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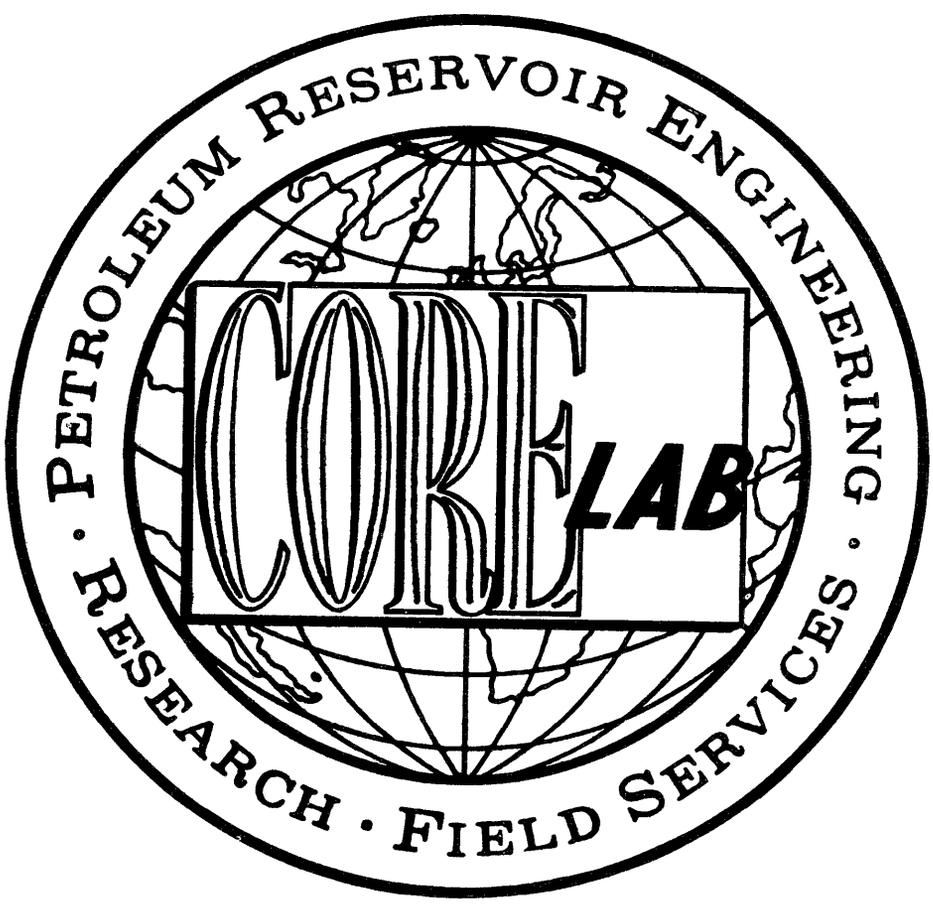
Attachment to WCR

IES / Final Well Report

Seahorse - 2

(W780)



OIL and GAS DIVISION

IES WELL REPORT
SEAHORSE No. 2
ESSO AUSTRALIA LTD.

CORE LABORATORIES AUSTRALIA (QLD.) LTD.

Petroleum Reservoir Engineering
AUSTRALIA

BRISBANE OFFICE:
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PINKENBA, Q. 4008.
P.O. BOX 456
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AUSTRALIA.

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TELEX No: COREBN AA42513
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10 th August 1982

Geology Department
Esso Australia Ltd
Esso House
127 Kent Street
SYDNEY NSW 2000

ATTENTION: Mr K Kuttan

Dear Sir

Core Laboratories Intermediate Extended Service Well Logging Unit FL 802 was in use during the drilling of SEAHORSE #2 from surface to a total depth of 2021 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 AUSTRALIA (QLD) LTD

A. DODSON
Unit Supervisor

Signed by _____ in A. Dodson's absence.

Encl
AD:ms:2

INDEX

1. INTRODUCTION
2. CORE LABORATORIES EQUIPMENT
3. CORE LABORATORIES MONITORING EQUIPMENT
4. INTERMEDIATE EXTENDED SERVICE INTRODUCTION
5. RIG INFORMATION SHEET
6. WELL INFORMATION SHEET
7. PROGRESS LOG
8. BIT RECORD SHEETS
9. MUD DATA SHEET
10. LITHOLOGICAL SUMMARY
11. R.F.T. DATA SHEETS
12. GAS COMPOSITION SHEETS
13. B.H.T. CALCULATIONS
14. PORE PRESSURE SUMMARY AND P.I.T. DATA
15. OVERBURDEN GRADIENT CALCULATIONS & OVERBURDEN GRADIENT PLOT
16. WELL HISTORY
17. CORE - O - GRAPHS
18. SIDEWALL CORE GAS ANALYSIS

COMPUTER DATA LISTINGS :-

a/ BIT RECORD AND INITIALIZATION
b/ HYDRAULIC ANALYSES
c/ DATA LIST A
d/ DATA LIST B
e/ DATA LIST C
f/ DATA LIST D

APPENDED LOGS :-

a/ DRILL DATA PLOT
b/ TEMPERATURE PLOT
c/ PRESSURE PLOT
d/ GEOPLOT
e/ GRAPHOLOG

INTRODUCTION

SEAHORSE #2 was drilled by Esso Australia Ltd in the Bass Strait, Australia.

Well co-ordinates were:

Latitude	:	38 deg	12'	13.680"	S
Longtitude	:	147 deg	39'	20.952"	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.

SEAHORSE #2 was spudded on the 11th July, 1982, and reached a total depth of 2021 metres on the 20th July, 1982; a total drilling time of 10 days. The main objective of the well was to test the thin oil sands encountered in SEAHORSE #1, and to confirm the south-west limit of the structure; a small fault controlled anticline.

Elevations were:

21.0 m Kelly bushings to mean sea level
42.6 m Water depth
63.6 m Kelly bushings to mud line

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

Core Laboratories' personnel involved in the logging of SEAHORSE #2 were as follows:

A. Dodson	-	Unit Supervisor
T. Charles	-	Pressure Engineer
B. Giftson	-	Logging Crew Chief
M. Robinson	-	Well Logger
R. Martin	-	Well Logger
P. Denton	-	Sample Catcher
A. Green	-	Sample Catcher

2. 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

3. 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.

4. 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 :

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

Deviations from the normal "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.

5. RIG INFORMATION SHEET

CORE LAB

RIG INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.

WELL SEAHORSE No. 2

OWNER	SOUTH SEAS DRILLING COMPANY
NAME AND NUMBER	SOUTHERN CROSS (N° 107)
TYPE	SEMI-SUBMERSIBLE , TWIN HULLED.
DERRICK, DRILL FLOOR & SUBSTRUCTURE	DERRICK: LEE C MOORE, 152' HIGH X 40' AT BASE. LOAD CAPACITY OF 1 000 000 lbs
DRAWWORKS	OILWELL E-2000 DRIVEN BY 2 GE 752 ELECTRIC MOTORS.
CROWN BLOCK	LEE C MOORE 27458 C. CAPACITY 500 SHORT TONS.
TRAVELING BLOCK	OILWELL A 500
SWIVEL	OILWELL PC 425
ELEVATORS	BYRON JACKSON MODEL GG CAPACITY 350 TON
KELLY & KELLY SPINNER	DRILLCO 5¼" x 50' HEX KELLY
ROTARY TABLE	OILWELL A 37½ SINGLE ELECTRIC MOTOR
ROTARY SLIPS	VARCO DCS-L
MUD PUMPS	TWO OILWELL A 1700PT. RATED AT 1600HP
MUD SYSTEM	FOUR MUD TANKS HAVING A TOTAL CAPACITY OF 1200 BBL, AND ONE PILL TANK HAVING A CAPACITY OF 105 BBL. TWO MUD HOPPERS POWERED BY 2 MISSION 6x8" CENTRIFUGAL BY TWO 100 HP ELECTRIC MOTORS. DESANDER : 1 DEMCO 4 CONE 12" MODEL N° 124 DESILTER : 1 DEMCO 4"-16H 16 CONE DEGASSER : 1 SWACO MODEL N° 36 SHALE SHAKERS : 2 BRANDT DUAL UNIT TANDEM - GHI DUAL UNIT.
BLOW OUT PREVENTORS	THREE SHAFFER L.W.S. 18¾" - 10 000 psi TWO HYDRIL G.L. 18¾" - 5000 psi
WELL CONTROL EQUIP.	FOUR VALVCON ACCUMULATORS. 2" - 10 000psi CHOKES: 2 C.I.W. ABJ H2 2 1/16" - 10 000 psi, 1 SWACO SUPER CHOKE
TUBULAR DRILLING EQUIPMENT	DC : 6¼" x 2 13/16" (4" IF TJ) 8 " x 2 13/16" (6 5/8" H90 TJ) 9¾" x 3" (7 5/8" H90 YJ) HWDP : 5" 50lb/ft GRADE G (6½" OD 4½" IF TJ) DP : 5" 19½lb/ft GRADE G&E (6 3/8" OD 4½" IF TJ)
CEMENTING UNIT	HALLIBURTON HT-400 UNIT
MONITORING EQUIPMENT	MARTIN DECKER : MUD VOLUME TOTALIZER 6 CHANNEL DRILLING RECORDER 4 PRESSURE GAUGES FLOWSHOW INDICATOR
POWER SUPPLY	2 EMD MD 18 DIESEL ENGINES RATED AT 1950 HP EACH 1 EMD MD 12 DIESEL ENGINE RATED AT 1500 HP
DIRECTIONAL EQUIP.	-

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

RISER: REGAN FC-7 TELESCOPIC 21" ID. PLUS FLOW DIVERTOR.

CASING POWER TONGS: ECKEL 13 3/8" (20 000 ft lbs), 20" (35 000 ft lbs)

CMT BULK TANKS: 3x1570cu ft. RISER TENSIONER: 6WESTERN GEAR, 50' STROKE, 80 000lbs.

MUD BULK TANKS: 3x1570cu ft. GUIDE LINE TENSIONERS : 4 WESTERN GEAR 16 000 lbs, 40' STROKE

7520-485 (CL 1151)

6. WELL INFORMATION SHEET

WELL INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD.
WELL SEAHORSE No 2.
Sheet No. 1

WELL NAME	SEAHORSE No 2.			
OPERATOR	ESSO AUSTRALIA LTD.			
PARTNERS	B.H.P.			
RIG	OWNER	SOUTH SEAS DRILLING COMPANY		
	NAME OR NUMBER	SOUTHERN CROSS		
	TYPE	SEMI – SUBMERSIBLE		
LOCATION	LATITUDE (X)	38°12'13.680" S	LONGITUDE (Y)	147°39'20.952" E
	FIELD	GIPPSLAND BASIN	AREA	BASS STRAIT
	COUNTY	–	STATE	VICTORIA
	COUNTRY	AUSTRALIA		
	DESCRIPTION			
DATUM POINTS	Ground Elevation	–	RKB to Ground Level	–
	Mean Water Depth	42.6m	RKB to Water Level	21m
DATES	SPUD	11 JULY 1982	TOTAL DEPTH	20 JULY 1982

HOLE SIZES

Depth From	Depth To	Bit Size	No. Of Bits	No. of Reamers	Date From	Date To	Cased	Logged
64	200	26	1	–	11JULY82	11JULY82	20"	N
200	787	17½	1	–	12JULY82	13JULY82	13	Y
787	2021	12¼	3	–	15JULY82	20JULY82	–	Y

DRILLING FLUID

Depth From	Depth To	Weights			Type
64	200	8.6	TO	8.6	SEAWATER
200	787	8.6	TO	9.1	SEAWATER / NATIVE SOLIDS
787	2021	9.1	TO	9.8	SEAWATER GEL
			TO		
			TO		
			TO		
			TO		
			TO		

WIRELINE LOGGING

Depth From	Depth To	Hole Size"	Date Run	Logs Run
785	62	17½	13JULY82	DIL-BHC-CAL-GR
2021	--	12¼	21JULY82	*MSFL-DLT-GR-SP, LTD-CNL-BHC-GR (TO 780m)
2021	135 0	12¼	22JULY82	MSFL-DLT-GR-SP
1868	780	12¼	22JULY82	HDT
--	--	--	22JULY82-25JULY82	RFT No.1-14&CST
2016	780	12¼	24JULY82	FDC-CNL-GR
				*TOOL MALFUNCTIONED

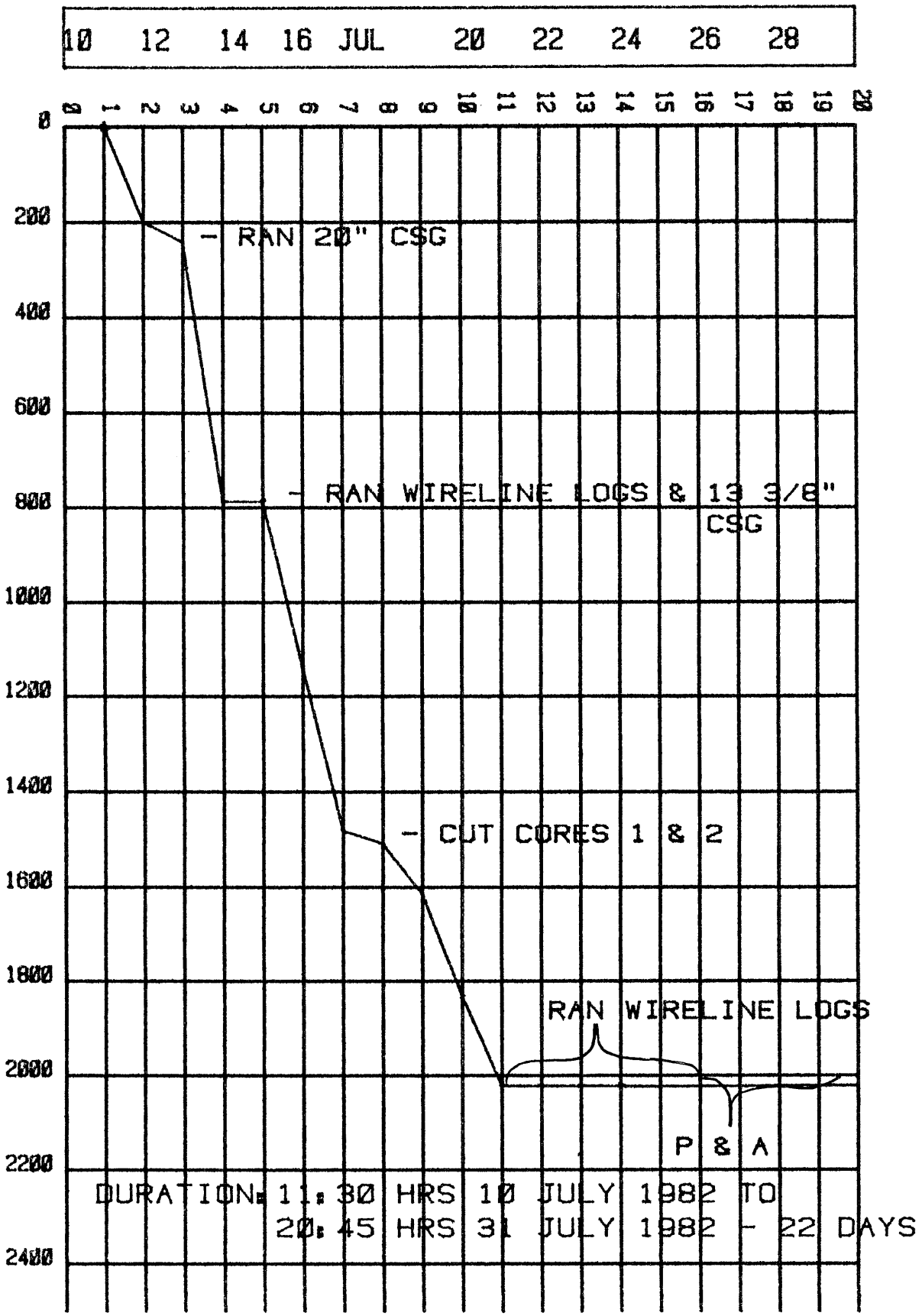
RISER, CASING & LINER

Depth From	Depth To	OD "	ID "	Weight	Grade	Threads	Date Run	Cement	Stages	Excess
2	64	22	21	–	–	–	RISER	–	–	–
64	185	20	19.124	94.4	X52	JVBOX	12JULY82	"N"	1	–
64	780	13 3/8	12.615	54.4	K55	BUTT	14JULY82	"N"	1	–

7520-484 (CL 1150)

7. PROGRESS REPORT

PROGRESS LOG
ESSO AUSTRALIA LTD SEAHORSE # 2



8. 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

CORE LAB

COMPANY ESSO AUSTRALIA LTD.

WELL SEAHORSE No.2

Sheet No. 1

S/N	Bit No.	Make	Type	IADC Code	Size "	Jets	Depth In m	Hole Made	Drilling Time	On Bottom Hours	K Turns	Condition T B G	Remarks
- / 294 SR	1	HTC	H.O. / OSC 3AJ	- / 111	26 / 17½	3x25 / 3x20	64	136	7	4.00	D.N.A.	1-1-I	Out to run 20" casing.
294 SR	RR 1	HTC	OSC 3AJ	111	17½	3x20	200	587	14	7.31	70	2-2-I	Out to run 13 3/8" casing.
040 KK	2	HTC	X3A	114	12 1/4	16/16/18	787	695	34 1/4	24.03	227	5-4-I	Out at Core point.
1W 5994	CB 1	CHRIST	RC 4	4	8½	TFA 0.50sq"	1482	14	5	4.9	30	10%WN	Cut Core No.1.
1W 5994	RRCB1	CHRIST	RC 4	4	8½	TFA 0.50sq"	1496	13	4½	8.39	51	20%WN	Cut Core No.2.
323 KK	3	HTC	X3A	114	12 1/4	16/16/16	1509	106	36 1/4	11.95	87	7-6-3/8	Reamed core rathole POOH due to low ROP
WA 994	4	HTC	J 22	517	12 1/4	16/16/16	1615	406	39½	34.05	154	3-2-I	Out for TD E-LOGS

7520-487 (CL 1153)

ON-BOTTOM HOURS & TURNS ARE CUMULATIVE

D.N.A.-Data not available

CORE LAB

BIT RECORD

COMPANY ESSO AUSTRALIA LTD.

WELL SEAHORSE No.2.

Sheet No. 1

Bit No.	Make	Type	IADC Code	Size	Cost	Jets	Depth In	Depth Out	Hole Made	Drilling Time	On Bottom Hours	Turns K	Average ROP	Average Cost/	Condition T B G
1	HTC	~~H.D. OSC 3AJ~~	~~—~~ ~~111~~	17½	6400	3x20	64	200	137	7	--	--	--	--	1-1-I
RR 1	HTC	OSC 3AJ	11	17½	2500	20 20 20	200	787	587	14	7.31	70	80	94	2-2-I
2	HTC	3XA	114	12¼	1400	16 16 18	787	1482	695	34¼	21.89	208	29	207	5-4-I
CB 1	CHRIS	RC 4	4	8½	13000	TFA.50sqin	1482	1496	14	5	4.94	30	3	--	10%WN
RRCB 1	CHRIS	RC 4	4	8½	13000	TFA.50sqin	1496	1509	13	4½	8.39	51	4	--	20%WN
3	HTC	X3A	114	12¼	1400	16/16/16	1509	1615	106	36¼	11.95	87	9	830	7-6-3/8
4	HTC	J22	517	12¼	6800	16/16/16	1615	2021	406	39½	34.07	153	11	540	3-2-I

7520-486 (CL 1152)

9. 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 SEAHORSE No 2.

Sheet No. 1

DEPTH	200	220	380	787	1056	1273	1494
DATE	11JULY82	12 JULY82	13 JULY82	14 JULY82	15 JULY82	16 JULY82	17 JULY82
TIME		22:30	02:35	12:00	20:00	14:30	09:30
WEIGHT	8:6	8:5	9:0	9:0	9:2	9:7	9:7
FUNNEL VISCOSITY		26	30	32	38	74	43
PV/YP			5/15	3/16	5/16	12/15	9/11
N/K			.18/6.97	.21/5.08	.31/3.1	.53/.99	.54/.71
GEL: INITIAL/10 MIN			4/4	3/3	4/6	15/32	9/20
pH					10.5	9.5	10.5
FILTRATE: API/API HTHP					N/C	6/13.5	7.6/15
CAKE					N/C	2	2
SALINITY Cl					15K	15.5K	16K
SAND			Tr		Tr	Tr	.25
SOLIDS			4		6	8	8
OIL					—	0	Tr
NITRATES (ppm)						-	-

REMARKS:

SEAWATER →

← SEAWATER NATIVE SOLIDS

DEPTH	1615	1832	2021	2021	2021		
DATE	18 JULY82	19JULY82	20 JULY82	21 JULY82	22JULY82	23 JULY82	24 JULY82
TIME	24:00	24:00	22:30	23:00	13:30	02:00	23:00
WEIGHT	9.7	9.7	9.7	9.7	9.7	9.7	9.7
FUNNEL VISCOSITY	45	47	47	48	47	41	41
PV/YP	10/16	10/15	8/9	8/10	12/13	8/24	8/25
N/K	.47/1.39	.49/1/21	.56/.53	.53/.66	.58/.68	.32/4.3	.58/1.30
GEL: INITIAL/10 MIN	9/15	10/19	9/19	9/21	10/21	15/28	9/24
pH	10	10.5	10.5	10.5	10.0	9	9
FILTRATE: API/API HTHP	7.2/13.5	7/13	8/14.5	8/14	8.5/15	9.5/16.5	9.5/16
CAKE	2	2	2	2	2	2	2
SALINITY Cl	15K	14.5K	14K	14.0K	14.0K	14.0 K	14 .0 K
SAND	.25	.25	.25	.25	.25	.25	.25
SOLIDS	8	8	8	8	8	8	8
OIL	0	0	0	0	0	0	0
NITRATES (ppm)	-	-	50	50	—	50	50

REMARKS:

← RUN WIRELINE LOGS & RFT.

7520-492 (CL 1158)

CORE LAB

MUD INFORMATION SHEET

COMPANY ESSO AUSTRALIA LTD
WELL SEAHORSE No.2

Sheet No. 2

DEPTH	2021	2021					
DATE	25 JUL 82	26 JUL 82					
TIME	23:00	24:00					
WEIGHT	9.7	9.5					
FUNNEL VISCOSITY	42	42					
PV/YP	7/8	8/10					
N/K	.55/.48	.53/.66					
GEL: INITIAL/10 MIN	7/15	9/16					
pH	10.5	10.5					
FILTRATE: API/API HTHP	9.5/18.4	9/18					
CAKE	3	3					
SALINITY	13.0 K	13.0 K					
SAND	.25	.25					
SOLIDS	8	8					
OIL	0	0					
NITRATES ppm	40	40					

REMARKS:

RUN R.F.T. _____ PLUG

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:

10. LITHOLOGICAL SUMMARY

LITHOLOGICAL SUMMARY SEAHORSE No.2

The primary objectives of Seahorse No.2 were to test the thin oil sands encountered by Seahorse No.1, and to confirm the south-west limit of the structure (a small fault controlled anticline).

GIPPSLAND LIMESTONE *

This formation was predominantly limestone. The limestone being an aggregate of fine to medium sand sized, calcite particles, with a predominante grey to white colour, grading to orange brown nearer the surface. Foraminifera and fossil fragments were common nearer the surface. These became less prolific as the depth increased. The limestone was moderately well indurated, becoming less well indurated with depth. It was carboniferous in part, with traces of pyrite and glauconite present throughout the lower depths. Loose quartz grains were present nearer the surface.

The other major lithology encountered in this section was sandstone.This occurs as major beds below 530m RKB.The sandstones colour ranged from clear to white to milky, it consisted of fine to medium unconsolidated quartz grains, which were hard, well rounded but poorly sorted. Foraminifera and shell fragments were apparent as were traces of glauconite, pyrite, and carbonate.

Background gas in this formation remained below 1 unit throughout.

LAKES ENTRANCE FORMATION *

This zone appeared as a calcareous cemented siltstone, with minor claystone and shale stringers.

The siltstone was of a light grey to grey colour,consisting of quartz particles with calcite cement. It was soft to firm, argillaceous in part with traces of pyrite, fossils and occasional carbonate grains.

The claystone was a grey to white colour, soft and very water sensitive.The shale was dark grey, sub fissile, calcic, firm, and blocky.

The background gas in this formation was a constant 2 to 4 units with C_1 as the major constituent.

THE LATROBE GROUP *

The Latrobe Group was found to be an assortment of lithologies, predominantly sandstone. Minor constituents were coal, siltstone and claystone.

The top part of this group was predominantly coal and siltstone, which had associated with it some 340 units of gas, consisting of C_1 to C_5. These heavies persisted throughout the group, even when the background level dropped to around 10 units, at 1480m RKB.

The sandstone was a clear to white, poorly sorted aggregation of rounded grains, mostly loose but with some dolomite cement. Although not predominante at the top of the Latrobe Group. It becomes the dominant lithology as the depth increases.

The coal was most abundant nearer the top of the group, although it did occur in small lenses throughout. It was predominantly dark brown to black in colour, hard to brittle and blocky, as opposed to the very hard conchoidal fracturing coal encountered deeper.

The siltstone was similar to that of the Lakes Entrance, being, grey to brown, with calcic cement. It was argillaceous in part, with a blocky structure, traces of pyrite, glaucanite, and carbonate were also present.

The claystone was of a lightgrey to buff colour, soft to firm, with a blocky structure, and water sensitive.

Background gas in the section from 1510m to total depth was around 0.4 units. However C_1 to C_6 was present, in parts of this interval. C_1 to C_4 were present for most of the interval from 1615m to 2021m RKB. No flourescense was found in these intervals.

2 cores were cut in the upper part of this group, with excellent recoveries. No flourescense was observed.

* DEPTHS OF FORMATION TOPS WERE NOT AVAILABLE AT THE TIME OF PRINTING

11. R.F.T. DATA

CORE LABORATORIES INTERNATIONAL

PORE PRESSURE DATA SHEET — DATA FROM RFT

COMPANY : ESSO AUSTRALIA LTD.

WELL : SEAHORSE No.2.

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.)	(P.S.I./m)
1436.5	1415.5	2052.5	8.52	1.450
1442.0	1421.0	2047.9	8.46	1.441
1444.5	1423.5	TIGHT	–	–
1450.5	1429.5	2066.6	8.49	1.446
1454.5	1433.5	2063.0	8.45	1.439
1456.5	1435.5	2063.3	8.44	1.437
1466.5	1445.6	2076.5	8.38	1.427
1468.0	1447.0	2078.5	8.44	1.436
1471.0	1450.0	2082.5	8.43	1.436
1474.0	1453.0	2086.9	8.43	1.436
1487.0	1466.0	2110.3	8.45	1.439
1496.5	1475.5	TIGHT	–	–
1503.0	1482.0	2132.4	8.45	1.439
1507.0	1486.0	2138.1	8.45	1.439
1511.5	1490.5	2144.6	8.45	1.439
1528.5	1507.5	2175.6	8.48	1.443
1531.5	1510.5	2179.0	8.47	1.443
1564.0	1543.0	2225.2	8.47	1.447
1565.0	1544.0	S.F.	–	–
1566.0	1545.0	2228.0	8.47	1.442
1603.0	1582.0	2284.0	8.48	1.444

S.F. – SEAL FAILURE

GORE LABORATORIES INTERNATIONAL

PORE PRESSURE DATA SHEET DATA FROM RFT

COMPANY : ESSO AUSTRALIA LTD.

WELL : SEAHORSE No.2.

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.)	(P.S.I./m)
1436.0	1415.0	S.F	–	–
1441.0	1420.0	S.F	–	–
1450.0	1429.5	2066.6	8.49	1.446
1451.5	1430.5	2069.9	8 .50	1.447
1618.0	1597	2299.7	8.46	1.440
1645.0	1624	2340.9	8.46	1.441
1673.5	1652.5	2385.6	8.46	1.444
1701.0	1680.0	2424.2	8.47	1.444
1721.0	1700	N.S.	–	–
1722.0	1701.0	2453.3	8.47	1.442
1442.0	1421.0	2047.9	8.46	1.441
1456.0	1435 .0	2062.9	8.44	1.438
1456.0	1435.0	2062.9	8.44	1.438
1454.5	1433.0	N.S.	–	–
1454.0	1433.0	2060.9	8.45	1.430
1466.5	1445.5	N.S.	–	–
1466.8	1445.8	N.S.	–	–
1467.9	1446.9	2078.1	8.43	1.436
1565.0	1544.0	N.S.	–	–
1564.8	1543.8	N.S.	–	–

LABORATORIES INTERNATIONAL

PORE PRESSURE DATA SHEET DATA FROM RFT

COMPANY : ESSO AUSTRALIA LTD.

WELL : SEAHORSE No.2.

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.)	(P.S.I./m)
1442.4	1421.4	2049.3	8.47	1.442
1451.0	1430.0	2069.3	8.50	1.447
1456.5	1456.5	2062.9	8.44	1.437
1466.5	1445.5	N.S.	–	–
1466.8	1445.8	TIGHT	–	–
1467.5	1446.5	N.S.	–	–
1467.5	1446.5	N.S.	–	–
1467.2	1446.2	LEAK	–	–
1466.1	1445.1	2076.1	8.44	1.437
1536.0	1515.0	2185.1	8.47	1.442
1536.0	1515.0	2212.8	8.35	1.461
1559.5	1538.5	N.S.	–	–
1559.0	1538.0	2217.0	8.47	1.441
1564.0	1543.0	2224.6	8.47	1.442
1603.2	1582.2	2281.3	8.47	1.442
15 67.0	1546.0	N.S.	–	–
1566.8	1545.8	N.S.	–	–
1566.8	1545.8	2228.1	8.46	1.441
1566.2	1433.2	2056.4	8.43	1.441
1454.2	1433.2	2056.4	8.43	1.435

CORE LABORATORIES INTERNATIONAL

PORE PRESSURE DATA SHEET DATA FROM RFT

COMPANY : ESSO AUSTRALIA LTD.

WELL : SEAHORSE No.2.

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.)	(P.S.I./m)
1496.0	1475.0	TIGHT	–	–
1497.0	1476.0	TIGHT	–	–
1436.5	1415.5	TIGHT	–	–
1487.0	1466.0	2109.8	8.45	1.439
1451.0	1430.0	2074.7	8.52	1.451
1568.0	15 47.0	N.S.	–	–
1566.8	1545.8	2228.0	8.46	1.441
1508.0	1487.0	2139.0	8.45	1.438

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

COMPANY ESSO AUSTRALIA LTD WELL SEAHORSE No.2

RUN No. RFT No.1 PRESSURE GAUGE TYPE H.P.

CHAMBER No.	1.	2.
CHAMBER CAPACITY ( )		
CHOKE SIZE ( )		
SEAT No.		
DEPTH( ) (frm.RKB)		
A. RECORDING TIMES	HH:MM:SS	HH:MM:SS
TOOL SET	: :	: :
PRETEST OPEN	: :	: :
TIME OPEN	: :	: :
CHAMBER OPEN	: :	: :
CHAMBER FULL	: :	: :
FILL TIME	: :	: :
START BUILD UP	: :	: :
FINISH BUILD UP	: :	: :
BUILD UP TIME	: :	: :
SEAL CHAMBER	: :	: :
TOOL RETRACT	: :	: :
TOTAL TIME	: :	: :
B. SAMPLE PRESSURES		
IHP ( )		
ISIP ( )		
IFP ( )		
FFP ( )		
FSIP ( )		
FHP ( )		
TEMP.CORR.ifapp.( )		
COMMENTS		
C. TEMPERATURE		
DEPTH TOOL REACHED( )		
MAX.REC.TEMP. (°)		
TIME CIRC.STOPPED		
TIME SINCE CIRC.	:	:
D. SAMPLE RECOVERY		
SURFACE PRESSURE( )		
VOL.GAS ( )		
VOL.OIL ( )		
VOL.WATER ( )		
VOL.FILTRATE ( )		
VOL.CONDENSATE ( )		
VOL.OTHER ( )		
E. SAMPLE PROPERTIES		
(a)GASCOMP C1 ( )		
C2 ( )		
C3 ( )		
C4 ( )		
C5 ( )		
C6+ ( )		
CO2 ( )		
H2S. ( )		
(b)OIL PROPERTIES		
DENSITY: HYDOMETER	@ °	@ °
( ) REFRACTOMETER		@ °
COLOUR		
FLUORESCENCE		
( )		

	CHAMB. 1.	CHAMB. 2.
OIL PROPERTIES CONT:		
ODOUR		
POUR POINT (°)		
COMMENTS		
(c)WATER PROPERTIES:		
RESISTIVITY (Ω m)	@	@ °
Cl (frm.resis.)( )		
Cl (frm.titrat)( )		
NO_3 ( )		
pH		
OTHER TRACERS ( )		
DENSITY		
FLUORESCENCE		
COLOUR		
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		
F. MUD PROPERTIES:		
TYPE		
RESISTIVITY ( )	@ °	@ °
Cl (frm.resis.)( )		
Cl (frm.titrat)( )		
NO_3 Drld/lst.circ)	/	/
pH		
OTHER TRACERS ( )		
DENSITY ( )		
G. GENRAL COMMENTS		
TOOK PRESSURE READINGS BUT DID NOT CARRY CHAMBERS.		

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 SEAHORSE No.2

RUN No. RFT No.2 PRESSURE GAUGE TYPE H.P.

		1.	2.
	CHAMBER No.		
	CHAMBER CAPACITY (GAL)	6	2¾
	CHOKE SIZE (SQIN)	.030	.020
	SEAT No.	35	35
	DEPTH( ) (trm.RKB)	1442	1442
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS
	TOOL SET	04 :35:30	: :
	PRETEST OPEN	04 :36:	: :
	TIME OPEN	00 :03:	: :
	CHAMBER OPEN	04 :39:	05 :18:
	CHAMBER FULL	05 :17:	: :
	FILL TIME	: :	: :
	START BUILD UP	: :	: :
	FINISH BUILD UP	05 :17:	05 :58:
	BUILD UP TIME	: :	: :
	SEAL CHAMBER	05 :17:	05 :58:
	TOOL RETRACT	: :	06 :00:
	TOTAL TIME	:42:	42 :
B.	SAMPLE PRESSURES		
	IHP (psia)	2502	
	ISIP (psia)	2047.9	
	IFP (psia)	1200	900
	FFP (psia)	2003	2036
	FSIP (psia)	2045	
	FHP (psia)		2407
	TEMP.CORR.ifapp.(-)		
	COMMENTS		
C.	TEMPERATURE		
	DEPTH TOOL REACHED (m)	1450	
	MAX.REC.TEMP. (°C)	59	
	TIME CIRC.STOPPED	15:00 22/7	
	TIME SINCE CIRC.	13:00	:
D.	SAMPLE RECOVERY		
	SURFACE PRESSURE (psig)	1000	
	VOL.GAS (cf)	11.0	
	VOL.OIL (L)	2.7	
	VOL.WATER (L)		
	VOL.FILTRATE (L)	17.4	
	VOL.CONDENSATE (L)		
	VOL.OTHER SCUM (L)	INCL IN FILT VOL	
E.	SAMPLE PROPERTIES		
	(a) GASCOMP C1 (ppm)	612863	
	C2 (ppm)	48593	
	C3 (ppm)	24562	
	C4 (ppm)	4968	
	C5 (ppm)	886	
	C6+ (ppm)	13	
	CO2 (%)	1.6	
	H2S (ppm)	200+	
	(b) OIL PROPERTIES		
	DENSITY: HYDOMETER (A.P.I.)	51.1 @ 60°F	@ °
	REFRACTOMETER		@ °
	COLOUR	blackish-brown	
	FLUORESCENCE	white-brt blue	
	G.O.R. (CF/STB)	648	

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (°C)	+4	
	COMMENTS		
	(c) WATER PROPERTIES:		
	RESISTIVITY (Ω m)	.39 @19°C	@ °
	Cl (frm.resis.) (ppm)	18.5K	
	Cl (frm.titrat) (ppm)	14.0K	
	NO_3 (ppm)	45	
	pH	7	
	OTHER TRACERS ( )		
	DENSITY (ppg)	8.0	
	FLUORESCENCE		
	COLOUR	BRN	
	COMMENTS		
	(d) OTHER SAMPLE PROPERTIES		
F.	MUD PROPERTIES:		
	TYPE	S/W GEL	S/W GEL
	RESISTIVITY (Ω m)	0.48 @19°C	0.48 @19°C
	Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	Cl (frm.titrat) (ppm)	14.0 K	14.0 K
	NO_3 Drld/1st.circ (ppm)	0 /50	0 /50
	pH	10.0	10.0
	OTHER TRACERS ( )		
	DENSITY (ppg)	9.7	9.7
G.	GENRAL COMMENTS		
			SAMPLE PRESERVED

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 SEAHORSE No.2

RUN No. RFT No.3 PRESSURE GAUGE TYPE

		CHAMBER No.	1.	2.
		CHAMBER CAPACITY (GAL)	6	1
		CHOKE SIZE (SQIN)	.030	.020
		SEAT No.	36	36
		DEPTH(m) (trm.RKB)	1456	1456
A.		RECORDING TIMES	HH:MM:SS	HH:MM:SS
		TOOL SET	09:44:	: -:
		PRETEST OPEN	09:44:	: -:
		TIME OPEN	:03:	: -:
		CHAMBER OPEN	09:47:	09:59:
		CHAMBER FULL	09:52:	10:02:
		FILL TIME	:05:	:03:
		START BUILD UP	09:52:	10:02:
		FINISH BUILD UP	09:58:	10:04:
		BUILD UP TIME	:06:	:02:
		SEAL CHAMBER	09:58:	10:05:
		TOOL RETRACT	: -:	10:06:
		TOTAL TIME	:14:	:07:
B.		SAMPLE PRESSURES		
		IHP (psia)	2524	-
		ISIP (psia)	2062.9	2062.9
		IFP (psia)	2020	1820
		FFP (psia)	2062.9	1820
		FSIP (psia)	2062.9	2062.8
		FHP (psia)	-	2522
		TEMP.CORR.ifapp.( )	-	-
		COMMENTS		
C.		TEMPERATURE		
		DEPTH TOOL REACHED (m)	1480	
		MAX.REC.TEMP. (^{o}C)	63	
		TIME CIRC.STOPPED	15:00 22/7	
		TIME SINCE CIRC.	21:00	:
D		SAMPLE RECOVERY		
		SURFACE PRESSURE (psig)	0	0
		VOL.GAS (CF)	0	0
		VOL.OIL (L)	0	0
		VOL.WATER (L)	0	0
		VOL.FILTRATE (L)	1.5	3.00
		VOL.CONDENSATE (L)	0	0
		VOL.OTHER (L)	0.	0
E		SAMPLE PROPERTIES		
	(a)GASCOMP	C1 ( )		
		C2 ( )		
		C3 ( )		
		C4 ( )		
		C5 ( )		
		C6+ ( )		
		CO2 ( )		
		H2S ( )		
	(b)OIL PROPERTIES			
	DENSITY: ( )	HYDOMETER	@ ^{o}	@ ^{o}
		REFRACTOMETER		@ ^{o}
	COLOUR			
	FLUORESCENCE			
	COLOR (			

	CHAMB. 1.	CHAMB. 2.
OIL PROPERTIES CONT:		
ODOUR		
POUR POINT (^{o})		
COMMENTS		
(c)WATER PROPERTIES:		
RESISTIVITY (Ω m)	.48 @18^{o}C	.42 @18^{o}C
Cl (frm.resis.) (ppm)	16.0 K	18.0 K
Cl (frm.titrat) (ppm)	12.0 K	14.0 K
NO_3 (ppm)	10	20
pH	9.0	8.5
OTHER TRACERS ( )		
DENSITY (PPG)	8.0	8.0
FLUORESCENCE	PALE GRN	PALE GRN
COLOUR	BROWN	CLR BRN
COMMENTS		
(d) OTHER SAMPLE PROPERTIES		
F. MUD PROPERTIES:		
TYPE	S/W GEL	S/W GEL
RESISTIVITY (Ω m)	.48 @19^{o}C	.48 @19^{o}C
Cl (frm.resis.) (ppm)	14.0 K	14.0 K
Cl (frm.titrat) (ppm)	14.0 K	14.0 K
NO_3 Drld/lst.circ ppm	0 / 50	0 / 5
pH	10.0	10.0
OTHER TRACERS ( )		
DENSITY (ppg)	9.7	9.7
G. GENRAL COMMENTS		
BOTH SAMPLES HAD AN OIL SCUM (VOL. NOT MEASURABLE) SCUM HAD BRT YELL/ WHITE FLUORESCENCE	PROBABLE TOOL FAILURE	PROBABLE TOOL FAILURE

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.

NOTE : WHEN CIRCULATION RESUMED AFTER 44:45 HRS. A MUD SAMPLE FM. THE FLOWLINE GAVE ONLY TR. NITRATES. SO WATER SAMPLE NITRATE VALUES ARE NOT RELIABLE

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

COMPANY ESSO AUSTRALIA WELL SEAHORSE No.2

RUN No. RFT No.4 PRESSURE GAUGE TYPE H.P.

CHAMBER No.		1.	2.			CHAMB. 1.	CHAMB. 2.
CHAMBER CAPACITY (GAL)		6	1		OIL PROPERTIES CONT:		
CHOKE SIZE (SQIN)		.030	.020		ODOUR		
SEAT No.		37			POUR POINT (°)		
DEPTH(m) (trm.RKB)		1456.0			COMMENTS		
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS		(c)WATER PROPERTIES:		
	TOOL SET	13 :58 :	: :		RESISTIVITY (Ω m)	@	@ °
	PRETEST OPEN	13 :58 :	: :		Cl (frm.resis.)(ppm)		
	TIME OPEN	:03 :	: :		Cl (frm.titrat)(ppm)		
	CHAMBER OPEN	14 :01 :	: :		NO_3 (ppm)		
	CHAMBER FULL	: :	: :		pH		
	FILL TIME	: :	: :		OTHER TRACERS ( )		
	START BUILD UP	: :	: :		DENSITY		
	FINISH BUILD UP	: :	: :		FLUORESCENCE		
	BUILD UP TIME	: :	: :		COLOUR		
	SEAL CHAMBER	: :	: :		COMMENTS		
	TOOL RETRACT	: :	: :				
	TOTAL TIME	: :	: :		(d) OTHER SAMPLE PROPERTIES		
B.	SAMPLE PRESSURES			E.	MUD PROPERTIES:		
	IHP (psia)	2520			TYPE		
	ISIP (psia)	2062.9			RESISTIVITY (Ω m)	@ °	@ °
	IFP (psia)				Cl (frm.resis.)(ppm)		
	FFP (psia)				Cl (frm.titrat)(ppm)		
	FSIP (psia)				NO_3 Drld/lst.circ ppm	/	/
	FHP (psig)				pH		
	TEMP.CORR.ifapp.(_)				OTHER TRACERS ( )		
	COMMENTS				DENSITY (PPG)		
C.	TEMPERATURE			G.	GENRAL COMMENTS		
	DEPTH TOOL REACHED(m)	1480			AFTER FAILURE AT 1456m, ATTEMPTED TO TAKE SAMPLE @ 1454.5 -TOO TIGHT. THEN MADE ATTEMPT @ 1454m GOT ISIP OF 2060.9 PSIA BUT FOUND NO DRAWDOWN (SEATS 37, 38 & 39)	TEST FAILED- NO DRAWDOWN WHEN CHAMBER OPENED	
	MAX.REC.TEMP. (°C)	62					
	TIME CIRC.STOPPED	15:00 22/7					
	TIME SINCE CIRC.	25:00	:				
D	SAMPLE RECOVERY						
	SURFACE PRESSURE (psig)						
	VOL.GAS (CF)						
	VOL.OIL (L)						
	VOL.WATER (L)						
	VOL.FILTRATE (L)						
	VOL.CONDENSATE (L)						
	VOL.OTHER (L)						
E	SAMPLE PROPERTIES						
	(a)GASCOMP C1 (ppm)						
	C2 (ppm)						
	C3 (ppm)						
	C4 (ppm)						
	C5 (ppm)						
	C6+ (ppm)						
	CO2 (%)						
	H2S. (ppm)						
	(b)OIL PROPERTIES						
	DENSITY: HYDOMETER	@ °	@ °				
	( ) REFRACTOMETER		@ °				
	COLOUR						
	FLUORESCENCE						
	C.O.R. ( )						

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 SEAHORSE No.2

RUN No. RFT No.5 PRESSURE GAUGE TYPE

CHAMBER No.		1.	2.		CHAMB. 1.	CHAMB. 2.
CHAMBER CAPACITY (GAL)		6				
CHOKE SIZE (60IN)		.030		OIL PROPERTIES CONT:		
SEAT No.		40		ODOUR		
DEPTH(m) (frm.RKB)		1466.5		POUR POINT (°)		
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS	COMMENTS		
	TOOL SET	: :	: :	(c)WATER PROPERTIES:		
	PRETEST OPEN	: :	: :	RESISTIVITY (Ω m)	@	@ o
	TIME OPEN	: :	: :	Cl (frm.resis.)( )		
	CHAMBER OPEN	: :	: :	Cl (frm.titrat)( )		
	CHAMBER FULL	: :	: :	NO_3 ( )		
	FILL TIME	: :	: :	pH		
	START BUILD UP	: :	: :	OTHER TRACERS ( )		
	FINISH BUILD UP	: :	: :	DENSITY		
	BUILD UP TIME	: :	: :	FLUORESCENCE		
	SEAL CHAMBER	: :	: :	COLOUR		
	TOOL RETRACT	: :	: :	COMMENTS		
	TOTAL TIME	: :	: :			
B.	SAMPLE PRESSURES			(d) OTHER SAMPLE PROPERTIES		
	IHP ( )					
	ISIP ( )					
	IFP ( )			F. MUD PROPERTIES:		
	FFP ( )			TYPE		
	FSIP ( )			RESISTIVITY ( )	@ o	@ o
	FHP ( )			Cl (frm.resis.)( )		
	TEMP.CORR.ifapp.( )			Cl (frm.titrat)( )		
	COMMENTS			NO_3 Drld/lst.circ)	/	/
C.	TEMPERATURE			pH		
	DEPTH TOOL REACHED( )			OTHER TRACERS ( )		
	MAX.REC.TEMP. (o)			DENSITY ( )		
	TIME CIRC.STOPPED			G. GENRAL COMMENTS		
	TIME SINCE CIRC.	:	:			
D	SAMPLE RECOVERY			ATTEMPTED TESTS AT 1467.5, 1466.5, 1466.8 AND 1565.0m, BUT COULD NOT SEAL	TOOL FAILED SEATS No.	40,41,42 43 & 44.
	SURFACE PRESSURE( )					
	VOL.GAS ( )					
	VOL.OIL ( )					
	VOL.WATER ( )					
	VOL.FILTRATE ( )					
	VOL.CONDENSATE ( )					
	VOL.OTHER ( )					
E	SAMPLE PROPERTIES					
	(a)GASCOMP C1 ( )					
	C2 ( )					
	C3 ( )					
	C4 ( )					
	C5 ( )					
	C6+ ( )					
	CO2 ( )					
	H2S. ( )					
	(b)OIL PROPERTIES					
	DENSITY: HYDOMETER	@ o	@ o			
	( ) REFRACTOMETER		@ o			
	COLOUR					
	FLUORESCENCE					
	C.O.R. ( )					

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 SEAHORSE No.2

RUN No. RFT No.6 PRESSURE GAUGE TYPE H.P.

CHAMBER No.		1.	2.		CHAMB. 1.	CHAMB. 2.
CHAMBER CAPACITY (GAL)		6	1			
CHOKE SIZE (SQIN)		.030	.020	OIL PROPERTIES CONT:		
SEAT No.		47	47	ODOUR		
DEPTH(m) (trm.RKB)		1456.5	1456.5	POUR POINT (°C)		
A. RECORDING TIMES		HH:MM:SS	HH:MM:SS	COMMENTS		
	TOOL SET	21:48:	: :	(c) WATER PROPERTIES:		
	PRETEST OPEN	21:48:	: :	RESISTIVITY (Ω m)	.38 @19 °C	.47 @16 °C
	TIME OPEN	:06:	: :	Cl (frm.resis.) (ppm)	18.0 K	17.0 K
	CHAMBER OPEN	21:54:	22:06:	Cl (frm.titrat) (ppm)	14.0 K	14.0 K
	CHAMBER FULL	22:01:30	22:09:30	NO_3 (ppm)	10	TR
	FILL TIME	:07:30	03:30:30	pH	8	7.5
	START BUILD UP	22:01:30	22:09:30	OTHER TRACERS ( )		
	FINISH BUILD UP	22:04:	22:11:	DENSITY (ppg)	8.1	8.1
	BUILD UP TIME	:02:30	:01:30	FLUORESCENCE	MILKY WH	WEAK BLU/WH
	SEAL CHAMBER	22:04:	22:11:	COLOUR	GRY/BRN	GRN/GRY
	TOOL RETRACT	:— :	22:13:	COMMENTS		
	TOTAL TIME	:16:	:09:	(d) OTHER SAMPLE PROPERTIES	OIL SCUM	OIL FILM
B. SAMPLE PRESSURES				F. MUD PROPERTIES:	S/W GEL	S/W GEL
	IHP (psia)	2527	-	TYPE		
	ISIP (psia)	2062.8	-	RESISTIVITY (Ω m)	.48 @19°C	.48 @19°C
	IFP (psia)	1776	1960	Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	FFP (psia)	2062.6	2062.8	Cl (frm.titrat) (ppm)	14.0 K	14.0 K
	FSIP (psia)	2062.8	2062.8	NO_3 Drld/1st.circ ppm	0 / 50	0 / 50
	FHP (psia)	-	2526	pH	10.0	10.0
	TEMP.CORR.ifapp.( )	-	-	OTHER TRACERS ( )		
	COMMENTS	-	-	DENSITY (ppg)	9.7	9.7
C. TEMPERATURE				G. GENRAL COMMENTS		
	DEPTH TOOL REACHED (m)	1500			NIL H_2S FROM OPEN FLUID CHAMBER	*30ppm H_2S FROM OPEN FLUID CHAMBER
	MAX.REC.TEMP. (°C)	61				
	TIME CIRC.STOPPED	03:30 24/7				
	TIME SINCE CIRC.	18 : 15	:			
D. SAMPLE RECOVERY						
	SURFACE PRESSURE (psig)	350	500			
	VOL.GAS (CF)	.28	.03			
	VOL.OIL (L)	NIL	NIL			
	VOL.WATER (L)	NIL	NIL			
	VOL.FILTRATE (L)	21.5	3.5			
	VOL.CONDENSATE (L)	NIL	NIL			
	VOL.OTHER (L)	NIL	NIL			
E. SAMPLE PROPERTIES						
(a) GASCOMP	C1 (ppm)		NOT MEASURED			
	C2 (ppm)					
	C3 (ppm)					
	C4 (ppm)					
	C5 (ppm)					
	C6+ (ppm)					
	CO2 (%)	NOT TESTED				
	H2S. (ppm)	1	30*			
(b) OIL PROPERTIES						
DENSITY:	HYDOMETER	@ °	@ °			
( )	REFRACTOMETER		@ °			
COLOUR						
FLUORESCENCE						
C.O.F.						

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.

NOTE :- WHEN CIRC RESUMED AFTER 44:45 HRS A MUD SAMPLE FM. THE FLOWLINE GAVE ONLY TR. NITRATES. SO WATER SAMPLE NITRATE VALUES ARE NOT RELIABLE.

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

COMPANY ESSO AUSTRALIA LTD WELL SEAHORSE No.2

RUN No. RFT No.7 PRESSURE GAUGE TYPE H.P.

		1.	2.
	GAUGE No.		
	CHAMBER CAPACITY (GAL)	6	1
	CHOKE SIZE (SQIN)	.030	.020
	SEAT No.	53	53
	DEPTH(m) (trm.RKB)	1466.1	1466.1
A	RECORDING TIMES	HH:MM:SS	HH:MM:SS
	TOOL SET	02 : 14:	: - :
	PRETEST OPEN	02 : 14:	: - :
	TIME OPEN	: 03:	: - :
	CHAMBER OPEN	02 : 17:	02 : 26:
	CHAMBER FULL	02 : 24:	02 : 30:
	FILL TIME	: 07:	: 04:
	START BUILD UP	02 : 24:	02 : 30:
	FINISH BUILD UP	02 : 26:	02 : 31:
	BUILD UP TIME	: 02:	: 01:
	SEAL CHAMBER	02 : 26:	02 : 31:
	TOOL RETRACT	: - :	02 : 33:
	TOTAL TIME	: 12:	: 07:
B	SAMPLE PRESSURES		
	IHP (psia)	2536	
	ISIP (psia)	2076	2076
	IFP (psia)	1994	2055
	FFP (psia)	2076	2076
	FSIP (psia)	2076	2076
	FHP (psig)	-	2536
	TEMP.CORR.ifapp.(-)	-	-
	COMMENTS		
C	TEMPERATURE		
	DEPTH TOOL REACHED(m)	1490	
	MAX.REC.TEMP. (^{o}C)	62	
	TIME CIRC.STOPPED	03:30 24/7	
	TIME SINCE CIRC.	21:30	:
D	SAMPLE RECOVERY		
	SURFACE PRESSURE (psig)	200	100
	VOL.GAS (CF)	0.26	0.025
	VOL.OIL (L)	THIN FILM	THIN FILM
	VOL.WATER (L)	21.25	3.7
	VOL.FILTRATE (L)	SEE COMM	SEE COMM
	VOL.CONDENSATE (L)		
	VOL.OTHER (L)		
E	SAMPLE PROPERTIES		
	(a)GASCOMP C1 (PPM)	88646	
	C2 (ppm)	19054	
	C3 (ppm)	25440	
	C4 (ppm)	6210	
	C5 (ppm)	662	
	C6+ (ppm)	0	
	CO2 (%)	NOT TESTED	
	H2S (ppm)	30	40
	(b)OIL PROPERTIES		
	DENSITY: HYDOMETER	@ ^{o}	@ ^{o}
	( ) REFRACTOMETER		@ ^{o}
	COLOUR		
	FLUORESCENCE	TR	

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (^{o})		
	COMMENTS		
	(c)WATER PROPERTIES:		
	RESISTIVITY (Ω m)	1.45 @21^{o}c	2.00 @18^{o}c
	Cl (frm.resis.)(ppm)	4.3 K	3.3 K
	Cl (frm.titrat)(ppm)	6.5 k	1.8 K
	NO_3 (ppm)	TR	NIL
	pH	7.5	7.0
	OTHER TRACERS (ppg)		
	DENSITY	8.1	8.1
	FLUORESCENCE		
	COLOUR	CLR/GRY	GRY
	COMMENTS	FILTRATE/ FORM'N WATER	MAINLY FO WATER
	(d) OTHER SAMPLE PROPERTIES		
F	MUD PROPERTIES:		
	TYPE	S/W GEL	S/W GEL
	RESISTIVITY (Ω m)	0.48 @19 C	0.4R@19 C
	Cl (frm.resis.)(ppm)	14.0K	14.0K
	Cl (frm.titrat)(ppm)	14.0K	14.0K
	NO_3 Drld/1st.circ(ppm)	0 /50	0 / 50
	pH	10.0	10.0
	OTHER TRACERS ( )		
	DENSITY (PPG)	9.7	9.7
G	GENRAL COMMENTS		
		H_2S MEASUREMENT IS FROM OPEN SAMPLE CHAMBER (CHAMBERS 1&2).	H_2S MEASUREMENT IS FROM OPEN SAMPLE CHAMBER.

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.

NOTE :- WHEN CIRC. RESUMED AFTER 44:45 HRS A MUD SAMPLE FM. THE FLOWLINE GAVE ONLY TR. NITRATES. SO WATER SAMPLE NITRATE VALUES ARE NOT RELIABLE.

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

COMPANY ESSO AUSTRALIA LTD. WELL SEAHORSE No.2.

RUN No. RFT.8. PRESSURE GAUGE TYPE H.P.

		CHAMBER No.	1.	2.
		CHAMBER CAPACITY (GAL)	6	1
		CHOKE SIZE (SQIN)	.030	.020
		SEAT No.	58	58
		DEPTH(m) (frm.RKB)	1564.0	1564.0
A.		RECORDING TIMES	HH:MM:SS	HH:MM:SS
		TOOL SET	06:20:	:-:
		PRETEST OPEN	06:20:	:-:
		TIME OPEN	:03:	:-:
		CHAMBER OPEN	06:23:	06:41:
		CHAMBER FULL	06:34:	06:44:
		FILL TIME	:11:	:03:
		START BUILD UP	06:34:	06:44:
		FINISH BUILD UP	06:40:	06:46:
		BUILD UP TIME	:06:	:02:
		SEAL CHAMBER	06: :	06:46:
		TOOL RETRACT	:- :	06:48:
		TOTAL TIME	:20:	:07:
B.		SAMPLE PRESSURES		
		IHP (PSIA)	2693	-
		ISIP (PSIA)	2224.9	-
		IFP (PSIA)	1250	1500
		FFP (PSIA)	2223.2	2224.2
		FSIP (PSIA)	2224.6	2224.6
		FHP (PSIG)	-	2693
		TEMP.CORR.ifapp.(-)	-	-
		COMMENTS		
C.		TEMPERATURE		
		DEPTH TOOL REACHED(m)	1575	
		MAX.REC.TEMP. (°C)	70	
		TIME CIRC.STOPPED	03:30 24/ 07	: /
		TIME SINCE CIRC.	26:50	:
D		SAMPLE RECOVERY		
		SURFACE PRESSURE (PSIG)	200	
		VOL.GAS (L)	0	
		VOL.OIL (L)	11.8	
		VOL.WATER (L)		
		VOL.FILTRATE (L)	8.75	
		VOL.CONDENSATE (L)	0	
		VOL.OTHER waxy scum (L)	0.50	
E		SAMPLE PROPERTIES		
	(a) GASCOMP	C1 (ppm)		
		C2 (ppm)	NOT MEASURED	
		C3 (ppm)		
		C4 (ppm)		
		C5 (ppm)		
		C6+ (ppm)		
		CO2 (%)		
		H2S (ppm)	40*	
	(b) OIL PROPERTIES			
	DENSITY: HYDOMETER		48.6 @60 °F	@ °
	(API) REFRACTOMETER		46 @60 °F	@ °
	COLOUR		BLKSH/BRN	
	FLUORESCENCE		BRTYEL-WH	
	G.O.R. ( )		-	

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (°C)	0	
	COMMENTS		
	(c) WATER PROPERTIES:		
	RESISTIVITY (Ω m)	0.39 @22 °C	@ °
	Cl (frm.resis.) (ppm)	16.0K	
	Cl (frm.titrat) (ppm)	9.0K	
	NO_3 (ppm)	30	
	pH	8.5	
	OTHER TRACERS ( )		
	DENSITY PPG	8.2	
	FLUORESCENCE	FILM ON SURF	
	COLOUR	LT BRN	
	COMMENTS		
	(d) OTHER SAMPLE PROPERTIES		
F.	MUD PROPERTIES:		
	TYPE	S/W GEL	S/W GEL
	RESISTIVITY (Ω m)	0.48 @19°C	0.48 @19°C
	Cl (frm.resis.) (ppm)	14.0K	14.0K
	Cl (frm.titrat) (ppm)	14.0K	14.0K
	NO_3 Drld/1st.circ ppm	0 / 50	0 / 50
	pH	10.0	10.0
	OTHER TRACERS ( )		
	DENSITY (PPG)	9.7	9.7
G.	GENRAL COMMENTS		
	*	H_2S FROM OPEN CHAMBER	SAMPLE SEALED.
		WATER IS A MIX OF FORM'N WATER & FILTRATE.	

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.

NOTE :- WHEN CIRC. RESUMED AFTER 44:45 HRS A MUD SAMPLE FM. FLOWLINE GAVE ONLY TR. NITRATES. SO WATER SAMPLE NITRATE VALUES ARE NOT RELIABLE

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

COMPANY ESSO AUSTRALIA LTD. WELL SEAHORSE No.2.

RUN No. RFT. No.9. PRESSURE GAUGE TYPE H.P.

	CHAMBER No.	1.	2.			
	CHAMBER CAPACITY (GAL.)	6	1			
	CHOKE SIZE (SQIN)	.030	.020		OIL PROPERTIES CONT:	CHAMB. 1. / CHAMB. 2.
	SEAT No.	59	59		ODOUR	
	DEPTH(m) (frm.RKB)	1603.2			POUR POINT (°C)	-5.5
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS		COMMENTS	
	TOOL SET	10 :05 :	: — :		(c) WATER PROPERTIES:	
	PRETEST OPEN	10 :05 :	: — :		RESISTIVITY (Ω m)	.39 @20 ° / @ °
	TIME OPEN	:04 :	: — :		Cl (frm.resis.) (ppm)	17.5
	CHAMBER OPEN	10 :09 :	10 :33 :		Cl (frm.titrat) (ppm)	9.0
	CHAMBER FULL	10 :22 :	10 :37 :		NO_3 (ppm)	NIL
	FILL TIME	:13 :	:04 :		pH	8.0
	START BUILD UP	10 :22 :	10 :37 :		OTHER TRACERS ( )	
	FINISH BUILD UP	10 :32 :	10 :40 :		DENSITY P.P.G	8.0
	BUILD UP TIME	:10 :	:03 :		FLUORESCENCE	
	SEAL CHAMBER	10 :32 :	10 :40 :		COLOUR	STRAW BRN
	TOOL RETRACT	: — :	10 :42 :		COMMENTS	MAINLY FOR WATER FILT.
	TOTAL TIME	27 :	:10 :		(d) OTHER SAMPLE PROPERTIES	
B.	SAMPLE PRESSURES			F.	MUD PROPERTIES:	
	IHP (PSIA)	2753	—		TYPE	S/W GEL / S/W GEL
	ISIP (PSIA)	2283.0	—		RESISTIVITY (Ω m)	0.48 @19°C / 0.48@19°C
	IFP (PSIA)	650	900		Cl (frm.resis.) (ppm)	14.0K / 14.0K
	FFP (PSIA)	2279.6	2280		Cl (frm.titrat) (ppm)	14.0K / 14.0K
	FSIP (PSIA)	2281.3	2281.3		NO_3 Drld/lst.circ ppm	0 / 50 / 0 / 50
	FHP (PSIG)	—	2756		pH	10.0 / 10.0
	TEMP.CORR.ifapp.(—)	—	—		OTHER TRACERS ( )	
	COMMENTS				DENSITY (ppg)	9.7 / 9.7
C.	TEMPERATURE			G.	GENRAL COMMENTS	SAMPLE SEALED.
	DEPTH TOOL REACHED (m)	1616				
	MAX.REC.TEMP. (°C)	70				
	TIME CIRC.STOPPED	03 3024/ JUL	: /			
	TIME SINCE CIRC.	30 :35	:			
D	SAMPLE RECOVERY					
	SURFACE PRESSURE (PSIG)	200				
	VOL.GAS ( )	0.91				
	VOL.OIL (L)	3.65				
	VOL.WATER (L)	16.75				
	VOL.FILTRATE (L)					
	VOL.CONDENSATE (L)					
	VOL.OTHER waxy scum (L)	0.75				
E	SAMPLE PROPERTIES					
	(a) GASCOMP C1 (ppm)	24624				
	C2 (ppm)	8620				
	C3 (ppm)	4825				
	C4 (ppm)	2277				
	C5 (ppm)	879				
	C6+ (ppm)	211				
	CO2 (%)	NIL				
	H2S (ppm)	NIL				
	(b) OIL PROPERTIES					
	DENSITY: HYDOMETER (API)	52.5 @ 60° F	@ °			
	REFRACTOMETER	49 @ 60° F	@ °			
	COLOUR	GRN/BLK				
	FLUORESCENCE	BRTYEL—WH				
	G.O.R. (CF/STB)	43				

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.

NOTE: WHEN CIRCULATION WAS RESUMED AFTER 44:45 HRS. A MUD SAMPLE FM. FLOWLINE GAVE ONLY TR. NITRATES. SO WATER SAMPLE NITRATE VALUES ARE NOT RELIABLE

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

COMPANY ESSO AUSTRALIA LTD. WELL SEAHORSE No.2.

RUN No. RFT No.10. PRESSURE GAUGE TYPE H.P.

		CHAMBER No.	1.	2.
		CHAMBER CAPACITY (GAL)	6	1
		CHOKE SIZE (SQIN)	.030	.020
		SEAT No.	64	64
		DEPTH(m) (frm.RKB)	1454.2	1454.2
A.		RECORDING TIMES	HH:MM:SS	HH:MM:SS
		TOOL SET	15 01 :	: — :
		PRETEST OPEN	15 01 :	: — :
		TIME OPEN	03 :	: — :
		CHAMBER OPEN	15 04 :	15 20 :
		CHAMBER FULL	15 11 :	15 23 :
		FILL TIME	07 :	03 :
		START BUILD UP	15 11 :	15 23 :
		FINISH BUILD UP	15 18 :	15 26 :
		BUILD UP TIME	07 :	: 03:
		SEAL CHAMBER	15 18 :	15 26 :
		TOOL RETRACT	: — :	15 29 :
		TOTAL TIME	: 17:	: 09:
B.		SAMPLE PRESSURES		
		IHP (PSIA)	2502	—
		ISIP (PSIA)	2061.5	—
		IFP (PSIA)	1714	1960
		FFP (PSIA)	2055.5	2055.5
		FSIP (PSIA)	2056.4	2056.7
		FHP (PSIG)	—	2503
		TEMP.CORR.ifapp.(-)	—	—
		COMMENTS		
C.		TEMPERATURE		
		DEPTH TOOL REACHED(m)	1575	
		MAX.REC.TEMP. (°C)	66	
		TIME CIRC.STOPPED	03 :3024/ JUL	: /
		TIME SINCE CIRC.	35 :30	:
D.		SAMPLE RECOVERY		
		SURFACE PRESSURE (PSIG)	0	150
		VOL.GAS (CF)	0.22	NIL
		VOL.OIL (L)	THIN FILM	THIN FILM
		VOL.WATER (L)	21.3	3.8
		VOL.FILTRATE (L)		
		VOL.CONDENSATE (L)		
		VOL.OTHER (L)		
E.		SAMPLE PROPERTIES		
	(a)GASCOMP	C1 (ppm)	12859	
		C2 (ppm)	7559	INSUFF-
		C3 (ppm)	5263	ICIENT
		C4 (ppm)	2484	TO
		C5 (ppm)	760	MEASURE
		C6+ (ppm)	105	
		CO2 (%)		
		H2S (ppm)	60*	90*
	(b)OIL PROPERTIES			
	DENSITY:	HYDOMETER	@ °	@ °
	( )	REFRACTOMETER	@ °	@ °
	COLOUR			
	FLUORESCENCE		WK BLU/WH	WK BLU/WH
	C.O.R. ( )			

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (°C)		
	COMMENTS		
	(c)WATER PROPERTIES:		
	RESISTIVITY (Ω m)	.39 @22 °C	.50 @18 °C
	Cl (frm.resis.) (ppm)	18.0K	14.0K
	Cl (frm.titrat) (ppm)	9.5K	8.5K
	NO_3 (ppm)	NIL	NIL
	pH	7.5	7.5
	OTHER TRACERS ( )		
	DENSITY (PPG)	8.0	8.0
	FLUORESCENCE		
	COLOUR	GRN/GRY	LT GRN/GRY
	COMMENTS	FORM'N WAT & FILTRATE	FORM'N WAT & FILTRATE
	(d) OTHER SAMPLE PROPERTIES	SAND PRESENT	NO SAND PRESENT
F.	MUD PROPERTIES:		
	TYPE	S/W GEL	S/W GEL
	RESISTIVITY (Ω m)	0.48 @ 19°C	0. @ °
	Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	Cl (frm.titrat) (ppm)	14.0 K	14.0 K
	NO_3 Drld/1st.circ ppm	0/50	0/50
	pH	10.0	10.0
	OTHER TRACERS ( )		
	DENSITY (ppg)	9.7	9.7
G.	GENRAL COMMENTS		
		*H_2S RDG FROM OPEN CHAMBER	*H_2S RDG FROM OPEN CHAMBER

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.

NOTE :- WHEN CIRCULATION RESUMED AFTER 44:45 HRS. A MUD SAMPLE FM. FLOWLINE GAVE ONLY TR. NITRATES. SO WATER SAMPLE NITRATE VALUES ARE NOT RELIABLE.

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

COMPANY ESSO AUSTRALIA LTD. WELL SEAHORSE No.2

RUN No. RFT No. 11 PRESSURE GAUGE TYPE H.P.

CHAMBER No.		1.	2.
CHAMBER CAPACITY (GAL)		6	6
CHOKE SIZE (64IN)		.030	.020
SEAT No.		68	68
DEPTH(M) (frm.RKB)		1487.0	1487.0
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS
	TOOL SET	19: 10:	: - :
	PRETEST OPEN	19: 10:	: - :
	TIME OPEN	: 02:	: - :
	CHAMBER OPEN	19: 12:	19: 23:
	CHAMBER FULL	19: 20:	19: 26:
	FILL TIME	: 08:	: 03:
	START BUILD UP	19: 20:	19: 26:
	FINISH BUILD UP	19: 22:	19: 27:
	BUILD UP TIME	: 02:	: 01:
	SEAL CHAMBER	19: 23:	19: 28:
	TOOL RETRACT	: - :	19: 29:
	TOTAL TIME	: 13:	: 06:
B.	SAMPLE PRESSURES		
	IHP (PSIA)	2552	-
	ISIP (PSIA)	2109.8	2109.8
	IFP (PSIA)	1680	1984
	FFP (PSIA)	2109.6	2109
	FSIP (PSIA)	2109.8	2109.8
	FHP (PSIA)	-	2553
	TEMP.CORR.ifapp.(-)	-	-
	COMMENTS		
C.	TEMPERATURE		
	DEPTH TOOL REACHED (M)	1500	
	MAX.REC.TEMP. (°C)	65	
	TIME CIRC.STOPPED	03 :30 24/JUL	: /
	TIME SINCE CIRC.	39 40	:
D.	SAMPLE RECOVERY		
	SURFACE PRESSURE (PSIG)	0	0
	VOL.GAS (CF)	NIL	NIL
	VOL.OIL (L)	THIN FILM	THIN FILM
	VOL.WATER (L)	21.3	3.6
	VOL.FILTRATE (L)	SEE COMM.	SEE COMM.
	VOL.CONDENSATE (L)	0	0
	VOL.OTHER (L)	0	0
E.	SAMPLE PROPERTIES		
	(a)GASCOMP C1 (ppm)	NOT MEASURABLE	NOT MEASURABLE
	C2 (ppm)		
	C3 (ppm)		
	C4 (ppm)		
	C5 (ppm)		
	C6+ (ppm)		
	CO2 (%)		
	H2S (ppm)	20 *	50 *
	(b)OIL PROPERTIES		
	DENSITY: HYDOMETER	@ °	@ °
	( ) REFRACTOMETER	@ °	@ °
	COLOUR	BRN	-
	FLUORESCENCE	BLU/WH	-
	G.O.R. ( )		

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (°)		
	COMMENTS		
	(c)WATER PROPERTIES:		
	RESISTIVITY (Ω m)	0.42 @21 °C	0.66 @17 °C
	Cl (frm.resis.) (ppm)	16.0 K	11.0 K
	Cl (frm.titrat) (ppm)	11.0 K	9.0 K
	NO_3 (ppm)	NIL	NIL
	pH	7.5	7.0
	OTHER TRACERS ( )		
	DENSITY (PPG)	8.1	8.2
	FLUORESCENCE		
	COLOUR	STW BRN	LT GRN/GRY
	COMMENTS	FILTRATE & FORM°N WAT.	FILTRATE & FORM°N WAT.
	(d) OTHER SAMPLE PROPERTIES	SAND PRESENT	
F.	MUD PROPERTIES:		
	TYPE	SW/GEL	SW/GEL
	RESISTIVITY (Ω M)	.48 @19 °C	.48 @19 °C
	Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	Cl (frm.titrat) (ppm)	14.0 K	14.0 K
	NO_3 Drld/lst.circ ppm	0 / 50	0 / 50
	pH	10.0	10.0
	OTHER TRACERS ( )		
	DENSITY (PPG)	9.7	9.7
G.	GENRAL COMMENTS		
		* H_2S RDG FROM OPEN CHAMBER	* H_2S RDG FRUM OPEN CHAMBER

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 SEAHORSE No.2

RUN No. RFT No.11 PRESSURE GAUGE TYPE H.P.

	CHAMBER No.	1.	2.			
	CHAMBER CAPACITY (GAL)	6	1			
	CHOKE SIZE (SQIN)	.030	.020		OIL PROPERTIES CONT:	
	SEAT No.	68	68		ODOUR	
	DEPTH(m) (frm.RKB)	1487.0	1487.0		POUR POINT (°C)	
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS		COMMENTS	
	TOOL SET	19 :10 :	: - :		(c)WATER PROPERTIES:	
	PRETEST OPEN	19 :10 :	: - :		RESISTIVITY (Ω m)	0.42 @21°C
	TIME OPEN	02 :	: - :		Cl (frm.resis.) (ppm)	16.0 K
	CHAMBER OPEN	19: 12:	19:23:		Cl (frm.titrat) (ppm)	11.0 K
	CHAMBER FULL	19:20:	19:26:		NO_3 (ppm)	NIL
	FILL TIME	:08:	:03:		pH	7.5
	START BUILD UP	19:20:	19:26:		OTHER TRACERS ( )	
	FINISH BUILD UP	19:22:	19:27:		DENSITY (ppg)	8.1
	BUILD UP TIME	:02:	:01:		FLUORESCENCE	
	SEAL CHAMBER	19:23:	19:28:		COLOUR	STRAW BRN
	TOOL RETRACT	: - :	19:29:		COMMENTS	FILTRATE & FORM.WATER
	TOTAL TIME	:13:	:06:		(d) OTHER SAMPLE PROPERTIES	SAND PRESENT
B.	SAMPLE PRESSURES			F.	MUD PROPERTIES:	
	IHP (psia)	2552	-		TYPE	
	ISIP (psia)	2109.8	2109.8		RESISTIVITY (m)	.48 @19°C
	IFP (psia)	1680	1984		Cl (frm.resis.) (ppm)	14.0 K
	FFP (psia)	2109.6	2109		Cl (frm.titrat) (ppm)	14.0 K
	FSIP (psia)	2109.8	2109.8		NO_3 Drld/1st.circ (ppm)	0 /50
	FHP (psia)	-	2553		pH	10.0
	TEMP.CORR.ifapp.(-)	-	-		OTHER TRACERS ( )	
	COMMENTS				DENSITY (ppg)	9.7
C.	TEMPERATURE			G.	GENRAL COMMENTS	
	DEPTH TOOL REACHED(m)	1500				* H_2S RDG FROM OPEN CHAMBER
	MAX.REC.TEMP. (°C)	65				
	TIME CIRC.STOPPED	03:30 7/24	: /			
	TIME SINCE CIRC.	39:45	:			
D.	SAMPLE RECOVERY					
	SURFACE PRESSURE (psig)	0	0			
	VOL.GAS (L)	NIL	NIL			
	VOL.OIL (L)	THIN FILM	THIN FILM			
	VOL.WATER (L)	21.3	3.6			
	VOL.FILTRATE (L)					
	VOL.CONDENSATE (L)					
	VOL.OTHER (L)					
E.	SAMPLE PROPERTIES					
	(a)GASCOMP C1 (ppm)					
	C2 (ppm)					
	C3 (ppm)					
	C4 (ppm)					
	C5 (ppm)					
	C6+ (ppm)					
	CO2 (%)					
	H2S (ppm)	20 *	50*			
	(b)OIL PROPERTIES					
	DENSITY: HYDOMETER	@ °	@ °			
	( ) REFRACTOMETER	@ °	@ °			
	COLOUR	TR BRN	-			
	FLUORESCENCE	BLU/WH	-			
	G.O.R. ( )					

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.

NOTE : WHEN CIRCULATION RESUMED AFTER 44:45 HRS. A MUD SAMPLE FROM THE FLOWLINE GAVE ONLY A TRACE OF NITRATES. DUE TO THIS THE VALUE FOR NITRATES IN THE WATER SAMPLE CANNOT BE USED WITH CERTAINTY.

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

COMPANY ESSO AUSTRALIA LTD WELL SEAHORSE No.2

RUN No. RFT No.12 PRESSURE GAUGE TYPE H.P.

	CHAMBER No.	1.	2.
	CHAMBER CAPACITY (GAL)	6	1
	CHOKE SIZE (SQIN)	.030	.020
	SEAT No.	69	69
	DEPTH(M) (frm.RKB)	1451	1451
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS
	TOOL SET	08:25:	:- :
	PRETEST OPEN	08:25:	:- :
	TIME OPEN	:03:	:- :
	CHAMBER OPEN	08:35:	09:39:
	CHAMBER FULL	09:15:	09:47:
	FILL TIME	:50:	:08:
	START BUILD UP	09:15:	09:47:
	FINISH BUILD UP	09:38:	09:56:
	BUILD UP TIME	:23:	:09:
	SEAL CHAMBER	09:38:	09:57:
	TOOL RETRACT	:- :	09:58:
	TOTAL TIME	01:13:	:19:
B.	SAMPLE PRESSURES		
	IHP (PSIA)	2545	-
	ISIP (PSIA)	2074.7	-
	IFP (PSIA)	90	200
	FFP (PSIA)	2034	2038
	FSIP (PSIA)	2034	2040
	FHP (PSIA)	-	2541
	TEMP.CORR.ifapp.( )		
	COMMENTS		
C.	TEMPERATURE		
	DEPTH TOOL REACHED(M)	1475	
	MAX.REC.TEMP. (°C)	56	
	TIME CIRC.STOPPED	03:3026/JUL	: /
	TIME SINCE CIRC.	05:00	:
D	SAMPLE RECOVERY		
	SURFACE PRESSURE (PSIG	200	0
	VOL.GAS (CF)	.10	0
	VOL.OIL (L)	SCUM	THIN FILM
	VOL.WATER (L)	22.5	3.75
	VOL.FILTRATE (L)	SEE COMM.	SEE COMM.
	VOL.CONDENSATE (L)	0	0
	VOL.OTHER (L)	0	0
E	SAMPLE PROPERTIES		
	(a)GASCOMP C1 (ppm)	45964	NOT MEASURABLE
	C2 (ppm)	5444	
	C3 (ppm)	4386	
	C4 (ppm)	2208	
	C5 (ppm)	922	
	C6+ (ppm)	211	
	CO2 (%)	2	
	H2S (ppm)	10 *	
	(b)OIL PROPERTIES		
	DENSITY: HYDOMETER	@ °	@ °
	( ) REFRACTOMETER	@ °	@ °
	COLOUR		
	FLUORESCENCE	WK BLU/WH	WK BLU/WH
	G.O.R. ( )		

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (°)		
	COMMENTS		
	(c)WATER PROPERTIES:		
	RESISTIVITY (Ω m)	.36 @26°C	.37 @19°C
	Cl (frm.resis.) (ppm)	16.0 K	19.0 K
	Cl (frm.titrat) (ppm)	10.0 K	12.0 K
	NO_3 (ppm)	NIL	NIL
	pH	7.5	7.5
	OTHER TRACERS ( )		
	DENSITY (PPG)	8.1	8.1
	FLUORESCENCE		
	COLOUR	LT.YEL/BRN	LT.YEL/GRN
	COMMENTS	FORM'N WAT. & FILTRATE	FORM'N WAT. & FILTRATE
	(d) OTHER SAMPLE PROPERTIES		
F.	MUD PROPERTIES:		
	TYPE	S/W GEL	S/W GEL
	RESISTIVITY (Ω M)	.40 @26oC	.40 @26oC
	Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	Cl (frm.titrat) (ppm)	13.0 K	13.0 K
	NO_3 Drld/lst.circ (ppm)	0/40	0/40
	pH	10.5	10.5
	OTHER TRACERS ( )		
	DENSITY (PPG)	9.7	9.7
G.	GENRAL COMMENTS		
		*H_2S RDGS FROM OPEN CHAMBER	

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 SEAHORSE No.2

RUN No. RFT No.13 PRESSURE GAUGE TYPE H.P.

	CHAMBER No.	1.	2.
	CHAMBER CAPACITY (GAL)	6	1
	CHOKE SIZE (60IN)	.030	.020
	SEAT No.	73	73
	DEPTH(M) (frm.RKB)	1566.8	1566.8
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS
	TOOL SET	12 :48 :	: - :
	PRETEST OPEN	12 :48 :	: - :
	TIME OPEN	:04 :	: - :
	CHAMBER OPEN	12 :52 :	13 :07 :
	CHAMBER FULL	13 :03 :	13 :10 :
	FILL TIME	:11 :	:03 :
	START BUILD UP	13 :03 :	13 :10 :
	FINISH BUILD UP	13 :05 :	13 :11 :
	BUILD UP TIME	:02 :	:01 :
	SEAL CHAMBER	13 :06 :	13 :12 :
	TOOL RETRACT	: - :	13 :13 :
	TOTAL TIME	:18 :	:06 :
B.	SAMPLE PRESSURES		
	IHP (PSIA)	2728	-
	ISIP (PSIA)	2228.0	-
	IFP (PSIA)	750	1600
	FFP (PSIA)	2228	2228
	FSIP (PSIA)	2228	2227.6
	FHP (PSIA)	-	2728
	TEMP.CORR.ifapp.(-)	-	-
	COMMENTS		
C.	TEMPERATURE		
	DEPTH TOOL REACHED (M)	1575	
	MAX.REC.TEMP. (°C)	63	
	TIME CIRC.STOPPED	03:30 26JUL	: /
	TIME SINCE CIRC.	9:15	:
D	SAMPLE RECOVERY		
	SURFACE PRESSURE (PSIG)	0	0
	VOL.GAS (CF)	NIL	NIL
	VOL.OIL (L)	SCUM	FILM
	VOL.WATER (L)	21.0	3.7
	VOL.FILTRATE (L)	SEE COMM	SEE COMM
	VOL.CONDENSATE (L)	0	0
	VOL.OTHER (L)	0	0
E	SAMPLE PROPERTIES		
	(a)GASCOMP C1 (ppm)	NOT MEASURABLE	NOT MEASURABLE
	C2 (ppm)		
	C3 (ppm)		
	C4 (ppm)		
	C5 (ppm)		
	C6+ (ppm)		
	CO2 (%)		
	H2S. (ppm)	6 *	4 *
	(b)OIL PROPERTIES		
	DENSITY: HYDOMETER	@ °	@ °
	( ) REFRACTOMETER	@ °	@ °
	COLOUR		
	FLUORESCENCE	DUL BLU/WH	DUL BLU/WH
	C.O.R. ( )		

		CHAMB. 1.	CHAMB. 2.
	OIL PROPERTIES CONT:		
	ODOUR		
	POUR POINT (°)		
	COMMENTS		
	(c)WATER PROPERTIES:		
	RESISTIVITY (Ω m)	.62 @24 °C	.88 @20°C
	Cl (frm.resis.) (ppm)	10.0 K	8.0 K
	Cl (frm.titrat) (ppm)	8.0 K	7.0 K
	NO_3 (ppm)	10	NIL
	pH	7.5	7.0
	OTHER TRACERS ( )		
	DENSITY (PPG)	8.0	8.1
	FLUORESCENCE		
	COLOUR	GRN/GRY	LT GRN/GRY
	COMMENTS	FORM'N WAT. & FILTRATE	FORM'N WAT. & FILTRATE
	(d) OTHER SAMPLE PROPERTIES		
F.	MUD PROPERTIES:		
	TYPE	SW/GEL	SW/GEL
	RESISTIVITY (M)	.40@26°C	.40 @26°C
	Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	Cl (frm.titrat) (ppm)	13.0 K	13.0 K
	NO_3 Drld/1st.circ (ppm)	0 / 40	0 / 40
	pH	10.5	10.5
	OTHER TRACERS ( )		
	DENSITY (PPG)	9.7	9.7
G.	GENRAL COMMENTS		
		* H_2S RDG FROM OPEN CHAMBER	* H_2S RDG FROM OPEN CHAMBER

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 SEAHORSE No.2

RUN No. RFT No.14 PRESSURE GAUGE TYPE H.P.

	CHAMBER No.	1.	2.			CHAMB. 1.	CHAMB. 2.
	CHAMBER CAPACITY (GALL)	6	1		OIL PROPERTIES CONT:		
	CHOKE SIZE (SQIN)	.030	.020		ODOUR		
	SEAT No.	74	74		POUR POINT (°)		
	DEPTH(m) (frm.RKB)	1508.0	1508.0		COMMENTS		
A.	RECORDING TIMES	HH:MM:SS	HH:MM:SS		(c)WATER PROPERTIES:		
	TOOL SET	15:57:	:--:		RESISTIVITY (Ω m)	1.00 @26°c	1.56 @17°c
	PRETEST OPEN	15:57:	:--:		Cl (frm.resis.)(ppm)	6.0 K	4.8 K
	TIME OPEN	:04:	:--:		Cl (frm.titrat)(ppm)	6.0 k	5.0 k
	CHAMBER OPEN	16:01:	16:12:		NO_3 (ppm)	NIL	NIL
	CHAMBER FULL	16:09:	16:15:		pH	7.5	7.5
	FILL TIME	:08:	:03:		OTHER TRACERS ( )		
	START BUILD UP	16:09:	16:15:		DENSITY (ppg)	8.0	8.0
	FINISH BUILD UP	16:11:	16:15:		FLUORESCENCE		
	BUILD UP TIME	16:12:	16:15:		COLOUR	GRY/GRN	GRY/GRN
	SEAL CHAMBER	:--:	16:16:		COMMENTS	FORM'N WATER & FILTRATE	
	TOOL RETRACT	:15:	:04:		(d) OTHER SAMPLE PROPERTIES	TR SAND PRESENT	NO SAND PRESENT
	TOTAL TIME	: :	: :	F.	MUD PROPERTIES:		
B.	SAMPLE PRESSURES				TYPE	S/W GEL	S/W GEL
	IHP (psig)	2619	--		RESISTIVITY (m)	.40 @26°c	.40 @26°c
	ISIP (psig)	2139	--		Cl (frm.resis.) (ppm)	14.0 K	14.0 K
	IFP (psig)	1890	2090		Cl (frm.titrat) (ppm)	13.0 K	13.0 K
	FFP (psig)	2138.7	2138.7		NO_3 Drld/lst.circ ppm	0 /40	0 /40
	FSIP (psig)	2138.7	2138.7		pH	10.5	10.5
	FHP (psig)	--	2619		OTHER TRACERS ( )		
	TEMP.CORR.ifapp.(--)	--	--		DENSITY (ppg)	9.7	9.7
	COMMENTS			G.	GENRAL COMMENTS		
C.	TEMPERATURE					*H_2S RDG FROM OPEN MEASURING CHAMBER	*H_2S RDG FROM OPEN MEASURING CHAMBER
	DEPTH TOOL REACHED(m)	1525					
	MAX.REC.TEMP. (°c)	66					
	TIME CIRC.STOPPED	03:30 26/7	: /				
	TIME SINCE CIRC.	12:30	:				
D	SAMPLE RECOVERY						
	SURFACE PRESSURE (psig)	0	0				
	VOL.GAS (CF)	0	0				
	VOL.OIL (L)	THIN SCUM	OIL FILM				
	VOL.WATER (L)	21.5	3.7				
	VOL.FILTRATE (L)	SEE COMM	SEE COMM				
	VOL.CONDENSATE (L)	0	0				
	VOL.OTHER (L)	0	0				
E	SAMPLE PROPERTIES						
	(a)GASCOMP C1 ( )						
	C2 ( )	NO GAS RECOVERED	NO GAS RECOVERED				
	C3 ( )						
	C4 ( )						
	C5 ( )						
	C6+ ( )						
	CO2 ( )						
	H2S (ppm)	25*	40*				
	(b)OIL PROPERTIES						
	DENSITY: HYDOMETER	@ °	@ °				
	( ) REFRACTOMETER	@ °	@ °				
	COLOUR						
	FLUORESCENCE	DULLYEL/BLU	V.DULLGRN				
	G.O.R. ( )						

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.

12. 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 PLOTS.

1482m: This plot is made from formation gas from a siltstone immediately above the core No.1 interval. The plot indicates wet gas as the pore fluid. No C_5 or C_6 was detected from this zone. No fluorescence was detected from this siltstone

No plot could be drawn for formation gas from the cored zone, as no gas components "heavier" than C_3 were detected. No fluorescence was found in the recovered core.

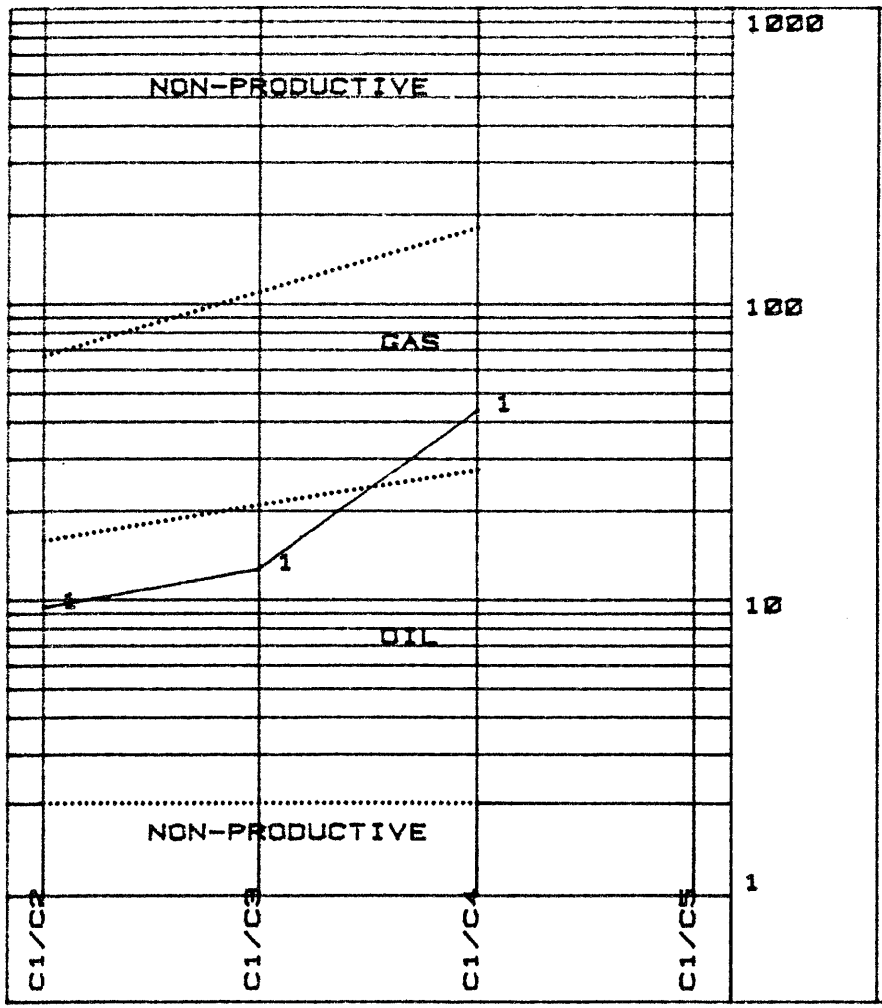
1576m : This plot is from a sandstone which showed no fluorescence. At 1575m, the gas composition changed significantly from C_1 and C_2, to C_1 to C_6. Also C_3 was found in greater volume than C_2,- a sign of a false show, possibly due to mud additives. This could not be verified, as at the time this gas was circulated up no ammonium sterate or other diesel based additives had been added for over 24 Hrs.
As can be seen on the plot, the homothetic centre is not in the "S" zone;- a sign of a false show.

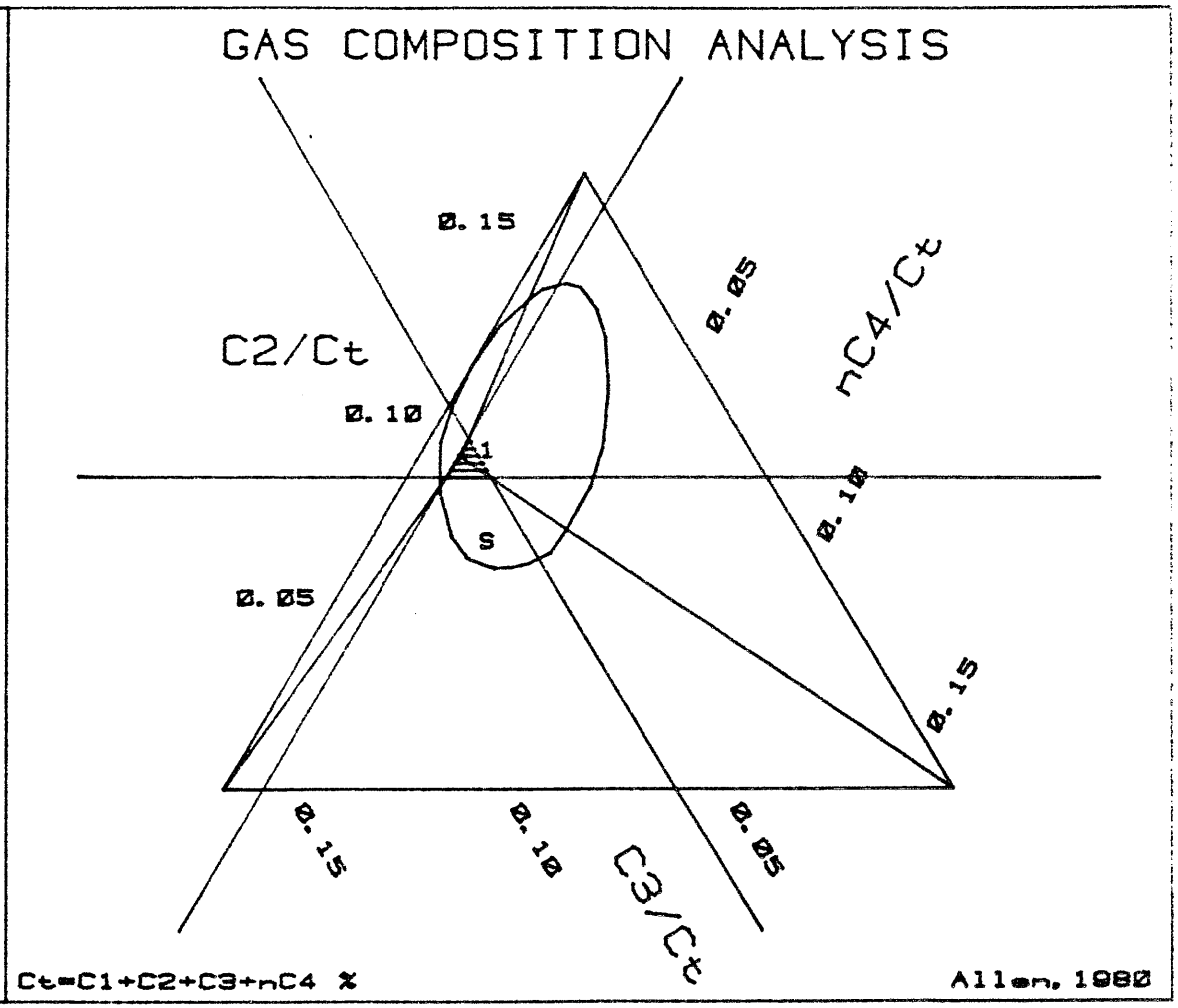
1780m : This plot is drawm from a gas sample from a sandstone/siltstone in which no fluorescence was found. The plot indicates that the formation fluid may be oil. Whether this formation gas has been affected by mud additives cannot be checked.

1802m : Like the plot from the sample from 1780m, this plot again indicates oil as the pore fluid. It can be seen that the gas composition does not vary significantly between this depth and from a sample from 1807m, where 90% coal was found. Again this suggests that the source of the heavier components is not the formation.

1974m : This plot is drawm from a gas sample from a sandstone near to total depth. The plot indicates wet gas or high G.O.R oil as the formation fluid.

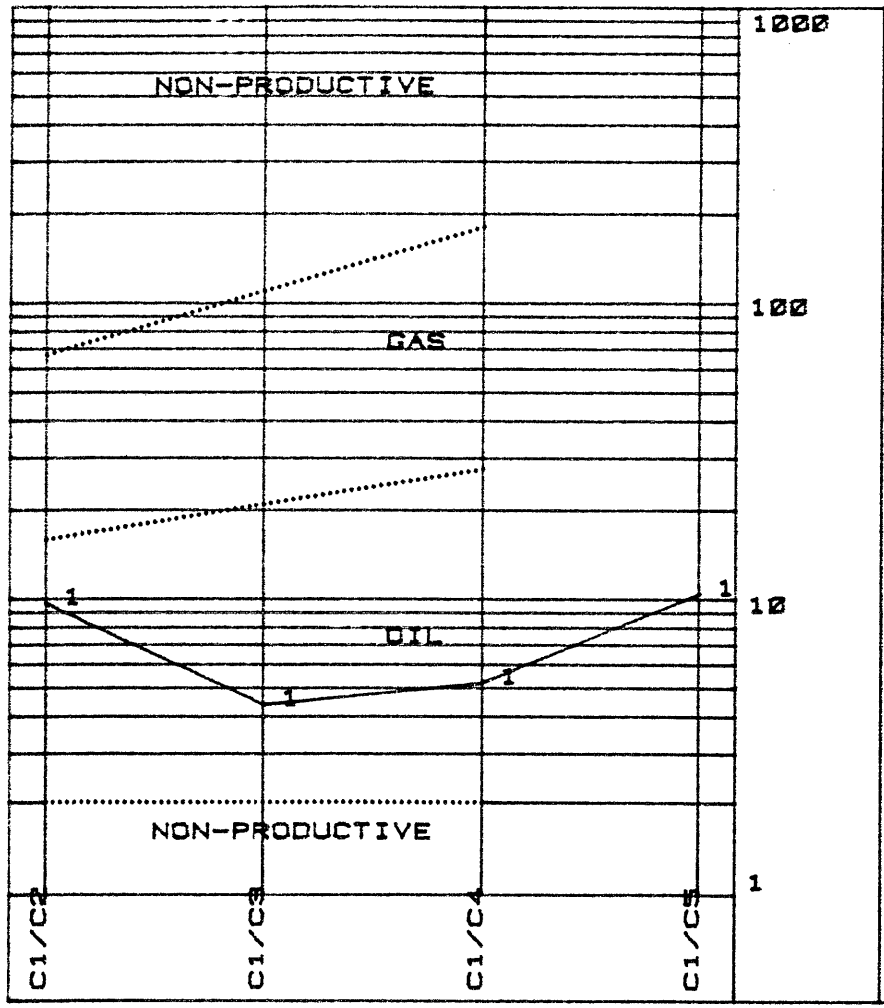
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SEAHORSE # 2

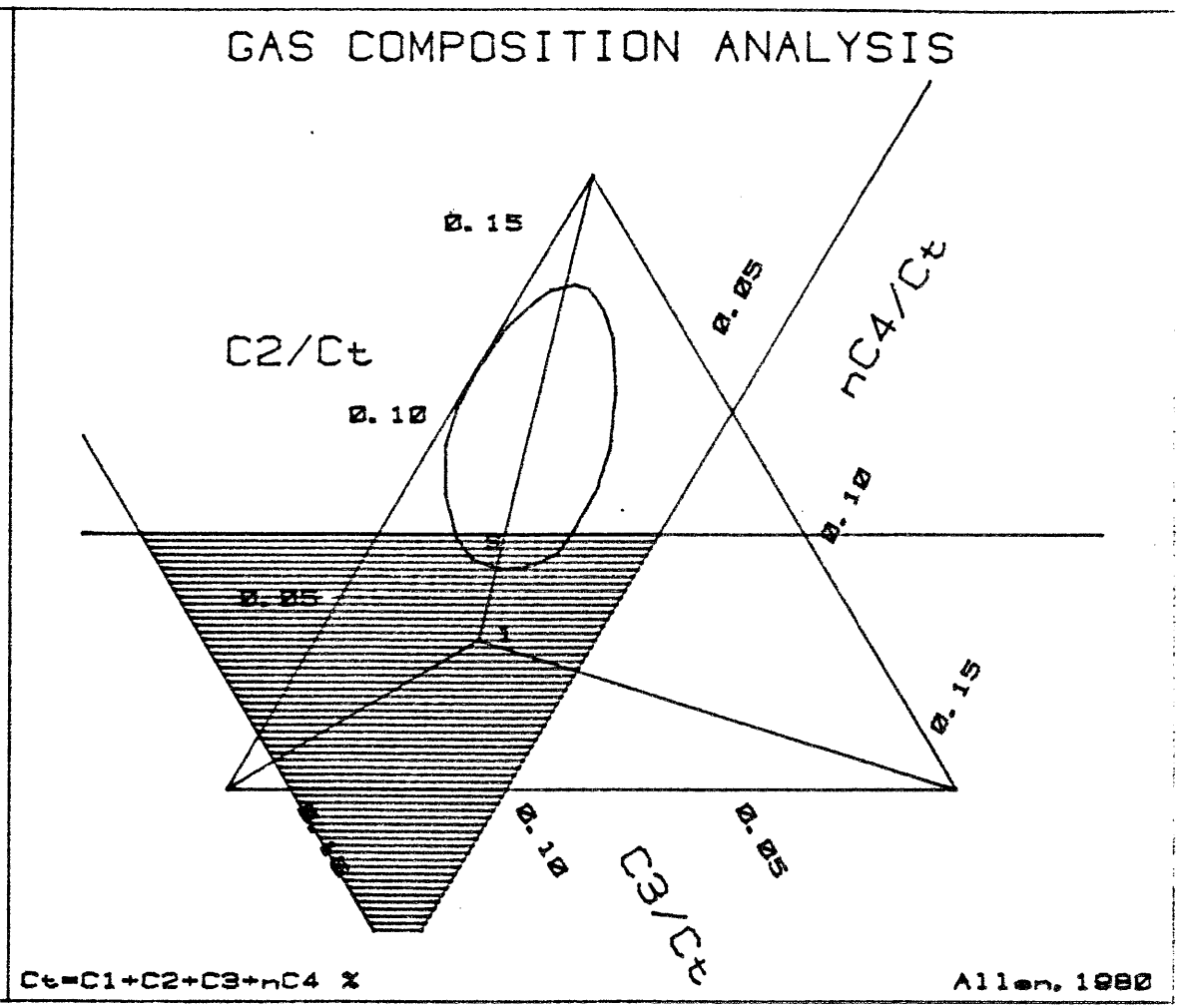




NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1482	0.369	0.039	0.028	0.004	0.004	0.000	0.000	0.441	9	13	44	

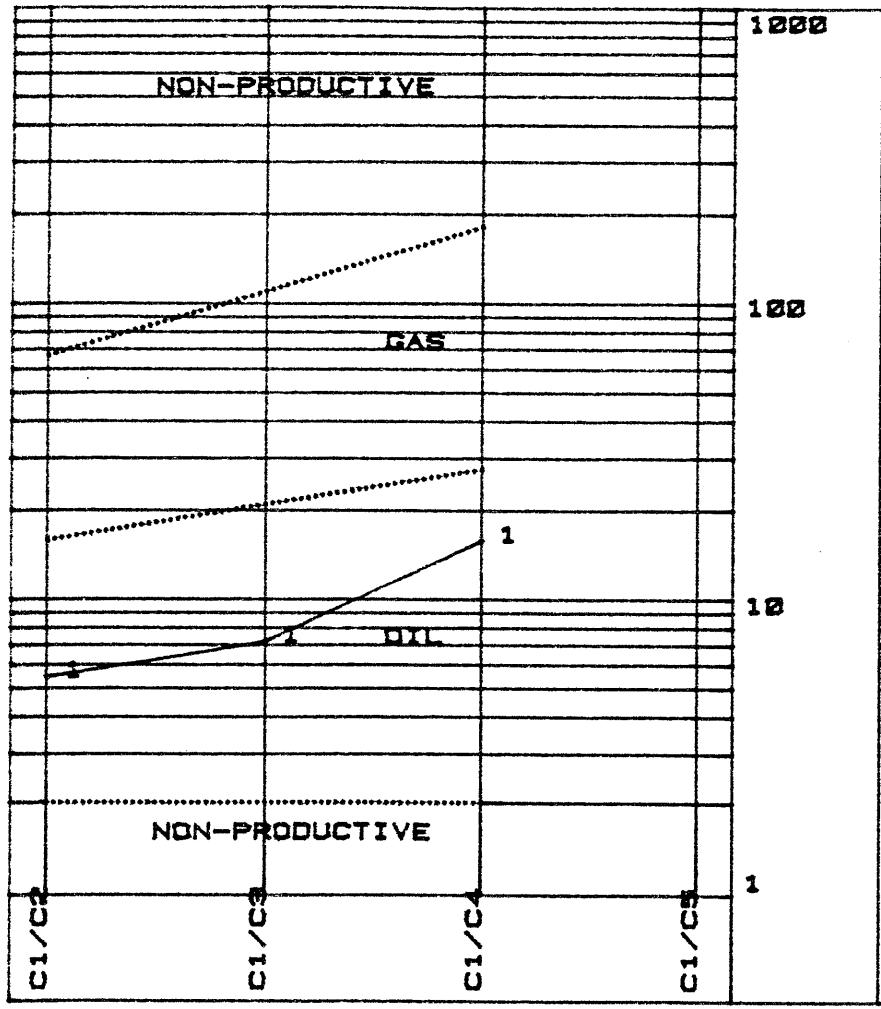
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SEAHORSE # 2

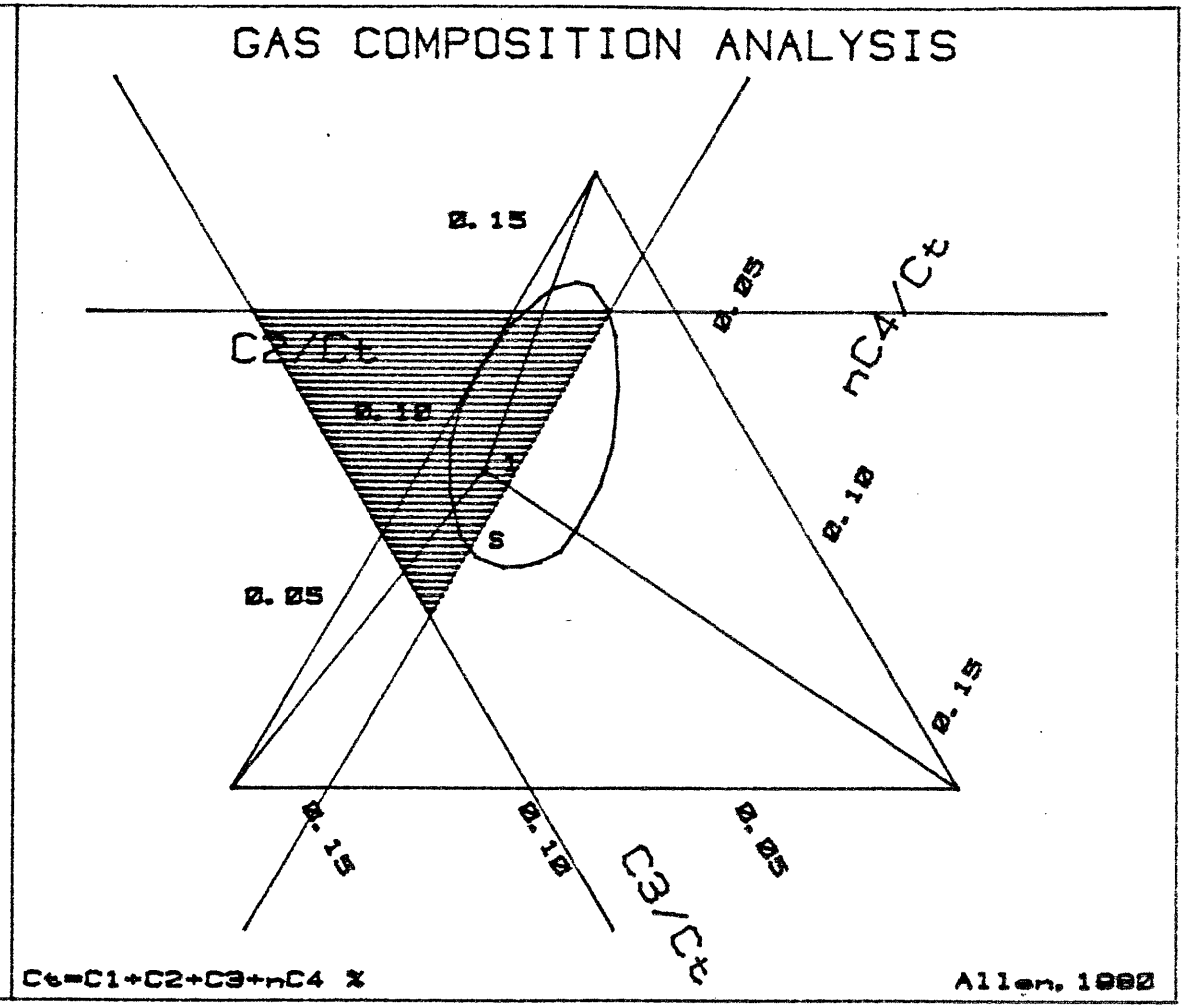




NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1578	0.025	0.003	0.008	0.002	0.002	0.002	0.002	0.038	10	4	5	10

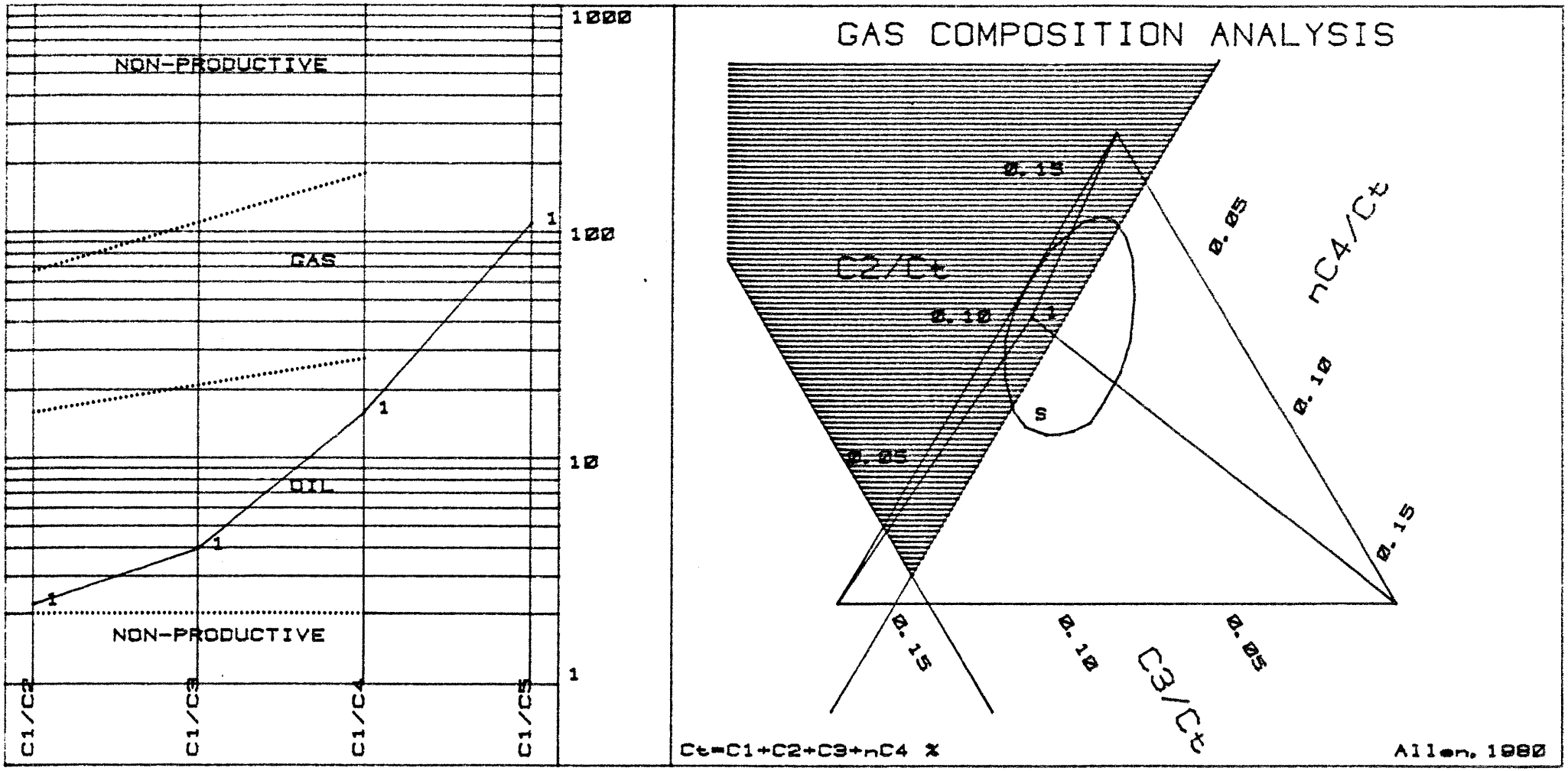
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SEAHORSE # 2





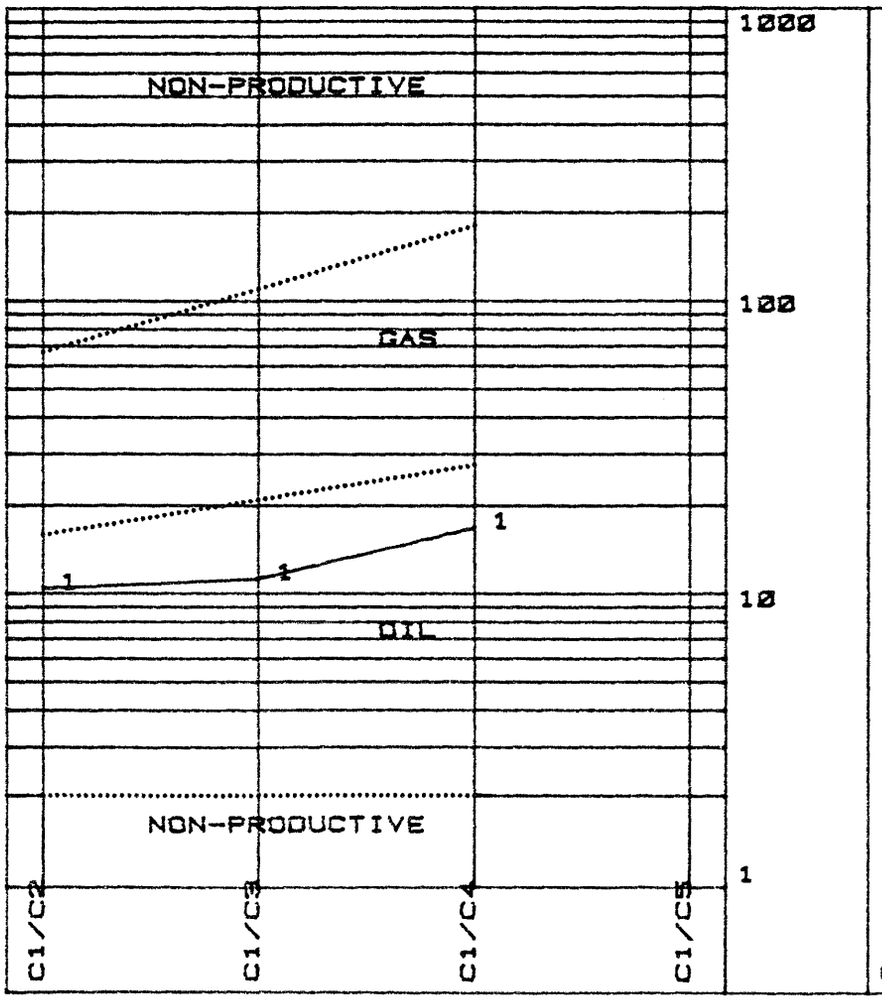
NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1780	0.018	0.003	0.002	0.001	0.001	0.000	0.000	0.021	5	7	16	

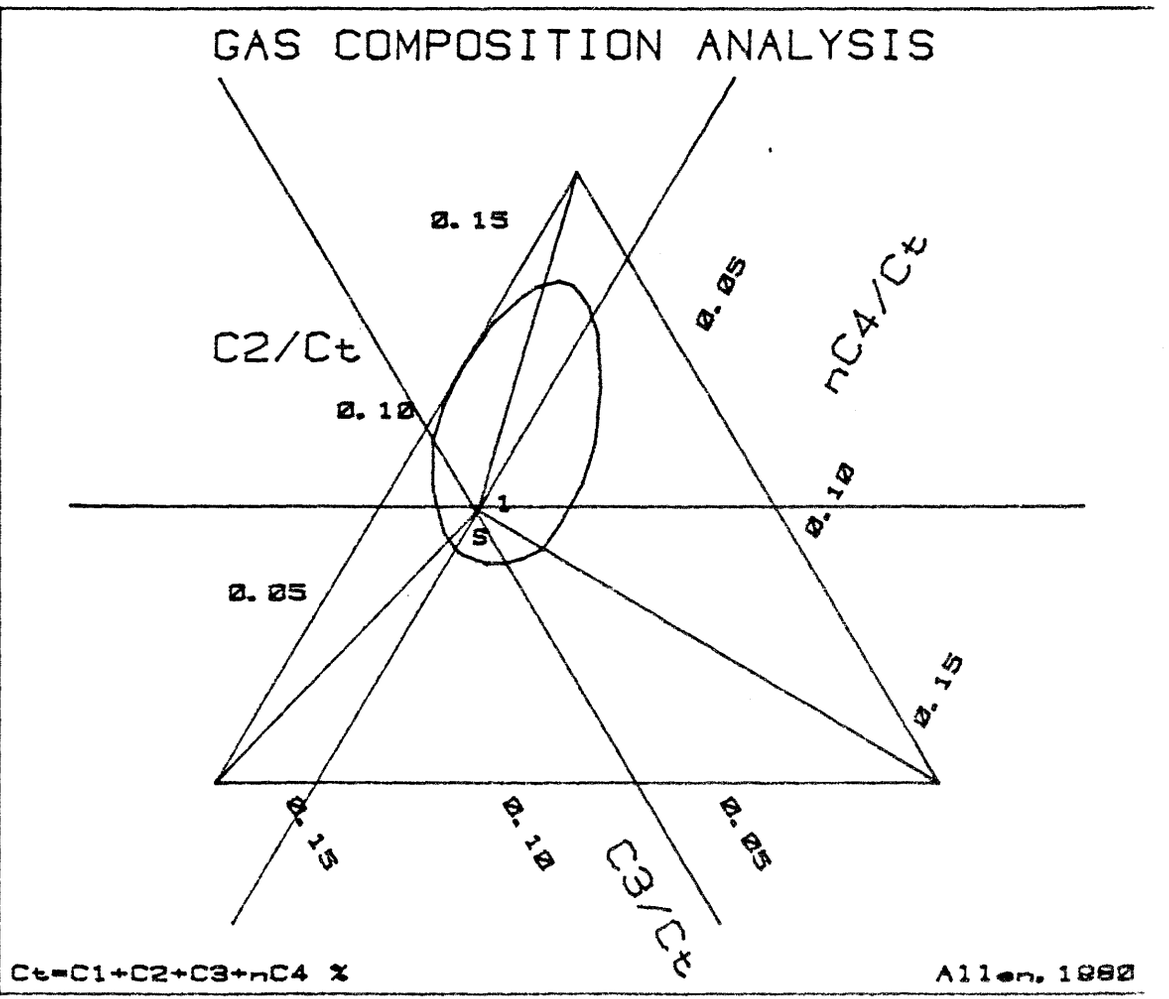
CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SEAHORSE # 2



NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1902	0.078	0.034	0.019	0.002	0.002	0.001	0.000	0.132	2	4	16	109

CORE LAB. INTL. LTD. Client: ESSO AUSTRALIA LTD. Well: SEAHORSE # 2





NO.	DEPTH	C1	C2	C3	iC4	nC4	C5	C6 %	Ct	C1/C2	C1/C3	C1/C4	C1/C5
1	1974	0.014	0.001	0.001	0.000	0.000	0.000	0.000	0.016	10	11	17	

13. B.H.T. CALCULATIONS.

CORE LAB

B.H.T. EXTRAPOLATION FOR SEAHORSE NO. 2

STRAIGHT LINE LEAST SQUARES BEST FIT

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

ENTERED DATA:

DATA SET #	1/TIME	TEMP(DEG C)	TIME(HOURS)
1	0.108	74.4	9.25
2	0.073	76.6	13.67
3	0.057	78.3	17.58

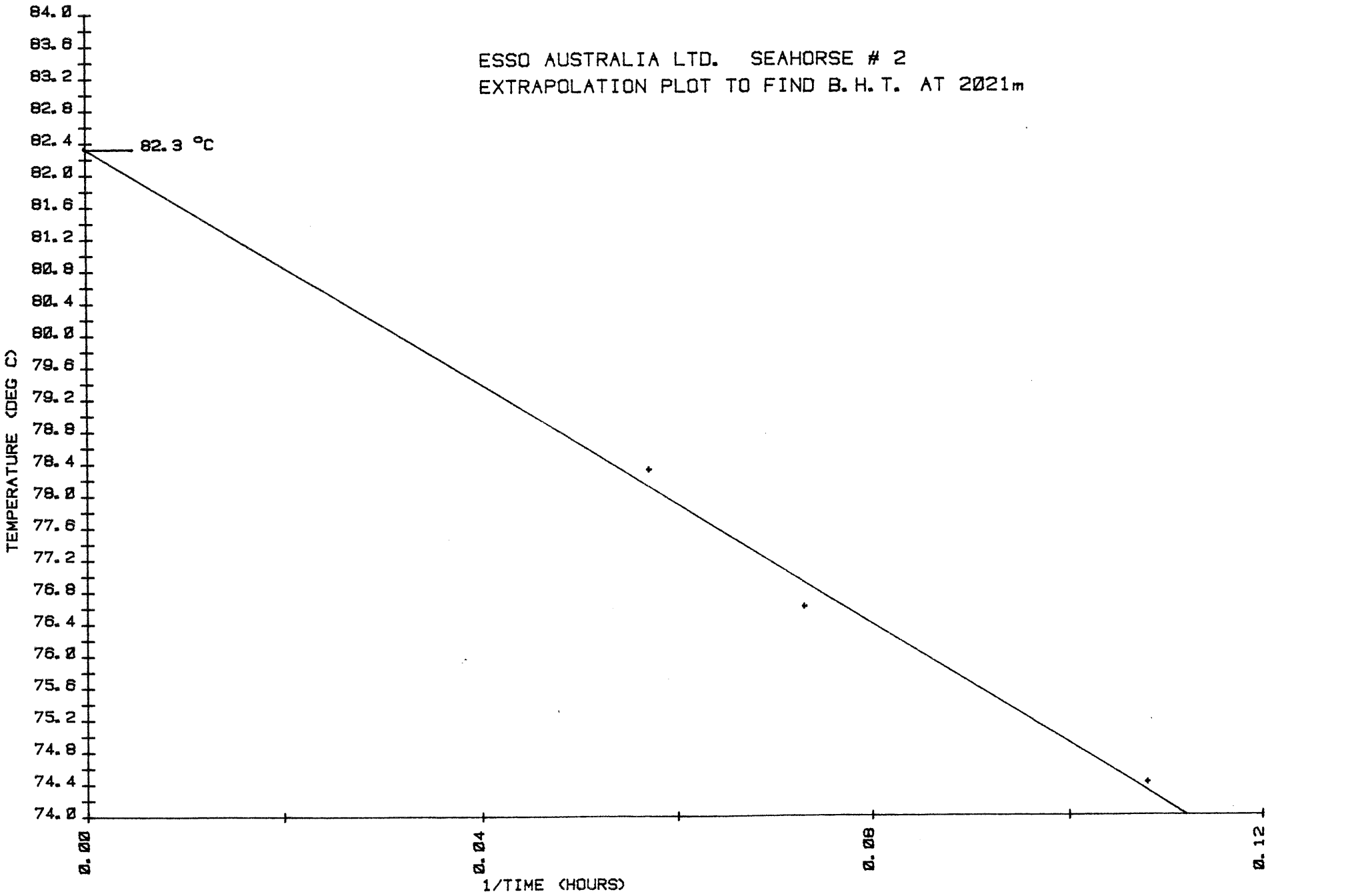
COEFFICIENT & CONSTANT:

Y = m.X + c where m = -7.4252817E 01 and c = 8.2324057E 01

INTERPOLATED DATA:

1/TIME	TEMP(DEG C)
0.000	82.3

ESSO AUSTRALIA LTD. SEAHORSE # 2
EXTRAPOLATION PLOT TO FIND B.H.T. AT 2021m



14. PORE PRESSURE SUMMARY. & P.I.T. DATA

PORE PRESSURE SUMMARY

Seahorse No. 2 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 and, as can been seen from the plot, the trend remains fairly scattered down to 900m, due primarily to the major sandstone beds encountered between 530m and 900m, interbedded with limestone.

From 900m to 1080m a normal trend is seen to be developing but moderate scattering still occurs due to the minor sandstone in the lithology with lateral shifting of the trend in places concurrent with mud weight changes, particularly between 1020m and 1050m where the mud density was increased from 9.0 to 9.3ppg and then again as the density fell to 8.9 and was raised to 9.3ppg between 1050m and 1090m.

A lithology change from limestone to siltstone at 1080m and a reasonably steady mud density after 1100m allowed the observation of a normal trend in the d'c as far as 1200m. The steady increase in mud density from 9.2 to 9.7ppg between 1200m and 1250m is then likely to be responsible for the abnormal trend in this interval.

The sharper increasing trend in the d'c after 1250 metres, although the mud density remains steady, is most likely due to formation change as minor claystone was observed in the samples below 1250 metres, with shale at 1280 metres. Below 1280 metres the d'c trend becomes more scattered and shifts abnormally, concurrent with an increase in mud density from 9.7 ppg to 9.8 ppg and a lithology change back to siltstone.

At around 1370 metres, another formation change occurs as the Latrobe Group is entered and the d'c trend becomes increasingly widely scattered thereafter.

No abnormalities in the mud gas plot can be seen. The increase in background gas from 1100to 1400 metres being attributable to a lithology change rather than any abnormality in formation pressure.

No shale density measurements were made as no beds of true shales were encountered. Also, 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 lack of shale poits encountered did not 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 Seahorse No. 2 are believed to be normally pressured throughout. The qualitative data for this log is from the RFT tests and the normal pore pressure is around 8.5 ppg MSL, EMW.

Overburden gradient calculations and a plot of the gradient are included in this report.It was not possible to derive a true fracture gradient as insufficient LOT's were taken.One PIT was made, at the 13.375" casing shoe (793 metres).LOT's were not required as high mud weights were not anticipated and the PIT that was conducted gave a value of 13.5 EMW.

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

The average geothermal gradient for Seahorse No 2 was $3.58^{o}C/100$ m. This is very similar to the majority of wells in the Gippsland Basin.

15. OVERBURDEN GRADIENT CALCULATIONS

DEPTH . . . . . .metres

BULK DENSITY . . . . . .gm/cc

OVERBURDEN PRESSURE INCREMENT .psi

CUMULATIVE OVERBURDEN PRESSURE .psi

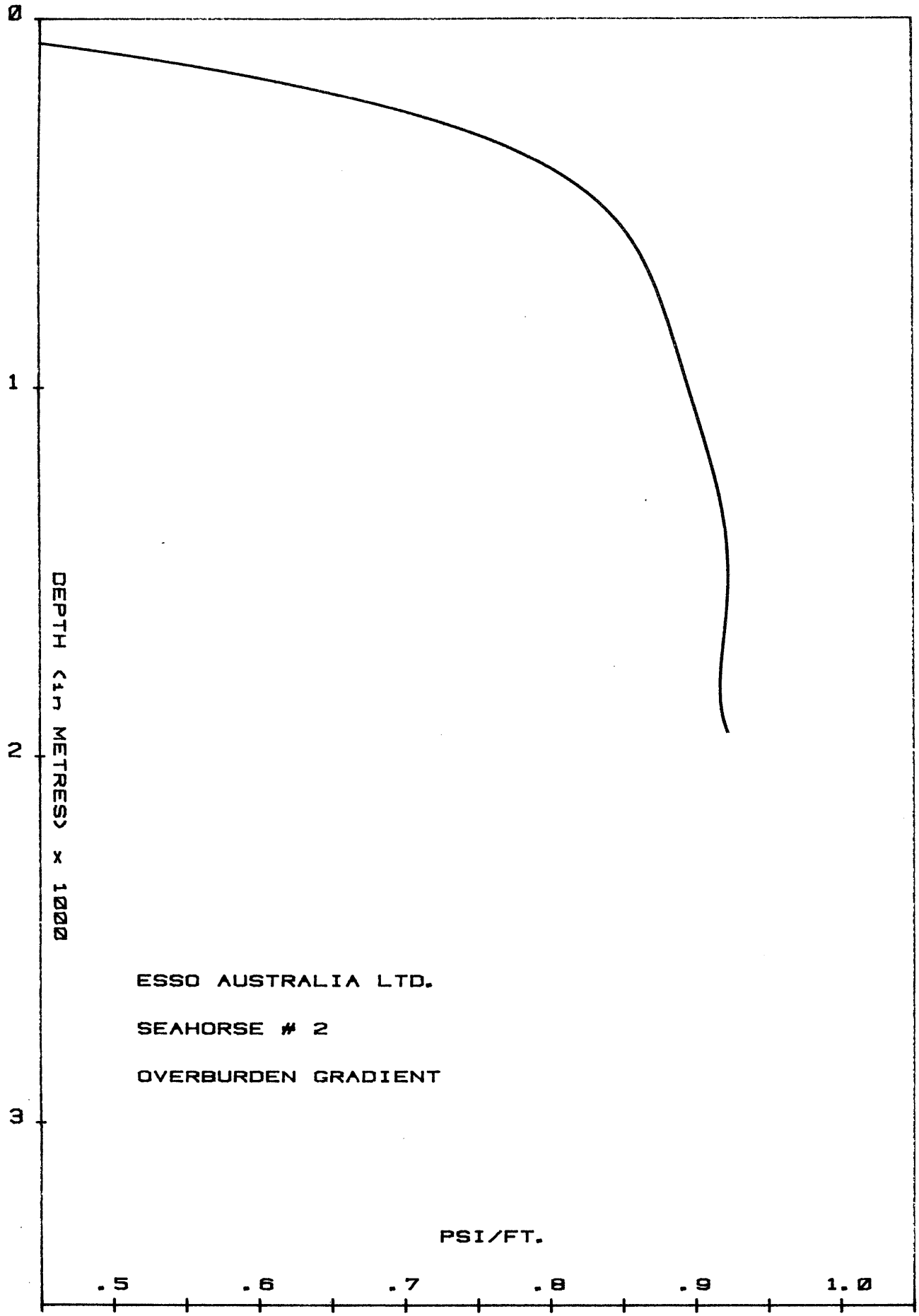
OVERBURDEN PRESSURE GRADIENT . .psi/ft

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.

OVERBURDEN GRADIENT CALCULATIONS

DEPTH from	DEPTH to	AVR.BULK DENSITY	O/BURDEN INCR.	O/BURDEN CUMM.	O/BURDEN GRAD.	O/BURDEN GRAD.
M	M	gms/cc	psi	psi	psi/ft	ppg
0	64	1.02	28.27	28.27	0.442	8.49
64	350	2.00	247.68	275.94	0.788	15.16
350	500	2.15	139.64	415.58	0.831	15.98
500	600	2.18	94.39	509.98	0.850	16.35
600	700	2.21	95.69	605.67	0.865	16.64
700	780	2.23	77.25	682.92	0.876	16.84
780	800	2.24	19.40	702.32	0.878	16.88
800	900	2.25	97.43	799.74	0.889	17.09
900	970	2.27	68.80	868.55	0.895	17.22
970	1070	2.35	101.76	970.30	0.907	17.44
1070	1110	2.29	39.66	1009.96	0.910	17.50
1110	1150	2.21	38.28	1048.24	0.912	17.53
1150	1200	2.26	48.93	1097.17	0.914	17.58
1200	1240	2.27	39.32	1136.49	0.917	17.63
1240	1320	2.22	76.90	1213.39	0.919	17.68
1320	1390	2.20	66.68	1280.07	0.921	17.71
1390	1410	1.95	16.89	1296.96	0.920	17.69
1410	1430	1.80	15.59	1312.54	0.918	17.65
1430	1470	2.02	34.99	1347.53	0.917	17.63
1470	1570	2.10	90.93	1438.46	0.916	17.62
1570	1590	2.18	18.88	1457.34	0.917	17.63
1590	1600	2.20	9.53	1466.87	0.917	17.63
1600	1670	2.22	67.29	1534.15	0.919	17.67
1670	1740	2.24	67.89	1602.05	0.921	17.71
1740	1820	2.22	76.90	1678.95	0.922	17.74
1820	1870	2.23	48.28	1727.23	0.924	17.76
1870	1910	2.28	39.49	1766.72	0.925	17.79
1910	1920	2.30	9.96	1776.68	0.925	17.80
1920	1980	2.27	58.97	1835.65	0.927	17.83
1980	2021	2.25	39.94	1875.60	0.928	17.85


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

16. WELL HISTORY.

WELL HISTORY.

10/JULY/1982 Tow to new location began at 11:30 Hrs. Ran the first two anchors.

11/JULY/1982 Ran the remaining anchors and deballasted the rig. Landed the template and spudded in with a 17½" bit (re-run HTC OSC 3AJ, 3x20) and a 26" hole opener at 10:30 Hrs. Drilled from 63.6m to 200m. The riser was not connected, so no samples were circulated out to the shakers. The hole was cleared using 350 bbls of Hi-vis mud. Dropped a survey, P.O.O.H. Retrieved the survey (¾°). R.I.H no fill was encountered. A further 350 bbls of Hi-vis mud was pumped down the hole. Ran the 20" casing.

12/ JULY/ 1982 Set the 20" casing shoe at 185m, using 630 sacks of class "N" cement (slurry weight was 12.3ppg). Ran the stack and riser. Hooked up the M.R.T's diverter and flow line. Made up the re-run bit No.1 with the new B.H.A and drilled through the cementshoe and into new hole (17½") down to 242m. (only a trace of gas was detected)

13/JULY/1982 Drilled 17½" hole from 242m to 787m, pumping viscous pills as needed.(the maximum gas in this interval was 1 unit (from 345m) over a background of "trace"). Circulated bottoms up, dropped a survey and P.O.O.H to the shoe at 185m. Retrieved the survey (½°) and ran in the hole to T.D Circulated and conditioned the hole, prior to pulling out of the hole at the intermediate casing point. Made the following Schlumberger logging run: DIL-BHC-CAL-GR.

14/JULY/1982 R.I.H and circulated the hole clean. P.O.O.H and ran 13⅜" casing. Set the casing shoe at 780m with cement.

14/JULY/1982 R.I.H with the new bit (No.2, HTC X3A, 12¼) and drilled through the cement, shoe and then 6m of new hole. A P.I.T was taken, it yielded 13.5 ppg E.M.W at 793m.Drilled new formation from 884m to 1139m (maximum gas was 1.1units, from 1125m, the background was 0.6 units.)

16/JULY/1982 Drilled 12¼ hole from 1139m to 1482m. The hole packed off at 1264m, so it was circulated clean, and the riser was flushed. Circulated out at 1426m (110 units of gas from coal), circulated out at 1432m (320 units of gas from coal), and at 1467m (268 units from coal). Circulated bottoms up at 1482m, dropped a survey, pumped a slug and P.O.O.H. at core point No.1.

17/JULY/1982 Retrieved the survey (½°) and finished P.O.O.H. R.I.H with the core barrel and core bit No.1 (Christ. RC4, 8.5, Equivalent nozzel sizes 15/15/14).Circulated bottoms up (trip gas was 42 units) and then cut core No.1. from 1482m to 1496m (recovering 12.8m, 90%). Cut core No.2. from 1496m to 1509m. Less than 1 unit of gas was detected during the cutting of both cores.

18/JULY/1982 Pulled the core barrel out of the hole and retrieved core No.2. (recovering 12m, 92%). R.I.H with a new bit (HTC X3A, 12¼", 3x16) and reamed the cored rathole from 1482m to 1509m. Drilled ahead from 1509m to 1615m C/O at 1519m (2 units of gas) and at 1533m (1unit of gas). Maximum gas in the drilled interval was 11 units (from 1608m) over a background of 0–2 units. P.O.O.H due to low R.O.P's.

19/JULY/1982 Recovered D.S.(1° @ 1615m) R.I.H. with NB No.4. and drilled from 1615m to 1832m. T.G. was 4–11–4 units.

20/JULY/1982 Drilled from 1832m to 2021m where T.D. was called. Circulated out. Circulation gas was 0.3 units,15 mins after bottoms up the shakers were clean. P.O.O.H with no drag and the hole taking the correct volume of mud. P.O. to 780m at the 13 3/8" shoe

21/JULY/1982 Recovered the D.S. (1½°, N.45° E,2021m)R.I.H and found no fill. Circulated and detected W.T.G. 0.4–4–0.4 units. P.O.O.H with no drag. Ran wireline logs:–

Suite No.2.:– MSFL–DLT–GR

Tool malfuntioned – C.O.O.H &

worked on tools, LDT–CNL–BHC–GR

22/JULY/1982 Ran Wireline Logs:–MSFL–DLT–GR

HDT – Tool would not pass 1868m

Velocity Log, got to 2021m

R.I.H and circulated; W.T.G. 3–13–0.5 units. P.O.O.H with no drag. Ran R.F.T. No.1.– Pressure tests– no samples.

23/JULY/1982 Ran R.F.T. No.2.– 1442m–Recovered oil and Filtrate and 200ppm+ H_2S.

Ran R.F.T. No.3.–1456m–Recovered oil and Filtrate nil H_2S.

Ran R.F.T. No.4.–1456m–Tool malfuntioned.

Ran R.F.T. No.5.–1466.5m–Tool failed.

Made a wiper trip and found tight at 1786m and 1812m.

24/JULY/1982 Washed and reamed to 1892m. Ran to T.D. and circulated T.G. 0.4–8–1.0 units. No H_2S detected while circulating. P.O.O.H with no drag. Tested the B.O.P. – O.K. Reran wireline logs while W.O. parts for the R.F.T. tool.

:– FDC – CNL – GR

Ran R.F.T. No.6.–1456.5m–Recovered Filtrate.

25/JULY/1982 Ran R.F.T. No.7.–1466.1m–Recovered Filtrate and Form'n water.

Ran R.F.T. No.8.–1564.0m–Recovered oil and Form'n water and Filtrate.

Ran R.F.T. No.9.–1603.2m–Recovered oil and Form'n water and Filtrate .

Ran R.F.T. No.10.–1454.2m–Recovered Form'n water and Filtrate.

Ran R.F.T. No.11.–1487.0m–Recovered Form'n water and Filtrate.

R.I.H. for a wiper trip.

26/JULY/1982 Circulated and detected T.G. of 1–10–1 units and found 15ppm H_2S at shakers at B.U.. P.O.O.H with no drag.

Ran R.F.T. No.12.–1451m–Recovered Form'n water and Filtrate.

Ran R.F.T. No.13.–1566.8m–Recovered Form'n water and Filtrate.

26/7/82(cont.) Ran R.F.T. No.14 -1508m-Recovered Formation water and Filtrate

Ran C.S.T. x 2.

27/JULY/1982 Finished running C.S.T. No.2, R.I.H. and circulated (T.G. of 1 unit and H_2S between 5 and 65 ppm). Rig down Schlumberger and R.I.H. open ended to set plug No. 1A @ 1640m (349 sacks of "N" cement with 43.2 bbls of water). P.O.O.H to 1500m to set plug No.1B with 349 sacks of cement and 43.2 bbls of water as for previous plug. P.O.O.H to 1300m and slip and cut the drill line while waiting on cement. Tag cement @ 1356m with 10K lbs and P.O.O.H to 832m. Plug No.2 was set from 830m to 730m with 256 sacks of "N" cement and P.O.O.H. continued to 380m. After testing OK to 1500 psi,set bridge plug at 360m,m/u casing gun and perforate at 145m. An injection rate of 8.5 bbl/min was established and a retainer then set at 135m.

28/JULY/1982 After rigging down Schlumberger, R.I.H with stinger and squeeze 299 sacks of cement with 37 bbls of sea-water below retainer and dump 97 sacks on top with 12 bbls seawater.
Then P.O.O.H. to 90m and test plug to 1000 psi. After circulating hole and riser clean and flushing choke and Kill lines, P.O.O.H (retrieve ware bushing), then rig up and pull marine riser and B.O.P. stack (stack on beams @ 12:30 hrs.).
Proceed then to m/u bomb,deballast rig and blow the well-head and retrieve it.

29/JULY/1982 Waiting on weather to pull anchors.

30/JULY/1982 Waiting on weather to pull anchors.

31/JULY/1982 Retrieve anchors and commence tow to new location at 20:45 Hrs. (New well : BREAM NO. 5)

DURATION OF WELL ——— 10 JULY '82 to 31 JULY '82 - 22 days.

17. CORE - 0 - GRAPHS

CORE-O-GRAPH

CLIENT: ESSO AUSTRALIA LTD.

WELL: SEAHORSE No. 2

CORE NO.: 1

INTERVAL CORED FROM 1482.0m TO 1496.2m

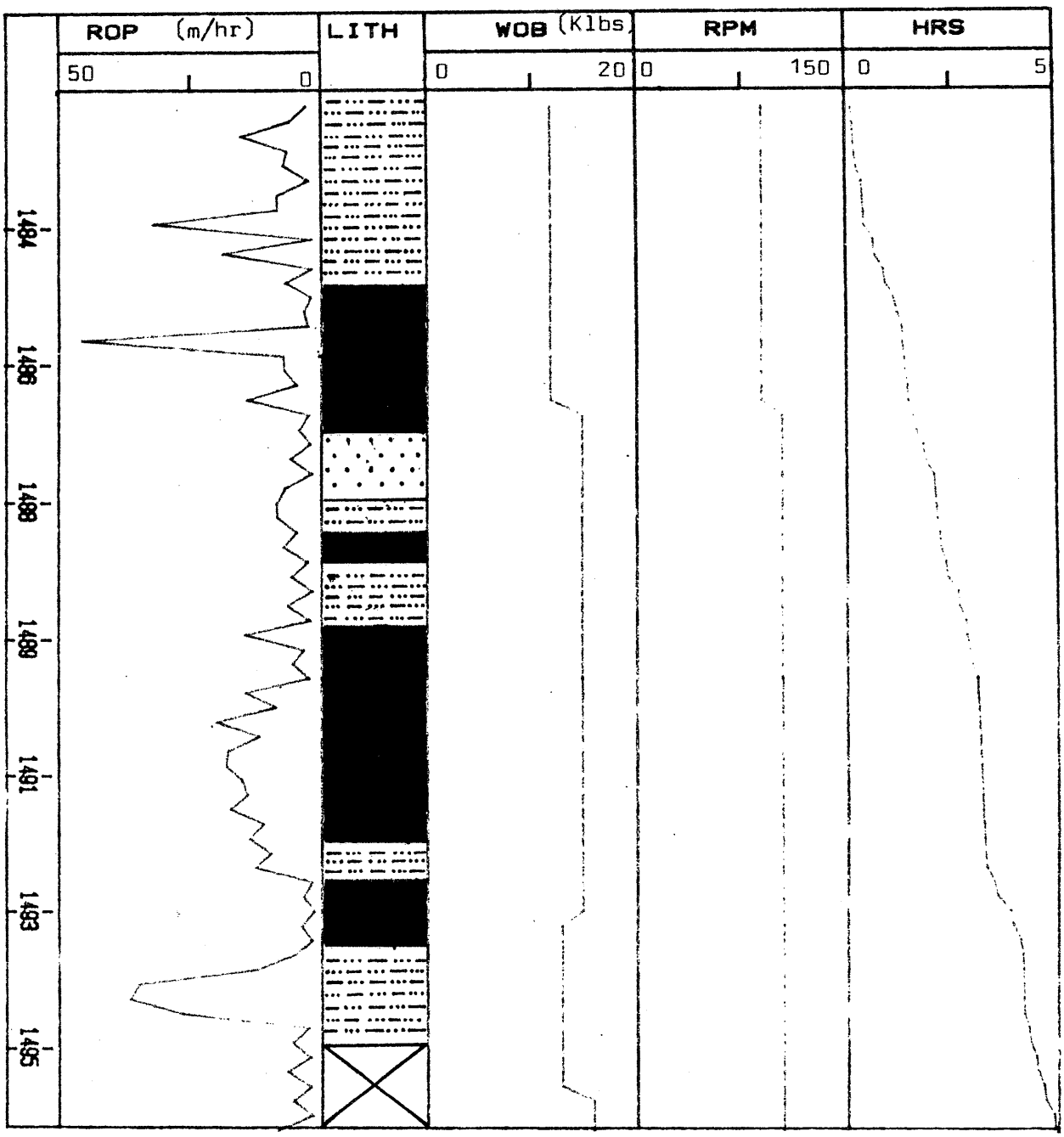
CUT: 14.2 m RECOVERED: 12.8 m (90 %)

FORMATION: LATROBE GROUP .

BIT MAKE & TYPE: CHRISTENSEN

CORE BARREL SIZE: 6.75in. x 4.00in. x 10.66m.

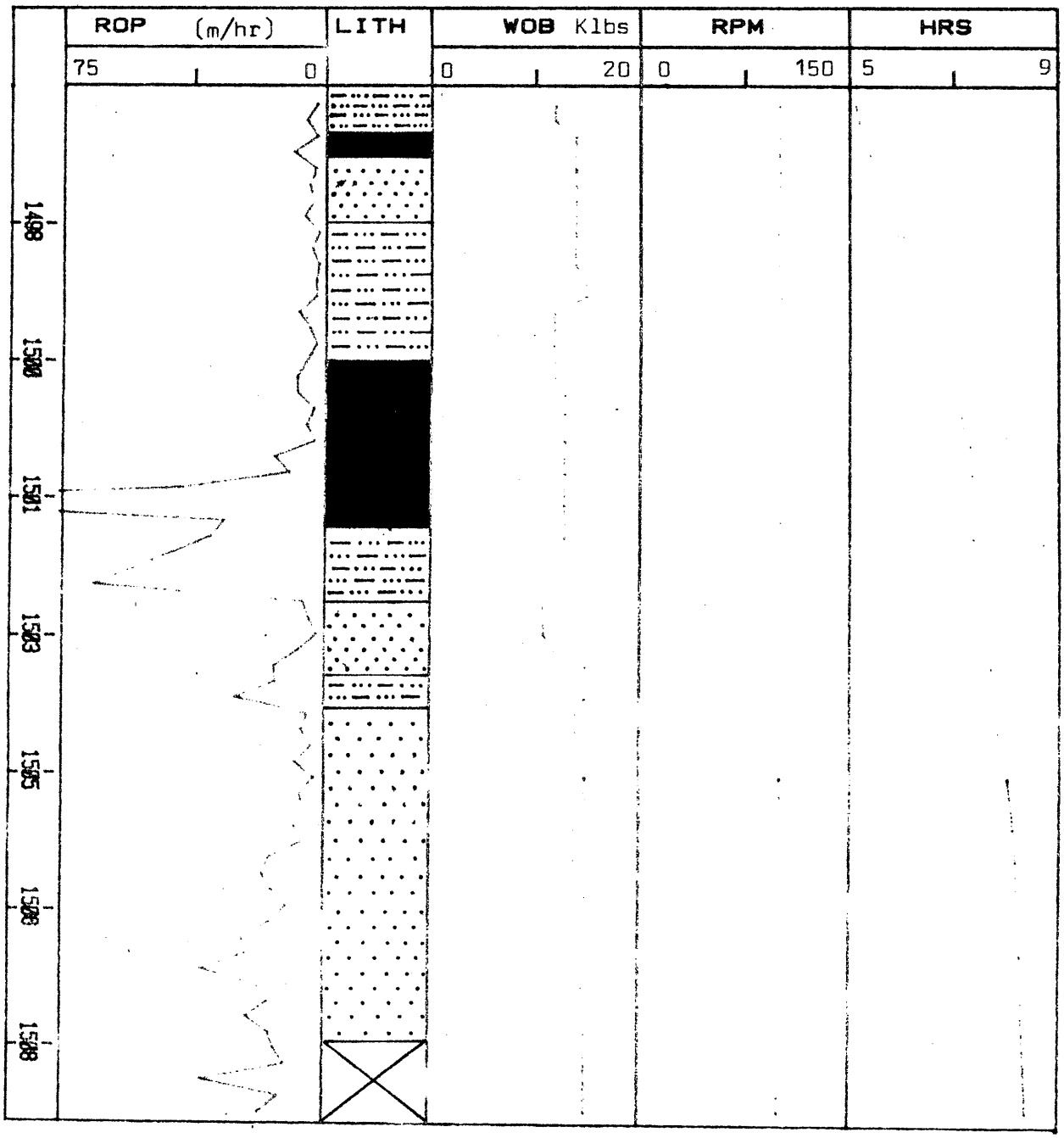
BIT SIZE: 8½ " MUD WT.: 9.7



NO FLUORESCENCE THROUGHOUT

CORE-O-GRAPH

CLIENT:	ESSO AUSTRALIA LTD.
WELL:	SEAHORSE No. 2
CORE NO.:	2.
INTERVAL CORED FROM	1496.2m TO 1509.2
CUT: 13.0 m	RECOVERED: 12.0 m (92.3%)
FORMATION:	LATROBE GROUP
BIT MAKE & TYPE:	CHRISTENSEN RC 4
CORE BARREL SIZE:	6.75in. x 4.00in. x 10.66m.
BIT SIZE: 8 ½ "	MUD WT.: 9.7 ppg



NO FLUORESCENCE THROUGHOUT

18. SIDEWALL CORE GAS ANALYSIS

CORE LAB — SIDEWALL CORE GAS ANALYSIS DATA SHEET — SHEET # 1

COMPANY ESSO AUSTRALIA LTD. LOGGING SUITE NO. 2

WELL SEAHORSE No.2.

No	DEPTH	C1	C2	C3	C4	C5	C6	COMMENTS
	M	PPM	PPM	PPM	PPM	PPM	PPM	
31	1619	130	40	49	48	43	42	
32	1615	31	16	25	27	27	21	SIDEWALL CORES No.1. To 30 WERE NOT TESTED FOR GAS.
33	1609	20	11	16	21	16	21	
34	1603	10	45	438	586	868	611	
35	1580	14	8	63	145	190	295	
36	1571	20	20	55	54	54	63	
37	1567	20	11	22	59	32	32	
38	1564	4	4	8	10	16	21	
39	1552.5	15	8	104	241	135	180	
40	1549.5	5	5	162	602	670	1370	
41	1526.9	- -	- - - - - -	NO GAS DETECTED		- - - -	- - - -	
42	1523	30	4	3	3	5	10	
43	1511.4	5	3	1	—	—	—	
44	1480.9	355	368	65	3	—	—	
45	1462.5	82	2086	1666	296	54	73	
46	1454.5	54	1270	1228	662	1302	1687	
47	1454.4	51	155	68	24	54	63	
48	1452	4	113	95	41	55	126	
49	1451	4	34	49	41	92	115	
50	1444.5	20136	12703	7719	1104	2083	168	
51	1442	14	72	646	855	694	970	
52	1441	136	1723	8772	8390	4862	6748	
53	1437	437	2722	15088	11481	7639	4049	
54	1435.5	NO RECOVERY						
55	1436	1751	6351	12632	9454	4514	10123	
56	1425	13132	13065	12983	3422	1041	1349	
57	1422	14008	11251	9825	2649	1041	—	
58	1415	4377	2177	2193	883	434	379	
59	1413	4815	3447	701	234	54	210	
60	1409.9	2626	1270	1929	552	108	126	
61	1406.9	48 15	2177	1491	441	255	295	
62	1405	1969	725	701	296	200	210	
63	1402	2298	453	701	331	173	137	
64	1399	9630	3175	1666	276	65	137	

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

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: SEAHORSE # 2

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	CONDITION B	CONDITION G
1	111	HTC OSC 3AJ	17.500	2500.00	20 20 20	200.0	787.0	587.0	7.31	80.3	3.9	93.86	69965	2	2	0.000
2	114	HTC X3A	12.250	1400.00	16 16 18	787.0	1482.0	695.0	21.89	31.7	6.4	193.00	207573	5	4	0.000
2	4	CHRIS RC 4	8.500	13000.00	15 15 14	1482.0	1496.2	14.2	4.94	2.9	6.4	4662.48	29769	0	0	0.100
2	4	CHRIS RC 4	8.500	13000.00	15 15 14	1496.2	1509.0	12.8	8.39	3.7	6.5	6473.74	50617	0	0	0.200
3	114	HTC X3A	12.250	1400.00	16 16 18	1509.0	1615.0	106.0	11.95	8.9	6.5	829.88	87429	7	6	0.375
4	517	HTC J22	12.250	6800.00	16 16 16	1615.0	2021.0	406.0	34.07	11.9	7.0	491.38	152720	3	2	0.000

BIT NUMBER: 1 IADC CODE 111 HTC OSC 3AJ

STARTING DEPTH	200.0		
BIT COST, RIG COST/HOUR	2500.00	4692.00	
TRIP TIME	3.9		
BIT DIAMETER	17.500		
NOZZLES	20	20	20
HW DRILL COLLAR LENGTH, OD, ID	20.45	9.750	3.000
DRILL COLLAR LENGTH, OD, ID	96.78	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	54.90	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	185.00	19.124	
RISER LENGTH, ID	63.60	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	0.04		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.6	2.00	
FINISHING DEPTH	787.0		
CUMULATIVE HOURS, TURNS	7.31	69965	
BIT CONDITION OUT	T 2	B 2	G 0.000

BIT NUMBER: 2 IADC CODE 114 HTC X3A

STARTING DEPTH	787.0		
BIT COST, RIG COST/HOUR	1400.00	4692.00	
TRIP TIME	6.4		
BIT DIAMETER	12.250		
NOZZLES	16	16	18
DRILL COLLAR LENGTH, OD, ID	60.22	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	108.93	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	780.00	12.615	
RISER LENGTH, ID	63.60	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	0.04		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.5	2.10	
FINISHING DEPTH	1482.0		
CUMULATIVE HOURS, TURNS	21.89	207573	
BIT CONDITION OUT	T 5	B 4	G 0.000

BIT NUMBER: 2 IADC CODE 4 CHRIS RC 4

STARTING DEPTH	1482.0		
BIT COST, RIG COST/HOUR	13000.00	4692.00	
TRIP TIME	6.4		
BIT DIAMETER	8.500		
NOZZLES	15	15	14
HW DRILL COLLAR LENGTH, OD, ID	27.12	6.250	2.813
DRILL COLLAR LENGTH, OD, ID	87.55	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	108.93	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	780.00	12.615	
RISER LENGTH, ID	63.60	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	0.04		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.0	2.20	
FINISHING DEPTH	1496.2		
CUMULATIVE HOURS, TURNS	4.94	29769	
BIT CONDITION OUT	T 0	B 0	G 0.100

BIT NUMBER: 2 IADC CODE 4 CHRIS RC 4

STARTING DEPTH	1496.2		
BIT COST, RIG COST/HOUR	13000.00	4692.00	
TRIP TIME	6.5		
PREVIOUS HOLE MADE	0.0		
PREVIOUS HOURS, TURNS	4.94	29769	
BIT DIAMETER	8.500		
NOZZLES	15	15	14
HW DRILL COLLAR LENGTH, OD, ID	27.12	6.250	2.813
DRILL COLLAR LENGTH, OD, ID	87.55	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	108.93	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	780.00	12.615	
RISER LENGTH, ID	63.60	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	0.04		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	0.4	2.30	
FINISHING DEPTH	1509.0		
CUMULATIVE HOURS, TURNS	8.39	50617	
BIT CONDITION OUT	T 0	B 0	G 0.000

BIT NUMBER: 3 IADC CODE 114 HTC X3A

STARTING DEPTH	1509.0		
BIT COST, RIG COST/HOUR	1400.00	4692.00	
TRIP TIME	6.5		
BIT DIAMETER	12.250		
NOZZLES	16	16	18
DRILL COLLAR LENGTH, OD, ID	60.22	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	108.93	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	780.00	12.615	
RISER LENGTH, ID	63.60	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	0.04		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	0.4	2.30	
FINISHING DEPTH	1615.0		
CUMULATIVE HOURS, TURNS	11.95	87429	
BIT CONDITION OUT	T 7	B 6	G 0.375

BIT NUMBER: 4 IADC CODE 517 HTC J22

STARTING DEPTH	1615.0		
BIT COST, RIG COST/HOUR	6800.00	4692.00	
TRIP TIME	7.0		
BIT DIAMETER	12.250		
NOZZLES	16	16	16
DRILL COLLAR LENGTH, OD, ID	114.67	8.000	2.813
HW DRILL PIPE LENGTH, OD, ID	108.93	5.000	3.000
DRILL PIPE OD, ID		5.000	4.276
CASING DEPTH, ID	780.00	12.615	
RISER LENGTH, ID	63.60	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	0.04		
"d" EXPONENT CORRECTION FACTOR	10.0		
CUTTINGS DIAMETER, DENSITY	2.2	2.48	
FINISHING DEPTH	2021.0		
CUMULATIVE HOURS, TURNS	34.07	152720	
BIT CONDITION OUT	T 3	B 2	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 nozzles, in metres per second

DENSITY UNITS. . . . Pounds per gallon

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

FHP. . . . . 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 nozzles, in metres per second

DENSITY UNITS. . . . Pounds per gallon

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 128 SPM 2 120 FLOW RATE 1240

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	44	58	LAMINAR	1	43	0.1
DC/OH	0.772	73	38	56	LAMINAR	1	38	0.3
DC/CSG	0.961	2	31	55	LAMINAR	0	30	0.0
HWDP/CSG	1.085	60	27	54	LAMINAR	0	27	0.1
DP/CSG	1.085	70	27	54	LAMINAR	0	27	0.1
DP/RIS	1.325	84	22	53	LAMINAR	0	22	0.1
TOTAL VOLUME		303			TOTAL PRESSURE DROP			0.7

LAG: 10.3 MINUTES 1312 STROKES #1 AND 1230 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1503.3	HHP	1087	IMPACT FORCE	2496
% SURFACE PRESSURE	64.0	HHP/sqin	4.52	JET VELOCITY	131

PRESSURE BREAKDOWN:

SURFACE	101.0				
STRING	735.2				
BIT	1503.3				
ANNULUS	0.7				
TOTAL	2340.2	PUMP PRESSURE	2350.0	% DIFFERENCE	0.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	460.6
CIRCULATING:	ECD	9.01	CIRCULATING PRESSURE	461.4
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	1.5
	EFFECTIVE MUD WEIGHT	8.97	BOTTOM HOLE PRESSURE	459.2

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 300.0 AND TVD 300.0

SPM 1 128 SPM 2 120 FLOW RATE 1240

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	44	58	LAMINAR	1	43	0.1
DC/OH	0.772	73	38	56	LAMINAR	1	38	0.3
DC/CSG	0.961	2	31	55	LAMINAR	0	30	0.0
HWDP/CSG	1.085	60	27	54	LAMINAR	0	27	0.1
DP/CSG	1.085	70	27	54	LAMINAR	0	27	0.1
DP/RIS	1.325	84	22	53	LAMINAR	0	22	0.1
TOTAL VOLUME		303			TOTAL PRESSURE DROP			0.7

LAG: 10.3 MINUTES 1312 STROKES #1 AND 1230 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1503.3	HHP	1087	IMPACT FORCE	2496
% SURFACE PRESSURE	64.0	HHP/sqin	4.52	JET VELOCITY	131

PRESSURE BREAKDOWN:

SURFACE	101.0				
STRING	735.2				
BIT	1503.3				
ANNULUS	0.7				
TOTAL	2340.2	PUMP PRESSURE	2350.0	% DIFFERENCE	0.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	460.6
CIRCULATING:	ECD	9.01	CIRCULATING PRESSURE	461.4
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	1.5
	EFFECTIVE MUD WEIGHT	8.97	BOTTOM HOLE PRESSURE	459.2

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 400.0 AND TVD 400.0

SPM 1 128 SPM 2 118 FLOW RATE 1230

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	44	58	LAMINAR	1	43	0.1
DC/OH	0.772	75	38	56	LAMINAR	1	37	0.3
HWDP/OH	0.896	49	33	55	LAMINAR	0	32	0.1
DP/OH	0.896	38	33	55	LAMINAR	0	32	0.1
DP/CSG	1.085	132	27	54	LAMINAR	0	27	0.2
DP/RIS	1.325	84	22	53	LAMINAR	0	22	0.1
TOTAL VOLUME		392			TOTAL PRESSURE DROP			1.0

LAG: 13.4 MINUTES 1714 STROKES #1 AND 1581 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1479.2	HHP	1061	IMPACT FORCE	2456
% SURFACE PRESSURE	62.9	HHP/sqin	4.41	JET VELOCITY	130

PRESSURE BREAKDOWN:

SURFACE	99.5		
STRING	781.9		
BIT	1479.2		
ANNULUS	1.0		
TOTAL	2361.5	PUMP PRESSURE 2350.0	% DIFFERENCE 0.5

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	614.2
CIRCULATING:	ECD	9.01	CIRCULATING PRESSURE	615.1
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	1.9
	EFFECTIVE MUD WEIGHT	8.97	BOTTOM HOLE PRESSURE	612.2

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 500.0 AND TVD 500.0

SPM 1 126 SPM 2 112 FLOW RATE 1190

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	42	57	LAMINAR	1	41	0.1
DC/OH	0.772	75	37	56	LAMINAR	0	36	0.3
HWDP/OH	0.896	49	32	54	LAMINAR	0	31	0.1
DP/OH	0.896	128	32	54	LAMINAR	0	31	0.3
DP/CSG	1.085	132	26	54	LAMINAR	0	26	0.2
DP/RIS	1.325	84	21	53	LAMINAR	0	21	0.1
TOTAL VOLUME		482			TOTAL PRESSURE DROP			1.2

LAG: 17.0 MINUTES 2143 STROKES #1 AND 1905 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1399.9	HHP	972	IMPACT FORCE	2324
% SURFACE PRESSURE	59.6	HHP/sqin	4.04	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	94.6
STRING	797.8
BIT	1399.9
ANNULUS	1.2
TOTAL	2293.5

PUMP PRESSURE 2350.0 % DIFFERENCE 2.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	776.2
CIRCULATING:	ECD	9.11	CIRCULATING PRESSURE	777.4
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	2.3
	EFFECTIVE MUD WEIGHT	9.07	BOTTOM HOLE PRESSURE	773.9

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 600.0 AND TVD 600.0

SPM 1 126 SPM 2 112 FLOW RATE 1190

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	42	57	LAMINAR	1	41	0.1
DC/OH	0.772	75	37	56	LAMINAR	0	36	0.3
HWDP/OH	0.896	49	32	54	LAMINAR	0	31	0.1
DP/OH	0.896	218	32	54	LAMINAR	0	31	0.5
DP/CSG	1.085	132	26	54	LAMINAR	0	26	0.2
DP/RIS	1.325	84	21	53	LAMINAR	0	21	0.1
TOTAL VOLUME		571				TOTAL PRESSURE DROP		1.4

LAG: 20.2 MINUTES 2542 STROKES #1 AND 2259 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1399.9	HHP	972	IMPACT FORCE	2324
% SURFACE PRESSURE	59.6	HHP/sqin	4.04	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	94.6				
STRING	852.3				
BIT	1399.9				
ANNULUS	1.4				
TOTAL	2348.2	PUMP PRESSURE	2350.0	% DIFFERENCE	0.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.10	HYDROSTATIC PRESSURE	931.5
CIRCULATING:	ECD	9.11	CIRCULATING PRESSURE	932.9
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	2.8
	EFFECTIVE MUD WEIGHT	9.07	BOTTOM HOLE PRESSURE	928.7

CORE LAB

HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 700.0 AND TVD 700.0

SPM 1 126 SPM 2 112 FLOW RATE 1190

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
HWDC/OH	0.673	14	42	58	LAMINAR	1	41	0.1
DC/OH	0.772	75	37	56	LAMINAR	0	36	0.3
HWDP/OH	0.896	49	32	55	LAMINAR	0	31	0.1
DP/OH	0.896	307	32	55	LAMINAR	0	31	0.8
DP/CSG	1.085	132	26	54	LAMINAR	0	26	0.2
DP/RIS	1.325	84	21	53	LAMINAR	0	21	0.1
TOTAL VOLUME		661					TOTAL PRESSURE DROP	1.6

LAG: 23.3 MINUTES 2940 STROKES #1 AND 2614 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1384.5	HHP	961	IMPACT FORCE	2298
% SURFACE PRESSURE	58.9	HHP/sqin	3.99	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	93.8
STRING	898.9
BIT	1384.5
ANNULUS	1.6
TOTAL	2378.8

PUMP PRESSURE 2350.0 % DIFFERENCE 1.2

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1074.8
CIRCULATING:	ECD	9.01	CIRCULATING PRESSURE	1076.4
PULLING OUT:	TRIP MARGIN	0.03	ESTIMATED SWAB	3.2
	EFFECTIVE MUD WEIGHT	8.97	BOTTOM HOLE PRESSURE	1071.6

CORE LAB
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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 800.0 AND TVD 800.0

SPM 1 100 SPM 2 80 FLOW RATE 900

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	5	78	147	LAMINAR	1	78	1.2
DC/CSG	0.303	12	71	146	LAMINAR	0	70	2.1
HWDP/CSG	0.427	47	50	144	LAMINAR	0	50	2.9
DP/CSG	0.427	242	50	144	LAMINAR	0	50	14.9
DP/RIS	1.325	84	16	141	LAMINAR	0	16	0.5
TOTAL VOLUME		391			TOTAL PRESSURE DROP			21.7

LAG: 18.2 MINUTES 1825 STROKES #1 AND 1460 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1631.7	HHP	856	IMPACT FORCE	1887
% SURFACE PRESSURE	65.8	HHP/sqin	7.27	JET VELOCITY	137

PRESSURE BREAKDOWN:

SURFACE	68.1				
STRING	658.6				
BIT	1631.7				
ANNULUS	21.7				
TOTAL	2380.1	PUMP PRESSURE	2480.0	% DIFFERENCE	4.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1228.3
CIRCULATING:	ECD	9.16	CIRCULATING PRESSURE	1250.0
PULLING OUT:	TRIP MARGIN	0.32	ESTIMATED SWAB	43.3
	EFFECTIVE MUD WEIGHT	8.68	BOTTOM HOLE PRESSURE	1185.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 900.0 AND TVD 900.0

SPM 1 100 SPM 2 94 FLOW RATE 970

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	84	139	LAMINAR	1	84	3.4
HWDP/OH	0.398	24	58	136	LAMINAR	0	58	1.5
HWDP/CSG	0.427	21	54	136	LAMINAR	0	54	1.2
DP/CSG	0.427	285	54	136	LAMINAR	0	54	15.9
DP/RIS	1.325	84	17	132	LAMINAR	0	17	0.4
TOTAL VOLUME		431					TOTAL PRESSURE DROP	22.5

LAG: 18.7 MINUTES 1866 STROKES #1 AND 1754 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1874.3	HHP	1060	IMPACT FORCE	2168
% SURFACE PRESSURE	63.5	HHP/sqin	9.00	JET VELOCITY	147

PRESSURE BREAKDOWN:

SURFACE	77.3		
STRING	791.5		
BIT	1874.3		
ANNULUS	22.5		
TOTAL	2765.5	PUMP PRESSURE 2950.0	% DIFFERENCE 6.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	8.90	HYDROSTATIC PRESSURE	1366.5
CIRCULATING:	ECD	9.05	CIRCULATING PRESSURE	1389.0
PULLING OUT:	TRIP MARGIN	0.29	ESTIMATED SWAB	44.9
	EFFECTIVE MUD WEIGHT	8.61	BOTTOM HOLE PRESSURE	1321.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1000.0 AND TVD 1000.0

SPM 1 94 SPM 2 94 FLOW RATE 940

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	82	113	LAMINAR	1	81	2.3
HWDP/OH	0.398	43	56	110	LAMINAR	0	56	1.9
DP/OH	0.398	20	56	110	LAMINAR	0	56	0.9
DP/CSG	0.427	306	52	110	LAMINAR	0	52	11.5
DP/RIS	1.325	84	17	105	LAMINAR	0	17	0.3
TOTAL VOLUME		471			TOTAL PRESSURE DROP			16.9

LAG: 21.0 MINUTES 1977 STROKES #1 AND 1977 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1780.0	HHP	976	IMPACT FORCE	2059
% SURFACE PRESSURE	62.2	HHP/sqin	8.28	JET VELOCITY	143

PRESSURE BREAKDOWN:

SURFACE	70.5
STRING	762.3
BIT	1780.0
ANNULUS	16.9
TOTAL	2629.7

PUMP PRESSURE 2860.0 % DIFFERENCE 8.1

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.00	HYDROSTATIC PRESSURE	1535.4
CIRCULATING:	ECD	9.10	CIRCULATING PRESSURE	1552.3
PULLING OUT:	TRIP MARGIN	0.20	ESTIMATED SWAB	33.8
	EFFECTIVE MUD WEIGHT	8.80	BOTTOM HOLE PRESSURE	1501.6

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1100.0 AND TVD 1100.0

SPM 1 90 SPM 2 94 FLOW RATE 920

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	80	112	LAMINAR	1	79	2.3
HWDP/OH	0.398	43	55	109	LAMINAR	0	55	1.9
DP/OH	0.398	60	55	109	LAMINAR	0	55	2.6
DP/CSG	0.427	306	51	108	LAMINAR	0	51	11.4
DP/RIS	1.325	84	17	104	LAMINAR	0	16	0.3

TOTAL VOLUME 510 TOTAL PRESSURE DROP 18.5

LAG: 23.3 MINUTES 2098 STROKES #1 AND 2191 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1742.9	HHP	935	IMPACT FORCE	2016
% SURFACE PRESSURE	58.1	HHP/sqin	7.93	JET VELOCITY	140

PRESSURE BREAKDOWN:

SURFACE	69.0
STRING	786.2
BIT	1742.9
ANNULUS	18.5
TOTAL	2616.6

PUMP PRESSURE 3000.0 % DIFFERENCE 12.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	1726.5
CIRCULATING:	ECD	9.30	CIRCULATING PRESSURE	1745.0
PULLING OUT:	TRIP MARGIN	0.20	ESTIMATED SWAB	37.1
	EFFECTIVE MUD WEIGHT	9.00	BOTTOM HOLE PRESSURE	1689.4

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1200.0 AND TVD 1200.0

SPM 1 89 SPM 2 90 FLOW RATE 895

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	78	112	LAMINAR	1	77	2.3
HWDP/OH	0.398	43	53	109	LAMINAR	0	53	1.9
DP/OH	0.398	100	53	109	LAMINAR	0	53	4.3
DP/CSG	0.427	306	50	108	LAMINAR	0	50	11.3
DP/RIS	1.325	84	16	104	LAMINAR	0	16	0.3
TOTAL VOLUME		550			TOTAL PRESSURE DROP			20.1

LAG: 25.8 MINUTES 2299 STROKES #1 AND 2325 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1649.5	HHP	861	IMPACT FORCE	1908
% SURFACE PRESSURE	55.4	HHP/sqin	7.31	JET VELOCITY	136

PRESSURE BREAKDOWN:

SURFACE	65.6
STRING	786.0
BIT	1649.5
ANNULUS	20.1
TOTAL	2521.2

PUMP PRESSURE 2980.0 % DIFFERENCE 15.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.20	HYDROSTATIC PRESSURE	1883.5
CIRCULATING:	ECD	9.30	CIRCULATING PRESSURE	1903.6
PULLING OUT:	TRIP MARGIN	0.20	ESTIMATED SWAB	40.2
	EFFECTIVE MUD WEIGHT	9.00	BOTTOM HOLE PRESSURE	1843.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1400.0 AND TVD 1400.0

SPM 1 88 SPM 2 75 FLOW RATE 815

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	71	127	LAMINAR	0	70	3.3
HWDP/OH	0.398	43	49	112	LAMINAR	0	49	2.2
DP/OH	0.398	180	49	112	LAMINAR	0	49	9.0
DP/CSG	0.427	306	45	111	LAMINAR	0	45	12.9
DP/RIS	1.325	84	15	93	LAMINAR	0	15	0.2
TOTAL VOLUME		630			TOTAL PRESSURE DROP			27.6

LAG: 32.5 MINUTES 2858 STROKES #1 AND 2436 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1457.0	HHP	693	IMPACT FORCE	1685
% SURFACE PRESSURE	49.4	HHP/sqin	5.88	JET VELOCITY	124

PRESSURE BREAKDOWN:

SURFACE	76.0				
STRING	997.4				
BIT	1457.0				
ANNULUS	27.6				
TOTAL	2558.0	PUMP PRESSURE	2950.0	% DIFFERENCE	13.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.80	HYDROSTATIC PRESSURE	2340.7
CIRCULATING:	ECD	9.92	CIRCULATING PRESSURE	2368.3
PULLING OUT:	TRIP MARGIN	0.23	ESTIMATED SWAB	55.2
	EFFECTIVE MUD WEIGHT	9.57	BOTTOM HOLE PRESSURE	2285.5

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1600.0 AND TVD 1600.0

SPM 1 80 SPM 2 71 FLOW RATE 755

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	17	66	112	LAMINAR	0	66	2.5
HWDP/OH	0.398	43	45	98	LAMINAR	0	45	1.7
DP/OH	0.398	259	45	98	LAMINAR	0	45	10.0
DP/CSG	0.427	306	42	96	LAMINAR	0	42	9.9
DP/RIS	1.325	84	14	80	LAMINAR	0	14	0.2
TOTAL VOLUME		710			TOTAL PRESSURE DROP			24.3

LAG: 39.5 MINUTES 3159 STROKES #1 AND 2804 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1237.6	HHP	545	IMPACT FORCE	1431
% SURFACE PRESSURE	43.7	HHP/sqin	4.62	JET VELOCITY	115

PRESSURE BREAKDOWN:

SURFACE	63.8
STRING	911.3
BIT	1237.6
ANNULUS	24.3
TOTAL	2237.0

PUMP PRESSURE 2830.0 % DIFFERENCE 21.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.70	HYDROSTATIC PRESSURE	2647.8
CIRCULATING:	ECD	9.79	CIRCULATING PRESSURE	2672.0
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	48.6
	EFFECTIVE MUD WEIGHT	9.52	BOTTOM HOLE PRESSURE	2599.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1700.0 AND TVD 1700.0

SPM 1 84 SPM 2 71 FLOW RATE 773

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	31	67	112	LAMINAR	1	67	4.9
HWDP/OH	0.398	43	46	96	LAMINAR	0	46	1.7
DP/OH	0.398	277	46	96	LAMINAR	0	46	10.6
DP/CSG	0.427	306	43	95	LAMINAR	0	43	9.7
DP/RIS	1.325	84	14	77	LAMINAR	0	14	0.1
TOTAL VOLUME		743			TOTAL PRESSURE DROP			27.0

LAG: 40.4 MINUTES 3385 STROKES #1 AND 2856 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1521.1	HHP	686	IMPACT FORCE	1616
% SURFACE PRESSURE	53.2	HHP/sqin	5.82	JET VELOCITY	128

PRESSURE BREAKDOWN:

SURFACE	67.9				
STRING	1147.2				
BIT	1521.1				
ANNULUS	27.0				
TOTAL	2763.2	PUMP PRESSURE	2860.0	% DIFFERENCE	3.4

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.60	HYDROSTATIC PRESSURE	2784.2
CIRCULATING:	ECD	9.69	CIRCULATING PRESSURE	2811.2
PULLING OUT:	TRIP MARGIN	0.19	ESTIMATED SWAB	54.0
	EFFECTIVE MUD WEIGHT	9.41	BOTTOM HOLE PRESSURE	2730.2

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1800.0 AND TVD 1800.0

SPM 1 82 SPM 2 70 FLOW RATE 758

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	31	66	111	LAMINAR	1	65	4.9
HWDP/OH	0.398	43	45	96	LAMINAR	0	45	1.6
DP/OH	0.398	317	45	96	LAMINAR	0	45	12.0
DP/CSG	0.427	306	42	94	LAMINAR	0	42	9.6
DP/RIS	1.325	84	14	76	LAMINAR	0	14	0.1
TOTAL VOLUME		783			TOTAL PRESSURE DROP			28.2

LAG: 43.3 MINUTES 3554 STROKES #1 AND 3022 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1475.9	HHP	653	IMPACT FORCE	1568
% SURFACE PRESSURE	51.6	HHP/sqin	5.54	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	66.1				
STRING	1153.7				
BIT	1475.9				
ANNULUS	28.2				
TOTAL	2723.9	PUMP PRESSURE	2860.0	% DIFFERENCE	4.8

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.67	HYDROSTATIC PRESSURE	2969.5
CIRCULATING:	ECD	9.76	CIRCULATING PRESSURE	2997.7
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	56.5
	EFFECTIVE MUD WEIGHT	9.49	BOTTOM HOLE PRESSURE	2913.0

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 1900.0 AND TVD 1900.0

SPM 1 78 SPM 2 74 FLOW RATE 759

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	31	66	113	LAMINAR	1	65	4.9
HWDP/OH	0.398	43	45	97	LAMINAR	0	45	1.6
DP/OH	0.398	357	45	97	LAMINAR	0	45	13.5
DP/CSG	0.427	306	42	95	LAMINAR	0	42	9.6
DP/RIS	1.325	84	14	77	LAMINAR	0	14	0.1
TOTAL VOLUME		822			TOTAL PRESSURE DROP			29.8

LAG: 45.5 MINUTES 3549 STROKES #1 AND 3362 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1453.5	HHP	644	IMPACT FORCE	1544
% SURFACE PRESSURE	51.0	HHP/sqin	5.46	JET VELOCITY	126

PRESSURE BREAKDOWN:

SURFACE	65.3				
STRING	1177.6				
BIT	1453.5				
ANNULUS	29.8				
TOTAL	2726.2	PUMP PRESSURE	2850.0	% DIFFERENCE	4.3

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.50	HYDROSTATIC PRESSURE	3079.3
CIRCULATING:	ECD	9.59	CIRCULATING PRESSURE	3109.1
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	59.5
	EFFECTIVE MUD WEIGHT	9.32	BOTTOM HOLE PRESSURE	3019.8

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

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HYDRAULICS ANALYSIS PROGRAM

HYDRAULICS CALCULATIONS AT DEPTH 2000.0 AND TVD 1999.9

SPM 1 75 SPM 2 74 FLOW RATE 744

ANNULAR HYDRAULICS:

ANNULUS TYPE	VOL/ UNIT	VOL	ANN VEL	CRIT VEL	TYPE OF FLOW	SLIP VEL	ASCEND VEL	PRESSURE DROP
DC/OH	0.274	31	65	112	LAMINAR	1	64	4.8
HWDP/OH	0.398	43	44	96	LAMINAR	0	44	1.6
DP/OH	0.398	397	44	96	LAMINAR	0	44	14.8
DP/CSG	0.427	306	41	95	LAMINAR	0	41	9.5
DP/RIS	1.325	84	13	77	LAMINAR	0	13	0.1
TOTAL VOLUME		862			TOTAL PRESSURE DROP			30.9

LAG: 48.6 MINUTES 3669 STROKES #1 AND 3577 STROKES #2

BIT HYDRAULICS:

PRESSURE DROP	1416.5	HHP	615	IMPACT FORCE	1505
% SURFACE PRESSURE	49.9	HHP/sqin	5.22	JET VELOCITY	123

PRESSURE BREAKDOWN:

SURFACE	63.7				
STRING	1185.7				
BIT	1416.5				
ANNULUS	30.9				
TOTAL	2696.8	PUMP PRESSURE	2840.0	% DIFFERENCE	5.0

BOTTOM HOLE PRESSURES:

		DENSITY UNITS		PRESSURE UNITS
NOT CIRCULATING:	MUD WEIGHT	9.63	HYDROSTATIC PRESSURE	3285.7
CIRCULATING:	ECD	9.72	CIRCULATING PRESSURE	3316.7
PULLING OUT:	TRIP MARGIN	0.18	ESTIMATED SWAB	61.9
	EFFECTIVE MUD WEIGHT	9.45	BOTTOM HOLE PRESSURE	3223.8

BIT NUMBER	1	IADC CODE	111	INTERVAL	200.0- 787.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	2500.00	TRIP TIME	3.9	BIT RUN	587.0
TOTAL HOURS	7.31	TOTAL TURNS	69965	CONDITION	T2 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
210.0	213.3	10.0	150	9.0	0.57	0.05	422	22	2102	8.5	11.6
215.0	290.3	10.0	150	9.0	0.50	0.06	577	16	1407	8.5	11.7
220.0	295.1	15.0	150	9.0	0.54	0.08	729	16	1059	8.5	11.7
225.0	400.0	15.0	150	9.0	0.47	0.09	842	11.73	849.51	8.5	11.7
230.0	152.9	15.0	150	9.0	0.70	0.13	1136	30.68	713.04	8.5	11.7
235.0	216.0	20.0	150	9.0	0.66	0.15	1344	21.72	614.28	8.5	11.7
240.0	206.9	20.0	150	9.0	0.67	0.17	1562	22.68	540.33	8.5	11.8
245.0	203.5	20.0	155	9.0	0.68	0.20	1791	23.06	482.85	8.5	11.8
250.0	222.2	20.0	155	9.0	0.66	0.22	2000	21.11	436.68	8.5	11.8
255.0	187.5	20.0	155	9.0	0.70	0.25	2248	25.02	399.26	8.5	11.8
260.0	260.9	20.0	155	9.0	0.62	0.27	2426	17.99	367.48	8.5	11.8
265.0	216.9	20.0	155	9.0	0.67	0.29	2640	21.64	340.88	8.5	11.9
270.0	236.8	20.0	155	9.0	0.64	0.31	2837	19.81	317.95	8.5	11.9
275.0	233.5	15.0	150	9.0	0.60	0.33	3029	20.09	298.09	8.5	11.9
280.0	204.0	15.0	155	9.0	0.64	0.36	3257	23.00	280.90	8.5	11.9
285.0	213.3	15.0	160	9.0	0.64	0.38	3482	21.99	265.67	8.5	11.9
290.0	136.4	15.0	160	9.0	0.74	0.42	3834	34.41	252.82	8.5	11.9
295.0	165.1	15.0	160	9.0	0.70	0.45	4125	28.41	241.01	8.5	12.0
300.0	100.0	15.0	160	9.0	0.82	0.50	4605	46.92	231.30	8.5	12.0
305.0	153.8	15.0	160	9.0	0.72	0.53	4917	30.50	221.74	8.5	12.0
310.0	144.0	15.0	160	9.0	0.73	0.56	5250	32.58	213.14	8.5	12.0
315.0	195.7	15.0	160	9.0	0.66	0.59	5496	23.98	204.92	8.5	12.0
320.0	110.4	15.0	160	9.0	0.80	0.63	5930	42.49	198.15	8.5	12.0
325.0	189.5	15.0	160	9.0	0.66	0.66	6184	24.76	191.22	8.5	12.1
330.0	183.8	15.0	160	9.0	0.67	0.69	6445	25.52	184.84	8.5	12.1
335.0	176.5	15.0	160	9.0	0.68	0.72	6717	26.59	178.98	8.5	12.1
340.0	99.4	15.0	160	9.0	0.82	0.77	7200	47.18	174.27	8.5	12.1
345.0	159.3	15.0	160	9.0	0.71	0.80	7501	29.46	169.28	8.5	12.1
350.0	82.0	15.0	160	9.0	0.87	0.86	8086	57.22	165.55	8.5	12.2
355.0	141.6	15.0	160	9.0	0.74	0.89	8425	33.13	161.27	8.5	12.2
360.0	91.8	15.0	160	9.0	0.84	0.95	8948	51.09	157.83	8.5	12.2
365.0	159.3	15.0	160	9.0	0.71	0.98	9249	29.46	153.94	8.5	12.2
370.0	90.5	15.0	160	9.0	0.84	1.04	9780	51.87	150.94	8.5	12.2
375.0	98.4	20.0	160	9.0	0.88	1.09	10268	47.70	147.99	8.5	12.2
380.0	91.8	20.0	160	9.0	0.90	1.14	10790	51.09	145.30	8.5	12.3
385.0	100.6	20.0	160	9.0	0.87	1.19	11268	46.66	142.63	8.5	12.3
390.0	70.9	20.0	160	9.0	0.96	1.26	11945	66.21	140.62	8.5	12.3
395.0	152.5	20.0	160	9.0	0.77	1.29	12260	30.76	137.80	8.5	12.3
400.0	121.6	22.0	160	9.0	0.84	1.34	12654	38.58	135.32	8.5	12.3
405.0	159.3	22.0	160	9.0	0.77	1.37	12956	29.46	132.74	8.5	12.3
410.0	130.4	22.0	160	9.0	0.82	1.41	13324	35.97	130.44	8.5	12.4
415.0	112.5	22.0	160	9.0	0.86	1.45	13750	41.71	128.37	8.5	12.4
420.0	105.9	22.0	160	9.0	0.88	1.50	14204	44.31	126.46	8.5	12.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
425.0	76.9	22.0	160	9.0	0.96	1.56	14828	61.00	125.01	8.5	12.4
430.0	116.9	22.0	160	9.0	0.85	1.60	15238	40.14	123.16	8.5	12.4
435.0	106.4	22.0	160	9.0	0.88	1.65	15690	44.11	121.48	8.5	12.4
440.0	109.8	22.0	160	9.0	0.87	1.70	16127	42.75	119.84	8.5	12.5
445.0	64.0	22.0	160	9.0	1.01	1.78	16877	73.31	118.89	8.5	12.5
450.0	82.0	22.0	160	9.0	0.95	1.84	17462	57.22	117.66	8.5	12.5
455.0	66.0	22.0	160	9.0	1.00	1.91	18190	71.14	116.75	8.5	12.5
460.0	56.3	22.0	160	9.0	1.05	2.00	19043	83.34	116.10	8.5	12.5
465.0	71.0	23.0	160	9.0	1.00	2.07	19719	66.08	115.16	8.5	12.5
470.0	43.4	23.0	160	9.0	1.13	2.19	20826	108.18	115.03	8.5	12.6
475.0	53.4	25.0	160	9.0	1.09	2.28	21724	87.84	114.54	8.5	12.6
480.0	40.4	25.0	160	9.0	1.17	2.40	22911	116.00	114.56	8.5	12.6
485.0	55.4	25.0	160	9.0	1.08	2.49	23778	84.72	114.04	8.5	12.6
490.0	43.2	25.0	160	9.0	1.15	2.61	24889	108.61	113.94	8.5	12.6
495.0	46.8	25.0	160	9.0	1.13	2.72	25915	100.36	113.71	8.5	12.6
500.0	41.0	25.0	160	9.1	1.15	2.84	27086	114.43	113.73	8.5	12.6
505.0	47.4	25.0	160	9.1	1.11	2.94	28099	99.05	113.49	8.5	12.7
510.0	36.1	25.0	160	9.1	1.19	3.08	29430	130.07	113.75	8.5	12.7
515.0	54.7	25.0	160	9.1	1.08	3.17	30307	85.76	113.31	8.5	12.7
520.0	51.6	25.0	160	9.1	1.09	3.27	31238	90.97	112.96	8.5	12.7
525.0	91.4	25.0	160	9.1	0.94	3.33	31763	51.35	112.01	8.5	12.7
530.0	102.3	25.0	160	9.1	0.91	3.37	32233	45.88	111.01	8.5	12.7
535.0	148.8	25.0	160	9.1	0.81	3.41	32555	31.54	109.82	8.5	12.8
540.0	103.4	30.0	160	9.1	0.95	3.46	33019	45.36	108.88	8.5	12.8
545.0	191.5	30.0	160	9.1	0.77	3.48	33270	24.50	107.65	8.5	12.8
550.0	198.6	30.0	160	9.1	0.76	3.51	33512	23.62	106.45	8.5	12.8
555.0	111.8	30.0	160	9.1	0.92	3.55	33941	41.97	105.54	8.5	12.8
560.0	166.7	30.0	160	9.1	0.81	3.58	34229	28.15	104.47	8.5	12.8
565.0	49.7	30.0	160	9.1	1.15	3.68	35196	94.49	104.33	8.5	12.8
570.0	122.4	30.0	160	9.1	0.90	3.72	35588	38.32	103.44	8.5	12.9
575.0	133.3	30.0	160	9.1	0.87	3.76	35948	35.19	102.53	8.5	12.9
580.0	233.8	30.0	160	9.1	0.72	3.78	36153	20.07	101.45	8.5	12.9
585.0	270.0	30.0	160	9.1	0.67	3.80	36331	17.38	100.35	8.5	12.9
590.0	253.5	30.0	160	9.1	0.69	3.82	36520	18.51	99.30	8.5	12.9
595.0	229.1	10.0	160	9.1	0.56	3.84	36730	20.48	98.31	8.5	12.9
600.0	145.2	10.0	160	9.1	0.66	3.88	37060	32.32	97.48	8.5	12.9
605.0	85.3	10.0	160	9.1	0.78	3.94	37623	55.03	96.96	8.5	13.0
610.0	121.0	30.0	160	9.1	0.90	3.98	38020	38.78	96.25	8.5	13.0
615.0	63.9	30.0	160	9.1	1.08	4.06	38771	73.40	95.97	8.5	13.0
620.0	73.2	30.0	160	9.1	1.04	4.12	39427	64.12	95.59	8.5	13.0
625.0	55.4	30.0	160	9.1	1.12	4.21	40293	84.72	95.47	8.5	13.0
630.0	56.0	30.0	160	9.1	1.12	4.30	41151	83.79	95.33	8.5	13.0
635.0	65.8	30.0	160	9.1	1.07	4.38	41880	71.29	95.05	8.5	13.1
640.0	76.9	30.0	160	9.1	1.03	4.44	42504	61.00	94.67	8.5	13.1
645.0	69.8	30.0	160	9.1	1.06	4.52	43192	67.25	94.36	8.5	13.1
650.0	68.0	30.0	160	9.1	1.06	4.59	43898	69.00	94.08	8.5	13.1
655.0	65.7	30.0	160	9.1	1.07	4.67	44628	71.41	93.83	8.5	13.1
660.0	82.0	30.0	160	9.1	1.01	4.73	45214	57.22	93.43	8.5	13.1
665.0	60.6	30.0	160	9.1	1.10	4.81	46005	77.39	93.26	8.5	13.1
670.0	57.9	30.0	160	9.1	1.11	4.90	46835	81.07	93.13	8.5	13.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
675.0	61.2	30.0	160	9.1	1.09	4.98	47619	76.64	92.95	8.5	13.2
680.0	41.0	30.0	160	9.1	1.21	5.10	48789	114.43	93.18	8.5	13.2
685.0	66.2	30.0	160	9.1	1.07	5.18	49515	70.90	92.95	8.5	13.2
690.0	33.3	30.0	160	9.1	1.27	5.33	50957	141.02	93.44	8.5	13.2
695.0	42.0	30.0	160	9.0	1.21	5.44	52101	111.83	93.62	8.5	13.2
700.0	37.9	30.0	160	9.0	1.24	5.58	53368	123.82	93.93	8.5	13.2
705.0	32.3	30.0	160	9.0	1.29	5.73	54853	145.19	94.43	8.5	13.2
710.0	27.8	30.0	160	9.0	1.33	5.91	56579	168.65	95.16	8.5	13.3
715.0	18.6	30.0	160	9.0	1.45	6.18	59155	251.80	96.68	8.5	13.3
720.0	30.9	30.0	160	8.9	1.32	6.34	60707	151.71	97.21	8.5	13.3
725.0	50.6	30.0	160	8.9	1.17	6.44	61656	92.80	97.17	8.5	13.3
730.0	83.3	30.0	160	8.9	1.03	6.50	62233	56.35	96.78	8.5	13.3
735.0	59.8	30.0	160	8.9	1.13	6.58	63035	78.46	96.61	8.5	13.3
740.0	81.1	30.0	160	8.9	1.04	6.65	63627	57.84	96.25	8.5	13.3
745.0	104.4	35.0	160	8.9	1.00	6.69	64087	44.93	95.78	8.5	13.4
750.0	105.3	35.0	160	8.9	1.00	6.74	64543	44.57	95.32	8.5	13.4
755.0	60.0	35.0	160	8.9	1.17	6.82	65343	78.20	95.16	8.5	13.4
760.0	77.3	35.0	160	8.9	1.09	6.89	65964	60.74	94.86	8.5	13.4
765.0	97.3	35.0	160	8.9	1.03	6.94	66457	48.22	94.44	8.5	13.4
770.0	61.0	35.0	160	8.9	1.17	7.02	67244	76.90	94.29	8.5	13.4
775.0	87.0	35.0	160	8.9	1.06	7.08	67796	53.93	93.94	8.5	13.4
780.0	74.4	35.0	160	8.9	1.11	7.15	68441	63.08	93.67	8.5	13.4
785.0	45.0	35.0	160	8.9	1.26	7.26	69508	104.27	93.76	8.5	13.5
787.0	42.0	35.0	160	8.9	1.28	7.31	69965	111.71	93.82	8.5	13.5

BIT NUMBER	2	IADC CODE	114	INTERVAL	787.0- 1482.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 18
COST	1400.00	TRIP TIME	6.4	BIT RUN	695.0
TOTAL HOURS	21.89	TOTAL TURNS	207573	CONDITION	T5 B4 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
788.0	69.0	10.0	110	9.0	0.81	0.01	96	68	31497	8.5	13.5
789.0	48.0	10.0	110	9.0	0.90	0.04	233	98	15797	8.5	13.5
790.0	30.5	15.0	110	9.0	1.10	0.07	449	154	10583	8.5	13.5
791.0	55.4	15.0	110	9.0	0.95	0.09	569	85	7958	8.5	13.5
792.0	28.1	15.0	110	9.0	1.12	0.12	803	167	6400	8.5	13.5
793.0	40.9	15.0	110	9.0	1.03	0.15	965	115	5352	8.5	13.5
794.0	42.9	20.0	110	9.0	1.09	0.17	1119	109	4603	8.5	13.5
795.0	30.3	20.0	110	9.0	1.19	0.20	1337	155	4047	8.5	13.5
796.0	41.4	20.0	110	9.0	1.10	0.23	1496	113	3610	8.5	13.5
797.0	40.9	20.0	110	9.0	1.10	0.25	1658	115	3261	8.5	13.5
798.0	50.7	20.0	110	9.0	1.04	0.27	1788	93	2973	8.5	13.5
799.0	40.0	20.0	110	9.0	1.11	0.30	1953	117	2735	8.5	13.5
800.0	41.9	20.0	110	9.0	1.09	0.32	2110	112	2533	8.5	13.5
801.0	75.0	20.0	110	9.0	0.93	0.33	2198	63	2357	8.5	13.5
802.0	76.6	20.0	110	9.0	0.92	0.35	2285	61	2204	8.5	13.5
803.0	69.2	20.0	110	9.0	0.95	0.36	2380	68	2070	8.5	13.5
804.0	42.9	20.0	125	9.0	1.12	0.38	2555	109	1955	8.5	13.5
805.0	27.7	20.0	125	9.0	1.25	0.42	2826	169	1856	8.5	13.5
806.0	53.7	20.0	125	9.0	1.06	0.44	2965	87	1762	8.5	13.5
807.0	92.3	20.0	125	9.0	0.91	0.45	3047	51	1677	8.5	13.5
808.0	73.5	20.0	125	9.0	0.97	0.46	3149	64	1600	8.5	13.5
809.0	58.1	20.0	125	9.0	1.04	0.48	3278	81	1531	8.5	13.5
810.0	50.2	35.0	150	9.1	1.30	0.50	3457	93	1469	8.5	13.5
811.0	55.4	35.0	150	9.1	1.27	0.52	3620	85	1411	8.5	13.5
812.0	51.4	35.0	150	9.1	1.30	0.54	3795	91	1358	8.5	13.5
813.0	64.3	35.0	150	9.1	1.22	0.55	3935	73	1309	8.5	13.5
814.0	55.4	35.0	150	9.1	1.27	0.57	4097	85	1263	8.5	13.5
815.0	87.8	35.0	150	9.1	1.12	0.58	4200	53	1220	8.5	13.5
816.0	94.7	35.0	150	9.1	1.10	0.59	4295	50	1180	8.5	13.5
817.0	52.2	35.0	150	9.1	1.29	0.61	4467	90	1143	8.5	13.5
818.0	63.2	35.0	150	9.1	1.23	0.63	4610	74	1109	8.5	13.5
819.0	76.6	35.0	150	9.1	1.17	0.64	4727	61	1076	8.5	13.5
820.0	41.4	35.0	150	9.1	1.37	0.67	4945	113	1047	8.5	13.5
821.0	120.0	35.0	150	9.1	1.02	0.67	5020	39	1017	8.5	13.6
822.0	133.3	35.0	150	9.1	0.99	0.68	5087	35.19	989.30	8.5	13.6
823.0	211.8	35.0	150	9.1	0.83	0.69	5130	22.16	962.44	8.5	13.6
824.0	133.3	35.0	150	9.1	0.99	0.69	5197	35.19	937.38	8.5	13.6
825.0	133.3	35.0	150	9.1	0.99	0.70	5265	35.19	913.64	8.5	13.6
826.0	97.3	35.0	150	9.1	1.09	0.71	5357	48.22	891.45	8.5	13.6
827.0	81.8	35.0	150	9.1	1.14	0.72	5467	57.35	870.59	8.5	13.6
828.0	91.0	33.0	160	9.0	1.12	0.73	5573	51.56	850.62	8.5	13.6
829.0	80.0	35.0	150	9.1	1.15	0.75	5685	58.65	831.76	8.5	13.6
830.0	40.4	35.0	150	9.1	1.37	0.77	5908	116.00	815.12	8.5	13.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
831.0	54.5	35.0	150	9.1	1.28	0.79	6073	86.02	798.55	8.5	13.6
832.0	124.1	35.0	150	9.1	1.01	0.80	6145	37.80	781.64	8.5	13.6
833.0	112.5	35.0	150	9.1	1.04	0.81	6225	41.71	765.55	8.5	13.6
834.0	90.0	35.0	150	9.1	1.11	0.82	6325	52.13	750.38	8.5	13.6
835.0	102.9	35.0	150	9.1	1.07	0.83	6413	45.62	735.69	8.5	13.6
836.0	94.7	35.0	150	9.1	1.10	0.84	6508	49.53	721.69	8.5	13.6
837.0	102.9	35.0	150	9.1	1.07	0.85	6595	45.62	708.17	8.5	13.6
838.0	61.0	35.0	150	9.1	1.24	0.86	6743	76.90	695.79	8.5	13.6
839.0	120.0	35.0	150	9.1	1.02	0.87	6818	39.10	683.16	8.5	13.6
840.0	105.9	35.0	150	9.1	1.06	0.88	6903	44.31	671.11	8.5	13.6
841.0	120.0	35.0	150	9.1	1.02	0.89	6978	39.10	659.40	8.5	13.6
842.0	109.1	35.0	150	9.1	1.05	0.90	7060	43.01	648.20	8.5	13.6
843.0	100.0	33.0	160	9.0	1.09	0.91	7156	46.92	637.46	8.5	13.6
844.0	115.2	35.0	150	9.1	1.03	0.92	7234	40.73	626.99	8.5	13.6
845.0	156.5	35.0	150	9.1	0.93	0.92	7292	29.98	616.70	8.5	13.6
846.0	171.4	35.0	150	9.1	0.90	0.93	7344	27.37	606.71	8.5	13.6
847.0	151.0	32.0	160	9.0	0.95	0.94	7408	31.07	597.11	8.5	13.6
848.0	192.0	35.0	150	9.1	0.87	0.94	7455	24.44	587.73	8.5	13.6
849.0	163.6	35.0	150	9.1	0.92	0.95	7510	28.67	578.71	8.5	13.6
850.0	211.8	35.0	150	9.0	0.84	0.95	7552	22.16	569.88	8.5	13.6
851.0	200.0	32.0	160	9.0	0.86	0.96	7600	23.46	561.34	8.5	13.6
852.0	218.2	35.0	150	9.0	0.83	0.96	7641	21.51	553.03	8.5	13.6
853.0	276.9	35.0	150	9.0	0.76	0.97	7674	16.94	544.91	8.5	13.6
854.0	200.0	35.0	150	9.0	0.86	0.97	7719	23.46	537.13	8.5	13.6
855.0	156.5	35.0	150	9.0	0.94	0.98	7776	29.98	529.67	8.5	13.6
856.0	102.9	35.0	150	9.0	1.08	0.99	7864	45.62	522.65	8.5	13.6
857.0	138.5	35.0	150	9.0	0.98	0.99	7929	33.89	515.67	8.5	13.6
858.0	205.7	35.0	150	9.0	0.85	1.00	7973	22.81	508.73	8.5	13.6
859.0	189.5	35.0	150	9.0	0.88	1.01	8020	24.76	502.01	8.5	13.6
860.0	150.0	35.0	150	9.0	0.96	1.01	8080	31.28	495.56	8.5	13.6
861.0	128.6	35.0	150	9.0	1.01	1.02	8150	36.49	489.36	8.5	13.7
862.0	78.3	25.0	150	9.0	1.07	1.03	8265	59.95	483.63	8.5	13.7
863.0	83.7	25.0	150	9.0	1.05	1.04	8373	56.04	478.00	8.5	13.7
864.0	126.0	33.0	160	9.0	1.02	1.05	8449	37.24	472.28	8.5	13.7
865.0	67.0	33.0	160	9.0	1.22	1.07	8592	70.03	467.12	8.5	13.7
866.0	56.2	25.0	150	9.0	1.16	1.08	8752	83.41	462.27	8.5	13.7
867.0	60.0	25.0	150	9.0	1.14	1.10	8902	78.20	457.47	8.5	13.7
868.0	109.1	25.0	150	9.0	0.97	1.11	8985	43.01	452.35	8.5	13.7
869.0	720.0	25.0	150	9.0	0.40	1.11	8997	6.52	446.91	8.5	13.7
870.0	76.6	25.0	150	9.0	1.07	1.13	9115	61.26	442.27	8.5	13.7
871.0	170.0	26.0	160	9.0	0.86	1.13	9171	27.60	437.33	8.5	13.7
872.0	240.0	20.0	150	9.0	0.69	1.14	9209	19.55	432.41	8.5	13.7
873.0	180.0	20.0	150	9.0	0.77	1.14	9259	26.07	427.69	8.5	13.7
874.0	200.0	20.0	150	9.0	0.74	1.15	9304	23.46	423.04	8.5	13.7
875.0	150.0	20.0	150	8.9	0.83	1.15	9364	31.28	418.59	8.5	13.7
876.0	287.0	20.0	160	8.9	0.66	1.16	9397	16.35	414.07	8.5	13.7
877.0	144.0	20.0	150	8.9	0.84	1.16	9460	32.58	409.83	8.5	13.7
878.0	276.9	20.0	150	8.9	0.66	1.17	9492	16.94	405.51	8.5	13.7
879.0	720.0	20.0	150	8.9	0.38	1.17	9505	6.52	401.18	8.5	13.7
880.0	26.2	20.0	150	8.9	1.33	1.21	9848	179.21	398.79	8.5	13.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
881.0	35.6	35.0	150	8.9	1.45	1.23	10101	131.64	395.95	8.5	13.7
882.0	40.0	35.0	150	8.9	1.41	1.26	10326	117.30	393.02	8.5	13.7
883.0	34.6	30.0	150	8.9	1.39	1.29	10586	135.55	390.33	8.5	13.7
884.0	29.5	30.0	150	8.9	1.44	1.32	10891	159.01	387.95	8.5	13.7
886.0	40.4	30.0	150	8.9	1.34	1.37	11336	116.00	382.46	8.5	13.7
887.0	38.7	30.0	150	8.9	1.36	1.40	11568	121.21	379.84	8.5	13.7
888.0	35.0	31.0	160	8.9	1.42	1.43	11843	134.06	377.41	8.5	13.7
889.0	28.9	30.0	150	8.9	1.45	1.46	12154	162.27	375.30	8.5	13.7
890.0	22.9	30.0	150	8.9	1.52	1.50	12546	204.62	373.64	8.5	13.7
891.0	50.0	20.0	150	8.9	1.14	1.52	12726	93.84	370.95	8.5	13.7
892.0	50.7	20.0	150	8.9	1.14	1.54	12904	92.54	368.30	8.5	13.7
893.0	45.0	20.0	150	8.9	1.17	1.57	13104	104.27	365.81	8.5	13.7
894.0	46.2	20.0	150	8.9	1.17	1.59	13299	101.66	363.34	8.5	13.7
895.0	41.4	20.0	150	8.9	1.20	1.61	13516	113.39	361.03	8.5	13.7
896.0	52.2	20.0	150	8.9	1.13	1.63	13689	89.93	358.54	8.5	13.7
897.0	42.9	20.0	150	8.9	1.19	1.65	13899	109.48	356.28	8.5	13.7
898.0	24.3	20.0	150	8.9	1.35	1.70	14269	192.89	354.80	8.5	13.7
899.0	33.3	20.0	150	8.9	1.26	1.73	14539	140.76	352.89	8.5	13.7
900.0	57.1	20.0	150	8.9	1.11	1.74	14696	82.11	350.50	8.5	13.7
901.0	38.7	30.0	150	8.8	1.37	1.77	14929	121.21	348.48	8.5	13.7
902.0	52.9	30.0	150	8.8	1.27	1.79	15099	88.63	346.23	8.5	13.8
903.0	43.9	30.0	150	8.8	1.33	1.81	15304	106.87	344.16	8.5	13.8
904.0	54.5	30.0	150	8.8	1.26	1.83	15469	86.02	341.96	8.5	13.8
905.0	42.4	30.0	150	8.8	1.34	1.85	15681	110.78	340.00	8.5	13.8
906.0	40.0	30.0	150	8.8	1.36	1.88	15906	117.30	338.13	8.5	13.8
907.0	50.0	31.0	160	8.8	1.32	1.90	16098	93.84	336.09	8.5	13.8
908.0	40.4	30.0	150	8.8	1.36	1.92	16321	116.00	334.27	8.5	13.8
909.0	37.9	30.0	150	8.8	1.38	1.95	16558	123.82	332.55	8.5	13.8
910.0	45.0	30.0	150	8.8	1.32	1.97	16758	104.27	330.69	8.5	13.8
911.0	35.0	30.0	150	8.8	1.41	2.00	17016	134.24	329.11	8.5	13.8
912.0	42.9	30.0	150	8.8	1.34	2.02	17226	109.48	327.35	8.5	13.8
913.0	39.1	30.0	150	8.8	1.37	2.05	17456	119.91	325.70	8.5	13.8
914.0	51.4	30.0	150	8.8	1.28	2.07	17631	91.23	323.86	8.5	13.8
915.0	24.2	30.0	150	8.9	1.51	2.11	18003	194.20	322.84	8.5	13.8
916.0	30.5	30.0	150	8.9	1.43	2.14	18298	153.79	321.53	8.5	13.8
917.0	27.1	30.0	150	8.9	1.47	2.18	18631	173.34	320.39	8.5	13.8
918.0	35.0	30.0	150	8.9	1.39	2.21	18888	134.24	318.97	8.5	13.8
919.0	33.3	30.0	150	8.9	1.40	2.24	19158	140.76	317.62	8.5	13.8
920.0	60.0	30.0	150	8.9	1.22	2.25	19308	78.20	315.82	8.5	13.8
921.0	38.3	40.0	160	9.0	1.49	2.28	19559	122.51	314.38	8.5	13.8
922.0	44.4	40.0	160	9.0	1.44	2.30	19775	105.57	312.83	8.5	13.8
923.0	42.9	40.0	160	9.0	1.45	2.33	19999	109.48	311.34	8.5	13.8
924.0	56.5	40.0	160	9.0	1.35	2.34	20169	83.09	309.67	8.5	13.8
925.0	44.0	40.0	160	9.0	1.44	2.37	20387	106.64	308.20	8.5	13.8
926.0	46.5	40.0	160	9.0	1.42	2.39	20594	101.01	306.71	8.5	13.8
927.0	45.0	40.0	160	8.9	1.45	2.41	20807	104.27	305.26	8.5	13.8
928.0	49.3	40.0	160	8.9	1.42	2.43	21002	95.14	303.77	8.5	13.8
929.0	35.3	40.0	160	8.9	1.53	2.46	21274	132.94	302.57	8.5	13.8
930.0	52.2	40.0	160	8.9	1.40	2.48	21458	89.93	301.08	8.5	13.8
931.0	36.7	40.0	160	8.9	1.52	2.51	21719	127.73	299.88	8.5	13.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
932.0	24.2	40.0	160	8.9	1.66	2.55	22117	194.20	299.15	8.5	13.8
933.0	60.0	40.0	160	8.9	1.35	2.56	22277	78.20	297.64	8.5	13.8
934.0	34.3	40.0	160	8.9	1.54	2.59	22557	136.85	296.54	8.5	13.8
935.0	23.8	40.0	160	8.9	1.67	2.63	22959	196.80	295.87	8.5	13.8
936.0	42.9	40.0	160	8.9	1.46	2.66	23183	109.48	294.62	8.5	13.8
937.0	39.1	40.0	160	8.9	1.50	2.68	23429	119.91	293.45	8.5	13.8
938.0	21.7	40.0	160	8.9	1.70	2.73	23871	216.35	292.94	8.5	13.8
939.0	27.7	40.0	160	8.9	1.62	2.77	24218	169.43	292.13	8.5	13.8
940.0	26.1	40.0	160	8.9	1.64	2.80	24586	179.86	291.40	8.5	13.8
941.0	22.9	40.0	160	8.9	1.68	2.85	25005	204.62	290.83	8.5	13.8
942.0	29.6	40.0	160	8.9	1.59	2.88	25329	158.57	289.98	8.5	13.8
943.0	36.7	40.0	160	8.9	1.52	2.91	25590	127.73	288.94	8.5	13.8
944.0	24.5	40.0	160	8.9	1.66	2.95	25982	191.59	288.32	8.5	13.9
945.0	22.5	40.0	160	8.9	1.69	2.99	26409	208.53	287.81	8.5	13.9
946.0	21.1	40.0	160	8.9	1.71	3.04	26865	222.87	287.41	8.5	13.9
947.0	31.3	40.0	160	8.9	1.57	3.07	27172	149.88	286.55	8.5	13.9
948.0	30.3	40.0	160	8.9	1.59	3.11	27489	155.10	285.73	8.5	13.9
949.0	25.4	40.0	160	8.9	1.65	3.15	27868	185.07	285.11	8.5	13.9
950.0	25.5	40.0	160	8.9	1.64	3.18	28244	183.77	284.49	8.5	13.9
951.0	23.0	40.0	160	8.9	1.68	3.23	28661	204.00	284.00	8.5	13.9
952.0	17.8	40.0	160	8.9	1.77	3.28	29200	263.27	283.87	8.5	13.9
953.0	32.1	40.0	160	8.9	1.56	3.32	29498	145.97	283.04	8.5	13.9
954.0	28.8	40.0	160	8.9	1.60	3.35	29832	162.92	282.32	8.5	13.9
955.0	31.6	40.0	160	8.9	1.57	3.38	30136	148.58	281.52	8.5	13.9
956.0	22.0	40.0	160	8.9	1.70	3.43	30573	213.75	281.12	8.5	13.9
957.0	29.5	40.0	160	8.9	1.59	3.46	30898	159.01	280.40	8.5	13.9
958.0	64.0	38.0	160	8.9	1.31	3.48	31048	73.31	279.19	8.5	13.9
959.0	49.3	35.0	160	8.9	1.36	3.50	31243	95.14	278.12	8.5	13.9
960.0	22.8	35.0	160	8.9	1.62	3.54	31664	205.93	277.71	8.5	13.9
961.0	31.3	35.0	160	8.9	1.51	3.57	31971	149.90	276.97	8.5	13.9
962.0	31.9	35.0	160	8.9	1.51	3.60	32272	147.08	276.23	8.5	13.9
963.0	45.0	35.0	160	8.9	1.39	3.63	32485	104.27	275.25	8.5	13.9
964.0	31.0	35.0	160	8.9	1.51	3.66	32795	151.19	274.55	8.5	13.9
965.0	36.7	35.0	160	8.9	1.46	3.69	33056	127.85	273.73	8.5	13.9
966.0	52.2	35.0	160	9.0	1.33	3.71	33240	89.89	272.70	8.5	13.9
967.0	48.0	35.0	160	9.0	1.35	3.73	33440	97.75	271.73	8.5	13.9
968.0	28.0	35.0	160	9.0	1.53	3.76	33783	167.57	271.15	8.5	13.9
969.0	33.0	35.0	160	9.0	1.48	3.79	34074	142.18	270.44	8.5	13.9
970.0	37.9	35.0	160	9.0	1.43	3.82	34327	123.80	269.64	8.5	13.9
971.0	37.9	35.0	160	9.0	1.43	3.84	34581	123.82	268.85	8.5	13.9
972.0	31.6	35.0	160	9.0	1.49	3.88	34885	148.58	268.20	8.5	13.9
973.0	36.0	35.0	160	9.0	1.45	3.90	35151	130.33	267.46	8.5	13.9
974.0	31.0	35.0	160	9.0	1.50	3.94	35461	151.19	266.84	8.5	13.9
975.0	47.4	35.0	160	9.0	1.36	3.96	35663	99.05	265.94	8.5	13.9
976.0	25.0	35.0	160	9.0	1.57	4.00	36047	187.68	265.53	8.5	13.9
977.0	30.3	35.0	160	9.0	1.51	4.03	36365	155.10	264.95	8.5	13.9
978.0	18.0	35.0	160	9.0	1.68	4.09	36898	260.67	264.93	8.5	13.9
979.0	20.8	35.0	160	9.0	1.63	4.13	37359	225.48	264.72	8.5	13.9
980.0	24.8	35.0	160	9.0	1.57	4.17	37746	188.98	264.33	8.5	13.9
981.0	28.0	35.0	160	9.0	1.53	4.21	38089	167.57	263.83	8.5	13.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
982.0	26.0	35.0	160	9.0	1.56	4.25	38458	180.46	263.40	8.5	13.9
983.0	14.0	35.0	160	9.0	1.76	4.32	39144	335.14	263.77	8.5	13.9
984.0	14.7	35.0	160	9.0	1.74	4.39	39797	319.32	264.05	8.5	13.9
985.0	16.2	35.0	160	9.0	1.71	4.45	40389	289.34	264.18	8.5	13.9
986.0	28.3	35.0	160	9.0	1.53	4.49	40728	165.52	263.68	8.5	13.9
987.0	32.1	35.0	160	9.0	1.49	4.52	41026	145.97	263.09	8.5	14.0
988.0	26.7	35.0	160	9.0	1.55	4.55	41386	175.95	262.66	8.5	14.0
989.0	37.9	35.0	160	9.0	1.43	4.58	41640	123.82	261.97	8.5	14.0
990.0	31.0	35.0	160	9.0	1.50	4.61	41949	151.35	261.43	8.5	14.0
991.0	26.5	35.0	160	9.0	1.55	4.65	42312	177.25	261.02	8.5	14.0
992.0	25.5	35.0	160	9.0	1.56	4.69	42688	183.77	260.64	8.5	14.0
993.0	28.0	35.0	160	9.0	1.53	4.73	43031	167.57	260.19	8.5	14.0
994.0	34.8	35.0	160	9.0	1.46	4.75	43307	134.90	259.58	8.5	14.0
995.0	40.0	35.0	160	9.0	1.41	4.78	43547	117.30	258.90	8.5	14.0
996.0	62.1	35.0	160	9.0	1.27	4.79	43702	75.59	258.02	8.5	14.0
997.0	40.9	35.0	160	9.0	1.41	4.82	43936	114.69	257.34	8.5	14.0
998.0	21.7	35.0	160	9.0	1.62	4.87	44379	216.35	257.14	8.5	14.0
999.0	16.5	35.0	160	9.0	1.71	4.93	44960	284.13	257.27	8.5	14.0
1000.0	41.9	35.0	160	9.0	1.40	4.95	45190	112.09	256.59	8.5	14.0
1001.0	49.3	35.0	160	9.0	1.35	4.97	45384	95.14	255.84	8.5	14.0
1002.0	59.0	35.0	160	9.0	1.29	4.99	45547	79.50	255.02	8.5	14.0
1003.0	35.0	35.0	160	9.0	1.46	5.02	45822	134.24	254.46	8.5	14.0
1004.0	47.4	35.0	160	9.0	1.36	5.04	46024	99.05	253.74	8.5	14.0
1005.0	50.0	35.0	160	9.0	1.34	5.06	46216	93.84	253.01	8.5	14.0
1006.0	35.3	35.0	160	9.0	1.46	5.09	46488	132.94	252.46	8.5	14.0
1007.0	19.5	38.0	160	9.0	1.69	5.14	46982	241.12	252.41	8.5	14.0
1008.0	16.2	38.0	160	9.0	1.75	5.20	47575	289.99	252.58	8.5	14.0
1009.0	23.1	38.0	160	9.0	1.64	5.24	47991	203.32	252.35	8.5	14.0
1010.0	26.5	38.0	160	9.0	1.59	5.28	48354	177.25	252.02	8.5	14.0
1011.0	29.3	38.0	160	9.0	1.55	5.31	48682	160.31	251.61	8.5	14.0
1012.0	18.9	38.0	160	9.0	1.70	5.37	49188	247.63	251.59	8.5	14.0
1013.0	29.0	38.0	160	9.0	1.56	5.40	49519	161.61	251.19	8.5	14.0
1014.0	40.4	38.0	160	9.0	1.45	5.43	49756	116.00	250.60	8.5	14.0
1015.0	51.4	38.0	160	9.0	1.36	5.45	49943	91.23	249.90	8.5	14.0
1016.0	39.1	38.0	160	9.0	1.46	5.47	50188	119.91	249.33	8.5	14.0
1017.0	22.9	38.0	160	9.0	1.64	5.51	50607	204.62	249.14	8.5	14.0
1018.0	28.1	38.0	160	9.1	1.55	5.55	50948	166.83	248.78	8.5	14.0
1019.0	36.0	38.0	160	9.1	1.47	5.58	51215	130.33	248.27	8.5	14.0
1020.0	27.7	38.0	160	9.1	1.56	5.61	51562	169.43	247.93	8.5	14.0
1021.0	36.7	38.0	160	9.1	1.46	5.64	51823	127.73	247.42	8.5	14.0
1022.0	28.8	38.0	160	9.1	1.54	5.68	52156	162.92	247.06	8.5	14.0
1023.0	37.1	38.0	160	9.1	1.46	5.70	52415	126.42	246.55	8.5	14.0
1024.0	38.7	38.0	160	9.1	1.44	5.73	52663	121.21	246.02	8.5	14.0
1025.0	33.3	38.0	160	9.1	1.49	5.76	52951	140.76	245.58	8.5	14.0
1026.0	52.2	38.0	160	9.1	1.34	5.78	53135	89.93	244.92	8.5	14.0
1027.0	56.2	38.0	160	9.1	1.32	5.80	53306	83.41	244.25	8.5	14.0
1028.0	37.1	38.0	160	9.1	1.46	5.82	53564	126.42	243.76	8.5	14.0
1029.0	49.3	38.0	160	9.1	1.36	5.84	53759	95.14	243.15	8.5	14.0
1030.0	46.8	38.0	160	9.2	1.37	5.86	53964	100.36	242.56	8.5	14.0
1031.0	40.0	38.0	160	9.2	1.42	5.89	54204	117.30	242.05	8.5	14.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1032.0	52.9	38.0	160	9.2	1.33	5.91	54386	88.63	241.42	8.5	14.1
1033.0	39.6	38.0	160	9.2	1.42	5.93	54628	118.60	240.92	8.5	14.1
1034.0	44.4	38.0	160	9.2	1.38	5.96	54844	105.57	240.37	8.5	14.1
1035.0	41.9	38.0	160	9.2	1.40	5.98	55074	112.09	239.86	8.5	14.1
1036.0	45.0	38.0	160	9.2	1.38	6.00	55287	104.27	239.31	8.5	14.1
1037.0	45.0	38.0	160	9.2	1.38	6.02	55500	104.27	238.77	8.5	14.1
1038.0	36.4	38.0	160	9.2	1.45	6.05	55764	129.03	238.33	8.5	14.1
1039.0	61.0	38.0	160	9.3	1.26	6.07	55922	76.90	237.69	8.5	14.1
1040.0	41.4	38.0	160	9.3	1.39	6.09	56154	113.39	237.20	8.5	14.1
1041.0	50.0	38.0	160	9.3	1.33	6.11	56346	93.84	236.64	8.5	14.1
1042.0	34.8	38.0	160	9.3	1.45	6.14	56622	134.90	236.24	8.5	14.1
1043.0	50.7	38.0	160	9.3	1.33	6.16	56811	92.54	235.68	8.5	14.1
1044.0	41.4	38.0	160	9.3	1.39	6.18	57043	113.39	235.20	8.5	14.1
1045.0	52.0	38.0	160	9.3	1.32	6.20	57227	90.23	234.64	8.5	14.1
1046.0	50.3	38.0	160	9.3	1.33	6.22	57418	93.19	234.09	8.5	14.1
1047.0	31.3	38.0	160	9.3	1.48	6.26	57725	149.88	233.77	8.5	14.1
1048.0	43.4	38.0	160	9.3	1.38	6.28	57946	108.18	233.29	8.5	14.1
1049.0	54.5	38.0	160	9.3	1.30	6.30	58122	86.02	232.73	8.5	14.1
1050.0	43.4	38.0	160	8.9	1.44	6.32	58343	108.18	232.25	8.5	14.1
1051.0	37.9	38.0	160	8.9	1.48	6.35	58597	123.82	231.84	8.5	14.1
1052.0	40.0	38.0	160	8.9	1.47	6.37	58837	117.30	231.41	8.5	14.1
1053.0	40.0	38.0	160	8.9	1.47	6.40	59077	117.30	230.98	8.5	14.1
1054.0	33.0	38.0	160	8.9	1.53	6.43	59367	142.06	230.65	8.5	14.1
1055.0	31.9	38.0	160	8.9	1.54	6.46	59669	147.28	230.34	8.5	14.1
1056.0	36.0	38.0	160	8.9	1.50	6.49	59935	130.33	229.97	8.5	14.1
1057.0	25.0	38.0	160	8.9	1.63	6.53	60319	187.68	229.81	8.5	14.1
1058.0	34.3	38.0	160	8.9	1.52	6.56	60599	136.85	229.47	8.5	14.1
1059.0	26.7	38.0	160	8.9	1.60	6.59	60959	175.95	229.27	8.5	14.1
1060.0	33.3	38.0	160	8.9	1.53	6.62	61247	140.76	228.94	8.5	14.1
1061.0	21.1	38.0	160	8.9	1.68	6.67	61703	222.87	228.92	8.5	14.1
1062.0	27.9	38.0	160	8.9	1.59	6.71	62047	168.13	228.70	8.5	14.1
1063.0	20.7	38.0	160	8.9	1.69	6.75	62511	226.78	228.69	8.5	14.1
1064.0	37.9	38.0	160	8.9	1.48	6.78	62765	123.82	228.32	8.5	14.1
1065.0	26.5	38.0	160	8.9	1.61	6.82	63127	177.25	228.13	8.5	14.1
1066.0	33.6	38.0	160	8.9	1.52	6.85	63413	139.46	227.81	8.5	14.1
1067.0	40.4	38.0	160	8.9	1.46	6.87	63650	116.00	227.42	8.5	14.1
1068.0	27.3	38.0	160	8.9	1.60	6.91	64002	172.04	227.22	8.5	14.1
1069.0	26.9	38.0	160	8.9	1.60	6.95	64359	174.65	227.03	8.5	14.1
1070.0	32.7	38.0	160	8.9	1.53	6.98	64653	143.37	226.74	8.5	14.1
1071.0	26.5	38.0	160	8.9	1.61	7.02	65015	177.25	226.56	8.5	14.1
1072.0	42.4	40.0	160	9.0	1.45	7.04	65242	110.78	226.16	8.5	14.1
1073.0	23.2	40.0	160	9.0	1.66	7.08	65655	202.02	226.07	8.5	14.1
1074.0	30.8	40.0	160	9.0	1.56	7.11	65967	152.49	225.81	8.5	14.1
1075.0	23.1	40.0	160	9.0	1.66	7.16	66383	203.32	225.74	8.5	14.1
1076.0	18.5	40.0	160	9.0	1.74	7.21	66903	254.15	225.84	8.5	14.1
1077.0	19.8	40.0	160	9.0	1.71	7.26	67389	237.21	225.87	8.5	14.1
1078.0	19.8	40.0	160	9.0	1.71	7.31	67874	237.21	225.91	8.5	14.2
1079.0	17.4	40.0	160	9.0	1.76	7.37	68426	269.79	226.06	8.5	14.2
1080.0	31.6	40.0	160	9.0	1.55	7.40	68730	148.58	225.80	8.5	14.2
1081.0	31.3	40.0	160	9.0	1.56	7.43	69037	149.88	225.54	8.5	14.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1082.0	19.9	40.0	160	9.3	1.66	7.48	69519	235.90	225.58	8.5	14.2
1083.0	32.7	40.0	160	9.3	1.49	7.51	69813	143.37	225.30	8.5	14.2
1084.0	12.9	40.0	160	9.3	1.80	7.59	70559	364.93	225.77	8.5	14.2
1085.0	29.0	40.0	160	9.3	1.53	7.63	70890	161.61	225.55	8.5	14.2
1086.0	24.0	40.0	160	9.3	1.59	7.67	71290	195.50	225.45	8.5	14.2
1087.0	19.7	40.0	160	9.3	1.66	7.72	71778	238.51	225.50	8.5	14.2
1088.0	21.8	40.0	160	9.3	1.63	7.77	72218	215.05	225.46	8.5	14.2
1089.0	13.3	40.0	160	9.3	1.79	7.84	72941	353.20	225.88	8.5	14.2
1090.0	20.9	40.0	160	9.3	1.64	7.89	73399	224.17	225.88	8.5	14.2
1091.0	20.2	40.0	160	9.3	1.65	7.94	73874	231.99	225.90	8.5	14.2
1092.0	24.0	40.0	160	9.3	1.59	7.98	74274	195.50	225.80	8.5	14.2
1093.0	25.5	40.0	160	9.3	1.57	8.02	74650	183.77	225.66	8.5	14.2
1094.0	26.1	40.0	160	9.2	1.58	8.06	75018	179.86	225.51	8.5	14.2
1095.0	59.0	40.0	160	9.2	1.31	8.07	75181	79.50	225.04	8.5	14.2
1096.0	46.2	40.0	160	9.2	1.39	8.10	75389	101.66	224.64	8.5	14.2
1097.0	41.4	40.0	160	9.2	1.43	8.12	75621	113.39	224.28	8.5	14.2
1098.0	43.9	40.0	160	9.2	1.41	8.14	75839	106.87	223.90	8.5	14.2
1099.0	34.6	40.0	160	9.2	1.49	8.17	76117	135.55	223.62	8.5	14.2
1100.0	33.6	40.0	160	9.2	1.50	8.20	76402	139.46	223.35	8.5	14.2
1101.0	72.0	40.0	160	9.2	1.24	8.22	76535	65.17	222.85	8.5	14.2
1102.0	36.4	40.0	160	9.2	1.47	8.24	76799	129.03	222.55	8.5	14.2
1103.0	44.4	40.0	160	9.2	1.40	8.27	77015	105.57	222.18	8.5	14.2
1104.0	45.0	40.0	160	9.2	1.40	8.29	77229	104.27	221.81	8.5	14.2
1105.0	59.0	40.0	160	9.2	1.31	8.30	77391	79.50	221.36	8.5	14.2
1106.0	31.3	40.0	160	9.2	1.52	8.34	77698	149.88	221.14	8.5	14.2
1107.0	49.3	40.0	160	9.2	1.37	8.36	77893	95.14	220.74	8.5	14.2
1108.0	36.0	40.0	160	9.2	1.48	8.38	78159	130.33	220.46	8.5	14.2
1109.0	40.0	40.0	160	9.2	1.44	8.41	78399	117.30	220.14	8.5	14.2
1110.0	40.0	40.0	160	9.2	1.44	8.43	78639	117.30	219.82	8.5	14.2
1111.0	44.4	40.0	160	9.2	1.40	8.46	78855	105.57	219.47	8.5	14.2
1112.0	53.7	40.0	160	9.2	1.34	8.48	79034	87.32	219.06	8.5	14.2
1113.0	50.0	40.0	160	9.2	1.37	8.50	79226	93.84	218.68	8.5	14.2
1114.0	34.6	40.0	160	9.2	1.49	8.52	79503	135.55	218.42	8.5	14.2
1115.0	49.3	40.0	160	9.2	1.37	8.54	79698	95.14	218.05	8.5	14.2
1116.0	39.1	40.0	160	9.2	1.45	8.57	79943	119.91	217.75	8.5	14.2
1117.0	38.3	40.0	160	9.2	1.45	8.60	80194	122.51	217.46	8.5	14.2
1118.0	49.3	40.0	160	9.2	1.37	8.62	80389	95.14	217.09	8.5	14.2
1119.0	41.4	40.0	160	9.2	1.43	8.64	80621	113.39	216.78	8.5	14.2
1120.0	27.7	40.0	160	9.2	1.56	8.68	80967	169.43	216.64	8.5	14.2
1121.0	27.5	40.0	160	9.2	1.57	8.71	81317	170.74	216.50	8.5	14.2
1122.0	39.6	40.0	160	9.2	1.44	8.74	81559	118.60	216.21	8.5	14.2
1123.0	26.9	40.0	160	9.2	1.57	8.78	81917	174.65	216.08	8.5	14.2
1124.0	53.7	40.0	160	9.2	1.34	8.79	82095	87.32	215.70	8.5	14.2
1125.0	51.4	40.0	160	9.1	1.37	8.81	82282	91.23	215.33	8.5	14.3
1126.0	26.7	40.0	160	9.1	1.59	8.85	82642	175.95	215.22	8.5	14.3
1127.0	26.7	40.0	160	9.1	1.59	8.89	83002	175.95	215.10	8.5	14.3
1128.0	26.1	40.0	160	9.1	1.60	8.93	83370	179.86	215.00	8.5	14.3
1129.0	27.0	40.0	160	9.1	1.59	8.96	83726	173.78	214.88	8.5	14.3
1130.0	28.0	40.0	160	9.1	1.58	9.00	84068	167.48	214.74	8.5	14.3
1131.0	40.9	40.0	160	9.1	1.45	9.02	84303	114.69	214.45	8.5	14.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1132.0	32.7	40.0	160	9.1	1.52	9.05	84596	143.37	214.24	8.5	14.3
1133.0	35.3	40.0	160	9.1	1.50	9.08	84868	132.94	214.01	8.5	14.3
1134.0	45.0	40.0	160	9.1	1.42	9.11	85082	104.27	213.69	8.5	14.3
1135.0	46.8	40.0	160	9.2	1.39	9.13	85287	100.36	213.37	8.5	14.3
1136.0	46.2	40.0	160	9.2	1.39	9.15	85495	101.66	213.05	8.5	14.3
1137.0	42.4	40.0	160	9.2	1.42	9.17	85722	110.78	212.75	8.5	14.3
1138.0	39.1	40.0	160	9.2	1.45	9.20	85967	119.91	212.49	8.5	14.3
1139.0	61.0	40.0	160	9.2	1.30	9.21	86124	76.90	212.10	8.5	14.3
1140.0	37.1	40.0	160	9.2	1.47	9.24	86383	126.42	211.86	8.5	14.3
1141.0	47.4	40.0	160	9.2	1.38	9.26	86586	99.05	211.54	8.5	14.3
1142.0	52.9	40.0	160	9.2	1.35	9.28	86767	88.63	211.20	8.5	14.3
1145.0	26.0	40.0	160	9.2	1.58	9.40	87875	180.46	210.94	8.5	14.3
1150.0	46.0	40.0	160	9.2	1.39	9.50	88918	102.00	209.44	8.5	14.3
1155.0	42.0	40.0	160	9.2	1.42	9.62	90061	111.71	208.11	8.5	14.3
1160.0	48.0	40.0	160	9.2	1.38	9.73	91061	97.75	206.63	8.5	14.3
1165.0	46.0	40.0	160	9.2	1.39	9.84	92105	102.00	205.25	8.5	14.3
1170.0	52.0	40.0	160	9.2	1.35	9.93	93028	90.23	203.75	8.5	14.3
1175.0	50.0	40.0	160	9.2	1.37	10.03	93988	93.84	202.33	8.5	14.4
1180.0	45.0	40.0	160	9.2	1.40	10.14	95054	104.27	201.08	8.5	14.4
1185.0	37.0	40.0	160	9.2	1.47	10.28	96352	126.81	200.15	8.5	14.4
1190.0	44.0	40.0	160	9.2	1.41	10.39	97443	106.64	198.99	8.5	14.4
1195.0	49.0	40.0	160	9.2	1.37	10.49	98422	95.76	197.72	8.5	14.4
1200.0	54.0	40.0	160	9.2	1.34	10.59	99311	86.89	196.38	8.5	14.4
1205.0	50.0	40.0	160	9.1	1.38	10.69	100271	93.84	195.15	8.5	14.4
1206.0	38.0	40.0	160	9.1	1.47	10.71	100524	123.47	194.98	8.5	14.4
1207.0	51.0	40.0	160	9.1	1.37	10.73	100712	92.00	194.74	8.5	14.4
1208.0	54.0	39.0	158	9.1	1.34	10.75	100887	86.89	194.48	8.5	14.4
1209.0	47.4	40.0	160	9.1	1.40	10.77	101090	99.05	194.26	8.5	14.4
1210.0	56.2	40.0	160	9.1	1.34	10.79	101261	83.41	193.99	8.5	14.4
1211.0	66.7	40.0	160	9.1	1.28	10.81	101405	70.38	193.70	8.5	14.4
1212.0	41.9	40.0	160	9.2	1.43	10.83	101634	112.09	193.51	8.5	14.4
1213.0	61.0	40.0	160	9.2	1.30	10.85	101791	76.90	193.24	8.5	14.4
1214.0	45.0	40.0	160	9.2	1.40	10.87	102005	104.27	193.03	8.5	14.4
1215.0	59.0	40.0	160	9.2	1.31	10.89	102167	79.50	192.76	8.5	14.4
1216.0	53.7	40.0	160	9.3	1.33	10.90	102346	87.32	192.52	8.5	14.4
1218.0	48.6	40.0	160	9.3	1.36	10.95	102741	96.45	192.07	8.5	14.4
1219.0	57.1	40.0	160	9.3	1.31	10.96	102909	82.11	191.82	8.5	14.4
1220.0	45.0	40.0	160	9.3	1.39	10.98	103122	104.27	191.61	8.5	14.4
1221.0	38.3	35.0	160	9.3	1.38	11.01	103373	122.51	191.46	8.5	14.4
1222.0	41.0	36.0	160	9.3	1.37	11.04	103607	114.44	191.28	8.5	14.4
1223.0	44.2	35.0	160	9.3	1.34	11.06	103824	106.22	191.08	8.5	14.4
1224.0	44.4	35.0	160	9.4	1.32	11.08	104040	105.57	190.89	8.5	14.4
1225.0	55.4	35.0	160	9.4	1.25	11.10	104214	84.72	190.65	8.5	14.5
1226.0	52.2	35.0	160	9.4	1.27	11.12	104398	89.93	190.42	8.5	14.5
1227.0	37.9	35.0	160	9.4	1.37	11.14	104651	123.82	190.26	8.5	14.5
1228.0	41.0	35.0	160	9.4	1.35	11.17	104885	114.44	190.09	8.5	14.5
1229.0	49.7	35.0	160	9.4	1.29	11.19	105078	94.49	189.88	8.5	14.5
1230.0	51.4	35.0	160	9.4	1.27	11.21	105265	91.23	189.65	8.5	14.5
1231.0	56.2	35.0	160	9.4	1.25	11.23	105436	83.41	189.41	8.5	14.5
1232.0	55.4	35.0	160	9.4	1.25	11.24	105609	84.72	189.18	8.5	14.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1233.0	55.4	35.0	160	9.5	1.24	11.26	105782	84.72	188.95	8.5	14.5
1234.0	40.4	35.0	160	9.5	1.34	11.29	106020	116.00	188.78	8.5	14.5
1235.0	51.4	35.0	160	9.5	1.26	11.31	106206	91.23	188.56	8.5	14.5
1236.0	52.9	35.0	160	9.6	1.24	11.32	106388	88.63	188.34	8.5	14.5
1237.0	54.5	35.0	160	9.6	1.23	11.34	106564	86.02	188.11	8.5	14.5
1238.0	50.7	35.0	160	9.6	1.25	11.36	106753	92.54	187.90	8.5	14.5
1239.0	60.0	35.0	160	9.6	1.20	11.38	106913	78.20	187.66	8.5	14.5
1240.0	55.0	35.0	160	9.6	1.23	11.40	107088	85.31	187.43	8.5	14.5
1241.0	51.8	35.0	160	9.1	1.31	11.42	107273	90.58	187.22	8.5	14.5
1242.0	56.2	35.0	160	9.7	1.21	11.43	107444	83.41	186.99	8.5	14.5
1243.0	52.2	35.0	160	9.7	1.23	11.45	107628	89.93	186.78	8.5	14.5
1244.0	48.6	35.0	160	9.7	1.25	11.47	107825	96.45	186.58	8.5	14.5
1245.0	75.0	35.0	160	9.7	1.12	11.49	107953	62.56	186.31	8.5	14.5
1246.0	48.0	35.0	160	9.7	1.26	11.51	108153	97.75	186.12	8.5	14.5
1247.0	58.1	35.0	160	9.7	1.20	11.53	108318	80.81	185.89	8.5	14.5
1248.0	55.4	35.0	160	9.7	1.21	11.54	108492	84.72	185.67	8.5	14.5
1249.0	50.0	35.0	160	9.7	1.24	11.56	108684	93.84	185.47	8.5	14.5
1250.0	47.4	35.0	160	9.7	1.26	11.59	108886	99.05	185.28	8.5	14.5
1251.0	53.7	35.0	160	9.7	1.22	11.60	109065	87.32	185.07	8.5	14.5
1252.0	45.0	35.0	160	9.7	1.28	11.63	109278	104.27	184.90	8.5	14.5
1253.0	50.7	35.0	160	9.7	1.24	11.65	109468	92.54	184.70	8.5	14.5
1254.0	40.4	35.0	160	9.7	1.31	11.67	109705	116.00	184.55	8.5	14.5
1255.0	40.0	35.0	160	9.7	1.31	11.70	109945	117.30	184.41	8.5	14.5
1256.0	37.9	35.0	160	9.7	1.33	11.72	110198	123.82	184.28	8.5	14.5
1257.0	31.9	35.0	160	9.7	1.38	11.75	110500	147.28	184.20	8.5	14.5
1258.0	35.0	35.0	160	9.7	1.35	11.78	110774	134.24	184.10	8.5	14.5
1259.0	27.0	35.0	160	9.7	1.43	11.82	111130	173.78	184.07	8.5	14.5
1260.0	29.1	35.0	160	9.7	1.41	11.85	111459	160.96	184.03	8.5	14.5
1261.0	29.8	35.0	160	9.7	1.40	11.89	111782	157.70	183.97	8.5	14.5
1262.0	29.3	35.0	160	9.7	1.41	11.92	112110	160.31	183.92	8.5	14.5
1263.0	16.0	35.0	160	9.7	1.59	11.98	112710	293.25	184.15	8.5	14.5
1264.0	31.4	35.0	160	9.7	1.39	12.02	113015	149.23	184.08	8.5	14.5
1265.0	16.6	35.0	160	9.7	1.58	12.08	113594	282.82	184.28	8.5	14.5
1266.0	23.5	35.0	160	9.7	1.47	12.12	114002	199.41	184.31	8.5	14.5
1267.0	18.1	35.0	160	9.7	1.55	12.17	114532	259.36	184.47	8.5	14.5
1268.0	18.8	35.0	160	9.7	1.54	12.23	115044	250.24	184.61	8.5	14.5
1269.0	16.7	18.0	160	9.7	1.32	12.29	115620	281.52	184.81	8.5	14.5
1270.0	26.3	35.0	160	9.7	1.44	12.32	115985	178.40	184.80	8.5	14.5
1271.0	21.1	35.0	160	9.7	1.51	12.37	116440	222.37	184.87	8.5	14.5
1272.0	18.9	35.0	160	9.7	1.54	12.42	116948	248.25	185.00	8.5	14.5
1273.0	16.4	35.0	160	9.7	1.58	12.49	117534	286.10	185.21	8.5	14.5
1274.0	13.6	35.0	160	9.7	1.64	12.56	118240	345.00	185.54	8.5	14.5
1275.0	15.9	35.0	160	9.7	1.59	12.62	118843	295.09	185.76	8.5	14.5
1276.0	11.8	35.0	160	9.7	1.69	12.71	119657	397.63	186.20	8.5	14.5
1277.0	22.0	35.0	160	9.7	1.49	12.75	120093	213.27	186.25	8.5	14.6
1278.0	15.9	35.0	160	9.7	1.59	12.82	120697	295.09	186.47	8.5	14.6
1279.0	16.7	18.0	160	9.7	1.32	12.88	121273	281.52	186.67	8.5	14.6
1280.0	15.9	20.0	160	9.7	1.37	12.94	121878	295.86	186.89	8.5	14.6
1281.0	16.7	20.0	160	9.7	1.35	13.00	122454	281.52	187.08	8.5	14.6
1282.0	21.1	20.0	160	9.7	1.29	13.05	122910	222.87	187.15	8.5	14.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1333.0	29.8	20.0	160	9.8	1.19	15.06	142227	157.70	186.96	8.5	14.7
1334.0	32.1	20.0	160	9.8	1.17	15.09	142526	145.97	186.89	8.5	14.7
1335.0	31.6	20.0	160	9.8	1.18	15.12	142830	148.58	186.82	8.5	14.7
1336.0	32.7	20.0	160	9.8	1.17	15.15	143123	143.37	186.74	8.5	14.7
1337.0	34.0	20.0	160	9.8	1.16	15.18	143406	138.15	186.65	8.5	14.7
1338.0	29.8	20.0	160	9.8	1.19	15.21	143728	157.70	186.60	8.5	14.7
1339.0	24.0	20.0	160	9.8	1.25	15.26	144128	195.50	186.61	8.5	14.7
1340.0	26.9	20.0	160	9.8	1.22	15.29	144486	174.65	186.59	8.5	14.7
1341.0	18.5	20.0	160	9.8	1.31	15.35	145006	254.15	186.71	8.5	14.7
1342.0	25.5	20.0	160	9.8	1.23	15.39	145382	183.77	186.71	8.5	14.7
1343.0	38.0	30.0	160	9.8	1.26	15.41	145634	123.47	186.60	8.5	14.7
1344.0	21.4	20.0	160	9.8	1.28	15.46	146084	219.61	186.65	8.5	14.7
1345.0	48.6	20.0	160	9.8	1.06	15.48	146281	96.45	186.49	8.5	14.7
1346.0	37.0	30.0	160	9.8	1.26	15.51	146541	126.81	186.39	8.5	14.7
1347.0	40.9	30.0	160	9.8	1.24	15.53	146775	114.69	186.26	8.5	14.7
1348.0	36.0	30.0	160	9.8	1.27	15.56	147042	130.33	186.16	8.5	14.7
1349.0	43.9	30.0	160	9.8	1.21	15.58	147261	106.87	186.02	8.5	14.7
1350.0	7.3	30.0	160	9.8	1.73	15.72	148573	641.24	186.83	8.5	14.7
1351.0	35.6	30.0	160	9.8	1.28	15.75	148842	131.64	186.73	8.5	14.7
1352.0	40.9	30.0	160	9.8	1.24	15.77	149077	114.69	186.60	8.5	14.7
1353.0	33.0	30.0	160	9.8	1.30	15.80	149367	142.06	186.52	8.5	14.7
1354.0	48.6	30.0	160	9.8	1.19	15.82	149565	96.45	186.36	8.5	14.7
1355.0	46.0	30.0	160	9.8	1.20	15.84	149773	102.00	186.21	8.5	14.7
1356.0	35.0	30.0	160	9.8	1.28	15.87	150048	134.06	186.12	8.5	14.7
1357.0	40.0	30.0	160	9.8	1.24	15.90	150288	117.30	186.00	8.5	14.7
1358.0	33.0	30.0	160	9.8	1.30	15.93	150578	142.18	185.93	8.5	14.7
1359.0	49.0	30.0	160	9.8	1.18	15.95	150774	95.76	185.77	8.5	14.7
1360.0	34.3	30.0	160	9.8	1.29	15.98	151054	136.85	185.68	8.5	14.7
1361.0	25.7	30.0	160	9.8	1.37	16.02	151428	182.47	185.68	8.5	14.7
1362.0	15.9	30.0	160	9.8	1.51	16.08	152030	294.55	185.87	8.5	14.7
1363.0	21.7	30.0	160	9.8	1.42	16.13	152473	216.35	185.92	8.5	14.7
1364.0	21.2	30.0	160	9.8	1.43	16.17	152926	221.57	185.98	8.5	14.7
1365.0	24.3	30.0	160	9.8	1.39	16.21	153321	192.89	185.99	8.5	14.7
1366.0	22.0	30.0	160	9.8	1.41	16.26	153757	213.27	186.04	8.5	14.7
1367.0	19.9	30.0	160	9.8	1.44	16.31	154240	235.90	186.13	8.5	14.7
1368.0	24.7	30.0	160	9.8	1.38	16.35	154629	190.29	186.13	8.5	14.7
1369.0	21.6	30.0	160	9.8	1.42	16.40	155075	217.66	186.19	8.5	14.7
1370.0	24.5	30.0	160	9.8	1.38	16.44	155467	191.59	186.20	8.5	14.7
1371.0	30.8	30.0	160	9.8	1.32	16.47	155779	152.49	186.14	8.5	14.7
1372.0	22.5	30.0	160	9.8	1.41	16.51	156205	208.53	186.18	8.5	14.7
1373.0	16.7	30.0	160	9.8	1.49	16.57	156779	280.22	186.34	8.5	14.7
1374.0	19.7	30.0	160	9.8	1.45	16.62	157267	238.51	186.43	8.5	14.7
1375.0	21.2	30.0	160	9.8	1.43	16.67	157720	221.57	186.49	8.5	14.7
1376.0	20.0	30.0	160	9.8	1.44	16.72	158200	234.60	186.57	8.5	14.7
1377.0	21.0	30.0	160	9.8	1.43	16.77	158657	223.52	186.63	8.5	14.7
1378.0	22.0	30.0	160	9.8	1.42	16.82	159095	213.75	186.68	8.5	14.7
1379.0	23.0	30.0	160	9.8	1.40	16.86	159512	204.00	186.71	8.5	14.7
1380.0	25.9	30.0	160	9.8	1.37	16.90	159883	181.02	186.70	8.5	14.7
1381.0	29.8	30.0	160	9.8	1.33	16.93	160205	157.70	186.65	8.5	14.7
1382.0	27.0	30.0	160	9.8	1.36	16.97	160561	173.78	186.63	8.5	14.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1383.0	26.2	30.0	160	9.8	1.36	17.01	160927	179.21	186.61	8.5	14.7
1384.0	25.4	30.0	160	9.8	1.37	17.05	161306	185.07	186.61	8.5	14.7
1385.0	30.3	30.0	160	9.8	1.32	17.08	161623	155.10	186.56	8.5	14.7
1386.0	22.5	30.0	160	9.8	1.41	17.12	162050	208.53	186.59	8.5	14.7
1387.0	22.8	30.0	160	9.8	1.40	17.17	162471	205.93	186.63	8.5	14.8
1388.0	20.2	30.0	160	9.8	1.44	17.22	162947	232.43	186.70	8.5	14.8
1389.0	13.3	30.0	160	9.8	1.56	17.29	163667	351.90	186.98	8.5	14.8
1390.0	15.0	30.0	160	9.8	1.53	17.36	164307	312.80	187.19	8.5	14.8
1391.0	22.9	30.0	160	9.8	1.40	17.40	164726	204.62	187.22	8.5	14.8
1392.0	18.8	23.0	157	9.8	1.35	17.45	165225	248.94	187.32	8.5	14.8
1393.0	20.9	23.0	157	9.8	1.32	17.50	165675	224.17	187.38	8.5	14.8
1394.0	23.2	23.0	157	9.8	1.30	17.55	166081	202.02	187.40	8.5	14.8
1395.0	19.0	23.0	157	9.8	1.35	17.60	166576	246.33	187.50	8.5	14.8
1396.0	21.6	23.0	157	9.8	1.32	17.64	167013	217.66	187.55	8.5	14.8
1397.0	25.5	23.0	157	9.8	1.27	17.68	167382	183.77	187.54	8.5	14.8
1398.0	13.9	23.0	157	9.8	1.43	17.76	168059	337.24	187.79	8.5	14.8
1399.0	14.8	23.0	157	9.8	1.42	17.82	168694	316.71	188.00	8.5	14.8
1400.0	15.5	23.0	157	9.8	1.40	17.89	169302	302.37	188.18	8.5	14.8
1401.0	18.4	23.0	157	9.8	1.36	17.94	169814	255.45	188.29	8.5	14.8
1402.0	12.7	23.0	157	9.8	1.46	18.02	170555	368.84	188.59	8.5	14.8
1403.0	13.2	23.0	157	9.8	1.45	18.10	171267	354.51	188.86	8.5	14.8
1404.0	7.2	23.0	157	9.8	1.61	18.24	172575	651.67	189.61	8.5	14.8
1405.0	4.9	23.0	157	9.7	1.73	18.44	174498	957.95	190.85	8.5	14.8
1406.0	12.3	23.0	157	9.7	1.48	18.52	175265	381.88	191.16	8.5	14.8
1407.0	16.2	23.0	157	9.7	1.41	18.58	175846	289.34	191.32	8.5	14.8
1408.0	16.6	23.0	157	9.7	1.40	18.64	176414	282.82	191.46	8.5	14.8
1409.0	18.7	23.0	157	9.7	1.37	18.70	176919	251.54	191.56	8.5	14.8
1410.0	23.2	23.0	157	9.7	1.31	18.74	177324	202.02	191.58	8.5	14.8
1411.0	22.5	23.0	157	9.7	1.32	18.78	177743	208.53	191.61	8.5	14.8
1412.0	14.2	28.0	161	9.7	1.53	18.85	178422	329.74	191.83	8.5	14.8
1413.0	7.3	28.0	161	9.7	1.72	18.99	179750	645.15	192.55	8.5	14.8
1414.0	13.3	28.0	161	9.7	1.55	19.07	180475	351.90	192.80	8.5	14.8
1415.0	22.9	28.0	161	9.7	1.39	19.11	180896	204.62	192.82	8.5	14.8
1416.0	24.8	28.0	161	9.7	1.37	19.15	181285	188.98	192.82	8.5	14.8
1417.0	20.9	28.0	161	9.7	1.42	19.20	181746	224.17	192.87	8.5	14.8
1418.0	16.4	28.0	161	9.7	1.49	19.26	182334	285.43	193.01	8.5	14.8
1419.0	18.6	30.0	160	9.8	1.46	19.31	182851	252.85	193.11	8.5	14.8
1420.0	18.4	30.0	160	9.8	1.47	19.37	183374	255.45	193.21	8.5	14.8
1421.0	22.2	30.0	160	9.8	1.41	19.41	183806	211.14	193.24	8.5	14.8
1422.0	17.0	30.0	160	9.8	1.49	19.47	184371	276.31	193.37	8.5	14.8
1423.0	12.3	30.0	160	9.8	1.58	19.55	185153	381.88	193.66	8.5	14.8
1424.0	13.6	30.0	160	9.8	1.55	19.63	185857	344.08	193.90	8.5	14.8
1425.0	12.5	30.0	160	9.8	1.58	19.71	186627	376.66	194.19	8.5	14.8
1426.0	16.0	29.0	160	9.8	1.49	19.77	187227	293.25	194.34	8.5	14.8
1427.0	24.2	30.0	160	9.8	1.39	19.81	187625	194.20	194.34	8.5	14.8
1428.0	22.0	30.0	160	9.8	1.42	19.86	188062	213.75	194.37	8.5	14.8
1429.0	36.7	30.0	160	9.8	1.27	19.88	188323	127.73	194.27	8.5	14.8
1430.0	37.1	30.0	160	9.8	1.26	19.91	188582	126.42	194.16	8.5	14.8
1431.0	24.0	30.0	160	9.8	1.39	19.95	188982	195.50	194.16	8.5	14.8
1432.0	28.1	30.0	160	9.8	1.34	19.99	189323	166.83	194.12	8.5	14.8

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1433.0	22.4	30.0	160	9.8	1.41	20.03	189753	209.84	194.14	8.5	14.8
1434.0	26.9	30.0	160	9.8	1.36	20.07	190110	174.65	194.11	8.5	14.8
1435.0	33.0	30.0	160	9.8	1.30	20.10	190401	142.06	194.03	8.5	14.8
1436.0	25.2	30.0	160	9.8	1.38	20.14	190782	186.38	194.02	8.5	14.8
1437.0	22.2	30.0	160	9.8	1.41	20.18	191214	211.14	194.05	8.5	14.8
1438.0	21.8	30.0	160	9.8	1.42	20.23	191654	215.05	194.08	8.5	14.8
1439.0	19.7	30.0	160	9.8	1.45	20.28	192142	238.51	194.15	8.5	14.8
1440.0	29.8	30.0	160	9.8	1.33	20.31	192465	157.70	194.09	8.5	14.8
1441.0	25.9	30.0	160	9.8	1.37	20.35	192835	181.16	194.07	8.5	14.8
1442.0	20.0	30.0	160	9.8	1.44	20.40	193315	234.60	194.14	8.5	14.8
1443.0	20.1	30.0	160	9.8	1.44	20.45	193793	233.30	194.20	8.5	14.8
1444.0	29.8	30.0	160	9.8	1.33	20.49	194115	157.70	194.14	8.5	14.8
1445.0	19.1	30.0	160	9.6	1.49	20.54	194617	245.03	194.22	8.5	14.9
1446.0	28.3	30.0	160	9.6	1.37	20.57	194955	165.52	194.17	8.5	14.9
1447.0	33.6	30.0	160	9.6	1.32	20.60	195241	139.46	194.09	8.5	14.9
1448.0	36.7	30.0	160	9.6	1.29	20.63	195502	127.73	193.99	8.5	14.9
1449.0	51.4	30.0	160	9.6	1.19	20.65	195689	91.23	193.84	8.5	14.9
1450.0	80.0	30.0	160	9.6	1.06	20.66	195809	58.65	193.63	8.5	14.9
1451.0	40.9	30.0	160	9.6	1.26	20.69	196043	114.69	193.51	8.5	14.9
1452.0	34.3	30.0	160	9.6	1.31	20.72	196323	136.85	193.43	8.5	14.9
1453.0	50.7	30.0	160	9.6	1.20	20.74	196513	92.54	193.28	8.5	14.9
1454.0	40.4	30.0	160	9.6	1.26	20.76	196750	116.00	193.16	8.5	14.9
1455.0	33.6	30.0	160	9.6	1.32	20.79	197035	139.46	193.08	8.5	14.9
1456.0	46.2	30.0	160	9.6	1.23	20.81	197243	101.66	192.94	8.5	14.9
1457.0	64.3	30.0	160	9.6	1.13	20.83	197393	72.99	192.76	8.5	14.9
1458.0	56.2	30.0	160	9.6	1.17	20.85	197563	83.41	192.60	8.5	14.9
1459.0	72.0	30.0	160	9.6	1.09	20.86	197697	65.17	192.41	8.5	14.9
1460.0	49.3	30.0	160	9.6	1.21	20.88	197891	95.14	192.27	8.5	14.9
1461.0	21.3	30.0	160	9.6	1.45	20.93	198342	220.26	192.31	8.5	14.9
1462.0	25.9	30.0	160	9.6	1.40	20.97	198713	181.16	192.29	8.5	14.9
1463.0	45.0	30.0	160	9.6	1.23	20.99	198926	104.27	192.16	8.5	14.9
1464.0	40.0	30.0	160	9.6	1.27	21.01	199166	117.30	192.05	8.5	14.9
1465.0	20.6	30.0	160	9.6	1.46	21.06	199633	228.08	192.10	8.5	14.9
1466.0	5.6	30.0	160	9.6	1.85	21.24	201337	839.83	193.05	8.5	14.9
1467.0	75.0	30.0	160	9.7	1.07	21.25	201465	62.56	192.86	8.5	14.9
1468.0	75.0	30.0	160	9.7	1.07	21.27	201593	62.56	192.66	8.5	14.9
1469.0	76.6	30.0	160	9.7	1.06	21.28	201718	61.26	192.47	8.5	14.9
1470.0	41.4	30.0	160	9.7	1.24	21.30	201950	113.39	192.36	8.5	14.9
1471.0	46.2	30.0	160	9.7	1.21	21.32	202158	101.66	192.22	8.5	14.9
1472.0	47.4	30.0	160	9.7	1.21	21.35	202361	99.05	192.09	8.5	14.9
1473.0	22.5	30.0	160	9.7	1.42	21.39	202787	208.53	192.11	8.5	14.9
1474.0	27.3	30.0	160	9.7	1.37	21.43	203139	172.04	192.08	8.5	14.9
1475.0	37.1	30.0	160	9.7	1.28	21.45	203398	126.42	191.99	8.5	14.9
1476.0	19.4	30.0	160	9.7	1.47	21.50	203894	242.42	192.06	8.5	14.9
1477.0	20.3	30.0	160	9.7	1.45	21.55	204366	230.69	192.12	8.5	14.9
1478.0	12.3	30.0	160	9.7	1.60	21.64	205145	380.57	192.39	8.5	14.9
1479.0	14.0	30.0	160	9.7	1.56	21.71	205830	334.96	192.59	8.5	14.9
1480.0	15.7	30.0	160	9.7	1.53	21.77	206443	299.77	192.75	8.5	14.9
1481.0	16.9	29.0	159	9.7	1.49	21.83	207008	277.63	192.87	8.5	14.9
1482.0	17.0	29.0	160	9.7	1.49	21.89	207573	276.00	192.99	8.5	14.9

BIT NUMBER	2	IADC CODE	4	INTERVAL	1482.0- 1496.2
CHRIS RC 4	M	SIZE	8.500	NOZZLES	15 15 14 *
COST	13000.00	TRIP TIME	6.4	BIT RUN	14.2
TOTAL HOURS	4.94	TOTAL TURNS	29769	CONDITION	T0 B0 G0.100

* EQUIVILANT TO T.F.A.

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1482.2	2.0	12.0	90	9.7	1.70	0.10	540	2346	217490	8.5	14.9
1482.4	5.2	12.0	90	9.7	1.46	0.14	748	902	109196	8.5	14.9
1482.6	14.4	12.0	90	9.7	1.20	0.15	823	326	72906	8.5	14.9
1482.8	5.6	12.0	90	9.7	1.44	0.19	1016	838	54889	8.5	14.9
1483.0	6.3	12.0	90	9.7	1.41	0.22	1187	743	44060	8.5	14.9
1483.2	1.5	12.0	90	9.7	1.77	0.35	1895	3076	37229	8.5	14.9
1483.4	7.5	12.0	90	9.7	1.36	0.38	2039	626	32000	8.5	14.9
1483.6	7.5	12.0	90	9.7	1.36	0.40	2183	626	28078	8.5	14.9
1483.8	31.3	12.0	90	9.7	1.00	0.41	2217	150	24975	8.5	14.9
1484.0	0.9	12.0	90	9.7	1.90	0.64	3431	5272	23005	8.5	14.9
1484.2	18.0	12.0	90	9.7	1.14	0.65	3491	261	20937	8.5	14.9
1484.4	0.8	12.0	90	9.7	1.92	0.89	4794	5663	19664	8.5	14.9
1484.6	5.9	12.0	90	9.7	1.42	0.92	4977	795	18213	8.5	14.9
1484.8	1.0	12.0	90	9.7	1.87	1.12	6066	4731	17250	8.5	14.9
1485.0	2.3	12.0	90	9.7	1.66	1.21	6533	2027	16235	8.5	14.9
1485.2	1.5	12.0	90	9.7	1.77	1.34	7253	3128	15416	8.5	14.9
1485.4	45.0	12.0	90	9.7	0.91	1.35	7277	104	14515	8.5	14.9
1485.6	6.2	12.0	90	9.7	1.41	1.38	7451	756	13751	8.5	14.9
1485.8	6.0	12.0	90	9.7	1.42	1.41	7631	782	13068	8.5	14.9
1486.0	3.7	12.0	90	9.7	1.54	1.47	7925	1277	12479	8.5	14.9
1486.2	13.3	12.0	90	9.7	1.22	1.48	8006	352	11901	8.5	14.9
1486.4	1.5	15.0	105	9.7	1.91	1.62	8840	3108	11501	8.5	14.9
1486.6	3.3	15.0	105	9.7	1.70	1.68	9218	1408	11063	8.5	14.9
1486.8	1.2	15.0	105	9.7	1.97	1.84	10246	3825	10761	8.5	14.9
1487.0	5.1	15.0	105	9.7	1.59	1.88	10494	925	10368	8.5	14.9
1487.2	0.9	15.0	105	9.7	2.04	2.09	11842	5018	10162	8.5	14.9
1487.4	6.1	15.0	105	9.7	1.54	2.12	12048	769	9814	8.5	14.9
1487.6	7.7	15.0	105	9.7	1.48	2.15	12213	613	9485	8.5	14.9
1487.8	7.6	15.0	105	9.7	1.48	2.18	12379	619	9180	8.5	14.9
1488.0	3.8	15.0	105	9.7	1.66	2.23	12710	1232	8915	8.5	14.9
1488.2	6.4	15.0	105	9.7	1.52	2.26	12906	730	8651	8.5	14.9
1488.4	1.7	15.0	105	9.7	1.88	2.38	13658	2802	8468	8.5	14.9
1488.6	4.9	15.0	105	9.7	1.60	2.42	13915	958	8240	8.5	14.9
1488.8	0.8	15.0	105	9.7	2.07	2.66	15420	5604	8163	8.5	14.9
1489.0	5.7	15.0	105	9.7	1.56	2.69	15641	821	7953	8.5	14.9
1489.2	1.3	15.0	105	9.7	1.96	2.85	16642	3728	7836	8.5	14.9
1489.4	13.8	15.0	105	9.7	1.32	2.87	16733	339	7633	8.5	14.9
1489.6	2.6	15.0	105	9.7	1.77	2.95	17225	1831	7480	8.5	14.9
1489.8	4.7	15.0	105	9.7	1.61	2.99	17491	991	7314	8.5	14.9
1490.0	1.6	15.0	105	9.7	1.89	3.11	18271	2906	7204	8.5	14.9
1490.2	13.8	15.0	105	9.7	1.32	3.13	18362	339	7036	8.5	14.9
1490.4	7.9	15.0	105	9.7	1.47	3.15	18521	593	6883	8.5	14.9
1490.6	19.5	15.0	105	9.7	1.23	3.16	18586	241	6728	8.5	14.9

BIT NUMBER	2	IADC CODE	4	INTERVAL	1496.2- 1509.0
CHRIS RC 4		SIZE	8.500	NOZZLES	15 15 14 *
COST	13000.00	TRIP TIME	6.5	BIT RUN	12.8
TOTAL HOURS	8.39	TOTAL TURNS	50617	CONDITION	T0 B0 G0.000

* EQUIVILANT TO T.F.A.

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1496.4	1.3	12.0	100	9.8	1.82	5.10	30726	3741	337123	8.5	14.9
1496.6	4.3	12.0	100	9.8	1.52	5.15	31006	1095	169109	8.5	14.9
1496.8	1.0	14.0	100	9.8	1.94	5.34	32164	4529	114249	8.5	14.9
1497.0	8.0	14.0	100	9.8	1.41	5.36	32314	587	85833	8.5	14.9
1497.2	1.6	14.0	100	9.8	1.83	5.49	33071	2959	69258	8.5	14.9
1497.4	3.3	14.0	100	9.8	1.64	5.55	33431	1408	57950	8.5	14.9
1497.6	2.4	14.0	102	9.8	1.73	5.63	33942	1962	49952	8.5	14.9
1497.8	4.8	14.0	102	9.8	1.55	5.68	34199	984	43831	8.5	14.9
1498.0	0.6	14.0	99	9.8	2.07	6.00	36097	7494	39793	8.5	14.9
1498.2	2.6	14.0	100	9.8	1.71	6.07	36560	1812	35995	8.5	14.9
1498.4	0.7	14.0	100	9.8	2.04	6.35	38250	6608	33324	8.5	14.9
1498.6	1.3	15.0	102	9.8	1.92	6.50	39161	3493	30838	8.5	14.9
1498.8	1.2	15.0	102	9.8	1.95	6.67	40183	3917	28767	8.5	14.9
1499.0	6.3	12.0	102	9.8	1.43	6.70	40378	749	26766	8.5	14.9
1499.2	3.0	12.0	102	9.8	1.61	6.77	40783	1551	25085	8.5	14.9
1499.4	1.2	12.0	102	9.8	1.84	6.94	41817	3962	23764	8.5	14.9
1499.8	6.7	12.0	102	9.8	1.41	7.00	42180	697	21201	8.5	14.9
1500.0	6.7	13.0	102	9.8	1.44	7.03	42364	704	20123	8.5	14.9
1500.2	1.9	13.0	102	9.8	1.76	7.13	43001	2444	19239	8.5	14.9
1500.4	4.1	13.0	100	9.8	1.55	7.18	43291	1134	18377	8.5	14.9
1500.6	1.5	13.0	102	9.8	1.82	7.31	44119	3174	17685	8.5	14.9
1500.8	13.3	13.0	102	9.8	1.26	7.33	44211	352	16932	8.5	14.9
1501.0	9.0	13.0	102	9.8	1.36	7.35	44347	521	16248	8.5	14.9
1501.2	40.0	13.0	102	9.8	0.98	7.36	44378	117	15603	8.5	14.9
1501.4	144.0	13.0	102	9.8	0.65	7.36	44386	33	15004	8.5	14.9
1501.6	27.7	13.0	102	9.8	1.07	7.36	44430	169	14455	8.5	14.9
1501.8	31.3	13.0	102	9.8	1.04	7.37	44470	150	13944	8.5	14.9
1502.4	65.5	13.0	102	9.8	0.85	7.38	44526	72	12601	8.5	14.9
1502.6	5.1	11.0	100	9.8	1.44	7.42	44762	925	12236	8.5	14.9
1502.8	3.5	11.0	100	9.8	1.54	7.48	45109	1355	11907	8.5	14.9
1503.0	1.0	11.0	100	9.8	1.83	7.67	46274	4555	11690	8.5	14.9
1503.2	6.3	12.0	103	9.8	1.43	7.70	46470	743	11378	8.5	14.9
1503.4	13.3	15.0	102	9.8	1.31	7.72	46561	352	11071	8.5	14.9
1503.6	13.1	15.0	102	9.8	1.31	7.73	46655	358	10782	8.5	14.9
1503.8	24.8	15.0	102	9.7	1.15	7.74	46704	189	10503	8.5	14.9
1504.0	3.9	14.0	100	9.7	1.61	7.79	47013	1206	10265	8.5	14.9
1504.2	5.6	14.0	100	9.7	1.52	7.83	47228	841	10029	8.5	14.9
1504.4	2.6	15.0	101	9.7	1.75	7.91	47690	1792	9828	8.5	15.0
1504.6	7.3	15.0	101	9.7	1.47	7.93	47855	639	9609	8.5	15.0
1504.8	2.0	15.0	101	9.7	1.82	8.03	48467	2366	9441	8.5	15.0
1505.0	5.9	15.0	101	9.7	1.53	8.07	48672	795	9244	8.5	15.0
1505.2	4.6	14.0	100	9.7	1.57	8.11	48932	1017	9062	8.5	15.0
1505.4	7.6	14.0	100	9.7	1.44	8.14	49090	619	8878	8.5	15.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1490.8	11.1	15.0	105	9.7	1.38	3.18	18700	424	6585	8.5	14.9
1491.0	17.1	15.0	105	9.7	1.26	3.19	18773	274	6445	8.5	14.9
1491.2	17.6	15.0	105	9.7	1.26	3.20	18845	267	6311	8.5	14.9
1491.4	14.4	15.0	105	9.7	1.31	3.22	18933	326	6183	8.5	14.9
1491.6	13.3	15.0	105	9.7	1.33	3.23	19027	352	6062	8.5	14.9
1491.8	16.7	15.0	105	9.7	1.27	3.24	19102	280	5944	8.5	14.9
1492.0	10.3	15.0	105	9.7	1.40	3.26	19225	456	5834	8.5	14.9
1492.2	13.1	15.0	105	9.7	1.33	3.28	19321	358	5727	8.5	14.9
1492.4	8.9	15.0	105	9.7	1.44	3.30	19463	528	5627	8.5	14.9
1492.6	12.0	15.0	105	9.7	1.36	3.32	19568	391	5528	8.5	14.9
1492.8	1.1	15.0	105	9.7	1.99	3.50	20693	4190	5503	8.5	14.9
1493.0	2.8	15.0	105	9.7	1.75	3.57	21146	1688	5434	8.5	14.9
1493.2	0.6	15.0	105	9.7	2.14	3.88	23094	7253	5466	8.5	14.9
1493.4	3.2	13.0	105	9.7	1.65	3.94	23486	1460	5396	8.5	14.9
1493.6	1.1	13.0	105	9.7	1.92	4.12	24631	4262	5376	8.5	14.9
1493.8	4.4	13.0	105	9.7	1.56	4.17	24914	1056	5303	8.5	14.9
1494.0	11.8	13.0	105	9.7	1.31	4.18	25021	398	5221	8.5	14.9
1494.2	34.3	13.0	105	9.7	1.04	4.19	25058	137	5138	8.5	14.9
1494.4	36.0	13.0	105	9.7	1.03	4.19	25093	130	5057	8.5	14.9
1494.6	25.7	13.0	105	9.7	1.11	4.20	25142	182	4980	8.5	14.9
1494.8	1.8	13.0	105	9.7	1.80	4.32	25857	2665	4944	8.5	14.9
1495.0	4.8	13.0	105	9.7	1.54	4.36	26118	971	4883	8.5	14.9
1495.2	1.5	13.0	105	9.7	1.85	4.50	26984	3226	4858	8.5	14.9
1495.4	5.9	13.0	105	9.7	1.49	4.53	27200	802	4797	8.5	14.9
1495.6	1.3	13.0	105	9.7	1.88	4.68	28145	3519	4778	8.5	14.9
1495.8	4.7	16.0	105	9.7	1.63	4.72	28411	991	4723	8.5	14.9
1496.0	1.1	16.0	105	9.7	2.04	4.91	29608	4457	4720	8.5	14.9
1496.2	7.8	16.0	105	9.7	1.50	4.94	29769	600	4661	8.5	14.9

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1505.6	5.2	14.0	100	9.7	1.54	8.18	49322	906	8708	8.5	15.0
1505.8	14.7	14.0	100	9.7	1.26	8.19	49404	319	8534	8.5	15.0
1506.0	16.7	14.0	100	9.7	1.23	8.20	49475	280	8365	8.5	15.0
1506.2	14.1	15.0	100	9.7	1.30	8.22	49560	332	8205	8.5	15.0
1506.4	9.6	15.0	100	9.7	1.40	8.24	49685	489	8053	8.5	15.0
1506.6	14.4	15.0	100	9.7	1.29	8.25	49769	326	7905	8.5	15.0
1506.8	22.5	15.0	100	9.7	1.17	8.26	49822	209	7759	8.5	15.0
1507.0	21.2	15.0	100	9.7	1.19	8.27	49879	222	7620	8.5	15.0
1507.2	34.3	15.0	100	9.7	1.06	8.27	49914	137	7484	8.5	15.0
1507.4	18.0	15.0	100	9.7	1.23	8.29	49980	261	7355	8.5	15.0
1507.6	14.7	15.0	100	9.7	1.28	8.30	50062	319	7231	8.5	15.0
1507.8	21.2	15.0	100	9.7	1.19	8.31	50119	222	7111	8.5	15.0
1508.0	14.7	15.0	100	9.7	1.28	8.32	50200	319	6995	8.5	15.0
1508.2	13.1	15.0	100	9.7	1.32	8.34	50292	358	6885	8.5	15.0
1508.4	10.0	15.0	100	9.7	1.39	8.36	50412	469	6780	8.5	15.0
1508.6	34.3	15.0	100	9.7	1.06	8.36	50447	137	6672	8.5	15.0
1508.8	11.8	15.0	100	9.7	1.34	8.38	50549	398	6573	8.5	15.0
1509.0	17.6	15.0	100	9.7	1.24	8.39	50617	267	6474	8.5	15.0

BIT NUMBER	3	IADC CODE	114	INTERVAL	1509.0- 1615.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 18
COST	1400.00	TRIP TIME	6.5	BIT RUN	106.0
TOTAL HOURS	11.95	TOTAL TURNS	87429	CONDITION	T7 B6 G0.375

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1510.0	36.6	20.0	150	9.7	1.13	0.03	246	128	32026	8.5	15.0
1511.0	44.1	20.0	150	9.7	1.08	0.05	450	106	16066	8.5	15.0
1512.0	72.0	20.0	150	9.7	0.95	0.06	575	65	10733	8.5	15.0
1513.0	48.0	20.0	150	9.7	1.06	0.08	763	98	8074	8.5	15.0
1514.0	50.0	30.0	150	9.7	1.17	0.10	943	94	6478	8.5	15.0
1515.0	31.3	35.0	160	9.7	1.39	0.14	1249	150	5423	8.5	15.0
1516.0	7.3	35.0	160	9.7	1.83	0.27	2567	644	4740	8.5	15.0
1517.0	17.2	35.0	160	9.7	1.57	0.33	3124	272	4182	8.5	15.0
1518.0	67.9	35.0	160	9.7	1.15	0.35	3265	69	3725	8.5	15.0
1519.0	73.5	35.0	155	9.7	1.12	0.36	3392	64	3359	8.5	15.0
1520.0	60.0	35.0	155	9.7	1.18	0.38	3547	78	3061	8.5	15.0
1521.0	42.9	35.0	160	9.7	1.29	0.40	3771	109	2815	8.5	15.0
1522.0	12.4	35.0	160	9.7	1.67	0.48	4547	379	2627	8.5	15.0
1523.0	10.7	35.0	160	9.6	1.73	0.57	5445	439	2471	8.5	15.0
1524.0	5.2	35.0	160	9.6	1.95	0.77	7280	897	2366	8.5	15.0
1525.0	7.7	35.0	160	9.6	1.83	0.90	8520	606	2256	8.5	15.0
1526.0	14.0	35.0	160	9.6	1.65	0.97	9205	335	2143	8.5	15.0
1527.0	20.8	35.0	160	9.6	1.53	1.01	9667	225	2037	8.5	15.0
1528.0	24.8	35.0	160	9.6	1.47	1.05	10053	189	1939	8.5	15.0
1529.0	37.9	35.0	160	9.6	1.34	1.08	10307	124	1849	8.5	15.0
1530.0	53.7	35.0	160	9.6	1.23	1.10	10485	87	1765	8.5	15.0
1531.0	102.9	35.0	160	9.6	1.03	1.11	10579	46	1687	8.5	15.0
1532.0	105.9	35.0	160	9.6	1.03	1.12	10669	44	1615	8.5	15.0
1533.0	36.4	35.0	160	9.6	1.36	1.15	10933	129	1553	8.5	15.0
1534.0	25.0	35.0	160	9.6	1.47	1.19	11317	188	1499	8.5	15.0
1535.0	54.5	35.0	160	9.6	1.23	1.20	11493	86	1444	8.5	15.0
1536.0	50.0	35.0	160	9.6	1.26	1.22	11685	94	1394	8.5	15.0
1537.0	59.0	34.0	158	9.6	1.19	1.24	11846	80	1347	8.5	15.0
1538.0	58.1	34.0	158	9.6	1.20	1.26	12009	81	1304	8.5	15.0
1539.0	50.0	34.0	158	9.6	1.24	1.28	12199	94	1263	8.5	15.0
1540.0	45.6	34.0	158	9.6	1.27	1.30	12407	103	1226	8.5	15.0
1541.0	55.4	34.0	158	9.6	1.21	1.32	12578	85	1190	8.5	15.0
1542.0	64.3	34.0	158	9.6	1.17	1.33	12726	73	1156	8.5	15.0
1543.0	72.0	34.0	158	9.6	1.13	1.35	12857	65	1124	8.5	15.0
1544.0	39.6	34.0	158	9.6	1.31	1.37	13097	119	1096	8.5	15.0
1545.0	3.7	35.0	158	9.6	2.06	1.65	15680	1279	1101	8.5	15.0
1546.0	5.4	30.0	130	9.7	1.78	1.83	17121	867	1094	8.5	15.0
1547.0	2.1	30.0	130	9.7	2.05	2.30	20804	2216	1124	8.5	15.0
1548.0	4.1	40.0	125	9.7	2.01	2.54	22617	1134	1124	8.5	15.0
1549.0	6.3	40.0	125	9.7	1.88	2.70	23809	746	1115	8.5	15.0
1550.0	3.1	40.0	125	9.7	2.10	3.02	26210	1502	1124	8.5	15.0
1551.0	2.9	36.0	115	9.7	2.03	3.37	28615	1636	1136	8.5	15.0
1552.0	6.9	36.0	115	9.7	1.76	3.52	29621	684	1126	8.5	15.0

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1553.0	8.2	45.0	130	9.7	1.87	3.64	30577	575	1113	8.5	15.0
1554.0	8.8	45.0	130	9.7	1.85	3.75	31459	530	1100	8.5	15.0
1555.0	17.6	45.0	130	9.7	1.62	3.81	31901	266	1082	8.5	15.0
1556.0	19.8	45.0	130	9.7	1.58	3.86	32295	237	1064	8.5	15.0
1557.0	22.1	45.0	130	9.7	1.55	3.91	32648	212	1046	8.5	15.0
1558.0	19.1	45.0	130	9.7	1.59	3.96	33055	245	1030	8.5	15.0
1559.0	25.7	45.0	130	9.7	1.49	4.00	33359	182	1013	8.5	15.0
1560.0	39.6	45.0	130	9.7	1.35	4.02	33556	118.60	995.53	8.5	15.0
1561.0	53.7	45.0	130	9.7	1.25	4.04	33701	87.32	978.07	8.5	15.0
1562.0	20.9	47.0	130	9.7	1.58	4.09	34074	224.17	963.84	8.5	15.0
1563.0	28.1	47.0	130	9.7	1.49	4.12	34352	167.26	949.09	8.5	15.0
1564.0	3.8	47.0	130	9.7	2.16	4.39	36423	1246	954	8.5	15.0
1565.0	8.7	47.0	70	9.7	1.67	4.50	36905	538.28	947.06	8.5	15.0
1566.0	17.7	47.0	125	9.7	1.63	4.56	37328	264.58	935.08	8.5	15.0
1567.0	24.7	47.0	125	9.7	1.52	4.60	37632	190.29	922.24	8.5	15.1
1568.0	63.2	47.0	125	9.7	1.20	4.62	37751	74.29	907.87	8.5	15.1
1569.0	33.0	47.0	125	9.7	1.42	4.65	37978	142.06	895.11	8.5	15.1
1570.0	65.5	47.0	125	9.7	1.19	4.66	38092	71.68	881.61	8.5	15.1
1571.0	14.5	47.0	125	9.7	1.70	4.73	38611	324.53	872.62	8.5	15.1
1572.0	6.7	47.0	125	9.7	1.95	4.88	39728	698.59	869.86	8.5	15.1
1573.0	2.4	47.0	125	9.7	2.29	5.29	42795	1919	886	8.5	15.1
1574.0	4.0	47.0	125	9.7	2.12	5.54	44649	1160	890	8.5	15.1
1575.0	2.9	48.0	75	9.7	2.07	5.88	46177	1594	901	8.5	15.1
1576.0	2.2	48.0	100	9.7	2.26	6.33	48882	2115	919	8.5	15.1
1577.0	4.4	48.0	100	9.7	2.03	6.55	50242	1064	921	8.5	15.1
1578.0	32.1	48.0	100	9.7	1.36	6.59	50429	145.97	910.12	8.5	15.1
1579.0	48.6	48.0	100	9.7	1.22	6.61	50552	96.45	898.50	8.5	15.1
1580.0	33.3	48.0	100	9.7	1.35	6.64	50732	140.76	887.83	8.5	15.1
1581.0	25.9	48.0	150	9.7	1.57	6.67	51080	181.16	878.01	8.5	15.1
1582.0	20.9	48.0	150	9.7	1.64	6.72	51510	224.17	869.06	8.5	15.1
1583.0	22.8	48.0	150	9.7	1.62	6.77	51905	205.93	860.09	8.5	15.1
1584.0	25.0	47.0	145	9.7	1.56	6.81	52253	187.68	851.13	8.5	15.1
1585.0	26.0	47.0	142	9.7	1.56	6.85	52597	180.46	842.30	8.5	15.1
1586.0	24.0	44.0	152	9.7	1.56	6.89	52977	195.50	833.90	8.5	15.1
1587.0	25.0	45.0	150	9.7	1.55	6.93	53337	187.68	825.62	8.5	15.1
1588.0	34.3	48.0	150	9.7	1.48	6.96	53599	136.85	816.90	8.5	15.1
1589.0	31.3	48.0	150	9.7	1.51	6.99	53887	149.88	808.56	8.5	15.1
1590.0	61.0	48.0	150	9.7	1.28	7.00	54034	76.90	799.53	8.5	15.1
1591.0	69.2	29.0	130	9.7	1.02	7.02	54147	67.77	790.61	8.5	15.1
1592.0	66.7	29.0	130	9.7	1.03	7.03	54264	70.38	781.93	8.5	15.1
1593.0	51.4	29.0	130	9.7	1.11	7.05	54416	91.23	773.71	8.5	15.1
1594.0	47.4	29.0	130	9.7	1.13	7.07	54580	99.05	765.77	8.5	15.1
1595.0	35.3	29.0	130	9.7	1.22	7.10	54801	132.94	758.41	8.5	15.1
1596.0	32.7	29.0	130	9.7	1.24	7.13	55040	143.37	751.34	8.5	15.1
1597.0	35.0	30.0	130	9.7	1.23	7.16	55263	134.24	744.33	8.5	15.1
1598.0	51.4	30.0	130	9.7	1.12	7.18	55414	91.23	736.99	8.5	15.1
1599.0	46.2	30.0	130	9.7	1.15	7.20	55583	101.66	729.93	8.5	15.1
1600.0	51.4	37.0	132	9.7	1.20	7.22	55738	91.28	722.91	8.5	15.1
1601.0	49.3	37.0	132	9.7	1.21	7.24	55898	95.17	716.09	8.5	15.1
1602.0	6.7	37.0	132	9.7	1.83	7.39	57080	700.30	715.92	8.5	15.1

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1603.0	9.8	37.0	132	9.7	1.71	7.49	57888	478.78	713.40	8.5	15.1
1604.0	3.6	37.0	132	9.7	2.02	7.77	60088	1303	720	8.5	15.1
1605.0	7.0	37.0	132	9.7	1.82	7.91	61220	670.29	719.09	8.5	15.1
1606.0	2.6	37.0	132	9.7	2.12	8.30	64266	1805	730	8.5	15.1
1607.0	3.9	37.0	132	9.7	2.00	8.56	66297	1203	735	8.5	15.1
1608.0	6.5	37.0	132	9.7	1.84	8.71	67515	721.85	734.97	8.5	15.1
1609.0	3.4	37.0	132	9.7	2.04	9.00	69845	1380	741	8.5	15.1
1610.0	3.0	35.0	80	9.7	1.89	9.34	71438	1557	750	8.5	15.1
1611.0	1.5	35.0	90	9.7	2.14	10.00	75008	3102	773	8.5	15.1
1612.0	1.7	47.0	90	9.7	2.31	10.60	78277	2840	793	8.5	15.1
1613.0	2.6	47.0	90	9.7	2.16	10.99	80374	1822	803	8.5	15.1
1614.0	4.6	46.0	95	9.6	2.00	11.21	81623	1028	805	8.5	15.1
1615.0	1.3	40.0	130	9.6	2.40	11.95	87429	3493	830	8.5	15.1

BIT NUMBER	4	IADC CODE	517	INTERVAL	1615.0- 2021.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	6800.00	TRIP TIME	7.0	BIT RUN	406.0
TOTAL HOURS	34.07	TOTAL TURNS	152720	CONDITION	T3 B2 G0.000

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1616.0	7.2	32.0	70	9.6	1.55	0.14	585	653	40297	8.5	15.1
1617.0	4.6	39.0	61	9.6	1.74	0.35	1373	1010	20654	8.5	15.1
1618.0	11.5	42.0	61	9.6	1.49	0.44	1690	407	13905	8.5	15.1
1619.0	36.7	42.0	61	9.6	1.11	0.47	1790	128	10460	8.5	15.1
1620.0	47.4	42.0	61	9.6	1.03	0.49	1867	99	8388	8.5	15.1
1621.0	44.4	42.0	61	9.6	1.05	0.51	1949	106	7008	8.5	15.1
1622.0	20.7	40.0	61	9.6	1.28	0.56	2126	227	6039	8.5	15.1
1623.0	48.0	40.0	61	9.6	1.01	0.58	2202	98	5296	8.5	15.1
1624.0	48.0	40.0	60	9.6	1.00	0.60	2277	98	4719	8.5	15.1
1625.0	21.4	40.0	60	9.7	1.26	0.65	2445	219	4269	8.5	15.1
1626.0	50.7	31.0	69	9.7	0.95	0.67	2527	93	3889	8.5	15.1
1627.0	41.1	31.0	69	9.7	1.01	0.69	2628	114	3575	8.5	15.1
1628.0	100.0	31.0	69	9.7	0.75	0.70	2669	47	3303	8.5	15.1
1629.0	67.9	31.0	69	9.7	0.86	0.72	2730	69	3072	8.5	15.1
1630.0	73.5	30.0	72	9.7	0.85	0.73	2789	64	2872	8.5	15.1
1631.0	31.3	30.0	72	9.7	1.10	0.76	2927	150	2701	8.5	15.2
1632.0	20.0	30.0	72	9.7	1.23	0.81	3143	235	2556	8.5	15.2
1633.0	32.4	30.0	72	9.7	1.08	0.84	3276	145	2422	8.5	15.2
1634.0	15.5	30.0	72	9.7	1.30	0.91	3554	302	2311	8.5	15.2
1635.0	25.0	30.0	72	9.7	1.16	0.95	3727	188	2205	8.5	15.2
1636.0	51.4	30.0	72	9.7	0.95	0.97	3811	91	2104	8.5	15.2
1637.0	63.2	30.0	69	9.7	0.88	0.98	3877	74	2012	8.5	15.2
1638.0	9.3	30.0	70	9.7	1.44	1.09	4329	506	1946	8.5	15.2
1639.0	4.3	30.0	80	9.7	1.71	1.32	5439	1084	1910	8.5	15.2
1640.0	5.1	30.0	80	9.7	1.66	1.52	6385	925	1871	8.5	15.2
1641.0	5.3	30.0	80	9.7	1.65	1.71	7299	893	1833	8.5	15.2
1642.0	7.9	30.0	80	9.7	1.53	1.84	7903	590	1787	8.5	15.2
1643.0	6.5	30.0	80	9.7	1.59	1.99	8647	727	1749	8.5	15.2
1644.0	4.2	30.0	81	9.7	1.72	2.23	9814	1127	1728	8.5	15.2
1645.0	18.2	30.0	81	9.7	1.29	2.29	10082	258	1679	8.5	15.2
1646.0	41.4	30.0	81	9.7	1.05	2.31	10199	113	1628	8.5	15.2
1647.0	31.3	30.0	79	9.7	1.12	2.34	10351	150	1582	8.5	15.2
1648.0	72.0	30.0	79	9.7	0.88	2.36	10416	65	1536	8.5	15.2
1649.0	67.9	30.0	79	9.7	0.90	2.37	10486	69	1493	8.5	15.2
1650.0	78.3	30.0	79	9.7	0.85	2.38	10547	60	1452	8.5	15.2
1651.0	109.1	30.0	79	9.7	0.76	2.39	10590	43	1413	8.5	15.2
1652.0	81.8	30.0	79	9.7	0.84	2.40	10648	57	1376	8.5	15.2
1653.0	62.1	30.0	79	9.7	0.92	2.42	10725	76	1342	8.5	15.2
1654.0	46.8	30.0	85	9.7	1.03	2.44	10834	100	1310	8.5	15.2
1655.0	9.5	27.0	80	9.7	1.43	2.55	11340	495	1290	8.5	15.2
1656.0	9.7	27.0	80	9.7	1.43	2.65	11835	484	1270	8.5	15.2
1657.0	56.2	27.0	80	9.7	0.93	2.67	11920	83	1242	8.5	15.2
1658.0	32.1	30.0	80	9.7	1.12	2.70	12070	146	1217	8.5	15.2

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1659.0	27.9	30.0	80	9.7	1.16	2.74	12242	168	1193	8.5	15.2
1660.0	29.5	30.0	80	9.7	1.14	2.77	12404	159	1170	8.5	15.2
1661.0	40.0	30.0	80	9.7	1.05	2.79	12524	117	1147	8.5	15.2
1662.0	40.9	30.0	80	9.7	1.05	2.82	12642	115	1125	8.5	15.2
1663.0	48.0	30.0	80	9.7	1.00	2.84	12742	98	1104	8.5	15.2
1664.0	24.0	30.0	80	9.7	1.20	2.88	12942	196	1085	8.5	15.2
1665.0	34.3	30.0	80	9.7	1.10	2.91	13082	137	1066	8.5	15.2
1666.0	23.8	30.0	80	9.7	1.21	2.95	13283	197	1049	8.5	15.2
1667.0	22.4	30.0	80	9.7	1.22	3.00	13498	210	1033	8.5	15.2
1668.0	22.1	30.0	78	9.7	1.22	3.04	13710	212	1017	8.5	15.2
1669.0	15.5	30.0	78	9.7	1.32	3.11	14011	302	1004	8.5	15.2
1670.0	6.0	31.0	78	9.7	1.62	3.27	14786	776.79	999.99	8.5	15.2
1671.0	5.9	36.0	80	9.7	1.70	3.44	15602	797.64	996.38	8.5	15.2
1672.0	5.8	36.0	80	9.7	1.71	3.62	16433	811.98	993.14	8.5	15.2
1673.0	10.4	36.0	80	9.7	1.53	3.71	16894	450.95	983.80	8.5	15.2
1674.0	29.5	36.0	80	9.7	1.21	3.75	17057	159.01	969.82	8.5	15.2
1675.0	40.9	36.0	80	9.7	1.10	3.77	17174	114.69	955.56	8.5	15.2
1676.0	37.5	36.0	80	9.7	1.13	3.80	17302	125.12	941.95	8.5	15.2
1677.0	34.6	36.0	80	9.7	1.16	3.83	17441	135.55	928.94	8.5	15.2
1678.0	46.2	36.0	80	9.7	1.07	3.85	17545	101.66	915.81	8.5	15.2
1679.0	39.6	36.0	80	9.7	1.12	3.87	17666	118.60	903.36	8.5	15.2
1680.0	48.0	36.0	80	9.7	1.06	3.89	17766	97.75	890.96	8.5	15.2
1681.0	57.1	36.0	80	9.7	1.00	3.91	17850	82.11	878.71	8.5	15.2
1682.0	60.0	36.0	80	9.7	0.99	3.93	17930	78.20	866.76	8.5	15.2
1683.0	35.0	36.0	80	9.7	1.15	3.96	18067	134.24	855.99	8.5	15.2
1684.0	30.3	36.0	80	9.7	1.20	3.99	18226	155.10	845.83	8.5	15.2
1685.0	40.9	36.0	80	9.7	1.10	4.01	18343	114.69	835.38	8.5	15.2
1686.0	64.3	36.0	80	9.7	0.97	4.03	18418	72.99	824.65	8.5	15.2
1687.0	30.8	36.0	80	9.7	1.19	4.06	18574	152.49	815.31	8.5	15.2
1688.0	62.1	36.0	80	9.7	0.98	4.08	18651	75.59	805.18	8.5	15.2
1689.0	40.4	36.0	80	9.7	1.11	4.10	18770	116.00	795.86	8.5	15.2
1690.0	48.0	36.0	80	9.7	1.06	4.12	18870	97.75	786.56	8.5	15.2
1691.0	42.4	36.0	80	9.7	1.09	4.15	18983	110.78	777.66	8.5	15.2
1692.0	17.3	36.0	80	9.7	1.37	4.20	19261	271.09	771.08	8.5	15.2
1693.0	6.8	36.0	79	9.7	1.66	4.35	19961	693.37	770.09	8.5	15.2
1694.0	8.4	36.0	79	9.7	1.59	4.47	20525	557.83	767.40	8.5	15.2
1695.0	7.2	36.0	79	9.7	1.64	4.61	21186	654.27	765.99	8.5	15.2
1696.0	8.5	36.0	79	9.7	1.59	4.73	21744	552.61	763.35	8.5	15.2
1697.0	9.4	36.0	79	9.7	1.55	4.83	22247	497.87	760.12	8.5	15.2
1698.0	12.0	36.0	79	9.7	1.48	4.92	22640	389.70	755.65	8.5	15.3
1699.0	35.6	36.0	75	9.6	1.14	4.95	22767	131.64	748.22	8.5	15.3
1700.0	62.1	36.0	75	9.6	0.96	4.96	22839	75.59	740.31	8.5	15.3
1701.0	36.4	36.0	75	9.6	1.13	4.99	22963	129.03	733.20	8.5	15.3
1702.0	63.2	36.0	75	9.6	0.96	5.01	23034	74.29	725.63	8.5	15.3
1703.0	31.3	36.0	75	9.6	1.18	5.04	23178	149.88	719.09	8.5	15.3
1704.0	50.7	36.0	75	9.6	1.03	5.06	23267	92.54	712.05	8.5	15.3
1705.0	50.7	36.0	75	9.6	1.03	5.08	23355	92.54	705.16	8.5	15.3
1706.0	39.6	36.0	75	9.6	1.10	5.10	23469	118.60	698.72	8.5	15.3
1707.0	46.8	36.0	75	9.6	1.05	5.12	23565	100.36	692.21	8.5	15.3
1708.0	54.5	36.0	75	9.6	1.00	5.14	23648	86.02	685.70	8.5	15.3

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1709.0	39.6	36.0	75	9.6	1.10	5.17	23762	118.60	679.66	8.5	15.3
1710.0	31.0	36.0	75	9.6	1.18	5.20	23907	151.19	674.10	8.5	15.3
1711.0	32.0	36.0	75	9.6	1.17	5.23	24047	146.63	668.61	8.5	15.3
1712.0	69.2	36.0	75	9.6	0.93	5.25	24112	67.77	662.41	8.5	15.3
1713.0	73.5	36.0	75	9.6	0.91	5.26	24174	63.86	656.30	8.5	15.3
1714.0	24.0	36.0	75	9.6	1.26	5.30	24361	195.50	651.65	8.5	15.3
1715.0	9.0	36.0	75	9.6	1.57	5.41	24862	522.64	650.36	8.5	15.3
1716.0	6.7	36.0	75	9.6	1.66	5.56	25536	702.50	650.87	8.5	15.3
1717.0	6.7	36.0	75	9.6	1.66	5.71	26212	705.10	651.41	8.5	15.3
1718.0	7.9	36.0	75	9.6	1.61	5.84	26784	595.62	650.86	8.5	15.3
1719.0	25.9	36.0	75	9.6	1.24	5.88	26957	181.16	646.35	8.5	15.3
1720.0	61.0	32.0	75	9.6	0.94	5.89	27031	76.90	640.93	8.5	15.3
1721.0	51.4	32.0	75	9.6	0.99	5.91	27119	91.23	635.74	8.5	15.3
1722.0	40.4	32.0	75	9.6	1.06	5.94	27230	116.00	630.88	8.5	15.3
1723.0	49.3	32.0	75	9.6	1.00	5.96	27321	95.14	625.92	8.5	15.3
1724.0	43.4	32.0	75	9.6	1.04	5.98	27425	108.18	621.17	8.5	15.3
1725.0	45.6	34.0	75	9.6	1.04	6.00	27524	102.96	616.46	8.5	15.3
1726.0	36.7	34.0	75	9.6	1.11	6.03	27646	127.73	612.06	8.5	15.3
1727.0	33.6	34.0	75	9.6	1.14	6.06	27780	139.46	607.84	8.5	15.3
1728.0	30.8	34.0	75	9.6	1.16	6.09	27926	152.49	603.81	8.5	15.3
1729.0	72.0	34.0	75	9.6	0.90	6.11	27989	65.17	599.08	8.5	15.3
1730.0	60.0	34.0	75	9.6	0.96	6.12	28064	78.20	594.55	8.5	15.3
1731.0	14.2	35.0	76	9.6	1.42	6.19	28385	331.05	592.28	8.5	15.3
1732.0	6.7	35.0	76	9.6	1.65	6.34	29062	695.98	593.17	8.5	15.3
1733.0	39.6	35.0	76	9.6	1.10	6.37	29177	118.60	589.15	8.5	15.3
1734.0	46.8	35.0	76	9.6	1.05	6.39	29275	100.36	585.04	8.5	15.3
1735.0	7.3	35.0	76	9.6	1.62	6.53	29896	639.94	585.50	8.5	15.3
1736.0	6.6	35.0	76	9.6	1.65	6.68	30587	710.32	586.53	8.5	15.3
1737.0	9.6	35.0	76	9.6	1.54	6.78	31061	487.45	585.72	8.5	15.3
1738.0	8.6	35.0	76	9.6	1.57	6.90	31591	546.10	585.39	8.5	15.3
1739.0	15.5	35.0	76	9.6	1.39	6.96	31886	303.68	583.12	8.5	15.3
1740.0	16.0	35.0	76	9.6	1.38	7.02	32171	293.25	580.80	8.5	15.3
1741.0	22.2	35.0	76	9.6	1.28	7.07	32377	211.14	577.87	8.5	15.3
1742.0	28.3	36.0	77	9.6	1.22	7.10	32540	165.52	574.62	8.5	15.3
1743.0	23.5	36.0	77	9.6	1.27	7.15	32736	199.41	571.69	8.5	15.3
1744.0	37.9	36.0	77	9.7	1.11	7.17	32858	123.82	568.22	8.5	15.3
1745.0	8.8	36.0	77	9.7	1.56	7.29	33380	530.46	567.93	8.5	15.3
1756.0	6.7	36.0	77	9.7	1.65	8.92	40918	695.98	577.92	8.5	15.3
1757.0	29.0	32.0	76	9.7	1.15	8.95	41076	161.79	574.99	8.5	15.3
1758.0	34.0	32.0	76	9.7	1.10	8.98	41210	138.00	571.93	8.5	15.3
1759.0	30.0	32.0	76	9.7	1.14	9.02	41362	156.40	569.05	8.5	15.3
1760.0	23.2	32.0	76	9.7	1.22	9.06	41558	202.02	566.52	8.5	15.3
1761.0	9.2	32.0	76	9.7	1.49	9.17	42055	510.91	566.13	8.5	15.3
1762.0	35.6	32.0	76	9.7	1.09	9.20	42183	131.64	563.18	8.5	15.3
1763.0	7.9	32.0	76	9.7	1.54	9.32	42761	595.62	563.40	8.5	15.3
1764.0	8.4	32.0	76	9.7	1.52	9.44	43305	559.13	563.37	8.5	15.3
1765.0	21.4	32.0	76	9.7	1.24	9.49	43518	218.96	561.07	8.5	15.3
1766.0	14.3	32.0	76	9.7	1.36	9.56	43836	327.14	559.52	8.5	15.3
1767.0	23.1	32.0	76	9.7	1.22	9.60	44033	203.32	557.18	8.5	15.3
1768.0	35.0	32.0	76	9.7	1.10	9.63	44164	134.24	554.42	8.5	15.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1769.0	56.2	32.0	76	9.7	0.95	9.65	44245	83.41	551.36	8.5	15.4
1770.0	40.0	32.0	76	9.7	1.06	9.67	44359	117.30	548.56	8.5	15.4
1771.0	23.7	32.0	76	9.7	1.21	9.71	44551	198.11	546.31	8.5	15.4
1772.0	17.4	32.0	76	9.7	1.30	9.77	44813	269.79	544.55	8.5	15.4
1773.0	8.6	32.0	76	9.7	1.52	9.89	45347	548.70	544.58	8.5	15.4
1774.0	14.1	33.0	76	9.7	1.38	9.96	45670	332.35	543.24	8.5	15.4
1775.0	4.5	33.0	76	9.7	1.72	10.18	46692	1052	546	8.5	15.4
1776.0	5.5	33.0	76	9.7	1.66	10.37	47519	851.08	548.31	8.5	15.4
1777.0	12.8	34.0	77	9.6	1.44	10.44	47880	366.24	547.19	8.5	15.4
1778.0	13.0	34.0	77	9.6	1.43	10.52	48235	360.92	546.05	8.5	15.4
1779.0	12.9	34.0	77	9.6	1.44	10.60	48594	364.93	544.94	8.5	15.4
1780.0	15.9	34.0	77	9.6	1.37	10.66	48886	295.86	543.43	8.5	15.4
1781.0	22.6	34.0	77	9.6	1.26	10.71	49090	207.23	541.41	8.5	15.4
1782.0	27.9	35.0	79	9.6	1.21	10.74	49260	168.13	539.17	8.5	15.4
1783.0	29.3	34.0	82	9.7	1.20	10.78	49428	160.31	536.92	8.5	15.4
1784.0	27.7	34.0	82	9.7	1.21	10.81	49605	169.43	534.74	8.5	15.4
1785.0	39.6	34.0	82	9.7	1.10	10.84	49730	118.60	532.29	8.5	15.4
1786.0	43.4	35.0	82	9.7	1.09	10.86	49843	108.18	529.81	8.5	15.4
1787.0	29.8	35.0	82	9.7	1.20	10.89	50009	157.70	527.65	8.5	15.4
1788.0	12.7	36.0	81	9.7	1.47	10.97	50391	368.84	526.73	8.5	15.4
1789.0	6.7	36.0	81	9.7	1.67	11.12	51114	698.59	527.72	8.5	15.4
1790.0	12.9	36.0	81	9.7	1.47	11.20	51491	363.63	526.78	8.5	15.4
1791.0	17.9	36.0	81	9.7	1.37	11.25	51762	261.97	525.28	8.5	15.4
1792.0	9.8	36.0	81	9.7	1.55	11.36	52258	478.32	525.01	8.5	15.4
1793.0	13.4	36.0	81	9.7	1.45	11.43	52619	349.29	524.02	8.5	15.4
1794.0	22.2	36.0	81	9.7	1.30	11.48	52838	211.14	522.28	8.5	15.4
1795.0	25.7	36.0	81	9.7	1.25	11.51	53027	182.47	520.39	8.5	15.4
1796.0	24.2	36.0	81	9.7	1.27	11.56	53228	194.20	518.59	8.5	15.4
1797.0	20.0	36.0	81	9.7	1.33	11.61	53471	234.60	517.03	8.5	15.4
1798.0	21.3	36.0	81	9.7	1.31	11.65	53699	220.26	515.40	8.5	15.4
1799.0	25.2	36.0	81	9.7	1.26	11.69	53893	186.38	513.62	8.5	15.4
1800.0	48.0	36.0	81	9.7	1.06	11.71	53994	97.75	511.37	8.5	15.4
1801.0	14.0	36.0	81	9.7	1.44	11.78	54341	335.14	510.42	8.5	15.4
1802.0	14.0	36.0	81	9.7	1.44	11.86	54688	335.14	509.48	8.5	15.4
1803.0	8.2	36.0	75	9.7	1.58	11.98	55234	569.74	509.80	8.5	15.4
1804.0	6.9	35.0	78	9.7	1.64	12.12	55916	682.95	510.72	8.5	15.4
1805.0	8.7	35.0	78	9.7	1.56	12.24	56455	540.88	510.88	8.5	15.4
1806.0	7.8	35.0	78	9.7	1.60	12.37	57056	602.14	511.36	8.5	15.4
1807.0	14.8	35.0	78	9.7	1.40	12.43	57372	316.71	510.34	8.5	15.4
1808.0	30.0	35.0	78	9.7	1.18	12.47	57528	156.40	508.51	8.5	15.4
1809.0	31.9	35.0	78	9.7	1.17	12.50	57675	147.28	506.65	8.5	15.4
1810.0	13.5	35.0	78	9.7	1.43	12.57	58020	346.69	505.83	8.5	15.4
1812.0	3.9	35.0	76	9.7	1.80	13.09	60367	1207	513	8.5	15.4
1813.0	5.8	38.0	75	9.7	1.72	13.26	61146	811.98	514.46	8.5	15.4
1814.0	3.7	38.0	75	9.7	1.86	13.53	62376	1282	518	8.5	15.4
1815.0	4.6	37.0	76	9.7	1.78	13.75	63376	1030	521	8.5	15.4
1816.0	4.8	37.0	76	9.7	1.77	13.96	64328	978.80	523.15	8.5	15.4
1817.0	7.7	37.0	76	9.7	1.62	14.09	64922	611.26	523.59	8.5	15.4
1818.0	11.8	37.0	76	9.7	1.49	14.18	65307	396.21	522.96	8.5	15.4
1819.0	14.6	37.0	76	9.7	1.42	14.25	65618	320.62	521.97	8.5	15.4

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1820.0	24.8	37.0	76	9.7	1.25	14.29	65802	188.98	520.34	8.5	15.4
1821.0	21.4	37.0	76	9.7	1.30	14.33	66015	218.96	518.88	8.5	15.4
1822.0	22.9	37.0	76	9.7	1.28	14.38	66214	204.62	517.36	8.5	15.4
1823.0	23.1	37.0	76	9.7	1.28	14.42	66411	203.32	515.85	8.5	15.4
1824.0	21.6	37.0	76	9.7	1.30	14.47	66623	217.66	514.43	8.5	15.4
1825.0	18.4	38.0	74	9.7	1.35	14.52	66864	255.45	513.19	8.5	15.4
1826.0	19.6	38.0	74	9.7	1.33	14.57	67091	239.81	511.90	8.5	15.4
1827.0	11.9	38.0	74	9.7	1.49	14.66	67465	394.91	511.35	8.5	15.4
1828.0	13.6	38.0	74	9.7	1.45	14.73	67792	345.38	510.57	8.5	15.4
1829.0	18.8	38.0	74	9.7	1.34	14.78	68029	250.24	509.35	8.5	15.4
1830.0	7.8	38.0	74	9.7	1.62	14.91	68601	604.75	509.79	8.5	15.4
1831.0	4.9	38.0	74	9.7	1.77	15.12	69516	967.07	511.91	8.5	15.4
1832.0	5.0	38.0	74	9.7	1.76	15.32	70407	941.01	513.89	8.5	15.4
1833.0	4.7	38.0	74	9.7	1.78	15.53	71360	1007	516	8.5	15.4
1834.0	9.2	38.0	74	9.7	1.57	15.64	71841	508.30	516.12	8.5	15.4
1835.0	15.1	38.0	74	9.7	1.41	15.71	72136	311.50	515.19	8.5	15.4
1836.0	23.7	38.0	74	9.7	1.27	15.75	72323	198.11	513.75	8.5	15.4
1837.0	20.2	38.0	63	9.7	1.27	15.80	72510	231.99	512.48	8.5	15.4
1838.0	8.9	38.0	63	9.7	1.53	15.91	72933	525.24	512.54	8.5	15.4
1839.0	4.7	38.0	65	9.7	1.74	16.13	73770	1006	515	8.5	15.4
1840.0	4.6	38.0	65	9.7	1.75	16.34	74627	1031	517	8.5	15.5
1841.0	5.8	38.0	65	9.7	1.67	16.52	75304	814.58	518.35	8.5	15.5
1842.0	5.9	35.0	62	9.7	1.61	16.69	75938	800.25	519.60	8.5	15.5
1843.0	11.5	34.0	59	9.7	1.38	16.78	76246	407.94	519.11	8.5	15.5
1844.0	14.5	35.0	62	9.7	1.34	16.84	76502	323.23	518.25	8.5	15.5
1845.0	10.5	35.0	62	9.7	1.44	16.94	76857	447.04	517.94	8.5	15.5
1846.0	8.3	34.0	61	9.7	1.49	17.06	77299	566.95	518.15	8.5	15.5
1847.0	17.8	34.0	61	9.7	1.26	17.12	77504	263.27	517.06	8.5	15.5
1848.0	19.7	34.0	61	9.7	1.23	17.17	77690	238.51	515.86	8.5	15.5
1849.0	27.9	34.0	61	9.7	1.12	17.20	77821	168.13	514.37	8.5	15.5
1850.0	15.3	31.0	73	9.7	1.32	17.27	78109	307.59	513.49	8.5	15.5
1851.0	22.5	31.0	73	9.7	1.21	17.31	78303	208.53	512.20	8.5	15.5
1852.0	18.6	31.0	73	9.7	1.27	17.37	78539	252.85	511.11	8.5	15.5
1853.0	16.8	31.0	73	9.7	1.29	17.43	78800	278.91	510.13	8.5	15.5
1854.0	14.1	31.0	73	9.7	1.35	17.50	79111	333.65	509.39	8.5	15.5
1855.0	12.2	27.0	62	9.7	1.29	17.58	79416	384.48	508.87	8.5	15.5
1856.0	15.4	27.0	62	9.6	1.23	17.65	79658	304.98	508.03	8.5	15.5
1857.0	16.7	30.0	60	9.6	1.23	17.71	79874	281.52	507.09	8.5	15.5
1858.0	18.1	30.0	60	9.6	1.21	17.76	80073	259.36	506.07	8.5	15.5
1859.0	16.0	30.0	60	9.6	1.24	17.82	80298	293.25	505.20	8.5	15.5
1860.0	16.2	28.0	62	9.6	1.23	17.88	80527	289.34	504.32	8.5	15.5
1861.0	22.5	28.0	62	9.6	1.13	17.93	80692	208.53	503.12	8.5	15.5
1862.0	16.4	28.0	62	9.6	1.22	17.99	80919	285.43	502.23	8.5	15.5
1863.0	12.8	28.0	62	9.6	1.30	18.07	81209	366.24	501.69	8.5	15.5
1864.0	16.9	28.0	62	9.6	1.22	18.13	81429	277.61	500.79	8.5	15.5
1865.0	16.9	28.0	62	9.6	1.22	18.19	81649	277.61	499.89	8.5	15.5
1866.0	16.9	32.0	63	9.6	1.27	18.25	81873	277.61	499.01	8.5	15.5
1867.0	10.9	32.0	63	9.6	1.40	18.34	82218	428.80	498.73	8.5	15.5
1868.0	14.0	32.0	63	9.6	1.33	18.41	82489	336.26	498.09	8.5	15.5
1869.0	16.4	32.0	63	9.6	1.28	18.47	82719	285.43	497.25	8.5	15.5

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1870.0	8.4	32.0	63	9.6	1.48	18.59	83170	559.13	497.49	8.5	15.5
1871.0	14.2	33.0	63	9.6	1.33	18.66	83436	331.05	496.84	8.5	15.5
1872.0	12.3	33.0	63	9.6	1.38	18.74	83744	381.88	496.40	8.5	15.5
1873.0	15.9	32.0	63	9.7	1.28	18.80	83982	295.09	495.61	8.5	15.5
1874.0	15.7	32.0	63	9.7	1.28	18.87	84223	298.85	494.86	8.5	15.5
1875.0	11.4	32.0	63	9.7	1.37	18.95	84554	411.58	494.53	8.5	15.5
1876.0	21.3	32.0	63	9.7	1.19	19.00	84732	220.28	493.48	8.5	15.5
1877.0	15.4	32.0	63	9.7	1.28	19.07	84977	304.68	492.76	8.5	15.5
1878.0	15.3	32.0	63	9.7	1.29	19.13	85224	306.67	492.06	8.5	15.5
1879.0	18.2	32.0	63	9.7	1.23	19.19	85432	257.80	491.17	8.5	15.5
1880.0	14.2	32.0	63	9.7	1.31	19.26	85698	330.42	490.56	8.5	15.5
1881.0	12.6	32.0	63	9.7	1.34	19.34	85998	372.38	490.12	8.5	15.5
1882.0	14.1	32.0	63	9.7	1.31	19.41	86266	332.77	489.53	8.5	15.5
1883.0	11.6	32.0	63	9.7	1.37	19.49	86592	404.48	489.21	8.5	15.5
1884.0	13.1	32.0	63	9.7	1.33	19.57	86880	358.17	488.72	8.5	15.5
1885.0	12.5	32.0	63	9.7	1.35	19.65	87183	375.36	488.30	8.5	15.5
1886.0	3.3	32.0	63	9.7	1.74	19.95	88328	1422	492	8.5	15.5
1887.0	3.9	32.0	63	9.7	1.69	20.21	89298	1203	494	8.5	15.5
1888.0	3.0	32.0	63	9.7	1.77	20.54	90558	1564	498	8.5	15.5
1889.0	3.3	32.0	63	9.7	1.74	20.85	91703	1422	502	8.5	15.5
1890.0	4.0	32.0	63	9.7	1.69	21.10	92648	1173	504	8.5	15.5
1891.0	4.7	32.0	63	9.7	1.64	21.31	93452	998.30	505.88	8.5	15.5
1892.0	3.4	32.0	63	9.7	1.73	21.60	94564	1380	509	8.5	15.5
1893.0	5.8	30.0	63	9.5	1.58	21.78	95216	809.37	510.12	8.5	15.5
1894.0	4.6	30.0	63	9.5	1.65	21.99	96035	1017	512	8.5	15.5
1895.0	6.9	30.0	63	9.5	1.53	22.14	96581	677.73	512.53	8.5	15.5
1896.0	16.1	30.0	63	9.5	1.28	22.20	96816	291.95	511.74	8.5	15.5
1897.0	21.8	30.0	63	9.5	1.18	22.24	96990	215.05	510.69	8.5	15.5
1898.0	10.2	30.0	63	9.5	1.41	22.34	97360	460.08	510.51	8.5	15.5
1899.0	19.7	30.0	63	9.5	1.21	22.39	97552	238.51	509.55	8.5	15.5
1900.0	23.8	30.0	63	9.5	1.16	22.44	97711	196.80	508.46	8.5	15.5
1901.0	25.5	30.0	63	9.5	1.14	22.47	97859	183.77	507.32	8.5	15.5
1902.0	16.7	30.0	63	9.5	1.26	22.53	98065	280.22	506.53	8.5	15.5
1903.0	14.2	30.0	63	9.5	1.31	22.60	98350	329.74	505.92	8.5	15.5
1904.0	14.4	30.0	63	9.5	1.31	22.67	98613	325.83	505.29	8.5	15.5
1905.0	29.5	30.0	63	9.5	1.09	22.71	98741	159.01	504.10	8.5	15.5
1906.0	24.3	30.0	63	9.5	1.15	22.75	98896	192.89	503.03	8.5	15.5
1907.0	32.7	30.0	63	9.5	1.06	22.78	99012	143.37	501.80	8.5	15.5
1908.0	23.0	31.0	63	9.5	1.18	22.82	99176	204.00	500.78	8.5	15.5
1909.0	14.2	30.0	63	9.5	1.31	22.89	99442	329.74	500.20	8.5	15.5
1910.0	19.4	30.0	63	9.5	1.22	22.94	99637	242.42	499.33	8.5	15.5
1911.0	11.2	30.0	63	9.5	1.38	23.03	99975	419.67	499.06	8.5	15.5
1912.0	6.0	30.0	63	9.5	1.57	23.20	100605	782.00	500.01	8.5	15.5
1913.0	10.1	32.0	63	9.7	1.41	23.30	100979	464.55	499.89	8.5	15.5
1914.0	9.5	32.0	63	9.7	1.43	23.41	101377	493.89	499.87	8.5	15.6
1915.0	11.9	32.0	63	9.7	1.36	23.49	101695	394.29	499.52	8.5	15.6
1916.0	14.5	32.0	63	9.7	1.30	23.56	101956	323.59	498.93	8.5	15.6
1917.0	14.3	32.0	63	9.7	1.31	23.63	102219	327.14	498.37	8.5	15.6
1918.0	17.2	32.0	63	9.7	1.25	23.69	102439	272.79	497.62	8.5	15.6
1919.0	17.3	32.0	63	9.7	1.25	23.74	102658	271.21	496.88	8.5	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1920.0	17.6	32.0	63	9.7	1.24	23.80	102872	266.59	496.12	8.5	15.6
1921.0	16.3	32.0	63	9.7	1.27	23.86	103104	287.85	495.44	8.5	15.6
1922.0	16.1	32.0	63	9.7	1.27	23.92	103339	291.43	494.78	8.5	15.6
1923.0	18.3	32.0	63	9.7	1.23	23.98	103546	256.39	494.00	8.5	15.6
1924.0	18.5	32.0	63	9.7	1.23	24.03	103750	253.62	493.22	8.5	15.6
1925.0	14.1	32.0	63	9.7	1.31	24.10	104018	332.77	492.71	8.5	15.6
1926.0	19.3	32.0	63	9.7	1.22	24.16	104214	243.11	491.90	8.5	15.6
1927.0	18.1	32.0	63	9.7	1.24	24.21	104423	259.23	491.16	8.5	15.6
1928.0	16.9	32.0	63	9.7	1.26	24.27	104646	277.63	490.48	8.5	15.6
1929.0	14.9	32.0	63	9.7	1.29	24.34	104900	314.90	489.92	8.5	15.6
1930.0	14.1	32.0	63	9.7	1.31	24.41	105168	332.77	489.42	8.5	15.6
1931.0	14.5	32.0	63	9.7	1.30	24.48	105429	323.59	488.89	8.5	15.6
1932.0	11.7	32.0	63	9.7	1.37	24.56	105752	401.03	488.62	8.5	15.6
1933.0	16.2	32.0	63	9.7	1.27	24.62	105985	289.63	487.99	8.5	15.6
1934.0	17.8	32.0	63	9.7	1.24	24.68	106198	263.60	487.29	8.5	15.6
1935.0	33.3	32.0	63	9.7	1.06	24.71	106311	140.90	486.20	8.5	15.6
1936.0	30.8	32.0	63	9.7	1.08	24.74	106434	152.34	485.16	8.5	15.6
1937.0	27.1	32.0	63	9.7	1.12	24.78	106573	173.14	484.20	8.5	15.6
1938.0	35.6	32.0	63	9.7	1.04	24.81	106679	131.80	483.10	8.5	15.6
1939.0	35.6	32.0	63	9.7	1.04	24.84	106786	131.80	482.02	8.5	15.6
1940.0	30.5	32.0	63	9.7	1.08	24.87	106910	153.84	481.01	8.5	15.6
1941.0	23.2	32.0	63	9.7	1.16	24.91	107073	202.24	480.15	8.5	15.6
1942.0	17.3	32.0	63	9.7	1.25	24.97	107291	271.21	479.52	8.5	15.6
1943.0	25.2	32.0	63	9.7	1.14	25.01	107441	186.19	478.62	8.5	15.6
1944.0	22.5	32.0	63	9.7	1.17	25.05	107609	208.53	477.80	8.5	15.6
1945.0	20.6	32.0	63	9.7	1.20	25.10	107793	227.77	477.04	8.5	15.6
1946.0	10.9	32.0	63	9.7	1.39	25.19	108139	430.46	476.90	8.5	15.6
1947.0	12.2	32.0	63	9.7	1.35	25.28	108449	384.59	476.62	8.5	15.6
1948.0	16.4	32.0	63	9.7	1.27	25.34	108680	286.10	476.05	8.5	15.6
1949.0	25.4	32.0	63	9.7	1.14	25.38	108828	184.72	475.18	8.5	15.6
1950.0	20.1	32.0	63	9.7	1.21	25.43	109016	233.43	474.46	8.5	15.6
1951.0	14.8	32.0	63	9.7	1.30	25.49	109272	317.03	473.99	8.5	15.6
1952.0	7.3	32.0	63	9.7	1.51	25.63	109790	642.74	474.49	8.5	15.6
1953.0	6.5	18.0	63	9.5	1.35	25.78	110370	720.74	475.22	8.5	15.6
1954.0	5.1	26.0	63	9.6	1.54	25.98	111106	913.64	476.51	8.5	15.6
1955.0	17.6	26.0	63	9.6	1.19	26.04	111322	267.18	475.90	8.5	15.6
1956.0	13.3	25.0	63	9.6	1.26	26.11	111606	353.20	475.54	8.5	15.6
1957.0	13.3	27.0	63	9.6	1.28	26.19	111890	351.90	475.18	8.5	15.6
1958.0	14.6	27.0	63	9.6	1.26	26.25	112149	321.92	474.73	8.5	15.6
1959.0	10.8	27.0	63	9.6	1.35	26.35	112500	435.31	474.61	8.5	15.6
1960.0	17.3	27.0	63	9.6	1.21	26.41	112718	271.09	474.02	8.5	15.6
1961.0	17.7	27.0	63	9.6	1.20	26.46	112931	264.58	473.42	8.5	15.6
1962.0	11.1	14.0	63	9.6	1.13	26.55	113270	420.98	473.27	8.5	15.6
1963.0	17.2	17.0	63	9.6	1.07	26.61	113490	272.40	472.69	8.5	15.6
1964.0	16.6	17.0	63	9.6	1.08	26.67	113718	282.82	472.15	8.5	15.6
1965.0	14.4	17.0	63	9.6	1.11	26.74	113980	325.83	471.73	8.5	15.6
1966.0	11.8	17.0	63	9.6	1.17	26.82	114302	398.82	471.52	8.5	15.6
1967.0	9.5	17.0	63	9.6	1.22	26.93	114701	495.27	471.59	8.5	15.6
1968.0	12.2	19.0	63	9.6	1.19	27.01	115009	383.18	471.34	8.5	15.6
1969.0	16.4	19.0	63	9.6	1.11	27.07	115239	285.43	470.81	8.5	15.6

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
1970.0	22.9	19.0	63	9.6	1.02	27.12	115404	204.62	470.06	8.5	15.6
1971.0	28.1	21.0	63	9.6	1.00	27.15	115538	166.83	469.21	8.5	15.6
1972.0	11.5	21.0	63	9.6	1.74	27.24	115868	409.25	469.04	8.5	15.6
1973.0	5.1	21.0	72	9.6	1.49	27.43	116713	917.55	470.30	8.5	15.6
1974.0	2.4	15.0	72	9.6	1.55	27.85	118489	1929	474	8.5	15.6
1975.0	2.7	15.0	72	9.6	1.52	28.21	120078	1726	478	8.5	15.6
1976.0	4.3	15.0	72	9.6	1.41	28.44	121075	1083	480	8.5	15.6
1977.0	3.2	26.0	63	9.6	1.67	28.76	122251	1460	482	8.5	15.6
1978.0	3.5	35.0	60	9.6	1.77	29.04	123297	1350	485	8.5	15.6
1979.0	4.4	35.0	60	9.6	1.70	29.27	124113	1077	486	8.5	15.6
1980.0	8.9	35.0	60	9.6	1.48	29.38	124516	525.24	486.34	8.5	15.6
1981.0	11.8	35.0	60	9.6	1.40	29.47	124820	396.21	486.10	8.5	15.6
1982.0	15.9	35.0	60	9.6	1.31	29.53	125047	295.86	485.58	8.5	15.6
1983.0	18.9	32.0	76	9.7	1.28	29.58	125288	248.25	484.93	8.5	15.6
1984.0	20.1	32.0	76	9.7	1.26	29.63	125515	233.43	484.25	8.5	15.6
1985.0	19.1	32.0	76	9.7	1.28	29.69	125754	245.65	483.61	8.5	15.6
1986.0	12.1	32.0	76	9.7	1.41	29.77	126131	387.77	483.35	8.5	15.6
1987.0	15.5	32.0	76	9.7	1.34	29.83	126425	302.71	482.86	8.5	15.6
1988.0	15.1	32.0	76	9.7	1.35	29.90	126727	310.73	482.40	8.5	15.6
1989.0	13.0	32.0	76	9.7	1.39	29.98	127078	360.92	482.08	8.5	15.6
1990.0	13.2	32.0	76	9.7	1.39	30.05	127423	355.45	481.74	8.5	15.6
1991.0	8.8	32.0	76	9.7	1.51	30.17	127941	533.18	481.88	8.5	15.6
1992.0	18.8	32.0	76	9.7	1.28	30.22	128184	249.57	481.26	8.5	15.7
1993.0	25.9	37.0	112	9.6	1.37	30.26	128443	181.16	480.47	8.5	15.7
1994.0	13.7	37.0	112	9.6	1.57	30.33	128932	341.47	480.10	8.5	15.7
1995.0	17.8	37.0	112	9.6	1.49	30.39	129309	263.27	479.53	8.5	15.7
1996.0	16.9	37.0	112	9.6	1.50	30.45	129707	277.61	479.00	8.5	15.7
1997.0	11.8	37.0	110	9.6	1.61	30.53	130264	396.21	478.78	8.5	15.7
1998.0	4.6	37.0	110	9.6	1.90	30.75	131689	1013	480	8.5	15.7
1999.0	3.8	38.0	116	9.6	2.00	31.01	133522	1236	482	8.5	15.7
2000.0	4.8	37.0	115	9.6	1.90	31.22	134955	974.89	483.42	8.5	15.7
2001.0	3.8	37.0	115	9.6	1.97	31.48	136749	1220	485	8.5	15.7
2002.0	3.8	37.0	114	9.7	1.97	31.74	138552	1237	487	8.5	15.7
2003.0	3.1	37.0	114	9.7	2.03	32.06	140730	1494	490	8.5	15.7
2004.0	4.5	39.0	110	9.7	1.92	32.28	142189	1037	491	8.5	15.7
2005.0	4.2	39.0	110	9.7	1.94	32.52	143760	1117	493	8.5	15.7
2006.0	8.3	37.0	117	9.7	1.72	32.64	144607	565.65	493.06	8.5	15.7
2007.0	10.2	38.0	115	9.7	1.66	32.74	145285	461.38	492.98	8.5	15.7
2008.0	10.2	38.0	115	9.7	1.66	32.84	145962	460.08	492.90	8.5	15.7
2009.0	10.4	38.0	115	9.7	1.66	32.93	146625	450.95	492.79	8.5	15.7
2010.0	14.7	37.0	112	9.7	1.53	33.00	147082	319.32	492.35	8.5	15.7
2011.0	17.9	37.0	112	9.7	1.47	33.06	147457	261.97	491.77	8.5	15.7
2012.0	10.8	37.0	112	9.7	1.62	33.15	148077	432.71	491.62	8.5	15.7
2013.0	8.5	37.0	112	9.7	1.70	33.27	148865	550.01	491.77	8.5	15.7
2014.0	8.2	35.0	76	9.7	1.57	33.39	149433	569.56	491.97	8.5	15.7
2015.0	8.1	37.0	81	9.7	1.61	33.51	150036	582.59	492.19	8.5	15.7
2016.0	13.8	37.0	81	9.7	1.45	33.58	150389	340.17	491.81	8.5	15.7
2017.0	10.1	35.0	76	9.7	1.50	33.68	150842	466.59	491.75	8.5	15.7
2018.0	9.5	35.0	76	9.7	1.52	33.79	151321	492.66	491.75	8.5	15.7
2019.0	10.3	37.0	84	9.7	1.55	33.89	151811	456.17	491.66	8.5	15.7

DEPTH	ROP	WOB	RPM	MW	"d"c	HOURS	TURNS	ICOST	CCOST	PP	FG
2020.0	10.3	37.0	84	9.7	1.55	33.98	152301	456.17	491.58	8.5	15.7
2021.0	11.2	36.0	78	9.7	1.49	34.07	152720	419.67	491.40	8.5	15.7

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	1	IADC CODE	111	INTERVAL	200.0- 767.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	2500.00	TRIP TIME	3.9	BIT RUN	587.0
TOTAL HOURS	7.31	TOTAL TURNS	69965	CONDITION	T2 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
210.0	213.3	10.0	0.05	422	21018.74	22	2102	-
220.0	292.7	20.0	0.08	729	21179.05	16	1059	-
230.0	221.3	30.0	0.13	1136	21391.11	21.21	713.04	-
240.0	211.4	40.0	0.17	1562	21613.11	22.20	540.33	-
250.0	212.4	50.0	0.22	2000	21833.98	22.09	436.68	-
260.0	218.2	60.0	0.27	2426	22049.03	21.51	367.48	-
270.0	226.4	70.0	0.31	2837	22256.26	20.72	317.95	-
280.0	217.8	80.0	0.36	3257	22471.72	21.55	280.90	-
290.0	166.4	90.0	0.42	3834	22753.73	28.20	252.82	-
300.0	124.6	100.0	0.50	4605	23130.39	37.67	231.30	-
310.0	148.8	110.0	0.56	5250	23445.80	31.54	213.14	-
320.0	141.2	120.0	0.63	5930	23778.15	33.24	198.15	-
330.0	186.6	130.0	0.69	6445	24029.59	25.14	184.84	-
340.0	127.2	140.0	0.77	7200	24398.43	36.88	174.27	-
350.0	108.3	150.0	0.86	8086	24831.80	43.34	165.55	-
360.0	111.4	160.0	0.95	8948	25252.89	42.11	157.83	-
370.0	115.4	170.0	1.04	9780	25659.53	40.66	150.94	-
380.0	95.0	180.0	1.14	10790	26153.49	49.40	145.30	-
390.0	83.1	190.0	1.26	11945	26717.83	56.43	140.62	-
400.0	135.3	200.0	1.34	12654	27064.52	34.67	135.32	-
410.0	143.4	210.0	1.41	13324	27391.66	32.71	130.44	-
420.0	109.1	220.0	1.50	14204	27821.76	43.01	126.46	-
430.0	92.8	230.0	1.60	15238	28327.45	50.57	123.16	
440.0	108.0	240.0	1.70	16127	28761.76	43.43	119.84	-
450.0	71.9	250.0	1.84	17462	29414.41	65.26	117.66	-
460.0	60.7	260.0	2.00	19043	30186.83	77.24	116.10	-
470.0	53.9	270.0	2.19	20826	31058.14	87.13	115.03	-
480.0	46.0	280.0	2.40	22911	32077.34	101.92	114.56	-
490.0	48.5	290.0	2.61	24889	33043.98	96.66	113.94	-
500.0	43.7	300.0	2.84	27086	34117.93	107.39	113.73	-
510.0	41.0	310.0	3.08	29430	35263.56	114.56	113.75	+
520.0	53.1	320.0	3.27	31238	36147.22	88.37	112.96	-
530.0	96.5	330.0	3.37	32233	36633.36	48.61	111.01	-
540.0	122.0	340.0	3.46	33019	37017.85	38.45	108.88	-
550.0	195.0	350.0	3.51	33512	37258.47	24.06	106.45	-
560.0	133.8	360.0	3.58	34229	37609.07	35.06	104.47	-
570.0	70.7	370.0	3.72	35588	38273.12	66.40	103.44	-
580.0	169.8	380.0	3.78	36153	38549.43	27.63	101.45	-
590.0	261.5	390.0	3.82	36520	38728.85	17.94	99.30	-
600.0	177.7	400.0	3.88	37060	38992.87	26.40	97.48	-
610.0	100.0	410.0	3.98	38020	39461.90	46.90	96.25	-
620.0	68.2	420.0	4.12	39427	40149.51	68.76	95.59	-
630.0	55.7	430.0	4.30	41151	40992.03	84.25	95.33	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
640.0	70.9	440.0	4.44	42504	41653.47	66.14	94.67	-
650.0	68.9	450.0	4.59	43898	42334.73	68.13	94.08	-
660.0	73.0	460.0	4.73	45214	42977.88	64.32	93.43	-
670.0	59.2	470.0	4.90	46835	43770.15	79.23	93.13	-
680.0	49.1	480.0	5.10	48789	44725.49	95.53	93.18	+
690.0	44.3	490.0	5.33	50957	45785.10	105.96	93.44	+
700.0	39.8	500.0	5.58	53368	46963.31	117.82	93.93	+
710.0	29.9	510.0	5.91	56579	48532.53	156.92	95.16	+
720.0	23.3	520.0	6.34	60707	50550.09	201.76	97.21	+
730.0	62.9	530.0	6.50	62233	51295.82	74.57	96.78	-
740.0	68.9	540.0	6.65	63627	51977.30	68.15	96.25	-
750.0	104.8	550.0	6.74	64543	52424.83	44.75	95.32	-
760.0	67.5	560.0	6.89	65964	53119.50	69.47	94.86	-
770.0	75.0	570.0	7.02	67244	53745.10	62.56	94.29	-
780.0	80.2	580.0	7.15	68441	54330.17	58.51	93.67	-
787.0	44.1	587.0	7.31	69965	55074.93	106.39	93.82	+

BIT NUMBER	2	IADC CODE	114	INTERVAL	787.0- 1482.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 16
COST	1400.00	TRIP TIME	6.4	BIT RUN	695.0
TOTAL HOURS	21.89	TOTAL TURNS	207573	CONDITION	T5 B4 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
790.0	44.1	3.0	0.07	449	31748.34	107	10583	-
800.0	39.7	13.0	0.32	2110	32929.16	118	2533	-
810.0	55.4	23.0	0.50	3457	33775.90	85	1469	-
820.0	60.5	33.0	0.67	4945	34551.38	.78	1047	-
830.0	94.1	43.0	0.77	5908	35049.98	49.86	815.12	-
840.0	90.5	53.0	0.88	6903	35568.71	51.87	671.11	-
850.0	140.7	63.0	0.95	7552	35902.16	33.34	569.88	-
860.0	171.4	73.0	1.01	8080	36175.86	27.37	495.56	-
870.0	88.2	83.0	1.13	9115	36708.01	53.22	442.27	-
880.0	123.6	93.0	1.21	9848	37087.57	37.96	398.79	-
890.0	33.6	103.0	1.50	12546	38485.21	139.76	373.64	-
900.0	41.9	113.0	1.74	14696	39606.07	112.09	350.50	-
910.0	43.9	123.0	1.97	16758	40674.81	106.87	330.69	-
920.0	35.3	133.0	2.25	19308	42004.21	132.94	315.82	-
930.0	44.7	143.0	2.48	21458	43054.78	105.06	301.08	-
940.0	30.7	153.0	2.80	24586	44583.59	152.88	291.40	-
950.0	26.2	163.0	3.18	28244	46371.33	178.77	284.49	-
960.0	28.1	173.0	3.54	31664	48043.21	167.19	277.71	-
970.0	36.1	183.0	3.82	34327	49344.69	130.15	269.64	-
980.0	28.1	193.0	4.17	37746	51015.56	167.09	264.33	-
990.0	22.8	203.0	4.61	41949	53070.01	205.45	261.43	-
1000.0	29.6	213.0	4.95	45190	54653.65	158.36	256.59	-
1010.0	30.3	223.0	5.28	48354	56200.06	154.64	252.02	-
1020.0	29.9	233.0	5.61	51562	57767.97	156.79	247.93	-
1030.0	40.0	243.0	5.86	53964	58942.27	117.43	242.56	-
1040.0	43.8	253.0	6.09	56154	60012.31	107.00	237.20	-
1050.0	43.8	263.0	6.32	58343	61082.65	107.03	232.25	-
1060.0	33.1	273.0	6.62	61247	62501.98	141.93	228.94	-
1070.0	28.2	283.0	6.98	64653	64166.33	166.44	226.74	-
1080.0	23.5	293.0	7.40	68730	66159.13	199.28	225.80	-
1090.0	20.6	303.0	7.89	73399	68441.27	228.21	225.88	+
1100.0	32.0	313.0	8.20	76402	69908.82	146.76	223.35	-
1110.0	42.9	323.0	8.43	78639	71002.32	109.35	219.82	-
1120.0	41.2	333.0	8.68	80967	72140.13	113.78	216.64	-
1130.0	31.0	343.0	9.00	84068	73655.69	151.56	214.74	-
1140.0	41.5	353.0	9.24	86383	74786.98	113.13	211.86	-
1150.0	37.9	363.0	9.50	88918	76026.04	123.91	209.44	-
1160.0	44.8	373.0	9.73	91061	77073.36	104.73	206.63	-
1170.0	48.8	383.0	9.93	93028	78034.52	96.12	203.75	-
1180.0	47.4	393.0	10.14	95054	79025.05	99.05	201.08	-
1190.0	40.2	403.0	10.39	97443	80192.29	116.72	198.99	-
1200.0	51.4	413.0	10.59	99311	81105.51	91.32	196.38	-
1210.0	49.2	423.0	10.79	101261	82059.54	95.40	193.99	-

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1220.0	51.6	433.0	10.98	103122	82969.26	90.97	191.61	-
1230.0	44.8	443.0	11.21	105265	84016.64	104.74	189.65	-
1240.0	52.7	453.0	11.40	107088	84907.40	89.08	187.43	-
1250.0	53.4	463.0	11.59	108886	85786.50	87.91	185.28	-
1260.0	37.3	473.0	11.85	111459	87044.00	125.75	184.03	-
1270.0	21.2	483.0	12.32	115985	89256.26	221.23	184.80	+
1280.0	16.3	493.0	12.94	121878	92136.44	288.02	186.89	+
1290.0	23.3	503.0	13.37	126006	94153.80	201.74	187.18	+
1300.0	22.8	513.0	13.81	130211	96209.11	205.53	187.54	+
1310.0	24.7	523.0	14.21	134091	98105.46	189.64	187.58	+
1320.0	27.9	533.0	14.57	137535	99788.66	168.32	187.22	-
1330.0	25.5	543.0	14.96	141296	101626.58	183.79	187.16	-
1340.0	30.1	553.0	15.29	144486	103185.80	155.92	186.59	-
1350.0	23.5	563.0	15.72	148573	105183.20	199.74	186.83	+
1360.0	38.7	573.0	15.98	151054	106396.18	121.30	185.68	-
1370.0	21.8	583.0	16.44	155467	108552.73	215.65	186.20	+
1380.0	21.7	593.0	16.90	159883	110710.93	215.82	186.70	+
1390.0	21.7	603.0	17.36	164307	112873.38	216.24	187.19	+
1400.0	18.9	613.0	17.89	169302	115357.20	248.38	188.18	+
1410.0	11.7	623.0	18.74	177324	119353.22	399.60	191.58	+
1420.0	15.9	633.0	19.37	183374	122300.06	294.68	193.21	+
1430.0	18.4	643.0	19.91	188582	124845.47	254.54	194.16	+
1440.0	24.7	653.0	20.31	192465	126743.12	189.77	194.09	-
1450.0	28.7	663.0	20.66	195809	128377.50	163.44	193.63	
1460.0	46.1	673.0	20.88	197891	129395.41	101.79	192.27	-
1470.0	23.7	683.0	21.30	201950	131379.08	198.37	192.36	+
1480.0	21.4	693.0	21.77	206443	133575.20	219.61	192.75	+
1482.0	16.9	695.0	21.89	207573	134128.83	276.82	192.99	+

BIT NUMBER	2	IADC CODE	4	INTERVAL	1482.0- 1496.2
CHRIS RC 4		SIZE	8.500	NOZZLES	15 15 14 *
COST	13000.00	TRIP TIME	6.4	BIT RUN	14.2
TOTAL HOURS	4.94	TOTAL TURNS	29769	CONDITION	T0 B0 G0.100

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1490.0	2.6	8.0	3.11	18271	57630.09	1825	7204	-
1496.2	3.4	14.2	4.94	29769	66192.99	1381	4661	-

* EQUIVILANT TO T.F.A.

BIT NUMBER	2	IADC CODE	4	INTERVAL	1496.2- 1509.0		
CHRIS RC 4		SIZE	8.500	NOZZLES	15 15 14 *		
COST	13000.00	TRIP TIME	6.5	BIT RUN	12.8		
TOTAL HOURS	8.39	TOTAL TURNS	50617	CONDITION	T0 B0 G0.000		

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	TCOST	CCOST	T-C
1500.0	1.8	3.8	7.03	42364	76465.82	2576	20123	-
1509.0	6.6	12.8	8.39	50617	82871.70	712	6474	-

* EQUIVILANT TO T.F.A.

BIT NUMBER	3	IADC CODE	114	INTERVAL	1509.0- 1615.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 18
COST	1400.00	TRIP TIME	6.5	BIT RUN	106.0
TOTAL HOURS	11.95	TOTAL TURNS	87429	CONDITION	T7 B6 G0.375

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	TCOST	CCOST	I-C
1510.0	36.6	1.0	0.03	246	32026.16	128	32026	-
1520.0	28.6	11.0	0.38	3547	33666.62	164	3061	-
1530.0	13.8	21.0	1.10	10485	37057.90	339	1765	-
1540.0	49.7	31.0	1.30	12407	38001.51	94	1226	-
1550.0	5.8	41.0	3.02	26210	46085.43	808	1124	-
1560.0	10.0	51.0	4.02	33556	50772.22	468.68	995.53	-
1570.0	15.6	61.0	4.66	38092	53778.14	300.59	881.61	-
1580.0	5.1	71.0	6.64	50732	63035.72	925.76	887.83	+
1590.0	27.2	81.0	7.00	54034	64761.93	172.62	799.53	-
1600.0	45.9	91.0	7.22	55738	65785.10	102.32	722.91	-
1610.0	4.7	101.0	9.34	71438	75699.99	991.49	749.50	+
1615.0	1.9	106.0	11.95	87429	87985.21	2457	830	+

BIT NUMBER	4	IADC CODE	517	INTERVAL	1615.0- 2021.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	6800.00	TRIP TIME	7.0	BIT RUN	406.0
TOTAL HOURS	34.07	TOTAL TURNS	152720	CONDITION	T3 B2 G0.000

DEPTH	ROP	BIT RUN	HOURS	TURNS	TOTAL COST	ICOST	CCOST	I-C
1620.0	10.2	5.0	0.49	1867	41940.80	459	8388	-
1630.0	41.4	15.0	0.73	2789	.43074.05	113	2872	-
1640.0	12.7	25.0	1.52	6385	46774.21	370	1871	-
1650.0	11.6	35.0	2.38	10547	50827.58	405	1452	-
1660.0	25.9	45.0	2.77	12404	52639.21	181	1170	-
1670.0	19.9	55.0	3.37	14786	54999.55	236.03	999.99	-
1680.0	16.1	65.0	3.89	17766	57912.50	291.30	890.96	-
1690.0	43.5	75.0	4.12	18870	58991.66	107.92	786.56	-
1700.0	11.9	85.0	4.96	22839	62926.42	393.48	740.31	-
1710.0	42.2	95.0	5.20	23907	64039.47	111.30	674.10	-
1720.0	14.4	105.0	5.89	27031	67297.15	325.77	640.93	-
1730.0	43.6	115.0	6.12	28064	68373.70	107.66	594.55	-
1740.0	11.1	125.0	7.02	32171	72600.41	422.67	580.80	-
1760.0	9.8	145.0	9.06	41558	82144.75	477.22	566.52	
1770.0	16.3	155.0	9.67	44359	85026.42	288.17	548.56	-
1780.0	10.1	165.0	10.66	48886	89666.19	463.98	543.43	-
1790.0	18.6	175.0	11.20	51491	92186.83	252.06	526.78	-
1800.0	19.4	185.0	11.71	53994	94603.21	241.64	511.37	-
1810.0	11.6	195.0	12.57	58020	98636.28	403.31	505.83	-
1820.0	5.8	205.0	14.29	65802	106670.68	803.44	520.34	+
1830.0	16.0	215.0	14.91	68601	109605.79	293.51	509.79	-
1840.0	7.0	225.0	16.34	74627	116333.60	672.78	517.04	+
1850.0	10.8	235.0	17.27	78109	120671.09	433.75	513.49	-
1860.0	16.3	245.0	17.88	80527	123557.97	288.69	504.32	
1870.0	14.2	255.0	18.59	83170	126860.62	330.26	497.49	-
1880.0	15.0	265.0	19.26	85698	129998.92	313.83	490.56	-
1890.0	5.4	275.0	21.10	92648	138625.79	862.69	504.09	+
1900.0	7.5	285.0	22.44	97711	144910.18	628.44	508.46	+
1910.0	19.6	295.0	22.94	99637	147301.17	239.10	499.33	-
1920.0	11.7	305.0	23.80	102872	151316.90	401.57	496.12	-
1930.0	16.5	315.0	24.41	105168	154166.59	284.97	489.42	
1940.0	21.7	325.0	24.87	106910	156328.24	216.16	481.01	-
1950.0	17.9	335.0	25.43	109016	158943.49	261.52	474.46	-
1960.0	10.2	345.0	26.41	112718	163538.25	459.48	474.02	-
1970.0	14.1	355.0	27.12	115404	166872.18	333.39	470.06	-
1980.0	4.4	365.0	29.38	124516	177515.20	1064	486	+
1990.0	15.0	375.0	30.05	127423	180652.19	313.70	481.74	-
2000.0	8.6	385.0	31.22	134955	186117.82	546.56	483.42	+
2010.0	5.6	395.0	33.00	147082	194480.01	836.22	492.35	+
2020.0	10.2	405.0	33.98	152301	199088.60	460.86	491.58	-
2021.0	11.2	406.0	34.07	152720	199508.27	419.67	491.40	-

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	1	IADC CODE	111	INTERVAL	200.0- 787.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	2500.00	TRIP TIME	3.9	BIT RUN	587.0
TOTAL HOURS	7.31	TOTAL TURNS	69965	CONDITION	T2 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
210.0	1100	2200.0	1183.0	53.8	759	3.16	1964	117
220.0	1100	2200.0	1183.0	53.8	759	3.16	1964	117
230.0	1100	2200.0	1183.0	53.8	759	3.16	1964	117
240.0	1100	2200.0	1183.0	53.8	759	3.16	1964	117
250.0	1240	2400.0	1503.3	62.6	1087	4.52	2496	131
260.0	1240	2400.0	1503.3	62.6	1087	4.52	2496	131
270.0	1240	2400.0	1503.3	62.6	1087	4.52	2496	131
280.0	1240	2350.0	1503.3	64.0	1087	4.52	2496	131
290.0	1240	2350.0	1503.3	64.0	1087	4.52	2496	131
300.0	1240	2350.0	1503.3	64.0	1087	4.52	2496	131
310.0	1240	2350.0	1503.3	64.0	1087	4.52	2496	131
320.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
330.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
340.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
350.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
360.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
370.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
380.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
390.0	1220	2350.0	1455.2	61.9	1035	4.30	2416	129
400.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
410.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
420.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
430.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
440.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
450.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
460.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
470.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
480.0	1230	2350.0	1479.2	62.9	1061	4.41	2456	130
490.0	1190	2350.0	1384.5	58.9	961	3.99	2298	126
500.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
510.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
520.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
530.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
540.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
550.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
560.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
570.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
580.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
590.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
600.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
610.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
620.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
630.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
640.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
650.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
660.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
670.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
680.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
690.0	1190	2350.0	1399.9	59.6	972	4.04	2324	126
700.0	1190	2350.0	1384.5	58.9	961	3.99	2298	126
710.0	1170	2350.0	1338.4	57.0	913	3.80	2222	124
720.0	1170	2350.0	1323.5	56.3	903	3.75	2197	124
730.0	1170	2350.0	1323.5	56.3	903	3.75	2197	124
740.0	1170	2350.0	1323.5	56.3	903	3.75	2197	124
750.0	1170	2350.0	1323.5	56.3	903	3.75	2197	124
760.0	1170	2350.0	1323.5	56.3	903	3.75	2197	124
770.0	1170	2350.0	1323.5	56.3	903	3.75	2197	124
780.0	1120	2300.0	1212.8	52.7	792	3.29	2013	119
787.0	1120	2300.0	1212.8	52.7	792	3.29	2013	119

BIT NUMBER	2	IADC CODE	114	INTERVAL	787.0- 1482.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 16
COST	1400.00	TRIP TIME	6.4	BIT RUN	695.0
TOTAL HOURS	21.89	TOTAL TURNS	207573	CONDITION	T5 B4 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
790.0	1010	2270.0	2054.9	90.5	1210	10.27	2377	154
800.0	900	2480.0	1631.7	65.8	856	7.27	1887	137
810.0	980	3000.0	1956.2	65.2	1118	9.49	2262	149
820.0	980	3000.0	1956.2	65.2	1118	9.49	2262	149
830.0	980	3000.0	1956.2	65.2	1118	9.49	2262	149
840.0	980	3000.0	1956.2	65.2	1118	9.49	2262	149
850.0	980	3000.0	1934.7	64.5	1106	9.38	2238	149
860.0	480	1250.0	464.1	37.1	130	1.10	537	73
870.0	1048	2950.0	2213.3	75.0	1353	11.48	2560	159
880.0	960	2980.0	1835.9	61.6	1028	8.72	2123	146
890.0	960	2980.0	1835.9	61.6	1028	8.72	2123	146
900.0	970	2950.0	1874.3	63.5	1060	9.00	2168	147
910.0	970	2950.0	1853.3	62.8	1048	8.90	2143	147
920.0	970	2950.0	1874.3	63.5	1060	9.00	2168	147
930.0	980	3000.0	1913.2	63.8	1093	9.28	2213	149
940.0	980	3000.0	1913.2	63.8	1093	9.28	2213	149
950.0	980	3000.0	1913.2	63.8	1093	9.28	2213	149
960.0	980	3000.0	1913.2	63.8	1093	9.28	2213	149
970.0	940	2900.0	1780.0	61.4	976	8.28	2059	143
980.0	940	2900.0	1780.0	61.4	976	8.28	2059	143
990.0	940	2900.0	1780.0	61.4	976	8.28	2059	143
1000.0	940	2860.0	1780.0	62.2	976	8.28	2059	143
1010.0	905	2880.0	1649.2	57.3	871	7.39	1908	138
1020.0	905	2880.0	1668.5	57.9	880	7.47	1929	138
1030.0	905	2880.0	1686.5	58.6	890	7.55	1951	138
1040.0	905	2880.0	1704.9	59.2	900	7.63	1972	138
1050.0	905	2880.0	1631.5	56.7	861	7.31	1887	138
1060.0	905	2880.0	1631.5	56.7	861	7.31	1887	138
1070.0	905	2880.0	1631.5	56.7	861	7.31	1887	138
1080.0	920	3000.0	1705.0	56.8	915	7.76	1972	140
1090.0	920	3000.0	1761.9	58.7	945	8.02	2038	140
1100.0	920	3000.0	1742.9	58.1	935	7.93	2016	140
1110.0	920	3000.0	1742.9	58.1	935	7.93	2016	140
1120.0	920	3000.0	1742.9	58.1	935	7.93	2016	140
1130.0	905	2950.0	1668.2	56.5	880	7.47	1929	138
1140.0	905	2950.0	1686.5	57.2	890	7.55	1951	138
1150.0	905	2950.0	1686.5	57.2	890	7.55	1951	138
1160.0	890	2850.0	1631.1	57.2	847	7.18	1886	135
1170.0	890	2850.0	1631.1	57.2	847	7.18	1886	135
1180.0	890	2850.0	1631.1	57.2	847	7.18	1886	135
1190.0	890	2850.0	1631.1	57.2	847	7.18	1886	135
1200.0	895	2980.0	1649.5	55.4	861	7.31	1908	136
1210.0	885	2960.0	1595.3	53.9	823	6.99	1845	135

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1220.0	885	2960.0	1630.3	55.1	841	7.14	1886	135
1230.0	885	2960.0	1647.9	55.7	851	7.22	1906	135
1240.0	885	2960.0	1682.9	56.9	869	7.37	1946	135
1250.0	885	2960.0	1700.5	57.4	878	7.45	1967	135
1260.0	885	2960.0	1700.5	57.4	878	7.45	1967	135
1270.0	885	2960.0	1700.5	57.4	878	7.45	1967	135
1280.0	885	2960.0	1700.5	57.4	878	7.45	1967	135
1290.0	885	2960.0	1700.5	57.4	878	7.45	1967	135
1300.0	800	3000.0	1389.5	46.3	648	5.50	1607	122
1310.0	800	3000.0	1403.8	46.8	655	5.56	1624	122
1320.0	800	2950.0	1403.8	47.6	655	5.56	1624	122
1330.0	820	2950.0	1474.9	50.0	705	5.98	1706	125
1340.0	830	2870.0	1511.1	52.7	731	6.21	1748	126
1350.0	830	2870.0	1511.1	52.7	731	6.21	1748	126
1360.0	550	1470.0	663.5	45.1	213	1.81	767	84
1370.0	984	1470.0	2124.5	144.5	1219	10.35	2457	150
1380.0	1015	1470.0	2262.6	153.9	1340	11.37	2617	154
1390.0	815	2950.0	1457.0	49.4	693	5.88	1685	124
1400.0	815	2950.0	1457.0	49.4	693	5.88	1685	124
1410.0	815	2950.0	1442.1	48.9	685	5.82	1668	124
1420.0	830	2900.0	1511.1	52.1	731	6.21	1748	126
1430.0	830	2900.0	1511.1	52.1	731	6.21	1748	126
1440.0	801	2900.0	1406.7	48.5	657	5.57	1627	122
1450.0	745	2910.0	1192.2	41.0	518	4.39	1379	113
1460.0	833	2910.0	1491.0	51.2	724	6.15	1724	127
1470.0	799	2900.0	1386.7	47.8	646	5.48	1604	122
1480.0	808	2900.0	1417.9	48.9	668	5.67	1640	123
1482.0	805	2900.0	1406.9	48.5	661	5.60	1627	122

BIT NUMBER	3	IADC CODE	114	INTERVAL	1509.0- 1615.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 18
COST	1400.00	TRIP TIME	6.5	BIT RUN	106.0
TOTAL HOURS	11.95	TOTAL TURNS	87429	CONDITION	T7 B6 G0.375

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1510.0	747	2950.0	1213.3	41.1	529	4.49	1403	114
1520.0	758	2980.0	1249.6	41.9	553	4.69	1445	115
1530.0	764	2980.0	1254.8	42.1	559	4.74	1451	116
1540.0	766	3000.0	1261.0	42.0	563	4.78	1458	116
1550.0	757	3000.0	1244.4	41.5	549	4.66	1439	115
1560.0	777	3000.0	1310.5	43.7	594	5.04	1516	118
1570.0	747	3000.0	1213.6	40.5	529	4.49	1404	114
1580.0	767	2830.0	1279.2	45.2	573	4.86	1479	117
1590.0	757	2830.0	1245.1	44.0	550	4.67	1440	115
1600.0	755	2830.0	1237.6	43.7	545	4.62	1431	115
1610.0	765	2830.0	1270.5	44.9	567	4.81	1469	116
1615.0	767	2900.0	1264.4	43.6	566	4.80	1462	117

BIT NUMBER	4	IADC CODE	517	INTERVAL	1615.0- 2021.0
HTC J22		SIZE	12.250	NOZZLES	16 16 16
COST	6800.00	TRIP TIME	7.0	BIT RUN	406.0
TOTAL HOURS	34.07	TOTAL TURNS	152720	CONDITION	T3 B2 G0.000

DEPTH	FLOW RATE	PSP	PBIT	%PSP	HHP	HHP/ sqin	IMPACT FORCE	JET VELOCITY
1620.0	771	2860.0	1520.0	53.1	684	5.80	1615	128
1630.0	764	2860.0	1500.4	52.5	669	5.68	1594	127
1640.0	772	2860.0	1529.7	53.5	689	5.84	1625	128
1650.0	767	2860.0	1513.1	52.9	677	5.75	1608	127
1660.0	765	2860.0	1502.1	52.5	670	5.69	1596	127
1670.0	771	2860.0	1528.4	53.4	688	5.84	1624	128
1680.0	749	2860.0	1441.5	50.4	630	5.35	1532	124
1690.0	778	2860.0	1555.3	54.4	706	5.99	1652	129
1700.0	773	2860.0	1521.1	53.2	686	5.82	1616	128
1710.0	775	2860.0	1530.8	53.5	692	5.87	1626	128
1720.0	770	2860.0	1509.2	52.8	678	5.75	1604	127
1730.0	771	2860.0	1516.1	53.0	682	5.79	1611	128
1740.0	772	2860.0	1520.3	53.2	685	5.81	1615	128
1760.0	751	2860.0	1453.9	50.8	637	5.41	1545	124
1770.0	761	2860.0	1492.5	52.2	663	5.62	1586	126
1780.0	768	2860.0	1501.8	52.5	673	5.71	1596	127
1790.0	764	2860.0	1498.8	52.4	668	5.67	1592	127
1800.0	758	2860.0	1475.9	51.6	653	5.54	1568	126
1810.0	760	2860.0	1484.4	51.9	659	5.59	1577	126
1820.0	769	2860.0	1516.5	53.0	680	5.77	1611	127
1830.0	763	2860.0	1492.5	52.2	664	5.63	1586	126
1840.0	770	2850.0	1521.3	53.4	683	5.80	1616	127
1850.0	759	2850.0	1479.3	51.9	655	5.56	1572	126
1860.0	760	2850.0	1476.1	51.8	655	5.56	1568	126
1870.0	752	2850.0	1444.7	50.7	634	5.38	1535	125
1880.0	760	2850.0	1485.6	52.1	658	5.59	1578	126
1890.0	760	2850.0	1485.6	52.1	658	5.59	1578	126
1900.0	759	2850.0	1453.5	51.0	644	5.46	1544	126
1910.0	753	2850.0	1431.3	50.2	629	5.34	1521	125
1920.0	760	2850.0	1485.6	52.1	658	5.59	1578	126
1930.0	760	2850.0	1485.6	52.1	658	5.59	1578	126
1940.0	760	2850.0	1485.6	52.1	658	5.59	1578	126
1950.0	760	2850.0	1485.6	52.1	658	5.59	1578	126
1960.0	757	2840.0	1453.9	51.2	642	5.45	1545	125
1970.0	751	2840.0	1436.7	50.6	629	5.34	1526	124
1980.0	742	2840.0	1404.6	49.5	608	5.16	1492	123
1990.0	760	2840.0	1485.6	52.3	658	5.59	1578	126
2000.0	744	2840.0	1416.5	49.9	615	5.22	1505	123
2010.0	743	2840.0	1425.5	50.2	618	5.24	1515	123
2020.0	741	2840.0	1421.4	50.0	615	5.22	1510	123
2021.0	742	2840.0	1423.5	50.1	616	5.23	1512	123

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	1	IADC CODE	111	INTERVAL	200.0- 787.0
HTC OSC 3AJ		SIZE	17.500	NOZZLES	20 20 20
COST	2500.00	TRIP TIME	3.9	BIT RUN	587.0
TOTAL HOURS	7.31	TOTAL TURNS	69965	CONDITION	T2 B2 G0.000

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
210.0	120	100	1100	34	27		24			20
220.0	120	100	1100	34	27		24			20
230.0	120	100	1100	34	27		24			20
240.0	120	100	1100	34	27		24		24	20
250.0	128	120	1240	38	31		27		27	22
260.0	128	120	1240	38	31		27		27	22
270.0	128	120	1240	38	31		27		27	22
280.0	128	120	1240	38	31		27		27	22
290.0	128	120	1240	38	31		27		27	22
300.0	128	120	1240	38	31		27		27	22
310.0	128	120	1240	38		33	27		27	22
320.0	124	120	1220	38		32	27		27	22
330.0	124	120	1220	38		32	27		27	22
340.0	124	120	1220	38		32	27		27	22
350.0	124	120	1220	38		32	27		27	22
360.0	124	120	1220	38		32		32	27	22
370.0	124	120	1220	38		32		32	27	22
380.0	124	120	1220	38		32		32	27	22
390.0	124	120	1220	38		32		32	27	22
400.0	128	118	1230	38		33		33	27	22
410.0	128	118	1230	38		33		33	27	22
420.0	128	118	1230	38		33		33	27	22
430.0	128	118	1230	38		33		33	27	22
440.0	128	118	1230	38		33		33	27	22
450.0	128	118	1230	38		33		33	27	22
460.0	128	118	1230	38		33		33	27	22
470.0	128	118	1230	38		33		33	27	22
480.0	128	118	1230	38		33		33	27	22
490.0	126	112	1190	37		32		32	26	21
500.0	126	112	1190	37		32		32	26	21
510.0	126	112	1190	37		32		32	26	21
520.0	126	112	1190	37		32		32	26	21
530.0	126	112	1190	37		32		32	26	21
540.0	126	112	1190	37		32		32	26	21
550.0	126	112	1190	37		32		32	26	21
560.0	126	112	1190	37		32		32	26	21
570.0	126	112	1190	37		32		32	26	21
580.0	126	112	1190	37		32		32	26	21
590.0	126	112	1190	37		32		32	26	21
600.0	126	112	1190	37		32		32	26	21
610.0	126	112	1190	37		32		32	26	21
620.0	126	112	1190	37		32		32	26	21
630.0	126	112	1190	37		32		32	26	21

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
640.0	126	112	1190	37		32		32	26	21
650.0	126	112	1190	37		32		32	26	21
660.0	126	112	1190	37		32		32	26	21
670.0	126	112	1190	37		32		32	26	21
680.0	126	112	1190	37		32		32	26	21
690.0	126	112	1190	37		32		32	26	21
700.0	126	112	1190	37		32		32	26	21
710.0	124	110	1170	36		31		31	26	21
720.0	124	110	1170	36		31		31	26	21
730.0	124	110	1170	36		31		31	26	21
740.0	124	110	1170	36		31		31	26	21
750.0	124	110	1170	36		31		31	26	21
760.0	124	110	1170	36		31		31	26	21
770.0	124	110	1170	36		31		31	26	21
780.0	124	100	1120	35		30		30	25	20
787.0	124	100	1120	35		30		30	25	20

BIT NUMBER	2	IADC CODE	114	INTERVAL	787.0- 1482.0		
HTC X3A		SIZE	12.250	NOZZLES	16 16 18		
COST	1400.00	TRIP TIME	6.4	BIT RUN	695.0		
TOTAL HOURS	21.89	TOTAL TURNS	207573	CONDITION	T5 B4 G0.000		

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
790.0	106	96	1010	88	79		56		56	18
800.0	100	80	900	78	71		50		50	16
810.0	100	96	980	85	77		55		55	18
820.0	100	96	980	85	77		55		55	18
830.0	100	96	980	85	77		55		55	18
840.0	100	96	980	85	77		55		55	18
850.0	100	96	980	85		59	55		55	18
860.0	96	0	480	42		29	27		27	9
870.0	120	90	1048	91		63	58		58	19
880.0	100	92	960	83		57	53		53	17
890.0	100	92	960	83		57	53		53	17
900.0	100	94	970	84		58	54		54	17
910.0	100	94	970	84		58	54		54	17
920.0	100	94	970	84		58	54		54	17
930.0	100	96	980	85		59	55		55	18
940.0	100	96	980	85		59	55		55	18
950.0	100	96	980	85		59		59	55	18
960.0	100	96	980	85		59		59	55	18
970.0	94	94	940	82		56		56	52	17
980.0	94	94	940	82		56		56	52	17
990.0	94	94	940	82		56		56	52	17
1000.0	94	94	940	82		56		56	52	17
1010.0	90	91	905	79		54		54	50	16
1020.0	90	91	905	79		54		54	50	16
1030.0	90	91	905	79		54		54	50	16
1040.0	90	91	905	79		54		54	50	16
1050.0	90	91	905	79		54		54	50	16
1060.0	90	91	905	79		54		54	50	16
1070.0	90	91	905	79		54		54	50	16
1080.0	90	94	920	80		55		55	51	17
1090.0	90	94	920	80		55		55	51	17
1100.0	90	94	920	80		55		55	51	17
1110.0	90	94	920	80		55		55	51	17
1120.0	90	94	920	80		55		55	51	17
1130.0	89	92	905	79		54		54	50	16
1140.0	89	92	905	79		54		54	50	16
1150.0	89	92	905	79		54		54	50	16
1160.0	88	90	890	77		53		53	50	16
1170.0	88	90	890	77		53		53	50	16
1180.0	88	90	890	77		53		53	50	16
1190.0	88	90	890	77		53		53	50	16
1200.0	89	90	895	78		53		53	50	16
1210.0	88	89	885	77		53		53	49	16

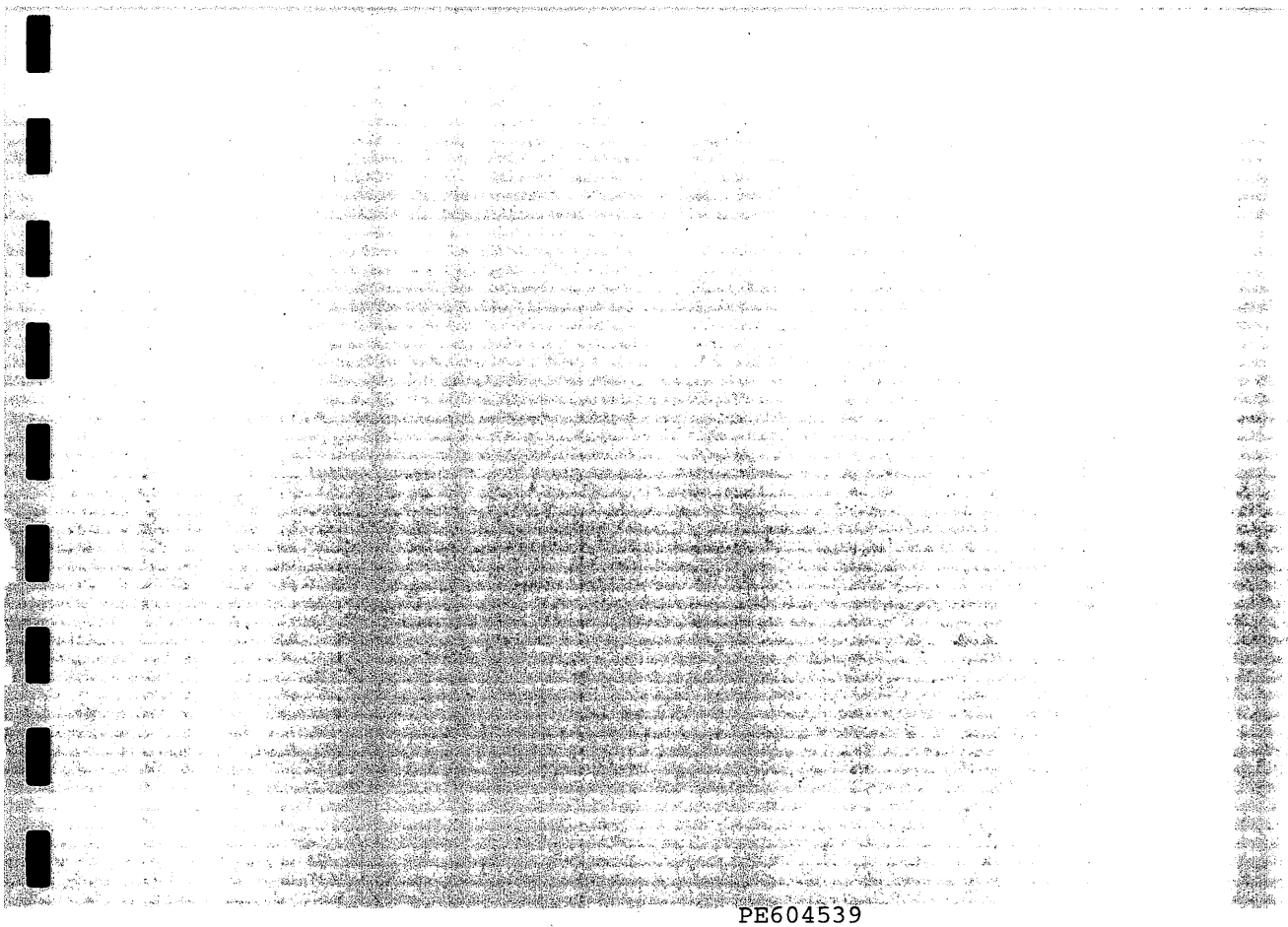
DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1220.0	88	89	885	77		53		53	49	16
1230.0	88	89	885	77		53		53	49	16
1240.0	88	89	885	77		53		53	49	16
1250.0	88	89	885	77		53		53	49	16
1260.0	88	89	885	77		53		53	49	16
1270.0	88	89	885	77		53		53	49	16
1280.0	88	89	885	77		53		53	49	16
1290.0	88	89	885	77		53		53	49	16
1300.0	80	80	800	69		48		48	45	14
1310.0	80	80	800	69		48		48	45	14
1320.0	80	80	800	69		48		48	45	14
1330.0	80	84	820	71		49		49	46	15
1340.0	86	80	830	72		50		50	46	15
1350.0	86	80	830	72		50		50	46	15
1360.0	0	110	550	48		33		33	31	10
1370.0	87	110	984	85		59		59	55	18
1380.0	93	110	1015	88		61		61	57	18
1390.0	88	75	815	71		49		49	45	15
1400.0	88	75	815	71		49		49	45	15
1410.0	88	75	815	71		49		49	45	15
1420.0	90	76	830	72		50		50	46	15
1430.0	90	76	830	72		50		50	46	15
1440.0	86	74	801	70		48		48	45	14
1450.0	76	73	745	65		44		44	41	13
1460.0	87	80	833	72		50		50	46	15
1470.0	88	72	799	69		48		48	45	14
1480.0	88	74	808	70		48		48	45	15
1482.0	88	73	805	70		48		48	45	14

BIT NUMBER	3	IADC CODE	114	INTERVAL	1509.0- 1615.0
HTC X3A		SIZE	12.250	NOZZLES	16 16 18
COST	1400.00	TRIP TIME	6.5	BIT RUN	106.0
TOTAL HOURS	11.95	TOTAL TURNS	87429	CONDITION	T7 B6 G0.375

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ BIS
1510.0	75	74	747	65		45		45	42	13
1520.0	78	74	758	66		45		45	42	14
1530.0	77	76	764	66		46		46	43	14
1540.0	78	75	766	67		46		46	43	14
1550.0	81	70	757	66		45		45	42	14
1560.0	84	71	777	67		46		46	43	14
1570.0	81	69	747	65		45		45	42	13
1580.0	81	73	767	67		46		46	43	14
1590.0	82	70	757	66		45		45	42	14
1600.0	80	71	755	66		45		45	42	14
1610.0	83	70	765	66		46		46	43	14
1615.0	84	70	767	67		46		46	43	14

BIT NUMBER	4	IADC CODE	517	INTERVAL	1615.0- 2021.0		
HTC J22		SIZE	12.250	NOZZLES	16 16 16		
COST	6800.00	TRIP TIME	7.0	BIT RUN	406.0		
TOTAL HOURS	34.07	TOTAL TURNS	152720	CONDITION	T3 B2 G0.000		

DEPTH	SPM1	SPM2	FLOW RATE	DC/ OH	DC/ CSG	HW/ OH	HW/ CSG	DP/ OH	DP/ CSG	DP/ RIS
1620.0	77	72	771	67		46		46	43	14
1630.0	77	76	764	66		46		46	43	14
1640.0	84	70	772	67		46		46	43	14
1650.0	83	70	767	67		46		46	43	14
1660.0	82	71	765	66		46		46	43	14
1670.0	84	70	771	67		46		46	43	14
1680.0	81	69	749	65		45		45	42	13
1690.0	84	72	778	68		46		46	43	14
1700.0	84	71	773	67		46		46	43	14
1710.0	84	71	775	67		46		46	43	14
1720.0	84	70	770	67		46		46	43	14
1730.0	84	71	771	67		46		46	43	14
1740.0	84	71	772	67		46		46	43	14
1760.0	81	70	751	65		45		45	42	14
1770.0	82	71	761	66		46		46	42	14
1780.0	84	70	768	67		46		46	43	14
1790.0	83	70	764	66		46		46	43	14
1800.0	82	70	758	66		45		45	42	14
1810.0	83	69	760	66		45		45	42	14
1820.0	84	70	769	67		46		46	43	14
1830.0	83	70	763	66		46		46	42	14
1840.0	84	70	770	67		46		46	43	14
1850.0	83	69	759	66		45		45	42	14
1860.0	82	70	760	66		45		45	42	14
1870.0	76	75	752	65		45		45	42	14
1880.0	82	70	760	66		45		45	42	14
1890.0	82	70	760	66		45		45	42	14
1900.0	78	74	759	66		45		45	42	14
1910.0	78	73	753	65		45		45	42	14
1920.0	82	70	760	66		45		45	42	14
1930.0	82	70	760	66		45		45	42	14
1940.0	82	70	760	66		45		45	42	14
1950.0	82	70	760	66		45		45	42	14
1960.0	78	73	757	66		45		45	42	14
1970.0	77	74	751	65		45		45	42	13
1980.0	76	73	742	64		44		44	41	13
1990.0	82	70	760	66		45		45	42	14
2000.0	75	74	744	65		44		44	41	13
2010.0	75	73	743	64		44		44	41	13
2020.0	75	73	741	64		44		44	41	13
2021.0	75	73	742	64		44		44	41	13



PE604539

This is an enclosure indicator page.
The enclosure PE604539 is enclosed within the container PE906941 at this location in this document.

The enclosure PE604539 has the following characteristics:

ITEM_BARCODE	= PE604539
CONTAINER_BARCODE	= PE906941
NAME	= Drill Data Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Drill Data Plot (enclosure from Final Well Report--attachment to WCR) for Seahorse-2
REMARKS	=
DATE_CREATED	= 20/07/82
DATE_RECEIVED	= 30/09/82
W_NO	= W780
WELL_NAME	= SEAHORSE-2
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC

(Inserted by DNRE - Vic Govt Mines Dept)

PE604539

Drill Data Plot

PE604540

This is an enclosure indicator page.
The enclosure PE604540 is enclosed within the container PE906941 at this location in this document.

The enclosure PE604540 has the following characteristics:

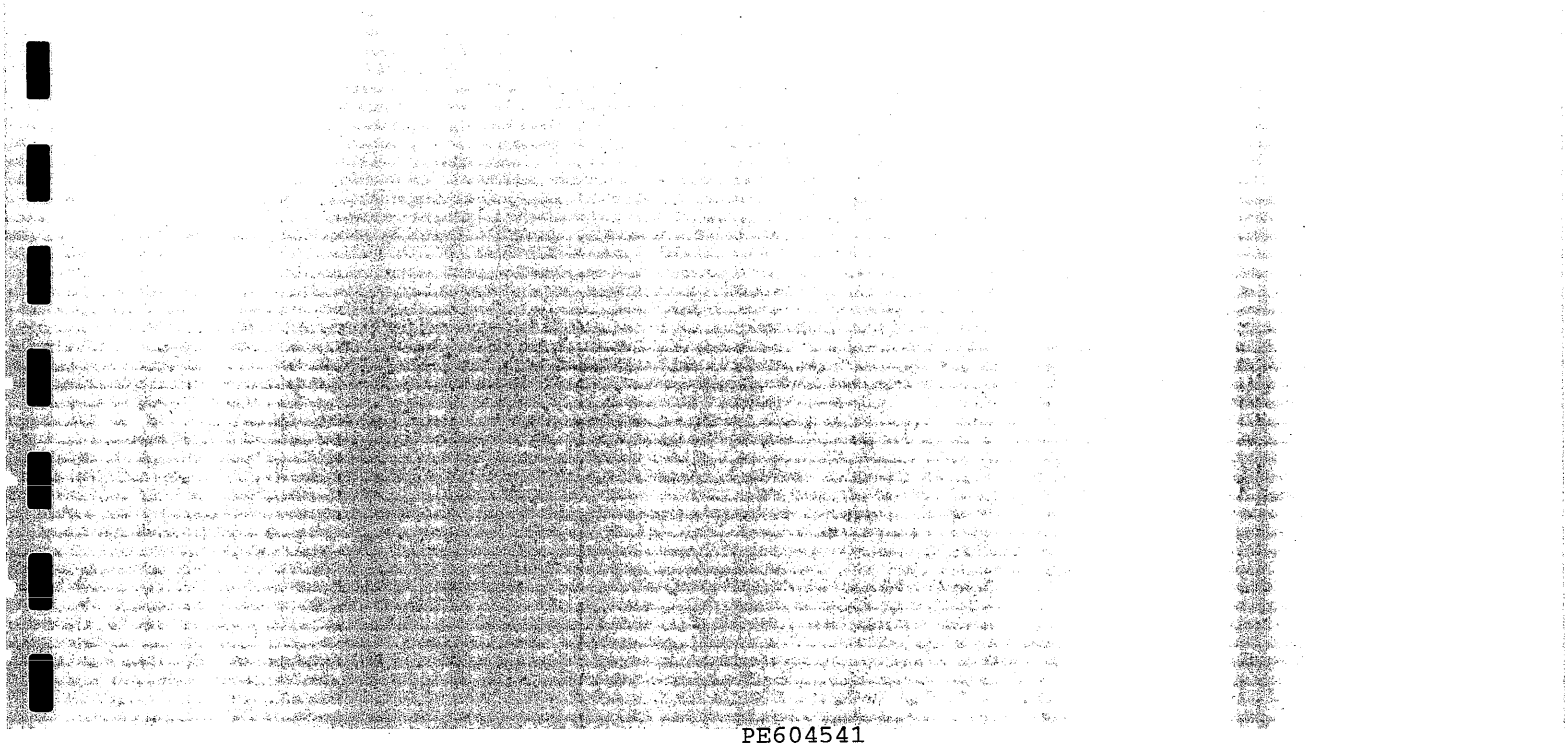
ITEM_BARCODE	= PE604540
CONTAINER_BARCODE	= PE906941
NAME	= Temperature Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Temperature Plot (enclosure from Final Well Report--attachment to WCR) for Seahorse-2
REMARKS	=
DATE_CREATED	= 20/07/82
DATE_RECEIVED	= 30/09/82
W_NO	= W780
WELL_NAME	= SEAHORSE-2
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC

(Inserted by DNRE - Vic Govt Mines Dept)

TEMPERATURE PLOT

PE604540

Temperature Plot



PE604541

This is an enclosure indicator page.
The enclosure PE604541 is enclosed within the container PE906941 at this location in this document.

The enclosure PE604541 has the following characteristics:

ITEM_BARCODE	= PE604541
CONTAINER_BARCODE	= PE906941
NAME	= Pressure Plot
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Pressure Plot (enclosure from Final Well Report--attachment to WCR) for Seahorse-2
REMARKS	=
DATE_CREATED	= 20/07/82
DATE_RECEIVED	= 30/09/82
W_NO	= W780
WELL_NAME	= SEAHORSE-2
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC

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PE604541

Pressure Plot

PE604542

This is an enclosure indicator page.
The enclosure PE604542 is enclosed within the container PE906941 at this location in this document.

The enclosure PE604542 has the following characteristics:

ITEM_BARCODE	PE604542
CONTAINER_BARCODE	PE906941
NAME	Geo-Plot
BASIN	GIPPSLAND
PERMIT	VIC/P1
TYPE	WELL
SUBTYPE	WELL_LOG
DESCRIPTION	Geo-Plot (enclosure from Final Well Report--attachment to WCR) for Seahorse-2
REMARKS	
DATE_CREATED	20/07/82
DATE_RECEIVED	30/09/82
W_NO	W780
WELL_NAME	SEAHORSE-2
CONTRACTOR	CORE LABORATORIES
CLIENT_OP_CO	ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC

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PE604542

Geo - Plot

PE604543

This is an enclosure indicator page.
The enclosure PE604543 is enclosed within the container PE906941 at this location in this document.

The enclosure PE604543 has the following characteristics:

ITEM_BARCODE	= PE604543
CONTAINER_BARCODE	= PE906941
NAME	= Grapholog/Mud Log
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Grapholog/Mud Log (enclosure from Final Well Report--attachment to WCR) for Seahorse-2
REMARKS	=
DATE_CREATED	= 20/07/82
DATE_RECEIVED	= 30/09/82
W_NO	= W780
WELL_NAME	= SEAHORSE-2
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC

(Inserted by DNRE - Vic Govt Mines Dept)

GRAPHOLOG

PE604543

Graphlog / Mud Log