# Santos -

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### DAILY GEOLOGICAL REPORT

**DGR 02** 

Date:		30 July 2006	Licence / State:	P39 (V) / VIC
Report Period:		06:00 - 06:00 Hours	Rig:	Ensign 32
Days from Spu	ld:	1	GL:	2.7m
Current Hole Size:		17.5"	RT:	8.6m
Depth @ 0600 Hrs:		320m MDRT	PTD:	2281m MDRT (-1338mSS)
_		-306m TVDSS	Spud Date:	04:30 hrs 29/07/06
24 Hr Progress:		220m		
Current Operation:		Circulating hole clean at	casing TD, prior to wiper	trip to conductor shoe.
Nope Cost	(Drill)\$	(C&S)\$		Cost To Date:
-	. ,	(P&A)\$		

Casing Data	Hole Size	Depth	Casing Size	Wt:	Туре	Shoe Depth	LOT
Conductor		60	20"			60m	

Mud Data	Туре:	Wt:	Visc:	WL:	PH:	KCI:	CI -:	PV/YP:	Rmf:
	KCL	9.2	48	10.0	10.0	-	5000	12 / 18	-

Bit Data	No.	Make	Туре		Size	Hours	Meters	Condition
	1	Reed	Rock	T11C	17.5"	0.45	20	0-0-NO-A-O-I-RR-BHA
	1RR	Red	Rock	T11C	17.5:	0.75	72	

Surveys	Туре	MD (m)	Inclination	Azimuth (T)	TVD (m)	Offset (m)	Direction (T)
	MWD	261.6	16.6	112.2	260.3	14.4	115.5
	MWD	276.5	19.1	117.1	274.5	19.0	115.4
	MWD	291.3	21.7	120.0	288.4	24.1	116.1
	MWD	303.7	23.2	118.7	299.9	28.9	116.6

### **OPERATIONS SUMMARY**

#### Previous 24 hrs Operations Summary:

Drill 17.5" hole from 100m to 120m. Pump sweeps, spot hi-viscosity pill at bottom and pull out of hole. Make up 17.5" directional BHA (motor with 1.5° bend) and run in hole to 110m, wash to bottom, no fill. Drill 17.5" directional hole from 120m to casing point at 320m, building angle to 24° towards 118.5°T as per plan. Casing point reached at 05:00hrs on 30/07/06. Circulate hole clean prior to wiper trip to conductor shoe.

#### Anticipated operations:

Wiper trip to conductor shoe and back to bottom. Circulate hole clean. Pull out of hole and run 13.375" casing (28 joints with shoe at 317m).

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FORMATION TOPS (Preliminary Field picks)							
FORMATION	ACTUAL TOP		High / Low to	High / Low to	PROGNOSE	ED TOP	
	(MDmRT)	(TVDmSS)	Prognosis	East Reeve-1	(MDmRT)	(TVDmSS)	
Jemmy's Point	5.9	2.7	-	-	6	3	
Tambo River (Coquina)	143.0	-134.4	30.6m High	30.8m High	180	-165	
Gippsland Limestone	235.0	-225.9	5.9m Low	0.2m High	230	-220	
Lakes Entrance							
Formation					1816	-919	
Latrobe Coarse Clastics					2098	-1155	
Latrobe N. Asperus							
(Coal)					2163	-1220	
Total Depth					2281	-1338	

### HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & HYDROCARBON FLUORESCENCE	GAS

GAS	MD (m)	Peak	Background	Chromatograph
Trip Gas	-	-	-	-
Connection Gas	-	-	-	-

INTERVAL	LITHOLOGY	GAS (Peak / BG)
ROP (min/ft)		Composition
100-143m	SANDSTONE: (100%) Pale grey, pale yellow, clear to translucent, off white,	Nil
ROP: 0.4-9.5	fine to coarse grained, dominantly medium grained, poorly sorted,	
Ave: 1.1	subangular to angular, occasional subrounded, trace weak siliceous	
	cement, trace dispersive clay matrix, trace fossil fragments, generally loose,	
	fair to good inferred porosity, no hydrocarbon fluorescence.	
	TAMBO RIVER FORMATION	
143-190m	COQUINA INTERBEDDED WITH MARL AND SANDSTONE	Nil
ROP: 0.8-3.9	COQUINA: (50-70%) Off white, pale yellow, pale brown, cream, abundant	
Ave:1.0	fossil fragments, locally loosely cemented with calcite, occasional fossil	
	casts with Calcareous Claystone, common fragments of bi-valves,	
	brachiopods, echinoid spines, sponges, bryozoa, Turritella fragments.	
	MARL: (10-40%) Light grey, light green grey, silty in part, grading to	
	Calcareous Claystone in part, abundant fossil fragments, occasional dark	
	green glauconite grains, dispersive, soft, amorphous to occasional	
	subblocky.	
	SANDSTONE: (10-40%) Clear to translucent, fine to coarse grained,	
	dominantly medium grained, poorly sorted, dominantly subangular to	
	occasional subrounded, trace argillaceous matrix, generally loose, fair	
	inferred porosity, no hydrocarbon fluorescence.	



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INTERVAL	LITHOLOGY	GAS (Peak / BG)
ROP (min/ft)		Composition
190-235m ROP: 1.0-3.5 Ave: 2.0	INTERBEDDED COQUINA, MARL AND SANDSTONE COQUINA: (30-40%) Off white, pale yellow, pale brown, cream, abundant fossil fragments, locally loosely cemented with calcite, occasional fossil casts with Calcareous Claystone, common fragments of bi-valves, cephalopods, brachiopods, echinoid spines, sponges, bryozoa, Turritella fragments. MARL: (30-40%) Light green grey, light grey, very calcareous and argillaceous grading to Calcareous Claystone in part, common fossil fragments, trace dark green glauconite grains, trace dispersed fine to medium quartz sand, dispersive, soft, amorphous to occasional subblocky. SANDSTONE: (10-20%) Clear to translucent, fine to coarse grained, dominantly medium grained, poorly sorted, dominantly subangular to occasional subrounded, trace argillaceous matrix, generally loose, fair inferred porosity, no hydrocarbon fluorescence.	Nil
	GIPPSLAND LIMESTONE	
235-280m ROP: 1.0-3.3 Ave: 2.5	MASSIVE LIMESTONE (CALCARENITE) INTERBEDDED WITH MARL CALCARENITE: (30-90) Light to medium grey, minor brown grey, medium to coarse grained, trace glauconite, argillaceous in part, common fossil fragments, moderately hard to hard, subblocky. MARL: (10-30) Light green grey, light grey, arenaceous in part, argillaceous in part, trace glauconite, trace fine to medium grained quartz grains, common fossil fragments, dispersive, soft, amorphous. SANDSTONE: (0-10%) Clear to translucent, fine to dominantly medium grained, moderately poorly sorted, dominantly subangular to occasional subrounded, trace argillaceous matrix, generally loose, fair inferred porosity, no hydrocarbon fluorescence.	Nil
280-320m ROP: 1.0-2.8 Ave: 2.5	MASSIVE LIMESTONE (CALCARENITE) CALCARENITE: (100%) Light to medium grey, light-medium brown, dominantly medium grained, minor coarse grained, slightly argillaceous, common fossil fragments, trace dark grey lithic fragments, trace glauconite, local strong calcite cement, occasional loose quartz grains, loose in part, moderately hard to hard, subblocky.	Nil