



# DAILY GEOLOGICAL REPORT

**WELL:** Glenaire-1ST1      **REPORT No.:** 42      **DAYS FROM SPUD:** 42      **DATE:** 20/10/06  
**PL:** PEP 160      **0000 hrs Depth:** 3563 m      **LAST DEPTH:** 3507 m      **PROGRESS:** 54 m  
**LOCATION:** Otway Basin      **Rig:** Ensign 32      **RT elevation:** 76.1 m      **PTD:** 3945 m  
**Northing:** 5 840 813 m N      **Easting:** 499 810 m E      **Ground Level:** 70.0m  
**NEARBY WELLS:** Tullich-1, Mceachern-1, Haselgrove South-1, Heathfield-1

**0600 OPS:** Drill ahead with 152mm hole to 3564m, POOH due to low ROP.

**PREVIOUS 24 Hours Operations:** POOH, lay out MWD, RIH, trip gas 3162 units, drill ahead with 152mm hole to 3563m.

**Comment:** The sandstone interval from 3508-3532m appears to be gas saturated, however the porosity is inferred as being very poor to poor, with most of the sand interval being sufficiently tight as to preclude gas accumulation. The gross sand interval is 24m, with a net effective gas pay of 5.5m. No evidence was seen in the cutting samples of fracturing, and no mud losses were recorded whilst drilling this interval.

The sandstones from 3550-3564m in cutting samples appear to have extremely limited porosity – sufficiently tight as to preclude gas accumulation - no evidence was observed in cutting samples of fracturing and no mud losses were recorded whilst drilling this interval.

Formation Tops (Wellsite)	Wellsite (mRT)	Wellsite (mSS)	Prognosed (mRT)	Depths (mSS)	Prognosis Diff H/L
Gambier Limestone	6.1	70	6	70	0
Dilwyn Formation	29	47	82	-6	53H
Pember Formation	320	-244	347	-271	27H
Pebble Point Formation	380	-304	421	-345	41H
Sherbrook Group	448	-372	487	-411	39H
Eumeralla Formation	609	-533	656	-580	47H
Windermere/Katnook Ss	Not Present	n/p	2034	-1958	Not Present
Laira Formation	1968	-1892	2059	-1983	91H
Pretty Hill Formation	3508	-1822	3746	-3670	238H
T.D.			3945	-3869	

Interval (m) ROP (ave) min/m	Lithology Description	Gas/Background Breakdown C1/C2/C3/C4/C5
3507 – 3508 (8)	SILTY CLAYSTONE, (100%) medium to dark grey to medium brown, abundant very fine altered feldspar grains in part, trace to common black carbonaceous flecks and detritus, common micromica, hard, subfissile.	130 (89:6:3:1:1)
<b>Fluorescence</b>	NIL	

3508 – 3532 (15)	SANDSTONE, (100%) off white, very fine to fine at top becoming very fine to occasionally very coarse at base, dominantly fine at top becoming dominantly medium to coarse at base, angular to subrounded, poorly sorted, strong silica and weak calcareous cements, common white argillaceous matrix, quartzose, common altered feldspars, trace green grey black and brown lithics, trace fine black coaly detritus, hard, nil to poor visual porosity, no oil fluorescence.	60 – 2332 (93:3:2:1:1)
<b>Fluorescence</b>	NIL	

3532 – 3550 (4)	SILTY CLAYSTONE, (80%) medium to dark grey to medium brown, common very fine altered feldspar grains in part, slightly carbonaceous, trace fine black carbonaceous flecks and detritus in part, common micromica, hard, subfissile. SANDSTONE, (20%) off white, very fine to very coarse, dominantly fine, angular to subrounded, poorly sorted, strong silica and weak calcareous cements, common white argillaceous matrix, quartzose, common altered feldspars, trace green grey black and brown lithics, trace fine black coaly detritus, very hard, no visual porosity, no oil fluorescence.	65 – 214 (125) (92:4:2:1:1)
<b>Fluorescence</b>	NIL	



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3550 – 3564 (3)	SILTY CLAYSTONE, (30%) medium to dark grey to medium brown, trace very fine altered feldspar grains in part, moderately carbonaceous, trace fine black carbonaceous flecks and detritus in part, common micromica, hard, subfissile. SANDSTONE, (70%) off white, very fine to rarely coarse, dominantly medium, angular to subrounded, poorly sorted, strong silica and weak calcareous cements, common white argillaceous matrix, quartzose, trace to common altered feldspars, trace green grey black and brown lithics, trace fine black coaly detritus, very hard, no visual porosity, no oil fluorescence.	75 – 256 (120) (92:4:2:1:1)
<b>Fluorescence</b>	The sandstone has dull yellow orange mineral fluorescence, no oil fluorescence or cut.	

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