Burong 1

Well Completion Report

BURONG-1 W922

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Well Completion Report

HARTOGEN ENERGY LIMITED
POSEIDON OIL PTY LTD
CLUFF OIL (PACIFIC) LIMITED
PLYMOUTH PETROLEUM N.L.

BURONG NO. 1

PEP 109, VICTORIA

WELL COMPLETION REPORT

BY

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R.I. HARRIS

HARTOGEN ENERGY LIMITED
15 YOUNG STREET
SYDNEY

AUGUST 1986

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1. SUMMARY

Burong No. 1 was drilled in PEP 109, Victoria, by Hartogen Energy Limited (Operator), on behalf of Hartogen, Poseidon Oil Pty Ltd, Cluff Oil (Pacific) Limited and Plymouth Petroleum N.L. by ATCO APM Drilling Pty Ltd. The well is located approximately 10 miles/16 km south-southeast of the town of Sale. Ninety Mile Beach lies approximately 10 miles/16 km to the southeast. Due east of Burong No. 1 lie the prolific oil and gas producing fields of the Offshore Gippsland Basin.

Burong No. 1 was drilled to test the crest of a narrow, high relief, asymmetrical, northwest to southeast trending anticline controlled on its northwestern flank by a reverse fault. A series of wells were drilled in the sixties by Arco-Woodside. Seaspray No. 1, approximately 2.25 miles/ 3.6 km to the southwest, is a down flank test of the Burong high, while North Seaspray Nos 1 and 2, 0.8 miles/1.25 km to the northeast, are tests of the parallel trending North Seaspray anticline. The primary targets at Burong No. 1 were the fluvial sandstones in the upper part of the Latrobe Group. A secondary target was the top of the Early Cretaceous Strzelecki Group.

The well spudded on 30 October 1985 and reached TD at 4120 ft/1255.8 m on 6 November 1985. The section drilled was similar to that prognosed. The Latrobe Group contained excellent reservoir sands with high porosity and permeability. There were no visual hydrocarbon shows in the Latrobe sands. Apart from a 40 unit gas kick (100% methane) at the top of the Latrobe, only very minor gas readings (less than 10 units), all 100% methane, were recorded during drilling. The methane anomaly at the top of the Latrobe is due to gas associated with a coal seam from 2255-2263 ft as well as high background gas generated by the thick coal seam at the top of the Latrobe Group between 2166-2211 ft. The bulk of the reservoir sands gave readings of less than 1 gas unit and the entire Latrobe section is water saturated. The uniformly high resistivity readings of the sands is the result of fresh formation water.

The well bottomed in the Strzelecki Group clastics in which traces of fluorescence and methane were recorded. These trace shows are not indicative of any hydrocarbon accumulation in the section drilled.

The well was plugged and abandoned and the rig released on 9 November 1985.

II. WELL HISTORY

1. GENERAL DATA

i Well Name

Burong No. 1

ii Name and Address of Operator

Hartogen Energy Limited
15 Young Street
Sydney NSW 2000

iii Name and Address of Titleholders

Hartogen Energy Limited, 15 Young Street, Sydney
Cluff Oil (Pacific) Limited, 111 Pacific Highway, North Sydney
Plymouth Petroleum NL, 154 Pacific Highway, North Sydney
Poseidon Oil Pty Ltd, 309 Angus Street, Adelaide

iv Petroleum Title

PEP 109

v Location

Latitude	38° 18' 38.84" south (surveyed)
Longitude	147° 11' 51.65" east (surveyed)
Seismic	SP 573 Line GHG85A-16

vi Elevation

Kelly Bushing	129 ft (39.3 m) (surveyed)
Ground Level	115 ft (35.2 m) (surveyed)

vii Total Depth

4120 ft (1255.8 m) drillers' depth
4133 ft (1259.8 m) loggers' depth (extrapolated)

viii Date Spudded

30 October 1985

ix Date Total Depth Reached

6 November 1985

x Date Rig Released

10 November 1985

xi Status

Plugged and abandoned

2. DRILLING DATA

i Name and Address of Drilling Contractor

ATCO-APM Drilling Pty Ltd
4 Formation Street
Wacol Queensland

ii Drilling Plant

Rotary Rig No. 3, Franks Cabot, trailer-mounted. Franks Cabot, Model 1287 - TD single drum drawwork.

Power

GE Series SGE 761 DC electric motor, complete with blower driven by a 5 HP electric motor. 2 - 400 kW alternators powered by D353 Caterpillar diesel engines.

Mast

Dreco 96 ft telescoping free standing mast with GNG 280,000 lbs.

Mud Pumps

2 x TSM - 500 Duplex pumps. No. 1 powered by GE 761 DC electric motor, and No. 2 powered by Caterpillar Model D353 diesel engine.

Blowout Preventors

Cameron 11" 3000 psi double ram blowout preventor
Shaffer 11" 3000 psi annular preventor
Wagner Model 5-80 1BN accumulator, 80 gallon capacity.

Drill Pipe

90 joints, approximately 900 m/2950 ft 4.5", 16.6 lbs/ft, Grade E, Range 2, 4" I.F. connections.
10 joints 4.5" XH, HEVI-WATE drill pipe, Range 2, 4" IF connections.

Drill Collars

20 x 6.25" slip and elevator recessed with 4" IF connections and 3 x 8" collars with 6.625" regular connections.

iii Hole Sizes and Depth

18.0" (457 mm) to 80 ft (24.4 m)
10.625" (270 mm) to 772 ft (235.3 m)
7.875" (200 mm) to 4120 ft (1255.8 m)

iv Casing and Cementing Details

	Conductor	Surface
Size (in/mm)	13.375/339.7	8.625/219.1
Weight (lbs/ft-kg/m)	54.6/81.3	24/35.7
Grade	K-55	K-55
Range	2	2
Setting Depth (ft/m)	80/24.4	762/232.3
Shoe		Guide shoe + float collar
Plugs	Top	Top+bottom
Centralizers	-	2
Cement (sacks)	100	170
Additives	1% $CaCl_2$	2% $CaCl_2$
Cemented to (ft/m)	Surface	Surface (topped up)

v Drilling Fluids

(a) Surface to 772 ft/235.3 m - NaCl water-gel-native clay system.

(b) 772 ft/235.3 m to total depth - low solids-NaCl polymer mud.

Physical Properties:

Weight	9.0	lbs/gal
Viscosity	42	seconds
Water Loss	8	ccs/30 mins
pH	10.2	
Sand Content	1	%
Filter Cake	2	32nds/inch

Mud and Chemicals Used:

Bentonite	130 sacks	5,910 kg
Polysal	52 sacks	1,300 kg
Staflo	4 sacks	100 kg
Caustic Soda	9 sacks	360 kg
Calcium Chloride	8 sacks	400 kg
Sodium Chloride	95 sacks	4,750 kg
Lime	12 sacks	300 kg

vi Water Supply

Water was pumped from a nearby creek, a distance of approximately 0.4 km/0.25 mile.

vii Plugging Back

The following plugs were run:-

Plug	Interval	Cement (sacks)	Remarks
1	2230 - 2065 ft 679.7- 629.4 m	56	Across top of Latrobe Group
2	1900 - 1735 ft 579.1- 528.8 m	110	Across top of Lakes Entrance Formation
3	835 - 651 ft 254.5- 198.4 m	60	Across surface casing shoe

3. FORMATION SAMPLING

i Ditch Cuttings

Cuttings were collected at 30 ft/10 m intervals from 762 ft/ 232.3 m to 1500 ft/457.2 m and then at 10 ft/3 m intervals to total depth. These were examined for indications of oil and gas, lithologically described, split and bagged. A complete set of cutting samples was sent to the Victorian Department of Industry, Technology and Resources.

ii Coring

Nil.

iii Sidewall Cores

Number shot: 30 Number recovered: 28

4. LOGGING AND SURVEYS

i Wireline Logs (run by Schlumberger Seaco Inc.)

DLL-GR-SP-Cal	762-4118 ft/ 232.1-1255.2 m
MSFL	1600-4118 ft/ 487.7-1255.2 m
BHCS-GR	762-4127 ft/ 232.1-1257.9 m
LDL-CNL-GR-Cal	1600-4131 ft/ 487.7-1259.0 m

ii Penetration Rate and Well Log

Mud logging services were provided by Exploration Logging of Australia Inc. and total gas and gas composition in the mud was monitored from 762 ft/232.5 m to total depth. A mudlog recording lithology, penetration rate, mud gas and other data was prepared and is an enclosure to this report.

iii Deviation Surveys

The following were recorded with a Totco Drift Indicator:-

Depth (ft/m)	Deviation (degrees)	Depth (ft/m)	Deviation (degrees)
311/ 95	1/4	2775/ 846	1/4
738/225	3/4	3281/1000	3/4
1291/394	1/4	3676/1121	1-1/2
1785/544	1/4	4079/1243	2
2310/704	1/4		

iv Temperature Surveys

Nil. During wireline logging the following bottom hole temperatures were recorded:-

1.	118°F/48°C	4 hours after circulation
2.	120°F/49°C	8 hours after circulation
3.	128°F/53°C	11 hours after circulation

The extrapolated bottom hole temperature is 140°F/60°C at 4120 ft/1255.8 m.

v Velocity Survey

A velocity survey was run by Schlumberger Seaco Inc. An attempt to run a walkaway VSP by Schlumberger was aborted due to failure in the modular equipment on the vibrator.

5. TESTING

Nil.

6. DRILLING SUMMARY

i 10.625" Hole (0-760 ft)

Burong No. 1 spudded at 1630 hours, 30 October 1985. An 18" auger was used to drill the conductor hole. Three joints of 13.375" 54.6 ppf casing were run to 80 ft and cemented with 100 sacks of Class "A" cement with 1% $CaCl_2$.

After nippling up the BOP's, the 10.625" hole was drilled to 772 ft in 4.5 hours. The drilling fluid system utilized was a gel spud mud with viscous sweeps as required. Prior to running the 8.625" casing, the hole was conditioned. A bridge was encountered at 110 ft on the first attempt to run the casing; this required a further clean-out trip with the bit. A total of 19 joints of 8.625" 24 ppf casing was run to 762 ft and cemented with 270 sacks of Class "A" cement with 2% $CaCl_2$.

ii 7.875" Hole (760-4120 ft)

While WOC the spud mud was dumped and a NaCl brine was mixed. The BOP's were nippled up and tested.

The brine was used to drill out the shoe and prehydrated gel added to develop carrying capacity upon drilling new formation.

Drilling proceeded rapidly through the Gippsland Formation with little control over the mud properties until just prior to reaching the Lakes Entrance Formation. At that point, the fluid loss was lowered. Upon reaching 2000 ft, large sections of coal were encountered and at 2240 ft the hole packed off and had to be circulated clean. Tight hole was encountered during wiper trip made at 2247 ft.

The chloride content and fluid loss of the mud had been altered by large additions of water made to the system. This was rectified when the bit was back on bottom. Drilling continued through coals and sandstones, with the desilter being run intermittently to minimize sand content.

After the claystones were encountered, the drilling rate slowed and a bit change was made without problems. Drilling continued to total depth at 4120 ft with no problems. The hole was conditioned and a wiper trip made prior to logging with Schlumberger.

Following logging a wiper trip was made and the well was plugged and abandoned.

Three plugs were set:

Plug No. 1 2230-2065 ft
Plug No. 2 1900-1735 ft
Plug No. 3 835- 651 ft

The final plug was tagged at 651 ft.

The rig was released at 1000 hours on 10 November 1985.

7. WELL STATUS

Plugged and abandoned.

III. GEOLOGY

REGIONAL GEOLOGY

Burong No. 1 is located on the northwestern margin of the Gippsland Basin in the southern part of PEP 109.

The onshore portion of the Gippsland Basin covers approximately 15,000 sq km, bounded to the north by the Victorian Ranges and to the south by the Bassian Rise, narrowing westwards towards the Mornington Peninsula.

Mesozoic and Cainozoic sediments overlie Paleozoic metasediments and granites. These sediments thicken rapidly in the offshore portion of the Gippsland Basin where the prospective Latrobe Group reservoir sequence is estimated to be up to 16,000 ft thick.

STRUCTURE

Within the Gippsland Basin section, Davidson, Blackburn and Morrison 1984, have divided the structuring into two distinct periods. The first is pre Middle Eocene which consisted of extensional tectonics with normal faulting predominant. The features tended to trend northwest to southeast with throw down to the northeast. The second phase of structuring is post Middle Eocene with the main phase of structural activity being Middle Miocene to Recent and is caused by a compressional force acting from the southeast. This has resulted in a series of northeast to southwest trending asymmetrical anticlines.

STRATIGRAPHY

Basement consists of low grade metamorphics of Early to Middle Palaeozoic age intruded by Ordovician and Early Devonian granites. However, economic basement in petroleum exploration has normally been considered to be the Early Cretaceous Strzelecki Group. Strzelecki sediments were deposited on a rapidly but steadily subsiding fluvial plain. They consist predominantly of graywackes, sub-graywackes, arkoses, chloritic mudstones, occasional coal, with local conglomerates, lavas and pyroclastic rocks. The sandstones are texturally mature but mineralogically immature and mostly impermeable. They are chloritic, feldspathic, volcanolithic, and of uniform fine to medium grain size with chloritic, kaolinitic, calcareous and sometimes pyritic cement. The shales have characteristic grey-green colour and are micaceous and slightly carbonaceous with silt laminae.

The Strzelecki Group is overlain by the Latrobe Group of Late Cretaceous to Late Eocene age. The Latrobe Group consists predominantly of fine to very coarse grained, poorly cemented quartzose sandstone with subordinate coal and grey or brown claystone and siltstone. The environment of deposition is interpreted to be fluviatile, deltaic, lacustrine ranging to marginal marine. It thickens significantly offshore to the east where it is estimated to reach up to 16,000 ft/5000 m thick.

The Latrobe Group contains prolific oil and gas accumulations in the offshore Gippsland Basin. The reservoir characteristics of the sandstones in the Latrobe are excellent with very high porosity and permeability sandstones. The hydrocarbon source for these accumulations is believed to be the lower (Late Cretaceous and Early Palaeocene) part of the Latrobe.

A regional seal to the Latrobe reservoir section is provided by the overlying Lakes Entrance Formation which consists of green, brown and gray calcareous claystone (marl) with thin limestone intercalations. The Lakes Entrance Formation represents a marine transgression which reaches its maximum with the Gippsland Limestone of Miocene age. The Gippsland Limestone consists of interbedded limestone and calcareous claystone or marl.

PREVIOUS INVESTIGATIONS

Petroleum exploration in the vicinity of PEP 109 commenced in the early 1960's and continued into the early 1970's, conducted mainly by Woodside and Arco. This exploration originally had as its main objective the Strzelecki Group with the emphasis moving to the Latrobe Group later in this period.

Early seismic exploration provided a sparse grid of poor-fair quality single fold and six fold data.

Onshore drilling commenced in the 1930's and continued spasmodically through to the Arco-Woodside programmes in the 1960's. Eight wells were drilled by Arco-Woodside with the only significant show being a small gas flow from the Strzelecki Group in North Seaspray No. 1.

Previous exploration has provided enough data to show that the productive reverse fault trends offshore continue onshore with top Latrobe seals and excellent quality Latrobe Group reservoirs present.

Several shallow bores have been drilled in the vicinity of PEP 109 by Victorian Electricity, Coal and Water Resource authorities; however, none of these bores encountered Latrobe Group reservoirs at a significant depth or within closure.

Approximately 170 km of the Hartogen-operated GHG84A Gravity Survey in PEP 110 was extended into PEP 109 to provide regional structual information in the western part of PEP 109.

During 1985, 275 km of seismic was acquired in PEP 109 forming a regional grid over accessible portions of the Permit. Several additional lines were programmed in the vicinity of the North Seaspray/Seaspray wells to investigate any updip potential on these structures.

DRILLING RESULTS

The Burong prospect at the top Latrobe level consists of a northeast to southwest trending asymmetrical anticline, fault controlled to the northwest. Burong No. 1 was located to test the crest of this anticline. The stratigraphy encountered was similar to that prognosed. The main target, the Latrobe Group, contained excellent reservoir rock with very high porosity and permeability. No oil shows were observed within the Latrobe, while only minor, 100% methane gas readings were recorded from sandstones in the upper 200 ft. Wireline logs verified that the Latrobe sands are water saturated. The minor amount of gas detected drilling through the upper part of the Latrobe Group came from a thick coal seam from 2166-2211 ft and coal seams from 2250-2278 ft. The gas peak is associated with a coal seam from 2255-2263 ft.

STRATIGRAPHIC TABLE

BURONG NO. 1

Formation	Age	Depth (KB) ft	Depth (KB) m	Subsea Depth ft	Subsea Depth m	Thickness ft	Thickness m
Undifferentiated	Late Miocene–Late Pliocene	14	4.3	+115	+35.1	686	209.1
Gippsland Limestone	Miocene	700	213.4	-571	-174.0	1112	338.9
Lakes Entrance	Oligocene	1812	552.3	-1683	-513.0	337	102.7
Latrobe Group	Late Eocene–Late Cretaceous	2149	655.0	-2020	-615.7	1956	596.1
Strzelecki Group	Early Cretaceous	4105	1251.1	-3976	-1211.6	28	8.5
Total Depth (logger extrap.)		4133	1259.8	-4004	-1220.4		

LITHOLOGY

UNDIFFERENTIATED LATE MIOCENE TO LATE PLIOCENE

Surface to approx. 700 ft
Surface to approx. 213 m

Thickness: 686 ft
209 m

No lithological description.

GIPPSLAND LIMESTONE

approx. 700 - 1812 ft
approx. 213 - 552 m

Thickness: 1112 ft
339 m

Limestone - light to medium grey, occasionally dark grey, light grey-brown, light grey-green, crypto-crystalline to crystalline in part, dominantly very fine to fine grained, occasionally coarse grained, soft to moderately hard, firm to friable in part, moderate to well sorted, silty in part, moderately argillaceous in part, with occasional traces of glauconite and pyrite, fossiliferous in part.
Claystone - dominantly light to medium grey, grey-green, occasionally dark grey and grey-brown, soft to firm, sticky in part, often dispersed in the drilling fluid, moderately to strongly calcareous, fossils common, including bryozoans, corals, forams and bivalve fragments, trace glauconite, silty in part. The section becomes more finely interbedded below 1347 ft as evidenced on the resistivity curves.

LAKES ENTRANCE FORMATION

1812 - 2149 ft
552 - 655 m

Thickness: 337 ft
103 m

Calcareous claystone with minor interbedded limestone.
Claystone - light to medium grey, grey-green, light brown, very soft to firm, commonly dispersed, sticky in part, subfissile in part, silty in part, moderate to strongly calcareous.
Limestone - cream, light translucent brown, hard to moderately hard, friable in part, very fine grained, commonly very argillaceous, crypto-crystalline in part. This unit is gradational with the overlying Gippsland Limestone. It is less fossiliferous than the Gippsland Limestone while fossil content decreases with depth.

LATROBE GROUP

2149 - 4105 ft
655 - 1251 m

Thickness: 1950 ft
596 m

2149 - 2155 ft
(655 - 656.8m)

Dolomitic Limestone - clear, light to medium brown, translucent, very hard, commonly very finely crystalline, trace of pale green lithics, argillaceous in part.

2155 - 2165 ft (656.8 - 659.9)	Claystone - light green-grey to light grey, medium to dark brown, soft to firm, subfissile to fissile, moderate to strongly calcareous, trace silty.
2165 - 2211 ft (659.9 - 673.9)	Coal - dark brown, firm to moderately hard, massive, sub-fissile in part, trace sub-conchoidal fracture, trace of quartz crystal inclusions, sub-vitreous lustre.
2211 - 2250 ft (673.9 - 685.8)	Sandstone - consisting of clear, occasionally frosted, loose quartz grains, fine grained to conglomeratic, dominantly coarse to very coarse grained, angular to sub-rounded, dominantly sub-angular to sub-rounded, moderate sorting, no visible matrix, trace of silica and calcite cement, excellent inferred porosity, no oil fluorescence.
2250 - 2278 ft (685.8 - 694.3)	Coal - as for 2165-2211 ft with minor interbedded Claystone - light to dark grey, dark brown, soft-firm, very carbonaceous, trace pyrite.
2278 - 2659 ft (694.3 - 810.5)	Sandstone - as for 2211-2250 ft, with minor interbedded Coal - as for 2165-2211 ft and Claystone - light to dark grey, dark brown and light green, soft to firm, occasionally moderately hard, massive to sub- fissile, very carbonaceous, micro-micaceous in part, commonly calcareous with occasional coaly laminations, trace pyritic.
2659 - 2871 ft (810.5 - 875.1)	Coal with interbeds of carbonaceous claystone and minor sandstone. Coal - dark brown-black, moderately hard to hard, brittle, massive, sub-fissile in part, sub-conchoidal fracture in part, sub-vitreous lustre with occasional thin dolomitic limestone beds (inferred from logs) within the coal seams. Claystone - medium to dark grey, medium to dark brown, very soft, very dispersed, sticky, massive to occasionally sub-fissile, silty in part, calcareous in part, very carbonaceous in part, grading in part to argillaceous, earthy Coal. Sandstone - consisting of clear, loose, medium to very coarse, dominantly coarse quartz grains, sub-angular to occasionally sub-rounded, moderately well sorted, no visible matrix, rare silica or calcite cement, good porosity, no oil fluorescence.
2871 - 3327 ft (875.1 - 1014.1)	Sandstone with interbedded coal and minor claystone. Sandstone - clear, occasional brown stained (lignitic?), medium grained to conglomeratic, dominantly medium to coarse grained, angular to sub-rounded, dominantly sub-angular to sub-rounded, moderate sorting, no visible matrix, rare silica and calcite cement in the upper part of the interval, grading to moderate silica cement with a trace of quartz overgrowths towards the base of the interval, porosity ranges from excellent in the upper part of the interval to good in the lower part, no oil fluorescence.

Coal - brown, brown-black in part, soft to firm, massive, very argillaceous, commonly silty, trace micro-micaceous, earthy, interbedded with coal, dark brown-black to black, moderately hard to hard, brittle in part, massive, sub-fissile in part, sub-conchoidal fracture in part, sub-vitreous to occasional vitreous lustre with a thin dolomitic limestone inferred from logs at 2931-2935 ft.
Claystone - light grey, light brown, grey-brown, soft and tacky, silty in part, dispersed, calcareous in part, carbonaceous in part, with a thin interval from 3090-3094 ft inferred from logs to be strongly dolomitic.

3327 - 3936 ft (1014.1 - 1199.7)

Sandstone with minor interbeds of claystone and coal.
Sandstone - consisting of clear quartz grains, frosted in part, fine grained to conglomeratic, dominantly medium to very coarse grained, angular to sub-rounded, dominantly sub-angular, trace argillaceous matrix, common siliceous cement with trace common quartz overgrowths, trace of pyrite and trace moderately weathered feldspar, porosity variable ranging from poor to good, generally fair to good, no oil fluorescence.
Claystone - light brown, light grey, grey-brown, soft, sticky, very dispersed, calcareous in part, silty in part, slightly micaceous in part.
Coal - dark brown-black, moderately hard to hard, brittle, sub-fissile to fissile, sub-conchoidal fracture in part, dull to sub-vitreous lustre, with thin inferred dolomitic limestone lense from 3715-3717 ft.

3936 - 4105 ft (1199.7 - 1251.2)

Interbedded sandstone and claystone with very minor thin coal.
Sandstone - consists of clear quartz grains, frosted in part, fine grained to occasionally conglomeratic, dominantly medium to very coarse grained, angular to sub-rounded, dominantly sub-angular, trace argillaceous matrix, common siliceous cement with a trace to common quartz overgrowths, trace calcareous cement, trace moderately weathered feldspar, poor to good inferred porosity, no oil fluorescence.
Claystone - light to medium grey, light to medium brown, soft, sticky, dispersed, calcareous in part, carbonaceous in part, slightly micaceous in part.
Coal - as above.

STRZELECKI GROUP

4105 - 4133 ft (TD)
1251 - 1260 m

Thickness: 28 ft
9 m

Sandstone with minor siltstone and claystone interbeds.
Sandstone - light to medium grey-brown, light to medium grey, moderately hard to hard, friable in part, very fine to coarse grained, dominantly fine to medium grained, angular to sub-rounded, poor sorting, very argillaceous in part, common calcite cement, trace silica cement, trace to common chlorite, trace to common pyrite, trace of moderately weathered feldspar, trace to common

carbonaceous material, trace to common grey, green and brown lithics, poor visual porosity, grading to Siltstone in part. Sandstone has trace moderate-bright yellow fluorescence giving a weak crush cut, leaving a thin film residue.
Siltstone - off-white, light to medium grey-green, medium grey-brown, firm to moderately hard, arkosic in part, very argillaceous in part, trace of common chlorite, common feldspar, slightly to moderately calcareous in part, trace of carbonaceous flecks and laminations, grading to a very fine grained sandstone in part.
Claystone - light to medium grey, light grey-brown, soft to occasionally firm, very dispersed, sticky, massive, silty in part, slightly chloritic.

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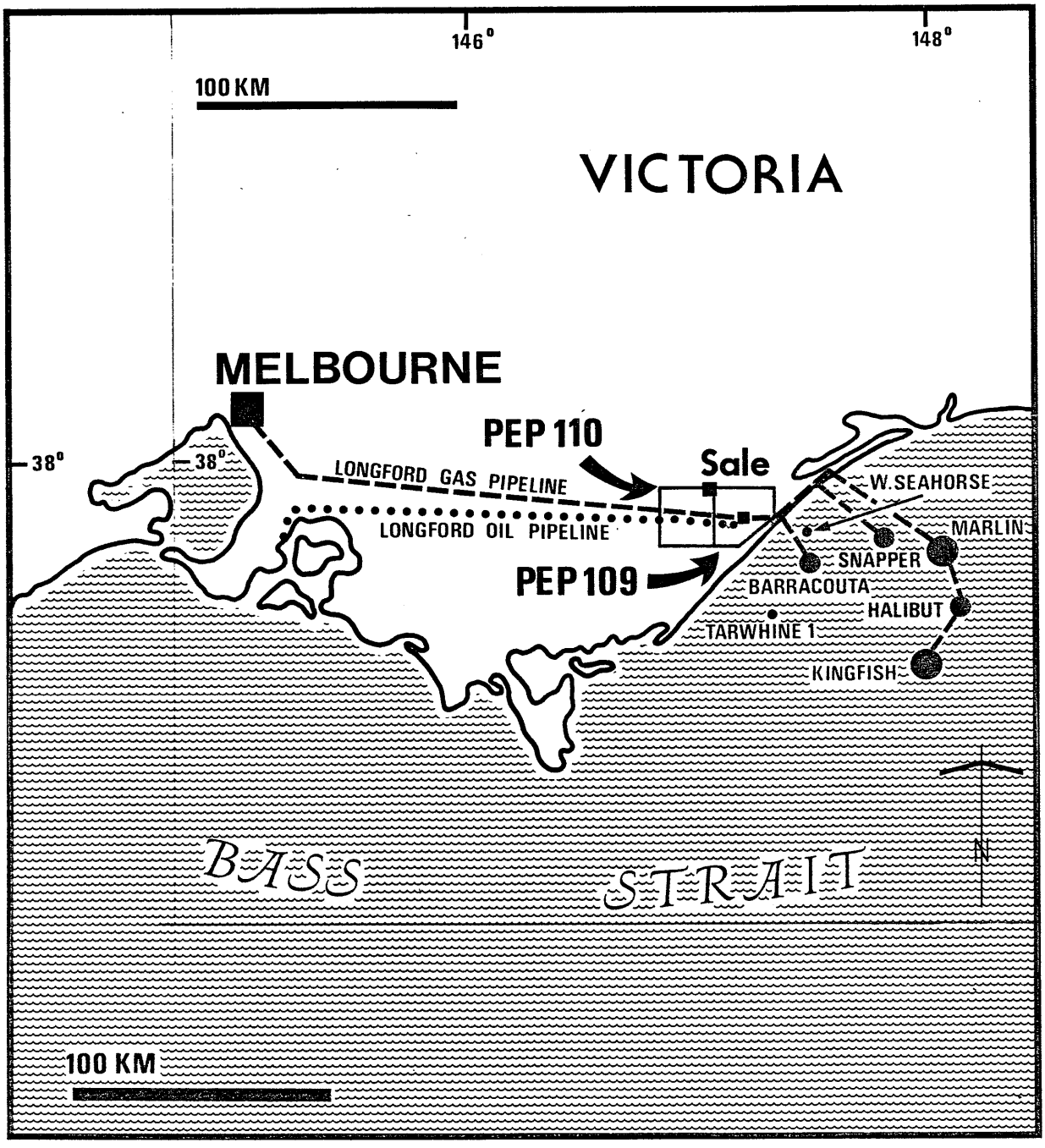
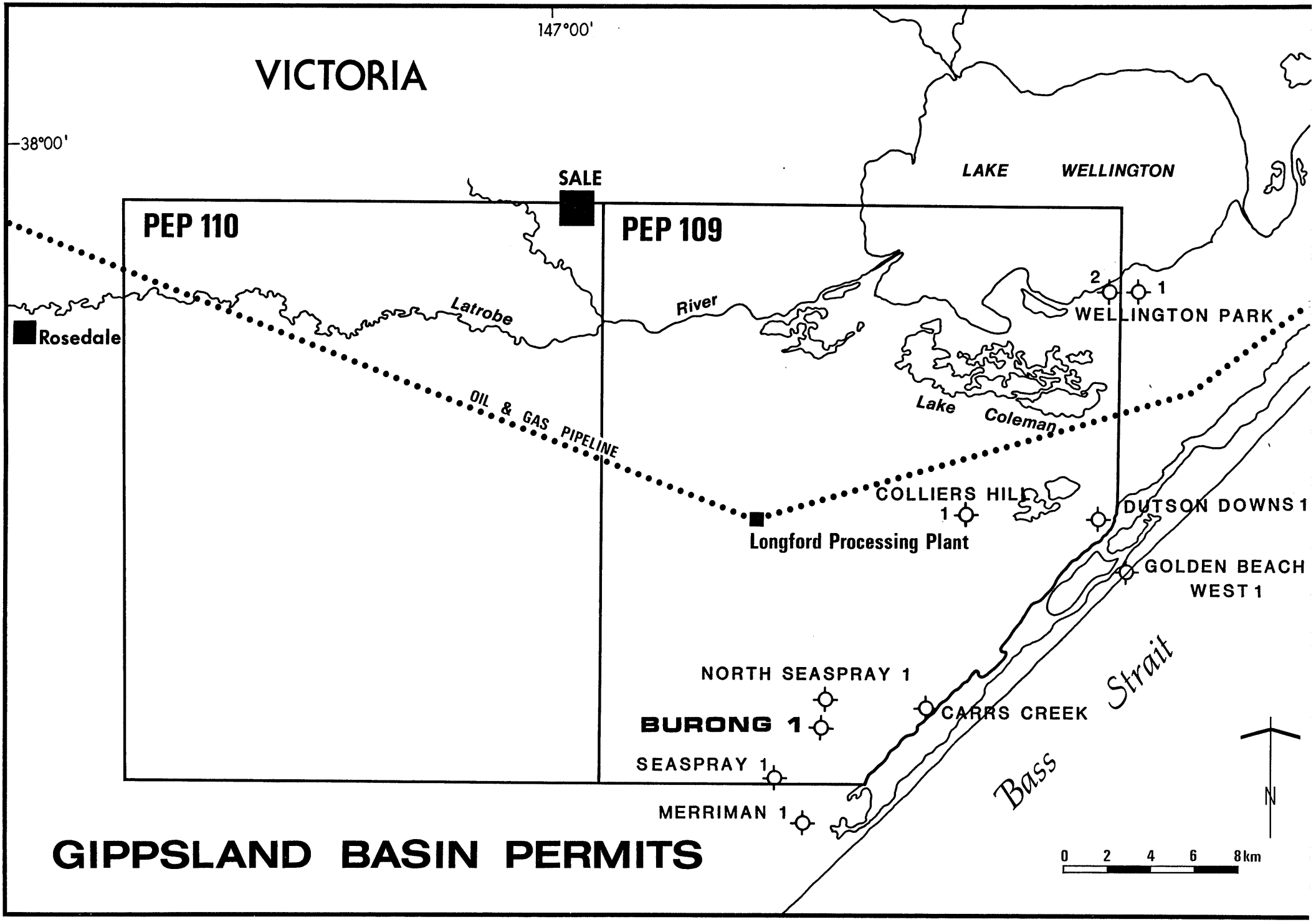
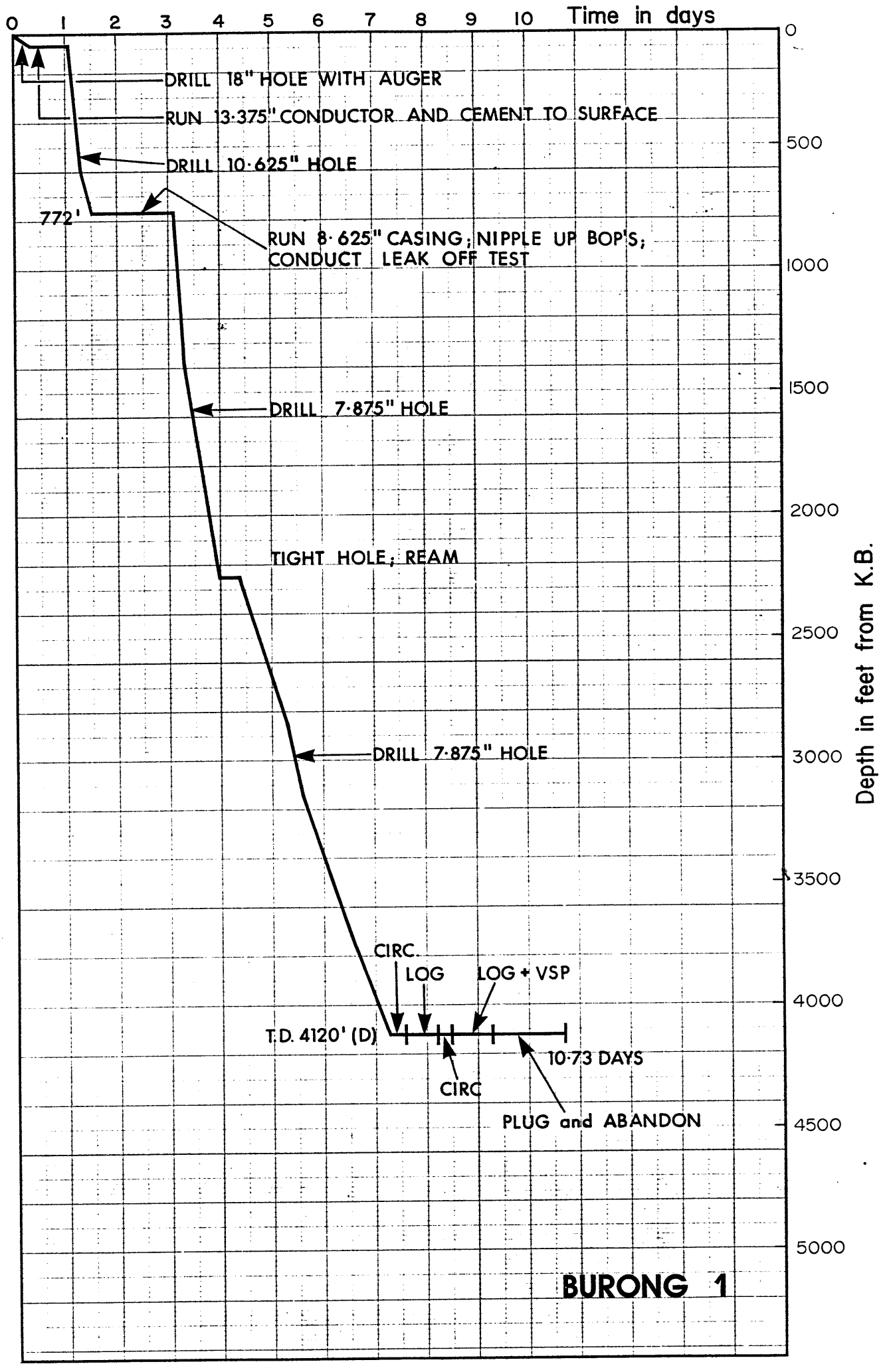

146°
148°
100 KM
VICTORIA
MELBOURNE
PEP 110
Sale
38°
38°
LONGFORD GAS PIPELINE
LONGFORD OIL PIPELINE
W.SEAHORSE
MARLIN
SNAPPER
BARRACOUTA
HALIBUT
TARWHINE 1
KINGFISH
PEP 109
BASS STRAIT
N
100 KM


147°00'
VICTORIA
38°00'
SALE
LAKE WELLINGTON
PEP 110
PEP 109
Rosedale
Latrobe River
OIL & GAS PIPELINE
2
1
WELLINGTON PARK
Lake Coleman
COLLIERS HILL 1
Longford Processing Plant
DUTSON DOWNS 1
GOLDEN BEACH WEST 1
NORTH SEASPRAY 1
BURONG 1
SEASPRAY 1
MERRIMAN 1
CARRS CREEK
Bass Strait
N
0 2 4 6 8km
GIPPSLAND BASIN PERMITS



DRILLING DEPTH PLOT

APPENDIX 1

WELL LOCATION SURVEY PLANS

OIL WELL LOCATION
REFERENCE MARKS' SKETCH PLAN

Well name BURONG # 1 File No

Authority to Prospect (or other title) PEP 109

SEASPRAY 1:25 000

Parish of Wulla Wullock County of Bulen Bulen Map 8321-3-1

Note – Measurements and bearings are to be shown from the well to the reference marks. Measurements need not be to scale. Reduced levels to be shown on sketch. Type of mark to be shown e.g. Iron Pin in concrete; B.M. on blazed ironbark

Lat. S 38° 18' 38"84

Long. E 147° 11' 51"68

AMG Co ords 517 283·2 E

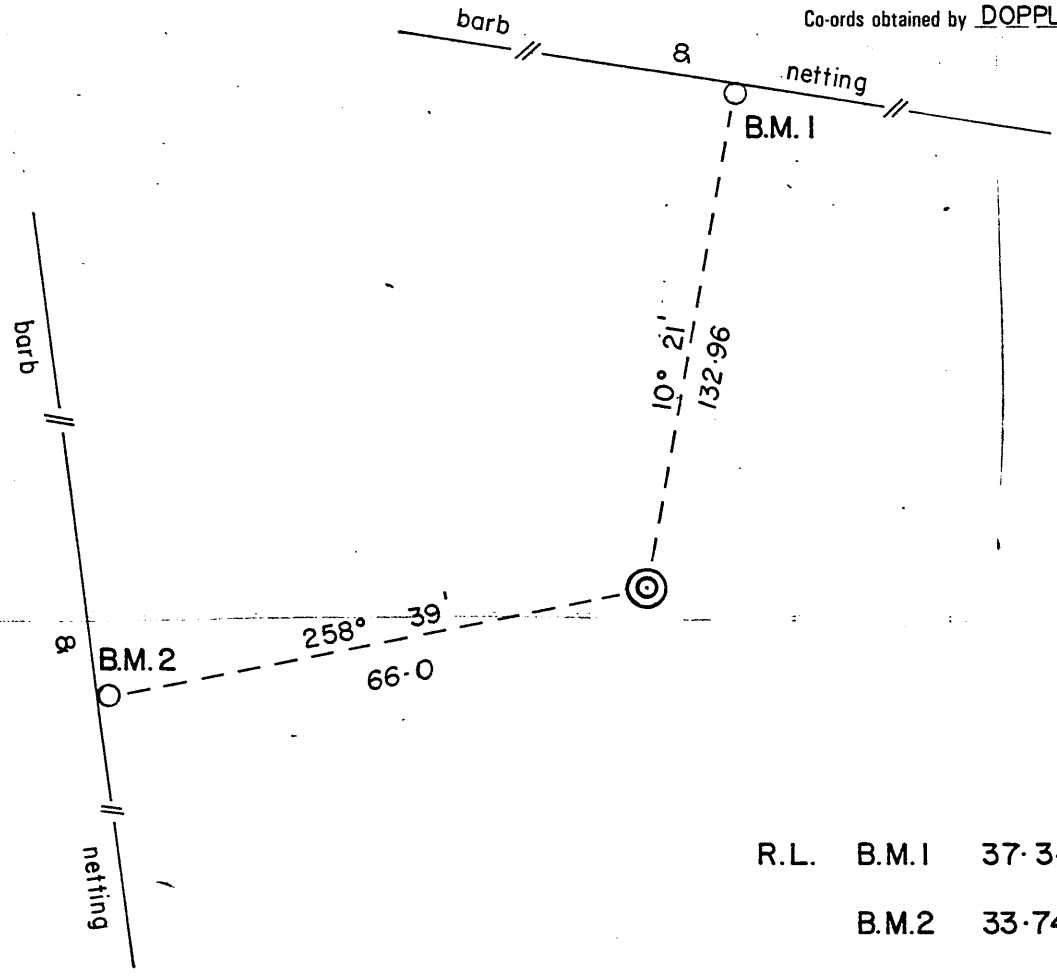
5 759 668·29 N

Zone 55

Grid Convergence 0° 07' 21"

Co-ords obtained by DOPPLER

Measurements are in metres



R.L. B.M.1 37·34

B.M.2 33·74

G.L. 35·2

Bench marks are 1·8m star pickets.

Installed by HARTOGEN ENERGY LTD Date 12-10-86

Levelled by A.L. OWEN Date 12-10-86

Levelled from DEADMANS HILL by Doppler

Adopted R.L. of Datum 63·245 Correction for AHD Datum ———

Datum for bearings A.M.G.

I certify that the reference mark shown in this sketch have been placed on the ground in accordance with regulations under "The Petroleum Acts 1923 to 1982" and that the information shown hereon is correct

VACANT MARGIN THIS LEAVE PLEASE

PE903927

This is an enclosure indicator page.
The enclosure PE903927 is enclosed within the container PE902365 at this location in this document.

The enclosure PE903927 has the following characteristics:

ITEM_BARCODE	= PE903927
CONTAINER_BARCODE	= PE902365
NAME	= Burong 1 Well Location Survey Plans
BASIN	= GIPPSLAND
PERMIT	= PEP109
TYPE	= WELL
SUBTYPE	= DIAGRAM
DESCRIPTION	= Burong 1 Well Location Survey Plan (Appendix 1 from WCR)
REMARKS	=
DATE_CREATED	= 12/10/85
DATE_RECEIVED	= 25/08/86
W_NO	= W922
WELL_NAME	= Burong-1
CONTRACTOR	=
CLIENT_OP_CO	= Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 2

LIST OF LOGS

BURONG NO. 1

LIST OF WIRELINE LOGS

Type	Interval
DLL-GR-SP-Cal	762-4118 ft/ 232.1-1255.2 m
MSFL	1600-4118 ft/ 487.7-1255.2 m
BHCS-GR	762-4127 ft/ 232.1-1257.9 m
LDL-CNL-GR-Cal	1600-4131 ft/ 487.7-1259.0 m
Cyberlook (1:240)	3090-4105 ft/ 941.8-1251.1 m
Cyberlitho (1:240)	3090-4100 ft/ 941.8-1249.6 m
SWC record	

Logging was by Schlumberger Seaco Inc. Logs are presented on 1:240 and 1:600 scales.

APPENDIX 3

BIT RECORD

APPENDIX 3

BIT RECORD – BURONG NO. 1

BIT NO.	SIZE (in)	MAKE	TYPE	JET SIZE (/32")	FROM (ft)	TO (ft)	FEET	HOURS	RATE (ft/hr)	WEIGHT ('000 lbs)	RPM	PUMP PRESSURE (psi)	MUD WT. (ppg)	MUD VISC. (sec)	CONDITION
1	10.625	SEC	S33S	15,15,15	80	772	692	6.5	106.5	5–10	120	550	8.7		1.1.In
2	7.875	HTC	X3A	10,10,12	772	2790	2018	27.0	74.7	5–20	120	800	8.7–9.2		4.4.1/8
3	7.875	SEC	S44F	10,10,12	2790	3710	920	26.0	35.4	5–25	65–120	850	9.0		8.6.1/16
4	7.875	HTC	J22	10,10,12	3710	4120	410	16.75	24.5	25	60–65	850	9.0		1.2.In

APPENDIX 4

DRILLING FLUID SUMMARY

WELL HISTORY

Magcobar
DRILLING FLUID SERVICES

OPERATOR: HARTOGEN ENERGY LIMITED	SECTION	TOWNSHIP	RANGE	MUD TYPE: NaCl/GEL/POLYSAL
WELL: BURONG 1	FIELD: PEP - 109			I.FLUID DATE: 31 OCT 1985
CONTRACTOR: ATCO - APM	COUNTY/PARISH: SEASPRAY			T.D. DATE: 7 NOVEMBER 1985
ENGINEER: G. GARRICK	STATE: VICTORIA			DAYS TO T.D: 8

CONDUCTOR	SIZE	DEPTH	BIT SIZE	N° SITS	ROTATING HOURS	DESILTER	DESANDER	DESILTER	CENTRIFUGE	SHAKER SCREENS
	13 3/8	80ft	AUGER							
SURFACE	8 5/8	760ft	10 5/8	1						
INTERMEDIATE	-	4120ft	7/8	3	-		10 HRS			B.60 B.60
LINER										
PRODUCTION										

DATE	MEASURED DEPTH	T.V.D.	MUD WT.	VIS SEC.	ANGLE AND DIRECTION	FLOW RATE (SPM)	FLOW LINE TEMP. °F °C	PV.	YP.	GELS	PH	API FLUID LOSS	M.T.H.P FLUID LOSS	P_f	M_f	P_m	SALT OR CHLORIDE ppm mg/l	CALCIUM (Ca++)	SOL %	OIL %	GEL	CAUSTIC	$CaCl_2$	LIME	POLYSAL	SALT	STAFLO	MUD COST
5/10	500		8.7	45	1°	424				/											57	1	3	3				
	RIG UP TO SPUD. CEMENT CONDUCTOR PIPE. DRILL 10 5/8" SURFACE HOLE TO 760ft. MIX SPUD MIX																											
5/11	2247		9.2	40	3/4°	212		7	14	8/27	9.2	8.6	-	0.1	0.2	0.4	16000	280	6	-	23	2			17	62		
	SET 8 5/8" CASING @ 760FT. DRILL 7 7/8" HOLE THROUGH LIMESTONE & LARGE SECTIONS OF COAL. TRIP OUT OF HOLE @ 2247 TO CLEAN OUT TIGHT																											
5/11	3160		9.0	42	1°	212		6	13	7/26	9.5	9.5	-	0.2	0.3	0.5	10000	120	5	-	15	3	2	8	15	12	2	
	RIG AND DRILL AHEAD CIRCULATING SAND SAMPLES OUT. SHUT DOWN TO FIX WATER PUMP. MUD DILUTED BY LARGE WATER ADDITIONS. CHANGE BIT.																											
6/11	3790		9.0	39		212		6	9	4/16	8.8	7	-	0.1	0.2	0.4	12500	120	5	-	25	1			10	16	1	
	DRILL 7 7/8" THROUGH COALS AND SANDSTONE. BIT SLOWED BY CLAYS @ 3790m																											
7/11	4120		9.0	48	2°	212		7	12	8/27	10.2	8	-	0.3	0.6	0.7	11500	80	4	-	10	2		1	8	5	1	
	POOH & CHANGE BIT. RIH AND REAM LAST 60 FT. DRILL AHEAD THROUGH CLAYSTONE'S & SANDSTONES TO T.D.																											
8/11										/												3		2				
	RUN ELECTRONIC LOGS. START P & A PROGRAM.																											

APPENDIX 5

SIDEWALL CORE DESCRIPTION

BURONG NO. 1

SIDEWALL CORE DESCRIPTIONS

SWC No.	Depth (ft)	Lithology
30	2021 616.0	Claystone - grey-green, calcareous, massive
29	2086 635.8	Claystone - grey-green, calcareous, massive
28	2113 644.0	Claystone - brown-grey, calcareous, massive
27	2123 647.1	Claystone - grey-green, calcareous, massive with silt to fine grained, greenish black grains imbedded
26	2255 687.3	Claystone - dark brown, carbonaceous, slightly calcareous, sub-fissile with minor silt laminae
25	2340 720.7	Claystone - dark brown, very carbonaceous, calcareous, sub-fissile with minor silt laminae
24	2428 740.1	No recovery
23	2496 760.8	Claystone - dark brown, very carbonaceous, calcareous, massive
22	2534 772.4	Claystone - light green, sub-fissile, very soft
21	2606 794.3	Claystone - light grey, silty, micaceous, calcareous
20	2618 798.0	No recovery
19	2791 850.6	Claystone - medium grey, slightly micaceous, calcareous, silty
18	2820 859.5	Claystone - medium grey, silty, massive, sub-fissile, carbonaceous
17	2843 866.5	Claystone - dark grey, very carbonaceous, calcareous, sub-fissile
16	2910 887.0	Claystone - brown-grey, carbonaceous, slightly calcareous
15	3010 917.4	Siltstone - light grey, very soft
14	3068 935.1	Claystone - grey-brown, carbonaceous, calcareous, with loose floating quartz grains
13	3159 962.7	Claystone - light grey-brown, calcareous
12	3234 985.7	Claystone - light brown-grey, calcareous
11	3274 997.9	Claystone - grey-brown, calcareous, carbonaceous

BURONG NO. 1

SIDEWALL CORE DESCRIPTIONS
(continued)

SWC No.	Depth (ft)	Lithology
10	3384 1031.4	Siltstone - light brown-grey, calcareous
9	3501 1067.1	Claystone - medium grey, carbonaceous, calcareous
8	3617 1102.7	Sandstone - light brown, fine to medium grained, fair sorting, sub-rounded, no visible matrix, very good porosity, no fluorescence
7	3724 1135.1	Claystone - brown-grey, carbonaceous, calcareous, sub-fissile, with floating quartz grains
6	3777 1151.2	Claystone - medium grey, carbonaceous, calcareous
5	3829 1167.1	Siltstone - light grey
4	3938 1200.3	Claystone - light grey, slightly micaceous
3	3956 1205.8	Claystone - medium grey, carbonaceous, calcareous
2	4009 1221.9	Claystone - medium grey, carbonaceous, calcareous
1	4053 1235.4	Siltstone - green with fine to medium greenish-black (chlorite?) grains imbedded

APPENDIX 6

LOG ANALYSIS REPORT

BURONG NO. 1

LOG ANALYSIS

Burong No. 1 was drilled as an exploration well to primarily evaluate the hydrocarbon potential of the reservoirs of the Latrobe and Strzelecki Groups.

No drill stem tests were conducted and no conventional cores were cut.

Log evaluation indicates that sands of the Latrobe and Strzelecki Groups are water saturated.

Variables were calculated from logs. However, Rw was assumed as 12.2 ohm.m at 68°F (Seaspray No. 1, DST No. 2) and confirmed by log interpretation.

APPENDIX 7

PALYNOLOGICAL REPORT

BIOSTRATIGRAPHIC REPORT
ON
BURONG NO. 1

Report No. R2/86/3
February, 1986

M.J. Dudgeon
Dr. JP Rexilius
ECL Australia Pty Ltd
16 Altona Street,
West Perth 6005
WESTERN AUSTRALIA

I. SUMMARY

Eight sidewall cores from Hartogen Energy Limited, Burong-1 indicate the following biostratigraphic subdivision:-

SAMPLE	FORAM ZONE	NANNO ZONE	PALY ZONE	AGE	ENVIRONMENT
SWC 29, 2086' (635.8m)	H1	Upper NN1	P. tuberculatus	basal Early Miocene	middle Neritic
SWC 27, 2123' (647.1)	Indeterminate	NP23-NP24	P. tuberculatus	latest Early-earliest Late Oligocene	inner Neritic
SWC 26, 2255' (687.3)	Indeterminate	Barren	middle N. asperus	Late Middle - Late Eocene	Non-marine
SWC 18, ~~2920'~~ 2820' ? (890.0m) (859.5m)	Barren	Not studied	middle N. asperus	Late Middle - Late Eocene	Non-marine
SWC 5, 3829' (1167.1)	Not studied	Not studied	Indeterminate	Tertiary undiff.	Non-marine
SWC 3, 3986' (1214.9m) 3956' ? - (1205.8)	Not studied	Not studied	lower M. diversus	Late Palaeocene - Early Eocene	Non-marine
SWC 2, 4009' (1221.9)	Not studied	Not studied	lower M. diversus	Late Palaeocene - Early Eocene	Non-marine
SWC 1, 4053' (1235.4)	Not studied	Not studied	?lower M. diversus	?Late Palaeocene - Early Eocene	Non-marine

II. INTRODUCTION

Eight sidewall cores from Burong-1 were provided by Hartogen Energy Limited for micropalaeontological and palynological analysis. Palynomorphs were recovered from all eight samples but only three of the four samples used for micropalaeontology contained any useful calcareous microfossils. The observed palynomorphs are listed in Enclosure 1 and the calcareous microfossils are listed in Appendix 1.

III. PALYNOLOGY

2086' *P. tuberculatus* Zone (Oligocene-Early Miocene) : Open Marine

A rich assemblage of spores, pollen and dinoflagellates was obtained from this sample. Dinoflagellates overwhelm the other palynomorphs and one species in particular, viz. *Spiniferites ramosus*. *Operculodinium* spp. are also plentiful

and this suggests a correlation with the *Operculodinium* sp. Zone of Evans (1971) which correlates with the *P. tuberculatus* Zone (Raine, 1984). The presence of the spore *Cyatheacidites annulatus* confirms the assignation to the *P. tuberculatus* Zone.

2123' **P. tuberculatus** Zone (Early Oligocene) : Open Marine

Dinoflagellates are again common in this sample and *Operculodinium* spp. are the most abundant. Of the spores/pollen present, *Cyatheacidites annulatus* and *Kuylisporites waterbolkii* definitely restrict the sample to the *P. tuberculatus* Zone while *Periporopollenites demarcatus* and *P. vesicus* probably further restrict the assignment to the lower half of the zone (i.e. Early Oligocene) using the biostratigraphy of Stover & Partridge (1973).

2255' middle **N. asperus** Zone (late Middle-Late Eocene) : Non-Marine

Dinoflagellates are absent from this sample and the environment of deposition was probably completely non-marine. The presence of the pollen *Tricolpites simatus*, and the spore *Verrucosisporites cristatus* indicates the age.

2920' middle **N. asperus** Zone (Late Middle-Late Eocene) : Non-marine

The presence of *Liliacidites bainii, Triorites magnificus* and *Triporopollenites ambiguus* indicate that this sample should be ascribed to the middle *N. asperus* zone. Because *Proteacidites tenuiexinus* has not been observed by Stover & Partridge (1973) above the base of the middle *N. asperus* Zone the sample possibly correlates closely with the boundary of the early and middle *N. asperus* Zones. The age would then be uppermost Middle Eocene.

3829' Tertiary undifferentiated : non-marine

Only a few spores/pollen were observed and none were age diagnostic. Microplankton were not observed and thus the depositional environment was probably non-marine.

3986' lower **M. diversus** Zone (Late Palaeocene-Early Eocene) : non-marine

Stereisporites regium, Latrobosporites crassus and *Tricolpites gillii* have tops above the base of the lower *M. diversus* Zone and *Crassoretitriletes vanraadshooveni* starts at the base of that zone. They restrict the age.

4009' lower *M. diversus* Zone (Late Palaeocene-Early Eocene) : non-marine.

A low yield of pollen and spores was obtained from this sample and it is not altogether certain that there was no mud contamination. However, the presence of *Gambierina rudata, Nothofagidites asperus* and *Tricolpites gillii* suggest a correlation with the lower *M. diversus* Zone of Stover & Partridge (1973) which is Late Palaeocene-Early Eocene in age (Partridge, 1976). The absence of microplankton indicates a non-marine origin.

4053' ?lower M. *diversus* Zone (Late Palaeocene-Early Eocene) : non-marine.

Significant contamination of this sample by drilling mud was evident in the sidewall core and in the pollen assemblage. In fact it is not impossible for the assemblage to have originated entirely from contamination. Pollen which were definitely introduced from higher in the sequence include *Aglaoredia qualumis, Anacolosidites sectus* and *Paripollis ochesis*. The presence of *Latrobosporites* crassus suggests an age no younger than early Eocene.

IV. MICROPALAEONTOLOGY

A total of 4 sidewall core samples from the interval 2086.0-2920.0 ft were analysed for foraminifera and calcareous nannoplankton. Calcareous microfossil species identified in the well section, interpreted zonation and depositional environment subdivision have been plotted on the micropalaeontological distribution chart (Appendix 1).

The planktonic foraminiferal letter zonal scheme of Taylor (in prep.) and the NP-NN calcareous nannoplankton letter scheme of Martini (1971) are used in this investigation. Foraminiferal studies by Carter (1964) and Jenkins (1971), and calcareous nannoplankton investigations by Edwards (1971) and Siesser (1979) have also been consulted.

(A) Calcareous Nannoplankton Biostratigraphy

i) 2086.0ft : upper Zone NN1 (basal Early Miocene)
The absence of *Zygrhablithus bijugatus* and *Helicosphaera cartieri* in a high yielding and well preserved nannofossil assemblage is indicative of an upper NN1 zonal assignment (= *Reticulofenestra gartneri* Zone of Edwards (1971).

ii) 2123.0ft : Zones NP23-NP24 (Early/Late Oligocene Boundary).
The association of *Chiasmolithus oamaruensis, Dictyococcites bisectus* and *Zygrhablithus bijugatus* without *Reticulofenestra umbilica*, indicates that the nannofossil assemblage at 2123.0

ft is assignable to Zones NP 23 and NP 24 (= *Cyclococcolithus neogammation* and *Syracosphaera clathrata* Zones of Edwards, 1971).

iii) 2255.0 ft : Indeterminate
The sample at 2255.0 ft is barren of calcareous nannoplankton.

(B) Planktonic Foraminiferal Biostratigraphy

i) 2086.0 ft : Zone H1 (basal Early Miocene)
The occurrence of *Globigerina woodi connecta* without *Globigerinoides trilobus* is indicative of Zone H1.

ii) 2123.0-2920ft: Indeterminate
The sample at 2123.0ft lacks age-diagnostic planktonic foraminifera. The sample at 2255.0ft contains caved planktonic foraminifera from the Seaspray Group. The sample at 2920.0ft is barren of foraminifera.

(C) Environment of Deposition

i) 2086.0ft : Middle neritic
A middle neritic environment of deposition for the sample at 2086.0ft is indicated by a moderate yielding planktonic foraminiferal fauna, high yielding calcareous nannoplankton assemblage and a rich benthonic foraminiferal fauna comprising *Sphaeroidina bulloides*, *Siphouvigerina proboscidea*, *Pullenia bulloides* and *Brizalina spp.* The planktonic foraminiferal percentage is approximately 15%.

ii) 2123.0ft : Inner-middle neritic
The sample at 2123.0ft contains a benthonic foraminiferal fauna including *Globocassidulina subglobosa*, *Gyroidina zelandica* and *Pullenia bulloides*. The yield of planktonic foraminifera is low while calcareous nannoplankton are abundant. The glauconitic marl sample at 2123.0ft is interpreted to have been deposited in an inner to middle neritic environment.

iii) 2255.0 and 2920.0 ft : Indeterminate
The sample at 2255.0 ft contains juvenile planktonic foraminifera which are interpreted to be contaminants from the Seaspray Group. Palynological evidence suggests that the sample at 2255.0ft is Middle *N. asperus* in age and non-marine. The sample at 2920ft is barren of foraminifera and is considered to be non-marine on the basis of palynological evidence.

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APPENDIX 1: CALCAREOUS MICROFOSSIL DISTRIBUTION CHART, BURONG-1

SAMPLE TYPE OR NO. *	29	27	26	18
DEPTHS / FOSSIL NAMES	2086.0ft	2123.0ft	2255.0ft	2920.0ft
PLANKTONIC FORAMINIFERA				B
Globigerina praebulloides	●			
Globigerina woodi connecta	/			
Globigerina spp.		O	Co	
CALCAREOUS NANNOPLANKTON			B	NS
Cyclicargolithus floridanus	●	■		
Sphenolithus moriformis	O	●		
Sphenolithus spp.	●			
Braarudosphaera bigelowi	/			
Coccolithus eupelagicus	/			
Micrantholithus attenuatus	/			
Pontosphaera spp.	/	/		
Discoaster deflandre	.	/		
juvenile coccoliths	●	●		
Chiasmolithus oamaruensis		O		
Dictyococcites bisectus		●		
Zygrhablithus bijugatus		O		
Rhabdosphaera longistylus		/		
BENTHONIC FORAMINIFERA				B
Sphaeroidina bulloides	O			
Dorothia spp.	.			
Pullenia bulloides	O	/		
Textularia spp.	/			
Siphouvigerina proboscidea	●		Co	
Lagena acuticostata	/			
Heronallenia lingulata	/			
Lagena hexagona	/			
Lenticulina spp.	/			
Siphouvigerina interrupta	O			
Gyroidina	/	/		
Hanzawai sumitomoi	.			
Fissurina spp.	O			
Ammodiscus spp.	.			
Cassidulina laevigata	.			
Pullenia quinqueloba	/			
Cibicides vortex	/			
Cibicides spp.	/	O		
Dentalina spp.	/			
Marssonella spp.	.			
Lagena semistriata	.			
Trifarina bradyi	/	/		
Pyrulina cyclindroides	.			
Quinqueloculina spp.	/			
Karreria maoria	/			
Brizalina anastomosa	.			
Astrononion tasmaniensis	.			
Eponides praecinctus	.			
Cibicides mediocris	/	/		
Gyroidina subzelandica		O		
Siphonina australis		/		
Globocassidulina subglobosa		●		

. Single O Few ■ Dominant Co Contamination
/ Rare ● Common B Barren NS Not Studied

SAMPLE TYPE OR NO. *	29	27	26	18
FOSSIL NAMES / DEPTHS	2086.0ft	2123.0ft	2255.0ft	2920.0ft
Cibicides subhaidingeri		O		
Parellina spp.		/		
Anomalina macraglabra		/		
Anomalina spp.		/		
Nodosaria spp.		/		
Marginulina spp.		.		.
Florilus japonicus			Co	
indeterminate benthonics			Co	
OTHER SKELETAL MATERIAL		B		B
Echinoid spines	/		Co	
Sponge spicules	●			
Ostracods	.			

. Single O Few ■ Dominant Co Contamination

PE900760

This is an enclosure indicator page.
The enclosure PE900760 is enclosed within the container PE902365 at this location in this document.

The enclosure PE900760 has the following characteristics:

ITEM_BARCODE	= PE900760
CONTAINER_BARCODE	= PE902365
NAME	= Palynological Range Chart
BASIN	= GIPPSLAND
PERMIT	= PEP109
TYPE	= WELL
SUBTYPE	= DIAGRAM
DESCRIPTION	= Palynmorphs Recorded in Burong-1
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W922
WELL_NAME	= BURONG-1
CONTRACTOR	= ECL AUSTRALIA
CLIENT_OP_CO	= HARTOGEN ENERGY LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 8

WELL VELOCITY SURVEY

BURONG NO. 1

VELOCITY SURVEY

A VELOCITY SURVEY WAS RUN ON THIS WELL BY SCHLUMBER SEACO INC., A COPY OF WHICH HAS ALREADY BEEN FORWARDED.

PE601128

This is an enclosure indicator page.
The enclosure PE601128 is enclosed within the container PE902365 at this location in this document.

The enclosure PE601128 has the following characteristics:

ITEM_BARCODE	= PE601128
CONTAINER_BARCODE	= PE902365
NAME	= Composite Well Log
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Composite Well Log
REMARKS	=
DATE_CREATED	= 09/11/1985
DATE_RECEIVED	= 25/08/1986
W_NO	= W922
WELL_NAME	= Burong-1
CONTRACTOR	= Hartogen Energy Ltd
CLIENT_OP_CO	= Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE601127

This is an enclosure indicator page.
The enclosure PE601127 is enclosed within the container PE902365 at this location in this document.

The enclosure PE601127 has the following characteristics:

ITEM_BARCODE	= PE601127
CONTAINER_BARCODE	= PE902365
NAME	= Exploration Logging of Australia Mud Log
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Exploration Logging of Australia Mud Log
REMARKS	=
DATE_CREATED	= 06/11/1985
DATE_RECEIVED	= 25/08/1986
W_NO	= W922
WELL_NAME	= Burong-1
CONTRACTOR	= Hartogen Energy Ltd
CLIENT_OP_CO	= Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)