PETROLEUM DIVISION

17 APR 1989

FINAL WELL REPORT

ESSO AUSTRALIA PETROLEUM CO.

Conger No.1

Offshore BASS STRAIT, VICTORIA

February to March 1989

bу

EXPLORATION LOGGING Australia LTD.

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INTRODUCTION

a. Well and Rig Data

Operator:

ESSO Australia Ltd.

Well Name:

Conger No.1

Location:

Offshore Bass Strait, Victoria

Position:

Lat: 38 deg 21' 27.21" South Long: 148 deg 03' 46.59" East

Field:

Exploration

Rig:

Southseas Drilling / "Southern Cross"

Semi-submersible

RKB - MSL:

21 metres

RKB - SB:

86 metres

Spud Date:

25th February 1989

Total Depth:

2970 metres

Completion Date:

16 March 1989

Completion Status:

Plugged and Abandoned.

Exlog Unit:

244, GEMDAS X

Crew - Gemdas:

B. Munro, D. New, R. O'Neill

Logging:

P. Greene, M. Sale, A Tariff

Tritium:

G. Dawson, D. Lowe, M. Ensor, J. Meehan

b. Prognosis

Conger No. 1 was an exploration well to be drilled approximately 21km to the SW of the Marlin "A" production platform. The well was programmed to reach a depth of 3021m below RKB in approximately 30 days from spud.

The Conger Prospect is a WNW-ESE trending fault block with high-side closure and down-thrown to the NE. The primary objective of the Conger No.1 well was to evaluate the hydrocarbon-bearing potential of the "M.diversus" and "L.L.balmei" sections below the 51.5 Ma sequence boundary. 54 MBOIP and 60 GCF GIP were expected to be present in 5 sands with gross thickness between 5 and 12m.

Exploration Logging provided a Geological Engineering Monitoring and Data Acquisition System service, with Formation Logging and Pressure Evaluation services on Conger No.1 from 440m to Total Depth of 2970m. Continuous evaluation of pressures and drilling progress from real time data provided an aid in optimising drilling costs and ensured drilling continues with maximum safety to personnel, the well and equipment. The operator was continuously advised as to the status of these analyses. The printouts and plots of the results and services are contained in the appendices of this report.

DRILLING AND ENGINEERING

a. Well History

Conger No.1 was spudded on 25th February 1989 by the semi-submersible drilling rig "Southern Cross". RKB to sea level was 21m, and RKB to seafloor was 86m (water depth 65m)

26" Hole Section: 86m to 214m.

The 26" hole section was drilled using RRB1, a Hughes OSC3AJ 26", with returns to the seabed. The section (128m) was completed in 8.75 hours on-bottom, with 30bbl hi-vis pills being pumped every second single. No problems were encountered while drilling this section. At 214m the hole was swept with a 50bbl hi-vis pill, a survey dropped and the bit pulled to the sea-floor trouble-free. The survey was recovered (1 deg) and the bit run back to bottom. The hole was displaced with 150bbl of mud and the bit pulled to 150m where a further 150 bbl of mud was pumped before the trip out was completed.

Casing (20", 12 joints, including the wellhead joint, 94 lb/ft) was run with the shoe set at 209m. The casing was then cemented with 750sx class G (@ 13.2ppg) followed by 350sx class G (@ 15.8ppg). The BOP stack and riser were then run and the BOP's tested to ESSO's requirements.

17.5" Hole Section: 214m - 815m

The 17.5" BHA was made up and run in with RRB2, a Reed S11J, which drilled cement, the shoe and the entire 17.5" section from 214m to 815m. The 601m was completed in 22.4 hrs (on bottom) at an average ROP of 26.8 m/hr. No hole problems were encountered while drilling this section of hole. At

815m a hi vis pill was pumped, the hole circulated clean, a survey dropped, and the bit pulled to run logs. Minor tight hole was recorded from stands 2 to 7 with a maximum drag of 30klb being recorded from the 5th stand. The BHC-GR-Cal wireline tool was then run but could not pass a bridge at 216m.

RRB2 was run in to 216m where the bridge was tagged with 60klb. Three singles were reamed through this zone and the trip in continued to 286m where another tight spot had to be reamed. The trip in then proceeded to 815m where the hole was circulated clean and a hi-vis pill pumped prior to pulling the bit. No hole problems were noted on the trip out. Wireline logs (BHC-GR-Cal) were then run over the interval 810m to 86m. Casing (13.375", 60 joints, 54.5 lb/ft) was run with the shoe set at 798m. This was then cemented with 1000sx of class 'G' cement (@ 15.8 ppg) and the BOP's tested to ESSO's specifications.

12.25" Hole Section: 815m - 2970m

The 12.25" hole section was drilled using a total of 9 bits (3 mill-tooth, 4 insert and 2 core bits, one of which did not reach bottom) in 135.1 hrs (on bottom), at an average ROP of 21.4 m/hr.

NB3, a REED HP11J, drilled the shoe track and new hole to 819m where returns were circulated and a formation integrity test run. The test was taken to a gauge pressure of 960 psi with no leak off which, with a mud density of 9.3ppg, gave a minimum formation fracture pressure of 16.5 ppg EMD. Drilling continued to 1822m where a 100 bbl hi-vis pill was circulated to clean the hole, a survey dropped (2.25deg N43W), and the bit pulled. Overpull of 15-50 klb was recorded from stands 1 to 11 on the trip out, probably due to the stabiliser balling up.

A junk sub and NB4, a HTC J11, were picked up and run in. Tight hole was noted over the intervals 890m - 910m, 1250m - 1300m (60klb drag) and the kelly picked up to ream a single at 1605m. After ream/washing the last two singles to bottom drilling continued to 1826m where 90 bbl of mud was lost when the flowline became blocked with cuttings. A further 110 bbls were lost while trying to clear the blockage.

The top of the Latrobe Group was intersected at 1831m and a negative flow check made at 1841m. Drilling then continued to 1928m where the ROP decreased to 1-2 m/hr and the bit was pulled. Very erratic and often high torque was noted while drilling the Latrobe Group sediments. The torque appeared to be associated with thin coal beds and discontinuities in the formation. The ROP's recorded during this bit run were general lower than expected due to inserts on the bit being broken, possibly by pyritically cemented sandstones.

The MWD tool and NB5, a HP51, were then picked up and run in with no problems. Drilling continued with erratic and variable torque, often necessitating the reduction of the WOB to 10klb or less to allow drilling to continue. At 1998m a hi-vis pill was circulated to clean out the hole and abundant rounded claystone cuttings were noted on bottoms up. At 2471m the bit was pulled due to high bit hours and low ROP. Tight hole was recorded from stands 2-20 (2441m-1881m) with a maximum overpull of 120klb from stands 14-15 (2088m-2028m). This drag was probably again due to the stabilisers balling up through claystone/siltstone sections that had not been tripped through before. NB5 proved to be badly worn with many missing inserts (particularly on the outer rows of each cone) and was 0.25" undergauge.

NB6, a REED HP51AJ, was run in to 2478m where tight hole was noted, the kelly picked up and a single reamed. The last 3 singles were reamed & washed to bottom and the junk sub worked before drilling ahead. of 1.1% was recorded. Between 2530m and 2620m gas values (both peaks and background) increased to a maximum 4.4%. After flow checking a drilling break at 2611m, drilling continued to 2621m where returns were circulated with no shows. Flow checks made at 2631m, 2669m, 2679m, 2735m and 2759m were all static. From 2675m to 2679m the ROP increased from 8 to 20-40m/hr and a sample was circulated at 2679m with 2.5% gas being recorded from a From 2550m, the MWD tool malfunctioned and all geological coal bed. interpretations were based on surface data. At 2685m, 350psi of pump pressure was lost. Pressure was steady afterwards and it was assumed the MWD tool was interfering with the mud flow. Later, pieces of journal bearing from the MWD tool were found in the bit and probably had partly blocked off a jet before breaking up. From 2758m, ROP increased from 10 to 20-40 m/hr. At 2776m, returns were circulated and found to be a sandstone with 10 to 40% moderately bright blue white fluorescence. It was decided to core the formation and the bit was pulled. Less than 30klb overpull was recorded on the trip out. After drilling 305m in 24.2hours at an average ROP of 12.6 m/hr, the bit was graded T4 B4 G6 with broken teeth. The junk sub recovered 1.15kg og missing inserts.

While preparing the core barrel to cut Core No. 1, a length of core was found to be remaining inside the core barrel from the previous hole (Mulloway No.1). This was collected conventionally and 6.5m was recovered. Only 0.18m had been recovered at the time the core was cut and this increased the initial recovery to 6.88m of 11.5m cut (58%). A possible explanation for the presence of the core is that the core slipped through the core catcher at the surface when the liner sleeve was removed from the

outer core barrel. When the sleeve was inspected, only the 0.18 metres of core was seen and recovered. The sleeve and core catcher slipped over the core when they were replaced in the outer barrel and stacked in the derrick to be used later.

RRCB1, a CHRIS ZC476, was run in with full size stabilisers to 2440m where tight hole was encountered. This was worked through and running in continued to 2630m where 100klb overpull and weight necessitated picking up the kelly and reaming. This continued to 2716m when lack of progress led to the bit being pulled. The gauge protection of the bit was obliterated and the bit was graded unserviceable without having reached bottom.

CB2, a CHRIS RC468 9.875", was run in conjunction with 9.875" stabilisers and had no difficulty reaching bottom. While circulating bottoms-up prior to coring, a distinct odour of hydrogen sulphide (H2S) was detected. Circulating ceased while alternative tests for H2S were run (Draeger tube, lead acetate and Garrett gas train). All of these indicated no H2S. However, carbon dioxide (CO2) was detected which may have accelerated the breakdown of the mud and released a very low concentration of H2S. Core No. 1 was cut from 2776m-2794.5m. Of the 18.5m cut, 18.23m (98.5%) was recovered. The core was cut in 1.2 hours at an average ROP of 15.4 m/hr. Final bit grading was 35% worn.

NB7, a Reed HP51AJ, was run in conjunction with the MWD tool to 2712m where it was decided to ream to bottom. This was done as a precautionary measure after problems experienced with CB1 in getting to bottom. From 2776m the 9.875" cored rathole was opened up to 12.25". New hole was drilled from 2794.5m. A trip gas of 8.3% total gas and 1.2% CO2 was recorded from bottom. Rate of penetration varied from 3 to 50 m/hr through sandstone with minor coal, siltstone and claystone. High torque at 2970m

ended the bit run and this became the final TD for the well. The bit had drilled 175.5m in 25.1 hours to give an average ROP of 7m/hr. Mud losses occurred through parts of the run and at times were 35bbl/hr constantly. Intermittently, 40 to 60 bbls of mud was lost when the pumps were restarted after connections or flow checks. This only occurred while the degasser and all solids control was running. Only minor losses occurred with the solids control off. However no single piece of equipment appeared to be putting out excessive underflow and the losses were generally ascribed as downhole. Low gravity solids and CO2 contamination combined to seriously impair the mud properties with water loss reaching 56cc. A full day of circulating was required to condition the mud before wireline logs could be run. The radical changes in mud properties may have also caused or contributed to the unusual losses.

The following wireline logs were run. 1: DLL-MSFL-BHC-LDL-CNL-SP-GR

2: SHDT-GR

3: WSS (Velocity Survey)

4: CST (2 guns)

After logging, the well was plugged and abandoned to ESSO procedure.

b. Bit Optimisation

Bit performance was continuously monitored and the operator advised of cost performance, rate of penetration, torque and formation changes. Cost analysis were performed on the basis of bit cost, rig cost, and an average tripping speed and are a guide only. A plot of the results can be found in the attached volume and a bit record is provided in this section. No bits were pulled purely on a cost basis.

The 26" hole section was drilled with one bit (in tandem with a hole-opener). The interval drilled was 128m (in 8.75 hrs) at an average ROP of 14.6m/hr and the bit was tripped to run 20" casing.

One bit was used to drill the 17.5" hole section. The interval drilled was 601m (in 22.4hrs) at an average ROP of 26.8m/hr. The bit was tripped to run 13.375" casing. Tooth wear was minor.

The 12.25" hole section was drilled with 6 bits (1 mill-tooth, 4 insert, and one core bit).

NB3, A Reed HP11J mill-tooth bit, drilled the shoe and new hole to 1822m, a distance of 1007m in 28.8hrs (on bottom), at an average ROP of 35 m/hr The dominant lithology drilled was calcareous claystone of the Gippsland Limestone. The bit was tripped on the basis of bit hours and footage. It was graded T3 B4 G0. It seemed ideally suited to the formation drilled.

NB4, a HTC J11, only drilled 106m in 11.2 hrs (on bottom) at an average ROP of 9.5m/hr and was pulled at 1928m due to low ROP. The top of the Latrobe was intersected at 1831m and consisted of variably cemented sandstones with interbedded siltstone. The ROP's recorded from this bit run were lower than would have been expected due to the cemented sands causing many of the

inserts to break. A bit with shorter inserts may have performed better in through this section.

NB5, a HP51AJ, was then run in with the MWD tool and drilled a distance of 543m in 40.4hrs at an average ROP of 13.4m/hr. Erratic and often very high torque meant that for much of this run the WOB had to be reduced to less than 10 klb to allow drilling to continue. Above about 2200m the torque appeared to be caused by thin coal beds and other discontinuities in the formation as the torque only occurred with the bit on bottom. Below 2200m most of the high torque appears to have been caused by the stabilisers working through rugose or undergauge hole. NB5 was badly worn with many missing inserts, particularly on the outer rows of each cone and was 0.25" undergauge. The nature of the wear suggests that a bit with shorter teeth may have performed better through the sandstone with interbedded siltstone and coal drilled by this bit.

NB6 a Reed HP51AJ drilled a distance of 305m at an average ROP of 12.6m/hr. This bit drilled through siltstone with interbedded sandstone and minor coal. Occasional high torque, caused by the stabiliser working through tight or rugosa hole, was recorded. This bit was tripped to cut Core No.1 and was graded as T4 B4 and 3/8" undergauge.

CB1, a Chris ZC478 12.25" was then run in to 2630m where the kelly was picked up to ream tight hole. After reaming to 2717m the ROP decreased to nearly zero and the bit was pulled without reaching bottom. The bit was replaced with CB2, a Chris RC476 9.875", the stabilisers changed out, and Core No.1 was cut from 2776m-2794.5m (18.5m) in 1.2 hrs at an average ROP of 15.4 m/hr. This bit may have been drilling on junk and was 35% worn when pulled.

NB7, a Reed HP51AJ, drilled a distance of 175.5m in 25.1 hours, at an average ROP of 7.0 m/hr. This bit drilled through hard cemented sandstone and siltstone of the lower Latrobe Group and was pulled at 2970m due to a sudden increase in torque. The bit was graded as T6 B4 G7/16 but most of the outer rows of inserts were missing from all three cones. The ROP's for this bit run were probably less than would have been expected possibly due to the bit being damaged while opening the 9.875" core rathole to 12.25".

c. Hydraulic Optimisation

Hydraulic analyses were provided for the operator on a daily basis and as required Results of these analyses are provided on the daily Gemdas reports and on selected hydraulic printouts in Appendix J.

The rig was equipped with two Oilwell A-1700PT triplex pumps (12" stroke) fitted with 6.5" liners. A pump output of 5.00 gal/stroke at 97% efficiency was used.

The 26" hole section was drilled with seawater and hi-vis sweeps. This, along with high annular velocities, ensured adequate hole cleaning through this interval. The hole was displaced with hi-vis mud prior to running casing.

The 17.5" hole section was drilled using seawater with hi-vis pills circulated every second or third connection as required. This was sufficient to keep the hole clean and no fill or tight hole was recorded while drilling, logging or casing this section of hole. Annular velocities, while relativelylow, were sufficient to lift the cuttings through the riser. Apart from the less consolidated upper part of this section, the hole was in-gauge and no significant washouts were noted.

The 12.25" was drilled with a seawater-gel-polymer mud system at flow rates ranging from 850gpm (in the unconsolidated limestones and claystones of the Gipsland Limestone) to 600gpm (in the lower part of the Latrobe Group).

These flow rates were sufficiently high to lift the cutting from the hole while still maintaining a laminar flow regime minimising hole washout.

Bit pressure losses through the lower Gippsland Limestone and Lakes

Entrance Formation decreased from 63% at 868m to 53% at 1928 as the flow

rate was reduced from 850 to 760 gpm. These moderate flow rates provided high impact force and bit hydraulic horsepower without causing any serious hole washout. The Latrobe Group sands were drilled with lower flow rates to reduce hole washout in the loosely consolidated sandstones. The inclusion of the MWD tool meant that percentage loss at the bit was reduced to between 32 to 40 percent. The selection of larger nozzles and lower flow rates within the Latrobe Group reduced impact force from c.1700 to 1200lbs. Smaller nozzles below 2471m enabled lower flow rates (c 600gpm) to be used without a marked decrease in impact force. Caliper logs show the borehole to be generally in-gauge through the Latrobe, with only relatively minor washout in the upper sections.

d. Borehole Condition

The borehole condition was monitored during drilling and tripping by observing the overpull or drag associated with tripping and connections which would indicate tight hole. Torque was also utilised as an aid in borehole condition analysis. Carbides were run periodically and the average hole size for an interval calculated on the return of the carbide. Wireline logs were examined to determine where major wash-outs or tight hole occurred.

No hole problems were noted from the 26" hole or while drilling the 17.5" hole. However on the trip out at 815m minor tight hole was recorded over the interval 786m-615m (stands 2 to 7) with a maximum drag of 30klb being recorded from the 5th stand. This drag was probably due to the stabiliser balling up and did not seem to indicate hole instability. The only other hole problem occurred when a bridge was hit at 216m, just below the 20" casing shoe, when running in with the logging tool necessitating a wiper trip.

Hole condition through the 12.25" section was stable with minor tight hole being recorded from most trips and erratic and often high torque being recorded from the upper part of the Latrobe Group. There was no indication of any serious hole instability. Erratic and often high torque was common while drilling through sediments of the Latrobe Group. This torque was often sufficiently high to stall the rotary table and necessitate a reduction in the WOB to allow drilling to continue. The torque above 2200m appears to be associated with discontinuities in the formation, particularly coal beds and the tops of sands. Below 2200m the torque appears to have been caused by the stabiliser working through tight or slightly undergauge hole. On the trip in at 1822m (NB4) tight hole was

noted over the intervals 890m-910m, 1250m - 1300m (60klb drag) and at 1605m. This tight hole was again probably largely due to the stabiliser balling up through argillaceous sections. High and erratic torque was recorded almost continuously from the top of the Latrobe at 1831m and appears to have been caused by coals caving in around the bit or by the bit being partially jammed by discontinuities in the formation. Because torque was often high enough to stall out the rotary table and force drilling to continue at low WOB's the ROP's recorded from this bit run were lower than might otherwise have been expected. No tight hole was recorded on the trip out with this bit. The trip in with NB5 was clean with no tight hole or fill being recorded. Torque, similar to that seen during the previous bit run, was recorded from this run but was not as severe. On the trip out with this bit at 2471m tight hole was recorded from stands 2 to 20 (2441m -1881m) with a maximum overpull of 120klb being noted from stands 14 and 15 (2088m -2028m). This tight hole was probably due to the stabilisers balling up through slightly hydrated clays. A single had to be reamed at 1968m on the trip in with NB6. The last three singles were reamed to bottom as NB5 was 0.25" undergauge. Torque caused by stabilisers hanging up in coals and undergauge hole was also noted but did not cause serious problems. Minor tight hole was recorded from stands 10 - 11 on the trip out at 2776m. Tight hole was noted from 2440m to 2447m with 40klb overpull being recorded. At 2630m overpull of 100klb was noted and the kelly picked up and tight hole reamed to 2717m where the core bit was pulled without reaching bottom. These problems appear to have been caused by a stiff BHA with full gauge stabilisers trying to work through undergauge or rugose hole as no problems were encountered on the trip in with the 9.875" bit. No hole problems were encountered on the trip in or while drilling with NB7 and only minor overpull of less than 30klb was recorded from stands 11-38.

PRESSURE EVALUATION

a. Formation Fracture Pressure

Formation fracture pressures were calculated during drilling and recorded in the Morning Reports (Appendix H). Plotted data can be found in Appendix D. Overburden gradients (OBG) were calculated from offset well data and OBG values, estimated from this data, were utilised while drilling.

One formation integrity test (FIT, PIT) was performed as follows:

Depth (metres)	Casing Shoe (metres)	Hole Size	Mud Dens (ppg)	Fracture Pressure (EMD, ppg)
815	798	12.25"	9.3	16.5

No significant downhole mud losses were recorded during the drilling of Conger No.1.

The minimum estimated fracture pressure in the 12.25" hole section was 16.5ppg EMD, recorded from the leak off test at the shoe. The Latrobe sands had an estimated minimum fracture pressure of 17.4ppg EMD. All estimated fracture pressures were considerably greater than either the maximum mud hydrostatic (9.6+ ppgEMD) or the maximum ECD (9.8 ppg) and mud losses due to hydraulic fracturing were not considered likely.

b. Formation Pore Pressure

Formation pore pressure indicators were monitored on a continuous basis while drilling and pore pressure estimates were reported to the operator daily, or whenever significant variations were encountered. Plots of the relevant pore pressure indicators are available in Appendix D.

The mud temperature plot was of little use due to frequent additions of seawater to maintain volume and the heat loss in the riser which varied with the currents. The DXC plots also were of limited value in the Latrobe Group due to the variable nature of the lithology which did not allow a meaningful baseline to be established. No connection gasses were recorded and trip gasses in the range of 0.74% to 0.65% were detected.

All the monitored pressure parameters indicated a normally pressured hole from spud to 2530m. From this depth to 2620m background gas increased and was slow to fall back after any peaks indicating a possible increase in formation pressure. No connection gas or splintery cavings were seen from this interval therefore it is unlikley that the formation pressure exceeded the mud hydrostatic at any stage and the maximum formation pressure was estimated to be 9.0 ppg EMD at 2620m. From 2620m gas values returned to normal and the section from 2620m to TD appeared to be normally pressured.

GEOLOGY & SHOWS

All depths measured below RKB :-RKB to mean sea level 21 metres :-RKB to seabed 86 metres

Returns to seafloor until 214m. Returns logging did not begin until 815m.

815 to 890 metres

LIMESTONE; light to medium grey, off white, silt size grains of carbonate set in micritic matrix, very soft, sticky, trace calcite crystals, trace to common forams (Calcilutite grading to Calcisiltite)

890 to 1070 metres

LIMESTONE; generally as above with trace claystone (Calcarenite)

1070 to 1730 metres.

LIMESTONE; light to medium grey, common forams, trace sponge spicules, trace bryozoa, trace glauconite, pyrite nodules, slightly dolomitic (Calcilutite grading to Calcisiltite)

1730 to 1830 metres

LIMESTONE; light brown grey to light grey, trace very light green grey, slightly dolomitic, becoming very argillaceous, common silt size carbonate crystals in micritic matrix, grading to very Calcareous Siltstone as carbonate content reduces, minor forams, trace pyrite nodules, trace glauconite (Calcarenite, Calcailtite becoming Calcareous Siltstone), with minor

CLAYSTONE; white to off white, light grey, trace quartz grains, massive, soft, very sticky, soluble, dispersive

1830 to 1835 metres

SILTSTONE; medium to dark grey, trace green, dominantly argillaceous, trace carbonaceous, 5% glauconite peloids, firm, subfissile, with minor SANDSTONE; transparent to transluscent, white to yellow, possible iron oxide staining, loose, medium to coarse grained, moderately sorted, subrounded to rounded, excellent inferred porosity, no show.

1835 to 2020 metres

SANDSTONE; generally as above, white to light grey, medium to very coarse, very poorly sorted, weak siliceous cement, trace argillaceous matrix good inferred porosity, no show, with variable

COAL; dark brown, black, slightly silty, waxy, subconchoidal fracture, hard, and

SILTSTONE; light to medium grey, tan, occasionally medium brown, argillaceous, slightly calcareous, moderately to very calcareous, micromicaceous, firm, blocky

2020 to 2765 metres

COAL; generally as above, dark brown, black, dull, subvitreous lustre, silty, tr quartz, blocky to subconchoidal, with variable SANDSTONE; generally as above, transluscent, white to light grey, very fine to medium grained, occasionally coarse grained, moderately to well sorted, subangular to subrounded, trace dolomite cement, trace pyrite cement, trace argillaceous matrix, firm to hard, poor porosity, trace mineral fluor, and SILTSTONE; generally as above, medium to dark brown, argillaceous, carbonaceous, firm to hard, blocky, becoming micromicaceous, trace pyrite

2765 to 2776 metres

SANDSTONE; transluscent to opaque, occasionally clear, off white to white, fine to coarse, moderately to well sorted, subangular to subrounded, loose in part, moderate siliceous cement, trace off white argillaceous matrix, very silty, friable to firm, poor visible porosity, SHOW; trace to 20% dull blue/white - blue/green patch fluorescence with no cut, very weak crush cut very thin ring residue, with minor SILTSTONE; as above

2776 to 2970 metres (TD)

SANDSTONE; generally as above, transparent to opaque, off white medium to very coarse, predominantly coarse, moderately to well sorted, angular to subrounded, trace pyrite cement, trace to common white argillaceous matrix, trace siderite, firm to hard, with SILTSTONE; grey brown to medium brown, slightly argillaceous, micromicaceous, common carbonaceous lamination & flecks, trace pyrite, fissile to blocky, soft to firm, and COAL; black, subvitreous, uneven to subconchoidal fracture, firm brittle.

5. EVALUATION AND TESTING

a. Wireline logs

The following is a summary of the logs run on Conger No. 1. Sonic, resistivity, caliper and density data are plotted on the Wireline Data Log in the accompanying Appendix Volume to this report.

Depth (m)	Hole Size	Logs run
178	26	Nil
815	17.5	BHC-GR-CAL
2970	12.25	DLL-MSFL-BHC-LDL-CNL-SP-GR SHDT-GR WSS (Velocity Survey) CST (2 guns)

b. Coring

One core only was cut on Conger No.1. This was from 1776m to 1794.5m. Recovery was 18.23m of the 18.5m cut (98%). In addition, a section of core was recovered from the Mulloway No.1 well that had been overlooked and had remained in the core barrel. This was from Core No. 2 and of 11.5m cut from 1393.5m to 1405m, 6.68m was eventually recovered.

o. DATA INVENTORY: Conger No.1

The following were supplied to ESSO Australia as required:

Formation Evaluation Log Drilling Data Printout Weekly Reports Hydraulics Printouts

On completion of the well the worksheets charts and data disks were forwarded to ESSO. Six (6) copies of the final well report (including the Formation Evaluation Log) were compiled by Exploration Logging in Perth and forwarded to ESSO on completion. Exploration Logging retained 1 copy of the final well report and all data disks.

Exploration Logging will use reasonable diligence to maintain and store the information and items in a manner to reasonably prevent damage or loss. Provided, however, Exploration Logging assumes no responsibility for the loss damage or theft of the items or the information contained therein and shall not be liable to Operator in any such event irrespective of cause, fault or the active or passive negligence of Exploration Logging or its employees.

CONCLUSIONS

Conger No.1 was spudded on the 25th February 1989 and reached a total depth of 2970 metres on 14th March 1989 in a total time of 20 days. The well was drilled with seven tri-cone bits and two stratapax core bits in a total of 135.1 cumulative on-bottom drilling hours.

Three primary targets were proposed within the Latrobe Group sandstones, but only one target contained a hydrocarbon show that warranted further evaluation by coring. The single core was cut from 2776m to 2794.5m and recovered only residual oil.

Pore pressure was estimated as normal for the majority of the well. The section from 2530m to 2620m did show a possible pore pressure increase and was estimated to have reached a maximum of 9.0ppg EMD.

APPENDIX A : Drilling Data Pressure Plot

PE602930

This is an enclosure indicator page. The enclosure PE602930 is enclosed within the container PE904392 at this location in this document.

The enclosure PE602930 has the following characteristics:

ITEM_BARCODE = PE602930
CONTAINER_BARCODE = PE904392

NAME = Drilling Data Pressure Log

BASIN =

PERMIT =

TYPE = WELL

SUBTYPE = WELL_LOG

DESCRIPTION = Drilling Data Pressure Log, Scale

1:5000, (Enclosure from Final Well

Report), By EXLOG for Esso Australia,

14 March 1989, for Conger-1.

REMARKS =

DATE_CREATED =

DATE_RECEIVED = 17-apr-1989

 $WELL_NO = W988$

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX B : Temperature Data Pressure Plot

PE602931

This is an enclosure indicator page. The enclosure PE602931 is enclosed within the container PE904392 at this location in this document.

The enclosure PE602931 has the folllowing characteristics:

ITEM_BARCODE = PE602931
CONTAINER_BARCODE = PE904392

NAME = Temperature Analysis Plot

BASIN =

PERMIT =

 $\mathtt{TYPE} = \mathtt{WELL}$

SUBTYPE = WELL_LOG

DESCRIPTION = Temperature Analysis Plot,Scale

1:2500, (Enclosure from Final Well Report), By EXLOG for Esso Australia,

for Conger-1.

REMARKS =

DATE_CREATED =

DATE_RECEIVED = 17/04/89

 $WELL_NO = W988$

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX C : Wireline Data Pressure Plot

PE602932

This is an enclosure indicator page. The enclosure PE602932 is enclosed within the container PE904392 at this location in this document.

The enclosure PE602932 has the folllowing characteristics:

ITEM_BARCODE = PE602932
CONTAINER_BARCODE = PE904392

NAME = Wireline Data Pressure Log

BASIN = PERMIT =

TYPE = WELL

SUBTYPE = WELL_LOG

DESCRIPTION = Wireline Data Pressure Log, Scale

1:2500, (Enclosure from Final Well Report), By EXLOG for Esso Australia,

for Conger-1.

REMARKS =

DATE_CREATED =

DATE_RECEIVED = 17/04/89

 $WELL_NO = W988$

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX D : Pressure Evaluation Plot

PE602933

This is an enclosure indicator page. The enclosure PE602933 is enclosed within the container PE904392 at this location in this document.

The enclosure PE602933 has the folllowing characteristics:

ITEM_BARCODE = PE602933

CONTAINER_BARCODE = PE904392

NAME = Pressure Gradient Analysis Plot

BASIN = PERMIT =

TYPE = WELL

SUBTYPE = WELL_LOG

DESCRIPTION = Pressure Gradient Analysis Plot,Scale

1:5000, (Enclosure from Final Well Report), By EXLOG for Esso Australia,

for Conger-1.

REMARKS =

DATE_CREATED =

DATE_RECEIVED = 17/04/89

 $WELL_NO = W988$

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX E : Drilling Data Printout

-------: F# TIME DEPTH ROP: TORQUE RPM FOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: m m/hr¦ AVG MAX AVG AVG PRES!DEPTH IN OUT IN OUT IN OUT ; m hr TW; ; + Spud Conger No.1 at 16:00 hrs on the 25th Feb 1989. ! Drill 26" hole to 214m. Run and cement 20" casing with shoe at 209m. : RRB2, Smith S11J 17.5" with 2x18 and 1x16 jets. Start depth 214m. : 7 0200 443.00 25.6195.1 172 120 4.88 2540:436.22 8.82 8.89 973.4 973 34.5 32.8 464: 229 6.1 .94: .74 .73 8.95 8.50:D 1 8 0201 444.01 48.7199.5 124 120 5.05 25501436.29 8.82 8.88 972.2 972 34.5 32.9 4631 230 6.1 .941 .63 .63 8.96 8.50ID : 9 0205 445.01 i3.4; 102 147 120 6.38 2670;437.39 8.82 8.91 974.3 975 34.4 33.1 458; 231 6.2 .95; .88 .88 8.98 8.50;D 10 0206 446.00 56.11 106 122 120 7.63 26801437.95 8.82 8.89 976.7 976 34.4 33.1 4571 232 6.2 .95; .65 .65 8.97 8.50;D 11 0209 447.00 18.51 124 162 120 10.7 26901438.00 8.83 8.92 974.5 974 34.3 33.2 4551 233 6.3 .961 .91 .90 9.01 8.501D : 12 0211 448.00 30.5: 121 203 125 10.6 2890:438.77 8.83 8.91 991.1 997 34.3 33.0 453: 234 6.3 .97: .82 .81 9.01 8.50:D ! 13 0222 449.00 67.4197.8 148 132 9.97 27201441.33 8.83 8.90 987.3 988 34.3 33.3 4441 235 ! 14 0223 450.01 46.0192.5 148 121 13.2 27201441.56 8.83 8.91 988.0 987 34.3 33.5 4431 236 6.4 .981 .67 .67 8.98 8.501D⁺ 6.4 .981 .77 .77 9.00 8.501D 1 15 0227 451.00 24.21 111 164 122 15.0 27301443.15 8.84 8.93 985.6 986 34.3 34.2 4381 237 6.5 .991 .93 .92 9.01 8.501D 1 16 0228 452.00 42.5190.2 122 121 13.2 28101443.24 8.84 8.92 986.1 986 34.3 34.0 4401 238 6.5 1.00; .79 .78 9.01 8.50;0 1 17 0229 453.02 44.2197.4 120 122 13.8 28201444.04 8.84 8.92 985.7 986 34.4 34.5 4391 239 6.5 1.001 .79 .78 9.02 8.501D 18 0237 454.00 8.42; 103 178 121 15.1 2820;447.64 8.85 8.96 984.6 984 34.6 34.6 436; 240 6.6 1.02:1.15 1.14 9.01 8.50:D 1 19 0238 455.00 39.6185.6 126 122 13.4 28201447.64 8.85 8.93 984.1 984 34.7 34.4 4351 241 6.7 1.02; .81 .80 9.00 8.501D 1 20 0244 456.00 10.7173.9 126 122 12.5 28201448.64 8.85 8.96 985.0 986 35.0 35.0 4331 242 6.7 1.04:1.05 1.05 9.03 8.50:D 1 21 0252 457.00 8.281 130 251 121 16.4 28201452.22 8.86 8.98 989.9 998 35.3 35.1 4241 243 6.9 1.06|1.17 1.17 9.00 8.50|D 1 22 0252 458.00 64.11 140 174 122 16.5 28201452.23 8.86 8.94 997.0 993 35.3 35.2 4241 244 6.9 1.061 .75 .74 8.99 8.501D : 23 0255 459.00 22.8:89.5 175 122 12.8 2830:452.31 8.87 8.96 995.0 998 35.4 35.2 4231 245 6.9 1.06; .91 .91 9.01 8.50;D : 24 0309 460.00 42.8: 161 270 115 16.9 2590:456.75 8.87 8.95 961.3 962 35.5 35.1 4511 246 7.0 1.08; .82 .82 8.98 8.50;D1 1 25 0310 461.00 69.71 214 245 118 20.6 25801457.24 8.87 8.95 960.9 961 35.6 35.0 4481 247 7.0 1.08; .76 .76 8.98 8.50;D 1 26 0311 462.00 77.11 189 223 120 19.0 25801457.71 8.87 8.95 960.5 961 35.6 35.1 4491 248 7.0 1.08; .73 .72 8.99 8.50;D 1 27 0312 463.00 40.01 200 253 120 20.7 27601457.80 8.87 8.96 981.2 986 35.6 35.1 4491 249 .88 9.02 8.501D 7.1 1.091 .89 1 28 0315 464.00 21.7: 176 227 122 22.7 2770:457.80 8.88 8.98 999.7 999 35.7 35.4 4461 250 7.1 1.09:1.04 1.04 9.06 8.50:D 1 29 0316 465.00 39.91 158 219 122 21.8 27701457.80 8.88 8.97 997.1 997 35.7 35.4 4471 251 7.1 1.101 .90 .89 9.07 8.501D : 30 0324 466.00 12.8: 208 480 111 17.1 2780:462.44 8.88 8.99 1004 1004 35.9 36.1 444: 252 7.2 1.11:1.07 1.07 9.03 8.50:D 7.2 1.11: .78 .77 9.00 8.50:0 ; 31 0326 467.00 57.3; 169 249 116 18.3 2780;463.25 8.88 8.96 1003 1002 36.0 35.8 445; 253 : 32 0335 468.00 24.8: 151 237 116 16.8 2680:464.30 8.89 8.98 972.6 975 36.2 35.4 440: 254 7.3 1.121 .94 .94 9.02 8.50 Dt 1 33 0335 469.00 1061 235 359 116 20.0 27401464.30 8.89 8.95 983.5 985 36.1 35.7 4411 255 7.3 1.12! .66 .65 9.01 8.50!D 1 34 0337 470.00 34.01 172 240 119 18.8 27401464.45 8.89 8.98 994.3 994 36.1 35.1 4391 256 .89 9.04 8.501D 7.3 1.13; .90 1 35 0338 471.00 42.91 200 244 116 20.0 27401464.73 8.89 8.98 993.6 993 36.1 35.4 4391 257 7.4 1.13: .85 .85 9.05 8.50¦D : 36 0339 472.00 98.1; 187 237 117 18.7 2740;465.02 8.89 8.96 993.3 994 36.1 35.4 4391 258 7.4 1.131 .66 .66 9.04 8.501D 7.4 1.14: .94 .94 9.08 8.50:D 1 37 0341 473.00 28.51 223 281 111 20.8 27401466.12 8.89 8.99 992.9 992 36.1 35.5 4391 259 4381 260 7.4 1.14: .71 .70 9.06 8.50:D 1 38 0341 474.00 84.81 199 278 118 19.8 27501466.43 8.89 8.97 992.9 993 36.1 35.5 : 39 0343 475.00 56.1: 152 261 120 15.1 2740:466.51 8.90 8.97 994.0 994 36.1 35.6 4391 261 7.4 1.141 .75 .75 9.09 8.501D : 40 0344 476.00 53.3: 146 204 121 16.0 2740:466.51 8.90 8.97 992.7 992 36.1 35.7 438: 262 7.4 1.14; .77 .76 9.11 8.50;D 1 41 0345 477.00 62.7: 164 207 120 17.7 2740:466.51 8.90 8.97 991.3 992 36.1 36.0 439: 263 7.5 1.151 .75 .74 9.12 8.501D : 42 0353 478.00 23.2: 183 290 120 18.6 B40:470.50 8.90 9.00 536.5 536 36.2 35.7 444: 264 .97 9.07 8.50ID 7.5 1.15; .98 : 43 0353 479.00 107: 236 278 114 21.3 840:470.87 8.90 8.97 535.1 535 36.2 36.0 445: 265 : 44 0355 480.00 32.6: 182 232 121 16.5 840:471.04 8.90 8.99 535.6 535 36.1 36.2 445: 266 .65 9.04 8.501D 7.5 1.161 .66 .88 9.08 8.50ID 7.6 1.161 .88 : 45 0355 481.00 184: 231 260 118 18.2 840:471.04 8.90 8.96 535.4 535 36.1 36.0 4441 267 7.6 1.161 .53 .52 9.05 8.501D 1 46 9357 482.01 45.81 190 264 119 17.5 8401471.57 8.91 8.99 533.2 534 36.1 35.7 4441 268 7.6 1.16; .81 .81 9.10 8.50 D 1 47 0358 483.00 49.71 174 240 121 15.1 8401472.63 8.91 8.98 535.9 536 36.1 35.5 4431 269 7.6 1.17: .78 .77 9.10 8.50ID : 48 0359 484.00 70.3; 182 243 120 13.5 840;473.03 8.91 8.98 535.7 536 36.1 35.2 443; 270 7.6 1.17; .69 .68 9.10 8.50;D : 49 0359 485.00 186: 193 253 119 14.3 840:473.20 8.91 8.96 535.6 535 36.2 35.0 444: 271 7.6 1.17: .50 .49 9.09 8.50:D : 50 0401 486.00 29.3; 183 254 120 15.5 840:473.93 8.91 9.00 535.0 535 36.2 34.9 443; 272 7.7 1.18; .88 .88 9.14 8.501D 1 51 0404 487.00 68.91 149 446 119 8.23 8501475.52 8.91 8.97 534.3 534 36.1 34.5 4431 273 7.7 1.181 .62 .62 9.10 8.50 Dt +-----+

Data Recorded at time 04:17 Date Feb 28 '89

.													Data 		rueu at		04:17	<i>'</i> 	nare	reu .	20 07		
: FI	TIM	E DEPTH	ROPI	TOP	RQUE	RPM	F08	PUMP:	RTRNS	MD	lb/gal	FLO	JW/MIN	t TE	MP (C)	PVT	-THIS	BIT-	- EST!	DXC	NXB	ECD	NXMD:
i		A	m/hr:	AV6	MAX	AV6	AVG	PRES	DEPTH	IN	OUT	IN	001	T IN	OUT	;	A	hr	TW:				i i
+ -			+					+								+			+				+
52	041	/ 488.03	18.0;	238	484	88	11.5	28301	481.66	8.92	9.00	446.4	997	36.0	35.2	42/1	2/4	7.8	1.19	.87	.87	9.08	8.501D
		B 489.00														4261			1.201				8.50!D
		9 490.05														4251			1.201				8.501D
		1 491.00														4231			1.20				8.501D
		2 492. 00														4231			1.20				8.501D
		3 493. 02														4231			1.21				8.501D
		5 494.00 6 495.01														4231			1.21;				8.501D
		7 496.05							486.48							4221			1.211				8.5010
		7 476.03 7 497.01														4211 4221			1.221				8.501D
		7 4 77.01 7 498. 03							491.47							4201			1.221				8.5010
		7 470.03 B 499.04						1								4201							8.501D
		7 500.00						4								4201			1.23				8.501D 8.501D
		, 500.00 0 501.03														4211			1.241				8.50ID
		0 501.03 1 502.01														4201			1.241				8.50ID
		4 503.00														4181			1.251				8.5010
		5 504.00														4201			1.25				8.50ID
		505.01														4191			1.26				8.501D
		B 506.00														4211			1.261				8.501D
		1 507.00														4191			1.271				8.5010
		2 508.00														4201			1.271			7.03	
		3 509.01														4171			1.271				8.50¦D
		5 510.00														4161			1.28				8.501D
		511.01														4141			1.28				8.501D
		7 512.00														4171			1.291				8.5010
		513.00														4191			1.291				8.501D
		2 514.01							505.96							4191			1.301				8.5010
		5 515.00														4201							8.50 D
		7 516.00														4231			1.31				8.50ID
		7 517.00														4271			1.321				8.50ID
		7 518.03							512.34							4291							8.50:0
		7 519.01														4281			1.321				8.501D
		520.02														4291							8.501D
		2 521.00							514.79							4281			1.33				8.501D
87	053	3 522.04	47.81	122	148	120	16.0	27301	515.20	8.97	9.05	977.4	979	36.6	37.2	4291			1.341				8.501D
88	053	5 523.05	35.11	116	148	119	17.5	27301	515.27	8.97	9.06	985.1	986	36.6	37.3	4331	309	8.7	1.341	.89	.88	9.04	8.501D
89	053	524.00	44.31	143	158	116	19.1	27301	515.27	8.97	9.06	981.5	981	36.6	37.1	4311	310	8.7	1.341	.84			8.501D
90	053	7 525.01	57.91	93.7	134	118	19.0		515.27						37.1	4291			1.35				8.501D
91	0539	7 526.08	40.61	78.9	97.0	120	18.8	27301	517.10	8.98	9.06	981.2	981	36.7	37.0	4311	312	8.8	1.351	.87	.86	9.08	8.501D
		527.00							517.51							4301			1.351				8.501D
93	054	3 528.00	41.51	154	214	120	20.0		520.15				974			4361			1.361				8.501D
94	054	7 529.00	45.51	156	217	121	18.9	27201	520.97	8.98	9.07	976.7	977	36.7	36.8	4341			1.361		.84	9.06	8.501D
95	0553	2 530.04	21.11	130	184	121	17.4	27101	523.23	8.99	9.09	974.1	974	36.7	37.1	4381		8.9	1.371	1.00	.99	9.06	8.501D
96	055	5 531.00	26.11	111	158	122	16.4	27201	524.63	8.99	9.08	974.8	975	36.7	36.9	4061	317	9.0	1.381	.94	.94	9.05	8.50ID
97	0558	3 532.00	17.51	97.2	192	122	14.5	27101	525.90	8.99	9.09	975.6	975	36.7	36.9	4071	318	9.0	1.381	1.00	.99	9.05	8.501D
	060	533.00	28.41	140	210	121	15.3	27101	526.65	8.99	9.08	973.5	973	36.7	37.0	4061	319	9.0	1.391	.91	.90	9.05	8.50
i 7t																	-						
99		1 534.02 3 535.01														4101	320	9.1	1.391	.81			8.501D

+------: F# TIME DEPTH ROP: TORQUE RPM FOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: ! ma_ma/hr¦AV6 MAXAV6 AV6 PRES¦DEPTH IN OUT IN OUT IN OUT ! m hr T₩¦ ; -------1101 0604 536.00 49.4; 150 185 121 16.1 2710;528.43 9.00 9.08 973.6 973 36.8 37.1 413; 322 9.1 1.40; .80 .80 9.06 8.50;D 1102 0606 537.02 39.01 142 193 121 15.8 26901529.33 9.00 9.08 972.6 973 36.8 37.0 4131 323 9.1 1.401 .85 .84 9.07 8.501D 1103 0616 538.00 63.51 114 192 120 14.1 26801530.90 9.00 9.07 961.9 962 36.6 36.6 4111 324 9.2 1.411 .73 .72 9.05 8.50 D1 1104 0618 539.08 26.1194.7 185 117 10.6 26801532.46 9.00 9.09 964.1 965 36.5 36.5 4141 325 9.2 1.421 .85 .85 9.06 8.501D 1105 0619 540.00 51.7: 106 187 119 9.99 2930:533.02 9.00 9.08 989.1 994 36.4 36.8 414: 326 9.2 1.42; .71 .71 9.05 8.50;D 1106 0621 541.02 35.2194.6 232 118 9.18 29301534.53 9.01 9.08 1020 1021 36.5 36.9 4141 327 9.3 1.42! .77 .77 9.05 8.50!D 1107 0622 542.01 43.2195.2 213 117 9.42 29301535.26 9.01 9.08 1022 1021 36.4 37.1 4141 328 9.3 1.431 .74 .73 9.05 8.501D 1108 0624 543.01 26.3185.6 173 119 8.44 29001536.18 9.01 9.09 1022 1022 36.4 37.3 4161 329 1109 0629 544.02 45.2188.3 143 108 7.76 9501536.18 9.01 9.08 567.1 568 36.4 37.4 4271 330 .81 9.06 8.50ID 9.3 1.431 .81 9.4 1.44: .68 .68 9.06 8.50;D 1110 0630 545.00 38.81 108 167 122 7.84 9401536.18 9.01 9.09 566.0 566 36.4 37.4 4291 331 9.4 1.44: .74 .73 9.08 8.50:D 1111 0632 546.01 33.9198.2 155 123 7.95 9401536.97 9.02 9.09 566.8 567 36.3 37.3 4021 332 9.4 1.451 .76 .76 9.08 8.501D 1112 0640 547.00 32.8196.8 122 122 9.10 8601538.67 9.02 9.10 544.8 545 36.0 36.5 3831 333 9.5 1.461 .79 .78 9.08 8.501D 1113 0641 548.04 43.2196.7 122 122 11.5 8801538.98 9.02 9.10 546.4 547 36.0 36.4 3851 334 9.5 1.46; .77 .77 9.09 8.50;D 1114 0643 549.00 40.3194.4 117 121 11.7 8801539.47 9.02 9.10 546.9 547 35.9 36.2 3841 335 .78 9.10 8.501D 9.5 1.461 .79 1115 0645 550.00 25.4168.9 96.0 122 10.1 8801540.39 9.02 9.11 545.9 546 35.9 36.2 .85 9.11 8.50 D 3611 336 9.6 1.471 .85 354: 337 1116 0647 551.00 34.7158.6 79.0 122 10.5 8801540.82 9.03 9.11 544.0 544 35.8 36.3 9.6 1.47; .80 .79 9.12 8.50;D 1117 0648 552.02 47.8185.1 109 121 11.5 870|541.16 9.03 9.10 547.4 548 35.7 36.3 353| 338 9.6 1.48; .75 .74 9.12 8.50;D 1118 0649 553.03 58.862.5 92.0 122 9.55 8706541.38 9.03 9.10 547.0 548 35.7 36.3 3536 339 9.6 1.48; .68 .68 9.13 8.50;D 1119 0650 554.04 76.3156.6 62.0 122 10.2 8801541.67 9.03 9.09 547.7 547 35.7 36.3 3551 340 9.6 1.48; .64 .63 9.13 8.50;D 1120 0651 555.02 59.8163.4 75.0 122 11.8 8801541.99 9.03 9.10 546.4 547 35.6 36.3 3561 341 9.7 1.481 .71 .70 9.15 8.501D 1121 0654 556.00 19.4166.3 85.0 121 10.6 8801542.77 9.03 9.12 547.8 548 35.5 36.3 3591 342 9.7 1.491 .90 .90 9.18 8.501D 1122 0703 557.00 37.41 123 164 119 12.7 8501545.25 9.04 9.12 533.1 533 35.2 36.0 3701 343 1123 0705 558.03 33.61 144 179 119 14.8 8401545.45 9.04 9.12 533.4 534 35.2 35.7 3381 344 .80 9.15 8.501D 9.8 1.501 .81 9.8 1.51! .86 .85 9.17 8.501D 1124 0706 559.01 41.01 144 240 118 12.7 8401546.19 9.04 9.12 534.2 535 35.1 35.8 3131 345 9.8 1.511 .79 .78 9.17 8.501D 1125 0708 560.01 43.1; 107 205 119 10.7 840;547.08 9.04 9.12 533.0 533 35.0 35.9 306; 346 9.8 1.511 .75 .75 9.17 8.501D 1126 0709 561.03 49.21 147 259 117 13.8 8701547.99 9.04 9.12 532.9 533 35.0 36.0 3101 347 .76 9.17 8.501D 9.9 1.521 .76 1127 0713 562.01 16.31 128 178 119 13.4 8701549.40 9.05 9.14 540.2 540 34.9 35.7 3141 348 9.9 1.531 .98 .98 9.20 8.501D 1128 0714 563.01 41.91 106 163 119 12.0 8701550.46 9.05 9.13 542.5 542 34.8 35.6 .77 9.17 8.501D 313; 349 10.0 1.53; .78 1129 0716 564.01 26.71 141 224 116 13.8 8701552.63 9.05 9.14 541.1 541 34.8 35.4 315; 350 10.0 1.53; .88 .88 9.17 8.501D 1130 0720 565.04 17.21 123 182 116 14.0 8801554.28 9.05 9.15 540.8 541 34.7 35.1 320; 351 10.0 1.54; .98 .97 9.17 8.50;D 1131 0729 566.04 34.31 205 236 115 13.4 8901555.05 9.06 9.14 548.5 549 34.5 34.9 3291 352 10.1 1.551 .83 .83 9.16 8.501D 1132 0731 567.01 34.31 179 221 119 12.2 9001556.18 9.06 9.14 551.5 552 34.4 34.3 330; 353 10.1 1.56; 82 .81 9.16 8.50; B 1133 0733 568.01 25.31 174 235 119 13.5 8901557.31 9.06 9.15 551.4 551 34.4 33.8 3321 354 10.2 1.561 .90 .89 9.17 8.501D 1134 0735 569.02 34.9; 169 201 120 13.5 8901558.76 9.06 9.15 551.2 551 34.3 33.9 331; 355 10.2 1.57; .84 .83 9.16 8.50;D 1135 0736 570.03 38.01 177 245 119 13.6 8901559.85 9.06 9.15 551.1 551 34.3 34.1 3361 356 10.2 1.571 .82 .81 9.15 8.501D 1136 0738 571.01 32.31 181 225 119 14.2 8901560.48 9.07 9.15 550.0 550 34.2 34.3 3351 357 10.3 1.581 .86 .85 9.17 8.501D 1137 0740 572.02 36.01 185 234 119 14.7 9001560.72 9.07 9.15 548.9 549 34.2 34.1 337; 358 10.3 1.58; .84 .84 9.18 8.50;D 1138 0741 573.03 34.61 160 209 120 13.0 8901561.92 9.07 9.15 548.1 548 34.1 33.9 3391 359 10.3 1.591 .83 .82 9.17 8.501D :139 0744 574.01 22.9; 161 227 119 13.4 900;562.89 9.07 9.16 548.4 549 34.1 33.8 340; 360 10.4 1.59; .92 .91 9.19 8.50;D :140 0752 575.00 63.3; 161 188 117 13.6 860;563.77 9.08 9.15 538.6 539 33.7 33.7 351; 361 10.4 1.60; .71 .71 9.17 8.50;D† 1141 0754 576.01 45.51 155 189 121 13.2 8601563.77 9.08 9.15 540.7 541 33.7 33.8 3511 362 10.4 1.601 .78 .77 9.18 8.501D 1142 0757 578.00 32.11 151 231 120 13.7 8701565.58 9.08 9.17 537.7 538 33.6 33.5 3331 364 10.5 1.611 .85 .85 9.21 8.501D 1143 0800 579.01 22.81 164 256 120 14.3 8701566.67 9.08 9.18 540.1 540 33.5 33.2 2961 365 10.5 1.621 .93 .93 9.22 8.5010 1144 0801 580.01 41.31 201 253 119 15.3 8601567.44 9.08 9.17 538.1 538 33.4 32.9 2981 366 10.6 1.621 .82 .81 9.21 8.50(D 1145 0804 581.00 24.7; 167 205 121 13.8 860; 568.84 9.09 9.18 539.1 539 33.3 32.9 298; 367 10.6 1.63; .91 .90 9.21 8.50; D 1146 0806 582.01 26.51 191 229 120 16.0 8601570.00 9.09 9.18 539.8 540 33.2 32.7 301; 368 10.6 1.63; .92 .92 9.21 8.50;D :147 0809 583.05 19.2; 180 248 120 14.5 860;571.86 9.09 9.19 537.9 538 33.1 32.8 305; 369 10.7 1.64; .97 .97 9.21 8.50;D 1148 0812 584.00 21.41 164 210 121 13.7 8601572.94 9.09 9.19 538.6 538 33.0 32.9 3081 370 10.7 1.651 .94 .93 9.21 8.501D

Data Printed at time 03:00 Date Mar 14 '89 Data Recorded at time 08:24 Date Feb 28 '89

+		+					+							+			+	 	 +
	ME DEPTH						PUMP!RTRNS												
;	A .	m/hr:	AVG	MAX	AVG	AVG	PRES: DEPTH	IN	OUT	IN	OUT	- IN	OUT	1	А	hr	TW:		}
+		+					+							+			+	 	 +
1149 08	24 585.02	15.5	179	240	118	14.1	870:576.12	9.10	9.20										
							870:577.04												8.50¦D
	29 587.00						8601578.02								373				8.50¦D
	31 588.0						8601579.42												8.50ID
	35 589.00						8601580.69								375				8.50ID
1154 08	39 591.03	34.01	186	226	120	15.2	8601582.38								377				8.50lD
	42 592.0						8701582.79												8.50¦D
	45 593.02						860:582.79								379				8.50ID
1157 08	48 594.00	18.91	210	279	117	17.9	870:582.97												8.50¦D
							25601584.74												8.50ID
							25701585.19												8.50¦D
							28101585.65												8.501D
							27501587.12												8.501D
							2760:588.13												8.50¦D
							27801590.24												8.501D
							27901591.98												8.501D
							2800:593.12												8.50¦D
							28001593.29												8.501D
							2810:594.65												8.501D
							27601598.16												8.501D
							27501598.63												8.501D
							27601578.89												8.50 <u>1D</u>
							2760:600.16											1.05	_
							27701601.60												8.50iD
							27701602.25												8.501D
							27801602.67												8.50¦D
							2780:602.67												8.501D
							27801603.24												8.50¦D
							28001605.88												8.50¦D
							2800:606.64												8.501D
							28001607.21												8.501D
							27901608.72												
							2800:610.19												8.501D
							28101610.93												8.50¦D
							2810:611.58												8.501D
							28201611.79												8.50¦D
							28201611.79												8.501D
							28601614.97												8.501D
	07 624.04						28501616.15				985								8.50ID
	09 625.00						2850:617.19												8.501D
	13 626.00						2850:619.04												8.501D
							2850:621.57												8.50ID
							28501621.57												8.501D
							28501622.39												8.501D
							28601623.15												8.50ID
							28601624.40												8.501D
							28601624.93												8.50¦D
							28101626.78												8.5010
							+												

! F# TIME DEPTH ROP: TORQUE RPM FOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: : m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW! ; ------1197 1043 634.00 18.5; 145 204 119 28.8 2810;628.07 9.21 9.33 974.8 975 34.6 35.4 324; 420 12.7 1.95;1.16 1.15 9.28 8.50;D :198 1046 635.00 20.6: 186 229 120 30.4 2860:629.37 9.10 8.98 987.9 982 34.7 35.4 324: 421 12.8 1.96:1.15 1.14 8.93 8.50:D 1199 1049 636.00 19.5; 194 291 121 31.2 2860;630.28 9.10 9.30 989.0 987 34.9 35.1 327; 422 12.8 1.97;1.16 1.16 8.99 8.50;0 1200 1051 637.01 26.01 210 312 122 30.9 28701631.06 9.10 9.30 987.6 988 35.0 34.8 3271 423 12.9 1.9811.09 1.08 9.03 8.501D 1201 1053 638.00 25.21 200 287 122 30.4 28701631.07 9.10 9.30 989.9 988 35.0 35.2 3301 424 12.9 1.9811.08 1.08 9.09 8.5010 1202 1057 639.01 18.3; 190 239 122 29.2 2870;632.09 9.10 9.30 987.2 987 35.1 35.2 333; 425 13.0 1.99;1.14 1.13 9.15 8.50;D 1203 1101 640.05 16.51 215 512 117 28.4 28701633.48 9.10 9.30 988.2 988 35.1 35.3 3371 426 13.0 2.0011.14 1.13 9.23 8.501D 1204 1104 641.00 24.91 186 254 123 24.5 28701635.27 9.10 9.30 991.2 990 35.2 35.5 3361 427 13.1 2.0111.01 1.01 9.24 8.501D 1205 1106 642.01 24.01 205 282 122 28.7 28701635.27 9.10 9.30 988.4 988 35.2 35.6 3371 428 13.1 2.0111.06 1.05 9.23 8.501D 1206 1118 643.06 21.81 190 252 119 27.5 28901637.77 9.10 9.30 993.8 991 35.1 35.9 3441 429 13.2 2.0311.07 1.06 9.21 8.501D 1207 1120 644.01 27.31 190 226 120 29.4 28801638.38 9.10 9.30 992.6 992 35.1 36.0 3491 430 13.2 2.0311.04 1.03 9.22 8.5010 1208 1124 645.00 18.31 242 561 114 29.0 29001639.26 9.10 9.30 991.9 990 35.3 36.0 3501 431 13.3 2.0411.11 1.11 9.22 8.501D 1209 1128 646.03 15.81 163 216 123 28.0 28901640.72 9.10 9.30 993.9 993 35.4 35.9 3521 432 13.4 2.0511.16 1.15 9.22 8.5010 1210 1132 647.00 16.61 153 204 123 27.2 28801640.73 9.60 9.80 994.7 993 35.6 35.9 3591 433 13.4 2.0611.13 1.12 9.29 8.501D 1211 1134 648.05 24.71 165 209 123 27.0 28901641.47 9.60 9.80 992.5 993 35.6 35.8 3581 434 13.5 2.0711.03 1.02 9.37 8.501D 1212 1137 649.00 16.81 145 200 121 24.9 28901642.98 9.60 9.80 993.0 992 35.6 36.2 3201 435 13.5 2.0811.08 1.07 9.46 8.501D 1213 1140 650.01 20.01 133 163 120 23.9 28801643.62 9.60 9.80 996.3 995 35.6 36.3 3411 436 13.6 2.0811.02 1.01 9.56 8.5010 1214 1144 651.00 19.11 137 186 119 23.9 28401644.43 9.60 9.80 993.4 992 33.2 36.6 4811 437 13.6 2.0911.02 1.01 9.64 8.501D 1215 1158 652.06 19.61 176 260 120 28.0 27801647.27 9.60 9.80 990.6 989 32.6 36.1 4911 438 13.7 2.1111.04 1.04 9.70 8.5010 1216 1201 653.00 25.91 217 254 118 32.1 27801647.96 9.60 9.80 990.9 990 32.9 35.8 4891 439 13.7 2.1111.02 1.01 9.71 8.5010 1217 1203 654.02 23.01 242 291 118 37.6 27901648.84 9.60 9.80 990.0 989 33.2 35.8 4961 440 13.8 2.1211.09 1.08 9.71 8.501D 1218 1205 655.03 38.01 241 297 117 39.9 27901649.49 9.60 9.80 990.0 989 33.4 35.9 4811 441 13.8 2.121 .98 .97 9.71 8.501D 1219 1207 656.01 32.41 221 257 118 37.6 27901649.82 9.60 9.80 991.9 990 33.6 35.8 4651 442 13.8 2.1311.00 1.00 9.72 8.501D 1220 1208 657.02 38.31 228 316 116 36.5 28001650.20 9.60 9.80 990.8 990 33.8 35.8 4661 443 13.9 2.131 .95 .95 9.73 8.501D 1221 1211 658.00 23.01 211 270 118 36.8 28001650.20 9.60 9.80 991.0 990 34.1 36.0 4671 444 13.9 2.1411.08 1.07 9.74 8.5010 1222 1212 659.04 43.81 233 286 119 36.6 28001650.20 9.60 9.80 989.7 989 34.3 35.8 4701 445 13.9 2.141 .92 .92 9.75 8.501D 1223 1214 660.02 26.41 236 283 118 35.9 28001650.28 9.60 9.80 991.0 990 34.5 35.8 4731 446 14.0 2.1511.04 1.03 9.76 8.501D 1224 1217 661.00 24.01 231 266 119 37.0 28101651.28 9.60 9.80 988.6 988 34.7 35.4 4761 447 14.0 2.1511.07 1.06 9.76 8.501D 1225 1227 662.00 32.71 216 253 116 33.7 28801653.93 9.60 9.80 999.4 996 34.8 34.6 4891 448 14.1 2.171 .97 .96 9.74 8.501D 1226 1228 663.00 39.21 219 242 117 33.8 28701655.09 9.60 9.80 998.7 998 34.8 34.5 4561 449 14.1 2.171 .93 .92 9.74 8.501D 1227 1230 664.01 36.91 226 254 118 33.4 28701656.16 9.60 9.80 997.6 997 34.8 34.7 4451 450 14.1 2.171 .94 .93 9.74 8.5010 1228 1231 665.00 31.91 224 251 116 33.0 28601656.54 9.60 9.80 1000 998 34.8 34.7 4501 451 14.2 2.181 .97 .96 9.75 8.501D 1229 1233 666.03 32.41 228 249 117 34.8 28601657.70 9.60 9.80 999.7 999 34.8 34.8 4511 452 14.2 2.181 .98 .97 9.75 8.5010 1230 1242 667.00 19.91 195 246 120 40.5 28401660.02 9.60 9.80 997.9 997 34.9 35.5 4691 453 14.3 2.1911.15 1.14 9.73 8.501D 1231 1245 668.04 25.1; 221 254 120 40.6 2840;661.51 9.60 9.80 998.9 997 34.9 35.3 466; 454 14.3 2.20;1.09 1.08 9.73 8.50;0 1232 1247 669.02 25.8; 226 253 120 40.9 2830;662.98 9.60 9.80 998.3 998 35.0 35.2 466; 455 14.4 2.21;1.09 1.08 9.72 8.50;0 1233 1249 670.01 25.8; 243 274 120 42.8 2840;664.11 9.60 9.80 997.1 997 35.0 35.4 470; 456 14.4 2.21;1.10 1.09 9.72 8.50;0 1234 1251 671.00 31.2; 224 268 120 41.2 2850;664.79 9.60 9.80 1004 999 35.0 35.5 473; 457 14.4 2.22;1.04 1.04 9.72 8.50;0 1235 1301 672.00 19.71 212 259 119 39.9 28001664.84 9.60 9.80 989.1 988 35.0 35.5 4851 458 14.5 2.2311.14 1.13 9.73 8.5010 1236 1303 673.00 26.51 235 281 120 40.4 28001665.81 9.60 9.80 1004 1002 35.1 35.6 4851 459 14.6 2.2411.08 1.07 9.73 8.501D 1237 1305 674.00 32.41 241 298 119 40.6 28001666.50 9.60 9.80 995.0 999 35.1 35.7 4881 460 14.6 2.2411.03 1.02 9.74 8.5010 1238 1307 675.00 27.01 229 261 120 40.8 28101667.48 9.60 9.80 990.7 990 35.1 35.7 4901 461 14.6 2.2511.07 1.06 9.74 8.501D 1239 1311 676.00 16.6; 219 264 120 41.6 2800; 668.96 9.60 9.80 991.3 990 35.2 35.6 492; 462 14.7 2.26; 1.20 1.19 9.73 8.50; D 1240 1312 677.00 30.8; 219 270 120 40.5 2820; 669.66 9.60 9.80 990.6 990 35.3 35.7 495; 463 14.7 2.26; 1.04 1.03 9.73 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; 215 244 120 39.7 2820; 669.66 9.60 9.80 993.1 992 35.3 35.9 496; 464 14.7 2.27; 1.00 .99 9.74 8.50; D 1241 1314 678.00 35.6; D 1241 1314 678.00 35.6; D 1241 1314 678.00 35.6; D 1251 1314 678.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 35.00 1242 1316 679.01 32.91 217 255 120 40.9 28201670.14 9.60 9.80 993.9 992 35.3 36.1 4981 465 14.8 2.2711.02 1.02 9.75 8.501D 1243 1318 680.02 29.21 223 282 120 41.7 28201670.68 9.60 9.80 995.7 994 35.4 36.1 5011 466 14.8 2.2811.06 1.05 9.76 8.501D 1244 1331 681.04 18.11 196 253 115 39.9 28301673.83 9.60 9.80 992.9 965 35.4 35.7 5171 467 14.9 2.2911.16 1.15 9.73 8.501D

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I F# TIME DEPTH ROP: TORQUE RPM FOB PUMP:RTRNS MD 16/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD ! m m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW! ! 1245 1333 682.00 31.11 239 264 123 39.5 28201674.36 9.60 9.80 994.3 990 35.4 35.1 5191 468 14.9 2.2911.04 1.03 9.74 8.501D 1246 1335 683.00 27.11 226 262 123 39.0 28201675.15 9.80 9.80 993.8 993 35.4 35.6 5211 469 15.0 2.3011.06 1.06 9.74 8.501D 1247 1339 684.00 16.31 224 258 123 38.3 8901676.90 9.80 9.70 535.6 596 35.4 35.8 5571 470 15.0 2.3111.18 1.17 9.75 8.501D 1248 1343 685.02 15.81 221 271 123 37.2 28001678.15 9.80 9.70 977.1 887 35.3 35.3 5161 471 15.1 2.3211.17 1.17 9.78 8.501D 1249 1344 686.05 49.1; 241 269 123 36.9 2850;678.75 9.80 9.70 998.1 971 35.3 35.2 519; 472 15.1 2.32; .90 .89 9.81 8.50;D 1250 1346 687.01 33.51 242 274 123 36.5 28501679.44 9.80 9.70 998.4 995 35.3 35.5 5231 473 15.1 2.331 .99 .98 9.83 8.501D 1251 1347 688.01 36.41 245 280 123 39.3 28501679.54 9.80 9.70 997.3 997 35.3 35.8 5251 474 15.2 2.331 .98 .98 9.85 8.501D 1252 1349 689.02 39.41 245 274 122 39.6 28501679.54 9.80 9.70 996.6 995 35.3 36.0 5271 475 15.2 2.331 .96 .96 9.88 8.501D 1253 1350 690.01 41.21 247 272 123 39.0 28501679.55 9.80 9.70 999.9 998 35.3 35.9 5291 476 15.2 2.341 .95 .94 9.90 8.501D 1254 1401 691.02 19.91 177 271 120 39.0 28301682.55 9.80 9.70 992.4 992 35.3 35.9 5401 477 15.3 2.3511.11 1.10 9.94 8.5010 1255 1406 692.00 12.41 171 226 121 40.3 28301684.87 9.80 9.70 994.9 994 35.3 36.2 5461 478 15.4 2.3711.24 1.23 9.93 8.501D 1256 1408 693.01 35.81 232 362 118 40.3 28301685.83 9.80 9.70 994.2 994 35.4 36.2 5451 479 15.4 2.371 .98 .97 9.93 8.501D 1257 1410 694.02 27.21 189 298 119 39.1 28301687.29 9.80 9.70 992.1 992 35.4 36.4 5491 480 15.5 2.3811.04 1.03 9.92 8.5010 1258 1412 695.00 26.51 175 212 120 38.2 28301688.71 9.80 9.70 994.5 992 35.5 36.1 5511 481 15.5 2.3811.04 1.03 9.92 8.501D 1259 1414 696.00 24.01 199 237 120 40.1 28201689.05 9.80 9.70 992.3 991 35.5 36.3 5541 482 15.5 2.3911.08 1.07 9.92 8.501D 1260 1418 697.02 17.7; 204 244 120 41.1 2830;689.33 9.80 9.70 991.9 991 35.6 36.0 559; 483 15.6 2.40;1.16 1.15 9.93 8.50;D 1261 1420 698.03 23.31 180 215 120 40.4 28301689.82 9.80 9.70 992.6 992 35.7 36.1 5611 484 15.6 2.4011.08 1.08 9.94 8.501D 1262 1423 699.01 21.31 164 204 120 39.0 28201690.27 9.80 9.70 990.7 991 35.7 36.2 5641 485 15.7 2.4111.09 1.09 9.95 8.5010 1263 1439 700.02 15.81 177 259 118 40.5 27901695.63 9.80 9.70 986.3 984 35.9 36.3 5851 486 15.8 2.4311.18 1.17 9.90 8.501Df 1264 1443 701.03 17.21 171 220 123 37.0 27901696.85 9.80 9.70 984.9 984 35.9 36.5 5421 487 15.9 2.4411.14 1.13 9.89 8.5010 1265 1445 702.00 27.71 201 228 123 38.3 27901697.67 9.80 9.70 985.9 985 35.9 36.5 5471 488 15.9 2.4511.04 1.03 9.90 8.501D 1266 1447 703.01 28.21 184 239 123 37.0 27801698.20 9.80 9.70 984.6 984 35.9 36.7 5541 489 16.0 2.4511.02 1.01 9.90 8.501D 1267 1450 704.00 16.41 153 187 123 35.3 27901698.61 9.40 9.50 987.2 985 36.0 36.7 5601 490 16.0 2.4611.14 1.13 9.88 8.50 1268 1455 705.01 13.21 149 186 123 35.5 27801698.61 9.40 9.50 985.9 985 36.1 36.8 5641 491 16.1 2.4711.20 1.19 9.81 8.50ib 1269 1500 706.00 11.51 150 201 123 35.7 27801699.25 9.40 9.50 986.5 985 36.2 36.7 5671 492 16.2 2.4911.24 1.24 9.70 8.501D 1270 1504 707.00 16.41 181 251 123 36.9 27901700.78 9.30 9.40 987.9 986 36.3 36.7 5741 493 16.2 2.4911.19 1.18 9.59 8.5010 1271 1507 708.00 21.21 181 230 123 36.9 27801702.01 9.30 9.40 987.8 987 36.3 36.8 5781 494 16.3 2.5011.13 1.12 9.52 8.501D 1272 1511 709.00 14.7; 166 213 123 36.2 2780;702.94 9.30 9.40 989.2 987 36.4 36.9 582; 495 16.4 2.51;1.22 1.21 9.47 8.50;D 1273 1523 710.01 17.6; 163 198 121 36.7 2800;704.78 9.30 9.40 993.4 991 36.4 36.7 589; 496 16.5 2.53;1.19 1.18 9.42 8.50;D 1274 1528 711.02 13.01 171 217 123 37.1 28101706.07 9.30 9.40 992.1 991 36.5 36.8 5901 497 16.5 2.5411.27 1.26 9.40 8.501D 1275 1530 712.00 25.21 201 240 123 38.4 28401706.81 9.30 9.40 986.8 991 36.6 36.7 5921 498 16.6 2.5511.12 1.11 9.41 8.501D 1276 1533 713.00 22.71 188 223 123 38.0 28601707.48 9.30 9.40 1071 1055 36.7 36.8 5901 499 16.6 2.5511.14 1.13 9.41 8.501D 1277 1535 714.01 29.71 184 221 123 37.5 28501708.02 9.30 9.40 1041 1057 36.8 36.9 5901 500 16.6 2.5611.07 1.06 9.42 8.501D 1278 1538 715.00 20.51 178 212 123 37.5 28401708.11 9.30 9.40 1040 1036 36.9 37.0 5961 501 16.7 2.5611.16 1.15 9.43 8.5010 1279 1543 716.01 12.01 174 219 123 38.0 28401708.85 9.30 9.40 1032 1018 37.1 36.9 5941 502 16.8 2.5811.29 1.29 9.43 8.501D 1280 1546 717.00 19.5; 178 234 122 38.1 2840;709.39 9.30 9.40 1011 1011 37.2 37.1 596; 503 16.8 2.59;1.17 1.16 9.44 8.50;D 1281 1549 718.00 20.0; 163 214 122 36.8 2840;710.68 9.30 9.40 999.9 1000 37.3 37.0 595; 504 16.9 2.59;1.15 1.15 9.43 8.50;D 1282 1601 719.02 10.81 137 177 119 34.9 28701713.99 9.40 9.40 1001 982 37.4 36.8 5921 505 17.0 2.6111.23 1.23 9.41 8.5010 1283 1606 720.03 16.3; 144 181 120 35.6 2860;715.00 9.40 9.40 1001 1001 37.4 37.5 539; 506 17.1 2.62;1.15 1.17 9.43 8.50;Dt 1284 1609 721.00 25.41 148 181 121 35.4 28601715.89 9.40 9.40 1002 1002 37.3 37.6 5431 507 17.1 2.6311.19 1.20 9.46 8.501D1 1285 1613 722.00 18.91 131 153 120 34.6 28601717.06 9.40 9.40 1005 1004 37.2 37.7 5471 508 17.2 2.6411.13 1.16 9.47 8.5010 1286 1618 723.00 12.51 167 242 120 33.4 28601717.57 9.40 9.40 1002 1001 37.2 37.7 5531 509 17.2 2.6511.22 1.22 9.50 8.501D 1287 1621 724.00 18.81 178 221 118 33.5 28601717.86 9.40 9.40 1004 1005 37.3 37.8 5551 510 17.3 2.6611.12 1.11 9.52 8.501D 1289 1624 725.00 19.61 177 206 116 33.1 28601718.32 9.40 9.40 999.5 1000 37.3 37.9 5591 511 17.3 2.6611.11 1.10 9.52 8.501D 1289 1628 726.00 15.71 168 219 117 32.9 28601719.52 9.40 9.40 1008 1011 37.4 37.9 5631 512 17.4 2.6711.16 1.15 9.52 8.501D 1290 1632 727.00 14.31 177 217 118 34.6 28601720.59 9.40 9.40 1009 1009 37.5 37.8 5691 513 17.5 2.6911.20 1.19 9.52 8.501D 1291 1636 728.00 14.61 178 219 118 34.0 28601721.43 9.40 9.40 1027 1021 37.5 38.1 5721 514 17.5 2.7011.19 1.18 9.52 8.501D [292 1639 729.00 17.5] 154 195 117 33.0 2870;722.41 9.40 9.40 1015 1019 37.6 38.1 574; 515 17.6 2.70;1.13 1.12 9.52 8.50; L

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F#	TIME	DEPTH	ROP:	TOR AV6	QUE Max	RPM AV6	FOB AVG	PUMP! PRES!	RTRNS Depth	MD In	lb/ga OUT	l FL	OW/MIN	T	EMP (C) N OUT	PVT		BIT-	- EST	DXC			
		730.00	25.41	213	257	119	32.9	2840	723.63	9.40	9.40	938.5	784	37.	5 37.8	559							
		731.02																					
		732.00																					8.50ID
		733.04																					8.501D
		734.02																					8.501D 8.501D
		735.00 736.00																					8.501D
		737.01																					8.501D
		738.00																					8.50 ID
		739.01																					8.5010
		740.04																					8.501D
		741.00																					8.5010
		742.03														528	528	18.3	2.82	1.14	1.13	9.41	8.501D
306	1739	743.01	16.01	172	218	115	34.6	28201	736.96	9.30	9.40	993.0	993	37.	7 38.1	528	529	18.4	2.83	1.18	1.17	9.42	8.5010
307	1743	744.02	15.11	179	227	119	34.9	28301	737.34	9.30	9.40	990.9	990	37.1	8 38.2	5351	530	18.5	2.84	1.18	1.18	9.42	8.501D
308	1746	745.00	19.21	188	218	120	35.2	28201	738.36	9.30	9.40	992.5	992	37.8	8 38.2	5361	531	18.5	2.84	1.12	1.11	9.42	8.50:0
309	1749	746.00	26.41	181	219	121	35.2	28201	739.07	9.30	9.40	990.1	990	37.9	7 38.3	5381	532	18.5	2.85	1.14	1.14	9.43	8.5010
		747.05																					8.5010
		748.01																					8.5010
		749.02																					8.5010
		750.02																					8.5010
		751.01																					8.5010
		752.01																					8.5010
		753.03																					8.5010
		754.05 755.01																					8.501D 8.501D
		756.05																					8.5010
		757.00																					8.50 I B
		758.02																					8.5010
		759.00																					8.5010
		760.00																					8.5010
		761.04																					8.5010
325	1917	762.02	30.51	202	239	120	37.5	28401	755.33	9.30	9.40	992.4	992	38.	1 38.9								8.5010
326	1919	763.00	29.01	203	241	120	37.7	28401	755.33	9.30	9.40	993.3	992	38.	1 39.0	548	549	19.3	2.97	1.07	1.06	9.43	8.5010
		764.01														5501	550	19.4	2.98	1.09	1.09	9.44	8.5010
		765.00																					8.5010
		766.00																					8.5010
		767.00																					8.5011
		768.02																					8.5010
		769.01																					8.5010
		770.01																					8.5010
		771.00 772.00																					8.501D 8.501D
		773.00																					8.50¦D
		774.02																					8.5010
		775.00																					8.50:D
		776.01																					8.5010
															38.2		563						

t-----t ! F# TIME DEPTH ROP: TORQUE RPM FOB PUMP!RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXM ! m m m/hr: AVG MAX AVG AVG PRES:DEPTH IN OUT IN OUT IN OUT ; m hr T₩; ; :-------1341 2032 778.00 25.21 195 224 148 36.7 8601770.73 9.30 9.40 691.7 829 38.5 38.6 5171 564 20.4 3.1411.14 1.13 9.43 8.501D 1342 2037 779.00 14.01 197 231 148 37.6 27301771.36 9.30 9.40 942.0 813 38.7 38.3 5381 565 20.5 3.1511.30 1.28 9.43 8.501D 1343 2039 780.00 26.61 214 241 148 38.9 28301772.11 9.30 9.40 988.3 976 38.7 37.9 5361 566 20.5 3.1511.15 1.13 9.43 8.501D 1344 2041 781.01 24.0; 207 250 148 38.7 2830;772.88 9.30 9.40 989.0 988 38.8 38.2 536; 567 20.6 3.16;1.17 1.16 9.44 8.50;0 1345 2044 782.00 21.51 209 250 148 38.4 28301774.21 9.30 9.40 991.1 989 38.9 38.6 5321 568 20.6 3.1711.20 1.18 9.43 8.501D 1346 2047 783.00 18.51 205 236 148 38.3 28301775.17 9.30 9.40 991.5 990 39.0 38.8 5291 569 20.7 3.1811.23 1.22 9.43 8.501D 1347 2049 784.00 41.61 217 246 148 37.7 28301775.17 9.30 9.40 993.5 992 39.0 38.8 5281 570 20.7 3.1811.03 1.01 9.44 8.501D 1348 2051 785.01 28.71 199 239 148 36.9 28301775.17 9.30 9.40 989.3 989 39.0 38.8 5261 571 20.7 3.1811.11 1.10 9.45 8.501D 1349 2117 786.00 15.81 191 245 148 37.3 28801781.55 9.30 9.40 995.3 985 37.8 37.9 5351 572 21.0 3.2311.27 1.25 9.40 8.501D 1350 2118 787.01 40.91 210 242 148 37.1 28801782.38 9.30 9.40 994.5 993 37.6 38.1 5371 573 21.0 3.2311.03 1.02 9.40 8.501D 1351 2120 788.00 39.41 208 253 148 36.3 28701783.17 9.30 9.40 995.4 994 37.5 38.2 5331 574 21.0 3.2311.04 1.02 9.40 8.501D 1352 2121 789.03 38.21 202 243 148 35.7 28701783.72 9.30 9.40 994.9 994 37.4 38.4 5341 575 21.1 3.2411.04 1.02 9.40 8.5010 1353 2124 790.03 23.51 189 225 148 35.5 28601784.18 9.30 9.40 996.5 995 37.4 38.5 5331 576 21.1 3.2411.15 1.14 9.41 8.501D 1354 2127 791.01 20.51 193 228 148 35.8 28601784.18 9.30 9.40 994.9 994 37.5 38.6 5301 577 21.2 3.2511.19 1.17 9.42 8.501D 1355 2129 792.02 26.91 201 252 148 35.0 28601784.18 9.30 9.40 995.5 994 37.6 38.6 5281 578 21.2 3.2611.11 1.10 9.43 8.501D 1356 2131 793.00 28.01 204 234 148 35.2 28501784.18 9.30 9.40 995.7 994 37.8 38.8 5291 579 21.2 3.2611.11 1.09 9.44 8.501D 1357 2133 794.01 27.91 220 258 148 36.9 28501784.18 9.30 9.40 996.4 995 37.9 38.8 5261 580 21.3 3.2711.12 1.10 9.45 8.501D 1358 2135 795.01 36.81 229 268 148 36.7 28501784.18 9.30 9.40 997.1 996 38.1 38.7 5251 581 21.3 3.2711.05 1.03 9.46 8.501D | 1359 2144 796.01 39.61 219 253 148 36.6 28401785.42 9.30 9.40 989.6 963 38.6 37.8 4681 582 21.4 3.2811.03 1.01 9.46 8.501D 1360 2146 797.00 33.31 216 244 148 36.0 28401786.63 9.30 9.40 990.3 987 38.7 37.6 4651 583 21.4 3.2911.07 1.05 9.46 8.501D 1361 2150 798.00 16.21 205 259 148 37.0 28401788.42 9.30 9.40 991.3 990 38.8 38.5 4631 584 21.5 3.3011.25 1.24 9.45 8.501D 1362 2152 799.01 21.91 226 257 148 37.4 28401789.26 9.30 9.40 990.1 989 38.9 38.9 4721 585 21.5 3.3011.18 1.17 9.45 8.501D 1363 2155 800.00 21.2; 238 309 148 37.4 2840;790.56 9.30 9.40 989.9 988 38.8 39.1 475; 586 21.5 3.31;1.19 1.18 9.45 8.5 1364 2157 801.00 24.31 238 276 148 39.6 28501791.66 9.30 9.40 990.9 990 38.8 39.1 4831 587 21.6 3.3211.18 1.16 9.45 8.50iu 1365 2201 802.03 19.61 209 248 148 38.5 28401793.24 9.30 9.40 991.2 990 38.7 39.2 4801 588 21.6 3.3311.22 1.21 9.44 8.501D 1366 2204 803.04 19.7; 211 256 148 37.4 2850;794.05 9.30 9.40 989.6 989 38.8 39.3 474; 589 21.7 3.33;1.21 1.19 9.44 8.50;D 1367 2206 804.02 29.1; 213 245 148 37.1 2840;794.09 9.30 9.40 991.8 991 38.9 39.2 473; 590 21.7 3.34;1.11 1.10 9.45 8.50;D 1368 2214 805.02 24.8; 190 239 148 37.2 2870;796.11 9.30 9.40 995.0 967 39.3 38.6 410; 591 21.8 3.35;1.15 1.14 9.44 8.50;D 1369 2218 806.02 17.3; 207 235 148 37.9 2870;797.44 9.30 9.40 995.2 994 39.3 38.7 409; 592 21.9 3.36;1.25 1.23 9.44 8.50;D 1370 2220 807.01 28.61 224 262 148 37.2 28701798.23 9.30 9.40 994.3 994 39.4 39.1 4131 593 21.9 3.3611.12 1.10 9.44 8.501D 1371 2222 808.01 30.01 217 260 148 36.6 28701798.84 9.30 9.40 993.3 993 39.4 39.2 4091 594 21.9 3.3711.10 1.08 9.45 8.501D 1372 2226 809.02 14.91 198 246 148 37.0 28701800.38 9.30 9.40 993.6 992 39.4 39.4 4081 595 22.0 3.3811.27 1.26 9.44 8.501D 1373 2228 810.00 30.81 226 265 148 37.1 28701801.09 9.30 9.40 994.0 993 39.3 39.5 4071 596 22.0 3.3811.10 1.08 9.44 8.501D 1374 2230 811.01 22.61 205 240 148 36.7 28701801.94 9.30 9.40 992.6 991 39.3 39.5 4101 597 22.1 3.3911.17 1.15 9.45 8.501D 1375 2235 812.02 14.01 188 221 148 36.7 28701803.65 9.30 9.40 994.8 993 39.4 39.6 4131 598 22.1 3.4011.29 1.27 9.44 8.501D 1376 2237 813.00 27.31 209 263 148 36.7 28701803.70 9.30 9.40 991.4 992 39.4 39.8 4121 599 22.2 3.4111.12 1.11 9.45 8.501D 1377 2239 814.01 29.21 203 235 148 35.5 28601804.10 9.30 9.40 994.5 993 39.4 39.8 4131 600 22.2 3.4111.10 1.08 9.45 8.501D 1379 2237 815.00 17.81 105 2374 130 39.7 28601804.10 9.30 9.40 994.5 993 39.4 39.8 4131 600 22.2 3.4111.10 1.08 9.45 8.501D 1380 2257 815.00 17.8; 105 236 130 38.7 2860; 809.65 9.30 9.40 990.1 989 39.6 39.6 421; 615 22.4 3.42; 1.21 1.20 9.42 8.50; D+ + Drill to 815m. Circulate hole clean and POOH. Run wireline logs BHC-GR-Cal. + NB3 Reed HP11J with 3x16 jets. Start depth 815m. 1 Date Mar 2 '89 1385 2013 816.01 22.81 183 302 65 20.2 11901815.00 9.30 9.40 529.1 521 30.8 30.6 50311.00 .1 .031 .91 .92 9.42 8.501D 1386 2018 817.02 14.31 163 224 66 21.3 18101815.00 9.30 9.40 627.8 585 30.9 30.8 49712.00 .2 .0611.04 1.04 9.43 8.501D 1387 2023 818.00 11.5; 158 230 66 22.1 1810;815.00 9.30 9.40 666.6 665 31.1 31.2 498;3.00 .3 .09;1.09 1.10 9.45 8.50;D + Drill to 818m, circulate bottoms up and run leak off test. ! ! Formation fracture gradient = 16.5ppg EMW 1389 2153 820.01 13.61 140 208 63 22.2 27601819.16 9.30 9.40 826.3 824 32.9 30.5 50914.96 .6 .1511.05 1.05 9.43 8.501D 1390 2155 821.00 27.31 156 196 71 23.7 27701819.16 9.30 9.40 838.9 836 32.9 32.0 51115.99 .6 .171 .92 .93 9.44 8.50

Data Printed at time 03:23 Date Mar 14 '89

Data Recorded at time 21:57 Date Mar 2 '89

+-----+ F# TIME DEPTH ROP: TORQUE RPM FOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PYT: -THIS BIT- EST: DXC NXB ECD NXMD: : m m/hr: AVG MAX AVG AVG PRES:DEPTH IN OUT IN OUT IN OUT : m hr TW: ; +-----+ 1391 2157 822.00 31.61 136 179 71 23.0 2760:819.16 9.30 9.40 838.3 837 32.8 32.3 514:6.99 .6 .18: .88 .88 9.45 8.50:D 1392 2210 823.00 19.6; 145 186 70 21.9 2700;819.16 9.30 9.40 828.6 828 32.7 33.3 527;8.00 .8 .21; .98 .98 9.47 8.50;D 1393 2212 824.00 25.51 142 185 72 20.0 27001819.16 9.30 9.40 829.4 828 32.8 33.5 53019.00 .B .231 .90 .90 9.48 8.501D 1394 2216 825.01 19.01 138 170 82 22.3 27001819.45 9.30 9.40 831.8 830 32.9 33.8 53419.99 .9 .2511.02 1.02 9.48 8.501D 1395 2218 826.00 21.01 150 177 87 23.8 27101820.56 9.30 9.40 829.0 829 33.0 33.8 537111.0 .9 .2711.03 1.03 9.48 8.501D 1396 2221 827.00 26.8; 154 177 88 24.2 2710;821.59 9.30 9.40 832.8 831 33.2 34.0 539;12.0 .9 .30; .98 .97 9.48 8.50;D 1397 2222 828.00 40.5; 153 183 88 23.7 2710;822.27 9.30 9.40 833.6 832 33.2 34.1 542;13.0 1.0 .31; .88 .87 9.49 8.50;D 1398 2224 829.00 24.4; 150 183 86 24.1 2710;822.38 9.30 9.40 829.9 830 33.4 34.3 544;14.0 1.0 .33;1.00 .99 9.50 8.50;D 1399 2227 830.00 23.11 150 189 95 24.4 27101822.38 9.30 9.40 832.6 831 33.5 34.4 547115.0 1.0 .3611.03 1.02 9.51 8.501D 1400 2228 831.01 43.61 159 187 103 24.4 27201822.63 9.30 9.40 831.2 831 33.6 34.4 548116.0 1.1 .371 .90 .89 9.51 8.501D 1401 2230 832.00 28.81 167 218 107 25.7 27201823.20 9.30 9.40 833.7 832 33.7 34.3 551117.0 1.1 .4011.02 1.01 9.52 8.501D 1402 2239 833.01 38.9; 158 209 107 26.8 2700;825.01 9.30 9.40 830.6 820 34.0 34.4 558;18.0 1.2 .44; .96 .95 9.51 8.50;10 1403 2240 834.00 57.2; 177 202 107 27.1 2700;825.35 9.30 9.40 830.1 827 34.1 34.3 559;19.0 1.2 .45; .87 .85 9.51 8.50;10 1404 2241 835.01 52.6; 185 222 108 28.6 2700;825.76 9.30 9.40 828.9 828 34.1 34.4 560;20.0 1.2 .46; .91 .89 9.52 8.50;10 1405 2243 836.00 25.01 171 208 108 28.8 27001826.77 9.30 9.40 829.9 829 34.2 34.4 561121.0 1.2 .5011.09 1.08 9.52 8.501D 1406 2245 837.01 48.81 179 212 107 28.7 27001827.46 9.30 9.40 830.8 830 34.2 34.5 563122.0 1.3 .511 .92 .91 9.53 8.5010 1407 2247 838.02 29.41 166 205 114 28.9 28501828.65 9.30 9.40 853.2 846 34.3 34.8 564122.9 1.3 .5311.07 1.05 9.53 8.501D 1408 2248 839.00 54.01 189 214 116 30.7 28601828.99 9.30 9.40 856.2 853 34.3 34.8 566124.0 1.3 .551 .94 .91 9.53 8.5010 1409 2249 840.01 56.61 191 224 112 31.1 28501829.40 9.30 9.40 856.2 855 34.3 34.9 566124.9 1.3 .571 .92 .89 9.54 8.501D 1410 2250 841.00 44.61 185 217 116 31.2 28601829.85 9.30 9.40 855.8 855 34.4 34.9 567126.0 1.3 .581 .99 .96 9.54 8.501D 1411 2252 842.03 45.51 183 205 115 30.9 28601830.81 9.30 9.40 853.3 853 34.5 35.0 569127.0 1.4 .601 .98 .95 9.54 8.501D 1412 2300 843.00 47.51 188 220 109 29.1 28001832.27 9.30 9.40 848.3 834 34.7 34.9 576128.0 1.4 .631 .94 .91 9.54 8.501D 1413 2301 844.01 49.81 192 226 117 30.0 28301832.27 9.30 9.40 847.4 843 34.7 34.7 576129.0 1.4 .641 .95 .93 9.55 8.501D 1414 2303 845.01 32.71 191 230 114 33.2 28201833.65 9.30 9.40 850.9 849 34.7 35.0 578130.0 1.5 .6711.08 1.06 9.55 8.501D 1415 2304 846.02 46.21 180 206 114 32.6 28201834.79 9.30 9.40 849.3 848 34.8 35.2 579131.0 1.5 .691 .99 .96 9.54 8.501D 1416 2306 847.01 37.91 176 212 115 32.4 28201835.54 9.30 9.40 849.2 848 34.8 35.3 579132.0 1.5 .7111.04 1.01 9.55 8.501D 1417 2307 848.01 42.71 187 229 116 33.1 28101836.35 9.30 9.40 850.5 849 34.9 35.5 580133.0 1.5 .7211.01 .99 9.55 8.501D 1418 2308 849.00 49.91 193 231 113 32.0 28201837.14 9.30 9.40 849.8 849 34.9 35.5 582134.0 1.5 .741 .96 .93 9.55 8.501D 1419 2310 850.01 41.11 182 210 117 32.8 28201837.85 9.30 9.40 850.7 849 35.0 35.5 561135.0 1.6 .7611.02 .99 9.55 8.501D 1420 2311 851.03 44.91 182 216 113 32.5 28201839.06 9.30 9.40 853.1 851 35.0 35.5 529136.0 1.6 .771 .99 .96 9.55 8.501D 1421 2319 852.00 49.01 176 224 107 32.0 28201842.22 9.30 9.40 847.4 788 35.1 35.8 510137.0 1.6 .801 .95 .92 9.53 8.501D 1422 2320 853.03 46.41 202 240 104 32.4 28201842.23 9.30 9.40 848.1 835 35.1 35.2 513138.0 1.7 .811 .96 .93 9.54 8.501D 1423 2321 854.01 51.21 216 238 112 33.7 28201842.23 9.30 9.40 849.9 845 35.1 35.0 515139.0 1.7 .831 .96 .93 9.55 8.501D 1424 2322 855.02 56.01 212 242 114 33.6 28201842.24 9.30 9.40 850.1 848 35.1 35.2 514140.0 1.7 .841 .94 .91 9.55 8.501D 1425 2323 856.00 71.51 207 232 113 33.1 28201842.89 9.30 9.40 850.0 849 35.2 35.4 515141.0 1.7 .851 .87 .84 9.56 8.501D 1426 2325 857.00 34.91 188 227 116 33.3 28201844.18 9.30 9.40 850.6 850 35.2 35.6 516142.0 1.7 .8711.07 1.03 9.56 8.501D 1427 2327 858.02 37.01 182 226 116 32.3 28201845.18 9.30 9.40 850.3 849 35.2 35.9 519143.0 1.8 .9011.04 1.01 9.56 8.501D 1428 2328 859.01 34.71 181 211 115 32.3 28201846.13 9.30 9.40 850.5 849 35.3 36.0 521144.0 1.8 .9111.06 1.02 9.56 8.501D 1429 2330 860.01 39.11 183 217 116 32.9 28101847.24 9.30 9.40 850.0 849 35.4 35.9 523145.0 1.8 .9311.03 1.00 9.56 8.501D 1430 2331 861.02 39.71 201 242 114 33.4 28101848.37 9.30 9.40 850.3 849 35.4 35.9 523146.0 1.8 .9511.03 1.00 9.56 8.501D 1431 2341 862.00 30.81 186 244 110 35.4 28301851.80 9.20 9.30 853.5 835 35.7 35.4 477147.0 1.9 .9911.11 1.07 9.52 8.501D 1432 2343 863.02 22.01 157 218 109 33.7 28201852.66 9.20 9.30 853.1 852 35.7 35.9 439148.0 1.9 1.0111.18 1.15 9.51 8.501D 1433 2345 864.05 32.31 152 197 106 31.0 28201854.22 9.20 9.30 852.0 851 35.7 35.9 433149.0 2.0 1.0311.03 .99 9.72 8.501D 1434 2348 865.03 22.91 155 200 107 31.8 28301856.53 9.20 9.30 852.9 852 35.7 36.4 435150.0 2.0 1.0611.12 1.09 9.69 8.501D 1435 2350 866.01 21.81 172 224 107 33.2 28201858.17 9.20 9.30 854.0 852 35.7 36.4 437151.0 2.1 1.0911.15 1.12 9.67 8.501D 1436 2353 867.02 19.71 134 165 108 31.9 28301860.16 9.20 9.30 853.0 852 35.9 36.4 440152.0 2.1 1.1211.17 1.13 9.65 8.501D 1437 2357 868.00 18.61 118 149 108 30.7 28201861.44 9.20 9.30 851.7 851 36.0 36.7 442153.0 2.2 1.1411.17 1.14 9.63 8.501D ! Date Mar 3 '89

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Data Printed at time 03:28 Date Mar 14 '89 Data Recorded at time 00:00 Date Mar 3 '89

+-----<u>-</u> I F# TIME DEPTH ROP! TORQUE RPM WOB PUMP:RTRNS ND 1b/gal FLOW/NIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXM : m · m/hr: AV6 MAX AV6 AV6 PRES:DEPTH IN OUT IN OUT - IN OUT : m hr T₩: ; -------1438 0000 869.00 15.8; 114 152 107 31.1 2810:861.82 9.20 9.30 853.3 852 36.2 37.1 448:54.0 2.2 1.18:1.22 1.18 9.62 8.50;D 1439 0004 870.02 17.21 115 168 107 30.0 28101863.11 9.20 9.30 852.8 852 36.4 37.2 451155.0 2.3 1.2111.19 1.15 9.62 8.501D 1440 0006 871.00 26.91 138 178 107 31.0 28201864.22 9.20 9.30 853.4 852 36.5 37 3 453156.0 2.3 1.2311.09 1.04 9.62 8.501D 1441 0018 872.02 15.6; 138 209 110 31.4 2780;867.47 9.20 9.30 839.4 833 36.8 36.9 441;57.0 2.4 1.29;1.24 1.20 9.59 8.50;D 1442 0020 873.01 28.81 184 220 113 33.0 27801868.00 9.20 9.30 847.7 846 36.8 37.3 446158.0 2.5 1.3111.10 1.06 9.60 8.501D 1443 0022 874.03 29.11 179 218 113 33.5 27901868.51 9.20 9.30 848.3 847 36.8 37.3 450159.0 2.5 1.3311.10 1.06 9.60 8.5010 1444 0024 875.01 31.01 201 233 112 33.9 27901869.02 9.20 9.30 847.5 847 36.7 37.6 453160.0 2.5 1.3511.09 1.04 9.61 8.5010 1445 0026 876.05 36.51 182 214 113 34.1 27901869.44 9.20 9.30 847.4 847 36.7 37.4 456161.0 2.6 1.3611.05 1.00 9.61 8.5010 1446 0028 877.00 35.41 185 219 113 34.1 27801869.97 9.20 9.30 848.6 847 36.8 37.4 458162.0 2.6 1.3811.06 1.01 9.62 8.5010 1447 0029 878.01 46.01 177 213 113 33.7 27901870.62 9.20 9.30 848.1 847 36.8 37.5 459163.0 2.6 1.391 .99 .94 9.62 8.501D 1448 0030 879.02 44.21 187 216 114 33.4 27801871.10 9.20 9.30 849.0 846 36.8 37.6 466164.0 2.6 1.401 .99 .95 9.62 8.501D 1449 0032 880.00 28.51 171 213 114 32.2 27901871.43 9.20 9.30 850.0 848 36.8 37.6 474165.0 2.7 1.4211.10 1.05 9.61 8.501D 1450 0046 881.02 24.1; 148 179 115 30.8 2810;871.81 9.20 9.30 857.5 853 36.8 37.5 438;66.0 2.8 1.47;1.13 1.08 9.64 8.50;D 1451 0047 882.03 31.9; 170 199 118 30.7 2800;872.72 9.20 9.30 854.0 853 36.8 37.7 443;66.9 2.8 1.49;1.06 1.01 9.64 8.50;D 1452 0049 883.00 34.1; 178 205 117 31.1 2810;873.54 9.20 9.30 855.4 854 36.8 37.9 446;68.0 2.8 1.51;1.04 .99 9.64 8.50;D 1453 0051 884.05 33.51 177 207 117 31.9 28001874.50 9.20 9.30 853.4 853 36.8 38.0 451169.0 2.9 1.5311.06 1.00 9.65 8.501D 1454 0053 885.03 31.81 185 212 118 32.6 28001875.59 9.20 9.30 856.1 854 36.8 37.8 456170.0 2.9 1.5511.08 1.03 9.64 8.501D 1455 0054 886.00 56.01 202 219 117 32.5 28001876.09 9.20 9.30 855.4 855 36.8 37.8 458171.0 2.9 1.551 .93 .88 9.65 8.5010 1456 0055 887.02 63.61 200 221 118 31.8 28001876.69 9.20 9.30 856.0 855 36.8 37.8 458172.0 2.9 1.561 .89 .84 9.65 8.501D 1457 0056 888.02 67.31 190 217 118 31.0 28101877.37 9.20 9.30 854.1 854 36.8 37.8 460173.0 2.9 1.571 .87 .82 9.66 8.501D 1458 0057 889.03 38.41 180 206 118 31.1 28101878.55 9.20 9.30 854.7 854 36.8 37.9 462174.0 3.0 1.5811.02 .96 9.65 8.501D 1459 0059 890.00 27.91 190 230 117 31.9 28401880.30 9.20 9.30 854.5 854 36.8 38.0 465175.0 3.0 1.6011.10 1.05 9.65 8.501D 1460 0116 891.03 31.2; 161 196 114 32.7 2810;881.25 9.20 9.30 853.8 851 36.8 37.6 448;76.0 3.1 1.65;1.08 1.02 9.65 8.5 1461 0118 892.01 28.01 158 196 117 33.4 28001882.53 9.20 9.30 852.1 852 36.8 37.8 449177.0 3.2 1.6711.12 1.06 9.65 8.50 iv 1462 0121 893.00 21.31 151 185 116 32.9 28001883.93 9.20 9.30 853.0 852 36.8 38.0 451178.0 3.2 1.6911.18 1.12 9.64 8.5010 1463 0124 894.00 17.81 126 161 114 31.7 27901886.31 9.20 9.30 856.1 854 36.8 38.1 454179.0 3.2 1.6811.21 1.15 9.63 8.501D 1464 0126 895.00 24.11 129 189 115 30.6 27901888.61 9.20 9.30 852.0 852 36.9 38.2 459180.0 3.3 1.6911.13 1.07 9.61 8.501D

 1465 0129 896.01 27.01 156 194 116 32.0
 28001889.78 9.20 9.30 853.8
 853 37.0 38.2
 460181.0
 3.3 1.7011.11 1.06 9.61 8.5010

 1466 0130 897.03 39.21 150 176 116 30.5
 28001890.02 9.20 9.30 853.7
 853 37.1 38.2
 462182.0
 3.3 1.7111.00 .95 9.62 8.5010

 1467 0132 898.01 34.21 152 176 115 31.1
 27901890.02 9.20 9.30 854.4
 853 37.1 38.2
 465183.0
 3.4 1.7111.04 .98 9.63 8.5010

 1468 0134 899.01 29.31 170 195 115 32.5
 27901890.02 9.20 9.30 854.0
 853 37.2 38.3
 468184.0
 3.4 1.7211.09 1.03 9.64 8.5010

 1469 0143 900.01 21.41 184 214 112 31.5 27401892.31 9.20 9.30 843.5 832 37.4 37.3 436185.0 3.5 1.7411.16 1.10 9.63 8.5010 1470 0145 901.02 28.31 179 214 120 27.4 27401893.10 9.20 9.30 845.3 843 37.4 38.1 439186.0 3.5 1.7411.06 1.00 9.63 8.501D 1471 0148 902.03 25.41 166 202 117 27.7 27401893.82 9.10 9.30 847.3 846 37.4 38.3 443187.0 3.5 1.7511.09 1.03 9.63 8.501D 1472 0149 903.04 33.01 180 231 116 28.4 27301894.44 9.10 9.30 847.4 847 37.4 38.3 445188.0 3.6 1.7611.03 .97 9.63 8.501D 1473 0151 904.00 55.51 199 229 116 30.2 27301894.71 9.10 9.30 847.6 847 37.4 38.3 445189.0 3.6 1.761 .91 .86 9.63 8.501D 1474 0152 905.01 51.11 194 221 115 30.0 27401895.28 9.10 9.30 845.8 845 37.4 38.3 446190.0 3.6 1.771 .93 .87 9.63 8.501D 1475 0153 906.01 48.41 207 231 115 31.5 27301895.89 9.10 9.30 846.2 846 37.4 38.3 448191.0 3.6 1.771 .96 .90 9.63 8.501D 1476 0154 907.01 40.51 196 215 117 31.3 27401896.72 9.10 9.30 844.1 844 37.4 38.3 450192.0 3.6 1.7811.01 .94 9.63 8.501D 1477 0156 908.01 34.31 187 216 117 30.3 27401897.80 9.10 9.30 844.6 844 37.4 38.4 449193.0 3.7 1.7911.04 .98 9.62 8.5010 1478 0157 909.00 46.41 178 199 117 31.4 27301898.48 9.10 9.30 846.0 845 37.5 38.4 448193.9 3.7 1.791 .97 .91 9.61 8.501D 1479 0207 910.00 27.91 162 205 114 32.1 28401899.86 9.10 9.30 860.0 846 37.9 37.3 443195.0 3.8 1.8111.11 1.05 9.58 8.501D 1480 0209 911.01 28.1; 174 207 122 32.1 2840;900.80 9.10 9.30 861.2 859 37.9 38.3 442;96.0 3.8 1.82;1.12 1.06 9.57 8.50;0 1481 0210 912.01 66.6; 186 207 122 31.6 2790;901.07 9.10 9.30 861.7 860 38.0 38.4 442;97.0 3.8 1.82; .90 .83 9.57 8.50;0 1482 0211 913.00 47.7; 173 191 122 31.2 2790;901.67 9.10 9.30 852.3 855 38.0 38.5 442;98.0 3.8 1.83; .98 .92 9.58 8.50;0 1483 0213 914.00 34.9; 171 198 122 31.5 2790;902.30 9.10 9.30 853.7 853 38.1 38.5 442;99.0 3.9 1.83;1.06 1.00 9.57 8.50;0 1483 0213 914.00 34.9; 171 198 122 31.5 2790;902.30 9.10 9.30 853.7 853 38.1 38.5 442;99.0 3.9 1.83;1.06 1.00 9.57 8.50;0 1484 0215 915.00 26.21 174 206 122 32.5 27901904.14 9.10 9.30 854.7 853 38.2 38.5 4431 100 3.9 1.8411.15 1.08 9.56 8.501D 1485 0216 916.00 42.11 187 219 122 32.7 28001905.39 9.10 9.30 853.4 853 38.3 38.5 4421 101 3.9 1.8511.03 .96 9.56 8.501A +------

Data Printed at time 03:33 Date Mar 14 '89

Data Recorded at time 02:18 Date Mar 3 '89

: F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: ! m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW! ! 1486 0218 917.03 29.61 173 201 122 33.0 27901906.78 9.10 9.30 851.7 851 38.4 38.6 4411 102 4.0 1.8611.12 1.06 9.55 8.5010 1487 0221 918.01 21.31 167 196 122 33.6 27901908.44 9.10 9.30 853.7 852 38.5 38.6 4391 103 4.0 1.8711.21 1.15 9.55 8.501D 1488 0230 919.00 25.71 158 203 115 32.5 27301909.35 9.10 9.30 839.5 778 38.8 38.1 4361 104 4.1 1.8811.06 1.00 9.54 8.501D 1 1489 0232 920.01 33.8; 188 213 114 33.5 2730;910.16 9.10 9.30 843.9 836 38.8 38.3 397; 105 4.1 1.89;1.07 1.01 9.55 8.50;D 1490 0233 921.02 38.41 188 211 114 33.6 27301910.83 9.10 9.30 842.8 841 38.8 38.5 3951 106 4.1 1.9011.04 .98 9.55 8.501D 1491 0235 922.01 34.21 181 203 115 32.6 27201912.47 9.10 9.30 840.3 839 38.8 38.6 3941 107 4.2 1.9011.06 1.00 9.54 8.501D 1492 0237 923.00 32.11 175 193 115 33.0 27201913.74 9.10 9.30 841.6 841 38.8 38.9 3961 108 4.2 1.9111.09 1.02 9.54 8.501D 1493 0239 924.01 30.81 182 211 114 33.7 27201914.52 9.10 9.30 842.3 842 38.8 39.0 3971 109 4.2 1.9211.10 1.04 9.54 8.501D 1494 0240 925.02 41.51 194 215 114 33.9 27201915.21 9.10 9.30 842.7 842 38.9 39.0 3941 110 4.2 1.9211.02 .96 9.55 8.501D 1495 0242 926.00 34.61 185 203 114 34.3 27301916.40 9.10 9.30 841.5 841 38.9 39.0 3921 111 4.3 1.9311.08 1.01 9.54 8.501D 1496 0244 927.01 29.31 184 210 114 34.6 27201917.31 9.10 9.30 840.4 840 39.0 39.2 3871 112 4.3 1.9411.12 1.06 9.54 8.501D 1497 0245 928.02 39.81 160 197 115 32.9 27201917.84 9.10 9.30 841.4 840 39.0 39.3 3911 113 4.3 1.9411.03 .96 9.55 8.501D 1498 0253 929.00 32.11 163 194 116 32.6 27201918.85 9.10 9.30 839.6 816 39.2 38.9 3861 114 4.4 1.9511.01 .95 9.55 8.501D 1499 0255 930.02 25.71 170 191 117 33.4 27201919.28 9.10 9.30 838.3 836 39.2 39.1 3851 115 4.4 1.9611.15 1.08 9.56 8.501D 1500 0257 931.00 30.4; 164 184 118 32.4 2710;920.55 9.10 9.20 842.6 841 39.3 39.4 386; 116 4.5 1.97;1.10 1.03 9.55 8.50;D 1501 0259 932.03 37.71 142 177 118 30.4 27301921.43 9.10 9.20 840.9 840 39.3 39.4 3841 117 4.5 1.9811.02 .96 9.55 8.501D 1502 0300 933.01 28.41 138 170 118 30.8 27201922.44 9.10 9.20 840.3 840 39.4 39.5 3871 118 4.5 1.9911.10 1.03 9.55 8.501D 1503 0303 934.00 24.5; 152 176 117 32.7 2710;923.64 9.10 9.20 840.8 839 39.5 39.5 381; 119 4.6 2.00;1.16 1.09 9.55 8.50;D 1504 0304 935.00 47.91 174 198 117 33.4 27101924.54 9.10 9.20 840.2 840 39.5 39.6 3841 120 4.6 2.001 .99 .92 9.55 8.501D 1505 0305 936.01 41.21 184 218 117 33.5 27301925.31 9.10 9.20 841.6 840 39.5 39.6 3831 121 4.6 2.0111.03 .96 9.55 8.501D 1506 0307 937.02 42.1; 175 216 117 33.4 2720;926.09 9.10 9.20 841.8 840 39.6 39.6 380; 122 4.6 2.01;1.02 .95 9.56 8.50;D 1507 0318 938.01 25.7; 144 178 111 31.5 2780;928.81 9.00 9.20 851.7 842 39.7 39.1 361; 123 4.7 2.03;1.12 1.05 9.54 8.50;D1 1508 0319 939.00 51.91 163 188 121 29.9 27801929.50 9.00 9.20 853.0 850 39.6 39.2 3401 124 4.7 2.031 .95 .88 9.54 8.501D 1509 0320 940.00 51.31 152 175 122 29.7 27801929.90 9.00 9.20 853.2 851 39.6 39.3 3391 125 4.8 2.041 .95 .88 9.54 8.5010 1510 0321 941.01 51.01 147 168 122 29.7 27801930.46 9.00 9.20 853.5 852 39.6 39.6 3391 126 4.8 2.041 .95 .88 9.54 8.5010 1511 0323 942.01 32.91 147 172 122 30.8 27801931.40 9.00 9.20 854.7 853 39.5 39.7 3431 127 4.8 2.0511.07 1.00 9.53 8.501D 1512 0325 943.01 40.21 154 176 122 30.3 27801932.30 9.00 9.20 852.2 852 39.5 39.8 3401 128 4.8 2.0611.02 .95 9.52 8.5010 1513 0327 944.00 20.21 150 178 122 31.4 27801933.71 9.00 9.20 852.6 852 39.4 39.8 3471 129 4.9 2.0711.21 1.14 9.51 8.501D 1514 0329 945.01 33.81 156 179 122 31.2 27801934.81 9.00 9.20 854.2 853 39.3 39.7 3591 130 4.9 2.0811.08 1.00 9.50 8.501D 1515 0331 946.01 47.9; 149 171 122 30.0 2770;935.75 9.00 9.20 855.1 854 39.2 39.7 366; 131 4.9 2.08; .97 .90 9.49 8.50;D 1516 0332 947.01 37.31 142 180 122 29.8 27801936.91 9.00 9.20 853.1 853 39.0 39.6 3761 132 5.0 2.0911.04 .97 9.49 8.501D 1517 0344 948.01 31.01 168 219 112 30.9 28401939.22 9.00 9.10 853.1 843 37.6 39.0 4471 133 5.1 2.1011.08 1.01 9.44 8.501D 1518 0346 949.01 31.61 179 213 111 31.6 27601940.82 9.00 9.10 856.9 855 37.6 39.1 4491 134 5.1 2.1111.08 1.01 9.43 8.5010 1519 0348 950.01 40.51 183 198 111 31.4 27801941.70 9.00 9.10 848.8 849 37.7 39.1 4331 135 5.1 2.1111.01 .94 9.43 8.501D 1520 0349 951.01 64.71 181 205 111 30.9 27901942.19 9.00 9.10 849.1 848 37.8 39.2 4111 136 5.1 2.121 .89 .82 9.44 8.501D 1521 0350 952.03 58.41 173 196 111 30.3 27901942.87 9.00 9.10 848.9 848 37.8 39.3 4121 137 5.1 2.121 .91 .84 9.44 8.501D 1522 0351 953.00 41.01 155 177 112 29.4 27901943.46 9.00 9.10 849.9 849 37.9 39.3 4091 138 5.2 2.131 .99 .92 9.44 8.501D 1523 0353 954.01 34.61 154 183 108 29.5 27901944.01 9.00 9.10 849.8 848 38.0 39.3 4101 139 5.2 2.1311.03 .96 9.45 8.501D 1524 0355 955.05 24.51 168 198 111 31.3 27801945.43 9.00 9.10 850.5 848 38.2 39.2 4101 140 5.2 2.1411.14 1.07 9.45 8.501D 1525 0357 956.00 31.81 173 200 114 31.8 27801946.70 9.00 9.10 848.2 848 38.3 39.2 4111 141 5.3 2.1511.09 1.01 9.44 8.501D 1526 0406 957.00 46.8; 183 227 114 32.2 2750;947.10 9.00 9.10 842.3 807 38.8 39.1 409; 142 5.3 2.15; ,94 .87 9.44 8.50;D1 1527 0407 958.00 49.81 184 206 114 32.0 27601947.00 9.00 9.10 842.4 833 38.8 39.0 4111 143 5.3 2.161 .97 .90 9.46 8.501D 1528 0408 959.01 42.1; 173 198 113 32.1 2760;947.20 9.00 9.10 844.3 841 38.9 38.8 409; 144 5.4 2.16;1.01 .94 9.47 8.50;D 1529 0410 960.02 33.3; 176 207 113 32.5 2750;948.28 9.00 9.10 844.1 843 38.9 39.0 412; 145 5.4 2.17;1.07 1.00 9.47 8.50;D 1530 0412 961.00 31.4; 172 193 115 32.7 2760;949.11 9.00 9.10 843.2 843 39.0 38.9 411; 146 5.4 2.17;1.10 1.02 9.47 8.50;D 1531 0413 962.01 39.61 176 199 115 32.1 27501950.10 9.00 9.10 842.7 842 39.0 38.8 4111 147 5.4 2.1811.03 .96 9.47 8.5010 :532 0414 963.01 72.1; 180 200 113 31.2 2750;951.04 9.00 9.10 842.1 841 39.0 38.7 410; 148 5.5 2.18; .87 .79 9.47 8.50;D 1533 0415 964.01 72.11 171 193 113 30.5 27501951.85 9.00 9.10 842.5 841 39.0 38.7 4101 149 5.5 2.191 .86 .78 9.47 8.501D

Data Printed at time 03:38 Date Mar 14 '89

Data Recorded at time 04:16 Date Mar 3 '89

F#	TIME	DEPTH	ROP:	TOR AV6	QUE Max	RPM AVG	WOB Avg	PUMP PRES	RTRNS Depth	MD In	lb/ga OUT	l FL In	MIM/WO Tuo	TEN • IN	(C) OUT	PVT :		BIT-	EST:	DXC	NXB		NXME !
1534	0416	965.00	60.71	159	181	113	29.8	2760	952.53	9.00	9.10	841.8	841	39.1	38.8	4101	150	5.5	2.191	.90	.82	9.47	8.50¦D
		966.00 967.02																					8.501Dt
		767.02 968.01																					8.501D 8.501D
		969.01														3681							8.501D
1539	0430	970.02	59.71	158	190	119	29.8	2760	956.43	9.00	9.10	843.5	843	39.1	38.6	3671							8.501D
		971.00														3661							8.501D
		972.00														3661							8.5010
		973.00 974.00														3651							8.501D
		975.01														3651 3641							8.501D 8.501D
		976.00														3621			2.261				8.501D
		977.00																					8.501D
		978.02													38.6	3641							8.501D
		979.03							* .							3661					.95	9.47	8.501D
		980.01														3621			2.281				8.501D
		981.02														3631			2.281				8.501D
		982.03 983.01														3621			2.291				8.501D
		984.02														3621			2.271				8.501D 8.501D
		985.02														3641			2.301				8.501D
		986.04														3861			2.301				8.50ID
		987.01														3881			2.311				8.50
		988.00														3931			2.311				8.50iu
		989.01														3931			2.321				8.50ID
		990.01 991.00														3921 3941			2.321				8.501D
		992.00														3971			2.331				8.501D 8.501D
		993.02														3961			2.331				8.501D
		994.00														3961			2.331				8.501D
1564	0531	995.01	48.61	151	221	101	33.3	2820	980.04	9.00	9.00	840.1	747	38.0	38.4	4061							8.501D
1565	0532	996.00	60.21	196	220	100	34.3	2800	980.56	9.00	9.00	846.6	817	38.0	38.6	4081	181	6.3	2.341	.90	.82	9.50	8.501D
1566	0533	997.00	55.61	192	226	100	34.2	2810	981.10	9.00	9.00	845.9	838	37.9	38.5	4101	182	6.3	2.341	.92	.84	9.50	8.50¦D
		998.00																					
		999.01 1000.0														4151 4151			2.351				8.501D 8.501D
		1001.0														4171			2.361				8.501D
		1002.0														4201			2.361				8.50¦D
1572	0540	1003.0	36.81	161	193	102	34.2	2810	985.56	9.00	9.00	846.7	845	37.8	38.4	4231	188		2.361				8.501D
		1004.0														4241			2.371		.94		8.501D
		1005.0														4791			2.38:		.89		8.501D1
		1006.0														4791			2.381				8.501D
		1007.0 1008.0														4801 4791			2.391				8.501D 8.501D
		1000.0														4811			2.391				8.501D
		1010.0														4791			2.401				8.501D
1580	0558	1011.0	61.01	190	214	120	36.9	2830	1995.42	9.00	9.00	846.0	845	37.2	37.9	4801			2.40;		.88	9.50	8.501D
1581	0559	1012.0														4811	197		2.411				8.50

+------+----+-----: F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: ! m m/hr: AVG MAX AVG AVG PRES:DEPTH IN OUT IN OUT IN OUT : m hr TW: 1582 0600 1013.0 68.6; 191 218 121 36.2 2820; 996.80 9.00 9.00 843.9 843 37.3 37.9 481; 198 6.7 2.411 .93 .84 9.50 8.5010 1583 0601 1014.0 63.5; 157 200 119 35.4 2830;997.65 9.00 9.00 843.3 843 37.3 37.9 482; 199 6.7 2.411 .94 .86 9.50 8.501D 1584 0609 1015.0 54.01 182 207 117 33.2 285011002.3 9.00 9.00 846.0 819 37.6 38.1 4801 200 6.8 2.421 .97 .88 9.47 8.50(D 1585 0610 1016.0 79.31 208 226 117 35.3 285011002.7 9.00 9.00 847.7 835 37.6 37.9 4811 201 6.8 2.421 .88 .79 9.47 8.50ID 1586 0611 1017.0 92.7; 213 237 116 35.8 2850;1003.1 9.00 9.00 847.6 841 37.6 37.5 482; 202 6.8 2.43! .84 .75 9.48 8.50¦D 1587 0612 1018.0 62.7: 201 222 117 35.3 2850:1003.8 9.00 9.00 848.1 845 37.7 37.4 481: 203 6.8 2.431 .94 .86 9.48 8.50ID 1588 0612 1019.0 67.9; 212 230 116 36.3 2850;1004.4 9.00 9.00 848.4 847 37.7 37.5 483; 204 6.8 2.431 .93 .84 9.49 8.50 D 1589 0613 1020.0 72.1: 216 236 117 36.3 2860:1004.7 9.00 9.00 847.5 847 37.7 37.5 482: 205 6.8 2.44! .91 .82 9.49 8.501D 1590 0614 1021.0 78.61 208 223 117 35.5 286011004.8 9.00 9.00 846.1 846 37.7 37.5 4821 206 6.8 2.44! .88 .79 9.50 8.50(D 1591 0615 1022.0 71.9; 197 218 119 35.0 2860;1004.8 9.00 9.00 847.3 846 37.7 37.6 481; 207 6.8 2.44! .90 .82 9.51 8.50(D 1592 0616 1023.0 73.0; 188 212 119 34.1 2860;1004.8 9.00 9.00 848.5 847 37.8 37.7 482; 208 6.9 2.441 .89 .81 9.52 8.501D 1593 0625 1024.0 46.9; 165 232 115 33.8 2840;1007.6 9.00 9.00 842.2 792 37.9 37.8 482; 209 6.9 2.45:1.00 .92 9.46 8.50 Dt 1594 0626 1025.0 68.01 218 232 114 32.7 284011008.8 9.00 9.00 844.4 825 37.9 38.1 4841 210 6.9 2.461 .89 .81 9.46 8.5010 1595 0627 1026.0 75.1: 212 237 114 31.9 2840:1009.5 9.00 9.00 844.7 837 37.9 38.0 484: 211 7.0 2.46: .86 .78 9.46 8.501D 1596 0628 1027.0 78.21 200 222 116 31.3 2840:1010.1 9.00 9.00 844.1 841 37.9 37.6 4831 212 7.0 2.461 .85 .77 9.46 8.501D 1597 0629 1028.0 66.41 195 226 116 30.7 2840:1011.0 9.00 9.00 843.5 842 37.9 37.6 4841 213 7.0 2.471 .89 .80 9.46 8.50ID 1598 0629 1029.0 68.71 194 218 116 30.4 285011011.9 9.00 9.00 843.7 842 37.9 37.4 4841 214 7.0 2.47; .88 .79 9.46 8.501D 1599 0630 1030.0 63.51 199 217 117 29.9 285011013.1 9.00 9.00 844.1 843 37.9 37.4 4841 215 7.0 2.471 .89 .81 9.46 8.50ID 1600 0631 1031.0 64.91 192 216 117 29.6 284011014.0 9.00 9.00 843.1 842 37.9 37.5 4831 216 7.0 2.471 .89 .80 9.46 8.501D 1601 0632 1032.0 69.91 179 212 117 28.9 284011014.1 9.00 9.00 845.3 844 37.9 37.6 4851 217 7.0 2.48; .86 .78 9.47 8.501D 1602 0639 1033.0 37.7! 168 200 118 28.6 2830:1014.3 9.10 9.00 838.7 769 37.9 37.6 482: 218 7.1 2.4811.01 .93 9.48 8.50 Dt 1603 0640 1034.0 60.8: 173 196 119 30.0 2830:1015.3 9.10 9.00 839.7 817 37.9 37.9 484: 219 7.1 2.491 .91 .83 9.48 8.50;D - 1604 0641 1035.0 69.7; 166 198 119 29.9 2830;1016.5 9.10 9.00 840.0 832 37.9 37.9 484; 220 7.1 2.491 .87 .79 9.48 8.501D 1605 0642 1036.0 57.7! 162 180 119 29.9 2830:1017.7 9.10 9.00 841.7 838 37.9 37.6 484: 221 7.1 2.491 .92 .84 9.49 8.501D 1606 0643 1037.0 60.01 154 180 119 29.8 283011018.8 9.10 9.00 842.1 840 37.9 37.6 4841 222 .83 9.49 8.501D 7.2 2.501 .91 1607 0644 1038.0 48.9; 155 174 119 29.9 2830;1020.3 9.10 9.00 840.1 840 37.9 37.4 482; 223 .88 9.49 8.501D 7.2 2.501 .96 1608 0646 1039.0 51.2: 156 189 119 29.8 2830:1021.8 9.10 9.00 839.1 839 37.9 37.4 482: 224 7.2 2.511 .95 .87 9.49 8.501D 1609 0647 1040.0 54.9; 154 179 119 29.4 2830;1022.8 9.10 9.00 840.7 839 37.9 37.5 482; 225 7.2 2.511 .93 .85 9.49 8.501D 1610 0648 1041.0 59.81 151 172 119 29.1 283011023.8 9.10 9.00 839.3 839 37.9 37.5 4831 226 7.2 2.51: .90 .82 9.49 8.501D 1611 0649 1042.0 48.41 147 175 119 28.8 283011023.9 9.10 9.00 841.7 840 37.9 37.7 4831 227 7.2 2.521 .96 .87 9.50 8.501D 1612 0657 1043.0 45.61 162 214 116 29.9 284011024.3 9.10 9.00 838.5 781 37.4 37.5 5001 228 7.3 2.521 .97 .89 9.53 8.501Dt 1613 0658 1044.0 62.71 201 235 116 30.6 285011025.3 9.10 9.00 841.3 822 37.4 37.8 5001 229 7.3 2.531 .89 .81 9.54 8.501D 1614 0659 1045.0 51.91 215 243 115 30.7 284011026.8 9.10 9.00 841.4 836 37.4 37.7 4991 230 7.3 2.531 .94 .86 9.54 8.501D 1615 0701 1046.0 56.0; 187 221 116 30.6 2840;1028.0 9.10 9.00 839.9 838 37.4 37.6 475; 231 7.3 2.531 .92 .84 9.54 8.501D 1616 0701 1047.0 61.7! 178 208 117 29.9 2840:1029.0 9.10 9.00 842.6 840 37.5 37.4 4621 232 7.4 2.541 .90 .81 9.54 8.50ID 1617 0702 1048.0 58.0: 167 191 114 29.6 2840:1030.1 9.10 9.00 841.9 841 37.5 37.4 4641 233 7.4 2.54! .90 .82 9.54 8.501D 1618 0704 1049.0 45.91 168 199 115 29.2 285011031.5 9.10 9.00 840.2 840 37.5 37.4 4631 234 7.4 2.541 .96 .88 9.54 8.501D 1619 0705 1050.0 59.11 171 201 114 29.1 285011032.6 9.10 9.00 842.2 841 37.5 37.5 4651 235 7.4 2.551 .89 .81 9.54 8.501D 1620 0706 1051.0 59.41 167 198 115 28.5 284011032.9 9.10 9.00 839.3 839 37.5 37.6 4641 236 7.4 2.551 .89 .80 9.56 8.50 D 1621 0707 1052.0 54.41 163 193 113 28.1 285011032.9 9.10 9.00 838.7 838 37.5 37.7 4631 237 7.4 2.551 .90 .82 9.57 8.501D 1622 0715 1053.0 37.91 174 217 113 29.2 284011037.0 9.10 9.00 838.9 795 37.6 37.7 4651 238 .87 9.55 8.501D 7.5 2.561 .95 1623 0716 1054.0 58.4; 191 212 105 29.2 2850;1037.9 9.10 9.00 840.9 827 37.6 37.8 464; 239 7.5 2.561 .87 .79 9.55 8.501D 1624 0717 1055.0 71.2: 186 212 105 28.8 2850:1038.7 9.10 9.00 842.9 837 37.6 37.8 464: 240 7.5 2.561 .82 .74 9.55 8.501D 1625 0718 1056.0 51.61 180 206 105 28.3 2850:1039.7 9.10 9.00 842.8 840 37.6 37.5 4631 241 7.5 2.571 .90 .82 9.55 8.501D 1626 0719 1057.0 66.91 179 198 105 28.2 285011040.7 9.10 9.00 840.2 840 37.6 37.5 4621 242 7.6 2.571 .83 .75 9.55 8.501D 1627 0720 1058.0 61.8: 175 196 106 27.8 2860:1041.5 9.10 9.00 841.5 841 37.6 37.4 463: 243 7.6 2.57: .85 .77 9.55 8.501D 1628 0721 1059.0 59.5! 168 194 105 27.7 2850;1042.1 9.10 9.00 840.4 840 37.7 37.6 463; 244 7.6 2.57; .86 .78 9.56 8.501D __ | 629 0722 1060.0 53.0| 164 190 106 27.7 2850| 1042.5 9.10 9.00 840.4 840 37.7 37.6 462| 245 7.6 2.58| .89 .81 9.56 8.501D

Data Printed at time 03:47 Date Mar 14 '89 Data Recorded at time 07:24 Date Mar 3 '89

.												Data	Kecor	rded at	time	07:24	•	Date	Mar 3	189		
: F#	TIME	NEPTH	ROP!	TORO	OUF	RPM	MUB	PUMP:RTRNS	MD	16/as1	EIG	14/HTN	TC	4D /C\	+ DUT:			+·				
	1 1111	A -	a/hr!	AVG	MAY	AVG	AVG	PRESIDEPTH	TN	UIIT.	i FLI IN	MIN THE	I I ET	1F (C) OUT	TY1:	-1412	BII-	C51i	DYC	MYR	ECD	י עמאא
+			+-					+					. 114		! +:	# 		1 M : +				;
1630	0724	1061.0	44.71	162	193	115	28.1	2850:1042.5	9.10	9.00	841.5	840	37.7	37.7	4631	246	7.6	2.58!	95	97	9 57	9 5010
1631	0734	1062.0	46.41	140	192	112	27.6	2820:1048.0	9.10	9.00	835.1	831	37.7	37.8	4631			2.591				8.501D
								2820:1048.9							4631			2.591				8.501D
								2830:1049.9							4601			2.601				8.501D
1634	0737	1065.0	64.61	178	222	115	27.5	2820:1050.7	9.10	9.00	833.5	834	37.8	37.5	4611			2.601				8.5010
								2830:1051.8							4611			2.601				8.501D
								2830:1052.3							4621			2.601				8.501D
1637	0741	1068.0	36.31	161	189	116	28.7	2830:1052.3	9.10	7.00	833.3	833	37.8	37.7	4611	253	7.8	2.611	1.01			8.501D
								2830:1052.3							4621	254	7.8	2.611	.98	.89	9.55	8.501D
								2830:1052.6							4641	255	7.8	2.621	.89	.81	9.56	8.501D
								2840:1053.4							4651	256	7.9	2.621	.92	.84	9.56	8.5010
1641	0752	1072.0	37.01	101	193	107	28.3	2870:1057.6	9.10	9.00	838.3	812	37.9	38.0	4631	257	7.9	2.631	.99	.90	9.54	8.50¦D↑
								2870:1058.8							4621			2.631				8.5010
								2870;1060.0							4621			2.631				8.501D
								2880:1060.7							4631			2.641				8.5010
								2880:1061.4							4621			2.641				8.50¦D
								288011061.7							4621			2.641				8.501D
								2890:1061.8 2890:1061.8							4611			2.651				8.501D
								2870:1061.8							4611			2.651				8.5010
								2900:1061.8							4611			2.661				8.50¦D
1651	0809	1083.0	62.5!	141	771	171	71 1	2880:1064.6	7.10	9 00	037./	0.J7 740	3/.7 70 A	3/.0 77 0	4621			2.661				8.50¦D
								289011067.9										2.661 2.681				8.50
1653	0814	1086.0	48.91	185	210	126	32.0	289011068.6	9.10	9.10	839.0	839	38.0	30.1				2.681			9.62	8.501D-
								289011069.4								272						8.501D
								2890:1070.3										2.691				8.501D
								2890:1071.6										2.69:1				8.501D
								2890:1072.0										2.70:				8.50¦D
1658	0820	1091.0	55.11	151	178	127	29.6	2900:1072.0	9.20	9.10	840.8	840	38.0	37.9	4641	276	8.3	2.701	.94			8.50¦D
1659	0821	1092.0	56.81	152	180	126	30.4	2890:1072.0	9.20	9.10	840.5	840	38.0	37.8	4661	277	B.3	2.701	.94			8.50¦D
1660	0831	1093.0	50.5	169	223	120	30.7	2870:1078.5	9.20	9.10	835.4	833	38.1	38.1	4651	278	8.4	2.721	.96			8.50¦D-
1661	0832	1094.0	50.51	191	209	122	31.0	2910:1079.2	9.20	9.10	836.3	834	38.0	38.2	4641	279	8.4	2.721	.96	.87	9.56	8.50!D
1662	0833	1095.0	64.11	194	217	122	31.0	2880:1079.9	9.20	9.10	834.9	834	38.1	37.9	4631	280	8.4	2.721	.90	.81	9.57	8.50¦D
								2880:1080.9							4641	281	B.4	2.731	.92	.83	9.57	8.50¦D
								288011081.8							4641			2.731		.85	9.58	8.50¦D
		1098.0					30.6	2880:1081.9							4651			2.731				8.50ID
		1099.0					30.9	2880:1083.7	9.20	9.10	835.7	835	38.1		4661			2.7411				8.50¦D
1007	0037 0844	1100.0	17.VI 45.5!	101 .	212 237	117	31.Z 71.5	2890:1092.0 2940:1093.6	7.20	7.10	ნან.∠ ნან.∠	825 '	38.1		4651			2.741				8.501D
															4621			2.751				8.501D1
1007	VUT/ 0880	1172.V 1187 8 :	77:11 50 5:	170 . 177 :	207 207	110 - 115	92.1 79 A	294011087.1 293011087.9	7.20	7.10	043.5 042 (07A) o . l		4631			2.751				8.501D
								2930:1087.9							4661			2.751				8.50ID
								2940:1089.7							4651			2.761				8.50ID
1673	0852	1106.0	42.61	178	209	114	33.1	293011090.9	9.20	7.10	DT4.1	DAI 1	70.1 (Q (4641 4641			2.761				8.501D
1674	0854	1107.0	38.2:	169	196	115 I	32.R	293011091.8	9.20	9.10	843.1	842	70.L		4561			2.76:1				8.501D
								2930:1091.2							4161			2.77¦1 2.78¦1				8.50¦D 8.50¦D
1676	0856	1109.0	42.11	136	162	116	28.6	293011091.3	9.20	9.10	840.7	840	88.1	38.0	4171			2.78¦				8.50ID
1677	0858	1110.0	36.01	148	179	115	30.1	2930:1091.3	9.20	9.10	340.2	840 3	8.1		4181			2.78:1				8.50
														•		'						

! F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: : m m/hr: AVG MAX AVG AYG PRES:DEPTH IN OUT IN OUT IN OUT : m hr TW: : .______ 1678 0859 1111.0 47.7; 158 198 115 31.0 2930;1091.3 9.30 9.10 844.6 842 38.1 38.0 418; 296 8.7 2.79; .95 .86 9.67 8.501D 1679 0907 1112.0 39.61 158 195 117 30.2 291011096.2 9.30 9.20 837.4 781 38.1 38.0 4171 297 8.8 2.791 .95 .86 9.65 8.501D 1680 0908 1113.0 63.4: 164 201 119 29.6 2920:1097.0 9.30 9.20 838.5 820 38.1 38.3 416: 298 .79 9.65 8.501D 8.8 2.801 .88 1681 0909 1114.0 54.41 167 193 119 29.4 291011097.9 9.30 9.20 839.4 833 38.1 38.3 4141 299 8.8 2.801 .92 .82 9.66 8.501D 1682 0910 1115.0 51.2: 144 184 119 27.7 2910:1098.8 9.30 9.20 838.9 836 38.1 38.1 416: 300 8.8 2.80; .92 .83 9.66 8.50;D 1683 0911 1116.0 54.8; 145 172 119 27.7 2920;1099.5 9.30 9.20 839.1 838 38.1 38.3 415; 301 8.9 2.801 .90 .81 9.66 8.501D 1684 0912 1117.0 54.9; 151 178 119 28.0 2920;1100.3 9.30 9.20 838.2 838 38.1 38.0 412; 302 8.9 2.81; .90 .81 9.67 8.50;D 1685 0914 1118.0 52.7; 162 201 119 28.2 2920;1100.8 9.30 9.20 838.0 837 38.1 38.0 414; 303 8.9 2.81; .91 .82 9.68 8.50;D 1686 0915 1119.0 53.7; 157 214 119 28.2 2920;1100.8 9.30 9.20 839.0 838 38.1 38.0 413; 304 8.9 2.82; .91 .82 9.69 8.50;D 1687 0916 1120.0 40.1; 157 193 119 30.7 2920;1101.1 9.30 9.20 837.2 837 38.1 37.9 415; 305 8.9 2.82; 1.00 .91 9.70 8.50;D 1688 0917 1121.0 49.61 162 193 119 32.1 292011101.9 9.30 9.20 837.9 837 38.1 37.9 4181 306 9.0 2.821 .96 .86 9.71 8.501D 1689 0926 1122.0 44.5; 163 201 119 31.2 2980;1106.4 9.30 9.20 844.3 808 38.2 38.0 416; 307 9.0 2.831 .94 .85 9.70 8.501D 1690 0928 1123.0 58.41 181 205 117 30.5 298011107.3 9.30 9.20 848.1 840 38.1 38.5 4161 308 9.0 2.84; .90 .81 9.71 8.50;0 1691 0929 1124.0 50.3; 167 198 118 29.3 2970;1108.1 9.30 9.20 847.4 845 38.1 38.2 418; 309 9.1 2.84: .93 .84 9.71 8.50:D 9.1 2.84: .90 .81 9.71 8.50:D 1692 0930 1125.0 54.4: 166 191 118 29.0 2970:1108.9 9.30 9.20 847.8 846 38.1 38.1 418: 310 1693 0931 1126.0 43.1; 154 189 118 28.6 2980; 1109.7 9.30 9.20 847.4 847 38.2 37.9 416; 311 .87 9.72 8.501D 9.1 2.851 .96 1694 0933 1127.0 45.9; 159 186 119 28.8 2980;1110.6 9.30 9.20 847.2 847 38.2 37.8 416; 312 9.1 2.851 .95 .85 9.73 8.5010 1695 0934 1128.0 52.6; 161 183 119 28.4 2980; 1111.3 9.30 9.20 846.9 846 38.2 38.1 418; 313 9.1 2.851 .91 .82 9.73 8.501D 1696 0935 1129.0 41.81 154 184 120 28.5 298011111.3 9.30 9.20 846.4 846 38.2 38.1 4171 314 9.2 2.861 .97 .87 9.75 8.501D 1697 0944 1130.0 39.7! 151 190 112 28.1 2920!1114.9 9.30 9.20 831.2 805 38.2 38.4 415; 315 9.2 2.87; .96 .87 9.73 8.50!D* 1698 0945 1131.0 48.3; 166 194 119 24.6 3000;1116.0 9.30 9.20 841.8 832 38.2 38.5 414; 316 9.2 2.87; .89 .81 9.73 8.50;0 1699 0946 1132.0 73.8; 207 238 119 29.7 3000;1116.8 9.30 9.20 848.4 842 38.2 38.2 417; 317 9.3 2.87; .84 .74 9.73 8.50;0 1700 0947 1133.0 58.4; 201 233 119 31.2 2990;1117.7 9.30 9.20 848.7 846 38.2 38.6 417; 318 9.3 2.88; .91 .81 9.73 8.50;0 1701 0948 1134.0 59.61 195 223 119 30.7 300011118.6 9.30 9.20 847.6 847 38.2 38.2 4161 319 9.3 2.881 .90 .80 9.73 8.501D 1702 0949 1135.0 66.81 189 226 119 30.1 299011119.2 9.30 9.20 846.6 846 38.2 38.0 4181 320 9.3 2.88! .86 .77 9.73 8.501D 1703 0950 1136.0 47.81 187 210 119 29.8 300011120.2 9.30 9.20 848.5 847 38.2 37.9 4171 321 9.3 2.891 .94 .85 9.73 8.501D 1704 0951 1137.0 55.5; 187 215 120 29.3 3000;1120.9 9.30 9.20 847.8 847 38.2 38.0 419; 322 9.3 2.891 .90 .81 9.73 8.50¦D 1705 0952 1138.0 64.71 182 208 120 28.8 300011121.4 9.30 9.20 850.8 849 38.3 38.1 4191 323 9.4 2.891 .86 .77 9.74 8.501D 1706 0953 1139.0 56.41 175 202 120 28.2 300011121.6 9.30 9.20 849.1 848 38.3 38.1 4171 324 9.4 2.901 .89 .80 9.74 8.501D 1707 0954 1140.0 42.41 166 191 119 28.1 299011121.0 9.30 9.20 848.8 848 38.3 38.1 4181 325 9.4 2.901 .96 .86 9.76 8.501D 1708 1001 1141.0 37.61 194 226 121 35.2 296011123.1 9.30 9.20 843.2 819 38.3 38.2 4161 326 9.4 2.9111.06 .96 9.75 8.501D 1709 1002 1142.0 56.41 212 238 122 35.7 297011124.1 9.30 9.20 843.6 836 38.3 38.5 4171 327 9.5 2.911 .96 .86 9.75 8.501D 1710 1003 1143.0 54.21 211 248 121 35.4 297011125.0 9.30 9.20 841.2 839 38.3 38.6 4201 328 9.5 2.911 .96 .86 9.75 8.501D 1711 1004 1144.0 80.81 202 232 122 34.7 296011125.5 9.30 9.20 840.4 839 38.3 38.3 4191 329 9.5 2.921 .86 .76 9.75 8.501D 1712 1005 1145.0 69.21 194 227 122 34.1 296011126.1 9.30 9.20 841.7 840 38.3 38.4 4191 330 9.5 2.921 .89 .79 9.76 8.501D 1713 1006 1146.0 67.7! 182 218 123 33.5 2970!1126.8 9.30 9.20 842.6 842 38.3 38.1 419! 331 9.5 2.92! .89 .79 9.76 8.50!D 1714 1007 1147.0 57.3! 184 210 123 33.6 2970!1127.8 9.30 9.20 842.0 841 38.3 38.1 419! 332 9.5 2.93! .94 .84 9.76 8.50!D 1715 1008 1149.0 64.2! 186 217 122 33.5 2960!1128.5 9.30 9.20 840.0 840 38.4 38.2 422! 333 9.6 2.93! .91 .81 9.76 8.50!D 1716 1009 1149.0 55.11 180 219 123 33.1 297011129.0 9.30 9.20 840.7 840 38.3 38.2 4231 334 9.6 2.931 .94 .84 9.76 8.501D 1717 1020 1150.0 35.61 159 212 114 33.3 296011131.5 9.30 9.30 837.1 830 38.0 38.6 4391 335 9.6 2.9511.04 .94 9.75 8.501Dt 9.7 2.95; .90 .80 9.75 8.50;D 1718 1021 1151.0 63.31 193 217 120 32.9 296011132.5 9.30 9.30 836.4 834 38.0 38.8 4411 336 1719 1021 1152.0 62.41 186 206 120 32.6 297011133.4 9.30 9.30 837.4 836 38.0 38.8 4421 337 9.7 2.95¦ .90 .80 9.75 8.50¦D 1720 1022 1153.0 66.11 181 202 120 32.0 296011134.4 9.30 9.30 837.6 837 37.9 38.6 4441 338 9.7 2.951 .88 .78 9.75 8.501D 1721 1023 1154.0 60.51 174 205 119 31.8 296011135.2 9.30 9.30 837.8 837 37.9 38.4 4471 339 9.7 2.961 .90 .80 9.75 8.501D 1722 1024 1155.0 50.4; 168 191 120 31.8 2970;1136.0 9.30 9.30 837.1 836 37.9 38.2 447; 340 1723 1026 1156.0 43.2; 172 204 118 32.3 2970;1137.3 9.30 9.30 837.7 836 37.9 38.3 449; 341 9.7 2.96; .95 .85 9.76 8.50;D 9.8 2.96! .99 .89 9.75 8.50!D 1724 1027 1157.0 63.5; 181 212 116 32.3 2970;1138.2 9.30 9.30 838.3 837 37.8 38.3 450; 342 9.8 2.97; .89 .79 9.75 8.50;D 1725 1028 1158.0 34.81 174 211 117 32.7 297011139.7 9.30 9.30 835.5 836 37.8 38.2 4511 343 9.8 2.9711.04 .94 9.75 8.501D

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Data Printed at time 03:56 Date Mar 14 '89 Data Recorded at time 10:30 Date Mar 3 '89

I F# TIME DEPTH ROP! TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD. i m m/hri AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT I m hr TW: 1726 1030 1159.0 42.91 183 209 117 33.4 2960:1140.1 9.30 9.30 838.9 837 37.8 38.2 4521 344 9.8 2.98:1.00 .90 9.75 8.50:D 1727 1038 1160.0 42.01 190 226 113 34.4 292011141.7 9.30 9.30 830.0 811 37.9 38.5 4531 345 9.9 2.9811.00 .90 9.75 8.501D 1728 1040 1161.0 53.0; 196 222 116 34.2 2920;1143.7 9.30 9.30 829.5 827 38.0 38.4 455; 346 9.9 2.99; .95 .85 9.74 8.50;D 1729 1041 1162.0 49.11 193 229 116 34.3 292011145.2 9.30 9.30 828.8 827 38.0 38.3 4531 347 9.9 2.991 .97 .87 9.74 8.501D 1730 1042 1163.0 65.0; 202 234 116 33.8 2920;1146.1 9.30 9.30 828.6 828 38.0 38.1 456; 348 9.9 3.00; .89 .79 9.74 8.50;D 1731 1043 1164.0 68.7; 188 211 116 32.9 2930;1146.8 9.30 9.30 831.2 829 38.0 38.0 453; 349 9.9 3.00; .87 .77 9.74 8.501D 1732 1044 1165.0 54.6; 181 217 116 32.2 2930;1147.9 9.30 9.30 830.1 829 38.0 38.1 454; 350 10.0 3.00; .92 .83 9.74 8.501D 1733 1045 1166.0 67.0! 187 216 116 32.2 2940!1148.7 9.30 9.30 831.8 830 38.1 38.2 452: 351 10.0 3.01: .87 .77 9.74 8.50ID 1734 1046 1167.0 54.9; 176 214 116 31.7 2930;1149.4 9.30 9.30 830.3 829 38.1 38.2 455; 352 10.0 3.01; .92 .82 9.74 8.501D 1735 1047 1168.0 41.0; 156 203 117 31.8 2940;1149.5 9.30 9.30 831.5 830 38.1 38.3 454; 353 10.0 3.01; .97 .88 9.75 8.50;D 1736 1057 1169.0 42.61 170 204 115 28.5 297011152.0 9.30 9.30 834.9 827 38.3 38.9 4551 354 10.1 3.021 .95 .86 9.74 8.501D 1737 1058 1170.0 74.21 180 204 124 27.6 297011152.9 9.30 9.30 837.7 833 38.3 39.0 4421 355 10.1 3.021 .83 .73 9.74 8.501D 1738 1059 1171.0 67.8; 175 197 124 26.9 2970;1153.8 9.30 9.30 837.7 835 38.3 38.8 422; 356 10.1 3.02; .84 .75 9.74 8.50ID 1739 1100 1172.0 62.81 168 193 124 26.5 298011154.7 9.30 9.30 836.3 836 38.3 38.7 4191 357 10.1 3.031 .86 .76 9.74 8.5010 1740 1101 1173.0 62.6; 167 194 124 26.2 2990;1155.4 9.30 9.30 838.7 837 38.3 38.3 416; 358 10.1 3.03; .86 .76 9.74 8.501D 1741 1102 1174.0 57.6; 170 201 125 26.1 2970;1156.3 9.30 9.30 839.5 838 38.3 38.3 416; 359 10.1 3.03; .88 .78 9.74 8.501D 1742 1103 1175.0 51.1; 171 203 124 25.9 2990;1157.2 9.30 9.30 838.8 838 38.3 38.4 418; 360 10.2 3.04; .90 .81 9.74 8.501D 1743 1104 1176.0 62.41 179 213 124 25.7 298011157.8 9.30 9.30 836.7 837 38.3 38.4 4141 361 10.2 3.041 .85 .76 9.75 8.5010 1744 1105 1177.0 63.5; 181 208 125 25.2 2970;1158.4 9.30 9.30 836.8 836 38.3 38.3 415; 362 10.2 3.04; .84 .75 9.75 8.501D 1745 1115 1178.0 35.01 140 193 118 23.9 298011161.1 9.30 9.30 835.7 786 38.2 38.3 4261 363 10.2 3.051 .93 1746 1117 1179.0 46.41 172 203 113 30.0 299011162.3 9.30 9.30 837.2 826 38.2 38.5 4301 364 10.3 3.051 .94 .84 9.74 8.50:D1 .84 9.73 8.501D 1747 1118 1180.0 62.0; 180 202 113 30.5 2990;1163.3 9.30 9.30 839.4 834 38.2 38.8 433; 365 10.3 3.05; .87 .77 9.73 8.501 1748 1119 1181.0 60.9; 176 206 115 30.2 2980; 1164.3 9.30 9.30 837.4 836 38.1 38.5 434; 366 10.3 3.06; .88 .78 9.73 8.50. 1749 1120 1182.0 58.81 173 197 123 29.5 299011165.4 9.30 9.30 837.8 836 38.1 38.5 4371 367 10.3 3.061 .90 .80 9.73 8.501D 1750 1120 1183.0 64.3; 171 195 123 28.9 2990;1166.3 9.30 9.30 838.3 837 38.0 38.4 439; 368 10.3 3.06; .87 .77 9.73 8.501D 1751 1121 1184.0 58.5; 167 191 123 28.3 2990;1167.2 9.30 9.30 837.6 837 38.0 38.4 438; 369 10.3 3.06; .89 .79 9.73 B.501D 1752 1122 1185.0 62.01 167 194 123 27.5 299011167.9 9.30 9.30 838.5 837 38.0 38.6 4401 370 10.4 3.071 .87 1753 1123 1186.0 64.11 194 225 123 29.1 300011168.1 9.30 9.30 838.7 837 38.0 38.6 4391 371 10.4 3.071 .87 .77 9.73 8.501D .77 9.74 8.50ID 1754 1124 1187.0 64.21 195 238 122 28.2 299011168.1 9.30 9.30 839.7 839 38.0 38.6 4421 372 10.4 3.071 .86 .76 9.75 8.501D 1755 1132 1188.0 48.11 158 206 120 26.3 293011168.8 9.30 9.30 830.2 798 38.2 38.4 4411 373 10.4 3.081 .91 .81 9.75 8.501D 1756 1133 1189.0 58.41 180 202 118 26.3 294011169.7 9.30 9.30 830.3 820 38.2 38.9 4411 374 10.4 3.081 .86 .76 9.75 8.501D 1757 1134 1190.0 58.1; 169 197 118 25.5 2940;1170.8 9.30 9.30 830.7 827 38.3 39.0 442; 375 10.5 3.08; .85 .76 9.75 8.501D 1758 1135 1191.0 71.91 160 198 119 24.3 295011171.7 9.30 9.30 828.1 827 38.3 38.7 4411 376 10.5 3.091 .80 .70 9.75 8.50ID 1759 1136 1192.0 50.9; 169 201 118 24.8 2950;1172.9 9.30 9.30 827.5 826 38.3 38.6 442; 377 10.5 3.09; .88 1760 1137 1193.0 54.5; 169 196 117 24.4 2950;1173.9 9.30 9.30 829.5 828 38.3 38.3 440; 378 10.5 3.09; .86 1761 1138 1194.0 72.1; 185 210 118 25.1 2950;1174.7 9.30 9.30 831.4 830 38.4 38.6 441; 379 10.5 3.09; .80 .78 9.75 8.501D .76 9.75 8.501D .70 9.75 8.501D 1762 1139 1195.0 77.41 206 221 115 26.7 2960:1175.4 9.30 9.30 830.4 830 38.4 38.6 4391 380 10.5 3.101 .79 .69 9.75 8.50ID 1763 1140 1196.0 69.7; 208 233 117 26.4 2960:1176.2 9.30 9.30 831.0 830 38.4 38.7 441; 381 10.6 3.10; .82 .72 9.76 8.50ID 1764 1141 1197.0 62.4; 201 235 118 27.0 2950;1177.0 9.30 9.30 832.2 831 38.4 38.6 442; 382 10.6 3.10; .85 .75 9.76 8.5010 1765 1153 1198.0 52.5; 181 220 115 29.3 2940;1179.5 9.30 9.30 831.4 829 38.7 38.8 442; 383 10.7 3.11; .91 .81 9.74 B.501D 1766 1154 1199.0 75.6; 205 228 114 30.9 2940;1180.4 9.30 9.30 831.0 829 38.7 38.8 439; 384 10.7 3.12; .83 1767 1155 1200.0 72.6; 181 212 114 28.9 2940;1181.0 9.30 9.30 828.7 829 38.7 39.2 443; 385 10.7 3.12; .82 1768 1156 1201.0 73.6; 192 216 117 29.9 2940;1181.8 9.30 9.30 828.9 828 38.7 38.6 438; 386 10.7 3.12; .83 .73 9.75 8.501D .72 9.75 8.501D .73 9.76 8.501D 1769 1156 1202.0 75.21 205 230 116 30.8 2940:1182.6 9.30 9.30 829.2 828 38.7 38.6 440: 387 10.7 3.121 .83 .73 9.76 8.501D 1770 1157 1203.0 73.2; 205 227 118 30.7 2940;1183.5 9.30 9.30 829.7 829 38.7 38.6 442; 388 10.8 3.12; .82 .72 9.76 8.501D 1771 1158 1204.0 51.31 191 233 113 29.9 293011184.5 9.30 9.30 829.8 829 38.8 38.8 4391 389 10.8 3.131 .91 .81 9.76 8.501D 1772 1159 1205.0 59.31 200 222 115 29.6 294011185.5 9.30 9.30 830.0 829 38.8 38.7 4401 390 10.8 3.131 .88 .78 9.76 8.501D 1773 1200 1206.0 79.81 205 234 114 29.5 2940:1186.3 9.30 9.30 827.4 B28 38.8 38.8 439: 391 10.8 3.13; .80 .70 9.76 8.50°

Data Printed at time 04:01 Date Mar 14 '89 Data Recorded at time 12:10 Date Mar 3 '89

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	F#	TIME	DEPTH	ROP!	TOR	QUE	RPM	WOB	PUMP!RTRNS PRES!DEPTH	MD	lb/gal	FLI	NIM/WC	TE	EMP (C)	PVT	-THIS	BIT-	EST	DXC	NXB	ECD	NXMD:
	+			#/!!!! ++	nvu							114	199	• 11	• •••	۱ ــــــــــــــــــــــــــــــــــــ	#	111	1 W I				i
									289011188.7														
									2880:1189.7														
									289011190.8											.89			8.50ID
									2890:1191.4								395						8.50ID
									2910:1192.1											.80			8.501D
									2890:1192.7											.82			8.501D
									290011193.5											.84			8.50ID
									2900:1194.5											.84			8.501D
	1782	1216	1215.0	67.31	187	212	115	31.1	290011195.5	9.30	9.30	830.2	828	39.1	39.0	4381	400	11.0	3.161	.86			8.501D
	1783	1217	1216.0	58.71	194	228	116	31.3	290011196.6	9.30	9.30	822.2	823	39.1	39.0		401						8.5010
	1784	1225	1217.0	43.81	181	232	117	28.7	2880:1197.2	9.30	9.30	813.3	753	39.2	38.8	4401	402	11.1	3.171	.95			8.501D
	1785	1226	1218.0	66.91	198	224	119	28.5	2880:1197.2	9.30	9.30	815.8	793	39.2	38.8	441;	403	11.1	3.171	.85			8.50ID
									2880:1197.2							4411	404	11.1	3.17!	.81	.71	9.78	8.50ID
									2890:1197.2							4401	405	11.1	3.171	.85	.74	9.79	8.501D
									2890:1197.3							4401	406	11.1	3.18:	.84	.74	9.79	8.501D
									2880:1197.8								407						8.50ID
									2880:1198.9								408				.76	9.80	8.50ID
									2880;1199.9								409						8.5010
									289011200.9														8.501D
									284011206.5														8.5010
									284011206.6								412						8.501D
_									2840:1206.6								413						8.501D
									286011206.6								414						8.501D
									285011206.6								415						8.5010
									2850;1206.6 2850;1206.8														8.501D
									2860;1207.9								417						8.50ID
									2860:1208.7														8.501D
									286011209.6														8.501D 8.501D
									295011216.1														8.501D1
									296011216.1														
									297011216.4														
									296011217.1														
									2970:1217.9								425						8.50ID
									296011219.4								426						8.501D
									296011220.3								427						8.501D
									296011221.2								428						8.501D
									296011222.5								429						8.501D
	1812	1309	1245.0	52.31	194	213	119	29.4	296011223.8	9.30	9.30	827.5	826 3	59.5	39.4		430						8.501D
	1813	1317	1246.0	45.31	177	223	119	25.0	289011225.8	9.30	9.30	815.2	753 3	59.6	39.2		431						8.501D
									2890:1225.8							4271	432	11.7	3.261	.85	.76	9.77	8.5010
									289011226.3								433						8.501D
									290011227.7								434						8.501D
									290011228.8								435						8.50ID
									2920:1229.9								436						8.501D
									2920:1231.0								437						8.50ID
									2950:1232.3														8.501D
									2920¦1233.5														8.50ID
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Data Printed at time 04:06 Date Mar 14 '89 Data Recorded at time 13:35 Date Mar 3 '89

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								PUMPIRTRNS									DIT_	+ . cer:	nyc	MAD	ברח	NVML
		# ·	m/hr:	AVG	MAX	AVG	AVG	PRES! DEPTH	TN	OIIT	IN	יינוי לייי. רווח	. IN	NIIT	! * ! !	-11113	hr		DVC	RAD	CUD	NATIV.
÷			+												+		. "	·#: +				·+
1822	1335	1255.0	46.21	188	231	115	27.1	292011235.5	9.30	9.30	811.1	722	40.0	39.5	4171	440	11.9	3.291	.92	.82	9.75	9.50!D*
1823	1336	1256.0	55.01	177	212	115	27.6	2920:1235.5	9.30	9.30	817.9	793	40.0	39.5	4171	441	11.9	3.291				8.50ID
								2920:1235.8								442						8.50ID
								2950:1236.2								443						8.50ID
								296011236.7								444						8.501D
1827	1340	1260.0	56.61	202	227	117	30.0	293011237.2	9.30	9.30	817.0	816	40.0	40.1		445						8.501D
1828	1341	1261.0	59.01	209	229	115	30.8	294011238.1	9.30	9.30	817.0	816	40.1	39.7		446						8.501D
1829	1342	1262.0	68.51	216	244	115	31.0	2940:1239.0	9.30	9.30	817.8	816	40.1	39.7	4141	447	12.0	3.311	.85			8.50ID
1830	1343	1263.0	54.91	210	238	117	31.1	293011240.1	9.30	9.30	818.8	817	40.1	39.6	413!	448	12.0	3.311	.91	.80	9.78	8.50ID
1831	1343	1264.0	73.91	209	253	113	31.6	2930:1241.0	9.30	9.30	818.6	818	40.1	39.6	4151	449	12.0	3.31:	.83			8.50¦D
1832	1353	1265.0	35.31	160	197	119	24.7	290011245.1	9.30	9.30	815.5	794	40.3	40.1	4101	450	12.1	3.321	.96	.86	9.76	8.50¦D
1833	1354	1266.0	37.71	184	220	119	26.7	290011245.1	9.30	9.30	817.7	812	40.3	40.5	4121	451	12.1	3.321	.97	.87	9.76	8.50ID
								291011245.3							4111	452	12.1	3.331	.88	.78	9.77	8.501D
								292011246.2							4081	453	12.1	3.331	.90	.80	9.77	8.50lD
								292011247.1							4101	454	12.1	3.331	.91	.80	9.77	8.50ID
								292011248.3							4071	455	12.2	3.341	.90	.80	9.77	8.50¦D
								2920:1249.0							4091	456	12.2	3.341	.89	.79	9.77	8.50¦D
								2930:1249.9								457						8.50¦D
								292011251.0							4091	458	12.2	3.351				8.50lD
								294011254.5								459				.84	9.75	8.50¦D↑
								2920:1254.5								460				.78	9.76	8.50ID
								293011254.5								461						8.50LL
								292011254.5								462					9.77	
								292011255.1								463						8.50lD
								292011255.8								464						8.50lD
								292011256.7								465						8.501D
								2930:1257.9								466						8.501D
								292011258.9 293011260.1								467						8.501D
								296011264.1								468						8.501D
								295011264.2								469						8.501D†
								275011264.7								470 471						8.50ID
								295011265.3							4001	4/1 477	12.J 12.5	3.37: 7 70:	.07 00	./0	7.//	8.501D
1855	1436	1288.0	45.91	203	231	119	29.1	296011266.1	9.30	9.30	819 A	R19	40.7	40.7		473						
								2950:1267.0								474						8.50¦D 8.50¦D
								295011268.0								475						8.501D
		1291.0														476						8.501D
		1292.0														477						8.501D
		1293.0						2940:1273.2								478						8.501D1
								2940:1273.6								479						8.50ID
		1295.0						293011273.6								480						8.501D
		1296.0														481						8.50!D
								294011274.7								482						8.501D
								293011275.8								483						8.50ID
								2940:1277.3								484						8.50ID
								2930:1278.5						40.5	3931	485	12.8	3.441	.92			8.501D
								2940:1279.9												.89	9.76	8.50¦D
								294011281.2												.86	9.76	8.50'
+			+-					+							+-			+				+

F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/qal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD; ! m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW! ! 1870 1510 1303.0 53.91 204 258 119 25.9 293011283.2 9.30 9.30 810.6 776 41.0 40.6 3871 488 12.9 3.451 .88 .77 9.75 8.501D 1871 1511 1304.0 59.81 196 236 119 25.9 292011283.2 9.30 9.30 814.2 803 41.0 40.7 3881 489 12.9 3.461 .85 .75 9.76 8.501D 1872 1512 1305.0 51.91 197 235 119 25.9 293011283.2 9.30 9.30 813.7 811 41.0 40.7 3881 490 13.0 3.461 .89 .78 9.77 8.501D 1873 1513 1306.0 62.5; 201 233 119 26.5 2920;1283.7 9.30 9.30 812.8 811 41.0 40.7 371; 491 13.0 3.46; .85 .74 9.77 8.50;D 1874 1514 1307.0 57.61 197 224 119 26.8 293011284.4 9.30 9.30 814.1 813 41.0 40.8 3551 492 13.0 3.461 .87 .76 9.77 8.501D 1875 1515 1308.0 51.1; 191 228 119 26.4 2930;1285.4 9.30 9.30 811.7 812 41.0 40.4 354; 493 13.0 3.47; .89 .79 9.77 8.50;D 1876 1516 1309.0 55.9; 195 219 119 26.8 2930;1286.3 9.30 9.30 814.8 813 40.9 40.4 354; 494 13.0 3.47; .88 .77 9.77 8.50;D 1877 1517 1310.0 57.2; 193 216 119 27.3 2930;1287.3 9.30 9.30 813.3 813 40.9 40.7 353; 495 13.0 3.47; .87 .77 9.77 8.50;D 1878 1519 1311.0 41.6; 188 225 119 27.2 2920;1288.7 9.30 9.30 814.4 813 40.9 40.8 353; 496 13.1 3.47; .95 .84 9.77 8.50;D 1879 1528 1312.0 49.6; 192 230 119 26.4 3000;1292.7 9.30 9.30 822.1 761 41.0 40.3 347; 497 13.1 3.48; .90 .79 9.74 8.50;D↑ 1880 1530 1313.0 50.51 208 235 117 25.6 299011292.7 9.30 9.30 823.0 808 40.9 40.7 3481 498 13.2 3.491 .89 .78 9.75 8.501D 1881 1531 1314.0 60.1; 216 253 115 26.2 3000;1293.0 9.40 9.30 823.9 819 40.9 41.2 347; 499 13.2 3.49; .85 .74 9.76 8.50ID 1882 1532 1315.0 45.01 203 230 115 25.4 273011294.0 9.40 9.30 792.4 804 40.9 40.8 3451 500 13.2 3.491 .91 .80 9.76 8.5010 1883 1533 1316.0 59.91 200 233 115 24.5 271011294.8 9.40 9.30 781.8 788 40.9 41.2 346: 501 13.2 3.49: .83 .73 9.76 8.501D 1884 1534 1317.0 51.71 200 230 114 25.7 271011295.7 9.40 9.40 779.3 781 41.0 40.8 347: 502 13.2 3.50: .87 .77 9.77 8.50¦D 1885 1535 1318.0 59.91 201 240 115 26.1 272011296.5 9.40 9.40 779.8 779 41.0 40.3 3461 503 13.2 3.501 .84 .74 9.77 8.501D 1886 1536 1319.0 49.61 209 240 115 26.6 271011297.3 9.40 9.40 781.0 780 41.0 40.5 3461 504 13.3 3.501 .89 .79 9.78 8.501D 1887 1537 1320.0 51.91 194 231 115 25.3 272011298.2 9.40 9.40 780.0 779 41.0 40.8 3451 505 13.3 3.501 .87 .76 9.78 8.501D 1888 1538 1321.0 61.31 206 237 114 26.6 272011298.7 9.40 9.40 780.0 779 41.0 40.8 3461 506 13.3 3.511 .84 .73 9.78 8.5010 1889 1546 1322.0 46.81 174 204 118 26.9 269011301.9 9.40 9.40 769.3 672 40.7 40.7 353; 507 13.3 3.51; .92 1890 1547 1323.0 56.9; 201 226 119 27.6 270011302.0 9.40 9.40 772.9 744 40.6 40.7 354; 508 13.4 3.51; .88 1891 1548 1324.0 52.8; 206 236 119 27.8 269011302.1 9.40 9.40 774.0 765 40.4 41.6 356; 509 13.4 3.52; .90 1892 1549 1325.0 60.3; 201 228 119 28.3 269011302.1 9.40 9.40 775.7 772 40.3 40.6 359; 510 13.4 3.52; .87 .81 9.78 8.50¦D† .77 9.79 8.501D .79 9.80 8.501D .76 9.81 8.501D 1893 1551 1326.0 48.41 183 216 119 26.9 269011302.3 9.40 9.40 774.3 773 40.2 41.0 3621 511 13.4 3.521 .91 .80 9.82 8.501D 1894 1552 1327.0 52.0; 194 229 119 27.7 2690;1303.0 9.40 9.40 774.8 773 40.1 41.3 363; 512 13.4 3.52; .90 .79 9.82 8.501D 1895 1553 1328.0 47.71 193 238 119 28.3 269011304.2 9.40 9.40 774.3 773 40.1 40.4 3671 513 13.4 3.531 .92 .81 9.83 8.50 D 1896 1554 1329.0 39.4: 185 218 119 27.5 2680:1305.4 9.40 9.40 776.1 775 40.0 40.6 371: 514 13.5 3.53: .96 .85 9.83 8.501D 1897 1556 1330.0 49.41 192 220 119 28.0 269011306.6 9.40 9.40 775.2 774 40.0 40.6 3731 515 13.5 3.531 .91 .80 9.83 8.501D 1898 1557 1331.0 44.61 191 222 119 28.1 269011307.7 9.40 9.40 775.0 774 40.0 40.6 3771 516 13.5 3.541 .94 .83 9.83 8.501D 1899 1607 1332.0 38.51 179 216 119 24.7 268011312.0 9.40 9.40 771.1 755 39.6 40.7 3971 517 13.6 3.551 .94 .83 9.82 8.501D 1899 1607 1332.0 38.51 179 216 119 24.7 268011312.0 9.40 9.40 771.1 755 39.6 40.7 3971 517 13.6 3.551 .94 .83 9.82 8.501D 1899 1607 1332.0 38.51 179 216 119 24.7 268011312.0 9.40 9.40 771.1 755 39.6 40.7 3971 517 13.6 3.551 .94 .83 9.82 8.501D 1899 1607 1899 1 1900 1608 1333.0 49.31 192 222 119 23.0 267011312.0 9.40 9.40 772.1 768 39.6 41.1 4021 518 13.6 3.551 .86 .76 9.83 8.501D 1901 1610 1334.0 44.81 189 227 119 23.2 267011312.0 9.40 9.40 772.1 771 39.5 40.7 4041 519 13.6 3.551 .89 .78 9.84 8.501D 1902 1611 1335.0 40.81 184 212 119 23.3 275011312.4 9.40 9.40 782.1 776 39.5 40.6 4081 520 13.7 3.561 .91 .80 9.85 8.501D 1903 1612 1336.0 47.81 197 217 119 23.8 276011313.4 9.40 9.40 783.3 781 39.5 40.5 4091 521 13.7 3.561 .88 .77 9.85 8.501D 1904 1613 1337.0 47.7! 195 219 119 24.0 2760|1314.4 9.40 9.40 781.8 781 39.5 40.9 413! 522 13.7 3.56| .88 1905 1615 1338.0 39.6| 187 217 119 23.6 2750|1315.7 9.40 9.40 784.7 783 39.5 40.6 414| 523 13.7 3.56| .92 1906 1616 1339.0 53.0| 185 208 119 23.4 2760|1316.8 9.40 9.40 784.0 783 39.6 40.5 418| 524 13.7 3.57| .85 .77 9.86 8.501D .81 9.86 8.50ID .74 9.86 8.501D 1907 1617 1340.0 47.01 181 214 119 23.4 275011317.8 9.40 9.40 783.0 782 39.6 40.3 4211 525 13.8 3.571 .88 .77 9.86 8.501D 1908 1619 1341.0 44.21 186 223 119 24.2 276011319.2 9.40 9.40 782.2 782 39.6 40.4 4241 526 13.8 3.571 .90 .79 9.86 8.501D 1909 1627 1342.0 47.21 199 232 119 22.5 277011321.8 9.40 9.40 784.1 760 39.5 40.2 4391 527 13.8 3.581 .87 .76 9.85 8.501D 1910 1628 1343.0 53.61 207 236 119 23.6 278011322.5 9.40 9.40 785.2 779 39.4 40.7 4431 528 13.8 3.581 .85 .74 9.85 8.501D 1911 1630 1344.0 48.31 205 232 119 23.5 277011323.0 9.40 9.40 784.1 782 39.4 40.5 4461 529 13.9 3.591 .87 .76 9.85 8.501D 1912 1631 1345.0 55.01 214 245 119 23.6 277011324.0 9.40 9.40 784.0 783 39.4 40.5 4481 530 13.9 3.591 .84 .73 9.85 8.501D 1913 1632 1346.0 57.91 204 227 119 23.3 2780:1324.9 9.40 9.40 783.0 782 39.4 40.5 452: 531 13.9 3.59: .83 .72 9.85 8.50:D 1914 1633 1347.0 42.81 206 235 119 23.6 279011326.2 9.40 9.40 783.7 783 39.4 40.3 4521 532 13.9 3.591 .90 .79 9.85 8.5010 1915 1634 1348.0 50.61 208 244 119 23.4 279011327.2 9.40 9.40 784.1 783 39.5 40.2 4561 533 13.9 3.601 .86 .75 9.85 8.501D 1916 1635 1349.0 51.21 202 222 119 23.4 279011328.2 9.40 9.40 782.4 782 39.6 40.3 4541 534 14.0 3.601 .86 .75 9.85 8.501D 1917 1637 1350.0 45.81 212 233 119 24.1 278011329.1 9.40 9.40 785.5 783 39.7 40.3 4561 535 14.0 3.601 .89 .78 9.85 8.501D

Data Printed at time 04:15 Date Mar 14 '89 Data Recorded at time 16:51 Date Mar 3 '89

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1918 1651 1351.0 92.7 189 421 11 97 119 24.6 27(01)1352.9 94.0 94.0 77.6 97 53 94.6 40.5 402 53 17 14.1 3.61 1.97 19 24.6 27(01)1354.0 94.0 94.0 77.6 97 53 95.4 40.6 402 53 17 14.1 3.62 1.99 1.8 98 9.8 9.8 9.8 9.8 9.0 19 22 1657 1355.0 93.7 1 159 184 119 23.1 27(01)1356.9 9.0 9.0 40 77.6 97 75 95.5 40.6 409 150 14 14.2 3.63 1.95 1.96 9.8 9.2 9.0 19 22 1657 1357.0 93.1 119 181 19 23.1 27(01)1356.9 9.0 9.0 94.0 77.6 97 75 97.5 95.5 40.6 409 150 14 14.2 3.63 1.95 1.96 9.22 9.50 19 22 1670 1357.0 93.2 110 19 119 23.1 27(01)1354.0 94.0 9.40 77.5 97 75 97.5 95.5 40.6 409 150 14 14.2 3.63 1.95 1.96 9.22 9.50 19 22 1670 1359.0 93.4 11 19 19 19 23.9 27(01)1360.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 9	F#	TIME	DEPTH	ROP!	TOR	QUE	RPM	WOB	PUMP	RTRNS	MD	lb/qal	FLI	OW/MIN	TEM	IP (C)	PVT!	-THIS	BIT-	FST!	DXC	NYR	FCD	NYMD.
1918 1651 1351.0 92.7 189 421 11 97 119 24.6 27(01)1352.9 94.0 94.0 77.6 97 53 94.6 40.5 402 53 17 14.1 3.61 1.97 19 24.6 27(01)1354.0 94.0 94.0 77.6 97 53 95.4 40.6 402 53 17 14.1 3.62 1.99 1.8 98 9.8 9.8 9.8 9.8 9.0 19 22 1657 1355.0 93.7 1 159 184 119 23.1 27(01)1356.9 9.0 9.0 40 77.6 97 75 95.5 40.6 409 150 14 14.2 3.63 1.95 1.96 9.8 9.2 9.0 19 22 1657 1357.0 93.1 119 181 19 23.1 27(01)1356.9 9.0 9.0 94.0 77.6 97 75 97.5 95.5 40.6 409 150 14 14.2 3.63 1.95 1.96 9.22 9.50 19 22 1670 1357.0 93.2 110 19 119 23.1 27(01)1354.0 94.0 9.40 77.5 97 75 97.5 95.5 40.6 409 150 14 14.2 3.63 1.95 1.96 9.22 9.50 19 22 1670 1359.0 93.4 11 19 19 19 23.9 27(01)1360.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 9	1		ā ′	m/hr:	AV6	MAX	AVG	AVG	PRES	DEPTH	IN	OUT	IN	OUT	- IN	OUT		A	hr	TW	404	11112	200	!
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1919 1633 1352.0 32.6 i 150 197 119 24.6 271011334.9 74.0 97.40 77.4 772 39.6 40.6 4821 537 14.1 3.621 198 6.7 93.6 93.0 1921 1637 1354.0 29.11 139 171 19 21.1 271011335.8 97.40 97.40 77.5 97.5 95.5 40.1 4831 538 14.1 3.621 198 6.7 93.6 95.0 1921 1637 1354.0 29.11 139 171 19 21.1 271011336.8 97.40 97.40 77.6 77.5 97.5 97.5 91.1 4831 539 14.2 3.621 99 8.8 98.2 9.501 1922 1591 135.0 34.7 139 181 191 29.1 27.0011336.9 97.40 97.40 77.5 97.5 97.5 97.5 91.0 4.2 3.631 .95 48 9.22 9.501 1922 1591 135.0 34.7 139 181 191 29.1 20011336.9 97.40 97.40 77.8 775 39.5 40.6 497.5 542 14.2 3.641 .95 48 9.22 9.5010 1922 1707 1359.0 34.4 159 181 191 29.1 20011341.6 97.40 97.40 77.5 775 39.5 40.6 497.5 542 14.2 3.641 .95 48 9.22 9.5010 1925 1707 1359.0 32.4 1159 181 192 9.7 20011341.6 97.40 97.40 77.6 77.5 39.5 40.6 497.5 542 14.3 3.6511.0 5 48 9.22 9.5010 1926 1707 1359.0 22.8 1155 178 119 23.7 20011341.6 97.40 97.40 77.6 77.5 39.5 40.6 40.0 29.1 161 221 221 221 192.40 2.6011346.4 97.40 97.40 77.6 77.5 39.5 40.6 544 14.3 3.6511.0 5 49 9.22 9.5010 1928 1791 3641.0 51.4 1210 235 119 24.0 2.6011346.4 97.40 97.40 77.6 77.5 39.5 40.5 544 545 14.4 3.661 85 7.4 9.80 9.5010 1928 1791 3641.0 51.4 120 235 119 24.0 2.6011346.4 97.40 97.40 77.5 77.5 97.5 40.0 544 14.3 3.661 85 7.4 9.80 9.5010 1939 1721 1354.0 46.4 120 235 119 24.2 2.6011348.4 97.40 97.40 77.5 37.5 97.4 40.5 524 549 14.5 3.661 85 7.4 9.80 9.5010 1939 1721 1354.0 46.1 182 119 21.6 2.6011348.9 4.0 97.40 77.5 37.7 97.4 40.5 524 549 14.5 3.67 1.0 9.7 9.80 9.5010 1933 1721 1354.0 46.1 182 119 21.6 2.6011348.9 4.0 97.40 77.5 37.9 4.4 0.5 524 549 14.5 3.67 1.0 9.7 9.80 9.5010 1933 1721 1354.0 46.1 182 119 21.6 2.6011348.9 4.0 97.40 77.5 37.7 97.4 40.5 524 549 14.5 3.67 1.0 9.7 9.80 9.5010 1933 1721 1354.0 46.1 182 119 21.6 2.6011355.9 97.40 97.40 77.5 37.8 97.4 40.5 524 549 14.5 3.67 1.0 97.7 97.8 98.8 5.5010 1933 1721 1354.0 40.9 11.0 11.0 12.1 12.2 12.2 12.0 12.0 12.0	1918	1651	1351.0	49.71	184	241	118	24.2	2710	1332.6	9.40	9.40	772.8	754	39.7	40.6	4781	536	14.1	3.61	.87	.76	9.83	8.50:D1
1920 1855 1355.0 31.71 154 197 119 23.1 270011353.8 9.40 9.40 77.8 775 39.5 40.5 4815 338 14.1 5.621 .99 89.89.89.10 1922 1857 1356.0 29.11 139 171 19 23.1 270011336.9 40 9.40 77.8 775 39.5 40.6 490 154 14.2 3.631 .95 88 9.82 8.5018 1922 1857 1357.0 34.21 161 192 119 23.2 270011338.2 9.40 9.40 77.8 775 39.5 40.6 490 154 14.2 3.631 .95 88 9.82 8.5018 1922 1702 1357.0 34.21 161 192 119 23.8 270011340.8 9.40 9.40 77.8 775 39.5 40.6 490 154 14.2 3.631 .95 88 9.82 8.5018 1922 1701 1358.0 36.41 191 189 119 23.9 270011340.8 9.40 9.40 77.8 775 39.5 40.6 490 154 14.2 3.631 .95 88 9.82 8.5018 1926 1701 1358.0 36.41 191 188 119 24.1 270011341.8 9.40 9.40 77.8 775 39.5 40.4 4921 542 14.2 3.631 .95 88 9.82 8.5018 1926 1701 1358.0 36.41 191 182 192 14.0 247011341.8 9.40 9.40 77.8 775 39.5 40.2 4941 543 14.3 3.641 .95 88 9.82 8.5018 1927 1717 1350.0 29.11 161 225 119 24.0 247011341.8 9.40 9.40 77.8 77.8 39.5 40.2 500 1544 14.3 3.651 1.00 99 9.80 8.5018 1927 1717 1350.0 29.11 161 225 119 24.0 247011348.4 9.40 9.40 77.8 77.8 39.5 40.2 500 1544 14.3 3.651 1.00 99 9.80 8.5018 1929 1720 1342.0 51.9 207 207 233 120 22.6 24011349.4 9.40 9.40 77.3 77.9 39.4 40.5 524 1549 14.4 3.661 .85 77 9.80 8.5018 1930 1721 1353.0 40.41 184 231 120 21.8 226011349.4 9.40 9.40 77.3 87 71.3 9.4 40.5 524 1549 14.4 3.661 .85 77 9.80 8.5018 1932 1724 1355.0 44.11 184 231 120 21.8 226011349.4 9.40 9.40 77.3 87 71.3 9.4 40.5 524 1549 14.5 3.671 .90 9.79 9.80 8.5018 1932 1727 1357.0 34.01 179 207 162.1 23011351.4 9.40 9.40 77.3 87 71.3 9.4 40.5 524 1549 14.5 3.671 .90 9.79 9.80 8.5018 1933 1722 1354.0 40.6 128 221 127 22.8 25011351.4 9.40 9.40 77.3 87 71.3 9.4 40.5 524 1549 14.5 3.671 .90 9.80 8.5018 1934 14.3 14.3 14.3 14.3 14.3 14.3 14.3 14	1919	1653	1352.0	32.61	160	197	119	24.6	2710	1334.0	9.40	9.40	774.4	772	39.6	40.6	4821	537	14.1	3.621	.98	.87	9.83	8.50!D
1921 1575 1534.0 29.1.1 137 171 1737.1 211011358.8 9.40 9.40 775.9 75 97.5 91.1 485: 339 4.2 2.621.99 88 9.82 8.5018 1923 1701 1356.0 35.1; 161 192 119 23.8 270011339.4 9.40 9.40 775.9 75 39.5 40.6 490: 541 14.2 3.631.95 84 9.82 8.5018 1924 1702 1537.0 34.2: 161 194 192 32.9 270011341.6 9.40 9.40 775.9 775 39.5 40.6 490: 541 14.2 3.631.95 84 9.82 8.5018 1924 1702 1537.0 34.2: 161 194 193.9 270011341.6 9.40 9.40 775.9 776 39.5 40.4 492: 542 14.2 3.641.96 85 9.62 8.5018 1926 1707 1539.0 22.81 155 158 119 24.2 20011341.6 9.40 9.40 776.7 776 39.5 40.3 494.53 14.3 3.6511.0 6 89.6 9.08 8.5018 1922 1717 1530.0 29.11 161 251 192 4.0 251134.6 9.40 9.40 776.7 776 39.5 40.5 40.4 494.53 14.3 3.6511.0 6 .89 9.60 8.5018 1928 1791 1351.0 51.4 120 251 192 4.0 26711346.4 9.40 9.40 776.7 776 39.5 40.5 548 159 159 14.3 3.6511.0 6 .89 9.60 8.5018 1928 1791 1351.0 51.4 120 251 192 4.0 26011340.4 9.40 9.40 776.7 776 39.5 40.5 548 154 55 144.4 3.661 .85 7.4 9.80 8.5018 1930 1721 1365.0 46.4 1208 237 120 22.6 268011347.4 9.40 9.40 771.9 761 39.5 40.5 548 14.4 3.661 .85 7.4 9.80 8.5018 1931 1721 1365.0 46.4 1208 237 120 22.6 268011349.4 9.40 9.40 771.3 770 39.5 41.0 541 541 541 44.3 6.61 .85 7.4 9.80 8.5018 1931 1721 1365.0 46.4 1208 237 120 22.6 268011349.4 9.40 9.40 771.3 770 39.5 41.0 541 541 541 541 541 541 541 541 541 541	1920	1655	1353.0	31.71	154	192	119	24.2	2700	1335.3	9.40	9.40	774.6	773	39.5	40.9	4831	538	14.1	3.621				
1922 1591 1550, 0 34, 71 159 189 119 23.2 270011330.2 9,40 9,40 773, 97 539,5 40.6 4897 340 14,2 2,631,95 98 9,82 8,5010 1924 1702 1357,0 34,21 161 194 119 23.9 270011340.8 9,40 9,40 773,9 773 39,5 40.4 4921 532 14,2 3,641,95 89 9,82 8,5010 1925 1701 1536,0 36,41 159 188 119 24.1 270011341.6 9,40 9,40 773,9 773 39,5 40.4 4921 532 14,2 3,641,95 89 9,82 8,5010 1927 1717 1350,0 29.1 161 255 119 22.2 26011341.8 9,40 9,40 773,9 773 39,5 40.4 5001 341 14,3 3,641,95 89 9,80 8,5010 1927 1717 1350,0 29.1 161 255 119 22.4 26911341.8 9,40 9,40 776,6 717 39,5 40.2 141,95 144,3 5,651,00 99 9,80 8,5010 1927 1717 1350,0 29.1 161 255 119 22.2 26911347.5 9,40 9,40 777.3 77 39,5 41.0 1519 1547 14.4 3,661 .85 74 9,80 8,5010 1929 1720 1362.0 51.91 207 238 120 22.6 267011348.4 9,40 9,40 773,3 770 39,5 41.0 1519 1547 14.4 3,661 .88 77 9,80 8,5010 1929 1720 1362.0 51.91 207 238 120 22.6 267011348.4 9,40 9,40 773,3 770 39,5 41.0 1519 1547 14.4 3,661 .88 77 9,80 8,5010 1930 1721 1353.0 46.41 270 281 251 192 2.6 268011359.5 9,40 9,40 773,8 771 39,4 40.5 251 544 59 14.5 3,661 .89 77 9,80 8,5010 1932 1721 1353.0 46.41 270 281 251 251 251 251 251 251 251 251 251 25																								
1923 1701 1356, 0 35.11 161 197 119 23.8 270011330, 4 9.40 9.40 773, 9 75 39, 5 40, 6 490; 541 14, 2 3.631, 95 84 9.82 8.5010 1925 1704 1358, 0 36.41 159 188 119 24.1 270011341, 8 9.40 9.40 773, 7 73 9.5 40.4 300; 544 14, 3 3.641, 95 84 9.82 8.5010 1925 1704 1358, 0 36.41 159 188 119 24.1 270011341, 8 9.40 9.40 773, 7 73 97, 5 40, 4 300; 544 14, 3 3.641, 95 84 9.82 8.5010 1926 1707 1357, 0 22.81 155 178 122 123 92.70011341, 8 9.40 9.40 776, 7 76 39, 5 40, 4 300; 544 14, 3 3.641, 95 84 9.82 8.5010 1928 1719 1361, 0 51.41 210 235 119 24.2 268011347, 5 9.40 9.40 776, 7 77 39, 5 40, 5 818 546 14, 4 3.661, 65 27 4 9.80 8.5010 1928 1719 1361, 0 51.41 210 235 119 24.2 268011347, 5 9.40 9.40 771, 7 71 37, 4 40, 9 221 549 14, 5 3.671, 90 8.5010 1930 1721 1353, 0 46, 41 208 231 122 22.6 268011347, 5 9.40 9.40 773, 7 70, 3 9, 5 40, 5 818 546 14, 4 3.661, 85 74 9.80 8.5010 1932 1721 1353, 0 46, 41 8 231 120 21.8 272011351, 3 9.40 9.40 773, 7 70, 3 9, 4 40, 5 221 549 14, 5 3.671, 90 8 79, 80 8.5010 1932 1724 1355, 0 44, 11 148 231 120 21.8 272011351, 3 9.40 9.40 773, 7 713, 9 4, 40, 1 523 520 14, 5 3.671, 90 8 77 9.80 8.5010 1933 1722 1367, 0 34, 9 20 71 16 221. 273011351, 4 9.40 9.40 773, 8 771 39, 4 40, 1 523 520 14, 5 3.671, 90 8 77 9.80 8.5010 1933 1721 1535, 0 49, 40 71 16 221. 274011351, 4 9.40 9.40 773, 8 771 39, 4 40, 1 523 520 14, 5 3.671, 90 8 77 9.80 8.5010 1933 1724 1367, 0 3.01 179 20 116 221. 274011351, 4 9.40 9.40 773, 8 771 39, 4 40, 1 524 525 520 14, 5 3.671, 90 8 77 9.80 8.5010 1933 1724 1370, 0 3.61 154 254 105 234 270011355.8 9.50 9.40 773, 7 773, 9 4, 40, 1 524 525 140, 5 3.671, 90 9 8.80 8.5010 1933 1724 1367, 0 3.01 179 20 116 221. 274011351, 4 9.40 9.40 773, 8 771 39, 4 40, 1 524 525 521 14, 5 3.671, 90 9 8.80 8.5010 1933 1744 1370, 0 3.61 154 254 105 234 270011355.8 9.50 9.40 773, 7 773, 9 4, 40, 1 524 525 520 14, 5 3.671, 90 9 8.80 8.5010 1933 1724 1370, 0 3.61 154 254 105 234 26011350, 7 9.50 9.40 773, 7 773, 9 4, 40, 1 524 525 520 14, 5 3.61 19 9 8, 8 8.80 10 8.90 10 8.90 10 8.90 10 8.90 10 8.90	1922	1659	1355.0	34.71	159	184	119	23.2	2700	1338.2	9.40	9.40	775.9	775	39.5	40.6								
1924 1702 1357, 0 34,21 161 194 119 23, 9 270011341,08 9,40 9,40 773, 9 773 39,5 40,4 49,15 35 142 14,2 3,641,95 84 9,22 8,5011 1925 1707 1359,0 22,81 155 178 119 23,9 270011341,8 9,40 9,40 776,7 776 39,5 40,4 500; 544 14,3 3,6511,05 89 9,80 8,5010 1927 1717 1360,0 271 161 225 119 24,0 250011341,8 9,40 9,40 776,7 776 39,5 40,4 500; 544 14,3 3,6511,05 89 9,80 8,5010 1927 1717 1360,0 21,161 225 119 24,0 250011341,8 9,40 9,40 771,6 776 39,5 40,2 518; 545 14,4 3,6511,05 89 9,80 8,5010 1929 1709 1352,0 51,4 120 22,5 250011347,5 9,40 9,40 771,1 771 39,4 40,1 518; 547 14,4 3,661,85 74 9,80 8,5010 1929 1702 1352,0 51,4 120 22,5 257011341,8 9,40 9,40 771,3 770 39,4 40,5 547 14,4 3,661,85 74 9,80 8,5010 1931 1722 1364,0 40,6; 188 211 119 21,6 288011350,5 9,40 9,40 771,3 770 39,4 40,5 547 14,4 3,661,88 77 9,80 8,5010 1932 1724 1350,0 44,1 128 231 120 21,8 272011351,3 9,40 9,40 777,3 778 39,4 40,5 547 14,5 3,671,90 479 9,80 8,5010 1935 1722 1350,0 34,0 179 207 116 221, 273011351,4 9,40 9,40 777,9 778 39,4 40,5 5271 551 14,5 3,671,95 49,7 9,80 8,5010 1935 1732 1369,0 20,8 182 212 172 22,8 274011351,4 9,40 9,40 777,9 778 39,4 40,1 523 1255 14,5 3,681,94 8,9 9,80 8,5010 1935 1732 1369,0 20,8 182 212 172 22,8 274011351,4 9,40 9,40 777,9 778 39,4 40,1 525 124,5 3,681,93 8,9 8,9 8,9 8,9 8,9 8,9 8,9 8,9 8,9 8,9	1923	1701	1356.0	35.11	161	192	119	23.8	2700	1339.4	9.40	9.40	774.9	775	39.5	40.6	4901	541	14.2	3.63	.95	.84	9.82	8.50¦D
1925 1704 1358,0 36.4 157 188 119 24.1 270011341.6 9.40 9.40 776.5 776 39.5 40.4 5001 544 14.3 3.651.05 .94 9.82 8.5010 1927 1717 156.0 29.11 161 25 119 24.0 26701346.4 9.40 9.40 776.7 776 39.5 40.4 5001 544 14.3 3.651.05 .94 9.82 8.5010 1928 1719 1361.0 51.4 120 235 119 24.2 26701346.4 9.40 9.40 771.0 717.9 75 40.5 518 546 14.4 3.651.05 .74 9.80 8.5010 1929 1720 1550.0 51.9 127 238 120 22.6 26701348.4 9.40 9.40 771.3 770 39.5 40.5 518 546 14.4 3.651.08 .74 9.80 8.5010 1930 1721 1350.0 46.4 128 237 120 22.6 26801349.4 9.40 9.40 771.3 770 39.4 40.5 521 546 14.4 3.651.08 .77 9.80 8.5010 1930 1721 1350.0 46.4 128 237 120 22.6 26801349.4 9.40 9.40 771.3 770 39.4 40.5 521 546 14.4 3.651.08 .77 9.80 8.5010 1932 1724 1350.0 46.4 128 237 120 21.8 27201351.3 9.40 9.40 771.3 770 39.4 40.5 521 548 14.4 3.651.08 .77 9.80 8.5010 1932 1724 1350.0 46.4 128 237 120 21.9 27301351.4 9.40 9.40 777.3 77 39.4 40.5 521 549 14.5 3.671.98 .77 9.80 8.5010 1933 1722 1356.0 32.71 184 238 120 21.9 27301351.4 9.40 9.40 777.9 778 39.4 40.5 527 551 14.5 3.671.95 .84 9.80 8.5010 1933 1726 1350.0 35.5 185 218 118 22.1 27401351.6 9.40 9.40 777.8 778 39.4 40.4 520 528 552 14.5 3.681.89 .3 9.81 8.5010 1933 1729 1368.0 35.5 185 218 118 22.1 27401351.6 9.40 9.40 777.8 778 39.4 40.4 520 528 552 14.5 3.681.0 5.9 9.8 9.8 9.8 9.8 9.8 9.8 9.8 9.8 9.8 9	1924	1702	1357.0	34.21	161	194	119	23.9	2700	1340.8	9.40	9.40	773.9	773	39.5	40.4	4921	542	14.2	3.641				
1927 1717 1361.0 291.1 161 225 119 24.0 24.0 1346.4 9.40 9.40 770.6 717 39.5 40.2 51.1 51.5 51.1 52.5 52.5	1925	1704	1358.0	36.41	159	188	119	24.1	2700	1341.6	9.40	9.40	778.5	776	39.5	40.3	4941	543	14.3	3.641	.95	.84	9.82	8.50¦D
1929 1719 1361.0 51.41 210 225 19 22.2 2680 1347.5 9.40 9.40 771.5 771 37.5 40.5 518 546 14.4 3.661 .85 .74 9.80 8.5010 1920 1721 1363.0 46.41 208 237 120 22.6 2680 1349.4 9.40 9.40 771.1 771 374 40.5 521 548 14.4 3.661 .85 .77 9.80 8.5010 1931 1722 1344.0 9.61 188 211 19 16 2680 1339.4 9.40 9.40 771.3 770 37.4 40.5 521 548 14.4 3.661 .85 .77 9.80 8.5010 1933 1722 1345.0 44.11 18 231 120 21.6 2680 1339.4 9.40 9.40 777.9 778 37.4 40.5 521 548 14.5 3.671 .98 .77 9.80 8.5010 1933 1726 136.0 32.71 18 231 120 21.9 2730 1351.4 9.40 9.40 777.9 778 37.4 40.5 521 548 14.5 3.671 .98 .98 .5010 1933 1727 136.0 32.71 18 231 120 21.2 2730 1351.4 9.40 9.40 777.9 778 37.4 40.5 527 528 522 14.5 3.671 .98 .98 .5010 1934 1741 1370 38.0 35.5 18 18 22.1 2730 1351.6 9.40 9.40 777.6 777 37.4 40.1 536 536 53.4 4.6 3.681 53 .98 9.80 .5010 1938 1745 1371 0.399 127 246 115 0.35 2700 1355.8 9.50 9.40 773.3 78 37.4 40.1 536 536 536 54.6 3.681 537 .98 9.80 .5010 1333 1746 1372.0 33.4 227 248 15 31.1 2700 1335.8 9.50 9.40 773.3 78 37.4 40.1 536 536 54.4 5.361 1.9 2.80 3.010 333 1746 1372.0 33.4 227 248 15 31.4 2700 1335.8 9.50 9.40 773.3 778 37.4 40.1 536 544 555 54.7 3.701 98 8.9 9.8 3.5010 333 1746 1372.0 33.4 227 248 13.5 3.40 3	1926	1707	1359.0	22.81	155	178	119	23.9	2700	1341.8	9.40	9.40	776.7	776	39.5	40.4	5001	544	14.3	3.651	1.05	.94	9.82	8.501D
1929 1720 1362.0 51.91 207 238 120 22.6 240 24	1927	1717	1360.0	29.11	161	225	119	24.0	2670	1346.4	9.40	9.40	770.6	717	39.5	40.2	5141	545	14.4	3.651	1.00	.89	9.80	8.501D1
1929 1720 1362,0 51,91 207 238 120 22.6 2260 237 120 22.6 2480 1349,4 9,40 9,40 771.3 770 39,5 41.0 5191 547 14.4 3,661 88 77 9,80 8,5010 7331 1722 1363.0 46.41 108 231 120 21.8 2480 1350.5 9,40 971.3 770 39,5 41.0 521 548 14.5 3,671 90 79 9,80 8,5010 7332 1724 1365.0 44.11 108 238 120 21.8 2260 1351.3 9,40 9,40 773.8 771 37.4 40.5 5231 550 14.5 3,671 80 77 9,80 8,5010 7933 1724 1365.0 34.01 179 207 116 22.1 2730 1351.4 9,40 9,40 773.8 771 37.4 40.1 5231 550 14.5 3,671 80 80 80.5010 7333 1722 1365.0 35.51 183 218 22.1 2740 1351.4 9,40 9,40 779.4 778 39,4 40.2 5281 552 14.5 3,681 93 9,81 8,5010 7335 1732 1365.0 35.51 183 218 22.1 2740 1351.4 9,40 9,40 779.4 778 39,4 40.4 5301 533 3432 3439,0 20.8 1822 212 17 22.8 2760 1351.6 9,40 9,40 777.4 777 39,7 40.1 5305 533 14.6 3,681 9,3 9,81 8,5010 7336 1732 35.4 222 221 17 22.8 2760 1351.6 9,40 9,40 777.4 777 77.7	1928	1719	1361.0	51.41	210	235	119	22.2	2680	1347.5	9.40	9.40	771.9	761	39.5	40.5	5181	546	14.4	3.661	.85	.74	9.80	8.501D
1931 1772 1364.0 40.61 188 211 119 21.6 246011350.5 9.40 9.40 771.3 770 39.4 40.5 5241 599 14.5 3.671 .90 .79 9.80 8.5010 1932 1724 1365.0 44.11 184 231 120 21.8 272011351.3 9.40 9.40 777.8 771 39.4 40.1 5231 550 14.5 3.671 .95 .84 9.80 8.5010 1933 1726 1366.0 32.71 184 238 120 21.9 273011351.4 9.40 9.40 779.9 778 39.4 40.3 5271 551 14.5 3.671 .95 .84 9.80 8.5010 1933 1726 1366.0 35.51 185 218 118 22.1 273011351.4 9.40 9.40 779.4 778 39.4 40.2 5281 552 14.5 3.681 .94 .83 9.81 8.5010 1933 1732 1369.0 20.81 182 212 117 22.8 274011351.4 9.40 9.40 777.6 777 39.4 40.1 5301 553 14.6 3.681 .93 .92 9.82 8.5010 1933 1732 1369.0 20.81 182 212 117 22.8 274011351.6 9.40 9.40 777.6 777 39.4 40.1 5361 554 14.6 3.6911.05 .95 9.82 8.5010 1933 1744 1370.0 36.01 153 254 105 23.4 270011355.8 9.50 9.40 773.3 788 39.4 40.7 544 555 14.7 3.691 .91 .81 9.80 8.5010 1933 1746 1372.0 55.41 229 246 115 30.1 270011355.8 9.50 9.40 773.2 771 39.3 40.9 517 556 14.7 3.701 .92 .80 9.82 8.5010 1933 1746 1373.0 59.21 229 246 115 30.1 270011355.8 9.50 9.40 772.9 772 39.3 40.8 517 558 14.7 3.701 .92 .80 9.82 8.5010 1943 1736.0 43.11 216 254 144 36.2 270011358.9 9.50 9.40 772.9 772 39.3 40.8 517 558 14.7 3.701 .92 .80 9.82 8.5010 1942 1750 1375.0 69.81 214 263 117 36.5 270011359.9 9.50 9.40 773.0 772 39.3 40.8 517 558 14.7 3.701 .92 .80 9.82 8.5010 1943 1751 1376.0 43.11 216 254 144 36.5 270011359.9 9.50 9.40 773.0 771 39.3 39.5 5251 550 14.8 3.7111.07 .80 9.82 8.5010 .94 1751 1376.0 43.11 216 254 144 36.5 270011359.9 9.50 9.40 773.0 771 39.3 39.5 5251 550 14.8 3.7111.07 .80 9.80 8.5010 .94 1751 1376.0 43.11 216 254 144 36.5 270011359.9 9.50 9.40 773.0 771 39.3 39.5 5251 550 14.8 3.7111.07 .80 9.80 8.5010 .94 1751 1376.0 43.11 216 .94 1751 1376.0 43.11 216 .94 1751 1376.0 43.11 216 .94 1751 1376.0 43.11 216 .94 1751 1376.0 43.11 216 .9	1929	1720	1362.0	51.91	207	238	120	22.6	2670	1348.4	9.40	9.40	773.3	770	39.5	41.0	5191	547	14.4	3.661	.85			
1931 1742 1364.0 40.61 188 211 119 21.6 2246 245 270 21.82 2736 2135 21.83	1930	1721	1363.0	46.41	208	237	120	22.6	2680	1349.4	9.40	9.40	771.1	771	39.4	40.9	5211	548	14.4	3.661	.88	.77	9.80	8.50¦D
1932 1724 1355.0 44.1; 184 231 120 21.8 272011351.3 9.40 9.40 773.8 71 39.4 40.1 523; 550 14.5 3.671 89 47, 9.80 8.5010 1933 1726 1366.0 32.7; 184 238 120 21.9 273011351.4 9.40 9.40 779.9 778 39.4 40.2 528; 552 14.5 3.681.94 83 9.81 8.5010 1935 1729 1366.0 35.5; 185 218 118 22.1 273011351.4 9.40 9.40 778.3 778 39.4 40.2 528; 552 14.5 3.681.94 83 9.81 8.5010 1935 1729 1369.0 20.81 182 212 117 22.8 274011351.4 9.40 9.40 777.6 777 39.4 40.1 536; 553 14.5 3.681.93 82, 98.2 8.5010 1935 1741 1370.0 36.0; 154 254 105 23.4 270011355.8 9.50 9.40 773.3 78 39.4 40.7 544; 555 14.7 3.691.91 89 8.8 9.81 8.5010 1938 1745 1371.0 39.9; 217 246 116 30.5 270011358.8 9.50 9.40 773.2 77 39.3 40.7 544; 555 14.7 3.691.91 89 8.8 9.81 8.5010 1939 1746 1372.0 53.4; 22 242 141 34.8 270011358.8 9.50 9.40 773.2 77 39.3 40.8 517; 558 14.7 3.691.91 89 8.8 9.81 8.5010 1943 1745 1374.0 34.1; 202 243 114 36.2 270011358.9 9.50 9.40 773.2 77 39.3 40.8 517; 558 14.7 3.701.92 80 9.82 8.5010 1943 1755.0 49.8; 12 42 53 17 3.55 270011359.9 9.50 9.40 773.4 77 39.3 40.8 517; 558 14.7 3.701.92 80 9.82 8.5010 1943 1755.0 49.8; 12 42 53 17 3.55 270011359.9 9.50 9.40 773.0 772 39.3 40.8 517; 558 14.7 3.701.92 80 9.82 8.5010 1943 1755.0 49.8; 12 42 53 17 3.55 270011359.9 9.50 9.40 773.0 772 39.3 40.8 517; 558 14.7 3.701.92 80 9.82 8.5010 1943 1753 1376.0 59.7; 236 259 116 38.1 270011359.9 9.50 9.40 773.0 772 39.3 40.8 517; 558 14.8 3.711.01 88 9.84 8.5010 1943 1753 1376.0 59.7; 234 288 114 35.5 270011359.9 9.50 9.40 773.0 772 39.3 39.6 525; 561 14.8 3.711.01 88 9.84 8.5010 1944 1752 1377.0 57.7; 236 259 116 38.1 270011350.7 9.50 9.40 773.0 772 39.3 39.6 525; 561 14.8 3.711.01 88 9.84 8.5010 1946 1758 1379.0 580.0 241 263 116 39.0 270011350.7 9.50 9.40 773.0 772 39.3 39.0 525; 561 14.8 3.711.01 88 9.84 8.5010 1946 1758 1379.0 580.0 241 263 116 39.0 270011350.7 9.50 9.40 773.0 772 39.3 39.0 525; 562 150 14.8 3.711.01 88 9.89 8.5010 1946 1758 1379.0 580.0 240 14.8 3.711.00 180 14.8 3.711.01 8.8 9.60 8.5010 1946 1758 138.0 40.9 253 228 112 37.7 27001350.5 9.50 9																								
1933 1726 1366.0 32.71 184 238 120 21.9 273011351.4 9.40 9.40 779.4 778 39.4 40.2 528 152 14.5 3.681 .94	1932	1724	1365.0	44.11	184	231	120	21.8	2720	1351.3	9.40	9.40	773.8	771	39.4	40.1								
1735 1727 1367.0 34.0 179 207 146 22.1 235011351.4 9.40 9.40 777.5 777 374 40.1 5301 535 146 3.681 94 98 8.5010 935 1727 1368.0 35.5 185 218 118 22.1 274011351.6 9.40 9.40 777.5 777 374 40.1 5301 535 5361 546 3.681 94 9.50 8.5010 937 1741 1370.0 36.0 154 254 105 23.4 270011355.8 9.50 9.40 773.5 777 374 40.1 5361 554 14.6 3.681 94 9.50 8.5010 938 1745 1371.0 379.9 217 248 118 30.5 270011355.8 9.50 9.40 773.5 773 374 40.7 544 555 14.7 3.691 91 81 9.80 8.5010 939 746 1372.0 53.4 224 248 113 30.5 270011355.8 9.50 9.40 773.2 771 373 340.8 517 556 14.7 3.701 91 80 9.82 8.5010 9.82 9.82 9.5010 9.82 9.5010	1933	1726	1366.0	32.71	184	238	120	21.9	2730	1351.4	9.40	9.40	779.9	778	39.4	40.3	5271	551	14.5	3.671	.95			
1935 1729 1369.0 35.51 185 218 118 22.1 274011351.4 9.40 9.40 778.3 778 39.4 40.4 \$301 553 14.6 3.68 95 8.2 9.82 8.50 1937 1744 1370.0 36.01 154 254 105 23.4 270011355.8 9.50 9.40 773.3 788 39.4 40.7 \$378 144 537.0 36.01 154 254 105 23.4 270011355.8 9.50 9.40 773.3 788 39.4 40.7 \$536 157 14.6 3.69 1.05 95 9.80 8.50 1938 1746 1371.0 39.91 217 246 118 30.5 270011358.8 9.50 9.40 773.3 788 39.4 40.9 \$517 556 14.7 3.70 1.99 8.6 9.81 8.50 1938 1746 1371.0 35.41 229 245 118 34.8 270011357.8 9.50 9.40 773.3 772 39.3 40.8 516 557 14.7 3.70 1.99 8.6 9.81 8.50 1941 1748 1373.0 58.12 224 261 113 34.8 270011358.9 9.50 9.40 772.9 772 39.3 40.8 516 557 14.7 3.70 1.99 8.0 9.82 8.50 1941 1748 1374.0 34.11 202 243 114 36.2 270011358.9 9.50 9.40 772.9 772 39.3 40.8 516 557 14.7 3.70 1.99 8.0 9.82 8.50 1942 1750 1375.0 69.81 214 52 118 55.5 270011359.9 9.50 9.40 772.9 772 39.3 40.8 516 557 14.7 3.70 1.99 8.0 9.82 8.50 1943 1750 1375.0 69.81 214 52 118 55.5 270011359.9 9.50 9.40 772.9 772 39.3 40.2 521 559 14.8 3.7111.07 9.4 9.82 8.50 1943 1750 1375.0 69.81 214 55.5 27011359.9 9.50 9.40 771.0 771 39.3 39.7 523 560 14.8 3.7111.07 9.7 8 9.83 8.50 1944 1752 1377.0 75.7 236 259 116 38.1 270011359.9 9.50 9.40 771.0 771 39.3 39.7 528 565 14.8 3.711 88 9.84 8.50 1944 1753 1378.0 551.5 234 268 114 36.2 27011350.7 9.50 9.40 771.0 771 39.3 39.7 528 565 14.8 3.711 88 9.84 8.50 1944 1753 1378.0 551.5 234 268 114 38.5 270011359.9 9.50 9.40 771.0 771 39.3 39.7 528 565 14.8 3.711 88 9.84 8.50 1946 1754 1379.0 580.5 14.8 3.711 197	1934	1727	1367.0	34.01	179	207	116	22.1	2730	1351.4	9.40	9.40	779.4	778	39.4	40.2				-				
1732 1732 1739 0 20.81 182 212 117 27.8 2746 11351.6 9.40 9.40 777.6 777 39.4 40.1 5361 554 14.6 3.69 1.05 5.9 9.82 8.50 B 1937 1744 1370.0 36.0 154 254 105 23.4 27001 1355.8 9.50 9.40 773.2 772 39.3 40.7 547 556 14.7 3.70 9.8 8.6 9.81 8.50 B 1938 1745 1371.0 39.9 217 246 116 30.5 27001 1356.8 9.50 9.40 773.2 771 39.3 40.8 516 557 14.7 3.70 9.8 8.6 9.81 8.50 B 1940 1748 1373.0 58.2 224 241 115 34.8 27001 1358.9 9.50 9.40 773.4 772 39.3 40.8 517 558 14.7 3.70 9.8 8.6 9.81 8.50 B 1941 1749 1374.0 34.1 202 243 114 34.2 27001 1358.9 9.50 9.40 773.4 772 39.3 40.2 521 559 14.8 3.71 1.07 94 9.82 8.50 B 17374.0 34.1 202 243 114 36.2 27001 1359.3 9.50 9.40 773.0 772 39.3 30.2 521 559 14.8 3.71 1.07 94 9.82 8.50 B 175 1376.0 43.1 216 234 114 36.5 27101 1359.7 9.50 9.40 773.0 772 39.3 39.5 523 550 14.8 3.71 1.07 94 9.82 8.50 B 175 1376.0 43.1 216 234 114 36.5 27101 1359.7 9.50 9.40 773.0 772 39.3 39.5 523 550 14.8 3.71 1.07 94 9.82 8.50 B 175 1376.0 53.1 216 234 114 36.5 27101 1359.7 9.50 9.40 773.0 772 39.3 39.5 523 550 14.8 3.71 1.07 94 9.82 8.50 B 175 1376.0 13.1 126 234 114 36.5 27101 1359.7 9.50 9.40 773.0 772 39.3 39.5 523 550 14.8 3.71 1.07 9.40 9.82 9.80 9.80 9.82 9.80 9.80 9.82 9.80 9.80 9.82 9.80 9.80 9.82 9.80 9.80 9.82 9.80 9.8	1935	1729	1368.0	35.51	185	218	118	22.1	2740	1351.4	9.40	9.40	778.3	778	39.4	40.4								
1935 1744 1370. 0 35.0 154 254 105 23.4 2700 1355.8 9.50 9.40 773.3 788 39.4 40.7 511 555 14.7 3.70 9.8 8.6 9.81 8.50 1939 1746 1372.0 53.4 227 248 115 31.1 2700 1358.8 9.50 9.40 773.3 771 39.3 40.8 517 558 14.7 3.70 9.1 9.8 8.50 1941 1748 1373.0 58.2 224 261 115 34.8 2700 1358.2 9.50 9.40 773.4 772 39.3 40.8 517 558 14.7 3.70 9.1 270 9.8 8.6 9.81 8.50 1941 1749 1374.0 34.1 202 243 114 36.2 2700 1358.2 9.50 9.40 773.4 772 39.3 40.8 517 558 14.7 3.70 9.1 270 9.82 8.50 1941 1745 1375.0 89.8 243 114 36.5 2700 1358.7 9.50 9.40 773.4 772 39.3 40.8 517 558 14.7 3.70 9.7 270 8.5 8.50 1942 1755 1376.0 43.1 216 254 114 36.5 2700 1359.3 9.50 9.40 773.4 772 39.3 39.9 525 561 14.8 3.71 1.0 8.8 9.84 8.50 1943 1751 1376.0 43.1 216 254 114 36.5 2700 1359.3 9.50 9.40 771.0 771 39.3 39.7 525 562 14.8 3.71 1.88 7.5 9.85 8.50 1945 1755 1376.0 43.1 216 254 114 36.5 2700 1359.7 9.50 9.40 771.0 771 39.3 39.7 528 565 561 14.8 3.71 1.88 7.5 9.85 8.50 1945 1755 1379.0 58.0 245	1936	1732	1369.0	20.81	182	212	117	22.8	2760	1351.6	9.40	9.40	777.6	777	39.4	40.1								
1785 1745 1371.0 39.91 217 246 116 30.5 270011356.8 9.50 9.40 773.3 768 39.4 40.9 517 556 14.7 3.701 .98 .86 9.81 8.501 1790 1746 1372.0 53.4 227 248 115 31.8 270011356.8 9.50 9.40 773.3 773 773 37.3 38.8 517 558 14.7 3.701 .91 79 9.81 8.501 1791 1746 1373.0 58.2 224 261 115 34.8 270011358.9 9.50 9.40 773.4 772 39.3 30.2 521 559 14.8 3.711 .07 .94 9.82 8.50 1794 1749 1374.0 34.11 202 243 114 36.5 270011358.9 9.50 9.40 773.0 772 39.3 39.9 523 560 14.8 3.711 .09 .76 9.83 8.501 1794 1755 1376.0 43.11 216 254 114 36.5 271011359.7 9.50 9.40 773.0 772 37.3 39.7 525 561 14.8 3.711 .09 .76 9.83 8.501 1794 1752 1377.0 75.77 236 259 14.8 3.711 .09 .76 9.83 8.501 1794 1752 1377.0 75.77 236 259 14.8 3.711 .09 .76 9.83 8.501 1794 1752 1377.0 75.77 236 259 14.8 3.711 .09 .76 .08 9.80 8.501 1794 1752 1377.0 75.77 236 259 241 23.11 23.70 271011350.7 9.50 9.40 773.1 772 37.3 30.0 529 561 14.8 3.711 .09 .76 .88 9.85 8.501 1794 1752 1377.0 25.77 235 231 123 37.0 271011350.7 9.50 9.40 783.0 783.0 391 40.0 541 567 41.9 3.731 .00 .08 .09	1937	1744	1370.0	36.01	154	254	105	23.4	2700	1355.8	9.50	9.40	763.8	752	39.4	40.7								
1746 1372.0 53.41 229 248 115 31.1 2700 1357.5 9.50 9.40 773.2 771 39.3 40.8 516 557 14.7 3.70 91 .79 9.81 8.50 1746 1373.0 58.21 224 241 115 34.8 2700 1358.2 9.50 9.40 773.4 772 39.3 40.8 517 558 14.7 3.70 92 .80 9.82 8.50 1741 1749 1374.0 34.1 202 243 114 36.2 2700 1358.9 9.50 9.40 773.4 772 39.3 40.8 517 558 14.8 3.71 .79 9.82 8.50 1742 1751 1375.0 69.81 214 245 114 36.5 2700 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 561 14.8 3.71 .79 7.6 9.83 8.50 1744 1751 1377.0 75.7 236 259 116 36.5 2700 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 562 14.8 3.71 .79 7.6 9.83 8.50 1744 1751 1377.0 75.7 236 259 116 36.5 2700 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 562 14.8 3.71 .79 7.6 9.83 8.50 1745 1753 1378.0 51.5 234 248 114 36.5 2700 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 562 14.8 3.71 .79 .76 9.83 8.50 1746 1754 1379.0 58.01 241 251 143 36.5 2700 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 562 14.8 3.71 .79 .76 9.83 8.50 1746 1754 1379.0 58.01 241	1938	1745	1371.0	39.91	217	246	116	30.5	2700	1356.8	9.50	9.40	773.3	768	39.4	40.9								
1940 1748 1373.0 58.2 224 261 115 34.8 2700 1358.2 9.50 9.40 772.9 772 39.3 40.8 517 558 14.7 3.70 9.2 9.0 9.02 8.50 1941 1750 1375.0 69.81 214 263 117 36.5 2700 1358.9 9.50 9.40 772.0 771 39.3 39.5 521 559 14.8 3.71 1.01 9.4 9.82 8.50 1943 1751 1376.0 43.11 216 234 114 36.5 2710 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 561 14.8 3.71 1.01 88 9.84 8.50 1945 1751 1376.0 43.11 216 234 114 36.5 2710 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 561 14.8 3.71 1.01 88 9.84 8.50 1945 1753 1378.0 51.51 234 248 114 36.5 2720 1350.5 9.50 9.40 773.0 771 39.3 39.7 528 562 14.8 3.71 1.01 88 9.84 8.50 1945 1753 1378.0 51.51 234 248 114 38.5 2720 1350.5 9.50 9.40 773.1 773 39.3 39.5 528 562 14.8 3.71 1.01 88 9.84 8.50 1945 1753 1378.0 51.51 234 248 114 39.0 2710 1350.7 9.50 9.40 773.1 773 39.3 40.2 528 563 14.8 3.71 1.02 8.9 9.85 8.50 1945 1753 1378.0 51.51 234 248 114 39.0 2710 1350.7 9.50 9.40 783.1 779 39.1 40.2 542 565 14.9 3.73 1.02 8.9 9.86 8.50 1.5 1804 1380.0 41.41 231 273 112 37.7 2750 1353.1 9.50 9.40 783.1 779 39.1 40.2 542 565 14.9 3.73 1.02 8.9 9.87 8.50 1.5	1939	1746	1372.0	53.4	229	248	115	31.1	2700	1357.5	9.50	9.40	773.2	771	39.3	40.8	5161	557	14.7	3.701	.91	.79	9.81	8.50:D
1750 1750	1940	1748	1373.0	58.21	224	261	115	34.8	2700	1358.2	9.50	9.40	772.9	772	39.3	40.8	5171	558	14.7	3.701	.92			-
1751 1376.0 43.11 216 254 114 36.5 2710 1359.7 9.50 9.40 773.0 772 39.3 39.6 525 561 14.8 3.711 1.8 7.5 9.85 8.5010 1945 1753 1378.0 51.5 234 268 114 38.5 2720 1360.5 9.50 9.40 771.1 771 39.3 39.7 528 562 14.8 3.711 9.8 9.85 8.5010 1945 1753 1378.0 51.5 234 268 114 38.5 2720 1360.7 9.50 9.40 771.1 771 39.3 39.7 528 563 14.8 3.711 9.8 9.85 8.5010 1946 1754 1379.0 58.0 241 263 116 39.0 2710 1360.7 9.50 9.40 773.1 772 39.3 40.0 529 564 14.9 3.721 9.5 9.82 9.86 8.5010 1380 1380 14.4 231 273 112 37.7 2750 1362.2 9.50 9.40 783.1 773 39.1 40.0 545 565 14.9 3.731 0.0 8.7 9.87 8.5010 14.8 1381 1382.0 1383 14.8 1381 1383 138	1941	1749	1374.0	34.1	202	243	114	36.2	2700	1358.9	9.50	9.40	773.4	772	39.3	40.2	5211	559	14.8	3.711	1.07	.94	9.82	8.50ID
1944 1752 1377.0 75.7; 236 259 116 38.1 270011359.9 9.50 9.40 771.0 771 39.3 39.7 528; 562 14.8 3.71; 88 .75 9.85 8.5010 945 1753 1378.0 51.5; 234 268 14 38.5 272011360.5 9.50 9.40 771.0 771 39.3 39.7 528; 563 14.8 3.72; 97 .85 9.85 8.5010 1946 1754 1379.0 58.0; 241 263 16 39.0 271011360.7 9.50 9.40 773.1 772 39.3 39.7 528; 563 14.8 3.72; 97 .82 9.86 8.5010 13 1380.0 14.4 231 273 12 37.7 275011362.2 9.50 9.40 783.0 78.1 14.9 3.7311.00 .87 9.87 8.5010 14.8 18.	1942	1750	1375.0	69.81	214	263	117	36.5	2700	1359.3	9.50	9.40	772.0	771	39.3	39.9	5231	560	14.8	3.711	.89	.76	9.83	8.501D
1945 1753 1378.0 51.5 234 268 114 38.5 2720 1360.5 9.50 9.40 771.8 771 39.3 39.7 528 563 14.8 3.72 .97 .82 9.86 8.50 0 1946 1754 1379.0 58.0 241 263 116 39.0 2710 1360.7 9.50 9.40 773.1 772 39.3 40.0 529 564 14.9 3.72 .95 .82 9.86 8.50 0 14.8 1380.0 41.4 231 273 112 37.7 2750 1362.2 9.50 9.40 783.1 779 39.1 40.0 545 566 14.9 3.73 11.0 2.89 9.87 8.50 0 15.0 3.73 1.0 2.89 9.87 8.50 0 15.0 3.73 1.0 2.89 9.87 8.50 0 15.0 3.73 1.0 2.89 9.87 8.50 0 15.0 3.73 9.2 1.0 3.74 9.89 9.80 8.50 0 15.0 3.74 9.89 9.80 8.50 0 15.0 3.74 9.89 9.80 9	1943	1751	1376.0	43.11	216	254	114	36.5	2710	1359.7	9.50	9.40	773.0	772	39.3	39.6	5251	561	14.8	3.71	1.01	.88	9.84	8.50ID
1746 1754 1379.0 58.0 241 263 116 39.0 2710 1360.7 9.50 9.40 773.1 772 39.3 40.0 529 564 14.9 3.72 9.5 82 9.86 8.50 13 1804 1380.0 41.4 231 273 112 37.7 2750 1362.2 9.50 9.40 783.1 779 39.1 40.2 542 565 14.9 3.73 1.00 87 9.87 8.50 15 1806 1382.0 62.0 257 276 111 39.0 2760 1363.1 9.50 9.40 783.7 782 39.1 40.0 545 566 14.9 3.73 1.00 87 9.87 8.50 15 5806 1382.0 62.0 257 276 111 39.0 2760 1364.5 9.50 9.40 783.7 782 39.1 39.1 40.0 546 567 15.0 3.73 9.2 79 9.88 8.50 16 1807 1383.0 63.11 245 268 115 38.0 2760 1364.5 9.50 9.40 783.7 782 39.1 39.7 547 568 15.0 3.74 9.2 9.88 8.50 17 1808 1384.0 56.9 228 267 116 38.8 2750 1365.2 9.50 9.40 784.9 784 39.1 39.8 548 569 15.0 3.74 9.2 9.88 8.50 18 1809 1385.0 48.9 241 270 115 38.6 2760 1365.5 9.50 9.40 784.9 784 39.1 39.5 552 571 15.0 3.75 9.3 8.6 9.90 8.50 10 1811 1386.0 59.8 247 271 115 38.6 2760 1365.5 9.50 9.40 784.9 784 39.1 39.5 552 571 15.0 3.75 9.3 8.1 9.90 8.50 10 1811 1389.0 60.4 245 268 143 38.9 2760 1365.5 9.50 9.40 784.9 784 39.1 39.5 555 572 15.0 3.75 9.3 8.1 9.90 8.50 11 1812 1388.0 60.4 245 268 143 38.9 2760 1365.5 9.50 9.40 784.6 783 39.1 39.5 555 572 15.0 3.75 9.3 8.0 9.91 8.50 11 1812 1389.0 43.2 2760 1370.6 9.50 9.40 776.1 775 39.0 39.7 576 574 15.1 3.76 10.0 88 9.92 8.50 11 1812 1389.0 43.7 195 240 119 32.2 2700 1370.6 9.50 9.40 777.1 775 39.0 39.7 586 578 15.2 3.77 9.6 8.9 9.92 8.50 11 1812 1389.0 43.4 199 222 119 31.2 2700 1370.6 9.50 9.40 777.5 776 39.0 39.7 586	1944	1752	1377.0	75.71	236	259	116	38.1	2700	1359.9	9.50	9.40	771.0	771	39.3	39.7	5251	562	14.8	3.711	.88	.75	9.85	8.50!D
1 180	1945	1753	1378.0	51.5	234	268	114	38.5	2720	1360.5	9.50	9.40	771.8	771	39.3	39.7	5281	563	14.8	3.721	.97	.85	9.85	8.50ID
1 1805 1381.0 46.91 253 281 112 39.0 275011363.1 9.50 9.40 783.0 781 39.1 40.0 5461 567 15.0 3.731 9.2 79 9.88 8.5010 2 5 1806 1382.0 62.01 257 276 111 39.0 276011363.8 9.50 9.40 783.7 782 39.1 39.7 5471 568 15.0 3.741 9.2 79 9.88 8.5010 3 1807 1383.0 63.11 245 268 115 38.0 276011364.5 9.50 9.40 783.7 782 39.1 39.7 5471 568 15.0 3.741 9.2 79 9.88 8.5010 4 1808 1384.0 56.91 228 267 116 36.8 275011365.2 9.50 9.40 784.9 784 39.1 39.8 5481 569 15.0 3.741 9.4 9.8 9.89 8.5010 5 1810 1386.0 59.81 247 271 115 38.6 276011365.2 9.50 9.40 784.9 784 39.1 39.5 5521 571 15.0 3.751 9.3 8.1 9.90 8.5010 6 1811 1387.0 55.31 244 274 115 38.5 275011367.1 9.50 9.40 784.9 783 39.1 39.5 5551 572 15.0 3.751 9.3 8.1 9.90 8.5010 7 1812 1388.0 60.41 245 268 14 38.9 276011367.1 9.50 9.40 784.9 783 39.1 39.5 5581 572 15.0 3.751 9.5 8.3 9.90 8.5010 8 1827 1390.0 48.21 206 229 119 32.2 270011370.6 9.50 9.40 776.9 776 39.0 39.7 578 575 571 57.1 3.761 9.8 9.92 8.5010 9 14 1828 1391.0 39.31 211 240 119 32.9 270011370.6 9.50 9.40 777.5 776 39.0 39.5 581 576 15.2 3.771 9.8 9.94 8.5010 1 1 1832 1394.0 52.61 192 218 119 31.8 270011371.8 9.40 9.40 777.5 776 39.0 39.9 581 581 582 571 581 572 3.771 9.8 9.95 8.5010 1 1 1832 1394.0 52.61 192 218 119 31.8 270011371.8 9.40 9.40 777.5 776 39.0 39.9 581 581 582 577 9.94 8.5010 1 1 1832 1394.0 52.61 192 218 119 31.8 270011371.8 9.40 9.40 777.5 776 39.0 39.9 581 581 582 577 9.94 8.5010 1 1 1832 1394.0 52.61 192 218 119 31.	1946	1754	1379.0	58.01	241	263	116	39.0	2710	1360.7	9.50	9.40	773.1	772	39.3	40.0	5291	564	14.9	3.72:	.95	.82	9.86	8.50ID
1 180 1382																		565	14.9	3.731	1.02	.89	9.87	8.50¦D
6 1807 1383.0 63.1 245 268 115 38.0 276011364.5 9.50 9.40 783.7 782 39.1 39.7 547 568 15.0 3.74 92 .79 9.88 8.50 9																						.87	9.87	8.5010
1 7 1808 1384.0 56.91 228 267 116 36.8 275011365.2 9.50 9.40 785.3 784 39.1 39.8 5481 569 15.0 3.741 .94 .81 9.89 8.5010 1818 1385.0 48.91 241 270 115 38.6 276011365.9 9.50 9.40 784.9 784 39.1 39.3 5491 570 15.0 3.741 .99 .86 9.90 8.5010 19 1810 1386.0 59.81 247 271 115 38.6 276011366.5 9.50 9.40 781.3 781 39.1 39.5 5521 571 15.0 3.751 .93 .81 9.90 8.5010 10 1811 1387.0 55.31 244 274 115 38.5 275011367.1 9.50 9.40 784.9 783 39.1 39.5 5551 572 15.0 3.751 .95 .83 9.90 8.5010 11 1812 1388.0 60.41 245 268 114 38.9 276011367.7 9.50 9.40 784.6 783 39.1 39.9 5581 573 15.1 3.751 .93 .80 9.91 8.5010 11 1812 1389.0 40.41 214 274 116 35.7 270011370.6 9.50 9.40 777.1 775 39.0 39.9 5761 574 15.1 3.7611.01 .88 9.92 8.5010 11 1812 1391.0 39.31 211 240 119 32.9 270011370.6 9.50 9.40 777.5 776 39.0 39.9 5761 575 15.1 3.761 .94 .82 9.92 8.5010 11 1812 1393.0 48.41 199 222 119 31.8 270011370.9 9.50 9.40 777.1 776 39.0 39.6 5831 577 15.2 3.771 .00 .88 9.94 8.5010 11 1813 1393.0 48.41 199 222 119 31.8 270011370.9 9.50 9.40 777.5 776 39.0 39.6 5831 577 15.2 3.771 .96 .84 9.95 8.5010 11 18 1834 1395.0 41.41 194 232 119 31.8 270011371.8 9.40 9.40 777.5 776 39.0 39.9 5801 570 15.2 3.771 .94 .82 9.95 8.5010 11 18 1834 1395.0 41.41 194 232 119 31.8 270011374.0 9.40 9.40 777.5 776 39.0 39.9 581 580 15.3 3.781 .92 .80 9.95 8.5010 11 18 1834 1395.0 41.41 194 232 119 31.8 270011374.0 9.40 9.40 777.5 776 39.0 39.9 581 580 15.3 3.781 .92 .80 9.95 8.5010 11 19 1835 1396.0 53.81 200 227 119 32.3 271011374.0 9.40 9.40 777.5 776 39.0 39.9 581 581 15.3 3.781 .92 .79 9.94 8.5010 11 18 1834 1395.0 41.41 194 232 119 31.1 271011374.0 9.40 9.40 777.5 776 39.0 39.9 581 581 15.3 3.781 .92 .79 9.94 8.5010 11 19 1835 1396.0 53.81 200 227 119 32.3 271011374.7 9.40 9.40 777.5 777 39.0 39.9 591 581 15.3 3.791 .95 .83 9.93 8.5010 11 18 1837 1398.0 47.91 203 224 119 32.3 270011375.9 9.40 9.40 777.6 775 39.0 39.8 591 583 15.3 3.791 .95 .83 9.93 8.5010 11 1837 1398.0 47.91 203 230 119 32.9 270011377.2 9.40 9.40 777.6 775 39.0 39.8 591 583 15.3 3.791 .95 .83 9.93 8																						.79	9.88	8.50ID
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F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 15/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: : m m/hr: AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT : m hr TW: : 22 1847 1399.0 49.3: 192 237 116 32.9 2680:1379.9 9.40 9.40 774.1 754 39.0 39.2 544: 584 15.4 3.80: .94 .82 9.90 8.50:D : 23 1848 1400.0 43.1; 205 238 118 32.3 2680;1380.1 9.40 9.40 773.2 769 39.0 39.1 547; 585 15.4 3.80; .97 .85 9.90 8.50;D : 24 1849 1401.0 51.3; 210 231 118 32.0 2680;1380.6 9.40 9.40 764.0 766 38.9 39.2 547; 586 15.4 3.80; .93 .80 9.91 8.50;D | 25 1850 1402.0 62.1; 215 248 117 32.6 2680;1381.3 9.40 9.40 770.8 768 38.9 39.2 548; 587 15.4 3.81; .88 .76 9.90 8.50;D | 26 1851 1403.0 51.0; 216 246 118 32.5 2690;1382.4 9.40 9.40 773.5 771 38.9 39.2 550; 588 15.5 3.81; .93 .81 9.90 8.50;D | 27 1852 1404.0 49.7; 217 250 117 33.1 2690;1383.7 9.40 9.40 773.7 773 38.9 39.3 551; 589 15.5 3.81; .94 .82 9.90 8.50;D 1 28 1854 1405.0 46.21 212 235 117 32.9 269011384.8 9.40 9.40 774.6 774 38.9 39.3 5561 590 15.5 3.811..96 .84 9.89 8.501D : 29 1855 1406.0 54.2; 206 234 117 32.9 2690;1385.7 9.40 9.40 773.8 773 38.9 39.5 556; 591 15.5 3.82; .92 .80 9.89 8.50;D 1 30 1856 1407.0 37.61 204 226 118 33.2 269011387.2 9.40 9.40 774.0 773 38.8 39.4 5591 592 15.5 3.8211.02 .89 9.88 8.501D 1 31 1857 1408.0 58.31 207 231 117 33.2 269011388.2 9.30 9.40 775.6 774 38.8 39.3 5611 593 15.6 3.821 .91 .78 9.88 8.501D 1 32 1908 1409.0 38.81 189 231 118 30.6 26701389.7 9.30 9.40 768.7 726 38.7 39.8 5731 594 15.6 3.831 .99 .87 9.87 8.501D 1 33 1909 1410.0 46.61 223 253 119 30.7 26801389.7 9.30 9.40 770.9 758 38.7 39.7 5711 595 15.6 3.841 .94 .82 9.88 8.501D 1 34 1910 1411.0 56.1; 245 267 119 32.5 2680;1389.7 9.30 9.40 772.9 768 38.7 39.7 570; 596 15.7 3.84; .91 .79 9.88 8.50ID 1 35 1911 1412.0 58.71 234 261 119 32.0 267011389.9 9.30 9.40 770.9 769 38.7 39.7 5701 597 15.7 3.841 .90 .77 9.88 8.501D 1 36 1912 1413.0 47.51 234 260 118 32.5 277011390.7 9.30 9.40 781.3 775 38.7 39.3 5691 598 15.7 3.841 .95 .83 9.87 8.501D 1 37 1913 1414.0 47.81 226 258 119 32.2 2760:1391.6 9.30 9.40 785.9 783 38.7 39.3 567: 599 15.7 3.85: .95 .83 9.87 8.501D 1 38 1914 1415.0 55.61 225 251 119 32.0 277011392.2 9.30 9.40 786.7 785 38.7 39.3 572: 600 15.7 3.85: .91 .79 9.87 8.50ID 1 39 1916 1416.0 44.61 210 238 119 31.2 2770:1393.2 9.30 9.40 786.6 786 38.7 39.4 5691 601 15.7 3.851 .96 .84 9.86 8.501D 1 40 1917 1417.0 54.21 237 263 118 32.6 2770:1394.2 9.30 9.40 786.5 786 38.7 39.3 5681 602 15.8 3.861 .92 .80 9.86 8.501D 1 41 1927 1418.0 44.41 188 260 118 32.1 2670:1399.3 9.30 9.40 769.5 759 39.1 39.8 5431 603 15.8 3.861 .97 .85 9.80 8.501D 1 42 1928 1419.0 41.91 188 220 119 31.8 277011399.6 9.30 9.40 782.2 774 39.1 39.5 5241 604 15.8 3.871 .99 .86 9.80 8.501D 1 43 1930 1420.0 34.81 188 211 119 32.4 278011399.6 9.30 9.40 786.9 784 39.1 39.5 508: 605 15.9 3.87:1.04 .91 9.81 8.50:D - 1 44 1932 1421.0 35.51 182 206 120 32.5 27701399.7 9.30 9.40 786.8 786 39.2 39.5 5021 606 15.9 3.8811.04 .91 9.81 8.501D 1 45 1933 1422.0 41.21 176 198 119 32.4 277011400.5 9.30 9.40 787.6 786 39.2 39.6 5051 607 15.9 3.8811.00 .87 9.81 8.501D 1 46 1936 1423.0 20.71 163 189 120 32.1 277011403.3 9.30 9.40 786.2 785 39.3 39.9 5041 608 16.0 3.8911.17 1.04 9.78 8.501D 1 47 1939 1424.0 21.01 159 190 119 30.1 277011405.6 9.30 9.40 787.8 787 39.3 39.8 4451 609 16.0 3.9011.15 1.02 9.77 8.501D : 48 1941 1425.0 24.3: 160 194 119 30.0 2770:1407.4 9.30 9.40 785.8 785 39.4 39.9 390: 610 16.1 3.90:1.11 .99 9.76 8.50ID 1 49 1943 1426.0 37.1; 175 207 119 31.6 2770;1408.7 9.30 9.40 786.3 785 39.4 39.7 363; 611 16.1 3.91;1.02 .90 9.75 8.50;D 1 50 1945 1427.0 23.61 175 203 119 32.3 2760:1409.5 9.30 9.40 787.5 786 39.3 39.7 367: 612 16.1 3.91:1.14 1.02 9.74 8.50:D 1 51 1956 1428.0 32.91 193 217 119 28.5 277011413.3 9.30 9.40 786.2 783 39.0 39.6 3831 613 16.2 3.9211.03 .90 9.70 8.501D 1 52 1958 1429.0 37.01 226 262 118 31.6 2770:1414.5 9.30 9.40 786.9 786 39.0 39.7 3841 614 16.2 3.9311.03 .90 9.70 8.501D 1 53 1959 1430.0 45.61 239 258 118 32.2 277011415.5 9.30 9.40 786.7 786 38.9 39.7 387; 615 16.3 3.93; .98 .85 9.70 8.501D 1 54 2000 1431.0 63.51 239 270 117 32.0 277011416.3 9.30 9.40 786.8 786 38.9 39.6 3911 616 16.3 3.931 .89 .76 9.70 8.50 D 1 55 2001 1432.0 55.11 226 258 115 31.3 277011417.0 9.30 9.40 786.2 785 38.9 39.6 3911 617 16.3 3.931 .92 .79 9.70 8.501D 1 56 2002 1433.0 50.41 230 256 113 31.1 277011417.8 9.30 9.40 785.3 784 38.9 39.5 3911 618 16.3 3.941 .93 .81 9.70 8.501D 1 57 2003 1434.0 49.61 237 269 113 32.2 277011418.3 9.30 9.40 788.0 787 38.8 39.6 3941 619 16.3 3.941 .95 .82 9.71 8.50¦D 1 58 2005 1435.0 52.81 230 258 114 31.8 2770:1418.3 9.30 9.40 787.8 787 38.8 39.6 3971 620 16.4 3.941 .93 .80 9.71 8.50ID 1 59 2006 1436.0 50.61 238 264 112 32.2 278011418.3 9.30 9.40 786.4 786 38.8 39.6 3971 621 16.4 3.941 .94 .81 9.72 8.501D 1 60 2014 1437.0 39.01 238 273 114 32.7 2750:1420.3 9.30 9.40 779.9 739 38.7 39.8 409: 622 16.4 3.95:1.01 .88 9.71 8.50ID 61 2015 1438.0 54.3; 214 240 119 31.6 2750;1421.0 9.30 9.40 782.9 771 38.7 39.6 411; 623 16.4 3.95; .93 .80 9.71 8.501D 1 62 2017 1439.0 38.81 196 252 118 29.8 274011421.9 9.30 9.40 782.9 780 38.7 39.2 4121 624 16.5 3.9611.00 .87 9.71 8.501D 163 2019 1440.0 29.21 175 208 117 29.4 273011423.0 9.30 9.40 782.4 781 38.6 39.5 4141 625 16.5 3.9611.06 .93 9.72 8.501D 1 64 2021 1441.0 38.41 171 231 114 28.3 274011423.5 9.30 9.40 783.7 782 38.6 39.6 4161 626 16.5 3.961 .97 .85 9.72 8.50ID 1 65 2022 1442.0 55.21 218 252 115 31.2 277011423.9 9.30 9.40 783.7 783 38.6 39.6 4171 627 16.5 3.971 .91 .78 9.72 8.501D : 66 2023 1443.0 42.1: 199 229 115 30.4 2750:1424.4 9.30 9.40 782.4 782 38.6 39.7 421: 628 16.6 3.97: .97 .85 9.73 8.501D | 67 2024 1444.0 49.9| 207 233 118 31.9 2740|1424.9 9.30 9.40 782.1 781 38.6 40.1 421| 629 16.6 3.97| .95 .82 9.73 8.50|D | 68 2025 1445.0 45.5| 212 230 113 32.3 2750|1425.5 9.30 9.40 782.0 781 38.6 40.1 422| 630 16.6 3.98| .97 .84 9.73 8.50|D | 69 2027 1446.0 53.3| 211 235 115 32.2 2750|1425.9 9.30 9.40 782.3 781 38.6 40.1 423| 631 16.6 3.98| .93 .80 9.74 8.50|D ·-----

Data Printed at time 04:31 Date Mar 14 '89 Data Recorded at time 20:41 Date Mar 3 '89

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F#	TIME	DEPTH	ROP!	TOF	RQUE	RPM	WOB	PUMP:RTRNS	MD	lb/gal	l FL(AIM/WC	I TEN	1P (C)	PVT	-THIS	BIT-	- EST:	DXC	NXB	ECD	NXMD.
		a '	m/hri	AVG	MAX	AVG	AV6	PRESIDEPTH	IN	OUT	IN	OUT	· IN	OUT	i	•	hr	TWI				1
70	2041	1447 0	 	107	272	115	71 A	2700;1428.0	0 70	0 40	775 5	401	70 7	70 0	4501	 L70	16 7	7 001	1 01		0 77	
								2800:1428.0														8.5010
								2880:1428.2										3.991				8.501D
								2880:1428.8										4.001				8.501D
								2890:1429.5										4.001				8.501D
								2870:1430.2										4.001				8.50ID
								2750:1431.2										4.001				8.501D
								276011432.1										4.001				8.50ID
								275011433.0										4.011				8.501D
								2750;1434.0										4.011				8.5010
								281011438.1	,									4.01:	-			8.501D
								2820:1438.4										4.011				8.50¦D
								2800:1438.7										4.021				8.501D
83	2105	1460.0	76.81	244	273	98	31.6	280011439.3	9.30	9.40	796.1	794	38.4	39.1				4.021				8.501D
84	2106	1461.0	50.81	224	262	99	29.6	2810:1440.0	9.30	9.40	794.9	793	38.3	39.2	4951	646	17.0	4.021	.88			8.5010
85	2107	1462.0	77.91	225	268	99	29.4	28001144015	9.30	9.40	795.3	794	38.3	39.2	4971	647	17.0	4.021	.77	.65	9.74	8.5010
86	2108	1463.0	48.81	245	279	99	31.3	2790:1441.1	9.30	9.40	796.4	795	38.3	39.2	497!	648	17.0	4.021	.90	.78	9.75	8.5010
87	2109	1464.0	69.61	245	278	99	31.5	2780:1441.5	9.30	9.40	795.1	794	38.3	39.4	4981	649	17.0	4.031	.82	.69	9.75	8.5010
88	2110	1465.0	54.61	233	268	98	30.6	2790:1442.0	9.30	9.40	792.7	793	38.3	39.4	5041	650	17.0	4.031	.87	.74	9.75	8.5011
89	2111	1466.0	54.71	222	253	100	30.0	2790:1442.9	9.30	9.40	794.3	793	38.3	39.5	5031	651	17.0	4.031	.87	.74	9.76	8.5011
90	2120	1467.0	43.71	199	267	99	29.6	277011447.5	9.30	9.40	790.4	759	38.4	39.4	4981	652	17.1	4.031	.92	.79	9.73	8.5011
91	2122	1468.0	42.11	198	249	112	29.7	2780:1448.1	9.30	9.40	792.0	785	38.4	39.2	4961	653	17.1	4.041	.96	.83	9.73	8.5011
92	2123	1469.0	62.51	226	258	112	32.0	2780;1448.1	9.30	9.40	794.2	791	38.4	39.5	4971	654	17.1	4.041	.88	.75	9.74	8.50.
93	2124	1470.0	58.01	230	268	112	32.0	2770:1448.1	9.30	9.40	793.2	792	38.4	39.3	499!	655	17.2	4.041	.90	.77	9.75	8.5011
94	2125	1471.0	50.31	232	279	112	32.9	2770:1448.1	9.30	9.40	791.8	792	38.5	39.1	4991	656	17.2	4.041	.94	.81	9.75	8.5011
95	2126	1472.0	70.31	228	256	112	32.3	2770:1448.1	9.30	9.40	794.0	792	38.5	39.2	5031	657	17.2	4.051	.85	.72	9.76	8.501
								2770:1448.1							5011	658	17.2	4.051	.88	.75	9.77	8.5011
								2770:1448.2										4.05				8.501
								2760:1448.9										4.051		.78	9.78	8.5011
								2770:1449.9										4.061				8.50
								2790:1455.2										4.061				8.501
								2790:1456.2										4.061				8.501
								280011457.1														
								2800:1458.1										4.071				8.5011
								2800;1458.2										4.071				8.5011
								2800:1458.2										4.071				8.501
								279011458.2										4.071				8.501
								280011458.2										4.08				8.501
		1485.0					33.4	2800:1458.2										4.08				8.501
								2790:1462.4										4.08				8.50
								279011463.3										4.091				8.501
								279011464.2										4.091				8.501
								2790:1465.0 2790:1465.8										4.091				8.501
								2770:1465.6										4.091 4.091				8.501
								2770:1466.3										4.071				8.5011 8.5011
								277011467.2										4.101				8.5011
								2780:1468.2										4.10				8.50

Data Printed at time 04:36 Date Mar 14 '89 Data Recorded at time 22:17 Date Mar 3 '89

+----- ! F# TIME DEPTH ROP! TORQUE RPM WOB PUMP!RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT! -THIS BIT- EST! DXC NXB ECD NXMD! : me m/hr! AVG MAX AVG AVG PRES:DEPTH IN OUT IN OUT IN OUT ! m hr TW: 1118 2217 1495.0 59.81 233 270 113 32.5 2780:1469.0 9.30 9.40 793.0 723 38.2 39.1 578: 680 17.6 4.10: .89 .76 9.77 8.50:0 1119 2217 1496.0 69.31 237 262 114 32.4 278011469.4 9.30 9.40 795.5 756 38.2 39.1 5771 681 17.6 4.111 .84 .70 9.77 8.501D 1120 2218 1497.0 61.91 221 262 113 31.0 2770:1470.4 9.30 9.40 795.0 786 38.1 39.0 578; 682 17.7 4.11; .87 .74 9.78 8.50:0 1121 2220 1498.0 37.4; 203 274 114 29.1 2770;1471.7 9.30 9.40 793.9 792 38.1 38.8 578; 683 17.7 4.11; .98 .85 9.77 8.50;D 1122 2220 1499.0 88.6; 220 244 113 33.4 2760:1472.4 9.30 9.40 795.1 793 38.1 38.8 579; 684 17.7 4.11; .80 .67 9.78 8.50;D 1123 2222 1500.0 52.6; 227 260 113 33.3 2780;1473.4 9.30 9.40 795.2 794 38.1 38.7 580; 685 17.7 4.11; .93 .80 9.78 8.50;D 124 2222 1501.0 70.4; 232 261 114 33.8 2770;1474.1 9.30 9.40 796.0 795 38.0 39.0 582; 686 17.7 4.12; .86 .73 9.78 8.50;D 1125 2223 1502.0 59.21 220 260 112 33.8 278011474.8 9.30 9.40 795.9 795 38.0 39.0 5821 687 17.7 4.121 .90 .77 9.78 8.501D 1126 2224 1503.0 66.51 221 241 111 33.2 2770:1475.8 9.30 9.40 795.6 795 38.0 39.0 581: 688 17.8 4.12: .87 .73 9.78 8.50:0 1127 2225 1504.0 55.31 212 238 110 33.7 2780:1476.7 9.30 9.40 795.0 794 38.0 39.1 5821 689 17.8 4.121 .92 .78 9.78 8.50:D 1128 2237 1505.0 49.31 196 238 112 28.7 278011478.7 9.30 9.40 794.2 783 38.0 39.1 5931 690 17.8 4.131 .91 .78 9.78 8.501Dt 1129 2238 1506.0 60.41 205 245 113 26.5 277011479.5 9.30 9.40 794.0 790 38.0 39.1 5951 691 17.8 4.131 .84 .71 9.77 8.50¦D 1130 2239 1507.0 72.51 246 284 113 29.7 278011480.3 9.30 9.40 795.8 793 38.0 39.0 5961 692 17.9 4.131 .82 .69 9.78 8.501D 1131 2240 1508.0 83.71 249 285 113 30.3 277011481.1 9.30 9.40 794.8 793 38.0 39.0 5991 693 17.9 4.131 .79 .66 9.78 8.501D 1132 2241 1509.0 71.2: 251 279 113 29.9 2770:1481.9 9.30 9.40 795.4 794 37.9 39.1 5941 694 17.9 4.141 .83 .70 9.78 8.501D 1133 2242 1510.0 63.11 243 273 113 30.0 277011482.7 9.30 9.40 794.8 794 37.9 39.1 5941 695 17.9 4.141 .86 .73 9.78 8.501D 1134 2242 1511.0 65.31 239 274 114 30.0 277011483.6 9.30 9.40 795.3 794 37.9 38.8 5901 696 17.9 4.141 .85 .72 9.78 8.501D 1135 2243 1512.0 76.91 255 290 113 31.4 278011484.6 9.30 9.40 795.6 795 37.9 38.7 5891 697 17.9 4.141 .82 .69 9.78 8.501D 1136 2244 1513.0 70.5; 243 287 113 30.9 2780;1485.4 9.30 9.40 794.9 794 37.9 38.7 588; 698 17.9 4.14; .84 .71 9.78 8.50;D 1137 2255 1514.0 43.5; 228 294 112 30.6 2760;1487.9 9.30 9.40 792.0 759 38.1 39.2 574; 699 18.0 4.15; .96 .82 9.77 8.50;D7 1138 2256 1515.0 57.7; 255 290 112 31.4 2770;1489.3 9.30 9.40 794.6 784 38.1 38.8 567; 700 18.0 4.15; .89 .76 9.77 8.50;D 1139 2257 1516.0 55.0; 243 294 112 31.1 2760;1490.5 9.30 9.40 792.5 790 38.1 38.6 557; 701 18.0 4.15; .90 .77 9.77 8.50;D 1140 2258 1517.0 59.51 244 277 112 31.2 276011491.6 9.30 9.40 793.5 791 38.2 38.6 5441 702 18.0 4.151 .88 .75 9.77 8.501D 1141 2259 1518.0 51.21 237 279 112 31.3 276011492.7 9.30 9.40 792.1 791 38.2 38.4 5421 703 18.0 4.161 .92 .79 9.77 8.501D 1142 2300 1519.0 52.91 228 261 112 30.0 276011494.0 9.30 9.40 793.0 792 38.2 38.4 5421 704 18.1 4.161 .90 .77 9.76 8.501D 1143 2301 1520.0 69.71 234 273 112 30.2 276011495.0 9.30 9.40 794.0 793 38.2 38.9 5411 705 18.1 4.161 .84 .70 9.76 8.501D 1144 2302 1521.0 66.61 238 276 112 30.9 275011495.8 9.30 9.40 793.7 793 38.3 39.0 5421 706 18.1 4.161 .85 .72 9.76 8.5010 1145 2303 1522.0 46.31 237 269 113 31.7 277011495.8 9.30 9.40 792.3 792 38.3 39.0 5401 707 18.1 4.161 .95 .82 9.77 8.501D 1146 2304 1523.0 39.81 224 277 115 31.7 277011495.9 9.30 9.40 793.0 792 38.3 39.0 5391 708 18.1 4.171 .99 .86 9.78 8.5010 1147 2317 1524.0 48.41 197 258 112 31.0 281011502.8 9.30 9.40 796.8 765 38.8 39.0 5261 709 18.2 4.171 .94 .80 9.74 8.501D 1148 2318 1525.0 64.31 225 267 113 32.4 281011503.9 9.30 9.40 797.2 787 38.8 39.0 5271 710 18.2 4.171 .88 .74 9.74 8.501D 1149 2319 1526.0 47.8; 225 255 113 32.2 2810;1505.1 9.30 9.40 800.1 797 38.8 39.1 525; 711 18.2 4.18; .95 .82 9.74 8.50;D 1150 2320 1527.0 68.91 227 264 113 32.4 281011505.5 9.30 9.40 799.5 798 38.8 38.8 5251 712 18.2 4.181 .86 .72 9.74 8.501D 1151 2321 1528.0 57.21 225 275 113 32.1 282011505.7 9.30 9.40 798.5 798 38.9 38.7 5241 713 18.2 4.181 .90 .77 9.74 8.501D 1152 2323 1529.0 39.5; 200 234 113 30.7 2820;1505.7 9.30 9.40 798.0 797 38.9 38.6 522; 714 18.3 4.18; .98 .85 9.75 8.50¦D 1153 2323 1530.0 59.9 209 268 113 29.4 2820 1505.7 9.30 9.40 796.6 796 38.9 38.9 519 715 18.3 4.19 .87 .74 9.76 8.501D 1154 2324 1531.0 76.21 241 266 113 31.6 282011505.7 9.30 9.40 796.3 796 38.9 38.9 5181 716 18.3 4.191 .83 .69 9.76 8.501D 1155 2325 1532.0 51.91 230 271 113 30.9 282011506.1 9.30 9.40 798.5 797 39.0 39.1 5181 717 18.3 4.191 .92 .78 9.77 8.50;D 1156 2327 1533.0 44.91 230 268 113 31.5 283011507.0 9.30 9.40 797.5 797 39.0 39.3 5191 718 18.3 4.191 .96 .82 9.77 8.501D 1157 2338 1534.0 50.61 185 230 113 30.6 280011514.0 9.30 9.40 792.0 781 39.2 39.1 5081 719 18.4 4.201 .93 .79 9.73 8.501Dt 1158 2339 1535.0 49.81 203 232 113 30.7 279011514.9 9.30 9.40 791.8 788 39.2 39.3 5111 720 18.4 4.201 .93 .80 9.73 8.50¦D 1159 2340 1536.0 40.51 207 235 113 32.3 279011515.1 9.30 9.40 791.9 790 39.2 38.9 5101 721 18.4 4.201 .99 .86 9.73 8.50ID 1160 2342 1537.0 43.61 214 248 113 32.6 280011515.1 9.30 9.40 791.1 791 39.2 38.6 5051 722 18.4 4.211 .98 .84 9.74 8.501D 1161 2343 1538.0 63.7; 216 243 113 32.9 2790;1515.1 9.30 9.40 791.5 790 39.2 38.6 506; 723 18.5 4.21; .88 .75 9.74 8.50;D 1162 2344 1539.0 47.41 217 251 112 33.2 280011515.5 9.30 9.40 792.0 791 39.2 38.9 5051 724 18.5 4.211 .96 .82 9.75 8.501D 1163 2345 1540.0 62.01 215 253 112 33.3 280011516.2 9.30 9.40 792.1 791 39.3 39.1 5031 725 18.5 4.211 .89 .75 9.75 8.501D 1164 2346 1541.0 57.61 219 259 110 33.3 282011517.1 9.30 9.40 791.3 790 39.3 39.3 5041 726 18.5 4.221 .91 .77 9.75 8.5010 1165 2347 1542.0 56.21 201 230 111 32.0 281011518.0 9.30 9.40 790.1 790 39.3 39.3 5041 727 18.5 4.221 .90 .77 9.75 8.501D t------t

+------ ! F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 16/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD. ! m m/hr! AV6 MAX AVG AV6 PRES!DEPTH IN OUT IN OUT IN OUT ! m hr TW! ; 1166 2349 1543.0 30.6; 170 284 86 29.8 2810;1519.8 9.30 9.40 791.9 791 39.3 39.5 500; 728 18.6 4.22; .97 .85 9.75 8.50;D 1 Date Mar 4 '89 ! 1167 0004 1544.0 76.4; 192 226 110 22.2 2790;1524.8 9.30 9.40 789.9 776 39.6 39.9 487; 729 18.6 4.22; .75 .62 9.72 8.50;D 1168 0005 1545.0 48.01 190 223 112 21.7 278011524.8 9.30 9.40 789.0 786 39.6 39.5 4861 730 18.6 4.231 .85 1169 0006 1546.0 47.91 187 209 112 21.4 279011524.8 9.30 9.40 790.0 788 39.6 39.5 4881 731 18.6 4.231 .85 1170 0008 1547.0 42.31 184 213 112 21.5 280011525.8 9.30 9.40 791.2 789 39.6 39.5 4841 732 18.7 4.231 .88 .73 9.73 8.501D .73 9.73 8.501D .76 9.73 8.501D 1171 0009 1548.0 49.7; 185 213 112 21.6 2790; 1526.7 9.30 9.40 791.2 790 39.6 39.5 483; 733 18.7 4.23; .84 .72 9.74 8.501D 1172 0010 1549.0 40.7; 180 208 112 22.1 2790;1528.1 9.30 9.40 791.0 790 39.7 39.7 482; 734 18.7 4.24; .89 .77 9.73 8.501D 1173 0011 1550.0 46.01 180 211 112 31.5 280011529.4 9.30 9.40 791.6 791 39.7 39.9 4801 735 18.7 4.241 .95 .82 9.73 8.501D 1174 0013 1551.0 52.1; 174 204 113 31.6 2790;1530.3 9.30 9.40 790.1 790 39.7 39.9 480; 736 18.7 4.24; .93 1175 0015 1552.0 30.7; 161 194 112 31.0 2800;1532.0 9.30 9.40 791.6 791 39.7 40.0 480; 737 18.8 4.24;1.05 .79 9.73 8.50ID .92 9.73 8.501D 1176 0026 1553.0 47.61 220 259 111 34.9 281011534.6 9.30 9.40 792.3 784 39.9 39.9 4761 738 18.8 4.251 .97 .83 9.71 8.501D 1177 0027 1554.0 56.61 238 257 112 35.2 2810:1534.6 9.30 9.40 793.4 789 39.9 39.9 475: 739 18.9 4.25: ,93 .79 9.72 8.501D 1178 0028 1555.0 62.31 231 262 112 34.8 282011534.9 9.30 9.40 793.2 791 39.9 39.2 4721 740 18.9 4.251 .90 .76 9.73 8.501D 1179 0028 1556.0 70.41 216 254 111 34.3 282011535.2 9.30 9.40 794.0 792 39.9 39.2 4711 741 18.9 4.261 .87 .73 9.73 8.501D 1180 0030 1557.0 50.31 218 250 112 34.4 283011536.3 9.30 9.40 791.0 791 39.9 39.3 4701 742 18.9 4.261 .95 .81 9.73 8.501D 181 0031 1558.0 42.2; 220 253 112 34.5 2820;1537.1 9.30 9.40 790.3 790 39.9 39.5 469; 743 18.9 4.26;1.00 .86 9.73 8.50;D 182 0032 1559.0 59.1; 221 261 112 34.7 2820;1537.9 9.30 9.40 790.8 790 39.9 39.9 469; 744 18.9 4.26; .91 .77 9.73 8.50;D 183 0033 1560.0 44.0; 213 254 111 34.3 2830;1538.9 9.30 9.40 791.7 790 39.9 40.2 469; 745 19.0 4.27; .99 .85 9.73 8.50;D 1184 0034 1561.0 63.0; 216 251 111 34.1 2830:1539.7 9.30 9.40 790.7 790 39.9 40.2 469; 746 19.0 4.27; .89 .75 9.73 8.50;D 1185 0045 1562.0 36.9; 192 240 111 33.8 2810;1544.6 9.30 9.40 784.1 717 40.0 40.3 462; 747 19.0 4.28;1.03 .89 9.71 8.501D1 1186 0045 1563.0 73.7; 221 255 112 34.1 2820;1544.7 9.30 9.40 786.2 756 40.0 40.2 461; 748 19.0 4.28; .86 .72 9.71 8.501 1187 0046 1564.0 49.0 224 266 112 34.6 2820 1544.7 9.30 9.40 785.5 778 40.0 39.8 462; 749 19.1 4.28; .96 1188 0047 1565.0 79.3 1 225 255 112 34.5 2810 1544.7 9.30 9.40 787.9 784 40.0 39.9 461; 750 19.1 4.28; .84 1189 0049 1566.0 34.7; 223 266 112 35.1 2820 1544.7 9.30 9.40 786.8 786 40.1 39.9 460; 751 19.1 4.28; .06 1190 0050 1567.0 56.4; 230 265 112 35.5 2820 1544.7 9.30 9.40 786.0 785 40.1 39.9 460; 752 19.1 4.29; .93 .82 9.72 8.50 .70 9.72 8.501D .91 9.73 8.501D .79 9.74 8.501D 1191 0051 1568.0 75.51 224 254 112 35.3 282011544.7 9.30 9.40 785.1 785 40.1 39.8 4601 753 19.1 4.291 .86 .71 9.74 8.501D 1192 0052 1569.0 42.61 219 270 112 35.5 282011544.7 9.30 9.40 787.2 786 40.1 40.1 4581 754 19.2 4.2911.00 .86 9.75 8.501D 1193 0053 1570.0 49.8; 234 273 112 36.5 2800;1544.7 9.30 9.40 787.5, 786 40.1 40.0 457; 755 19.2 4.29; .97 .83 9.76 8.501D 1194 0055 1571.0 48.61 224 277 112 36.5 282011544.9 9.30 9.40 785.2 785 40.1 40.1 4571 756 19.2 4.301 .98 .83 9.76 8.5010 1195 0104 1572.0 36.41 211 276 108 35.9 279011549.7 9.30 9.40 783.0 745 40.2 40.7 4471 757 19.3 4.3011.04 .90 9.74 8.5010 1196 0105 1573.0 56.41 221 253 112 35.1 282011550.5 9.30 9.40 782.2 772 40.2 40.7 4501 758 19.3 4.311 .93 .79 9.74 8.5010 1197 0106 1574.0 83.91 213 245 112 34.7 279011550.9 9.30 9.40 783.2 777 40.2 40.5 4481 759 19.3 4.311 .82 .68 9.74 8.5010 1198 0107 1575.0 53.21 209 243 111 34.6 280011551.8 9.30 9.40 783.6 782 40.2 40.1 4471 760 19.3 4.311 .94 .80 9.75 8.501D 1199 0109 1576.0 41.41 203 253 112 34.6 280011553.0 9.30 9.40 782.9 782 40.2 40.0 4461 761 19.3 4.3111.01 .86 9.74 8.501D 1200 0110 1577.0 52.31 196 231 112 33.3 2810:1553.4 9.30 9.40 784.2 783 40.2 40.0 447; 762 19.3 4.32; .93 .79 9.75 8.50; 0 1201 0111 1578.0 40.91 201 238 112 34.0 280011553.6 9.30 9.40 783.4 783 40.3 40.3 4471 763 19.4 4.3211.00 .86 9.75 8.501D 1202 0112 1579.0 55.21 211 239 112 35.1 280011553.7 9.30 9.40 783.9 783 40.3 40.4 4441 764 19.4 4.321 .93 .79 9.76 8.5010 1203 0113 1580.0 59.81 207 241 112 35.1 280011553.7 9.30 9.40 785.0 784 40.3 40.5 4441 765 19.4 4.321 .91 .77 9.76 8.501D 1204 0114 1581.0 42.41 207 240 112 35.3 281011553.7 9.30 9.40 785.1 784 40.4 40.6 4421 766 19.4 4.3311.00 .86 9.77 8.5010 1205 0124 1582.0 49.61 189 270 103 36.0 289011558.8 9.30 9.40 795.8 779 40.5 41.0 4161 767 19.5 4.331 .95 .81 9.75 8.50 D 1206 0125 1583.0 55.91 215 241 112 36.5 289011559.6 9.30 9.40 794.1 789 40.5 40.5 40.31 768 19.5 4.341 .94 .80 9.75 8.50 D 1207 0126 1584.0 86.81 192 220 112 34.2 2900:1560.2 9.30 9.40 796.0 793 40.5 40.5 390: 769 19.5 4.34: .81 .67 9.75 8.50:D 1208 0127 1585.0 48.1; 195 216 112 34.3 2890:1561.2 9.30 9.40 797.8 795 40.5 40.4 388; 770 19.5 4.34; .96 .82 9.75 8.50;D 1209 0128 1586.0 50.4; 202 234 113 34.7 2890; 1562.3 9.30 9.40 796.9 796 40.5 40.9 384; 771 19.6 4.34; .96 1210 0129 1587.0 62.8; 202 232 112 34.4 2890; 1563.0 9.30 9.40 796.2 795 40.5 40.9 385; 772 19.6 4.34; .90 1211 0131 1588.0 45.4; 199 218 112 35.2 2900; 1563.4 9.30 9.40 795.8 795 40.5 40.7 382; 773 19.6 4.35; .99 .81 9.75 8.501D .75 9.75 8.501D .84 9.75 8.50ID 1212 0132 1589.0 49.61 207 247 111 35.6 289011563.6 9.30 9.40 793.6 793 40.5 40.8 3821 774 19.6 4.351 .96 .82 9.76 8.50

Data Printed at time 04:46 Date Mar 14 '89 Data Recorded at time 01:33 Date Mar 4 '89

																						
: F#	TIME	DEPTH	ROP!	TOR	QUE	RFM	MOB	+PUMP!RTRNS	MD	lb/gal	FLO)W/MIN	TEN	1P (C)	PVT	-THI	5 BIT-	- EST:	DXC	NXB	ECD	NXMD:
		Ē	m/hri	AVG	MAX	AVG	AVG	PRESIDEPTH	IN	OUT	IN	OUT	- IN	OUT	1	M	hr	TW:				ľ
								2890:1563.6														
								2860:1566.8														
								2850:1567.7										4.361				8.5010
								2860:1568.6										4.361				8.50ID
								2860:1569.9										4.361				8.501D
								2860:1570.7										4.371				8.501D
								2850:1571.7										4.371				8.501D
								2850:1572.6										4.371				8.50ID
								2830 1573.1										4.371				8.50ID
								2850;1573.1										4.381				8.50ID
								2850:1577.0										4.381				8.501D1
								2820:1577.8							3601			4.391				8.50!D
1225	0204	1602.0	51.91	212	248	109	32.6	2820:1578.6	9.40	9.40	789.5	785 4	1.0	41.4				4.391				8.501D
								2870:1579.7							3591			4.391				8.50¦D
1227	0207	1604.0	37.41	196	236	109	31.4	2840:1581.1	9.40	9.40	790.6	790 4	1.0	41.1	3601			4.391				8.501D
1228	0208	1605.0	67.21	209	237	108	32.6	2840:1581.9	9.40	9.40	793.2	791 4	1.0	41.1	3591	790	20.0	4.391	.85			8.50!D
1229	0209	1606.0	48.31	209	264	106	33.1	2810:1582.8	9.40	9.40	793.6	792 4	1.1	41.3				4.401				8.50ID
1230	0211	1607.0	32.91	204	252	109	33.5	2770:1583.3	9.40	9.40	794.4	793 4	1.1	41.4	3571	792	20.1	4.40:	1.04	.90	9.80	8.5010
1231	0213	1608.0	27.31	180	229	109	31.7	2730:1582.6	9.40	9.40	795.3	795 4	1.2	41.6				4.401				8.501D
1232	0215	1609.0	26.91	172	200	109	31.0	275011583.7	9.40	9.40	796.7	795 4	1.2	42.2	3541	794	20.1	4.41	1.07			8.5010
1233	0226	1610.0	30.01	204	248	109	34.9	2640;1590.4	9.40	9.40	794.4	789 4	1.4	41.8	3431	795	20.2	4.421	1.08	.93	9.80	8.501D
1234	0228	1611.0	36.41	210	249	110	35.7	2610:1591.3	9.40	9.40	792.3	792 4	1.4	41.6	3401	796	20.3	4.421	1.04	.89	9.80	8.5010
1235	0230	1612.0	28.31	188	208	111	34.1	2600:1591.7	9.40	9.40	794.3	793 4	1.3	41.5	3491	797	20.3	4.421	1.09	.95	9.81	8.50ID
								2610:1592.1							3531	798	20.3	4.431	1.08	.94	9.82	8.501D
								263011593.3							3611	799	20.4	4.431	1.04	.90	9.82	8.501D
								264011595.3							3651	800	20.4	4.441	1.11	.96	9.82	8.5010
								2630:1597.0							3741	801	20.4	4.44	1.08	.94	9.82	8.501D
								2620:1598.6										4.45				8.5010
								2610:1600.3												1.00	9.82	8.501D
								1620;1606.0										4.45				8.501D
								1640:1607.3														8.50ID
								1620:1608.0										4.461				8.50ID
								1630;1608.9										4.47				8.50ID
								162011609.3										4.47				8.50ID
								163011609.8										4.48				8.50ID
								1630:1610.4										4.481				8.50ID
								1640;1610.7										4.481				8.50ID
								1630:1610.8										4.491				8.5010
								1620 1610.8										4.491				8.50ID
								1630:1612.5										4.50				8.501D
								140011614.2										4.511				8.501D1
								1400:1614.8 1410:1615.6										4.511				8.501D
								1410:1615.6										4.511				8.50 ID
								141011616.0										4.521 4.521				8.501D
								1430:1617.4										4.531				8.501D 8.501D
								1440:1618.0														
								1430;1618.6														
			•					•							•			•				•

Data Printed at time 04:50 Date Mar 14'89 Data Recorded at time 04:18 Date Mar 4'89

: F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 16/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD; ! m m m/hr avg max avg avg presidepth in out in out in out ! m hr tw: ; 1261 0418 1638.0 34.3; 251 319 110 35.3 1410;1619.6 9.40 9.40 531.7 517 41.2 41.4 455; 823 21.3 4.54;1.05 .90 9.82 8.50;D↑ 1262 0420 1639.0 28.41 250 280 111 34.5 1420:1619.6 9.40 9.40 532.3 531 41.2 40.9 4551 824 21.4 4.5511.09 .94 9.82 8.50:D 1263 0422 1640.0 27.81 236 282 113 36.6 1430:1619.8 9.40 9.40 533.8 532 41.2 41.3 454; 825 21.4 4.55:11.12 .97 9.83 8.50:D 1264 0425 1641.0 25.21 208 252 115 34.1 142011620.0 9.40 9.40 535.4 534 41.2 41.9 4551 826 21.4 4.5611.13 .98 9.83 8.5010 1265 0427 1642.0 20.61 196 245 115 32.9 143011620.1 9.40 9.40 536.1 535 41.3 41.9 4531 827 21.5 4.5611.16 1.02 9.84 8.5010 1266 0430 1643.0 29.1; 225 270 114 35.5 1430;1620.1 9.40 9.40 536.2 535 41.3 41.9 452; 828 21.5 4.57;1.10 .95 9.85 8.50;D 1267 0432 1644.0 24.11 217 255 114 35.0 143011620.1 9.40 9.40 537.3 536 41.3 42.1 4501 829 21.6 4.5711.14 .99 9.85 8.501D 1268 0433 1645.0 40.01 230 265 114 35.3 144011620.5 9.40 9.40 538.5 537 41.4 42.0 4491 830 21.6 4.5811.01 .86 9.86 8.501D 1269 0435 1646.0 36.81 227 264 114 35.4 144011621.3 9.40 9.40 538.7 537 41.5 42.0 4491 831 21.6 4.5811.04 .89 9.86 8.501D 1270 0437 1647.0 30.41 208 237 114 33.7 144011622.5 9.40 9.40 537.0 536 41.5 42.3 4481 832 21.6 4.5811.07 .92 9.86 8.501D 1271 0447 1648.0 32.8; 226 273 113 34.9 1440;1625.4 9.40 9.40 536.6 517 41.6 42.3 443; 833 21.7 4.59;1.04 .89 9.84 8.50;D1 1272 0449 1649.0 45.01 251 278 111 36.0 144011626.1 9.40 9.40 537.9 534 41.7 41.1 4421 834 21.7 4.591 .98 .83 9.85 8.5010 1273 0451 1650.0 21.11 214 259 112 34.4 144011627.6 9.40 9.40 538.5 537 41.7 40.9 4421 835 21.8 4.6011.17 1.02 9.84 8.501D 1274 0453 1651.0 33.01 215 251 112 33.3 144011628.5 9.40 9.40 543.1 540 41.7 42.0 4411 836 21.8 4.6011.04 .89 9.84 8.501D 1275 0455 1652.0 38.61 226 267 112 34.3 144011629.2 9.40 9.40 538.7 539 41.7 42.3 4381 837 21.8 4.6011.01 .86 9.84 8.501D 1276 0456 1653.0 45.91 231 272 111 34.7 145011629.7 9.40 9.40 539.6 538 41.7 42.3 4391 838 21.8 4.611 .97 .82 9.85 8.5010 1277 0458 1654.0 23.9; 212 250 112 33.9 (1440:1629.8 9.40 9.40 538.8 538 41.7 42.4 436: 839 21.9 4.61:1.13 .98 9.85 8.50:D. 1278 0500 1655.0 30.61 228 261 112 35.2 3440:1629.8 9.40 9.40 539.9 539 41.7 42.4 436; 840 21.9 4.62;1.07 .92 9.86 8.50;0 1279 0503 1656.0 22.6; 206 257 112 34.0 1450;1630.8 9.40 9.40 539.1 538 41.8 42.4 437; 841 22.0 4.62;1.14 .99 9.86 8.50;0 1280 0505 1657.0 32.41 218 254 112 34.0 144011631.5 9.40 9.40 540.8 539 41.8 42.4 4351 842 22.0 4.6211.05 .90 9.86 8.501D 1281 0517 1658.0 25.81 204 238 109 33.8 281011635.3 9.40 9.40 769.5 767 41.9 42.3 4231 843 22.1 4.6311.10 .95 9.86 8.501D 1282 0520 1659.0 23.01 185 228 109 31.7 288011637.1 9.40 9.40 776.1 775 42.0 42.5 4191 844 22.1 4.6411.11 .96 9.86 8.501D 1283 0522 1660.0 26.61 191 223 109 32.9 289011638.7 9.40 9.40 781.7 780 42.0 42.6 4191 845 22.2 4.6411.09 .94 9.85 8.50 1284 0524 1661.0 26.8; 213 251 109 35.1 2890:1639.5 9.40 9.40 781.3 780 42.0 42.7 418; 846 22.2 4.65;1.10 .95 9.85 8.50;0 1285 0526 1662.0 28.61 201 232 110 33.5 290011639.8 9.40 9.40 781.8 781 42.1 42.7 4151 847 22.2 4.6511.07 .92 9.86 8.501D 1286 0528 1663.0 28.81 181 215 110 31.7 297011641.2 9.40 9.40 782.0 781 42.1 42.6 4171 848 22.3 4.6611.05 .91 9.86 8.5010 1287 0531 1664.0 22.1; 175 211 110 30.7 3050;1642.7 9.40 9.40 803.9 801 42.2 42.5 415; 849 22.3 4.66;1.11 .96 9.85 8.50;0 1288 0533 1665.0 34.8; 192 222 110 32.3 3050;1643.8 9.40 9.40 802.5 802 42.3 42.7 413; 850 22.3 4.66;1.01 .86 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1666.0 25.0; 184 228 110 32.8 3050;1645.4 9.40 9.40 804.3 803 42.4 42.8 414; 851 22.4 4.67;1.10 .95 9.85 8.50;0 1289 0535 1665.0 804.0 804.3 803 42.4 42.8 414;851 22.4 4.67;1.10 .95 8.50;0 1289 0535 1665.0 1290 0539 1667.0 16.81 168 205 110 31.6 305011648.3 9.40 9.40 804.5 804 42.5 43.0 4111 852 22.4 4.6811.19 1.04 9.84 8.501D 1291 0552 1668.0 21.2; 166 210 111 31.2 2980;1652.8 9.40 9.40 794.0 791 42.8 42.2 403; 853 22.5 4.68;1.13 .98 9.82 8.50;D 1292 0554 1669.0 32.5: 188 232 110 32.3 2980:1654.4 9.40 9.40 795.4 793 42.8 42.8 401: 854 22.6 4.69:1.03 ,89 9.81 8.50:D 1293 0556 1670.0 35.91 219 242 110 34.4 2980:1655.6 9.40 9.40 793.7 794 42.8 43.0 401: 855 22.6 4.69:1.03 .88 9.81 8.50:D 1294 0557 1671.0 37.01 204 232 109 33.4 298011656.8 9.40 9.40 795.7 794 42.8 43.2 4011 856 22.6 4.7011.01 .86 9.81 8.5010 1295 0559 1672.0 36.91 223 250 108 35.1 293011657.8 9.40 9.40 791.6 792 42.9 43.4 3981 857 22.7 4.7011.02 .87 9.81 8.501D 1296 0601 1673.0 31.81 227 256 108 35.3 293011658.7 9.40 9.40 785.9 787 42.9 43.5 3991 858 22.7 4.7011.06 .91 9.81 8.501D 1297 0602 1674.0 45.71 223 266 109 35.4 287011658.7 9.40 9.40 787.0 786 42.9 43.6 3991 859 22.7 4.7011.06 .91 9.81 8.501D 1298 0604 1675.0 32.01 215 253 108 35.6 285011658.7 9.40 9.40 773.7 775 43.0 43.5 3971 860 22.7 4.7111.06 .91 9.82 8.501D 1299 0606 1676.0 23.71 222 289 109 36.0 285011659.2 9.40 9.40 773.9 773 43.1 43.9 3951 861 22.8 4.7111.15 .99 9.82 8.501D 1300 0608 1677.0 30.0; 224 248 109 36.3 2840;1660.0 9.40 9.40 773.0 772 43.2 43.9 395; 862 22.8 4.72;1.09 .93 9.82 8.50;D 1301 0622 1678.0 36.81 204 266 99 33.5 263011663.5 9.40 9.40 738.6 726 43.4 43.1 3881 863 22.9 4.721 .99 .84 9.81 8.50 Df 1302 0624 1679.0 25.81 233 291 118 35.0 279011664.4 9.40 9.40 766.4 759 43.4 43.2 3841 864 22.9 4.731 .97 1303 0626 1680.0 32.41 245 301 120 36.3 279011665.0 9.40 9.40 762.4 762 43.4 43.8 3841 865 22.9 4.731 .94 1304 0627 1681.0 34.41 244 290 118 35.8 280011665.7 9.40 9.40 766.5 764 43.5 43.8 3861 866 22.9 4.731 .92 .84 11.4 8.501D .80 11.4 8.50ID .78 11.4 8.50¦D 1305 0629 1682.0 38.31 245 269 120 35.8 280011666.5 9.40 9.40 765.3 764 43.5 43.9 3831 867 23.0 4.741 .90 .76 11.4 8.501D 1306 0630 1683.0 46.81 249 279 119 36.6 280011667.0 9.40 9.40 765.2 764 43.5 44.0 3831 868 23.0 4.741 .86 .72 11.4 8.5010 1307 0635 1685.0 38.91 253 336 118 37.5 284011667.8 9.40 9.40 772.0 771 43.6 44.2 3791 870 23.1 4.7511.05 .89 9.83 8.501D 1308 0636 1686.0 40.3; 239 278 120 39.4 2840;1668.3 9.40 9.40 771.6 770 43.7 44.2 381; 871 23.1 4.76;1.06 .90 9.83 8.50

! F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD lb/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: m me/hr!AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW! ! 1311 0652 1688.0 24.41 197 313 112 32.1 284011668.8 9.40 9.40 771.0 768 43.9 43.7 3691 873 23.2 4.7711.11 .95 9.84 8.5010 1312 0656 1689.0 17.7; 183 245 112 31.9 2840;1668.8 9.40 9.40 770.1 770 43.9 44.6 371; 874 23.3 4.77;1.18 1.03 9.84 8.50;p 1313 0659 1690.0 19.0; 172 194 110 31.5 2860; 1668.8 9.40 9.40 768.5 768 43.4 44.1 387; 875 23.3 4.78; 1.16 1.01 9.85 8.50; D 1314 0702 1691.0 20.8; 163 189 109 31.1 2870; 1668.8 9.40 9.40 772.2 771 43.1 44.5 396; 876 23.4 4.79; 1.13 .98 9.86 8.50; D 1315 0705 1692.0 17.21 162 194 108 31.6 293011668.8 9.40 9.40 775.0 772 43.0 44.8 4081 877 23.4 4.7911.18 1.03 9.86 8.501D 1316 0710 1693.0 14.31 165 208 110 31.6 294011668.8 9.40 9.40 775.1 774 42.8 44.8 4221 878 23.5 4.8011.23 1.08 9.87 8.501D 1317 0714 1694.0 15.5; 162 203 113 31.9 2930; 1668.8 9.40 9.40 779.6 778 42.8 44.9 433; 879 23.6 4.81; 1.22 1.06 9.87 8.50; D 1318 0717 1695.0 17.61 170 195 113 32.2 284011668.8 9.40 9.40 763.3 766 42.8 44.7 4501 880 23.6 4.8111.19 1.03 9.88 8.501D 1319 0721 1696.0 15.3; 162 199 115 31.4 2810;1668.8 9.40 9.40 761.1 761 43.0 44.8 449; 881 23.7 4.82;1.22 1.06 9.89 8.50;D 1320 0725 1697.0 15.51 162 206 117 31.8 279011668.8 9.40 9.40 761.9 761 43.6 44.7 4461 882 23.7 4.8311.22 1.07 9.89 8.501D 1321 0737 1698.0 13.91 170 233 118 32.1 265011682.7 9.40 9.40 744.2 736 44.2 44.3 4451 883 23.9 4.8411.23 1.07 9.81 8.501D 10.501 1 1322 0740 1699.0 28.31 238 325 119 33.5 268011683.3 9.40 9.40 749.9 747 44.3 45.0 4431 884 23.9 4.8511.10 .94 9.81 8.501D 1323 0742 1700.0 31.5; 240 286 119 35.1 2790; 1683.9 9.40 9.40 766.0 760 44.3 45.0 442; 885 23.9 4.85; 1.09 .93 9.82 8.50; D 1324 0744 1701.0 25.9; 219 260 119 34.3 2790;1684.6 9.40 9.40 764.9 764 44.4 44.9 440; 886 24.0 4.85;1.13 .97 9.82 8.50;D 1325 0746 1702.0 29.51 204 250 138 33.2 293011685.3 9.40 9.40 786.4 782 44.5 44.6 4391 887 24.0 4.8611.12 .96 9.82 8.501D 1326 0748 1703.0 28.41 214 274 139 34.2 292011686.0 9.40 9.40 787.0 786 44.5 44.7 4411 888 24.0 4.8711.14 .98 9.82 8.501D 1327 0749 1704.0 35.71 218 260 139 33.6 292011686.5 9.40 9.40 784.8 784 44.6 44.8 4391 889 24.1 4.8711.08 .92 9.83 8.501D 1328 0751 1705.0 33.81 219 253 139 34.1 292011686.9 9.40 9.40 784.2 784 44.6 44.8 439: 890 24.1 4.88:1.10 .94 9.83 8.50:D 1329 0753 1706.0 28.51 209 237 139 33.2 293011687.5 9.40 9.40 784.2 783 44.7 44.8 4381 891 24.1 4.8811.13 .97 9.83 8.501D 1330 0755 1707.0 29.81 215 244 139 33.2 292011687.9 9.40 9.40 786.2 785 44.7 44.7 4381 892 24.2 4.8911.12 .96 9.84 8.5010 1331 0807 1708.0 32.71 226 300 132 36.3 296011690.1 9.40 9.40 791.3 787 44.8 44.1 4321 893 24.3 4.9011.12 .95 9.83 8.501D 1332 0810 1709.0 24.5; 205 279 136 34.9 2960;1690.8 9.40 9.40 789.0 788 44.7 44.8 434; 894 24.3 4.9;;1.18 1.02 9.83 8.50;D 1333 0812 1710.0 25.81 191 218 136 33.9 296011691.3 9.40 9.40 787.1 786 44.7 45.1 4291 895 24.3 4.9211.16 1.00 9.83 8.501D 1334 0814 1711.0 36.41 194 222 136 33.8 296011691.8 9.40 9.40 786.1 785 44.7 45.2 4281 896 24.4 4.9211.07 .91 9.84 8.501D 1335 0817 1712.0 22.31 180 229 137 33.0 296011692.5 9.40 9.40 787.2 786 44.8 45.2 4271 897 24.4 4.9311.19 1.02 9.84 8.5010 1336 0819 1713.0 26.01 191 218 134 33.7 297011692.7 9.40 9.40 787.1 786 44.8 45.2 4261 898 24.4 4.9311.15 .99 9.84 8.5010 1337 0821 1714.0 31.51 195 222 135 33.5 296011692.7 9.40 9.40 789.1 787 44.8 45.3 4231 899 24.5 4.9411.10 .94 9.85 8.5010 1338 0823 1715.0 26.71 193 252 135 33.5 296011692.8 9.40 9.40 788.3 787 44.9 45.5 4201 900 24.5 4.9511.14 .98 9.85 8.5010 1339 0825 1716.0 30.41 196 248 134 34.1 297011693.6 9.40 9.40 787.6 787 44.9 45.6 4191 901 24.5 4.9511.11 .95 9.85 8.501D 1340 0837 1717.0 26.9; 216 270 134 35.0 2970; 1697.8 9.40 9.40 784.7 777 45.1 45.5 411; 902 24.7 4.97; 1.16 .99 9.84 8.501D 1341 0840 1718.0 23.61 204 244 136 33.6 297011699.4 9.40 9.40 789.9 788 45.2 46.0 409: 903 24.7 4.97:1.18 1.01 9.83 8.50:D 1342 0841 1719.0 37.91 217 246 139 33.9 298011700.2 9.40 9.40 788.0 787 45.2 46.1 408: 904 24.7 4.98:1.07 .90 9.83 8.501D 1343 0843 1720.0 33.31 211 239 139 35.6 298011701.0 9.40 9.40 789.7 788 45.3 45.8 408; 905 24.8 4.98;1.12 .95 9.83 8.50;D 1344 0844 1721.0 40.11 211 232 139 34.3 298011701.8 9.40 9.40 790.5 789 45.4 45.9 407: 906 24.8 4.99:1.06 .89 9.84 8.50:D 1345 0846 1722.0 37.81 224 255 139 36.0 297011702.4 9.40 9.40 789.4 789 45.4 46.1 408; 907 24.8 4.99;1.09 .92 9.84 8.50;D 1346 0847 1723.0 39.81 222 251 139 35.7 297011702.4 9.40 9.40 790.2 789 45.5 46.2 4061 908 24.8 5.0011.07 .90 9.84 8.5010 1347 0849 1724.0 41.7; 219 246 139 34.7 2980:1702.4 9.40 9.40 789.8 789 45.5 46.3 411; 909 24.9 5.00:1.05 .88 9.85 8.50:D 1348 0850 1725.0 39.91 224 254 139 35.1 298011702.4 9.40 9.40 789.0 789 45.6 46.1 4071 910 24.9 5.0111.06 .89 9.86 8.501D 1349 0902 1726.0 28.71 218 264 138 35.8 292011705.4 9.40 9.40 781.7 775 45.7 45.5 3981 911 25.0 5.0211.15 .98 9.84 8.501D 1350 0904 1727.0 37.41 223 253 136 36.9 294011706.1 9.40 9.40 785.3 783 45.7 45.8 3961 912 25.0 5.0211.09 .92 9.85 8.501D 1351 0905 1728.0 37.2; 204 231 136 34.7 2940;1706.8 9.40 9.40 783.5 782 45.7 46.1 392; 913 25.0 5.03;1.07 .90 9.85 8.50;D 1352 0908 1729.0 26.01 206 237 136 36.1 294011707.6 9.40 9.40 785.1 784 45.7 46.3 3931 914 25.1 5.0411.18 1.01 9.85 8.501D 1353 0909 1730.0 39.2; 207 240 136 36.0 2940;1708.4 9.40 9.40 783.7 783 45.7 46.2 392; 915 25.1 5.04;1.07 .90 9.85 8.50;D 1354 0912 1731.0 20.21 191 217 136 35.2 294011709.7 9.40 9.40 785.3 784 45.8 46.1 3931 916 25.1 5.0511.23 1.06 9.85 8.501D 1355 0914 1732.0 35.41 202 227 136 35.0 295011710.4 9.40 9.40 783.4 783 45.8 46.0 391: 917 25.2 5.05:1.09 .92 9.85 8.50ID 1356 0916 1733.0 29.11 198 224 136 34.7 295011711.2 9.40 9.40 786.8 784 45.9 46.3 392: 918 25.2 5.06:11.13 .97 9.85 8.50:D 1357 0918 1734.0 25.31 203 223 136 34.9 295011710.9 9.40 9.40 782.9 782 45.9 46.4 3931 919 25.2 5.0611.17 1.00 9.86 8.501D

- 1358 0920 1735.0 31.41 197 229 136 34.3 2940|1710.8 9.40 9.40 786.1 785 46.0 46.5 392| 920 25.3 5.07|1.11 .94 9.86 8.50|D

Data Printed at time 05:00 Date Mar 14'89 Data Recorded at time 09:31 Date Mar 4'89

: F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD ! m m/hr! AVG MAX AVG AVG PRES!DEPTH IN OUT IN OUT IN OUT ! m hr T₩! ; **+-----**387; 921 25.3 5.08;1.10 .93 9.85 8.50;D 1359 0931 1736.0 35.01 228 283 139 35.9 286011713.7 9.40 9.40 770.8 769 46.0 46.0 1360 0936 1738.0 26.41 197 227 139 33.4 299011716.6 9.40 9.40 791.6 790 46.0 46.8 381: 923 25.4 5.09:1.15 .98 9.85 8.50:D 1361 0938 1739.0 29.91 222 245 139 35.2 299011717.9 9.40 9.40 789.3 788 46.0 46.7 383: 924 25.5 5.10:1.14 .97 9.85 8.50:D 1362 0940 1740.0 34.7; 212 237 139 34.5 3000;1719.0 9.40 9.40 788.4 787 46.1 46.5 383; 925 25.5 5.11;1.09 .92 9.85 8.50;D 1363 0942 1741.0 27.11 204 229 139 33.7 299011720.2 9.40 9.40 790.0 789 46.1 46.5 3811 926 25.5 5.1111.15 .98 9.84 8.501D 1364 0944 1742.0 30.21 199 225 139 32.5 300011720.5 9.40 9.40 790.5 789 46.2 46.7 3801 927 25.6 5.1211.11 .94 9.85 8.501D 1365 0946 1743.0 35.71 214 245 139 33.7 300011720.5 9.40 9.40 790.2 789 46.2 46.8 3791 928 25.6 5.1211.08 .91 9.85 8.501D 1366 0947 1744.0 33.91 225 265 139 34.9 300011720.5 9.40 9.40 790.0 789 46.3 46.9 3761 929 25.6 5.1311.10 .93 9.86 8.501D 1367 0958 1745.0 29.81 219 264 137 33.2 298011723.8 9.40 9.40 783.1 765 45.1 46.3 3931 930 25.7 5.1411.12 .95 9.85 8.501D1 1368 1000 1746.0 29.91 241 275 131 34.8 299011724.8 9.40 9.40 785.0 782 44.9 46.4 3971 931 25.7 5.1411.12 .95 9.85 8.501D 1369 1016 1747.0 28.91 204 268 138 34.2 304011729.4 9.40 9.40 771.9 743 44.1 46.2 4561 932 25.9 5.1511.11 .94 9.82 8.501D? 1370 1018 1748.0 34.01 221 257 138 32.2 294011729.9 9.40 9.40 774.7 769 44.0 46.3 4451 933 25.9 5.1511.08 .91 9.83 8.5010 1371 1020 1749.0 32.41 238 271 138 34.6 304011729.9 9.40 9.40 785.5 783 44.0 46.2 4251 934 25.9 5.1611.11 .94 9.83 8.501D 1372 1022 1750.0 33.61 245 274 138 36.9 298011729.9 9.40 9.40 785.9 784 43.9 46.1 .95 9.84 8.501D 423: 935 26.0 5.17:1.12 1373 1025 1751.0 21.21 220 257 138 35.6 297011731.1 9.40 9.40 778.8 779 43.7 46.2 430; 936 26.0 5.17;1.23 1.06 9.84 8.50;D 1374 1027 1752.0 30.01 215 244 139 34.2 297011732.0 9.40 9.40 779.7 778 43.7 46.1 4341 937 26.1 5.1811.13 .96 9.84 8.501D 1375 1029 1753.0 25.01 208 244 139 33.7 297011732.9 9.40 9.40 779.5 778 43.8 46.1 4341 938 26.1 5.1911.17 1.00 9.84 8.501D 1376 1031 1754.0 34.1; 242 267 138 36.0 2960; 1733.8 9.40 9.40 779.4 778 44.1 46.1 433; 939 26.1 5.19; 1.11 .94 9.84 8.501D 1377 1041 1755.0 21.11 224 266 138 35.9 299011737.3 9.40 9.40 782.6 756 45.0 45.7 4281 940 26.2 5.2011.19 1.02 9.82 8.501D 1378 1042 1756.0 34.11 234 270 131 35.5 299011738.3 9.40 9.40 786.2 781 45.2 45.8 4261 941 26.2 5.2111.10 .92 9.82 8.501D 1379 1044 1757.0 28.81 219 258 130 33.5 299011739.3 9.40 9.40 786.5 785 45.2 46.5 4251 942 26.3 5.2111.12 .94 9.84 8.501D 1380 1046 1758.0 29.41 226 257 130 33.9 299011739.8 9.40 9.40 786.7 786 45.3 46.5 4241 943 26.3 5.2211.12 .94 9.83 8.501D 1381 1049 1759.0 27.1; 223 242 130 34.1 2970;1739.7 9.40 9.40 785.1 785 45.4 46.1 422; 944 26.3 5.22;1.14 .97 9.83 8.50 1382 1050 1760.0 38.1; 226 249 128 33.0 2990;1739.6 9.40 9.40 787.7 786 45.5 46.0 423; 945 26.4 5.2;11.04 .87 9.84 8.50;u 1383 1052 1761.0 30.1; 235 270 130 33.3 2990;1740.7 9.40 9.40 784.8 785 45.2 46.1 429; 946 26.4 5.23;1.10 .93 9.84 8.50;D 1384 1053 1762.0 43.2; 240 278 131 33.6 2990;1741.3 9.40 9.40 784.8 784 45.1 46.4 432; 947 26.4 5.23;1.02 .84 9.84 8.50;D 435: 948 26.5 5.24:1.12 1385 1056 1763.0 27.31 229 270 130 33.1 299011741.6 9.40 9.40 785.9 784 45.0 46.7 .95 9.84 8.501D 1386 1058 1764.0 29.21 236 262 129 32.6 299011741.6 9.40 9.40 784.7 784 45.0 46.4 436: 949 26.5 5.24:1.10 .93 9.85 8.50:D 1387 1109 1765.0 32.61 222 270 135 33.2 301011743.2 9.40 9.40 784.5 774 44.6 46.4 447: 950 26.6 5.25:11.09 .92 9.85 8.50:D1 1388 1110 1766.0 37.41 242 281 141 34.6 301011744.1 9.40 9.40 785.0 782 44.8 46.5 4471 951 26.6 5.2611.08 .90 9.85 8.501D 1389 1112 1767.0 32.11 214 244 141 32.6 301011745.1 9.40 9.40 786.3 785 45.0 46.8 4551 952 26.6 5.2611.10 .93 9.85 8.501D 1390 1114 1768.0 37.01 234 254 141 33.9 296011745.5 9.40 9.40 779.8 782 44.6 46.8 4621 953 26.6 5.2711.08 .90 9.85 8.501D 1391 1115 1769.0 57.6: 241 268 141 34.2 3000:1746.0 9.40 9.40 781.9 780 44.6 46.8 464: 954 26.7 5.27: .97 .79 9.85 8.501D 1392 1117 1770.0 28.51 238 275 141 34.8 301011746.8 9.40 9.40 783.9 783 44.4 46.7 4741 955 26.7 5.2711.15 .97 9.86 8.501D 1393 1118 1771.0 39.01 219 253 141 33.4 302011747.5 9.40 9.40 783.8 783 44.3 46.5 4811 956 26.7 5.2811.06 .88 9.86 8.501D .93 9.86 8.501D 1394 1120 1772.0 31.5; 213 255 141 33.0 3000;1748.5 9.40 9.40 784.7 783 44.1 46.4 490; 957 26.7 5.28;1.11 1395 1122 1773.0 33.6; 210 229 141 31.9 3010;1749.2 9.40 9.40 781.9 782 44.1 46.3 496; 958 26.8 5.29;1.08 .91 9.86 8.50¦D 1396 1124 1774.0 29.21 199 219 142 30.6 300011749.5 9.40 9.40 781.7 781 44.1 46.3 5031 959 26.8 5.3011.10 .93 9.86 8.501D 1397 1137 1775.0 19.71 190 232 136 32.6 304011752.4 9.40 9.40 787.0 785 43.4 46.3 5491 960 26.9 5.3111.21 1.03 9.89 8.5010 1398 1139 1776.0 33.41 205 233 138 33.2 304011753.3 9.40 9.40 785.0 785 43.5 46.6 5501 961 26.9 5.3111.08 .91 9.89 8.501D 1399 1142 1777.0 32.2; 208 243 137 33.3 3030;1755.1 9.40 9.40 785.0 784 44.0 46.6 550; 962 27.0 5.32;1.09 .92 9.89 8.501D 1400 1144 1778.0 26.81 208 235 138 33.8 301011756.3 9.40 9.40 786.2 785 44.2 46.7 549: 963 27.0 5.33:1.15 .97 9.88 8.501D 1401 1146 1779.0 38.9; 223 248 138 33.4 3000:1757.5 9.40 9.40 788.3 786 44.6 46.5 550; 964 27.1 5.33; 1.05 .87 9.88 8.50; D 1402 1148 1780.0 34.21 234 266 138 34.2 299011758.4 9.40 9.40 787.4 786 44.8 46.4 548: 965 27.1 5.34:1.09 .91 9.88 8.50:D 1403 1150 1781.0 36.41 223 265 138 33.5 299011759.1 9.50 9.40 786.9 786 45.0 46.5 5481 966 27.1 5.3411.07 .89 9.88 8.501D 1404 1152 1782.0 24.61 221 269 138 33.4 298011759.3 9.50 9.40 785.8 785 45.2 46.4 5471 967 27.2 5.3511.16 .99 9.89 8.501D :405 1202 1783.0 24.0: 209 256 139 29.7 2910:1761.5 9.50 9.40 773.5 769 45.8 46.2 543: 968 27.2 5.36:1.13 .96 9.89 8.50:D

			DEPTH	ROP!	TOR	QUE	RPM	WOB	PUMP:RTRNS	MD	lb/gal	FL	DW/MIN	TEI	1P (C)	PVT	-THIS	BIT-	EST				
									PRESIDEPTH								A	hr	T₩¦				¦
									3020:1764.3									27.3	5.3711	1.11	.94	9.90	8.50¦D
									302011765.6										5.3711				8.501D
									3020:1766.9										5.3811				8.50ID
									3010:1767.8										5.3911				8.50¦D
									3060:1768.7							5621	974	27.4	5.3911	1.11	.93	9.91	8.50lD
	1412	1216	1790.0	33.01	240	290	139	30.9	302011769.1	9.5	9.40	789.2	789	46.1	45.1	5601	975	27.5	5.4011	1.06	.89	9.92	8.50ID
									3030:1769.1							5581	976	27.5	5.401	1.05	.87	9.93	8.501D
									2950:1770.7										5.411				8.50¦D+
									3000:1771.6										5.411				8.50ID
									3040:1772.0										5.421				8.50¦D
									305011772.7										5.431				8.501D
									305011773.8										5.431				8.50ID
									3050:1774.7										5.4311 5.4411				8.501D 8.501D
									305011775.7 305011776.6										5.441				8.50ID
									3060:1777.0										5.451				8.501D
									306011777.0										5.451				8.50ID
									3060:1777.2										5.461				8.50ID
									306011781.7										5.471				8.50ID
									303011782.7										5.471				8.501D
									3030:1783.8										5.481		.93	9.98	8.501D
									3040:1784.8							5371	991	28.2	5.481	1.06	.88	9.98	8.50ID
~	1429	1312	1807.0	34.01	222	260	135	31.0	305011785.8	9.5	0 9.40	790.2	790	45.9	46.5	5381	992	28.2	5.491	1.05	.87	9.98	8.501D
									304011786.6							5381	993	28.2	5.491	1.06	.89	9.98	8.50!D
									3050:1786.7										5.501				8.501D
									305011787.6										5.501				8.501D
									305011787.8										5.511				8.5010
									306011791.2														8.501D1
									294011792.7														8.501D 8.501D
									2930:1793.8 2930:1795.7														8.5010
									2930:1797.4														8.50ID
									2950:1798.0														8.50ID
									296011798.0										5.551				8.50ID
									2950:1798.0														8.501D
									295011798.1							5371	1005	28.7	5.561	1.04	.87	9.98	8.50 D
	1443	1352	1821.0	30.71	237	272	136	30.8	2950:1798.6	9.5	0 9.40	778.0	777	46.3	46.4	5361	1006	28.7	5.571	1.07	.89	9.98	8.501D
	444	1354	1822.0	25.0	247	314	136	31.2	295011799.7	9.5	0 9.40	776.5	777	46.3	46.4	5361	1007	28.8	5.571	1.12	.95	9.98	8.501D
									d POOH.														1
	+ NB				with	3x16	. S	tart d	epth 1822m.														:
	!		Mar 5			0~1		,,,	005814888 1			744 -	7.4	74 ~	70 7	700.	1000		A 7 4		1 07	0.7/	0 5415
									2850:1822.0								1008						8.501D
									2820:1822.0								1009						8.501D 8.501D
									2880;1822.0 2930;1822.0								1010						8.501D
									2900:1822.0								4.97						8.501D1
									292011822.1								5.99						8.5010
									2930:1822.2								7.00						8.501D
									+														

Data Printed at time 05:09 Date Mar 14 '89 Data Recorded at time 02:08 Date Mar 5 '89

4			+					+								~~~~			1101	J U/		
! F#	TIME	DEPTH	ROP!	TOR	ROUE	RPM	WOB	PUMP!RTRNS	MD	lb/oa	I FLO	W/MIN	TEM	P (C)	PVT!	-THIS	 -TIR	FST!	DXC	NYR	ECD.	NYMU
1		a *	m/hrl	AVG	MAX	AVG	AVG	PRESIDEPTH	IN	OUT	IN	OUT	- IN	OUT		<u> </u>	hr	TW:	2.0	III	LOU	!
÷			+					PRESIDEPTH							+							+
1458	0208	1830.0	22.31	215	273	116	39.7	292011822.4	9.40	9.40	772.0	771	37.8	41.0	3201	7.98	.5	.151	1.22	1.21	9.80	8.50ID
								291011822.6							3221							8.5010
								292011822.8							3221				.96			8.50ID
1461	0213	1833.0	72.61	194	239	112	39.1	2930:1822.9	9.40	9.40	771.5	770	38.3	41.1	3201				.89			8.50ID
1462	0223	1834.0	68.91	204	258	115	33.3	291011824.4	9.40	9.40	773.0	770	39.6	41.0	3131				.86			8.50lD
1463	0224	1835.0	79.21	210	251	114	33.6	292011824.5	9.40	9.40	772.1	771	39.8	41.2	3121	13.0	.7	.151	.83	.82	9.81	8.50ID
:464	0225	1836.0	65.71	212	270	114	33.7	292011824.9	9.40	9.40	770.8	770	39.8	41.2	313!		.7	.15!	.88	.87	9.81	8.501D
1465	0226	1387.0	54.11	213	253	114	34.6	291011825.3	9.40	9.40	771.6	770	39.9	41.0	3111	15.0	.7	.151	.94	.93	9.81	8.50ID
1466	0227	1838.0	57.21	212	250	115	35.3	291011825.6	9.40	9.40	772.2	771	40.0	41.0	3121	16.0	.7	.15	.93	.92	9.82	8.50ID
								292011825.7							3111	17.0	.8	.151	.87	.86	9.82	8.50ID
								296011826.5							3691	19.0	.8	.15	1.01	1.00	9.74	8.501D¥
								2880;1826.8							3501	18.9	.9	.151	.73	.72	9.83	8.501D1
								2880:1826.8							348!	20.0			.68	.70	9.84	8.5010
								2880:1826.8								22.0			.72	.71	9.85	8.50ID
								2880:1826.8							3491	23.0			.79			8.50ID
								2890:1826.8								24.0			.84		9.86	8.50lD
								2880:1826.8											.83			8.50ID
								288011826.8							3531				.90			8.501D
								236011830.8							4021							8.50:04
								237011832.7							4071							8.50ID-
								2010:1846.8							4841							8.50ID
								263011848.5							4901							8.501D
								241011848.5							4971					1.45		
								245011850.1							5031							8.5010
								207011850.2														8.50ID
								2640:1850.2							5111							8.50101
								2220;1850.2 2210;1850.2							5041							8.50ID
								221011850.2							4911							8.50ID
								221011852.3							4811							8.50¦D
								2360:1856.8														8.501D 8.501D
								2040:1860.4														8.50ID
								2300:1860.6														
								2480:1861.7							5011							8.501D
								2520:1862.6							5191		3.7					8.50ID
								3030:1863.1							5251		3.8					8.50ID
								2360:1865.0							5721		4.2					8.50 D1
								2250:1866.4							5671		4.4					8.50¦D
		1869.0						2240:1866.5							5611		4.6					8.50ID
1497	0817	1870.0	7.421	176	229	78	35.7	225011866.5							5641		4.7					8.50ID
								232011866.8							5551		4.8					8.50¦D↑
1499	0837	1872.0	10.81	197	343	73	33.5	230011866.9	9.50	9.50	692.5	691	37.5	37.6	5541		4.9					8.50ID
								2310:1867.6							5491	51.0	5.0		.99			8.50¦D
								2320:1867.7							5481		5.1	.19:	.80	.79	9.88	8.50¦D
								232011868.0							5491			.191				8.501D
		1876.0						2320:1869.7							5391							8.50¦D
								2320:1869.8								55.0		.191				8.50ID
								2320:1870.0								56.0			.99			8.50
+			+					+														

Data Recorded at time 09:11 Date Mar 5 '89

F#	TIME	DEPTH	ROP:	TOR AVG	QUE Max	RPM AVG	WOB AVG	PUMP!RTRNS PRES!DEPTH	MD I N	lb/gal OUT	FL(In	MIM/WC Tuo	TE . IN	MP (C) OUT	PVT:	-THIS	BIT- hr	EST:	DXC	NXB	ECD	NXMD:
506	0911	1879.0	36.81	189	275	82	31.3	232011870.5	9.50	9.50	692.9	692	37.6	36.8	5381	57.0	5.3	.191	.91	.91	9.89	8.501D
								232011870.7														8.50ID
								216011872.5							5261							8.50 D
								2160:1872.5							5231							8.501D
								2160:1872.8 2170:1874.2							523 l 520 l							8.501D 8.501D
								2290:1875.3							5201							8.50ID
								2270:1875.6							5191							8.501D
								2290:1875.6							5191							8.501D
								230011875.6							5151							8.501D
								2300:1875.6							5161							8.501D
								2850:1889.6								70.0						8.50ID
								290011891.2							4871							8.501D
								1500:1891.8							4931							8.50ID
								2880:1892.8							4901							8.50!D
								2890:1892.9							4881					.59		
								2890:1892.9							4881		7.2	.201	.62	.62	9.58	8.5010
								2890:1893.0							4861			.201		.73		
								2900:1893.0							4871	77.0	7.2	.201	.61	.61	9.59	8.5011
								291011893.6							5101	78.0	7.3	.201	.75	.75	9.59	8.5011
								290011893.9							5081	79.0	7.3	.201	.80	.80	9.60	8.5010
								2900:1894.4							5081	80.0	7.4	.201	.85	.85	9.60	8.5011
528	1250	1903.0	29.01	160	224	73	19.7	2900:1894.5	9.40	9.50	788.8	787	37.5	37.5	5081	81.0	7.4	.201	.86	.86	9.61	8.5010
529	1254	1904.0	14.4	127	235	80	16.7	2900:1894.5	9.4	9.50	788.4	788	37.5	37.2	5101	82.0	7.5	.201	1.00	1.00	9.61	8.5011
								290011894.5								83.0		.201		.93		
								2900:1894.5								84.0				1.00		
								2890:1894.5								85.0				1.12		
								2880:1898.7								85.9				1.06		
								2870:1899.8								87.0				.84		
								2840:1903.0								88.0						8.5011
								2830:1903.6												.58		
								2830:1904.1									8.0	.201	.61	.61	9.60	8.501
								282011904.3												.77		
								281011905.0									9.1	.201	. 54			
								1360:1909.1								93.0						8.501 8.501
								135011909.1								94.0	8.3		.71 .99			8.50
								1350:1909.2 1370:1913.2								95.0 96.0				1.01		
		1918.0						1370;1713.2								97.0	8.6			1.03		
		1919.0 1920.0						137011714.3								98.0	8.7			1.02		
		1921.0						137011715.4								99.0	8.7		.52			8.501
		1922.0						1370:1713.6								100	8.8		.53			8.501
		1923.0						1380:1917.3								101	8.9		.53			8.501
		1924.0						1380;1919.5								102	8.9		.54			8.501
		1925.0						1370;1921.0								103	9.4			1.64		
		1926.0						1440:1923.2								104						
								291011925.1								105						
								2920:1927.0								106						

t-------I F# TIME DEPTH ROP! TORQUE RPM WOB PUMPIRTRNS MD lb/gal FLOW/MIN TEMP (C) PVT! -THIS BIT- EST! DXC NXB ECD NXMD. i m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT | m hr TW; + NB#5 Reed HP51 12.25", jets 2x16,18. Start depth 1928m. 1 Date Mar 6 '89 1559 0405 1929.0 22.0; 146 215 52 16.0 2830;1928.0 9.40 9.40 723.3 729 31.0 34.4 545;1.00 .2 .00; .88 .89 9.56 8.50;D 1560 0410 1930.0 17.31 190 337 55 21.1 284011928.0 9.40 9.40 727.8 727 31.5 35.2 54212.00 .3 .0111.00 1.01 9.57 8.501D 1561 0417 1931.0 14.41 194 372 52 19.9 278011928.0 9.40 9.40 730.0 728 32.4 35.5 54113.00 .4 .0111.03 1.03 9.58 8.501D 1562 0438 1932.0 16.5; 218 372 58 24.3 2830;1928.0 9.40 9.40 723.8 723 34.1 36.0 527;4.04 .7 .01;1.05 1.06 9.58 8.50;D 1563 0447 1933.0 17.2; 279 646 52 30.4 2840;1928.2 9.40 9.40 725.6 724 34.9 36.7 529;5.00 .8 .02;1.11 1.11 9.58 8.50;D 1564 0449 1934.0 29.41 219 286 82 31.1 276011928.4 9.40 9.40 727.0 726 35.0 36.7 52915.98 .9 .021 .98 .98 9.59 8.501D 1565 0452 1935.0 19.5; 218 272 87 33.4 2790:1928.6 9.40 9.40 728.2 727 35.3 36.7 526:7.00 .9 .02:1.10 1.11 9.59 8.50:D 1566 0454 1936.0 38.51 266 310 80 34.9 286011928.6 9.40 9.40 725.6 726 35.5 36.8 52618.00 .9 .021 .94 .94 9.60 8.501D 1567 0456 1937.0 29.01 264 314 56 35.2 280011928.6 9.40 9.40 725.0 724 35.6 36.7 52618.98 1.0 .0211.01 1.02 9.60 8.501D 1568 0458 1938.0 28.1; 246 297 54 39.6 2790;1928.6 9.40 9.40 728.3 727 35.7 36.7 52419.96 1.0 .0211.06 1.07 9.61 8.501D 1569 0509 1939.0 6.871 226 620 55 19.8 268011931.5 9.40 9.40 727.3 727 36.4 36.6 520111.0 1.2 .0311.19 1.20 9.60 8.501D 1570 0523 1940.0 21.21 199 456 89 21.1 257011930.4 9.40 9.40 711.0 710 36.8 35.9 513112.0 1.4 .031 .95 .96 9.61 8.501Df 1571 0530 1941.0 11.6: 282 548 94 35.6 2670:1932.2 9.40 9.40 713.3 712 36.8 36.5 509:13.0 1.5 .03:1.32 1.32 9.60 8.50:0 1572 0537 1942.0 27.71 261 362 109 33.4 268011932.3 9.40 9.40 712.5 712 36.9 36.6 506114.0 1.6 .0411.11 1.10 9.61 8.501D 1573 0538 1943.0 65.31 408 510 97 29.4 269011932.5 9.40 9.40 711.7 711 36.9 36.6 507114.9 1.6 .041 .82 .82 9.61 8.501D 1574 0546 1944.0 27.0; 272 637 112 17.0 2650;1936.0 9.40 9.40 712.9 712 37.0 36.5 504;16.0 1.7 .04; .94 .93 9.60 8.50;D 1575 0547 1945.0 58.01 277 635 114 13.4 263011936.6 9.40 9.40 711.7 711 37.0 36.5 504117.0 1.7 .041 .73 .73 9.60 8.501D 1576 0608 1946.0 6.861 222 631 101 8.49 263011939.7 9.40 9.40 715.0 714 37.3 36.6 491118.0 2.0 .0511.04 1.04 9.59 8.501D 1577 0609 1947.0 52.61 203 331 111 11.1 270011939.7 9.40 9.40 714.0 713 37.3 36.6 491119.0 2.0 .051 .71 .71 9.59 8.5010 1578 0612 1948.0 22.01 236 527 100 8.01 267011939.7 9.40 9.40 714.3 712 37.3 36.6 490120.0 2.1 .051 .81 .81 9.60 8.501D 1579 0613 1949.0 47.41 131 208 112 7.79 273011939.8 9.40 9.40 713.9 713 37.3 36.7 490121.0 2.1 .051 .68 .68 9.60 8.50 1580 0623 1950.0 36.61 150 250 91 10.2 275011940.5 9.40 9.40 714.6 691 37.4 36.6 480122.0 2.1 .051 .73 1581 0624 1951.0 54.41 223 263 99 22.3 269011940.8 9.40 9.40 717.1 710 37.4 36.5 481123.0 2.1 .051 .81 .73 9.61 8.50 Dr .81 9.61 8.501D 1582 0625 1952.0 56.9: 209 246 100 22.0 2670:1941.1 9.40 9.40 716.1 714 37.3 36.4 480:23.9 2.2 .05: .80 .80 9.61 8.50ID 1583 0632 1953.0 19.91 236 487 96 18.5 264011942.8 9.40 9.40 717.0 716 37.4 36.7 477125.0 2.2 .051 .99 .99 9.61 8.5010 1584 0639 1954.0 15.2; 215 491 99 7.95 2730;1943.4 9.40 9.40 717.2 716 37.4 36.6 474;26.0 2.3 .06; .87 .87 9.61 8.50;D1 1585 0641 1955.0 38.61 143 208 120 4.74 265011944.9 9.40 9.40 713.7 713 37.4 36.6 473127.0 2.4 .061 .67 .66 9.61 8.5010 1586 0642 1956.0 31.91 169 315 119 7.12 269011945.0 9.40 9.40 714.7 714 37.4 36.6 471128.0 2.4 .061 .75 .75 9.61 8.501D | 1587 0645 1957.0 26.2| 136 196 120 8.5| 2580|1945.0 9.40 9.40 713.1 712 37.4 36.7 | 471|29.0 2.4 .06| .82 .81 9.62 8.50|D | 1588 0647 1958.0 22.4| 172 233 120 16.1 2740|1945.0 9.40 9.40 713.1 713 37.4 36.7 | 468|30.0 2.5 .06| .98 .97 9.63 8.50|D | 1589 0702 1959.0 31.4| 212 258 100 29.5 2790|1945.1 9.40 9.40 718.6 712 37.3 37.2 | 465|31.0 2.6 .06|1.01 1.01 9.63 8.50|D | 1590 0709 1960.0 7.691 218 366 89 32.3 276011948.0 9.40 9.40 725.9 725 37.4 36.8 463132.0 2.7 .0711.37 1.37 9.62 8.5010 1591 0715 1961.0 11.0: 237 313 99 33.6 2750:1949.7 9.40 9.40 724.4 724 37.5 36.7 457:33.0 2.8 .07:1.32 1.32 9.62 8.50:D 1592 0717 1962.0 25.31 231 331 65 33.9 281011950.4 9.40 9.40 725.8 725 37.5 36.6 458134.0 2.8 .0711.00 1.01 9.62 8.501D 1593 0721 1963.0 40.7; 201 451 94 9.20 2750;1952.7 9.40 9.40 729.4 729 37.5 36.7 454;35.0 2.8 .07; .70 .70 9.61 8.50;D* 1594 0721 1964.0 1111 213 233 108 12.5 281011952.7 9.40 9.40 727.1 727 37.5 36.8 455135.9 2.9 .071 .58 .57 9.61 8.50ID 1595 0722 1965.0 89.51 239 284 106 20.7 276011952.7 9.40 9.40 726.2 726 37.5 36.8 454137.0 2.9 .071 .70 1596 0723 1966.0 69.21 227 255 106 21.0 284011952.7 9.40 9.40 726.5 726 37.5 36.8 453138.0 2.9 .071 .76 .69 9.62 8.501D .76 9.63 8.5010 1597 0724 1967.0 88.7; 264 370 102 20.1 2650;1952.7 9.40 9.40 727.6 726 37.5 36.8 454;39.0 2.9 .07; .68 .68 9.63 8.501D 1598 0728 1968.0 23.31 262 492 92 6.97 276011953.7 9.40 9.40 725.0 725 37.5 36.8 451140.0 2.9 .071 .76 .76 9.63 8.501D 1599 0732 1969.0 32.7; 117 255 110 2.60 2870;1954.0 9.40 9.40 727.0 726 37.5 36.8 448;41.0 3.0 .08; .61 .61 9.64 8.50 Dt 1600 0747 1970.0 109; 217 292 102 18.6 2900;1958.7 9.40 9.40 744.8 711 37.4 36.6 441;42.0 3.0 .08; .63 .63 9.62 8.50;D1 1601 0750 1971.0 27.31 263 491 75 17.9 280011958.7 9.40 9.40 724.2 726 37.4 37.2 441143.0 3.0 .081 .86 .86 9.62 8.501D1 1602 0755 1972.0 19.61 157 281 102 4.85 283011959.0 9.40 9.40 725.3 724 37.3 37.4 439144.0 3.1 .081 .75 .75 9.62 8.501D 1603 0757 1973.0 25.11 136 258 104 4.65 282011959.3 9.40 9.40 721.6 722 37.3 37.2 443145.0 3.1 .081 .71 .71 9.63 8.501D 1604 0758 1974.0 58.91 179 258 103 7.48 267011959.5 9.40 9.40 725.6 723 37.3 37.2 443146.0 3.2 .081 .62 .62 9.63 8.501 +-----+

Data Printed at time 05:23 Date Mar 14 '89
Data Recorded at time 08:05 Date Mar 6 '89

.								+									, :	1				
F#	TIME	DEPTH	ROP!	TOR	QUE	RPM	MOB	PUMP!RTRNS PRES!DEPTH	MD	lb/gal	FLO)W/MIN	TEI	MP (C)	PVT	-THIS	BIT-	EST	DXC	NXB	ECD	NXMD!
+ :605	0805	1975.0	10.31	298	578	88	10.0	2780:1960.7	9.40	9.40	722.1	722	 37.2	36.9	450:	47.0	3.3	.08!	.96	.96	9.63	8.50!N
								2640:1974.8														
								2690:1974.9														
806	0855	1978.0	16.81	245	634	120	6.03	259011975.3	9.40	9.50	728.3	727	36.8	36.8	5011	50.0	3.4	.081	.84	.84	9.57	8.501D
								1320:1975.4														8.50¦D
								1380:1975.4														8.50lD
								1350:1975.4								53.0						
								1450:1975.4								54.0						8.501D
								1490:1975.4										.081				8.5010
								145011975.4										.081				8.501D
								1440:1975.4 1490:1975.4														8.501D 8.501D
								1500:1775.4														8.50ID
								150011775.4														8.501D
								1400:1975.4														8.501D
								1590:1975.4														8.50ID
								147011975.4										.081				8.501D
								1540:1975.4														8.501D
1623	0952	1993.0	34.71	282	464	110	8.30	158011975.4	9.40	9.50	543.3	542	36.6	37.3								8.501D
1624	0957	1994.0	18.71	213	508	109	7.88	1590:1975.4	9.40	9.50	541.8	541	36.7	37.3	5231	66.0	4.2	.081	.85	.84	9.64	8.50lD
								1580:1975.4							5221	67.0	4.2	.081	.71	.71	9.65	8.50¦D
								1470:1975.8														8.50ID
								1530:1976.2								68.9						8.50¦D
								1500:1977.7														8.50!D
								1790:1977.9								71.0						8.501D
								1420:1978.4														8.501D
								1400;1989.4 1420;1989.4								73.0						8.501D
								2840:1767.4								74.0 75.0						8.501D 8.501D
								2790:1792.5														8.50ID
								2830:1993.1														8.501D
								280011994.0														8.501D
								2930:2000.1														8.50¦D
1638	1211	2008.0	8.671	391	539	90	17.5	291012003.3	9.40	9.50	744.3	743	38.0	38.6	4871	80.0						8.50¦D
1639	1232	2009.0	7.701	405	556	100	7.35	283012006.4	9.40	9.50	743.0	742	38.9	39.1	4781	81.0	6.0	.211	.98	.98	9.57	8.5010
								269012007.6								82.0	6.2					8.501D
								271012007.6								83.0	6.3					8.501D
								267012007.6								84.0		,				8.501D
								2540:2008.1								85.0						8.501D
								267012008.4								86.0						8.5010
								269012009.4 252012009.7								87.0 88.0	6.7 6.7	.251				8.501D 8.501D
								271012010.1								89.0	6.8	.261				8.5010
								261012010.9								90.0		.261				8.50¦D↑
								2640:2011.3								91.0		.271				8.501D1
								2710:2012.3								92.0		.271				8.501D1
								274012013.6														8.5010
1652	1413	2022.0	47.51	216	266	119	33.0	279012013.6	9.40	9.50	732.8	732	40.7	40.1	417	94.0	7.1	.281	.99	.97	9.60	8.50ID
+ -			+					+										+				+

Data Printed at time 05:28 Date Mar 14 '89 Data Recorded at time 14:14 Date Mar 6 '89

+			4					+				vata	NECOI	ucu at	LIME	17:1	7	vate,	nar	0 67		
								PUMP!RTRNS														
1		a	a/hr:	AVG	MAX	AVG	AVG	PRESIDEPTH	IN	nut	IN	NIIT	· TN	NIIT	1 * 1 1	11117	br	TH!	UAL	IVAD	CUD	NADU.
+			+					+							، +			ını 4				1
1653	1414	2023.0	50.71	220	269	119	32.9	278012013.6	9.40	9.50	734.2	733	40.7	40.1	4161	95.0	7.1	.291	. 97	.96	9.61	9 50!n
								279012013.7								96.0						
								276012013.7										.291				8.50¦D
								269012013.7										.291				8.501D
								270012013.7										.301				8.50¦D
								269012015.4														8.50:D1
								270012015.5								101						8.501D
								268012016.0														8.50ID
								269012016.3														8.501D
								259012016.9														8.501D
								271012017.1														8.50ID
1664	1448	2034.0	25.21	193	238	118	32.2	272012017.6	9.40	9.50	723.5	722	40.8	40.1								8.50ID
1665	1458	2035.0	6.121	156	216	115	33.9	2680:2017.9	9.40	9.50	723.8	722	40.8	40.1								8.50ID
1666	1507	2036.0	7.371	134	186	116	33.5	270012020.3	9.40	9.50	722.5	722	40.8	40.3								8.50¦D
1667	1512	2037.0	11.41	144	232	110	32.9	261012024.5	9.40	9.50	722.6	721	40.8	40.2								8.50¦D↑
1668	1533	2038.0	26.51	220	326	119	25.5	280012029.5	9.40	9.50	728.2	728	40.2	40.5								8.50!D
1669	1538	2039.0	24.11	288	553	103	18.6	277012030.9	9.40	9.50	731.3	730	40.2	40.6	3901							8.50ID
1670	1540	2040.0	30.21	183	326	114	21.2	272012031.4	9.40	9.50	730.4	730	40.2	40.4	3901							8.5010
1671	1542	2041.0	34.01	220	328	113	34.2	276012032.3	9.40	9.50	730.1	730	40.2	40.2	3941							8.501D†
1672	1544	2042.0	50.71	242	298	115	31.3	272012032.9	9.40	9.50	730.3	729	40.2	40.2	3981							8.50101
								282012033.0							3991	115	8.3	.411	.86	.84	9.61	8.501D
								275012033.4							4011	116	8.3	.411	1.14	1.13	9.61	8.50 D
								276012034.1							4091					1.21		
								267012035.2							4321	118	8.5	.431	.96	.94	9.61	8.501D†
								281012035.4							4341	119	8.5	.431	.81	.80	9.62	8.5010
								283012036.7									8.6	.44¦	.96	.94	9.62	8.50lD
								274012036.7							4421	121	8.7	.451	1.23	1.22	9.62	8.501D
								277012036.7									8.8	.451	1.09	1.07	9.63	8.50¦D
								281012037.4														8.501D†
								279012037.9														8.501D†
								278012038.4														8.50:D1
								270012038.7								126						8.501D1
								271012044.0														8.50¦D
								274012044.4							4521							8.501D
								269012044.5							4521							8.501D
								271012045.9							4561		9.1					8.50ID
								261012046.0							4571							8.501D
								271012046.4							4561							8.501D
								271012048.2							4571							8.5010
								277012049.7							4601							8.501D
								2710:2051.3							4581			.511				8.501D
								274012052.6 279012054.1							4601			.521				8.50ID
								275012055.2							4611			.521				8.501D
		2067.0													4581							8.501D+
								276012057.9							460¦ 460¦		9.8					8.501D
								273012058.7									9.9					8.50¦D 8.50¦D
								274012059.3														8.501

! F# TIME DEPTH ROP! TORQUE RPM WOB PUMP¦RTRNS MD 1b/qal FLOW/MIN TEMP (C) PVT¦ -THIS BIT- EST! DXC NXB ECD NXMD; ! m m m/hr: AVG MAX AVG AVG PRES:DEPTH IN OUT IN OUT IN OUT : m hr TW: ; 1701 1805 2071.0 23.0; 217 256 118 37.1 2760; 2060.0 9.40 9.50 727.6 728 40.8 40.6 463; 143 10.0 .60; 1.21 1.19 9.61 8.50; D 1702 1807 2072.0 24.11 243 323 119 39.3 283012061.1 9.40 9.50 727.2 727 40.9 40.5 4631 144 10.0 .6111.22 1.20 9.61 8.501D 1703 1810 2073.0 27.7; 228 289 120 39.8 2700;2061.4 9.40 9.50 729.6 728 40.9 40.6 465; 145 10.1 .62;1.19 1.17 9.62 8.50;D 1704 1813 2074.0 17.01 219 271 119 41.1 286012062.1 9.40 9.50 729.5 729 40.9 40.7 4661 146 10.1 .6311.33 1.31 9.62 8.5010 1705 1815 2075.0 43.31 255 376 115 39.9 273012062.3 9.40 9.50 728.4 728 40.8 40.6 4671 147 10.2 .6411.06 1.03 9.62 8.501D 1706 1838 2076.0 18.91 207 304 113 39.0 275012066.0 9.40 9.50 724.6 724 40.5 41.2 4711 148 10.3 .6711.27 1.25 9.61 8.501D 1707 1841 2077.0 18.5; 191 247 119 38.4 2770;2066.0 9.40 9.50 727.6 726 40.5 40.3 472; 149 10.4 .69;1.28 1.26 9.61 8.50;D 1708 1845 2078.0 15.8; 195 239 119 38.4 2760;2066.0 9.40 9.50 725.9 725 40.7 40.8 473; 150 10.4 .70;1.33 1.30 9.62 8.50;D 1709 1849 2079.0 14.5; 203 253 120 38.2 2790;2066.7 9.40 9.50 724.5 724 40.7 40.5 474; 151 10.5 .72;1.35 1.32 9.62 8.50;D 1710 1854 2080.0 12.8; 190 260 120 38.4 2800;2067.8 9.40 9.50 725.4 725 40.8 40.5 475; 152 10.6 .74;1.39 1.36 9.62 8.50;D 1711 1900 2081.0 14.41 220 322 118 38.1 272012069.2 9.40 9.50 726.2 725 40.9 40.4 4761 153 10.7 .7611.19 1.17 9.62 8.501Df 1712 1904 2082.0 50.51 248 338 119 38.5 286012070.6 9.50 9.50 725.0 724 41.0 40.6 4761 154 10.7 .761 .62 .64 9.62 8.501D 1713 1905 2083.0 57.41 276 381 118 37.7 275012071.1 9.50 9.50 726.9 725 41.0 40.6 4761 155 10.7 .761 .74 .74 9.62 8.501Df 1714 1909 2084.0 19.61 234 296 121 38.5 283012072.4 9.50 9.50 726.4 725 41.0 40.7 4761 156 10.8 .7711.17 1.15 9.62 8.501D 1715 1927 2085.0 15.01 220 299 118 38.5 274012075.7 9.50 9.50 724.8 723 41.1 41.4 4711 157 11.0 .8011.27 1.25 9.63 8.501D 1716 1936 2086.0 9.051 202 265 119 38.6 278012077.1 9.50 9.50 724.0 723 41.2 41.2 4721 158 11.1 .8311.44 1.41 9.64 8.501D 1717 1941 2087.0 26.81 263 378 112 38.7 264012078.4 9.50 9.50 723.1 722 41.4 41.1 4691 159 11.1 .831 .89 .89 9.65 8.501D 1718 1952 2088.0 49.61 230 365 113 22.3 277012080.4 9.50 9.50 722.8 723 41.6 41.2 4701 160 11.2 .831 .38 .40 9.67 8.501D 1719 1955 2089.0 22.21 228 283 118 34.3 279012080.8 9.50 9.50 722.2 722 41.6 41.2 4681 161 11.2 .8411.18 1.16 9.68 8.5010 1720 1957 2090.0 23.31 234 284 120 36.5 264012081.4 9.50 9.50 724.2 723 41.5 41.2 4711 162 11.3 .8511.20 1.17 9.69 8.501D 1721 2000 2091.0 25.01 223 278 120 34.1 263012081.9 9.50 9.50 723.0 722 41.5 41.2 4741 163 11.3 .8611.15 1.12 9.69 8.501D 1722 2002 2092.0 24.01 229 428 121 34.1 270012083.1 9.50 9.50 723.6 722 41.4 41.3 4771 164 11.3 .8711.17 1.14 9.69 8.501D 1723 2004 2093.0 36.81 225 362 120 31.6 278012083.6 9.50 9.50 723.7 722 41.3 41.2 4751 165 11.4 .8811.03 1.00 9.70 8.501D 1724 2018 2094.0 18.71 223 336 120 35.1 279012085.1 9.50 9.50 721.9 720 40.9 41.3 4861 166 11.5 .9011.24 1.21 9.70 8.501D 1725 2022 2095.0 19.81 324 581 123 20.2 259012085.6 9.50 9.50 721.4 720 40.9 41.6 4881 167 11.5 .9211.05 1.02 9.70 8.501D 1726 2024 2096.0 29.61 205 266 119 23.1 272012085.7 9.50 9.50 719.3 719 40.9 41.4 4881 168 11.6 .9211.00 .97 9.71 8.501D 1727 2028 2097.0 12.81 220 283 119 35.9 274012086.2 9.50 9.50 722.2 720 41.0 41.2 4931 169 11.7 .9411.35 1.31 9.71 8.501D 1728 2033 2098.0 14.01 231 339 120 35.8 278012086.9 9.50 9.50 721.5 720 41.0 41.1 4981 170 11.7 .9611.32 1.29 9.71 8.501D 1729 2034 2099.0 51.51 218 294 120 35.6 271012087.1 9.50 9.50 722.5 721 41.0 41.1 4961 171 11.7 .961 .98 .95 9.72 8.501D 1730 2035 2100.0 62.41 198 232 119 35.1 272012087.2 9.50 9.50 721.1 720 41.0 41.2 4991 172 11.8 .971 .92 .89 9.72 8.501D 1731 2038 2101.0 16.2; 203 244 119 36.1 2630; 2087.8 9.50 9.50 721.3 720 41.0 41.1 501; 173 11.8 .98; 1.28 1.25 9.72 8.50; D 1732 2053 2102.0 18.21 202 254 119 33.9 271012088.8 9.50 9.50 722.4 711 40.8 41.2 5061 174 12.0 1.0111.23 1.20 9.72 8.501Df 1733 2055 2103.0 23.01 235 284 119 33.6 263012089.7 9.50 9.50 724.7 723 40.8 41.7 5041 175 12.0 1.0211.17 1.13 9.72 8.5010 1734 2057 2104.0 33.61 240 288 119 33.9 277012090.4 9.50 9.50 723.5 723 40.8 41.6 5041 176 12.0 1.0311.07 1.04 9.73 8.501D 1735 2102 2105.0 13.61 221 276 119 34.4 272012092.1 9.50 9.50 724.1 723 40.9 41.3 5091 177 12.1 1.0511.31 1.28 9.72 8.501D 1736 2105 2106.0 16.71 226 274 119 34.0 277012093.9 9.50 9.50 725.5 724 40.9 41.2 5091 178 12.2 1.0611.25 1.22 9.72 8.501D 1737 2109 2107.0 14.6! 219 269 119 34.3 281012093.9 9.50 9.50 723.3 722 41.0 41.0 513! 179 12.3 1.08!1.29 1.26 9.72 8.50!D 1738 2113 2108.0 17.1; 206 260 119 34.0 2780;2094.2 9.50 9.50 724.1 723 41.0 40.7 516; 180 12.3 1.09;1.25 1.21 9.73 8.50;D 1739 2115 2109.0 19.31 202 272 119 33.2 274012095.0 9.50 9.50 722.5 722 41.0 41.1 5181 181 12.4 1.1011.21 1.17 9.73 8.5010 1740 2117 2110.0 37.9; 283 484 122 33.0 2620;2095.0 9.50 9.50 723.9 722 41.0 41.1 519; 182 12.4 1.11;1.03 1.00 9.73 8.50;D 1741 2120 2111.0 17.5; 210 248 119 33.6 2790; 2096.6 9.50 9.50 724.6 724 41.0 41.1 513; 183 12.4 1.12; 1.24 1.20 9.73 8.50; D 1742 2126 2112.0 10.5; 199 245 119 33.7 2810;2097.9 9.50 9.50 724.1 723 41.3 41.0 508; 184 12.5 1.14;1.37 1.33 9.73 8.50;D 1743 2129 2113.0 18.0; 198 261 119 33.6 2760;2098.7 9.50 9.50 722.7 722 41.4 40.9 507; 185 12.6 1.16;1.23 1.19 9.73 8.50;D 1744 2148 2114.0 12.4; 248 419 121 33.7 2800;2102.6 9.50 9.50 723.5 722 41.5 41.5 498; 186 12.8 1.20;1.33 1.29 9.71 8.50;D 1745 2156 2115.0 12.01 225 293 119 31.6 177012104.7 9.50 9.50 560.8 519 41.6 41.6 4991 187 12.9 1.2311.31 1.27 9.70 8.501D 1746 2159 2116.0 17.31 224 277 119 33.8 171012105.5 9.50 9.50 561.7 561 41.6 41.6 4971 188 13.0 1.2411.25 1.21 9.70 8.501D 1747 2204 2117.0 18.0 242 359 120 33.3 2770 2106.2 9.50 9.50 698.8 578 41.6 41.7 487 189 13.1 1.26 11.23 1.19 9.70 8.50 ID 1748 2206 2118.0 29.6; 307 450 121 32.8 2840; 2106.7 9.50 9.50 721.1 708 41.7 41.4 484; 190 13.1 1.27; 1.10 1.06 9.71 8.50; D **+-----**

t------! F# TIME DEPTH ROP! TORQUE RPM WOB PUMP!RTRNS MD 1b/qal FLOW/MIN TEMP (C) PVT! -THIS BIT- EST; DXC NXB ECD NXMD. ! m m/hr! AVG MAX AVG AVG PRES!DEPTH IN OUT IN OUT IN OUT ! m hr TW! ; 1749 2208 2119.0 32.7; 280 437 121 29.7 2800;2107.2 9.50 9.50 720.7 718 41.7 41.7 485; 191 13.1 1.27;11.04 1.00 9.72 8.50;D 1750 2216 2120.0 31.41 309 581 123 26.7 264012108.3 9.50 9.50 720.5 721 41.8 41.1 4811 192 13.2 1.2911.02 .98 9.71 8.501D 1751 2217 2121.0 60.7; 309 384 120 32.8 2780;2108.8 9.50 9.50 721.3 711 41.8 41.1 480; 193 13.2 1.29; .91 .87 9.72 8.50;D 1752 2217 2122.0 68.71 297 339 120 34.6 281012109.3 9.50 9.50 720.2 717 41.8 41.1 4811 194 13.3 1.301 .89 .85 9.72 8.501D 1753 2231 2123.0 19.3; 224 579 123 19.6 2760;2112.2 9.50 9.50 722.4 714 41.7 41.4 471; 195 13.4 1.32;1.05 1.01 9.71 8.50;D↑ 1754 2232 2124.0 12.5; 254 286 119 34.7 2850;2112.4 9.50 9.50 724.2 721 41.7 41.5 470; 195 13.4 1.33;1.19 1.16 9.71 8.50;D↑ 1755 2241 2125.0 11.5; 219 275 119 34.1 2830;2113.4 9.50 9.50 723.4 722 41.8 41.4 464; 197 13.6 1.36;1.35 1.31 9.72 8.50;D↑ 1756 2246 2126.0 11.4: 216 259 119 34.3 2820:2113.4 9.50 9.50 725.0 724 41.8 41.3 460: 198 13.6 1.38:1.36 1.31 9.72 8.50:D 1757 2250 2127.0 12.7; 208 253 119 35.2 2760;2113.8 9.50 9.50 725.1 724 41.8 41.5 458; 199 13.7 1.40;1.34 1.29 9.72 8.50;D 1758 2255 2128.0 14.6; 193 241 119 33.7 2840;2114.2 9.50 9.50 723.0 722 41.9 41.3 456; 200 13.8 1.41;1.28 1.24 9.73 8.50;D 1762 2307 2132.0 35.31 224 283 119 33.7 276012115.9 9.50 9.50 725.5 723 41.9 41.5 4471 204 14.0 1.4611.06 1.01 9.74 8.501D 1763 2325 2133.0 14.51 217 292 119 34.7 285012117.9 9.50 9.50 723.9 723 41.7 41.4 4431 205 14.2 1.5011.30 1.25 9.73 8.501D 1764 2327 2134.0 11.61 323 582 123 34.0 269012117.9 9.50 9.50 722.6 722 41.7 41.5 4451 206 14.2 1.5111.34 1.30 9.73 8.501Dt 1765 2330 2135.0 39.71 195 246 119 20.8 282012119.6 9.50 9.50 725.9 724 41.7 41.6 4441 207 14.3 1.521 .90 .86 9.73 8.501D* 1766 2333 2136.0 24.31 253 303 120 33.9 277012120.2 9.50 9.50 723.0 722 41.7 41.5 4431 208 14.3 1.5311.15 1.11 9.73 8.501D 1767 2335 2137.0 32.71 252 295 120 33.8 276012120.3 9.50 9.50 723.5 723 41.7 41.3 4431 209 14.4 1.5411.08 1.03 9.74 8.501D 1768 2339 2138.0 12.51 208 273 119 32.5 283012120.6 9.50 9.50 725.7 724 41.7 41.3 4431 210 14.4 1.5511.31 1.26 9.74 8.501D 1769 2344 2139.0 13.71 210 268 119 33.6 275012120.9 9.50 9.50 723.3 722 41.7 41.4 4401 211 14.5 1.5711.30 1.25 9.75 8.501D 1770 2346 2140.0 23.81 218 293 119 31.5 282012121.1 9.50 9.50 723.3 722 41.7 41.3 4421 212 14.6 1.5811.13 1.09 9.75 8.5010 1771 2350 2141.0 14.51 195 254 119 31.9 285012121.3 9.50 9.50 723.7 722 41.7 41.3 4411 213 14.6 1.5911.26 1.21 9.76 8.501 1772 2356 2142.0 10.41 194 251 119 32.2 279012122.1 9.50 9.50 724.0 723 41.7 41.4 4401 214 14.7 1.6111.35 1.30 9.76 8.501D 1 Date Mar 7 '89 1773 0022 2143.0 11.81 260 408 121 39.4 277012123.5 9.50 9.50 709.1 709 41.7 42.0 4351 215 15.1 1.6811.41 1.35 9.70 8.501D 1774 0024 2144.0 18.01 246 348 120 39.9 267012123.8 9.50 9.50 707.7 707 41.8 41.9 4321 216 15.1 1.6911.30 1.24 9.70 8.501D 1775 0033 2145.0 10.61 283 577 123 36.4 269012127.1 9.50 9.50 708.2 707 41.9 42.1 4291 217 15.2 1.7311.40 1.35 9.69 8.501D1 1776 0035 2146.0 33.61 255 363 120 25.9 275012127.5 9.50 9.50 708.4 707 42.0 41.9 4281 218 15.3 1.7311.00 .95 9.69 8.501D 1777 0037 2147.0 37.31 324 490 122 30.6 269012127.9 9.50 9.50 709.1 708 42.0 41.9 4281 219 15.3 1.7411.02 .96 9.70 8.501D 1778 0039 2148.0 26.71 212 336 120 26.5 271012128.4 9.50 9.50 709.9 709 42.0 41.8 4271 220 15.3 1.7411.06 1.01 9.70 8.501D 1779 0041 2149.0 24.4; 146 199 118 24.3 2750;2129.0 9.50 9.50 708.1 708 42.1 41.8 427; 221 15.4 1.75;1.05 1.00 9.70 8.50;D 1780 0046 2150.0 14.2; 202 272 119 37.0 2740;2130.1 9.50 9.50 711.0 710 42.1 42.1 42.1 423; 222 15.5 1.77;1.33 1.27 9.70 8.50;D 1781 0059 2151.0 7.33; 183 252 119 38.3 2720;2132.1 9.50 9.60 708.3 707 42.2 42.2 420; 223 15.7 1.82;1.52 1.46 9.70 8.50;D 1782 0113 2152.0 14.3! 206 267 119 40.3 2740:2141.9 9.50 9.60 712.3 711 42.1 43.1 419: 224 15.8 1.85:1.37 1.31 9.65 8.50:D 1783 0115 2153.0 25.91 230 301 120 40.9 277012144.4 9.50 9.60 712.0 711 42.2 42.9 4191 225 15.8 1.8511.22 1.15 9.64 8.501D 1784 0124 2154.0 6.661 170 222 119 40.1 276012134.1 9.50 9.60 711.9 711 42.4 42.3 4181 226 16.0 1.8911.57 1.51 9.70 8.501D 1785 0133 2155.0 6.751 189 328 120 38.5 274012135.4 9.50 9.60 711.8 710 42.5 42.2 4151 227 16.1 1.9211.55 1.48 9.70 8.501D 1786 0139 2156.0 10.11 198 325 120 37.4 279012138.4 9.50 9.60 712.4 711 42.5 42.3 4181 228 16.2 1.9411.43 1.37 9.69 8.501D 1787 0142 2157.0 23.01 188 226 119 37.0 272012139.3 9.50 9.60 713.8 712 42.5 42.4 4181 229 16.3 1.9511.21 1.14 9.69 8.501D 1788 0145 2158.0 17.4: 176 232 119 36.2 2780:2139.9 9.50 9.60 711.1 711 42.5 42.0 416: 230 16.3 1.97:1.27 1.21 9.69 8.50:D 1789 0150 2159.0 12.6: 175 244 119 35.0 2730:2140.5 9.50 9.60 711.6 710 42.5 42.4 417: 231 16.4 1.98:1.34 1.28 9.69 8.50:D 1790 0159 2160.0 6.75; 160 211 119 35.3 2620;2140.9 9.50 9.60 711.9 710 42.5 42.6 418; 232 16.6 2.01;1.51 1.44 9.70 8.50;D 1791 0213 2161.0 15.1; 179 254 119 35.1 2770;2141.8 9.50 9.60 718.3 712 42.4 42.2 414; 233 16.7 2.04;1.30 1.23 9.70 8.50;D↑ 1792 0216 2162.0 20.9; 196 239 119 36.0 2790;2142.9 9.50 9.60 718.5 717 42.4 43.5 413; 234 16.7 2.05;1.22 1.16 9.70 8.50;D 1793 0218 2163.0 22.41 201 262 119 36.8 276012143.1 9.50 9.60 717.0 716 42.4 43.1 4131 235 16.8 2.0611.21 1.14 9.70 8.501D 1794 0226 2164.0 16.81 231 580 123 28.0 282012144.0 9.50 9.60 717.8 717 42.6 42.5 4041 236 16.9 2.0811.19 1.13 9.70 8.501D1 1795 0229 2165.0 21.91 194 282 119 26.0 284012144.3 9.50 9.60 717.6 717 42.6 42.5 4121 237 16.9 2.0811.10 1.04 9.70 8.501 **+-----**

Data Recorded at time 02:31 Date Mar 7 '89 : F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/qal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: ! m/m/hr: AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT | m hr TW: 1796 0231 2166.0 25.31 220 284 119 34.9 286012144.6 9.50 9.60 717.2 717 42.7 42.5 4131 238 17.0 2.0911.16 1.09 9.71 8.501D 1797 0236 2167.0 12.7; 205 279 119 35.8 2790;2145.2 9.50 9.60 717.6 716 42.7 42.7 414; 239 17.0 2.11;1.35 1.28 9.71 8.50;D 1798 0241 2168.0 10.9; 215 305 120 40.0 2790; 2146.4 9.50 9.60 717.6 716 42.6 42.8 418; 240 17.1 2.13; 1.43 1.36 9.71 8.50; D 1799 0246 2169.0 12.0: 180 286 119 36.3 2820:2148.1 9.50 9.60 716.4 716 42.4 42.8 442: 241 17.2 2.15:1.37 1.30 9.71 8.50:D 1800 0256 2170.0 20.6; 199 252 119 33.7 2850;2148.9 9.50 9.60 717.0 718 42.2 42.9 439; 242 17.3 2.16;1.20 1.13 9.68 8.50;D* 1801 0340 2171.0 19.0; 287 574 123 24.1 2700;2163.5 9.50 9.60 716.2 715 41.2 43.0 421; 243 17.8 2.25;1.12 1.05 9.64 8.50;D* 1802 0343 2172.0 18.3; 251 398 121 17.6 2690;2165.1 9.50 9.60 715.8 715 41.1 43.0 439; 244 17.9 2.26;1.04 .98 9.64 8.50;D-1803 0345 2173.0 23.51 199 293 119 24.0 269012165.2 9.50 9.60 716.6 715 40.8 43.0 4581 245 17.9 2.2711.07 1.00 9.64 8.501D 1804 0347 2174.0 42.01 235 290 119 34.4 269012165.4 9.50 9.60 716.5 716 40.8 43.0 4691 246 17.9 2.2711.03 .96 9.64 8.501D 1805 0350 2175.0 18.51 235 342 120 41.6 274012165.6 9.50 9.60 715.6 715 40.7 42.8 4781 247 18.0 2.2811.32 1.24 9.65 8.501D 1806 0356 2176.0 10.4! 176 221 119 40.3 2710!2166.3 9.50 9.60 717.0 716 41.6 42.7 476! 248 18.1 2.31!1.46 1.38 9.65 8.50!D 1807 0359 2177.0 18.3: 172 226 119 37.9 2730!2166.6 9.50 9.60 717.6 716 41.8 42.6 479: 249 18.1 2.32!1.28 1.20 9.65 8.50!D 1808 0402 2178.0 19.5: 199 249 119 37.0 2670:2166.3 9.50 9.60 717.2 715 42.1 42.7 484: 250 18.2 2.33:1.25 1.18 9.66 8.50:D 1809 0428 2179.0 26.5! 186 273 119 36.1 272012166.6 9.50 9.60 712.2 713 43.1 44.3 486: 251 18.3 2.34:1.16 1.09 9.66 8.50:D1 1810 0431 2180.0 17.71 212 267 119 35.6 268012166.8 9.50 9.60 711.3 710 43.3 45.2 4851 252 18.3 2.3511.26 1.19 9.67 8.501D 1811 0435 2181.0 19.5; 192 337 120 35.6 2690; 2167.0 9.50 9.60 708.1 708 43.4 45.1 486; 253 18.4 2.36; 1.24 1.16 9.67 8.50; D 1812 0436 2182.0 34.0: 180 230 119 33.6 2750:2167.0 9.50 9.60 708.9 708 43.4 45.1 487: 254 18.4 2.37:1.07 1.00 9.68 8.50:0 1813 0439 2183.0 18.81 223 265 119 36.3 272012167.4 9.50 9.60 710.8 709 43.7 44.5 4811 255 18.4 2.3811.25 1.18 9.68 8.501D 1814 0442 2184.0 22.7; 201 246 119 36.2 2680;2167.8 9.50 9.60 710.9 709 43.8 44.3 478; 256 18.5 2.39;1.20 1.13 9.68 8.50;D 1815 0446 2185.0 12.6: 198 243 119 35.6 2720:2170.2 9.50 9.60 710.9 709 43.9 44.1 484: 257 18.6 2.41:1.35 1.27 9.67 8.50:D 1816 0450 2186.0 15.5; 184 239 119 35.0 2720;2171.0 9.50 9.60 709.2 709 44.1 44.1 476; 258 18.6 2.42;1.29 1.21 9.68 8.50;D 1817 0456 2187.0 10.8: 197 308 120 35.4 2600:2172.0 9.50 9.60 708.1 707 44.2 43.9 477: 259 18.7 2.44:1.39 1.31 9.68 8.50:D 1818 0459 2188.0 18.31 200 354 120 35.4 271012172.9 9.50 9.60 709.1 709 44.2 44.4 4761 260 18.8 2.4511.25 1.17 9.68 8.501D 1819 0501 2189.0 23.81 247 396 121 36.5 269012173.7 9.50 9.60 708.0 707 44.2 44.5 4761 261 18.8 2.4611.19 1.11 9.68 8.501D 1820 0516 2190.0 11.51 199 280 119 36.0 274012174.8 9.50 9.60 717.8 716 44.1 44.5 4751 262 18.9 2.4911.38 1.30 9.68 8.501D 1821 0522 2191.0 11.5; 176 246 119 36.3 2730;2174.8 9.50 9.60 716.0 715 44.2 44.5 473; 263 19.0 2.50;1.38 1.30 9.68 8.50;D 1822 0523 2192.0 31.31 216 252 119 37.7 277012174.8 9.50 9.60 716.5 715 44.2 44.6 4731 264 19.1 2.5111.13 1.05 9.69 8.501D 1823 0527 2193.0 14.31 206 263 119 39.4 278012175.0 9.50 9.60 715.6 714 44.2 44.6 4741 265 19.1 2.5211.36 1.28 9.69 8.501D 1824 0530 2194.0 24.6: 243 327 120 37.8 2800:2175.6 9.50 9.60 716.4 716 44.3 44.4 476: 266 19.2 2.53:11.19 1.11 9.69 8.50:D 1825 0533 2195.0 21.81 211 427 121 34.9 263012176.3 9.50 9.60 716.8 715 44.3 44.5 4731 267 19.2 2.5411.20 1.12 9.69 8.501D 1826 0536 2196.0 15.31 195 245 119 35.7 277012178.1 9.50 9.60 716.1 715 44.4 44.7 4741 268 19.3 2.5611.30 1.22 9.69 8.5010 1827 0541 2197.0 12.21 220 273 119 38.3 282012179.8 9.50 9.60 716.4 715 44.5 45.0 4721 269 19.4 2.5711.39 1.31 9.69 8.501D 1828 0546 2198.0 12.8: 242 277 119 38.8 2780:2180.9 9.50 9.60 716.3 716 44.5 45.1 474: 270 19.4 2.59:1.38 1.30 9.69 8.50:D 1829 0602 2199.0 12.6; 223 292 119 36.9 2540;2183.3 9.50 9.60 700.2 699 44.6 45.9 469; 271 19.6 2.62;1.36 1.28 9.68 8.50;D 1830 0606 2200.0 13.4: 180 234 119 34.6 2710:2184.8 9.50 9.60 701.1 701 44.7 45.5 467: 272 19.7 2.63:1.32 1.24 9.68 8.50:0 1831 0611 2201.0 12.4; 203 245 119 37.4 2720;2185.4 9.50 9.60 699.8 698 44.9 45.0 469; 273 19.7 2.65;1.37 1.29 9.68 8.50;D 1832 0616 2202.0 10.91 202 233 119 38.0 269012185.7 9.50 9.60 699.0 698 45.0 45.2 4681 274 19.8 2.6711.42 1.33 9.68 8.501D 1833 0620 2203.0 18.31 239 295 120 38.0 269012186.3 9.50 9.60 710.7 709 45.0 45.2 4651 275 19.9 2.6811.28 1.19 9.68 8.501D 1834 0624 2204.0 13.8! 228 285 119 37.1 2700!2187.7 9.50 9.60 710.0 709 45.1 45.2 467! 276 20.0 2.69!1.34 1.26 9.68 8.50!D 1835 0630 2205.0 13.2! 209 505 122 19.7 2720!2189.6 9.50 9.60 710.5 709 45.1 45.3 464! 277 20.0 2.71!1.14 1.06 9.68 8.50!D 1836 0632 2206.0 36.6! 149 194 118 20.1 2800!2190.5 9.50 9.60 709.6 709 45.1 45.3 463! 278 20.1 2.71! .91 .84 9.68 8.50!D 1837 0637 2207.0 12.7! 212 279 119 33.6 2690!2191.7 9.50 9.60 709.9 709 44.9 45.5 468! 279 20.2 2.73!1.33 1.24 9.68 8.50!D 1838 0641 2208.0 14.8! 202 269 120 35.8 2740!2192.5 9.50 9.60 710.5 709 44.6 45.4 474! 280 20.2 2.74!1.31 1.23 9.68 8.50!D

1839 0654 2209.0 19.01 175 264 119 20.8 267012196.3 9.50 9.60 707.8 707 43.7 45.5 4901 281 20.3 2.7611.07 1.00 9.66 8.501D 1840 0659 2210.0 11.61 223 265 119 35.2 267012196.4 9.50 9.60 708.4 707 43.7 45.4 4941 282 20.4 2.7811.37 1.28 9.67 8.501D 1841 0702 2211.0 21.01 236 288 119 35.2 274012196.9 9.50 9.60 708.4 707 44.1 45.5 4941 283 20.5 2.7911.21 1.13 9.67 8.501D 1842 0704 2212.0 29.11 227 262 119 34.3 259012197.3 9.50 9.60 707.8 707 44.2 45.6 4931 284 20.5 2.7911.12 1.03 9.67 8.501D 1843 0706 2213.0 21.31 222 273 119 34.9 270012197.9 9.50 9.60 715.7 711 44.4 45.6 4921 285 20.5 2.8011.21 1.12 9.68 8.501D

Data Printed at time 05:47 Date Mar 14 '89 Data Recorded at time 07:11 Date Mar 7 '89

! F# TIME DEPTH ROP: TORQUE RPM WOB PUMPERTRNS MD lb/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD. i m m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW; -------1844 0711 2214.0 13.1; 252 444 121 34.0 2730;2199.0 9.50 9.60 707.6 707 44.7 45.6 493; 286 20.6 2.82;1.32 1.24 9.68 8.50;D 1845 0718 2215.0 9.14; 191 249 119 35.3 2740;2200.2 9.50 9.60 708.4 708 45.0 46.0 493; 287 20.7 2.84;1.43 1.34 9.67 8.50;0 1846 0724 2216.0 8.89! 196 253 119 34.9 2720!2202.0 9.50 9.60 709.5 708 45.2 46.2 489! 288 20.8 2.86!1.43 1.35 9.67 8.50!D 1847 0734 2217.0 6.10! 181 248 119 36.5 2760!2204.5 9.50 9.60 709.0 708 45.6 46.4 486! 289 21.0 2.89!1.55 1.46 9.66 8.50!D 1848 0751 2218.0 8.82! 197 364 120 40.7 2760!2206.1 9.50 9.60 710.8 711 45.9 46.0 483! 290 21.2 2.93!1.51 1.41 9.66 8.50!D 1849 0756 2219.0 10.1! 233 336 120 42.5 2800!2207.4 9.50 9.60 710.1 709 45.9 45.9 481! 291 21.3 2.95!1.49 1.39 9.66 8.50!D 1850 0803 2220.0 8.99; 250 359 120 42.0 2790; 2209.5 9.50 9.60 710.5 709 45.9 46.1 487; 292 21.4 2.97; 1.52 1.42 9.65 8.50; D 1851 0808 2221.0 12.21 223 285 119 41.8 278012211.2 9.50 9.60 709.0 708 45.9 46.3 4851 293 21.5 2.9911.43 1.33 9.65 8.501D 1852 0815 2222.0 8.081 217 299 120 43.2 272012212.6 9.50 9.60 710.2 710 45.9 46.0 4881 294 21.6 3.0211.56 1.46 9.65 8.501D 1853 0823 2223.0 7.891 189 238 119 40.2 268012213.7 9.50 9.60 709.2 709 45.9 46.4 4851 295 21.7 3.0411.53 1.43 9.65 8.501D 1854 0826 2224.0 20.81 202 255 119 40.0 278012214.1 9.40 9.60 711.1 709 45.9 46.5 4891 296 21.8 3.0511.27 1.17 9.65 8.501D 1855 0833 2225.0 14.81 249 487 121 43.4 274012214.8 9.40 9.60 712.4 712 45.9 46.8 4881 297 21.9 3.0711.39 1.29 9.65 8.501D* 1856 0839 2226.0 9.991 201 282 119 39.2 280012215.2 9.40 9.60 710.0 709 46.0 46.8 4891 298 22.0 3.0911.46 1.36 9.64 8.501D 1857 0842 2227.0 19.1: 193 234 119 38.5 2720:2215.2 9.40 9.60 708.9 708 46.1 46.9 487: 299 22.0 3.10:1.28 1.18 9.64 8.50:p 1858 0846 2228.0 13.51 172 218 119 35.7 275012215.7 9.40 9.60 709.6 709 45.9 47.1 4941 300 22.1 3.1211.34 1.24 9.64 8.5010 1859 0911 2229.0 15.2; 219 264 119 37.9 2740; 2218.4 9.40 9.60 707.7 707 45.6 48.3 507; 301 22.2 3.13; 1.32 1.23 9.60 8.50; D 1860 0914 2230.0 29.6; 226 276 119 38.4 2750;2219.2 9.40 9.60 705.1 705 46.0 48.0 505; 303 22.2 3.14;1.14 1.04 9.59 8.50; 1861 0917 2231.0 17.1; 221 260 119 38.3 2730;2219.5 9.40 9.60 705.1 705 46.0 48.0 505; 303 22.3 3.15;1.30 1.20 9.59 8.50; 1862 0922 2232.0 11.5; 203 263 119 36.7 2740;2220.2 9.40 9.60 706.7 706 46.3 47.5 501; 304 22.3 3.16;1.40 1.30 9.58 8.50; 1862 0922 2232.0 11.5; 203 263 119 36.7 2740;2220.2 9.40 9.60 706.7 706 46.3 47.5 501; 304 22.3 3.16;1.40 1.30 9.58 8.50; 1862 0922 2232.0 11.5; 203 263 119 36.7 2740;2220.2 9.40 9.60 706.7 706 46.3 47.5 1863 0930 2233.0 11.0; 233 511 122 34.1 2690;2221.7 9.40 9.60 706.8 705 46.7 47.4 500; 305 22.5 3.18;1.38 1.28 9.57 8.50;D 1864 0933 2234.0 24.21 237 277 119 29.1 264012222.5 9.40 9.60 702.1 703 46.7 47.3 5011 306 22.5 3.1911.12 1.03 9.56 8.5010 1865 0935 2235.0 25.6; 239 282 119 37.0 2800;2222.8 9.40 9.60 704.6 704 46.8 47.4 499; 307 22.5 3.20;1.19 1.09 9.56 8.50; 1866 0937 2236.0 24.61 214 262 119 34.4 273012223.0 9.40 9.60 707.1 706 46.8 47.1 4991 308 22.6 3.2111.17 1.07 9.56 8.50 1867 0951 2237.0 14.4; 221 515 122 31.9 2720;2225.0 9.40 9.60 709.1 702 46.9 47.5 492; 309 22.7 3.23;1.28 1.19 9.56 8.50;D* 1868 0953 2238.0 30.61 213 259 119 39.1 279012225.5 9.40 9.60 707.1 707 46.8 47.6 4901 310 22.7 3.2311.16 1.06 9.56 8.501D 1869 0957 2239.0 15.9; 192 237 119 36.3 2720;2226.2 9.40 9.60 707.0 706 46.7 47.7 489; 311 22.8 3.24;1.31 1.21 9.56 8.50;D 1870 0959 2240.0 25.11 218 261 119 38.6 277012226.3 9.40 9.60 709.2 708 46.8 48.0 4881 312 22.8 3.2511.21 1.10 9.57 8.501D 1871 1001 2241.0 36.2: 237 275 119 38.0 2740:2226.3 9.40 9.60 709.3 708 46.8 48.0 490: 313 22.9 3.26:1.10 1.00 9.57 8.50:p 1872 1003 2242.0 23.1; 217 257 119 37.2 2740;2226.3 9.40 9.60 707.2 706 46.9 47.9 488; 314 22.9 3.26;1.22 1.11 9.58 8.50;D 1873 1005 2243.0 28.11 223 259 119 38.2 266012226.3 9.40 9.60 706.8 706 46.9 47.8 4891 315 22.9 3.2711.17 1.07 9.58 8.5010 1874 1009 2244.0 18.5; 221 287 119 40.1 2780;2226.4 9.40 9.60 709.0 707 47.0 47.7 488; 316 23.0 3.28;1.30 1.20 9.59 8.50;0 1875 1012 2245.0 18.3; 210 245 119 36.9 2700;2227.1 9.40 9.60 708.7 707 47.1 47.6 488; 317 23.0 3.29;1.27 1.17 9.59 8.50;0 1876 1016 2246.0 12.9; 221 265 119 38.1 2790;2228.5 9.40 9.60 706.2 706 47.2 48.0 487; 318 23.1 3.31;1.38 1.28 9.59 8.50;0 1877 1019 2247.0 28.0: 215 271 119 36.4 2770:2229.0 9.40 9.60 707.7 706 47.2 48.1 487: 319 23.2 3.31:1.15 1.05 9.59 8.50:D 1878 1029 2248.0 19.81 203 260 119 34.1 291012230.5 9.40 9.60 717.5 715 47.3 47.9 4821 320 23.2 3.3311.22 1.12 9.59 8.501D 1879 1033 2249.0 16.41 225 282 119 35.8 292012230.8 9.40 9.60 719.2 717 47.4 48.2 4811 321 23.3 3.3411.29 1.19 9.59 8.501D 1880 1038 2250.0 10.4: 190 271 119 36.3 2910:2232.7 9.40 9.60 723.0 723 47.5 48.6 481: 322 23.4 3.36:1.42 1.31 9.59 8.50:D 1881 1044 2251.0 11.11 215 278 119 37.6 277012234.0 9.40 9.60 722.9 722 47.6 48.8 4791 323 23.5 3.3711.41 1.31 9.58 8.501D 1882 1047 2252.0 16.51 235 284 119 39.5 283012234.5 9.40 9.60 720.5 720 47.7 48.7 4781 324 23.5 3.3911.33 1.22 9.59 8.5010 1883 1052 2253.0 12.91 216 289 119 36.5 287012235.3 9.40 9.60 722.8 722 47.9 48.8 4811 325 23.6 3.4011.36 1.26 9.59 8.501D 1884 1055 2254.0 20.51 211 286 119 37.8 283012236.5 9.40 9.60 721.2 721 48.1 49.0 4831 326 23.7 3.4111.25 1.14 9.59 8.501D 1885 1101 2255.0 9.751 197 264 119 38.7 286012238.8 9.40 9.60 722.0 721 48.3 49.3 4801 327 23.8 3.4311.46 1.36 9.58 8.501D 1886 1107 2256.0 9.161 195 255 119 36.3 293012241.4 9.40 9.60 722.2 721 48.5 49.6 4811 328 23.9 3.4511.45 1.35 9.57 8.501D 1887 1109 2257.0 31.2; 206 294 119 37.8 2870;2242.1 9.40 9.60 722.9 722 48.6 49.5 478; 329 23.9 3.45;1.14 1.03 9.57 8.50;D 1888 1122 2258.0 31.01 212 313 120 37.5 281012244.8 9.40 9.60 706.3 706 48.8 50.0 4771 330 24.0 3.4711.14 1.03 9.57 8.501D 1889 1126 2259.0 12.31 234 312 120 36.1 281012245.0 9.40 9.60 711.9 710 48.9 49.9 4751 331 24.1 3.4811.37 1.26 9.57 8.501D 1890 1130 2260.0 24.91 272 393 120 35.6 279012246.1 9.40 9.60 709.2 709 49.0 50.0 4741 332 24.1 3.4911.18 1.07 9.57 8.501D 1891 1133 2261.0 19.61 259 315 120 36.9 277012247.0 9.40 9.60 710.5 709 49.1 49.7 4751 333 24.2 3.5011.26 1.15 9.57 8.501

+-----: F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: ! m m/hr: AVG MAX AVG AVG PRES:DEPTH IN OUT IN OUT IN OUT ! m hr TW: ! +-----+ 1892 1137 2262.0 15.91 251 314 120 37.8 266012247.7 9.40 9.60 710.3 709 49.2 49.5 4741 334 24.2 3.5211.32 1.21 9.57 8.501D 1893 1140 2263.1 19.31 256 366 120 35.1 281012248.1 9.40 9.60 710.2 709 49.3 49.4 4721 335 24.3 3.5311.24 1.13 9.57 8.501D 1894 1143 2264.0 18.51 269 453 121 33.5 273012248.6 9.40 9.60 710.7 709 49.4 49.5 4721 336 24.3 3.5311.24 1.13 9.58 8.501D 1895 1146 2265.0 19.31 256 322 120 36.6 273012249.5 9.40 9.60 708.8 708 49.4 49.6 4711 337 24.4 3.5411.26 1.15 9.58 8.501D 1896 1158 2266.0 23.8; 263 404 121 38.1 2850; 2251.8 9.40 9.60 717.3 710 49.4 49.0 466; 338 24.5 3.56; 1.22 1.10 9.57 8.50; Dt 1897 1202 2267.0 15.41 258 301 120 40.8 285012252.5 9.40 9.60 714.2 714 49.4 50.0 4641 339 24.6 3.5711.36 1.25 9.57 8.5010 1898 1204 2268.0 27.21 256 296 119 39.0 286012252.9 9.40 9.60 717.0 716 49.4 49.8 4641 340 24.6 3.5811.19 1.08 9.58 8.501D 1899 1207 2269.0 20.2; 258 319 120 39.8 2870;2253.3 9.40 9.60 713.6 714 49.4 49.7 464; 341 24.7 3.59;1.28 1.16 9.58 8.50;D 1900 1211 2270.0 16.21 261 321 120 41.1 280012253.9 9.40 9.60 717.3 716 49.4 49.6 4631 342 24.7 3.6011.35 1.23 9.58 8.501D 1901 1213 2271.0 26.9; 246 329 120 41.3 2900; 2254.7 9.40 9.60 715.6 715 49.4 49.7 464; 343 24.8 3.61; 1.21 1.10 9.58 8.50; 0 1902 1220 2272.0 13.61 322 526 122 35.3 280012255.2 9.40 9.60 715.8 715 49.5 50.1 4611 344 24.8 3.6311.33 1.22 9.58 8.501D 1903 1223 2273.0 17.41 252 351 120 38.6 281012256.2 9.40 9.60 716.4 715 49.5 50.0 4611 345 24.9 3.6311.30 1.19 9.58 8.5010 1904 1227 2274.0 16.11 278 348 120 42.0 281012257.0 9.40 9.60 715.0 714 49.5 50.0 4601 346 25.0 3.6511.36 1.24 9.58 8.501D 1905 1231 2275.0 15.6: 258 337 120 41.6 2870:2258.2 9.40 9.60 717.9 716 49.5 50.4 461: 347 25.0 3.66:1.37 1.25 9.58 8.50:D 1906 1254 2276.0 14.31 262 394 120 41.0 291012262.7 9.40 9.60 724.9 723 49.5 51.4 4491 348 25.2 3.6911.39 1.27 9.57 8.501Df 1907 1257 2277.0 18.7; 256 307 120 40.6 2890; 2263.6 9.40 9.60 722.1 722 49.4 51.0 448; 349 25.2 3.70; 1.31 1.19 9.57 8.50; D 1908 1259 2278.0 29.71 275 339 120 40.9 293012263.8 9.40 9.60 723.8 722 49.5 50.6 4471 350 25.3 3.7011.18 1.06 9.57 8.501D 1909 1303 2279.0 15.7; 251 322 120 44.2 2800; 2263.9 9.40 9.60 723.8 722 49.6 50.3 445; 351 25.3 3.72; 1.39 1.27 9.57 8.50; D 1910 1307 2280.0 13.9; 231 263 119 43.9 290012264.8 9.40 9.60 724.1 723 49.8 50.4 444; 352 25.4 3.73;1.42 1.30 9.58 8.50;D 1911 1312 2281.0 12.8: 210 252 119 40.2 285012266.6 9.40 9.60 722.3 721 49.8 50.4 439: 353 25.5 3.75:1.41 1.29 9.57 8.50:0 1912 1315 2282.0 18.71 215 268 119 35.6 293012267.5 9.40 9.60 721.3 721 49.8 50.2 4361 354 25.5 3.7611.26 1.14 9.57 8.501D 1913 1317 2283.0 25.41 261 321 120 35.5 284012268.3 9.40 9.60 722.7 722 49.9 50.1 4281 355 25.6 3.7611.17 1.06 9.57 8.5010 1914 1321 2284.0 19.61 222 263 119 35.5 288012269.4 9.40 9.60 722.5 722 49.9 50.0 4311 356 25.6 3.7711.24 1.13 9.57 8.501D 1915 1325 2285.0 13.0: 212 268 119 35.9 2850:2269.8 9.40 9.60 723.7 722 50.0 50.1 424: 357 25.7 3.78:1.36 1.24 9.58 8.50:0 1916 1328 2286.0 22.8; 243 345 120 35.3 289012270.6 9.40 9.60 722.5 722 50.0 50.3 421; 358 25.7 3.79;1.20 1.08 9.58 8.50;D 1917 1340 2287.0 26.51 264 333 120 34.2 286012272.7 9.40 9.60 718.8 712 49.8 49.7 4111 359 25.8 3.8011.15 1.03 9.57 8.5010 1918 1343 2288.0 18.81 277 323 120 35.5 288012273.7 9.40 9.60 718.1 717 49.8 50.5 4061 360 25.9 3.8111.26 1.14 9.57 8.501D 1919 1346 2289.0 17.71 262 379 120 36.2 281012273.9 9.40 9.60 717.6 717 49.8 50.5 402: 361 25.9 3.82:11.28 1.16 9.57 8.50:D 1920 1351 2290.0 12.31 243 290 119 36.3 288012273.9 9.40 9.60 718.0 717 49.8 50.5 3961 362 26.0 3.8411.37 1.25 9.58 8.501D 1921 1354 2291.0 18.61 238 272 119 36.3 290012273.9 9.40 9.60 718.8 717 49.9 50.6 387; 363 26.0 3.85;1.26 1.15 9.58 8.50;D 1922 1357 2292.0 27.3! 242 282 119 36.3 2890!2274.3 9.40 9.60 719.3 718 49.9 50.6 394; 364 26.1 3.85;1.16 1.04 9.59 8.50;D 1923 1400 2293.0 18.51 260 316 120 35.9 287012275.5 9.40 9.60 717.6 717 50.0 50.7 390: 365 26.1 3.86:11.26 1.14 9.59 8.50:0 1924 1402 2294.0 24.61 262 309 120 35.7 285012276.2 9.40 9.60 716.9 716 49.9 50.9 388; 366 26.2 3.87;1.18 1.06 9.59 8.50;D 1925 1404 2295.1 33.51 243 299 120 35.6 281012276.7 9.40 9.60 718.6 718 49.9 50.9 387: 367 26.2 3.87:1.10 .98 9.59 8.50:D 1926 1422 2296.0 17.21 253 321 120 36.3 282012279.2 9.40 9.60 717.9 718 49.2 51.1 367: 368 26.3 3.90:1.28 1.16 9.58 8.50:D 1927 1426 2297.0 15.71 258 328 120 36.1 281012280.5 9.40 9.60 719.2 718 49.1 50.9 3651 369 26.4 3.9111.31 1.19 9.58 8.5010 1928 1428 2298.0 23.61 286 344 120 35.7 279012281.4 9.40 9.60 720.1 718 49.1 51.1 3611 370 26.4 3.9211.20 1.07 9.58 8.501D 1929 1430 2299.0 31.4; 283 348 120 35.5 2730; 2281.8 9.40 9.60 718.5 719 49.2 50.7 361; 371 26.5 3.92; 1.12 1.00 9.58 8.50; 0 1930 1432 2300.0 40.21 304 371 120 35.6 288012282.1 9.40 9.60 718.1 717 49.2 50.7 3541 372 26.5 3.9311.05 .93 9.59 8.501D 1931 1434 2301.0 33.2; 271 324 120 35.9 2860; 2282.5 9.40 9.60 720.4 718 49.2 50.6 357; 373 26.5 3.93; 1.10 .98 9.59 8.50; 0 1932 1436 2302.0 23.41 260 311 120 36.2 277012283.3 9.40 9.60 719.2 718 49.2 50.7 3541 374 26.6 3.9411.20 1.08 9.59 8.501D 1933 1438 2303.0 29.6; 282 407 121 36.0 2780;2283.8 9.40 9.60 719.8 718 49.2 50.5 352; 375 26.6 3.94;1.14 1.01 9.59 8.50;0 1934 1439 2304.0 40.31 260 294 119 36.1 278012283.8 9.40 9.60 721.1 720 49.3 50.2 3511 376 26.6 3.9511.05 .93 9.60 8.501D 1935 1442 2305.0 27.31 236 284 119 35.7 282012284.2 9.40 9.60 719.1 718 49.3 50.6 3451 377 26.7 3.9611.15 1.03 9.60 8.501D 1936 1453 2306.0 23.51 243 280 119 32.4 284012286.6 9.40 9.60 724.3 702 48.9 50.0 3421 378 26.7 3.9711.16 1.04 9.59 8.501D 1937 1456 2307.0 26.01 284 342 120 35.8 286012287.1 9.40 9.60 726.6 725 48.6 50.3 3441 379 26.8 3.9711.17 1.05 9.60 8.501D 1938 1500 2308.0 39.41 296 424 121 32.6 163012287.6 9.40 9.60 502.9 527 48.5 50.8 3511 380 26.8 3.9811.03 .91 9.58 8.501D* 1939 1502 2309.0 28.7! 274 373 120 32.4 166012287.9 9.40 9.60 540.8 526 48.4 50.6 353! 381 26.8 3.98!1.11 .99 9.59 8.50!D

Data Printed at time 05:56 Date Mar 14 '89 Data Recorded at time 15:05 Date Mar 7 '89

! F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/qal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD. ! m - m/hr! AVG MAX AVG AVG PRES!DEPTH IN OUT IN OUT IN OUT ! m hr TW! ; 1940 1505 2310.0 21.81 241 302 120 33.7 164012288.5 9.40 9.60 546.9 546 48.3 50.1 3581 382 26.9 3.9911.19 1.07 9.59 8.501D 1941 1507 2311.0 20.41 259 320 120 35.7 166012289.2 9.40 9.60 548.4 547 48.3 50.3 357; 383 26.9 4.00;1.23 1.11 9.60 8.50;D 1942 1510 2312.0 25.71 296 339 120 36.1 169012289.8 9.40 9.60 547.3 546 48.2 50.1 361: 384 27.0 4.01:1.17 1.05 9.60 8.50:D 1943 1514 2313.0 19.7; 266 324 120 36.0 1710;2290.9 9.40 9.60 548.9 548 48.2 49.9 361; 385 27.0 4.02;1.24 1.12 9.60 8.50;D-1944 1535 2314.0 13.81 253 347 120 36.2 172012294.1 9.40 9.60 556.0 555 47.7 49.1 3711 386 27.3 4.0611.34 1.22 9.59 8.501D 1945 1538 2315.0 20.11 292 346 120 35.4 172012294.5 9.40 9.60 556.0 555 47.6 49.5 3681 387 27.3 4.0711.23 1.11 9.59 8.501D 1946 1543 2316.0 26.5; 286 355 120 31.7 2860;2295.3 9.40 9.60 668.9 711 47.6 49.1 368; 388 27.3 4.07;1.12 1.00 9.59 8.50;D? 1947 1545 2317.0 31.7; 282 331 120 30.9 2770;2295.9 9.40 9.60 715.4 694 47.5 48.8 369; 389 27.4 4.08;1.07 .95 9.60 8.50;0 1948 1547 2318.0 25.31 284 325 120 31.0 277012296.9 9.40 9.60 716.0 714 47.5 48.8 3701 390 27.4 4.0811.13 1.01 9.60 8.501D 1949 1550 2319.0 20.11 269 307 120 30.9 279012298.4 9.40 9.60 718.5 717 47.5 48.9 3711 391 27.5 4.0911.18 1.06 9.60 8.5010 1950 1555 2320.0 13.6; 255 330 120 31.3 2870/2300.2 9.40 9.60 717.3 715 47.6 48.6 371; 392 27.5 4.10/1.29 1.17 9.60 8.50/D 1951 1558 2321.0 16.51 257 297 119 30.8 280012302.1 9.40 9.60 718.9 718 47.6 48.4 3791 393 27.6 4.1111.23 1.11 9.59 8.501D 1952 1601 2322.0 21.41 273 302 120 31.0 282012303.1 9.40 9.60 718.7 718 47.7 48.1 3791 394 27.6 4.1211.17 1.05 9.59 8.501D 1953 1605 2323.0 15.31 274 352 120 31.0 286012303.4 9.40 9.60 720.9 719 47.6 48.5 379: 395 27.7 4.13:1.25 1.13 9.59 8.50:0 1954 1625 2324.0 24.1: 243 320 120 25.1 2710:2310.1 9.40 9.60 723.9 723 47.3 49.1 3971 396 27.8 4.1511.08 .96 9.57 8.501D 1955 1632 2325.0 13.81 282 510 122 26.8 286012312.6 9.40 9.60 724.7 723 47.4 48.8 4001 397 27.9 4.1611.23 1.12 9.56 8.5010 1956 1637 2326.0 28.0 242 510 122 7.64 2830 2313.1 9.40 9.60 724.4 722 47.5 48.6 400 398 28.0 4.17 .79 .70 9.56 8.50 Dt 1957 1641 2327.0 12.91 271 384 120 26.8 288012314.0 9.40 9.60 722.0 721 47.7 49.3 3991 399 28.0 4.1811.25 1.13 9.56 8.5010 1958 1645 2328.0 15.31 258 322 120 30.4 287012315.7 9.40 9.60 720.3 720 47.8 49.3 3981 400 28.1 4.1911.25 1.13 9.56 8.501D 1959 1649 2329.0 15.1: 272 343 120 30.4 2870:2317.5 9.40 9.60 721.8 721 48.0 49.1 391: 401 28.2 4.20:1.26 1.13 9.56 8.50:D 1960 1653 2330.0 16.1: 268 495 122 28.6 2830:2318.8 9.40 9.60 720.5 720 48.2 48.7 393: 402 28.2 4.21:1.22 1.10 9.55 8.50:D 1961 1657 2331.0 15.1; 255 319 120 30.2 2860; 2319.7 9.40 9.60 720.5 720 48.3 48.2 394; 403 28.3 4.22; 1.25 1.13 9.56 8.50; D_ 1962 1706 2332.0 8.421 276 524 122 25.7 293012322.5 9.40 9.60 723.7 722 48.3 49.3 3871 404 28.4 4.2411.34 1.22 9.55 8.50. 1963 1723 2333.0 11.51 241 435 121 21.0 293012322.9 9.40 9.60 728.0 727 48.2 48.8 3731 405 28.6 4.2611.20 1.09 9.55 8.5010 1964 1727 2334.0 14.9; 227 271 119 29.1 2930; 2323.4 9.40 9.60 727.1 726 48.2 49.3 373; 406 28.6 4.27; 1.25 1.12 9.55 8.50; D 1965 1734 2335.0 20.91 234 515 122 14.8 288012324.6 9.40 9.60 728.4 727 48.3 49.3 3701 407 28.7 4.281 .97 .87 9.55 8.501D 1966 1737 2336.0 21.9; 249 283 119 28.1 2930; 2324.9 9.40 9.60 728.2 727 48.3 49.2 370; 408 28.7 4.29; 1.14 1.01 9.55 8.50; D 1967 1739 2337.0 28.31 281 363 120 26.9 290012325.5 9.40 9.60 726.1 726 48.4 49.1 3681 409 28.8 4.2911.06 .94 9.56 8.501D 1968 1740 2338.0 44.51 265 303 120 26.5 296012325.9 9.40 9.60 726.9 725 48.4 49.2 3671 410 28.8 4.301 .94 .82 9.56 8.501D 1969 1742 2339.0 29.51 273 339 120 28.1 291012326.3 9.40 9.60 727.9 726 48.4 49.1 3691 411 28.8 4.3011.06 .94 9.56 8.501D 1970 1744 2340.0 35.01 271 364 120 27.1 290012326.6 9.40 9.60 726.6 726 48.4 49.0 3641 412 28.8 4.3011.01 .89 9.56 8.5010 1971 1746 2341.0 26.5; 279 339 120 28.5 2960; 2327.3 9.40 9.60 726.6 726 48.4 48.8 364; 413 28.9 4.31; 1.09 .97 9.57 8.50; D 1972 1748 2342.0 31.21 273 324 120 27.5 296012327.7 9.40 9.60 726.8 726 48.5 49.0 3631 414 28.9 4.3211.04 .92 .9.57 8.501D 1973 1802 2343.0 17.61 255 437 121 27.8 269012330.1 9.40 9.60 722.2 724 48.1 49.6 3541 415 29.0 4.3311.19 1.06 9.56 8.501D 1974 1807 2344.0 13.6; 252 277 119 29.8 2750;2331.1 9.40 9.60 705.1 701 48.1 48.8 351; 416 29.1 4.34;1.27 1.15 9.56 8.50;D 1975 1812 2345.0 11.7; 236 293 119 30.4 2830;2331.4 9.40 9.60 704.2 703 48.1 48.8 349; 417 29.2 4.35;1.32 1.19 9.56 8.50;D 1976 1816 2346.0 13.1; 243 292 119 30.6 2710;2332.1 9.40 9.60 707.8 705 48.1 49.1 345; 418 29.2 4.37;1.29 1.16 9.57 8.50;D 1977 1821 2347.1 14.31 234 284 119 30.0 273012332.3 9.40 9.60 706.5 706 48.2 49.0 3441 419 29.3 4.3811.26 1.13 9.57 8.501D 1978 1824 2348.0 19.81 299 464 121 29.2 273012332.3 9.40 9.60 704.3 704 48.2 49.0 3421 420 29.3 4.3811.17 1.04 9.57 8.5010 1979 1826 2349.0 29.01 265 316 120 29.7 277012332.3 9.40 9.60 703.8 703 48.2 49.0 3421 421 29.4 4.3911.08 .95 9.58 8.501D 1980 1829 2350.0 17.11 245 285 119 30.1 265012333.0 9.40 9.60 704.6 704 48.2 48.9 3391 422 29.4 4.4011.22 1.09 9.58 8.501D 1981 1834 2351.0 12.71 239 273 119 30.3 272012333.9 9.40 9.60 706.6 705 48.2 49.2 3361 423 29.5 4.4111.30 1.17 9.58 8.501D 1984 1846 2352.0 23.51 292 535 122 28.8 273012335.8 9.40 9.60 706.7 682 48.1 49.0 3271 424 29.6 4.4211.12 1.00 9.58 8.501D 1985 1849 2353.0 18.41 263 312 120 29.6 276012337.6 9.40 9.60 706.1 705 48.0 49.1 3271 425 29.6 4.4311.20 1.07 9.57 8.501B 1986 1853 2354.0 17.51 254 301 120 29.5 269012339.4 9.40 9.60 705.0 704 47.8 49.4 3261 426 29.7 4.4411.21 1.08 9.57 8.501D 1987 1857 2355.0 13.21 258 314 120 30.4 283012341.6 9.40 9.60 708.2 707 47.6 48.7 3291 427 29.8 4.4511.29 1.16 9.56 8.501D 1988 1859 2356.0 27.9; 267 321 120 29.9 2720;2342.1 9.40 9.60 706.1 706 47.6 48.6 327; 428 29.8 4.46;1.09 .96 9.57 8.50;D 1989 1903 2357.0 17.0: 259 324 120 30.3 2750:2342.1 9.40 9.60 706.6 705 47.5 48.1 327: 429 29.9 4.47:1.22 1.09 9.57 8.50: +------

: F# TIME DEPTH ROP! TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT! -THIS BIT- EST! DXC NXB ECD NXMD! a ma/hr: AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT I m hr TW: +----- 1990 1906 2358.0 17.6: 257 296 119 30.8 2760:2342.4 9.40 9.60 706.9 706 47.4 48.7 329: 430 29.9 4.48:1.22 1.09 9.57 8.50:D 1991 1909 2359.0 17.6: 266 314 120 30.4 2750:2343.3 9.40 9.60 706.0 705 47.3 48.7 328: 431 30.0 4.49:1.21 1.08 9.57 8.50:D 1992 1913 2360.0 16.5: 261 335 120 30.2 2740:2344.0 9.40 9.60 707.3 705 47.2 48.7 330: 432 30.0 4.49:1.23 1.10 9.58 8.50:D 1993 1916 2361.0 17.9; 282 359 120 30.1 2810;2344.6 9.40 9.60 707.4 705 47.2 48.6 329; 433 30.1 4.50;1.21 1.08 9.58 8.50;D 1994 1941 2363.0 7.97; 341 537 122 13.5 2660;2350.6 9.40 9.60 708.9 708 46.7 48.9 340; 435 30.3 4.53;1.15 1.04 9.56 8.50;D* 1995 1947 2364.0 11.81 289 491 121 9.95 277012351.6 9.40 9.60 710.2 709 46.9 48.4 3441 436 30.4 4.5411.00 .90 9.56 8.501D 1996 1953 2365.0 10.4; 291 464 121 24.2 2850; 2352.8 9.40 9.60 708.5 708 46.6 49.0 353; 437 30.5 4.56; 1.27 1.14 9.56 8.50; D 1997 2002 2366.0 12.0: 276 528 122 10.2 2800:2355.3 9.40 9.60 710.6 710 45.5 48.4 378: 438 30.6 4.57:11.00 .90 9.55 8.50:D 1998 2008 2367.0 9.38: 303 510 122 17.6 2720:2357.2 9.40 9.60 710.2 709 45.1 47.1 398: 439 30.7 4.58:1.19 1.08 9.55 8.50:D 1999 2012 2368.0 13.7: 262 401 121 18.9 2670:2358.5 9.40 9.60 711.4 710 44.9 47.5 409: 440 30.7 4.59:1.13 1.01 9.55 8.50:D 1000 2016 2369.0 15.7; 254 400 121 19.4 2750;2359.8 9.40 9.60 710.3 709 44.6 47.8 420; 441 30.8 4.60;1.11 .99 9.54 8.50;D 1001 2019 2370.0 18.3; 228 266 119 18.4 2610;2360.6 9.40 9.60 710.4 709 44.5 47.7 428; 442 30.9 4.61;1.06 .94 9.55 8.50;D 1 3 2041 2372.0 18.01 247 332 118 26.9 270012362.4 9.40 9.60 696.9 696 44.2 47.7 4731 444 31.0 4.6311.17 1.04 9.54 8.501D 1 4 2045 2373.0 17.61 236 285 118 29.9 258012362.7 9.40 9.60 696.5 696 44.8 47.3 4751 445 31.1 4.6411.21 1.08 9.55 8.501D : 5 2048 2374.0 18.9; 271 380 118 29.6 2640;2363.2 9.40 9.60 697.9 697 45.0 47.4 473; 446 31.2 4.65;1.19 1.05 9.55 8.50;D 1 6 2055 2375.0 12.61 222 313 118 25.2 279012364.4 9.40 9.60 698.1 693 45.7 47.5 4781 447 31.2 4.6611.24 1.11 9.54 8.5010 1 7 2100 2376.0 13.31 229 301 118 26.3 269012365.2 9.40 9.60 708.3 706 45.8 47.2 4761 448 31.3 4.6711.24 1.11 9.55 8.501D 1 8 2109 2377.0 8.581 243 416 118 31.9 269012366.3 9.40 9.60 708.2 707 46.0 47.4 4821 449 31.4 4.6911.42 1.28 9.55 8.501D 1 9 2112 2378.0 20.01 235 312 118 33.2 275012366.8 9.40 9.60 705.5 705 46.0 46.9 4831 450 31.5 4.7011.22 1.07 9.55 8.501D 1 10 2123 2379.0 19.91 242 286 118 32.4 321012367.9 9.40 9.60 759.1 664 46.0 46.9 4861 451 31.5 4.7111.21 1.07 9.55 8.501D? : 11 2125 2380.0 27.5; 274 384 118 32.5 2910;2368.5 9.40 9.60 714.1 726 46.1 47.2 484; 452 31.6 4.72;1.13 .99 9.56 8.50;D 12 2128 2381.0 20.2; 272 328 118 32.2 2750; 2369.5 9.40 9.60 719.9 720 46.1 46.8 482; 453 31.6 4.72; 1.20 1.06 9.56 8.50; D ! 14 2139 2382.0 21.4! 292 396 118 32.3 2700:2371.4 9.40 9.60 703.4 702 46.3 47.0 477: 454 31.7 4.74:1.19 1.05 9.55 8.50:D : 15 2140 2383.0 36.8: 315 355 118 33.5 2680:2371.4 9.40 9.60 702.2 701 46.3 46.3 477: 455 31.7 4.74:1.06 .92 9.55 8.50:D 472: 456 31.8 4.75:11.22 1.08 9.56 8.50:D 1 16 2143 2384.0 20.21 267 343 118 34.0 279012371.4 9.40 9.60 704.0 703 46.4 46.8 1 17 2148 2385.0 14.61 276 381 118 34.0 268012371.4 9.40 9.60 701.3 701 46.5 47.4 471: 457 31.8 4.76:11.31 1.16 9.56 8.50:D : 18 2151 2386.0 17.7: 249 333 118 33.2 2770:2371.8 9.40 9.60 702.4 701 46.5 47.5 470: 458 31.9 4.77:1.25 1.10 9.57 8.50:D 468: 459 32.0 4.78:1.37 1.23 9.56 8.50:D 1 19 2156 2387.0 11.51 258 331 118 34.5 276012373.4 9.40 9.60 701.4 700 46.6 47.1 1 20 2201 2388.0 13.21 279 381 118 33.9 263012374.5 9.40 9.60 702.2 701 46.7 47.3 4671 460 32.1 4.8011.33 1.18 9.56 8.501D ! 21 2203 2389.0 20.9! 248 369 118 33.8 2780!2374.8 9.40 9.60 701.9 701 46.8 47.3 465! 461 32.1 4.80!1.21 1.06 9.57 8.50!D 1 22 2206 2390.0 22.91 254 322 118 33.9 275012375.2 9.40 9.60 701.1 700 46.8 47.4 4631 462 32.2 4.8111.19 1.04 9.57 8.501D 1 23 2219 2391.0 20.01 261 321 118 34.0 273012376.4 9.40 9.60 707.1 692 46.9 47.8 4511 463 32.2 4.8211.22 1.08 9.57 8.501Dt 1 24 2222 2392.0 15.31 276 328 118 34.5 280012376.9 9.40 9.60 707.2 706 46.9 48.0 4471 464 32.3 4.8311.30 1.15 9.57 8.501D 1 25 2226 2393.0 15.51 269 348 118 34.2 285012378.2 9.40 9.60 706.9 706 46.9 47.4 4431 465 32.4 4.8411.29 1.14 9.57 8.501D 1 26 2228 2394.0 27.61 298 341 118 33.8 277012378.8 9.40 9.60 705.4 705 47.0 47.6 4431 466 32.4 4.8511.14 .99 9.57 8.501D 1 27 2231 2395.0 19.61 287 377 118 33.7 272012379.2 9.40 9.60 706.0 705 47.0 47.7 4411 467 32.4 4.8611.22 1.08 9.57 8.5010 1 28 2233 2396.0 31.11 245 328 118 32.1 278012379.9 9.40 9.60 707.8 706 47.0 47.7 4391 468 32.5 4.8611.09 .94 9.57 8.501D 1 29 2236 2397.0 23.51 273 341 118 33.1 282012380.8 9.40 9.60 707.5 706 47.1 47.9 4381 469 32.5 4.8711.17 1.02 9.58 8.501D 1 30 2240 2398.0 13.91 248 329 118 34.3 272012381.1 9.40 9.60 706.1 706 47.1 47.3 4341 470 32.6 4.8811.32 1.17 9.58 8.501D 433: 471 32.6 4.89:1.24 1.09 9.58 8.50:D 1 31 2243 2399.0 18.81 243 366 118 34.2 270012381.7 9.40 9.60 706.0 704 47.2 47.7 1 32 2248 2400.0 18.91 307 684 118 27.8 271012383.8 9.40 9.60 704.8 705 47.2 48.0 4311 472 32.7 4.9011.17 1.03 9.58 8.5010 : 33 2305 2401.0 14.2; 270 389 118 31.3 2740;2386.9 9.40 9.60 703.5 702 47.2 47.7 419; 473 32.9 4.92;1.28 1.13 9.57 8.50;D 1 35 2307 2402.0 13.11 259 327 118 32.7 269012387.2 9.40 9.60 701.9 701 47.3 47.5 4191 474 32.9 4.9211.32 1.15 9.62 8.501D4 1 36 2312 2403.0 13.61 261 346 118 33.0 267012388.0 9.40 9.60 702.8 701 47.3 47.9 4151 475 33.0 4.9411.31 1.16 9.57 8.501D 1 37 2316 2404.0 12.91 255 375 118 33.9 263012389.0 9.40 9.60 703.1 702 47.4 47.9 4131 476 33.0 4.9511.33 1.19 9.57 8.501D 1 38 2324 2405.0 7.831 295 524 118 34.2 274012389.3 9.40 9.60 704.0 703 47.4 47.9 4081 477 33.2 4.9711.47 1.32 9.57 8.501D 1 39 2328 2406.0 14.51 260 358 118 34.0 267012389.9 9.40 9.60 701.6 701 47.4 48.0 4071 478 33.2 4.9811.31 1.16 9.57 8.501D : 40 2331 2407.0 21.1: 285 353 118 34.0 2760:2390.2 9.40 9.60 701.2 701 47.4 47.7 406: 479 33.3 4.99:1.21 1.06 9.58 8.50:D +------

Data Printed at time 06:30 Date Mar 14 '89 Data Recorded at time 23:44 Date Mar 7 '89

+			+						+														+
! F#	TIME	DEPTH	ROP!	TOR	QUE	RPM	WOB	PUMP	RTRNS	MD	lb/qal	FLO)W/MIN	TEM	1P (C)	PVT	-THIS	BIT-	EST:	DXC	NXB	ECD	NXMD:
i i		A '	m/hr:	AVG	XAM	AVG	AVG	PRES	DEPTH	IN	OUT	IN	OUT	- IN	OUT	i i	Æ	hr	TW:				i
																							8.50¦D↑
1 42	2347	2409.0	16.91	215	282	118	16.9	2790	2393.4	9.40	9.60	702.5	701	47.1	47.7	4121	481	33.4	5.001	1.05	.92	9.57	8.50:D
1 43	2354	2410.0	9.381	211	370	118	17.8	2760	2394.4	9.40	9.60	701.9	701	47.0	48.1	4171	482	33.5	5.021	1.19	1.06	9.57	8.50ID
!	Date	Mar 8	189																				;
: 44	0013	2411.0	13.71	228	393	118	21.1	2790	12395.3	9.40	9.60	699.0	673	46.2	48.3	4271	483	33.6	5.03	1.16	1.02	9.57	8.501D1
1 45	0016	2412.0	21.91	252	323	118	34.8	2770	12395.5	9.40	9.60	697.1	696	46.1	47.8	4291	484	33.7	5.041	1.21	1.05	9.58	8.5010
1 46	0019	2413.0	15.11	246	381	118	37.9	2710	12396.0	9.40	9.60	698.8	698	46.1	47.6	4301	485	33.7	5.05	1.34	1.18	9.58	8.50ID
1 47	0024	2414.0	10.31	254	368	118	42.8	2740	2397.2	9.40	9.60	697.5	696	46.1	47.5	4341	486	33.8	5.061	1.50	1.33	9.58	8.50ID
: 48	0030	2415.0	10.5	235	372	118	38.9	2800	12398.2	9.40	9.60	695.8	696	46.1	47.7	4381	487	33.9	5.08	1.45	1.29	9.58	8.501D
: 49	0036	2416.0	10.21	215	289	118	38.0	2750	2399.0	9.40	9.60	696.0	695	45.8	47.7	4511	488	34.0	5.10	1.44	1.28	9.58	8.5010
: 50	0039	2417.0	18.01	242	297	118	37.2	2720	12399.8	9.30	9.60	699.1	698	45.6	47.7	4561	489	34.1	5.11	1.28	1.12	9.58	8.501D
1 51	0043	2418.0	14.81	246	476	118	36.6	2630	2401.2	9.30	9.60	697.1	696	45.4	47.8								8.5010
1 52	0051	2419.0	7.661	187	410	118	36.5	2640	2401.7	9.30	9.60	698.2	697	45.3	47.3								8.50ID
1 53	0100	2420.0	6.851	208	322	118	38.2	2650	2403.0	9.30	9.60	697.7	696	46.0	47.8								8.501D
1 54	0120	2421.0	6.331	203	328	118	39.5	2600	2405.4	9.30	9.60	699.0	698	46.9	48.2								8.501D
		2422.0																					8.501D
		2423.0																					8.501D
		2424.0																					8.5010
		2425.0																					8.50ID
		2426.0																					8.501D
		2427.0																					8.50ID
		2428.0																					8.50¦D
		2429.0																			1.37		
		2430.0																					8.501D
		2431.0																					8.501D
		2432.0																					8.5010
		2433.0																					
		2434.0																					8.50ID
		2435.0																					8.5010
		2435.0																					8.501D
		2437.0																					8.5010
																							8.501D
		2438.0 2439.0																					8.5010
																							8.501D
		2440.0																					8.5010
		2441.0																					8.501D
		2442.0																					8.5010
		2443.0 2444.0																					8.501D
																							8.5010
		2445.0							2432.8														8.50lD
		2446.0																					8.501D
		2447.0																					8.501D
		2448.0																					8.5010
		2449.0																					8.50ID
		2450.0																					8.5010
		2451.0																					8.501D
		2452.0																					8.50lD
		2453.0																					8.501D
		2454.0																					8.501
+			+						+							+							+

Data Printed at time 06:35 Date Mar 14 '89 Data Recorded at time 05:32 Date Mar 8 '89

+	EPTH	ROP	TORG	AUE	RPM	WOB	PUMPIR	TRNS	MD	lb/gal	FLO	W/MIN	TEM	P (C)	PVT	-THIS	BIT-	ESTI	DXC	NXB	ECD N	IXMD:
·		+-					+-								+-			+-				+
1 00 0532 2	455 A	4.88!	233	346	118	36.5	270012	440.1	9.40	7.50	/01.0	/00	30.I	20.2	4011	34/	30.4	1./1:1	.00	1.00	1.30 0	1.3010
: 89 0541 2	456.0	6.351	230	317	118	33.9	276012	442.6	9.40	9.50	703.5	702	49.8	50.7	4/01	528	38.3	5./8:1	.52	1.35	7.38 8	עוטם.נ
1 90 0547 2	457.0	10.11	251	394	118	35.8	279012	443.6	9.40	9.50	702.2	702	49.7	50.2	4721	529	38.4	5.7911	.42	1.24	7.58 8	3.5010
1 91 0609 2	2458.0	9.461	272	433	118	35.3	280012	444.2	9.40	9.50	703.4	703	49.8	50.8	4681							3.50¦D↑
1 92 0613 2	2459.0	14.61	244	456	118	33.1	272012	445.2	9.40	9.50	703.9	703	49.8	50.7						1.12		
1 93 0618 2	2460.0	13.61	239	328	118	36.4	273012	446.4	9.40	9.50	702.2	702	49.9	51.0						1.17		
1 94 0625 2	2461.0	7.951	231	291	118	38.4	275012	448.3	9.40	9.50	704.4	703	50.1	51.3						1.33		
1 95 0635 2	2462.0	5.871	249	454	118	40.0	277012	2449.8	9.40	9.50	703.6	702	50.4	51.1						1.43		
1 96 0646 2	2463.0	5.531	218	415	118	39.2	279012	451.0	9.40	9.50	703.2	703	50.6	51.2						1.44		
1 97 0656 2	2464.0	5.801	209	256	118	39.2	278012	2452.5	9.40	9.44	704.5	703	50.7	51.1						1.43		
1 98 0707 2	2465.0	5.561	202	267	118	35.9	277012	2453.3	9.40	9.40	703.8	703	50.8	31.1 51.5						1.40 1.36		
1 99 0715	2466.0	7.001	202	267	118	38.3	284012	2454.2	9.40	9.40	704.0	703	50.8	01.0						1.34		
1100 0723	2467.0	7.741	195	239	118	38.7	278012	455.8	7.40	9.40	/01.3	/01	50.7	31.3						1.42		
101 0743	2468.0	5.511	218	328	118	3/.6	272012	243/.4	7.4) 7.40 \ 0.40	101.0	07J	50.0	50.2								8.50¦D
1102 0752	2469.0	6.211	237	307	118	38.2	276012	2438.3 3450 A	7.40) 7.4V \ 0.40	405.7	070 205	50.7	AQ 7								8.50¦D
103 0800	2470.0	7.251	2/0	488	118	 	2/80i2 1 1 may Di	2437.V	7.4	, 7. 4 0	073./	073	30.7	7/1/	7971	3.T.C	70.1	UIV/I			,,,,,	1
+ POOH at 1	24/1m :	que to	nign	710	110	75 dHU	2700!3	UF. 2867 N	9 40	1 9 40	8 874	637	38.1	39.7	4261	1.00	.2	.131	1.21	1.21	9.53	8.5010
1107 2134	24/2.V 2477 A	J.V41	100	204	110	17.0	279017	2447 N	9 40) 7.40 1 9 40	637.0	636	39.6	43.7	413	1.99						8.50lD
1108 2208	24/J.V 4474 A	4.J1:	140	200	110	15 A	2700!1	2467.0	9.40	9.40	635.5	635	41.5	41.7		2.95						8.50101
1109 2223	24/4.V 2475 A	14 41	274	741	111	23.0	2710!	2467.0	9.4	9.40	635.2	635	41.7	41.8		4.00						8.50¦D
1110 2226	247J.V 287L A	10.01 Q 54!	244	747	111	27.4	278011	2467.0	9.4	9.40	636.0	635	42.0	43.3		4.98						8.50ID
1111 2233	2470.V 2477 N	17 4!	255	388	112	28.8	277011	2467.0	9.4	9.40	636.9	636	42.0	43.5		5.97						8.501D
1112 2250	2477.V 2478 N	14.7	261	383	117	33.8	273011	2468.7	9.4	0 9.40	638.3	637	42.1	43.0		7.00		.201	1.21	1.21	9.55	8.50lD
1114 2303	2479.0	9.681	247	344	111	36.1	27401	2469.1	9.4	0 9.40	637.6	636	42.2	43.8	413	7.98						8.50¦D
1115 2307	2480.0	15.9	273	417	112	35.2	27401	2469.3	9.4	0 9.40	638.0	637	42.3	44.2	419	8.99						8.50¦D
1116 2308	2481.0	44.6	293	355	111	34.3	27301	2469.5	9.4	0 9.40	636.7	636	42.3	44.2	418	9.97						8.50¦D
1117 2312	2482.0	14.7	273	372	112	36.7	27601	2470.0	9.4	0 9.40	635.0	635	42.3	44.2	422	11.0						8.50lD
1118 2315	2483.0	18.7	300	397	112	36.2	27101	2470.2	9.4	0 9.40	636.0	636	42.4	44.4	424	12.0						8.501D
1119 2319	2484.0	16.9	283	408	112	36.2	27401	2470.5	9.4	0 9.40	638.8	3 637	42.5	5 44.6	429	13.0						8.501D
1120 2322	2485 0	19.9	292	369	112	35.9	27701	2470.7	9.4	0 9.40	637.2	636	42.6	5 44.6	431	114.0	1.4	.261	1.18	1.17	9.58	8.50:0
1121 2340	2484.0	13.5	277	452	112	35.9	27701	2471.4	9.4	0 9.40	637.9	617 6	42.9	7 45.2	449	15.0	1.5	2/1	1.50	1.29	4.08	8.50104
1100 0717	2407 (0 021	261	TAC	111	74.7	2900!	2472 0	Q 4	0 9.40	1 639.9	1 637	47.9	7 44.8	449	116.0	1.3	28 i	1.38	1.37	7.30	0.30:07
1122 2343	2488.0	9.55	255	363	112	. 37.1	27001	2473.3	9.4	0 9.40	637.6	637	43.0) 45.3	45/	117.0	1.6		1.3/	1.30	7.30	0.5010
1124 2355			264	388	112	38.0	28001	2474.2	9.4	0 9.40	636.4	1 635	45.1	2 44.9	462	118.0	1.7	.301	1.30	1.33	7.30	8.50¦D
: Date	Mar 9	7 '89						0475 4				1 / 70	47	4 AC A	ALO	119.0	1 0	2 719	1 74	1 77	9 58	8.50¦D
1125 0001	2490.0	10.3	277	399	112	36.7	2/501	24/5.0	7.4	O 7.4	, 740 . 1 978°,	י פיני 1 קיי	43.	4 43.4 5 A5 0		120.0						8.501D
1126 0006	2491.0	10.8	244	346	111	. 36.5	2/00	24/0.2 24/0.2	. 7.9 . o .	N 7.4	, 69p. , 647	3 03/ A LTL	43.i	1 11 1 1 11 1		121.0						8.501D
1127 0010	2492.0	16.8	1 259	35%	/ 111	. 33.3	2/601	24/3.0	1 7.4 1 0 <i>1</i>	10 7.41 10 0 A) 03/.º	4 030 7 475	: 43 : Δ7 :	0 70.1 8 A5 T		122.0						8.501D
1128 0015 1129 0017	2475.	V 11.2	i 200	441) 112 (114	1 34./ 3 76 0	2/0Vi	147/0./ 17877 1	7.4	[V 7±11] [N 0 A:	O GAN '	6 Y46	, 131 147	9 45.4		123.0						8.501D
1129 0017 1130 0020	2474.	0 29.2 0 99 0	i 2/0 i 20#	440) 11 <i>4</i> 7 11'	. 30.0 7 ap r	2/201 2/201	147//•1 1747¤ (. /.* }	10 9 A	0 437 0 437	, 037 1 A3A	44	0 45.5		124.0						8.501D
1130 0020	2470.	V ZZ.V N 15 7	: 474 ! 207	37. 409	. 114 7 111	. 37.0 7 39 0	2710	2479	791	0 9 4	0 638	0 637	44.	1 46.2		125.0						8.5010
1131 0024	2470.	v 1J.3	: 700 ! 740	7V.	, 112 4 11'	2 3A.2	2830	2481.0	9.4	0 9.4	0 652.	9 657	2 44.	2 46.6		126.0						8.50¦D
1132 0027	2498	0 12.J	1 290	409	 8 111	2 38.0	2840	2484	5 9.4	10 9.4	0 652.	0 651	44.	8 46.2		127.0	2.	5 .39	11.19	1.19	9.57	8.501D
134 0101	2499	0 15.7	1 761	35	3 11	1 37.7	3070	2485.	3 9.	10 9.4	0 673.	3 671	44.	9 46.4	512	128.0	2.					8.50¦D
1135 0105	2500	0 15.4	1 248	30	B 11	1 36.0	3060	12486.	1 9.	40 9.4	0 674.	7 673	3 45.	1 46.9	510							8.50ID
1171 0100	2501	0 15 5	1 254	. τρ	A 11'	7 34 5	0407	12486.	79.4	40 9.4	0 673.	7 673	3 45.	2 47.0	510	130.0	2.	6 .42	11.28	1.26	9.58	8.50ID
+			+					+								+			+			+

Data Printed at time 06:40 Date Mar 14'89 Data Recorded at time 01:12 Date Mar 9'89

! F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD. ! m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW: ! 1137 0112 2502.0 19.31 244 366 112 37.9 303012487.3 9.40 9.40 671.2 671 45.4 46.9 507131.0 2.7 .4311.25 1.23 9.58 8.5010 1138 0116 2503.0 12.01 232 326 111 36.9 292012488.2 9.40 9.40 674.8 673 45.7 47.1 507132.0 2.8 .4411.36 1.35 9.58 8.501D 1139 0125 2504.0 7.161 217 284 111 38.1 299012490.1 9.40 9.50 674.6 674 46.0 47.4 501133.0 2.9 .4611.52 1.50 9.58 8.501D 1140 0131 2505.0 10.2; 209 290 111 38.0 2910;2496.3 9.40 9.50 675.4 674 46.3 47.6 501;34.0 3.0 .48;1.42 1.41 9.55 8.50;D 1141 0138 2506.0 8.59; 223 305 111 39.3 3010;2498.3 9.40 9.50 675.0 674 46.6 47.8 496;35.0 3.1 .50;1.48 1.46 9.55 8.50;D 1142 0145 2507.0 8.361 202 272 111 37.4 288012500.0 9.40 9.50 672.9 672 46.9 48.4 486136.0 3.3 .5111.37 1.36 9.55 8.501D 1143 0157 2508.0 14.6; 234 344 111 35.5 2970;2500.0 9.40 9.50 683.2 682 47.1 48.6 473;37.0 3.4 .53;1.29 1.28 9.55 8.50;D+ 1144 0200 2509.0 20.01 260 352 111 37.2 298012500.0 9.40 9.50 684.5 684 47.2 49.4 470138.0 3.4 .5311.19 1.18 9.56 8.501D 1145 0206 2510.0 11.51 253 357 111 36.7 297012500.1 9.40 9.50 685.5 684 47.4 49.5 467139.0 3.5 .5411.13 1.13 9.60 8.501D 1146 0210 2511.0 15.11 271 362 112 39.5 297012501.2 9.40 9.50 685.2 684 47.6 49.8 462140.0 3.6 .5411.18 1.18 9.60 8.501D 1147 0215 2512.0 13.7; 251 365 112 36.7 3090;2502.5 9.40 9.50 684.1 683 47.9 50.0 460;41.0 3.6 .56;1.33 1.31 9.60 8.50;D 1148 0219 2513.0 12.81 219 294 111 32.4 295012503.7 9.40 9.50 677.3 674 48.1 49.8 457142.0 3.7 .5711.30 1.28 9.60 8.501D 1149 0221 2514.0 23.31 251 374 112 35.7 292012504.3 9.40 9.50 679.5 678 48.3 49.8 455143.0 3.7 .5811.18 1.16 9.60 8.501D 1150 0224 2515.0 29.91 339 452 112 46.9 296012504.8 9.40 9.50 679.7 678 48.3 49.8 451144.0 3.8 .5811.21 1.19 9.61 8.5010 1151 0229 2516.0 10.11 225 367 112 41.7 292012505.6 9.40 9.50 677.9 677 48.6 49.5 444145.0 3.9 .6011.47 1.44 9.61 8.5010 1152 0235 2517.0 11.21 196 280 111 36.8 294012506.2 9.40 9.50 679.1 677 48.8 49.5 443146.0 4.0 .6211.38 1.36 9.61 8.5010 1153 0313 2518.0 13.01 244 373 112 35.0 156012510.8 9.50 9.50 488.1 487 49.0 50.4 413147.0 4.3 .6711.32 1.30 9.61 8.501D 1154 0327 2520.0 9.941 239 339 111 33.2 201012513.3 9.50 9.50 563.6 563 49.1 50.4 400148.9 4.5 .7111.37 1.35 9.63 8.501D 1155 0332 2521.0 13.21 265 322 111 36.7 201012514.2 9.50 9.50 567.7 566 49.1 50.1 399150.0 4.6 .7211.33 1.31 9.63 8.5010 1156 0336 2522.0 15.8: 274 355 111 36.1 1980:2515.0 9.50 9.50 565.7 564 49.1 50.7 399:51.0 4.7 .73:1.28 1.25 9.64 8.50:0 1157 0340 2523.0 13.81 266 378 112 36.6 199012516.2 9.50 9.50 564.8 564 49.1 50.5 392152.0 4.7 .7411.32 1.29 9.64 8.501D 1158 0354 2524.0 10.61 263 390 112 37.2 290012518.3 9.50 9.50 674.2 661 49.2 49.4 374153.0 4.9 .7711.39 1.37 9.66 8.5010 1159 0356 2525.0 22.1; 242 310 111 37.9 2730;2518.8 9.50 9.50 655.5 658 49.2 49.8 374;54.0 4.9 .77;1.20 1.18 9.67 8.50; 1160 0401 2526.0 12.31 251 355 111 40.3 276012519.3 9.50 9.50 656.4 655 49.2 50.2 371155.0 5.0 .7911.39 1.36 9.66 9.501D 1161 0405 2527.0 14.2; 241 295 118 39.0 2790;2519.3 9.50 9.50 655.2 655 49.2 50.1 368;56.0 5.1 .80;1.35 1.32 9.68 8.50;D 1162 0408 2528.0 18.21 252 304 120 39.4 278012519.3 9.50 9.50 655.2 654 49.2 50.4 367157.0 5.1 .8111.29 1.26 9.69 8.501D 1163 0411 2529.0 21.51 257 314 120 39.7 276012519.3 9.50 9.50 656.9 656 49.2 50.4 368158.0 5.2 .8211.25 1.22 9.70 8.501D 1164 0414 2530.0 17.1; 245 297 120 38.2 2760; 2517.7 9.50 9.50 657.2 656 49.2 50.6 365; 59.0 5.2 .83; 1.29 1.26 9.71 8.50; D 1165 0418 2531.0 16.7; 250 347 120 38.8 2930; 2517.3 9.50 9.50 656.9 657 49.1 50.7 369; 60.0 5.3 .84; 1.31 1.28 9.72 8.50; D 1166 0422 2532.0 16.6; 250 325 120 39.0 2900; 2517.9 9.50 9.50 656.7 656 49.0 51.0 370; 61.0 5.3 .85; 1.31 1.28 9.72 8.50; D 1167 0424 2533.0 20.51 256 335 120 39.3 278012518.7 9.50 9.50 661.0 660 49.0 51.1 371162.0 5.4 .8611.25 1.22 9.72 8.501D 1168 0428 2534.0 17.8; 229 336 120 37.2 2840;2519.7 9.50 9.50 659.9 659 49.1 51.2 369;63.0 5.4 .87;1.27 1.24 9.72 8.50;D 1169 0439 2535.0 23.61 231 290 120 36.9 278012521.1 9.50 9.50 652.6 648 48.6 50.8 374164.0 5.5 .8911.19 1.16 9.72 8.5010 1170 0443 2536.0 15.8; 254 318 120 38.2 2840;2521.5 9.50 9.50 667.0 665 48.5 51.3 376;65.0 5.6 .90;1.31 1.28 9.72 8.50;D 1171 0446 2537.0 18.51 293 544 122 38.3 292012522.3 9.50 9.50 667.6 666 48.5 51.3 378166.0 5.7 .9111.27 1.24 9.72 8.5010 1172 0447 2538.0 42.01 293 449 121 38.5 283012522.7 9.50 9.50 665.3 665 48.5 51.0 379167.0 5.7 .9211.05 1.02 9.72 8.501D 1173 0451 2539.0 17.01 265 457 122 38.9 299012523.7 9.50 9.50 666.9 666 48.6 51.0 379168.0 5.7 .9311.30 1.27 9.73 8.501D 1174 0455 2540.0 15.11 256 334 120 38.5 285012524.8 9.50 9.50 667.3 666 48.6 50.6 383169.0 5.8 .9411.33 1.30 9.72 8.501D 1175 0500 2541.0 10.71 245 326 120 38.3 299012525.9 9.50 9.50 664.4 665 48.7 51.0 382170.0 5.9 .9611.42 1.38 9.72 8.501D :176 0505 2542.0 13.2: 258 343 120 40.4 2930:2526.2 9.50 9.50 666.3 665 48.7 51.2 388:71.0 6.0 .97:1.38 1.35 9.73 8.50:D 1177 0508 2543.0 16.51 264 397 121 39.1 287012527.3 9.50 9.50 665.3 664 48.5 51.2 398172.0 6.0 .9911.31 1.27 9.73 8.5010 1178 0526 2544.0 17.7 255 334 120 38.7 2830 2530.3 9.50 9.50 589.9 589 47.7 50.3 425 73.0 6.2 1.01 1.29 1.25 9.71 8.50 Dt 1179 0529 2545.0 18.81 260 317 120 36.4 281012531.3 9.50 9.50 583.8 585 47.5 51.7 425174.0 6.2 1.0211.25 1.21 9.71 8.501D 1180 0531 2546.0 22.1; 260 333 120 35.5 2810;2532.0 9.50 9.50 588.8 588 47.5 51.6 427;75.0 6.3 1.03;1.20 1.16 9.71 8.50;0 181 0535 2547.0 16.7; 255 309 120 35.8 2800;2532.9 9.50 9.50 589.9 589 47.5 51.7 434;76.0 6.3 1.04;1.27 1.24 9.71 8.50;0 182 0538 2548.0 19.4; 232 282 120 32.3 3020;2533.7 9.50 9.50 613.7 606 47.5 51.3 433;77.0 6.4 1.05;1.20 1.16 9.72 8.50;0 1183 0541 2549.0 21.41 225 275 120 33.3 297012534.5 9.50 9.50 609.7 609 47.6 51.5 442178.0 6.4 1.0611.18 1.15 9.72 8.501D 1184 0544 2550.0 17.01 255 297 120 38.3 296012535.3 9.50 9.50 608.2 608 47.7 51.5 446179.0 6.5 1.0711.29 1.26 9.72 8.501™

! F# TIME DEPTH ROP! TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: m m/hr! AVG MAX AVG AVG PRES!DEPTH IN OUT IN OUT IN OUT ! m hr TW! | 1185 0548 2551.0 17.11 254 334 120 38.2 299012536.3 9.50 9.50 607.8 608 47.8 51.5 448180.0 6.5 1.0811.29 1.26 9.72 8.501D 1186 0551 2552.0 21.01 242 335 120 38.6 305012536.3 9.50 9.50 607.2 606 48.0 51.1 450181.0 6.6 1.0911.24 1.20 9.72 8.501D 1187 0553 2553.0 24.7; 226 294 120 36.4 3040;2536.6 9.50 9.50 607.1 606 48.1 51.3 450;82.0 6.6 1.09;11.18 1.14 9.73 8.50;D 189 0619 2555.0 16.2; 256 315 120 39.4 2960;2541.8 9.50 9.50 631.3 631 47.8 51.0 461;84.0 6.8 1.12;11.32 1.28 9.71 8.50;D 189 0624 2554 0 10 4; 237 704 120 70.4 2070;2540 2.554 0 10 4; 237 704 120 70.5 1190 0624 2556.0 10.6; 223 304 120 39.4 2870;2542.8 9.50 9.50 620.9 621 47.8 50.9 471;85.0 6.9 1.14;1.43 1.39 9.71 8.50;D 1191 0629 2557.0 11.71 227 318 120 40.0 287012543.8 9.50 9.50 621.0 620 47.8 50.4 478186.0 7.0 1.1611.41 1.37 9.71 8.501D 1192 0635 2558.0 10.4: 213 271 120 39.3 2870:2545.0 9.50 9.50 622.9 621 47.9 50.0 483:87.0 7.1 1.17:1.44 1.40 9.71 8.50:D 1193 0641 2559.0 10.71 217 281 120 39.1 287012545.8 9.50 9.50 622.9 622 48.0 49.8 486188.0 7.1 1.1911.43 1.39 9.71 8.501D 1194 0644 2560.0 16.8; 225 304 120 38.5 2920;2545.8 9.50 9.50 623.0 621 48.4 50.0 484;89.0 7.2 1.20;1.30 1.26 9.72 8.50;D 195 0646 2561.0 32.8; 255 326 120 38.5 2960;2545.8 9.50 9.50 633.0 629 48.4 50.0 480;89.9 7.2 1.21;1.12 1.08 9.72 8.50;D 1196 0649 2562.0 21.4; 229 311 120 37.0 2960;2546.3 9.50 9.50 633.3 632 48.6 49.9 482;91.0 7.3 1.22;1.22 1.18 9.72 8.50;0 1197 0654 2563.0 12.21 222 321 120 37.2 296012548.2 9.50 9.50 633.2 632 48.8 50.1 476192.0 7.4 1.2311.37 1.33 9.72 8.501D 1198 0710 2564.0 11.6: 209 436 121 36.5 2970:2551.7 9.50 9.50 636.1 626 49.0 50.0 463:93.0 7.5 1.25:1.38 1.34 9.71 8.50:D? 1199 0715 2565.0 10.71 260 346 120 40.0 297012553.3 9.50 9.50 633.7 632 48.9 49.8 456194.0 7.6 1.2711.44 1.40 9.71 8.5010 1201 0725 2567.0 12.71 261 341 120 42.5 298012555.4 9.50 9.50 633.5 632 49.0 49.2 444196.0 7.8 1.3011.42 1.37 9.71 8.5010 1202 0770 2548 0 14 11 252 751 120 42.1 297012555.6 9.50 9.50 633.5 632 49.0 49.2 444196.0 7.8 1.3011.42 1.37 9.71 8.5010 1202 0770 2548 0 14 11 252 751 120 42.1 297012555 6 9.50 9.50 633.5 632 49.0 49.2 444196.0 7.8 1.3011.42 1.37 9.71 8.5010 1202 0770 2548 0 14 11 252 751 120 42.1 297012555 6 9.50 9.50 633.5 632 49.0 49.2 1202 0730 2568.0 14.11 252 351 120 42.1 297012555.5 9.50 9.50 632.8 632 49.0 49.5 441197.0 7.8 1.3211.39 1.34 9.71 8.501D 1203 0732 2569.0 29.91 256 337 120 41.2 298012555.7 9.50 9.50 633.0 632 49.0 49.8 437198.0 7.9 1.3211.16 1.11 9.71 8.5010 1204 0734 2570.0 25.81 288 369 121 42.9 298012556.5 9.50 9.50 632.8 632 49.0 49.8 436199.0 7.9 1.3311.20 1.16 9.71 8.501D 1205 0738 2571.0 14.91 256 339 120 41.9 298012557.4 9.50 9.50 631.0 630 49.0 50.7 4331 100 8.0 1.3411.34 1.30 9.71 8.501D 1206 0743 2572.0 12.01 240 355 120 43.0 299012558.3 9.50 9.50 632.9 632 49.1 50.8 4281 101 8.0 1.3511.41 1.37 9.72 8.501D 1207 0746 2573.0 16.91 314 382 121 41.6 299012559.0 9.50 9.50 632.5 632 49.2 50.9 4231 102 8.1 1.3611.30 1.26 9.72 8.501D 1208 0800 2574.0 14.11 242 316 120 39.7 295012560.8 9.50 9.50 626.9 626 49.4 51.6 4111 103 8.2 1.3911.37 1.32 9.71 8.501D 1209 0805 2575 0 12 21 201 419 121 40 0 295012560.8 9.50 9.50 626.9 626 49.4 51.6 4111 103 8.2 1.3911.37 1.32 9.71 8.501D 1209 0805 2575.0 12.21 281 419 121 40.0 295012562.1 9.50 9.50 625.7 625 49.5 52.0 4081 104 8.3 1.4011.41 1.36 9.71 8.501D 1210 0811 2576.0 11.11 284 394 121 39.2 295012564.1 9.50 9.50 625.2 624 49.8 52.0 4051 105 8.4 1.4211.39 1.34 9.71 8.501D 1211 0816 2577.0 11.1: 252 323 120 40.0 2950:2565.4 9.50 9.50 626.4 625 50.1 52.2 402: 106 8.5 1.43:1.42 1.37 9.71 8.50:0 1212 0821 2578.0 12.11 251 323 120 38.3 296012565.9 9.50 9.50 625.3 624 50.3 52.5 3981 107 8.6 1.4511.38 1.33 9.71 8.501D 1217 0855 2583.0 28.41 238 301 120 36.3 299012571.8 9.50 9.50 627.7 627 49.1 52.1 4281 112 9.0 1.5211.14 1.09 9.70 8.5010 1218 0858 2584.0 19.91 237 283 120 35.0 299012572.5 9.50 9.50 626.9 626 49.0 53.0 4261 113 9.0 1.5211.22 1.17 9.70 8.5010 1219 0902 2585.0 14.81 241 289 120 34.3 298012573.6 9.50 9.50 627.8 627 49.0 53.3 4311 114 9.1 1.5311.28 1.23 9.71 8.5010 1220 0904 2586.0 24.4; 268 339 120 33.1 2980;2574.0 9.50 9.50 627.7 626 49.0 53.1 433; 115 9.1 1.54;1.14 1.09 9.71 8.50;D 1221 0906 2587.0 37.7! 287 361 121 33.9 296012574.3 9.50 9.50 627.7 627 49.0 52.7 4331 116 9.2 1.5511.04 .99 9.71 8.501D 1222 0909 2588.0 17.5! 280 591 123 36.0 298012575.0 9.50 9.50 626.6 626 49.1 52.7 4351 117 9.2 1.5511.26 1.21 9.71 8.501D 1223 0914 2589.0 11.81 257 308 120 37.6 298012575.2 9.50 9.50 626.8 627 49.1 52.1 4331 118 9.3 1.5711.39 1.34 9.71 8.501D 1224 0918 2590.0 16.61 256 305 120 36.1 297012575.9 9.50 9.50 627.1 627 49.0 51.8 4361 119 9.4 1.5811.28 1.23 9.72 8.501D 1225 0920 2591.0 22.71 255 346 120 35.2 296012576.4 9.50 9.50 627.8 627 49.0 51.4 4351 120 9.4 1.5911.19 1.14 9.72 8.5010 1226 0926 2593.0 14.71 236 287 120 33.8 298012577.5 9.50 9.50 617.4 618 49.0 51.7 4401 122 9.5 1.6011.29 1.24 9.72 8.501D1 1227 0941 2595.0 13.51 210 302 120 36.4 305012579.4 9.50 9.50 612.5 612 48.5 51.4 4501 124 9.6 1.6211.32 1.27 9.72 8.5010 1228 0946 2596.0 12.21 208 310 120 34.8 291012580.5 9.50 9.50 604.8 603 48.3 51.3 4531 125 9.7 1.6311.34 1.28 9.72 8.501D 1232 1004 2600.0 10.7; 230 278 120 38.3 2980;2584.2 9.50 9.50 600.1 600 48.4 50.0 467; 129 10.0 1.68;1.38 1.33 9.72 8.50;Df +------

I F# TIME DEPTH ROP! TORQUE RPM WOB PUMP!RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD. " m' m/hr¦ AVG MAX AVG AVG PRES\DEPTH IN OUT IN OUT IN OUT ! m hr TW! ------ 1233 1014 2601.0 10.0 209 270 120 36.5 2770 2584.2 9.50 9.50 589.5 591 48.4 49.9 489 130 10.1 1.70 1.39 1.34 9.70 8.50 DT 1234 1018 2602.0 14.7; 242 323 120 38.1 2740;2585.2 9.50 9.50 589.3 587 48.3 49.7 483; 131 10.2 1.71;1.33 1.27 9.73 8.50;D 1235 1023 2603.0 11.71 250 376 121 38.7 279012586.6 9.50 9.50 589.1 588 48.2 50.8 4851 132 10.2 1.7211.39 1.34 9.72 8.501D 1236 1038 2604.0 11.41 246 296 120 37.6 274012590.3 9.50 9.50 583.5 583 47.9 50.6 4971 133 10.4 1.7511.39 1.33 9.71 8.5010 1237 1044 2605.0 9.561 225 289 120 38.4 271012591.6 9.50 9.50 583.0 582 47.9 51.0 5001 134 10.5 1.7611.45 1.39 9.71 8.501D 1238 1046 2606.0 25.81 227 293 120 37.1 266012592.2 9.50 9.50 583.6 583 47.9 50.7 5021 135 10.5 1.7711.17 1.11 9.71 8.501D 1239 1051 2607.0 13.31 242 328 120 38.2 267012593.5 9.50 9.50 585.8 585 47.9 50.4 5051 136 10.6 1.7811.36 1.30 9.71 8.5010 1240 1055 2608.0 12.51 263 333 120 38.3 270012594.9 9.50 9.50 583.3 582 48.0 49.7 5111 137 10.7 1.8011.37 1.32 9.71 8.5010 1241 1100 2609.0 12.31 266 331 120 38.5 269012591.1 9.50 9.50 583.0 582 48.1 49.7 5131 138 10.8 1.8111.38 1.32 9.73 8.5010 1242 1105 2610.0 12.01 243 373 121 38.4 269012592.4 9.50 9.50 582.9 582 48.1 49.6 5171 139 10.8 1.8211.38 1.33 9.73 8.5010 1243 1110 2611.0 12.7; 264 329 120 38.2 2640;2593.7 9.50 9.50 582.1 581 48.1 49.5 521; 140 10.9 1.84;1.37 1.31 9.73 8.50;D 1244 1115 2612.0 13.51 281 358 121 38.5 264012595.5 9.50 9.50 583.0 582 48.1 49.6 5241 141 11.0 1.8511.35 1.29 9.72 8.5010 1245 1118 2613.0 15.71 297 395 121 39.1 267012596.5 9.50 9.50 584.2 583 48.0 49.4 5261 142 11.1 1.8611.32 1.26 9.72 8.501D 1246 1151 2614.0 27.0; 324 514 122 36.8 2690;2603.0 9.50 9.50 578.4 577 48.2 49.1 495; 143 11.2 1.92;1.16 1.09 9.70 8.50;0 1247 1151 2615.0 24.2; 321 361 121 35.4 2710;2607.2 9.50 9.50 578.4 577 48.2 49.1 496; 144 11.3 1.92;1.19 1.12 9.70 8.50;D 1248 1152 2316.0 29.21 286 367 121 34.8 292012608.7 9.50 9.50 580.2 577 48.3 49.4 4951 145 11.4 1.9211.12 1.06 9.70 8.501D 1249 1153 2617.0 23.5; 247 347 120 36.2 3020;2611.5 9.50 9.50 575.7 576 48.6 49.6 493; 146 11.4 1.92;1.21 1.17 9.70 8.50;04 1250 1153 2618.0 25.81 262 382 121 38.6 299012613.1 9.50 9.50 574.1 575 49.7 49.9 4951 147 11.5 1.9211.19 1.13 9.70 8.501D 1251 1155 2619.0 29.51 197 346 120 37.9 288012614.1 9.50 9.50 573.7 573 49.8 50.0 4921 148 11.5 1.9211.18 1.12 9.69 8.501Dt + Circulate bottoms up at 2621m. No show. 1253 1316 2622.0 46.41 270 339 120 22.0 269012622.0 9.50 9.50 582.2 580 52.0 53.0 460! 151 11.5 1.92! .88 .83 9.65 8.50!D↑ 1254 1325 2623.0 34.31 280 340 120 29.8 261012622.1 9.50 9.50 572.4 566 52.1 52.2 4611 152 11.5 1.9311.03 .97 9.65 8.501pc 1255 1328 2624.0 18.2: 290 366 121 34.3 2680:2622.1 9.50 9.50 577.0 576 52.0 52.1 453: 153 11.6 1.94:1.24 1.18 9.66 8.50 1256 1331 2625.0 23.91 282 345 120 34.0 267012622.1 9.50 9.50 576.4 576 51.9 51.8 4511 154 11.6 1.9511.16 1.10 9.66 8.5010 1257 1335 2626.0 13.11 271 361 121 34.4 268012622.1 9.50 9.50 579.0 578 51.9 51.5 4481 155 11.7 1.9611.32 1.26 9.67 8.501D 1258 1341 2627.0 9.681 250 310 120 37.6 269012622.1 9.50 9.50 578.1 577 51.7 51.6 4451 156 11.8 1.9811.44 1.38 9.67 8.501D 1259 1346 2628.0 13.81 253 305 120 38.9 269012622.1 9.50 9.50 577.5 576 51.5 51.7 4441 157 11.9 1.9911.36 1.29 9.68 8.501D 1260 1349 2629.0 19.11 270 324 120 40.5 270012622.1 9.50 9.50 578.9 578 51.5 51.7 4421 158 11.9 2.0011.29 1.22 9.68 8.501D 1261 1351 2630.0 21.9; 255 302 120 39.6 269012622.1 9.50 9.50 578.6 578 51.4 51.7 4391 159 12.0 2.0011.24 1.17 9.68 8.501D 1262 1353 2631.0 34.81 296 341 120 40.2 269012622.1 9.50 9.50 577.8 576 51.4 51.7 4401 160 12.0 2.0111.12 1.05 9.69 8.501D 1263 1355 2632.0 33.81 292 344 120 40.0 269012622.1 9.50 9.50 576.8 576 51.3 51.7 4381 161 12.0 2.0111.12 1.06 9.69 8.5010 1264 1418 2633.0 33.0 284 344 120 33.9 2770 2622.1 9.50 9.50 582.0 581 50.6 50.6 427 162 12.1 2.03 11.08 1.01 9.70 8.50 10 1265 1419 2634.0 34.01 263 300 120 34.8 277012622.1 9.50 9.50 581.7 580 50.4 51.4 4081 163 12.1 2.0311.08 1.01 9.70 8.501D 1266 1421 2635.0 30.31 256 297 120 39.3 284012622.1 9.50 9.50 582.2 581 50.4 51.4 3991 164 12.2 2.0411.15 1.08 9.71 8.501D 1267 1423 2636.0 27.21 276 332 120 40.6 282012622.1 7.50 7.50 583.0 581 50.2 51.5 3781 165 12.2 2.0411.17 1.10 9.71 8.501D 1268 1425 2637.0 31.21 272 444 121 38.8 279012622.1 9.50 9.50 581.6 581 50.1 51.0 3961 166 12.2 2.0511.13 1.07 9.71 8.501D 1269 1427 2638.0 31.51 271 364 121 38.9 280012622.1 9.50 9.50 582.6 581 50.1 51.0 3971 167 12.3 2.0511.13 1.07 9.72 8.501D 1270 1429 2639.0 34.51 286 412 121 40.0 278012622.1 9.50 9.50 581.7 580 50.0 50.6 3971 168 12.3 2.0611.12 1.05 9.72 8.501D 1271 1431 2640.0 27.51 264 316 120 40.3 275012622.1 9.50 9.50 581.9 581 50.0 51.0 3961 169 12.3 2.0611.18 1.11 9.73 8.5010 1272 1434 2641.0 17.41 235 297 120 39.8 276012622.1 9.50 9.50 581.1 580 50.0 50.9 3991 170 12.4 2.0711.30 1.23 9.73 8.5010 1273 1441 2642.0 9.121 220 271 120 41.6 276012622.1 9.50 9.50 582.6 581 50.0 51.7 3891 171 12.5 2.0911.49 1.42 9.74 8.501D 1274 1502 2643.0 12.31 242 322 120 41.2 282012623.0 9.50 9.50 591.9 590 49.7 52.1 3671 172 12.7 2.1211.40 1.34 9.74 8.501D 1275 1506 2644.0 14.81 246 380 121 41.8 283012623.4 9.50 9.50 588.3 587 49.7 52.4 3661 173 12.7 2.1311.36 1.29 9.74 8.5010 1276 1508 2645.0 21.11 232 310 120 41.3 283012624.1 9.50 9.50 588.8 588 49.8 52.1 3631 174 12.8 2.1411.26 1.19 9.74 8.5010 1277 1511 2646.0 25.51 247 292 120 40.8 284012624.8 9.50 9.50 588.8 587 49.8 52.1 3641 175 12.8 2.1411.20 1.13 9.74 8.5010 1278 1513 2647.0 28.31 309 443 121 41.3 283012625.5 9.50 9.50 588.8 588 49.9 52.2 3651 176 12.8 2.1511.18 1.11 9.74 8.5010 1279 1515 2648.0 23.51 295 514 122 40.2 283012626.3 9.50 9.50 580.9 589 50.0 51.9 3631 177 12.9 2.1611.22 1.15 9.74 8.5010 1279 1515 2648.0 23.51 295 514 122 40.2 283012626.3 9.50 9.50 580.9 589 50.0 51.9 3631 177 12.9 2.1611.22 1.15 9.74 8.5010 1280 1518 2649.0 20.31 233 266 120 39.7 283012626.8 9.50 9.50 590.9 590 50.1 52.0 3591 178 12.9 2.1611.25 1.18 9.75 8.501

Data Printed at time 06:55 Date Mar 14 '89 Data Recorded at time 15:21 Date Mar 9 '89

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: ⊢#	1177	DEPTH m	806	TO	20116	DOM	ผกอ	OHMO	OTOMO	MΛ	16/	1 ~	MII / 14 P L										
t									DL 			IN 	100			; •	A	hr	i₩i				!
1201	1021	7000.0	4.4.41	400	400	120	47.0	7970	Z0Z/.1	7.50	1 7.50	590.3	589 '	50 2	52.1	7501	170	17 A	2 171	1 22	4 4 5	0 70	O FAIR
1202	1327	2031.0	10.21	424	407	170	41.0	78701	262/./	7.50	9.50	589.1	588 :	50.3	. 52.2	3571	180	13.0	2 19!	1 30	1.10	7./3	8.50:D
1200	IJLI	7097.0	10.01	217	790	117	41.0	7810	2628.6	7.50	7.50	589.8	589 :	50.4	52.1	354!	181	13.1	7 19!	1 29	1 22	7./J	8.50ID
1284	1541	2653.0	18.11	235	299	120	38.2	2110:	2631.2	9.50	9.50	587.9	588 5	50. A	51.5	7511	107	17 2	2 201	1 20	1 21	0.70	0 5015
1285	1543	2654.0	29.11	273	335	120	38.4	2100	2632.0	9.50	9.50	508.7	513.5	A 08	51.5	749!	107	17 2	2 211	1 15	1 07	0.74	0 5010
1200	1747	2000.0	4/:1:	20/	212	120	-9g.g	21201	2632.8	-9.50	9.50	514.1	510.5	50 T	51 5	1445	10/	177	2 211	1 17	1 10	0.74	0 5018
: 207	IJTO	7070'A	44.44	210	4/0	122	37.4	- Z1ZVi	2652.8	7.50	9.50	514.3	513.5	50 T	51 5	TAL	105	177	2 221	1 77	4 45	0.74	0.0018
1200	1990	2007.0	49.71	474	277	122	37.3	Z1/0i	2632.8	7.50	9.50	514.6	514 5	10.2	52.5	347!	186	13.3	2.231	1.19	1.12	9.75	8.5010
1207	1777	7000.0	20.4:	ZJ0	322	170	33.7	Z1/0;	2655.2	7.50	9.50	515.6	514 5	10.2	51.9	344!	187	13.4	2.231	1.16	1.09	9.75	8.50ID
1290	1555	2659.0	26.01	286	458	122	38.6	21901	2633.8	9.50	9.50	515.3	514 5	0.2	51.4	342!							8.50¦D
1291	1558	2660.0	16.11	291	489	122	38.0	2210:	2635.4	9.50	9.50	516.4	515 5	0.2	51.9	341!	189	13.5	2.251	1.30	1.23	9.75	8.50ID
1292	1607	2661.0	14.8	326	663	124	31.2	22901	2639.4	9.50	9.50	537.3	551 5	0.2	51.7	1877							8.501D
1293	1609	2662.0	27.71	285	508	122	24.3	22701	2640.4	9.50	9.50	533.2	534 5	0.2	51.2	335!	191	13.6	2.271	1.02	.95	9.74	8.501D
1274	1623	2663.0	23.21	314	556	123	30.9	28001	2642.6	9.50	9.50	588.1	586 5	0.0	50.5	324!							8.50:D1
1270	1626	2664.0	20.51	237	431	121	35.9	28501	2642.8	9.50	9.50	585.6	584 4	9.8	49.6	777!	107	17 0	2 201	1 21	1 17	0.74	0 5015
1270	1627	2665.0	24.11	285	442	121	36.7	28301	2642.9	9.50	9.50	585.6	585 4	9.7	51.6	7711	104	17 0	9 761	1 17	4 4A	0.74	0 5010
14//	1000	4000.V	10.01	2.3.3	04/	120	20.0	_ Z8Z011	2645.8	9.50	9.50	584.1	584 4	97	50 5	7151	105	14 0	711	1 17	1 07	0 74	0 5015
1270	IUTV	400/ IV	37:31	200	314	170	JZ.J	_ Z830i.	2644.2	7.50	7.50	588.9	597 A	9 Q	50 4	7151	104	SAA	771	1 04	0.7	0 75	B EA18
12//	LUTZ	700010	31./:	4J0	307	120	ა/.ტ	_ Z8ZVi.	2644.8	7.50	7.50	586.7	584 4	Q Q	50 A	3121	197	14 0 1	7771	1 11	1 04	0 75	O CAIR
1000	1077	2007.0	41:71	<i>2</i> J4	700	120	37.3	ZÖZVi.	2643.6	7.50	7.50	589.2	588 4	9.8	50.8	3121	198	14.1	2.331	1.16	1.09	9.75	8.50ID
1001	1070	701010	J4:0:	211	3/7	121	41.0	78701	2096.Z	7.50	9.50	586.4	586 4	9.9	51.2	3111	199	14.1	2.3310	1.12	1.04	9.75	8.50¦D
1303	1459	2671.0	12.01	140	277	110	41.0 70.7	283017	264/.5	7.50	7.50	587.1	587 4	9.9		3111	200	14.1 2	2.341:	1.18	1.11	9.75	8.501D
:304	1731	2672.0 2673.0	4 91!	114	201	117	30.7 81 A	207017	1/50 F	7.30	7.50	59/.1	595 4	9.6	50.5								8.50¦D
1305	1754	2674.0	5 10!	108	157	117	71.V	245017	0.7603 0.44 A	7.50	7.50	588.2	588 4	9.1	53.1	3271	202	14.6 2	2.4111	1.53	1.46	9.71	B.50¦D†
1306	1804	2675.0	20 3!	118	141	110	30.0 75 5	243012	1004.V	7.30	7.30	336.I EE/ 7	336 4	8./	55.1	3791	203	14.9 2	2.4511	1.60	1.52	9.69	B.501D
1307	1815	2676.0	35.41	127	197	110	33.3 35 A	274012	1444 S	7.30	7.50	006./ 577.9	336 4	8.6	53.3	3941	204	15.0 2	2.461	.97	.92	9.69	B.50:D†
1308	1817	2677.0	55.91	151	211	119	27 B	224012	1000.J 1117 T	7.30	7.30	JJJ.Z 570 /	574 4	5.6	33.3 50 °	4281	205	15.0 2	2.461	.85	.80	9.69	B.50¦D1
1309	1820	2678.0	60.61	146	206	119	78 S	252012	2649 7	7.JV 9.50	7.30	JJ2.0 579 A	JJ1 40	5.4	32.V 50.7	4201	206	15.0 2	2.461	.71	. 65	9.69 8	8.50¦D↑ 8.50¦D↑
1310	1822	2679.0 a botto	42.21	138	159	118	8.42	242012	7.000.7	7.3V 9.5A	9.50	JJZ.V 57A O	331 40 570 40	5.Z	32.3 50 7	4251	207	15.1 2	4.46	.84	.78	9.69 8	3.50 D1
+ Circ	ulat	e botto	MS UD	at 26	79m.	No	show	5.	.00710	7 . gV	7.00	330.7	J-30 40	2.4	J2.J	420 i	208	15.1 2	(.4/i)	.02	.94	9.69 8	3.50¦D
1312 1	1951	2680.0	16.21	184	337	120 3	35.8	272012	679.9	9.50	9.50 3	587 5	584 51	ι ο ι	51 0	ALAI	200	15 1 7	47:4	- 20	4 04	~ . r .	
1313 2	2011	2681.0	11.51	137	293	120 2	20.7	272012	680.0	9.50	9.50	385.1	585 51		51./	457!	210	13.1 Z 15 A 7	4/il	1.27	1.21	7.63 E	1.501D
1314 2	2014	2682.0	17.61	152	192	119 3	36.6	271012	680.0	9.50	9.50	587.5	584 51	1.3 9	51.0	454!	210	13.7 Z 15 A 7	1,VL.	27	1.17	7.00 t	1.5VID
1315 2	2018	2683.0	20.11	146	186	119 3	37.3	272012	680.0	9.50	9.50	587.8	586 51		50.9	455!	211	15.7 2	.JI:I	25	1.17	7.00 C	1.301D
1316 2	2022	2684.0	13.91	141	191	119 3	36.0	266012	680.0	9.50	9.50 5	86.9	586 51	.0 :	50.9						1.25		
1317 2	:027	2685.0	11.6	139	168 1	119 3	86.5	233012	680.0	9.50	9.50 5	95.2	594 50	.9 5	50.7						1.30		
1318 2	034	2686.0	8.35	147	214 1	119 3	57.5	234012	680.0	9.50	9.50 5	94.9	594 50	.7 5	50.7						1.39		
1319 2	042	2687.0	7.131	157	256 1	119 3	57.2	236012	680.0	9.50	9.50 5	95.5	595 50	0.0 5	50.7						1.43		
1320 2	050 2	2688.0	8.061	137	175 1	119 3	7.1	236012	680.0	7.50	9.50 5	95.9	595 49	.3 5	50.8						1.39		
1321 2	126 2	2689.0	6.311	147	311 1	120-3	6.7	232012	680.7	7.50	9.50 5	87.1	586 46	. 6 5	50.1								1.50¦D↑
1322 2	131 2	2690.0	21.21	122	140 1	118 3	6.2	231012	680.7	7.50	9.50 5	87.0	586 46	.7 5	50.0								1.501D1
1323/2	136 7	2691.0	36.71	128	157 1	18 3	6.7	230012	680.7	7.50	9.50 5	90.2	589 46	.8 4	49.6			16.3 2			.87		
1324 2	139 7	2692.0	17.4	129	165 1	19 3	4.9	231012	680.8	7.50	9.50 5	90.5	589 46	.9 4	49.3						1.17		
1325 2	145 2	2693.0	22.41	133	283 1	20 3	3.3	284012	682.0 °	7.50	9.50 6	60.2	657 47	.2 4	49.5								.50:D1
1326 2	100 2	2694.0	16.91	108	127 1	18 3	2.9	284012	683.5	7.50	9.50 6	60.4	659 47	.4 4	49.2	5.44!					1.16		
132/ Z 1700 0	100 Z 207 2	2695.0 1	(Z.V) 7 07 3	114	142 1	18 3	5.3	282012	685.0	7.50	9.50 6	53.9	655 47	.6 4	19.1	566!	224	14 4 2	A711	₹₹ :	1 25	2 70 0	50:0
, o z o z		2696.0	1701 .	110 .	1JZ l	.IO Ś	4.4	282012	686.3 S	7.50	7.50 6	57.0	656 47	.9 4	19.0	5701	225	16.7 2	.6911	.45	1.37	7.70 8	.501D
			7																				

t------! F# TIME DEPTH ROP! TORQUE RPM WOB PUMP:RTRNS MD 1b/qal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST! DXC NXB ECD NXMD ! m · m/hr! AVG MAX AVG AVG PRES!DEPTH IN OUT IN OUT -IN OUT ! m hr T₩! ; 1329 2208 2697.0 11.7: 132 162 118 35.8 282012687.1 9.50 9.50 655.0 659 48.0 49.0 571: 226 16.8 2.71:1.37 1.28 9.69 8.50:D 1330 2222 2698.0 17.0: 142 163 118 36.6 2880:2688.3 9.50 9.50 663.8 662 48.2 48.9 569: 227 16.9 2.72:1.28 1.19 9.70 8.50:D 1331 2225 2699.0 19.21 124 156 118 34.7 284012688.8 9.50 9.50 659.6 659 48.2 48.9 5731 228 17.0 2.7311.23 1.14 9.70 8.5010 1332 2227 2700.0 49.71 104 123 118 34.7 284012688.9 9.50 9.50 659.2 659 48.3 48.8 5691 229 17.0 2.731 .98 .90 9.70 8.5010 1333 2236 2701.0 9.781 104 121 118 37.6 288012688.9 9.50 9.50 658.2 657 48.2 48.9 5641 230 17.1 2.7511.43 1.35 9.71 8.5010 1334 2242 2702.0 9.711 114 132 118 37.2 290012689.5 9.50 9.50 655.1 655 48.3 48.9 5641 231 17.2 2.7611.43 1.34 9.71 8.501D 1335 2249 2703.0 8.49; 118 144 118 38.4 2900; 2690.3 9.50 9.50 657.6 656 48.4 48.8 565; 232 17.3 2.78; 1.48 1.39 9.71 8.50; p 1336 2255 2704.0 9.281 131 163 118 38.0 290012691.8 9.50 9.50 656.0 655 48.5 49.2 5671 233 17.4 2.8011.45 1.36 9.71 8.5010 1337 2301 2705.0 10.21 139 161 118 37.8 291012693.5 9.50 9.50 656.8 656 48.6 49.2 5641 234 17.5 2.8111.42 1.34 9.71 8.5010 1338 2308 2706.0 8.79; 147 174 119 37.6 2910;2694.5 9.50 9.50 656.3 655 48.6 48.9 565; 235 17.6 2.83;1.46 1.37 9.71 8.50;D 1339 2327 2707.0 10.0; 164 208 119 39.3 2870;2696.8 9.50 9.50 647.4 646 48.7 49.9 561; 236 17.8 2.86;1.45 1.36 9.70 8.50;D? 1340 2332 2708.1 13.7 148 179 119 38.1 290012697.9 9.50 9.50 648.1 647 48.7 49.4 5621 237 17.9 2.87 11.35 1.26 9.70 8.50 10 1341 2335 2709.0 16.6: 163 221 119 38.9 2880:2697.9 9.50 9.50 648.9 649 48.7 49.8 562: 238 17.9 2.88:1.31 1.22 9.70 8.50:D 1342 2339 2710.0 14.21 169 198 119 39.1 287012698.5 9.50 9.50 651.0 650 48.8 50.1 5611 239 18.0 2.8911.35 1.26 9.70 8.5010 1343 2342 2711.0 20.21 198 281 120 39.2 288012699.4 9.50 9.50 652.3 651 48.8 50.3 5601 240 18.0 2.9011.26 1.17 9.71 8.5010 | 1344 2345 2712.0 20.8| 216 259 119 39.1 | 2880|2700.5 9.50 9.50 649.3 | 649 48.9 50.4 | 561| 241 18.1 2.90|1.25 1.16 9.71 8.50|D | 1345 2349 2713.0 14.5| 201 256 119 39.0 | 2870|2701.1 9.50 9.50 651.7 | 650 49.0 50.2 | 560| 242 18.1 2.91|1.34 1.25 9.71 8.50|D | 1346 2353 2714.0 17.9| 198 244 119 38.8 | 2880|2701.6 9.50 9.50 650.9 | 650 49.1 50.1 | 560| 242 18.2 2.92|1.29 1.19 9.71 8.50|D | 1347 2355 2715.0 20.4| 233 | 274 120 38.3 | 2870|2701.9 9.50 9.50 651.6 | 650 49.2 50.1 | 560| 244 18.3 2.93|1.25 1.15 9.71 8.50|D | 1348 2359 2716.0 18.81 239 296 120 39.0 287012702.4 9.50 9.50 650.6 649 49.3 50.4 5601 245 18.3 2.9411.27 1.18 9.71 8.501D 1 Date Mar 10 '89 ; 1349 0012 2717.0 21.91 246 364 121 38.1 284012703.9 9.50 9.50 643.6 642 49.6 50.5 5741 246 18.4 2.9511.23 1.13 9.71 8.50101 1350 0015 2718.0 19.9; 266 375 121 38.3 2830;2704.2 9.50 9.50 633.6 636 49.6 50.8 561; 247 18.5 2.96;1.25 1.16 9.71 8.50 1351 0019 2719.0 14.71 248 326 120 39.1 286012705.0 9.50 9.50 640.8 639 49.6 50.6 5561 248 18.5 2.9711.34 1.25 9.71 8.501b 1352 0022 2720.0 20.11 261 323 120 37.7 285012705.5 9.50 9.50 642.8 641 49.6 50.5 557: 249 18.6 2.98:1.24 1.15 9.72 8.50:D 1353 0025 2721.0 21.41 248 306 120 37.9 285012705.9 9.50 9.50 640.1 640 49.7 50.6 556: 250 18.6 2.99:1.23 1.13 9.72 8.50:D 1354 0028 2722.0 22.81 265 307 120 38.7 286012706.3 9.50 9.50 640.5 640 49.7 50.2 5551 251 18.7 2.9911.22 1.12 9.72 8.5010 1355 0030 2723.0 22.11 271 310 120 38.3 286012706.8 9.50 9.50 639.4 639 49.8 50.3 555; 252 18.7 3.00;1.22 1.13 9.72 8.50;D 1356 0033 2724.0 22.01 262 329 120 39.2 287012707.2 9.50 9.50 640.5 639 49.8 50.3 5561 253 18.8 3.0111.23 1.14 9.73 8.5010 1357 0041 2725.0 7.431 242 404 121 39.3 286012707.6 9.50 9.50 639.4 639 49.8 50.2 5561 254 18.9 3.0311.52 1.43 9.73 8.501D 1358 0050 2726.0 6.74; 226 301 120 38.8 2860;2708.7 9.50 9.50 641.4 641 49.8 50.5 554; 255 19.0 3.05;1.54 1.45 9.73 8.50;D 1359 0107 2727.0 9.041 232 310 120 39.2 284012712.9 9.50 9.50 636.2 635 49.8 50.4 5581 256 19.2 3.0711.47 1.37 9.71 8.501D⁺ 1360 0116 2728.0 7.121 229 318 120 39.1 287012715.3 9.50 9.50 635.9 635 49.7 50.2 5521 257 19.3 3.1011.54 1.44 9.71 8.501D 1361 0124 2729.0 8.601 214 275 120 38.4 285012717.3 9.50 9.50 634.8 635 49.7 50.8 5501 258 19.5 3.1111.48 1.38 9.70 8.501D 1362 0130 2730.0 8.22; 224 286 120 38.7 2850;2717.5 9.40 9.50 636.8 636 49.6 50.6 543; 259 19.6 3.13;1.49 1.39 9.71 8.50;D 1363 0137 2731.0 8.861 234 293 120 39.8 285012719.4 9.40 9.50 636.7 635 49.7 51.0 5411 260 19.7 3.1511.49 1.39 9.70 8.501D 1364 0144 2732.0 7.971 226 290 120 39.7 284012721.8 9.40 9.50 635.2 635 49.8 51.2 5391 261 19.8 3.1711.52 1.41 9.69 8.5010 1365 0152 2733.0 8.061 216 292 120 39.4 285012724.6 9.40 9.50 636.4 635 49.9 51.4 5351 262 19.9 3.1911.51 1.41 9.68 8.501D 1366 0156 2734.0 14.11 212 262 120 39.5 281012725.3 9.40 9.50 636.4 636 50.0 51.3 5331 263 20.0 3.2011.36 1.26 9.67 8.501D 1367 0206 2735.0 22.5; 208 254 119 35.6 2710;2725.7 9.40 9.50 634.7 628 50.1 51.2 570; 264 20.1 3.20;1.21 1.11 9.60 8.50;D* 1368 0211 2736.0 11.21 224 339 120 40.3 269012725.9 9.40 9.50 628.6 637 50.1 50.7 5331 265 20.1 3.2211.43 1.33 9.66 8.501D 1369 0215 2737.0 15.11 298 636 123 39.3 274012726.4 9.40 9.50 625.5 624 50.0 51.5 5191 266 20.2 3.2311.34 1.24 9.67 8.501D 1370 0228 2738.0 28.41 283 475 122 38.6 271012727.4 9.40 9.50 629.1 612 50.0 51.0 5281 267 20.3 3.2411.17 1.06 9.65 8.501D1 1371 0235 2739.0 9.331 275 458 122 39.2 276012727.4 9.40 9.50 627.8 627 50.0 52.1 5121 268 20.4 3.2611.47 1.37 9.65 8.5010 1372 0241 2740.0 9.191 337 720 124 39.3 272012728.3 9.40 9.50 627.0 626 50.1 52.0 5091 269 20.5 3.2711.48 1.38 9.64 8.5010 1373 0248 2741.0 9.68; 251 445 121 39.5 2720; 2729.0 9.40 9.50 628.6 628 50.2 51.7 508; 270 20.6 3.29; 1.47 1.36 9.63 8.50; D 1374 0301 2742.0 5.82; 260 611 123 39.9 2800; 2730.6 9.40 9.50 628.0 620 50.4 50.8 504; 271 20.8 3.32; 1.61 1.51 9.62 8.50; D 1375 0310 2743.0 6.99; 237 417 121 39.6 2920; 2731.8 9.40 9.50 627.8 627 50.3 50.7 498; 272 21.0 3.34; 1.56 1.46 9.60 8.50; P

Data Printed at time 07:04 Date Mar 14 '89
Data Recorded at time 03:19 Date Mar 10 '89

+----- : F# TIME DEPTH ROP: TORQUE RPM WOB PUMP:RTRNS MD 1b/gal FLOW/MIN TEMP (C) PVT: -THIS BIT- EST: DXC NXB ECD NXMD: m m/hr! AVG MAX AVG AVG PRESIDEPTH IN OUT IN OUT IN OUT ! m hr TW! 1376 0319 2744.0 6.291 224 355 120 39.9 283012733.1 9.40 9.50 629.7 630 50.2 50.8 4961 273 21.1 3.3611.60 1.49 9.60 8.5010 1377 0327 2745.0 7.431 214 347 120 39.8 284012734.2 9.40 9.50 631.9 630 50.1 50.8 4951 274 21.3 3.3811.55 1.44 9.60 8.5010 1378 0332 2746.0 11.71 212 276 120 38.9 284012736.0 9.40 9.50 630.7 630 50.1 50.9 4931 275 21.3 3.3911.42 1.31 9.60 8.5010 1379 0334 2747.0 34.11 252 523 122 39.3 285012736.7 9.40 9.50 632.1 630 50.1 51.1 4911 276 21.4 3.4011.13 1.02 9.60 8.5010 1380 0336 2748.0 28.31 332 628 123 39.4 283012737.0 9.40 9.50 632.6 632 50.1 51.1 4911 277 21.4 3.4011.18 1.07 9.60 8.501D 1381 0356 2749.0 23.2; 225 473 122 18.9 2890;2739.4 9.40 9.50 635.3 635 50.1 52.6 482; 278 21.5 3.42;1.01 .92 9.60 8.50;D 1382 0400 2750.0 23.4; 244 503 122 33.0 290012739.9 9.40 9.50 634.7 634 50.1 52.8 482; 279 21.6 3.43;1.17 1.07 9.60 8.50;0 1383 0402 2751.0 26.51 242 509 122 41.4 289012740.2 9.40 9.50 634.5 634 50.1 52.7 482: 280 21.6 3.43:1.22 1.11 9.60 8.50:D 1384 0408 2752.0 9.691 236 316 120 41.3 290012741.1 9.40 9.50 637.1 636 50.3 52.5 4781 281 21.7 3.4511.49 1.38 9.60 8.5010 1385 0415 2753.0 8.581 227 281 120 37.4 291012742.1 9.40 9.50 635.7 634 50.5 52.7 4801 282 21.8 3.4711.48 1.37 9.60 8.501D 1386 0423 2754.0 7.251 220 280 120 38.0 288012742.8 9.40 9.50 635.1 635 50.8 52.6 4751 283 22.0 3.4911.53 1.42 9.60 8.501D 1387 0432 2755.0 6.331 210 272 120 37.8 289012744.0 9.40 9.50 637.8 636 51.0 52.6 4751 284 22.1 3.5111.57 1.46 9.60 8.501D 1388 0440 2756.0 7.551 215 280 120 37.9 288012744.7 9.40 9.50 639.0 637 51.1 52.4 4721 285 22.3 3.5311.52 1.41 9.60 8.501D 1389 0448 2757.0 7.631 218 288 120 38.0 288012745.7 9.40 9.50 636.9 635 51.2 52.8 4661 286 22.4 3.5511.52 1.41 9.60 8.501D 1390 0524 2758.0 6.681 222 343 120 37.8 295012752.0 9.40 9.50 642.0 641 51.0 52.7 4521 287 22.9 3.6111.56 1.44 9.58 8.5010 1391 0526 2759.0 26.41 231 279 120 37.2 294012752.3 9.40 9.50 640.4 640 51.0 52.7 4501 288 22.9 3.6211.18 1.07 9.58 8.501D 1392 0534 2760.0 45.51 217 297 120 33.2 291012753.0 9.40 9.50 635.3 609 51.0 51.9 4561 289 22.9 3.6211.00 .89 9.58 8.50101 1393 0540 2761.0 8.741 239 340 120 37.2 290012753.9 9.40 9.50 633.7 633 50.9 52.7 4491 290 23.0 3.6411.48 1.36 9.58 8.5010 1394 0542 2762.0 29.81 231 280 120 37.2 289012754.1 9.40 9.50 633.5 633 50.9 52.9 4481 291 23.1 3.6411.15 1.03 9.59 8.501D 1395 0549 2763.0 8.29; 237 316 120 37.8 288012754.9 9.40 9.50 634.0 633 50.9 52.7 444; 292 23.2 3.6611.50 1.38 9.59 8.50;D 1396 0553 2764.0 15.1: 242 303 120 37.0 2890:2755.3 9.40 9.50 632.6 632 50.9 52.7 4431 293 23.2 3.6711.33 1.21 9.59 8.501D - 1397 0600 2765.0 8.57; 235 321 120 37.0 2890;2756.2 9.40 9.50 633.5 633 51.0 52.9 431; 294 23.4 3.68;1.48 1.36 9.59 8.50;D 1398 0605 2766.0 12.11 229 298 120 37.5 233012756.8 9.40 9.50 567.2 569 51.0 52.9 4171 295 23.4 3.7011.39 1.28 9.59 8.501D 1399 0629 2767.0 13.1; 248 300 120 37.3 2270;2757.2 9.40 9.50 554.8 555 50.6 52.7 388; 296 23.6 3.72;1.37 1.25 9.59 8.50;D 1400 0632 2768.0 15.41 250 331 120 37.4 227012757.6 9.40 9.50 556.4 555 50.3 52.7 3871 297 23.7 3.7311.33 1.21 9.59 8.501D 1401 0639 2769.0 9.861 248 309 120 38.0 227012757.6 9.40 9.50 556.9 556 50.2 52.3 3901 298 23.8 3.7411.45 1.33 9.60 8.5010 1402 0643 2770.0 12.3! 244 311 120 37.7 227012757.6 9.40 9.50 555.9 556 50.2 52.1 3901 299 23.9 3.7511.39 1.27 9.60 8.501D 1403 0650 2771.0 8.631 235 347 120 38.3 226012758.0 9.40 9.50 553.5 554 50.2 52.0 3951 300 24.0 3.7711.49 1.37 9.60 8.501D 1404 0653 2772.0 26.81 257 341 120 37.0 228012758.2 9.40 9.50 555.6 554 50.2 51.7 3941 301 24.0 3.7811.17 1.05 9.61 8.501D 1405 0655 2773.0 26.61 261 317 120 37.3 227012758.4 9.40 9.50 552.3 553 50.2 51.7 3961 302 24.1 3.7811.18 1.06 9.61 8.5010 1406 0658 2774.0 20.71 261 312 120 38.0 227012758.8 9.40 9.50 554.9 555 50.2 51.8 3951 303 24.1 3.7911.25 1.13 9.61 8.501D 1407 0729 2775.0 24.61 275 332 120 31.9 229012765.0 9.40 9.50 553.9 553 50.3 53.5 3971 304 24.1 3.7911.15 1.03 9.59 8.501D 1408 0739 2776.0 24.71 279 361 121 36.2 226012765.8 9.40 9.50 553.1 536 50.6 52.6 4381 305 24.2 3.8011.19 1.07 9.59 8.501D1 + Circulated bottoms up at 2776m. POH to cut core 1. + CB#2 CHRIS RC476 9 7/8". .! Date Mar 11 '89 1413 2113 2776.5 14.5; 206 390 68 4.91 1110;2776.0 9.40 9.50 361.6 360 44.2 46.4 410; .50 .2 .01; .77 1.71 9.53 8.50;D 1414 2115 2777.1 15.0; 239 385 66 7.23 1150;2776.0 9.40 9.50 361.2 361 44.2 46.4 411; .95 .2 .01; .83 1.71 9.53 8.50;D 1415 2118 2778.0 20.0: 215 352 68 6.46 1150:2776.0 9.40 9.50 362.0 361 44.0 47.0 417:1.93 .2 .01: .76 1.71 9.54 8.50:D 1416 2121 2778.5 19.01 220 341 67 7.21 111012776.0 9.40 9.50 362.2 361 43.9 47.4 42112.50 .3 .01: .78 1.71 9.54 8.501D 1417 2122 2779.0 17.01 187 303 69 5.66 114012776.0 9.40 9.50 361.9 361 43.9 47.4 42313.00 .3 .021 .77 1.71 9.54 8.501D 1418 2124 2779.5 14.51 196 301 71 6.11 112012776.0 9.40 9.50 361.0 360 43.9 47.4 42313.41 .3 .021 .81 1.71 9.54 8.501D 1419 2125 2780.0 15.0: 189 338 68 5.88 1140:2776.0 9.40 9.50 361.3 360 43.8 47.3 428:3.99 .4 .02: .79 1.71 9.55 8.50:D 1420 2127 2780.5 15.01 199 307 68 6.26 114012776.0 9.40 9.50 362.0 361 43.8 47.3 43014.40 .4 .021 .81 1.71 9.55 8.501D 1421 2128 2781.0 15.31 296 341 68 10.4 117012776.0 9.40 9.50 361.7 361 43.8 47.3 43114.82 .4 .021 .90 1.72 9.55 8.5010 1422 2130 2781.5 15.51 258 348 67 9.56 115012776.0 9.40 9.50 362.3 361 43.8 47.4 43615.46 .5 .031 .87 1.72 9.55 8.501D 1423 2132 2782.1 17.01 250 390 62 9.54 115012776.0 9.40 9.50 360.4 360 43.8 47.4 43515.89 .5 .031 .84 1.72 9.56 8.501D 1424 2133 2782.5 17.5 266 377 63 9.41 1130 2776.0 9.40 9.50 359.7 360 43.8 47.4 437 6.41 .5 .031 .83 1.72 9.56 8.501D +-----+

F# TIME DEPTH ROP: TORQUE RPM WOB PUMP;RTRNS MD lb/gal FLOW/MIN TEMP (C) PVT; -THIS BIT- EST; DXC NXB ECD NXMD; m m/hr; AVG MAX AVG AVG PRES;DEPTH IN OUT IN OUT IN OUT; m hr TW; +------ 476 0534 2817.0 6.72; 229 306 106 40.0 2480; 2801.8 9.40 9.50 598.6 597 47.0 49.4 388; 22.5 4.2 .42; 1.55 1.53 9.61 8.50; D 1477 0542 2818.0 8.06; 223 293 104 40.1 2500; 2803.6 9.40 9.50 595.4 595 47.2 49.3 405; 23.5 4.4 .44; 1.49 1.48 9.61 8.50; D 1482 0620 2823.0 6.85; 241 292 104 41.7 2710; 2812.9 9.40 9.50 594.8 594 47.9 49.1 380; 28.5 5.0 .55; 1.56 1.54 9.59 8.50; D 483 0630 2824.0 6.62; 227 273 105 40.9 2530; 2813.9 9.40 9.50 595.2 594 48.1 49.5 376; 29.5 5.2 .58; 1.56 1.54 9.59 8.50; D | 484 0647 2825.0 14.9| 228 321 105 40.6 | 2690|2814.4 9.40 9.50 598.7 | 597 48.1 48.1 | 400|30.5 | 5.3 | .59|1.33 1.31 | 9.60 8.50|D | 485 0648 2826.0 54.6| 233 309 106 39.2 | 2580|2814.8 9.40 9.50 599.0 | 598 48.1 48.1 | 397|31.5 | 5.3 | .60| .97 | .95 | 9.60 8.50|D | 486 0656 2827.0 52.1| 234 | 334 110 39.5 | 2730|2815.5 9.40 9.50 598.6 | 566 48.0 49.1 | 420|32.4 | 5.3 | .60| .95 | .93 | 9.60 8.50|D | 487 0659 2828.0 33.2| 208 | 380 112 38.6 | 2700|2816.0 9.40 9.50 598.4 | 599 47.8 46.8 | 381|33.5 | 5.4 | .61|1.12 | 1.09 | 9.60 8.50|D | 488 0703 2829.0 16.3| 225 | 278 112 41.3 | 2680|2816.4 9.40 9.50 598.4 | 598 47.7 48.3 | 371|34.5 | 5.4 | .62|1.33 | 1.31 | 9.60 8.50|D | 489 0709 2830.0 12.2| 215 | 282 112 40.4 | 2710|2817.1 9.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 2831 0 24.5| 214 | 251 113 20.5 | 2730|2817.3 | 0.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 2831 0 24.5| 214 | 251 113 20.5 | 2730|2817.3 | 0.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 2831 0 24.5| 214 | 2710|2817.1 | 9.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 2831 0 24.5| 214 | 2710|2817.1 | 9.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 2831 0 24.5| 214 | 2710|2817.1 | 9.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 28310 0 24.5| 214 | 2710|2817.1 | 9.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 28310 0 24.5| 214 | 2710|2817.1 | 9.40 9.50 598.6 | 598 47.5 49.2 | 343|35.4 | 5.5 | .64|1.41 | 1.38 | 9.60 8.50|D | 1490 07310 28310 0 24.5| 214 | 1.50 9.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1 490 0710 2831.0 24.5; 214 251 113 39.6 2730; 2817.3 9.40 9.50 601.3 599 47.5 49.3 336; 36.5 5.6 .64; 1.21 1.19 9.61 8.50; D | 491 0716 2832.0 10.4| 227 269 112 40.6 | 2540| 2817.9 9.40 9.50 599.0 | 599 47.5 49.2 | 319| 37.5 | 5.7 .66| 1.45 1.42 9.61 8.50| D | 492 0724 2833.0 7.91| 218 278 112 40.0 | 2550| 2819.3 9.40 9.50 597.8 | 598 47.8 50.0 | 318| 38.5 | 5.8 .68| 1.52 1.49 9.61 8.50| D | 493 0732 2834.0 8.04| 219 281 111 39.5 | 2630| 2820.5 9.40 9.50 598.6 | 597 48.0 49.6 | 331| 39.5 | 5.9 .71| 1.50 1.48 9.61 8.50| D | 494 0752 2835.0 12.7| 251 374 109 41.6 | 2290| 2821.6 9.40 9.50 557.0 | 555 46.7 47.8 | 383| 40.5 | 6.1 .73| 1.40 1.37 9.60 8.50| D | 495 0755 2836.0 23.0| 283 380 107 44.4 | 2170| 2822.0 9.40 9.50 595.9 | 556 46.2 48.7 | 363| 41.5 | 6.1 .74| 1.25 1.23 9.61 8.50| D | 496 0801 2837.0 28.3| 283 404 107 43.7 | 2580| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 496 0801 2837.0 28.3| 283 404 107 43.7 | 2580| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 43.4 | 2460| 2822.5 9.40 9.50 595.9 | 570 45.7 48.8 | 367| 42.4 | 6.2 .75| 1.19 1.17 9.61 8.50| D | 497 0806 2838 0.15 31 287 358 107 | 498 0810 2839.0 15.5| 275 366 108 41.6 2650|2823.2 9.40 9.50 598.4 598 45.0 50.0 382|44.4 6.3 .77|1.34 1.31 9.62 8.50|2499 0812 2840.0 23.6| 273 376 107 42.9 2630|2823.5 9.40 9.50 600.0 599 45.0 49.9 385|45.5 6.4 .78|1.23 1.20 9.62 8.50|D | 500 0816 2841.0 17.7| 290 393 107 41.1 2620|2823.9 9.40 9.50 599.1 598 45.1 49.8 389|46.4 6.4 .79|1.29 1.27 9.62 8.50|D | 501 0820 2842.0 14.8| 290 408 107 39.9 2470|2824.3 9.40 9.50 599.6 599 45.3 49.9 396|47.5 6.5 .80|1.33 1.30 9.62 8.50|D \$502 0825 2843.0 11.3; 287 385 108 41.4 2640; 2824.7 9.40 9.50 600.2 599 45.6 50.1 403; 48.5 6.6 .82; 1.42 1.39 9.63 8.50; D \$503 0831 2844.0 11.5; 294 400 107 40.8 2660; 2826.4 9.40 9.50 598.5 598 45.8 48.8 412; 49.5 6.7 .83; 1.41 1.38 9.62 8.50; D | 503 0831 2844.0 11.5| 294 | 400 107 40.8 | 2660|2826.4 9.40 9.50 598.5 | 598 45.8 48.8 | 412|49.5 | 6.7 | .83|1.41 | 1.38 | 9.62 8.50|D |
504 0834 2845.0 18.4	304	409 107 40.6	2550	2827.5 9.40 9.50 600.6	599 45.9 49.0	416	50.5	6.7	.84	1.28	1.25	9.62 8.50	D												
505 0849 2846.0 18.9	294	422 107 38.9	2580	2830.3 9.40 9.50 602.3	601 45.7 47.9	440	51.5	6.8	.86	1.25	1.23	9.62 8.50	D												
506 0853 2847.0 17.1	304	404 107 39.4	2610	2831.5 9.40 9.50 602.8	601 45.5 48.3	440	52.4	6.9	.87	1.29	1.26	9.61 8.50	D												
507 0857 2848.0 15.8	280	389 107 39.8	2620	2832.1 9.40 9.50 600.5	600 45.3 48.7	443	53.5	7.0	.88	1.31	1.28	9.62 8.50	D												
508 0901 2849.0 15.3	287	392 106 39.2	2550	2832.6 9.40 9.50 600.5	600 45.3 48.7	447	54.5	7.0	.89	1.31	1.28	9.62 8.50	D												
509 0906 2850.0 13.5	303	402 105 39.4	2540	2833.4 9.40 9.50 598.7	598 45.3 49.6	452	55.5	7.1	.90	1.35	1.32	9.62 8.50	D												
510 0911 2851.0 13.1	292	419 103 39.4	2560	2833.8 9.40 9.50 600.9	600 45.4 47.7	458	56.4	7.2	.91	1.35	1.32	9.62 8.50	D												
511 0917 2852.0 11.3	267	399 108 38.9	2710	2834.5 9.40 9.50 600.9	600 45.8 47.3	468	58.5	7.3	.94	1.21	1.18	9.63 8.50	D												
513 0922 2854 0 21 5	253	346 109 39.0	2710	2834.6 9.40 9.50 602.1	600 45.8 47.3	468	58.5	7.4	.94	1.22	1.19 9.63 8.50	D		513 0922 2854.0 21.5	252 353 108 39.1	2670	2834.9 9.40 9.50 600.3 600 45.8 48.5	470	59.5	7.4	.94	1.22	1.19	9.63 8.50	D
514 0943 2855.0 21.7	290	408 108 38.8	2530	2839.0 9.40 9.50 591.1	591 46.4 48.5	467	60.4	7.6	.97	1.22	1.19	9.62 8.50	D												
515 0945 2856.0 27.4	302	418 107 38.2	2570	2839.6 9.40 9.50 592.1	591 46.5 49.7	467	61.5	7.6	.98	1.15	1.12	9.62 8.50	D												
516 0949 2857.0 17.6	284	399 108 39.3	2510	2840.7 9.40 9.50 595.0	594 46.7 49.1	466	62.5	7.7	.99	1.28	1.25	9.62 8.50	D												
517 0951 2858.0 24.2	285	374 108 39.0	2520	2841.4	9.40 9.50 593.3	593 46.9 49.9	477	63.4	7.7	1.00	1.19	1.16	9.62 8.50	D											
518 0955 2859.0 17.8	265	353 107 39.5	2350	2842.2	9.40 9.50 592.7	591 47.1 50.0	485	64.5	7.8	1.01	1.28	1.25	9.62 8.50	D											
519 0959 2860.0 17.1	260	366 108 39.3	2500	2842.9	9.40 9.50 592.7	592 47.1 50.0	494	65.5	7.8	1.02	1.29	1.26	9.62 8.50	D											
520 1001 2861.0 19.2	284	322 108 40.1	2500	2843.4	9.40 9.50 592.7	592 47.0 49.6	499	66.4	7.9	1.02	1.26	1.23	9.62 8.50	D											
521 1005 2862.0 15.6	261	365 107 38.9	2530	2844.2	9.40 9.50 594.9	593 47.0 50.1	506	67.5	7.9	1.03	1.31	1.27	9.62 8.50	D											
522 1028 2863.0 15.2	265	367 106 39.3	2440	2847.4	9.40 9.50 594.2	593 46.5	49.7	514	69.5	8.3	1.09	1.37	1.33	9.61 8.50	D										
523 1035 2864.0 12.3	257	351 103 39.5	2580	2849.0	9.40 9.50 594.2	593 46.5	49.7	514	69.5	8.3	1.09	1.37	1.33	9.61 8.50	D	t------t									

1	TIME	DEPTH m	ROP; m/hr;	TOR AVG	AUB Nax	RPM AVG	WOB AVG	POMP; RTRNS PRES; DEPTI	MD In	lb/ga 001	l Pi	MIM/WO. TUO	TEN	IP (C) OUT	PVT;	-7819 B	BIT hr	- EST;	DXC	NXB	ECD	NXMD;
								2580¦2849.														
•		2866.0						2660¦2850.							513;		8.4	1.10	1.28	1.25	9.61	8.50¦D
		2867.1	-				38.6	2520;2850.							509							8.50¦D
		2868.0					39.1	2660;2851.							510							8.50¦D
		2869.0 2870.0					38.5 39.1	2660¦2852. 2570¦2853.							507¦							8.50¦D 8.50¦D
•		2871.0	-				37.9	2590 2854							504			-				8.50¦D
•		2872.0	•				36.2	2610;2855.							496							8.50¦D
		2873.0					38.4	2610 2856							496							8.50¦D
		2874.1			376	108	34.4	2590 2858.							492							8.50;D;
1534	1138	2875.1	17.0;	278	355	108	33.3	2620 2859.	4 9.4	0 9.50	596.4	596	47.3	49.7	488	80.4						8.50¦D
		2876.0					35.5	2680;2860.							488;		9.1	1.22	1.26	1.22	9.61	8.50¦D
		2877.0					33.5	2630¦2862.							484;			-				8.50¦D
•		2878.0	•				33.4	2560;2862.							482;							8.50¦D
		2879.0					38.2 38.0	2580;2862.					47.5		483							8.50¦D
		2880.0 2881.0					33.2	2690¦2864. 2400¦2080.					47.5 47.9		466			•				8.50¦D
		2882.0	-				39.5	2610;2080.						51.2	453			1.32				8.50¦D 8.50¦D
•		2883.0	•				38.2	2660;2080.					48.4									8.50;D;
•		2884.0	•				37.9	2550 2080.					48.7					-				8.50¦D
		2885.0					38.9	2440 2080.					49.0									8.50¦D
-		2886.0					39.2	2570 2081.						51.2								8.50 D
546	1315	2887.0	10.1;	229	308	107	38.5	2610;2081.	0 9.4	0 9.50	593.7	593	49.2	51.6								8.50 D
-		2888.0	-				38.5	2570 2081.					49.3					1.42				8.50¦D
		2889.0	-				37.4	2680;2082.					49.3					1.45				8.50¦D;
		2890.1					38.2	2730 2083.					49.3									8.50¦D
		2891.1 2892.1					38.6 27.7	2720;2109.					49.3					1.47				8.50 D
		2893.0					27.0	2480¦2407. 2670¦2513.					49.3					1.48				8.50¦D; 8.50¦D
		2894.0					26.7	2050 2639.														8.50¦D
•		2895.1	•				26.0	2020 2798.														8.50¦D
		2896.0					26.3	1990,2882.														8.50¦D
		2897.0						2100;2883.	4 9.4	0 9.50	515.5	515	48.8	51.1								8.50 D
								1970;2884.							321;	103	11.5	1.55	1.28	1.24	9.60	8.50¦D
		2899.0					26.2	2000¦2885.														8.50¦D
		2900.0					33.3	2210;2887.														8.50¦D
		2901.0					37.0	2340 2889.														8.50;D1
		2902.0 2904.0					36.8 36.8	2120¦2891. 2680¦2902.														8.50¦D 8.50¦D
		2905.0					35.5	2790;2902.														8.50 D
		2906.0					37.7	2630 2902.														8.50¦D
		2907.0					36.6	2770 2903.					48.0									8.50¦D
		2908.0					36.5	2570;2903.					48.1									8.50¦D
		2909.0					35.9	2660¦2903.	8 9.4	0 9.50	599.9	599	48.5									8.50 D
		2910.0					39.3	2570 2904.					48.9									8.50¦D
		2911.1					40.4	2680;2904.														8.50¦D
								2640 2904.														8.50¦D
1919 +								2100¦2905.														8.50¦D

F TIME DEPTH ROP! TORQUE RPH WOB PUMP!RTRNS MD lb/gal FLOW/MIN TEMP (C) PVT! -THIS BIT- EST! DXC MXB ECD MXMD m m/hr; AVG MAX AVG AVG PRES; DEPTH IN OUT IN OUT IN OUT ; m hr TW; -------1576 1802 2916.0 7.14; 234 307 109 36.2 2110; 2908.2 9.40 9.50 531.0 530 49.8 51.9 314; 121 14.2 1.93; 1.50 1.44 9.58 8.50; D 1577 1813 2917.0 5.56; 228 265 109 37.0 2060; 2908.8 9.40 9.50 531.5 530 49.7 52.1 307; 122 14.4 1.96; 1.57 1.51 9.58 8.50; D \$578 1825 2918.0 5.08; 219 268 109 36.6 2110;2908.9 9.40 9.50 532.1 531 50.0 51.6 303; 123 14.6 1.99;1.59 1.53 9.58 8.50;D | 579 1847 2919.0 9.45| 212 291 109 35.7 2770|2910.8 9.40 9.50 592.2 592 49.5 51.5 287| 124 14.8 2.02|1.42 1.35 9.58 8.50|D| | 1580 1853 2920.0 10.8| 322 372 110 34.0 2660|2911.3 9.40 9.50 591.6 590 49.4 51.5 284| 125 14.9 2.04|1.36 1.30 9.59 8.50|D| | 1581 1900 2921.0 9.51| 286 322 110 35.9 2720|2911.7 9.40 9.50 591.3 590 49.6 51.9 276| 126 15.0 2.05|1.42 1.35 9.59 8.50|D| | 1582 1912 2922.0 5.20| 288 328 110 36.5 2640|2912.8 9.40 9.50 591.4 590 49.9 51.7 269| 127 15.2 2.08|1.58 1.52 9.59 8.50|D| \$\\ \bar{1937} 2924.0 \\ 5.09\\ 237 \\ 287 \\ 109 \\ 36.1 \\ 2700\\ 2915.7 \\ 9.40 \\ 9.50 \\ 592.0 \\ 591 \\ 49.8 \\ 52.4 \\ 247\\ 129 \\ 15.6 \\ 2.14\\ 1.58 \\ 1.52 \\ 9.59 \\ 8.50\\ D | 586 1957 2926.0 9.32; 241 302 109 36.3 2630;2917.8 9.40 9.50 589.8 589 49.2 52.5 283; 131 16.0 2.19;1.43 1.36 9.58 8.50;D | 1587 2006 2927.0 6.69; 234 291 109 36.7 2620;2918.8 9.40 9.50 589.7 589 46.8 52.5 344; 132 16.1 2.21;1.52 1.45 9.58 8.50;D | 1588 2014 2928.0 7.68; 236 287 109 36.3 2680;2918.8 9.40 9.50 590.4 589 46.0 51.5 387; 133 16.3 2.23;1.48 1.41 9.59 8.50;D | 1589 2106 2929.0 3.37; 217 260 109 36.1 2680;2923.5 9.40 9.50 594.5 593 48.9 52.4 393; 134 16.9 2.31;1.70 1.62 9.57 8.50;D \$590 2115 2930.0 6.88; 221 262 109 35.4 2600;2924.1 9.40 9.50 596.0 594 49.5 52.3 395; 135 17.0 2.33;1.50 1.43 9.58 8.50;D 1592 2133 2932.0 5.53; 219 255 109 38.9 2710;2926.1 9.40 9.50 597.5 596 50.3 52.0 393; 137 17.3 2.37;1.60 1.52 9.58 8.50;D | 593 2144 2933.1 5.94; 217 260 109 39.5 2630|2927.5 9.40 9.50 596.9 596 50.8 52.9 | 395; 138 17.5 2.40|1.59 1.51 9.57 8.50|D | 1594 2152 2934.0 7.44; 218 263 109 40.0 2710|2928.0 9.40 9.50 594.9 594 50.7 52.6 | 400; 139 17.6 2.42|1.53 1.45 9.58 8.50|D | 1595 2200 2935.0 8.22; 225 277 109 39.2 2600|2928.5 9.40 9.50 594.9 594 50.5 52.5 | 403; 140 17.8 2.43|1.49 1.42 9.58 8.50|D | 1596 2208 2936.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 297 109 39.9 2610|2928.5 9.40 9.50 596.2 594 50.5 52.8 | 402; 141 17.9 2.45|1.54 1.46 9.58 8.50|D | 1597 2011 2027.0 7.27; 231 1597 2211 2937.0 21.2; 239 276 109 38.9 2690; 2928.5 9.40 9.50 593.9 593 50.4 52.9 405; 142 17.9 2.46; 1.23 1.16 9.58 8.50; D 1598 2219 2938.0 6.89; 226 285 109 39.4 2500; 2928.5 9.40 9.50 592.0 591 50.3 51.9 406; 143 18.1 2.48; 1.54 1.47 9.59 8.50; D 1599 2254 2939.0 4.82; 219 273 109 40.3 2800; 2930.9 9.40 9.50 605.1 604 49.9 52.2 407; 144 18.5 2.54; 1.65 1.57 9.58 8.50; D | 600 2306 2940.0 5.35| 218 251 109 41.0 2730|2932.1 9.40 9.50 602.0 602 50.6 52.6 405| 145 18.7 2.57|1.63 1.55 9.58 8.50|D | 601 2318 2941.0 4.92| 209 241 109 40.8 2610|2933.2 9.40 9.50 603.9 602 51.0 52.8 401| 146 18.9 2.60|1.65 1.57 9.58 8.50|D 1602 2336 2942.0 3.441 206 235 109 41.4 2480 2935.3 9.40 9.50 604.9 604 51.5 53.1 393; 147 19.2 2.64;1.76 1.68 9.58 8.50;D 1603 2357 2943.0 3.201 206 237 109 42.3 264012938.1 9.40 9.50 605.2 603 51.9 53.3 3871 148 19.6 2.6911.80 1.71 9.57 8.501D Date Mar 14 '89 1604 0011 2944.0 3.981 209 242 109 40.8 269012938.1 9.40 9.50 604.1 604 52.0 53.7 382; 149 19.8 2.73;1.71 1.63 9.58 8.50;D \$606 0034 2946.0 9.28; 229 264 109 37.2 2100;2939.6 9.40 9.50 543.1 542 51.7 53.2 373; 151 20.1 2.77;1.44 1.35 9.57 8.50;D | 609 0126 2949.0 5.21| 209 275 109 39.2 2690| 2942.3 9.40 9.50 607.4 606 51.0 53.1 356| 154 20.7 2.85| 1.62 1.53 9.58 8.50| D 1610 0139 2950.0 5.03; 213 286 109 39.2 2690; 2943.0 9.40 9.50 610.3 608 50.9 53.1 358; 155 20.9 2.88; 1.63 1.54 9.58 8.50; D 1611 0146 2951.0 8.63; 220 282 109 39.0 2670; 2943.4 9.40 9.50 610.6 609 50.8 53.2 363; 156 21.1 2.90; 1.48 1.39 9.58 8.50; D 1612 0203 2953.0 8.61; 228 290 109 39.2 2550;2944.8 9.40 9.50 612.1 611 50.8 53.4 369; 158 21.3 2.94;1.48 1.39 9.59 8.50;D | 612 0205 2954.0 4.53 | 208 265 109 39.1 | 2770 2947.2 9.40 9.50 612.2 | 612 50.9 53.7 | 377 | 159 21.6 2.97 | 1.66 1.56 9.58 8.50 | D | 614 0227 2955.0 5.62 | 222 271 109 39.1 | 2590 2947.3 9.40 9.50 610.9 | 611 51.0 53.6 | 380 | 160 21.7 2.99 | 1.60 1.50 9.58 8.50 | D | 615 0235 2956.0 6.97 | 217 274 109 38.7 | 2820 2947.5 9.40 9.50 611.3 | 611 51.1 53.1 | 387 | 161 21.9 3.01 | 1.53 1.44 9.59 8.50 | D | 616 0250 2957.0 4.13 | 213 277 109 38.9 | 2810 2948.7 9.40 9.50 613.9 | 612 50.9 53.6 | 399 | 162 22.1 3.04 | 1.68 1.58 9.59 8.50 | D | 617 0310 2958.0 12.1 | 222 291 109 39.0 | 2710 2950.0 9.40 9.50 597.0 | 596 50.1 52.6 | 416 | 163 22.3 3.07 | 1.39 1.29 9.58 8.50 | D | 618 0318 2959.0 7.75 | 224 303 109 39.2 | 2730 2950.9 9.40 9.50 596.8 | 595 50.0 52.8 | 423 | 164 22.4 3.09 | 1.51 1.41 9.58 8.50 | D | 619 0333 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 0330 2960.0 4.03 | 211 267 109 38.8 | 2720 2952.8 9.40 9.50 596.1 | 596 50.0 53.3 | 436 | 165 22.7 3.12 | 1.68 1.59 9.58 8.50 | D | 619 | 620 0349 2961.0 3.76| 208 282 109 38.8 2550| 2954.0 9.40 9.50 597.8 597 50.2 53.0 449| 166 23.0 3.15| 1.70 1.60 9.58 8.50| t-----t

Data Printed at time 13:53 Date Mar 15 '89 Data Recorded at time 03:57 Date Mar 14 '89

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F# TIME	DEPTH m	ROP:	TOR:	MAX Que	RPM AVG	WOB AVG	PUMP PRES	RTRNS Depth	HD In	lb/ga DUT	l P	LOW/HIN TOO	TEH	P (C) OUT	PVT	-THIS	BIT- hr	EST;	DXC	NXB	ECD	NXMD
† 621 0357	2962.0	8.17;	225	286	109	39.2	2590	2954.6	9.40	9.50	597.	4 597	50.4	53.1	462;	167	23.1	3.17	1.50	1.40	9.58	8.50;D
622 0401 623 0419								¦2955.2 ¦2956.4							•							8.50¦D 8.50¦D
624 0430	2965.0	5.76	210	274	109	38.5	2640	2957.3	9.40	9.50	602.	2 601	50.4	53.6	480	170	23.5	3.23	1.58	1.48	9.58	8.50¦D
625 0439 626 0459								2957.5 2959.5										•				8.50¦D 8.50¦D
1627 0542 1628 0557								2963.0 2963.9														8.50¦D 8.50¦D
629 0614	2970.0	3.21	279	517	80	48.3	2690	2967.2	9.4	9.50	599.	8 600										8.50¦D
† Circula † POH and					re ca	rbona	ite co	ntamina	tion	from	the m	ud.										1
Plug an				•																		i i

APPENDIX F : Drilling Data Plot

PE602934

This is an enclosure indicator page. The enclosure PE602934 is enclosed within the container PE904392 at this location in this document.

The enclosure PE602934 has the following characteristics:

ITEM_BARCODE = PE602934
CONTAINER_BARCODE = PE904392

NAME = Drilling Data Plot

BASIN =

PERMIT =

TYPE = WELL

SUBTYPE = WELL_LOG

DESCRIPTION = Drilling Data Plot, Scale

1:2500, (Enclosure from Final Well Report), By EXLOG for Esso Australia,

for Conger-1.

REMARKS =

DATE_CREATED =

 $DATE_RECEIVED = 17/04/89$

WELL_NO = W988

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX G : Drilling Cost Plot

PE602935

This is an enclosure indicator page. The enclosure PE602935 is enclosed within the container PE904392 at this location in this document.

The enclosure PE602935 has the following characteristics:

ITEM_BARCODE = PE602935
CONTAINER_BARCODE = PE904392

NAME = Drilling Data Cost Plot

BASIN = PERMIT =

TYPE = WELL

SUBTYPE = WELL_LOG

DESCRIPTION = Drilling Data Cost Plot,Scale

1:2500, (Enclosure from Final Well Report), By EXLOG for Esso Australia,

for Conger-1.

REMARKS =

DATE_CREATED =

 $DATE_RECEIVED = 17/04/89$

 $WELL_NO = W988$

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX H : Daily Geological-Engineering Reports



COMPANY ESSO AUST WELL CONGER No!
DATE
DEPTH LAST REPORT DEPTH
RIG OPERATIONS CIRCULATE HOLE CLEAN.
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT Bit No.: $RR2$ Type: $SII5$ Size: $I7'/2$ Jets: 2×18 , 1×16
On Bit: Footage: 60 m Hours: 21.4 ROP: 26.8 M/HR WOB: 10-40 RPM: 120
Pump Press: 2830 SPM: 198 Torque: 100-459BR: CP I:\$ CP B:\$
HYDRAULICS REPORT Mud Density In: 9.3 Mud Density Out: 9.4 ECD: 9.5 PV/YP: 3 / 15
Gels: 11/15 Salinity: 16,000 PPM CI Solids: 4% %
Hole Volume: 850 BBL Annular Volume: 768 BBL Tubing Volume: 33 BBC Displaced Volume: 50 BBL
Carbide Lag-Calculated Lag: Flowrate: 995 GPM.
Drillpipe Annular Vel (Max. Dia. Sec.): 58.6 FT [mip Drillpipe Annular Vel (Open Hole): 86.7 FT [mip Drill Collar Annular Vel (Open Hole): 93/4) 115.5 FT [mip Critical Vel: 313.9 FT [mip
ressure Loss System: 1090 psi Pressure Loss Bit: 1760 psi % Pressure Loss: 76
Nozzel Vel: 460-4-FT/SEC Jet Impact Force: 2205 LB HHP: 1021-8 HP.
PRESSURE PARAMETERS
Drilling Exponent: ~ 1 2 (NORMAL) Flowline Temperature: 40° C
Shale Density: Shale Factor:
Background Gas: 0.2-0.4% Max. Formation Gas: 1.5% @ 465m Trip Gas: @
Other Gas:
Fill: Tight Hole:
Cavings: Est %: TIPOR . Average Size:
ESTIMATED PORE AND FRACTURE PRESSURE
Kick Tolerance: Min. Estimated Fracture Pressure (Open Hole):
Estimated Pore Pressure: 8.5 ppg EMW Min. Estimated Pore Pressure (Open Hole): 8.5 @
Max. Estimated Pore Pressure (Open Hole): 8.5pg EMW @ 815m Estimated Fracture Pressure at TD:
Comments:
DRILL 171/2" HOLE TO BISM. CIRCULATE HOLE CLEAN.



COMPANY ESSO AUST WELL CONGER No.
DATE 15T MARCH 1989 TIME 24:00 HRS
DEPTH 815m LAST REPORT DEPTH 815m.
RIG OPERATIONS RUNNING 133/8 CASING.
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: RR2 Type: 5115 Size: 171/2 Jets: 18, 18, 16
On Bit: Footage: 601 Hours: 22.4 ROP: 26.8 M/HR WOB:RPM:
Pump Press: 2830 SPM: 198 Torque: 100 450 TBR: CP I:\$ CP B:\$
HYDRAULICS REPORT
Mud Density In: 9-3 Mud Density Out: 9-4 ECD: 9-5 PV/YP: 3/15
Gels: 1/15 Salinity: 16,000 PPM CI Solids: 4% %
Hole Volume: SSORR Annular Volume: 768 BR Tubing Volume: 33BB Displaced Volume: 50BB
Carbide Lag—Calculated Lag:Flowrate:
Drillpipe Annular Vel (Max. Dia. Sec.): Drillpipe Annular Vel (Open Hole):
Drill Collar Annular Vel (Open Hole): Critical Vel:
Pressure Loss System:
Nozzel Vel: Jet Impact Force: HHP:
PRESSURE PARAMETERS
PRESSURE PARAMETERS Drilling Exponent: Flowline Temperature:
Drilling Exponent: Flowline Temperature: Shale Pactor: Shale Factor:
Drilling Exponent: Flowline Temperature:
Drilling Exponent: Flowline Temperature: Shale Pactor: Background Gas: Max. Formation Gas: @ Trip Gas: @ Other Gas:
Drilling Exponent: Flowline Temperature: Shale Density: Shale Factor:
Drilling Exponent: Flowline Temperature: Shale Pactor: Background Gas: Max. Formation Gas: @ Trip Gas: @ Other Gas:
Drilling Exponent:
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Drilling Exponent:Flowline Temperature:
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COMPANY ESSO AUST WELL CONGER Noi
DATE 2ND MARCH 1989. TIME 24:00 HRS
DEPTH 868m LAST REPORT DEPTH 815 m
RIG OPERATIONS DRILL 1214" HOLE.
REPORT BY D. NEW REPORT RECEIVED BY (OPERATOR)
DRILLING REPORT
Bit No.: NB 3 Type: REED HP115 Size: 1214 Jets: 3×16
On Bit: Footage: 53 Hours: 2.2 ROP: 24-1 M/HR (NUG) WOB: 13-33 RPM: 60-120
Pump Press: 2820 SPM: 171 Torque: 110 - 250 TBR: 11,694 CP I:\$ 202 CP B:\$ 333
HYDRAULICS REPORT
Mud Density In: 9.2 Mud Density Out: 9.3 ECD: 9.6 PV/YP: 5/40
Gels: 14 30 Salinity: 16,000 PPM CI Solids: 4 % %
Hole Volume: 49638L Annular Volume: 40688L Tubing Volume: 43688L Displaced Volume: 4458L
Carbide Lag-Calculated Lag: Flowrate: 853 6Pm.
Drillpipe Annular Vel (Max. Dia. Sec.): 58.9 FT/mip Drillpipe Annular Vel (Open Hole):
Drill Collar Annular Vel (Open Hole): 242.9 FT MID Critical Vel: 585.6 FT MID
ressure Loss System: 1047 Pressure Loss Bit: 1773 PSI % Pressure Loss: 63 %
Nozzel Vel: 464.6 PT [SEC Jet Impact Force: 1897 LI3 HHP: 882 HP.
PRESSURE PARAMETERS
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7°C
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7 ° C Shale Density: 2.2 (ESTIMATED) Shale Factor:
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7°C
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7 ° C Shale Density: 2.2 (ESTIMATED) Shale Factor: Background Gas: 0.05% (2.5u)Max. Formation Gas: 0.07% @ 835 m Trip Gas: 0.5%(25)@ 815 m Other Gas: NIL
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7°C Shale Density: 2.2 (ESTIMATED) Shale Factor: Background Gas: 0.05% (2.5u)Max. Formation Gas: 0.07% @ 835 m Trip Gas: 0.5%(25u)@ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7 ° C Shale Density: 2.2 (ESTIMATED) Shale Factor: Background Gas: 0.05% (2.5u)Max. Formation Gas: 0.07% @ 835 m Trip Gas: 0.5%(25u)@ 815 m Other Gas: NIL
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7°C Shale Density: 2.2 (ESTIMATED) Shale Factor: Background Gas: 0.05% (2.5u)Max. Formation Gas: 0.07% @ 835 m Trip Gas: 0.5%(25u)@ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE
Drilling Exponent: O'9-12 (NORMAL) Flowline Temperature: 36.7° C Shale Density: ~ 2.2 (ESTLMATED) Shale Factor: Background Gas: O.05% (2.5c)Max. Formation Gas: O.07% @ 835 m Trip Gas: O.5% (2C)@ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: MINOR Average Size: SMALL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 PP3 Min. Estimated Fracture Pressure (Open Hole): 16.5 SHOE
Drilling Exponent: 0.9-1.2 (NORMAL) Flowline Temperature: 36.7 °C Shale Density: 2.2 (ESTIMATED) Shale Factor: Background Gas: 0.05% (2.5u)Max. Formation Gas: 0.07% @ 835 m Trip Gas: 0.5% (25.) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: MINOR Average Size: SMALL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 pg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815
Drilling Exponent: O'9-1-2 (NORMAL) Flowline Temperature: 36.7°C Shale Density: V2.2 (ESTLMATED) Shale Factor: Background Gas: O'05% (2.5e)Max. Formation Gas: O'07% @ 835 m Trip Gas: O'5% (2c.) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: MINOR Average Size: SMAL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 ppg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815 Max. Estimated Pore Pressure: (Open Hole): 8.5 ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8.5 ppg @ 815
Drilling Exponent: O'9-12 (NORMAL) Flowline Temperature: 36.7 °C Shale Density: 22 (ESTIMATED) Shale Factor: Background Gas: O'05 % (2.5u)Max. Formation Gas: O'07 % @ 835 m Trip Gas: O'5% (25u)@ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMALL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 pg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8.5 ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8.5 ppg @ 868 Estimated Fracture Pressure at TD: 16.66 Comments: Run And Cement 133/8 CASING
Drilling Exponent: O'9-12 (NORMAL) Flowline Temperature: 36.7°C Shale Density: V2.2 (ESTIMATED) Shale Factor: Background Gas: O.05% (2.5m) Max. Formation Gas: O.07% @ 835 m Trip Gas: O.5% (2C.) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMAL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 ppg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815 Estimated Pore Pressure: 8.5 ppg @ 868 Estimated Fracture Pressure at TD: 16.6 Comments: Run And Cament 133/8 CASING SMOE AT 798 m
Drilling Exponent: O'9 - 1·2 (NORMAL) Flowline Temperature: 36·7°C Shale Density: ~ 2·2 (ESTIMATED) Shale Factor: Background Gas: O·O5/c (2·SuMax. Formation Gas: O·O7%. @ 835 m Trip Gas: O·S% (2SL) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMAL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5·5 ppg Min. Estimated Fracture Pressure (Open Hole): 6·5 shoe Estimated Pore Pressure: 8·5 ppg Min. Estimated Pore Pressure (Open Hole): 8·5 ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8·5 ppg @ 868 Comments: Run And Cement 13³/e CASING Shoe At 798 m TEST BOP's
Drilling Exponent: O'9-12 (NORMAL) Flowline Temperature: 36.7°C Shale Density: V22 (ESTIMATED) Shale Factor: Background Gas: O'05% (2.5c) Max. Formation Gas: 0'07% @ 835 m Trip Gas: 0'5% (2c) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMALL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 ppg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815 Estimated Pore Pressure: 8.5 ppg @ 868 Estimated Pore Pressure (Open Hole): 8.5 ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8.5 ppg @ 815 Comments: Run And Cement 133/e Casing Shoe At 798 m TEST BOP'S DAILL SHOE TRACH AND NEW MOLE TO 818 m PERFORM LEAH OF TEST. (960 pst ; 16.5 ppg EMW)
Drilling Exponent: O'9 - 1·2 (NORMAL) Flowline Temperature: 36·7°C Shale Density: ~ 2·2 (ESTIMATED) Shale Factor: Background Gas: O·O5/c (2·Su/Max. Formation Gas: O·O7% @ 835 m Trip Gas: O·S% (2Su) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMAL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5·5 ppg Min. Estimated Fracture Pressure (Open Hole): 6·5 shoe Estimated Pore Pressure: 8·5 ppg Min. Estimated Pore Pressure (Open Hole): 8·5 ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8·5 ppg @ 868 Comments: Run And Cement 13³/e CASING Shoe At 798 m TEST BOP's
Drilling Exponent: O'9-12 (NORMAL) Flowline Temperature: 36.7°C Shale Density: V22 (ESTIMATED) Shale Factor: Background Gas: O'05% (2.5c) Max. Formation Gas: 0'07% @ 835 m Trip Gas: 0'5% (2c) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMALL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 ppg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815 Estimated Pore Pressure: 8.5 ppg @ 868 Estimated Fracture Pressure at TD: 16.6 Comments: Run And Cement 133/e Casing Shoe At 798 m TEST BOP'S DAILL SHOE TRACH AND NEW MOLE TO 818 m PERFORM LEAH OF TEST. (960 pst; 16.5 ppg EMW)
Drilling Exponent: O'9-12 (NORMAL) Flowline Temperature: 36.7°C Shale Density: V22 (ESTIMATED) Shale Factor: Background Gas: O'05% (2.5c) Max. Formation Gas: 0'07% @ 835 m Trip Gas: 0'5% (2c) @ 815 m Other Gas: NIL Fill: NONE Tight Hole: NONE Cavings: Est %: HINOR Average Size: SMALL ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 5.5 ppg Min. Estimated Fracture Pressure (Open Hole): 6.5 ppg @ 815 Estimated Pore Pressure: 8.5 ppg @ 868 Estimated Fracture Pressure at TD: 16.6 Comments: Run And Cement 133/e Casing Shoe At 798 m TEST BOP'S DAILL SHOE TRACH AND NEW MOLE TO 818 m PERFORM LEAH OF TEST. (960 pst; 16.5 ppg EMW)



COMPANY ESSO AUST WELL CONGER No.1
DATE
DEPTH LAST REPORT DEPTH 868 m
RIG OPERATIONS DRILLING 121/4" HOLE.
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB #3 Type: REED HP115 Size: 121/4 Jets: 3 × 16.
On Bit: Footage: 729 M Hours: 18.6 ROP: 39.2 (AUG.) WOB: 28-35 RPM: 110-120
Pump Press: 2850 SPM: 158 Torque: 150-270 TBR: 131863 CP I: \$ 140 CP B: \$ 100
HYDRAULICS REPORT
Mud Density In: 9.3+ Mud Density Out: 9.4 ECD: 9.5+ PV/YP: 6/13
Gels: 8/18 Salinity: 18H PPM CI Solids: 5 %
Hole Volume: 84913134_ Annular Volume: 70613134_ Tubing Volume: 83 13134_ Displaced Volume: 6013134_
Carbide Lag—Calculated Lag: +239 STHS. Flowrate: 793 GPM.
Drillpipe Annular Vel (Max. Dia. Sec.): 54.7 FT[mix Drillpipe Annular Vel (Open Hole): 140.8 FT[mix
Drill Collar Annular Vel (Open Hole): 196.3 FT[MIN Critical Vel: ### ################################
Pressure Loss System: 1247 Pressure Loss Bit: 1553 ps / % Pressure Loss: 55%
Nozzel Vel: 431.7 FT / SEC Jet Impact Force: 1653 LI3 HHP: 718 HP
PRESSURE PARAMETERS
PRESSURE PARAMETERS Drilling Exponent: O'8 - 1 i (NORMAL) Flowline Temperature: 39.9° C
Drilling Exponent: O'8-1' (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor:
Drilling Exponent: O'8-1' (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Background Gas: 0.3% (15u) Max. Formation Gas: 0.68% @ 1220 m Trip Gas: — @
Drilling Exponent: O'8-1' (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Gas: O'8% (ISu) Max. Formation Gas: O'68% @ 1220 m Trip Gas: Gas: Other Gas: NIL .
Drilling Exponent: O'8-1: (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Shale Factor: Other Gas: NIL. (34u) Fill: NONE Tight Hole: NONE
Drilling Exponent: O'8-1' (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Gas: O'8% (ISu) Max. Formation Gas: O'68% @ 1220 m Trip Gas: Gas: Other Gas: NIL .
Drilling Exponent: O'8-1' (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Flowline Temperature: 39.9° C Background Gas: O'3% (15 u) Max. Formation Gas: O'68% @ 1220 m Trip Gas: Other Gas: N1L (34 u) Fill: NONE Tight Hole: NONE Cavings: Est %: 10-20% Average Size: ROUNDED - BLOCHEM ESTIMATED PORE AND FRACTURE PRESSURE
Drilling Exponent: O'8-1: (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Background Gas: O'3% (ISu) Max. Formation Gas: O'68% @ 1220 m Trip Gas: — @ Other Gas: NIL. (34u) Fill: NONE Tight Hole: NONE Cavings: Est %: 10-20% Average Size: Rounded - BLoched ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3:6 pg EMW Min. Estimated Fracture Pressure (Open Hole): 16:5 ppg BT SHOE
Drilling Exponent: O'8-11 (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Shale Factor: Max. Formation Gas: O'68% @ 1220 m Trip Gas: — @ Other Gas: NIL. (34 u) Fill: NONE Tight Hole: NONE Cavings: Est %: 10-20% Average Size: ROUNDED - BLOCHEY ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3'6 pg EMW Min. Estimated Fracture Pressure (Open Hole): 16.5 ppg BT SHOE Estimated Pore Pressure: 8'5 ppg EMW Min. Estimated Pore Pressure (Open Hole): 8 5 ppg @ 815
Drilling Exponent: O'8-1: (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Background Gas: O'3% (ISu) Max. Formation Gas: O'68% @ 1220 m Trip Gas: — @ Other Gas: NIL. (34u) Fill: NONE Tight Hole: NONE Cavings: Est %: 10-20% Average Size: Rounded - BLoched ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3:6 pg EMW Min. Estimated Fracture Pressure (Open Hole): 16:5 ppg BT SHOE
Drilling Exponent: O'8-11 (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Flowline Gas: O'3% (15 u) Max. Formation Gas: O'6870 @ 1220 m Trip Gas: Other Gas: NIL. (34 u) Other Gas: NIL. (34 u) Fill: NONE Tight Hole: NONE Cavings: Est %: 10-20% Average Size: Rounded - BLoched ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3'6 pg Emw Min. Estimated Fracture Pressure (Open Hole): 16'S ppg BT SHOE Estimated Pore Pressure: 8'S ppg Emw Min. Estimated Pore Pressure (Open Hole): 8 Sppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8'S ppg @ 1544 Estimated Fracture Pressure at TD: 18'0 ppg.
Drilling Exponent: O'8-1: (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Background Gas: O'3/6 (IS u) Max. Formation Gas: O'68/6 @ 1220 m Trip Gas: @ Other Gas: NIL . (34 u) Fill: NONE Tight Hole: NONE Cavings: Est %: 10-20 % Average Size: ROUNDED - BLOCHEY ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3'6 pg Emw Min. Estimated Fracture Pressure (Open Hole): 16'S ppg BT SHOE Estimated Pore Pressure: 8'S ppg Emw Min. Estimated Pore Pressure (Open Hole): 8'S ppg @ 815 Max. Estimated Pore Pressure (Open Hole): 8'S ppg @ 1564 Estimated Fracture Pressure at TD: 18'0 ppg.
Drilling Exponent: O'8-11 (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale Factor: Shale Factor: Max. Formation Gas: O'6876 @ 1220 m Trip Gas: @
Drilling Exponent: O'8-1: (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Shale
Drilling Exponent: O'8-11 (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Background Gas: O'3% (15u) Max. Formation Gas: O'69% @ 1220 m Trip Gas: @
Drilling Exponent: O'8-11 (NORMAL) Flowline Temperature: 39.9°C Shale Density: Shale Factor: Shale
Drilling Exponent: O'8-11 (NORMAL) Flowline Temperature: 39.9° C Shale Density: Shale Factor: Background Gas: O'3% (15u) Max. Formation Gas: O'69% @ 1220 m Trip Gas: @



COMPANY ESSO AUST. WELL CONGER No!
DATE 4TH MARCH 1989. TIME 24:00 HRS
DEPTH 1822m LAST REPORT DEPTH 1544 m
RIG OPERATIONS RIH WITH NB#4.
REPORT BY D. NEW. REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB#4 Type: HTC J11 Size: 12'/4 Jets: 3×16
On Bit: Footage: 1057M Hours:
HYDRAULICS REPORT
Mud Density In: 9.5 Mud Density Out: ECD: PV/YP: 5.21
Gels: 9/32 Salinity: 18k PPM CI Solids: 10% %
Hole Volume: 928BBL Annular Volume: 762BBL Tubing Volume: 99BBL Displaced Volume: 66BBL
Carbide Lag-Calculated Lag:
Drillpipe Annular Vel (Max. Dia. Sec.): 53 FT MIN Drillpipe Annular Vel (Open Hole): 159 FT MIN
Drill Collar Annular Vel (Open Hole): 239 FT IMIN Critical Vel: 408 FT (MIN
Pressure Loss System: 1427 Pressure Loss Bit: 1473 % Pressure Loss: 51%
Nozzel Vel: 46.7 FT/SEC Jet Impact Force: 1568 BB HHP: 657 HP
PRESSURE PARAMETERS
Drilling Exponent: 6.8-1.1 (PORMAL) Flowline Temperature: 46.4 AT 1822m
Shale Density: Shale Factor: Shale Factor: Shale Part
Drilling Exponent: 0.8-1.1 (NORMAL) Flowline Temperature: 46.4 NT 1822m Shale Density: Shale Factor:
Drilling Exponent: 0.8-1.1 (NORMAL) Flowline Temperature: 46.4 AT 1822m Shale Density: Shale Factor:
Drilling Exponent: 0.8-1.1 (NORMAL) Flowline Temperature: 46.4 AT 1822m Shale Density: Shale Factor:
Drilling Exponent: O.S-I.I (PORMAL) Flowline Temperature: 46.4 AT 1822 M Shale Density: Shale Factor: Shale Factor: Shale Factor: Shale Factor: Max. Formation Gas: O.27% @ 1580 m Trip Gas: Other Gas: NIL (13.5u) Other Gas: NIL Tight Hole: MINOR OFPULL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PLATT - BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE
Shale Density: Shale Density: Background Gas: O·2 (10u) Max. Formation Gas: O·2766 @ IS80m Trip Gas: Other Gas: NIL Tight Hole: MINOR OFPULL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PLATY - BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: Shale Factor: Shale Factor: O·2 1822m Shale Factor: Average Size: LARGE, PLATY - BLOCKY.
Drilling Exponent: O.S-I. (NORMAL) Flowline Temperature: 46.4 AT 1822M Shale Density: Shale Factor: Background Gas: O.2 (10u) Max. Formation Gas: O.27% @ ISSOM Trip Gas: @ Other Gas: NIL Fill: NIL Tight Hole: MINOR OFFILL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PLATY - BLOCHY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3.1 pg EMW. Min. Estimated Fracture Pressure (Open Hole): 8-Spg @ SMOE Estimated Pore Pressure: 8.5 (NORMAL) Min. Estimated Pore Pressure (Open Hole): 8-Spg @ SMOE
Shale Density: Shale Density: Background Gas: O·2 (10u) Max. Formation Gas: O·2766 @ IS80m Trip Gas: Other Gas: NIL Tight Hole: MINOR OFPULL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PLATY - BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: Shale Factor: Shale Factor: O·2 1822m Shale Factor: Average Size: LARGE, PLATY - BLOCKY.
Shale Density: Shale Factor: Shale Factor:
Drilling Exponent: O.8 - 1.1 (NORMAL) Flowline Temperature: 46.4 AT 1822m
Shale Density: Shale Factor: Shale Factor:
Drilling Exponent: O.S-I.I (NORMAL) Flowline Temperature: 46.4 NT 1822m Shale Density: Shale Factor: Shale Factor: Shale Factor: Shale Factor: Max. Formation Gas: O.276 @ ISSOM Trip Gas: @ Other Gas: NIL (13.54) Tight Hole: MINOR O/PULL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PLATY -BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3.1 pmg EMW. Min. Estimated Fracture Pressure (Open Hole): 16.5 ppg NT SHOE Estimated Pore Pressure: S.5 (NORMAL) Min. Estimated Pore Pressure (Open Hole): 8.5 ppg @ T.D Estimated Fracture Pressure at TD: 18.2 Comments: DRILL TO 1822m. AND CIRC NGLE CLERN WITH IOO BBL HI VIS P1LL. DROP SURVEY AND POM (DEU 23/W N43W) PICH UP JUNK SUB AND NB#4 RIM.
Drilling Exponent: O.8 - 1.1 (NORMAL) Flowline Temperature: 46.4 AT 1822M Shale Density: Shale Factor: Background Gas: O.2 (104) Max. Formation Gas: O.27% @ ISSOM Trip Gas: @ Other Gas: NIL (13.54) Fill: NIL Tight Hole: MINOR O/PULC ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PCNTY -BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3.1 ppg EMW. Min. Estimated Fracture Pressure (Open Hole): 16.5 ppg NT SHOE Estimated Pore Pressure: 8.5 (NORMAL) Min. Estimated Pore Pressure (Open Hole): 8-Spg @ SHOE Max. Estimated Pore Pressure (Open Hole): 8.5 ppg @ T. D Estimated Fracture Pressure at TD: 18.2 Comments: DRILL TO 1822M. AND CIRC HOLE CLERN WITH OO BBL HI VIS PILL. DROP SURVE! AND POM (DEV 23/W N43W)
Drilling Exponent: O.8-1.1 (NORMAL) Flowline Temperature: 46.4 AT 1822 M Shale Density: Shale Factor: Shale Factor: Shale Factor: Background Gas: O.2 (10u) Max. Formation Gas: O.27% @ ISSOM Trip Gas: @ Other Gas: NIL (13.5u) Tight Hole: MINOR Of PULL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE, PLATY -BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3.1 pmg EMW. Min. Estimated Fracture Pressure (Open Hole): 16.5 ppg ht Shoe Estimated Pore Pressure: 8.5 (NORMAL) Min. Estimated Pore Pressure (Open Hole): 8.5 ppg @ T. D
Drilling Exponent: O.S-I.I (NORMAL) Flowline Temperature: 46.4 NT 1822 M Shale Density: Shale Factor: Shale Factor: Shale Factor: Shale Factor: Shale Factor: MIL (13.5 L) Other Gas: NIL (13.5 L) Fill: NIL Tight Hole: MINOR O/PULL ON TRIP OUT Cavings: Est %: UP TO 20% Average Size: LARGE PLATY -BLOCKY. ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 3.1 pmg EMW. Min. Estimated Fracture Pressure (Open Hole): 16.5 ppg NT SHOE Estimated Pore Pressure: S.S. (NORMAL) Min. Estimated Pore Pressure (Open Hole): 8.5 ppg © T.D Estimated Fracture Pressure at TD: 18.2 Comments: DRILL TO 1822 m. AND CIRC NGLE CLERN WITH 100 BBL HI VIS P1LL. DROP SCRUE/ AND POM (DEU 23/W N43W) PICH UP SUNL SUB AND NB#4 RIH.



COMPANY ESSO AUST. WELL CONGER No.
DATE STH MARCH 1987 TIME 24:00 HRS.
DEPTH 1928m. LAST REPORT DEPTH 1822
RIG OPERATIONS RIH WITH NB#5
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB 4 Type: HTC JII Size: 121/4 Jets: 3×16
On Bit: Footage: 106m Hours: 11.2 HRS ROP: 9.5 M/HR WOB: 10-35 RPM: 80-120
Pump Press: 2850 SPM: 156 Torque: 110-700 TBR: 58234 CP 1:\$ 453 CP B:\$ 474
HYDRAULICS REPORT
Mud Density In: 9.4+ Mud Density Out: 9.5 ECD: 9.54 PV/YP: 7/18
Gels: 6 26 Salinity: 18,000 PPM CI Solids: 8.5% %
Hole Volume: 1003BBC Annular Volume: 829BBC Tubing Volume: 105BBC Displaced Volume: 69BBC
Carbide Lag-Calculated Lag: 190 (Aus Din 11.94") Flowrate: 780 FPM
Drillpipe Annular Vel (Max. Dia. Sec.): 54 FT min Drillpipe Annular Vel (Open Hole): 153 FT min
Drill Collar Annular Vel (Open Hole): 272 FT/MIN Critical Vel: 367 FT/MIN
Pressure Loss System: 1333 Pressure Loss Bit: 1517 ps 1 % Pressure Loss: 53%
Nozzel Vel: 425 FT [SEC Jet Impact Force: 1612 LB HHP: 689 HP
PRESSURE PARAMETERS
Drilling Exponent: 0'8-2'0 (HIGH DUE TO 1317 Flowline Temperature: 38°C (Low DUE TO CONDITION) Shale Density: Shale Factor: Shale Factor:
Shale Density:
Other Gas: NIL (38u) 195 u
Fill: NIL Tight Hole: TINOR TIGHT HOLE ON TRIP OUT
Cavings: Est %: 10-30 Average Size: MED-OCC LARG, PLATI-1564
ESTIMATED PORE AND FRACTURE PRESSURE
Kick Tolerance: 29 pg Min. Estimated Fracture Pressure (Open Hole): 16 Spg A7 SHOE
Estimated Pore Pressure: 8.5 pg Min. Estimated Pore Pressure (Open Hole): 8.5 pg @ SHOE Max. Estimated Pore Pressure (Open Hole): 8.5 pg @ SHOE Max. Estimated Pore Pressure (Open Hole): 8.5 pg @ SHOE
Max. Estimated Pore Pressure (Open Hole): 8 Spag @ T.D. Estimated Fracture Pressure at TD: 17-4 (SST)
Comments: REAM BRIDGE AT 1605m.
REAM WASH 2 SINGUES TO BOTTOM, DRILL 1214" HOLE.
Han not
~ 200 BBL MUD LOST WHEN FLOWLING BECAME
MUD (70BBL LOST INITIALY REST LOST TRYING
DRILL AHEAD. HIGHLY ERRATIC TORQUE IN '
LATROBE GP. DUE TO DISCONTINUITIES IN FM ?
LOW KOP DUE TO BROHEN INSERTS ON BIT

THIS REPORT IS GOVERNED BY THE TERMS AND CONDITIONS AS SET FORTH ON THE REVERSE SIDE



GEMDAS LOGGING REPORT NO. ______

COMPANY ESSO AUST WELL CONGER NO
DATE 6TH MARCH 1989 TIME 24:00 HRS
DEPTH 2142m LAST REPORT DEPTH 1928m
RIG OPERATIONS DRILL 1214" HOLE.
REPORT BY D. NEW. REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB #5 Type: READ HPSI Size: 12 1/4 Jets: 16, 16, 18
On Bit: Footage: 214 m Hours: 147 ROP: 14-6 m/HR. WOB: 5-40 RPM: 100-120
Pump Press: 2780 SPM: 145 Torque: 100-700 TBR: 99,284 CP I:\$ 267 CP B:\$ 303
HYDRAULICS REPORT
Mud Density In: 9 5 pps Mud Density Out: 9.5+ ECD: 9.65 ppg PV/YP: 7/16.
Gels: Salinity: 18.5 PPM CI Solids: 9% %
Hole Volume: 1105 BBL Annular Volume: 912 BBL Tubing Volume: 117 BBL Displaced Volume: 76 BBL
Carbide Lag-Calculated Lag: - 190 (11.9 " AUG DIA) Flowrate: 725
Drillpipe Annular Vel (Max. Dia. Sec.): 50 FT (mい Drillpipe Annular Vel (Open Hole): 142 MFT (min
Drill Collar Annular Vel (Open Hole): 206 FT/MIN Critical Vel: 338 FT / MIN
Pressure Loss System: 1664 Pressure Loss Bit: 116 PPT % Pressure Loss: 40.1%
Nozzel Vel: <u>362.8 F715€</u> Jet Impact Force: <u>1293.2 ← LB</u> HHP: <u>472 HP</u> .
PRESSURE PARAMETERS
Shale Density: Shale Factor:
Drilling Exponent: 1.0-1.3 (NORMAL) Flowline Temperature: 4.7 Shale Density:
Other Gas: NONE (\$100)
Fill: MIPOR Tight Hole: NONE
Cavings: Est %: 0 - 20% Average Size: MEDIUM, BLOCHY
ESTIMATED PORE AND FRACTURE PRESSURE
Kick Tolerance: 1.6 ppg Emw. Min. Estimated Fracture Pressure (Open Hole): 16-5 n7 5HOC
Estimated Pore Pressure: 8.5 pps EmwMin. Estimated Pore Pressure (Open Hole): 8.5 @ SMOE
Max. Estimated Pore Pressure (Open Hole): 8.5 @ 2142 M Estimated Fracture Pressure at TD: 17.7
Comments:
DRILL 1214" HOLE TORBUE HIGHLY ERRATIC - APPARENTLY DUE TO
DISCONTINUITES IN THE FORMATION
CIRCULATE HIGH UIS PILL AT 1998M WITH ABUNDANT
ROUNDED CUTTINGS ON BOTTOMS CEP.
DRILL AHEAD WITH -VE FLOW CHECK BT 2054m.



GEMDAS LOGGING REPORT NO. ______

COMPANY ESSO AUST	WELL CONGER No.1
DATE7/3/89.	_ TIME24: 00
DEPTH LAST REPORT	DEPTH 2142m
RIG OPERATIONS DRILL 121/4" HOLE	
REPORT BY D. NEW REPORT RECEI	VED BY(OPERATOR)
DRILLING REPORT	
Bit No.: NB村S Type: REED HPSIAT Size: 127	/4Jets:16, 16, 18
On Bit: Footage: 482 Hours: 33.5 ROP: 14	
Pump Press: 2750 SPM: 140 Torque: 200-650 BR:	245,000 CP 1:\$ 339 CP B:\$ 265
HYDRAULICS REPORT	
Mud Density In: 9-5009 Mud Density Out: 9-6009 E	CD: 9·7 PV/YP: 7/18
Gels:	PPM CI Solids:%
Hole Volume: 1334 Annular Volume: 1018 Tubing Volu	_
Carbide Lag—Calculated Lag:	
Drillpipe Annular Vel (Max. Dia. Sec.): 48 FT[min Drillpipe A	
Drill Collar Annular Vel (Open Hole):	
Pressure Loss System: 1709pfi Pressure Loss Bit: 1041	· · · · · · · · · · · · · · · · · · ·
Nozzel Vel: 350 FT [SEC Jet Impact Force:	1206 LB
PRESSURE PARAMETERS	
Drilling Exponent: 1-1-1-3 (PORMAL) Flow	line Temperature: 51°C
Drilling Exponent: 1.1-1-3 (PORMAL) Flow	e Factor:
Drilling Exponent: 1.1-1-3 (PORMAL) Flow	e Factor:
Drilling Exponent: 1.1-1.3 (NORMAL) Flowless Shale Density: Shale Background Gas: 0.1-0.2% Max. Formation Gas: 0.35% @ Other Gas: NIL (5-10a) (17.5a) @	2158 M Trip Gas: @@
Drilling Exponent:	### Factor:
Drilling Exponent:	### Factor:
Drilling Exponent:	ze: Small.
Drilling Exponent: 11-1-3 (PORMAL) Flow Shale Density: Shale Density: Shale Density: Shale Density: Shale Density: Shale Density: Max. Formation Gas: 0:35% @ (17.5u) Other Gas: NIL (S-10u) Tight Hole: NONE Cavings: Est %: MINOR (MAINLY COAL) Average Size ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.3 pp Min. Estimated Fracture II	### Factor:
Drilling Exponent:	Pressure (Open Hole): 8.5 @ AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE
Drilling Exponent:	Pressure (Open Hole): 8.5 @ AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE
Drilling Exponent:	Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (SLTST
Drilling Exponent:	Pressure (Open Hole): 16.5 AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (SLTST
Drilling Exponent:	Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (SLTST
Drilling Exponent: 1.1-1-3 (PORMAL) Flow Shale Density:	Pressure (Open Hole): 16.5 AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (SLTST) A = 1.8° AT 342° B = 1.9° AT 355°
Drilling Exponent: 1.1-1-3 (PORMAL) Flow Shale Density:	Pressure (Open Hole): 16.5 AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (9LTST) 1. 1.8° AT 342° 2. 1.9° AT 355°.
Drilling Exponent:	Pressure (Open Hole): 16.5 AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (SLTST) A = 1.8° AT 342° B = 1.9° AT 355° CORQUE POSSIBLY DUE TO
Drilling Exponent:	Pressure (Open Hole): 16.5 AT SHOE Pressure (Open Hole): 8.5 @ AT SHOE Estimated Fracture Pressure at TD: 18.2 (SLTST) A = 1.8° AT 342° B = 1.9° AT 355° CORQUE POSSIBLY DUE TO



COMPANY ESSO AUST. WELL CONGER NO!
DATE 8/3/89. TIME 24:00
DEPTH 2490 m. LAST REPORT DEPTH 2410 m
RIG OPERATIONS DRILL 12'14" HOLE
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB#6 Type: REED HP51BJ Size: 12'/4" Jets: 16, 16, 14.
On Bit: Footage: 19m Hours: 1.8 HRS ROP: 10.5 M HR. WOB: 35-40 RPM: 110
Pump Press: 2970 SPM: 137 Torque: 150-450 TBR: 21100 CP I:\$ 215 CP B:\$ 707
HYDRAULICS REPORT
Mud Density In: 9.5+ Mud Density Out: 9.6 ECD: 9.76 ppg PV/YP: 8/28
Gels: FO 26 Salinity: ISH PPM CI Solids: 9% %
Hole Volume: 1272 BBL Annular Volume: 1050 BBL Tubing Volume: 137 BBL Displaced Volume: 84
Carbide Lag-Calculated Lag: Flowrate: 684 GPM.
Drillpipe Annular Vel (Max. Dia. Sec.): 47 FT MIP Drillpipe Annular Vel (Open Hole): 134 FT MIP.
Drill Collar Annular Vel (Open Hole): 194.7 FT MIP Critical Vel: 433 FT MIP.
Pressure Loss System: 1581 Pressure Loss Bit: 1389 % Pressure Loss: 47%
Nozzel Vel: 404 PT/ SEC Jet Impact Force: 1363 LB HHP: 554 HP.
PRESSURE PARAMETERS
Drilling Exponent: 1.1-1-4 (NORMAL) Flowline Temperature: 53°C (MAX)
Shale Density:Shale Factor:
Shale Density: Shale Factor:
Other Gas: OLC
Fill: MINOR Tight Hole: STANDS 2-11 ON TRIP OUT AT 2471m
Cavings: Est %: 10 - 30% Average Size: SMALL - MEDIUM, ROUNDED.
ESTIMATED PORE AND FRACTURE PRESSURE
Kick Tolerance: 1.2 ppg Min. Estimated Fracture Pressure (Open Hole): 46-5 ppg N7 SHOE Estimated Pore Pressure: 8.5 ppg Min. Estimated Pore Pressure (Open Hole): 8.5 ppg @
Max. Estimated Pore Pressure (Open Hole): 8.5 pg @ 2490 Estimated Fracture Pressure at TD: 18.3
Comments:
DRILL TO 2471M. PUMP SCUG AND POH HOLE TIGHT STANDS 2-11
DRILL TO 2471M. PUMP SCUG AND POH HOLE TIGHT STANDS 2-11 WORM TIGHT MOLE 2290-2002M. WITH
DRILL TO 2471M. PUMP SCUE AND POH HOLE TIGHT STANDS 2-11 WORM TIGHT MOLE 2290-2002M. WITH 70-1204LB OUERPULL.
DRILL TO 2471M. PUMP SCUE AND POH HOLE TIGHT STANDS 2-11 WORM TIGHT MOLE 2290-2002M. WITH 70-120HLB OUERPULL. PICH UP NBHE AND RIH. CCUT AND SCIP LINE
DRILL TO 2471M. PUMP SCUE AND POH HOLE TIGHT STANDS 2-11 WORM TIGHT MOLE 2290-2002M. WITH 70-1204LB OUERPULL.



COMPANY ESSO AUST. WELL CONGER No!
DATE 9/3/89. TIME 24:00 HRS
DEPTH 2716m LAST REPORT DEPTH 2490 M.
RIG OPERATIONS DRILLING 1214" HOLE
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB#6 Type: REED HPSIB5 Size: 121/4 Jets: 16, 16, 14
On Bit: Footage: 245 Hours: 8-3 ROP: 13-4 WOB: 35-40 RPM: 120
Pump Press: 2870 SPM: 130 Torque: 150-370TBR: 138,000 CP I:\$ 427 CP B:\$ 316
HYDRAULICS REPORT
Mud Density In: 9-4 Mud Density Out: 9-4+ ECD: 9-57 PV/YP: 8/18
Gels:
Hole Volume: 1380 BBC Annular Volume: 140 Tubing Volume: 150 Displaced Volume: 90
Carbide Lag-Calculated Lag: ~ TN GAUGE Flowrate: Flowrate: Flowrate: Flowrate
Drillpipe Annular Vel (Max. Dia. Sec.): 44 8 FT MIN Drillpipe Annular Vel (Open Hole): 127.4 FT MIN
Drill Collar Annular Vel (Open Hole): 185 FT/MIN Critical Vel: 365 7 FT/MIN.
Pressure Loss System: 1656 Pressure Loss Bit: 1238 psi % Pressure Loss: 43.
Nozzel Vel: 384 F7 SEC Jet Impact Force: 12145 LB HHP: 469.4 HP.
PRESSURE PARAMETERS
Drilling Exponent: 1.2 - 1.6 (NCRMAL) Flowline Temperature: 51.7°C.
Shale Density: Shale Factor:
Background Gas: 0.1-0.5 Max. Formation Gas: 4:98% @ 2703m Trip Gas: @
Background Gas: 0.1-0.6 Max. Formation Gas: 4.98% @ 2703M Trip Gas: @ Other Gas: No connection GAS WAS RECORDED.
Background Gas: 0.1-0.5 Max. Formation Gas: 4:98% @ 2703M Trip Gas: @
Background Gas: O'I - O'E Max. Formation Gas: 4:98% @ 2703M Trip Gas: @
Background Gas: O' I - O' 6 Max. Formation Gas: 4:98% @ 1703m Trip Gas: @ Other Gas: No connection Gas was recorded. Fill: Tight Hole: Cavings: Est %: UP TO 20% Average Size: SMALL - MEDIUM, BLOCKY - PLATY ESTIMATED PORE AND FRACTURE PRESSURE
Background Gas: O' 1 - O' 5 Max. Formation Gas: 4:98% @ 2703M Trip Gas: @ Other Gas: No connection Gas was recorded. Fill: Tight Hole: Cavings: Est %: UP TO 20% Average Size: SMALL - MEDIUM, BLOCKY - PLATY ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2-1 ppg EMW Min. Estimated Fracture Pressure (Open Hole): 16-Spg
Background Gas: O'I - O'E Max. Formation Gas: 4:98% @ 2703M Trip Gas: @
Background Gas: O'I - O'S Max. Formation Gas: 498% @ 2703M Trip Gas: @
Background Gas: 0.1-0.6 Max. Formation Gas: 4.98% @ 2703m Trip Gas: @
Background Gas: O' 1 - O' 5 Max. Formation Gas: 498% @ 2703 m Trip Gas: @
Background Gas: 0.1 - 0.6 Max. Formation Gas: 4.98% @ 2703M Trip Gas: @
Background Gas: 0.1 - 0.5 Max. Formation Gas: 4.98% @ 2703 m Trip Gas: @
Background Gas: O·I - O·5 Max. Formation Gas: 4.98% @ 2703m Trip Gas: @
Background Gas: O· I - O· 5 Max. Formation Gas: Ip 98% @ 2703m Trip Gas: @
Background Gas: O· I - O· 5 Max. Formation Gas: 498% @ 2703 m Trip Gas: @

THIS REPORT IS GOVERNED BY THE TERMS AND CONDITIONS AS SET FORTH ON THE REVERSE SIDE



COMPANY ESSO AUST.	WELL CONGER No!
DATE 10TH MARCH 1989.	TIME 24:00 HRS
DEPTH 2776m LAST REPORT	DEPTH 2716m
RIG OPERATIONS REAM WITH CORE B	BRREL
REPORT BY D. NEW REPORT RECEI	VED BY(OPERATO
DRILLING REPORT	
Bit No.: NB #6 Type: REED MP5185 Size: 12	
On Bit: Footage: 305m Hours: 24·2 ROP: 12	
Pump Press: <u>7800</u> SPM: <u>127</u> Torque: <u>200-400</u> TBR:	163932. CP I:\$ CP B:\$
HYDRAULICS REPORT (FOR CORE BIT)	
Mud Density In: 9.4 Mud Density Out: 9.5	
Gels: 10 128 Salinity: 18,000	PPM CI Solids:
Hole Volume: 1409 Annular Volume: 163 Tubing Volu	•
Carbide Lag—Calculated Lag:	Flowrate: 400 GPM
Drillpipe Annular Vel (Max. Dia. Sec.): 27.6 FT MIN Drillpipe A	•
Drill Collar Annular Vel (Open Hole): 113.9 FT / M (B)	
Pressure Loss System: G41 pg1 Pressure Loss Bit: 138 pc CALC TOTAL PR. 1059 779 ps 1 Nozzel Vel: 128 pt 158 pc Jet Impact Force: 2	251 % Pressure Loss: 18 % 149・8に3 HHP: 32・3MP.
PRESSURE PARAMETERS	
Drilling Exponent: 12-16 (NORMAL) Flowli	
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling	F. A.
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling	F. A.
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ Other Gas: NIL (15-25tt) (2544) Fill: Tight Hole: 11NOR (42014)	Factor:
Drilling Exponent: 1:2-1:6 (NORMAL) Flowling Shale Density: Shale Background Gas: 0:3-0:5 % Max. Formation Gas: 5-05% @ Other Gas: NIL (15-250) (2544)	Factor:
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ Other Gas: NIL (15-25tt) (2544) Fill: Tight Hole: 11NOR (42014)	Factor:
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Density: Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ (2544) Other Gas: NIL (15-254) (2544) Fill: Tight Hole: TINOR (4204) Cavings: Est %: UP TO 20% Average Siz ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 CPg. Min. Estimated Fracture F	Factor: 2746m Trip Gas: 4.05 % @ 2776. (202.54) LB) FROM STANDS 10-11 ON THE BLOCKY- PLATY Pressure (Open Hole): 16.5 AT SMOE
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ Other Gas: NIL (15-25tt) (2544) Fill: Tight Hole: 11NOR (2204) Cavings: Est %: UP TO 20% Average Siz ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 Ppg Min. Estimated Fracture F Estimated Pore Pressure: 8.5 ppg Min. Estimated Pore F	Pressure (Open Hole): 8.5 @ SMOE
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Density: Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ (2544) Other Gas: NIL (15-254) (2544) Fill: Tight Hole: TINOR (4204) Cavings: Est %: UP TO 20% Average Siz ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 CPg. Min. Estimated Fracture F	Pressure (Open Hole): 8.5 @ SMOE
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ (15-25tt) (15-25	Factor: 2746m Trip Gas: 4.05 % @ 2776. (202.54) LB) FROM STANDS 10-11 ON e: BLOCKY-PLATY Pressure (Open Hole): 16.5 A7 SMOE Pressure (Open Hole): 8.5 @ SMOE M Estimated Fracture Pressure at TD: 17.8 FLOW CNEXAS BT 2735 AND
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Background Gas: 0.3-0.5% Max. Formation Gas: 5.05% @ (15-25tt) (15-25tt) (15-25tt) Fill: Tight Hole: 11NOR (420th) Cavings: Est %: UP TO 20% Average Size ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 Ppg Min. Estimated Fracture From Estimated Pore Pressure: 8.5 ppg Min. Estimated Pore From Max. Estimated Pore Pressure (Open Hole): 9.0 @ 2620 Comments: DRILL TO 2774m WITH TOC 2759m. AT 2774m CIRCULATE SAME	Factor: 2746m Trip Gas: 4.05% @ 2776. (202.54) CB) FROM STANDS 10-11 ON The: BLOCHT- PLATY Pressure (Open Hole): 16.5 A7 SMOE Pressure (Open Hole): 8.5 @ SMOE Pressure (Open Hole): 8.5 DESTARDE Pressure (Open Hole): 17.8
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ (15-25tt) (15-25	Factor: 2746m Trip Gas: 4.05% @ 2776. (202.54) LB) FROM STANDS 10-11 ON The: BLOCHY-PLATY Pressure (Open Hole): 16.5 A7 SMOE Pressure (Open Hole): 8.5 @ SMOE Pressure (Open Hole): 17.8 Prow Checks BT 2735 App IPLE FOR 30 MIN. DRILL TO BOTTOMS UP. POOR TO
Drilling Exponent: 1.2-1.6 (NORMAL) Flowling Shale Density: Background Gas: 0.3-0.5% Max. Formation Gas: 5.05% @ (15-25tt) (15-25tt) (15-25tt) Fill: Tight Hole: 11NOR (420th) Cavings: Est %: UP TO 20% Average Size ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 Ppg Min. Estimated Fracture From Estimated Pore Pressure: 8.5 ppg Min. Estimated Pore From Max. Estimated Pore Pressure (Open Hole): 9.0 @ 2620 Comments: DRILL TO 2774m WITH TOC 2759m. AT 2774m CIRCULATE SAME	Factor: 2746m Trip Gas: 4.05 % @ 2776. (202.54) LB) FROM STANDS 10-11 ON The: BLOCKY-PLATY Pressure (Open Hole): 16.5 A7 SMOE Pressure (Open Hole): 8.5 @ SMOE Pressure (Open Hole): 17.8 Pressure (Open Hole): 17.8 Pressure (Open Hole): 18.5 @ SMOE Pressure (Open Ho
Drilling Exponent: 1·2 - 1·6 (NORMAL) Shale Density: Background Gas: 0·3-0·5 / Max. Formation Gas: 5·09% @ Other Gas: NIL (15-25tt) (2544) Fill: Tight Hole: MINOR (420H Cavings: Est %: UP TO 20% TRIP OUT. Average Siz ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2·1 pg. Min. Estimated Fracture F Estimated Pore Pressure: 8·5 ppg. Min. Estimated Pore F Max. Estimated Pore Pressure (Open Hole): 9·0 @ 2620 Comments: DRILL TO 2774m WITH OUT 2759m. AT 2774m CIRCULATE SAM 2776m ROP 7 25 M/MR. CIRCULATE FBIR OIL SHOW WITH 20-30% FOR	Factor: 2746m Trip Gas: 4.05% @ 2776. (202.54) LB) FROM STANDS 10-11 ON The: BLOCKY-PLATY Pressure (Open Hole): 16.5 AT SMOE Pressure (Open Hole): 8.5 @ SMOE Pressure (Open Hole): 8.5 & Open To LUCKESCENCE. MAX GAS:1.56 CORE BARREL AND RIM
Drilling Exponent: 1.2-1.6 (NORMAL) Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ Other Gas: NIL (15-250) Fill: Tight Hole: 11NOR (220H Cavings: Est %: 1P To 20% TRIP OUT. Average Siz ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 pg. Min. Estimated Fracture F Estimated Pore Pressure: 8.5 pg Min. Estimated Pore F Max. Estimated Pore Pressure (Open Hole): 9.0 @ 2620 Comments: DRILL TO 2774m WITH OUT 2759m. AT 2774m CIRCULATE SAN 2759m. BT 2774m CIRCULATE SAN 2776m ROP 7 25 M/MR. CIRCULATE FAIR OIL SHOW WITH 20-30% FOR	Factor: 2746m Trip Gas: 4.05% @ 2776. (202.54) LB) FROM STANDS 10-11 ON The: BLOCKY-PLATY Pressure (Open Hole): 16.5 AT SMOE Pressure (Open Hole): 8.5 @ SMOE Pressure (Open Hole): 8.5 & Open To LUCKESCENCE. MAX GAS:1.56 CORE BARREL AND RIM
Drilling Exponent: 1.2-1.6 (NORMAL) Shale Density: Shale Background Gas: 0.3-0.5 % Max. Formation Gas: 5.05% @ Other Gas: NIL (15-25th) Fill: Tight Hole: 11NOR (420H Cavings: Est %: UP TO 20% TRIP OUT. Average Siz ESTIMATED PORE AND FRACTURE PRESSURE Kick Tolerance: 2.1 ppg Min. Estimated Fracture F Estimated Pore Pressure: 8.5 ppg Min. Estimated Pore F Max. Estimated Pore Pressure (Open Hole): 9.0 @ 2620 Comments: DRILL TO 2774m WITH TUC 2759m. AT 2774m CIRCULATE SAM ATOM ROP 7 25 MIMR. CIRCULATE FAIR OIL SHOW WITH 20-30% FOR PUMP SCUE AND POM. PICH UP COMMENTED TO COMMENTED TO COMMENTED TO COMMENTED TO COMMENTED TO CIRCULATE SAM PUMP SCUE AND POM. PICH UP COMMENTED TO COMMENTED TO COMMENTED TO COMMENTED TO COMMENTED TO CIRCULATE SAM PUMP SCUE AND POM. PICH UP COMMENTED TO COMMENTED TO COMMENTED TO COMMENTED TO CIRCULATE SAM PUMP SCUE AND POM. PICH UP COMMENTED TO COMMENTED TO COMMENTED TO CIRCULATE SAM PUMP SCUE AND POM. PICH UP COMMENTED TO COME	Factor: 2746m Trip Gas: 4.05% @ 2776. (202.54) LB) FROM STANDS 10-11 ON The: BLOCKY-PLATY Pressure (Open Hole): 16.5 AT SMOE Pressure (Open Hole): 8.5 @ SMOE Pressure (Open Hole): 8.5 & Open To LUCKESCENCE. MAX GAS:1.56 CORE BARREL AND RIM



COMPANY ESSO AUST WELL CONGER No!
DATE 11/3/89 TIME @ 24:00
DEPTH 2794 5m LAST REPORT DEPTH 2776m
RIG OPERATIONS POH WITH CORE NO!
DEDODT BY DIFFW DEDODT DECEIVED BY (OPERATOR)
DRILLING REPORT
Bit No.: 23#2 Type: ZHRIS RC476 Size: 95/8 Jets: TFA = 0.55
On Bit: Footage: 18.5 Hours: 1.2 ROP: 15.4 M/HR WOB: 10 RPM: 65
Pump Press: 1160 SPM: 72. Torque: 220-370TBR: 4680 CP I:\$ CP B:\$
HYDRAULICS REPORT
Mud Density In: 9.4 ⁺ Mud Density Out: 9.5 ECD: 9.5 ⁺ PV/YP: 8/17
Gels: 8/22 Salinity: 19,000 PPM CI Solids: 9 %
Hole Volume: 1414 Annular Volume: 1168 Tubing Volume: 155 Displaced Volume: 92
Carbide Lag-Calculated Lag: ~ TN GAUGE Flowrate: 362
Drillpipe Annular Vel (Max. Dia. Sec.): 25 FT MIP Drillpipe Annular Vel (Open Hole): 71 FT MIP.
Drill Collar Annular Vel (Open Hole): 264.7 FT[MIN Critical Vel: 433.1 FT [MIN.
Pressure Loss System: 786 ps/ Pressure Loss Bit: 374 ps/ % Pressure Loss: 32%
Nozzel Vel: Jet Impact Force: 371.9 LB HHP: 79 HP.
PRESSURE PARAMETERS
Drilling Exponent:Flowline Temperature:For
Shale Density: Shale Factor:
Background Gas: Max. Formation Gas: @ Trip Gas: 3.2 % @ 2776 m
Other Gas:
Fill: ~ 30m Tight Hole: COULD NOT GET BELOW 2716 WITH 121/4 CORE BIT.
Cavings: Est %: Average Size:
ESTIMATED PORE AND FRACTURE PRESSURE
Kick Tolerance: Min. Estimated Fracture Pressure (Open Hole): Emw
Estimated Pore Pressure: Min. Estimated Pore Pressure (Open Hole): @
Max. Estimated Pore Pressure (Open Hole): $\frac{\sim 9.0 \rho g}{0.00000000000000000000000000000000000$
Comments: REAM TO 2716M
Comments: REAM TO 2716M PUMP SLUG AND POH.
Comments: REAM TO 2716M PUMP SLUE AND POH. PICH UP 95/8 CORE BIT AND NEW STABILIZERS
Comments: REAM TO 2716M PUMP SCUE AND POH. PICH UP 95/8 CORE BIT AND NEW STABILIZERS PIH AND CUT CORE NO! 2776M - 2794.5m.
Comments: REAM TO 2716M PUMP SLUG AND POH. PICH UP 95/P CORE BIT AND NEW STABILIZERS PIH AND CUT CORE NO! 2776M-2794.5m. (18.5m)
Comments: REAM TO 2716M PUMP SCUE AND POH. PICH UP 95/8 CORE BIT AND NEW STABILIZERS PIH AND CUT CORE NO! 2776M - 2794.5m.
Comments: REAM TO 2716M PUMP SLUG AND POH. PICH UP 95/P CORE BIT AND NEW STABILIZERS PIH AND CUT CORE NO! 2776M-2794.5m. (18.5m)



COMPANY ESSO AUST	WELL	CONGER	No.1
DATE 12TH MARCH 1989			
DEPTH 2794 Sm LAST RE			
RIG OPERATIONS REAM CORED SECTION	,		
REPORT BY D. NEW REPORT I			_(OPERATOR)
DRILLING REPORT	10.11		
Bit No.: NB # 7 Type: REED HPSIGS Size:			
On Bit: Footage: Hours: ROP:			
Pump Press: 2610 SPM: 124 Torque:	TBR:	. CP I:\$	CP B: \$
HYDRAULICS REPORT	9.4		ſ
Mud Density In: 9.4 ⁺ Mud Density Out: 9.5			
Gels: 10 28 Salinity: 19000 Hole Volume: 1417 Annular Volume: 1171 Tu	PPM CI	Solids: 8:3	 %
Hole Volume: Annular Volume: Tu Carbide Lag—Calculated Lag:	ubing Volume:	Displaced Volum	e:
Drillpipe Annular Vel (Max. Dia. Sec.): 42.8 FT/MIN			
Drill Collar Annular Vel (Open Hole): 176.8			
Pressure Loss System: 1481 Pressure Loss Bit:			_
Pressure Loss System Tressure Loss Bit	/1-	2	
Nozzel Vel: 367 F7/SEC Jet Impact F	Force:	863 HHP:	409 MP
Nozzel Vel: 367 F7/SEC Jet Impact F	Force:	963 HHP:	<u> 409 hp</u>
PRESSURE PARAMETERS	The second secon		409 HP
PRESSURE PARAMETERS Drilling Exponent:	Flowline Temperature:	49°C	409 MP
PRESSURE PARAMETERS Drilling Exponent:	Flowline Temperature: Shale Factor:	49°C	
PRESSURE PARAMETERS Drilling Exponent:	Flowline Temperature: Shale Factor:	49°C	
PRESSURE PARAMETERS Drilling Exponent:	Flowline Temperature: Shale Factor:	49°C	
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~0.2 % (ICuMax. Formation Gas: Other Gas: I.2% CO2 WITH TRIP GBS. Fill: Tight Hole:	Flowline Temperature: Shale Factor:	49°C	
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~ 0 · 2 % (ICu)Max. Formation Gas: Other Gas: I · 2 % CO2 WITH TRIP GBS. Fill: Tight Hole: Cavings: Est %: A ESTIMATED PORE AND FRACTURE PRESSURI	Flowline Temperature: Shale Factor: O O O O O O O O O O O O O	49°C Trip Gas: 8.3% S. (415a)	@2794·Sm
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~ 0.2 % (IC)Max. Formation Gas: Other Gas: 1.2% CO2 WITH TRIP GAS. Fill: Tight Hole: Cavings: Est %: A ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2.1 Min. Estimated	Flowline Temperature: Shale Factor:	49°C Trip Gas: 8.3% S. (415a)	@2794·Sm
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~ 0 · 2 % (ICM) Max. Formation Gas: Other Gas: 1 · 2 % CO2 WITH TRIP GBS. Fill: Tight Hole: AVENTY TRIP GBS. ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2 · 1	Flowline Temperature: Shale Factor:	49°C Trip Gas: 8.3% (415a)	@2794:Sm SHOE @5HOE
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~ 0 · 2 % (ICu) Max. Formation Gas: Other Gas: 1 · 2 % CO2 WITH TRIP GBS. Fill: Tight Hole: Cavings: Est %: A ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2 · 1	Flowline Temperature: Shale Factor: @ DDDH2 verage Size: E Fracture Pressure (Open Hotald Pore Pressure (Open Hotald Estimate	16.5 97 d Fracture Pressure at TC	@2794:Sm
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~ 0 · 2 % (ICu)Max. Formation Gas: Other Gas: 1 · 2 % CO2 WITH TRIP GBS. Fill: Tight Hole: Cavings: Est %: A ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2 · 1	Flowline Temperature: Shale Factor: O O O O O O O O O O O O	16.5 97 d Fracture Pressure at TC	@2794:Sm
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~0.2 % (ICu)Max. Formation Gas: Other Gas: 1.2% CO2 WITH TRIP GAS. Fill: Tight Hole: Cavings: Est %: A ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2.1	Flowline Temperature: Shale Factor: WO H2 Everage Size: Fracture Pressure (Open House Pressure (Open House Pressure (Open House Pressure (Open House Pressure Pressure (Open House Pressure Pressure (Open House Pressure Pressu	49°C. Trip Gas: 8.7% (415a) Die): 16.5 97 Die): 8.5 57 d Fracture Pressure at TO WITH 986	@2794:Sm
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~0.2% (ICUMax. Formation Gas: Other Gas: 1.2% CO2 WITH TRIP GBS. Fill: Tight Hole: Cavings: Est %: ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2.1 Min. Estimated Estimated Pore Pressure: 8.5 Min. Estimated Estimated Pore Pressure (Open Hole): 9.0 @ 2 Comments: POH AND CORE IS PRESSURE TEST IS	Flowline Temperature: Shale Factor: O O Verage Size: Fracture Pressure (Open House Pore Pressure Pore Pore Pressure Pore Pore Pressure Pore Pore Pressure Pore Pore Pore Pore Pore Pore Pore Po	49°C Trip Gas: 8.3% (415a) Ole): 16.5 97 Ole): 8.5 97 d Fracture Pressure at TI WITH 989	@2794.5m
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~0.2 % (IQ)Max. Formation Gas: Other Gas: I.2% CO2 WITH TRIP GAS. Fill: Tight Hole:	Flowline Temperature: Shale Factor: WOND Verage Size: Fracture Pressure (Open House Pressure Pressure (Open House Pressure Pressure (Open House Pressure	49°C Trip Gas: 8.3% S. (415a) Die): 16.5 97 Die): 8.5 97 d Fracture Pressure at TO WITH 989 TOOL 2794.5M	@2794.5m @2794.5m SHOE @5HOE D: 17.7
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~0.2% (ICU) Max. Formation Gas: Other Gas: 1.2% CO2 WITH TRIP GAS. Fill: Tight Hole: Cavings: Est %: ESTIMATED PORE AND FRACTURE PRESSURI Kick Tolerance: 2.1 Min. Estimated Estimated Pore Pressure: 8.5 Min. Estimated Estimated Pore Pressure (Open Hole): 9.0 @ 2 Comments: POH AND RECOVER IN PRESSURE TEST IS PRESSURE TEST IS RIM WITH NB # 7 RIM TO 2712M AI	Flowline Temperature: Shale Factor: WOH2 Verage Size: E Fracture Pressure (Open House Pressure (Open House Pressure (Open House Pressure (Open House Pressure Pressure (Open House Pressure	49°C Trip Gas: 8.3% S. (415a) Die): 16.5 97 Die): 8.5 97 d Fracture Pressure at TO WITH 989 TOOL 2794.5M	@2794.5m, SHOK @_SHOE D:_17.7 % RECOVERY
PRESSURE PARAMETERS Drilling Exponent: Shale Density: Background Gas: ~0.2 % (IQ)Max. Formation Gas: Other Gas: I.2% CO2 WITH TRIP GAS. Fill: Tight Hole:	Flowline Temperature: Shale Factor: WOH2 Verage Size: E Fracture Pressure (Open House Pressure (Open House Pressure (Open House Pressure (Open House Pressure Pressure (Open House Pressure	16.5 97 Ole): 16.5 97 Ole): 8.5 97 d Fracture Pressure at TI WITH 989 TOOL 2794.5m	@2794.5m. SHOE SHOE T7.7 RECOVERY



COMPANY ESSO AUST WELL CONGER No!
DATE 13TH MARCH 1989 TIME 24:00
DEPTH 2943m LAST REPORT DEPTH 2794.5
RIG OPERATIONS DRILLING 121/4" HOLE
REPORT BY D. NEW REPORT RECEIVED BY (OPERATOR)
DRILLING REPORT
Bit No.: NB#7 Type: REED #P5/95 Size: 12/4 Jets: 16,16,14
On Bit: Footage: 148m Hours: 19.6 HRS ROP: 7.5 M/HR. WOB: 35-40 RPM: 110
Pump Press: 1650 SPM: 120 Torque: 220-400 TBR: 128476 CP 1:\$ 680 CP B:\$ 545
HYDRAULICS REPORT
Mud Density In: 9.4 Mud Density Out: 9.4 ECD: 9.6 [†] PV/YP: 8/32
Gels: 14/46 Salinity: 16,500 PPM CI Solids: 91/2 %
Hole Volume: 1488 Annular Volume: 1230 Tubing Volume: 164 Displaced Volume: 95
Carbide Lag-Calculated Lag: ~ IN GAUGE Flowrate: 607 GPM
Drillpipe Annular Vel (Max. Dia. Sec.): 41.5 Drillpipe Annular Vel (Open Hole): 171./
Drill Collar Annular Vel (Open Hole): 171.4 FT[MIN Critical Vel: 517 FT[MIN.
Pressure Loss System: 1588 Pressure Loss Bit: 1062 % Pressure Loss: 40%
Nozzel Vel: 355.7 FT [SE< Jet Impact Force: 1041.8 LB HHP: 372.9.
PRESSURE PARAMETERS
Drilling Exponent: 1.3-1.8 (NORMAL) Flowline Temperature: 53.3°C
Shale Density:
Background Gas: O'4-0'6/0 Max. Formation Gas: 1-44-70 @ ATM Trip Gas: @
Other Gas: 0.0-0.2% CO2 No M25
Fill: Tight Hole: NONE Cavings: Est %: UP TO 20% Average Size: SMALL- MEDIUM . SPLINTER! TO
Duc-17
ESTIMATED PORE AND FRACTURE PRESSURE Min. Estimated Fracture Pressure (Open Hole): 16-5 ppg EMW
Kick Tolerance: Min. Estimated Fracture Pressure (Open Hole): EMW Min. Estimated Pore Pressure (Open Hole): 8.5 pg @ SHOE
Max. Estimated Pore Pressure (Open Hole): 9000 @ 2620 Estimated Fracture Pressure at TD: 18.9pg
Comments: REAM CORED SECTION AT ~ 30 M/HR. DRILL 121/4 HOLE.



COMPANY ESSO BUST WELL CONGER No!
DATE 14TH MARCH 1989 TIME 24:00
DEPTH 2970 CTD). LAST REPORT DEPTH 2943.
RIG OPERATIONS CIRCULATE TO CONDITION MUD.
REPORT BY D. NEW REPORT RECEIVED BY(OPERATOR)
DRILLING REPORT
Bit No.: NB#7 Type: REED HPSIAJ Size: 12/4 Jets: 16, 16, 14
On Bit: Footage: 175 Hours: 25.1 ROP: 7.0 M/HR. WOB: 35-55 RPM: 80-110
Pump Press: <u>2680</u> SPM: <u>120</u> Torque: <u>200~550</u> TBR: <u>159700</u> CP I:\$ CP B:\$
HYDRAULICS REPORT
Mud Density In: 9.4 Mud Density Out: 9-47 ECD: 9.68 PV/YP: 8/32
Gels: 14 46 Salinity: 16-5h PPM CI Solids: 9.5 %
Hole Volume: 1501 Annular Volume: 1240 Tubing Volume: 165 Displaced Volume: 96
Carbide Lag—Calculated Lag: ~ Th GAUGE. Flowrate: 600 CPM
Drillpipe Annular Vel (Max. Dia. Sec.): 4-4 FT/min Drillpipe Annular Vel (Open Hole): 117-6 FT min
Drill Collar Annular Vel (Open Hole): 170 9 FT min Critical Vel: 517 FT min
Pressure Loss System: 1625 Pressure Loss Bit: 1055 PS1 % Pressure Loss: 39
Nozzel Vel: 354:5 FT SEC Jet Impact Force: 1035 LB HHP: 369 HP.
PRESSURE PARAMETERS
Drilling Exponent: 1.3-1.8 (NORMAC) Flowline Temperature: 53.3° C
Shale Density: (15-25u) Shale Factor:
Background Gas: 0.3-0.5% Max. Formation Gas: 1.9% @ 2958m. Trip Gas: @
Other Gas:
Fill: Tight Hole:
Cavings: Est %: 10 - 20 % Average Size: MED(UM.
ESTIMATED PORE AND FRACTURE PRESSURE
Kick Tolerance: Min. Estimated Fracture Pressure (Open Hole): EMW Estimated Pore Pressure: 8.5pg EMW Min. Estimated Pore Pressure (Open Hole): 8.5pg @ SHOE
Comments: DRILL 1214" HOLE TO 2970m. HIGH TORQUE AND BIT BOUNCING
CIPCULATE TO CONDITION MUD

 ${\tt APPENDIX} \ {\tt I} \ : \ {\tt Weekly Geological-Engineering Reports}$

GEOLOGICAL-ENGINEERING REPORT No. 1

25th Feb - 1st March 1989

ESSO AUSTRALIA PETROLEUM Co.

Spud to 815 metres.

Conger No.1

EXLOG U244 - D. New, B. Munro

OPERATIONS SUMMARY

Conger No.1 was spudded at 23:15 hours on 8th February 1989 by the semi-submersible drilling rig "Southern Cross". RKB to sea level was 21m, and RKB to seafloor was 86m. (Water Depth 65m)

26" Hole Section: 86m to 214m.

The 26" hole section was drilled using RRB1, a Hughes OSC3AJ 26", with returns to the seabed. The section (128m) was completed in 8.75 hours drilling with 30bbl high vis pills being pumped every 2nd single. No problems were encountered while drilling this section. At 214m the hole was swept with a 50bbl high vis pill, a Totco droped and the bit pulled to the sea-floor with no problems. The survey recovered (Dev 1 deg at 214m) and the bit run back to TD the hole displaced with of mud. The bit was then pulled to 150m where a further 150 bbl of mud was pummped and the trip out compleated.

12 joints (including the wellhead joint) of 94 lb/ft 20" casing were run with the shoe at 209m. The casing was then cemented with 750sx class G at 13.2ppg followed by 350sx class G at 15.8ppg. The BOP stack and riser were then run and the BOP's tested to ESSO's requirements.

17.5" Hole. 214m - 815m

The 17.5" BHA was made up and run in with RRB2, a Reed S11J, which drilled cement and the shoe track. The 17.5" hole was then drilled from 214m to 815m, a distance of 601m, in 22.4 hrs (on bottom) at an average ROP of 26.8 m/hr. No hole problems were encountered while drilling this section of hole. At 815m a hi vis pill was pumped, the hole circulated clean, a survey dropped, and the bit pulled to run logs. Minor tight hole was recorded from stands 2 to 7 with a maximum drag of 30klb being recorded from the 5th stand. The BHC-GR-Cal wireline tool was then rigged up and run in but could not get past a bridge at 216m and had to be pulled out.

RRB2 was picked up and run in to 216m where the bridge was tagged with 60klb. The kelly was picked up and used to ream/wash 3 singles. The trip in continued to 286m where anouther tight spot had to be reamed. The trip in then proceded to 815m where the hole was circulated clean and and a high vis pill pummped prior to pulling the bit. No hole problems were noted on the trip out. Wireline logs BHC-GR-Cal were then run over the interval 810m to 86m. After rigging down Schlumberger the 13.375" casing was run.

Current operation at 24:00 hrs 1/3/89 is running 13.375" casing.

BOREHOLE CONDITION

No hole problems were noted from the 26" hole or while drilling the 17.5" hole. However on the trip out at 815m minor tight hole was recorded over the intervall 786m 615m (stands 2 to 7) with a maximum drag of 30klb being recorded from the 5 stand. This drag was probably due to the stabilizer balling up and did not seem to indicate hole instability.

The only other hole problem occured when a bridge was hit at 216m, just below the 20" casing shoe, when running in with the logging tool necessitating a wiper trip with a bit.

PORE PRESSURE.

A normal pore pressure trend of 8.5 ppg EMW has been assumed for this well. All the indicators monitered while drilling the 17.5" hole indicated an normaly pressured section and the pore pressure at 815m is estimated to be 8.5 ppg EMW.

GEOLOGICAL-ENGINEERING REPORT No. 2

1st March - 8th March 1989

ESSO AUSTRALIA PETROLEUM Co.

815 - 2490 metres.

Conger No.1

EXLOG U244 - D. New, B. Munro

OPERATIONS SUMMARY

60 joints of 54.5 lb/ft 13.365" casing were run (shoe at 798m) and cemented with 1000sx of class G cement at 15.8ppg. The BOP's were tested to ESSO's requirements, the 12.25" BHA made up, and NB#3, a REED HP11J, picked up and run in. This bit drilled the shoe track and new hole to 819m where bottoms up were circulated and a formation integrity test run. The test was taken to a gauge pressure of 960 psi, (9.3ppg mud weight) with no leak, off giving a minimum formation fractiue pressure of 16.5 ppg EMW. Drilling then continued to 1610m where a washout in a standpipe pressure value caused a pressure drop of 150psi and drilling continued with one pump while the value was repaired. At 1822m a 100 bbl high vis pill was circulated to clean the hole, a survey dropped (Dev = 2.25deg N43W), and the bit pulled. Overpull of 15-50klb was recorded from stands 1 to 11 on the trip out, probably due to the stabilizer balling up.

A junk sub and NB#4, a HTC J11, were picked up and run in. Tight hole was noted over the intervals 890m - 910m, 1250m - 1300m (60klb drag) and a the kelly picked up and a single reamed at 1605m. After ream/washing the last two singles to bottom drilling continued to 1826m where 90 bbl of mud was lost when the flowline became blocked with cuttins and overflowed. A further 110 bbls were lost trying to clear the blockage. The top of the Latrobe Group was intersected at 1831m and a -ve flow check made at 1841m. Drilling then continued to 1928m where the ROP decreased to 1-2 m/hr and the bit was pulled. Very erratic and often high torque was noted while drilling the Latrobe Group sediments. The torque appeared to be associated with thin coal beds and discontinuities in the formation. The ROP's recorded during this bit run were generaly lowere than expected due to inserts on the bit being broken, possibly by pyriticaly cemented sandstones. A bit with shorter inserts may have performed better in this section.

The Teleco MWD tool and NB#5, a HP51, were then picked up and run in with no problems. Drilling continued with erratic and varible torque, often necessitating the reduction of the WOB to 5 lkb or less to alow drilling to continue. At 1998m a Hi-Vis pill was circulated to clean out the hole and abundant rounded claystone cuttings were noted on bottoms up. At 2471m the bit was pulled due to high bit hours and low ROP. Tight hole was recorded from stands 2 to 20 (2441m-1881m) with a maximum overpull of 120klb from stands 14-15 (2088m-2028m). This drag was probably due to the stabilizer balling up through claystone/siltstone sections that had not been triped through before. NB#5 proved to be baddly worn with many missing inserts, particularly on the outer rows of each cone, and was 0.25" undergauge.

NB#6, a REED HP51AJ, was then picked up and run in the hole to 1968m where tight hole was noted, the kelly picked up, and a single reamed. The last 3 singles were reamed/washed to bottom and the junk sub worked for 20min before drilling ahead.

Current operations as at 24:00hrs 8/3/89 is drill ahead with NB#6 at 2490m.

BOREHOLE CONDITION

Erratic and often high torque was common while drilling through sediments of the Latrobe Group. This torque was often sufficently high to stall the rotary table and necessitate a reduction in the WOB to alow drilling to continue. The torque above about 2200m appears to be associated with discontinuites in the formation, particularly coal beds and the tops of sands. Below 2200m the torque appears to have been caused by the stabilizer working through tight or slightly undergauge hole.

The first trip through a section of hole were generaly fairly tight with moderate to high overpull, of up to 120klb being recorded. On the trip out with NB#3 overpull of up to 50klb was recorded from stands 1-11 and on the trip in with NB#4 tight spots were recorded from 880m-910m, 1250m-1300m and at 1605m where the kelly had to be picked up to ream one single. Tight hole was recorded from stands 2-20 (2441m-1881m) on the trip out with NB#5, probably caused by the stabilizer balling up through claystone/ siltstone sections that had not been previously triped through.

PORE PRESSURE.

A normal pore pressure trend of 8.5 ppg EMW has been assumed for this well. All the indicators monitered while drilling the 12.25" hole indicated a normaly pressured section and the pore pressure at 2490m is estimated to be 8.5 ppg EMW.

Gas values were generally low, averaging 0.1-0.2% (5-10 units) with no connection gas and only minor trip gasses being recorded. Flowline temprature proved to be damped and unreliable due to the frequent additions on cold mud and temprature losses in the riser.

Up to 30% cavings were recorded at various time while drilling the 12.25" hole section, however the cavings were generaly rounded to blocky and did not appear to indicate an overpressured or unstable formation.

DXC followed the expected trend with any deviations being due to bit wear or variations in lithology.

ESSO AUSTRALIA PETROLEUM Co.

2490 - 2970 metres

Conger No.1

EXLOG U244 - D. New, R. O'Neill

OPERATIONS SUMMARY

NB#6 continued to drill to 2675m where the ROP increased from 20 to 40 m/hr and bottoms up was circulated at 2679m with 2.50% (125 units) of gas being recorded from a coal. Drilling continued at 5 to 15 m/hr to 2758m where the ROP increased to 20 to 40 m/hr and returns were circulated for 30 min before drilling to 2776m where bottoms up were circulated. A poor to fair oil show was noted and the bit was pulled to cut core 1. Minor tight hole of less than 30 klb was recorded from stands 10-11 on the trip out.

While preparing the core barrel for core 1, it was discovered that a length of core remained in the core barrel from Mulloway No.1. This was laid out as a conventional core and 6.5 metres was recovered and described. Total recovery for Mulloway No.1 core 2 was 6.68 metres from 11.5 metres cut (58%) It is believed that when the core was first cut and pulled to surface, the core slipped past the core catcher and remained in the outer barrel when the liner was laid out and inspected. When the liner was replaced in the outer barrel, the core slid back through the core catcher and remained there until preparing to cut core 1 on Conger No.1.

CB#1, a Chris ZC478 12.25" with two full gauge stabilizers was then picked up and run in the hole. From 2440m to 2447m tight hole, with 40 klb overpull was noted. At 2630m further tight hole was encountered and the kelly picked up and used to ream to 2617m where the rate of reaming decreased to less than 1 m/hr and the bit pulled without reaching bottom. The tight hole appeared to have been caused by a stiff BHA with full gauge stabilizers being worked through undergauge or rugose hole. The 12.25" core bit was changed out for a 9.875" Chris RC468 core bit, and graded as unservicable with the gauge protection having been obliterated. The stabilizers were changed out and the core barrel run back in the hole. Core 1 was then cut from 2776.0m to 2794.5m, (18.5m) in 1.2 hrs (on bottom) at an average ROP of 15.4 m/hr. While circulating prior to coring a strong smell of H2S was noticed at the shakers but no H2S was detected. The smell was possibly caused by CO2 lowering the pH of the mud causing accelerated bacterial breakdown of the polymers in the mud. The barrell was pulled out and layed down and 18.2m (98%) of water saturated sandstone recovered. CB#2 was graded as 35% worn.

NB#7, a Reed HP51AJ 12.25", was picked up and run in conjunction with an MWD tool to 2712m where the kelley was picked up and 7 singles reamed to bottom. A trip gas of 8.3% (415 u) and 1.2% CO2 was recorded from bottoms up. Drilling continued through well cemented siltstones and sandstones of the lower Latrobe Group at 3 to 30 m/hr. At 2823 the ROP increased to over 50 m/hr and a flow check (static) was made at 2825m. When drilling resumed 30 bbl of mud were lost, presumably

to the formation as there were no apparent surface losses at this time. The lithology associated with the drilling break was (fractured?) coal. Anouther drilling break was flow checked at 2963m with no flow. Drilling then continued to 2970m where high on bottom torque and severe bit bouncing were recorded indicating possibly locked cones and it was decided to TD the well at this depth (2970m). The mud had become baddly contaminated by CO2 and it was necessary to circulate for 19.5 hours to remove the carbonate contamination from the mud. When the bit reached surface it was graded T6 B4 G14.

Electric wireline logs were then run,

Run 1: DLL-MSFL-BHC-LDL-CNL-SP-GR

Run 2: SHDT-GR

Run 3: WSS (Velocity Survey)

Run 4: CST (2 guns)

After the wireline logs were run, the hole was plugged and abandoned according to ESSO procedures.

BOREHOLE CONDITION.

Hole conditions from 2490m to 2970m were generaly good with no hole problems being noted while drilling. Only minor tight hole was recorded from stands 10 and 11 on the trip out with NB#6. However on the trip in with CB#1 (a 12.25" bit) tight hole was noted from 2440m to 2447m and at 2630m the kelly had to be picked up to ream tight hole. By 2717m the gauge protection on the bit had been worn off and the bit pulled before reaching TD. The hole problems associated with this run were thought to be due to a stiff BHA with full gauge stabilizers and bit trying to pass through undergauge or rugose hole. There was no indications of any hole instability.

Core 1 was cut, using a 9.875" bit, with no problems and 18.2m (98%)of water saturated sandstone recovered.

No hole problems were note while tripping in or drilling with NB#7 and only minor tight hole (less than 30klb drag) recorded from stands 11 - 28 on the trip out prior to logging.

PORE PRESSURE

All the monitered pressure parameters indicated a normaly pressured hole from 2490m to 2530m. From this depth to 2620m background gas satrted to increase and was slow to decrease after any peaks. This may have been caused by an increase in formation pressure. No connection gas or splintery cavings were seen from this interval therfore it is unlikley that the formation pressure exceeded the mud hydrostatic at any stage and the maximum formation pressure was estimated to be 9.0 ppg EMW at 2620m.

From 2620m gas values returned to normal and the section from 2620m to 2970 appeares to be normaly pressured.

APPENDIX J : Hydraulics Printouts

ESSO Congaer No.1

Date: 1 Mar 87 Time: 07:19

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY 3.00 cP 3.00 cP 15.00 lb/cft^2 4.5738 YIELD POINT POWER LAW k POWER LAW n .2224 DEPTH 815.00 m DEPTH OF RETURNS 815.00 m 803.00 m CUTTINGS BULK DENSITY 2.10 spc grv MUD DENSITY 9.30 lb/gal ACTIVE SURFACE MUD VOLUME **447** bbl FLOW RATE 995 gal/min BOOSTER FLOW
PUMP PRESSURE
PUMP CAPACITY
BIT NOZZLES 18, 18, BOOSTER FLOW 0 gal/min 2850 psi

5.00 gal/stk

CALCULATED RESULTS:

FROM	TO 1	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min		FLOW REGIME	PRESS LOSS
86.00 214.00 617.45 699.60	214.00 617.45 699.60 794.00	128.00 403.45 82.15 94.40	21.000/ 5.000 18.936/ 5.000 17.500/ 5.000 17.500/ 5.000 17.500/ 8.000 17.500/ 9.750	58.6 73.1 86.7 86.7 100.7 115.5	283.7 289.1 293.4 293.4 305.4 313.9	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	.9 3.5

MUD HYDROSTATIC 9.30 lb/gal FLOW CONTRIBUTION .05 lb/gal .13 lb/gal CUTTINGS CONTRIBUTION EQUIVALENT CIRCULATING DENSITY 9.48 lb/gal

SURFACE PRESSURE LOSS 105 psi NOZZLE VELOCITY 460.4 ft/
PIPEBORE PRESSURE LOSS 451 psi HYDRAULIC POWER 1021.8 hp
ANNULAR PRESSURE LOSS 7 psi JET IMPACT FORCE 2205.2 lb
BIT PRESSURE LOSS 1760 psi % OF PRESS LOSS AT BIT 76
TOTAL CALC. PRESS LOSS 2324 psi 460.4 ft/sec

VOLUMES:	gal	bbl	Strokes	Minutes @ 199 s.p.m.
(1) Pipe Capacity	1383	33	277	1.4
(2) Pipe Displacement	2083	50	417	2.1
(3) Total Annulus	32241	76 8	644 8	32.4 <- LAG
Mud in active pits	18770	447	3754	18.9
Circulation (1) + (3)	33625	801	6725	33.8
Hole Volume $(1)+(2)+(3)$	35708	850	7142	35.9
Total Mud Circulation	52394	1247	10479	52.7

Date: 3 Mar 87 Time: 00:19

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY 5.00 cP 40.00 lb/cft^2 YIELD POINT 17.6815 POWER LAW k .1520 POWER LAW n 868.00 m DEPTH VERTICAL DEPTH 868.00 m DEPTH OF RETURNS 863.00 m CUTTINGS BULK DENSITY 2.20 spc grv MUD DENSITY 9.20 lb/gal ACTIVE SURFACE MUD VOLUME 444 bbl FLOW RATE 853 gal/min BOOSTER FLOW 0 gal/min PUMP PRESSURE PUMP CAPACITY 2820 psi 5.00 gal/stk BIT NOZZLES 16, 16, 16

CALCULATED RESULTS:

+ !!	FROM	TO :	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
	86.00 644.63	644.63 726.78 815.00	558.63 82.15 88.22	19.500/ 5.000 12.612/ 5.000 12.612/ 5.000 12.612/ 8.000 12.250/ 8.000	58.9 155.9 155.9 219.9 242.9	524.8 555.9 555.9 581.5 585.6	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	30.1 4.4 8.9

MUD HYDROSTATIC 9.20 lb/gal
FLOW CONTRIBUTION .35 lb/gal
CUTTINGS CONTRIBUTION .05 lb/gal
EQUIVALENT CIRCULATING DENSITY 9.60 lb/gal

SURFACE PRESSURE LOSS 78 psi NOZZLE VELOCITY 464.6 ft/sec PIPEBORE PRESSURE LOSS 316 psi HYDRAULIC POWER 882.4 hp ANNULAR PRESSURE LOSS 51 psi JET IMPACT FORCE 1887.1 lb BIT PRESSURE LOSS 1773 psi % OF PRESS LOSS AT BIT 80 TOTAL CALC. PRESS LOSS 2218 psi

Date: 4 Mar 89 Time: 02:42

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY 6.00 cP 6.00 cP 13.00 lb/cft^2 1.6521 YIELD POINT POWER LAW k .3959 1544.00 m 1544.00 m POWER LAW n DEPTH VERTICAL DEPTH DEPTH OF RETURNS 1523.57 m CUTTINGS BULK DENSITY MUD DENSITY 2.20 spc grv 9.33 lb/gal ACTIVE SURFACE MUD VOLUME 487 bbl FLOW RATE 793 gal/min BOOSTER FLOW 0 gal/min PUMP PRESSURE 2800 psi PUMP CAPACITY 5.00 gal/stk

BIT NOZZLES 16, 16, 16

CALCULATED RESULTS FOR OUT OF GAUGE HOLE: THEORETICAL HOLE SIZE = 12.250 in CALCULATED HOLE SIZE = 12.765 in

m m m in ft/min ft/min REGIME psi 2.50 86.00 83.50 19.500/ 5.000 54.7 218.3 LAMINAR .3	-								
2.50 86.00 83.50 19.500/ 5.000 54.7 218.3 LAMINAR .3 86.00 815.00 729.00 12.612/ 5.000 144.9 258.0 LAMINAR 9.3 815.00 1320.6 505.63 12.765/ 5.000 140.8 256.7 LAMINAR 6.2 1320.6 1402.8 82.15 12.765/ 5.000 140.8 256.7 LAMINAR 1.0					•			REGIME	PRESS LOSS
		86 .00 815.00 132 0.6	815.00 1320.6 1402.8	729.00 505.63 82.15	12.612/ 5.000 12.765/ 5.000 12.765/ 5.000	144.9 140.8 140.8	258.0 256.7 256.7	LAMINAR LAMINAR LAMINAR LAMINAR	.3 9.3 6.2 1.0

MUD HYDROSTATIC 9.33 lb/gal
FLOW CONTRIBUTION .08 lb/gal
CUTTINGS CONTRIBUTION .12 lb/gal
EQUIVALENT CIRCULATING DENSITY 9.53 lb/gal

SURFACE PRESSURE LOSS	69 psi	NOZZLE VELOCITY	431.7 ft/sec
PIPEBORE PRESSURE LOSS	659 psi	HYDRAULIC POWER	718.1 hp
ANNULAR PRESSURE LOSS	21 psi	JET IMPACT FORCE	1652.7 lb
BIT PRESSURE LOSS	1553 psi	% OF PRESS LOSS AT BIT	67
TOTAL CALC PRESS LOSS	2301 nsi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 159 s.p.m.
(1) Pipe Capacity	3481	83	696	4.4
(2) Pipe Displacement	2523	60	505	3.2
(3) Total Annulus	29668	706	5934	37.4 <- LAG
Mud in active pits	20454	487	4091	25.8
(culation (1) + (3)	33148	789	6630	41.8
Hole Volume $(1)+(2)+(3)$	35671	849	7134	45.0
Total Mud Circulation	53602	1276	10720	67.6
+				

Date: 5 Mar 89 Time: 02:57

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY			5.00	cР
YIELD POINT			21.00	lb/cft^2
POWER LAW k			5.4418	
POWER LAW n			. 2538	
DEPTH			1822.00	m
VERTICAL DEPTH			1822.00	m
DEPTH OF RETURNS			1818.00	m
CUTTINGS BULK DENSI	TY		2.30	spc grv
MUD DENSITY			9.50	lb/gal
ACTIVE SURFACE MUD	VOLUM	E	360	bbl
FLOW RATE			765	gal/min
BOOSTER FLOW			0	gal/min
PUMP PRESSURE			2900	psi
PUMP CAPACITY			5.00	gal/stk
BIT NOZZLES	16.	16,	16	

CALCULATED RESULTS FOR OUT OF GAUGE HOLE: THEORETICAL HOLE SIZE = 12.790 in CALCULATED HOLE SIZE = 11.937 in

FROM m	TO :	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
1598.6	815.00 1598.6 1680.8	729.00 783.63 82.15	·	52.8 139.9 159.6 159.6 238.9	333.8 368.9 374.1 374.1 408.1	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	.7 17.7 22.2 2.3 9.0

MUD HYDROSTATIC 9.50 lb/gal FLOW CONTRIBUTION .17 lb/gal CUTTINGS CONTRIBUTION .02 lb/gal EQUIVALENT CIRCULATING DENSITY 9.69 lb/gal

SURFACE PRESSURE LOSS	66 psi	NOZZLE VELOCITY	416.7 ft/sec
PIPEBORE PRESSURE LOSS	546 psi	HYDRAULIC POWER	657.4 hp
ANNULAR PRESSURE LOSS	52 psi	JET IMPACT FORCE	1567.6 lb
BIT PRESSURE LOSS	1473 psi	% OF PRESS LOSS AT BIT	69
TOTAL CALC. PRESS LOSS	2137 psi		

; VOLUMES:	gal	bbl	Strokes	Minutes @ 153 s.p.m.	+ ¦ +
1) Pipe Capacity	4161	99	832	5.4	- !
(2) Pipe Displacement	2792	66	558	3.6	1
(3) Total Annulus	32024	762	6405	41.9 <- LAG	1
(4) Mud in active pits	15120	360	3024	19.8	1
Circulation (1) + (3)	36185	862	7237	47.3	1
Hole Volume $(1)+(2)+(3)$	38977	928	7795	50.9	I L
Total Mud Circulation	51305	1222	10261	67.1	1

ESSO AUST | Conger No.1 | Time : 02:18

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY			7.00	cP
YIELD POINT			18.00	lb/cft^2
POWER LAW k			2.7793	
POWER LAW n			. 3561	
DEPTH			1928.00	m
VERTICAL DEPTH			1927.60	m
DEPTH OF RETURNS			1925.17	m
CUTTINGS BULK DENSI	TY		2.40	spc grv
MUD DENSITY			9.40	lb/gal
ACTIVE SURFACE MUD	VOLUM	E	4 81	bbl
FLOW RATE			780	gal/min
BOOSTER FLOW			0	gal/min
PUMP PRESSURE			2850	psi
PUMP CAPACITY			5.00	gal/stk
BIT NOZZLES	16,	16,	16	

CALCULATED RESULTS:

FROM	TO m	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS
86.00 815.00 1704.6	815.00 1704.6 1786.8	889.63 82.15	12.612/ 5.000	53.8 142.6 152.9 152.9 222.1	277.5 321.4 325.0 325.0 366.8	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	13.4

MUD HYDROSTATIC	9.40 lb/gal
FLOW CONTRIBUTION	.12 lb/gal
CUTTINGS CONTRIBUTION	.02 lb/gal
EQUIVALENT CIRCULATING DENSITY	9.54 lb/gal

SURFACE PRESSURE LOSS	68 psi	NOZZLE VELOCITY	424.8 ft/sec
PIPEBORE PRESSURE LOSS	748 psi	HYDRAULIC POWER	689.3 hp
ANNULAR PRESSURE LOSS	40 psi	JET IMPACT FORCE	1612.3 lb
BIT PRESSURE LOSS	1515 psi	% OF PRESS LOSS AT BIT	64
TOTAL CALC. PRESS LOSS	2370 psi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 156 s.p.m.
1) Pipe Capacity	4420	105	884	5.7
(2) Pipe Displacement	2895	69	579	3.7
(3) Total Annulus	34810	829	6962	44.6 <- LAG
(4) Mud in active pits	20202	481	4040	25.9
Circulation (1) + (3)	39231	934	7846	50.3
Hole Volume (1)+(2)+(3)	42126	1003	8425	54.0
Total Mud Circulation	59433	1415	11887	76.2

ESSO AUST Conger No.1
Date: 7 Mar 89 Time: 01:22

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY 7.00 cP16.00 lb/cft^2 YIELD POINT POWER LAW k 2.1617 POWER LAW n . 3833 DEPTH 2142.00 m VERTICAL DEPTH 2141.70 m DEPTH OF RETURNS 2132.63 m CUTTINGS BULK DENSITY 2.40 spc grv MUD DENSITY 9.50 lb/gal ACTIVE SURFACE MUD VOLUME 417 bbl FLOW RATE 725.0 gal/min BOOSTER FLOW 0.0 gal/min PUMP PRESSURE 2780 psi PUMP CAPACITY 5.00 gal/stk BIT NOZZLES 16, 16, 18

CALCULATED RESULTS:

; FROM	TO m	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
86.00 815.00 1904.6	815.00 1904.6 1986.7	83.50 729.00 1089.6 82.15 155.27	12.250/ 5.000 12.250/ 5.000	50.0 132.5 142.1 142.1 206.5	249.1 292.5 296.1 296.1 337.9	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	.4 11.2 18.4 1.4 6.3

MUD HYDROSTATIC 9.50 lb/gal FLOW CONTRIBUTION .10 lb/gal CUTTINGS CONTRIBUTION .05 lb/gal EQUIVALENT CIRCULATING DENSITY 9.65 lb/gal

SURFACE PRESSURE LOSS	20 psi	NOZZLE VELOCITY	362.8 ft/sec
PIPEBORE PRESSURE LOSS	765 psi	HYDRAULIC POWER	472.1 hp
ANNULAR PRESSURE LOSS	38 psi	JET IMPACT FORCE	1293.2 lb
BIT PRESSURE LOSS	1116 psi	% OF PRESS LOSS AT BIT	58
TOTAL CALC. PRESS LOSS	1939 psi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 145 s.p.m.	.— - 1
1) Pipe Capacity	4925	117	985	6.8	
(2) Pipe Displacement	3194	76	639	4.4	;
(3) Total Annulus	38305	912	7661	52.8 <- LAG	•
(4) Mud in active pits	17518	417	3504	24.2	
Circulation (1) + (3)	43230	1029	8646	59.6	1
Hole Volume $(1)+(2)+(3)$	46424	1105	9285	64.0	į
Total Mud Circulation	60748	1446	12150	83.8	!

ESSO AUST Conger No.1
Date: 8 Mar 89 Time: 02:51

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY	7.00	cP
YIELD POINT	18.00	lb/cft^2
POWER LAW k	2.7793	
POWER LAW n	. 3561	
DEPTH	2410.00	m
VERTICAL DEPTH	2409.30	m
DEPTH OF RETURNS	2394.00	m
CUTTINGS BULK DENSITY	2.40	spc grv
MUD DENSITY	9.50	lb/gal
ACTIVE SURFACE MUD VOLUME	433	bbl
FLOW RATE	700.0	gal/min
BOOSTER FLOW	0.0	gal/min
PUMP PRESSURE	2750	psi
PUMP CAPACITY	5.00	gal/stk
BIT NOZZLES 16 16	18	

CALCULATED RESULTS:

+ !!!!	FROM m	TO m	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
!	86.00 815.00 2172.6	815.00 2172.6 2254.7	729.00 1357.6 82.15	•	48.3 128.0 137.2 137.2 199.4	275.7 319.4 322.9 322.9 364.5	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	12.9 26.3

9.50	lb/gal
.12	lb/gal
.08	lb/gal
9.70	lb/gal
	.12 .08

SURFACE PRESSURE LOSS	19 psi	NOZZLE VELOCITY	350.3 ft/sec
PIPEBORE PRESSURE LOSS	765 psi	HYDRAULIC POWER	425.0 hp
ANNULAR PRESSURE LOSS	48 psi	JET IMPACT FORCE	1205.6 lb
BIT PRESSURE LOSS	1041 psi	% OF PRESS LOSS AT BIT	56
TOTAL CALC. PRESS LOSS	1872 psi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 140 s.p.m.	
1) Pipe Capacity	5580	133	1116	8.0	- !
(2) Pipe Displacement	3454	82	691	4.9	1
(3) Total Annulus	42772	1018	8554	61.1 <- LAG	1
(4) Mud in active pits	18190	433	3638	26.0	1
Circulation (1) + (3)	48353	1151	9671	69.1	1
Hole Volume (1)+(2)+(3)	51807	1234	10361	74.0	1
Total Mud Circulation	66543	1584	13309	95.1	1
+					

ESSO AUST Conger No.1
Date: 9 Mar 89 Time: 02:10

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY			8.00	cP
YIELD POINT			24.00	lb/cft^2
POWER LAW k			4.3949	
POWER LAW n			. 3219	
DEPTH			2490.00	m
VERTICAL DEPTH			2489.20	m .
DEPTH OF RETURNS			2478.45	m
CUTTINGS BULK DENSI	TY		2.50	spc grv
MUD DENSITY			9.54	lb/gal
ACTIVE SURFACE MUD	VOLUM	Ε	470	bbl
FLOW RATE			683.5	gal/min
BOOSTER FLOW			0.0	gal/min
PUMP PRESSURE			2970	psi
PUMP CAPACITY			5.00	gal/stk
BIT NOZZLES	16,	16,	14	

CALCULATED RESULTS:

FROM	TO 1	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
2.50 86.00 815.00 2252.6 2334.7 2481.5	815.00 2252.6 2334.7 2481.5	1437.6 82.15 146.77	19.500/ 5.000 12.612/ 5.000 12.250/ 5.000 12.250/ 5.000 12.250/ 8.000 12.250/ 8.000	47.2 125.0 134.0 134.0 194.7 194.7	338.2 385.4 389.2 389.2 433.4 433.4	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	.6 17.9 38.5 2.2 8.9 .5

MUD HYDROSTATIC 9.54 lb/gal FLOW CONTRIBUTION .16 lb/gal CUTTINGS CONTRIBUTION CUTTINGS CONTRIBUTION .06 lb/gal EQUIVALENT CIRCULATING DENSITY 9.76 lb/gal

SURFACE PRESSURE LOSS	71 psi	NOZZLE VELOCITY	403.8 ft/sec
PIPEBORE PRESSURE LOSS	769 psi	HYDRAULIC POWER	553.9 hp
ANNULAR PRESSURE LOSS	69 psi	JET IMPACT FORCE	1362.9 lb
BIT PRESSURE LOSS	1389 psi	% OF PRESS LOSS AT BIT	60
TOTAL CALC. PRESS LOSS	2299 psi		

+	gal	bbl	Strokes	Minutes @ 137 s.p.m	-
1) Pipe Capacity	5774	137	1155	8.4	! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !
2) Pipe Displacement	3534	84	707	5.2	
3) Total Annulus	44106	1050	8821	64.5 <- LAG	
4) Mud in active pits	19744	470	3949	28.9	
Circulation (1) + (3)	49880	1188	9976	73.0	
Hole Volume (1)+(2)+(3)	53414	1272	10683	78.1	
Total Mud Circulation	69624	1658	13925	101.9	

Date: 10 Mar 89 Time: 02:23

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY			8.00	cР
YIELD POINT			18.00	lb/cft^2
POWER LAW k			2.3886	
POWER LAW n			. 3870	
DEPTH			2716.00	m
VERTICAL DEPTH			2715.13	m
DEPTH OF RETURNS			2703.15	m
CUTTINGS BULK DENSI	[TY		2.50	spc grv
MUD DENSITY			9.40	lb/gal
ACTIVE SURFACE MUD	VOLUM	E	516	bbl
FLOW RATE			650.0	gal/min
BOOSTER FLOW			0.0	gal/min
PUMP PRESSURE			2870	psi
PUMP CAPACITY			5.00	gal/stk
BIT NOZZLES	16,	16,	14	

CALCULATED RESULTS:

FROM TO LENGTH ANNULUS/PIPE ANN VEL. CRIT VEL. FLOW PRESS LOSS m m m in ft/min ft/min REGIME psi 2.50 86.00 83.50 19.500/5.000 44.8 268.7 LAMINAR .4 86.00 815.00 729.00 12.612/5.000 118.8 316.1 LAMINAR 12.0 815.00 2476.1 1661.1 12.250/5.000 127.4 319.9 LAMINAR 30.1 2476.1 2558.2 82.15 12.250/5.000 127.4 319.9 LAMINAR 1.5 2558.2 2705.0 146.77 12.250/8.000 185.1 365.7 LAMINAR 6.4 2705.0 2716.0 11.00 12.250/8.000 185.1 365.7 LAMINAR 5.5	-								+
86.00 815.00 729.00					. *				PRESS LOSS
		86.00 815.00 2476.1 2558.2	815.00 2476.1 2558.2 2705.0	729.00 1661.1 82.15 146.77	12.612/ 5.000 12.250/ 5.000 12.250/ 5.000 12.250/ 8.000	118.8 127.4 127.4 185.1	316.1 319.9 319.9 365.7	LAMINAR LAMINAR LAMINAR LAMINAR	12.0 30.1 1.5 6.4

MUD HYDROSTATIC 9.40 lb/gal FLOW CONTRIBUTION .11 lb/gal CUTTINGS CONTRIBUTION .06 lb/gal EQUIVALENT CIRCULATING DENSITY 9.57 lb/gal

SURFACE PRESSURE LOSS	481 psi	NOZZLE VELOCITY	384.0 ft/sec
PIPEBORE PRESSURE LOSS	879 psi	HYDRAULIC POWER	469.4 hp
ANNULAR PRESSURE LOSS	51 psi	JET IMPACT FORCE	1214.5 lb
BIT PRESSURE LOSS	1238 psi	% OF PRESS LOSS AT BIT	47
TOTAL CALC PRESS LOSS	2649 nsi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 130 s.p.m.
(1) Pipe Capacity	6319	150	1264	9.7
(2) Pipe Displacement	3774	90	755	5.8
(3) Total Annulus	47860	1140	9572	73.6 <- LAG
(4) Mud in active pits	21672	516	4334	33.3
Circulation (1) + (3)	54179	1290	10836	83.4
Hole Volume $(1)+(2)+(3)$	57953	1380	11591	89.2
Total Mud Circulation	75851	1806	15170	116.7

Date: 11 Mar 89 Time: 02:59

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY 7.00 cP 22.00 lb/cft^2 YIELD POINT POWER LAW k 4.2363 POWER LAW n .3119 DEPTH 2776.00 m VERTICAL DEPTH 2775.14 m DEPTH OF RETURNS 2764.62 m CUTTINGS BULK DENSITY 2.50 spc grv MUD DENSITY 9.40 lb/gal ACTIVE SURFACE MUD VOLUME 352 bbl FLOW RATE 400.0 gal/min BOOSTER FLOW 0.0 gal/min 900 psi PUMP PRESSURE PUMP CAPACITY 5.00 gal/stk BIT NOZZLES 21, 21, 21

CALCULATED RESULTS:

FROM	TO 1	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
2.50 86.00 815.00 2536.1 2618.2 2765.0	2536.1 2618.2 2765.0	729.00 1721.1 82.15 146.77	19.500/ 5.000 12.612/ 5.000 12.250/ 5.000 12.250/ 5.000 12.250/ 8.000 12.250/ 8.000	27.6 73.1 78.4 78.4 113.9 113.9	327.0 370.9 374.4 374.4 415.3 415.3	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	.5 14.1 36.2 1.7 7.0

MUD HYDROSTATIC 9.40 lb/gal
FLOW CONTRIBUTION .13 lb/gal
CUTTINGS CONTRIBUTION .05 lb/gal
EQUIVALENT CIRCULATING DENSITY 9.58 lb/gal

SURFACE PRESSURE LOSS 195 psi NOZZLE VELOCITY 128.3 ft/sec HYDRAULIC POWER PIPEBORE PRESSURE LOSS 386 psi 32.3 hp JET IMPACT FORCE
% OF PRESS LOSS AT BIT ANNULAR PRESSURE LOSS 60 psi 249.8 lb BIT PRESSURE LOSS 138 psi 18 TOTAL CALC. PRESS LOSS 779 psi

; VOLUMES:	gal	bbl	Strokes	Minutes @	80 s.p.m.
(1) Pipe Capacity	6466	154	1293	16.2	
(2) Pipe Displacement	3833	91	767	9.6	
(3) Total Annulus	48860	1163	9772	122.2	<- LAG
(4) Mud in active pits	14784	352	2957	37.0	
Circulation (1) + (3)	55326	1317	11065	138.3	
Hole Volume $(1)+(2)+(3)$	59158	1409	11832	147.9	
Total Mud Circulation	70110	1669	14022	175.3	

Date: 12 Mar 89 Time: 03:17

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY			8.00	cР
YIELD POINT			17.00	lb/cft^2
POWER LAW k			2.1128	
POWER LAW n			. 4005	
DEPTH			2794.50	m
VERTICAL DEPTH			2793.53	m
DEPTH OF RETURNS			2776.00	m
CUTTINGS BULK DENSI	[TY		2.50	spc grv
MUD DENSITY			9.40	lb/gal
ACTIVE SURFACE MUD	VOLUM	E	475	bbl
FLOW RATE			362.0	gal/min
BOOSTER FLOW			0.0	gal/min
PUMP PRESSURE			1160	psi
PUMP CAPACITY			5.00	gal/stk
BIT NOZZLES	15,	15,	15	

CALCULATED RESULTS:

FROM m	TO LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
815.00 25 2554.6 26 2636.7 27 2776.0 27	6.00 83.50 5.00 729.00 54.6 1739.6 36.7 82.15 76.0 139.27 83.5 7.50 94.5 11.00	12.612/ 5.000 12.250/ 5.000 12.250/ 5.000 12.250/ 8.000 9.875/ 8.000	25.0 66.2 70.9 70.9 103.1 264.7 264.7	255.6 302.8 306.6 306.6 352.5 433.1 433.1	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	.3 8.8 23.2 1.1 4.5 1.1 1.6

MUD HYDROSTATIC 9.40 lb/gal
FLOW CONTRIBUTION .09 lb/gal
CUTTINGS CONTRIBUTION .06 lb/gal
EQUIVALENT CIRCULATING DENSITY 9.54 lb/gal

SURFACE PRESSURE LOSS PIPEBORE PRESSURE LOSS ANNULAR PRESSURE LOSS BIT PRESSURE LOSS	162 psi	NOZZLE VELOCITY	211.2 ft/sec
	376 psi	HYDRAULIC POWER	79.0 hp
	41 psi	JET IMPACT FORCE	371.9 lb
	374 psi	% OF PRESS LOSS AT BIT	39
TOTAL CALC. PRESS LOSS	953 psi	% of Hubb hobb iii bii	

VOLUMES:	gal	bbl	Strokes	Minutes @	72 s.p.m.
	6511 3851 49039 19950	155 92 1168 475	1302 770 9808 3990	10.6	<- LAG
Circulation (1) + (3) Hole Volume (1)+(2)+(3) Total Mud Circulation	55549 59400 75499	1323 1414 1798	11110 11880 15100	153.5 164.1 208.6	

ESSO AUST Conger No.1 Date: 13 Mar 89 Time: 02:58

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY			8.00	cP
YIELD POINT			26.00	lb/cft^2
POWER LAW k			5.1891	
POWER LAW n			. 3049	
DEPTH			2794.50	m
VERTICAL DEPTH			2793.50	m
DEPTH OF RETURNS			2779.01	m
CUTTINGS BULK DENSI	TY		2.50	spc grv
MUD DENSITY			9.40	lb/gal
ACTIVE SURFACE MUD	VOLUM	E	338	bbl
FLOW RATE			620.8	gal/min
BOOSTER FLOW			0.0	gal/min
PUMP PRESSURE			2610	psi
PUMP CAPACITY			5.00	gal/stk
BIT NOZZLES	16.	16,	14	

CALCULATED RESULTS:

FROM m	TO I	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS
2.50 86.00 8 815.00 2 2554.6 2 2636.7 2 2783.5 2	315.00 2554.6 2636.7 2783.5	1739.6 82.15 146.77	19.500/ 5.000 12.612/ 5.000 12.250/ 5.000 12.250/ 5.000 12.250/ 8.000 12.250/ 8.000	42.8 113.5 121.7 121.7 176.8 176.8	363.3 410.7 414.5 414.5 458.6 458.6	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	19.3 50.1 2.4 9.5

9.40 lb/gal .17 lb/gal MUD HYDROSTATIC FLOW CONTRIBUTION .07 lb/gal 9.65 lb/gal CUTTINGS CONTRIBUTION EQUIVALENT CIRCULATING DENSITY

SURFACE PRESSURE LOSS	442 psi	NOZZLE VELOCITY	366.8 ft/sec
PIPEBORE PRESSURE LOSS	761 psi	HYDRAULIC POWER	408.9 hp
ANNULAR PRESSURE LOSS	83 psi	JET IMPACT FORCE	1107.8 lb
BIT PRESSURE LOSS	1129 psi	% OF PRESS LOSS AT BIT	4 7
TOTAL CALC. PRESS LOSS	2415 psi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 124 s.p.m.	
1) Pipe Capacity	6511	155	1302	10.5	
(2) Pipe Displacement	3851	92	770	6.2	
(3) Total Annulus	49169	1171	9834	79.2 <- LAG	
4) Mud in active pits	14209	338	2842	22.9	
Circulation (1) + (3)	55679	1326	11136	89.7	
Hole Volume $(1)+(2)+(3)$	59530	1417	11906	95.9	
Total Mud Circulation	69888	1664	13978	112.6	

Date: 14 Mar 89 Time: 01:49

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY 8.00 cP YIELD POINT 32.00 lb/cft^2 7.9053 POWER LAW k POWER LAW n .2630 DEPTH 2943.00 m VERTICAL DEPTH 2941.70 m DEPTH OF RETURNS 2938.32 m 2.50 spc grv CUTTINGS BULK DENSITY MUD DENSITY 9.40 lb/gal ACTIVE SURFACE MUD VOLUME 363 bbl FLOW RATE 602.0 gal/min 0.0 gal/min BOOSTER FLOW 2650 psi PUMP PRESSURE PUMP CAPACITY 5.00 gal/stk 16, 16, BIT NOZZLES

CALCULATED RESULTS:

FROM	TO m	LENGTH m	ANNULUS/PIPE in	ANN VEL. ft/min	CRIT VEL. ft/min	FLOW REGIME	PRESS LOSS;
2.50 86.00 815.00 2703.1 2785.2 2932.0	815.00 2703.1 2785.2 2932.0	1888.1 82.15 146.77	19.500/ 5.000 12.612/ 5.000 12.250/ 5.000 12.250/ 5.000 12.250/ 8.000 12.250/ 8.000	41.5 110.1 118.0 118.0 171.4 171.4	424.4 470.9 474.6 474.6 517.0	LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR LAMINAR	25.1 70.4 3.1 11.8

MUD HYDROSTATIC 9.40 lb/gal FLOW CONTRIBUTION .22 lb/gal CUTTINGS CONTRIBUTION .02 lb/gal EQUIVALENT CIRCULATING DENSITY 9.65 lb/gal

SURFACE PRESSURE LOSS	417 psi	NOZZLE VELOCITY	355.7 ft/sec
PIPEBORE PRESSURE LOSS	715 psi	HYDRAULIC POWER	372.9 hp
ANNULAR PRESSURE LOSS	112 psi	JET IMPACT FORCE	1041.8 lb
BIT PRESSURE LOSS	1062 psi	% OF PRESS LOSS AT BIT	46
TOTAL CALC. PRESS LOSS	2306 psi		

gal	bbl	Strokes	Minutes @ 120 s.p.m.
6874	164	1375	11.4
3995	95	799	6.6
51644	1230	10329	85.8 <- LAG
15246	363	3049	25.3
58518	1393	11704	97.2
62513	1488	12503	103.8
73764	1756	14753	122.5
	6874 3995 51644 15246 58518 62513	6874 164 3995 95 51644 1230 15246 363 58518 1393 62513 1488	6874 164 1375 3995 95 799 51644 1230 10329 15246 363 3049 58518 1393 11704 62513 1488 12503

APPENDIX K : Formation Evaluation Log

APPENDIX L : Drilling Data Tables

- Casing and cemanting Data
 Drilling Fluid Properties
 Bit Data

- 4. Hydraulics Data

Casing and Cementing: Conger No.1

Depth metres	Hole Size	Casing OD/ID	Shoe Depth	Grade lb/ft	#Joints	Cementing .
214	26	20/	029	X56	12	LEAD: 750sx Class G @ 13.2ppg plus 2.2% prehyd bent.
		19.124		94		TAIL: 350sx Class G @ 15.8ppg
815	17.5	13.375/ 12.615	798	K55 54.5		1000sx Class G ● 15.8ppg

Drilling Fluid Properties: Conger No.1

Table No.2

Date		Depth ; metres;				Gel	¦ Filt			ol ; % ;	Sand ! MBT	¦ pH		il			Ca ;
27/2	16:00	214 ;	8.8	27	2/4	-	! -	! -	1 1	2 ;	trace! -	; 9.0	i	0 ;	17000	i i	1700 ;
27/2	24:00	411	9.2	29	; 3/8	-	-	! -	1	4	trace; -	; 9.0	į	0	17000	į	1700 ;
28/2	11:30	645 ;	9.4+	31	4/13	10/1	2¦ -	<u> </u>	1 1	6 ;	trace¦ -	; 9.0	1	0 ;	17000	1	1700 ;
28/2	24:00	815 ;	9.2+;	34	; 3/15	11/1	5¦ -	¦ -	!	4 ¦	trace; -	; 9.0	1	0 ;	16000	1	1350 ;
2/3	23:00;	844 ;	9.2+	50	5/40	15/3	5¦ -	-	1	4 ¦	trace; -	111.	2;	0 ;	16000	1	1300 ;
2/3	24:00;	868	9.2 ;	40	6/30	14/3	0; -	-	!	4 ;	trace; -	111.	0;	0	16500	1	1300 ;
3/3	13:00	1260 ;	9.5 ;	33	5/14	6/22	-	-	!	4 ¦	trace; -	1 10.	1;	0	15500	1	1200 ;
3/3	23:00	1543	9.3+1	33	6/13	\ 8/18	; -	-	i !	5 ¦	trace; -	1 9.7	1	0 ;	18000	L	1280 ;
4/3	13:00	1822 ;	9.5 ;	43	5/32	16/3	8; 36	1 4	1 1	9 ;	Nil 35.0	; 10.	6¦	0 ;	18000	į	560 ;
4/3	23:20	1822	9.5	42	5/21	9/32	17	; 3	1	10 ;	Nil 35.0	; 10.	2;	0 ;	18000	ŀ	560 ;
5/3	13:00	2005	9.4+	37	7/17	6/24	7.6	! 2	i (9	Nil 26.0	10.	2;	0	18000	1	640 ;
5/3	21:00	1928	9.4+	38	7/18	6/26	7.2	; 2	1	8.5¦	Trace;25.0	9.8	!	0 ;	18000	1	480 ;
6/3	23:00	1930	9.5	39	7/16	5/16	7.8	; 2		9 ;	Trace 20.0	; 9.9	1	0	18500	!	320 ;
	11:00	2254	9.5	44	1 7/22	8/26	6.6	; 2	1 1	9 ;	Trace;22.5	; 10.	6¦	0	17500	1	140 ;
1 7/3	22:00	2401	9.5	41	7/18	1 7/26	6.8	; 2	1 1	8.5;	Trace; 19.0	; 9.8	1	0	18000	ļ	280 ;
8/3	11:00	2471 ;	9.5+	51	8/28	14/3	2; 6.6	2	;	8.5;	Trace 16.25	10.	4¦	0	18000	Į Į	80 ;
8/3	23:00	2479	9.5+;	47	8/24	; 10/2	6; 6.4	1 2	1	9 ¦	Trace 17.5	110.2	i t	0	18000	1	60 ;
9/3	10:00	2600 !	9.5 ;	48	10/2	1; 10/3	2: 8.2	! 2	!	8.51	Trace!17.5	110.1	!	0	18500	ļ	160 ;
9/3	22:00	2697	9.4	43	8/18	8/26	7.8	2	1	8 ;	Trace: 16.25	10.3	1	0	18500	1	200
	22:00	•	9.4		7/22		•	2		9 ;	Trace 16.25	•	•	0	18000	;	80
	22:00	•	9.4+		8/17				•		Trace 15.0	•	•	0	19000	•	320
	11:00		9.4+		8/26		•	-		-	Trace 15.0			0	19000	İ	360
	12:00	•	9.5		6/25	10/3	•	•			Trace 13.75	•		0	17000	•	320
• •	22:30		9.4		8/32		•	•	•		Trace 12.5	•	•	0	16500	ì	340
•	10:00	-	9.6		8/29	13/3		•			Trace 14.0	•		0	17000		480
	23:00	•	9.6+		9/16		•	•	1	10	Trace 16.0	19.4	l I	0	16500	1	460

Table No.3

Bit Table : Conger No.1

+ Bit #						•	Jets 32nds		Depth In												RPM	•	Torque avg-max			-		_	de G
RRB1	!	26.0	1	HUGHES	OSC3AJ	 	3x20	1	86	i	214	i	128	1	8.7	8	3.75;		0-10	!	80- 90	;	-	!	-	!	1	1	0
RRB2	 !	17.5	1	REED S1	1J	 ¦1	8,18,16	1	214	;	815	!	601	¦	22.4	2	26.8	1	5-45	!	120-150	!	180-450	;	174720	!	4	7	5
NB#4	į	12.25	į	REED HE HTC J11 REED HE		;1	6,16,16 6,16,16 6,16,18	;	1822	i	1928	i	106	i	11.2	9	3.5 ;	1	10-50	ļ	75-120	i	180-250 150-650 100-700	ł	58234	ł	7	4	
NB#6	į	12.25	į	REED HE	251AJ 20478	1	6,16,14 tfa 1.0	 	2471 2776	!!!!	2776 Faile	1	305 to re	ead	24.2 ch bo	l 1 tto	12.6¦		35-40	1 1	110-120	1	150-700	1 1	163932	1	4 05	4	3/16
•	•			CHRIS I																			220-350 200-520			•			orn 7/16

Hydraulics Data : Conger No.1

Table 4

į	 3I1	į		H;HO DI;	AM	ł		1	MUI WBI(HT;		PV/Y		RATE	; PRES ; lbs ;Surf	per	sq.	.in	fee	t per	min	¦ D	C VEI	ן ו	ABT	HHP	BIT ; PU IMP;Bit lbs; %	To	SURE; otal; Act;
! †·	# - - -	· 														·													i
i	2	1		5;17								3/15			105	451		1760	•			-					2205;76	2324	2850;
•	3			8;12								15/40			;78	918		1773	•		243	•		•		882	1887 63	2218	2820;
!	3	i	154	4:12	. 25	11	6,16	,16	9	3+¦	9.5	+¦6/13	1	790	;69	659	21	1553	; 55		196	•		•	432		1653 55	2310	2800;
į	4	I	182	2;12	. 25	110	6.16	.16	9	.5 ;	9.7	15/21	. !	765	66	546	52	1473	53	160	239	I	408	ŀ	417	657	1568¦51	2137	2900;
•		•		8:12						4	9.5	+17/18	1	780	168	748	40	1515	54	153	222	1	367	ŧ	425	689	1612;53	2370	2850;
•		•		2:12		•						+17/10			38	765	20	1116	50	142	207	1	338	ļ	363	472	1293;40	1939	2780;
				0;12		•	•	-				7/18			119	765		1041		137	199	į	364	i	350	425	1206;38	1872	2750;
•				0;12						•		+ 8/2			71	769		1389	•		195	•			404		1363;47	2299	2970
		-		6;12								8/18			481	879		1238	•		185	•		•	384		1214:43	2649	2870
•		•		•		•				•					•			374	-		103	•			211		372 32	953	1160
•		•		619.		-			•	•		+ 18/23			1162	376			•			•		•			•	-	2610
!	7	1	279	6;12	. 25	11	6,16	, 14				+18/21			442	761		1129	•		177	•		į	367		1108;43	2415	
!	7	1	294	1;12	. 25	11	6,16	, 14	9	. 4 ¦	9.6	+ 8/3	, ;	602	1417	715	112	1062	42	118	171	i	517	i	356	373	1042;40	2306	2650
+																													t

PE904393

This is an enclosure indicator page. The enclosure PE904393 is enclosed within the container PE904392 at this location in this document.

The enclosure PE904393 has the following characteristics:

ITEM_BARCODE = PE904393
CONTAINER_BARCODE = PE904392

NAME = Exlog Mud Log

BASIN =

PERMIT =

TYPE = WELL

SUBTYPE = MUD_LOG

DESCRIPTION = Mud Log, (Enclosure from Final Well

Report), By EXLOG for Esso Australia,

14 March 1989, for Conger-1.

REMARKS =

 $DATE_CREATED = 14/03/89$

DATE_RECEIVED =

WELL_NO = W988

WELL_NAME = Conger-1

CONTRACTOR = EXLOG

CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)