TPR
OR-357B.

Amoco Australia Petroleum Company

PELICAN NO 5

DETAILED OPERATIONS PLAN
DECEMBER, 1985

TPR
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AMOCO AUSTRALIA PETROLEUM COMPANY

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BASS BASIN T22/P TENEMENT

AMOCO AUSTRALIA PETROLEUM COMPANY

G.A. COWAN

J.G. RANKIN

R.J. WALLA

WELL PROGRAM : PELICAN NO. 5

DECEMBER, 1985

BASS BASIN T 22/P TENEMENT

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Attachments:

AMOCO AUSTRALIA PETROLEUM COMPANY

EXPLORATORY WELL OPERATION PROGRAMME

Well Name	:	Pelican No. 5
Proposed	:	Lat. deg. S 40° 20' 43.58"
		Long. deg. E 145° 51' 49.21"
Shot Point Location	:	Shot Point 240, Line TNK4-87
Water Depth	:	± 253' (77 m)
Rotary Kelly Bushing	:	± 73' MSL (22.3 m)
Authorized Total Depth	:	14,073' RKB (4289 m)
Expected Drilling Time	:	106 DAYS
Well Objective	:	Late Eocene To Late Cretaceous
Drilling Contractor/Rig	:	DIAMOND M/DIAMOND M EPOCH

The operations plan calls for setting 30", 20", 13-3/8", 9-5/8" casing, and a 7" liner string. The tentative casing shoe depths are as follows:

CASING SIZE	MUDLINE DEPTH	RKB DEPTH
30"	± 315'	± 607'
20"	± 1,000'	± 1,326'
13-3/8"	± 5,442'	± 5,768'
9-5/8"	±10,174'	±10,500'
7"	± 13,717'	± 14,043'

Exact casing shoe depths will be selected while drilling as dictated by lithology and hole conditions.

I. PRE-SPUD PREPARATIONS

1. Pre-Spud Meeting - A pre-spud meeting will be held on the rig for all wellsite personnel. This meeting will be conducted as early as possible.

2. Site Survey - The location will be surveyed for bathymetric hazards, bottom conditions, and shallow gas. The report will be made available as soon as possible.

3. Positioning of Rig - The semisubmersible will move to the location, following a previously agreed route. Final positioning will be accomplished using a survey team that will be on location. The rig heading will be based on available weather data and provided prior to arrival of the vessel on location.

4. A specific procedure for anchor handling will be furnished prior to move.

II. 36" HOLE AND 30" STRUCTURAL CASING

A. Spud: It is anticipated that a temporary guide (TGB) will be used.

1. Skid and secure TGB in moonpool. Attach anti-rotation legs, slope indicator, and guide lines.

2. Fill TGB with sack barite. Paint orientation marks on the TGB. Identify the TGB relative to the Rig's heading.

3. Make-up the TGB running tool and "J" into TGB. Paint running tool.

4. Lower the TGB to the sea floor, being careful not to rotate the TGB. Be sure of the rig's position before landing and releasing. Observe the TGB, note the position and orientation of the TGB to facilitate re-location for re-entry. Tension guidelines.

5. Slack off the weight of the TGB and release the running tool with right hand rotation. POH. Steel line measure the running string. Check the altitude and attitude of the TGB after releasing running tool.

6. Make up and run to the sea-floor a 26" bit on a 36" hole-opener with 8''drill collars as required.

7. Re-enter the TGB using re-entry guide frame while observing with rig camera.

8. Wash the bit down with minimum pump rate until the kelly bushings are engaged, then drill ahead to ± 661' RKB. Care should be taken not to wash out a crater around the TGB. Keep weight on the bit to a minimum through this section of the hole. Enough hole should be drilled to accommodate 8 joints (± 320 feet) of 30" casing. After drilling to TD, sweep the hole with a high vis pill (75 bbl mud min.). Fill the hole with mud and make a short trip. Condition the hole if fill encountered.

9. Prior to pulling out of hole to run casing, displace hole to mud and drop a survey. Observe the TGB after coming out of the hole.

B. Logging Programme:

No logs will be run in this hole section.

C. Casing Programme:

1. Casing is 30" X 1" wall thickness, Grade B, Range 3 with Dril Quip Quik Stab connectors. Enough 36" hole should be drilled so that with 8 joints of 30" casing run and the shoe resting just off bottom, the PGB will seat at the seabed. Check the 30" casing tally for exact measurements.

2. Skid and secure the permanent guide base (PGB) in the moonpool. Paint a target on the PGB, and number guide posts.

3. Make up a joint of 30" casing (painted white with penetration stripes) with a welded duplex shoe, 6 joints of 30" casing, and the 30" housing joint painted with penetration stripes (total 8 joints, length approximately 320 ft.). Fill the casing with sea water while running. Attach soft line from shoe to guide lines. Re-enter TGB with 30" shoe utilizing the rig camera for observation. Land 30" wellhead in rotary. Remove the running tool and install beacon and slope indicator on PGB.

NOTE: All painting should be done prior to rigging up to run casing.

4. Make up 5" D.P. cementing string and run into 30" casing to within 30 ft. of the shoe. Make up the cementing string to the running tool and engage the running tool into the 30" housing by left hand rotation. Lower 30" the housing into the PGB. Ensure the 30" housing latches into the PGB properly. Paint an orientation stripe on the running tool mandrel.

5. Lower the 30" assembly into the water with the air bleeder valves opened on the top of the 30" running tool and one 10 Ft. snorkel installed to ensure the casing is full of water. Pick up just above water level and close the bleeder valves on the running tool. RIH on 5" HWDP, filling the string with sea water as run.

6. RIH and land PGB on TGB. Observe TGB/PGB for settling. It may be necessary to hold the string at proper altitude from surface with the motion compensator. Check attitude of PGB/30" csg with slope indicator.
7. Circulate and cement casing with ± 2000 sxs class "G" cement at 15.8 ppg (exact formulation to be advised). Observe and report returns during cementation. Observe altitude and attitude of PGB after cementation is complete. DO NOT allow PGB to sink below the mud line.
8. If necessary, support the 30"/PGB with the motion compensator until cement has taken initial set.
9. Adjust the motion compensator for neutral point at the wellhead and release the mechanical running tool with right hand rotation. Check tension on guide lines.
10. POH until 15 ft. of the cementing stinger remains in the wellhead and wash the wellhead area with seawater. Slowly pull the stinger out of the wellhead while pumping. POH and SLM for riser space out.
11. Observe PGB area for cement build up. Observe the inclinometer to ensure that housing alignment is not more than 1-1/2° off vertical. If the housing is more than 1-1/2° from vertical, inform the Amoco Hobart Drilling Supervisor and prepare to move the rig for re-spud.

MATERIALS - PRESPUD THRU 30" CASING

Item	Quantity
TGB w/anti rotation legs	1 + 1 B/U
PGB	1 + 1 B/U
TGB "J" running tool	1
Barite (in sack for TGB)	as necessary
36" Hole Opener and cutters	1
26" Bit	2
30" Housing w/NS-60 box housing joint	1 + 1 B/U
30" Shoe joint with weld on float shoe	1 + 1 B/U
30" X 1" WT X-56 w/NS-60 connectors	11 jts
30" NS-60 connector O-rings and releasing screws (backup)	as necessary
5" HWDP	± 25 jts
'G' Cement	±2000 sx
Calcium Chloride	25 sx
Mud materials	as necessary
Honeywell beacon	2
Slope indicator	2

PERSONNEL

Wellhead Service Engineer

Cementer

Mud Engineer

Divers

III. 26" HOLE AND 20" CONDUCTOR CASING:

This section of hole will be drilled using sea water and viscous sweeps.

A. Drillout from 30" Casing:

1. Make up 18-3/4" wellhead, mechanical running tool, and 5" HWDP stinger and stand back. Ensure wear bushing is removed. Paint orientation and indexing marks on running tool.
2. Drill to 1346' RKB with a 26'' bit.
3. Survey at ± 800' and at total depth.
4. At TD, sweep hole and make a wiper trip back to the 30'' shoe.
5. Displace hole to mud and POH.

B. Drilling Mud Programme:

1. This interval of hole will be drilled with sea water to an approximate depth of ± 1346' RKB.
2. Sweep pill volumes should be ± 50 bbls at approximately 90'-100' intervals or as hole conditions require. Sweep at TD should be ± 200 bbl. (See Attachment #4 for properties).

C. Casing Programme:

1. The hole will be drilled to approximately ± 1346' RKB. This will accommodate about 24 joints of 20", 94 ppf, Grade B, Range 3 casing. Casing connectors are Dril Quip Quik-Thread.
2. The casing string will consist of a shoe joint (painted white with penetration stripes), and soft line attached to guide lines, approximately 22 intermediate joints, a crossover joint, and an 18-3/4" housing joint (w/penetration stripes). Check for proper float shoe operation before running remainder of casing. The stab of the 20" shoe into the 30'' housing should be observed with the rig T.V. camera.
3. While running casing, continuously fill with seawater (maximum interval two joints).
4. Prior to making up the 18-3/4" housing joint, run a drill pipe stinger into the casing to approximately 50 feet above the shoe using a slotted plate and double elevator technique.

5. Make up 18-3/4" wellhead. Recheck the running tool make up. Lower wellhead into water and fill casing through landing string.
6. RIH with HWDP landing string filling with seawater as run. RIH with blocks unlocked.
7. Circulate prior to landing to check that floats are not plugged.
8. Land 18-3/4" wellhead into 30" housing and pull 10-15 K over pick up weight to ensure that it is latched into the 30" housing.
9. Circulate and condition hole with seawater. Cement with ± 1500 sxs extended class 'G' cement at 12.8 ppg. Tail in with 500 sxs class 'G' at 15.8 ppg. Displace tail slurry to within 25' of the shoe. Do not over displace. Release the pressure and check for back flow.
10. Release mechanical running tool by right hand rotation.
11. POH until 15 ft. of cement stinger is inside the wellhead. Wash the wellhead area with seawater. When POH with stinger, do not hesitate or vessel motion may cause stinger to damage AX ring groove.
11. POH and SLM for riser space out.

BOP SEQUENCE

1. Follow D.M. BOP handling procedures.
2. Use rig T.V. camera to observe landing of BOP.
3. Test BOP after landing and nippling up in accordance with Attachment No. 3.
4. Run 18-3/4" nominal seat protector.

MATERIALS - 26" HOLE THRU 20" CASING

Item	Quantity
26" Bit	2
Drilling jars	2
Mud materials	as necessary
18-3/4" high-pressure housing w/Quik-Stab box down & running tool	1 + 1 B/U
18-3/4" wear bushing & running tool	1
20" S-60 casing	30 jts
20" Crossover (Quik-Stab pin x Quik-Thread pin)	2
20" S-60 shoe joint	1 + 1 B/U
20" Quik-Thread (S-60) O-rings	20 B/U
20" Quik-Stab (NS-60) O-rings	4 B/U
'G' cement	± 2000 sx
Sack Bentonite	± 100 sx
NF-1 Defoamer	as necessary
Power tongs and pack	1
20" Swage	1

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

A. This section will be drilled with a 17-1/2" bit and then logged. The casing point has been tentatively selected at ± 5,768' RKB.

B. Drillout from 20" Casing:

1. After landing and successfully testing the BOP stack as specified in Attachment No. 3 and installing the 18-3/4" seat protector, RIH with a 17-1/2" bit. Use a drill pipe float as necessary.

2. Before drilling out the shoe, pressure test the 20" casing to 500 psi.

3. Drill out the shoe and 2' of cement below the shoe. Spot a gel pill on bottom. Run a CCCT to leakoff. Notify Drilling Supervisor if less than 12.5 ppg.

4. Clean out rathole and drill 5' of new formation. Spot a gel pill on bottom. Run a FCCT to leakoff. Notify Drilling Supervisor if less than 12.5 ppg.

NOTE: The decision to divert or to shut-in will be made based upon the 20" FCCT test results.

C. Drilling Fluid Programme:

1. For this section, a seawater, low-solids, mud system will be used after drilling the 20" shoe and cleaning out the rat hole.

   The mud system has been designed based on the expected formation types with emphasis on simplicity of maintenance. It is planned to keep mud weight to a minimum to optimize drilling rates and prevent loss of circulation. The system is designed to keep water loss to a minimum to prevent troublesome shales from swelling and sloughing into the wellbore.

2. The following range of mud properties is typical for this type of mud system.

Density	:	8.9-9.2 lb/gal
Yield Valve	:	8-20 lbs/100 sq. ft.
10 sec gel	:	6-15 lbs/100 sq. ft.
10 min gel	:	15-30 lbs/100 sq. ft.
API fluid loss	:	20 cc/30 min. or less
Bentonite	:	20-30 ppb
Nitrate	:	150-250 ppm
pH	:	10.5-11.0

3. Solids control equipment must be used continuously to keep drill solids content to a minimum. Controlled drilling will be used if necessary and the rate will be determined at the time. Analysis of the types of drilled solids, as well as quantities, will determine any additional treatment needed. Drill solids will be controlled by the "dump and dilute" method, employing whole mud and water additions. Dumping should not exceed 25% of total circulating volume per 24 hour circulating day.
4. A pH of 10.5-11.0 will be maintained for corrosion control.
5. Magnetic single shot surveys should be taken on dull bits, at total depth, or at approximately 500' intervals. A multishot survey will be dropped prior to POH for logs.

D. Logging Programme:

1. Prior to tripping for logs, sweep the hole with a 100 bbl viscous pill.
2. Run logs per Form 46.
3. Sidewall cores may be taken upon the wellsite geologist's recommendations.

E. Casing Programme:

1. A 17-1/2" hole will be drilled to a TD of ±5728' RKB to accomodate ± 145 jnts of 13-3/8", 72 lb./ft., N-80, Buttress (Drilquip No Cross).
2. Remove nominal seat protector from 20" housing.
3. Do not rely solely on average torque values for proper make up of buttress threads. Triangular makeup markings must be reasonably close for proper engagement. If possible highlight makeup markings prior to running casing. Drift all casing prior to running.
4. After visual inspection, make up float shoe, two joints of casing and float collar. Check float shoe and collar for proper operation. Use thread locking compound to lock the float equipment and the shoe joints. Run the remainder of the casing string, and the casing hanger assembly.
5. Fill up the shoe joints before making up the float collar. Rig up a fill-up line so that each joint can be filled while the next joint is being picked up. Make sure the casing is totally full when 13-3/8" shoe has reached the 20" shoe. Monitor weight indicator to make sure casing is being filled properly. Fill running string while RIH.

7. Make up SSR (Sub-Surface Release) cementing equipment, 13-3/8" hanger assembly and running tool, and using 5" HWDP, land in wellhead. Rabbit landing string as it is picked up to assure dart clearance. Have the hanger assembly and running tool made up prior to running casing.

   NOTE:

   Install full joint of D.P. between Running Tool and SSR sub. Make up plug set after picking up hanger and running tool.

8. Cement casing with extended class 'G' cement at 12.8 ppg. Use open hole caliper + 400' lap into 20" casing to determine cement volume. Tail in with 500 sx class 'G' plus additives at 15.8 ppg. The cement composition and Slurry Flow Plan will be provided prior to the job.

9. Bump top plug with 2000 psi and check the float equipment. DO NOT OVER DISPLACE. If the rig pumps are used for displacement, verify pump efficiency prior to job. If float equipment holds, release running tool and flush out the wellhead. WOC time is 8 hours.

10. RIH with wash tool and thoroughly wash BOP and wellhead area. Spot a clean gel pill in the wellhead seal area before pulling out of hole.

11. Run and install seal assembly, and test to 5000 psi with the drill pipe full of fluid and open to the atmosphere.

MATERIALS - 17-1/2" HOLE THRU 13-3/8" CASING

Item	Quantity
17-1/2" Bits & jets	3
17-1/2" Nearbit stabilizer	2
17-1/2" String stabilizer	4
8" Monel Drill Collar	2
Drilling jars	2
13-3/8" CIW hanger, extension and running tool	2
13-3/8" Seal assembly & running tool/tester	2
13-3/8" Wear bushing	2
13-3/8" Float shoe - buttress	2
13-3/8" Float collar - buttress	2
13-3/8" SSR plug, ball & dart set	2
13-3/8" SSR cementing/ball launching manifold	2
Thread lock compound	5
13-3/8", N-80, 68 ppf, range 3, buttress casing	± 135 jts
13-3/8", N-80, 72 ppf, R-3, buttress pup joints	15 jts
13-3/8" Buttress Collar	4
13-3/8" Klampon thread protectors	6
API modified thread dope	7 buckets
13-3/8" casing drift	1
Single shot instrument	1
Multishot instrument	1
Power tongs and unit	2
'G' cement (plus additives)	± 2500 sx
Mud materials	as necessary
Logging Tools	as necessary

PERSONNEL

Wellhead Engineer

Casing Crew

Directional Surveyor

Cementer

Divers

Mud Engineer

Logging Crew

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

A. This section of hole will be drilled with 12-1/4" bits to ±10,500 ft RKB total depth then logged. The 9 5/8" casing will then be run. This section of hole will be drilled with a freshwater, low solids, deflocculated mud system with 4 ppb gilsonite and up to 0.3 ppb H.M.E.. This type mud is designed to stabilize shales and neutralize the effects of CO2. The objective formations may be cored when encountered. Take single shot surveys on dull bits, and at ±10,500 ft and approximately 500' intervals. A multishot survey will be run at TD.

B. Drillout from the 13-3/8" casing:

1. After the BOP stack has been tested in accordance with Attachment No. 3 and the wear bushing has been installed, run in the hole with a 12-1/4" drilling assembly. Use a drill pipe float as necessary.

2. After drilling cement to within 15 ft. of the shoe, test the 13-3/8" casing to 2000 psi.

3. Drill out the shoe and drill 2 ft. of cement. Perform CCCT to leakoff. Notify Drilling Supervisor if less than 13.6 ppg.

4. Clean out the rat hole and drill 5 feet of new hole. Perform FCCT to leakoff. Notify Drilling Supervisor if less than 13.6 ppg.

C. Drilling Fluid Programme:

1. For this section, a freshwater, low-solids, deflocculated mud system will be used. The mud system has been designed based on the expected formation types with emphasis on simplicity of maintenance. The system can easily be weighted up for any abnormal pressures encountered or hole stability problems.

2. The following range of mud properties is typical for this type of mud system.

Density	: 8.9-17.0 lb/gal
Yield Value	: 10-25 lbs/100 sq. ft.
10 sec gel	: 4-15 lbs/100 sq. ft.
10 min gel	: 8-30 lbs/100 sq. ft.
API fluid loss	: 10 cc/30 min. or less
HTHP @ BHT	: 20-22 cc/30 min.
Bentonite	: 20-30 ppb
Nitrate	: 150-250 ppm
pH	: 11.0-12.0
Pf	: 1-4 mf
Mf	: 2-6
Pf/Mf	: Less than 2
Excess Lime	: 1-2 ppb

3. Solids control equipment will be run in closed loop mode. All effluents will be collected and reprocessed. This system is designed to improve solids removal efficiency and to minimize water dilution. All solids will be checked with a 50 ml. retort for improved measurement accuracy. Periodic samples will be collected for laser particle analysis and the results included in the final well report.

4. If an influx of CO2 is detected, a scale inhibitor will be added to protect the drill string.

D. Logging Programme:

1. Upon reaching T.D., drop multishot survey.

2. Make a wiper trip to the 13-3/8" casing shoe and retrieve the survey.

3. Run logs per Form 46.

E. Coring Programme:

A core may be cut at the top of any zones with hydrocarbon shows, using a fibreglass inner barrel.

F. Casing Programme:

1. A 12-1/4" hole will be drilled to a TD of approximately 10,500 ft RKB to accomodate ± 260 jts of 9-5/8", 53.5 ppf, N-80, R-3 Buttress casing.

2. After logging, make a wiper trip and condition hole.
3. Retrieve the 13-3/8" wear bushing.
4. Visually inspect all float equipment beforehand.
5. Make up the float shoe, followed by two joints of casing, and the float collar. Thread lock all connections for first three couplings. Pump through the floats after make up.
6. Run casing, filling with mud as the next joint is being picked up. Drift all casing prior to running.
7. Make up the SSR plug set, 9-5/8" casing hanger and running tool and land in the wellhead using 5" HWDP. Drift 5" HWDP while running. Keep running string full. Have the hanger and running tool made up prior to starting in hole with 9-5/8" casing.

   NOTE:

   Install full joint of D.P. between Running Tool and SSR sub. Make up plug set after picking up hanger and running tool.
8. Cement program will be provided prior to the job.
9. After bumping the top plug with 3000 psi, check the float equipment. If float equipment holds, release running tool and flush out the wellhead. WOC time is 10 hours.
10. RIH with wash tool and thoroughly wash BOP and wellhead area. Spot a clean gel pill in wellhead seal area before pulling the wash tool out of hole.
11. Run and install seal assembly and test to 5000 psi with the drill pipe open to atmosphere.

MATERIALS - 12-1/4" HOLE & 9-5/9" CASING

Item	Quantity
12-1/4" Bits and nozzles	as necessary
12-1/4" Nearbit stabilizer	3
12-1/4" String stabilizer	9
12-1/4" Roller Reamer	2
9-5/8" Float shoe - buttress	2
9-5/8" Float collar - buttress	2
9-5/8", 53.5 ppf, N-80, R III, buttress casing & pups	± 290 jts
9-5/8" Buttress Collars	6 jts
9-5/8" casing hanger & pup w/running tool	2
9-5/8" seal assembly w/running test tool	2
9-5/8" wear bushing	2
8" Monel drill collar	2
Drilling jars	3
Coring equipment - lot	1
9-5/8" Surface release head	2
9-5/8" Klampon thread protectors	6
9-5/8" Circ. Swedge	1
9-5/8" Casing drift	1
API modified thread compound	12
9-5/8" casing scraper with spare blocks	1
Power tongs & pack	2
Mud materials	as necessary
Cement	± 3500 sx
Single and multishot instruments	1 each
Logging Tools	as necessary

PERSONNEL

Casing Crew

Core Hand

Wellhead Engineer

Mud Engineer

Surveyor

Cementer

Logging Crew

V. 8-1/2" HOLE AND 7" CASING OIL STRING

A. This section of hole will be drilled with 8-1/2" bits to ±14,073 ft RKB total depth then logged. The liner will be run if testing is indicated. This section of hole will be drilled with a freshwater, low solids, deflocculated mud system with 4 ppb gilsonite and up to 0.3 ppb H.M.E.. This type mud is designed to stabilize shales and neutralize the effects of CO2. The objective formations may be cored when encountered. If productive formations are encountered, the formation may be drill stem tested after 7" liner is set. Take single shot survey on dull bits, and at total depth and approximately 500' intervals. A multishot survey will be run at TD.

B. Drillout from the 9-5/8" casing:

1. After the BOP stack has been tested in accordance with Attachment No. 3 and the wear bushing has been installed, run in the hole with a 8-1/2" drilling assembly. Use a drill pipe float as necessary.
2. After drilling cement to within 15 ft. of the shoe, test the 9-5/8" casing to 2000 psi.
3. Drill out the shoe and drill 2 ft. of cement. Perform CCCT to leakoff. Notify Drilling Supervisor if less than 17.0 ppg.

4. Clean out the rat hole and drill 5 feet of new hole. Perform FCCT to leakoff. Notify Drilling Supervisor if less than 17.0 ppg.

C. Drilling Fluid Programme:

1. For this section, a freshwater, low-solids, deflocculated mud system will be used. The mud system has been designed based on the expected formation types with emphasis on simplicity of maintenance. The system can easily be weighted up for any abnormal pressures encountered or hole stability problems.

2. The following range of mud properties is typical for this type of mud system.

Density	:	8.9-17.0 lb/gal
Yield Value	:	10-25 lbs/100 sq. ft.
10 sec gel	:	4-15 lbs/100 sq. ft.
10 min gel	:	8-30 lbs/100 sq. ft.
API fluid loss	:	10 cc/30 min. or less
HTHP @ BHT	:	20-22 cc/30 min.
Bentonite	:	20-30 ppb
Nitrate	:	150-250 ppm
pH	:	11.0-12.0
Pf	:	1-4 mf
Mf	:	2-6
Pf/Mf	:	Less than 2
Excess Lime	:	1-2 ppb

3. Solids control equipment will be run in closed loop mode. All effluents will be collected and reprocessed. This system is designed to improve solids removal efficiency and to minimize water dilution. All solids will be checked with a 50 ml. retort for improved measurement accuracy. Periodic samples will be collected for laser particle analysis and the results included in the final well report.

4. If an influx of CO2 is detected, a scale inhibitor will be added to protect the drill string.

D. Logging Programme:

1. Upon reaching T.D., drop multishot survey.

2. Make a wiper trip to the 9-5/8" casing shoe and retrieve the survey.

3. Run logs per Form 46.

E. Coring Programme:

A core may be cut at the top of any zones with hydrocarbon shows, using a fibreglass inner barrel.

F. Casing Programme:

1. A 8-1/2" hole will be drilled to a TD of approximately 14,073 ft RKB to accomodate ±120 jnts of 29 ppf, N-80 buttress liner.

2. After logging, make a wiper trip and condition hole.
3. R/U and run the 7", 29 ppf, N-80 Buttress liner.
4. Visually inspect all float equipment beforehand.
5. Make up the float shoe, followed by two joints of liner, and the float collar. Thread lock all connections for first three couplings. Pump through the floats after make up.
6. Run liner, filling with mud as the next joint is being picked up. Drift all liner prior to running.
7. Make up the TIW Hydro hanger and running tool and set liner at TD with ± '300 ft overlap inside 9-5/8" casing using drill pipe. Drift 5" drill pipe while running. Keep running string full. Have the hanger and running tool made up prior to starting in hole with 7" liner.
8. Cement program will be provided prior to the job.
9. After bumping the top plug with 3000 psi, check the float equipment. If float equipment holds, release running tool, POOH, and flush out the wellhead. WOC time is 10 hours.
10. RIH with wash tool and thoroughly wash BOP and wellhead area.
11. RIH with cleanout assembly and cleanout 7" liner. Test liner lap to 1 ppg over 9-5/8" FCCT.

G. Testing

Zones identified as potentially productive will be tested. A DST procedure will be developed by the engineering staff.

H. Plugging and Abandonment

After being fully evaluated for potential production, the well will be plugged and abandoned according to Petroleum (Submerged Lands) Act 1967, Directions as to Drilling (1 June 1980).

A detailed programme will be furnished to the rig prior to commencement of P & A operations.

PERSONNEL

Casing Crew
Core Hand
TIW Engineer
Mud Engineer
Surveyor
Cementer
Testing Crews
DST Crew
Logging Crew

MATERIALS - 8-1/2" HOLE & 7" LINER

Item		Quantity
8-1/2"	Bits and nozzles	as necessary
8-1/2"	Nearbit stabilizer	3
8-1/2"	String stabilizer	9
8-1/2"	Roller Reamer	2
7"	Float shoe - buttress	2
7"	Float collar - buttress	2
7", 29 ppf, N-80, R III, buttress casing & pups		± 127 jts
7"	Buttress Collars	6
7"	TIW Liner hanger w/ running tool	2
7"	TIW Polished slick jt	2
6-1/2"	Monel drill collar	2
	Drilling jars	3
	Coring equipment - lot	1
7"	Surface release head	2
7"	Klampon thread protectors	6
7"	Circ. Swedge	1
7"	Casing drift	1
	API modified thread compound	12
	29 ppf liner scraper with spare blocks	1
	Polished Mill for PBR tie back sleeve	2
	Power tongs & pack	2
	Mud materials	as necessary
	Cement	+ 3500 sx
	Single and multishot instruments	1 each
	Logging Tools	as necessary
	DST Tools	as necessary

MATERIALS - 8-1/2" HOLE AND 7" LINER

(Clean Out Assembly)

Item	Quantity
4-3/4" Spiral Collars	20
3-1/2" S-135 Drill Pipe	5000 ft
6" String Stabilizers	2
6" Bits	3
5-7/8" bits	2
4-1/2" IF Box x 3-1/2" IF Pin XO	2
4-3/4" Drilling Jars	2

AMOCO AUSTRALIA PETROLEUM COMPANY
NAME OF COMPANY

448036

FORM 46 3-68

ATTACHMENT # 1

DRILLING AND COMPLETION PROGRAM

FILE No. 400
DATE DECEMBER 11, 1985

WELL NAME PELICAN WELL NO. 5 FIELD

COUNTRY AUSTRALIA PROVINCE BASS STRAIT TASMANIA AREA BASS BASIN T-22P

LOCATION SEISMIC LINE TNK - 87 S.P. 240 (40 DEGREES 20' 43.58" SOUTH LATITUDE, 145 DEGREES 51' 49.21" EAST LONGITUDE)

OBJECT EASTERN VIEW GROUP: LATE EOCENE THRU LATE CRETACEOUS (5798 - 14,073 RKB)

METHOD OF DRILLING

TYPE TOOLS	DEPTH INTERVAL
ROTARY	SEABED TO T.D. 14,000 SS

SPECIAL SURVEYS

TYPE	DEPTH INTERVAL, ETC.
ISF-BHC-GR-SP-CAL (GR TO SEABED)	1346' - 5725' SS
ISF-BHC-GR-SP-(MSFL/CAL)	5725' - 14000' SS
LDT-CNT	5725' - 14000' SS
HDT (1346'- 5725' SS IF REQUIRED)	5725' - 14000' SS
VSP (OPTIONAL)	1346' - 14000' SS
CST (1346' - 5725' SS IF REQUIRED)	5725' - 14000' SS

REMARKS

SINGLE SHOT SURVEYS ON TRIPS EVERY 500' - LOGS TO BE RUN AT 13 3/8" AND 9 5/8" CSG DEPTHS AND AT T.D. AND IN THE INTERIM AS REQUIRED TO EVALUATE FORMATIONS BEING DRILLED.

SPECIAL TEST

TYPE	DEPTH INTERVAL, ETC.
RFT'S	AS REQUIRED
DST'S	AS REQUIRED

REMARKS

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 RFT'S AND CONVENTIONAL DST'S THROUGH CASING.

APPROXIMATE DEPTHS OF GEOLOGICAL MARKERS

ESTIMATED ELEVATION

MARKER	DEPTH		ELEVATION	
TORQUAY GROUP (Sea Bottom)	326	RKB	253'	SS
DEMONS BLUFF (Top Eocene)	5423	RKB	5350'	SS
*EASTERN VIEW GROUP	5798	RKB	5725'	SS
*Within Lower Eocene	7613	RKB	7540'	SS
*Within Lower Paleocene	12,873	RKB	12,800'	SS

TOTAL DEPTH 14,073 RKB 14,000' SS
* POSSIBLE PAY # PROBABLE COMPLETION INTERVAL

DRILL CUTTING SAMPLES

FREQUENCY		DEPTH INTERVAL
32.8'	(10M)	1346' - 5423' RKB
32.8'	(10M)	1346' - 5423' RKB
18.4'	(5M)	5423' - 5798' RKB
32.8'	(10M)	5423' - 5798' RKB
9.8'	(3M)	5798' -14073' RKB
29.5'	(9M)	5798' -14073' RKB
29.5'	(9M)	5798' -14073' RKB

DRILLING TIME

FREQUENCY	DEPTH INTERVAL
(6 SETS)	WASHED & DRIED
(2 SETS)	WET COMPOSITE CLOTH BAG
(6 SETS)	WASHED & DRIED
(2 SETS)	WET COMPOSITE CLOTH BAG
(6 SETS)	WASHED & DRIED
(2 SETS)	WET COMPOSITE CLOTH BAG
(1 SET)	WET COMPOSITE CANNED

REMARKS

THE ABOVE CONFORMS WITH REQUIREMENTS OF THE PETROLEUM (SUBMERGED LANDS) ACT, 1967, CLAUSE 14

MUD PROGRAM

APPROXIMATE INTERVAL			TYPE MUD	WEIGHT #/GAL	VISCOSITY SEC. API	W. L. CC/30M	OTHER SPECIFICATIONS
ML	-	1346' RKB	SEAWATER	W/VISCOUS SWEEPS			
1346'	-	5768' RKB	SW/GEL	8.9 - 9.2	45 - 55	20 OR LESS	YV 8 - 20, pH 10.5 - 11.0
5768'	-	14073' RKB	FW/GEL	8.9 - 17.0	45 - 55	10 OR LESS	YV 10- 25, pH 11.0 - 12.0 HTHP 20 - 22

REMARKS

PROPERTIES OF MUD SYSTEM ARE DESCRIBED IN THE DETAILED OPERATIONS PLAN.

HTHP TO BE RUN FROM 7000' TO T.D. AT BHT (GRADIENT = 2.0° F/100' IF NO OTHER DATA AVAILABLE)

CASING PROGRAM

CASING STRING	EST. DEPTH	CASING SIZE*	HOLE SIZE*	SX. CEMENT	TYPE CEMENT	DESCRIPTION OF LANDING POINT, ETC.
CONDUCTOR	607' RKB	30"	36"	2000	CLASS 'G' + ADDITIVES	
SURFACE	1326' RKB	20"	26"	2000	CLASS 'G' + ADDITIVES	
INTERMEDIATE	5786' RKB	13 3/8"	17 1/2"	BY CALIPER	CLASS 'G' + ADDITIVES	
OIL STRING	10500' RKB	9 5/8"	12 1/4"	BY CALIPER	CLASS 'G' + ADDITIVES	
LINER CASING	14073' RKB	7"	8 1/2"	BY CALIPER	CLASS 'G' + ADDITIVES	

REMARKS

1. ALL CASING POINTS ARE TENTATIVE
2. CEMENT COMPOSITIONS TO BE LAB TESTED
3. 30" AND 20" CASING TO BE CEMENTED BY INNER STRING METHOD

* NORMAL. THE TUBULAR GOODS ALLOCATION LETTER SPECIFIES CASING SIZES TO BE USED. HOLE 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 RECOMMENDATIONS OF THE WELLSITE GEOLOGIST WITH CONCURRENCE OF AMOCO'S SYDNEY OFFICE, SIDEWALL CORES WILL BE TAKEN IN SHALES AND OTHER FORMATIONS OF INTEREST BELOW 5725' SS 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	APPROVED:	APPROVED:
J. G. RANKIN/B. WHEELER EAC TGR		

ATTACHMENT # 2

448037

DRILLING GRAPH

DRILLING PROGRESS IN FEET / DAY

FIELD T-18P WELL NAME PELICAN 5

PROJECTED T.D. 14000' SS FORMATION L CRET

MUD SEAWATER GEL ; ML TO 5798'

FRESHWATER GEL ; 5798' TO TD

CSG. 30" @ 607' ; 20" @ 1326'

13 3/8" @ 5768' ; 9 5/8" @ 10,500

RIG EPOCH CONT'R. DIAMOND M

GRND. EL. 73 RDB. WL. SEABED

WL. MUDLINE 219 RDB. ML. 292

EST. COST (GROSS) US $11,465,647-

REMARKS ALL DEPTHS ARE RKB

25 DAYS TESTING

4 DAYS P&A AND ANCHORS

7" @ 14,000'

DRILLING TIME (DAYS)

0 10 20 30 40 50 60 70 80

WELL DEPTH (THOUSANDS OF FEET)

0 1 2 3 4 5 6 7 8 9 10 11 12

12 13 14 15 16

DATE →

Anchors

30" Casing

20" Casing

13 3/8" Casing

9 5/8" Casing

7" Liner

M Bbls. Mud

W Bbls. Water

M. Cement

P Csg. Press.

rs Coring

P Drill Pipe

S Drill Stem Test

F Fish For

C Gas Cut Mud

CM Oil Cut Mud

B Plug Back

R Repair Rig

DI Sidetrack

P Tbg. Press.

C Loss of Circ.

WELL NAME PELICAN No 5

ATTACHMENT # 3

BOP TEST REQUIREMENTS

Australian regulations specify the following BOP equipment test requirements:

BOP	After Installation	Prior to Csg. Drillout	Following Disconnection of Pressure Seals	Weekly	Trip	Relatch LMRP
Connector, Choke & Kill Lines	5,000 psi	5,000 psi	5,000 psi	5,000 psi	N/A	5,000 psi
Annular	70% Rating	70% Rating	70% Rating	Function	N/A	Connection to 3,500 psi
Pipe Rams	5,000 psi	5,000 psi	5,000 psi	5,000 psi	Function	Function
Shear & Blind Rams	Function	Min 70%	Function	Function	Function	Function

The regulations additionally require that all such tests be recorded in the drillers log. (IADC report)

ATTACHMENT #4

TENTATIVE MUD PROGRAMME

TYPE SYSTEM	36" Hole Seawater w/Hi Vis Sweeps	26" Hole Seawater w/Hi Vis Sweeps	17-1/2" Hole Lightly Dispersed Seawater/Gel	12-1/4" Hole 8-1/2" Hole Deflocculated Freshwater/Gel*
MUD WT (PPG)	9.5-10.5	9.5-10.5	8.9-9.2	8.9-17.0
VIS (SEC)	100+	100+	45-55	45-55
YV	26	26	8-20	10-25
10 SEC GEL (LB/100 SF)	NC	NC	6-15	4-15
10 MIN GEL (LB/100 SF)	NC	NC	15-30	8-30
API FLUID LOSS (CC)	NC	NC	20 or less	10 or less
HTHP (500 PSI, PER TEMP. GRADIENT)	NC	NC	NC	20-22
pH	10.5	10.5-11.0	10.5-11.0	11.0-12.0
NITRATE (PPM)	-	-	150-250	150-250
MBT (PPB)	25-35	25-35	20-30	20-30
LOW GRAVITY SOLIDS (PPB)			50	50

* NOTE: SEE PAGE 21 FOR DISCUSSION OF MUD FOR THIS INTERVAL.

ATTACHMENT #5

TENTATIVE CASING PROGRAMME

	30"	20"	13-3/8"	9-5/8"	7"
SETTING DEPTH (RKB)	± 641'	± 1,326'	± 5,728'	± 10,500'	± 14,043'
HOLE SECTION	ML-TD	ML-TD	ML-TD	ML-TD	± 10,200' TD
WT	1.0" WALL	94 PPF	72 PPF	53.5 PPF	29 PPF
GRADE	B	B	N-80	N-80	N-80
CONN	D.Q. QUIK STAB	D.Q. QUIK STAB THREAD	D.Q. NO CROSS BUTT	BUTT	BUTT

The following is a recommended practice for proper casing hanger landout and measurement.

1. Secure a length of steel 0.092 wire to the outer barrel of the slip joint. Space out the wire through the rig floor as near to the rotary as possible. Secure tied off line in a safe place.

2. RIH with the casing hanger landing string and latch into wear bushing. Function pipe ram on painted joint for surface measurement. Mark landing string and 0.092 wire on rig floor. POH with wear bushing.

3. Calculate proper surface measurement differential between 0.092 wire and marked landing joint for casing hanger landout.

4. RIH with casing and land casing hanger in wellhead. Check for proper 0.092 wire/landing joint measurement on rig floor. Function pipe ram on painted joint for surface calculation of casing hanger landing depth.

5. Cement casing as per program.

ATTACHMENT #6

TENTATIVE CEMENTING PROGRAMME

ITEM	30" CSG	20" CSG	13-3/8" CSG	9-5/8" CSG	7" Liner
PREFLUSH	50 BBL SEAWATER	50 BBL SEAWATER	TBA	TBA	TBA
SPACER (SCAVENGER)	NA	50 sx 'G'	50 sx 'G'	50 sx 'G'	30
SLURRY WT		10.0 ppg	10.0 ppg	10.0 ppg	10.0 ppg
MIX WATER		38.3 gal/sx	38.3 gal/sx	38.3 gal/sx	38.3 gal/sx
LEAD SLURRY		1,500 sx 'G'	2,000 sx 'G'	2,575 sx 'G'	
SLURRY WT (PPG)		12.8 pg	12.8	12.8	
MIX WATER (GAL/SX)		10.8	10.8	10.8	
YIELD(CF/SX)		1.94	1.94	1.94	
BENTONITE (PREHYD)		2.5%	2.5%	2.5%	
HR-6L (GAL/SX)		-	0.1	0.1	
CFR-2L (GAL/SX)		-	TBA	TBA	
NF1 (GAL/SX)		.05	.05	.05	
TAIL SLURRY	2,000 sx 'G'	500 sx 'G'	500 sx 'G'	500 sx 'G'	620 sx 'G'
SLURRY WT (PPG)	15.8	15.8	15.8	15.8	15.8
MIX WATER (GAL/SX)	5	5	5	5	5
YIELD (CF/SX)	1.15	1.15	1.15	1.15	1.15
CALCIUM CHLORIDE (% BWOW)	1.0 X	-	-		
HR-6L (GAL/SX)	-	-	.066	TBA	TBA
CFR-2L (GAL/SX)	-	-	TBA	TBA	TBA
NF-1 (GAL/SX)	-	-	-	-	-
CMT TOP RKB	ML	ML	± 1056'	TBA	± 10,000
DISPLACEMENT FLUID	SEAWATER	SEAWATER	SEAWATER	SEAWATER	MUD

ATTACHMENT #7

TENTATIVE LOGGING PROGRAMME

17-1/2" HOLE

RUN #1	ISF-BHC-GR-SP-CAL (GR TO ML)

12-1/4" HOLE & 8-1/2" HOLE

RUN #1	ISF-BHC-GR-SP-CAL
RUN #2	LDT-CNT
RUN #3	HDT (1,326'-5,768' IF REQUIRED)
RUN #4	VSP (OPTIONAL)
RUN #5	CST (1,326'-5,768' IF REQUIRED)

NOTES:

1. Provision will be made to run RFT if required.

ATTACHMENT #8

PLUG REQUIREMENTS FOR P & A

Application	Cement		Equipment & Remarks
	Top of Cmt.	Bottom of Cmt.	
Uncased Hole			
Oil & Gas Zones	100' Above Zone	100' Below Zone	No Cmtg. Equip. Reqd.
Fresh Water Zones	100' Above Zone	100' Below Zone	No Cmtg. Equip. Reqd.
Workable Minerals	300' Above Zone	300' Below Zone	Contact Director of Mines for Definition of Workable Minerals
Cased Hole			
w/Open Hole Below	100' Above Shoe	100' Below Shoe	No Cmtg. Equip. Reqd.
w/Open Hole Below	50' Above Retainer	100' Below Shoe	Cmt. Retainer 100' to 50' Above Shoe.
w/Open Hole Below & Possible Lost Circ.	50' Above Bridge Plug	Top of Bridge Plug	Permanent Bridge Plug 0' to 100' Above Shoe
Open Perfs			
Cmt Plug	100' Above Top of Interval	100' Below Bottom of Interval	No Cmtg. Equip. Reqd.
w/Bridge Plug	50' Above B.P.	Top of B.P.	Bridge Plug 0'-150' Above Interval Note: Perfs must be isolated from Below
Misc			
Casing Stubs	100' Above Casing	100' Below Casing	Retainer Optional
Liners	100' Above Liner Top	100' Above Liner Top	Retainer Optional
Annular Space	As Reqd.	As Reqd.	Not Reqd If Space Not Open to Uncased Hole
Surface Plug (inside string)	0'-150' Below Sea Floor	Variable	Must Be at Least 150' Long

ATTACHMENT # 9

RECOMMENDED HYDRAULICS

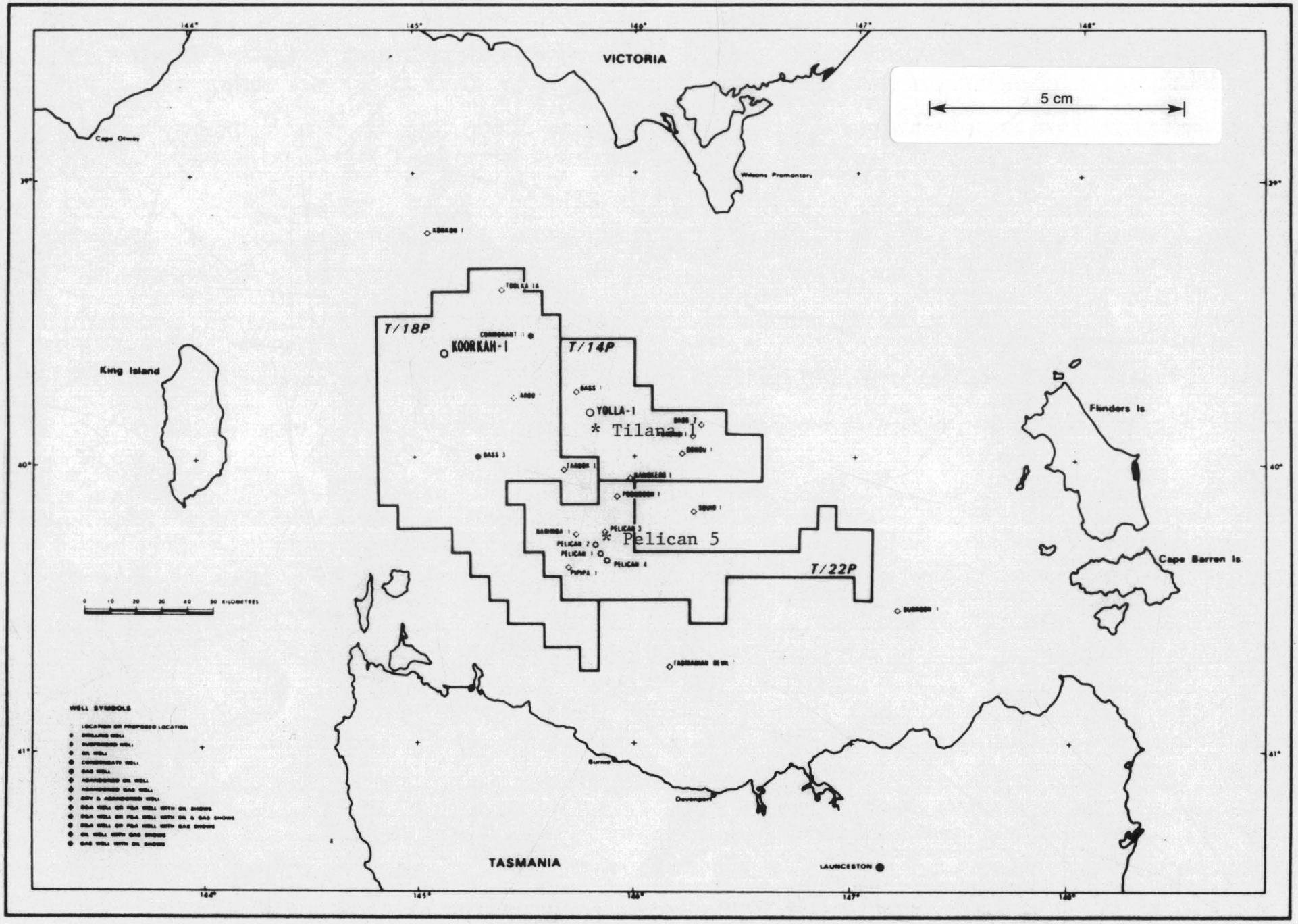
	26'' HOLE	17-1/2''HOLE	12-1/4'' HOLE	8-1/2'' HOLE
Maximum Surface Pressure	2200 psi	3000 psi	3000 psi	3000 psi
Flowrate	±1240 GPM	±850 GPM	±560 GPM	± 350 GPM
Jets	3 x 22	3 x 16, C-14 (TFA = .75)	2 x 12, 13, C-11 (TFA = .444)	12-13-14 (TFA = 0.38)
AV's (DC/DP)	50/47 Ft/Min	86/74 Ft/Min	159/110 Ft/Min	237/182 ft/min
HHP/sq in	1.3	2.3	3.9	4.1

ATTACHMENT # 10

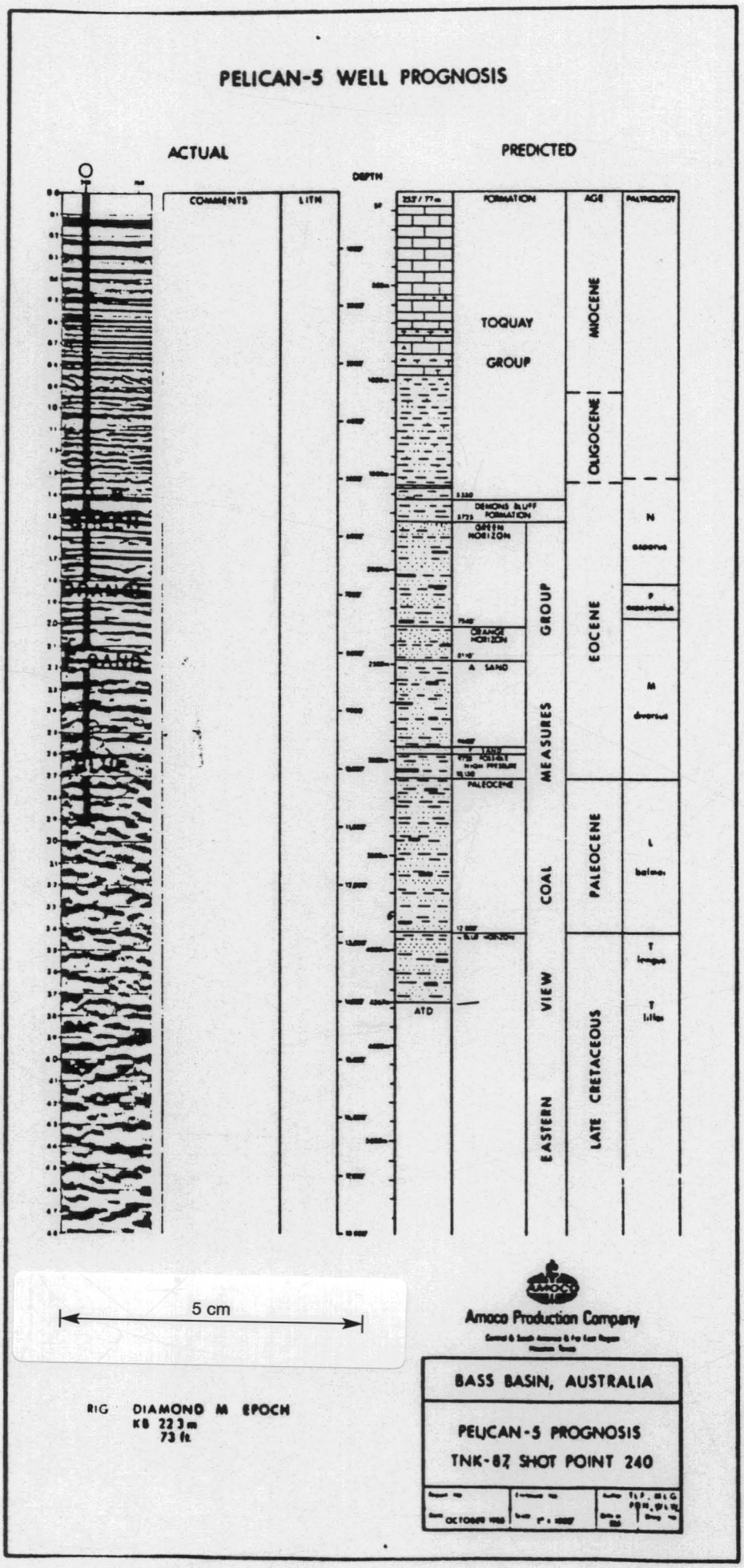
TENTATIVE B.H.A.PROGRAM

	36" and 26" Hole	17 1/2", 12-1/4", 8-1/2" Hole
Type	Slick	60 Ft. pendulum
Max. O.D.	8"	8"
Survey Type	Totco	Single shot and multi-shot
8" Monels required	None	1
Float Sub required	Yes w/ Weep hole	Yes w/ Weep hole
Junk Sub	N/A	Prior to Coring

NOTE: 26" Stabilizer will be available on rig and to be run as required.


VICTORIA
5 cm
Cape Otway
Wilsons Promontory
T/18P
KOORKAH-1
T/14P
King Island
YOLLA-1
* Tilana 1
Flinders Is.
* Pelican 5
Cape Barren Is.
T/22P
TASMANIA
Burnie
Devonport
LAUNCESTON
WELL SYMBOLS
144°
145°
146°
147°
148°
39°
40°
41°

ATTACHMENT # 12



ATTACHMENT # 13

TENATIVE SAMPLE COLLECTION

DEPTH	FREQUENCY	DESCRIPTION
410.3 m - 1653.0 m (1346 - 5423 ft)	10 m (32.8 ft)	6 sets washed and dried 2 sets wet composite, cloth bag
1653.0 m - 1767.3 m (5423 - 5798 ft)	5 m (16.4 ft) 10 m (32.8 ft)	6 sets washed and dried 2 sets wet composite, cloth bag
1767.3 m - 4289.5 m (5798 - 14,073 ft)	3 m (9.8 ft) 9 m (29.5 ft)	6 sets washed and dried 2 sets wet composite, cloth bag 1 set wet composite, canned