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Contractor	Global Marine
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R. J. K.
85/337

FINAL WELL REPORT

YOLLA NO 1

JANUARY, 1986

C.D. CORNELL

G.A. COWAN

J.G. RANKIN

R.J. WALLA

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TABLE OF CONTENTS

	<u>PAGE</u>
I INTRODUCTION	1
II FINAL WELL REPORT DATA SHEET	2
III CONCLUSIONS	3
IV RECOMMENDATIONS	4
V SUMMARY SECTION	
- Well Summary By Interval	5
- Testing	7
- Abandonment	9
- Summary Casing & Cementing	10
- Well Cost Summary Sheet	11
VI DISCUSSION	
- Non Scheduled Events	12
- Summary Daily Drilling Reports	17
- Casing & Cementing Reports	31
- Pipe Tally Records	35
- Mud Records	41
- Mud Discussion by Interval	53
- Bit & Hydraulic Records	59
- Bottom Hole Assemblies	61
- Time Distribution	67
- Lost Time Summary	71
- Wait on Weather Summary	78
- Arms 5 Bell Discussion	79

ATTACHMENTS

1. Form 46
2. Form 850
3. Drilling Graph
4. Location Map
5. Short Hook-Up Anchor Pattern Diagram
6. Long Hook-Up Anchor Pattern Diagram
7. Wind Directional Diagram
8. Sheared Pipe Fishing Assembly
9. Solids Removal Schematic
10. Significant Features of the Robert F. Bauer Drillship

I

INTRODUCTION

Yolla No. 1 was an exploratory well drilled in the T/14P Permit in the Bass Strait of Australia. The primary objectives of this well were to evaluate the early Eocene through late Cretaceous sands of the Eastern View Coal Measures expected below approximately 5900'. The total depth was projected to be 14,000' MSL.

The Early Eocene was encountered at 7251', and the Late Cretaceous was not reached by total depth which was 10981'. Two sands within the Eastern View Coal Measures formation were tested and found to contain hydrocarbons. These sands were tested from 9216' - 9267', and 5948' - 6016'. They produced 15.1 MMCFD gas (11% CO₂) and 580 BCPD (30/64" Choke), and 11.8 MMCFD gas, 891.9 BCPD, and 300 BWPD, respectively.

Yolla No. 1 was temporarily plugged and abandoned after 129 days of continuous operations for a total estimated well cost of \$14.8 MM.

II

FINAL WELL REPORT DATA SHEET

COUNTRY: Bass Strait, Australia
 WELL NAME: Yolla No. 1
 LOCATION: Lat.: 39° 50' 18.89" South
 Long.: 145° 48' 20.55" East
 SP LOCATION: S.P. 197 on line HB73A-169
 WATER DEPTH: Approximately 259 ft.
 ROTARY KELLY BUSHING: Approximately 36.5 ft. above MSL
 TOTAL DEPTH: 10,981 ft. RKB
 TOTAL OPERATING TIME: 129 Days
 DRILLING CONTRACTOR/RIG: Global Marine / Glomar "Robert F. Bauer" (Drillship)
 ARRIVE ON LOCATION: 4 June, 1985 at 0400 hours
 SPUD DATE: 8 June, 1985 at 0800 hours
 RIG RELEASE DATE: 11 October, 1985 at 0400 hours
 DAYS ON WELL: 130 days
 TOTAL WELL COST: US \$14,784,668
 STATUS OF WELL: Temporarily Plug and Abandon
 WELLHEAD SYSTEM: Cameron 18-3/4" WS-I, 10,000 psi
 CASING SETTING DEPTHS: 30" - 619.41' RKB
 20" - 1,309.47' RKB
 13-3/8" - 5,748.10' RKB
 9-5/8" - 10,957.24' RKB

WELLHEAD RECALL BOUY SYSTEM

DATE SET: 9 October, 1985
 FREQUENCY: 12 Hertz
 "Helle Recall Beacon" CODE 054
 Set 9 Meters at 320° from wellhead

III

CONCLUSIONS

1. When required to operate drillships in harsh environments the method of use needs to be totally engineered with respect to weather window selection, vessel reaction simulation and mooring analysis simulation.
2. The combination chain/wire mooring system proved to be too "Stiff" in terms of anchor tension during moderate sea conditions when only short lengths (500') of wire were deployed.
3. The holding power of piggy-back anchors is too strong for a stiff mooring system. Excessive tensions are not allowed to dissipate through anchor slippage.
4. A manned diving bell without ROV support resulted in delays when reconnecting the LMRP since the risk to crew when entering the water in moderate sea conditions was judged to be excessive.

IV

RECOMMENDATIONS

1. Maximize drilling time with a drillship during summer months in the Bass Strait to minimize weather down time.
2. Anchor the vessel with a "Long Hook-up" of at least 5000' of wire out to allow for vessel movement inside an elastic mooring system.
3. Do not run piggy-back anchors until the vessel and mooring system demonstrate a need for the extra holding power.
4. Rig up a camera guideline system to allow a subsea camera to monitor BOP/LMRP landing operations and casing stab in procedures. The guidelines can also assist in providing a manipulator holding area for the ARMS-5 Bell to minimize battery usage due to using positioning thrusters while on bottom.

V

SUMMARY SECTIONWELL SUMMARY BY INTERVAL36" HOLE AND 30" CASING

Yolla No. 1 was spudded 8 June 1985, at 0800 hours. The 36" hole was drilled in 5-1/2 hours to 645' RKB without incident. Seawater with gel sweeps were used as the drilling fluid, and cuttings were circulated to the ocean floor.

Six joints of 30", 1" wall, X-56, Range 3 casing with NS-60 connectors, were run with a sting-in float shoe. The string was landed with a 30" low pressure Cameron guidelineless wellhead the shoe was landed at 621' RKB.

The 30" string was cemented with 2000 sx 'G' neat cement. The slurry volume was 2300 cuft, yield-1.15 cuft/sx, 15.9 ppg, and 5 gal/sx seawater. Cement returns were not monitored due to bad weather. Cement was noted on subsequent seabed inspection.

26" HOLE AND 20" CASING

The 26" hole was drilled from 621' to 1350'.

After running the pin connector, riser, slip joint, function testing the diverter, WOW, and repairing anchors for 174 hours, the 26" hole was drilled in 30 hours, with an additional 27 hours spent waiting on weather, or weather related repairs/incidences. A 17-1/2" pilot hole was drilled to 1350', then opened with a 26" bit to the same depth.

Twenty four joints of 20" casing were run and landed at 1309' with an 18-3/4" Cameron guidelineless wellhead housing. The shoe and bottom two joints were 94 ppf, X-56, followed by ten joints of 129 ppf, X-56 casing. The remaining fourteen joints consisted of 94 ppf, X-56 casing (94 ppf casing from surplus stock). The joints were connected with Drill-Quip S-60 connectors, and were all Range 3.

The 20" string was cemented by the inner string method with a lead slurry of 1400 sx 'G' with 2.5% Bentonite BWOC, and 1% CaCl₂ BWOW with 10.8 gal/sx freshwater. The 2720 cuft lead slurry weighed 12.8 ppg, with a 1.94 cuft/sx yield. The lead slurry was followed with a 500 sx tail slurry of 'G' neat at 15.8 ppg, 5.0 gal/sx freshwater, at 1.15 cuft/sx. Cement returns were observed at the seafloor by the OMB-4 (Arms-5) diving bell. The wellhead was washed following cementing.

17-1/2" HOLE AND 13-3/8" CASING

The 17-1/2" hole was drilled from the 20" casing shoe at 1309' to 5769', after successfully performing a CCCT to 12.1 ppg EMW, and an FCCT to 12.5 ppg EMW (not taken to lead off). Actual drilling time consisted of 149 hours, whereas 156 hours were spent waiting on weather.

The mud consisted of a seawater/gel, lightly dispersed system with solids control equipment run continuously. No hole problems were encountered while drilling the 17-1/2" hole.

At TD, a multishot survey was run, and the hole logged with a DLL-GR-SP-Cal.

Twenty-three joints of 13-3/8", 72 lb/ft N-80 buttress casing, followed by 117 joints 68 lb/ft N-80 buttress casing were run and landed at 5748.5' with no difficulties. The 13-3/8" casing was landed using a Cameron WS-I 13-3/8" casing hanger. The 13-3/8" string was then cemented with a SSR single stage job consisting of a 2200 sx 'G' lead slurry with 2.5% Bentonite BWOC. Slurry weight was 12.8 ppg, yield - 1.94 cuft/sx, 10.8 gal/sx freshwater, with 3.8 gals HR-6L per 10 bbls mix water. This was followed by 500 sx 'G' at 15.8 ppg, 1.15 cuft/sx, 5.0 gal/sx freshwater with 5.5 gals HR-6L per 10 bbls mix water. The slurry was displaced with mud using the rig pumps and full returns were observed throughout. The cement top is estimated at \pm 1109'.

12-1/4" HOLE AND 9-5/8" CASING

The 12-1/4" hole was drilled from 5749' to 10,981'. After successfully performing a CCCT to 13.6 ppg EMW, and an FCCT to 13.6 ppg EMW (leakoff was not reached) at the 13-3/8" shoe, TD was reached in 41 days. Actual drilling time consisted of 285.5 hours, while 604.5 hours were spent WOW. No hole problems were encountered due to prolonged exposure while WOW other than light fill.

The mud consisted of a freshwater/gel lightly dispersed system, with solids control equipment run continuously. While drilling the 12-1/4" hole a tight spot/ledge existed at approximately 8526', and remained for the duration of the hole. Beginning at approximately 9000', carbonate contamination of the mud was encountered. This was a result of formation CO₂. This condition was remedied with lime treatments.

At 10,974', a multishot survey was run, and a 7' core was taken. The 12-1/4" hole had previously been cored from 6030'-6063'.

The 12-1/4" hole was logged due to oil stained cuttings and also due to core samples taken from 6513' to 5749'. The logs ran were: ISF/BHC/GR/SP/MSFL/CAL and LDT-NT-GR-Cal.

At TD, the hole was logged with the following logging suite: (1) ISF/BHC/MSFL/GR/SP, (2) EPT/LDL/CNL/NGT/CAL, (3) HDT-GR, (4) RFT-GR.

Two hundred and sixteen joints of 9-5/8", 47 ppf, N-80 buttress casing were run, prior to hanging off and waiting on weather. After the weather subsided, fifty-six more joints were run, bringing the total to 272 joints. Eight additional joints made up the landing string. The shoe was landed at 10,957' with no difficulties using a Cameron WS-I 9-5/8" casing hanger.

The 9-5/8" string was cemented using a full bore Halliburton Multiple Stage Cementer (DV). The first stage slurry consisted of a 10 bbl SAM-5 spacer followed by 1975 sx 'G' w/0.5% Halad-22A BWOC. Density was 15.8 ppg, yield - 1.15 cuft/sx, 5.0 gal/sx freshwater with 9.6 gal/10 bbl CFR-2, and 6.9 gal/10 bbl HR-13L. A total of 235 barrels of mix water were used, and the slurry volume was 2271 cuft. The first stage was displaced with 15 barrels freshwater, and 780 barrels of mud, using the rig pumps. The second stage consisted of 10 bbl SAM-5 spacer, 436 sx 'G' w/ 0.5% Halad 22-A BWOC, density was 15.8 ppg, yield - 1.15 cuft/sx, 5.0 gal/sx freshwater with 9.6 gal/10 bbl CFR-2, and 6.9 gal/10 bbl HR-13L. A total of 52 barrels of mix water were used and the slurry volume was 501 CuFt. The second stage was displaced with 15 bbls freshwater followed by 470 bbls mud using the rig pumps.

After casing and cementing the 12-1/4" hole, the seal assembly would not test successfully. It was discovered that the 9-5/8" casing hanger was 40" high. After pulling the seal assembly, the casing, wellhead, BOP, and riser connection were tested to 4000 psi successfully, and final logging and DST operations commenced. Two CBL logs were run, one with 700 psi applied to 9-5/8" casing annulus, indicating that an overall satisfactory cement job had been performed.

The 9-5/8" casing hanger was high due to picking up hanger when returns were lost during cementing and packing off at the casing hanger was suspected as the cause. The 4000 psi pressure test gave an EMW of 23 ppg at the 13-3/8" shoe which indicated good cement in the 13-3/8" x 9-5/8" annulus.

TESTING

In preparation for DST No. 1, the interval 9222'-9267' was perforated in 3 runs using 4" casing guns (BH charges at 4 spf and 90° phasing). The interval 9216'-9233' missfired resulting in one extra run. The test tools and string were run in the hole. After making up the SSTT, the crossover 4-1/2" LTC thread between the fluted hanger and test tree body parted, and the test string was lost downhole.

Several fishing runs were made using an 8-1/8" overshot and grapple, a spear with a 3" grapple, a die collar, and a taper tap in succession, with no success the riser was then displaced with seawater to view the fish using a subsea TV. A 10' drill pipe pup joint was bent, and a spear and grapple run. The die collar which had been modified was then run to retrieve the fish. All DST tools were subsequently retrieved and laid down and new tools picked up. Both hydraulic by-pass cases were split and all clocks and gauges were damaged.

A scraper trip and then a dummy run with the SSTT were made. The first string of HOWCO tools were broken down for parts, and a new string of tools dressed for DST No 1A.

The tool string was run in the hole, and surface equipment rigged up. After pressure testing, a cushion of 149 bbls of diesel was pumped, yielding an 1050 psi underbalance. The lubricator and SRO gauges were rigged up. DST No. 1A established that test interval #1, 9222'-9267' would flow a maximum of 15.1 MMCFD gas with a minimum of 11% CO₂ and 580 BCPD (50.3° API) through a 30/64" choke.

After pulling the test string, a gauge ring and junk basket were run prior to setting an EZSV at 9206'. An injection rate was established, and 100 sxs of cement with 25 gal/10 bbl CFR-2L, 0.8% Halad - 22A, and 7.5 gal / 10 bbl HR-13L were mixed and pumped to squeeze the perforations.

A 4" casing gun set at 4 spf and 360° phasing was run and shot, 6054' - 6056', followed by an EZSV set at 6037'. A block squeeze of 100 sxs of cement, blended as before, was performed. After WOC, the cement and EZSV were drilled out. A gauge ring and junk basket were run to ensure that the hole was prepared for the next DST.

The DST # 2 test string was run, and a 91 bbl diesel cushion placed in the string for an underbalance condition of 725 psi. This test indicated maximum flowrates of 2.42 MMCFD and 1565 BWPd through a 32/64" choke.

A CBL was run, and two dry tests of the squeeze perfs were attempted. The isolated perforations were observed to flow. An EZSV was set at 5965', and 100 sx of cement, blended as before was mixed and squeezed into the perfs. After drilling cement and the EZSV, a dry test using 800 psi drawdown was performed. The cement held for 15 minutes before flow commenced. An EZSV was set at 6334', and a balanced plug of 215 sx of cement, blended as before was set above the packer, and a bradenhead squeeze performed. After drilling cement to 6223', an injection rate was again established. A balanced plug of 200 sx of cement with 1% CFR-2, 20 gal FDP-C351, and 8.5 gal/10 bbl HR-13L was set above the previous cement plug, and a bradenhead squeeze performed. The cement was the drilled to 6192' and a dry test successfully performed.

After running the DST # 2A test string in the hole, a leak in the upper slip joint was discovered. While out of the hole, a positive test of 2000 psi was performed on the squeezed perfs. The string was run with a water cushion (800 psi draw down).

The interval 6014.4' - 6016.4' (DST # 2A) was perforated with 2-1/8" Enerjets, 4 SPF, 0°. A stabilized flowrate of 1.00 MMCFD gas and 300 BOPD (45.5° API) through a 16/64" choke resulted. The test continued with additional perforations being fired from 5948' to 6014'. A maximum flowrate of 11.8 MMCFD gas and 891.9 BCPD of (50.6° API) was produced through an 80/64" choke.

ABANDONMENT

An EZSV was set at 5923', and 200 sx of cement with 1% CFR-2, 20 gal/10 bbl Halad-22AL, and 0.3% HR-12 were mixed and squeezed into the DST # 2A perforations. After circulating at 5850', a balanced plug of 100 sxs of neat cement was placed above the cement on the packer.

A 1-11/16" scallop gun set at 4 spf and 0° phase was run and the interval perforated from 4009' - 4001'. An EZSV was set at 3954', and circulation of the 9-5/8" x 13-3/8" annulus was attempted to test for a cement bond.

A 1-11/16" scallop gun set at 4 spf and 0° phase was then run and the interval perforated from 2985' - 2987'. After setting an EZSV at 2930', circulation of the 9-5/8" x 13-3/8" annulus was established. A tracer pumped during clean-up indicated an annular volume 85 bbl less than expected. After repairing the RCM, 265 sxs of neat cement were mixed and pumped, placing 40 bbl of cement in the annulus.

The hole was then displaced with seawater, and the 9-5/8" casing cut at 329'. After verifying the 13-3/8" seal assembly was properly set, the riser and BOP stack were pulled. A total of 4 bbls of corrosion inhibitor (COAT B-1400) was pumped, and a corrosion cap placed on the wellhead. A location pinger and buoy were then placed at the wellhead.

A final survey of the wellhead and seabed was conducted by the divers. Anchors were pulled and the ship prepared for sailing.

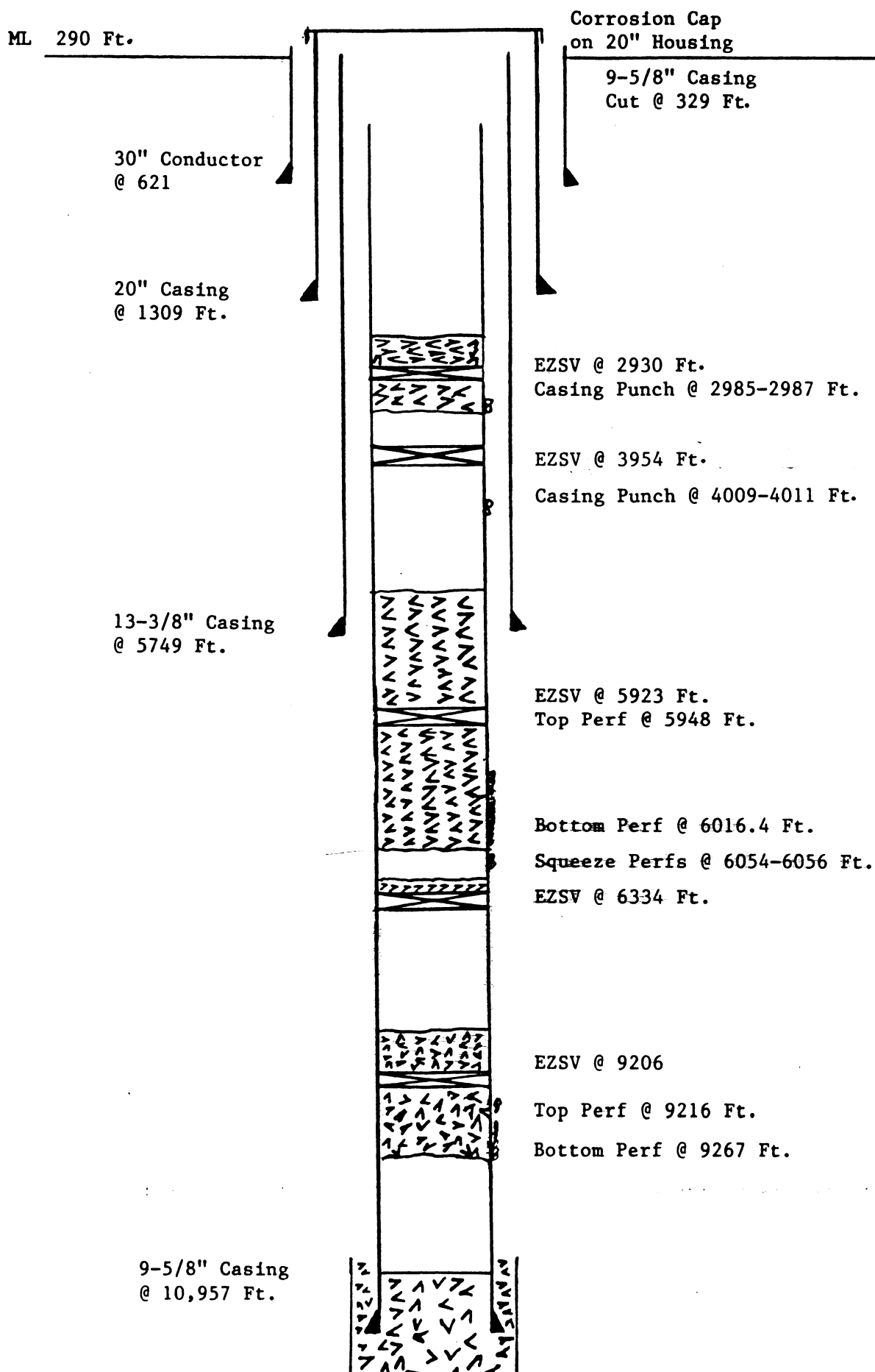
The 'Robert F. Bauer' was released at 0400 hours, 11 October, 1985. (see attachment No 1)

NOTE

All EZSV'S run had a mild steel guide attached to the junk pusher with steel banding material.

ABANDONMENT DIAGRAM

All Depths
RKB



Estimated Well Cost

18-Oct-85

Well: Yolla #1

Exchange Rate:

0.7000

INTANGIBLES	Daily Cost		Post & Pre-well		Est. US\$ 130 Day Well
	US \$	AS	US\$	US\$	
1 Rig	50,000		191,979		5,465,312
2 Work Boats		15,270	135,340		1,524,910
3 Standby Boat		3,166	86,925		375,031
4 Helicopter Base Charge		4,521	6,060		417,471
5 E-Log Base Charge	4,650		61,800		666,300
6 Mud Logging Base Charge	1,505	94			204,204
7 Mud Laboratory	100				12,800
8 Centrifuge	275				35,750
9 DST - Otis	1,038		26,821		161,761
10 DST - Halliburton	134		519		17,939
11 Diving	1,000	3,062	64,302		472,944
12 Rental Tools	1,285	2,276	120,294		494,460
13 Mud Engineer	283	33			39,793
14 Mud Consultant	315				40,950
15 Cementer & Pressure testing	477				62,010
16 Weather Forecast		220			20,020
17 Secondary Anchors	739		14,780		110,850
18 Communications	1,000	250			152,750
19 Well Site Supervision	1,450	80			195,780
20 Uharfage, Labour & Assoc.	150	555	8,455		78,460
21 Directional Surveys				20,000	20,000
22 Rig Mob/Denob			600,000		600,000
23 Miscellaneous Mob/Denob			113,256		113,256
24 Location Survey		1,035	73,460		155,329
25 Rig Positioning Survey			64,240		64,240
26 Helicopter Hourly Charges		1,384		10,000	135,944
27 E-Log Services				400,000	400,000
28 DST Services				275,000	275,000
29 Diving Depth Charge		200			18,200
30 Rig Fuel		4,550			414,050
31 Heli Fuel		349	1,792		33,551
32 Work Boat Fuel		1,082	22,038		120,500
33 Drill Water				2,000	2,000
34 Bits				200,000	200,000
35 Mud Material				183,866	183,866
36 Cement & Additives				75,000	75,000
37 Cementing Services				28,000	28,000
38 Coring				45,000	45,000
39 Casing Accessories				53,064	53,064
40 Miscellaneous	5,000				650,000
=====					
TOTAL INTANGIBLES	69,401	38,127	1,592,061	1,283,930	14,128,495
=====					
TANGIBLES					
=====					
41 Wellhead				200,000	200,000
42 Casing				456,173	456,173
=====					
TOTAL TANGIBLES				656,173	656,173
=====					
ESTIMATED TOTAL WELL COST			1,592,061	1,940,103	14,784,668
=====					

VI

DISCUSSIONNON SCHEDULED EVENTSRUNNING ANCHORS

Upon the recommendation from Global Marine (Houston), a "Short Hook-up" of 300'-500' of wire out was selected for the R. F. Bauer as the optimum length. This was to minimise transition failures between the 1800' of chain and 300'-500' of wire. The R.F.Bauer approached the location, which was marked with a Geomex bouy spread and positioning was done with transponders and satellite passes, at 0400 hours on 4 June 1985, and dropped No. 8 Anchor as the ships anchor. The workboats were then prepared to run anchors by receiving anchors and buoys from the rig.

Anchor No. 1 was the first to be run @ 0950 hours on 4th June, 1985.

After No. 8 was recovered numbers 5, 4, and 8, were subsequently run @ 1418 hrs, 1045 hrs, and 2148 hrs, respectively, before the mandatory Union 8-hour rest period was enforced.

The next 25-1/2 hours were spent W.O.W., before the boats could resume anchor handling. The following anchor Nos. 8, 2, 4, 6, 7, and 3 were run @ 0900, 1137, 1214, 1622, 2135, and 2345 hours, respectively. Anchors No. 8 and No. 4 were reset due to improper wire out once the ship was positioned. All anchors were subsequently piggy-backed by 0007 hours on 7th June 1985, except for Nos. 2 and 6.

Due to improper wire out figures, Anchors Nos. 8, 2, and 4 were reset and piggy-backed @ 1147, 1525, and 1540 hours, respectively, on 7th June 1985. No. 8 anchor was still set with the improper amount of wire out and the decision was made to spud the well and reset the anchor later. Maximum heading change @ 15° with anchor spread. (see attachment No 3)

RECOMMENDATIONS

Upon reviewing the anchoring procedures on the R.F. Bauer, some serious shortcomings were pointed out that were the result of poor understanding of the Captain. It is recommended that detail anchoring procedures be prepared by rig personnel to ensure a satisfactory procedure is followed.

An Amoco computer simulated anchoring program should be employed to recommend proper anchor chain/wire out measurements. This would alleviate dependence on Contractors to supply such data to Amoco.

MOORING LINE/CHAIN FAILURES

On 11 June 1985, @ 1440 hours, anchor Nos. 1 and 2 parted the mooring line and anchor chain, respectively. After W.O.W. for 79-1/2 hours, both anchors were grappled for and run with their piggy-backs and subsequently re-run due to slipping in 56-1/2 hours. A total of 10 hours was spent flaking out the chain on the workboat after it was grappled for and retrieved.

Anchor No. 8 was re-set due to an improper line out figure on 21 June 1985. No time was lost to the operation due to re-setting the anchor.

Anchor No. 3. parted in the mooring wire @ 0810 hours on 14 July 1985. A total of 82-1/2 hours was spent W.O.W. and 18 hours recovering the anchor and chain and the subsequent re-running of the primary anchor and piggy-back.

Anchor No. 2. parted the anchor chain @ 2220 hours on 20 July, 1985.

A total of 57-1/2 hours was spent W.O.W. and 9 hours to recover the anchors and remaining chain and to reset the primary and piggy-back anchors.

Anchor No. 7 parted the master link between the mooring wire and anchor chain @ 2250 hours on 16 August 1985 forcing an emergency disconnect. A total of 51-1/2 hours was spent W.O.W. and 14-1/2 hours to recover the anchor and chain and to reset the primary anchor. At this time, all piggy-backs had been recovered to reduce the holding power exhibited by the piggy-back anchors. (See detailed report Page 16)

FAILURE OF # 7 ANCHOR AND EMERGENCY DISCONNECT

On August 16, 1985 at 0730 hours, operations were undertaken to POOH to hang off due to weather. The rig waited on weather for 5-1/2 hours. The worst was forecast at 1400 hours, 16 August 1985. This consisted of 30/42 knt winds at 120°, with 7 ft swells from 090°. Vessel heading was 238°.

Actual weather at 1400 hours was 5/10 knts @ 100°, 7 ft swells from 120°, Roll-3-1/2° Pitch-3° Heave-4 ft.

The worst conditions occurred from 0200-1200 hrs 17 August 1985, with winds ranging from 28 knts to 35 knts, at 124° to 110°, respectively. Swells were from 090° to 120° at heights ranging from 4' and building to 7-8'. Roll-4°, Pitch-3°, Heave-4ft.

In light of both the improving weather conditions and forecast, the decision was made to resume operations. This occurred at 1700 hours. It should be noted that at 1630 hours, because the weather was rougher than forecast, Oceanroutes was contacted. They indicated mild weather to continue - a few southerly gusts, but tending to subside.

After retrieving the "hang"-off tool and beginning to RIH, the weather began to deteriorate. With the bit at 9137', the decision was made to POH and hang off. This occurred at 2230 hours.

The weather continued to deteriorate. At 2200 hours, the wind was 36/40 knts @ 162°, swells 6 ft @ 180°. Roll-5°, Pitch-5°, Heave-3-1/2 ft. It should be noted that the weather was blowing out of the South and Southeast, (ie., directly on the port beam). This was approximately 180° opposite than predominant weather for June and July. Waves were breaking over the port side of the vessel, with occasional crests sweeping the deck. The ships' crew were monitoring mooring tensions. At this time (2155 hours) Oceanroutes was contacted a second time. They now indicated a low pressure system building over Wilson's Promontory moving off to the ESE, however, they indicated the weather should not worsen and would probably moderate soon. The highest mooring tensions observed at this time were 272 kips on digital readout and 150 kips at the winch for the #7 anchor. Thirty minutes later, at 2230 hours, the decision was made to POOH and hang off. At 2238 hours, the #7 anchor line failed (it failed with approximately 250 kips tension).

At 2252 hours, with the bit at 8973', the drill string was hung off on the middle pipe rams and sheared. The LMRP was disconnected at 2259 hours, 16 August 1985.

A total of 25' of sheared drillpipe was recovered. The recovery of the #7 mooring line indicated the kinter link had failed. The recovered half of the kinter link showed signs of cracking (old rust) along the cross sectional area that failed.

The fish was recovered and operations resumed @ 1530 hours on 20 August 1985. A total of 88-1/2 hours were lost.

RE-ANCHORING

The decision was made on 5 September, 1985 to re-anchor the rig with a less rigid anchor pattern as recommended by Hoffman Maritime. At 2200 hours the LMRP was unlatched and the anchors were re-run with 1800' of chain and 5200' of wire out. The LMRP was relatched and diverter and flowlines installed @ 1700 hours on 7 September, 1985. The total time for re-anchoring was 43 hours. A maximum heading change of 30° was possible with the revised anchor spread. (see attachment No 4)

CONCLUSIONS & RECOMMENDATIONS

1. The failure of the kinter link was gradual, ie, it had been cracked for a period of time, as indicated by the old rust along the wall of the failure. Under the given conditions, the crack grew until failure occurred. This is also borne out by the fact that the link failed at only 250 kips, whereas past mooring line failures occurred at much higher tensions.
2. A special sheared drillpipe overshot/mill should be available for any future operations associated with a drillship and heavy weather.

FISHING OPERATIONS

1. An emergency disconnect, due to a broken anchor chain from heavy weather, forced a fishing operation for the sheared drillpipe which was hung off on the pipe rams. A total of 88-1/2 hours were lost from a combination of WOW, re-running the No. 7 anchor, and milling over and retrieving the fish in the BOP. (See attachment No 2)
2. While running the DST No. 1 test string, the fluted hanger 4-1/2" LTC threaded crossover stripped out of the subsea tree lower body and landed in the wellhead. The subsequent fishing operation required 105-1/2 hours to retrieve and test the string, scrape casing, and re-run the test string.

Probable cause of failure is due to improper subsea tree inspection.

SUMMARY DAILY DRILLING REPORTS

<u>DAY</u>	<u>JUNE</u>	<u>DESCRIPTION</u>
0	4	Drop No. 8 Anchor.
0	5	W.O.W., secure TGB, preparing to finish anchoring, tested stack.
0	6	W.O.W. to work anchors.
0	7	Work and run anchors.
0	8	P/U BHA.
1	9	Spud well at 0800 hrs June 8, 1985. Drlg to 654'. Survey. Short trip to ML. POH. Run 30". Cmt 30" w/2000 sx 'G'. Shoe depth - 621'.
2	10	POH w/stinger. WOW to jump divers.
3	11	WOW, jumped divers. 30" wellhead landed O.K. R/U to run riser.
4	12	Running pin conn, P/U slip jt, R/U to run subsea camera, WOW. No. 1 Anchor wire parted along with No. 2 Anchor chain. L/D riser, pin conn, and secure rig, WOW.
5	13	WOW to reset No. 1 and No. 2 anchor. Grappling for chain.
6	14	Repairing No. 1 wire and No. 2 chain. WOW to reset No. 1 and No. 2 anchors.
7	15	WOW, Run No. 2 anchor.
8	16	No. 1 anchor on bottom, tensioning Anchors 1 and 2. No. 2 slipping. WOW.
9	17	WOW. Re-run anchors 1 and 2.
10	18	Test anchors 1 and 2 to 300 kips. Run pin conn, dress slip jnt N/U diverter, R/U floor and RIH. Function test diverter. Tag cmt @ 600' drill out shoe at 621'. Clean out rat hole to 645'. Drlg 17-1/2" hole to 953'.
11	19	Drlg to 1350. Pump pill. Survey and POH. Recover survey. Losing \pm 120 bbls/hr to hole or riser. N/D diverter and slip jt, pull pin connector. WOW. Continue pulling pin connector.

<u>DAY</u>	<u>JUNE</u>	<u>DESCRIPTION</u>
12	20	Cont. pulling pin connector. M/U Guide Funnel Retrieval Tool. RIH, retrieve guide funnel. RIH W/26" Bit, Drill cmt inside 30" From 559' - 621'. Open 17-1/2" hole from 621' - 985'.
13	21	Open 17-1/2" hole from 985' - 1350' Survey, POOH. R/U and run 20" csg. Run shoe, 10 jnts of 129 lb/ft and 14 jnts of 94 lb/ft w/18-3/4" wellhead assembly. Run stinger assembly and land csg in 30" wellhead. Cmt w/ 1400 sxs class G cmt w/ 2.5% BWOC Gel and 1% BWOW CaCl ₂ w/ 10.8 gal/sx freshwater yield of 1.94 cuft/sx @ 12.9 ppg. Tailed in 500 sx neat CL "G" cmt, 1.15 cuft/sx; @ 15.8 ppg Release from wellhead and POOH. Wash wellhead area, R/U to run BOP.
14	22	Run BOP. 18-3/4" wellhead @ 289' RKB.
15	23	R/U slip jnt. land BOP, test stack, RIH w/ 17-1/2" drilling assembly. Drill cmt from 1284' - 1311'. Perform CCCT to 12.1 ppg EMW and drill from 1311' - 1355'. Displace hole to mud.
16	24	Perform FCCT to 12.5 ppg EMW. Note: CCCT of 12.1 ppg EMW was due to a leak in the CMT valve. Drill 17-1/2" hole from 1355' - 2364' with surveys. POOH to 1026', hang off drill string and unlatch LMRP, WOW.
17	25	WOW. Land LMRP. Retrieve hung off drill string. Test connectors on stack. RIH and drill 17-1/2" hole from 2364' - 2593'.
18	26	Drill and survey 17-1/2" hole from 2593' - 3651'.
19	27	Drill and survey 17-1/2" hole from 3651' - 4101'. POOH. Unlatch LMRP. WOW.
20	28	WOW. Land LMRP. Test connectors. RIH w/ 17-1/2" drilling assembly and drill from 4101' - 4231' (59' of fill).

<u>DAY</u>	<u>JUNE</u>	<u>DESCRIPTION</u>
21	29	Drill 17-1/2" hole from 4231' - 4566'.
22	30	Drill and survey 17-1/2" hole from 4566' - 4764' POOH. Unlatch LMRP and L/D Riser, W.O.W.
<u>DAY</u>	<u>JULY</u>	<u>DESCRIPTION</u>
23	1	L/D Riser, W.O.W.
24	2	WOW. Run LMRP, position rig, WOW.
25	3	WOW.
26	4	WOW. Position rig, land LMRP, test BOP connectors.
27	5	Test BOP connectors, RIH and break circulation every 1000'. Wash + ream bridge from 4041' - 4122'. Wash 30' fill on bottom. Drill 17-1/2" hole from 4764' - 4913'.
28	6	Drill 17-1/2" hole from 4913' - 5175'.
29	7	Drill and survey 17-1/2" hole from 5175' - 5220'. POOH for new bit. RIH, 39' fill. Drill 17-1/2" hole from 5220' - 5342'.
30	8	Drill and circulate samples in 17-1/2" hole from 5342' - 5735'.
31	9	Drill 17-1/2" hole from 5735' - 5769'. Circulate and condition hole for logging. Drop multi-shot, and POOH. Rig up and run Schlumberger ISF-BHC-MSFL-GR-CAL log. Rig for cleanout trip.
32	10	RIH and circulate and condition hole. POOH for short trip. RIH, 17' fill. Displace hole w/10.5 ppg mud. POOH to run 13-3/8" casing.

<u>DAY</u>	<u>JULY</u>	<u>DESCRIPTION</u>
33	11	<p>Retrieve wear bushing.</p> <p>Rig up to run 13-3/8" casing. Run 23 jts of 72 ppf N-80 buttress, and 117 jts of 68 ppf N-80 buttress 13-3/8" casing. Land casing hanger in wellhead with shoe @ 5748.5'.</p> <p>Mix and pump 2200 sxs class G cement w/ 2.5% BWOC Gel and 10.8 gal/sx Freshwater w/ 3.8 gals HR-6L per 10 bbls mix water. Yield @ 12.8 ppg is 1.94 cuft/sx. Tail in with 500 sxs Class G neat cement @ 15.8 ppg and 1.15 cuft/sx with mix water @ 5 gal/sx w/ 5.5 gals HR-6L per 10 bbls mix water. POOH with running string and wash wellhead.</p>
34	12	<p>Wash wellhead area. M/U seal assembly and set same. Test BOP. RIH and tag top plug and float collar @ 5670'.</p> <p>No cement. Tag cement @ 5728'. Clean out casing to 5738'. Perform casing test, O.K. Drill shoe and clean out rat hole to 5750'. Perform CCCT to 13.6 ppg EMW. Drill to 5774' and perform FCCT to 13.6 ppg EMW, no leak off. Drill 12-1/4" hole from 5774' - 5871'. Circulate samples.</p>
35	13	<p>Drill 12-1/4" hole and circulate samples from 5871' - 6030'. POOH, RIH w/ core barrel and cut core # 1 from 6030' - 6063', POOH.</p>
36	14	<p>POOH w/ core barrel. Recover 9' of core. RIH w/ 12-1/4" bit and ream core hole from 6030' - 6060'. Drill 12-1/4" hole from 6060' - 6513'. POOH to 13-3/8" shoe for weather. Hang off. Release LMRP.</p>
37	15	WOW.
38	16	WOW.
39	17	WOW.

<u>DAY</u>	<u>JULY</u>	<u>DESCRIPTION</u>
40	18	WOW.
41	19	Run # 3 anchor. Re-latch LMRP. Recover drill pipe RIH to bottom 85' fill. Circulate bottoms up thru choke. 4-1/2% max gas. Run Intermediate logs. Run Schlumberger ISF-BHC-GR-SP-MSFL-CAL.
42	20	Run LDT-CNL-GR log. Test stack. RIH and drill 12-1/4" hole from 6509' - 6760' and circulate samples.
43	21	Drill 12-1/4" hole from 6760' - 7142'. Drop survey. Circulate bottoms up and POOH to shoe for weather. Hole tight from 6610' - 6579'. 60k max overpull. WOW.
44	22	WOW.
45	23	WOW
46	24	WOW. Relatch LMRP. Recover drill string, RIH to 7131', 11' of fill. Wash to 7142', circulate bottoms up. Max gas 15%. Drill 12-1/4" hole from 7142' - 7277'.
47	25	Drill and survey 12-1/4" hole from 7277' - 7726'. Circulate bottoms up and POOH to shoe for weather. WOW.
48	26	WOW.
49	27	WOW. Relatch LMRP, retrieve drill string. RIH to 7718', 8' fill. Circulate bottoms up, max gas 21.5%. Drill 12-1/4" hole from 7726' - 7752'.
50	28	Drill 12-1/4" hole from 7752' - 8003'. Circulate bottoms up and POOH to shoe for weather. Hang off. Release LMRP WOW.
51	29	WOW.
52	30	WOW.
53	31	WOW.

<u>DAY</u>	<u>AUGUST</u>	<u>DESCRIPTION</u>
54	1	WOW.
55	2	WOW. Relatch LMRP. Retrieve drillstring, RIH to 8003', 2' fill. Circulate bottoms up, max gas = 52.6%. Circulate thru choke. Drill 12-1/4" hole from 8003' - 8229'.
56	3	Drill and survey 12-1/4" hole from 8229' - 8595'.
57	4	Drill 12-1/4" hole from 8595' - 8902'. POOH for a bit change.
58	5	POOH, RIH w/ new bit. Hangoff w/bit @ 5370'. WOW.
59	6	WOW. Relatch LMRP, and recover drillstring. RIH and tag bridge @ 8526'. Wash and ream from 8526' - 8602'. RIH, no fill. Circulate bottoms up, max gas 2.3% Drill 12-1/4" hole from 8902' - 9000'.
60	7	Drlg 9000' - 9176'. Survey POH to WOW based on forecast. RIH wash to bottom. Drlg 9176' - 9348'.
61	8	Drlg 9348' - 9515'. Circ BU. POH, tight spot @ 8632', 100k overpull. Test BOP.
62	9	Test BOP. RIH. Ream and wash 8530'-8610', 9400' - 9515'. Drlg 9515' - 9667'.
63	10	Drill 12-1/4" hole from 9667'-10,015'.
64	11	Drlg 10,015' - 10,097'. Work junk-sub, drop survey. POH, tight spot @ 8663'-100k overpull for ± 5'. RIH.
65	12	RIH. Cut and slip drill line. 9965' - 10,097'. Work junk-sub. Drlg 10,097' - 10,271'.

<u>DAY</u>	<u>AUGUST</u>	<u>DESCRIPTION</u>
66	13	Drlg 10,271' - 10,412'. Work junk-sub survey. POH. Tight spot at 8630' - 8640', 60k overpull. RIH. Wash and ream 10,362' - 10,412'. Drlg 10,412' - 10,422'.
67	14	Drlg. 10,422' - 10,643'.
68	15	Drill 12-1/4" hole from 10,643'-10,879'. Circulate bottoms up, drop survey, POOH for new bit.
69	16	Continue POOH, test BOP, RIH. Drill 12-1/4" hole from 10,879'-10,960'.
70	17	Drill 12-1/4" hole from 10,960'-10,972'. POOH to casing shoe to WOW. RIH to 9137'. POOH to 8973' due to weather. Anchor No. 7 broke in the master link, activate emergency shear/disconnect, WOW.
71	18	WOW. Retrieve anchor No. 7 and chain, WOW.
72	19	WOW.
73	20	WOW. Re-run anchor No. 7, pre-tension anchor slipping. Re-run anchor No. 7 with piggy-back. Pre-tension to 310 kips. Re-latch LMRP, RIH to fish for sheared drillpipe in BOP.
74	21	RIH, mill fish, engage and pull 110,000 lbs overpull. Fishing string parted @ overshot. RIH with overshot, engage fish, POOH with 130,000 lbs overpull. Lay out fishing string, circulate bottoms up @ 8690'. RIH, wash and ream from 8720' - 9262'. Circulate bottoms up @ 9846'. RIH to 10,972', circulate bottoms up, 2.5% Max gas. Drill from 10,972' - 10,974'. Circulate sample and condition mud.

<u>DAY</u>	<u>AUGUST</u>	<u>DESCRIPTION</u>
75	22	POOH to core. Make up and RIH with core barrel. Cut core # 1 from 10,974' - 10,981'. POOH, 64% recovery of core. Lay down core barrel. Rig up Schlumberger to log.
76	23	Log Run #1 - ISF-BHC-MSFL-GR-SP from 10,981' - 5749'. Transmit logs to Sydney. Run #2 - EPT-LDL-CNL-NGT-CAL from 10,981' - 5749'. Transmit logs to Sydney. Run #3 - HDT-GR from 10,981' - 5749'.
77	24	Continue Run #3 - HDT-GR from 10,981' - 5749'. Make up bit and RIH to 5653'. Circulate and condition mud. Max gas = 9.2%. RIH, wash and ream 8414', 8472'-8539', 9198'-9230'. Ream 8-1/2" core hole from 10974'-10981'. Circulate and condition mud, drop multi-shot, POOH.
78	25	Continue POOH, rig up and run R.F.T. #1. POOH, replace packer element, RIH with R.F.T. #2. POOH, replace packer element, RIH with R.F.T. #3.
79	26	Continue with R.F.T. #3, POOH. RIH with cleanout assembly. Circulate bottoms up @ 5749', max gas = 1.5%. RIH to 8306' and circulate. POOH to W.O.W. Unlatch LMRP.
80	27	W.O.W.
81	28	W.O.W
82	29	Wash and ream 8550' - 8624'. Circulate and condition mud. Max gas = 9%. RIH, circulate bottoms up, POOH to 5749' and W.O.W. Unlatch LMRP.
83	30	W.O.W, circulate and condition mud at 5749'. POOH, RIH with R.F.T.
84	31	Run R.F.T. # 4, could not pass 8563'. POOH. RIH for cleanout trip to 10,200'. POOH to run R.F.T. #. 5.

<u>DAY</u>	<u>SEPTEMBER</u>	<u>DESCRIPTION</u>
85	1	POOH with R.F.T. #5. RIH with C.S.T. Sidewall core guns. Shoot 49 out of 57 cores. RIH for cleanout trip. Wash and ream from 10,200' - 10,981'. Circulate and condition mud.
86	2	Short trip 10 stands, POOH. Rig up and run 216 jnts, N-80, 47 ppf 9-5/8" casing. Hang off casing in wellhead, circulate hole, W.O.W.
87	3	Retrieve hungoff casing. Run 56 jnts, N-80, 47 ppf 9-5/8" casing. Run 9-5/8" casing landing string. Land casing in wellhead. Shoe @ 10,957'. Top of shut off baffle @ 10,837', top of D.V. collar @ 6477'. Mix and pump 1975 sxs of Class G cement with 0.5% BWOC Halad - 22A, 9.6 gal /10 bbl CFR-2L, 6.9 gal/10 bbl. HR-13L @ 15.8 ppg with a yield of 1.15 cuft/sx with 5 gal/sx drill water. Drop D.V. bomb, open D.V. collar with 1300 psi. Circ x W.O.C.
88	4	Mix and pump 2nd stage slurry of 435 sxs Class G cement with 0.5% BWOC Halad - 22A, 9.6 gal/10 bbl CFR-2L, 6.9 gal/10 bbl HR-13L @ 15.8 ppg with a yield of 1.15 cuft/sx with 5 gal/sx drill water. Drop D.V. close plug, close D.V. collar, bump plug with 3000 psi. Release from casing hanger, RIH and wash wellhead, no go past BOP. POOH, install wash tool centralizer. RIH and wash wellhead. POOH. RIH with seal assembly, no test, POOH. RIH and wash wellhead, RIH with seal assembly, test against RTTS, no test. POOH with seal assembly.

<u>DAY</u>	<u>SEPTEMBER</u>	<u>DESCRIPTION</u>
89	5	RIH with wash tool, wash wellhead, POOH. RIH with seal assembly, no test, POOH. Set wear bushing. Lay down 8" drill collars. RIH with an 8-1/2" bit, drill D.V. collar @ 6476'. RIH to 10,550'. Drill cement and shut off baffle from 10,550' - 10,875'. Circulate and displace casing to seawater, POOH.
90	6	L/D riser and LMRP, running anchors and re-positioning vessel.
91	7	Run LMRP, position ship over hole, latch LMRP, R/U diverter and flow-lines. RIH w/ bollweevil tester and painted pup jt. Close rams to mark. Open rams, POH. 9-5/8" hanger 40" high. RIH w/RTTS. Pressure test above and below RTTS to 4000 psi-OK. Test LMRP connector to 3500 psi-OK.
92	8	POH w/ RTTS, RIH w/ 9-5/8" csg scraper work scraper @ 5897', 5953', and 9164'. Circulate hole w/seawater, displace w/completion fluid. POH, Gatorhawk DP connections, R/U and run 7 jts of 7" csg w/modified BRX hanger on bottom of string.
93	9	R/U Schlum. Run CBL w/700 psi. Two runs. R/D Schlum and 7" shooting nipple. R/U Schlum. and run VSP.
94	10	Run VSP, made dummy run with Otis SSTT. R/U Schlum. and wait on daylight to perforate.
95	11	Wait on daylight to perforate. Perf 9245'-9267', 9222'-9233', 9216'-9233'. Re-run misfire on 9216'-9233'. Make up test tools and RIH.
96	12	RIH w/ DST string. Crossover on subsea test tree parted. Fished for DST string in 9-5/8" hanger of wellhead.

<u>DAY</u>	<u>SEPTEMBER</u>	<u>DESCRIPTION</u>
97	13	Fished DST string, POH with same.
98	14	POH, make up bit for scraper run. RIH, circ and condition mud.
99	15	M/U SSTT, RIH w/ DST string. Pressure test to 500 psi.
100	16	Spot diesel cushion, RIH w/ SRO gauge. DST # 1-A - open and flow well.
101	17	Shut-in well for build-up. Open well. Flow well, establish rates, took samples, kill well.
102	18	POH w/ DST # 1-A. R/U Schlum, run gauge ring and junk basket. Set EZSV @ 9206', test to 1000 psi - OK. RIH w/ stinger and squeeze perfs w/ 100 sxs cmt.
103	19	POH. Test casing to 2000 psi - OK. R/U Schlum, RIH w/ casing punch and perf 6054'-6056'. POH, RIH w/ EZSV and set @ 6037'. Pressure test EZSV to 2000 psi - 10 min - OK. M/U stinger and RIH. Squeeze punch holes w/ 100 sx cmt. POH.
104	20	WOC. RIH w/ bit and BHA. Tag cmt @ 6030'. Drill cmt 6030'-6037'. Drill EZSV, clean out to 6088'. RIH to 6600'. Circ B/U to clear out gas, POH to 6050'. Test perfs to 1500 psi - OK. POH.
105	21	RIH w/ Schlum gauge ring and junk basket. POH. M/U DST # 2. Test tools, RIH, set packer @ 5822'. Test lines, spot diesel cushion. Test lubricator 5000 psi - OK. M/U perf guns.
106	22	RIH, wait on daylight to perf. Perf 6004'-6021'. Open well.
107	23	DST # 2. Flowing well, kill well, POH. Run CBL w/ Schlum, run EZSV, POH w/ EZSV.

<u>DAY</u>	<u>SEPTEMBER</u>	<u>DESCRIPTION</u>
108	24	RIH w/ RTTS. Dry test packer did not seat, POH. RIH w/ test tools. Run CCL on Schlum to correlate.
109	25	Set packer @ 6035'. Commence flow test, annulus dropping. Reverse out, POH. R/U Schlum, set EZSV @ 5965'. Pressure test to 2000 psi - OK. RIH w/ stinger, sting in and squeeze perfs. POH, WOC. M/U bit RIH.
110	26	RIH, hang off on middle rams. WOW while WOC. Retrieve hung-off pipe, RIH. Tag cmt @ 5856'. Drill cmt 5856'-5965'. Drill EZSV. Drill cmt 5965'-6025'. Clean out to 6101'. RIH to 6709'. Circ and Cond. POH.
111	27	POH. R/U Schlum, run gauge ring and junk basket. M/U test tools, RIH for dry test. No flow for 15 min, then flow for 15 min. Reverse out. Establish injection rate, POH. R/U Schlum, set EZSV @ 6334'. R/D Schlum RIH w/ open ended DP.
112	28	Mix and pump 215 sx cmt balanced plug. WOC. POH. M/U bit and BHA. RIH, tag cmt @ 5910'. Wash from 5910' - 5916'. Drill cmt from 5916' - 5927'. Circ B/U, WOC.
113	29	WOC. Drill cmt from 5927'-5972'. Circ B/U, WOC. Drill cmt from 5972'-6223'. Circ B/U. POH to 5765'. Establish injection rate of 1/2-1 BPM. RIH w/ open ended DP, squeeze 200 sx cmt.
114	30	Continue to squeeze 200 sx cmt, WOC. POH. M/U bit and BHA, RIH. Tag cmt @ 5843'. Wash to 5941'. Circ & WOC. Drill cmt from 5941'-5944'. Circ B/U, WOC.

<u>DAY</u>	<u>OCTOBER</u>	<u>DESCRIPTION</u>
115	1	Drill cmt from 5944'-6192'. Circ B/U. POH to 5859'. Test squeeze to 2000 psi - OK. POH. M/U Howco tools and RIH. Set RTTS @ 5795'. Dry test - ok. Reverse out, POH.
116	2	P/U Otis and SSTT, RIH for DST # 2A. Pressure test Howco tools - no test. POH, L/D slip jt. Pressure test perfs to 2000 psi - OK. RIH, pressure test tools - OK. Could not close pipe rams. POH w/ landing string and SSTT.
117	3	RIH w/ SSTT and landing string. Pressure test equipment, R/U Schlum lubricator, pressure test. RIH w/ perf guns and perf from 6014.4'-6016.4', POH. RIH w/ Schlum PLT/PST. Open well and flow.
118	4	Flowing well, establish flow, shut in well, POH w/ PLT/PST. RIH and perf from 5948'-6014'. Open well, flow 20 min, close well. POH, and RIH w/ PLT.
119	5	Flow well and stabilize flow. Shut in for build up, POH w/ PLT. Kill well, POH.
120	6	Set EZSV w/ Schlum @ 5929'. POH, test packer to 2000 psi - OK. RIH w/ star guide and stinger. Tag EZSV @ 5929'. Circ and Condition. Sting in and establish injection rate. Mix and pump 200 sx "G" w/ 1% CFR-2, 20 gal/10bbl HAL-22-AL, .3% HR-12, 15.8 ppg, 1.15 cuft/sx. Spot slurry. Sting in and squeeze same. Final squeeze pressure - 1900 psi. POH to 5850'. Mix x pmp 100 sx "G" neat, cmt. Balanced plug. POH to 5336'. Circ B/U. POH and L/D DP. R/U CSG punch. Punch casing 4009'-4011'. POH. Set EZSV @ 3954'. R/D WL. RIH and star guide and stinger.

<u>DAY</u>	<u>OCTOBER</u>	<u>DESCRIPTION</u>
121	7	Sting in EZSV and attempt to circ 9 5/8" x 13 3/8" annulus, and reverse circ same - annulus holding. POH. RIH w/ Schlum and punch casing from 2985'-2987'. Pressure test to 1500 psi-OK. POH. RIH and set EZSV @ 2930'. POH w/ Schlum. RIH w/ stinger. Sting-in and pump 265 sxs cmt. Unsting and dump 10 bbl cmt on top of EZSV. POH to 2045'.
122	8	Circ, POH, L/D DP, PU 9 5/8" casing cutter and RIH. Cut csg @ 329'. POH and L/D. M/U spear, RIH, recover 35' csg. M/U wash tool, wash BOP, POH. N/D diverter and unlatch.
123	9	Pull riser and BOP. RIH, pump corrosion inhibitor, set corrosion cap. L/D DC & DP, run pinger and buoy. Survey seabed. Position ship for seabed search. Pulling anchors.
124	10	Pulling anchors, offload mooring equipment.
125	11	Backload Amoco equipment and prepare rig for transit. Release rig @ 0400 hrs.

Casing - Cementing Report
Form 20 (6-79)

Company

Amoco Aust Pet Co

Attach Form 19

Well Yolla No 1	Area Bass Strait	Field Tasmania
Rig R. F. Bauer	Casing Size (30 ")	Date June 8, 1985

Cement Data									
Job Type (Check one)		Well Depth		Bit Size		Mud Weight (Prior to cementing)			
<input type="checkbox"/> (1) Single Stage <input type="checkbox"/> (1) and (2) Two Stage						In		Out	
		645 Ft		26/36"		Seawater		Seawater	
Cement Interval		From	To	Total		Remarks			
1.		297' ML	645 FT	348 FT					
2.									
Cement Type		Sacks	Yield (Cu. Ft./Sx)	Slurry Volume (Cu. Ft.)	Lbs./Gal.	Additives and amount (Pre blend)			
1 Lead	Class G	2000	1.15 FT ³ /SX	2300 FT ³	15.9	5 gal/SX Seawater			
1 Tail									
2 Lead									
2 Tail									
Mixed Water Used: Type		Amount		Additives and amount (Pre mixed in water)					
1 Lead	Seawater	5 gal/SX							
1 Tail									
2 Lead									
2 Tail									
(a) Total Slurry Volume (Cu. Ft.)		(b) Gauge Hole Volume (Cu. Ft.)		(c) Caliper Volume (Cu. Ft.)		Average Hole Size		% Excess	
1	2	1	2	1	2	1	2	1	2
2300		713		N/A		N/A		223	
Note: % Excess is calculated on basis of (a-b) + b with no caliper survey or by (a-c) + c with caliper survey (within the cement interval)									
No. of Bbl's to Displace Plug		Calculated				Actual			
<input type="checkbox"/> Rig Pump or <input type="checkbox"/> CMT Unit		1 23 bbls for stinger				1 23 bbls			
		2 Stinger 282 FT below running tool							
* Casing Data									
Last Casing Set (measured from RKB)		Size		Weight		Grade			
Final Casing String - Top to Bottom (RKB to top of CSG string 30 Well head)									

Joints	Description	Length	Set @ RKB
1	30" x 1" wall c/w shoe	43.40	619.41
6	30" x 1" wall	244.10	331.91
1	30" x 1" wall c/w Wellhead	41.91	290.00
Total Joints in string		Total Joint length	
8		(329.41)	
Centralizers: Quantity		Make	Type
None			
Total Section Covered		Spacing	
Shoe Jt vol = 202 FT ³			
Overall Job Remarks:			
Casing landed and cemented without observing			
with diving bell due to weather			

Operational Times			
Start CSG in @	1830	Hrs.	
Running CSG	3	Hrs.	0 Min's.
Circulating 1	2	Hrs.	0 Min's.
	2	Hrs.	Min's.
Mixing CMT	1 2	Hrs.	0 Min's.
	2	Hrs.	Min's.
Displacing 1	-	Hrs.	- Min's.
	2	Hrs.	Min's.
Plug Bumped @			
w/1		Psi	
w/2		Psi	
Total Time	7	Hrs.	0 Min's.
Surveys Run		Temp	None
CBL		Seabed	
Top of CMT @		Calculations	
Based upon			
Toolpusher	R. Rowe		
Cementer	G. Sisely		
Co. Rep.	L. Transier		

* Casing measurements in ☒ feet
☐ meters

Company Representative

L. Transier/ Jack Rankin

Casing — Cementing Report
 Form 20 (6-79)

Company

Amoco Aust. Pet. Co

Attach Form 19

Well Yolla No 1	Area Bass Strait	Field Offshore Tas
Rig R. F. Bauer	Casing Size (20")	Date 20 June 1985

Cement Data									
Job Type (Check one)		Well Depth		Bit Size		Mud Weight (Prior to cementing)			
						In		Out	
<input checked="" type="checkbox"/> (1) Single Stage		1350'		26"		8.9		-	
<input type="checkbox"/> (1) and (2) Two Stage									
Cement Interval		From	To	Total	Remarks				
1.		1350'	ML (297)	1053'					
2.									
Cement Type	Sacks	Yield (Cu. Ft./Sack)		Slurry Volume (Cu. Ft.)	Lbs./Gal.	Additives and amount (Pre blend)			
1 Lead Class G	1400	1.94		2720	12.8				
1 Tail Class G	500	1.15		575	15.8				
2 Lead									
2 Tail									
Mixed Water Used: Type		Amount		Additives and amount (Pre mixed in water)					
1 Lead Freshwater		360bbbls		2.5% BWOC Gel + 1% BWOW CaCl ₂					
1 Tail Seawater		60bbbls							
2 Lead									
2 Tail									
(a) Total Slurry Volume (cu. ft.)		(b) Gauge Hole Volume (cu. ft.)		(c) Caliper Volume (cu. ft.)		Average Hole Size		% Excess	
1 2		1 2		1 2		1 2		1 2	
3295		1712						92 -0-	
Note: % Excess is calculated on basis of (a-b) + b with no caliper survey or by (a-c) + c with caliper survey (within the cement interval)									
No. of Bbl's to Displace Plug		Calculated				Actual			
<input type="checkbox"/> Rig Pump		1 30 bbls/seawater				1 30 bbls			
<input checked="" type="checkbox"/> CMT Unit		2				2			
* Casing Data									
Last Casing Set (measured from RKB)		Size		Weight		Grade			
621'		30 "		1" wall		X-56/R-III			
Final Casing String — Top to Bottom (RKB to top of CSG string)		296'							
Joints	Description			Length	Set @ RKB				
1	18-3/4" Cameron WS-I W/HD			27.42	296'				
24	20"=X-56 129 # w/94 #			990.05	1309.47'				
Total Joints in string		25		Total Joint length		(1017.47)			
Centralizers: Quantity		None		Make		Type			
Total Section Covered				Spacing					
Overall Job Remarks:									
Good CMT Job, Float held ok									
CMT returns observed by OMB-4 bell									

Operational Times	
Start CSG in @	1500 Hrs.
Running CSG	8 Hrs. 30 Min's.
Circulating 1	1 Hrs. 0 Min's.
2	Hrs. Min's.
Mixing CMT	1 2 Hrs. 0 Min's.
2	Hrs. Min's.
Displacing 1	Hrs. Min's.
2	Hrs. Min's.
Plug Bumped @	N/A
w/1	Psi
w/2	Psi
Total Time	11 Hrs. 30 Min's.
Surveys Run	
CBL	Temp. None
Top of CMT @	M.L.
Based upon	OMB-4 Bell obs.
Toolpusher	M. Brockman
Cementor	G. Sisely
Co. Rep.	C. Blackburn

 * Casing measurements in ☒ feet
☐ meters

Company Representative

C. Blackburn/J. G. Rankin

Casing - Cementing Report
Form 20 (6-79)

33

Company

AMOCO AUST. PET. CO.

Attach Form 19

Well YOLLA NO. 1	Area BASS STRAIT	Field
Rig GLOMAR ROBERT F. BAUER	Casing Size (13-3/8 ")	Date 11 JULY 1985

Cement Data							
Job Type (Check one)		Well Depth		Bit Size		Mud Weight (Prior to cementing)	
<input checked="" type="checkbox"/> (1) Single Stage <input type="checkbox"/> (1) and (2) Two Stage		5769		17/1-2		In Out 9.1 9.1	
Cement Interval		From	To	Total		Remarks	
		1. 5748	1109	4639			
		2.					
Cement Type		Sacks	Yield (Cu. Ft./Sx)	Slurry Volume (Cu. Ft.)	Lbs./Gal.	Additives and amount (Pre blend)	
1 Lead	G	2200	1.94	4268	12.8		
1 Tail	G	500	1.15	575	15.8		
2 Lead							
2 Tail							
Mixed Water Used: Type		Amount		Additives and amount (Pre mixed in water)			
1 Lead	FRESHWATER	566 bbls		2.5% BENTONITE BWOC, 3.8 gal/10 bbl HR-6L			
1 Tail	FRESHWATER	60 bbls		5.5 gal/10 bbl HR-6L			
2 Lead							
2 Tail							

(a) Total Slurry Volume (cu. ft.)		(b) Gauge Hole Volume (cu. ft.)		(c) Caliper Volume (cu. ft.)		Average Hole Size		% Excess	
1	2	1	2	1	2	1	2	1	2
4843		3273		4850					

Note: % Excess is calculated on basis of (a-b) + b with no caliper survey or by (a-c) + c with caliper survey (within the cement interval)

No. of Bbl's to Displace Plug		Calculated		Actual	
<input checked="" type="checkbox"/> Rig Pump or <input type="checkbox"/> CMT Unit		1	806	1	
		2		2	

* Casing Data			
Last Casing Set (measured from RKB)	Size	Weight	Grade
1309	20 "	129 ppf, 94 ppf	
Final Casing String - Top to Bottom (RKB to top of CSG string 292 ft.)			

Joints	Description	Length	Set @ RKB
	RKB to 13-3/8" csg hanger	292	292
1(143)	Hanger joint	13.44	305.44
117 (142-26)	13-3/8", 68 ppf, N-80 csg	4547.45	4852.89
21 (25-5)	13-3/8", 72 ppf, N-80 csg	815.12	5668.01
1 (4)	13-3/8" Howco Float collar	1.46	5669.47
2 (3-2)	13-3/8", 74 ppf, N-80 csg	76.67	5746.14
1 (1)	13-3/8", Howco Float Shoe	1.96	5748.10

Total Joints in string	143	Total Joint length	(5456.50)
Centralizers: Quantity	Make	Type	
Total Section Covered	Spacing		

Overall Job Remarks:	

Operational Times	
Start CSG in @	0930 Hrs.
Running CSG	10 Hrs. 30 Min's.
Circulating 1	1 Hrs. 00 Min's.
2	Hrs. Min's.
Mixing CMT 1	2 Hrs. 30 Min's.
2	Hrs. Min's.
Displacing 1	1 Hrs. 30 Min's.
2	Hrs. Min's.
Plug Bumped @	
w/1	Psi
w/2	Psi
Total Time	15 Hrs. 30 Min's.
Surveys Run	
CBL	Temp. None
Top of CMT @	
Based upon	
Toolpusher LAWSON	
Cementer D. HOOVER	
Co. Rep. C.L. BLACKBURN	

* Casing measurements in ☒ feet
☐ meters

Company Representative

C. L. Blackburn/C. A. Cowan

Casing - Cementing Report
Form 20 (6-79)

34

Company

AMOCO AUSTRALIA

Attach Form 10

Well YOLLA NO. 1	Area T14P	Field BASS STRAIT
Rig GLOMAR "ROBERT F. BAUER"	Casing Size (9-5/8")	Date 4 SEPTEMBER ' 85

Cement Data									
Job Type (Check one)		Well Depth	Bit Size		Mud Weight (Prior to cementing)				
<input type="checkbox"/> (1) Single Stage <input checked="" type="checkbox"/> (1) and (2) Two Stage		10,981'	12-1/4"		In: 9.8 Out: 9.8				
Cement Interval		From	To	Total	Remarks				
		1. 10,957	7000	3957					
		2. 6,477	5000	1477					
Cement Type	Sacks	Yield (Cu. Ft./Sx)		Slurry Volume (Cu. Ft.)	Lbs./Gal.	Additives and amount (Pre blend)			
1 Lead 'G'	1975	1.15		2271.3	15.8				
1 Tail									
2 Lead 'G'	436	1.15		501.4	15.8				
2 Tail									
Mixed Water Used: Type		Amount		Additives and amount (Pre mixed in water)					
1 Lead FRESH		235 bbls		9.6 gal/10bbl CFR-2, 6.9gal/10bbl HR-13L					
1 Tail				Halad-22A (1/2% BWOC)					
2 Lead FRESH		52 bbls		9.6 gal/10bbl CFR-2, 6.9gal/10bbl HR-13L					
2 Tail				Halad-22A (1/2% BWOC)					
(a) Total Slurry Volume (cu. ft.)		(b) Gauge Hole Volume (cu. ft.)		(c) Caliper Volume (cu. ft.)		Average Hole Size		% Excess	
1 2		1 2		1 2		1 2		1 2	
2271.3 501.4		1239.8 472.4		2200 478.1		13.1" 13.1"		3.2% 4.9%	
Note: % Excess is calculated on basis of (a-b) + b with no caliper survey or by (a-c) + c with caliper survey (within the cement interval)									
No. of Bbl's to Displace Plug		Calculated				Actual			
<input checked="" type="checkbox"/> Rig Pump or <input type="checkbox"/> CMT Unit		1 794.6 bbls				1 775.5 bbls			
		2 475.5 bbls				2 470.7 bbls			
* Casing Data									
Last Casing Set (measured from RKB)		Size		Weight		Grade			
5749'		13-3/8" "		68 & 72 LB/FT		N-80			
Final Casing String - Top to Bottom (RKB to top of CSG string 292 FT.)									

Joints	Description	Length	Set @ RKB
1	9-5/8" Howco Float Shoe	1.85	10,957.24
2-3	9-5/8" Buttress, 47ppf, N-80 csg	78.25	10,878.99
4	9-5/8" Howco Float Collar	1.45	10,877.54
5-117	9-5/8" Buttress, 47ppf, N-80 csg	4395.09	6,482.45
118	9-5/8" Howco Multiple Stage Cmtr.	3.28	6,479.17
119-276	9-5/8" Buttress, 47ppf N-80csg	6183.02	296.15
277	9-5/8" Casing Hanger for Cameron	2.30	293.85
	WS-1, 18-3/4", 10,000 psi wp		
278-285	9-5/8" Buttress, 47ppf, N-80	313.7	- 19.52
	Running String		
Total Joints in string		Total Joint length	
273 Jts. 9-5/8" Casing		(10,665.24')	
Contractors: Quantity		Make	Type
Total Section Covered		Spacing	
ML-10,957.24'			
Overall Job Remarks:			

Operational Times		
Start CSG in @	1415	Hrs.
Running CSG	14	Hrs. 30 Min's.
Circulating 1	2	Hrs. 30 Min's.
2	2	Hrs. 30 Min's.
Mixing CMT 1	1	Hrs. 35 Min's.
2	1	Hrs. 10 Min's.
Displacing 1	1	Hrs. 40 Min's.
2	1	Hrs. 20 Min's.
Plug Bumped @		
w/1	3400	Psi
w/2	3000	Psi
Total Time	25	Hrs. 15 Min's.
Surveys Run		
CBL		Temp. None
Top of CMT @		
Based upon		
Toolpusher Coss/Lawson		
Cementer Cashman/Baker		
Co. Rep. C. Blackburn		

* Casing measurements in ☒ feet
☐ meters

Company Representative

C. L. Blackburn/G. A. Cowan

Pipe and Auxiliary Equipment Tally
(Permanent Detailed Record)
Form 19 (6-79)

Attach to Form 20

Field	Bass Strait/Tasmania	Well No.	Yolla 1	Article		Size	30"	Date	8 June, 1985
Note: For casing and tubing with Hydril, Extremeline, or similar joints, record shoulder to shoulder measurements; for other tubulars, record measurement from outer edge of mill coupling to last engaged thread on field end.									Measurements made with <input type="checkbox"/> Decimal Footage Tape <input type="checkbox"/> Meters Centimeters Tape
Note: Denote Centralizers on or Between Joints With (X)									

No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		Tally of Joints Not Run		
													No.	Feet or Meters			
1	43	40	51	shoe	JT	101			151			201					
2	38	35	52			102			152			202			1		
3	41	25	53			103			153			203			2		
4	40	60	54			104			154			204			3		
5	43	35	55			105			155			205			4		
6	40	75	56			106			156			206			5		
7	39	80	57			107			157			207			6		
8	41	91	58	Wellhead		108			158			208			7		
9			59			109			159			209			8		
10			60			110			160			210			9		
11			61			111			161			211			10		
12			62			112			162			212			11		
13			63			113			163			213			12		
14			64			114			164			214			13		
15			65			115			165			215			14		
16			66			116			166			216			15		
17			67			117			167			217			16		
18			68			118			168			218			17		
19			69			119			169			219			18		
20			70			120			170			220			19		
21			71			121			171			221			20		
22			72			122			172			222			21		
23			73			123			173			223			22		
24			74			124			174			224			23		
25			75			125			175			225			24		
26			76			126			176			226			25		
27			77			127			177			227			26		
28			78			128			178			228			27		
29			79			129			179			229			28		
30			80			130			180			230			29		
31			81			131			181								
32			82			132			182			No. Joints Delivered: 8					
33			83			133			183			No. Joints Run: 8					
34			84			134			184								
35			85			135			185			Total Run – Overall: 329.41 FT					
36			86			136			186								
37			87			137			187			Top Pipe Below:					
38			88			138			188			<input checked="" type="checkbox"/> Rotary Drive Bushing					
39			89			139			189			<input type="checkbox"/> Derrick Floor					
40			90			140			190			Depth Landed: 297 FT (ML)					
41			91			141			191			Operational Data					
42			92			142			192			Casing Makeup Torque ft.-lbs.					
43			93			143			193								
44			94			144			194			Hanging Weight @ Setting Depth lbs.					
45			95			145			195								
46			96			146			196			Pick Up Weight-Drag Setting Depth lbs.					
47			97			147			197								
48			98			148			198			Set Down Weight-Drag Setting Depth					
49			99			149			199								
50			100			150			200			Casing Hung in Tension w/ lbs. on hanger					

Item(s)
No.

Pipe Run

Size	Weight	Grade	Type	Joint	Range	Qty.
1 Size 30"	Weight 1" Wall	Grade X56	Type Joint	Drill Quip NS-60	Range III	Qty. 1
2-7 Size 30"	Weight 1" Wall	Grade X56	Type Joint	Drill Quip NS-60 w/D-L 501 DVT Shoe	Range III	Qty. 6
8 Size 30"	Weight 1" Wall	Grade	Type Joint	30" Cameron Guidelineless Wellhead w/EXT	Range III	Qty. 1

Pipe and Auxiliary Equipment Tally
(Permanent Detailed Record)
Form 19 (6-79)

Attach to Form 20

Field Bass Strait	Well No. Yolla 1	Article	Size 20"	Date 20 June, 1985
Note: For casing and tubing with Hydril, Extremeline, or similar joints, record shoulder to shoulder measurements; for other tubulars, record measurement from outer edge of mill coupling to last engaged thread on field end.				Measurements made with <input checked="" type="checkbox"/> Decimal Footage Tape <input type="checkbox"/> Meters Centimeters Tape
Note: Denote Centralizers on or Between Joints With (X)				

No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		Tally of Joints Not Run				
	Shoe									No.	Feet or Meters					
1	41	89	51			101			151					No.	Feet or Meters	
2	41	37	52			102			152					1		
3	41	38	53			103			153					2		
4	41	32	54			104			154					3		
5	41	33	55			105			155					4		
6	41	35	56			106			156					5		
7	41	35	57			107			157					6		
8	41	35	58			108			158					7		
9	41	32	59			109			159					8		
10	41	35	60			110			160					9		
11	41	33	61			111			161					10		
12	41	40	62			112			162					11		
13	41	40	63			113			163					12		
14	41	35	64			114			164					13		
15	41	40	65			115			165					14		
16	41	38	66			116			166					15		
17	41	38	67			117			167					16		
18	41	36	68			118			168					17		
19	39	92	69			119			169					18		
20	41	37	70			120			170					19		
21	41	40	71			121			171					20		
22	41	40	72			122			172					21		
23	39	10	73			123			173					22		
24	41	85	74			124			174					23		
25	27	42	75			125			175					24		
26			76			126			176					25		
27			77			127			177					26		
28			78			128			178					27		
29			79			129			179					28		
30			80			130			180					29		
31			81			131			181							
32			82			132			182				No. Joints Delivered: 25			
33			83			133			183				No. Joints Run: 25			
34			84			134			184							
35			85			135			185				Total Run – Overall: 1017.47'			
36			86			136			186							
37			87			137			187				Top Pipe Below:			
38			88			138			188				<input checked="" type="checkbox"/> Rotary Drive Bushing			
39			89			139			189				<input type="checkbox"/> Derrick Floor			
40			90			140			190				Depth Landed: 1309.47'			
41			91			141			191				Operational Data			
42			92			142			192				Casing Makeup Torque 10-12,000 ft.-lbs.			
43			93			143			193				Hanging Weight @ Setting Depth 175 lbs.			
44			94			144			194				Pick Up Weight- Drag Setting Depth 180 lbs.			
45			95			145			195				Set Down Weight- Drag Setting Depth 170			
46			96			146			196				Casing Hung in Tension w/ lbs. on hanger			
47			97			147			197							
48			98			148			198							
49			99			149			199							
50			100			150			200							

Item(s)				Pipe Run			
No.	Size	Weight	Grade	Type	Joint	Range	Qty.
1	20"	94	X-56	Drill-Quip S-60 Box X		3	1
2-3	20"	94	X-56	D-L 501 DVT Float Shoe		3	2
4-12	20"	129	X-56	Drill-Quip S-60		3	9
13-28	20"	94	X-56	Drill-Quip S-60		3	11

Pipe and Auxiliary Equipment Tally
(Permanent Detailed Record)
Form 19 (6-79)

Attach to Form 20

Field				Well No.		Article		Size		Date	
Note: For casing and tubing with Hydril, Extremeline, or similar joints, record shoulder to shoulder measurements; for other tubulars, record measurement from outer edge of mill coupling to last engaged thread on field end.										Measurements made with <input type="checkbox"/> Decimal Footage Tape <input type="checkbox"/> Meters Centimeters Tape	
Note: Denote Centralizers on or Between Joints With (X)											
No.	Feet or Meters	No.	Feet or Meters	No.	Feet or Meters	No.	Feet or Meters	No.	Feet or Meters	Tally of Joints Not Run	
										No.	Feet or Meters
1		51		101		151		201		1	
2		52		102		152		202		2	
3		53		103		153		203		3	
4		54		104		154		204		4	
5		55		105		155		205		5	
6		56		106		156		206		6	
7		57		107		157		207		7	
8		58		108		158		208		8	
9		59		109		159		209		9	
10		60		110		160		210		10	
11		61		111		161		211		11	
12		62		112		162		212		12	
13		63		113		163		213		13	
14		64		114		164		214		14	
15		65		115		165		215		15	
16		66		116		166		216		16	
17		67		117		167		217		17	
18		68		118		168		218		18	
19		69		119		169		219		19	
20		70		120		170		220		20	
21		71		121		171		221		21	
22		72		122		172		222		22	
23		73		123		173		223		23	
24		74		124		174		224		24	
25		75		125		175		225		25	
26		76		126		176		226		26	
27		77		127		177		227		27	
28		78		128		178		228		28	
29		79		129		179		229		29	
30		80		130		180		230			
31		81		131		181					
32		82		132		182					
33		83		133		183					
34		84		134		184					
35		85		135		185					
36		86		136		186					
37		87		137		187					
38		88		138		188					
39		89		139		189					
40		90		140		190					
41		91		141		191					
42		92		142		192					
43		93		143		193					
44		94		144		194					
45		95		145		195					
46		96		146		196					
47		97		147		197					
48		98		148		198					
49		99		149		199					
50		100		150		200					
										No. Joints Delivered:	
										No. Joints Run:	
										Total Run - Overall:	
										Top Pipe Below:	
										<input type="checkbox"/> Rotary Drive Bushing	
										<input type="checkbox"/> Derrick Floor	
										Depth Landed:	
										Operational Data	
										Casing Makeup Torque ft.-lbs.	
										Hanging Weight @ Setting Depth lbs.	
										Pick Up Weight-Drag Setting Depth lbs.	
										Set Down Weight-Drag Setting Depth	
										Casing Hung in Tension w/ lbs. on hanger	
Item(s) No. Pipe Run											
24 Size 20" Weight 94 Grade X-56 Type Joint Drill-Quip NS-60 Pin X Range 3 Qty. 1											
25 Size 20" Weight 94 Grade X-56 Type Joint Drill-Quip S-60 Pin Range Qty.											
Size Weight Grade Type Joint w/ Extension & Range Qty.											
Size Weight Grade Type Joint Drill-Quip NS-60 Box Range Qty.											

Field YOLLA	Well No. 1	Article INTERMEDIATE CASING	Size 13-3/8	Date 10 JULY 1985
Note: For casing and tubing with Hydril, Extremeline, or similar joints, record shoulder to shoulder measurements; for other tubulars, record measurement from outer edge of mill coupling to last engaged thread on field end.				Measurements made with <input checked="" type="checkbox"/> Decimal Footage Tape <input type="checkbox"/> Meters Centimeters Tape
Note: Denote Centralizers on or Between Joints With (X)				

No.			Feet or Meters			No.			Feet or Meters			No.			Feet or Meters			No.			Feet or Meters			Tally of Joints Not Run					
No.			Feet or Meters			No.			Feet or Meters			No.			Feet or Meters			No.			Feet or Meters			No.			Feet or Meters		
1	1	96	51	39	18	101	39	25	151			201											No.	Feet or Meters					
2	37	49	52	39	67	102	38	23	152			202										1	39	35					
3	39	18	53	37	21	103	38	78	153			203										2	39	35					
4	1	46	54	38	08	104	38	97	154			204										3	39	35					
5	38	69	55	38	03	105	37	26	155			205										4	37	95					
6	39	30	56	38	38	106	36	31	156			206										5	36	22					
7	39	60	57	39	02	107	39	41	157			207										6	39	55					
8	38	88	58	39	28	108	39	60	158			208										7	39	25					
9	39	47	59	39	33	109	39	75	159			209										8	38	00					
10	38	34	60	38	01	110	39	76	160			210										9	39	35					
11	39	76	61	39	77	111	39	41	161			211										10	38	84					
12	39	26	62	38	71	112	39	07	162			212										11	39	15					
13	38	88	63	39	39	113	39	24	163			213										12	38	53					
14	39	65	64	39	05	114	39	15	164			214										13	39	65					
15	37	52	65	39	13	115	38	28	165			215										14	39	12					
16	39	55	66	39	77	116	37	23	166			216										15	39	05					
17	38	53	67	38	24	117	39	75	167			217										16	39	34					
18	39	52	68	33	80	118	38	83	168			218										17	39	15					
19	38	50	69	33	89	119	38	45	169			219										18	38	98					
20	39	29	70	39	77	120	38	81	170			220										19	39	54					
21	39	20	71	39	79	121	39	56	171			221										20	38	83					
22	38	97	72	39	77	122	39	65	172			222										21	39	18					
23	39	44	73	39	34	123	39	54	173			223										22	39	64					
24	38	08	74	38	86	124	39	40	174			224										23	10	18					
25	34	69	75	39	69	125	39	75	175			225										24	15	28					
26	39	36	76	39	47	126	38	81	176			226										25							
27	39	30	77	37	85	127	38	43	177			227										26							
28	39	52	78	24	58	128	38	77	178			228										27							
29	37	81	79	39	82	129	39	33	179			229										28							
30	39	04	80	38	90	130	39	68	180			230										29							
31	38	94	81	39	76	131	39	13	181																				
32	39	32	82	39	48	132	39	53	182				No. Joints Delivered: 164																
33	38	18	83	39	20	133	38	42	183				No. Joints Run: 140																
34	36	72	84	39	00	134	38	52	184																				
35	39	09	85	38	34	135	39	69	185				Total Run – Overall: 5456.50 (INCLUDES																
36	38	27	86	39	43	136	38	03	186				SHOE, FC & HANGER)																
37	39	47	87	39	73	137	37	62	187				Top Pipe Below:																
38	38	80	88	39	93	138	39	12	188				<input checked="" type="checkbox"/> Rotary Drive Bushing																
39	38	77	89	39	75	139	39	47	189				<input type="checkbox"/> Derrick Floor																
40	39	29	90	39	71	140	39	40	190				Depth Landed: 5748.50																
41	39	68	91	39	55	141	39	46	191				Operational Data																
42	37	92	92	39	77	142	39	15	192				Casing Makeup Torque(10,000) ft.-lbs.																
43	39	10	93	39	77	143	HGR 13	44	193																				
44	39	72	94	38	29	144			194				Hanging Weight @ Setting Depth 390,000 lbs.																
45	39	77	95	39	49	145			195																				
46	38	53	96	39	14	146			196				Pick Up Weight- Drag Setting Depth 400,000 lbs.																
47	39	52	97	38	49	147			197																				
48	38	20	98	38	38	148			198				Set Down Weight- Drag Setting Depth 370,000 lbs.																
49	37	90	99	39	70	149			199																				
50	38	03	100	39	52	150			200				Casing Hung in Tension w/321000 lbs. on hanger																

Item(s) No.		Pipe Run											
1 & 4	Size 13-3/8	Weight	Grade	Type Joint	BUTTRESS	Range		Qty.	SHOE & FC (3.42')				
2-25	Size 13-3/8	Weight 72	Grade N-80	Type Joint	BUTTRESS	Range		Qty.	891.79', 23 jts.				
26-142	Size 13-3/8	Weight 68	Grade N-80	Type Joint	BUTTRESS	Range		Qty.	4547.45', 117 jts.				
143	Size 13-3/8	Weight	Grade	Type Joint	BUTTRESS	Range		Qty.	13.44', 1 jt.				

Field						Well No.		Article		Size		Date				
YOLLA						1		CASING		9-5/8"		2ND SEPTEMBER'85				
Note: For casing and tubing with Hydril, Extremeline, or similar joints, record shoulder to shoulder measurements; for other tubulars, record measurement from outer edge of mill coupling to last engaged thread on field end.												Measurements made with <input checked="" type="checkbox"/> Decimal Footage Tape <input type="checkbox"/> Meters Centimeters Tape				
Note: Denote Centralizers on or Between Joints With (X)																
No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		No.	Feet or Meters		Tally of Joints Not Run	
1	Shoe 1	85	51	39	54	101	38	22	151	39	08	201	39	35	No.	Feet or Meters
2	38	60	52	39	12	102	39	21	152	39	50	202	39	67	1	39 29
3	39	65	53	38	99	103	38	86	153	38	87	203	39	33	2	37 41
4	F.C. 1	45	54	39	16	104	38	92	154	39	52	204	39	13	3	39 47
5	39	19	55	39	50	105	39	02	155	39	32	205	39	50	4	39 30
6	39	60	56	39	50	106	39	66	156	38	93	206	39	44	5	39 49
7	39	57	57	39	68	107	35	09	157	39	51	207	39	49	6	39 36
8	39	26	58	39	50	108	39	50	158	37	88	208	39	20	7	39 58
9	39	45	59	39	09	109	39	10	159	39	51	209	39	49	8	38 74
10	39	47	60	39	50	110	39	50	160	39	51	210	39	49	9	39 65
11	39	69	61	39	53	111	39	50	161	39	38	211	39	36	10	39 43
12	39	33	62	39	25	112	39	51	162	39	50	212	38	11	11	39 49
13	39	33	63	39	50	113	39	32	163	39	32	213	39	27	12	39 50
14	38	89	64	39	67	114	39	39	164	39	40	214	39	50	13	
15	39	49	65	36	83	115	39	50	165	39	50	215	39	51	14	Running String
16	39	32	66	38	70	116	39	23	166	39	46	216	39	50	15	
17	39	40	67	39	52	117	38	52	167	39	49	217	39	48	16	37 72
18	36	95	68	38	94	118	DV 3	28	168	39	50	218	39	48	17	39 39
19	38	38	69	39	68	119	39	65	169	36	76	219	39	25	18	39 49
20	36	62	70	36	44	120	39	50	170	38	37	220	39	64	19	39 41
21	38	25	71	39	05	121	39	51	171	39	50	221	39	51	20	39 50
22	36	80	72	39	64	122	39	64	172	39	54	222	39	49	21	39 24
23	36	88	73	39	51	123	39	53	173	39	51	223	39	49	22	39 13
24	39	17	74	38	01	124	39	50	174	39	50	224	38	64	23	39 49
25	39	42	75	38	63	125	39	22	175	39	50	225	39	45	24	
26	38	80	76	39	31	126	36	74	176	39	40	226	39	32	25	
27	39	35	77	39	40	127	39	43	177	39	40	227	38	65	26	
28	38	90	78	39	53	128	39	39	178	39	47	228	39	13	27	
29	37	40	79	39	50	129	39	67	179	39	22	229	39	60	28	
30	34	75	80	39	32	130	39	22	180	39	50	230	39	44	29	
31	38	29	81	39	35	131	39	03	181	38	89					
32	38	12	82	39	50	132	39	66	182	39	50					
33	38	29	83	37	76	133	39	53	183	39	43					
34	39	19	84	39	32	134	38	04	184	39	49					
35	39	27	85	36	40	135	38	25	185	39	50					
36	38	85	86	38	35	136	39	09	186	39	51					
37	36	23	87	39	50	137	38	80	187	39	03					
38	39	38	88	38	59	138	39	49	188	39	32					
39	39	32	89	39	49	139	39	04	189	39	49					
40	38	85	90	39	17	140	39	49	190	39	50					
41	37	10	91	39	69	141	39	69	191	39	36					
42	39	15	92	39	58	142	39	45	192	39	52					
43	39	53	93	39	50	143	39	49	193	39	35					
44	38	05	94	37	18	144	39	49	194	39	53					
45	39	19	95	39	34	145	39	38	195	39	53					
46	39	31	96	39	29	146	39	62	196	39	09					
47	39	05	97	39	65	147	39	06	197	39	24					
48	39	10	98	39	50	148	39	08	198	39	36					
49	39	50	99	39	65	149	39	25	199	39	50					
50	38	41	100	38	82	150	39	53	200	39	50					
Item(s) No. <u>1,4,118</u> Size <u>9-5/8"</u> Weight <u> </u> Grade <u> </u> Type Joint <u>Buttress</u> Range <u> </u> Qty. <u>Shoe, F.C., DV</u>																
<u>277</u> Size <u>9-5/8"</u> Weight <u> </u> Grade <u> </u> Type Joint <u>Buttress</u> Range <u> </u> Qty. <u>Casing Hanger</u>																
2-3,5-117 Size <u>9-5/8"</u> Weight <u>47</u> Grade <u>N-80</u> Type Joint <u>Buttress</u> Range <u>3</u> Qty. <u>273</u>																
119-276 Rng Stngs Size <u>9-5/8"</u> Weight <u>47</u> Grade <u>N-80</u> Type Joint <u>Buttress</u> Range <u>3</u> Qty. <u>8</u>																
Total Run - Overall: <u>10,978.61'</u> <u>10,665.24'</u>																
Top Pipe Below: <input checked="" type="checkbox"/> Rotary Drive Bushing <input type="checkbox"/> Derrick Floor																
Depth Landed: <u>10,957.24</u>																
Operational Data (9900) Triangle Casing Makeup Torque <u> </u> ft.-lbs.																
Hanging Weight @ Setting Depth <u>490,000</u> lbs.																
Pick Up Weight-Drag Setting Depth <u>510,000</u> lbs.																
Set Down Weight-Drag Setting Depth <u>450,000</u> lbs.																
Casing Hung in Tension w/ <u>426,000</u> lbs. on hanger																

Field YOLLA # 1	Well No. 1	Article	Casing	Size 9-5/8"	Date 2nd September, 1985
Note: For casing and tubing with Hydril, Extremeline, or similar joints, record shoulder to shoulder measurements; for other tubulars, record measurement from outer edge of mill coupling to last engaged thread on field end.					Measurements made with <input type="checkbox"/> Decimal Footage Tape <input type="checkbox"/> Meters Centimeters Tap
Note: Denote Centralizers on or Between Joints With (X)					

No.	Feet or Meters	No.	Feet or Meters	No.	Feet or Meters	No.	Feet or Meters	No.	Feet or Meters	Tally of Joints Not Run	
										No.	Feet or Meters
1	36 85	51		101		151		201		1	
2	39 16	52		102		152		202		2	
3	39 28	53		103		153		203		3	
4	39 68	54		104		154		204		4	
5	39 50	55		105		155		205		5	
6	39 51	56		106		156		206		6	
7	39 20	57		107		157		207		7	
8	39 00	58		108		158		208		8	
9	39 40	59		109		159		209		9	
10	39 55	60		110		160		210		10	
11	39 66	61		111		161		211		11	
12	39 48	62		112		162		212		12	
13	39 05	63		113		163		213		13	
14	39 28	64		114		164		214		14	
15	38 79	65		115		165		215		15	
16	39 28	66		116		166		216		16	
17	39 52	67		117		167		217		17	
18	39 52	68		118		168		218		18	
19	39 38	69		119		169		219		19	
20	39 20	70		120		170		220		20	
21	38 98	71		121		171		221		21	
22	39 28	72		122		172		222		22	
23	39 65	73		123		173		223		23	
24	39 45	74		124		174		224		24	
25	39 12	75		125		175		225		25	
26	39 67	76		126		176		226		26	
27	39 03	77		127		177		227		27	
28	39 04	78		128		178		228		28	
29	39 69	79		129		179		229		29	
30	39 48	80		130		180		230			
31	39 45	81		131		181				No. Joints Delivered:	
32	39 66	82		132		182					
33	39 28	83		133		183				No. Joints Run:	
34	39 49	84		134		184					
35	39 30	85		135		185				Total Run - Overall:	
36	39 50	86		136		186					
37	39 28	87		137		187				Top Pipe Below:	
38	39 02	88		138		188					
39	39 50	89		139		189				Depth Landed:	
40	39 31	90		140		190					
41	39 12	91		141		191				Operational Data	
42	39 51	92		142		192					
43	39 21	93		143		193				Casing Makeup Torque ft.-lbs.	
44	38 66	94		144		194					
45	39 29	95		145		195				Hanging Weight @ Setting Depth lbs.	
46	pup 15 94	96		146		196					
47	hgr 2 30	97		147		197				Pick Up Weight-Drag Setting Depth lbs.	
48		98		148		198					
49		99		149		199				Set Down Weight-Drag Setting Depth	
50		100		150		200					
										Casing Hung in Tension w/ lbs. on hanger	

Item(s) No.	Pipe Run	Size	Weight	Grade	Type Joint	Range	Qty.

GRAPHICAL ANALYSIS

OPERATOR AMOCO AUSTRALIA PET. CO.

RIG D/S R.F. BAUER

WELL YOLLA No 1

SPUD DATE 8 JUNE 1985

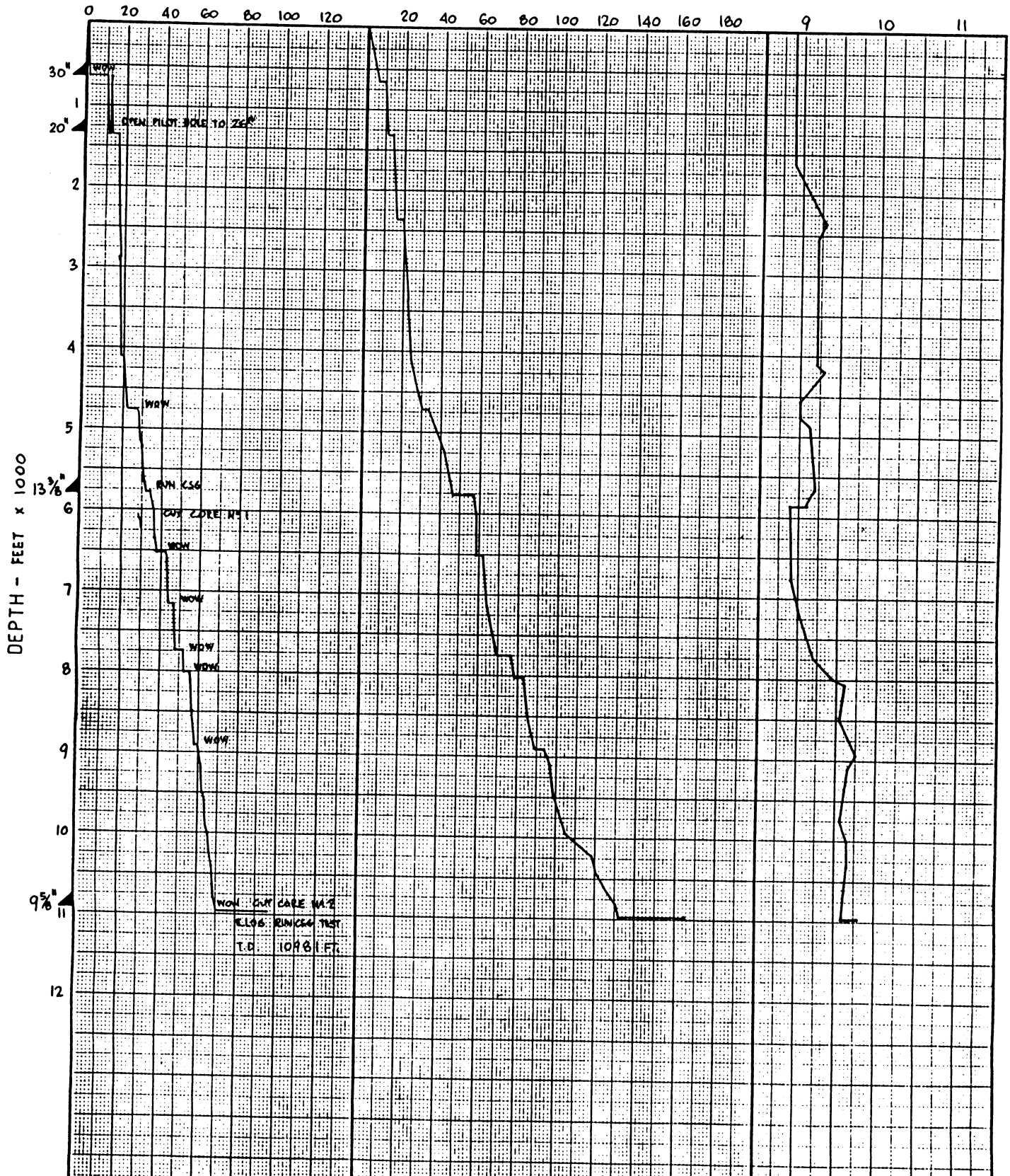
DRAWN BY S. ECKFELD

DATE DRAWN SEPTEMBER 1985

DAYS

COST - US \$ x 1000

FLUID DENSITY - PPg



MUD MATERIAL USAGE AND COST BY INTERVAL

<u>MATERIAL</u>	<u>36" HOLE</u>	<u>26" HOLE</u>	<u>17 1/2" HOLE</u>	<u>12 1/4" HOLE</u>	<u>DST</u>	<u>TOTALS</u>
GEL	654	628	1489	2800	749	6320
BARITE	107	0	1042	7100	2386	10635
CAUSTIC (50 KG)	15	5	109	165	27	321
CAUSTIC (70 KG)	0	0	33	52	3	88
Q-BROXIN	0	0	184	297	7	488
PAC-R	0	0	22	83	30	135
PAC-L	0	0	90	300	75	465
DEXTRID	0	0	285	80	219	584
SODA ASH	3	2	42	8	0	55
LIME	9	15	6	104	2	136
SUR-FLO W-300	0	0	1	0	0	1
ALUMINIUM STEARATE	0	0	9	1	0	10
POTASSIUM NITRATE	0	0	0	47	0	47
SODIUM BICARBONATE	0	0	0	6	1	7
CALCIUM CHLORIDE	0	28	0	0	0	28
CARBONOX	<u>0</u>	<u>0</u>	<u>0</u>	<u>155</u>	<u>0</u>	<u>155</u>
US DOLLARS	5932.92	5162.18	38,651.97	99,659.43	34,459.27	183,865.77



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

MATERIAL SUMMARY

COMPANY	AMOCO	MUD TYPE	HOLE	FEET	DRILLING
WELL	YOLLA NO. 1	SEAWATER-AQUAGEL	SIZE	DRILLED	DAYS
LOCATION	T14P, BASS STRAIT		36"	353	1
COST/DAY	\$4,339.92		26"	703	2
COST/FT	\$ 20.71	TOTAL ROTATING HRS	17 $\frac{1}{2}$ "	4424	15
COST/BBL	\$ 8.79	TOTAL DAYS ON HOLE	12 $\frac{1}{4}$ "	5209	33
RECAPPED BY	P. McNAUGHTON	TOTAL DEPTH	10981 ft	TOTAL	10689 ft
		MUD CONSUMPTION : WELL AVERAGE			2.35 BBL/FT

MATERIAL	UNIT	UNIT COST	ESTIMATED USED KG/M ³	ACTUAL USED ppb	TOTAL COST ESTIMATED	ACTUAL
AQUAGEL (BULK)	100 lb	13.21		5476		72,339.96
AQUAGEL (SACKS)	100 lb	13.21		68		898.28
ALUMINIUM STEARATE	10 kg	22.75		10		227.50
BICARB. SODA	50 kg	19.81		6		118.86
CARBONOX	50 lb	13.20		155		2,046.00
CAUSTIC SODA	50 kg	38.52		306		11,787.12
CAUSTIC SODA	70 kg	53.93		123		6,633.39
DEXTRID	50 lb	25.52		362		9,238.24
LIME	25 kg	5.38		134		720.92
PAC-L	50 lb	85.53		380		32,501.40
PAC-R	50 lb	85.53		105		8,980.65
POTASSIUM NITRATE	50 kg	45.01		47		2,115.47
Q-BROXIN	25 kg	15.11		473		7,147.03
SODA ASH	50 kg	17.52		13		227.76
SURFLO W300	200 lb	193.06		1		193.06
BARITE (BULK)	100 lb	8.66		7640		66,162.40

MATERIAL NOT USED FOR DRILLING (NOT INCLUDED IN TOTAL MUD COST)1. BASE PLATE

BARITE (SACKS)	100 lb	8.66		107		926.62
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2. CEMENTING

AQUAGEL (SACKS)	100 lb	13.21		40		528.40
CALCIUM CHLORIDE	25 kg	7.78		28		217.84

CHEMICAL VOLUME	890 BBL
FRESH WATER	20,412 BBL
SEA WATER	3,870 BBL
TOTAL MUD MADE	25,172 BBL

COST LESS BARYTES US\$155,173.64

COST WITH BARYTES US\$221,336.04

COMMENTS

COST/DAY AND DRILLING DAYS EXCLUDE DAYS LOST W.O.W.



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

MATERIAL RECAP

COMPANY	AMOCO	MUD TYPES	HOLE SIZE	36"
WELL	YOLLA NO. 1	SEAWATER +	INTERVAL TO	645 ft
LOCATION	T-24P, BASS STRAIT	FRESHWATER-GEL SPUD MUD	FROM	292 ft
COST/DAY	\$9,318.12		FEET DRILLED	352 ft
COST/ FT	\$ 26.40	CONTRACTOR	GLOBAL MARINE	
COST/ BBL	\$ 4.78	DRILLING DAYS/PHASE	1	
RECAPPED BY	M. SEWELL	ROTATING HRS/PHASE	6½	
DATE	JUNE 21, 1985	MUD CONSUMPTION FACTOR	3.26 bbl/ft	

MATERIAL	UNIT	UNIT COST	ESTIMATED USED KG/M³	ACTUAL USED ppb	TOTAL COST	
					ESTIMATED	ACTUAL
AQUAGEL (BULK)	100 lb	13.21		654		8,639.34
CAUSTIC SODA	50 kg	38.52		15		577.80
SODA ASH	50 kg	17.52		3		52.56
LIME	25 kg	5.38		9		48.92
<u>MATERIAL NOT CHARGED TO DRILLING</u>						
BARITE (FOR BASE PLATE)	100 lb	8.66		107		926.62

CHEMICAL VOLUME

FRESH WATER

73 BBL

SEA WATER

1877 BBL

TOTAL MUD MADE

1950 BBL

COST LESS BARYTES

US\$ 9,318.12

COST WITH BARYTES

US\$ 9,318.12

COMMENTS

MUD CONSUMPTION CALCULATED ON 1,150 BBL ALLOWING FOR 800 BBL CARRIED OVER TO 36" HOLE INTERVAL.



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

MATERIAL RECAP

COMPANY	AMOCO	MUD TYPES	HOLE SIZE	26"
WELL	YOLLA NO. 1	SEAWATER +	INTERVAL TO	1348 ft
LOCATION	T-14P, BASS STRAIT	FRESHWATER-GEL SPUD MUD	FROM	645 ft
COST/DAY	\$4,037.91		FEET DRILLED	703 ft
COST FT	\$ 11.49	CONTRACTOR	GLOBAL MARINE	
COST BBL	\$ 6.46	DRILLING DAYS/PHASE	2 (EXCLUDING W.O.W.)	
RECAPPED BY	M. SEWELL	ROTATING HRS/PHASE		
DATE	JUNE 21, 1985	MUD CONSUMPTION FACTOR	2.91 bbl/ft	

MATERIAL	UNIT	UNIT COST	ESTIMATED USED KG/M ³	ACTUAL USED	TOTAL COST ESTIMATED	ACTUAL
AQUAGEL (BULK)	100 lb	13.21		588		7,767.48
CAUSTIC SODA	50 kg	38.52		5		192.60
SODA ASH	50 kg	17.52		2		35.04
LIME	25 kg	5.38		15		80.70
<u>CEMENTING MATERIALS NOT INCLUDED IN COST OF DRILLING MUD</u>						
CALCIUM CHLORIDE	25 kg	7.78		28		217. 84
AQUAGEL (SACK)	100 lb	13.21		40		528.40
						<u>\$746.24</u>

CHEMICAL VOLUME
 FRESH WATER
 SEA WATER
 TOTAL MUD MADE
 COST LESS BARYTES
 COST WITH BARYTES
 COMMENTS

65 BBL
 1185 BBL
 -
 1250 BBL

US\$ 8,075.82
 US\$ 8,075.82

MUD CONSUMPTION CALCULATED ON 2060 BBLs, INCLUDING 800 BBL RESERVE VOLUME CARRIED OVER FROM 26" INTERVAL.
 2 DAYS DRILLING AND 1 DAY W.O.W.



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

MATERIAL RECAP

COMPANY	AMOCO	MUD TYPES	HOLE SIZE	17½"
WELL	YOLLA NO. 1	SEAWATER-AQUAGEL-POLYMER	INTERVAL TO	5772 ft
LOCATION	T-14P, BASS STRAIT		FROM	1348 ft
COST/DAY	\$3,811.46		FEET DRILLED	4424 ft
COST/FT	\$ 12.92	CONTRACTOR	GLOBAL MARINE	
COST/BBL	\$ 6.21	DRILLING DAYS/PHASE	15 (EXCLUDING W.O.W.)	
RECAPPED BY	M. SEWELL	ROTATING HRS/PHASE		
DATE	JULY 10, 1985	MUD CONSUMPTION FACTOR	2.08	bbl/ft

MATERIAL	UNIT	UNIT COST	ESTIMATED USED	KG/M³	ACTUAL USED	TOTAL COST	
						ESTIMATED	ACTUAL
AQUAGEL (BULK)	100 lb	13.21			1434		18,943.14
AQUAGEL (SACK)	100 lb	13.21			68		898.28
ALUMINIUM STEARATE	10 kg	22.75			9		204.75
CAUSTIC SODA	50 kg	38.52			132		5,084.64
CAUSTIC SODA	70 kg	53.93			60		3,235.80
DEXTRID	50 lb	25.52			282		7,196.64
LIME	25 kg	5.38			6		32.28
PAC-L	50 lb	85.53			90		7,697.70
PAC-R	50 lb	85.53			22		1,881.66
Q-BROXIN	25 kg	15.11			184		2,780.24
SURFLO W300	200 lb	193.06			1		193.06
BARITE (BULK)	100 lb	8.66			1042		9,023.72

CHEMICAL VOLUME

320 BBL

FRESH WATER

5010 BBL

SEA WATER

3870 BBL

TOTAL MUD MADE

9200 BBL

COST LESS BARYTES

US\$ 48,148.19

COST WITH BARYTES

US\$ 57,171.91

COMMENTS

DISPERSIVE CLAY IN TORQUAY GROUP (2800 - 4200 ft) REQUIRED HEAVY DILUTION AND CHEMICAL TREATMENT.
 350 BBL OF WEIGHTED (10.5 ppg) MUD PUMPED BEFORE RUNNING CASING.
 15 DAYS DRILLING + 4 DAYS W.O.W.

N Baroid Australia PTY. LTD./NL INDUSTRIES INC.

MATERIAL RECAP

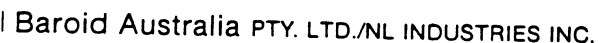
COMPANY	AMOCO	MUD TYPES	HOLE SIZE	12 $\frac{1}{4}$ "
WELL	YOLLA NO. 1	FRESHWATER-GEL-POLYMER	INTERVAL TO	10981 ft
LOCATION	T-14P, BASS STRAIT		FROM	5772 ft
COST/DAY	\$4,447.58		FEET DRILLED	5209 ft
COST/FT	\$ 28.18	CONTRACTOR GLOBAL MARINE		
COST/BBL	\$ 11.49	DRILLING DAYS/PHASE	33 (EXCLUDING W.O.W.)	
RECAPPED BY	S. BRACKER	ROTATING HRS/PHASE		
DATE	SEPTEMBER 5, 1985	MUD CONSUMPTION FACTOR	2.45 bbl/ft	

MATERIAL	UNIT	UNIT COST	ESTIMATED USED	KG/M ³	ACTUAL USED	TOTAL COST	
						ESTIMATED	ACTUAL
AQUAGEL	100 lb	13.21			1800		36,988.00
ALUMINIUM STEARATE	10 kg	22.75			1		22.75
BICARB. SODA	50 kg	19.81			6		118.86
CARBONOX	50 lb	13.20			155		2,046.00
CAUSTIC SODA	50 kg	38.52			154		5,932.08
CAUSTIC SODA	70 kg	53.93			63		3,397.59
DEXTRID	50 lb	25.52			80		2,041.60
LIME	25 kg	5.38			104		559.52
PAC-L	50 lb	85.53			290		24,803.70
PAC-R	50 lb	85.53			83		7,098.99
POTASSIUM NITRATE	50 kg	45.01			47		2,115.47
Q-BROXIN	25 kg	15.11			289		4,366.79
SODA ASH	50 kg	17.52			8		140.16
BARITE	100 lb	8.66			6598		57,138.68

CHEMICAL VOLUME	432	BBL	
FRESH WATER	12340	BBL	
SEA WATER	-		
TOTAL MUD MADE	12772	BBL	
COST LESS BARYTES			US\$ 89,631.51
COST WITH BARYTES			US\$146,770.19
COMMENTS			

MUD WEIGHT INCREASED BELOW 8000 FT DUE TO INCREASED BACKGROUND/TRIP GAS.
LIME ADDED TO TREAT FOR CO₂/CARBONATE/BICARBONATE CONTAMINATION.

EXTRA TREATMENT FOR EXTENDED W.O.W. SHUTDOWN (33 DRILLING DAYS + 20 DAYS W.O.W.)



DRILLING FLUID PROPERTY RECAP

COMPANY AMOCO AUSTRALIA PETROLEUM CO

WELL YOLLA NO. 1

DATE 1985	DEPTH Ft	HOLE SIZE	TEMP °C	WEIGHT ppg	VIS SEC	PV	YP	GELS 10 sec	10 min	WATER LOSS A.P.I.	CAKE mm	pH	PI	MI	Cl mg/l	Ca mg/l	SAND %	SOLIDS %	WATER %	OIL %	MBC ppb	REMARKS	TREATMENT	FORMATION
JUNE																								
5-6	-			9.0	180	10	70	75	85															
6				9.0	180																			
7				9.0	180 ⁺																			
8	645	36	-	8.9	100 ⁺	22	154	70	100			11									40	SPUD DATE		
9				-	-																			
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18	1345	17½		8.9	100 ⁺	22	154	70	100			11									40	RETURNS TO SURFACE	SHELL, CORAL, SAND	
19	1348	"		8.9	100 ⁺																			
20	1348	26"		8.9	100 ⁺	22	154	70	100			11									40	RETURNS TO SEABED		
21	1348	"		8.9	100 ⁺																			
22	1348	17½"		8.9	100 ⁺																			
23	1580	"	27.8	8.9	37	8	17	10	14	29.4	4	8.5	.05	.15	10000	560	4	4	96	0	20	RUN BOP, TAG CEMENT		
24	2364	"	-	9.3	67	10	43	23	35	38.0	3	9.8	.3	.7	15000	100	.25	8	92	0	25	DRILL CMT & SHOE	CLAYSTONE	
25	2539	"	36.1	9.2	69	7	48	25	30	13.4	3	9	.1	.25	13000	360	.25	6	94	0	22.5	DRILLED 14½ HRS		
26	3528	"	50.6	9.2	63	7	40	26	31	21.1	4	9.4	.1	.23	17000	1120	.1	6	94	0	22.5	WOW 10½ HRS, TEST BOP		
27	4101	"	-	9.2	65	10	35	23	-	16.0	3	9.8	.2	.5	19000	400	Tr	6	94	0	22.5	DRILL 23 HRS	CLAYSTONE	
28	4199	"	37.8	9.3	62	8	34	21	25	15.6	3	9.0	.1	.25	17000	760	Tr	7	93	0	25	DRILL 18 HRS,BIT TRIP	CLAYSTONE/SHALE	
29	4546	"	48.9	9.0+	41	4	24	18	26	10.3	2	11	1.25	2.9	16500	80	Tr	5	95	0	25	WOW, TEST BOP,DRILL 1HR	"	
	4764	"	-	9.0	48	8	22	19	28	9.8	2	11	1.4	2.9	16500	100	Tr	6	94	0	25	DRILL 23½ HRS	CLAYSTONE, SANDST	



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

DRILLING FLUID PROPERTY RECAP

COMPANY AMOCO AUSTRALIA PETROLEUM CO

WELL YOLLA NO. 1

DATE 1985	DEPTH Ft	HOLE SIZE	TEMP °C	WEIGHT ppg	VIS SEC	PV	YP	GELS 10 sec	10 min	WATER LOSS A.P.I.	CAKE mm	pH	Pf	Mf	Cl mg/l	Ca mg/l	SAND %	SOLIDS %	WATER %	OIL %	MBC ppb	REMARKS	TREATMENT	FORMATION
JUNE 30		17½	-																			W.O.W.		
JULY 1																						W.O.W.		
2																						W.O.W.		
3																						W.O.W.		
4	4764	"	-	9.1	84	15	48	33	48	12.8	2	9.5	.35	1.65	16500	160	Tr	6	94	0	25	TEST BOP's WASH & REAM TO BTM, DRILL	CLAYSTONE, SANDSTONE	
5	4858	"	41.1	9.1+	46	10	20	13	39	9.2	2	11	1.3	2.7	12000	100	Tr	7	93	0	27.5	DRILL 24 HRS	CLAYSTONE	"
6	5220	"	41.3	9.1	46	10	20	12	43	7.6	2	10.5	1.6	3.5	11000	100	Tr	7	93	0	28	DRILL 13½ HRS	"	"
7	5659	"	50.7	9.2	48	14	20	8	28	5.8	2	11	1.7	2.9	11000	80	Tr	7	93	0	27.5	DRILL, CIRC 24 HRS	"	"
8	5772	"	51	9.2	45	10	20	8	21	7	2	10.5	1.1	2.1	10000	100	Tr	7	93	0	27	DRILL 3 HRS	"	"
9	5772	"	51	9.1	48	15	18	7	15	7	2	10.8	1.0	2.7	10000	80	Tr	7	93	0	27.5	REAM, CIRC		
10	5772	"	-	9.1	49	26	19	8	16	7	2	10.8	1.0	2.7	10000	80	Tr	7	93	0	27.5	RUN 13-3/8" CSG		
11	5772	12¼	-	8.9	52	19	16	2	15	6	1	11.0	1.7	3.1	3500	Tr	Tr	4	96	0	20	DRILL, LEAK-OFF TEST	CLAYSTONE	
12	6030	"	-	8.9	45	17	15	2	12	5.8	1	11	1.6	3.1	4000	Tr	Tr	4	96	0	17.5	DRILL 6½ HRS	SAND	
13	6302	"	30	8.9	48	17	17	2	12	5.8	1	11	1.3	2.6	4000	Tr	Tr	4	96	0	17.5	CORE, RIH, CIRC	"	
14	6504	"	-	8.9	48	17	17	2	12	5.8	1	11	1.3	2.6	4000	Tr	Tr	4	96	0	17.5	DRILL 5½ HRS, W.O.W.		
15																						W.O.W.		
16																						W.O.W.		
17																						W.O.W.		
18	6504	"	46.1	8.9	49	17	18	2	12	6.0	1	11	1.3	2.6	4000	Tr	Tr	4	96	0	19	W.O.W., RIH, CIRC		
19	6605	"	43.3	8.9	45	16	17	4	12	5.9	1	10.5	1.0	2.1	4000	Tr	Tr	4	96	0	19	LOGS, DRILL 3½ HRS		
20	6722	"	-	8.9	50	19	15	4	22	6.0	1	10.5	1.1	2.0	4000	Tr	Tr	4	96	0	20	DRILL 14½ HRS, W.O.W.		
21	7142	"	-	9.0	51	23	19	4	21	6.0	1	11.5	1.7	2.5	4000	Tr	Tr	3	97	0	20	W.O.W.		
22																						W.O.W.		
23																						W.O.W.		
24	7179	"	45.6	8.9	45	15	13	3	15	6.3	1	11.0	1.4	1.9	5000	20	Tr	3	97	0	20	DRILL 18½ HRS RAISE WT TO 9.2	SST, SILTST, CLAYST COAL	



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

DRILLING FLUID PROPERTY RECAP

COMPANY

WELL

DATE 1985	DEPTH Ft	HOLE SIZE	TEMP °C	WEIGHT ppg	VIS SEC	PV	YP	GELS 10 sec	10 min	WATER LOSS A.P.I.	CAKE mm	pH	PI	MI	Cl mg/l	Ca mg/l	SAND %	SOLIDS %	WATER %	OIL %	MBC ppb	REMARKS	TREATMENT	FORMATION
JULY																								
25	7726	12 $\frac{1}{4}$	58.3	9.2	51	16	14	6	31	6.0	1	11.6	1.37	2.34	4200	Tr	Tr	5	95	0	22.5	W.O.W.		
26																						W.O.W.		
27	7726	"	32.2	9.2	49	19	14	3	14	5.6	1	11.5	.98	1.85	4300	Tr	Tr	5	95	0	22.5	DRILL 12 $\frac{1}{4}$ HRS RAISE WT TO 9.4		SANDST, SHALE, COAL
28	8000	"	62.8	9.4+	56	20	20	5	29	5.8	1	10.9	1.15	2.04	3500	Tr	Tr	7	93	0	26	W.O.W.		
29																						W.O.W.		
30																						W.O.W.		
31	"	"	15.6	9.4+	90	30	26	8	22	5.2	1	10.1	.81	1.8	4900	32	Tr	7	93	0	26	W.O.W.		
AUGUST																								
1	8050	"	55.6	9.6	57	22	21	9	31	5.3	1	10.4	1.12	2.5	4000	20	Tr	7	93	0	26	DRILL 7 HRS		SANDST, SHALE, COAL
2	8183	"	61.1	9.6	56	23	21	10	33	5.3	1	10.7	1.37	2.8	3600	Tr	.25	7	93	0	26	DRILL, 23 HRS		SANDST, SILT, COAL
3	8544	"	68.9	9.5+	59	25	21	9	32	5.6	1	10.5	1.3	2.5	2750	Tr	.4	7	93	0	25	DRILL 24 HRS		SHALE, VOLCANICS
4	8902	"	71.1	9.7+	53	23	16	8	25	5.2	1	10.8	1.66	3.25	2400	Tr	.25	8	92	0	27	BIT TRIP, W.O.W.		
5	8902	"	-	9.7+	53	23	16	8	25	5.2	1	10.8	1.66	3.25	2400	Tr	.25	8	92	0	27	WASH TO BOTTOM		
6	9176	"	70	9.6+	52	16	24	11	39	7.4	1	10.4	1.67	4.2	2700	20	0.25	7	93	0	23	CO ₂ CONTAMINATION?		
7	9460	"	72.2	9.6+	160	15	78	64	76	7.5	3	10.6	1.8	4.5	2600	40	0.25	7	92	0	23	" " TREAT WITH LIME		
	9515	"	72.4	9.6	60	14	32	22	33	7.5	2	11.0	1.7	2.4	2500	200	0.2	8	92	0	22	" " " " "		
8	9532	"	71.1	9.6+	66	16	35	20	36	7.8	2	10.7	1.8	3.9	2400	140	0.2	7	93	0	23	DRILL		
9	9777	"	72.2	9.5+	51	15	10	5	18	8.6	2	11.4	2.2	3.9	2100	200	0.2	7	93	0	23	REDUCE SOLIDS/RHEOLOGY		
10	10068	"	70.6	9.6+	50	19	14	7	25	6.2	2	10.7	1.6	3.4	1500	120	0.25	7	93	0	25	DRILL		
11	10138	"	71.7	9.5+	49	14	12	5	15	6.3	2	10.8	1.7	3.2	1300	20	0.1	6	94	0	25	DRILL		
12	10360	"	71.7	9.6	51	19	14	5	23	6.5	2	10.9	1.4	3.1	1200	20	0.25	7	93	0	25	DRILL		
13	10500	"	73.9	9.6	57	20	16	5	22	7.7	2	10.6	1.2	2.5	1200	Tr	0.25	8	92	0	28	DRILL		
14	10823	"	76.7	9.6	50	19	14	4	11	8.7	2	10.7	0.9	1.9	1200	40	0.1	7	93	0	25	DRILL		
15	10930	"	75	9.6	59	17	18	5	14	8.6	2	11.0	1.1	2.3	1400	40	Tr	7	93	0	26	DRILL		
16	10972	"	-	9.6	44	16	16	4	16	8.5	2	11.0	1.0	2.3	1300	40	Tr	7	93	0	25	W.O.W.		
17	10972	"	-	9.6	44	16	16	4	16	8.5	2	11.0	1.0	2.2	1300	40	Tr	7	93	0	25	W.O.W.		



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

DRILLING FLUID PROPERTY RECAP

COMPANY

AMOCO AUSTRALIA PETROLEUM CO

WELL

YOLLA NO. 1

DATE 1985	DEPTH Ft	HOLE SIZE	TEMP °C	WEIGHT ppg	VIS SEC	PV	YP	GELS 10 sec	10 min	WATER LOSS A.P.I.	CAKE mm	pH	PI	MI	CI mg/l	Ca mg/l	SAND %	SOLIDS %	WATER %	OIL %	MBC ppb	REMARKS	TREATMENT	FORMATION
<u>AUGUST</u>																								
18	10972	12 $\frac{1}{4}$	-	9.6	44	16	16	4	16	8.5	2	11.0	1.0	2.2	1300	40	Tr	7	93	0	25	W.O.W.		
19	10972	"	-	9.6	44	16	16	4	16	8.5	2	11.0	1.0	2.3	1300	40	Tr	7	93	0	25	W.O.W.		
20	-	-	20	9.6	48	18	15	5	16	5.8	2	12.2	2.8	5.1	1800	Tr	Tr	6	94	0	28	MILL FISH IN STACK		
21	10974	"	78.3	9.8	56	19	16	4	23	8.8	2	11.0	1.95	3.5	1800	Tr	Tr	7	93	0	25	RAISE WT-HIGH BACKGROUND GAS & CO ₂		
22	10974	"	78.0	9.8	44	16	10	2	7	9.0	2	11.0	2.2	4.2	1200	Tr	Tr	8	92	0	25	E-LOG		
23	10981	"	-	9.8	40	15	8	2	5	7.6	2	12.1	3.1	5.4	1400	40	Tr	8	92	0	25	TREAT SURFACE MUD WITH LIME, E-LOG		
24	10981	"	-	9.6+	70	23	24	7	18	9.9	2	11.8	1.40	3.10	1500	Tr	Tr	7	93	0	27	E-LOG		
25	10981	"	-	9.6	40	8	8	3	10	9.7	2	12.0	1.45	3.00	1400	Tr	Tr	7	93	0	28	E-LOG, W.O.W.		
26	20981	"	-	9.6	40	8	8	3	9	9.7	2	12.0	1.45	3.00	1400	Tr	Tr	7	93	0	28	W.O.W.		
27	10981	"	46	9.6	50	14	7	3	9	10.0	2	11.8	2.40	3.65	1700	Tr	0.3	9	91	0	28	W.O.W., WIPER TRIP		
28	10981	"	-	9.7	42	7	8	2	9	9.2	2	10.2	0.14	0.64	7900	120	0.2	7	93	0	27	RAISE WT, CLEAN HOLE W.O.W.		
29	10981	"	-	9.8	41	9	7	2	7	8.4	2	10.2	0.60	1.10	8000	140	Tr	7	93	0	26	W.O.W., WIPER TRIP		
30	"	"	-	9.8	40	9	7	2	6	8.4	2	10.3	0.80	2.60	7400	100	Tr	8	92	0	25	E-LOGS		
31	"	"	62	9.8	52	19	10	3	10	9.6	2	10.8	.45	1.80	3600	80	0.2	8	92	0	29	E-LOGS, WIPER TRIP		
<u>SEPTEMBER</u>																								
1	"	-	-	9.8	42	10	8	3	9	9.6	2	10.7	.40	1.60	3800	100	0.1	8	92	0	29	WIPER TRIP, RUN 9-5/8" CSG		
2	"	9-5/8"	-	9.8	42	10	8	3	9	9.6	2	10.7	.40	1.60	3800	100	0.1	8	92	0	29	RUN CSG, W.O.W., CMT CSG		
3	"	"	-	9.8	42	10	8	3	9	9.6	2	10.7	.40	1.60	3800	100	0.1	8	92	0	29	CMT CSG., TEST WELL HEAD		
4	"	"	-	9.6	53	15	5	1	4	4.4	1	12.2	2.2	3.30	1500	Tr	0	4	96	0	10	MIX NEW MUD FOR TESTING		
5	"	"	-	9.6	62	32	19	3	10	4.0	1	12.3	2.3	3.40	1500	Tr	0	4	96	0	10			
6	"	"	-	9.6	64	34	18	3	10	4.0	1	12.2	2.25	3.30	1500	Tr	0	4	96	0	10			
7	"	"	-	9.6	66	32	19	3	10	4.0	1	12.2	2.25	3.30	1500	Tr	0	4	96	0	10			
8	"	"	-	9.6	67	27	19	2	6	4.1	1	12.2	2.1	3.2	1800	Tr	0	4	96	0	10	DISPLACE SEAWATER IN CSG WITH TEST FLUID		
9	"	"	-	9.6	67	28	18	2	6	4.1	1	12.1	2.1	3.2	1800	Tr	0	4	96	0	10			
10	"	"	-	9.6	67	29	20	2	6	4.1	1	12.1	2.1	3.2	1900	Tr	0	4	96	0	10			
11	"	"	-	9.6	67	27	19	2	6	4.2	1	12.1	2.0	3.1	1800	Tr	0	4	96	0	10			
12	"	"	-	9.5+	67	27	20	3	6	4.2	1	12.1	2.0	3.1	1800	Tr	0	4	96	0	10			



Baroid Australia PTY. LTD./NL INDUSTRIES INC.

DRILLING FLUID PROPERTY RECAP

COMPANY

AMOCO AUSTRALIA PETROLEUM

WELL

YOLLA NO. 1

DATE	DEPTH	HOLE	TEMP	WEIGHT	VIS	PV	YP	GELS	WATER	CAKE	pH	PI	MI	CI	Ca	SAND	SOLIDS	WATER	OIL	MBC	REMARKS	TREATMENT	FORMATION
1985	Ft	SIZE	°C	ppg	SEC			10	10	LOSS				mg/l	mg/l	%	%	%	%	ppb			
SEPTEMBER																							
13	10981	9 ⁵ / ₈ "	-	9.6	73	32	20	2	6	3.6	1	12.3	3.4	5.1	4100	Tr	0	4	96	0	10	SEAWEATER CONTAM OF MUD,REBUILD LOST VOL RAISE MBT TO 17.5 TO IMPROVE SUSPENSION	
14	"	"	48	9.6	73	42	34	4	15	4.2	1	12.0	1.5	2.2	2700	Tr	0	5	95	0	17.5		
15	"	"	-	9.6	73	42	34	4	15	4.2	1	12.0	1.5	2.2	2700	Tr	0	5	95	0	17.5		
16	"	"	-	9.6	73	36	25	4	14	4.2	1	12.1	1.8	2.4	3400	Tr	0	5	95	0	17.5		
17	"	"	-	9.6	69	40	24	5	16	4.4	1	11.9	1.6	2.3	3600	Tr	0	5	95	0	17.5		
18																							
19																					W.O.W.		
20																					W.O.W.		
21																					W.O.W.		
22	"	"	-	9.6	70	42	30	8	15	4.2	1	12.5	1.7	2.6	1200	Tr	0	5	95	0	12.5	W.O.W.	
23	"	"	-	9.6	75	39	30	6	15	4.0	1	12.0	1.7	2.6	1200	Tr	0	5	95	0	12.0	DST NO. 2, PERF @ 6000 FT	
24	"	"	-	9.6	75	40	31	6	16	4.0	1	12.0	1.6	2.5	1200	Tr	0	5	95	0	17.5	DST NO. 2	
25	"	"	-	9.6	68	38	30	5	14	4.0	1	12.0	1.6	2.5	1200	Tr	0	5	95	0	17.5	RAN CBL & EZ-SV	
26	"	"	-	9.6	68	38	30	6	15	4.2	1	12.0	1.6	2.6	1200	Tr	0	5	95	0	17.5	DST NO.3, PACKER FAILURE	
27	"	"	-	9.8	52	35	20	6	15	4.0	1	12.0	1.8	2.8	2800	Tr	0	5	95	0	17.5	DST NO. 3A, PACKER FAILURE	
28	"	"	-	9.6	50	33	19	5	14	4.0	1	12.0	1.7	2.8	3000	Tr	0	5	95	0	17.5	CEMENT SQUEEZE NO. 1	
29	"	"	-	9.6	70	40	32	7	16	4.0	1	12.0	1.7	2.8	3200	Tr	0	5	95	0	17.5	CEMENT SQUEEZE NO. 2	
30	"	"	-	9.7	62	32	23	5	15	4.0	1	12.0	2.8	3.6	3800	Tr	0	5	95	0	20.0	CEMENT SQUEEZE NO. 3	
OCTOBER																							
1	"	8 ¹ / ₂ "	-	9.6	74	40	32	5	17	4.0	1	12.0	2.4	3.2	3500	Tr	0	5	95	0	25	DRILL OUT CMT	
2	"	"	-	9.6	70	43	32	6	17	4.0	1	12.0	2.4	3.2	3500	Tr	0	5	95	0	25		
3	"	"	-	9.6	75	45	34	6	18	4.0	1	12.0	2.4	3.2	3500	Tr	0	5	95	0	25	RIH WITH RTTS, DRY TEST	
4	"	"	-	9.6	70	43	32	6	17	4.0	1	12.0	2.4	3.2	3500	Tr	0	5	95	0	25	RIH WITH DST NO.3	
5	"	"	-	9.6	62	38	27	5	16	4.0	1	12.0	2.4	3.2	3500	Tr	0	5	95	0	25	FLOW WELL : 6012 - 6014 ft	
																					FLOW WELL		

MUD DISCUSSION BY INTERVAL

36" Hole, RKB to 645 ft (RKB to Seabed 259 + 37 ft)

30" Casing Set at 621 ft

The 36" hole was drilled with seawater. Fluid returns were to the seabed. At 645 ft the hole was flushed with 75 bbls high viscosity mud and followed by seawater. The hole was again displaced with 800 bbls of high viscosity mud.

The high viscosity mud was prepared by prehydrating 40 ppb of Bentonite in Drill Water and then flocculating this mix with Lime just before pumping downhole.

No problems were experienced in running the 30" casing to 621 ft.

26" Hole 17-1/2" Pilot Hole, 645 ft to 1348 ft
20" Casing Set at 1309 ft

For the 17-1/2" Pilot hole the riser was run. Seawater with high viscosity Bentonite plus Lime was used, as in the previous hole phase, to assist in hole cleaning. The pilot hole was drilled in 6-1/2 hours.

Prior to pulling the riser and opening the pilot hole to 26", a 50 bbl high viscosity pill was spotted in the hole. A total of 280 bbls of high viscosity mud were consumed.

After pulling the riser, the hole was opened to 26" at a controlled drilling rate of 90 - 100 ft/hr. At 1348 ft, a 50 bbl high viscosity pill was circulated around and a wiper trip was made to the 30" casing shoe. No fill was evident on running back to bottom. The 26" hole was then displaced with 1000 bbls of high viscosity mud.

20" casing was run and cemented at 1309 ft with no problems.

17-1/2" Hole, 1348 ft to 5772 ft
13-3/8" Casing Set at 5748 ft

General

This hole interval was drilled with a lightly dispersed seawater Bentonite/Starch mud. Bentonite was prehydrated to be added to the seawater as a base mud. Additions of Dextrid, Pac-R and Pac-L were made to maintain desirable mud properties and lower the fluid loss. Q-Broxin was added to control Rheology.

After drilling out the 20" shoe and 5 ft of new hole, the hole was displaced with mud. A FCCT was performed to a 12.5 ppg mud weight equivalent.

Drilling continued through claystones and shales. Due to lengthy periods of waiting on weather, the mud properties were adjusted to give maximum hole stability i.e. an M.B.T. of 25 ppb, a filtrate of 15-10 cc/30 min and a pH of greater than 11.0.

At 3358 ft, highly dispersive clays were drilled, necessitating heavy dilution to control mud weight and viscosity. No major hole problems developed other than some hole fill after periods of waiting on weather.

The hole was logged after making a wiper trip. After logging, further wiper trips were made and high viscosity pills were pumped around to assist hole cleaning due to 17 ft of fill. Prior to running casing, 350 bbl of 10.5 ppg mud was spotted on the bottom, and 13-3/8" casing was run and cemented at 5748 ft with no problems.

Solids Control Equipment

The available solids control equipment on the drillship R. F. Bauer consisted of 2 Brandt double deck shakers, a 2 x 12" cone desander, 2 Brandt 10 x 4" desilters/mud cleaners and a 24" x 38" Baroid high volume centrifuge.

While drilling, maximum use was made of all the available solids control equipment. The Baroid high volume centrifuge was run at 1800 rpm, processing 100 gpm of mud.

Below 5100 ft, the mud became badly aerated, consequently the use of the desander and desilter had to be discontinued temporarily as their operating pressures fell to only 12 psi instead of the 40-50 psi as required for efficient operation. Defoamers did not solve the aeration problem which was due to a CO₂ influx.

The mud alkalinities were closely monitored for bicarbonate contamination and the pH raised to 11.0 to ensure the CO₂ influx was kept in a carbonate form.

The high circulating rates of 20-23 bbl/min necessary to ensure good hole cleaning only allowed use of 40 over 60 Mesh shaker screens for most of this section. One shale shaker however, was fitted with a 60 over 80 set of screens below 5100 ft.

Mud Properties

Mud properties were run in accordance with Amoco's requirements as a Lightly Dispersed/Seawater/Bentonite/Starch mud.

At 3358 ft, highly dispersive formation clays were drilled. These clays were found to have an M.B.T. in excess of 25 ppb. Heavy mud dilution and treatment were needed to maintain desirable properties despite continuous use of the solids control equipment.

As mentioned previously, mud properties were optimized as a precaution against lengthy periods of waiting on weather.

Slight carbonate alkalinity contamination was encountered at around 5600 ft. as the hole temperatures become high enough to react to bicarbonates. This was corrected by the addition of small quantities of lime.

The mud system used and the properties maintained were good for the zones drilled in this well. Generally good hole conditions were experienced despite lengthy periods when the hole was left standing open while waiting on weather.

<u>Property</u>	<u>Programmed</u>	<u>Achieved</u>
Density	8.9 - 12.5 ppg	8.9 - 9.2
Funnel Viscosity	40 - 50 sec/qt	65 - 45
Yield Point	8 - 20 lbs/100 ft ²	35 - 20
10 Sec Gel	6 - 15 lbs/100 ft ²	25 - 7
API Fluid Loss	< 15 cc/30 min	38 - 7
MBT	20 - 30 ppb	23 - 27.5
pH	10.5 - 11.0	9.5 - 11.0 +

Hole Conditions

Generally this hole section was in good condition despite dispersive formations and long periods of waiting on weather. The dispersive clays of the "Torquay Group" drilled from approximately 2800 ft to 4200 ft, required heavy dilution and mud treatments but did not cause any major hole problems.

After having waited on weather for 4 days at 4764 ft, the hole was re-entered with only 30 ft of fill after working through tight spots at 1309 ft, 2346 ft, 3381 - 3463 ft, 4041 - 4122 ft and 4734 - 4764 ft.

The "Demons Bluff" formation was encountered at 5250 ft. This was a relatively unreactive claystone with a low MBT of 6 ppb. However after logging at 5772 ft, the hole needed to be washed at 5461 - 5494 ft and 5710 - 5769 ft. Cuttings from the "Demons Bluff" were blocky with no overt signs of sloughing.

Conclusions

The mud system as used performed well at reasonable cost and is recommended again for future wells in this area.

If a faster overall drilling time is achieved in the future, i.e., less time is spent waiting on weather, the mud properties could probably be relaxed as the formations drilled did not appear to be so reactive that continual hole problems were experienced.

Good solids control is necessary, particularly in the "Torquay Group" of claystones.

Consideration should be given to maintaining an excess of at least 100 ppm Calcium, as distinct from total hardness (Calcium and Magnesium), in the filtrate. This will help prevent excessively high progressive gel strengths caused by carbonate/bicarbonate alkalinities. Generally, carbonates are more reactive to pressure and temperature. Foaming will be a slight problem but can be reduced with the use of aluminium stearate and diesel. Do not use liquid defoamers. Overtreatment from liquid defoamers cause "Foaming".

The total number days spent waiting on weather, were 34.6 days. Five additional days were spent handling anchors.

12-1/4" Hole, 5772 ft to 10981 ft
9-5/8" Casing Set at 10955 ft

General

While drilling out the 13-3/8" casing float collar and shoe, the seawater mud from the previous interval was displaced with a freshly prepared Freshwater/Bentonite/Starch mud which had been pretreated with Sodium Bicarbonate and Lignosulphonate to minimize the effects of cement contamination. The weight of this mud was initially maintained at 8.9 ppg with the use of all available solids control equipment. Mud properties were maintained by the addition of new premixed mud with polymers from the reserve system.

Below 6500 ft, the Bentonite content of the mud was gradually raised from 17.5 ppb to 20 to 25 ppb to reduce the HT-HP fluid loss and to provide increased mud stability during extended periods of waiting on weather.

Increasing background gas readings below 7500 ft suggested a mud weight increase. The weight was raised from 8.9 ppg to 9.2 ppg. After further gas (20%) on bottoms up at 7726 ft, the weight was again increased to 9.4 + ppg, and 9.6 ppg by 8000 ft after 50% bottoms up gas after waiting on weather.

Carbonate contamination from CO₂ was encountered from 9000 ft - 10,000 ft. This was treated with lime to counteract the contamination.

The hole was logged at a T.D. of 10,981 ft. Estimated pore pressures from R.F.T. data suggest normal pressures throughout this interval:

9250'	8.66 ppg equivalent
9200'	8.67 " " "
9810'	8.60 " " "
6010'	8.67 " " "
5970'	8.67 " " "

9-5/8" casing was run and cemented at 10,955 ft.

Solids Control Equipment

The available solids control equipment for this hole section was as used previously, with the exception that 200 mesh screens were placed on the mud cleaners below 9000 ft to retrieve Barite with the higher mud weight in use. Use of the high volume centrifuge was also reduced to save Barite.

In combination with good solids control equipment and dilution with premix, excessively high solids were not a problem. The total low gravity solids content of the mud was below 50 ppb and averaged around 40 ppb or less. No controlled drilling was necessary. The formations drilled were not highly dispersive.

Mud Properties

For this section a Freshwater/Bentonite/Polymer mud was used. With increasing depth and temperature, the use of starch was curtailed and replaced by PAC-R and PAC-L due to their greater temperature tolerance. Additions of Lignite and Lignosulphonate were also made to help control rheology and HT-HP filtrate.

Below 6500 ft, the Bentonite content of the mud was raised to 20-25 ppb and to 25-30 ppb by total depth to assist in HT-HP control and mud stability.

The mud weight was increased, as mentioned previously, in accordance with background/trip gas indications, reaching 9.8 ppg by total depth, although in retrospect, R.F.T. data indicates normal pressure throughout this interval.

Below 9000 ft, carbonate contamination from CO₂ was indicated. It was not possible to reduce high gel strengths and yield point with chemical treatment in the form of Lignite/Lignosulphonate additions. Fluid loss measurements were erratic and flowline viscosities were high and in excess of 3 times the suction viscosity.

P1/P2 alkalinities also indicate a carbonate/bicarbonate problem. After pilot testing, 1 ppb lime was added successfully to the system to counteract the problem. Following a initial viscosity hump during the lime additions, properties returned to normal. Further carbonate contamination occurred at 10,060 ft and at T.D. these problems were corrected with lime as above.

Apart from the carbonate/bicarbonate contamination, the mud proved easy to maintain and provided the desired properties both good hole cleaning, and relatively good hole stability despite long periods of waiting on weather.

<u>Property</u>	<u>Programmed</u>	<u>Achieved</u>
Density	8.9 - 12.5 ppg	8.9 - 9.8
Funnel Viscosity	40 - 50 sec/qt	40 - 60
Yield Point	8 - 20 lbs/100 ft ²	8 - 20
10 Sec Gel	6 - 15 lbs/100 ft ²	2 - 10
10 Min Gel	15 - 30 lbs/100 ft ²	15 - 35
API Fluid Loss	< 10 cc/30 min	5 - 10
HP - HT	10.5 - 11.0	10.5 - 12
MBT	20 - 30 ppb	17.5 - 30

Hole Conditions

Hole condition was good considering many days were lost while waiting on weather. Even with drill pipe and casing left in the open hole while waiting on weather, no cases of stuck pipe occurred.

At 6504 ft there was 90 ft of fill after W.O.W., but after cleaning this out, no problems were experienced during logging.

There was tight hole on P.O.H. at 6610 ft - 6579 ft. After W.O.W., there was 11 ft of fill.

After W.O.W. at 7726 ft, there was 8 ft of fill and 20% gas.
After W.O.W. at 8902 ft, there was a bridge at 8526 ft, and some washing at 8526 ft - 8628 ft. No fill.

Conclusions

The mud system performed well despite many days downtime for weather. It proved relatively trouble free to maintain, once the carbonate/bicarbonate contamination was recognized, and treated.

For future wells in this area, the presence of CO₂ must be expected, and lime additions may be made as a preventative measure even before the effect of CO₂ contamination is seen. A low lime mud below the 13-3/8" casing would prove a good alternative for CO₂ problems.

Water/drilled, consumed by intervals

20"	hole section:	2,000 bbls
13-3/8"	hole section:	6,000 bbls
12-1/4"	hole section:	32,332 bbls

COMPANY										CONTRACTOR										COUNTY										STATE																																							
AMOCO AUSTRALIA PETROLEUM COMPANY										GLOBAL MARINE										AUSTRALIA										TASMANIA																																							
LEASE										WELL NO										SEC										TOWNSHIP										RANGE										BLOCK										FIELD									
T/14-P										YOLLA # 1																														BASS STRAIT																													
TOOL PUSHER WILLIAMS/WILSON/GOSS/LAWSON										DRILL PIPE 5" 19.50										DRAW WORKS NATIONAL 1625 U.E.																																																	
DAY DRILLER DODD/BRONDEL/WACHTER/TRAUTH										TOOL JOINT MAKE SIZE TYPE 4-1/2" IF										POWER 3000 H P										UNDER SURF																																							
EVENING DRILLER										DRILL COLLAR NO 0 D I D LENGTH 6.5 2 13/16										PUMP NO 1 MAKE MODEL STROKE NATIONAL 12P-160 12										INT DATE																																							
MORNING DRILLER										DRILL COLLAR NO 0 D I D LENGTH 8 2 13/16										PUMP NO 2 MAKE MODEL STROKE " " " "										T D DATE																																							
BIT NO	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LBS	ROTARY R P M	VERT DEV	PUMP PRESS	PUMPS			MUD		DULL CODE			REMARKS FORMATION CIRC FLUID, ETC	DATE																																											
					1	2	3										No	Liner	SPM	Wt	Vis	T	B	G																																													
1	26	S	DSJ	XR 6740	18	18	18	645	348	5 1/2	5.5	63.3	0-10	100	3/4	1200	2	7	100	9	100	2	2	I	26/36 H.O. ASSEM.	9/6																																											
2	17-1	2 S	DSJ	XO 5484	18	18	18	1350	705	6 1/2	12	108.5	5-8	140	3/4	2900	2	7	180	9	100	1	1	I	PILOT HOLE	18/6																																											
RR1 3	26	S	DSJ	XR 6740	20	20	20	1350	(705)	8	20	94	5-8	120	1 1/2	2300	2	7	198	9	100	2	2	I	OPEN PILOT HOLE	20/6																																											
4	17 1/2	S	SDSC	XE 0162	16	14 16	16	2364	1014	13	33	78	5-10	60-120	1/2	2620	2	7	160	9.2	69	1	1	I	HUNG OFF WOW	24/6																																											
RR4 5	17-1/2	S	SDSC	XE 0162	16	14 16	16	4101	2751	40 TOT 53	73	51.9	15-20	120-125	1	3000	2	7	164	9.2	65	3	6	I	SEAL EFFECTIVE	26/6																																											
6	17-1/2	S	SDT-C	ER 4031	15	14 15	15	4763	663	43	116	15.4	25-30	120	1	2750	2	7	154	9.0	48	6	4	1/8	HEEL ROW SEVERELY WORN	30/6																																											
7	17-1/2	S	SDGHC	XD 9464	15	12 15	15	5220	578	44-1/2	160.5	13	25-40	120	1/2	2800	2	7	140	9.2	43	7	5	I	SEAL EFFECTIVE	7/7																																											
8	17-1/2	S	SDGH	XO 9378	16	16	18	5769	427	27	187.5	15.8	35	90	1/2	2850	2	7	142	9.2	45	3	3	I	PIN GALLED	9/7																																											
9	17-1/2	S	SDIC	RR-6																					CLEAN-UP TRIP	10/7																																											
10	12-1/4	S	SDGH	ER 8788	14	14	13	6030	261	6 1/2	194	40	25	80		2750	2	7	114	8.9	48	6	2	1/16																																													
11	8-1/2	DB	CB-303	1173				6063	33	1 1/2	195.5	22	8-18	80-110	0	2800	2	7	116	8.9	45				WEAR ON DIAMONDS NEGLIB	14/7																																											
12	12-1/4	S	F-2	EV 9877	14	14	13	6503	439	12	207.5	36.1	25	70		2800	2	7	114	8.9	49	1	2	I	POH TO LOG	19/7																																											
13	12-1/4	S	F-2	EW 1050	14	14	13	7726	1222	35-1/2	243	34.4	35-45	80-100	1-1/2	2900	2	7	106	9.2	49	1	4	1/16		27/7																																											
14	12-1/4	S	F-2	EX 0219	14	14	13	8902	1126	66-1/2	309.5	16.9	50-55	95	1/2	3000	2	7	100	9.1	53	2	6	1/16		4/8																																											
15	12-1/4	S	F-2	EV 9360	14	14	13	9515	613	34-1/2	334	17.8	40-55	95	1	3000	2	7	100	9.6	55	3	8		BEARINGS FAILED, CONES LOCKED	8/8																																											
16																																																																					

[illegible]

COMPANY AMOCO AUSTRALIA		WELL NAME & No. YOLLA NO 1		FIELD BASS BASIN	COUNTRY TASMANIA	SPUD DATE	RIG RELEASE	DRILLING PARAMETERS					
BHA No.	BIT No.	BOTTOM HOLE ASSEMBLY						WOB	RPM	DEPTH IN	DEPTH OUT	ANGLE BELOW	ANGLE ABOVE
1	1	26"	36" FS 15-8" DC	.XO.	3-5" HWDP			0-10	100	261'	645'		3/4°
			462.13'		90.45'								
2	2	17½"	FS 9-8" DC	.XO.	9-5" HWDP			5-8	120	645'	1350'		1½°
			277.39'		272.14'								
3	3	26"	FS 9-8" DC	.XO.	9-5" HWDP			5-8	120	645'	1350'		1½°
			277.39'		272.14'								
4	4-7	17½"	FS 8" Mn1. 8" DC	10-8"DC .XO.	6-5" HWDP 6½" Jars, 8-5" HWDP			25-40	120	1350'	5220'		½°
			29.78'	339.70'	459.00'								
5	8-9	17½"	FS 8" Mn1. 8" DC	16-8"DC .XO.	6-5" HWDP 6½" Jars, 8-5" HWDP			35-40	90	5220'	5769'		½°
			29.78'	530.45'	455.96'								
6	10	12½"	JS FS 8" Mn1 17-8" DC	.XO. 6-5" HWDP 6½" Jars 8-5" HWDP				25-30	80	5769'	6030'		
			525.18'	455.96'									
7	11	8½"C	Core Bbl .XO. 8" Mn1 17-8"DC	.XO. 6-5" HWDP 6½" Jars, 8-5" HWDP				8-1880-110	6030'	6063'			
			554.96'	456.13'									
8	12-13	12½"	FS 8" Mn1 8"DC	16-8"DC .XO. 6-5" HWDP 6½" Jars, 8-5" HWDP				40-45	100	6063'	7726'		1½°
			560.20'	456.13'									
9	14-16	12½"	FS 8" Mn1 SDC 8" DC	16-8"DC .XO. 6-5" HWDP, 6½" Jars, 8-5" HWDP				50-55	95	7726'	10097'		1-3/4°
10	17-19	12½"	JS FS 8" Mn1 SDC 8"DC	16-8"DC .XO. 6-5" HWDP 6½" Jars, 8-5" HWDP				40-45	80	10097'	10974'		1°
11	20	8½"CH	Core Bbl .XO. 8"SDC 17-8"DC	.XO. 6-5" HWDP Jars, 8-5" HWDP				10-1880-100	10974'	10981'			1°



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

AMOCO (AUST) PETROLEUM
COMPANY

YOLLA NO.1.
WELL NAME

OFFSHORE, TASMANIA
LOCATION

JOB NUMBER

AS685 MM 006

AS885 MM 012

TYPE OF SURVEY

MAGNETIC MULTISHOT 0-5750Ft

MAGNETIC MULTISHOT 5750-1096Ft

DATE

8th July, 1985

24 August, 1985

SURVEY BY
MARK NEWTON

OFFICE
SALE, VICTORIA.

OPERATOR : AMOCO
STRUCTURE : YOLLA #1
LOCATION : BASS STRAIT
RIG NAME : GLOMAR, ROBERT F. BAUER
LEASE/AREA : BASS BASIN

SLOT NAME : 1
WELL NAME : 1

10

DATE : 03-SEP-85

SURVEY FILE : S01278.4AM

PLATFORM DATA :

LATITUDE :
LONGITUDE :

U.T.M. (GRID) NORTH : 0.00
U.T.M. (GRID) EAST : 0.00

SLOT DATA :

LATITUDE :
LONGITUDE :

U.T.M. NORTH : 0.00
U.T.M. EAST : 0.00
LOCAL CO-ORDINATES (N/S) : 0.00 N
LOCAL CO-ORDINATES (E/W) : 0.00 E

MAGNETIC DECLINATION : 13.00 E

TOTAL CORRECTION TO TRUE NORTH : 13.00 E

NO:	MEASURED DEPTH	DRIFT ANGLE	DRIFT DIRECTION	VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURE DISTANCE	DOGLEG AZIMUTH	DOGLEG DEG/100FT
1	0.00	0.00	0.00	0.00	0.00	0.00 N 0.00 E	0.00	90.00	0.00
2	1309.00	0.00	0.00	1309.00	0.00	0.00 N 0.00 E	0.00	90.00	0.00
3	1333.08	0.75	129.00	1383.08	-0.31	0.31 S 0.38 E	0.48	129.00	1.01
4	1477.20	0.75	125.00	1477.19	-1.05	1.05 S 1.36 E	1.72	127.57	0.06
5	1571.32	0.50	103.00	1571.30	-1.49	1.49 S 2.26 E	2.71	123.37	0.36
6	1665.44	0.50	112.00	1665.42	-1.74	1.74 S 3.05 E	3.51	119.71	0.08
7	1759.56	0.75	120.00	1759.54	-2.20	2.20 S 3.96 E	4.53	119.05	0.28
8	1853.68	0.50	118.00	1853.65	-2.70	2.70 S 4.86 E	5.56	119.08	0.27
9	1947.80	0.50	114.00	1947.77	-3.06	3.06 S 5.59 E	6.38	118.68	0.04
10	2041.92	0.25	72.00	2041.88	-3.16	3.16 S 6.16 E	6.93	117.17	0.38
11	2136.04	0.50	79.00	2136.00	-3.02	3.02 S 6.76 E	7.41	114.08	0.27
12	2230.16	0.50	83.00	2230.12	-2.89	2.89 S 7.57 E	8.11	110.91	0.04
13	2324.28	0.25	84.00	2324.24	-2.82	2.82 S 8.19 E	8.66	109.02	0.27
14	2512.52	0.00	84.00	2512.48	-2.78	2.78 S 8.59 E	9.03	107.92	0.13
15	2606.64	0.00	0.00	2606.59	-2.78	2.78 S 8.59 E	9.03	107.92	0.00
16	2700.76	0.25	108.00	2700.71	-2.84	2.84 S 8.79 E	9.24	107.92	0.27
17	2794.88	0.25	105.00	2794.83	-2.96	2.96 S 9.18 E	9.65	107.86	0.01
18	2888.90	0.00	105.00	2888.95	-3.01	3.01 S 9.38 E	9.85	107.80	0.27
19	2983.02	0.00	0.00	2983.07	-3.01	3.01 S 9.38 E	9.85	107.80	0.00
20	3077.24	0.25	85.00	3077.19	-2.99	2.99 S 9.59 E	10.04	107.35	0.27
21	3265.48	0.25	97.00	3265.43	-3.01	3.01 S 10.40 E	10.83	106.13	0.03
22	3359.60	0.25	90.00	3359.55	-3.03	3.03 S 10.81 E	11.23	105.68	0.03
23	3547.84	0.50	82.00	3547.79	-2.92	2.92 S 12.04 E	12.38	103.64	0.14
24	3736.08	0.50	7.00	3736.02	-1.99	1.99 S 12.95 E	13.10	98.74	0.32
25	3924.32	0.50	350.50	3924.25	-0.36	0.36 S 12.91 E	12.92	91.62	0.08
26	4018.44	0.50	18.00	4018.37	0.43	0.43 N 12.97 E	12.98	88.10	0.25
27	4112.56	0.75	18.00	4112.48	1.41	1.41 N 13.29 E	13.36	83.96	0.27
28	4206.68	1.00	18.00	4206.59	2.77	2.77 N 13.73 E	14.01	78.58	0.27
29	4300.80	0.75	6.00	4300.70	4.17	4.17 N 14.05 E	14.66	73.48	0.33
30	4394.92	1.25	25.50	4394.81	5.71	5.71 N 14.56 E	15.64	68.59	0.64
31	4489.04	1.00	18.00	4488.91	7.41	7.41 N 15.25 E	16.96	64.08	0.31
32	4583.16	0.75	24.00	4583.02	8.76	8.76 N 15.76 E	18.03	60.93	0.28
33	4677.28	0.75	33.00	4677.13	9.84	9.84 N 16.34 E	19.08	58.96	0.13
34	4771.40	0.75	43.00	4771.24	10.81	10.81 N 17.10 E	20.23	57.71	0.14
35	4865.52	0.75	18.00	4865.35	11.84	11.84 N 17.71 E	21.30	56.23	0.34
36	4959.64	0.75	58.00	4959.47	12.75	12.75 N 18.42 E	22.41	55.31	0.55
37	5053.76	0.75	33.00	5053.58	13.60	13.60 N 19.28 E	23.59	54.81	0.34

NO.	MEASURED DEPTH	DRIFT ANGLE	DRIFT DIRECTION	VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURE DISTANCE	DOGLEG AZIMUTH	DEG/100FT
38	5147.88	0.75	34.00	5147.69	14.62	14.62 N 19.96 E	24.75	53.77	0.01
39	5242.00	0.75	58.00	5241.80	15.46	15.46 N 20.83 E	25.94	53.41	0.33
40	5336.12	0.50	32.00	5335.92	16.14	16.14 N 21.57 E	26.94	53.20	0.40
41	5430.24	0.75	55.00	5430.03	16.84	16.84 N 22.29 E	27.94	52.93	0.37
42	5618.48	1.00	65.50	5618.25	18.23	18.23 N 24.79 E	30.77	53.68	0.16
43	5712.60	1.25	97.00	5712.35	18.44	18.44 N 26.56 E	32.33	55.23	0.70
44	5750.60	0.75	95.00	5750.35	18.37	18.37 N 27.22 E	32.84	55.99	1.32
45	5820.00	1.25	75.00	5819.74	18.53	18.53 N 28.40 E	33.91	56.89	0.87
46	6009.00	1.00	88.00	6008.70	19.12	19.12 N 32.04 E	37.31	59.18	0.19
47	6103.00	0.50	78.00	6102.69	19.23	19.23 N 33.26 E	38.42	59.97	0.55
48	6197.00	0.50	63.00	6196.69	19.50	19.50 N 34.03 E	39.22	60.18	0.14
49	6291.00	0.25	63.00	6290.69	19.78	19.78 N 34.58 E	39.84	60.23	0.27
50	6385.00	0.00	63.00	6384.69	19.87	19.87 N 34.76 E	40.04	60.24	0.27
51	6479.00	0.00	0.00	6478.69	19.87	19.87 N 34.76 E	40.04	60.24	0.00
52	6573.00	0.00	0.00	6572.69	19.87	19.87 N 34.76 E	40.04	60.24	0.00
53	6668.00	0.25	253.00	6667.68	19.81	19.81 N 34.56 E	39.84	60.18	0.26
54	6762.00	0.25	358.00	6761.68	19.96	19.96 N 34.56 E	39.74	59.85	0.42
55	6856.00	0.25	32.00	6855.68	20.34	20.34 N 34.46 E	40.01	59.45	0.16
56	6950.00	0.50	94.00	6949.68	20.48	20.48 N 34.98 E	40.54	59.65	0.47
57	7044.00	0.75	104.00	7043.68	20.31	20.31 N 35.99 E	41.32	60.57	0.29
58	7138.00	0.75	93.00	7137.67	20.12	20.12 N 37.20 E	42.29	61.59	0.15
59	7232.00	1.00	95.00	7231.66	20.02	20.02 N 38.63 E	43.51	62.60	0.27
60	7327.00	1.00	87.00	7326.64	19.99	19.99 N 40.28 E	44.97	63.61	0.15
61	7421.00	1.25	74.00	7420.62	20.32	20.32 N 42.09 E	46.73	64.23	0.38
62	7515.00	1.50	62.00	7514.60	21.18	21.18 N 44.16 E	48.97	64.38	0.40
63	7609.00	1.50	59.00	7608.56	22.39	22.39 N 46.30 E	51.43	64.19	0.08
64	7703.00	2.25	59.00	7702.51	23.97	23.97 N 48.94 E	54.49	63.90	0.80
65	7797.00	1.75	62.00	7796.46	25.60	25.60 N 51.78 E	57.77	63.70	0.54
66	7892.00	1.25	59.00	7891.42	26.81	26.81 N 53.95 E	60.25	63.58	0.53
67	8080.00	1.00	60.00	8079.39	28.69	28.69 N 57.13 E	63.93	63.34	0.13
68	8174.00	0.75	69.00	8173.38	29.32	29.32 N 58.42 E	65.36	63.35	0.30
69	8268.00	0.25	82.00	8267.37	29.57	29.57 N 59.19 E	66.17	63.46	0.54
70	8362.00	0.25	82.00	8361.37	29.62	29.62 N 59.60 E	66.56	63.57	0.00
71	8456.00	0.25	73.00	8454.37	29.71	29.71 N 60.00 E	66.95	63.65	0.04
72	8551.00	0.50	75.00	8550.37	29.88	29.88 N 60.60 E	67.57	63.75	0.26
73	8645.00	0.75	121.00	8644.36	29.67	29.67 N 61.52 E	68.30	64.25	0.57
74	8739.00	0.75	139.00	8738.36	28.89	28.89 N 62.45 E	68.81	65.18	0.25

NO:	MEASURED DEPTH	DRIFT ANGLE	DRIFT DIRECTION	VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURE DISTANCE	DOGLEG AZIMUTH DEG/100FT
70	8833.00	1.00	147.00	8832.34	27.74	27.74 N 63.31 E	69.12	66.34 0.30
76	8927.00	0.75	161.00	8926.33	26.47	26.47 N 63.95 E	69.21	67.52 0.35
77	9021.00	1.25	157.00	9020.32	24.94	24.94 N 64.55 E	69.20	68.87 0.54
78	9116.00	1.50	168.00	9115.29	22.77	22.77 N 65.22 E	69.08	70.75 0.38
79	9210.00	2.00	175.00	9209.25	19.93	19.93 N 65.62 E	68.58	73.10 0.58
80	9304.00	2.00	177.00	9303.19	16.66	16.66 N 65.84 E	67.92	75.80 0.07
81	9398.00	1.50	178.00	9397.15	13.80	13.80 N 65.97 E	67.40	78.19 0.53
82	9492.00	1.00	173.00	9491.12	11.75	11.75 N 66.12 E	67.15	79.92 0.54
83	9586.00	0.75	177.00	9585.11	10.32	10.32 N 66.25 E	67.05	81.14 0.27
84	9680.00	0.50	166.00	9679.11	9.31	9.31 N 66.38 E	67.03	82.02 0.29
85	9775.00	0.50	158.00	9774.10	8.52	8.52 N 66.63 E	67.18	82.71 0.07
86	9869.00	0.50	133.00	9868.10	7.86	7.86 N 67.09 E	67.55	83.31 0.23
87	9963.00	0.50	84.00	9962.10	7.63	7.63 N 67.80 E	68.22	83.58 0.44
88	10057.00	0.75	49.00	10056.09	8.07	8.07 N 68.67 E	69.14	83.29 0.47
89	10151.00	0.50	79.00	10150.09	8.56	8.56 N 69.54 E	70.06	82.99 0.43
90	10245.00	0.25	75.00	10244.08	8.69	8.69 N 70.14 E	70.67	82.94 0.27
91	10439.00	0.75	33.00	10432.08	9.83	9.83 N 71.20 E	71.88	82.14 0.31
92	10527.00	1.00	48.00	10526.07	10.89	10.89 N 72.15 E	72.96	81.42 0.36
93	10622.00	1.00	77.00	10621.05	11.63	11.63 N 73.57 E	74.48	81.02 0.53
94	10810.00	1.00	88.00	10809.02	12.06	12.06 N 76.81 E	77.75	81.08 0.10
95	10904.00	1.00	69.00	10903.01	12.38	12.38 N 78.39 E	79.37	81.03 0.35
96	10967.00	1.00	54.00	10966.00	12.90	12.90 N 79.35 E	80.39	80.77 0.41

SURVEY RUN INFORMATION

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MAGNETIC MULTIPLE SHOT SURVEY TIED TO SLOT SURFACE

CO-ORDINATES AT 1309 FT MD.

SURVEYED DEPTHS : 1383 TO 5750 FT MD.

SURVEYOR: M. NEWTON

DATE: 08-JUL-85

MAGNETIC MULTIPLE-SHOT SURVEY TIED TO M.M.S SURVEY AT

5750 FT MD.

SURVEYED DEPTHS : 5820 TO 10967 FT MD.

SURVEYOR : M. NEWTON

DATE: 24-AUG-85

TIME DISTRIBUTIONYOLLA NO. 1 TIME DISTRIBUTION

<u>Description</u>	<u>Hours</u>	<u>%</u>
Drilling	459.0	14.8
Opening Hole	7.5	0.2
Washing and Reaming	27.0	0.9
Coring	3.5	0.1
Circulate/Condition	68.0	2.2
Tripping	499.5	16.1
Service Rig	6.0	0.2
Repair Rig	2.5	0.1
Survey	14.0	0.5
Logging/wireline	233.5	7.5
Running/Cementing Casing	81.5	2.6
W.O.C.	3.5	0.1
Run/Retrieve BOP/Riser	118.5	3.8
Test BOP/Casing/CCCT/FCCT	106.0	3.4
Squeeze Cement	76.0	2.5
Fishing	36.0	1.2
Pick Up/Lay Down Drill String	15.5	0.5
W.O.W.	928.5	30.0
Run/Retrieve Anchors	166.0	5.4
Ballast/Position Rig	9.5	0.3
Drill Stem Test	155.0	5.0
Drilling Cement	11.0	0.4
Plug and Abandon	64.5	2.1
Backload Workboats	<u>4.0</u>	<u>0.1</u>
TOTAL	3096.0	100.0

ANCHORING UP VESSEL

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Run Anchors	31.0	35.6
Run Piggy-Backs	4.5	5.2
Re-Position Anchors	5.5	6.3
Re-Position Piggy-Backs	2.5	2.9
Mandatory Shut Down Period	16.5	19.0
W.O.W.	25.5	29.3
Pre-Tension	1.5	1.7
	=====	=====
TOTAL	87.0	100.0

36" HOLE SECTION - 30" CASING

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Drilling	5.5	7.2
Circulating/Conditioning	3.0	4.0
Tripping	1.5	2.0
Survey	1.0	1.3
Running/Cementing Casing	12.0	15.8
Pick Up/Lay Down Drill String	5.0	6.6
W.O.W.	39.0	51.3
T.G.B.	8.0	10.5
Divers	1.0	1.3
	=====	=====
TOTAL	76.0	100.0

26" HOLE SECTION - 20" CASING

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Drilling	6.5	2.7
Opening Hole 17 1/2" - 26"	7.5	3.1
Wash & Ream	2.0	0.8
Circulate/Condition Mud	1.0	0.4
Tripping	8.0	3.3
Survey	3.5	1.4
Running/Cementing Casing	12.0	5.0
Running/Retrieve Pin Connector	28.0	11.6
Testing Diverter	0.5	0.2
Fish for Guide Skirt	17.0	7.0
W.O.W. (Pull/Run Riser)	100.0	41.2
Run/Retrieve Anchors	56.5	23.2
	=====	=====
TOTAL	242.5	100.0

17 1/2" HOLE SECTION - 13 3/8" CASING

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Drilling	149.0	32.6
Wash & Ream	7.5	1.6
Circulate/Condition Mud	20.5	4.5
Tripping	50.0	10.9
Survey	7.0	1.5
Running/Cementing Casing	28.5	6.2
Run BOP	29.0	6.3
Test BOP/Casing/FCCT	9.0	2.0
W.O.W.	156.0	34.2
Rig Service	1.0	0.2
	=====	=====
TOTAL	457.5	100.0

12-1/4" HOLE SECTION - 9-5/8" CASING

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Drilling	298.0	20.3
Wash & Ream	17.5	1.2
Coring	3.5	0.2
Circulate/Condition Mud	12.0	0.8
Tripping	165.0	11.3
Survey	6.0	0.4
Logging	117.5	8.1
Running/Cementing/Casing	29.0	2.0
W.O.C.	3.5	0.2
Run BOP	61.5	4.2
Test BOP/Casing/FCCT	96.5	6.6
Pick Up/Lay Down Drill String	10.5	0.7
W.O.W.	608.0	41.5
Run/Retrieve Anchors	20.0	1.4
Ballast/Position Rig	2.0	0.1
Drilling Cement	11.0	0.8
Rig Service	3.0	0.2
	=====	=====
TOTAL	1464.5	100.0

DRILL STEM TEST

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Tripping	277	42.4
Squeeze Cement	76	11.6
Fishing	36	5.5
Evaluation/DST	155	23.8
Logging/wireline	109	16.7
	=====	=====
TOTAL	653	100.0

PLUG AND ABANDONMENT

Time Breakdown

<u>Description</u>	<u>Hours</u>	<u>%</u>
Retrieve BOP	19.0	16.5
Retrieve Anchors	28.0	24.2
Plug & Abandon	64.5	55.8
Backload Work Boats	4.0	3.5
	=====	=====
TOTAL	115.5	100.0

LOST TIME SUMMARYRIG - R. F. BAUER

<u>Date</u>	<u>Time Lost</u>	<u>Cause of Lost Time</u>
20 June 1985	11 Hours	Fabricate reterieving tool and retrieve guide funnel.
22 June 1985	2.5 Hours	Repair BOP Handling Hydraulics.
28 June 1985	0.5 Hours	Power failure in mud logging unit.
5 July 1985	1 Hour	Run wear bushing - first attempt failed.
20 August 1985	10.5 Hour	Fishing for sheared D.P. after No 7 anchor master link parted.
21 August 1985	9.5 Hour	Fish and retrieve sheared D.P. lay down tools.
22 August 1985	1 Hour	Break down fishing tools.
4 September 1985	16 Hour	Attempt to set and test seal assembly.
5 September 1985	6 Hours	Attempt to set and test seal assembly.
6 September 1985	14 Hours	Attempt to set and test seal assembly.
8 September 1985	13 Hours	Check 9 5/8 land out (40" to high) test 9 5/8 casing and 13 3/8 annules with RTTS.
11 September 1985	4.5 Hours	Retrieve seal assembly measure 9 5/8". Hanger to upper rams.
	=====	
TOTAL	89.5 Hours	

OTIS

<u>Date</u>	<u>Time Lost</u>	<u>Cause of Lost Time</u>
3 October 1985	8 Hours	After RIH with test string unable to close pipe rams on SSTT slick jt. Rig down surface equipment POH with landing string inspect and paint SSTT, RIH and mark POH, adjust hanger RIH, rig up surface equipment.
21 September 1985	0.5 Hour	Make up sub on Otis Subsea Tree, landing hanger.
16 September 1985	12 Hours	XO parted between.
15 September 1985	24 Hours	Fluted hanger.
14 September 1985	24 Hours	
13 September 1985	19 Hours	And SSTT body on the 13 September.
	=====	
TOTAL	87.5 Hours	

WAITING ON DAYLIGHT

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
11 September 1985	10.5 Hours	Waiting on daylight to perforate.
22 September 1985	4.5 Hours	Waiting on daylight to perforate.
	=====	
TOTAL	15 Hours	

HALLIBURTON

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
8 October 1985	1.5 Hours	Repair unit.
	=====	
TOTAL	1.5 Hours	

ANCHORS BREAKING & RE-RUNNING

12 June 1985		No 1 Anchor wire parted.
13 June 1985	19.5 Hours	Recover No 1 Bouy and Piggy Back, Recover parted Anchor wire and chain.
14 June 1985	12.5 Hours	Recover No 1 chain and anchor, recover No 2 Piggy Back Anchor.

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
15 June 1985	13.5 Hours	Re-run No 1 & 2
16 June 1985	1 Hour	No 1, 2 socked No 1 & 2 slipping.
17 June 1985	7 Hours	Repair 1 & 2 and soaking.
15 July 1985		No 3 anchor parted at 8.10 hours.
18 July 1985	11.5 Hours	Retrieved No 3 anchor and chain.
19 July 1985	6.5 Hours	Re connect No 3 anchor wire and re run.
21 July 1985		No 2 anchor chain parted at 2200 hours.
24 July 1985	9 Hours	Recovered repaired and re run No 2 Anchor.
17 August 1985	0.5 Hours	No 7 anchor master link parted hung off on middle pipe rams, sheared D.P..
18 August 1985	7 Hours	Retrieve No 7 anchor and chain.
20 August 1985	10 Hours	Re run No 7 anchor.
6 September 1985	8 Hours	Release LMRP, rerun anchors to change rig heading.
7 September 1985	24 Hours	Continue pulling LMRP while re run anchors, inspect riser and slip jt. Run LMRP and riser.
8 September 1985	11 Hours	Completed heading changed land LMRP hooked up same.
	=====	
TOTAL	141 Hours	

WORKBOAT REST PERIOD

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
4 June 1985	2 Hours	
7 June 1985	6 Hours	
8 June 1985	2.5 Hours	
	=====	
TOTAL	10.5 Hours	

W.O.W.

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
3 September 1985	10.5	
2 September 1985	5.5	
30 August 1985	15	
29 August 1985	19	
28 August 1985	24	
27 August 1985	24	
20 August 1985	3.5	
19 August 1985	24	
18 August 1985	17	
17 August 1985	22.5	
7 August 1985	5.5	
6 August 1985	17.5	
5 August 1985	18	
2 August 1985	8.5	
1 August 1985	24	
31 July 1985	24	
30 July 1985	24	
29 July 1985	24	
28 July 1985	11	
27 July 1985	7.5	
26 July 1985	24	
25 July 1985	6	
24 July 1985	10.5	
23 July 1985	24	
22 July 1985	24	
21 July 1985	13.5	

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
19 July 1985	9.5	
18 July 1985	12.5	
17 July 1985	24	
16 July 1985	24	
15 July 1985	22	
14 July 1985	0.5	
4 July 1985	22.5	
3 July 1985	24	
2 July 1985	24	
1 July 1985	23	
30 June 1985	3.5	
28 June 1985	12	
27 June 1985	5.5	
25 June 1985	12.5	
24 June 1985	7.5	
20 June 1985	2	
17 June 1985	17	
16 June 1985	21	
15 June 1985	10.5	
14 June 1985	11.5	
13 June 1985	4.5	
12 June 1985	20	
11 June 1985	16	
10 June 1985	23	
7 June 1985	1.5	
5 June 1985	18	
	=====	
TOTAL	803 Hours	

WAIT ON CEMENT, SQUEEZING AND DRY TESTING

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
24 September 1985	15.5 Hours	RIH with CBL EZSV did not set EZSV because CBL did not indicate comenet at block squeeze perfs at 6054' - 6056' - 1845 m - 1846 m, POH.
25 September 1985	24 Hours	RIH to dry test block squeeze perf no seat, pull out re ran string no seat POH.
26 September 1985	24 Hours	Complete POH dry test tools, RIH set EZSV at 1818.1 m (5965 ft). RIH with stinger establish injection rate mix and pump cement squeeze cement, POH WOC.
27 September 1985	24 Hours	WOC RIH drill cement and EZSV run Schlumberger gauge run and junk basket. M/U test tools RIH to dry test.
28 September 1985	24 Hours	RIH with dry test string set RTTS, no flow for 15 min then flowed. POH, breakdown dry test tools, RIH with open ended D.P., mix and pump cement, squeeze, W.O.C.
29 September 1985	24 Hours	POH, M/U drill assembly RIH, wash soft cement, WOC drill soft cement WOC.
30 September 1985	24 Hours	WOC drill cement POH, to 5745 ft R/U Howco. Establish injection rate; POH, RIH open ended D.P. mix and pump cement, WOC.
1 October 1985	24 Hours	POH M/U drill assembly RIH, wash soft cement WOC drill soft cement WOC. Drill cement circulate bottoms up.

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
2 October 1985	17 Hours	POH. Test cement to 2000 PSI, M/U dry test tools, RIH dry test perfs no flow POH L/D Test Tools.
	=====	
TOTAL	200.5 Hours	

SCHLUMBERGER

<u>Date</u>	<u>Lost Time</u>	<u>Cause of Lost Time</u>
8 October 1985	4 Hours	Attempt to RIH with casing punch, POH make up centralizers on punch.
19 September 1985	1 Hour	Run EZSV on wireline unable to pass well head POH, install guide on EZSV.
12 September 1985	3 Hours	Run Perforating Gun No 3 9216 ft to 9233 ft.
	=====	
TOTAL	8 Hours	

WAIT ON WEATHER SUMMARY

WOW hours less than Force 9	790.5	25.5%
WOW hours Force 9 and greater	61.0	2.0%
Repair hours	94.0	3.0%
Operating hours	2150.5	69.5%
	=====	=====
TOTAL	3096.0	100.0%

This time breakdown was developed to help verify contractor invoices due to the weather stipulations in the contract.

Note:

The 928.5 hours W.O.W. in the Time Distribution included all procedures necessary to restore the operation to the point where W.O.W. commenced. These procedures include POH, hanging off, unlatching, retrieving hang off, RIH, etc.

ARMS-5 BELL DISCUSSIONWAIT ON WEATHER

A total of two dives were pulled early due to bad weather approaching. Both dives were in June during the 30" and 20" cementing operations. Since there was not a rig camera available, the 30" and 20" casings were cemented "blind" with no attitude or altitude readings for the PGB or 18 3/4" housing. Both operations are considered critical for proper BOP/Wellhead alignment.

The ARMS-5 BELL contains a crew of two; one pilot and one technician. The human factor is a partial contributor to operational considerations for the Arms-5-Bell. The ROV un-manned sub has no human factor present, so it can be operated in sea states where the only consideration is loss of the ROV. In addition, the ROV can dive faster through the air-water interface due to its vertical thrusters, as opposed to the gravity lowered ARMS-5 BELL.

The ARMS-5 BELL did not perform any task that a suitably equipped ROV could not have performed. The ARMS-5 BELL recovered and replaced the AX ring gasket and secured the TGB to the PGB with slings. These tasks are routine with a suitable ROV as well.

For guidelineless deepwater drilling, the diving system employed would be the only "rig" camera available for critical drilling/cementing operations. With the ARMS-5 BELL unable to dive due to moderately rough weather, critical operations were done "blind". This factor could have caused a re-spud of the well, if the operation had failed.

With Global Marine's demonstrated reluctance to properly rig up a heave indicator so they could use the "Bomb-Shell" camera for re-latching the LMRP/BOP connections, the ARMS-5 BELL was employed to observe the operation. This method of operation places the ARMS-5 BELL in a situation where large storm generated waves prohibit launching. This situation was not a planned use for the ARMS-5 BELL.

The ARMS-5 BELL proved to be uneconomical when combined with the rig type, sea states, and job requirements necessary for Yolla No 1. Had the ARMS-5 BELL not been previously installed by Amoco Indonesia, a suitably equipped ROV would have been the proper choice for heavy weather, shallow water operation.

The following is a cost comparison between the ARMS-5 BELL and the Scorpio ROV employed by Amoco on the Tilana 1 well.

<u>ARMS-5</u>		<u>SCORPIO-ROV</u>
\$2810/day		\$2150/day
\$ 105/dive depth pay		
	over 130 days and 60 dives	
\$365,300		\$279,500
\$ 6,300		
<hr/> \$371,600	Total	<hr/> \$279,500

The cost savings of the ROV vs the ARMS-5 BELL for Yolla No 1 is: \$92,100 or 24.8%

FORM 46 3-88

NAME OF COMPANY

DRILLING AND COMPLETION PROGRAM

FILE NO. 400

DATE May 21,

WELL NAME Yolla WELL NO. 1 FIELD

COUNTRY Australia PROVINCE Bass Strait - Tasmania AREA

LOCATION Seismic Line HB 73A-169 SP 197 (39° 50' 18.96" south latitude, 145° 48' 21.20" east longitude)

OBJECT Eastern View Group: Late Eocene to late Cretaceous (5636' - 14000' RKB)

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKERS	
TYPE TOOLS	DEPTH INTERVAL	ESTIMATED ELEVATION	DEPTH
Rotary	Seabed to 14000' TD		
SPECIAL SURVEYS		MARKER	DEPTH
TYPE	DEPTH INTERVAL, ETC.		ELEV.
ISF-BHC-GR-SP-CAL (GR to seabed)	1260' - 5600'SS	TORQUAY GROUP (Sea Bottom)	300'RKB 264'SS
DLL-GR-SP-(MSFL/CAL)	5600'-13964'SS	DEMONS BLUFF (Top Eocene)	5136'RKB 5100'SS
LDT-CNT	5600'-13964'SS	*EASTERN VIEW GROUP	5636'RKB 5600'SS
LSS-GR	5600'-13964'SS	*Within Lower Eocene	6936'RKB 6900'SS
MDT (1260'-5600' if required)	5600'-13964'SS	*Within Lower Paleocene	8536'RKB 8500'SS
VSP (at TD or earlier if required)	1260'-13964'SS	*Near Top Cretaceous	10436'RKB 10400'SS
CST (1260'-5600' if required)	5600'-13964'SS		
REMARKS		TOTAL DEPTH	14000'RKB 13964'SS
Single shot surveys on trips every 500'. Logs to be run at 13.3/8" csg depth, at TD and in the interim as required to evaluate formations being drilled.		* POSSIBLE PAY	** PROBABLE COMPLETION INTEN
SPECIAL TEST		DRILL CUTTING SAMPLES	
TYPE	DEPTH INTERVAL, ETC.	FREQUENCY	DEPTH INTERVAL
RFT'S	As required	16.4'(5m)	596'- 5600'SS (7 sets)
DST'S	As required	9.8'(3m)	5600'-13964'SS (7 sets)
REMARKS		32.8'(10m)	composites 596'-5600'SS (2 sets)
The decision to test the hole will be based on encouragement from mud log shows and wireline analysis. The rig will be equipped to conduct the RFT's and conventional DST's through casing.		29.5'(9m)	composites 5600'-13964'SS (3 sets)
		REMARKS	
		NOTE: The above conforms with requirements of Petroleum (Submerged Lands) Act, 1967, Clause 14.	

MUD PROGRAM	TYPE MUD	WEIGHT ± G/L	VISCOSITY SEC API	W. L. CC/MM	OTHER SPECIFICATIONS
APPROXIMATE INTERVAL					
M.L. -1296' RKB	Seawater	W/VISCOUS SWEEPS			YP 26
1296'-5636' RKB	SW/CEL/DISP	8.9 - 9.2	40 - 50	15 or less	PH 10.5 - 11.0
					YP 8 - 20
5036' - 14,000' RKB	FW/CEL/DISP	8.9 - 12.5	40 - 50	10 or less	HTHP 18 or less
					YP 8 - 20

REMARKS

Properties of mud system are described in the detailed operations plan.

CASING PROGRAM	EST DEPTH	CASING SIZE	MOLE SIZE	SK CEMENT	TYPE CEMENT	DESCRIPTION OF LANDING POINT
CASING STRING						
CONDUCTOR	596' RKB	30"	26/36"	Determined	Class "C" + additives	
SURFACE	1296' RKB	20"	17 1/2/26"	by	" "	"
INTERMEDIATE	5636' RKB	13.3/8"	17 1/2"	Caliper	" "	"
OIL STRING	14000' RKB	9.5/8"	12 1/2"	Log	" "	"

LINER CASING

REMARKS

- All casing points are tentative and 9.5/8" casing setting depth will depend upon formation pore pressure
- Cement compositions to be lab tested
- 30" and 20" casing to be cemented by inner string method.

NORMAL THE TUBULAR GOODS ALLOCATION LETTER SPECIFIES CASING SIZES TO BE USED MOLE SIZES WILL BE GOVERNED BY CONTRACT.

CORING PROGRAM Conventional cores to more thoroughly investigate shows and potential reservoir rocks will be cut if drilling conditions permit upon the recommendation of the well site geologist with concurrence of Amoco Sydney Office. Below 10,000 feet, three 32.8 foot cores will be cut in sandstones at approximate depths of 10171 feet, 11483 feet and 13124 feet; exact coring points to be determined by wellsite geologist. Sidewall core will be taken in shales and other formations of interest below 5636 feet for palynology, geochemistry and lithological data. Note requirements of Petroleum (Submerged Lands) Act 1967, Clause 14.

COMPLETION PROGRAM

Authorised completion program will be furnished on decision to complete well.

GENERAL REMARKS

All values reported to Government must be in metric units.

PREPARED BY

J. Rankin, R. Walla,
J. Craig, G. Kjellgren

APPROVED:

C. H. Manning
OPERATING AREA MANAGER

APPROVED:

COMPANY MANAGER

Well Authorization

Operator AMOCO AUSTRALIA PETROLEUM CO. Lease YOLLA Well No. 1									
Producing Department <input type="checkbox"/> Development <input type="checkbox"/> Extension <input type="checkbox"/> Service <input type="checkbox"/> #1 Status Well <input type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other _____ <input type="checkbox"/> Support Form 11 Target Depth _____ Formation _____ Total Depth _____ Formation _____ Budget Project _____		Exploration Department <input checked="" type="checkbox"/> New Field <input type="checkbox"/> New Pool <input type="checkbox"/> Deep Pool <input type="checkbox"/> Shallow Pool <input type="checkbox"/> #1 Status Well Play/Prospect Code _____ <input type="checkbox"/> Oil <input type="checkbox"/> Gas EA Code _____ Target Depth 10,000' Formation Cretaceous Total Depth 14,000' Formation _____ Budget Prov. _____ Code _____							
FLAC (Well) No. _____	Basic CD _____	H/Z Sub _____	Comb. CD _____	Regulatory Field Code _____	Horizon Code _____	FLAC (Lease/Unit) _____	(Controller's Dept. Use Only) Own Code _____ CD _____ Int _____		
						Op. Fid. Code _____	Tp. Loc. Code _____ Contract # _____		
						LPN _____	Appn. No. _____		
Type of Job: <input checked="" type="checkbox"/> Drill <input type="checkbox"/> Recomplete <input type="checkbox"/> Multiple Completion									
Type Authorization: <input checked="" type="checkbox"/> New <input type="checkbox"/> Reauthorization <input type="checkbox"/> Reentry <input type="checkbox"/> Final # _____ <input type="checkbox"/> Input Only # _____ <input type="checkbox"/> Amended # _____ <input type="checkbox"/> Supplement # _____ <input type="checkbox"/> Cancel									
Property Description and Land Data									
Field YOLLA				Country AUSTRALIA		State TASMANIA		District T-14P-1	
Location BASS STRAITS				Spacing Pattern-Acres/Well _____					
Latitude 39° 50' 18.96" SOUTH				Longitude 145° 48' 21.20" EAST					
Lease Expiration Date 6TH YEAR JAN. 8, 1986				Must Commence <input type="checkbox"/> Operations <input type="checkbox"/> Spud By _____ 19____ Qtr To Start 3RD					
Time To Complete 3RD				Time Required To Meet Land Requirements _____ Location Meets <input type="checkbox"/> State Regs <input type="checkbox"/> Field Rules <input type="checkbox"/> Exception Required					
Amoco Working Interest: Before Royalty 50%				After Royalty _____ Other Working Interests SAOGC, AND CUE GROUP 50					
Oil Outlet _____				Gas Outlet _____					
Estimated Allow/Cal. Day: 800 N/A MCFD N/A				<input type="checkbox"/> Prorated <input type="checkbox"/> Nonprorated Executive Order 11246 <input type="checkbox"/> Is <input type="checkbox"/> Is Not Applicable					
<input type="checkbox"/> Federal Lease/Unit				Special Contractual Provisions NOTIFICATION OF INTENT TO RELINQUISH ACREAGE BY OCT. 8, 198					
Offset or Nearby Well Data <input checked="" type="checkbox"/> Not Appl. <input type="checkbox"/> See Rev. Side of Form									
Expected Impact on Booked Reserves or Net Expected Resources <input checked="" type="checkbox"/> Not Appl. <input type="checkbox"/> See Rev. Side of Form									
Estimated Costs									
Drilling Intangibles Drilling Cost 14,000 Feet @ \$ NA Per Foot _____ Lay Work 76 Days @ \$ 50,000 Per Day _____ Location \$ 152,000 Surveys \$ 760,000 Mud \$ 213,000 Stimulation \$ -0- Other \$ 5,025,000 Total Drilling Intangibles _____ Well Equipment-Tangibles Casing and Tubing _____ Wellhead, Etc. _____ Total Well Equipment-Tangibles _____ Remarks Total This Request _____ Previous Estimate _____ Total To-Date Estimate _____					Producing Department		Exploration Department		
					Estimated		Estimated		
					Gross Dry Hole	Gross Producer	Gross Dry Hole	Gross Producer	
					\$	\$	\$	\$	
							3,800,000		
							6,150,000		
							9,950,000		
							675,000		
							303,000		
							978,000		
					Net Dry Hole	Net Producer			
					\$	\$	10,928,000		
Notice To Nonoperator: Costs shown on this form are estimates only. Nonoperators should not consider these estimates as establishing any limit on the monies which will be required to perform the proposed operation. Nonoperator _____ By _____ Date _____									
Recommended		Date		Division Approvals		Date		<input type="checkbox"/> Authorized <input type="checkbox"/> Rejected	
				Prod _____					
				Expl. _____					
				Land _____				Date _____	
Economics: PI _____ ROI _____ DROI _____ PW ₁ \$ _____ PW ₁₀ \$ _____ MAX CASH OUT \$ _____ PAYOUT _____ MOS _____ SALES DELAY _____ MOS MIN. PROB. SUCCESS @ PI-15 _____ Functional Category: COMMITTED <input checked="" type="checkbox"/> DISCRETIONARY _____									

* From January 18, 1985 telex from SRK to WCC on mill prices and delivery.

Offset or Nearby Well Data

Company Lease and Well				
Pay Formation, Thickness, and Prod. Interval				
Cumulative Prod. <input type="checkbox"/> Oil-BBLS <input type="checkbox"/> Gas-MMCF				
	Potential Test	Latest Test	Potential Test	Latest Test
Date				
Allow/Cal. Day <input type="checkbox"/> BBLS <input type="checkbox"/> MCF				
Prod-Oil-Water-Gas				
Hours-Choke-Gas/Oil Ratio				
Producing Method and Pressures				

Expected Impact On Net Reserves Or Net Expected Resources

Product	Proved	Proved Developed	Indicated Additional	Expected Resources
6C, MB				
as, MMCF				
NGL, MB				
Sulfur, LT				
Percentage expected to be booked in current year	%	%	%	
Category Of Reserves Changes				
Discovery				
Extension				
New/Exp. Impr. Rec.				
Revisions of previous Estimates				

Remarks:

DRILLING TIME (DAYS)

DRILLING GRAPH

DRILLING PROGRESS IN FEET

FIELD BASS STRAIT WELL NAME YOLLA 1

PROJECTED T.D. _____ FORMATION _____

MUD SW/GEL ; ML TO 5748

FW/GEL ; 5748 TO 10,957

CSG. 30 @ 619 ; 13 3/8 @ 5748

20 @ 1309 ; 9 5/8 @ 10,957

RIG R. F. BAUER CONT'R. G. MARINE

GRND. EL. SL RDB. WL. 36.5

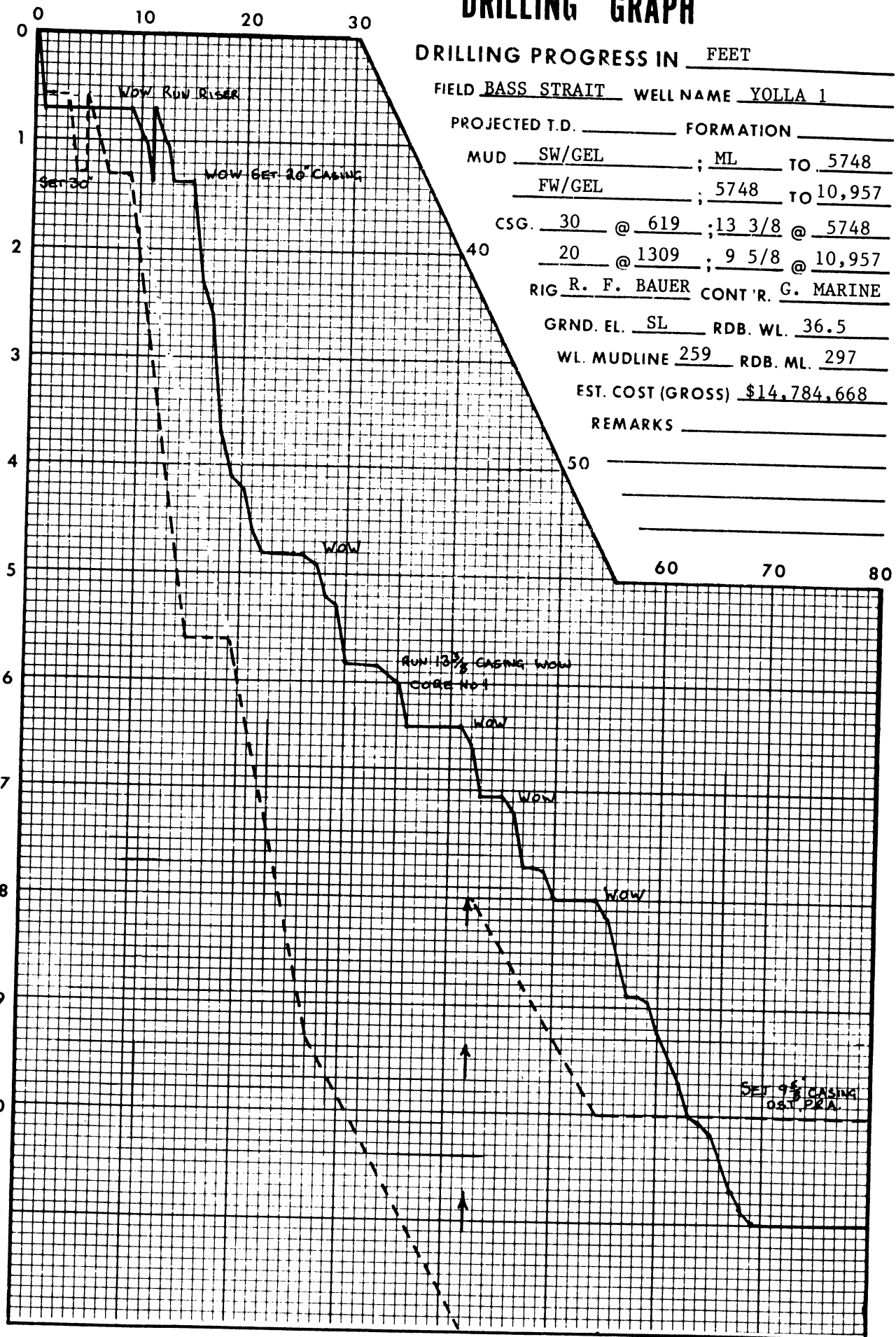
WL. MUDLINE 259 RDB. ML. 297

EST. COST (GROSS) \$14,784,668

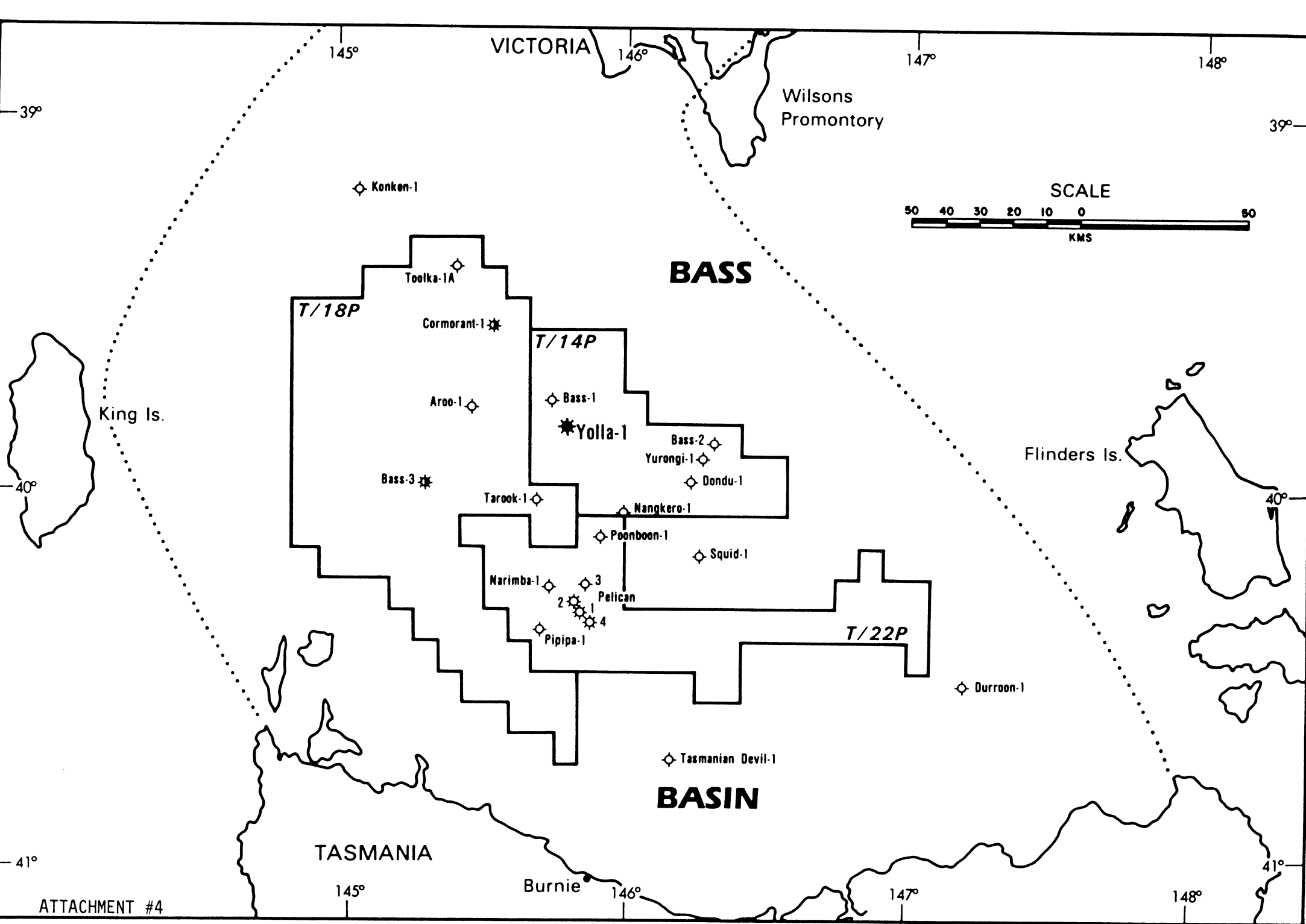
REMARKS _____

- BM Bbls. Mud
- BW Bbls. Water
- CMT Cement
- CP Csg. Press.
- Crg Coring
- DP Drill Pipe
- ST Drill Stem Test
- FF Fish For
- CM Gas Cut Mud
- OCM Oil Cut Mud
- Plug Back
- RR Repair Rig
- SK Sidetrack
- TP Tbg. Press.
- Loss of Circ.

WELL DEPTH (THOUSANDS OF FEET)



----- PROGNOSED
———— DRILLED



GLOMAR ROBERT F. BAUER

Short Hook-Up; Wire out Figures (W.O.)

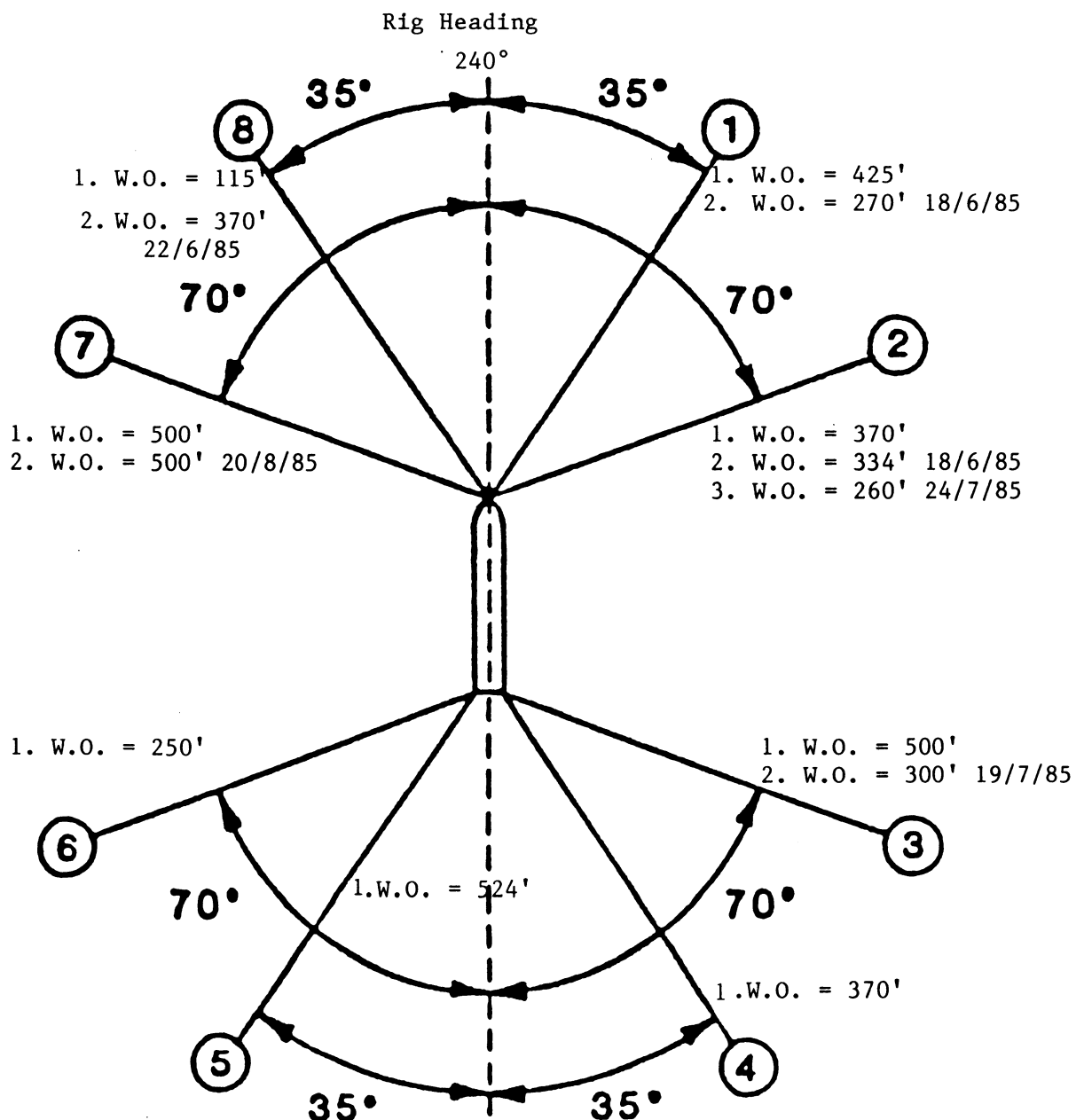
Note: 1 All anchors held 1800' of 2-3/4" chain

2 All anchors were piggy backed with 500' of 2 1/4" pennant wire.

3 Anchor wire is 3" OD

4 Anchors in place 8 June 1985

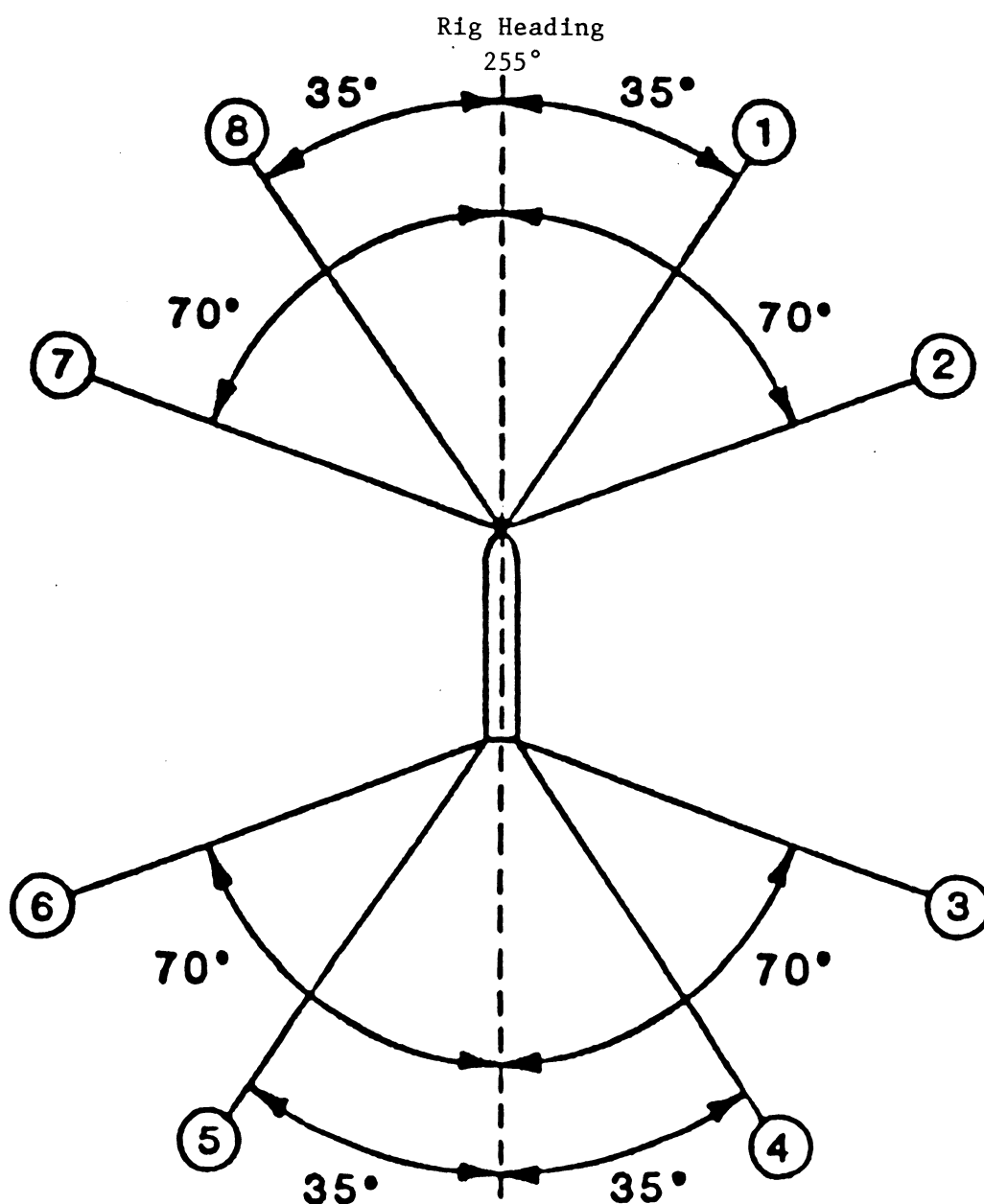
5 All piggy backs recovered by 24 August, 1985.



GLOMAR ROBERT F. BAUER

Long Hook-up

- Note: 1. All anchors held 1800' of 2-3/4" chain
2. Anchor wire is 3" OD.
3. All anchors set 7 September 1985.
4. All anchors held 5200' of wire out.

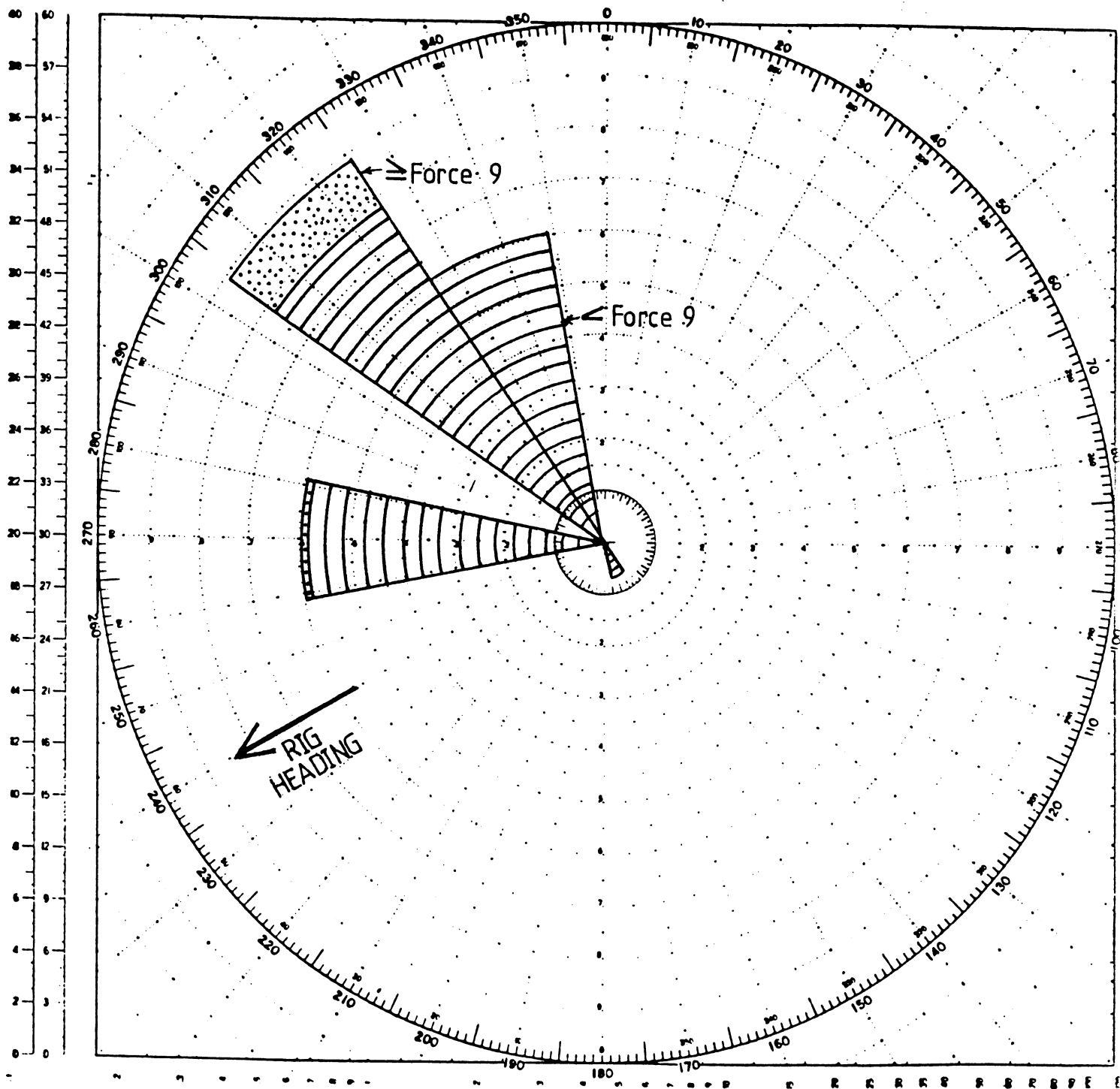


W.O.W TIME(Days)/DIRECTION

JUNE 1985

MANEUVERING BOARD

SCALES
2:1 3:1



LOGARITHMIC SPEED AND DISTANCE SCALE

Use single scale throughout

Use of inner and logarithmic time speed and distance scale

THE SPEED scale is used to find the speed of a ship or to find the distance of a ship from a point of observation. The distance scale is used to find the distance of a ship from a point of observation.

Scale in miles

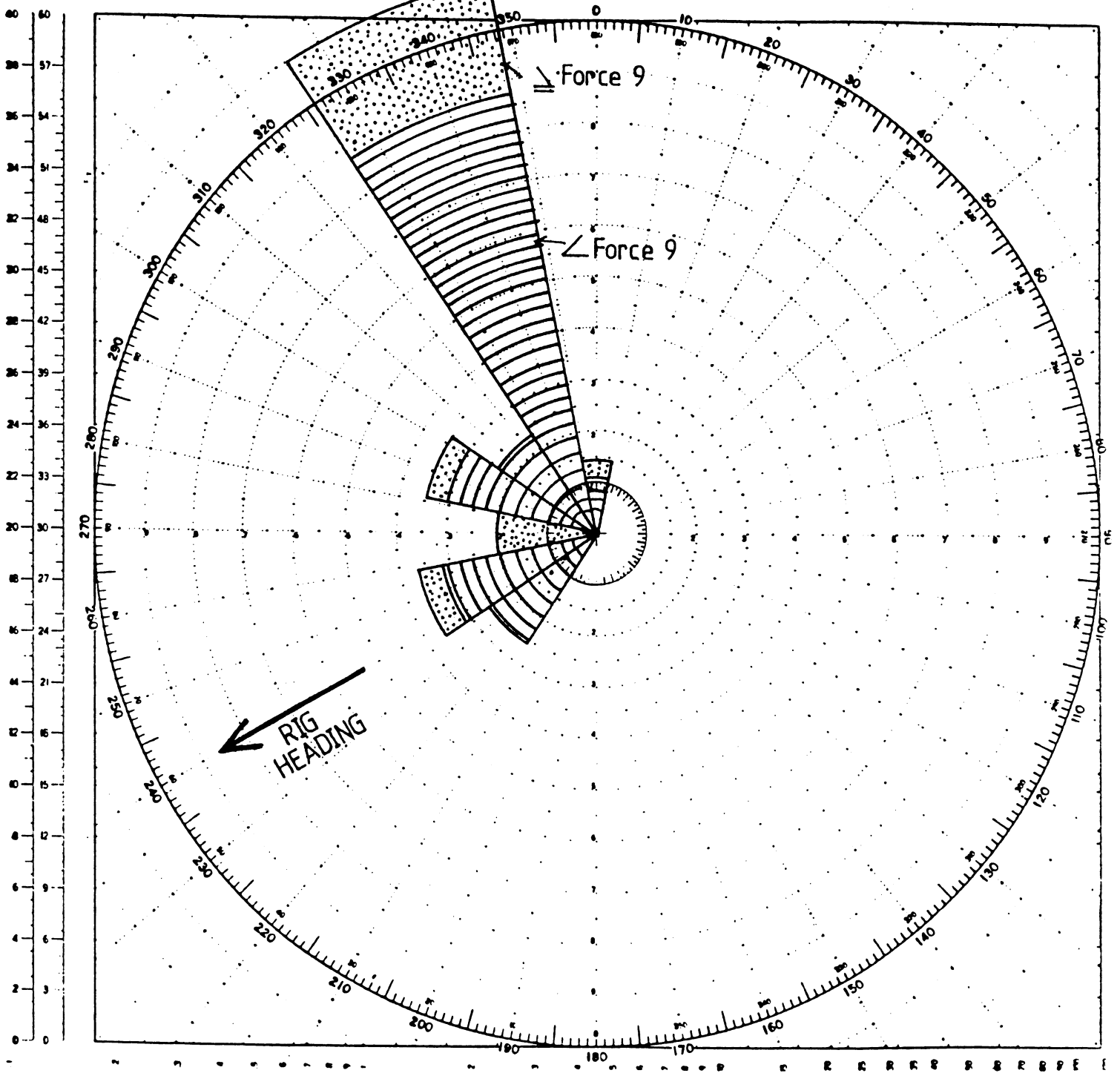
Scale in miles

WQW TIME(Days) / DIRECTION

JULY 1985

MANEUVERING BOARD

SCALES
2:1 3:1



LOGARITHMIC TIME, SPEED AND DISTANCE SCALE

Use of scales with logarithmic time, speed and distance scale

Use of scales with logarithmic time, speed and distance scale

NO SPILL: place one point of divider on
anywhere on the logarithmic time scale
and draw a line parallel to the time scale

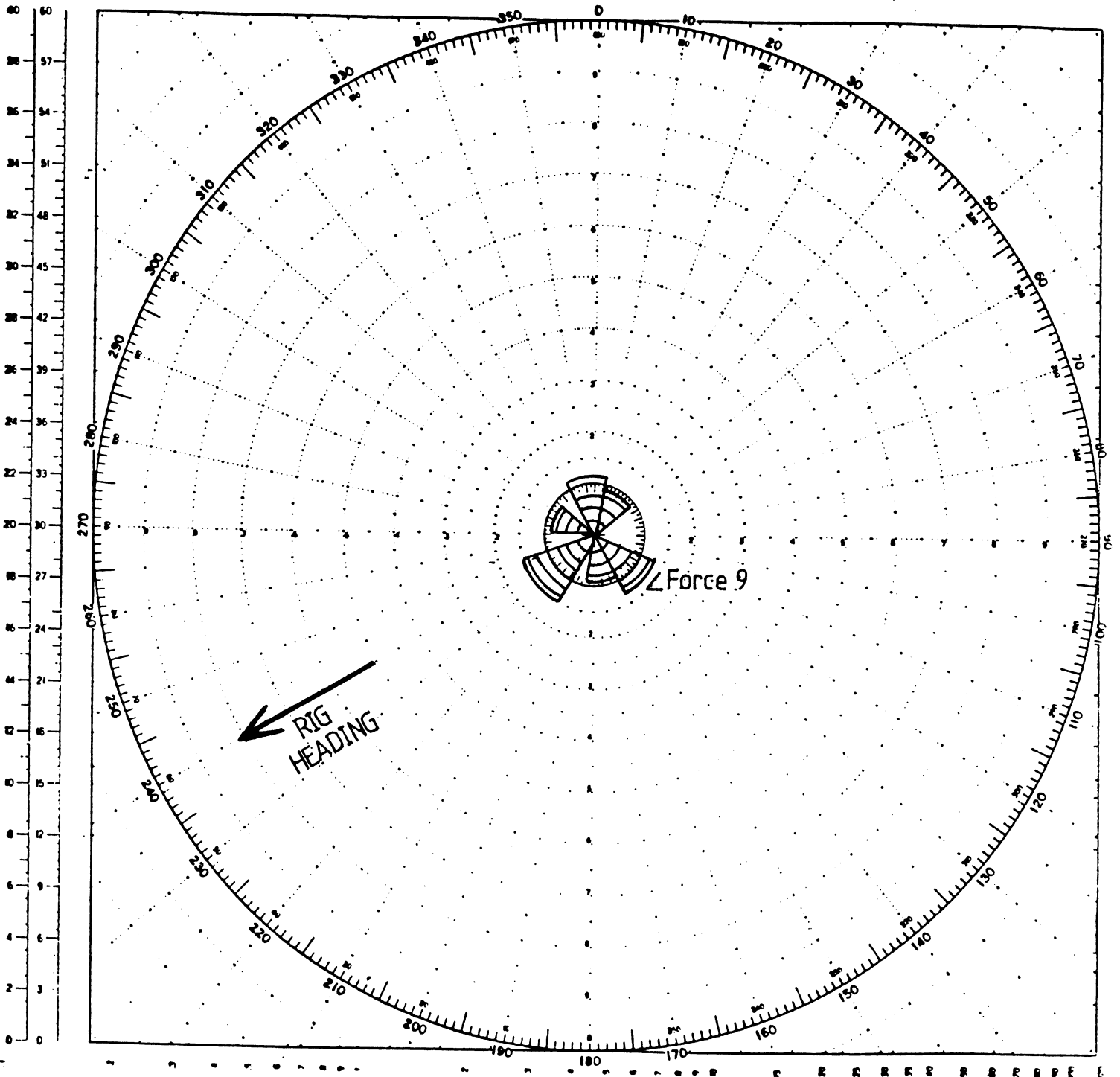
TO FIND DISTANCE: place one point
of divider on the logarithmic speed scale
and draw a line parallel to the speed scale

Scale 1:1

W.O.W TIME(Days) / DIRECTION

AUGUST 1985
MANEUVERING BOARD

SCALES
2:1 3:1



LOGARITHMIC TIME SPEED AND DISTANCE SCALE

Use single scale throughout

Use outer scale with logarithmic time speed and distance scale

NO SCALE given for point of departure or
point of arrival. If point of departure is
known, then the point of arrival is
known. If point of arrival is known, then
the point of departure is known.

NO TIME (DISTANCE) OR TIME (SPEED) SCALE
OR SCALE (SPEED) OR DISTANCE (SPEED) SCALE
OR SCALE (DISTANCE) OR TIME (SPEED) SCALE

Scale in miles

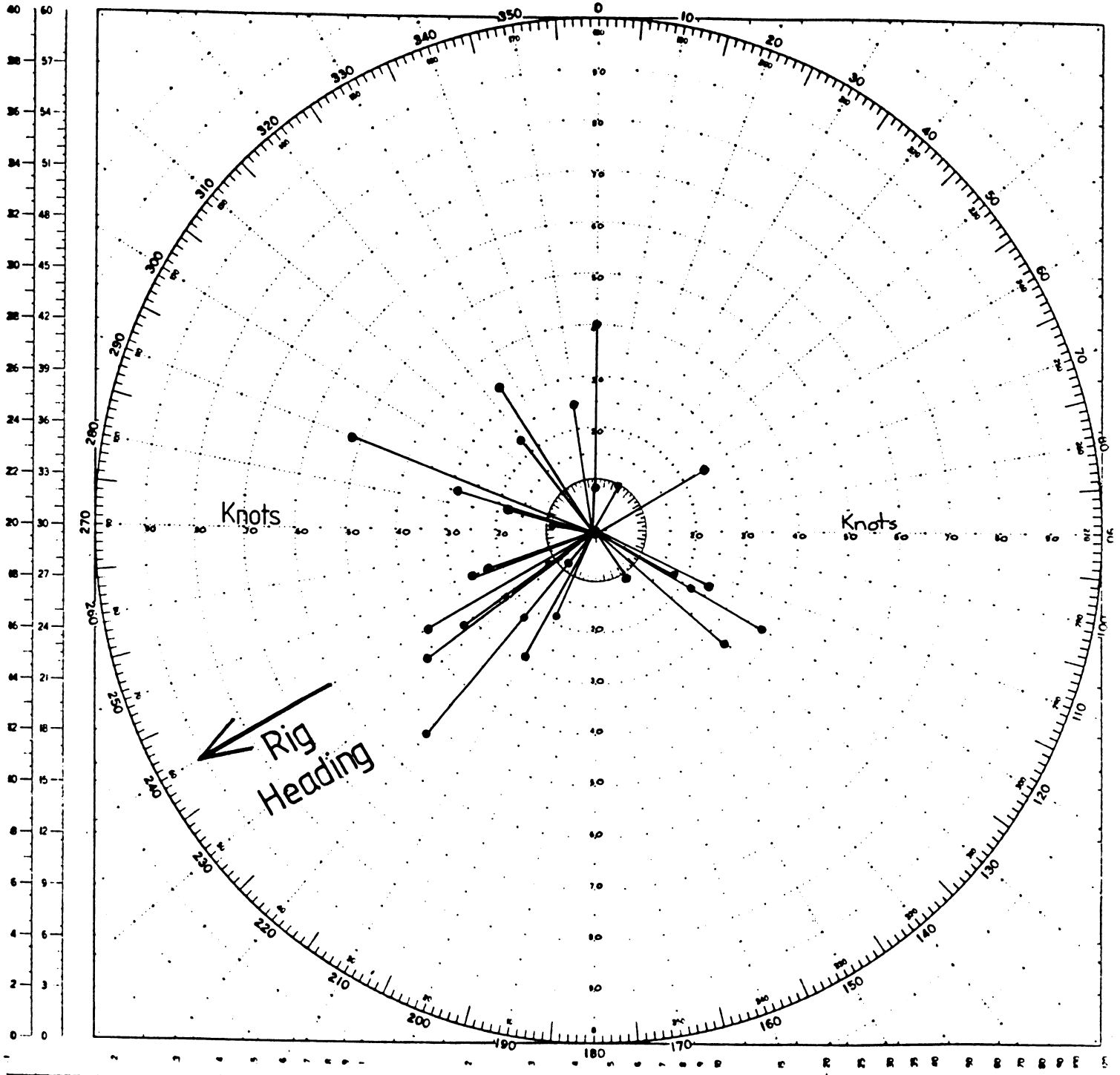
Scale in hours

WIND SPEED / DIRECTION

SEPTEMBER 1985

MANEUVERING BOARD

SCALES
2:1 3:1



LOGARITHMIC TIME, SPEED AND DISTANCE SCALE

Use single scale throughout

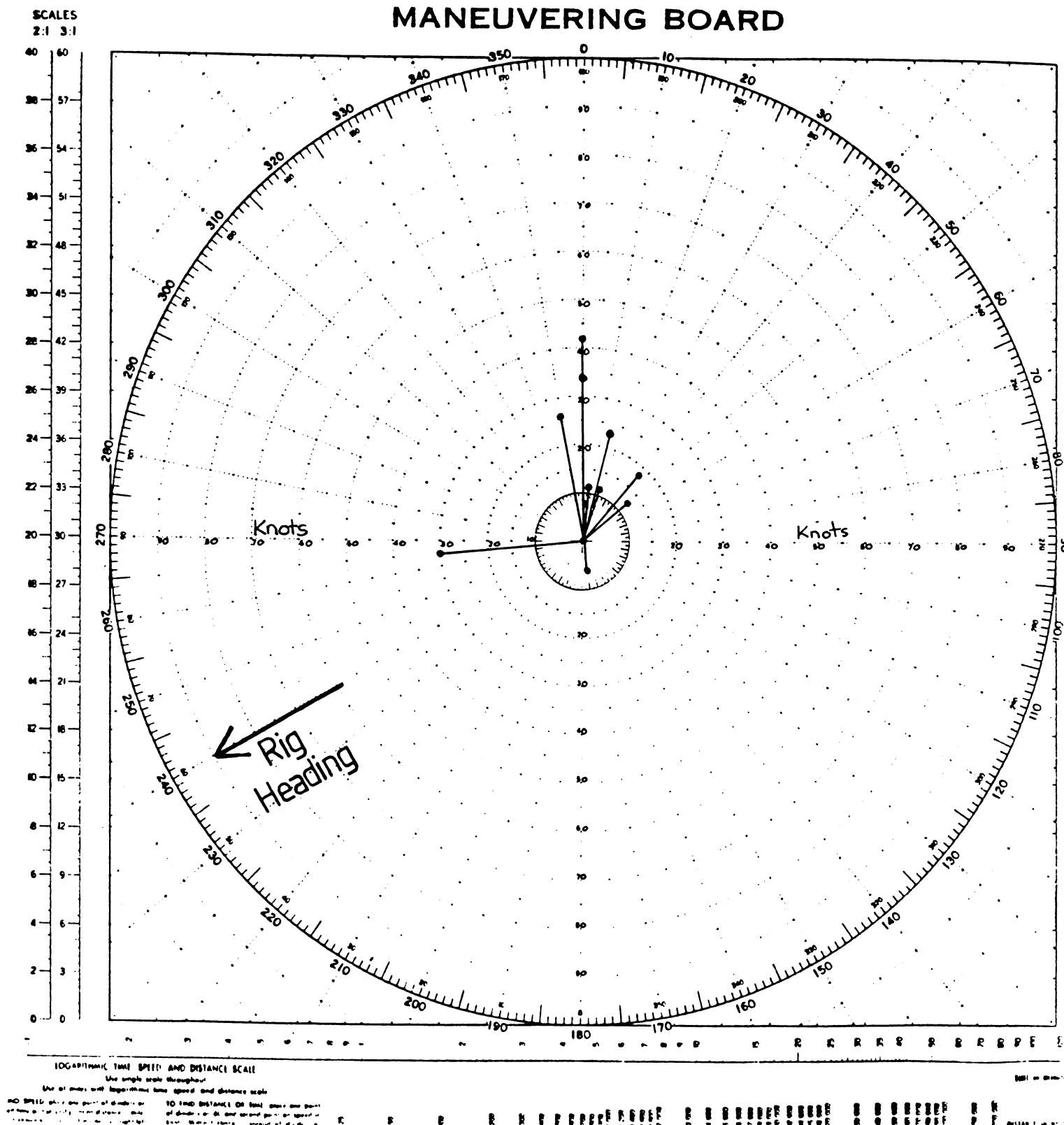
Use of miles with logarithmic time, speed and distance scale

1. SPEED: place one point of divider on time scale (left) and other point on speed scale (right).
2. TO FIND DISTANCE: OR TIME: place one point of divider on distance scale (left) and other point on speed scale (right).
3. TO FIND TIME: place one point of divider on time scale (left) and other point on distance scale (right).

1001-1010

1011-1020

MANEUVERING BOARD

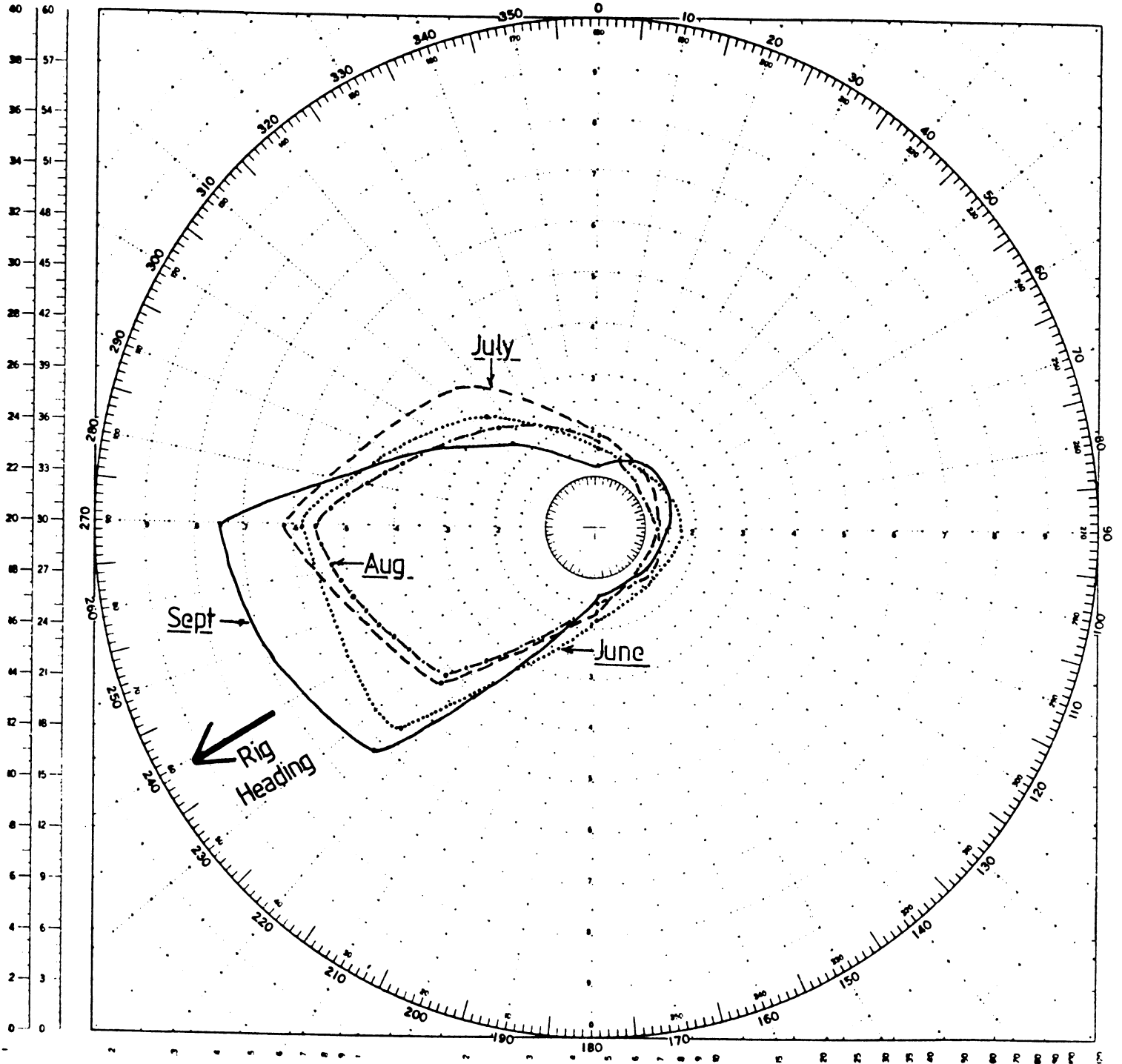


Σf of Wind Speed > 21 Knots

JUNE - AUGUST, 1985

MANEUVERING BOARD

SCALES
2:1 3:1



LOGARITHMIC TIME SPEED AND DISTANCE SCALE

Use single scale throughout

Use of scales with logarithmic time, speed, and distance scale

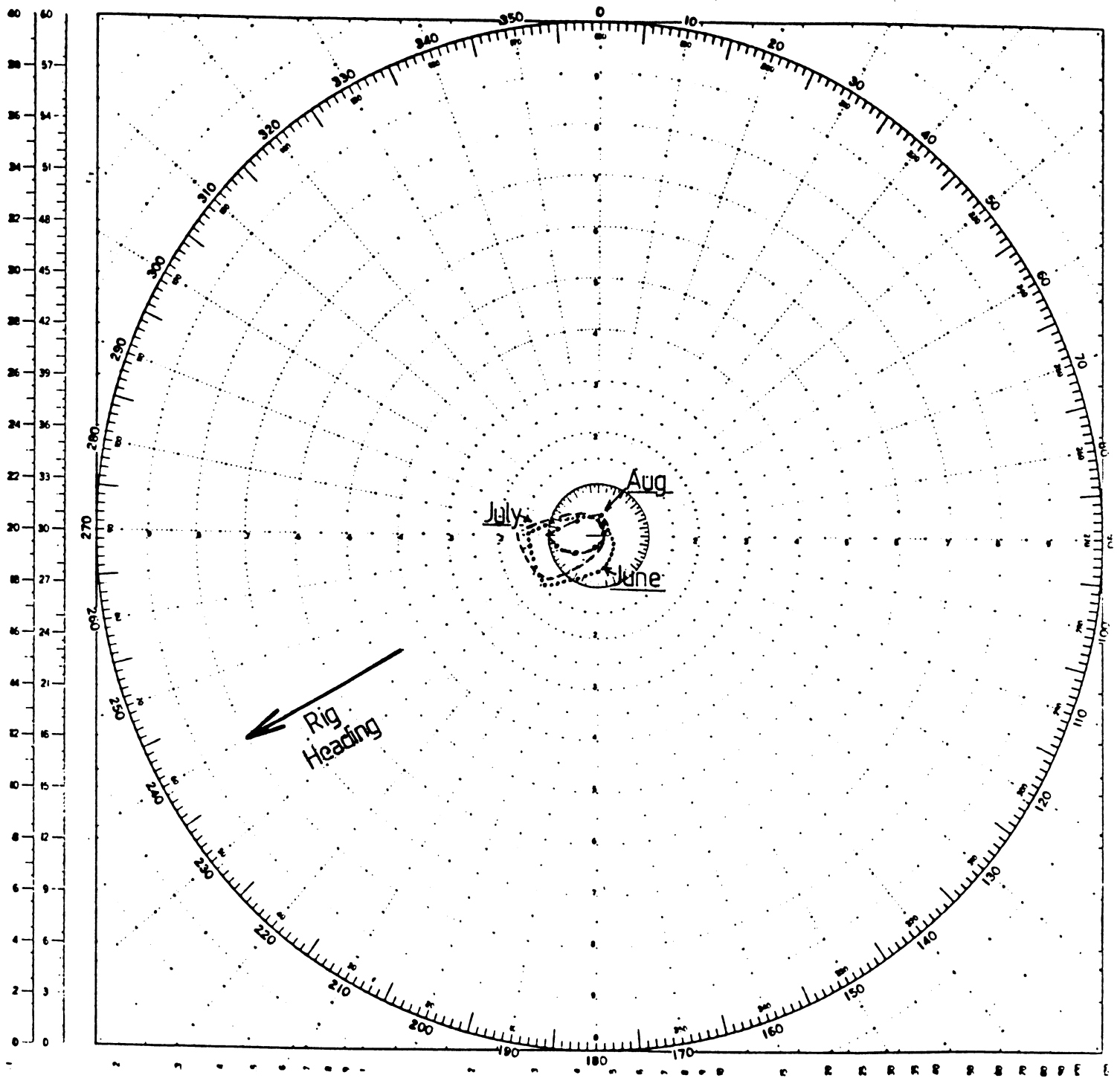
TO FIND DISTANCE OR TIME, place one point of divider on 60 and second point on speed in knots. Then, without changing position of divider, place other point on time scale.

Scale in minutes

Distance in miles

JUNE - AUGUST 1985

SCALES
2:1 3:1



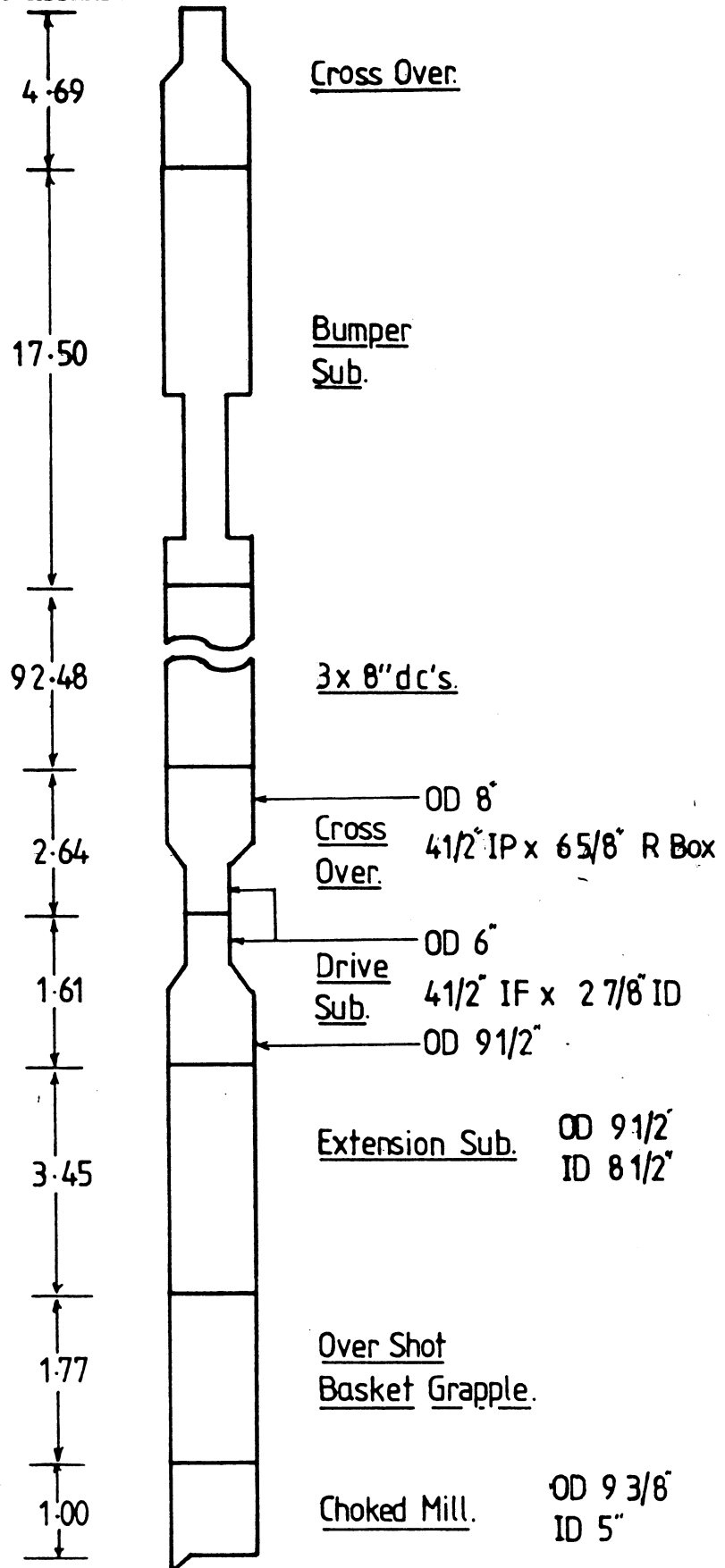
LOGARITHMIC TIME SPEED AND DISTANCE SCALE

Use single words throughout.

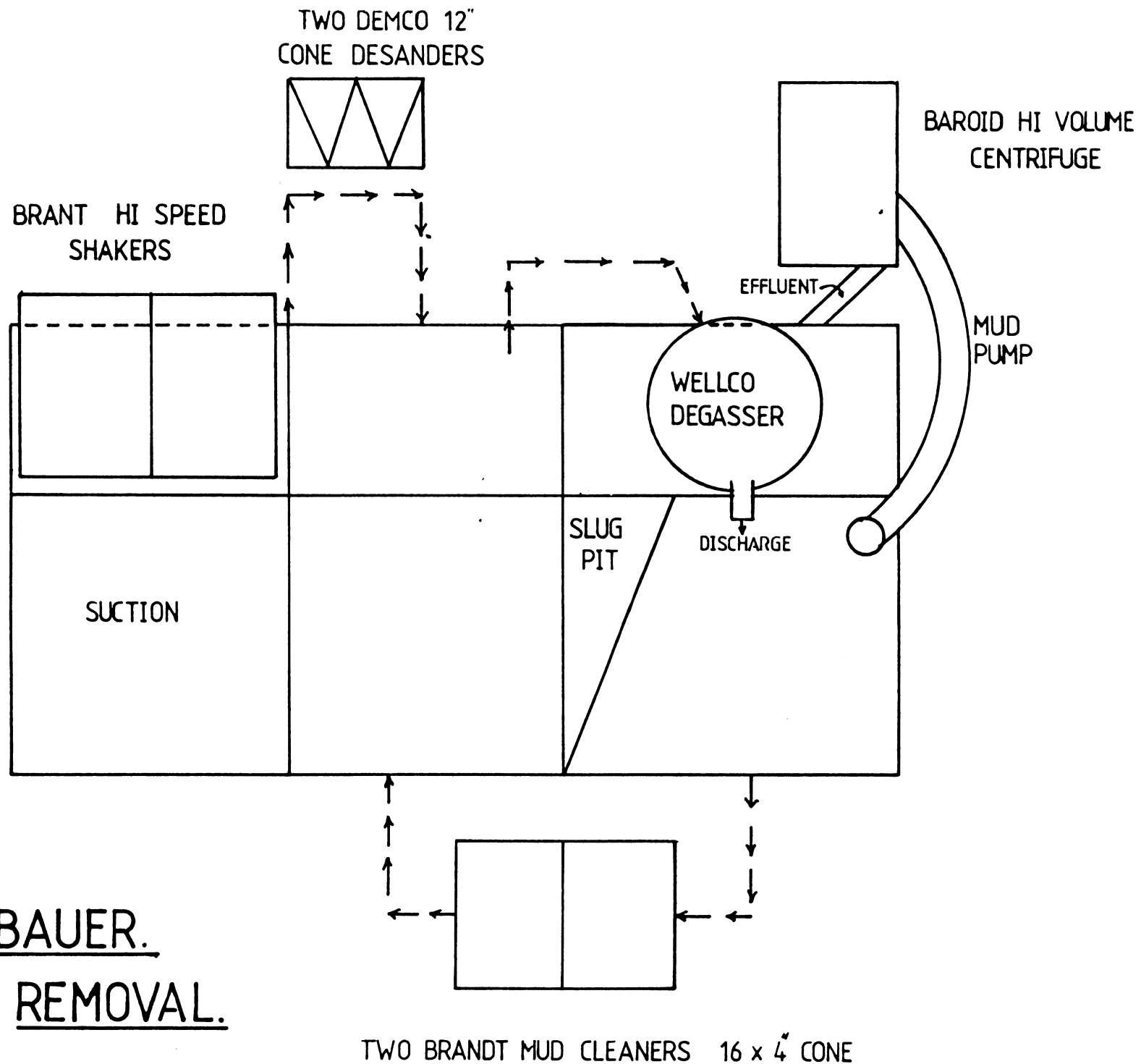
the 1st mile, with logarithmic time speed and distance scale

[illegible]

SHEARED PIPE FISHING ASSEMBLY



R. F. BAUER.
SOLIDS REMOVAL.



SIGNIFICANT FEATURES OF THE ROBERT F. BAUER DRILLSHIP

- Constructed to fully meet the U.S. Coast Guard requirements.
- Designed to meet ABS classifications ✕ A1 ✕ AMS.
- Large variable load in excess of 7,000 short tons.
- Piping system arranged to permit multiple use of pumps wherever practical. Virtually all systems are redundant.
- Extensive use of pneumatic control in lieu of hydraulics, thereby reducing maintenance problems associated with hydraulics.
- Liberal use of stainless steel and zincless bronze in pumps and other applications subjected to corrosion.
- BOP handling system that allows moving the BOP from the transport position to the moonpool while fully unitized.
- Propulsion system of 9,600 total hp which permits transit speeds of approximately 14 knots.
- Modern air-conditioned accommodations for 99 men including a 4-man hospital.
- Self-contained deepwater 8-point conventional chain/wire mooring system, allowing for operation in water depths up to 2,500 feet. (Up to 3,000 feet under certain conditions).
- Cement recirculating/liquid additive system, allowing for controlled cementing operations.
- Three cranes located to optimize deck coverage.
- 18¾" 10,000 psi guidelineless BOP with 15,000 psi BOP control system. (Can be supplied with 15,000 psi BOP).
- Longitudinal framing requiring less steel while increasing the cargo capacity, allows for extended operations in remote areas.
- Large bilge keel extension providing better roll characteristics.
- Automated mud system providing for accurate control of mud weight.
- Fresh water cooling of all auxiliary equipment (eliminating problems associated with seawater cooling).
- Horizontal automatic pipe handling system, which allows for drill pipe storage in triples in excess of 23,000 feet.
- 2,100 kw low RPM diesel electric power plant with SCR system for propulsion and drilling operations.
- Large drilling package:
 - 3,000 hp drawworks
 - 650 traveling block and hook
 - Derrick rated at 1,300,000 lbs.
 - Two 1600 hp mud pumps

INTRODUCTION

The GLOMAR ROBERT F. BAUER, first in a new class of drillships, is currently under construction at the Far East Livingston Shipyard in Singapore. Starting with Global Marine's proven basic drillship design, the GLOMAR ROBERT F. BAUER was developed to incorporate the latest in conventionally moored drillship technology. The water depth capability of 2,500 feet (3,000 feet under certain conditions) permits effective and economical operation in water depths normally requiring dynamic positioning. The GLOMAR ROBERT F. BAUER has a completely self-contained propulsion system, mooring system, and marine riser system and requires no support in transit or location moves; only minimal support while on location. The high transit speed (approximately 14 knots), large variable load (approximately 7,000 tons), wide water depth range (100 to 2,500 feet plus), and proven safety features (ability to move rapidly off location in an emergency) give this unit an over-all capability unsurpassed for self-sufficiency, versatility, economy of operations, and safety. The major design criteria for the GLOMAR ROBERT F. BAUER are as follows:

- A design permitting a high degree of mobility.
- A design permitting deepwater drilling while utilizing a fully self-contained mooring system.
- A design permitting effective operations in a wide range of environments.
- A proven evolutionary design rather than a radical new approach.
- A safe design with regard to strength, stability, and the ability to move rapidly off station.
- A design that facilitates high operational reliability coupled with low maintenance costs.
- A design that offers a large variable load capability to enhance self-sufficiency and reduce dependency on re-supply.
- A design that will facilitate efficient inspection and service.
- A simple but efficient design to allow optimization of storage and transfer of expendables.

GENERAL DESCRIPTION

The GLOMAR ROBERT F. BAUER is a self-propelled diesel electric powered single-hull drillship designed to drill up to 25,000 feet in water depths up to 2,500 feet. In addition to the vessel meeting the latest requirements of the U.S.C.G. and ABS for safety, stability, and strength, it also bears the highest ABS classification for an offshore drilling unit.

The vessel is framed longitudinally, maximizing strength and cargo carrying capacity while minimizing the total steel weight. The principal dimensions are well-balanced, providing optimum freeboard to depth ratio and resulting in dryer working decks. The hull is divided into seven main cargo and service compartments with each compartment subdivided into a centerhold and port and starboard wing tanks. Center spaces are further subdivided to carry bulk materials. A double bottom is fitted throughout the length of the cargo and machinery spaces and allows for storage of fuel oil, ballast water, drill water, and wash water. The large storage and cargo capacity allows for storage and transportation of a sufficient amount of supplies to drill in remote locations with minimal re-supply.

The main deck is arranged to handle all the equipment necessary for drilling operations. A casing rack is located aft, while an automatic drill pipe racker is located forward of the drill well. Three pedestal mounted revolving cranes are located to optimize equipment and material handling.

Five 2100 kw, 60 Hz, 600 VAC, diesel-electric generators supply power to all propulsion, drilling and auxiliary machinery. The major drilling and propulsion machinery is powered through SCR converters for DC drive. Propulsion power is supplied to the vessel's twin screws by 1600 hp DC electric motors producing a total of 9600 hp and an estimated speed of 14 knots.

The vessel is equipped with a completely self-contained eight-point combination wire/chain deepwater mooring system, and is outfitted with eight 30,000 lb. Moorfast anchors, each with 2,000 feet of 2¾ in. anchor chain and 6,500 feet of 3 in. wire rope. The mooring system permits heading changes to minimize motion during drilling operations and to provide protective shelter for offloading supply boats or to reduce mooring loads during rough weather.

PRINCIPAL CHARACTERISTICS

Classification:

ABS✕A1✕AMS drilling unit
United States Coast Guard Certified

Water Depth Capability: 2,500 ft.

Vessel Dimensions:

Length Overall	444 ft. 5 in.
Beam Molded	76 ft.
Depth at Side	35 ft.
Draft at Load Line	24 ft. 6 in.
Centerwell	26 ft. x 26 ft.

Loading Data: (Approx.)

Lightship Displacement	10,080 s. tons
Maximum Loaded Displacement	17,920 s. tons
Maximum Variable Load	7,840 s. tons

Maximum Storage Capacities:

Tubular Goods	
Casing Rack	448 s. tons
Casing Hold	672 s. tons
Sack Storage	15,000 cu. ft.
Bulk Mud	16,890 cu. ft.
Liquid Mud	
Active	594 bbls (approx.)
Reserve	3,044 bbls.
Bulk Cement	7,415 cu. ft.
Potable Water	1,140 bbls.
Drilling Water	16,806 bbls.
Treated Water	1,740 bbls.
Wash Water	2,748 bbls.
Fuel	13,446 bbls.
Lube Oil	407 bbls.

Note: Any combination of the above can not exceed the maximum allowable variable load.

Propulsion System:

Two 11 foot, four bladed, fixed pitch propellers, each driven by three 1,600 hp DC electric motors, developing a total of 9,600 SHP, allowing an approximate speed of 14 knots.

Fully Self-Contained Mooring System:

Eight point conventional wire/chain system comprised of two double drum, double wildcat Skagit windlasses and four single drum, single wildcat Skagit windlasses, with fairleaders; eight 30,000 lb. anchors and associated lines and buoys; eight 6,500 ft. lengths of 3 in. wire rope and eight 2,000 ft. length of 2¾ in. Oil Rig Quality chain.

Living Quarters:

Air conditioned accommodations located aft for 77 persons including 4 hospital berths. Air conditioned forward accommodations for 22 persons.

Power Generation:

Five skid mounted EMD 16 cylinder diesel engine/generator sets rated at 2,100 KW/600 volts each.

Power Conversion:

DC power is supplied by 6 SCR units rated at 1800 amps, 750 volts each.

Emergency Power:

One 600 KW/480 volt generator powered by a Detroit Diesel 12V-149 diesel engine.

Auxiliary Equipment:

Cranes: Two Liebherr BOS-30—300D cranes rated at 30 tons at a 20 ft. radius. One Liebherr BOS-65—550D crane rated at 65 tons at a 25 ft. radius.

Heliport: 72 ft. diameter with approved foam dry chemical and CO₂ fire fighting systems. Meets requirements for operation of Sikorsky S-61 helicopter.

Water Distillation System: Two Riley-Beaird model TCF 75 with 7,500 gallon per day capacity each and two raw water pumps.

Lifeboats: Two totally enclosed diesel powered 28 ft. lifeboats each equipped for 58 person capacity. Two totally enclosed diesel powered 26 ft. lifeboats each equipped for 44 person capacity. Sufficient life rafts and life jackets to meet U.S.C.G. requirements.

Compressed Air Systems:

General Service System (125 psi)
Engine Cold Start System (175 psi)
Bulk Air System (40 psi)
Motion Compensator and Riser Tensions System (2,400 psi)
Breathing Air System (3,500 psi)

Drilling Equipment:

Derrick: Global Marine design 160 ft. x 61 ft. x 38 ft. bolted galvanized steel derrick rated at 650 tons static hook load, with a two rail traveling block guide system.

Crown Block: Global Marine design 650 ton capacity.

Swivel: National P-650 rated at 650 tons with an International Tool A-6C kelly spinner.

Hook: National H-650 rated at 650 ton capacity.

Motion Compensator: NL Shaffer dual cylinder with integral traveling block with a rated locked capacity of 500 tons and a 200 ton live capacity and a 20 ft. stroke.

Drawworks: National 1625 DE rated at 3,000 hp with Elmagco electric brake, driven by three GE 752 electric motors.

Rotary Table: National 49½ in. driven by one GE 752 electric motor rated at 800 continuous horsepower.

Drill Pipe Racker: Global marine design pneumatically operated automatic horizontal drill pipe racker with a capacity of 24,759 ft. in triples.

Drill Pipe: 15,000 ft. of 5 in. grade G

Drill Collars: Thirty 8 in. OD x 2¼ in. ID x 30 ft. long; forty 6½ in. OD x 2¼ in. ID x 30 ft. long.

Automated Mud System: Complete automated mud system for automatic mud density control.

Mud Pumps: Two National 12-P-160 triplex pumps, each driven by two 800 hp DC electric motors.

Shale Shakers: Brandt Dual Tandem mounted on active tank.

Desander: Brandt desander rated at 1,000 gallons per minute at 40 psi.

Mud-Gas Separator: Wellco

Degasser: Wellco

Mud Mixing Pumps: Two Mission Magnum 8x6R pumps driven by 100 hp electric motor.

Subsea Equipment:

Diverter: Regan model KFDH diverter.

Slip Joint: Regan 21 in. x ½ in. wall with 50 ft. stroke, complete with integrated 3 in. ID 10,000 psi wp choke and kill lines.

Riser: Regan integral joint choke and kill riser, 21 in. OD x ½ wall for 2,500 ft. water depth. All riser equipped with syntactic foam buoyancy modules.

Blowout Preventer Handling System: Global Marine design skidding system.

Blowout Preventer: 18¾ in. 10,000 psi wp Cameron guidelineless blowout preventer system consisting of two double ram preventers; two 18¾ in. 5,000 psi wp Hydril annular preventers, with Cameron 18¾ in. 10,000 psi wp Wellhead and LMRP connectors.

BOP Choke and Kill Line System: Two choke and one kill line, each containing one 3¼ in. 10,000 psi wp 90° angle valve and one 3¼ in. 10,000 psi wp straight valve. Valves are hydraulically-operated, failsafe close, with pressure assist close.

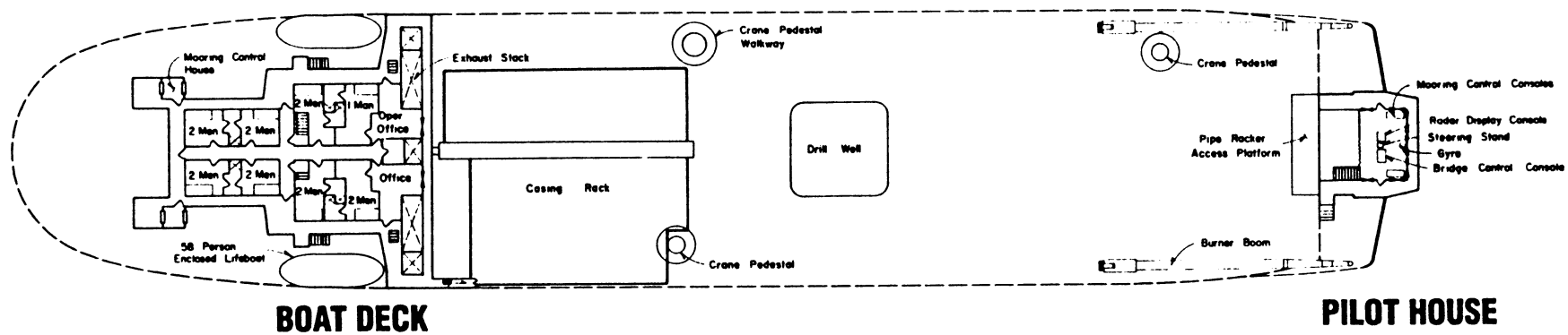
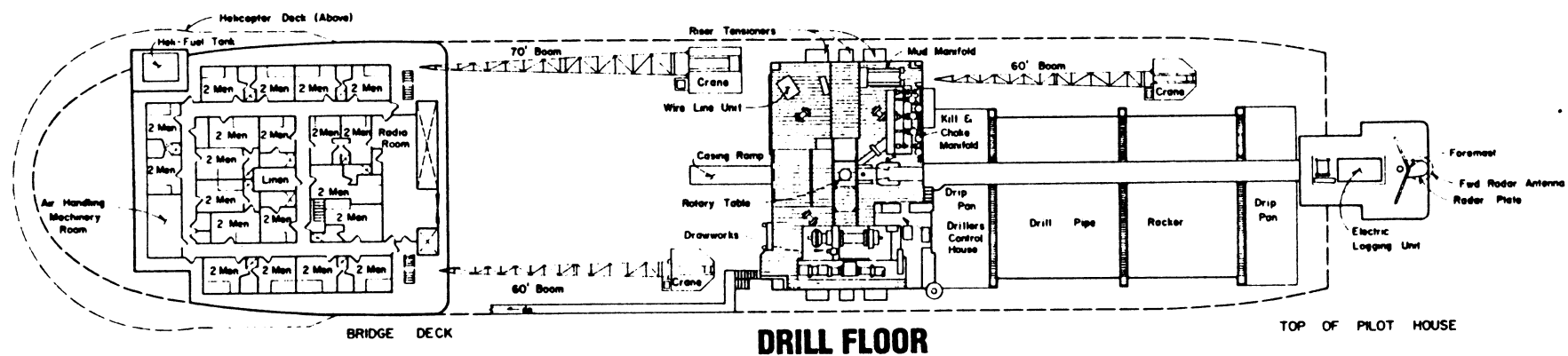
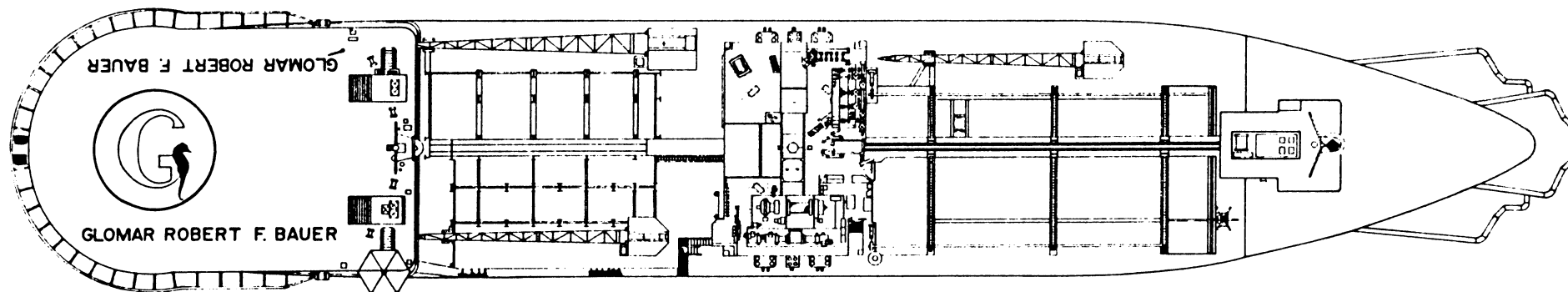
BOP Choke and Kill Manifold: Four station 3¼ in. 15,000 psi wp manifold, H₂S trimmed, with two hydraulically adjustable chokes and two manually adjustable chokes.

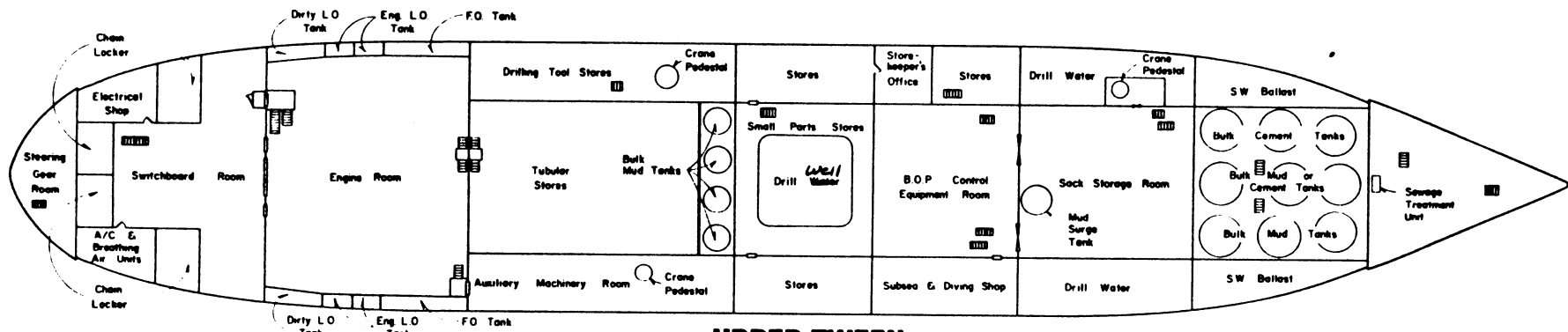
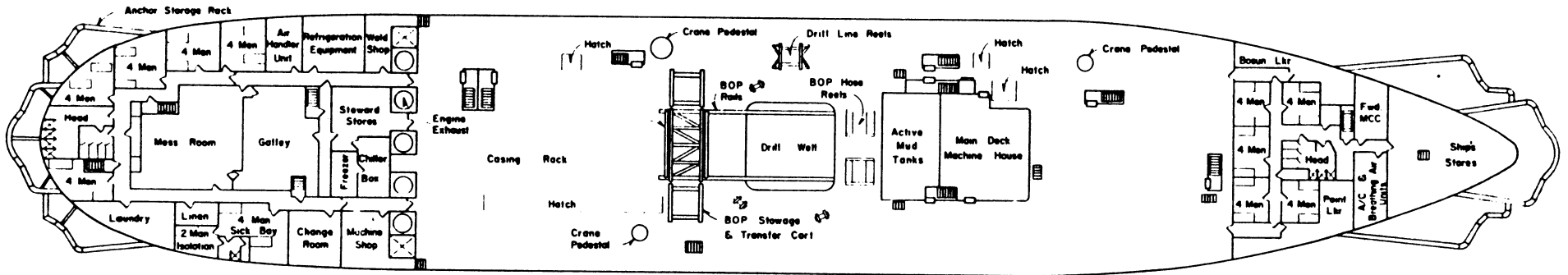
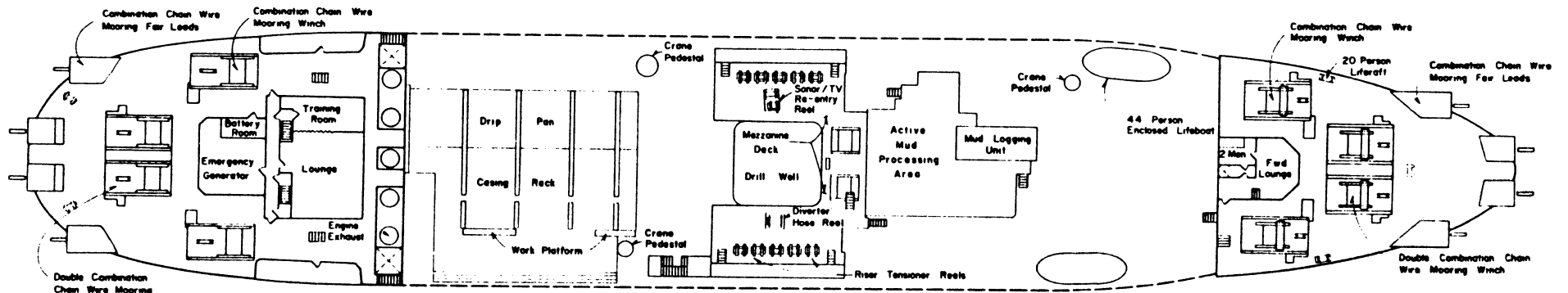
BOP Guidance System: Cameron Guidelineless System.

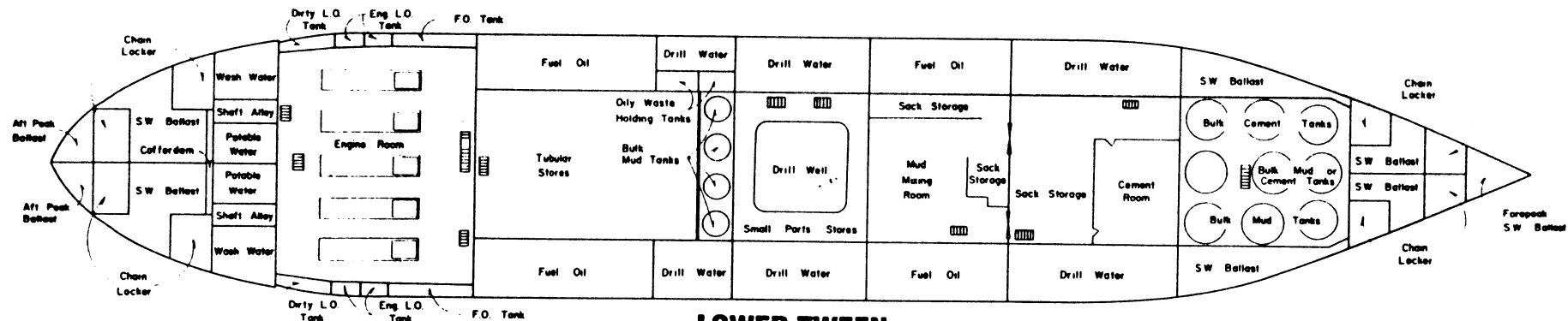
BOP Moonpool Guidance System: Global Marine design.

BOP Control System: Koomey dual pod, completely redundant hydraulic system including 1,000 gallon accumulator system, control manifold and hose reels.

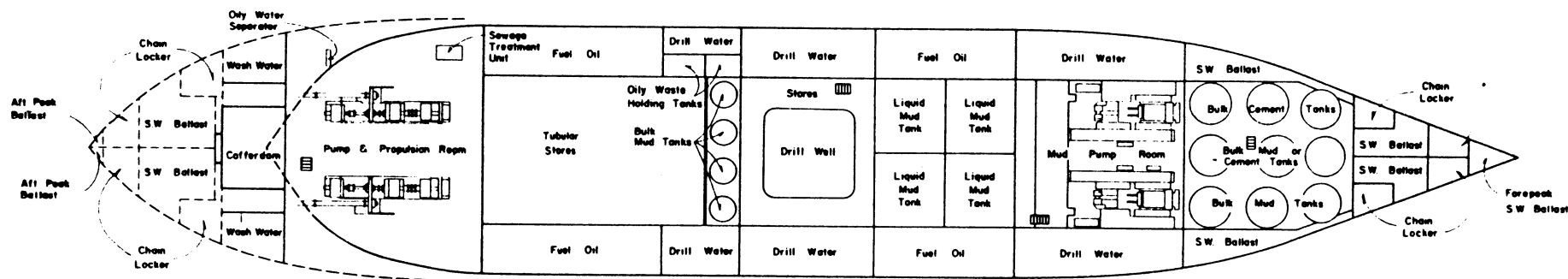
Riser Tensioners: Four N.L. Schaffer dual and two single units each with 80,000 lbs. maximum line pull and a 50 ft. line travel.



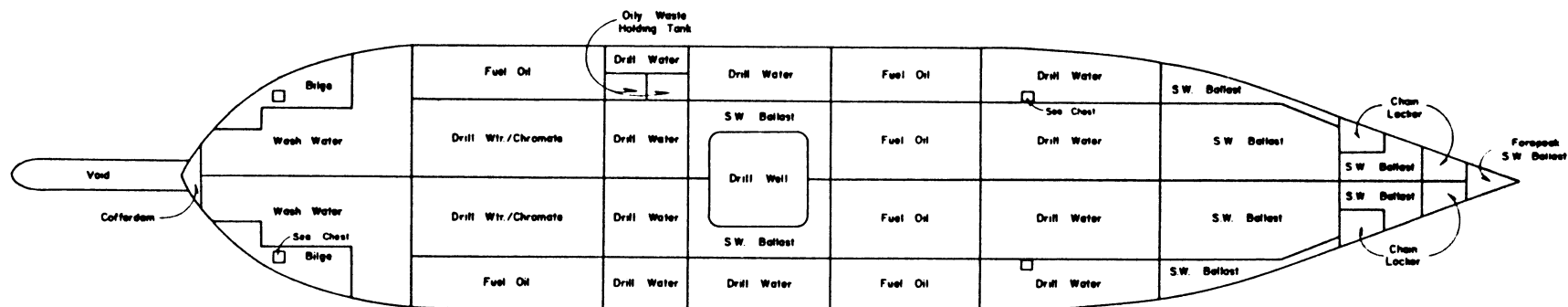




LOWER TWEEN



TANK TOP



INNER TANK BOTTOM

