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PAGE 1 OF 50
(4 COLOUR PAGES)



LAKES OIL N.L.

(A.B.N. 62 004 247 214)

PATTIES PIES SOUTH-1A

PEP 156

ONSHORE GIPPSLAND BASIN, VICTORIA

WELL COMPLETION REPORT

**By
Tim O'Brien**

February 2004

LAKES OIL N.L.
Level 11
500 Collins Street
Melbourne 3000



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TABLE OF CONTENTS

- 1.0 SUMMARY**
- 2.0 WELL HISTORY**
 - 2.1 GENERAL DATA**
 - 2.2 RIG DATA**
 - 2.3 DRILLING DATA**
 - 2.4 LOGGING AND TESTING**
- 3.0 GEOLOGY**
 - 3.1 REGIONAL GEOLOGY**
 - 3.2 TECTONIC HISTORY**
 - 3.3 STRUCTURAL ELEMENTS**
 - 3.4 PEEP156**
 - 3.5 EXPLORATION HISTORY**
 - 3.6 REASONS FOR DRILLING**
 - 3.7 STRATIGRAPHIC PROGNOSIS**
 - 3.8 STRATIGRAPHY**
 - 3.9 HYDROCARBON SHOWS**
- 4.0 DISCUSSION AND COMPLETION**
- 5.0 COMPLETION**

TABLE OF FIGURES AND ATTACHMENTS

LIST OF FIGURES

Figure 1	Locality Map for Patties Pies South
Figure 2	Drilling Time vs Depth Curve
Figure 3	Well Completion Diagram
Figure 4	Generalised Gippsland Basin Stratigraphic Table
Figure 5	Seismic Line GOR88A-05 through the Patties Pies Prospects
Figure 6	Time Structure Map of Patties Pies Prospects

LIST OF TABLES

Table 1	Stratigraphic Table for Patties Pies South
Table 2	Formation Tops Table

LIST OF APPENDICIES

Appendix 1	Cuttings Descriptions
Appendix 2	Bit Record
Appendix 3	Well Location Survey

LIST OF ENCLUSURES (Pocket)

Enclosure 1	Lithological Logs
Enclosure 2	GHD Well Logs

Suite 1. (@ T.D.)

Type Log

Density, Caliper, SP, Resistivity
Gamma

Interval (m)

456m – 84.5m
456m – Surface

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Patties Pies Sth Location Map

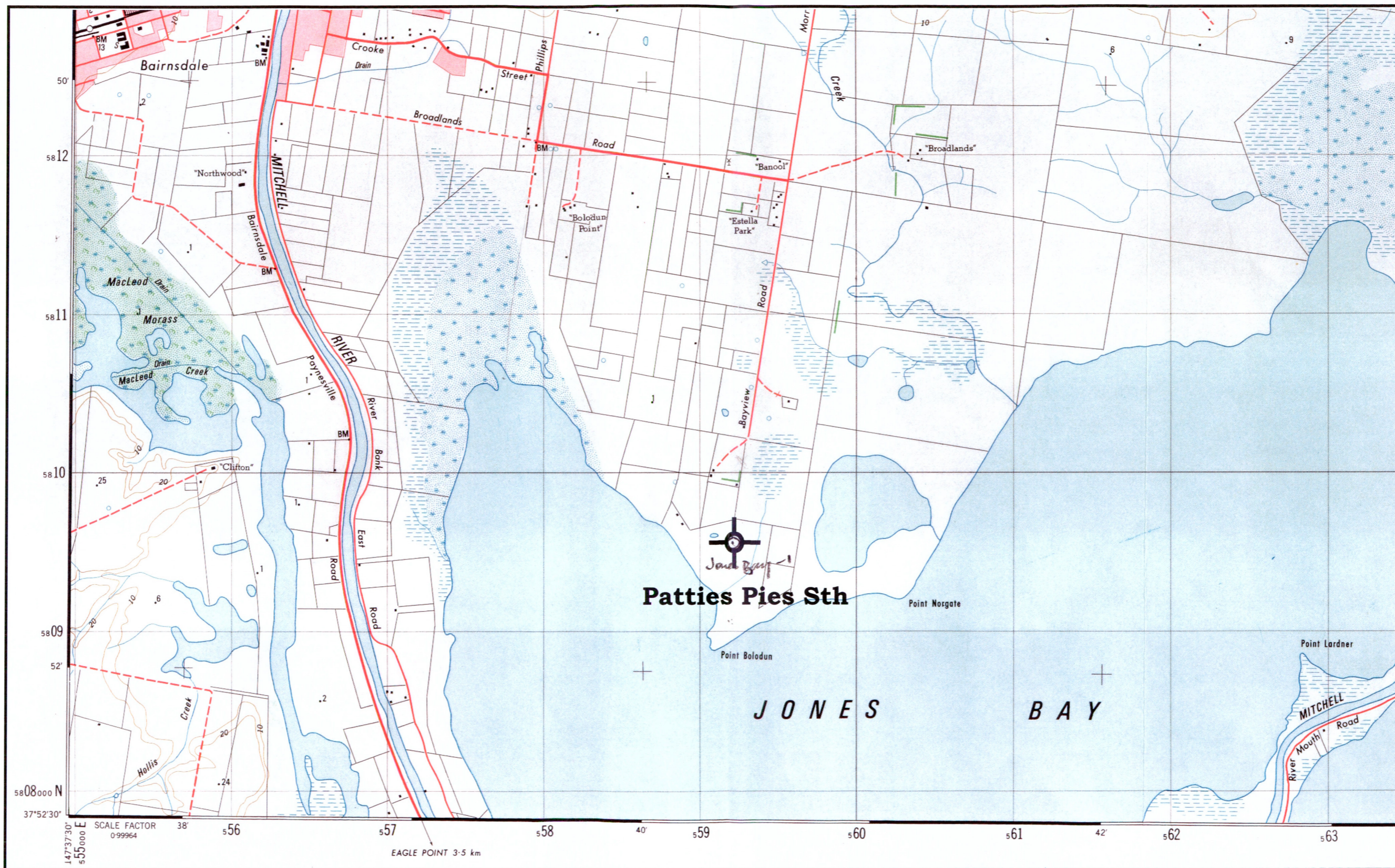


Figure 1

2.0 WELL HISTORY

2.1 GENERAL DATA

Well name and number: PATTIES PIES SOUTH-1A

Location: Latitude: 37°51'35''
Longitude: 147°40'26''
Easting: 559216 E
Northing: 5809564 N
Seismic VP 135 Line GOR 88A-05
Bairnsdale SS

Elevations: G.L. 2.2m A.S.L.
K.B. 3.5m A.S.L.

Petroleum Tenement: PEP156

Name of Operator LAKES OIL N.L.
A.C.N. 004 247 214
Level 11
500 Collins Street
MELBOURNE, VICTORIA 3000

Other Participants: None

Date Drilling Commenced: 17th September 2003

Date Drilling Completed: 11th October 2003

Date Rig Released: 14th October 2003

Drilling Time to T.D.: 24 days

Total Depth: Driller: 456m
Logger: 456m

Status: Dry and Abandoned
Left for conversion by landowner to a water well, producing from the Latrobe Group sands.

2.2 RIG DATA (Rig 1)

Drilling Contractor:	Drilltec Pty Ltd Drilling Depot Rd, Morwell, Vic. 3840
Rig:	Bournedrill THD25VP (rotary rig)
Rig Carrier:	Truck Mounted
Weight Indicator:	Hydraulic Pressure
Power:	Truck Engine
Rotary:	Top Drive
Blocks:	Not Applicable
Pumps:	Duplex 5" × 6" Double Action
Mud Mixing:	Gardener Denver Duplex
Sump Pump:	Not Applicable
Transfer Pump:	Not Applicable
Tubulars:	Mayhew Pipe
Fishing Tools:	None on Site
Handling Tools:	Drilltec Toolbox
Stabilizer:	5 5/8"
Spare Parts:	As reasonably required to conduct operations for programmed well.
Personnel:	Driller plus 2 crew
Drilling Hours:	Rig Operated During Daylight Hours Only

RIG DATA (Rig 2)

Rig :	Bournedrill C500 (cable tool rig)
Rig Carrier:	Truck Mounted
Weight Indicator:	Hydraulic Pressure
Power:	Truck Mounted Auxiliary Power Source
Rotary:	Not Applicable (Cable Tool Rig)
Pumps:	Not Applicable
Tubulars:	Not Applicable
Fishing Tools:	None on Site
Handling Tools:	Drilltec Toolbox
Stabilizer:	Not Applicable
Spare Parts:	As reasonably required to conduct operations for programmed well.
Personnel:	Driller plus one crew
Drilling Hours:	Rig operated during daylight hours only

Time vs Depth Curve for Patties Pies South-1A

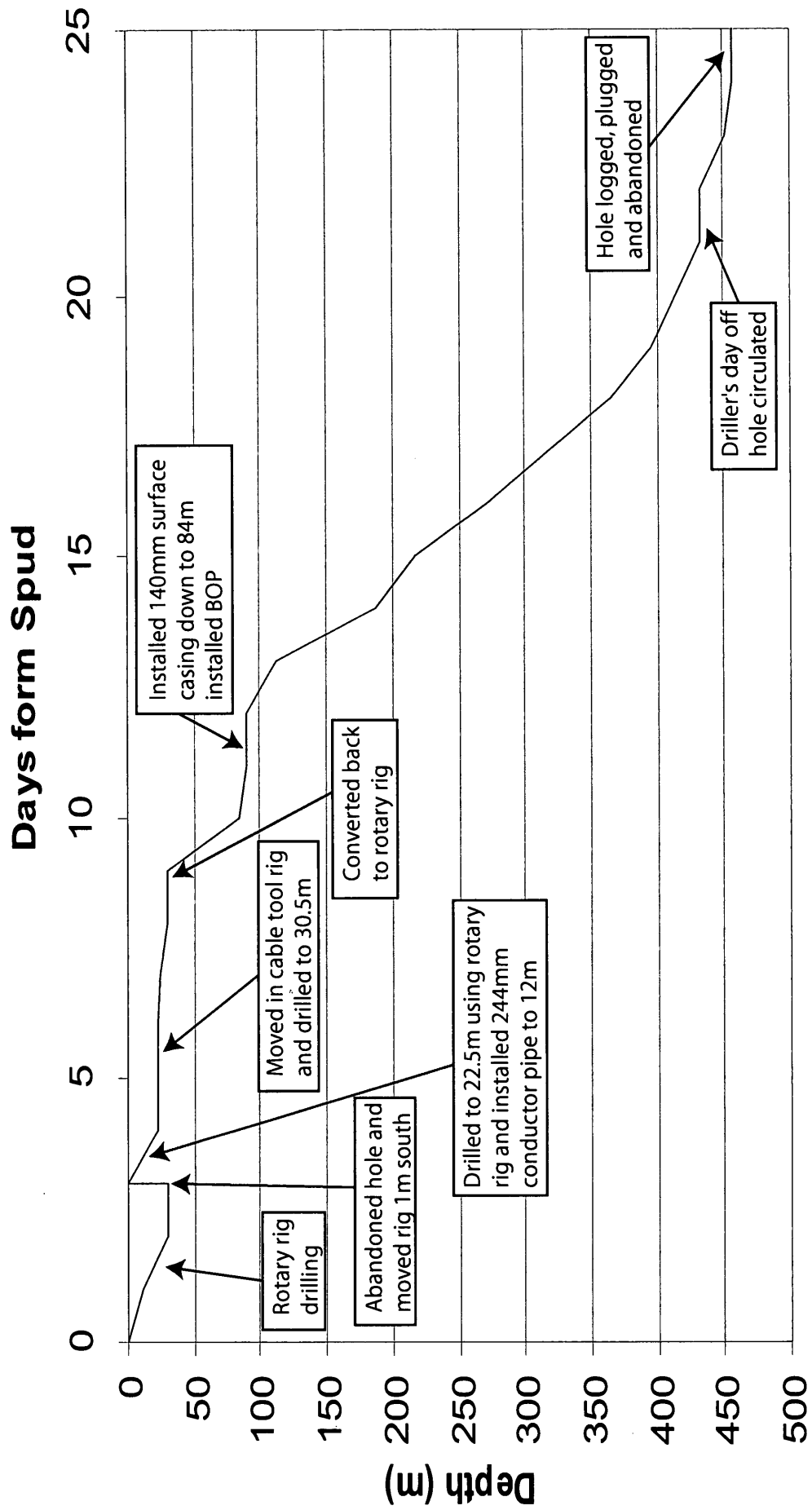


FIGURE 2

2.3 DRILLING DATA

The following is the daily operations summary for Patties Pies South-1A. It has been compiled from the tour sheets and daily drilling reports. The well was operated on a turn-key rate with onsite drilling supervision by Lakes Oil N.L. personnel. Further details are provided in the time/depth curve (Fig. 2).

The depths in the following summary are those reached at 2400 hrs on each day with the operations given for the previous 24 hour period.

Date	Depth (KB)	Hours Drill.	Prog-ress	Mud Wt.	Mud Vis	Mud WL	Mud pH	Activity (Report time-6.00AM)
18-9-03	0	0	0					Rig up
19-9-03	13.0	1.5	13					Spud PP S/1 @ 8.13 A.M. 18-9-03: drill 244mm hole. Condition hole.
20-9-03	30.5	1.5	17.5					Drill cond. hole. No returns @ 30.5m. POH with drag bit. RIH with roller bit. No returns.
21-9-03	30.5	0	0					Inject air to clean hole. Some cgl. Pebbles returned.
22-9-03	22.5	N.A.	22.5					Plug well. Move rig 1m & spud PP-S/1a. drill 16" to 22.5m Move rig off hole. Wait for cable rig.
23-9-03	22.5	0	0					W.O. cable tool rig.
24-9-03	22.5	0	0					Cable tool rig on site.
25-9-03	25.8	4.0	3.3					RIH 14" csg. Drill cable tool in csg while pushing csg. Ahead.
26-9-03	31.8	6.0	6.0					Drill to 31.8m. Run 225mm PVC cond. Pipe.
27-9-03	31.8	0	0					Pull 14" csg. Move cable tool rig off hole. Cement cond. pipe.
28-9-03	84.0	9.0	52.2					Move rotary rig onto hole. Drill 8.5" hole.
29-9-03	90.0	1.0	6.0					Clean 6m fill. Drill to 90m, run surf. csg. & cement W.O.C.
30-9-03	90.0	0	0					Wait on cement.
1-10-03	112.0	2.0	22.0					Nipple up BOP. Drill 5 5/8" hole.
2-10-03	187.0	5.0	65.0	-	37	170	-	Drilling.
3-10-03	217.0	3.0	30.0					Drilling. Shut down due to weather.
4-10-03	272.0	7.0	55.0	8.7	38	-	-	Drilling
5-10-03	318.0	3.5	46.0					Drilling.
6-10-03	365.0	5.0	47.0					Drilling.
7-10-03	396.0	7.8	31.0					Drilling.
8-10-03	414.0	7.5	18.0					Drilling.
9-10-03	432.0	6.3	18.0					Drilling.
10-10-03	432.0	0	0					Rig shut down.
11-11-03	452.0	5.3	20.0					Drilling
12-10-03	456.0	2.0	4.0					Drilled to T.D.
13-10-03	456.0	0	0					Ran Logs.
14-10-03	456.0	0	0					Ran plugs.

Hole Sizes and Depths:

12.25" / 311mm. to 30.5m.

8.5" / 216mm. to 84.5m.

5.625" / 143mm. to Total Depth (456m)

Casing and Cementing:Surface

Size - 225mm PVC csg.
Weight - 13.7kg/m
Grade - Class 12
Shoe Setting Depth - 12.3m KB
Quantity of Cement - 328 kg Construction Cement

Intermediate

Size - 7" / 178mm.
Weight - 38.7 kg/m
Grade - K55
Shoe Setting Depth - 84.5m KB
Quantity of cement - 1720 kg Construction Cement

Deviation Surveys:

Nil

Drilling Fluid:

- (a) Spud – 84m Additives – Bentonite, Pac R
(b) 84m – 456m Additives – KCL Polymer, Pac L, Pac R

Water Supply:

Water was trucked by tanker from Sale.

Perforation Record:

None.

Plugging and Cementing:

Cement plug from 370m – 390m at the base of the Latrobe Sand.

2.4 LOGGING AND TESTING

Wellsite Geologist:

Barry Clarke

Mudlogging:

Lakes' own hot-wire gas detector was used to monitor ditch gas, and was supervised by Dennis Sisely.

A mudlog recording lithology, penetration rate, mud gas and other data was prepared and is an enclosure to this report.

Ditch Cutting Samples:

Cuttings were collected at 5m intervals from surface to 300m and then at 3m intervals to 456m (T.D.). The cuttings samples and sets were:

<u>Sample Type</u>	<u>No. Sets</u>
Unwashed	1 (DPI)
Samplex Trays	1 (Operator)

Coring:

None.

Sidewall Cores:

None.

Testing:

None.

Wireline Logs:

One suite of logs were run by GHD.

<u>Run #1</u>	<u>Interval (m)</u>
<u>Log Type</u>	
Density, Caliper, SP, Resistivity	456m – 84.5m
Gamma	456m – surface

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CUTTINGS
DESCRIPTIONS



APPENDIX 1

CUTTINGS DESCRIPTIONS

PATTIES PIES SOUTH-1A CUTTINGS DESCRIPTIONS
Wellsite Geologist: Barry Clarke. Well spudded 18/09/03.

DEPTH (m)	ROP (min/m)	Gas Units	DESCRIPTIONS
0-5	6.0	0	SAND - clear, fine - coarse grain, most medium - coarse grain, sub round, fair sorted, quartz, trace micaceous, 40% brown argillaceous, limonitic, abundant clay, buff, unconsolidated, trace Bryozoa.
5-10	12.0	0	CLAY - brown, very silty, very fine carbonaceous specks, floating sand & silt grains, grades very argillaceous siltstone to argillaceous silty sandstone, very poor sorted, 5% loose sand grains as above.
10-15	3.6	0	CLAY - grey, soft, slight carbonaceous, also brown limonite clay as above.
15-20	3.2	0	CLAYSTONE - medium orange brown, limonitic, very silty, grades brown argillaceous siltstone.
20-25	2.4	0	CONGLOMERATE - polymictic, pebble fragments of argillite, quartzite, igneous, limestone, coal etc.
25-30	5.2	0	25 - 26m - CONGLOMERATE - as above. 26m - 30m - SILTSTONE - medium grey, very argillaceous, very fine grained sandy grading silty sandstone, abundant skeletal fragments including Gastropod, Pelecypod Bryozoa.
30-35	3.0	0	SILTSTONE - as above, abundant loose grains quartz, lithic grains, glauconite, coal.
35-40	2.3	0	SILTSTONE - as above, medium to dark grey, very fine sandy, quartz, argillaceous, abundant skeletal grains, soft, friable.
40-45	2.6	0	SILTSTONE - as above, grey, sandy and argillaceous, abundant bioclastic material, grades silty, bioclastic wackestone and packstone.
45-50	4.0	0	SILTSTONE - as above, medium grey, quartzose, abundant bioclastic material, lithic grains, glauconite, micaceous, soft, friable.

50-55	3.0	0	SILTSTONE – as above, grades quartz silty, bioclastic packstone and wackestone, mostly poor porosity, small amount pinpoint porosity.
55-60	5.6	0	LIMESTONE – light grey, buff, skeletal wackestone and packstone, silty to very coarse grain material, small amount very fine, crystal spar, Bryozoa, Coral, glauconite, scattered intraskeletal porosity, most primary porosity infilled with spar cement. No shows.
60-65	4.0	0	LIMESTONE – buff, light grey, very fine to very coarse grained skeletal and intraclasts, micrite and spar infill of porosity, poor porosity, no shows.
65-70	4.0	0	LIMESTONE – as above, fair amount intraskeletal porosity, probable poor permeability, most primary skeletal porosity infilled with spar. No shows.
70-75	3.2	0	LIMESTONE – buff, light grey, poor sorted sparry skeletal wackestone and packstone, mostly silt to medium grain size allochems, scattered intraskeletal porosity, mostly poor porosity, no shows.
75-80	2.0	0	LIMESTONE – buff, fine to medium grain, sparry skeletal packstone and grainstone, possible small amount large size intraskeletal porosity, trace skeletal-moldic porosity.
80-85	2.4	0	LIMESTONE – as above, poor sorted very fine to very coarse grain skeletal packstone and wackestone, fair amount intraskeletal porosity, no shows.
85-90	4.2	0	LIMESTONE - as above, poorly sorted bioclastic packstone and wackestone, abundant Bryozoa, interbedded bioclastic siltstone.
90-95	5.6	0	LIMESTONE – bioclastic packstone and wackestone as above, abundant Bryozoa, Pelecypod, small amount intraskeletal porosity, trace interskeletal porosity, no shows.
95-100	5.0	0	LIMESTONE – as above, no shows.
100-105	4.2	0	LIMESTONE – as above, common intraskeletal porosity, small amount interskeletal porosity, much porosity infilled with grey calcareous silt, no shows.

105-110	7.0	0	LIMESTONE – light grey, very poorly sorted skeletal wackestone as above, most silt to very fine grain size, abundant fine to coarse grain skeletal material including Bryozoa, glauconite, coal grains, large amount intraskeletal porosity, no shows.
110-115	2.8	0	LIMESTONE – 40%, as above, slight carbonaceous and quartz silty. 60 percent siltstone – grey, calcareous, argillaceous, bioclastic.
115-120	3.2	0	LIMESTONE / SILTSTONE – grey, bioclastic wackestone, argillaceous, quartz silt, Bryozoa: Siltstone – 60%, bioclastic, argillaceous.
120-125	2.8	0	SILTSTONE / MARLSTONE – grey, argillaceous, calcareous, carbonaceous, bioclastic; Limestone – 10% silty, argillaceous, bioclastic wackestone.
125-130	5.8	0	MARLSTONE / SILTSTONE – as above, grey, bioclastic, coarse grain fragments skeletal material, including Bryozoa, glauconite, quartz silt.
130-135	4.4	1	MARLSTONE / LIMESTONE – argillaceous micrite, with abundant coarser grains bioclastic detrital including Bryozoa, Foraminifera, Pelecypod, glauconite. LIMESTONE – 30%, buff, grey, poor sorted bioclastic wackestone, micrite to medium grain allochems, slight argillaceous, carbonaceous specs, glauconite. 1 unit hot wire gas.
135-140	3.4	1	LIMESTONE / MARLSTONE - medium buff grey, quartz silty and argillaceous skeletal wackestone, carbonaceous specs, Bryozoa etc. poorly sorted, quartz silt, coarse grain skeletal fragments. 1 unit hot wire gas.
140-145	2.8	2	MARLSTONE / SILTSTONE – very fine to medium grained, bioclastic wackestone, part grades argillaceous and micritic silty, bioclastic packstone. Two units hot wire gas.
145-150	3.6	1	LIMESTONE - grey, marly skeletal wackestone and packstone as above, very fine to coarse grain fossil material with micrite matrix, poor sorted, abundant Bryozoa, glauconite, carbonaceous specs, quartz silt, part argillaceous, grades marlstone. 1 unit hot wire gas.

150-155	3.2	0	LIMESTONE – buff, light brown, bioclastic wackestone, micrite to medium grained allochems, poorly sorted, Bryozoa, Pelecypod, intraclasts, argillaceous, quartz silt, glauconite, micrite matrix, trace spar cement, small amount interskeletal porosity, trace, 1 unit hot wire gas.
155-160	3.2	1	LIMESTONE – wackestone, as above, fair amount glauconite argillaceous. Limestone – micritic bioclastic wackestone, small amount coarser skeletal material, fairly glauconitic, poor porosity, no shows.
160-165	3.4	0	LIMESTONE / MARLSTONE - argillaceous and quartz silt bioclastic wackestone, Bryozoa, Coral, glauconite.
165-170	4.4	0	CLAYSTONE – 50%, slight green grey, very calcareous including abundant fragments Bryozoa. 50% marly limestone as above.
170-175	6.0	0	CLAYSTONE – light green, very calcareous, glauconitic. Claystone – medium to light grey as above, marly with abundant fine to coarse grained skeletal material.
175-180	6.0	0	CLAYSTONE - as above; LIMESTONE – 90%, light grey, light buff, sparry detrital wackestone, micrite to very fine grained bioclastic material including abundant Bryozoa, small amount glauconite.
180-185	4.6	0	CLAYSTONE – medium green grey, abundant bioclastic detrital material, grades marlstone. LIMESTONE – 20%, white, sparry micrite. LIMESTONE – 20%, white, light buff, very fine to medium grained skeletal and intraclast packstone, abundant Bryozoa, small amount intraskeletal porosity, no shows.
185-190	6.8	0	LIMESTONE - 90%, light buff, bioclastic packstone and wackestone, mostly very fine to fine grained, small amount coarse grain, poorly sorted, Pelecypod, Bryozoa, scattered intergranular porosity, trace skel- moldic porosity most tight, no shows. LIMESTONE – 10%, medium brown grey, bioclastic glauconitic wackestone as above.

190-195	4.4	0	<p>LIMESTONE – light buff, sparry pellooidal micrite.</p> <p>LIMESTONE – light buff, micritic and sparry bioclastic wackestone grading packstone, small amount interskeletal porosity.</p> <p>LIMESTONE – buff, sparry very fine grained detrital packstone and grainstone, tight, no shows.</p>
195-200	8.0	0	<p>CLAYSTONE – 10%, medium green, very calcareous, bioclastic particles;</p> <p>CLAYSTONE – 20%, medium grey brown, abundant poorly sorted skeletal material, grades marlstone;</p> <p>LIMESTONE – 70%, bioclastic wackestone, very fine to medium grained, abundant Bryozoa.</p>
200-205	8.8	0	<p>CLAYSTONE – 60%, medium to dark grey, calcareous silty;</p> <p>CLAYSTONE – 10%, light green, moderately calcareous, carbonaceous specks;</p> <p>LLAYSTONE – 30%, buff, very fine to medium grained bioclastic wackestone and grainstones as above, tight, no shows.</p>
205-210	4.6	0	<p>CLAYSTONE – grey as above, moderately calcareous;</p> <p>LIMESTONE – buff, as above.</p>
210-215	5.6	0	<p>CLAYSTONE – medium green grey, moderately calcareous;</p> <p>LIMESTONE – 20%, light buff, grey, bioclastic wackestone, very fine to very coarse grain, poorly sorted, calcareous silt and micrite infilling interskeletal porosity, part with spar cement, Bryozoa, no shows.</p>
215-220	5.0	0	<p>LIMESTONE – varigated buff green and grey, poorly sorted intraclast and bioclastic wackestone and packstone, tight;</p> <p>CLAYSTONE – medium grey green, bioclastic, silty.</p>
220-225	6.8	1	<p>CLAYSTONE - as above, samples probably contain a higher percent claystone than logged - much is probably washed out during sample washing;</p> <p>LIMESTONE – as above.</p>
225-230	4.8	1	<p>CLAYSTONE – as above, marly;</p> <p>LIMESTONE – as above. 1 unit hot wire gas.</p>

230-235	3.8	1	CLAYSTONE – as above, marly, soft, friable, bioclastic fragments common. 1 unit hot wire gas.
235-240	6.2	0	CLAYSTONE / MARLSTONE – as above; Limestone – 10% as above.
240-245	8.6	0	CLAYSTONE / MARLSTONE – as above.
245-250	6.8	0	CLAYSTONE / MARLSTONE – as above.
250-255	4.0	0	CLAYSTONE / MARLSTONE – medium grey, slight green grey, very calcareous, siltier than above, carbonaceous specks; CLAYSTONE – medium to dark brown grey, very calcareous, very fine grain bioclastic detrital, Bryozoa, Pelecypod, Foraminifera.
255-260	3.8	0	CLAYSTONE – grading marlstone as above; LIMESTONE – variegated buff and green, poorly sorted sparry detrital and bioclastic wackestone, fair amount glauconite, no porosity, no shows.
260-265	6.0	0	CLAYSTONE / MARLSTONE – as above; Limestone as above, some grades sparry bioclastic packstone, glauconitic, slightly carbonaceous, no porosity.
265-270	7.8	0	CLAYSTONE – varieties as above; LIMESTONE – buff, variegated green, slight sparry bioclastic and intraclast wackestone, poorly sorted, fair amount glauconite, Pelecypod, Bryozoa, tight.
270-275	7.2	0	CLAYSTONE / MARLSTONE – medium green grey, slight silty, slight carbonaceous, abundant Bryozoa, Pelecypod.
275-280	6.8	0	MARLSTONE / CLAYSTONE – 40%, medium to dark grey, abundant coarse grain skeletal material including Pelecypod;

			CLAYSTONE - 40%, slight green-grey, calcareous; CLAYSTONE - 20%, grey-green, bioclastic.
280-285	3.4	0	CLAYSTONE - varieties as above.
285-290	3.2	0	CLAYSTONE - medium brown grey, silty, very fine sandy, carbonaceous specks, calcareous, bioclastic detrital including Pelecypod, grades argillaceous calcareous siltstone; MARLSTONE / CLAYSTONE - as above.
290-295	5.8	1	SANDSTONE - 30%, dark brown, very fine to fine grain, scattered medium & coarse grain, poorly sorted, sub angular, quartz, chert, skeletal fragments, abundant calcareous cement - up to 50% quartz grains replaced, abundant black carbonaceous grains, small amount siliceous cement, lithoclasts, trace pyrite, tight, no shows; MARLSTONE - 70%, as above. Coarse fragments Pelecypod.
295-300	7.6	1	SANDSTONE - medium brown, as above, very fine to fine grain, angular, calcite cement replacing quartz, carbonaceous grains, glauconite, chert, lithics, possible laminae sandy bioclastic limestone, tight, no shows, 1 unit hot wire gas.
300-303	6.0	2	SANDSTONE - 30% as above; SILTSTONE - 70%, medium to dark brown grey, very argillaceous, very fine sandy, very soft, friable, unconsolidated, no shows, 2 units hot wire gas.
303-306	4.3	2	SANDSTONE - variegated medium brown and white, most very fine grain, well sorted, small amount with scattered coarser grains, 50% calcite cement replacing quartz grains, fair amount glauconite, tight, no shows; CLAYSTONE - 10%, emerald green, coarse fragments Pelecypod. 2 units hot wire gas.
306-309	9.0	0	SANDSTONE - 60% as above; SANDSTONE - 40%, similar composition as above, friable and argillaceous, soft, possible relic - mix quartz grains and mud?

309-312	6.7	0	SANDSTONE – medium to dark brown, as above, more glauconite than above, tight, no shows.
312-315	4.3	0	SANDSTONE – as above, no shows.
315-318	9.0	0	SANDSTONE – as above, very fine grain, silty, loose aggregates pyrite – part as pyritised plant material, less glauconite than above, tight, no shows.
318-321	9.7	0	SANDSTONE / SILTSTONE – medium brown, very fine grain, silty, poorly sorted, angular, argillaceous, quartz, calcite cement, pyrite - part as cement, chert or lithic grains, worm tubes, tight, no shows.
321-324	11.3	0	SANDSTONE / SILTSTONE – as above, tight, no shows; SANDSTONE - 5%, loose grains quartz, medium to very coarse grain, sub round to round.
324-327	7.6	0	SILTSTONE / SANDSTONE – brown, very fine grain to silt, slightly argillaceous, medium to poorly sorted, sub angular to sub round, quartzose, abundant calcite cement, trace pyrite, trace glauconite, micaceous, well compacted, hard, tight, no shows, trace amount coarse grains quartz – loose, as above.
327-330	8.0	1	SANDSTONE – as above.
330-333	5.3	0	SANDSTONE – as above; Sandstone – 1%, loose grains quartz, coarse grained, sub round; no shows.
333-336	5.3	0	SANDSTONE – light grey, clear, slightly frosty, medium to very coarse grain, fairly well sorted, round to sub round, quartz, small amount chert and lithic grains, abundant disseminated microcrystalline pyrite between quartz grains, unconsolidated, excellent porosity & permeability, no shows.
336-339	4.7	0	SANDSTONE - as above, unconsolidated, abundant loose silt to very fine grain quartz – possible matrix?, abundant pyrite intermixed with fine grain fraction - part forming cement, very good porosity, no shows.
339-342	7.8	0	SANDSTONE – as above, slightly coarser grained.

342-345	2.0	1	SANDSTONE – clear, white, medium to very coarse grain, well sorted, quartz, chert, lithic grains, unconsolidated as above, no shows.
345-348	2.3	0	SANDSTONE – as above, abundant dark grey chert or lithiclast grains, aggregates cemented with pyrite, small amount black resinous or organic material associated with pyrite gave no fluorescence but gave fairly fast blooming cut with a very weak blue fluorescence.
348-351	2.7	0	SANDSTONE – as above, very coarse to fine grain, fair sorting, milky white and clear quartz, chert, lithoclasts, patches with microcrystalline pyrite cement, very good porosity, no shows.
351-354	4.3	0	SANDSTONE - as above, possible slight coarser grain than above, large amount pyrite - part as cement, unconsolidated, very good porosity, no shows.
354-357	5.0	0	SANDSTONE – as above, 25% Coal – black, probably bedded.
357-360	5.7	0	SANDSTONE – medium grey, fine grain, sub angular to sub round, quartz – part with silica overgrowths, micaceous, abundant pyrite; COAL – black, interlaminated with sandstone above, floating sand grains in coal and common pyrite.
360-363	3.3	0	SANDSTONE – very fine grain, as above, interbedded? with black coal, abundant pyrite, poor sample, no shows.
363-366	5.3	0	SANDSTONE – salt & pepper, medium to coarse grain, common fine grain, fair sorted, sub round to sub angular, quartz with crystal overgrowths blocking pore throats, pyrite cement in part, coal grains, consolidated, breaks easily into grains, fairly good porosity, poor permeability, no shows; COAL – 20%, black, as above, part occurs as grains in the sandstone; trace black bituminous organic material with floating sand grains – no fluorescence but gives fast weak blooming cut with weak blue fluorescence.
366-369	6.3	1	SANDSTONE – 60%, mostly as loose grains as above, silt – very coarse grained, mostly coarse grained, sub round, clear quartz, grey lithoclasts, most unconsolidated, also cuttings of very fine to medium grain salt & pepper sandstone as above, no shows;

			COAL - 40%, black, as above.
369-372	5.3	0	SANDSTONE - 50%, loose grains & cuttings as above, no shows; COAL - 50%, black, floating sand grains and interlaminated silty sandstone, carbonaceous plant material, abundant disseminated pyrite, coarse crystals mica, part of coal gives fairly fast blooming cut with weak blue florescence.
372-375	10.0	0	COAL & SANDSTONE - as above, poor sample?, unwashed samples are mostly light grey clay - weathered volcanics?.
375-378	14.6	0	CLAY - light grey as above.
378-381	15.3	0	CLAY - as above.
381-384	19.0	0	CLAY - as above.
384-387	26.6	0	CLAY - grey and brick red.
387-390	17.6	0	CLAY - as above; SANDSTONE - 5%, red brown, very fine grain - silt, angular, siliceous cement, iron stain or clay matrix, some loose grains quartz with red stain, very fine to medium grain, mostly tight, no shows.
390-393	17.1	0	CLAY - red, with red sandstone as above.
393-396	19.3	0	CLAY - as above.
396-399	23.3	0	CLAYSTONE - interlaminated red and light grey and green grey, non calcareous, very micaceous, sub fissile.
399-402	20.0	0	CLAYSTONE - as above.
402-405	23.3	0	CLAYSTONE - as above, part silty and micaceous, interlaminated with Sandstone - mottled red, very

				fine to medium grain, scattered coarser grain, fair to poorly sorted, no shows.
405-408	29.0	0		CLAYSTONE / SHALE – green grey and red brown, interlaminated, part slight silty, micaceous.
408-411	21.0	0		CLAYSTONE – as above; SANDSTONE – small amount, grey, salt & pepper, very fine to silt, argillaceous, quartz, lithiclasts, slight to fairly calcareous, tight, no shows.
411-414	23.6	0		CLAYSTONE – red as above, also mottled buff and red.
414-417	19.0	0		CLAYSTONE / SHALE – as above, poor sample.
417-420	18.0	0		CLAYSTONE / SHALE – as above, fair amount of loose sand grains, fine to very coarse grain, increase ROP, mud pit turned deep red brown color.
420-423	21.3	0		CLAYSTONE – as above.
423-426	19.0	0		CLAYSTONE – red, buff, very micaceous, abundant cavings.
426-429	21.0	0		CLAYSTONE – as above, abundant loose grains quartz sand – cavings?
429-432	27.0	0		CLAYSTONE – red, light to medium brown, yellow brown, very micaceous, silty laminae, very fissile.
432-435	22.0	0		CLAYSTONE / SHALE - as above.
435-438	18.0	0		CLAYSTONE – as above, 80% loose grains quartz sand, very fine to coarse grained; trace SANDSTONE – dirty brown, very fine to medium grain, poor sorted, sub angular, quartz, micaceous, carbonaceous, silica? cement, non calcareous, tight, no shows.
438-441	21.3	0		CLAYSTONE – as above; 50% loose grains sand as above; SANDSTONE – trace, as above.

441-444	15.3	0	SANDSTONE – 10%, dirty brown as above, very micaceous, tight; SANDSTONE – 10%, very coarse fragments quartz, possible conglomerate .
444-447	11.0	0	SANDSTONE / CONGLOMERATE – clear, white, coarse to very coarse grain, possible fragments of larger size material, angular, quartz - part with quartz crystal overgrowths, lithics, no shows.
447-450	19.3	0	SANDSTONE? - as above, probably much cavings.
450-453	33.3	0	SANDSTONE? - as above, abundant cavings, trace lithic fragments including metamorphics and igneous, no shows.
453-456	28.3	0	SANDSTONE? – as above, possible conglomerate as above; SANDSTONE – trace amount, medium grain, very fine grain to silt, grades siltstone, poor to fair sorted, angular, quartz, siliceous cement, tight, very similar to base of Patties Pies # 1.

RECORD

BIT

APPENDIX 2

BIT RECORD

BIT RECORDWELL NAME : PATTIES PIES SOUTH -1/1a

BIT No.	1	2	3	4	5	6	
SIZE (mm)	244 mm	8.5 inch	16.0 inch	14.0 inch	8.5 inch	5 5/8 inch	
MAKE	n.a.	n.a. re-run	n.a. re-run	n.a.	n.a. new bit	ASH 1	
TYPE	4 way drag	Roller cone.	Four way drag.	Cable tool.	Four way chevron drag	P.C.D.	
JETS	none	none	none	none	none	none	
IN AT (KB) m	0	30.5	0	22.4	30.5	84.5	
OUT AT (KB) m	30.5	30.5	22.4	30.5	90.5	456.0	
METERS	30.5	0	22.4	8.1	60.0	371.5	
HOURS	3.0	3.0	2.5	10.0	3.0	54.4	
ACC. HRS	3.0	6.0	8.5	18.5	21.5	75.9	
WT.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
RPM	n.a.	n.a.	n.a.	-	n.a.	n.a.	
MUD WT.	(fresh water)	(fresh water)	(fresh water)	(fresh water)	(fresh water)	112	
VIS.						37	
VER.DEV.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
COND.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
REMARKS	Unable to drill or lift pebbles at 30.5m	Unable to drill or lift pebbles.	16 in. hole drilled for 14in.csg	Cable tool drilled through 14 in. csg.			

WELL
LOCATION
SURVEY

APPENDIX 3

WELL LOCATION SURVEY



AUSTEC SURVEYING CONSULTANTS PTY LTD
ACN 006 347 100
TITLE & ENGINEERING SURVEYORS :: LAND DEVELOPMENT CONSULTANTS

Ref 03300.C01
24/06/03

Lakes Oil N.L.
P.O. Box 300
Collins Street West
Melbourne, 8007.

Att: Mr J. Mulready
Re: Wellsite Surveys
Location: Bayview Road, Bairnsdale
And Bunga Creek, Lakes Entrance.

Further to your request we have completed the co-ordination of the bore holes at Bairnsdale and Lakes Entrance.

Jones Bay-1 E 559212.975 N 5809565.222 RL 2.200 PSF 0.99964318
Patties Pies-1 E 559321.145 N 5810466.907 RL 2.280 PSF 0.99964334
Datum: Parish of Broadlands PM 35
Parish of Bairnsdale StMarys Spire

Bunga Creek-1 E 589376.388 N 5809860.128 RL 60.600 PSF 0.99969839
Bunga Creek-2 E 591192.088 N 5810294.796 RL 43.890 PSF 0.99970242
Datum: Parish of Colquhoun PM's 32 & 33

- The above co-ords have been deduced from ground survey work to an estimated accuracy of +/- 0.02m.
- The co-ords are to the centre line at ground level of the bores, except for "Jones Bay-1" This bore has not yet been drilled. The co-ords are to the centre of the northern edge of a dirt ramp, at a distance of 7.45m on Magnetic Brg of about 7° from a steel (GI) stake placed on site.

Yours Faithfully,

Bruce Bowden.
Licensed Surveyor

903390 045

LOGS

ENCLOSURE 1

LITHOLOGICAL LOGS

PE613642

This is an enclosure indicator page.
The enclosure PE613642 is enclosed within the
container PE909990 at this location in this
document.

The enclosure PE613642 has the following characteristics:

ITEM_BARCODE = PE613642
CONTAINER_BARCODE = PE909990
NAME = Patties Pies South-1A Lithological Log
BASIN = GIPPSLAND
ONSHORE? = Y
DATA_TYPE = WELL
DATA_SUB_TYPE = MUD_LOG
DESCRIPTION = Patties Pies South-1A Lithological Log.
1:200. Lakes Oil N.L. Barry W. Clarke.
October 2003. Enclosure 1
REMARKS =
DATE_WRITTEN = 11-OCT-2003
DATE_PROCESSED =
DATE_RECEIVED =
RECEIVED_FROM = Lakes Oil N.L.
WELL_NAME = Patties Pies South-1A
CONTRACTOR =
AUTHOR =
ORIGINATOR = Lakes Oil N.L.
TOP_DEPTH = 0
BOTTOM_DEPTH = 456
ROW_CREATED_BY = DH00_SW

(Inserted by DNRE - Vic Govt Mines Dept)

ENCLOSURE 2

GHD WELL LOGS

PE613643

This is an enclosure indicator page.
The enclosure PE613643 is enclosed within the
container PE909990 at this location in this
document.

The enclosure PE613643 has the following characteristics:

ITEM_BARCODE = PE613643
CONTAINER_BARCODE = PE909990
NAME = Patties Pies South-1A GHD Well Log
BASIN = GIPPSLAND
ONSHORE? = Y
DATA_TYPE = WELL
DATA_SUB_TYPE = WELL_LOG
DESCRIPTION = Patties Pies South-1A GHD Well Log.
Suite 1 (@ TD). Density, Caliper, SP,
Resistivity and Gamma. Enclosure 2
REMARKS =
DATE_WRITTEN =
DATE_PROCESSED =
DATE_RECEIVED =
RECEIVED_FROM = Lakes Oil N.L.
WELL_NAME = Patties Pies South-1A
CONTRACTOR =
AUTHOR =
ORIGINATOR = Lakes Oil N.L.
TOP_DEPTH = 0
BOTTOM_DEPTH = 456
ROW_CREATED_BY = DH00_SW

(Inserted by DNRE - Vic Govt Mines Dept)