



DAILY GEOLOGICAL REPORT

WELL: Glenaire-01 **REPORT No.:** 20 **DAYS FROM SPUD:** 20 **DATE:** 28/09/06
PL: PEP 160 **0000 hrs Depth:** 3103 m **LAST DEPTH:** 3002 m **PROGRESS:** 101 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 3156m, increase mud weight to 9.8 lb/gal, drill ahead to 3168m.

PREVIOUS 24 Hours Operations: Drill out shoe track and new hole to 3005m, FIT to 13.8 ppg mw eq, drill ahead with 152mm hole to 3103m.

Comment: Pressure response on FIT, cutting shape and hole instability would indicate the probable presence of a tectonically stressed fault/fracture being present at around 3000m.

Survey at 3108m = 8.5 degrees at 332 degrees TN.

At 3153m total gas readings rose to 4251 units (70:10:11:6:3) corresponding to a very strongly calcareous cemented sandstone (no visual porosity – dull orange carbonate fluorescence – no cut). Sample and drilling indicators suggest the gas came from a small partially open calcite lined fracture at this depth. Subsequently the mud weight was increased from 9.5 lb/gal to 9.8 lb/gal by the addition of KCl.

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			3746	-3670	
T.D.			3945	-3869	

Interval (m) ROP (ave) min/m	Lithology Description	Gas/Background Breakdown C1/C2/C3/C4/C5
3002 – 3108 (17)	SILTY CLAYSTONE, (90%) medium to dark grey to medium brown grey, grey black and very carbonaceous in part, abundant very fine altered feldspar grains in part, trace black carbonaceous flecks and detritus, common micromica, hard, subfissile. SANDSTONE, (10%) off white to light brown, silty to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and calcareous cements, abundant off white argillaceous matrix – matrix supported, abundant altered feldspar grains, trace green grey brown red and black volcanogenic lithics, trace quartz grains, trace fine brown mica flakes, trace black carbonaceous detritus, hard, no visual porosity, no oil fluorescence.	35 – 240 (76) (83:7:5:3:2)
Fluorescence	Nil in the sandstone, but: The detrital coal has no fluorescence but gives a very weak dull yellow crush cut.	

3108-3162 (40)	SILTY CLAYSTONE, (70%) medium to dark grey to medium brown grey, abundant very fine altered feldspar grains in part, slightly calcareous where arenaceous, trace black carbonaceous flecks and detritus, trace vein calcite at 3129m, common micromica, hard, subfissile. SANDSTONE, (30%) off white to light brown, silty to fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and very strong calcareous cements, abundant off white argillaceous matrix – matrix supported, abundant altered feldspar grains, trace green grey brown red and black volcanogenic lithics, trace quartz grains, trace fine brown mica flakes, trace black carbonaceous detritus, hard, no visual porosity, no oil fluorescence. COAL, (trace) black, subvitreous to vitreous, subconchoidal fracture, hard, brittle.	50 – 530 (190) (70:10:11:6:3)
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Fluorescence	The sandstone has dull orange mineral fluorescence, no cut. The coal has no fluorescence but gives a weak pale yellow crush cut.
Fluorescence	
Fluorescence	
Fluorescence	
Fluorescence	
Fluorescence	