

GEOGRAM*

(Synthetic Seismogram)

* A Mark of Schlumberger

Company: BHP PETROLEUM
 Well: MINERVA -2A
 Field: WILDCAT
 Country: AUSTRALIA
 Reference No: 560960 Interval: 2160.00 to 600.00
 Date Logged: 14-OCT-1993 Date Processed: 23/10/93
 Location: 142 57' 20.80" N 38 43' 04.54" E
 Elevations: KB: 25.30 DF: 25.00 GL: -85.00
 Permanent Datum: MSL Depth Units: METRES

LOG INFORMATION

FIELD RECORDING Engineer: M HELWIG Location: Program Version: 32.2
 COMPUTATION Analyst: Z.KATELIS Centre: SYJ Baseline: 20.4

ELEVATION ABOVE MEAN SEA LEVEL

Logging Datum: 25.00
 Seismic Reference Datum: 0.00

Sonic Calibration By Check Shots: YES Sonic Edited By Analyst: YES

Two-Way Time Sample Interval: 2 ms Environment:

True Vertical Depth Corrections Applied:
 Source of True Vertical Depth Data:
 Maximum Hole Deviation: 0

Run	Date	Tool Type	Bit Size/Depth	Casing Size/Depth	Top Depth	Bottom Depth

VSP Run	Date	Gun Offset	Hydro Offset	Gun Elevation	Hydro Elevation	Gun Azimuth	Hydro Azimuth
1	14-10-93	47 M	47 M	6 BELOW MSL	12 M BELOW MSL	50 0	50 0

GEOGRAM MODEL ASSUMPTIONS

Equal time slice model of horizontal plane layers.
 Plane acoustic waves at normal incidence.
 No intrinsic attenuation.

POLARITY

An upgoing wave, reflected by an increase in acoustic impedance with depth, is displayed as a white trough under normal polarity.

SIGNATURES

All signatures displayed in the Geogram results correspond to a wavelet convolved with a reflection coefficient of -0.5 (A decrease in acoustic impedance with depth).

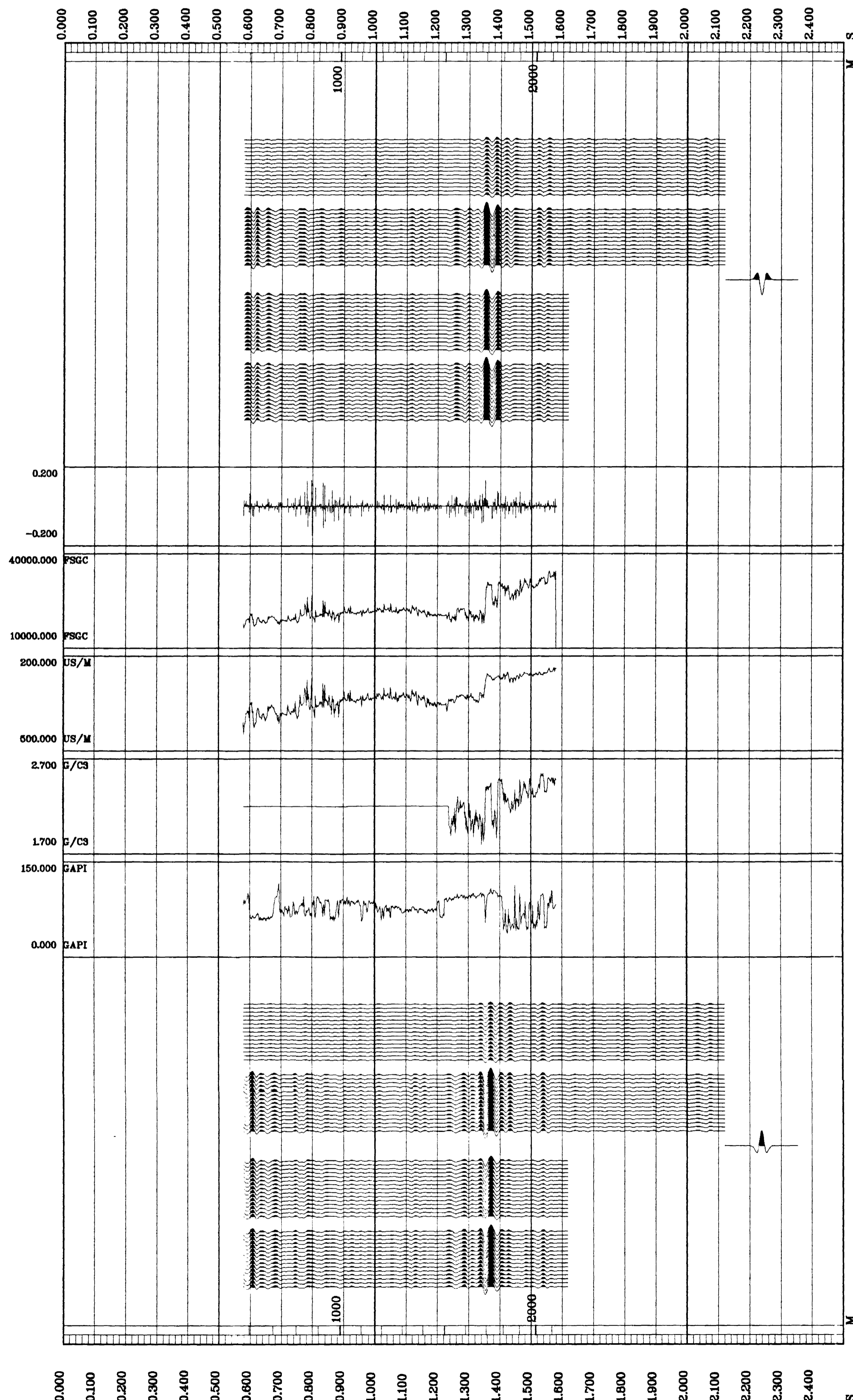
REMARKS

All interpretations are opinions based on information from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officials, agents or employees. These interpretations are also subject to Clause 2 of our General Terms and Conditions as set out in our current Price Schedule.
 The well name, location and borehole reference data were furnished by the customer.

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**** GEOGRAM ****
25 HERTZ ZERO PHASE RICKER WAVELET
 VERTICAL SCALE = 10 CM/SEC

MULTIPLES ONLY REVERSE POLARITY
PRIMARIES AND MULTIPLES REVERSE POLARITY
PRIMARIES WITH TRANSMISSION LOSS REVERSE POLARITY
PRIMARIES REVERSE POLARITY
REFLECTION
ACOUSTIC IMPEDANCE
SONIC
DENSITY
GAMMA RAY
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