40	23	19
620.0	110	105	1075	50		40		40	23	19
630.0	110	105	1075	50		40		40	23	19
640.0	110	105	1075	50		40		40	23	19
650.0	110	105	1075	50		40		40	23	19
660.0	110	105	1075	50		40		40	23	19
670.0	110	105	1075	50		40		40	23	19

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
680.0	110	110	1100	51		41		41	24	20
690.0	110	110	1100	51		41		41	24	20
700.0	110	110	1100	51		41		41	24	20
710.0	110	110	1100	51		41		41	24	20
720.0	110	110	1100	51		41		41	24	20
730.0	108	110	1090	51		41		41	24	20
740.0	108	110	1090	51		41		41	24	20
750.0	108	110	1090	51		41		41	24	20
760.0	108	110	1090	51		41		41	24	20
770.0	108	110	1090	51		41		41	24	20
780.0	108	110	1090	51		41		41	24	20
790.0	108	110	1090	51		41		41	24	20
800.0	110	112	1110	52		41		41	24	20
810.0	110	112	1110	52		41		41	24	20
818.0	110	112	1110	52		41		41	24	20

BIT NUMBER	3	IADC CODE	114	INTERVAL	818.0- 1298.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	5.7	BIT RUN	480.0
TOTAL HOURS	13.25	TOTAL TURNS	117216	CONDITION	T5 B6 G0.125

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
820.0	50	50	500	64	62		50		50	9
830.0	50	50	500	64	62		50		50	9
840.0	50	50	500	64	62		50		50	9
850.0	50	50	500	64	62		50		50	9
860.0	110	0	550	70	69		56		56	10
870.0	50	55	525	67	65		53		53	9
880.0	0	110	550	70	69		56		56	10
890.0	0	110	550	70	69		56		56	10
900.0	0	110	550	70	69		56		56	10
910.0	0	110	550	70	69		56		56	10
920.0	0	110	550	70	69		56		56	10
930.0	0	110	550	70	69		56		56	10
940.0	0	110	550	70	69		56		56	10
950.0	0	110	550	70	69		56		56	10
960.0	0	110	550	70	69		56		56	10
970.0	0	110	550	70	69		56		56	10
980.0	50	55	525	67	65		53		53	9
990.0	50	55	525	67	65		53		53	9
1000.0	50	55	525	67	65		53		53	9
1010.0	58	52	550	70		57	56		56	10
1020.0	58	52	550	70		57	56		56	10
1030.0	58	52	550	70		57	56		56	10
1040.0	58	52	550	70		57	56		56	10
1050.0	58	51	545	70		56	55		55	10
1060.0	58	51	545	70		56	55		55	10
1070.0	58	51	545	70		56	55		55	10
1080.0	58	51	545	70		56	55		55	10
1090.0	58	51	545	70		56	55		55	10
1100.0	58	51	545	70		56		56	55	10
1110.0	58	51	545	70		56		56	55	10
1120.0	58	51	545	70		56		56	55	10
1130.0	58	51	545	70		56		56	55	10
1140.0	58	51	545	70		56		56	55	10
1150.0	58	53	555	71		57		57	56	10
1160.0	58	53	555	71		57		57	56	10
1170.0	58	53	555	71		57		57	56	10
1180.0	58	53	555	71		57		57	56	10
1190.0	58	53	555	71		57		57	56	10
1200.0	58	53	555	71		57		57	56	10
1210.0	58	53	555	71		57		57	56	10
1220.0	58	53	555	71		57		57	56	10
1230.0	58	53	555	71		57		57	56	10
1240.0	58	53	555	71		57		57	56	10

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
						57		57	56	10
1250.0	58	53	555	71		57		57	56	10
1260.0	58	53	555	71		57		57	56	10
1270.0	58	53	555	71		57		57	56	10
1280.0	58	53	555	71		57		57	56	10
1290.0	58	53	555	71		57		57	56	10
1298.0	58	53	555	71						

BIT NUMBER	4	IADC CODE	114	INTERVAL	1298.0- 1496.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	198.0
TOTAL HOURS	17.93	TOTAL TURNS	165110	CONDITION	T3 B5 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1300.0	100	0	500	64		52		52	50	9
1310.0	100	0	500	64		52		52	50	9
1320.0	100	0	500	64		52		52	50	9
1330.0	100	0	500	64		52		52	50	9
1340.0	100	0	500	64		52		52	50	9
1350.0	96	0	480	61		49		49	48	9
1360.0	96	0	480	61		49		49	48	9
1370.0	96	0	480	61		49		49	48	9
1380.0	96	0	480	61		49		49	48	9
1390.0	96	0	480	61		49		49	48	9
1400.0	50	50	500	64		52		52	50	9
1410.0	54	44	490	63		50		50	49	9
1420.0	54	44	490	63		50		50	49	9
1430.0	54	44	490	63		50		50	49	9
1440.0	50	51	505	65		52		52	51	9
1450.0	50	51	505	65		52		52	51	9
1460.0	50	51	505	65		52		52	51	9
1470.0	50	51	505	65		52		52	51	9
1480.0	50	51	505	65		52		52	51	9
1490.0	50	51	505	65		52		52	51	9
1496.0	50	51	505	65		52		52	51	9

BIT NUMBER	5	IADC CODE	114	INTERVAL	1496.0- 1510.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	14.0
TOTAL HOURS	1.21	TOTAL TURNS	9592	CONDITION	T2 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1500.0	50	50	500	64		52		52	50	9
1510.0	50	50	500	64		52		52	50	9

BIT NUMBER	6	IADC CODE	114	INTERVAL	1510.0- 1666.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	7.0	BIT RUN	156.0
TOTAL HOURS	10.02	TOTAL TURNS	74837	CONDITION	T2 B5 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1520.0	58	54	560	72		58		58	57	10
1530.0	58	54	560	72		58		58	57	10
1540.0	58	54	560	72		58		58	57	10
1550.0	58	54	560	72		58		58	57	10
1560.0	58	54	560	72		58		58	57	10
1570.0	58	54	560	72		58		58	57	10
1580.0	110	0	550	70		57		57	56	10
1590.0	110	0	550	70		57		57	56	10
1600.0	110	0	550	70		57		57	56	10
1610.0	56	56	560	72		58		58	57	10
1620.0	105	0	525	67		54		54	53	9
1630.0	105	0	525	67		54		54	53	9
1640.0	56	52	540	69		56		56	55	10
1650.0	56	52	540	69		56		56	55	10
1660.0	56	52	540	69		56		56	55	10
1666.0	56	52	540	69		56		56	55	10

BIT NUMBER	7	IADC CODE	114	INTERVAL	1666.0- 2187.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	8.0	BIT RUN	521.0
TOTAL HOURS	19.49	TOTAL TURNS	149236	CONDITION	T4 B5 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1670.0	65	65	650	83		67		67	66	12
1680.0	70	69	695	89		72		72	70	12
1690.0	70	69	695	89		72		72	70	12
1700.0	68	71	695	89		72		72	70	12
1710.0	68	71	695	89		72		72	70	12
1720.0	68	71	695	89		72		72	70	12
1730.0	68	71	695	89		72		72	70	12
1740.0	68	71	695	89		72		72	70	12
1750.0	68	71	695	89		72		72	70	12
1760.0	68	71	695	89		72		72	70	12
1770.0	68	71	695	89		72		72	70	12
1780.0	68	71	695	89		72		72	70	12
1790.0	68	71	695	89		72		72	70	12
1800.0	69	71	700	89		72		72	71	13
1810.0	69	71	700	89		72		72	71	13
1820.0	69	71	700	89		72		72	71	13
1830.0	69	71	700	89		72		72	71	13
1840.0	69	71	700	89		72		72	71	13
1850.0	69	71	700	89		72		72	71	13
1860.0	69	71	700	89		72		72	71	13
1870.0	69	71	700	89		72		72	71	13
1880.0	69	71	700	89		72		72	71	13
1890.0	0	108	540	69		56		56	55	10
1900.0	0	111	555	71		57		57	56	10
1910.0	0	110	550	70		57		57	56	10
1920.0	70	65	675	86		70		70	68	12
1930.0	70	65	675	86		70		70	68	12
1940.0	70	65	675	86		70		70	68	12
1950.0	70	65	675	86		70		70	68	12
1960.0	70	65	675	86		70		70	68	12
1970.0	70	65	675	86		70		70	68	12
1980.0	70	65	675	86		70		70	68	12
1990.0	70	65	675	86		70		70	68	12
2000.0	70	65	675	86		70		70	68	12
2010.0	70	65	675	86		70		70	68	12
2020.0	72	63	675	86		70		70	68	12
2030.0	72	64	680	87		70		70	69	12
2040.0	72	64	680	87		70		70	69	12
2050.0	112	0	560	72		58		58	57	10
2060.0	74	66	700	89		72		72	71	13
2070.0	74	66	700	89		72		72	71	13
2080.0	74	66	700	89		72		72	71	13
2090.0	65	72	685	88		71		71	69	12

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2100.0	65	72	685	88		71		71	69	12
2110.0	65	72	685	88		71		71	69	12
2120.0	65	72	685	88		71		71	69	12
2130.0	65	72	685	88		71		71	69	12
2140.0	65	72	685	88		71		71	69	12
2150.0	64	74	690	88		71		71	70	12
2160.0	0	110	550	70		57		57	56	10
2170.0	0	110	550	70		57		57	56	10
2180.0	0	110	550	70		57		57	56	10
2187.0	0	110	550	70		57		57	56	10

BIT NUMBER	8	IADC CODE	114	INTERVAL	2187.0- 2413.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 14
COST	900.00	TRIP TIME	9.8	BIT RUN	226.0
TOTAL HOURS	9.74	TOTAL TURNS	73672	CONDITION	T7 B8 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2190.0	0	110	550	70		57		57	56	10
2200.0	0	110	550	70		57		57	56	10
2210.0	0	108	540	69		56		56	55	10
2220.0	0	108	540	69		56		56	55	10
2230.0	0	108	540	69		56		56	55	10
2240.0	0	113	565	72		58		58	57	10
2250.0	0	113	565	72		58		58	57	10
2260.0	0	113	565	72		58		58	57	10
2270.0	0	113	565	72		58		58	57	10
2280.0	0	113	565	72		58		58	57	10
2290.0	67	66	665	85		69		69	67	12
2300.0	67	66	665	85		69		69	67	12
2310.0	67	66	665	85		69		69	67	12
2320.0	0	110	550	70		57		57	56	10
2330.0	0	110	550	70		57		57	56	10
2340.0	0	110	550	70		57		57	56	10
2350.0	0	110	550	70		57		57	56	10
2360.0	0	108	540	69		56		56	55	10
2370.0	0	110	550	70		57		57	56	10
2380.0	0	110	550	70		57		57	56	10
2390.0	0	110	550	70		57		57	56	10
2400.0	0	110	550	70		57		57	56	10
2410.0	0	110	550	70		57		57	56	10
2413.0	0	110	550	70		57		57	56	10

BIT NUMBER	9	IADC CODE	4	INTERVAL	2414.0- 2423.8
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	9.8
TOTAL HOURS	1.80	TOTAL TURNS	10896	CONDITION	T0 B0 G0.800

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2420.0	0	50	250	63		40		40	25	4
2423.8	0	50	250	63		40		40	25	4

BIT NUMBER	10	IADC CODE	4	INTERVAL	2424.6- 2437.6
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	13.0
TOTAL HOURS	1.50	TOTAL TURNS	9282	CONDITION	T0 B0 G0.800

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2430.0	0	52	260	59		42		42	26	5
2437.6	0	52	260	59		42		42	26	5

BIT NUMBER	11	IADC CODE	114	INTERVAL	2437.6- 2571.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	10.3	BIT RUN	133.4
TOTAL HOURS	5.64	TOTAL TURNS	41606	CONDITION	T4 B3 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
2440.0	50	53	515	66		53		53	52	9
2450.0	50	53	515	66		53		53	52	9
2460.0	58	58	580	74		60		60	59	10
2470.0	60	62	610	78		63		63	62	11
2480.0	60	62	610	78		63		63	62	11
2490.0	0	108	540	69		56		56	55	10
2500.0	60	60	600	77		62		62	61	11
2510.0	55	55	550	70		57		57	56	10
2520.0	55	55	550	70		57		57	56	10
2530.0	55	55	550	70		57		57	56	10
2540.0	55	55	550	70		57		57	56	10
2550.0	54	56	550	70		57		57	56	10
2560.0	54	56	550	70		57		57	56	10
2570.0	51	51	510	65		53		53	51	9
2571.0	51	51	510	65		53		53	51	9

COMPUTER DATA LISTING : LIST D

INTERVAL . . . . . 10 m average

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	2	IADC CODE	111	INTERVAL	235.0- 818.0
HUGHES OSC-3AJ		SIZE	15.000	NOZZLES	20 20 18
COST	2000.00	TRIP TIME	4.0	BIT RUN	583.0
TOTAL HOURS	7.48	TOTAL TURNS	75478	CONDITION	T3 B6 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
250.0	1000	1700.0	1064.9	62.6	621	3.51	1656	113
260.0	1000	1700.0	1064.9	62.6	621	3.51	1656	113
270.0	1000	1740.0	1064.9	61.2	621	3.51	1656	113
280.0	1000	1780.0	1064.9	59.8	621	3.51	1656	113
290.0	1100	2150.0	1288.5	59.9	827	4.68	2004	124
300.0	1100	2150.0	1288.5	59.9	827	4.68	2004	124
310.0	1050	1920.0	1174.0	61.1	719	4.07	1826	119
320.0	1125	2040.0	1347.7	66.1	884	5.00	2096	127
330.0	1125	2110.0	1347.7	63.9	884	5.00	2096	127
340.0	1100	1990.0	1288.5	64.7	827	4.68	2004	124
350.0	1100	1990.0	1288.5	64.7	827	4.68	2004	124
360.0	650	750.0	449.9	60.0	171	0.97	700	74
370.0	1025	2200.0	1118.8	50.9	669	3.78	1740	116
380.0	1025	2200.0	1118.8	50.9	669	3.78	1740	116
390.0	1025	2200.0	1118.8	50.9	669	3.78	1740	116
400.0	1075	2020.0	1230.6	60.9	771	4.37	1914	122
410.0	1075	2020.0	1230.6	60.9	771	4.37	1914	122
420.0	1075	2020.0	1230.6	60.9	771	4.37	1914	122
430.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
440.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
450.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
460.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
470.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
480.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
490.0	1100	2160.0	1288.5	59.7	827	4.68	2004	124
500.0	1075	2150.0	1230.6	57.2	771	4.37	1914	122
510.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
520.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
530.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
540.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
550.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
560.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
570.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
580.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
590.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
600.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
610.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
620.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
630.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
640.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
650.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
660.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122
670.0	1075	2200.0	1230.6	55.9	771	4.37	1914	122

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
680.0	1100	2180.0	1288.5	59.1	827	4.68	2004	124
690.0	1100	2180.0	1288.5	59.1	827	4.68	2004	124
700.0	1100	2180.0	1288.5	59.1	827	4.68	2004	124
710.0	1100	2180.0	1288.5	59.1	827	4.68	2004	124
720.0	1100	2180.0	1288.5	59.1	827	4.68	2004	124
730.0	1090	2260.0	1309.3	57.9	832	4.71	2036	123
740.0	1090	2260.0	1309.3	57.9	832	4.71	2036	123
750.0	1090	2260.0	1309.3	57.9	832	4.71	2036	123
760.0	1090	2260.0	1309.3	57.9	832	4.71	2036	123
770.0	1090	2260.0	1309.3	57.9	832	4.71	2036	123
780.0	1090	2260.0	1309.3	57.9	832	4.71	2036	123
790.0	1090	2400.0	1309.3	54.6	832	4.71	2036	123
800.0	1110	2380.0	1357.8	57.0	879	4.97	2111	126
810.0	1110	2380.0	1357.8	57.0	879	4.97	2111	126
818.0	1110	2380.0	1357.8	57.0	879	4.97	2111	126

BIT NUMBER	3	IADC CODE	114	INTERVAL	818.0- 1298.0				
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11				
COST	900.00	TRIP TIME	5.7	BIT RUN	480.0				
TOTAL HOURS	13.25	TOTAL TURNS	117216	CONDITION	T5 B6 G0.125				

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
820.0	500	3080.0	2671.1	86.7	779	10.17	1341	175
830.0	500	3080.0	2671.1	86.7	779	10.17	1341	175
840.0	500	3080.0	2671.1	86.7	779	10.17	1341	175
850.0	500	3080.0	2671.1	86.7	779	10.17	1341	175
860.0	550	3140.0	3232.1	102.9	1037	13.54	1623	193
870.0	525	3140.0	2944.9	93.8	902	11.77	1479	184
880.0	550	3140.0	3232.1	102.9	1037	13.54	1623	193
890.0	550	3200.0	3232.1	101.0	1037	13.54	1623	193
900.0	550	3220.0	3232.1	100.4	1037	13.54	1623	193
910.0	550	3170.0	3232.1	102.0	1037	13.54	1623	193
920.0	550	3170.0	3232.1	102.0	1037	13.54	1623	193
930.0	550	3170.0	3232.1	102.0	1037	13.54	1623	193
940.0	550	3210.0	3232.1	100.7	1037	13.54	1623	193
950.0	550	3210.0	3232.1	100.7	1037	13.54	1623	193
960.0	550	3210.0	3232.1	100.7	1037	13.54	1623	193
970.0	550	3210.0	3232.1	100.7	1037	13.54	1623	193
980.0	525	3050.0	2944.9	96.6	902	11.77	1479	184
990.0	525	3050.0	2944.9	96.6	902	11.77	1479	184
1000.0	525	3050.0	2944.9	96.6	902	11.77	1479	184
1010.0	550	2950.0	3232.1	109.6	1037	13.54	1623	193
1020.0	550	2950.0	3232.1	109.6	1037	13.54	1623	193
1030.0	550	2950.0	3232.1	109.6	1037	13.54	1623	193
1040.0	550	2950.0	3232.1	109.6	1037	13.54	1623	193
1050.0	545	2950.0	3173.6	107.6	1009	13.17	1594	191
1060.0	545	2950.0	3173.6	107.6	1009	13.17	1594	191
1070.0	545	2950.0	3173.6	107.6	1009	13.17	1594	191
1080.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1090.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1100.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1110.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1120.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1130.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1140.0	545	2950.0	3208.8	108.8	1020	13.32	1611	191
1150.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1160.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1170.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1180.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1190.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1200.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1210.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1220.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1230.0	555	2950.0	3327.7	112.8	1077	14.06	1671	194
1240.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1250.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1260.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1270.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1280.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1290.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194
1298.0	555	3000.0	3327.7	110.9	1077	14.06	1671	194

BIT NUMBER	4	IADC CODE	114	INTERVAL	1298.0- 1496.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	198.0
TOTAL HOURS	17.93	TOTAL TURNS	165110	CONDITION	I3 B5 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1300.0	500	3120.0	2700.8	86.6	788	10.28	1356	175
1310.0	500	3120.0	2700.8	86.6	788	10.28	1356	175
1320.0	500	3120.0	2700.8	86.6	788	10.28	1356	175
1330.0	500	3120.0	2700.8	86.6	788	10.28	1356	175
1340.0	500	3120.0	2700.8	86.6	788	10.28	1356	175
1350.0	480	2900.0	2489.1	85.8	697	9.10	1250	168
1360.0	480	2890.0	2489.1	86.1	697	9.10	1250	168
1370.0	480	2890.0	2489.1	86.1	697	9.10	1250	168
1380.0	480	2890.0	2489.1	86.1	697	9.10	1250	168
1390.0	480	2890.0	2489.1	86.1	697	9.10	1250	168
1400.0	500	2900.0	2700.8	93.1	788	10.28	1356	175
1410.0	490	2900.0	2593.8	89.4	741	9.68	1303	172
1420.0	490	2900.0	2622.3	90.4	749	9.78	1317	172
1430.0	490	2900.0	2622.3	90.4	749	9.78	1317	172
1440.0	505	2900.0	2785.4	96.0	820	10.71	1399	177
1450.0	505	2900.0	2785.4	96.0	820	10.71	1399	177
1460.0	505	2900.0	2785.4	96.0	820	10.71	1399	177
1470.0	505	2900.0	2785.4	96.0	820	10.71	1399	177
1480.0	505	2900.0	2815.6	97.1	829	10.83	1414	177
1490.0	505	2900.0	2785.4	96.0	820	10.71	1399	177
1496.0	505	2900.0	2785.4	96.0	820	10.71	1399	177

BIT NUMBER	5	IADC CODE	114	INTERVAL	1496.0- 1510.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	6.4	BIT RUN	14.0
TOTAL HOURS	1.21	TOTAL TURNS	9592	CONDITION	T2 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1500.0	500	2950.0	2671.1	90.5	779	10.17	1341	175
1510.0	500	2950.0	2671.1	90.5	779	10.17	1341	175

BIT NUMBER	6	IADC CODE	114	INTERVAL	1510.0- 1666.0
HUGHES X3A		SIZE	9.875	NOZZLES	11 11 11
COST	900.00	TRIP TIME	7.0	BIT RUN	156.0
TOTAL HOURS	10.02	TOTAL TURNS	74837	CONDITION	T2 B5 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1520.0	560	3000.0	3350.6	111.7	1094	14.29	1683	196
1530.0	560	3000.0	3350.6	111.7	1094	14.29	1683	196
1540.0	560	3000.0	3350.6	111.7	1094	14.29	1683	196
1550.0	560	3000.0	3350.6	111.7	1094	14.29	1683	196
1560.0	560	3000.0	3350.6	111.7	1094	14.29	1683	196
1570.0	560	3000.0	3350.6	111.7	1094	14.29	1683	196
1580.0	550	2960.0	3232.1	109.2	1037	13.54	1623	193
1590.0	550	2960.0	3232.1	109.2	1037	13.54	1623	193
1600.0	550	2960.0	3196.1	108.0	1025	13.39	1605	193
1610.0	560	2950.0	3313.4	112.3	1082	14.13	1664	196
1620.0	525	2930.0	2912.2	99.4	892	11.64	1462	184
1630.0	525	2930.0	2912.2	99.4	892	11.64	1462	184
1640.0	540	2990.0	3081.0	103.0	970	12.67	1547	189
1650.0	540	2990.0	3081.0	103.0	970	12.67	1547	189
1660.0	540	2990.0	3081.0	103.0	970	12.67	1547	189
1666.0	540	2990.0	3081.0	103.0	970	12.67	1547	189

BIT NUMBER	7	IADC CODE	114	INTERVAL	1666.0- 2187.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	8.0	BIT RUN	521.0
TOTAL HOURS	19.49	TOTAL TURNS	149236	CONDITION	T4 B5 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1670.0	650	3100.0	2288.4	73.8	867	11.33	1605	163
1680.0	695	2950.0	2616.2	88.7	1060	13.85	1835	174
1690.0	695	2950.0	2616.2	88.7	1060	13.85	1835	174
1700.0	695	2950.0	2616.2	88.7	1060	13.85	1835	174
1710.0	695	2950.0	2616.2	88.7	1060	13.85	1835	174
1720.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1730.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1740.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1750.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1760.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1770.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1780.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1790.0	695	2950.0	2586.8	87.7	1048	13.69	1814	174
1800.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1810.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1820.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1830.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1840.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1850.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1860.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1870.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1880.0	700	2950.0	2624.1	89.0	1071	13.99	1841	176
1890.0	540	1940.0	1561.6	80.5	492	6.42	1095	135
1900.0	555	1960.0	1649.6	84.2	534	6.97	1157	139
1910.0	550	1990.0	1620.0	81.4	520	6.78	1136	138
1920.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1930.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1940.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1950.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1960.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1970.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1980.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
1990.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
2000.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
2010.0	675	2940.0	2440.0	83.0	961	12.54	1711	169
2020.0	675	2960.0	2440.0	82.4	961	12.54	1711	169
2030.0	680	2920.0	2476.3	84.8	982	12.82	1737	170
2040.0	680	2920.0	2476.3	84.8	982	12.82	1737	170
2050.0	560	1950.0	1679.4	86.1	548	7.16	1178	140
2060.0	700	2850.0	2624.1	92.1	1071	13.99	1841	176
2070.0	700	2850.0	2624.1	92.1	1071	13.99	1841	176
2080.0	700	2850.0	2624.1	92.1	1071	13.99	1841	176
2090.0	685	2890.0	2512.9	87.0	1004	13.11	1763	172

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2100.0	685	2890.0	2512.9	87.0	1004	13.11	1763	172
2110.0	685	2890.0	2512.9	87.0	1004	13.11	1763	172
2120.0	685	2890.0	2512.9	87.0	1004	13.11	1763	172
2130.0	685	2890.0	2512.9	87.0	1004	13.11	1763	172
2140.0	685	2890.0	2512.9	87.0	1004	13.11	1763	172
2150.0	690	2910.0	2549.7	87.6	1026	13.40	1788	173
2160.0	550	1900.0	1620.0	85.3	520	6.78	1136	138
2170.0	550	1900.0	1620.0	85.3	520	6.78	1136	138
2180.0	550	1900.0	1620.0	85.3	520	6.78	1136	138
2187.0	550	1900.0	1620.0	85.3	520	6.78	1136	138

BIT NUMBER	8	IADC CODE	114	INTERVAL	2187.0- 2413.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 14
COST	900.00	TRIP TIME	9.8	BIT RUN	226.0
TOTAL HOURS	9.74	TOTAL TURNS	73672	CONDITION	T7 B8 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2190.0	550	2100.0	1476.9	70.3	474	6.19	1091	131
2200.0	550	2100.0	1476.9	70.3	474	6.19	1091	131
2210.0	540	1940.0	1423.7	73.4	448	5.85	1052	129
2220.0	540	1940.0	1423.7	73.4	448	5.85	1052	129
2230.0	540	1940.0	1423.7	73.4	448	5.85	1052	129
2240.0	565	2010.0	1576.1	78.4	519	6.78	1164	134
2250.0	565	2140.0	1576.1	73.6	519	6.78	1164	134
2260.0	565	1980.0	1576.1	79.6	519	6.78	1164	134
2270.0	565	1980.0	1576.1	79.6	519	6.78	1164	134
2280.0	565	1980.0	1576.1	79.6	519	6.78	1164	134
2290.0	665	2980.0	2207.6	74.1	856	11.18	1631	158
2300.0	665	2980.0	2231.9	74.9	866	11.30	1649	158
2310.0	665	2980.0	2256.1	75.7	875	11.42	1667	158
2320.0	550	2190.0	1543.3	70.5	495	6.46	1140	131
2330.0	550	2190.0	1543.3	70.5	495	6.46	1140	131
2340.0	550	2190.0	1559.9	71.2	500	6.53	1152	131
2350.0	550	2190.0	1559.9	71.2	500	6.53	1152	131
2360.0	540	2090.0	1503.7	71.9	474	6.18	1111	129
2370.0	550	2240.0	1576.5	70.4	506	6.60	1165	131
2380.0	550	2240.0	1576.5	70.4	506	6.60	1165	131
2390.0	550	2240.0	1576.5	70.4	506	6.60	1165	131
2400.0	550	2240.0	1576.5	70.4	506	6.60	1165	131
2410.0	550	2240.0	1576.5	70.4	506	6.60	1165	131
2413.0	550	2240.0	1576.5	70.4	506	6.60	1165	131

BIT NUMBER	9	IADC CODE	4	INTERVAL	2414.0- 2423.8
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	9.8
TOTAL HOURS	1.80	TOTAL TURNS	10896	CONDITION	T0 B0 G0.800

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2420.0	250	650.0	331.9	51.1	48	0.86	243	60
2423.8	250	650.0	331.9	51.1	48	0.86	243	60

BIT NUMBER	10	IADC CODE	4	INTERVAL	2424.6- 2437.6
CHRISTENSEN C-22		SIZE	8.469	NOZZLES	23 0 0
COST	15000.00	TRIP TIME	9.8	BIT RUN	13.0
TOTAL HOURS	1.50	TOTAL TURNS	9282	CONDITION	T0 B0 G0.800

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2430.0	260	630.0	359.0	57.0	54	0.97	263	62
2437.6	260	630.0	359.0	57.0	54	0.97	263	62

BIT NUMBER	11	IADC CODE	114	INTERVAL	2437.6- 2571.0
HUGHES X3A		SIZE	9.875	NOZZLES	13 13 13
COST	900.00	TRIP TIME	10.3	BIT RUN	133.4
TOTAL HOURS	5.64	TOTAL TURNS	41606	CONDITION	T4 B3 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
2440.0	515	2240.0	1533.4	68.5	461	6.01	1076	129
2450.0	515	2650.0	1533.4	57.9	461	6.01	1076	129
2460.0	580	2740.0	1944.9	71.0	658	8.59	1364	145
2470.0	610	2850.0	2151.3	75.5	765	9.99	1509	153
2480.0	610	2850.0	2151.3	75.5	765	9.99	1509	153
2490.0	540	2390.0	1685.8	70.5	531	6.93	1182	135
2500.0	600	2860.0	2081.3	72.8	728	9.51	1460	150
2510.0	550	2430.0	1748.9	72.0	561	7.32	1227	138
2520.0	550	2580.0	1748.9	67.8	561	7.32	1227	138
2530.0	550	2320.0	1748.9	75.4	561	7.32	1227	138
2540.0	550	2320.0	1748.9	75.4	561	7.32	1227	138
2550.0	550	2540.0	1748.9	68.9	561	7.32	1227	138
2560.0	550	2540.0	1748.9	68.9	561	7.32	1227	138
2570.0	510	2360.0	1503.7	63.7	447	5.84	1055	128
2571.0	510	2360.0	1503.7	63.7	447	5.84	1055	128

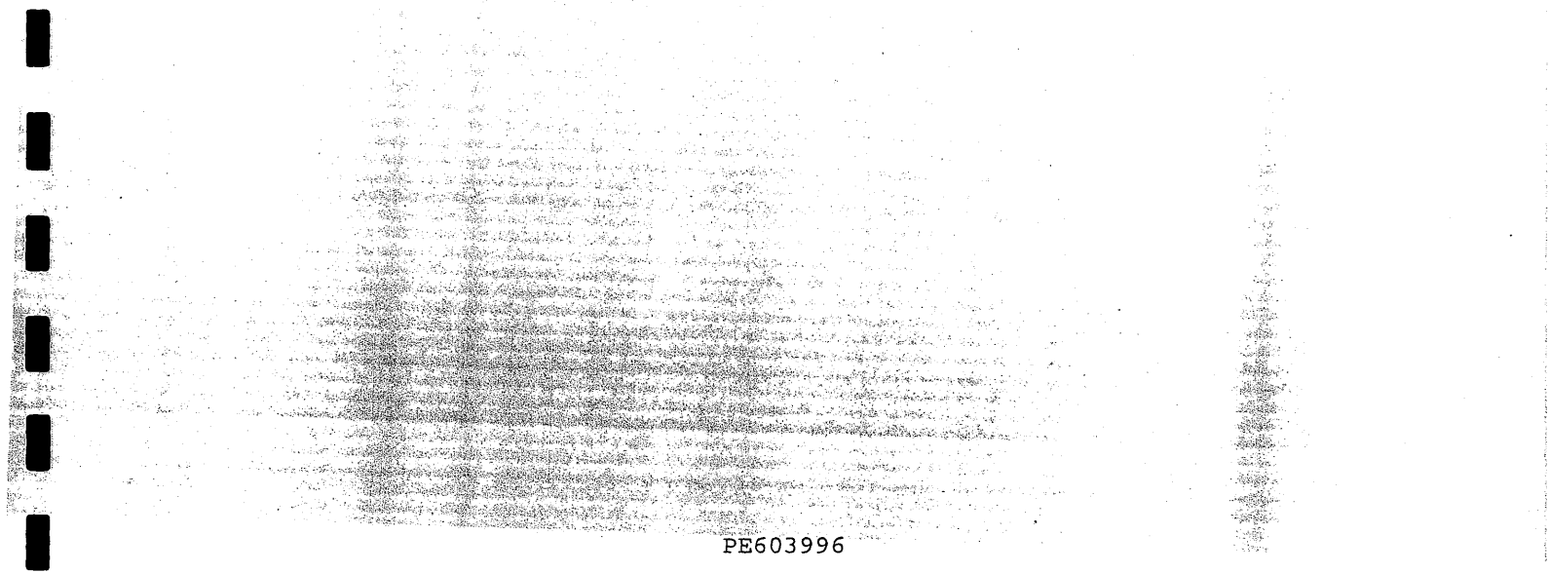
PE603995

This is an enclosure indicator page.
The enclosure PE603995 is enclosed within the container PE905606 at this location in this document.

The enclosure PE603995 has the following characteristics:

ITEM_BARCODE	= PE603995
CONTAINER_BARCODE	= PE905606
NAME	= Drill Data Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Drill Data Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



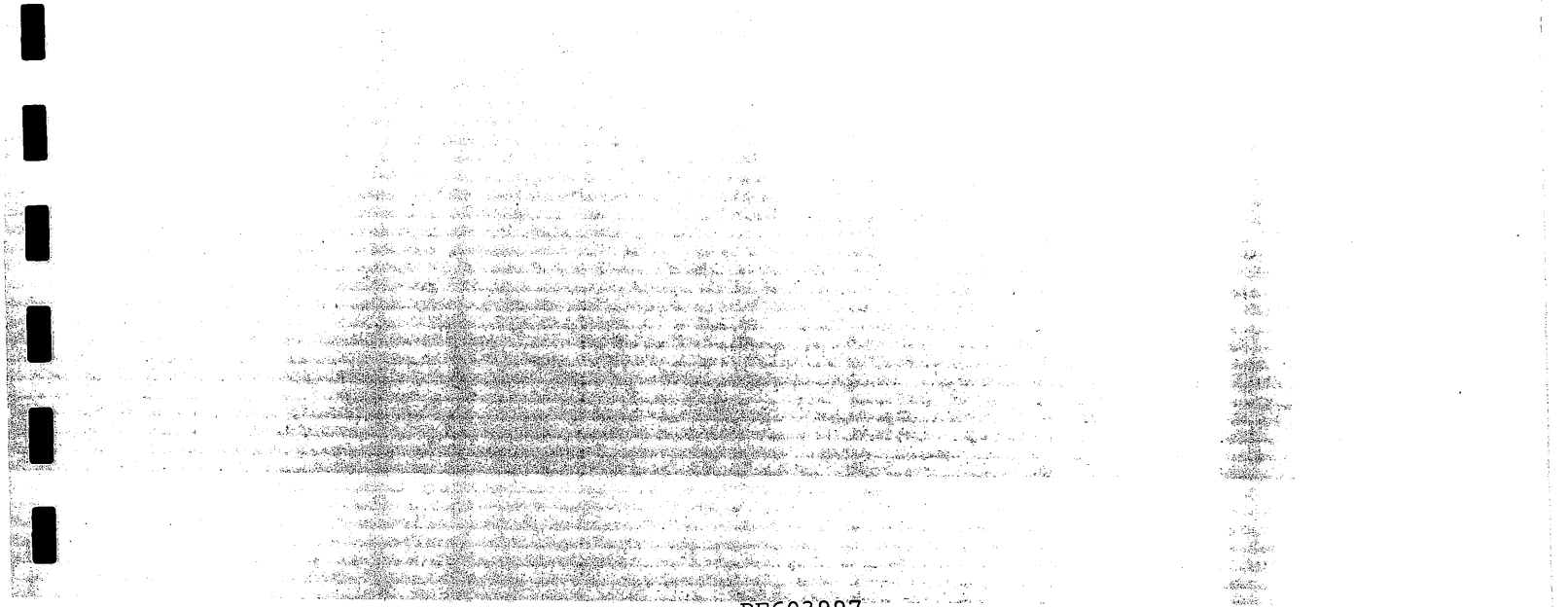
PE603996

This is an enclosure indicator page.
The enclosure PE603996 is enclosed within the container PE905606 at this location in this document.

The enclosure PE603996 has the following characteristics:

ITEM_BARCODE	= PE603996
CONTAINER_BARCODE	= PE905606
NAME	= ROP/Gas Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= ROP/Gas Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



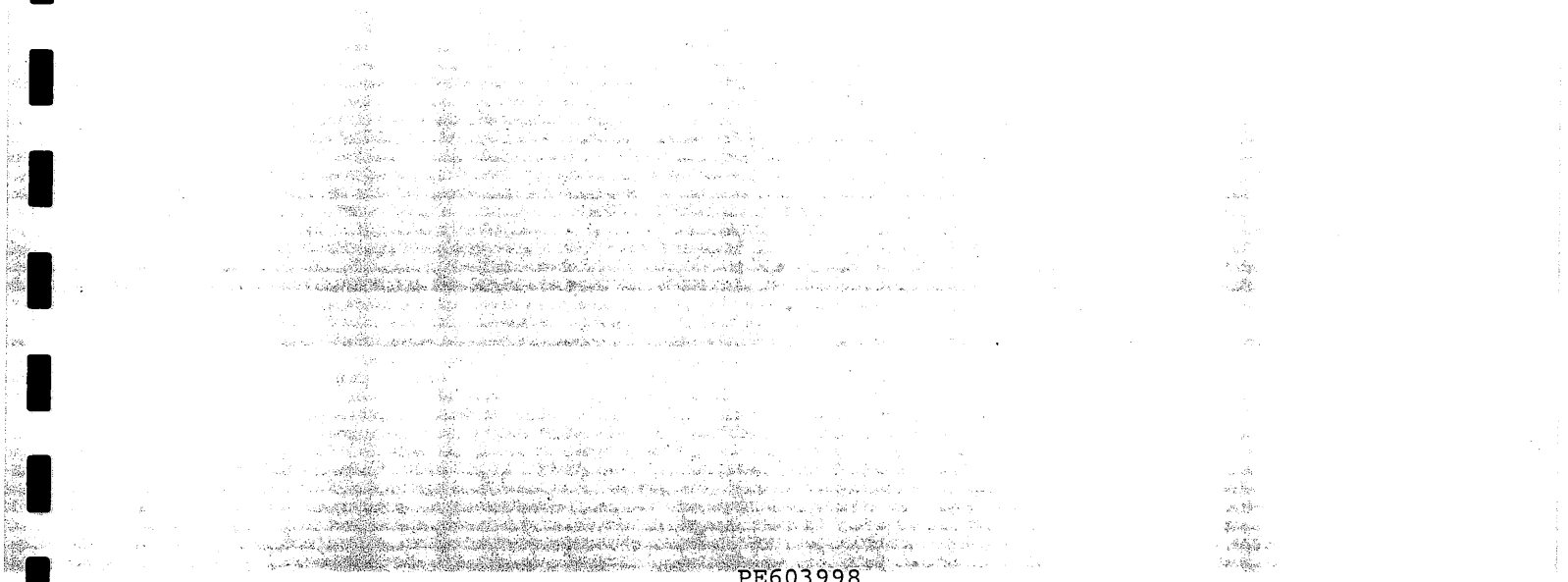
PE603997

This is an enclosure indicator page.
The enclosure PE603997 is enclosed within the container PE905606 at this location in this document.

The enclosure PE603997 has the following characteristics:

ITEM_BARCODE	= PE603997
CONTAINER_BARCODE	= PE905606
NAME	= Temperature Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Temperature Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



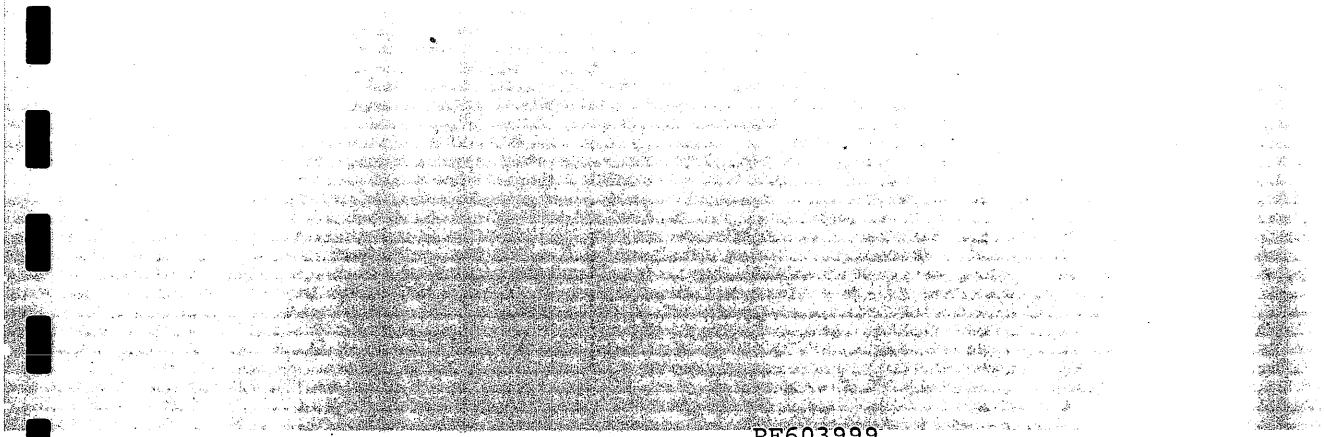
PE603998

This is an enclosure indicator page.
The enclosure PE603998 is enclosed within the container PE905606 at this location in this document.

The enclosure PE603998 has the following characteristics:

ITEM_BARCODE	= PE603998
CONTAINER_BARCODE	= PE905606
NAME	= Pressure Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Pressure Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



PE603999

This is an enclosure indicator page.
The enclosure PE603999 is enclosed within the container PE905606 at this location in this document.

The enclosure PE603999 has the following characteristics:

ITEM_BARCODE	= PE603999
CONTAINER_BARCODE	= PE905606
NAME	= Geo-Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Geo-Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

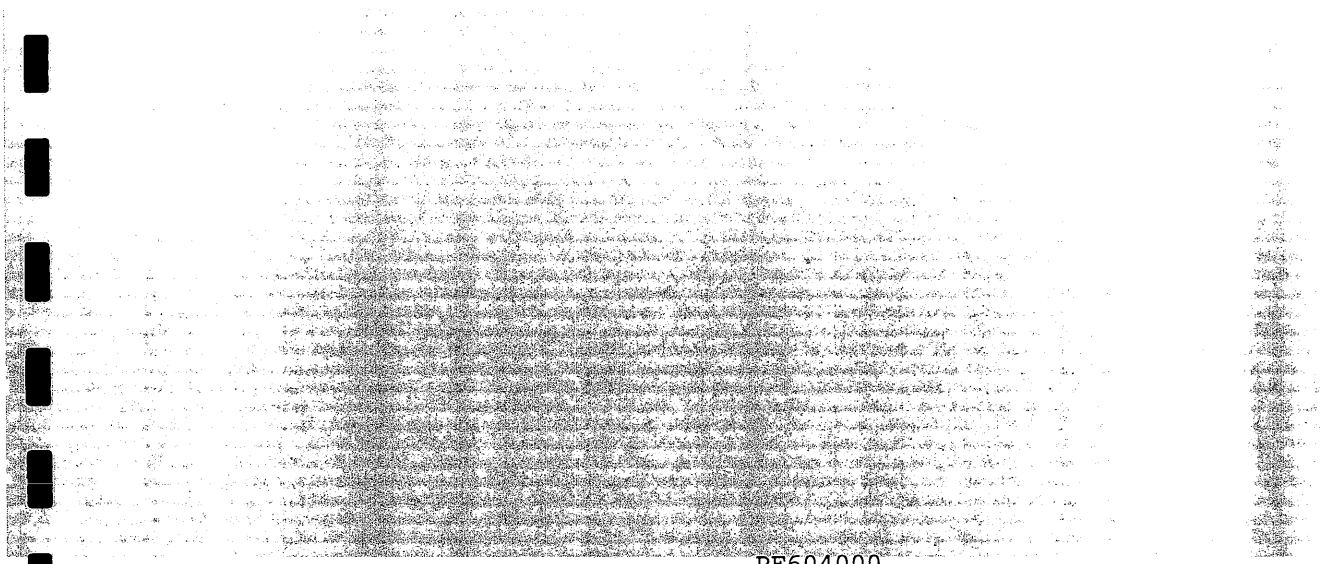
PE610644

This is an enclosure indicator page.
The enclosure PE610644 is enclosed within the container PE905606 at this location in this document.

The enclosure PE610644 has the following characteristics:

ITEM_BARCODE	PE610644
CONTAINER_BARCODE	PE905606
NAME	Geo-Plot, Scale=1:2000
BASIN	GIPPSLAND
OFFSHORE?	N
DATA_TYPE	WELL
DATA_SUB_TYPE	WELL_LOG
DESCRIPTION	Geo-Plot (from MudLogging Report--attachment to WCR) for Yellowtail-1, Scale=1:2000
REMARKS	
DATE_WRITTEN	01-NOV-1981
DATE_PROCESSED	
DATE_RECEIVED	29-APR-1982
RECEIVED_FROM	Esso Australia Ltd
WELL_NAME	Yellowtail-1
CONTRACTOR	Esso Australia Ltd
AUTHOR	
ORIGINATOR	Esso Australia Ltd
TOP_DEPTH	220
BOTTOM_DEPTH	2571
ROW_CREATED_BY	AL00_SW

(Inserted by DNRE - Vic Govt Mines Dept)



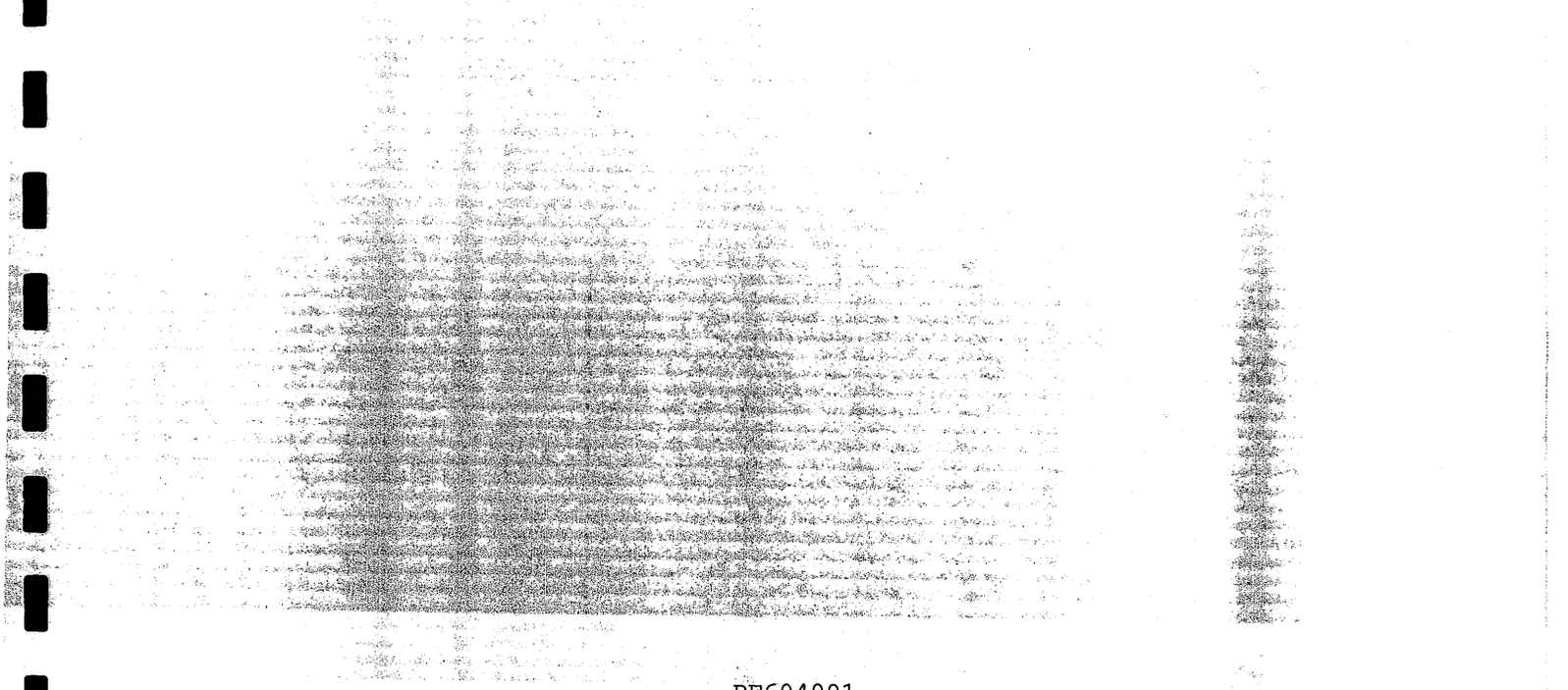
PE604000

This is an enclosure indicator page.
The enclosure PE604000 is enclosed within the container PE905606 at this location in this document.

The enclosure PE604000 has the following characteristics:

ITEM_BARCODE	= PE604000
CONTAINER_BARCODE	= PE905606
NAME	= Cost analysis Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Cost Analysis Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



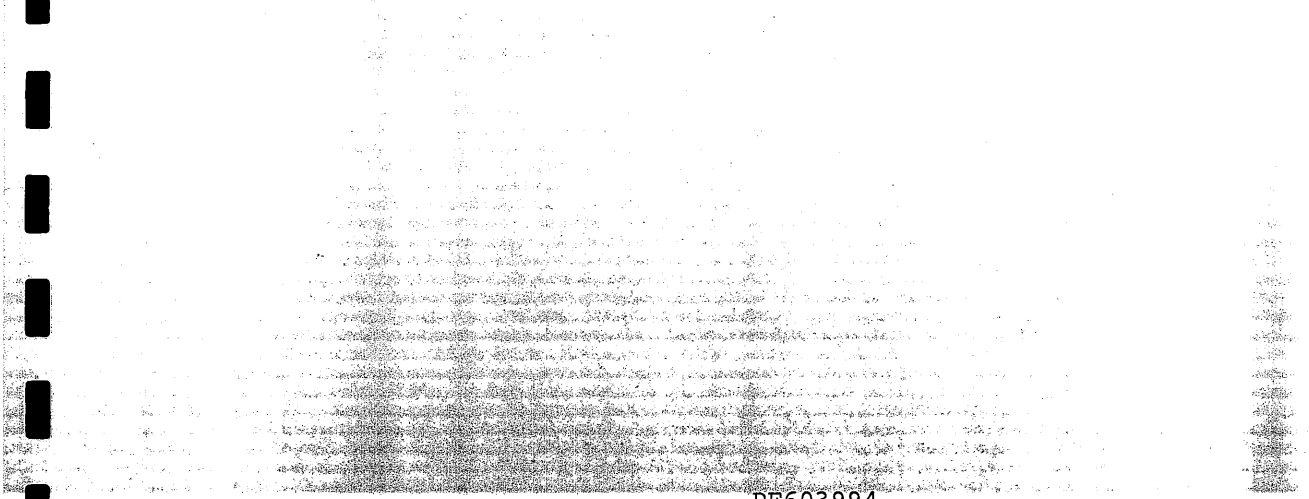
PE604001

This is an enclosure indicator page.
The enclosure PE604001 is enclosed within the container PE905606 at this location in this document.

The enclosure PE604001 has the following characteristics:

ITEM_BARCODE	= PE604001
CONTAINER_BARCODE	= PE905606
NAME	= Drilling Parameter Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Drilling Parameter Plot (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)



PE603994

This is an enclosure indicator page.
The enclosure PE603994 is enclosed within the container PE905606 at this location in this document.

The enclosure PE603994 has the following characteristics:

ITEM_BARCODE	= PE603994
CONTAINER_BARCODE	= PE905606
NAME	= Mudlog (Grapholog)
BASIN	= GIPPSLAND
PERMIT	= VIC/L5
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Mudlog (from Mudlogging Report--attachment to WCR) for Yellowtail-1
REMARKS	=
DATE_CREATED	= 1/11/81
DATE_RECEIVED	= 29/04/82
W_NO	= W756
WELL_NAME	= YELLOWTAIL-1
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)