## 908936 001



## LAKES OIL N.L.

## **BAUDIN-1**

WELL COMPLETION REPORT
PEP 135 VIC.
GIPPSLAND BASIN
VICTORIA

PREPARED BY: J.GAUSDEN
J. GAUSDEN & ASSOCIATES PTY LTD
MARCH 2000

## **BAUDIN-1**

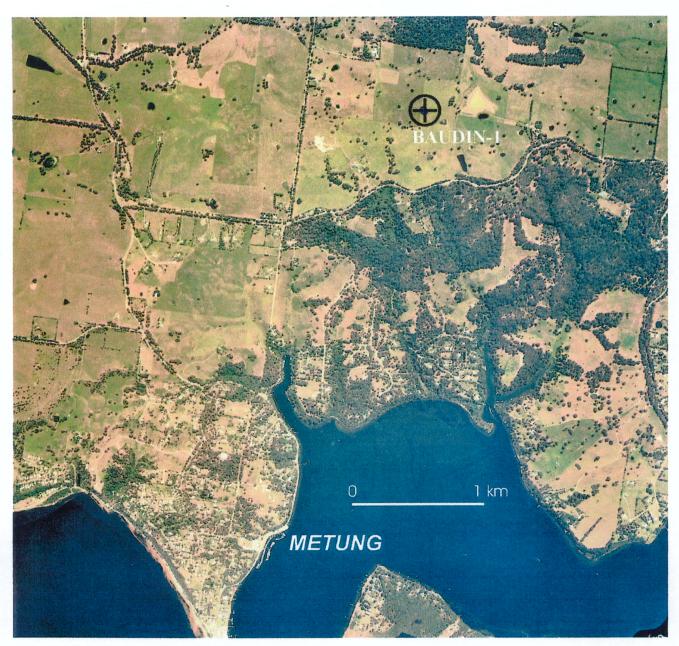
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Enclosure 3 Electric Wireline Logs

## **AERIAL PHOTOGRAPH OF THE BAUDIN-1 WELL LOCATION**



After UPG99 Central Gippsland 1996 RUN 22 1-28 019



#### 1.0 SUMMARY AND CONCLUSIONS

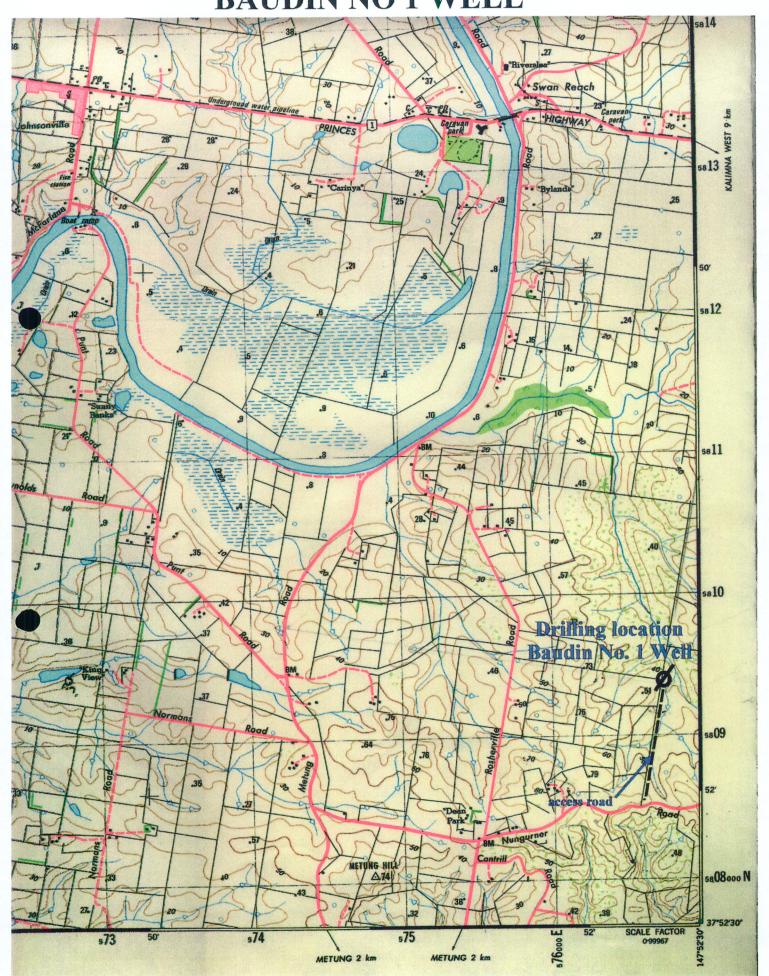
Baudin-1 was drilled as part of a program to investigate the potential for structural-stratigraphic entrapment of hydrocarbons within the lower portion of the Latrobe Group. The target for Baudin-1 was an area of pinchout of the lower Latrobe Group over a structural nose. Potential entrapment required that intraformational seals within the Latrobe Group, known to be present to the south of this location, should persist over the target area to provide the top seal to the lower Latrobe Group sands. Hydrocarbon entrapment in Lower Latrobe Group sands has been demonstrated by the Seahorse field in the relatively near offshore Gippsland Basin, and oil migration to the onshore Basin by oil occurrences at Lakes Entrance and Woodside.

In Baudin-1, the Latrobe Group was found to be thinner than prognosis (33.5 m against 50 m on prognosis), and no sealing section was present within the Latrobe Group. Basement was encountered 28 m high to prognosis. Background gas was first detected at approximately 257 m and averaged approximately 0.1% to the basement top and reduced to 0.02% at TD. There was no detectable increase at the top Latrobe Group and no closure was expected at this level. No hydrocarbon fluorescence was noted in the well.

The results of the well indicate that any structural-stratigraphic prospects of this style will need to be pursued where the Latrobe Group is significantly thicker than it was at the Baudin location. There was also no evidence that the well penetrated a migration pathway from the deeper basin.

### 908936 006

## LOCATION MAP BAUDIN NO 1 WELL



#### 2.0 WELL HISTORY

#### 2.1 LOCATION

Co-ordinates:

Latitude:

37°51'41"

Longitude:

147°52'19"

AMG Co-ordinates:

576695 E 5809195 N

The site was located on the property of Mr. And Mrs. F. Stephenson, approximately 3.5 km northeast of the township of Metung. Access is by an entry off the north side of Nungurner Road, thence by a northerly bearing gravelled track of approximately 800 metres length.

#### 2.2 GENERAL DATA

Well Name:

Baudin-1

Operator:

Lakes Oil N.L.

Level 20

459 Collins St. Melbourne 3000

Elevation:

GL: 4

40 metres

KB:

42 metres (approximate)

Total Depth:

Driller: 426 m.

Logger: 425.6 m.

Spudded:

28 September 1999, @ 18:30 hours.

TD. Reached:

02 October 1999, @ 04:15 hours.

Rig Released:

03 October 1999, @ 07:00 hours

Time:

Spud to TD, 3.4 days.

Status:

Plugged and abandoned, dry hole.

#### 2.3 DRILLING DATA

#### 2.3.1 Drilling Contractor:

Sides Engineering Pty Ltd

25 Garden Road Clayton 3168

#### 2.3.2 Drilling Rig:

Bourne 2000 THD

See Appendix 1 for details

#### 2.3.3 Casing and Cementing Details:

#### 2.3.3.1 Casing:

Conductor:

244mm set at 11 mKB prior to rig up.

Surface Casing:

23 pound LTC 178 mm casing set at 124 mKB Cemented with 16 bbl Class G cement, displaced with mud, Plug bumped at 7000 Kpa

#### 2.3.3.2 Cement Plugs:

Plug No:	1	Interval:	410 m. to 330 m.
Method:	Balanced	Tested:	No
Plug No: Method: tested	2 Balanced	Interval: Tested:	160 m. to 80 m. Yes. Tagged at 71 m, and to 5600 kPa.
Plug No:	3	Interval:	10 m. to Surface.
Method:	Pumped.	Tested:	No

#### 2.3.3 Drilling Bits:

Bit No: Size: Make: Type: IADC Code: Serial No:	RR1 216 mm Reed S1GJ 1.1.4 379814	2 156 mm Varel L127 1.2.7 128063
Nozzles:	3 x 12	$3 \times 11$
Depth in:	0 m	130 m
Depth out:	130 m	426 m
Total metres:	130	296 m
Total hours:	4.5	33.5
WOB (dN):	1.5	2
RPM:	110	100
Condition:	1.1.I	6.3.I

#### 2.3.4 Drilling Fluids:

The well was spudded and the 216 mm surface hole drilled to 130 m using a basic aquagel mud. This was converted to a KCl/polymer mud to drill the 156 mm hole to TD. Typical mud properties close to TD were as follows:

Density:	1.12 SG	Gels:	12/16
Viscosity:	49 sec.	Sand:	0.5%
Water Loss:	9.6 ml.	Solids:	5%
pН	10.5	K+:	10,500 mg/l.
Filter Cake	2 mm.	Chlorides:	9300 mg/l.
PV/YP	12/16	Calcium:	180 mg/l.

#### 2.4 FORMATION SAMPLING AND TESTING

#### 2.4.1 Cuttings:

Cuttings samples were collected at 10 m intervals from surface to 300m, 5m intervals from 300 m to 345 m, and 3 m from 348 m to TD. One washed and one unwashed sample was taken from each interval. The washed sample was divided into two splits stores in labelled plastic bags and one reference sample samplex tray. One cut was provided to the Victorian DNRE and the remainder retained by the operator. See Appendix 3 for Cuttings Descriptions.

2.4.2 Cores:

No cores were cut.

2.4.3 Tests:

No formation tests were conducted.

#### 2.5 LOGGING AND SURVEYS:

#### 2.5.1 Mud Logging:

A standard skid mounted Geoservices mud logging unit was employed. This provided continuous monitoring of mud gas including total gas and chromatographic breakdown, penetration rate, mud pump rates and mud pit levels. The Geoservices' masterlog is included as Enclosure

#### 2.5.2 Wireline Logging:

Wireline logging services were provided by Reeves using a standard truck mounted unit. Slim hole tools were employed. Two logging runs were undertaken as detailed below.

Run 1 Dual Resistivity - SP - GR

423 m to 124 m, GR to surface.

Run 2 Density - Caliper - GR

423 m to 124 m.

These logs are presented in a composite format as Enclosure 3

#### 2.5.3 Deviation Survey:

0.75 deg @ 426 m. TD.

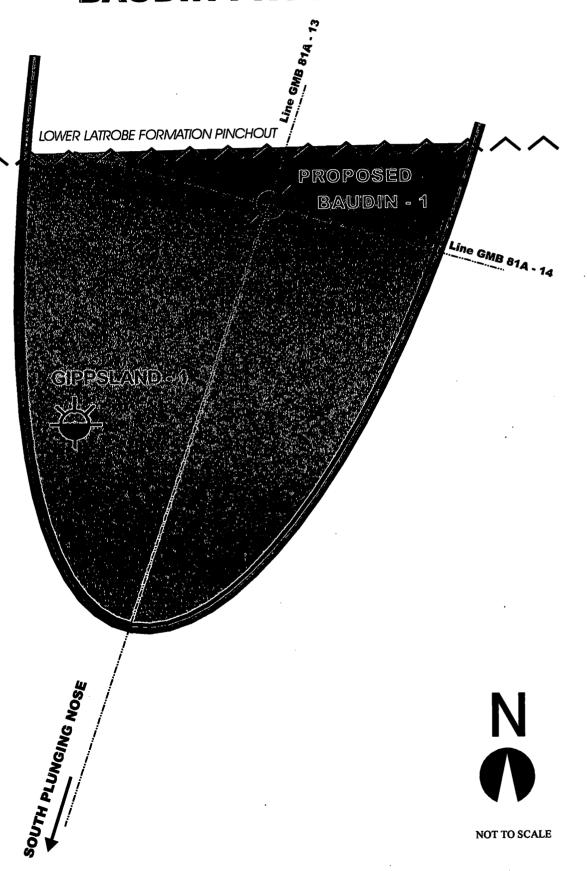
#### 2.5.4 Velocity Survey:

No velocity survey was recorded.

Cap in



# DIAGRAMMATIC PLAN BAUDIN PROSPECT



#### 3.0 RESULTS OF DRILLING

#### 3.1 STRATIGRAPHY

The following stratigraphic intervals have been delineated using wireline log interpretation and cuttings analysis. The target lower Latrobe units were not recognised and are probably absent, as basement was intersected 28 metres high to prognosis. The total Latrobe Group thickness was 33.5 metres against a prognosis of 50 metres and it follows that the lower Latrobe Units may pinch out to the south of Baudin-1.

The Lakes Entrance Formation top is transitional with the basal portion of the Gippsland Limestone and cannot be regarded as a reliable marker. The Tambo River Formation is also not clearly differentiated from the Jemmy's Point Formation in the sub-surface.

FORMATION	PROGNOSED (mKB)	ACTUAL (mKB)	THICKNESS	DEPTH (mSS)	DIFFERENCE
	(IIIVD)	(IIIKD)	(m)	(11133)	(m)
Haunted Hills Gravels	1.5	1.5	19.5	40	0
Jemmy's Point	26	51	24	-9.5	25 low
Formation					
Tambo River	<i>7</i> 5	<i>7</i> 5	23	-33.5	0
Formation					
Gippsland Limestone	105	98	206	-56.5	7 high
Lakes Entrance	300	304	64.5	-262.5	4 low
Formation					
Latrobe Formation	380	368.5	33.5	-327	11.5 high
Lower Latrobe units	400	not	recognised		
Basement	430	402	24+	-360.5	28 high
(Ordovician)					
TD	460	426		-384.5	

## 3.2 LITHOLOGICAL DESCRIPTION (Depths KB)

(Refer to Appendix 3 for detailed cuttings descriptions)

#### 3.2.1 SALE GROUP

#### Haunted Hills Gravels (surface to 51 m)

From surface to 25 m.

SANDSTONE: (Unconsolidated Sands) pale to moderate yellowish brown, unconsolidated, fine to coarse grained, sub angular to sub rounded poorly sorted quartz, common coarse mica, part with common ferruginous cement, part with common white to pale brown clay matrix.

From 25 m to 51 m.

SANDSTONE: (Unconsolidated Sands), generally as above, but grading down unit to CALCAREOUS SANDSTONE: light yellowish grey, unconsolidated, coarse to very coarse grained, 70% sub rounded moderate sphericity pale yellowish grey quartz, 25% very coarse marine shell fragments; 5% COAL fragments below 40 m, black, dull, with woody texture (possibly reworked early Tertiary or Cretaceous); trace glauconite, trace mica. Minor CALCAREOUS CLAYSTONE: light moderate grey, soft, sticky, with common calcareous fossil fragments, gasteropoda? lamellibranchia? trace foraminifera.

#### 3.2.2 SEASPRAY GROUP

#### Jemmy's Point Formation (51 m to 75 m)

CALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common dispersive calcareous argillaceous matrix, rare to common glauconite, trace mica.

#### Tambo River Formation (75 m to 98 m)

CALCAREOUS SANDSTONE: as above, with interbedded CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.

#### Gippsland Limestone (98 m to 304 m)

From 98 m to 195 m.

CALCARENITE: white to yellowish grey and light olive grey, friable to firm; fine to very coarse calcareous grains and fragments; minor calcareous cement, minor to common argillaceous micritic matrix; abundant corals and bryozoa, minor mollusca, trace foraminifera; trace to rare glauconite pellets.

From 195 m to 304 m.

CALCARENITE: as above, with minor to common interbedded CALCAREOUS CLAYSTONE: medium light grey to greenish grey, soft, amorphous, partly dispersive, grading to MARL in part, minor part brownish grey, slightly silty.

#### Lakes Entrance Formation (304 m to 368.5 m)

From 304.0 m to 330 m.

SILTY CLAYSTONE: brownish grey, soft, amorphous, common to abundant quartz silt, argillaceous slightly to moderately calcareous matrix, rare to minor mica, rare to minor carbonaceous flecks, rare moderate reddish brown lithic grains, trace pyrite, trace glauconite, grading to ARGILLACEOUS SILTSTONE in part; with minor interbedded CALCAREOUS CLAYSTONE: as for previous interval. (A very brief drilling break at 324 m produced minor glauconite pellets in a spot sample and probably corresponds to a thin glauconitic interbed (<0.5 m) with no associated gas or fluorescence shows).

From 330 m to 368.5 m.

CALCAREOUS SANDY SILTSTONE: brownish grey to olive grey, firm to moderately hard, very poorly sorted, comprises quartz silt, sub angular very fine to fine quartz and calcareous grains, trace coarse to very coarse sub rounded to rounded frosted yellowish brown quartz grains, strong micrite cement, common to abundant argillaceous matrix in part, minor glauconite, trace moderate reddish orange lithic grains, no visible porosity. Interbedded SILTY CLAYSTONE and minor CALCAREOUS CLAYSTONE as for previous interval.

#### 3.2.3 LATROBE GROUP

#### Undifferentiated Latrobe Group (368.5 m to 402.5 m)

From 368.5 m to 402.5 m.

SANDSTONE: very light grey, predominantly returned unconsolidated, medium to very coarse grained, moderately sorted, sub rounded to rounded, moderate sphericity, clear and frosty quartz, trace greyish yellow quartz, trace very coarse lithic (basement derived?) grains, trace nodular pyrite, inferred good porosity below 380 m, minor aggregates are very fine to medium grained, with weak silica cement and trace pyrite cement, rare argillaceous matrix, minor moderate brown (carbonaceous?) staining, no fluorescence, no cut, poor visible porosity. Very minor interbedded SILTSTONE: brownish grey to medium grey, firm to moderately hard, quartz silt grading to very fine sand in part, minor to common calcareous cement, minor to common argillaceous matrix, trace lithic grains, trace pyrite.

#### 3.2.4 BASEMENT (Ordovician?) (402.5 m to 426 m TD)

From 402.5 m to 410 m.

CLAYSTONE: (low grade metamorphic), medium silvery grey, moderately hard, sub fissile, slightly striated texture. (At 409.5 mKB a brief fast drilling break corresponds to low density log readings covering about 0.5 m. This suggests the presence of an open faulted or fractured contact with the underlying unit).

From 410 m to 426 m TD.

SANDSTONE: (indurated), light greenish grey, hard, very fine to coarse grained, poorly sorted, angular to sub rounded quartz, strong silica cement, trace dolomite cement, rare white feldspar, trace pyrite, tight, no shows, with minor CLAYSTONE: as for previous interval.

#### 3.3 HYDROCARBON INDICATIONS

#### 3.3.1 Mud Gas Readings.

A flame induction total gas recorder and gas chromatograph were operational from spud to TD. The first detectable background gas was recorded at 258 m in the Gippsland Limestone. Gas background generally varied from 0.08% to 0.2% with the higher values occurring from 320 to 340 metres in the lower part of the Gippsland Limestone. No gas peaks were recorded and there was no increase in background gas when the Latrobe Group was intersected. The gas composition was 100% methane. (Note: Ethane values to 100ppm are recorded on the mudlog from 268 m to 284 m. These are questionable as they may reflect recirculated acetylene from a prior large carbide circulation check. Circulation time through the open pits cannot be reliably measured).

#### 3.3.2 Sample Fluorescence

All samples were routinely examined for hydrocarbon fluorescence. No hydrocarbon fluorescence was detected. Selected portions of samples from the Lakes Entrance Formation and Latrobe Group were also tested for cut fluorescence and crush cut fluorescence in the absence of direct fluorescence, and none was detected.

#### 4.0 GEOLOGY

#### 4.1 Structural and Stratigraphic Setting

Baudin-1 was located to test a pinchout of lower Latrobe Group stratigraphic units. The potential trap was defined on the basis of re-interpretation of 1981 seismic lines and on offset well data including bores drilled in the 1930s and 1940s. The well was located on a structural nose, which plunges to the southward into the Gippsland Basin. In the sediments are underlain by Cretaceous age sediments of the Strzelecki Group. In PEP 135, the Latrobe Group sediments thin rapidly to the north onto regional basement usually of Ordovician age. At the Baudin-1 location 50 metres of Latrobe Group sediments were expected to be present. Seismic interpretation indicated that an intra-Latrobe reflector onlapped basement to the north of the well location and defined an area of potential structural stratigraphic entrapment. The existence of this trap depended on the presence of a competent claystone seal or seals within the Latrobe Group and associated with the mapped intra-Latrobe event.

#### 4.2 Porosity and Permeability

The density log suggests that porosity in the target Latrobe Group sands may reach 30% in the lower portion of the encountered sediments. Good permeability can be expected at this porosity level. In the absence of hydrocarbon indications no neutron log was run thus any porosity determinations are approximate. The sonic log was also not run, as it is known to produce unreliable results in these relatively unconsolidated sediments.

#### 4.3 Conclusions: Contributions to Geological Knowledge.

The results of the well indicate that any structural-stratigraphic prospects of this style will need to be pursued where the Latrobe Group is significantly thicker than it was at the Baudin location. There was also no evidence that the well penetrated a migration pathway from the deeper basin.

DETAILS OF DRILLING RIG

#### DETAILS OF DRILLING RIG

Type:

Bourne 2000 THD

Mast:

Rated to 70 klb

Rotary:

Top Drive, 0 – 70 & 0 – 126 rpm

Power:

Detroit Diesel 6V/92TA power source, zone 1, class 1 with emergency

shutdown system.

Pumps:

Ideco T-440, Dressed with liners for continuous drilling operations at 280

gpm @ 1000 psi.

Emsco AA-10, Dressed with liners for continuous drilling operations at

280 gpm@ 800 psi.

Water and mud transfer pump, 2", c/w suction and discharge hoses.

Diaphram sump pump, 2", c/w suction and discharge hoses.

Weight Indicator:

Direct string readout gauge at drillers console.

Breakout Wrench:

Bourne 1500 hydraulic.

Mud Mixing: Tubulars:

Mud mixing hopper and necessary hoses and lines.

900 m of 3.5" drill pipe.

9 joints of 6" OD drill collars with 4.5" FH connections 9 joints of 5" OD drill collars with 3.5" FH connections

Fishing Tools: Handling Tools:

As required to fish Contractor supplied tubulars. As required for all contractor supplied tubulars.

7" casing lift elevator

7" casing slips

General hand tools as required.

Stabiliser:

1 piece 8.5" OD stabiliser with 4.5" FH connections

#### Rig Equipment List:

Well Control:

Annular preventer, 7 – 1/16", 3000 psi.

Ram preventers, 7 - 1/16", 3000 psi., 3.5" pipe rams top, blind rams

lower.

Accumulator, 30 gallon bottles, control panel.

Kill and choke valves and lines. Choke manifold, 3000 psi

Lighting: Forklift:

2 units, freestanding light towers.

Forklift: 2 ton, all terrain forklift.

Survey:

Eastman 1 - 11/16", 0 - 8 deg. Go-devil.

Rig Personel:

Each 12 hour tour consisted of:

1 Toolpusher.1 Driller.2 Roustabouts.

SUMMARY OF DRILLING OPERATIONS

#### DAILY DRILLING REPORT

Well:

Baudin-1

Report No:

1 Date:

28-Sep-99

2400 hr Depth: Total Fuel: 130 3870 Last Depth: Fuel Usage:

Day Progress:Daily Cost:

130 \$101,678

0600 hr Operations:

Rigging to run 178mm casing

Remarks:

No LTA's

Cumm Cost: \$101,678

BIT INFORMATION				
Bit Number	RR1			
Size (mm)	216			
Make	Reed			
Туре	S1GJ			
IADC Code	1.1.4	]		
Serial Number	379813			
Nozzies (mm)	3x12	}		
Depth In (m)	0	Ì		
Depth Out (m)	130			
Total Metres	130			
Total Hours	4.5			
WOB (dN)	1.5			
RPM	110	Ì		
Condition	1.1.1	ł		
HSI		}		
JV (m/sec)	1	1		

<b>OPS BREAKDOWN (hrs)</b>				
Drilling	4.5			
Tripping				
Surveys				
Coring				
Testing				
Circ Sample				
Casing				
Cementing				
Wireline				
Circ & Cond	0.5			
Rig Service				
Reaming				
Rig repairs	0.5			
Drill cement				
Handle tools				
Total	5.5			

MUD PROPER	MUD PROPERTIES				
Density	1.08	SG			
Viscosity	43	sec			
Water Loss	n/c	ml			
pH	9.0	strip			
Filter Cake		mm			
PV/YP	12/15	cp/Pa			
Gels	5/9	10s/10m			
Sand	0.25	% .			
Solids	3.5	%			
K+		mg/l			
Chlorides		mg/l			
Calcium		mg/l			
PHPA		kg/m3			
		İ			
Day Cost	\$1,194				
Cumm Cost	\$1,194	<u> </u>			

BHA: Bit, bit sub with float, 2 x 6" DC's, stabiliser, 1 x 6" DC

OPERATIONS SUMMARY				
From To Time Operation				
1830 2200 3.5 Spudded well at 1830 hrs 2200 2230 0.5 Repaired rig. Hydraulic line. 2230 2330 2400 0.5 Circulated hole clean.				

CHEMICALS USED				
Туре	Unit Size	Qty		
Aquagel Caustic soda Soda ash Barite	25 kg 25 kg 25 kg	84 2 3		

SURVEYS		
Depth	Incl	Azm
130m	0.25	

PUMP DATA			
SPM	34	st/min	
Output	920	l/min	
Pressure	2400	kPa	
AV DP		m/min	
AV DC		m/min	

Supervisor:

#### DAILY DRILLING REPORT

Well:

Baudin-1

2 156

Varel L127

1.2.7

3x11

130

128063

Report No: Last Depth: Date:

2

29-Sep-99

2400 hr Depth:

130

130 Day Progress:

\$31,709

Total Fuel:

Fuel Usage:

Daily Cost: Cumm Cost:

\$133,672

0600 hr Operations:

BIT INFORMATION

Drilling 178mm shoe at 124m

Remarks:

Bit Number

Size (mm) Make

Serial Number

Nozzles (mm)

Depth Out (m) Total Metres **Total Hours** WOB (dN) RPM Condition HSI JV (m/sec)

Depth In (m)

Туре IADC Code No LTA's

	_	_	_	7
-	-	-	-	1
				1
				1
				1

<b>OPS BREAKDO</b>	WN (hrs)
Drilling	
Tripping	4.5
Surveys	
Coring	
Testing	
Circ Sample	
Casing	2.5
Cementing	1.0
Wireline	
Circ & Cond	1.5
Rig Service	
Moved rig	3.0
Rig repairs	
WOC	4.0
Installed BOP's	7.5
Total	24.0

MUD PROPERTIES				
Density	1.07	SG		
Viscosity	40	sec		
Water Loss		ml		
pН	10.0	strip		
Filter Cake		mm		
PV/YP		cp/Pa		
Gels		10s/10m		
Sand		%		
Solids		%		
K+		mg/l		
Chlorides		mg/l		
Calcium		mg/l		
PHPA		kg/m3		
		1		
Day Cost	\$620	1		
Cumm Cost	\$1.814	L		

Bit, bit sub with float, 2 x 4-3/4" DC's, stabiliser, 6 x 4-3/4" DC's

OPERATIONS SUMMARY				
From	То	Time	Operation	
0000	0230	2.5	Made wiper trip to 20m. Hole good.	
0230	0300	0.5	Circulated hole clean.	
0300	0500	2.0	POH. Laid out 6" DC's.	
0500	0700	2.0	Moved rig carrier off well.	
0700	0930	2.5	Ran 10 jts 7" 23# K55 LTC casing to	
0930	1030	1.0	Circulated casing.	
1030	1130	1.0	Mixed and pumped 16bbl 15.2 ppg cement. Displaced with mud. Bumped plug with 7000 Kpa. Float held.	
1130	1530	4.0	WOC. Removed conductor.	
1530	2130	6.0	Backed out landing joint. Installed casing head and BOP's.	
2130	2200	0.5	Function test BOP's.	
2200	2300	1.0	Moved rig carrier over well.	
2300	2400	1.0	Installed flow line.	

CHEMICALS USED		
Unit Size	Qty	
25 kg 25 kg 25 kg 25 kg	20	
	Unit Size 25 kg 25 kg 25 kg	

SURVEYS		
Depth	Incl	Azm
	1	
	1	
	1	
	}	

PUMP DAT	A				
SPM	35	st/min			
Output	770	1/min			
Pressure	1	kPa			
AV DP	}	m/min			
AV DC		m/min			

Supervisor:

#### DAILY DRILLING REPORT

Well:

Baudin-1 329m

Report No:

3 Date: 30-Sep-99

2400 hr Depth:

Last Depth:

130m Day Progress: 199m

Total Fuel:

Fuel Usage:

Daily Cost: Cumm Cost:

\$14,545 \$149,017

0600 hr Operations:

Drilling 156mm hole at 383m

No LTA's Remarks:

BIT INFORMAT	ON	
Bit Number	2	
Size (mm)	156	
Make	Varel	
Туре	L127	
IADC Code	1.2.7	
Serial Number	128063	
Nozzles (mm)	3x11	
Depth In (m)	130	
Depth Out (m)	1	
Total Metres	199	
Total Hours	12	ļ
WOB (dN)	2	Ì
RPM	100	
Condition	IN	
HSI	1	1
JV (m/sec)		[

OPS BREAKDO	WN (hrs)
Drilling	12.0
Tripping	4.0
Surveys	
Coring	
Testing	
Circ Sample	
Casing	
Cementing	
Wireline	
Circ & Cond	
Rig Service	
FIT	0.5
Rig repairs	5.0
Drilled cement	1.0
Installed BOP's	1.5
Total	24.0

MUD PROPERTIES				
Density	1.10	SG		
Viscosity	54	sec		
Water Loss	9.2	ml		
рН	9.5	strip		
Filter Cake	2	mm		
PV/YP	16/18	cp/Pa		
Gels	10/18	10s/10m		
Sand	0.3	%		
Solids	5.0	%		
K+	12000	mg/l		
Chlorides	11000	mg/l		
Calcium	190	mg/l		
PHPA	}	kg/m3		
Day Cost	\$800			
Cumm Cost	\$2,614			

BHA: Bit, bit sub with float, 2 x 4-3/4" DC's, stabiliser, 6 x 4-3/4" DC's

OPERATIONS SUMMARY				
From	То	Time	Operation	
0000	0200	2.0	Rigged up handling equipment. Picked	
			up 156mm BHA.	
0200	0330	1.5	Tested BOP's, choke manifold, surface	
			equipment to 7000 kPa.	
0330	0530	2.0	RIH. Tagged wiper plug at 123m.	
0530	0630	1.0	Drilled shoe and rat-hole to 130m.	
0630	1130	5.0	Rig repair to pump #1.	
1130	1200	0.5	Drilled 156mm hole f/130m to 140m.	
1200	1230	0.5	Circulated hole clean. Performed FIT to	
}		}	11.0 ppge.	
1230	2400	11.5	Drilled 156mm hole f/140m to 329m.	
		1		
			Į.	
		}		
}		l		
1	1			

CHEMICALS USED			
Туре	Unit Size	Qty	
KCI	25 kg	20	
Caustic soda	25 kg		
Soda ash	25 kg		
Barite			
PAC	25 kg		
QBII	25 kg	6	
CMC LV	25 kg	4	

SURVEYS		
Depth	Incl	Azm
		Ţ
	1	}

PUMP DATA		
SPM	35	st/min
Output	770	1/min
Pressure	5600	kPa
AV DP		m/min
AV DC		m/min

Supervisor:

#### DAILY DRILLING REPORT

Well:

Baudin-1 423m

Report No: Last Depth:

4 329m Date: Day Progress: 1-Oct-99 94m

2400 hr Depth:

Daily Cost:

\$16,918

Total Fuel:

Fuel Usage:

Cumm Cost:

\$165,935

0600 hr Operations:

POH to run E-logs

Remarks:

Ν

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lo	L.	TΑ	's			

BIT INFORMATION				
Bit Number	2			
Size (mm)	156			
Make	Varel			
Туре	L127			
IADC Code	1.2.7			
Serial Number	128063			
Nozzles (mm)	3x11			
Depth In (m)	130			
Depth Out (m)				
Total Metres	293			
Total Hours	29.5			
WOB (dN)	2			
RPM	100			
Condition				
HSI				
JV (m/sec)				

OPS BREAKDOWN (hrs)			
Drilling	17.5		
Tripping	4.5		
Surveys			
Coring			
Testing			
Circ Sample			
Casing			
Cementing			
Wireline			
Circ & Cond			
Rig Service			
FIT			
Rig repairs	1.5		
Unplugged pump	0.5		
Installed BOP's			
Total	24.0		

MUD PROPERTIES				
Density	1.12	SG		
Viscosity	49	sec		
Water Loss	9.6	ml		
рH	10.5	strip		
Filter Cake	2	mm		
PV/YP	12/16	cp/Pa		
Gels	12/16	10s/10m		
Sand	0.5	%		
Solids	5.0	%		
K+	10500	mg/l		
Chlorides	9300	mg/l		
Calcium	180	mg/l		
PHPA		kg/m3		
Day Cost	\$128			
Cumm Cost	\$2,742			

Bit, bit sub with float, 2 x 4-3/4" DC's, stabiliser, 6 x 4-3/4" DC's BHA:

OPERATIONS SUMMARY					
From	To	Time	Operation		
0000	0300	3.0	Drilled 156mm hole f/329m to 358m.		
0300	0330	0.5	Cleaned pump suction.		
0330	1100	6.5	Drilled 156mm hole f/358m to 415m.		
1100	1330	2.5	POH to shoe. Circulated and back-reamed. Hole condition good.		
1330	1500	1.5	Rig repair to swivel packing.		
1500	1700	2.0	RIH		
1700	2400	7.0	Drilled 156mm hole f/415m to 423m		

Туре	Unit Size	Qty
	1	
KCI	25 kg	
Caustic soda	25 kg	
Soda ash	25 kg	
Barite		ł
PAC	25 kg	
QBII	25 kg	4
CMC LV	25 kg	1

SURVEYS		
Depth	Incl	Azm
	1	
	1	

PUMP DATA		
SPM	35	st/min
Output	770	1/min
Pressure		kPa
AV DP		m/min
AV DC		m/min

Supervisor:

#### DAILY DRILLING REPORT

Well:

Baudin-1 426m

Report No:

5 Date: 423m

2-Oct-99

2400 hr Depth: Total Fuel:

Last Depth: Fuel Usage: Day Progress:

\$35,791

3m

0600 hr Operations: Remarks:

JV (m/sec)

Set top plug No LTA's

Daily Cost: Cumm Cost:

\$203,726

BIT INFORMATION					
Bit Number	2				
Size (mm)	156				
Make	Varel				
Туре	L127				
IADC Code	1.2.7	ĺ			
Serial Number	128063				
Nozzles (mm)	3x11				
Depth In (m)	130				
Depth Out (m)	426	1			
Total Metres	296				
Total Hours	33.5	<b>\</b>			
WOB (dN)	2	ļ			
RPM	100				
Condition	6.3.1				
HSI					

OPS BREAKDO	WN (hrs)
Drilling	4.0
Tripping	6.5
Surveys	
Coring	
Testing	
Circ Sample	
Casing	
Cementing	4.5
Wireline	6.5
Circ & Cond	0.5
Rig Service	
woc	2.0
Rig repairs	
Unplugged pump	ł
Installed BOP's	
Total	24.0

MUD PROPERTIES			
Density	1.12	SG	
Viscosity	49	sec	
Water Loss	9.6	ml	
pН	10.5	strip	
Filter Cake	2	mm	
PV/YP	12/16	cp/Pa	
Gels	12/16	10s/10m	
Sand	0.5	%	
Solids	5.0	%	
K+	10500	mg/l	
Chlorides	9300	mg/l	
Calcium	180	mg/l	
PHPA		kg/m3	
	l	İ	
Day Cost	\$152	Ī	
Cumm Cost	\$2,894		

Bit, bit sub with float, 2 x 4-3/4" DC's, stabiliser, 6 x 4-3/4" DC's

	OPERATIONS SUMMARY			
From	То	Time	Operation	
0000	0400	4.0	Drilled 156mm hole f/423m to 426m	
0400	0430	0.5	Circulated hole clean	
0430	0830	4.0	POH .	
0830	1500	6.5 ,	Rigged up for wireline	
1500	1700	2.5	Ran logs. Rigged down wireline.	
1500	1730	2.5	1	
1730	1830	1.0	Mixed and pumped plug #1 over interval 410m to 330m.	
1830	1930	1.0	POH to 315m. Circulated DP clean	
1930	2030	1.0	POH to 160m. Broke circulation.	
2030	2130	1.0	Mixed and pumped plug #2 over interval	
			160m to 75m	
2130	2200	0.5	РОН	
2200	2400	2.0	woc.	
	ļ	ļ		
	}	}		
		Ì		
	ļ			
1	1	1	1	

CHEMICALS USED			
Туре	Unit Size	Qty	
		]	
KCI	25 kg	1	
Caustic soda	25 kg		
Soda ash	25 kg		
Barite	25 kg	20	
PAC	25 kg		
QBII	25 kg		
CMC LV	25 kg		

SURVEYS		
Depth	Incl	Azm
426	1.0	
		l
	1	1

PUMP DATA		
SPM	35	st/min
Output	770	l/min
Pressure	5800	kPa
AV DP		m/min
AV DC		m/min

Supervisor:

#### DAILY DRILLING REPORT

Well:

Baudin-1

Report No:

6 Date: 3-Oct-99

2400 hr Depth:

426m

Last Depth:

426m

Day Progress:

\$24,669

Total Fuel:

Fuel Usage:

Daily Cost: Cumm Cost:

\$228,395\*\*\*

0600 hr Operations: Remarks:

Released rig No LTA's

BIT INFORMATION	ON	
Bit Number		
Size (mm)		
Make		
Туре		
IADC Code		
Serial Number		
Nozzleś (mm)		
Depth In (m)		
Depth Out (m)		
Total Metres		
Total Hours		
WOB (dN)		
RPM		
Condition		
HSI		
IV (m/sec)	ì	1

OPS BREAKDO	WN (hrs)
Drilling	
Tripping	
Surveys	
Coring	
Testing	
Circ Sample	
Casing	
Cementing	
Wireline	
Circ & Cond	
Rig Service	
woc	
Rig repairs	
Unplugged pump	
Installed BOP's	
Total	0.0

MUD PROPER	TIES	
Density		SG
Viscosity		sec
Water Loss		ml
pН		strip
Filter Cake		mm
PV/YP		cp/Pa
Gels		10s/10m
Sand		%
Solids		%
K+		mg/l
Chlorides		mg/l
Calcium		mg/l
PHPA		kg/m3
Day Cost		
Cumm Cost	\$2,894	L

BHA:

OPERATIONS SUMMARY				
From	То	Time	Operation	
0000	0200	2.0	WOC	
0200	0230	0.5	RIH. Tagged cement plug #2 at 71m.	
			Pressure tested plug to 5600 kPa	
0230	0500	2.5	Laid out BOP's	
0500	0600	1.0	Recovered casing head	
0600	0630	0.5	Mix and pumped cement plug #3 over	
		1	interval surface to 10m.	
0630	0700	0.5	Welded cap on 178mm casing stub.	
			Rig released at 0700hrs 3 Oct 1999	
		1		
		ł		
			}	
1		l		

CHEMICALS USED		
Туре	Unit Size	Qty
KCI	25 kg	
Caustic soda	25 kg	
Soda ash	25 kg	
Barite	25 kg	
PAC	25 kg	
QBII	25 kg	
CMC LV	25 kg	

SURVEYS		
Depth	Incl	Azm

PUMP DATA			
SPM	st/min		
Output	l/min		
Pressure	kPa		
AV DP	m/min		
AV DC	m/min		

Supervisor:

DETAILED CUTTINGS DESCRIPTIONS

#### **DETAILED CUTTINGS DESCRIPTIONS**

CUTTINGS DESCRIPTION		WE	LL: BAUDIN-1	PERMIT:	PEP 135
20 SANDSTONE: pale to moderate yellowish brown, firm to unconsolidated, fine to coarse grained, sub angular to sub rounded poorly sorted quartz, common coarse mica, part with common ferruginous cement, part with common white to pale brown clay matrix.  30 80 SANDSTONE: as above, predominantly fine grained very argillaceous.  20 CALCAREOUS CLAYSTONE: light moderate grey, soft, sticky, with common calcareous fossil fragments, gasteropods? lamellibranchs? trace foraminifera.  40 100 CALCAREOUS SANDSTONE: light yellowish grey, unconsolidated, coarse to very coarse grained, 70% sub rounded moderate sphericity pale yellowish grey quartz, 25% very coarse marine shell fragments, 5% black coal fragments, trace glauconite, trace mica. CALCAREOUS CLAYSTONE: a.  50 90 CALCAREOUS SANDSTONE: generally as above, 50% calcareous fossil fragments. ARGILLACEOUS CALCAREOUS SANDSTONE: light moderate grey, firm, very fine grained quartz, with abundant argillaceous calcareous matrix.  60 90 CALCAREOUS SANDSTONE: light moderate grey; unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  10 ARGILLACEOUS CALCAREOUS SANDSTONE: as above.  (Possible clay dispersing to mud, ?soft calcareous claystone)  70 70 CALCAREOUS SANDSTONE: as above.  CALCARENTE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS sands of the firm firm firm from calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa.	DEPTH	%	CUTTINGS DESCRIPTION		
grained, sub angular to sub rounded poorly sorted quartz, common coarse mica, part with common ferruginous cement, part with common white to pale brown clay matrix.  80  80  81  82  83NDSTONE: as above, predominantly fine grained very argillaceous. CALCAREOUS CLAYSTONE: light moderate grey, soft, sticky, with common calcareous fossil fragments, gasteropods? lamellibranchs? trace foraminifera.  40  100  CALCAREOUS SANDSTONE: light yellowish grey, unconsolidated, coarse to very coarse grained, 70% sub rounded moderate sphericity pale yellowish grey quartz, 25% very coarse marine shell fragments, 5% black coal fragments, trace glauconite, trace mica. CALCAREOUS CLAYSTONE: aa.  50  90  CALCAREOUS SANDSTONE: generally as above, 50% calcareous fossil fragments. ARGILLACEOUS CALCAREOUS SANDSTONE: light moderate grey, firm, very fine grained quartz, with abundant argillaceous calcareous matrix.  60  90  CALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  ARGILLACEOUS CALCAREOUS SANDSTONE: as above. (Possible clay dispersing to mud, ?soft calcareous daystone)  70  70  CALCAREOUS SANDSTONE: as above.  CALCARENTE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80  30  CALCARENTE: as above, trace foraminifera.  90  20  CALCAREOUS SANDSTONE: as above.  CALCARENTE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110  100  CALCARENTE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.	(m)				
20 CALCAREOUS CLAYSTONE: light moderate grey, soft, sticky, with common calcareous fossil fragments, gasteropods? lamellibranchs? trace foraminifera.  40 100 CALCAREOUS SANDSTONE: light yellowish grey, unconsolidated, coarse to very coarse grained, 70% sub rounded moderate sphericity pale yellowish grey quartz, 25% very coarse marine shell fragments, 5% black coal fragments, trace glauconite, trace mica. CALCAREOUS CALCAREOUS SANDSTONE: aa.  50 90 CALCAREOUS SANDSTONE: generally as above, 50% calcareous fossil fragments. ARGILLACEOUS CALCAREOUS SANDSTONE: light moderate grey, firm, very fine grained quartz, with abundant argillaceous calcareous matrix.  60 90 CALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  10 ARGILLACEOUS CALCAREOUS SANDSTONE: as above. (Possible clay dispersing to mud, ?soft calcareous claystone)  70 70 CALCAREOUS SANDSTONE: as above.  CALCARENTTE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  100 CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  100 CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above, trace foraminifera.	20	100	grained, sub angular to sub rounded p	poorly sorted quartz, common coars	e mica, part with
grained, 70% sub rounded moderate sphericity pale yellowish grey quartz, 25% very coarse marine shell fragments, 5% black coal fragments, trace glauconite, trace mica. CALCAREOUS CLAYSTONE: aa.  50 90 CALCAREOUS SANDSTONE: generally as above, 50% calcareous fossil fragments. ARGILLACEOUS CALCAREOUS SANDSTONE: light moderate grey, firm, very fine grained quartz, with abundant argillaceous calcareous matrix.  60 90 CALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  10 ARGILLACEOUS CALCAREOUS SANDSTONE: as above. (Possible clay dispersing to mud, ?soft calcareous claystone)  70 70 CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  CALCAREOUS SANDSTONE: as above.  70 CALCAREOUS SANDSTONE: as above.  CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above.  CALCARENITE: as above, trace foraminifera.  90 20 CALCAREOUS SANDSTONE: as above.  CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.	30		CALCAREOUS CLAYSTONE: ligh	DUS CLAYSTONE: light moderate grey, soft, sticky, with common calcareous	
ARGILLACEOUS CALCAREOUS SANDSTONE: light moderate grey, firm, very fine grained quartz, with abundant argillaceous calcareous matrix.  OCALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  ARGILLACEOUS CALCAREOUS SANDSTONE: as above.  (Possible clay dispersing to mud, ?soft calcareous claystone)  CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  CALCARENITE: as above, trace foraminifera.  CALCARENITE: as above, trace foraminifera.  CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  CALCARENITE: as above.  CALCARENITE: as above.	40	100	grained, 70% sub rounded moderate sphericity pale yellowish grey quartz, 25% very coarse marine shell fragments, 5% black coal fragments, trace glauconite, trace mica.		
grained quartz, with abundant argillaceous calcareous matrix.  60 90 CALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coarse grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  10 ARGILLACEOUS CALCAREOUS SANDSTONE: as above.  (Possible clay dispersing to mud, ?soft calcareous claystone)  70 70 CALCAREOUS SANDSTONE: as above.  30 CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above.  70 CALCAREOUS SANDSTONE: as above.  CALCARENITE: as above, trace foraminifera.  90 20 CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.	50	90	CALCAREOUS SANDSTONE: gei	nerally as above, 50% calcareous fos	sil fragments.
grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coarse marine shell fragments, common glauconite, trace mica.  ARGILLACEOUS CALCAREOUS SANDSTONE: as above. (Possible clay dispersing to mud, ?soft calcareous claystone)  70 70 CALCAREOUS SANDSTONE: as above. 30 CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above. 70 CALCARENITE: as above, trace foraminifera.  90 20 CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.		10	grained quartz, with abundant argillac	eous calcareous matrix.	·
10 ARGILLACEOUS CALCAREOUS SANDSTONE: as above. (Possible clay dispersing to mud, ≥soft calcareous claystone)  70 70 CALCAREOUS SANDSTONE: as above. 30 CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above. 70 CALCARENITE: as above, trace foraminifera.  90 20 CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.	60	90 CALCAREOUS SANDSTONE: light moderate grey, unconsolidated, coarse to very coar grained, 50% sub rounded moderate sphericity pale yellowish grey quartz, 50% very coars		oarse to very coarse , 50% very coarse -	
70 CALCAREOUS SANDSTONE: as above. CALCARENITE: light grey, firm, fine grained calcareous grains and fragments, minor quartz grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above. CALCARENITE: as above, trace foraminifera.  90 20 CALCAREOUS SANDSTONE: as above. CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.		10	ARGILLACEOUS CALCAREOUS	SANDSTONE: as above.	
grains, rare glauconite, minor argillaceous matrix, minor calcareous cement.  80 30 CALCAREOUS SANDSTONE: as above. 70 CALCARENITE: as above, trace foraminifera.  90 20 CALCAREOUS SANDSTONE: as above. CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.	<i>7</i> 0	70	CALCAREOUS SANDSTONE: as	above.	
70 CALCARENITE: as above, trace foraminifera.  90 20 CALCAREOUS SANDSTONE: as above. CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.		30			
90 20 CALCARENITE: as above, trace foraminifera.  100 100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.	80	30			
CALCARENITE: as above, trace foraminifera.  100		<i>7</i> 0	CALCARENITE: as above, trace for	raminifera.	
100 CALCARENITE: light grey to light olive grey, firm, fine to coarse calcareous grains and fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.	90	20	CALCAREOUS SANDSTONE: as	above.	
fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals, bryozoa.  110 100 CALCARENITE: white to yellowish grey, firm, fine to very coarse calcareous grains and fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.		80	CALCARENITE: as above, trace for	raminifera.	
fragments, minor calcareous cement, trace glauconite, abundant corals, bryozoa, trace forams.  120 100 CALCARENITE: as above.  130 100 CALCARENITE: as above.	100	100	fragments, rare glauconite, rare argillaceous matrix, minor calcareous cement, abundant corals,		
130 100 CALCARENITE: as above.	110	100			
	120	100	CALCARENITE: as above.		,
Reached TD 8.5" hole section at 23:30 hours, 28/9/99	130	100	CALCARENITE: as above.		
			Reached TD 8.5" hole section at 23:3	0 hours, 28/9/99	

	WE	LL: BAUDIN-1	PERMIT:	PEP 135 VIC
DEDTH	T	OF HEALTH TOO DEPOSITION I		
DEPTH	%		TINGS DESCRIPTIO	
(m)		156 mm Hole Section		Geologist: J. Gausden
140	100	CALCARENITE: yellowish grey to light olive grey, firm, fine to very coarse poorly sorted bioclastic fragments, minor micritic matx, rare glauconite pellets, coarser fragments include corals, bryozoa, echinoid spines, trace foraminifera.		
150	100	CALCARENITE: as above.		
160	100	CALCARENITE: generally as	above, minor argillaceous micrit	ic matrix.
170	100	CALCARENITE: yellowish gro bioclastic fragments, minor to c coarser fragments include corals	ommon argillaceous micritic ma	tx, trace glauconite pellets,
180	100	CALCARENITE: as above.		
190	100	CALCARENITE: as above.		
200	100	CALCARENITE: as above.		
	tr	MARL: greenish grey, soft, amo (Probably dispersive, estimate 1)		OUS CLAYSTONE.
210	90	CALCARENITE: as above.		
	10	MARL: as above.		
220	100	CALCARENITE: as above.	***************************************	
	tr	MARL: as above.		
230	95	CALCARENITE: as above.		
	5	MARL: as above.		
240	90	CALCARENITE: yellowish grobioclastic fragments, minor to c coarser fragments include corals MARL: greenish grey, soft, and (Probably dispersive, estimate 2)	ommon argillaceous micritic ma s, bryozoa, echinoid spines, trace orphous, grading to CALCARE	tx, trace glauconite pellets, e foraminifera.
250	70	CALCARENITE: as above.		
	30	CALCAREOUS CLAYSTONE	E: medium light grev to greenish	grey, soft, amorphous, partly
		dispersive, grading to MARL in	part, minor part brownish grey,	slightly slty.
260	70	CALCARENITE: yellowish grabioclastic fragments and carbon argillaceous micritic matx, trace echinoid spines, trace foraminiforms.	ey to light olive grey, firm, fine t ate grains, minor recrystallisation glauconite, coarser fragments in era.	o minor coarse poorly sorted n, minor to common
	30	CALCAREOUS CLAYSTONE	as above.	
270	70	CALCARENITE: as above.	S 1	
200	30	CALCAREOUS CLAYSTONE	2: as above.	
280	70	CALCARENITE: as above.	S. on all anno	
200	30	CALCAREOUS CLAYSTONE	as above.	
290	60 40	CALCARENITE: as above. CALCAREOUS CLAYSTONE	E: generally as above, minor par	t with rare calcareous
200	(2)	bioclastic fragments.		
300	60	CALCARENITE: as above.	S	
	40	CALCAREOUS CLAYSTONE	as above.	

	WE	LL: BAUDIN-1	PERMIT:	PEP 135 VIC
DEPTH	%	CUTTINGS	DESCRIPTION	V
(m)		156 mm Hole Section	(	Geologist: J. Gausden
305	50	CALCARENITE: as above, trace Turritella.		
	30	CALCAREOUS CLAYSTONE: as above.		
	20	SILTY CLAYSTONE: brownish grey, soft, amorphous, common to abundant quartz silt,		
		argillaceous slightly to moderately calcareous	matrix, rare to mino	or mica.
310	50	CALCARENITE: as above.		
	20	CALCAREOUS CLAYSTONE: as above.		
	30	SILTY CLAYSTONE: as above.		
315	40	CALCARENITE: as above.		
	20	CALCAREOUS CLAYSTONE: as above.		
	40	SILTY CLAYSTONE: brownish grey, soft,		
		argillaceous slightly to moderately calcareous		
		carbonaceous flecks, rare moderate reddish l	prown lithic grains, to	ace pyrite, grading to
		ARGILLACEOUS SILTSTONE in part.		
320	40	CALCARENITE: as above.		
	10	CALCAREOUS CLAYSTONE: as above.		
225	50	SILTY CLAYSTONE: as above.	( 1.0	. 1 1: 1: 1
325	40	CALCARENITE: as above, minor coarse to	o very coarse tossil tr	agments, including bivalves
	10	and gasterapods.  CALCAREOUS CLAYSTONE: as above.		
	10 50	SILTY CLAYSTONE: as above.		
1	tr	Glauconite: greenish black, very fine to med	um arained pellets	(nossibly from thin
	u	greensand interbed)	ium grameu, peneus,	(possibly from thin
330	40	CALCARENITE: as above.		
350	20	CALCAREOUS CLAYSTONE: as above.		
	40	SILTY CLAYSTONE: as above.		
	tr	Glauconite: as above.		
335	60	CALCARENITE: as above.		
	20	CALCAREOUS CLAYSTONE: as above.		
	20	SILTY CLAYSTONE: as above.		
	tr	SANDSTONE: single grains only, coarse to	very coarse, sub rou	inded to rounded, moderate
		sphericity, frosted, yellowish brown quartz, r		
340	40	CALCARENITE: as above.		<u> </u>
	20	CALCAREOUS CLAYSTONE: as above.		
	10	SILTY CLAYSTONE: as above.		
	30	CALCAREOUS SANDY SILTSTONE: br		
		sorted, comprises quartz silt, sub angular ver		
		with trace scattered coarse to very coarse sub		
		quartz grains, strong micrite cement, commo	n argillaceous matrix	t in part, tight, no shows.
345	40	CALCARENITE: as above.		
	10	CALCAREOUS CLAYSTONE: as above.		
	10	SILTY CLAYSTONE: as above.	1	
	40	CALCAREOUS SANDY SILTSTONE: as		(
	tr	Glauconite: greenish black, very fine to medi	um grained, pellets,	possibly from thin
348	40	greensand interbed). No show.  CALCARENITE: as above.		
348	40 10	CALCARENTI E: as above.  CALCAREOUS CLAYSTONE: as above.		
	10	SILTY CLAYSTONE: as above.		
	40	CALCAREOUS SANDY SILTSTONE: bro	winish owar to ali	way from to moderately
	10	hard, very poorly sorted, comprises quartz si		
		quartz grains, minor glauconite, trace moder		
		to very coarse sub rounded to rounded frost		
		cement, common argillaceous matrix in part,		10m 22 grants, serong micrite
		1 comerci, committed argulaceous marix in part,	ugui, no mows.	

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	WE	LL: BAUDIN-1	PERMIT:	PEP 135 VIC
DEPTH	%	CUT	TINGS DESCRIPTIO	N
(m)		156 mm Hole Section		Geologist: J. Gausden
351	40	CALCARENITE: as above proba	oly washing from uphole.	
	60 CALCAREOUS SANDY SILTSTONE: generally as above, minor to common glauconite			nor to common glauconite,
		trace to rare coarse to very coarse	quartz.	
354	40	CALCARENITE: as above probal CALCAREOUS SANDY SILTST		
357	60 40	CALCAREOUS SANDI SILISI CALCARENITE: as above proba		
33/	60	CALCARENTE: as above proba-		
360	40	CALCARENITE: as above proba		
	60	CALCAREOUS SANDY SILTST		
363	50	CALCARENITE: as above proba	oly washing from uphole.	
	50	CALCAREOUS SANDY SILTST	ONE: brownish grey to olive	grey, firm to moderately
		hard, very poorly sorted, comprise		
		quartz grains, minor glauconite, tra	ice moderate orange reddish l	ithics, rare scattered coarse to
		very coarse sub rounded to rounded		iartz grains, strong micrite
366	50	cement, common argillaceous mat CALCARENITE: as above proba		
300	50	CALCAREOUS SANDY SILTST	ONE: generally as above, 5%	loose coarse to very coarse
		sub rounded yellowish brown quar		
369	40	CALCARENITE: as above probably washing from uphole.		
	50	CALCAREOUS SANDY SILTSTONE: as above.		
	10	SANDSTONE: loose quartz grains as above.		
372	50	SANDSTONE: yellowish grey, loo to rounded, moderate sphericity, c	ose, medium to very coarse m lear, frosty, trace greyish yello	oderately sorted, sub rounded w quartz, inferred very good
	50	porosity, no shows.	ONE	
375	50 70	CALCAREOUS SANDY SILTSTONE: as above.  SANDSTONE: as above.		
3/3	30		ONE: as above	
378	70	CALCAREOUS SANDY SILTSTONE: as above.  SANDSTONE: as above.		
3, 0	30	CALCAREOUS SANDY SILTST	ONE: as above.	
381	80	SANDSTONE: very light grey, loo	ose, medium to very coarse gr	ained, moderately sorted, sub
		rounded to rounded, moderate spl		z, trace greyish yellow quartz,
		inferred very good porosity, no she	ows.	
204	20	CALCAREOUS SANDY SILTST		
384	80 20	SANDSTONE: as above, trace no SILTSTONE: brownish grey to m	dular pyrite.	1-1
	20	very fine sand in part, minor to co		
		matrix, trace lithic grains, trace pyr		nor to common arginaceous
387	90	SANDSTONE: as above, trace no		
	10	SILTSTONE: as above.		
390	90	SANDSTONE: as above.		
	10	SILTSTONE: as above.		
393	80	SANDSTONE: as above, trace ve	ry coarse rounded lithic grains	s (basement derived?)
	20	SILTSTONE: as above.		

	WELL	.: BAUDIN-1	PERMIT:	PEP 135 VIC
DEPT	%	CUTTINGS DESCRIPTION		
Н		156 mm Hole Section		Geologist: J. Gausden
(m)				
396	90	SANDSTONE: very light grey, predominantly loose, medium to very coarse grained, moderately sorted, sub rounded to rounded, moderate sphericity, clear and frosty quartz, trace greyish yellow quartz, trace nodular pyrite, inferred very good porosity, no shows; (in part very fine to medium grained aggregates, weak silica cement, trace pyrite cement, rare argillaceous matrix, minor moderate brown stain (brown coal?), no fluorescence, no cut, poor visual porosity).  SILTSTONE: as above.		
399	90	SANDSTONE: as above.		
377	10	SILTSTONE: as above.		
402	100	SANDSTONE: as above. (rare co	parse lithic grains )	
	tr	PHYLLITE? medium silvery grey		
405	95	SANDSTONE: as above.	·	
	5	PHYLLITE: as above.		
408	95	SANDSTONE: as above.		
	5	PHYLLITE: as above.		
411	95	SANDSTONE: as above.		
	5	PHYLLITE: as above.		
414	100	SANDSTONE: as above, trace h		
	122	NB: low ROP, samples below 40-	m interpreted as predomin	antly uphole cavings.
415	100	SANDSTONE: as above. Interpr		
447		POOH to shoe, work on stand pi	pe, pumps.	( 11:
417	tr	SANDSTONE: (Quartzite?): wel	ded angular quartz with min	or aggregates of crystalline
	100	pyrite. SANDSTONE: Cavings, as abov	Δ.	
420	40	SANDSTONE: (Basement): light	c.	ne to corree grained poorly
120	10	sorted, angular to sub rounded qu		
		feldspar, trace pyrite, tight, no sho		ace doi cerrent, rare write
	60	Cavings: Sandstone, minor Calcar	enite, as above.	
423	50	SANDSTONE: (Basement): as al	oove.	
•	50	Cavings: as above.	= = : = :	
426	40	SANDSTONE: (Basement): as al	oove.	
	20	CLAYSTONE: (low grade schist)		n, hard, sub fissile, faint cleavage
		trace quartz veining.	0 0 7. 7	
	40	Cavings: Sandstone, minor Calcar	enite, as above.	

This is an enclosure indicator page.

The enclosure PE908937 is enclosed within the container PE908936 at this location in this document.

```
The enclosure PE908937 has the following characteristics:
     ITEM_BARCODE = PE908937
CONTAINER_BARCODE = PE908936
            NAME = Baudin-1 Composite Well Log
            BASIN = GIPPSLAND
         ONSHORE? = Y
        DATA_TYPE = WELL
    DATA_SUB_TYPE = COMPOSITE_LOG
      DESCRIPTION = Baudin-1 Composite Well Log Enclosure 1
                                                   REMARKS =
     DATE_WRITTEN =
   DATE_PROCESSED =
    DATE_RECEIVED =
    RECEIVED_FROM = Lakes Oil NL
        WELL_NAME = Baudin-1
       CONTRACTOR =
           AUTHOR =
       ORIGINATOR = Lakes Oil NL
        TOP_DEPTH =
     BOTTOM_DEPTH =
   ROW_CREATED_BY = DN07_SW
(Inserted by DNRE - Vic Govt Mines Dept)
```

This is an enclosure indicator page. The enclosure PE908938 is enclosed within the container PE908936 at this location in this document.

The enclosure PE908938 has the following characteristics: ITEM\_BARCODE = PE908938 CONTAINER\_BARCODE = PE908936 NAME = Baudin-1 Mud Log BASIN = GIPPSLAND ONSHORE? = YDATA\_TYPE = WELL DATA\_SUB\_TYPE = MUD\_LOG DESCRIPTION = Baudin-1 Formation Evaluation Mud Log Scale 1:200 Enclosure 2 REMARKS = DATE\_WRITTEN = DATE\_PROCESSED = DATE\_RECEIVED = RECEIVED\_FROM = Lakes Oil NL WELL\_NAME = Baudin-1 CONTRACTOR = Lakes Oil NL AUTHOR = ORIGINATOR = Lakes Oil NL  $TOP_DEPTH = 0$  $BOTTOM_DEPTH = 450$ ROW\_CREATED\_BY = DN07\_SW

(Inserted by DNRE - Vic Govt Mines Dept)

This is an enclosure indicator page. The enclosure PE607422 is enclosed within the container PE908936 at this location in this document.

The enclosure PE607422 has the following characteristics: ITEM\_BARCODE = PE607422 CONTAINER\_BARCODE = PE908936 NAME = Baudin-1 Field Log Print BASIN = GIPPSLAND ONSHORE? = YDATA\_TYPE = WELL DATA\_SUB\_TYPE = WELL\_LOG DESCRIPTION = Baudin-1 Dual Resistivity SP Density Gamma Caliper Field Log Print Scale 1:200 Enclosure 3(a) REMARKS = DATE WRITTEN = DATE\_PROCESSED = 02-OCT-1999 DATE\_RECEIVED = RECEIVED\_FROM = Lakes Oil NL WELL\_NAME = Baudin-1 CONTRACTOR = AUTHOR = ORIGINATOR = Lakes Oil NL  $TOP\_DEPTH = 0$  $BOTTOM_DEPTH = 423.4$ ROW\_CREATED\_BY = DN07\_SW

(Inserted by DNRE - Vic Govt Mines Dept)

This is an enclosure indicator page. The enclosure PE607423 is enclosed within the container PE908936 at this location in this document.

```
The enclosure PE607423 has the following characteristics:
     ITEM_BARCODE = PE607423
CONTAINER_BARCODE = PE908936
            NAME = Baudin-1 Field Log Print
           BASIN = GIPPSLAND
        ONSHORE? = Y
        DATA_TYPE = WELL
   DATA_SUB_TYPE = WELL_LOG
     DESCRIPTION = Baudin-1 Dual Laterlog SP Density Gamma
                    Caliper Field Log Print Scale 1:200
                    Enclosure 3(b)
         REMARKS =
    DATE_WRITTEN =
  DATE_PROCESSED = 09-OCT-1999
   DATE_RECEIVED =
    RECEIVED_FROM = Lakes Oil NL
       WELL_NAME = Baudin-1
       CONTRACTOR =
          AUTHOR =
       ORIGINATOR = Lakes Oil NL
        TOP_DEPTH = 0
     BOTTOM_DEPTH = 696.1
   ROW_CREATED_BY = DN07_SW
(Inserted by DNRE - Vic Govt Mines Dept)
```