INTERPRETATIVE

O/S 13 pt 1.
OR-0342

349648

ONE WAY TIME BELOW SEA LEVEL

TWO WAY TIME BELOW SEA LEVEL

ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC.

POONBOON—1

TIME DEPTH CURVE

DATUM: MEAN SEA LEVEL

AUTHOR: M.A. HENSCHKE

CO ORDINATES:
LAT.:— 40° 08' 15.9" S
LONG.:— 145° 55' 01.29" E

LEGEND

Water Depth 259'
K.B. 32'
⊙ Check Shots
⊡ Interpolated from Sonic Log
T.D. 10,720' (-10,688')*
Casing Depth 8761' (-8729')*
Gas Gun Survey — Lock-in Well Geophone
G denotes good quality data
F denotes fair quality data

5 cm

ENCLOSURE 4

DRAFTED BY: J.R. SCHMIDT

DATE OF SURVEY : 14 SEPTEMBER, 1972

No data available about these portions of the curves above -3948'

Time Depth Curve

(7330'/sec.)

(7330'/sec)

Velocity vs. Depth Curve

Interval Velocities from calibrated Sonic Log

(7620'/sec.)

(7690'/sec.)

(7940'/sec)

(8090'/sec.)

(8370'/sec.)

(8490'/sec.)

(8630'/sec.)

(8750'/sec.)

(8840'/sec.)

F (-539,-3948')

Sonic Log Integrator Error of -16 microsec/ft. in this interval

(576,-4220'), 4 msec. subtracted from sonic log time to tie with check shots

G (-622,-4574')

TOP OF EOCENE SHALE (-5724')

G (-751,-5724')

TOP OF EASTERN VIEW (-6175')

(-803,6174')

G (-893,-7088')

(-935,-7500') 2 msec added to sonic log time to tie with check shot points

Sonic Log Integrator Error of +3·9 microsec/ft

Time vs Velocity Curve

F (-971,-7858')

G (1·049,-8768)
F (1·051,(-8795')

(1·089,-9250)

(1·130,-9750)

(1·172,-10,250)

(1·205,-10,650)

T.D. 10,720' (-10,688')

This was a gas gun survey with a lock-in geophone The quality of the records is good. In the interval between the first check shot (-3948') and the second check shot (-4574'), the check shot interval time is 83 msec. and the sonic log interval time from the integrator is 93 msec. representing an error of -16 microsec/ft. This may be due to the poor quality of the hole and a calibration error.

-16 microsec/ft was the maximum error. The average of the errors in the remaing intervals is 1·6 microsec/ft.

$$\text{Error} = \frac{\text{Interval Time (Check Shot} - \text{Interval Time (Sonic Log)}}{\text{Thickness of the interval}}$$

* At the time of the gas gun survey T.D. was 8827' (-8795') and casing depth was 3028' (-2996') The well was subsequently drilled to the Total Depth and Casing Depth shown in the Legend. The T.D. curve was extrapolated below -8795' using points interpolated from a sonic log run between -8795' and -10,688'

DEPTH IN FEET BELOW SEA LEVEL

(AVERAGE VELOCITY — FEET PER SECOND)

AVERAGE AND INTERVAL VELOCITY — FEET PER SECOND

Dwg 1491/OP/1