



# GEMDAS LOGGING REPORT NO. 4

COMPANY Amoco AUSTRALIA. WELL TILANA-1  
 DATE 13th SEPT '85 TIME 0500HRS  
 DEPTH 1587.9m. (5210') LAST REPORT DEPTH 1320.3m (4332')  
 RIG OPERATIONS DRILLING  
 REPORT BY J. STRAUTINS REPORT RECEIVED BY S. MAXWELL. (OPERATOR)  
SIGNED

## DRILLING REPORT

Bit No.: NB 4 Type: SMITH F2 Size: 12 1/4" Jets: 11, 3x13  
 On Bit: Footage: 970' Hours: 21.9 ROP: av. 44 ft/hr WOB: 15-42 klb RPM: 92-110  
 Pump Press: 2720 psi SPM: 142 Torque: 2.2 kft/lb TBR: 140,000 CP I: \$ 298 CP B: \$ 402

## HYDRAULICS REPORT

Mud Density In: 9.1 ppG Mud Density Out: 9.1 ppG ECD: 9.4 ppG PV/YP: 8/32  
 Gels: 15/25 Salinity: 12,000 PPM Cl Solids: 7. %  
 Hole Volume: 1021 bbl Annular Volume: 874 bbl Tubing Volume: 84 bbl Displaced Volume: 62 bbl  
 Carbide Lag—Calculated Lag: + 320 stks. Flowrate: 703 gpm  
 Drillpipe Annular Vel (Max. Dia. Sec.): 53 ft/min Drillpipe Annular Vel (Open Hole): 138 ft/min  
 Drill Collar Annular Vel (Open Hole): 288 ft/min Critical Vel: 563 ft/min  
 Pressure Loss System: 938 psi Pressure Loss Bit: 1782 psi % Pressure Loss: 66 %  
 Nozzel Vel: 468 ft/sec Jet Impact Force: 1551 lbs HHP: 731 hp

## PRESSURE PARAMETERS

Drilling Exponent: 1.44 @ 45 ft/hr. Flowline Temperature: 45°C  
 Shale Density: - Shale Factor: -  
 Background Gas: 3-7v. Max. Formation Gas: 11v. @ 4625' Trip Gas: - @ -  
 Other Gas: -  
 Fill: - Tight Hole: 10-30 klbs overpull on cnns.  
 Cavings: Est %: <20% Average Size: 2x3x4 mm<sup>3</sup>, BLOCKY.

## ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.61 / 10.71 Min. Estimated Fracture Pressure (Open Hole): 15.3 ppG @ CSG  
 Estimated Pore Pressure: 8.7 ppG Min. Estimated Pore Pressure (Open Hole): 8.7 ppG @ CSG  
 Max. Estimated Pore Pressure (Open Hole): 8.7 ppG @ TD Estimated Fracture Pressure at TD: 19.5 ppG

Comments: DRILL TO 1383.7m (4540'). START LOSS OF ≈ 60 BBL/HR TO FORMATION. DECREASE PUMP PRESSURE / FLOW TO MINIMISE LOSSES. DRILL AHEAD AT 10-40 FT/HR THROUGH VOLCANICS. FORMATION RETURNS TO CLAYSTONE @ 1416m (4636') & ROP INCREASED TO 50-100 FT/HR. CIRCULATE DRILL TO 1419.4m (4957'). SURVEY 1/4°. DRILL AHEAD.

CORRECTED HOLE : 1058 bbl.  
 CORRECTED ANNULUS: 912 bbl.