ATTACHMENT TO W.C.R.

ELL SEISMIC PROCESSING REPORT

VOL 1

PATRICIA-1

(W963)

SYDNEY LOG INTERPRETATION CENTRE

W963. PATRICIA-1. SEIS CAL + SYN SEISMOGRAMS

LASMO ENERGY AUSTRALIA

WELL SEISMIC PROCESSING REPORT

PATRICIA - 1

FIELD	:	PATRICIA
STATE	:	VICTORIA
LOCATION	:	BASS STRAIT
COUNTRY	:	AUSTRALIA
COORDINATES	:	038° 01' 53.23" S 148° 26' 46.82" E
DATE OF SURVEY	:	03-JULY-1987
REFERENCE NO.	:	570705/570706

CONTENTS

1.0 INTRODUCTION

A vertical seismic profile was shot in the Patricia - 1 well on 3 July 1987. Data was acquired using an airgun source. Thirty two levels were shot from 445 to 895 metres. The shot data has been used to calibrate the sonic log. A synthetic seismogram was computed.

The major aims of VSP processing are :

- to obtain a high resolution time-depth curve. As the levels are separated by an average of 7 milliseconds, accurate velocity analysis can be made.
- to obtain a better tie between the VSP and Seismic. The lateral depth of investigation of a VSP is intermediate between surface seismic and logs
- to determine the multiple content of the area by analysis of the downgoing wavetrains.
- Further analysis of the downgoing wavetrain provides information on the earth filtering of the seismic wave versus depth.

2.0 DATA ACQUISITION

Table 1 Field Equipment and Survey Parameters

Elevation SRD	0.0 metres AMSL
Elevation KB	22.0 metres AMSL
Elevation DF	21.7 metres AMSL
Elevation GL	-51.0 metres AMSL
Total Depth	900 metres below KB
No. of Levels	32
Energy Source	Airgun
Source Offset	50 metres
Source Azimuth	245°
Source Depth	5.0 metres below MSL
Reference Sensor	Hydrophone
Sensor Offset	50 metres
Sensor Azimuth	245°
Sensor Depth	10.0 metres below MSL
Downhole Triaxial Geophones	3 orthogonally opposed, not gimballed Sensor SM-4 (one/axis) Temperature 350°F Low cut filter 2 Hz @6 db/oct High cut filter 330 Hz @30 db/oct Natural Freq. 10 hertz Sensitivity 0.83 V/cm/sec per axis

Recording was made on the Schlumberger Cyber Service Unit (CSU) using LIS format. The survey was shot using a airgun source and hydrophone as the surface sensor.

3.0 SONIC CALIBRATION

A 'drift' curve is obtained using the sonic log and the vertical check level times. The term 'drift' is defined as the seismic time (from check shots) minus the sonic time (from integration of edited sonic). Commonly the word 'drift' is used to identify the above difference, or to identify the gradient of drift verses increasing depth, or to identify a difference of drift between two levels.

The gradient of drift, that is the slope of the drift curve, can be negative or positive.

For a negative drift $\frac{\Delta drift}{\Delta depth} < 0$, the sonic time is greater than the seismic time over a certain section of the log.

For a positive drift $\frac{\Delta drift}{\Delta depth} > 0$, the sonic time is less than the seismic time over a certain section of the log.

The drift curve, between two levels, is then an indication of the error on the integrated sonic or an indication of the amount of correction required on the sonic to have the TTI of the corrected sonic match the check shot times.

Two methods of correction to the sonic log are used.

1. **Uniform or block shift** This method applies a uniform correction to all the sonic values over the interval. This uniform correction is applied in the case of positive drift and is the average correction represented by the drift curve gradient expressed in μsec/m.
2. **ΔT Minimum** In the case of negative drift a second method is used, called Δt minimum. This applies a differential correction to the sonic log, where it is assumed that the greatest amount of transit time error is caused by the lower velocity sections of the log. Over a given interval the method will correct only Δt values which are higher than a threshold, the Δt_{min}. Values of Δt which are lower than the threshold are not corrected. The correction is a reduction of the excess of Δt over Δt_{min}, Δt - Δt_{min}.

   $\Delta t - \Delta t_{min}$ is reduced through multiplication by a reduction coefficient which remains constant over the interval. This reduction coefficient, named G, can be be defined as:

$$G = 1 + \frac{drift}{\int (\Delta t - \Delta t_{min}) dZ}$$

   Where drift is the drift over the interval to be corrected and the value $\int (\Delta t - \Delta t_{min}) dZ$ is the time difference between the integrals of the two curves Δt and Δt_{min}, only over the intervals where $\Delta t > \Delta t_{min}$.

   Hence the corrected sonic: $\Delta t = G(\Delta t - \Delta t_{min}) + \Delta t_{min}$.

4.0 SONIC CALIBRATION PROCESSING

4.1 Open Hole Logs

The sonic and density logs have been edited prior to input into the Well Seismic Calibration processing chain.

The sonic amplitude is very low in the gas zone (700 to 750 metres below KB) and Δ T is subject to cycle skip. The shortest transmitter-receiver pair (8 ft) is least affected by attenuation and the sonic log has been reconstructed over this interval by following the trend in the 8 ft transit time curve.

The density log has been patched across from 655 to 643 metres where the density is affected by poor hole conditions. A constant density of 2.1 gm/cc is assumed from the surface to the top of recording at 605 metres.

4.2 Correction to Datum and Velocity Modelling

A pseudo shot has been placed on the sea floor assuming a water velocity of 1480 metres/sec. Seismic datum is at mean sea level. All shots have been corrected to MSL.

4.3 Sonic Calibration Results

The top of the sonic log (220 metres below KB) is chosen as the origin for the calibration drift curve. The drift curve indicates a number of corrections to be made to the sonic log.

Table 3 Sonic Drift

Depth Interval (metres below KB)	Block Shift μsec/m	Δt_{min} μsec/m	Equiv Block Shift μsec/m
220.0 - 509.5	13.82	-	13.82
509.5 - 643.5	37.31	-	37.31
643.5 - 702.0	17.09	-	17.09
702.0 - 750.5	6.19	-	6.19
750.5 - 900.0	10.03	-	10.03

The adjusted sonic curve is considered to be the best result using the available data.

5.0 GEOGRAM PROCESSING

GEOGRAM plots were generated using 40, 50 and 60 hertz zero phase ricker wavelets. The presentations include both normal and reverse polarity on a time scale of 20 cm/sec.

GEOGRAM processing produces synthetic seismic traces based on reflection coefficients generated from sonic and density measurements in the well-bore. The steps in the processing chain are the following:

Depth to time conversion

Reflection coefficients

Attenuation coefficients

Convolution

Output.

5.1 Depth to Time Conversion

Open hole logs are recorded from the bottom to top with a depth index. This data is converted to a two-way time index and flipped to read from the top to bottom in order to match the seismic section.

5.2 Primary Reflection Coefficients

Sonic and density data are averaged over chosen time intervals (normally 2 or 4 millisecs). Reflection coefficients are then computed using:

$$R = \frac{\rho_2.\nu_2 - \rho_1.\nu_1}{\rho_2.\nu_2 + \rho_1.\nu_1}$$

where

ρ_1 = density of the layer above the reflection interface

ρ_2 = density of the layer below the reflection interface

ν_1 = compressional wave velocity of the layer above the reflection interface

ν_2 = compressional wave velocity of the layer below the reflection interface

This computation is done for each time interval to generate a set of primary reflection coefficients without transmission losses.

5.3 Primaries with Transmission Loss

Transmission loss on two-way attenuation coefficients are computed using:

$$A_n = (1 - R_1^2).(1 - R_2^2).(1 - R_3^2)...(1 - R_n^2)$$

A set of primary reflection coefficients with transmission loss is generated using:

$$Primary_n = R_n.A_{n-1}$$

5.4 Primaries plus Multiples

Multiples are computed from these input reflection coefficients using the transform technique from the top of the well to obtain the impulse response of the earth. The transform outputs primaries plus multiples.

5.5 Multiples Only

By subtracting previously calculated primaries from the above result we obtain multiples only.

5.6 Wavelet

A theoretical wavelet is chosen to use for convolution with the reflection coefficients previously generated. Choices available include:

Klauder wavelet

Ricker zero phase wavelet

Ricker minimum phase wavelet

Butterworth wavelet

User defined wavelet.

Time variant butterworth filtering can be applied after convolution.

5.7 Polarity Convention

An increase in acoustic impedance gives a positive reflection coefficent and is displayed as a white trough under normal polarity. Polarity conventions are displayed in Figure 1.

5.8 Convolution

Standard procedure of convolution of wavelet with reflection coefficients. The output is the synthetic seismogram.

6.0 VSP PROCESSING

6.1 PROCESSING SEQUENCE

1. STACKING

   A median stack was performed on the vertical and horizontal component data (Plot 1) of all the good shots at each level using the surface sensor break times as the zero time for stacking. The transit time is computed after stacking, which is now the transit time from surface sensor to geophone.

2. SPHERICAL DIVERGANCE CORRECTION and BANDPASS FILTER

   A bandpass filter of 5-125 hertz bandwidth was applied. A time varying gain function of the exponential form :

   $$GAIN(T) = (\frac{T}{T_0})^{\alpha}$$

   where T is the recorded time and T_0 is the first break time and $\alpha = 1.2$

   Trace equalisation was applied by normalising the RMS amplitude of the first break to correct for transmission losses of the direct wave. A normalisation window of 50 millisecs was used. A static correction varying from +5.2 to +6.1 msec has been applied to reference the data to mean sea level, correct for gun to hydrophone distance and correct for source offset. Data after this stage is displayed at Plot 2.

3. VELOCITY FILTER

   The downgoing coherent energy is estimated using a seven level median velocity filter. The filter array is moved down one level after each computation and the process is repeated level by level over the entire dataset. As a result, the deepest and shallowest levels are lost because of edge effects.

   The residual wavefield is obtained by subtracting the downgoing coherent energy from the total wavefield. Finally, a five level median filter is applied on the residual wavefield to enhance the upgoing compressional waveield. The downgoing and residual wavefields are displayed at Plot 3.

4. PREDICTIVE DECONVOLUTION

   At this stage, the assumption is made that the downgoing energy at a given level is convolved with the earth reflectivity sequence below that level. The deconvolution operator is designed on the downgoing trace, the operator is applied to both the downgoing and upgoing traces at the same level.

   The result of predictive deconvolution on the residual wavefield is shown in plot 4. An operator of 1000 msec length and prediction distance equal to the 2^{nd} zero crossing was computed. The deconvolution is applied before any coherency enhancement in order to collapse the multiple sequence of shear arrivals, diffractions or out of plane reflections. A five level median filter is applied to the residual wavefield after predictive deconvolution to enhance the reflected compressional events.

5. WAVESHAPING DECONVOLUTION

Plot 6 shows the data after the application of waveshaping deconvolution. The deconvolution operator is a two sided operator and is designed trace by trace by opening a 520 msec window starting 20 msec before the first break on the downgoing wave train. The desired output wavelet was chosen to be zero phase with a band width of 10-80 hertz. The operator is applied to the downgoing and subtracted wavefield at the same level. The upgoing compressional wavefield are enhanced as before.

6. CORRIDOR STACK

A corridor stack is computed on the data after deconvolution by summing the data in a 100 millisec window from the first break. All the data from the bottom four levels have been included to provide continuity of the corridor stack data down to 3.0 seconds.

The enhanced upgoing and corridor stack after predictive deconvolution are displayed at plot 5, the enhanced upgoing and corridor stack after waveshaping deconvolution are displayed at plot 7.

7. ACOUSTIC IMPEDANCE INVERSION

The zero phase waveshaping should permit a better interpretation of acoustic contrast, hence the data used for the inversion has been taken from the VSP after zero phase waveshaping deconvolution. The traces chosen for the inversion were the corridor stack.

The inversion technique is one which produces a limited number of reflection coefficients and varies these to minimises the error energy between the observed seismogram and the synthetic seismogram, whilst satisfying any constraints that may be imposed. This approach yields a blocky impedance profile.

An initial impedance of 15509 taken from the logged impedance was used. No constraints are applied to the inverted impedance.

The quality of the inversion procedure on the data can be assessed by the similarity in the observed trace and synthetic trace (the synthetic trace is obtained by convolving the zero phase downgoing wavelet with reflectivity series derived from the inversion procedure).

The inversion is displayed alongside the VSP data after zero phase waveshaping deconvolution at plot 8. The similarity between the corridor stack and the synthetic seismogram from the inversion process is very good. Equally the comparison between the inverted impedance and the logged impedance is good, with the inverted impedance reflecting acoustic boundaries from rather subtle lithological changes. This is especially evident within the reservoir zone where the small increases in impedance probably reflect tighter sands.

8. VELOCITY ANALYSIS

The shear and compressional interval velocities were computed with respect to their transmitted arrivals on both the vertical component and horizontal component (see plot 9). A log like response of the V_P/V_S ratios and poissons ratio was computedfrom these components. There is a very good correlation between the V_P and the the sonic log. The gas zone can be identified as the low section in the poisson's ratio curve. The shear velocities can be used to compute the rock properties of the sand reservoir.

9. HORIZONTAL COMPONENT PROCESSING

The maximum horizontal energy was obtained by opening a narrow time window about the first arrival and applying a rotation in the direction of maximum energy. This is computed for each geophone position.

Plot 10 displays the horizontal components projected on the downgoing shear wavefield. Plot 11 displays the horizontal components projected on the downgoing compressional wavefield.

A bandpass filter of 5-50 hertz bandwidth was applied and the result is displayed on the two upper panels.

10. SHEAR WAVE PROCESSING

The maximum horizontal energy projected on the downgoing shear wavefield is processed to yeild the upgoing shear wavefield (see plot 12). The processing sequence is similar to the Z-axis processing.

- Amplitude recovery 1.22, Bandpass filter 5-50 hertz and normalisation in 400 millisec window from compressional first break.
- Seven level median estimate of downgoing shear
- Residual wavefield
- Five level enhancement of upgoing shear
- Convert to shear two way time

The impedance change at the base of the sandstone can be identified the black peak at 1550 msec on the lower panel of Plot 12. No deconvolution has been applied to the horizontal component processing.

An inspection of the residual wavefield reveals several alignments of upgoing data. These can be enhanced as upgoing shear and upgoing compressional (see Plot 13). The compressional events on the horizontal components would suggest significant dip on these events. This is also consistent with the strong mode converted compressional to shear energy. Significant time moveout is evident on the shear aligned data.

The polarity convention for displaying horizontal component data is not consistent with the Z - axis, and will change if the upgoing wavefield arrives at the geophone from the opposite side of the borehole from that of the downgoing wavefield. Tectonic stresses can also effect phase rotations in the shear components. In the case of a vertical well we can expect the apparent polarity of the horizontal components to vary with time.

APPENDIX - 1 SUMMARY OF GEOPHYSICAL LISTINGS

Six geophysical data listings are appended to this report. Following is a brief description of the format of each listing.

Geophysical Airgun Report

1. Level number : the level number starting from the top level (includes any imposed shots).
2. Vertical depth from KB : *dkb*, the depth in metres from kelly bushing .
3. Vertical depth from SRD : *dsrd*, the depth in metres from seismic reference datum.
4. Vertical depth from GL : *dgl*, the depth in metres from ground level.
5. Observed travel time HYD to GEO : *tim0*, the transit time picked from the stacked data by subtracting the surface sensor first break time from the downhole sensor first break time.
6. Vertical travel time SRC to GEO : *timv*, is corrected for source to hydrophone distance and for source offset.
7. Vertical travel time SRD to GEO : *shtm*, is *timv* corrected for the vertical distance between source and datum.
8. Average velocity SRD to GEO : the average seismic velocity from datum to the corresponding checkshot level, $\frac{dsrd}{shtm}$.
9. Delta depth between shots : $\Delta depth$, the vertical distance between each level.
10. Delta time between shots : $\Delta time$, the difference in vertical travel time (*shtm*) between each level.
11. Interval velocity between shots : the average seismic velocity between each level, $\frac{\Delta depth}{\Delta time}$.

Drift Computation Report

1. Level number : the level number starting from the top level (includes any imposed shots).
2. Vertical depth from KB : the depth in metres from kelly bushing .
3. Vertical depth from SRD : the depth in metres from seismic reference datum.
4. Vertical depth from GL : the depth in metres from ground level.
5. Vertical travel time SRD to GEO : the calculated vertical travel time from datum to downhole geophone (see column 7, Geophysical Airgun Report).
6. Integrated raw sonic time : the raw sonic log is integrated from top to bottom and listed at each level. An initial value at the top of the sonic log is set equal to the checkshot time at that level. This may be an imposed shot if a shot was not taken at the top of the sonic.
7. Computed drift at level : the checkshot time minus the integrated raw sonic time.
8. Computed blk-shft correction : the drift gradient between any two checkshot levels ($\frac{\Delta drift}{\Delta depth}$).

Sonic Adjustment Parameter Report

1. Knee number : the knee number starting from the highest knee. (The first knees listed will generally be at SRD and the top of sonic. The drift imposed at these knees will normally be zero.)
2. Vertical depth from KB : the depth in metres from kelly bushing .
3. Vertical depth from SRD : the depth in metres from seismic reference datum.
4. Vertical depth from GL : the depth in metres from ground level.
5. Drift at knee : the value of drift imposed at each knee.
6. Blockshift used : the change in drift divided by the change in depth between any two levels.
7. Delta-T minimum used : see section 4 of report for an explanation of Δt_{min}.
8. Reduction factor : see section 4 of report.
9. Equivalent blockshift : the gradient of the imposed drift curve.

Velocity Report

1. Level number : the level number starting from the top level (includes any imposed shots).
2. Vertical depth from KB : the depth in metres from kelly bushing .
3. Vertical depth from SRD : the depth in metres from seismic reference datum
4. Vertical depth from GL : the depth in metres from ground level
5. Vertical travel time SRD to GEOPH : the vertical travel time from SRD to downhole geophone (see column 7, Geophysical Airgun Report)
6. Integrated adjusted sonic time : the adjusted sonic log is integrated from top to bottom. An initial value at the the top of the sonic is set equal the checkshot time at that level. (The adjusted sonic log is the drift corrected sonic log.)
7. Drift=shot time-raw son : the check shot time minus the raw integrated sonic time.
8. Residual=shot time-adj son : the check shot time minus the adjusted integrated sonic time. This is the difference between calculated drift and the imposed drift.
9. Adjusted interval velocity : the interval velocity calculated from the integrated adjusted sonic time at each level.

Time Converted Velocity Report

The data in this listing has been resampled in time.

1. Two way travel time from SRD : This is the index for the data in this listing. The first value is at SRD (0 millisecs) and the sampling rate is 2 millisecs.
2. Measured depth from KB : the depth from KB at each corresponding value of two way time.
3. Vertical depth from SRD : the vertical depth from SRD at each corresponding value of two way time.
4. Average velocity SRD to GEO : the vertical depth from SRD divided by half the two way time.
5. RMS velocity : the root mean square velocity from datum to the corresponding value of two way time.

$$v_{rms} = \sqrt{\Sigma_1^n v_i^2 t_i / \Sigma_1^n t_i}$$

where v_i is the velocity between each 2 millisecs interval.

6. First normal moveout : the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 3000 feet).
7. Second normal moveout : the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 4500 feet).
8. Third normal moveout : the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 6000 feet).
9. Interval velocity : the velocity between each sampled depth. Typically, the sampling rate is 2 millisecs two way time, (1 millisec one way time) therefore the interval velocity will be equal to the depth increment divided by 0.001. It is equivalent to column 9 from the the Velocity Report.

Synthetic Seismogram Table

1. Two way travel time from SRD : This is the index for the data in this listing. The first value is at the top of the sonic. The default sampling rate is 2 millisecs.
2. Vertical depth from SRD : the vertical depth from SRD at each corresponding value of two way time.
3. Interval velocity : the velocity between each sampled depth. Typically, the sampling rate is 2 millisecs two way time, (1 millisec one way time) therefore the interval velocity will be equal to the depth increment divided by 0.001. It is equivalent to column 9 from the the Velocity Report.
4. Interval density : the average density between two successive values of two way time.
5. Reflect. coeff. : the difference in acoustic impedance divided by the sum of the acoustic impedance between any two levels. The acoustic impedance is the product of the interval density and the interval velocity.
6. Two way atten. coeff. : is computed from the series

$$A_n = (1 - R_1^2).(1 - R_2^2).(1 - R_3^2)...(1 - R_n^2)$$

7. Sythetic seismo. primary : the product of the reflection coefficient at each depth and the two way attenuation coefficient up to that depth.

$$Primary_n = R_n.A_{n-1}$$

8. Primary + multiple : a transform technique is used to calculate multiples from the input reflection coefficients.
9. Multiples only : (Primary + multiple) - (Synthetic seismo. primary)

GEOGRAM PLOTS

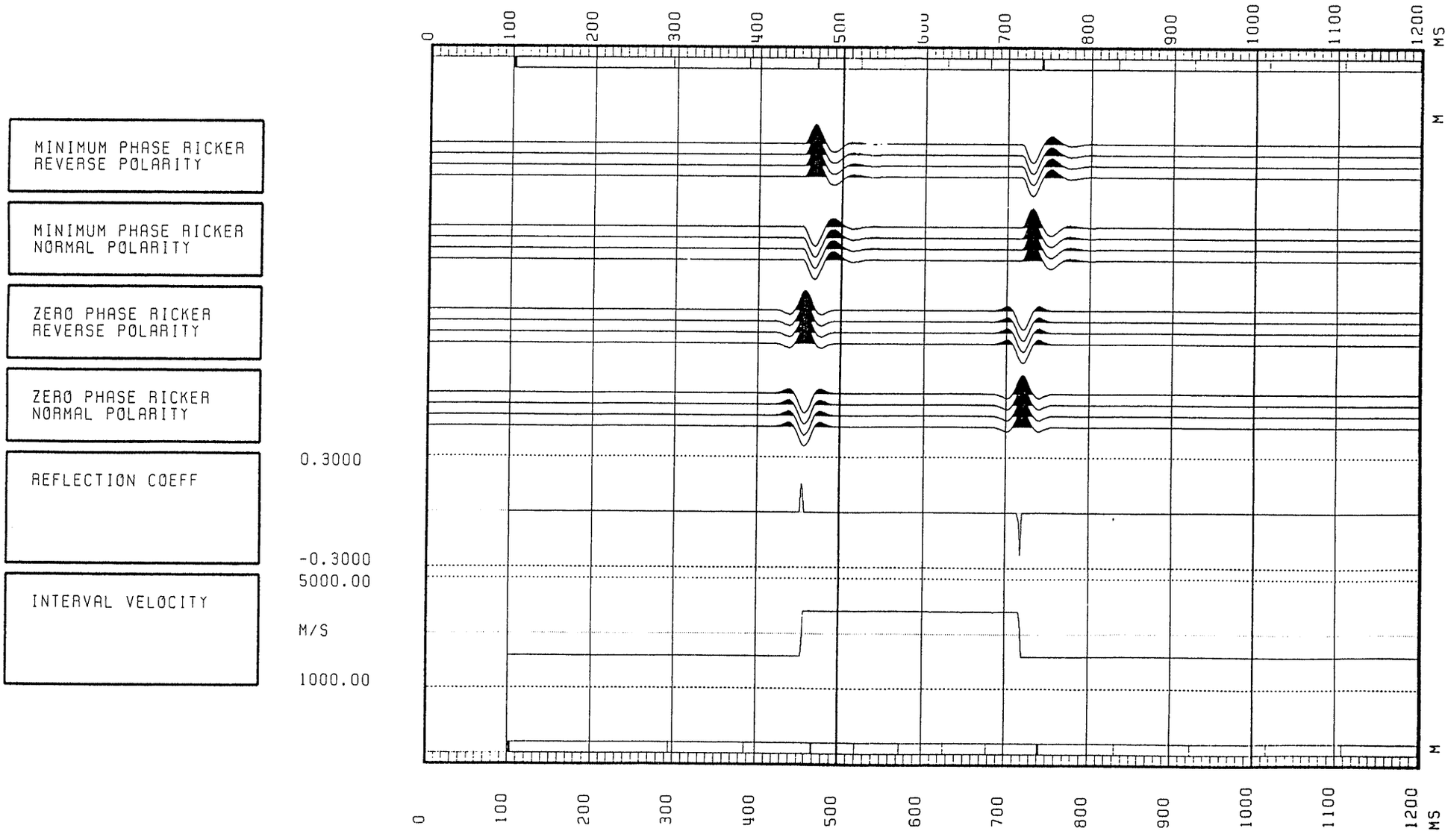
Seismic Calibration Log
40 hertz Geogram
50 hertz Geogram
60 hertz Geogram

VSP PLOTS

Plot 1	X, Y & Z axis : Stacked data
Plot 2	Amplitude Recovery
Plot 3	Velocity Filter
Plot 4	Predictive Deconvolution
Plot 5	Predictive Deconvolution & Corridor Stack
Plot 6	Waveshaping Deconvolution
Plot 7	Waveshaping Deconvolution & Corridor Stack
Plot 8	VSP Inversion
Plot 9	Compressional/Shear Velocity Analysis
Plot 10	Horizontal Projection on Shear Arrival
Plot 11	Horizontal Projection on Compressional Arrival
Plot 12	Shear Wave Processing
Plot 13	Comp & Shear VSP from Horizontal Components

SCHLUMBERGER (SEG-1976) WAVELET POLARITY CONVENTION

Figure 1



Shot

ANALYST: M. SANDERS 14-JUL-87 13:23:20 PROGRAM: GSHOT 007.E08

SCHLUMBERGER

GEOPHYSICAL AIRGUN REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 57C705

ANALYST: M. SANDERS 14-JUL-87 13:23:20 PROGRAM: GSHOT 007.E08

SCHLUMBERGER

GEOPHYSICAL AIRGUN REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 570705

LONG DEFINITIONS

GLOBAL

KB - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL
SRD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL
EKB - ELEVATION OF KELLY BUSHING
GL - ELEVATION OF USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
VELHYD - VELOCITY OF THE MEDIUM BETWEEN THE SOURCE AND THE HYDROPHONE
VELSUR - VELOCITY OF THE MEDIUM BETWEEN THE SOURCE AND THE SRD

MATRIX

GUNELZ - SOURCE ELEVATION ABOVE SRD (ONE FOR THE WHOLE JOB; OR ONE PER SHOT)
GUNEWZ - SOURCE DISTANCE FROM THE BOREHOLE AXIS IN EW DIRECTION (CF. GUNELZ)
GUNNSZ - SOURCE DISTANCE FROM THE BOREHOLE AXIS IN NS DIRECTION (CF. GUNELZ)
HYDELZ - HYDROPHONE ELEVATION ABOVE SRD (CF. GUNELZ)
HYDEWZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN EW DIRECTION (CF GUNELZ)
HYDNSZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN NS DIRECTION (CF GUNELZ)
TRTHYD - TRAVEL TIME FROM THE HYDROPHONE TO THE SOURCE
TRTSRD - TRAVEL TIME FROM THE SOURCE TO THE SRD
DEVWEL - DEVIATED WELL DATA PER SHOT : MEAS. DEPTH, VERT. DEPTH, EW, NS

SAMPLED

SHOT.GSH - SHOT NUMBER
DKB.GSH - MEASURED DEPTH FROM KELLY-BUSHING
DSRD.GSH - DEPTH FROM SRD
DGL.GSH - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
TIMO.GSH - MEASURED TRAVEL TIME FROM HYDROPHONE TO GEOPHONE
TIMV.GSH - VERTICAL TRAVEL TIME FROM THE SOURCE TO THE GEOPHONE
SHTM.GSH - SHOT TIME (WST)
AVGV.GSH - AVERAGE SEISMIC VELOCITY
DELZ.GSH - DEPTH INTERVAL BETWEEN SUCCESSIVE SHOTS
DELT.GSH - TRAVEL TIME INTERVAL BETWEEN SUCCESSIVE SHOTS
INTV.GSH - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	: 22.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	: 0	M
ELEVATION OF KELLY BUSHI	EKB	: 22.0000	M
ELEV OF GL AB. SRD(WST)	GL	: -51.0000	M
VEL SOURCE-HYDRO(WST)	VELHYD	: 1480.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	: 1480.00	M/S

(MATRIX PARAMETERS)

	SOURCE ELV M	SOURCE EW M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1	-5.00	-45.32	-21.13	-10.00	-45.32	-21.13

	TRT HYD-SC MS	TRT SC-SRD MS
1	3.38	3.38

	MD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1	73.00	73.00	51.00	0	0
2	220.00	220.00	198.00	0	0
3	445.00	445.00	423.00	0	0
4	460.00	460.00	438.00	0	0
5	475.00	475.00	453.00	0	0
6	490.00	490.00	468.00	0	0
7	505.00	505.00	483.00	0	0
8	520.00	520.00	498.00	0	0
9	535.00	535.00	513.00	0	0
10	550.00	550.00	528.00	0	0
11	565.00	565.00	543.00	0	0
12	580.00	580.00	558.00	0	0
13	595.00	595.00	573.00	0	0
14	610.00	610.00	588.00	0	0
15	625.00	625.00	603.00	0	0
16	640.00	640.00	618.00	0	0
17	656.00	656.00	634.00	0	0
18	670.00	670.00	648.00	0	0
19	685.00	685.00	663.00	0	0
20	700.00	700.00	678.00	0	0
21	715.00	715.00	693.00	0	0
22	730.00	730.00	708.00	0	0
23	745.00	745.00	723.00	0	0
24	760.00	760.00	738.00	0	0
25	774.00	774.00	752.00	0	0
26	790.00	790.00	768.00	0	0
27	805.00	805.00	783.00	0	0
28	820.00	820.00	798.00	0	0
29	835.00	835.00	813.00	0	0
30	850.00	850.00	828.00	0	0
31	865.00	865.00	843.00	0	0
32	880.00	880.00	858.00	0	0
33	8[illegible].00	895.00	873.00	0	0

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
1	73.00	51.00	0	42.53	31.08	34.46	1480			
2	220.00	198.00	147.00	113.00	112.66	116.04	1706	147.00	81.58	1802
3	445.00	423.00	372.00	213.00	214.85	218.23	1938	225.00	102.19	2202
4	460.00	438.00	387.00	220.00	221.90	225.28	1944	15.00	7.06	2126
5	475.00	453.00	402.00	226.00	227.96	231.34	1958	15.00	6.06	2476
6	490.00	468.00	417.00	233.00	235.01	238.39	1963	15.00	7.05	2128
7	505.00	483.00	432.00	240.00	242.06	245.44	1968	15.00	7.05	2129
8	520.00	498.00	447.00	247.00	249.10	252.48	1972	15.00	7.04	2130
9	535.00	513.00	462.00	253.00	255.15	258.52	1984	15.00	6.04	2481
10	550.00	528.00	477.00	259.00	261.19	264.57	1996	15.00	6.04	2483
11	565.00	543.00	492.00	265.00	267.23	270.61	2007	15.00	6.04	2484
12	580.00	558.00	507.00	272.00	274.26	277.64	2010	15.00	7.03	2133
13	595.00	573.00	522.00	278.00	280.29	283.67	2020	15.00	6.03	2486
14	610.00	588.00	537.00	285.00	287.32	290.70	2023	15.00	7.03	2134
15	625.00	603.00	552.00	292.00	294.35	297.73	2025	15.00	7.03	2134
16	640.00	618.00	567.00	299.00	301.38	304.76	2028	15.00	7.03	2135
17	656.00	634.00	583.00	307.00	309.40	312.78	2027	16.00	8.02	1994
18	670.00	648.00	597.00	314.00	316.42	319.80	2026	14.00	7.02	1994
19	685.00	663.00	612.00	321.00	323.45	326.82	2029	15.00	7.02	2136
20	700.00	678.00	627.00	329.00	331.46	334.84	2025	15.00	8.02	1871
21	715.00	693.00	642.00	336.00	338.49	341.86	2027	15.00	7.02	2137
22	730.00	708.00	657.00	343.00	345.51	348.88	2029	15.00	7.02	2137
23	745.00	723.00	672.00	350.00	352.52	355.90	2031	15.00	7.02	2137
24	760.00	738.00	687.00	356.00	358.55	361.92	2039	15.00	6.02	2491

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
								14.00	5.02	2789
25	774.00	752.00	701.00	361.00	363.56	366.94	2049	16.00	5.02	3185
26	790.00	768.00	717.00	366.00	368.59	371.97	2065	15.00	5.02	2988
27	805.00	783.00	732.00	371.00	373.61	376.99	2077	15.00	6.02	2493
28	820.00	798.00	747.00	377.00	379.62	383.00	2084	15.00	7.01	2138
29	835.00	813.00	762.00	384.00	386.64	390.02	2085	15.00	5.02	2990
30	850.00	828.00	777.00	389.00	391.66	395.03	2096	15.00	6.01	2494
31	865.00	843.00	792.00	395.00	397.67	401.05	2102	15.00	6.01	2494
32	880.00	858.00	807.00	401.00	403.69	407.06	2108	15.00	7.01	2139
33	895.00	873.00	822.00	408.00	410.70	414.08	2108			

Drift

ANALYST: M. SANDERS 14-JUL-87 13:29:35 PROGRAM: GDRIFT 007.E09

SCHLUMBERGER

DRIFT COMPUTATION REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 570705

LONG DEFINITIONS

GLOBAL

KB - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL
SRD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL
EKB - ELEVATION OF KELLY BUSHING
GL - ELEVATION OF USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
XSTART - TOP OF ZONE PROCESSED BY WST
XSTOP - BOTTOM OF ZONE PROCESSED BY WST
GAD001 - RAW SONIC CHANNEL NAME USED FOR WST SONIC ADJUSTMENT
UNFDEN - UNIFORM DENSITY VALUE

ZONE

LOFDEN - LAYER OPTION FLAG FOR DENSITY : -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
LAYDEN - USER SUPPLIED DENSITY DATA

SAMPLED

SHOT - SHOT NUMBER
DKB - MEASURED DEPTH FROM KELLY-BUSHING
DSRD - DEPTH FROM SRD
DGL - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
SHTM - SHOT TIME (WST)
RAWS - RAW SONIC (WST)
SHDR - DRIFT AT SHOT OR KNEE
BLSH - BLOCK SHIFT BETWEEN SHOTS OR KNEE

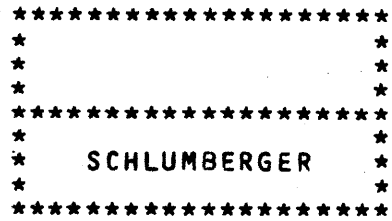
(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	22.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	0	M
ELEVATION OF KELLY BUSHI	EKB	22.0000	M
ELEV OF GL AB. SRD(WST)	GL	-51.0000	M
TOP OF ZONE PROCD (WST)	XSTART	0	M
BOT OF ZONE PROCD (WST)	XSTOP	0	M
RAW SONIC CH NAME (WST)	GAD001	DT.ATT.004.IPA.FLP.*	
UNIFORM DENSITY VALUE	UNFDEN	2.30000	G/C3

(ZONED PARAMETERS)		(VALUE)		(LIMITS)		
LAYER OPTION FLAG DENS	LOFDEN	1.000000		30479.7	-	0
USER SUPPLIED DENSITY DA	LAYDEN	-999.2500	G/C3	30479.7	-	0

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHFT CORRECTION US/M
1	73.00	51.00	0	34.46	34.46	0	0
2	220.00	198.00	147.00	116.04	116.04	0	0
3	445.00	423.00	372.00	218.23	215.58	2.64	11.74
4	460.00	438.00	387.00	225.28	222.20	3.08	29.23
5	475.00	453.00	402.00	231.34	228.52	2.82	-17.33
6	490.00	468.00	417.00	238.39	235.09	3.30	32.12
7	505.00	483.00	432.00	245.44	241.68	3.75	29.98
8	520.00	498.00	447.00	252.48	247.96	4.52	51.10
9	535.00	513.00	462.00	258.52	253.73	4.80	18.56
10	550.00	528.00	477.00	264.57	259.28	5.29	32.79
11	565.00	543.00	492.00	270.61	265.13	5.48	12.52
12	580.00	558.00	507.00	277.64	271.01	6.62	76.51
13	595.00	573.00	522.00	283.67	276.98	6.69	4.27
14	610.00	588.00	537.00	290.70	283.69	7.01	21.65
15	625.00	603.00	552.00	297.73	289.73	8.00	65.83
16	640.00	618.00	567.00	304.76	295.90	8.86	57.21
17	656.00	634.00	583.00	312.78	303.36	9.42	35.01
18	670.00	648.00	597.00	319.80	309.95	9.85	31.04
19	685.00	663.00	612.00	326.82	316.73	10.09	16.01
20	700.00	678.00	627.00	334.84	323.47	11.38	85.46
21	715.00	693.00	642.00	341.86	330.79	11.08	-19.76
22	730.00	708.00	657.00	348.88	338.26	10.62	-30.63
23	745.00	723.00	672.00	355.90	345.50	10.41	-14.15
24	760.00	738.00	687.00	361.92	351.49	10.43	1.85

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHFT CORRECTION US/M
25	774.00	752.00	701.00	366.94	355.93	11.01	41.05
26	790.00	768.00	717.00	371.97	361.18	10.79	-14.00
27	805.00	783.00	732.00	376.99	366.46	10.53	-17.20
28	820.00	798.00	747.00	383.00	372.52	10.49	-2.72
29	835.00	813.00	762.00	390.02	378.48	11.53	69.85
30	850.00	828.00	777.00	395.03	384.01	11.02	-34.26
31	865.00	843.00	792.00	401.05	389.81	11.24	14.88
32	880.00	858.00	807.00	407.06	395.89	11.17	-4.80
33	895.00	873.00	822.00	414.08	401.71	12.36	79.52
34	899.92	877.92	826.92	415.96	403.59	12.36	0

ANALYST: M. SANDERS 14-JUL-87 13:42:37 PROGRAM: GADJST 008.E08



SONIC ADJUSTMENT PARAMETER REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
CCUNTRY : AUSTRALIA
REFERENCE: 570705

LONG DEFINITIONS

GLOBAL

SRCDRF - ORIGIN OF ADJUSTMENT DATA
CONADJ - CONSTANT ADJUSTMENT TO AUTOMATIC DELTA-T MINIMUM = 7.5 US/F
UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)

ZONE

ZDRIFT - USER DRIFT AT BOTTOM OF THE ZONE
ADJOPZ - TYPE OF ADJUSTMNENT IN THE DRIFT ZONE : 0=DELTA-T MIN, 1=BLOCKSHIFT
ADJUSZ - DELTA-T MINIMUM USED FOR ADJUSTMENT IN THE DRIFT ZONE
LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
LAYVEL - USER SUPPLIED VELOCITY DATA

SAMPLED

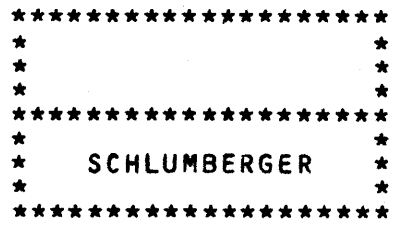
SHOT - SHOT NUMBER
VDKB - VERTICAL DEPTH RELATIVE TO KB
DSRD - DEPTH FROM SRD
DGL - VERTICAL DEPTH RELATIVE TO GRCUND LEVEL (USER'S REFERENCE)
KNEE - KNEE
BLSH - BLOCK SHIFT BETWEEN SHOTS OR KNEE
DTMI - VALUE OF DELTA-T MINIMUM USED
COEF - DELTA-T MIN COEFFICIENT USED IN THE DRIFT ZONE
DRGR - GRADIENT OF DRIFT CURVE

(GLOBAL PARAMETERS)		(VALUE)	
ORIG OF ADJ DATA (WST)	SRCDRF	: 2.00000	
CONS SONIC ADJST (WST)	CONADJ	: 24.6063	US/M
UNIFORM EARTH VELOCITY	UNERTH	: 2133.60	M/S

(ZONED PARAMETERS)		(VALUE)		(LIMITS)		
USER DRIFT ZONE (WST)	ZDRIFT	: 11.80000	MS	900.000	-	750.500
		10.30000		750.500		702.000
		10.00000		702.000		643.500
		9.000000		643.500		509.500
		4.000000		509.500		220.000
		0		220.000		0
ADJUSMNT MODE (WST)	ADJOPZ	:-999.2500		30479.7	-	0
USER DELTA-T MIN (WST)	ADJUSZ	:-999.2500	US/M	30479.7	-	0
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7	-	0
USER VELOC (WST)	LAYVEL	: 1802.000	M/S	220.000	-	73.0000
		1480.000		73.0000		0

KNEE NUMBER	VERTICAL DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	DRIFT AT KNEE MS	BLOCKSHIFT USED US/M	DELTA-T MINIMUM USED US/M	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT US/M
					0			0
2	220.00	198.00	147.00	0	13.82			13.82
3	509.50	487.50	436.50	4.00	37.31			37.31
4	643.50	621.50	570.50	9.00	17.09			17.09
5	702.00	680.00	629.00	10.00	6.19			6.19
6	750.50	728.50	677.50	10.30	10.03			10.03
7	900.00	878.00	827.00	11.80				

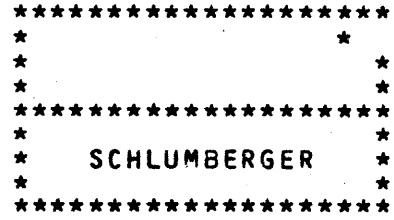
ANALYST: M. SANDERS 14-JUL-87 13:43:31 PROGRAM: GADJST 008.E08



VELOCITY REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 570705

ANALYST: M. SANDERS 14-JUL-87 13:43:31 PROGRAM: GADJST 008.E08



VELOCITY REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 570705

LONG DEFINITIONS

GLOBAL

KB - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL
SRD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL
EKB - ELEVATION OF KELLY BUSHING
GL - ELEVATION OF USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)

ZONE

LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
LAYVEL - USER SUPPLIED VELOCITY DATA

SAMPLED

SHOT - SHOT NUMBER
DKB - MEASURED DEPTH FROM KELLY-BUSHING
DSRD - DEPTH FROM SRD
DGL - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
SHTM - SHOT TIME (WST)
ADJS - ADJUSTED SONIC TRAVEL TIME
SHDR - DRIFT AT SHOT OR KNEE
REST - RESIDUAL TRAVEL TIME AT KNEE
INTV - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	22.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	0	M
ELEVATION OF KELLY BUSHI	EKB	22.0000	M
ELEV OF GL AB. SRD(WST)	GL	-51.0000	M
UNIFORM EARTH VELOCITY	UNERTH	2133.60	M/S

(ZONED PARAMETERS)		(VALUE)		(LIMITS)		
LAYER OPTION FLAG VELOC	LOFVEL	1.000000		30479.7	-	0
USER VELOC (WST)	LAYVEL	1802.000	M/S	220.000	-	73.0000
		1480.000		73.0000		0

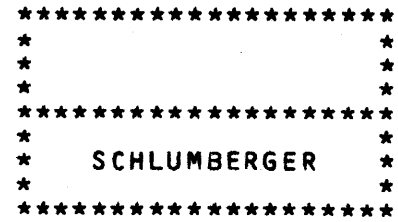
COMPANY : LASMO ENERGY WELL : PATRICIA - 1

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEOPH MS	INTEGRATED ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
								1480
1	73.00	51.00	0	34.46	34.46	0	0	
								1802
2	220.00	198.00	147.00	116.04	116.03	0	0	
								2192
3	445.00	423.00	372.00	218.23	218.69	2.64	-.47	
								2198
4	460.00	438.00	387.00	225.28	225.52	3.08	-.23	
								2298
5	475.00	453.00	402.00	231.34	232.04	2.82	-.70	
								2214
6	490.00	468.00	417.00	238.39	238.82	3.30	-.43	
								2206
7	505.00	483.00	432.00	245.44	245.62	3.75	-.18	
								2230
8	520.00	498.00	447.00	252.48	252.35	4.52	.13	
								2374
9	535.00	513.00	462.00	258.52	258.66	4.80	-.14	
								2455
10	550.00	528.00	477.00	264.57	264.77	5.29	-.21	
								2336
11	565.00	543.00	492.00	270.61	271.20	5.48	-.59	
								2328
12	580.00	558.00	507.00	277.64	277.64	6.62	0	
								2295
13	595.00	573.00	522.00	283.67	284.18	6.69	-.50	
								2066
14	610.00	588.00	537.00	290.70	291.44	7.01	-.74	
								2275
15	625.00	603.00	552.00	297.73	298.03	8.00	-.30	
								2228
16	640.00	618.00	567.00	304.76	304.76	8.86	-.01	
								2048
17	656.00	634.00	583.00	312.78	312.57	9.42	.21	
								2052
18	670.00	648.00	597.00	319.80	319.39	9.85	.41	
								2131
19	685.00	663.00	612.00	326.82	326.44	10.09	.39	
								2145
20	700.00	678.00	627.00	334.84	333.43	11.38	1.41	
								2018
21	715.00	693.00	642.00	341.86	340.86	11.08	1.00	
								1980
22	730.00	708.00	657.00	348.88	348.44	10.62	.45	
								2048
23	745.00	723.00	672.00	355.90	355.76	10.41	.14	
								2458
24	760.00	738.00	687.00	361.92	361.87	10.43	.06	

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEOPH MS	INTEGRATED ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
								3051
25	774.00	752.00	701.00	366.94	366.45	11.01	.49	
								2960
26	790.00	768.00	717.00	371.97	371.86	10.79	.11	
								2760
27	805.00	783.00	732.00	376.99	377.30	10.53	-.31	
								2416
28	820.00	798.00	747.00	383.00	383.50	10.49	-.50	
								2452
29	835.00	813.00	762.00	390.02	389.62	11.53	.39	
								2641
30	850.00	828.00	777.00	395.03	395.30	11.02	-.27	
								2524
31	865.00	843.00	792.00	401.05	401.25	11.24	-.20	
								2405
32	880.00	858.00	807.00	407.06	407.48	11.17	-.42	
								2512
33	895.00	873.00	822.00	414.08	413.45	12.36	.62	
								2552
34	899.92	877.92	826.92	415.96	415.38	12.36	.58	

Time / Depth

ANALYST: M. SANDERS 14-JUL-87 13:49:18 PROGRAM: GTRFRM 001.E12



TIME CONVERTED VELOCITY REPORT

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 570705

LONG DEFINITIONS

GLOBAL

KB - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL
SRD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL
GL - ELEVATION OF USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)
UNFDEN - UNIFORM DENSITY VALUE

MATRIX

MVODIS - MOVE-OUT DISTANCE FROM BOREHOLE

ZONE

LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
LAYVEL - USER SUPPLIED VELOCITY DATA
LOFDEN - LAYER OPTION FLAG FOR DENSITY : -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
LAYDEN - USER SUPPLIED DENSITY DATA

SAMPLED

TWOT - TWO WAY TRAVEL TIME (RELATIVE TO THE SEISMIC REFERENCE
DKB - MEASURED DEPTH FROM KELLY-BUSHING
DSRD - DEPTH FROM SRD
AVGV - AVERAGE SEISMIC VELOCITY
RMSV - ROOT MEAN SQUARE VELOCITY (SEISMIC)
MVOT - NORMAL MOVE-OUT
MVOT - NORMAL MOVE-OUT
MVOT - NORMAL MOVE-OUT
INTV - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	: 22.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	: 0	M
ELEV OF GL AB. SRD(WST)	GL	: -51.0000	M
UNIFORM EARTH VELOCITY	UNERTH	: 2133.60	M/S
UNIFORM DENSITY VALUE	UNFDEN	: 2.30000	G/C3

(MATRIX PARAMETERS)

	MVOUT DIST M
1	1000.0
2	1500.0
3	2000.0

(ZONED PARAMETERS)		(VALUE)		(LIMITS)
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7 - 0
USER VELOC (WST)	LAYVEL	: 1802.000	M/S	220.000 - 73.0000
		1480.000		73.0000 0
LAYER OPTION FLAG DENS	LOFDEN	:-1.000000		30479.7 - 0
USER SUPPLIED DENSITY DA	LAYDEN	:-999.2500	G/C3	30479.7 - 0

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
0	22.00	0						1480
2.00	23.48	1.48	1480	1480	673.68	1011.52	1349.35	1480
4.00	24.96	2.96	1480	1480	671.69	1009.52	1347.36	1480
6.00	26.44	4.44	1480	1480	669.70	1007.53	1345.36	1480
8.00	27.92	5.92	1480	1480	667.72	1005.55	1343.38	1480
10.00	29.40	7.40	1480	1480	665.75	1003.56	1341.39	1480
12.00	30.88	8.88	1480	1480	663.78	1001.58	1339.40	1480
14.00	32.36	10.36	1480	1480	661.82	999.61	1337.42	1480
16.00	33.84	11.84	1480	1480	659.87	997.64	1335.45	1480
18.00	35.32	13.32	1480	1480	657.92	995.67	1333.47	1480
20.00	36.80	14.80	1480	1480	655.97	993.71	1331.50	1480
22.00	38.28	16.28	1480	1480	654.03	991.75	1329.53	1480
24.00	39.76	17.76	1480	1480	652.10	989.80	1327.56	1480
26.00	41.24	19.24	1480	1480	650.18	987.85	1325.60	1480
28.00	42.72	20.72	1480	1480	648.26	985.90	1323.64	1480
30.00	44.20	22.20	1480	1480	646.34	983.96	1321.68	1480
32.00	45.68	23.68	1480	1480	644.43	982.02	1319.73	1480
34.00	47.16	25.16	1480	1480	642.53	980.08	1317.78	1480
36.00	48.64	26.64	1480	1480	640.63	978.15	1315.83	1480
38.00	50.12	28.12	1480	1480	638.74	976.23	1313.89	1480
40.00	51.60	29.60	1480	1480	636.86	974.30	1311.94	1480
42.00	53.08	31.08	1480	1480	634.98	972.38	1310.00	1480
44.00	54.56	32.56	1480	1480	633.11	970.47	1308.07	1480
46.00	56.04	34.04	1480	1480	631.24	968.56	1306.13	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
48.00	57.52	35.52	1480	1480	629.38	966.65	1304.20	1480
50.00	59.00	37.00	1480	1480	627.52	964.75	1302.28	1480
52.00	60.48	38.48	1480	1480	625.67	962.85	1300.35	1480
54.00	61.96	39.96	1480	1480	623.83	960.95	1298.43	1480
56.00	63.44	41.44	1480	1480	621.99	959.06	1296.51	1480
58.00	64.92	42.92	1480	1480	620.16	957.17	1294.60	1480
60.00	66.40	44.40	1480	1480	618.33	955.29	1292.68	1480
62.00	67.88	45.88	1480	1480	616.51	953.41	1290.77	1480
64.00	69.36	47.36	1480	1480	614.70	951.53	1288.87	1480
66.00	70.84	48.84	1480	1480	612.89	949.66	1286.96	1480
68.00	72.32	50.32	1480	1480	611.09	947.79	1285.06	1675
70.00	74.00	52.00	1486	1486	606.61	941.89	1277.77	1802
72.00	75.80	53.80	1494	1496	600.48	933.51	1267.17	1802
74.00	77.60	55.60	1503	1505	594.68	925.61	1257.21	1802
76.00	79.40	57.40	1511	1513	589.17	918.13	1247.81	1802
78.00	81.20	59.20	1518	1521	583.91	911.03	1238.91	1802
80.00	83.01	61.01	1525	1529	578.89	904.28	1230.47	1802
82.00	84.81	62.81	1532	1536	574.08	897.84	1222.45	1802
84.00	86.61	64.61	1538	1543	569.46	891.68	1214.80	1802
86.00	88.41	66.41	1544	1550	565.02	885.79	1207.50	1802
88.00	90.21	68.21	1550	1556	560.75	880.13	1200.51	1802
90.00	92.02	70.02	1556	1562	556.62	874.70	1193.81	1802
92.00	93.82	71.82	1561	1567	552.63	869.46	1187.38	1802
94.00	95.62	73.62	1566	1573	548.77	864.41	1181.19	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
96.00	97.42	75.42	1571	1578	545.03	859.53	1175.23	1802
98.00	99.22	77.22	1576	1583	541.39	854.81	1169.47	1802
100.00	101.02	79.02	1580	1587	537.86	850.24	1163.91	1802
102.00	102.83	80.83	1585	1592	534.43	845.80	1158.53	1802
104.00	104.63	82.63	1589	1596	531.08	841.50	1153.32	1802
106.00	106.43	84.43	1593	1600	527.82	837.31	1148.27	1802
108.00	108.23	86.23	1597	1604	524.63	833.24	1143.36	1802
110.00	110.03	88.03	1601	1608	521.52	829.27	1138.59	1802
112.00	111.84	89.84	1604	1612	518.48	825.39	1133.95	1802
114.00	113.64	91.64	1608	1615	515.51	821.62	1129.43	1802
116.00	115.44	93.44	1611	1619	512.59	817.93	1125.03	1802
118.00	117.24	95.24	1614	1622	509.74	814.32	1120.73	1802
120.00	119.04	97.04	1617	1625	506.94	810.79	1116.53	1802
122.00	120.85	98.85	1620	1628	504.19	807.33	1112.43	1802
124.00	122.65	100.65	1623	1631	501.50	803.94	1108.42	1802
126.00	124.45	102.45	1626	1634	498.85	800.62	1104.49	1802
128.00	126.25	104.25	1629	1637	496.24	797.37	1100.65	1802
130.00	128.05	106.05	1632	1639	493.68	794.17	1096.88	1802
132.00	129.86	107.86	1634	1642	491.17	791.03	1093.18	1802
134.00	131.66	109.66	1637	1644	488.69	787.94	1089.56	1802
136.00	133.46	111.46	1639	1647	486.25	784.90	1086.00	1802
138.00	135.26	113.26	1641	1649	483.84	781.92	1082.50	1802
140.00	137.06	115.06	1644	1652	481.48	778.98	1079.07	1802
142.00	138.87	116.87	1646	1654	479.14	776.08	1075.69	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								1802
144.00	140.67	118.67	1648	1656	476.84	773.23	1072.36	
								1802
146.00	142.47	120.47	1650	1658	474.56	770.42	1069.09	
								1802
148.00	144.27	122.27	1652	1660	472.32	767.65	1065.87	
								1802
150.00	146.07	124.07	1654	1662	470.11	764.92	1062.70	
								1802
152.00	147.88	125.88	1656	1664	467.92	762.22	1059.57	
								1802
154.00	149.68	127.68	1658	1666	465.76	759.56	1056.49	
								1802
156.00	151.48	129.48	1660	1668	463.63	756.93	1053.45	
								1802
158.00	153.28	131.28	1662	1669	461.52	754.34	1050.45	
								1802
160.00	155.08	133.08	1664	1671	459.44	751.78	1047.49	
								1802
162.00	156.89	134.89	1665	1673	457.38	749.24	1044.56	
								1802
164.00	158.69	136.69	1667	1674	455.34	746.74	1041.67	
								1802
166.00	160.49	138.49	1669	1676	453.33	744.26	1038.82	
								1802
168.00	162.29	140.29	1670	1678	451.33	741.81	1036.00	
								1802
170.00	164.09	142.09	1672	1679	449.36	739.39	1033.22	
								1802
172.00	165.90	143.90	1673	1681	447.41	737.00	1030.46	
								1802
174.00	167.70	145.70	1675	1682	445.48	734.62	1027.74	
								1802
176.00	169.50	147.50	1676	1683	443.56	732.27	1025.04	
								1802
178.00	171.30	149.30	1678	1685	441.67	729.95	1022.38	
								1802
180.00	173.10	151.10	1679	1686	439.79	727.65	1019.74	
								1802
182.00	174.91	152.91	1680	1687	437.93	725.37	1017.13	
								1802
184.00	176.71	154.71	1682	1689	436.09	723.11	1014.54	
								1802
186.00	178.51	156.51	1683	1690	434.27	720.87	1011.98	
								1802
188.00	180.31	158.31	1684	1691	432.46	718.65	1009.44	
								1802
190.00	182.11	160.11	1685	1692	430.67	716.45	1006.92	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								1802
192.00	183.91	161.91	1687	1694	428.89	714.27	1004.43	
								1802
194.00	185.72	163.72	1688	1695	427.13	712.10	1001.96	
								1802
196.00	187.52	165.52	1689	1696	425.39	709.96	999.51	
								1802
198.00	189.32	167.32	1690	1697	423.66	707.83	997.09	
								1802
200.00	191.12	169.12	1691	1698	421.94	705.72	994.68	
								1802
202.00	192.92	170.92	1692	1699	420.24	703.63	992.29	
								1802
204.00	194.73	172.73	1693	1700	418.55	701.55	989.92	
								1802
206.00	196.53	174.53	1694	1701	416.88	699.49	987.57	
								1802
208.00	198.33	176.33	1695	1702	415.22	697.44	985.24	
								1802
210.00	200.13	178.13	1696	1703	413.57	695.41	982.93	
								1802
212.00	201.93	179.93	1697	1704	411.94	693.40	980.63	
								1802
214.00	203.74	181.74	1698	1705	410.32	691.40	978.35	
								1802
216.00	205.54	183.54	1699	1706	408.71	689.41	976.09	
								1802
218.00	207.34	185.34	1700	1707	407.11	687.44	973.84	
								1802
220.00	209.14	187.14	1701	1708	405.53	685.48	971.61	
								1802
222.00	210.94	188.94	1702	1709	403.95	683.53	969.39	
								1802
224.00	212.75	190.75	1703	1709	402.39	681.60	967.19	
								1802
226.00	214.55	192.55	1704	1710	400.84	679.67	965.00	
								1802
228.00	216.35	194.35	1705	1711	399.30	677.77	962.83	
								1802
230.00	218.15	196.15	1706	1712	397.77	675.87	960.67	
								1802
232.00	219.95	197.95	1707	1713	396.26	673.99	958.53	
								2222
234.00	222.18	200.18	1711	1718	393.42	670.04	953.59	
								2120
236.00	224.30	202.30	1714	1722	390.98	666.70	949.47	
								2247
238.00	226.54	204.54	1719	1727	388.15	662.75	944.52	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								2040
240.00	228.58	206.58	1722	1729	386.04	659.90	941.05	2215
242.00	230.80	208.80	1726	1734	383.40	656.24	936.48	2016
244.00	232.81	210.81	1728	1737	381.41	653.58	933.27	2099
246.00	234.91	212.91	1731	1740	379.21	650.57	929.58	2142
248.00	237.06	215.06	1734	1743	376.90	647.41	925.67	2073
250.00	239.13	217.13	1737	1746	374.83	644.60	922.24	2139
252.00	241.27	219.27	1740	1750	372.60	641.53	918.46	2229
254.00	243.50	221.50	1744	1754	370.13	638.09	914.17	2136
256.00	245.63	223.63	1747	1757	367.97	635.12	910.51	2053
258.00	247.68	225.68	1749	1760	366.06	632.54	907.39	2217
260.00	249.90	227.90	1753	1764	363.73	629.29	903.34	2148
262.00	252.05	230.05	1756	1767	361.62	626.38	899.75	2172
264.00	254.22	232.22	1759	1770	359.47	623.41	896.08	2270
266.00	256.49	234.49	1763	1775	357.09	620.06	891.89	2246
268.00	258.74	236.74	1767	1779	354.81	616.86	887.89	2281
270.00	261.02	239.02	1771	1783	352.47	613.56	883.76	2297
272.00	263.32	241.32	1774	1787	350.12	610.24	879.60	2358
274.00	265.67	243.67	1779	1792	347.64	606.71	875.15	2416
276.00	268.09	246.09	1783	1797	345.05	602.99	870.43	2457
278.00	270.55	248.55	1788	1803	342.40	599.16	865.55	2375
280.00	272.92	250.92	1792	1808	340.00	595.73	861.23	2305
282.00	275.23	253.23	1796	1812	337.82	592.63	857.35	2473
284.00	277.70	255.70	1801	1817	335.25	588.91	852.61	2282
286.00	279.98	257.98	1804	1821	333.18	586.00	848.97	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								2230
288.00	282.21	260.21	1807	1824	331.27	583.31	845.64	2353
290.00	284.57	262.57	1811	1828	329.09	580.20	841.73	2239
292.00	286.80	264.80	1814	1831	327.21	577.55	838.44	2264
294.00	289.07	267.07	1817	1835	325.29	574.84	835.07	2159
296.00	291.23	269.23	1819	1837	323.62	572.52	832.23	2284
298.00	293.51	271.51	1822	1840	321.71	569.81	828.83	2091
300.00	295.60	273.60	1824	1842	320.21	567.75	826.35	2155
302.00	297.76	275.76	1826	1844	318.61	565.52	823.61	2109
304.00	299.87	277.87	1828	1846	317.10	563.45	821.09	2071
306.00	301.94	279.94	1830	1848	315.69	561.51	818.76	2154
308.00	304.09	282.09	1832	1850	314.13	559.33	816.09	2028
310.00	306.12	284.12	1833	1851	312.82	557.55	813.96	2091
312.00	308.21	286.21	1835	1853	311.40	555.60	811.60	2106
314.00	310.32	288.32	1836	1855	309.97	553.62	809.20	2166
316.00	312.48	290.48	1839	1857	308.44	551.48	806.57	2155
318.00	314.64	292.64	1840	1859	306.95	549.39	804.00	2126
320.00	316.76	294.76	1842	1861	305.53	547.41	801.58	2148
322.00	318.91	296.91	1844	1862	304.08	545.38	799.09	2099
324.00	321.01	299.01	1846	1864	302.73	543.50	796.81	2142
326.00	323.15	301.15	1848	1866	301.31	541.52	794.39	2176
328.00	325.33	303.33	1850	1868	299.85	539.45	791.85	2128
330.00	327.46	305.46	1851	1870	298.49	537.54	789.51	2166
332.00	329.62	307.62	1853	1871	297.08	535.54	787.05	2103
334.00	331.73	309.73	1855	1873	295.78	533.73	784.84	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
336.00	333.82	311.82	1856	1874	294.51	531.95	782.69	2093
338.00	335.94	313.94	1858	1876	293.20	530.11	780.44	2123
340.00	338.05	316.05	1859	1877	291.92	528.33	778.26	2108
342.00	340.14	318.14	1860	1879	290.69	526.60	776.17	2088
344.00	342.15	320.15	1861	1879	289.59	525.09	774.36	2008
346.00	344.28	322.28	1863	1881	288.30	523.26	772.12	2138
348.00	346.59	324.59	1865	1884	286.76	521.01	769.30	2303
350.00	348.87	326.87	1868	1886	285.27	518.84	766.58	2282
352.00	351.44	329.44	1872	1891	283.30	515.90	762.78	2567
354.00	353.77	331.77	1874	1894	281.77	513.64	759.94	2333
356.00	356.17	334.17	1877	1897	280.13	511.22	756.85	2406
358.00	358.51	336.51	1880	1900	278.63	509.02	754.07	2332
360.00	361.04	339.04	1884	1904	276.83	506.30	750.58	2531
362.00	363.27	341.27	1885	1906	275.52	504.40	748.21	2230
364.00	365.55	343.55	1888	1908	274.13	502.37	745.66	2289
366.00	368.22	346.22	1892	1913	272.15	499.36	741.74	2668
368.00	370.46	348.46	1894	1915	270.87	497.50	739.42	2239
370.00	372.77	350.77	1896	1917	269.51	495.48	736.88	2308
372.00	374.93	352.93	1897	1919	268.36	493.82	734.83	2163
374.00	377.15	355.15	1899	1920	267.14	492.05	732.63	2217
376.00	379.42	357.42	1901	1922	265.86	490.17	730.26	2273
378.00	381.58	359.58	1903	1924	264.75	488.56	728.28	2156
380.00	383.73	361.73	1904	1925	263.65	486.97	726.32	2151
382.00	385.83	363.83	1905	1926	262.62	485.50	724.52	2101

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								2094
384.00	387.93	365.93	1906	1927	261.61	484.05	722.75	
								2154
386.00	390.08	368.08	1907	1928	260.53	482.49	720.82	
								2116
388.00	392.19	370.19	1908	1929	259.51	481.01	719.00	
								2241
390.00	394.44	372.44	1910	1931	258.34	479.29	716.84	
								2081
392.00	396.52	374.52	1911	1932	257.38	477.90	715.14	
								2138
394.00	398.65	376.65	1912	1933	256.35	476.41	713.30	
								2119
396.00	400.77	378.77	1913	1934	255.36	474.96	711.52	
								1999
398.00	402.77	380.77	1913	1934	254.50	473.75	710.07	
								2162
400.00	404.93	382.93	1915	1935	253.47	472.24	708.19	
								2366
402.00	407.30	385.30	1917	1938	252.19	470.31	705.73	
								2490
404.00	409.79	387.79	1920	1941	250.77	468.13	702.91	
								2003
406.00	411.79	389.79	1920	1941	249.94	466.95	701.49	
								2063
408.00	413.86	391.86	1921	1942	249.05	465.66	699.92	
								2122
410.00	415.98	393.98	1922	1943	248.11	464.27	698.20	
								2083
412.00	418.06	396.06	1923	1943	247.21	462.97	696.60	
								2046
414.00	420.11	398.11	1923	1944	246.35	461.73	695.09	
								2153
416.00	422.26	400.26	1924	1945	245.39	460.31	693.32	
								2233
418.00	424.50	402.50	1926	1946	244.35	458.74	691.34	
								2134
420.00	426.63	404.63	1927	1947	243.42	457.37	689.64	
								1941
422.00	428.57	406.57	1927	1947	242.69	456.34	688.41	
								2194
424.00	430.76	408.76	1928	1948	241.71	454.88	686.57	
								2535
426.00	433.30	411.30	1931	1952	240.35	452.75	683.80	
								2184
428.00	435.48	413.48	1932	1953	239.40	451.33	682.01	
								2016
430.00	437.50	415.50	1933	1953	238.62	450.20	680.64	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								2053
432.00	439.55	417.55	1933	1954	237.82	449.02	679.19	2066
434.00	441.62	419.62	1934	1954	237.00	447.82	677.71	2012
436.00	443.63	421.63	1934	1954	236.24	446.71	676.36	2027
438.00	445.66	423.66	1935	1955	235.47	445.59	674.99	2057
440.00	447.71	425.71	1935	1955	234.68	444.42	673.55	2219
442.00	449.93	427.93	1936	1956	233.74	442.98	671.73	2221
444.00	452.15	430.15	1938	1958	232.80	441.55	669.91	2283
446.00	454.44	432.44	1939	1959	231.80	440.02	667.96	2247
448.00	456.68	434.68	1941	1961	230.85	438.56	666.10	2225
450.00	458.91	436.91	1942	1962	229.92	437.15	664.31	2172
452.00	461.08	439.08	1943	1963	229.06	435.84	662.65	2163
454.00	463.25	441.25	1944	1964	228.21	434.55	661.03	2566
456.00	465.81	443.81	1947	1967	226.95	432.56	658.40	2288
458.00	468.10	446.10	1948	1968	226.00	431.09	656.51	2358
460.00	470.46	448.46	1950	1970	224.99	429.50	654.46	2277
462.00	472.73	450.73	1951	1972	224.06	428.06	652.62	2202
464.00	474.94	452.94	1952	1973	223.21	426.76	650.96	2088
466.00	477.02	455.02	1953	1973	222.46	425.64	649.55	2148
468.00	479.17	457.17	1954	1974	221.67	424.43	648.03	2125
470.00	481.30	459.30	1954	1975	220.90	423.26	646.56	2331
472.00	483.63	461.63	1956	1976	219.96	421.78	644.64	2171
474.00	485.80	463.80	1957	1977	219.16	420.55	643.08	2290
476.00	488.09	466.09	1958	1979	218.27	419.15	641.28	2303
478.00	490.39	468.39	1960	1980	217.37	417.74	639.45	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
480.00	492.74	470.74	1961	1982	216.43	416.27	637.53	2350
482.00	494.94	472.94	1962	1983	215.64	415.04	635.96	2199
484.00	497.10	475.10	1963	1983	214.88	413.86	634.47	2161
486.00	499.28	477.28	1964	1984	214.11	412.67	632.95	2181
488.00	501.52	479.52	1965	1985	213.30	411.40	631.32	2235
490.00	503.69	481.69	1966	1986	212.55	410.24	629.84	2168
492.00	505.81	483.81	1967	1987	211.84	409.14	628.44	2129
494.00	507.92	485.92	1967	1987	211.15	408.08	627.09	2105
496.00	510.13	488.13	1968	1988	210.39	406.88	625.55	2207
498.00	512.50	490.50	1970	1990	209.49	405.45	623.68	2371
500.00	514.75	492.75	1971	1991	208.70	404.20	622.06	2253
502.00	516.91	494.91	1972	1992	207.99	403.09	620.64	2155
504.00	519.26	497.26	1973	1993	207.13	401.71	618.84	2351
506.00	521.65	499.65	1975	1995	206.24	400.28	616.96	2394
508.00	523.94	501.94	1976	1996	205.44	399.01	615.30	2293
510.00	526.16	504.16	1977	1997	204.71	397.85	613.80	2212
512.00	528.49	506.49	1978	1999	203.89	396.54	612.08	2330
514.00	530.83	508.83	1980	2000	203.07	395.21	610.34	2345
516.00	533.23	511.23	1982	2002	202.21	393.82	608.50	2399
518.00	535.95	513.95	1984	2005	201.07	391.94	605.97	2725
520.00	538.36	516.36	1986	2007	200.22	390.56	604.14	2407
522.00	540.64	518.64	1987	2008	199.48	389.37	602.58	2279
524.00	542.91	520.91	1988	2009	198.75	388.19	601.04	2268
526.00	545.46	523.46	1990	2011	197.80	386.64	598.96	2548

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
528.00	547.85	525.85	1992	2013	196.99	385.32	597.21	2390
530.00	550.71	528.71	1995	2017	195.79	383.30	594.46	2865
532.00	553.36	531.36	1998	2019	194.80	381.65	592.23	2644
534.00	555.57	533.57	1998	2020	194.14	380.59	590.85	2213
536.00	557.96	535.96	2000	2022	193.35	379.30	589.14	2395
538.00	560.32	538.32	2001	2023	192.60	378.07	587.51	2361
540.00	562.51	540.51	2002	2024	191.97	377.06	586.19	2189
542.00	564.61	542.61	2002	2024	191.40	376.16	585.03	2096
544.00	566.79	544.79	2003	2025	190.78	375.16	583.74	2179
546.00	569.09	547.09	2004	2026	190.08	374.03	582.24	2304
548.00	571.57	549.57	2006	2027	189.27	372.68	580.43	2476
550.00	573.73	551.73	2006	2028	188.68	371.72	579.19	2163
552.00	576.34	554.34	2008	2030	187.78	370.21	577.14	2611
554.00	578.58	556.58	2009	2031	187.14	369.18	575.78	2242
556.00	580.83	558.83	2010	2032	186.51	368.14	574.42	2246
558.00	582.99	560.99	2011	2033	185.93	367.21	573.20	2164
560.00	585.26	563.26	2012	2033	185.29	366.16	571.82	2265
562.00	587.50	565.50	2012	2034	184.67	365.14	570.48	2246
564.00	589.80	567.80	2013	2035	184.01	364.07	569.06	2298
566.00	592.57	570.57	2016	2038	183.04	362.41	566.78	2768
568.00	594.69	572.69	2017	2039	182.51	361.55	565.66	2119
570.00	596.60	574.60	2016	2038	182.09	360.89	564.84	1913
572.00	598.59	576.59	2016	2038	181.63	360.17	563.91	1991
574.00	600.71	578.71	2016	2038	181.11	359.32	562.81	2112

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								2067
576.00	602.77	580.77	2017	2038	180.62	358.52	561.78	
								1915
578.00	604.69	582.69	2016	2038	180.20	357.87	560.97	
								2102
580.00	606.79	584.79	2017	2038	179.69	357.05	559.89	
								2407
582.00	609.20	587.20	2018	2039	179.01	355.90	558.34	
								1977
584.00	611.17	589.17	2018	2039	178.57	355.20	557.45	
								2308
586.00	613.48	591.48	2019	2040	177.95	354.17	556.07	
								2295
588.00	615.78	593.78	2020	2041	177.35	353.16	554.72	
								2319
590.00	618.09	596.09	2021	2042	176.73	352.12	553.33	
								2446
592.00	620.54	598.54	2022	2044	176.04	350.96	551.75	
								2159
594.00	622.70	600.70	2023	2044	175.52	350.10	550.62	
								2257
596.00	624.96	602.96	2023	2045	174.96	349.15	549.36	
								2258
598.00	627.21	605.21	2024	2046	174.39	348.21	548.09	
								2396
600.00	629.61	607.61	2025	2047	173.75	347.12	546.62	
								2266
602.00	631.88	609.88	2026	2048	173.18	346.18	545.36	
								2277
604.00	634.15	612.15	2027	2048	172.62	345.23	544.08	
								2126
606.00	636.28	614.28	2027	2049	172.14	344.43	543.03	
								2126
608.00	638.41	616.41	2028	2049	171.66	343.64	541.98	
								2126
610.00	640.53	618.53	2028	2049	171.18	342.84	540.94	
								2126
612.00	642.66	620.66	2028	2049	170.70	342.06	539.90	
								2074
614.00	644.73	622.73	2028	2050	170.26	341.32	538.93	
								2090
616.00	646.82	624.82	2029	2050	169.80	340.57	537.94	
								1982
618.00	648.80	626.80	2028	2049	169.40	339.92	537.09	
								2000
620.00	650.80	628.80	2028	2049	169.00	339.25	536.23	
								2015
622.00	652.82	630.82	2028	2049	168.59	338.57	535.35	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
624.00	654.84	632.84	2028	2049	168.17	337.90	534.46	2020
626.00	656.90	634.90	2028	2049	167.74	337.18	533.52	2066
628.00	658.94	636.94	2028	2049	167.33	336.49	532.61	2039
630.00	660.96	638.96	2028	2049	166.92	335.82	531.73	2020
632.00	662.93	640.93	2028	2049	166.54	335.19	530.92	1964
634.00	665.02	643.02	2028	2049	166.10	334.47	529.96	2092
636.00	667.10	645.10	2029	2049	165.68	333.75	529.01	2076
638.00	669.15	647.15	2029	2049	165.26	333.06	528.09	2059
640.00	671.34	649.34	2029	2049	164.78	332.25	527.01	2188
642.00	673.55	651.55	2030	2050	164.30	331.43	525.90	2210
644.00	675.64	653.64	2030	2050	163.88	330.72	524.96	2084
646.00	677.67	655.67	2030	2050	163.48	330.06	524.08	2032
648.00	679.67	657.67	2030	2050	163.10	329.42	523.25	2002
650.00	681.76	659.76	2030	2050	162.68	328.71	522.30	2094
652.00	684.08	662.08	2031	2051	162.16	327.81	521.07	2317
654.00	686.28	664.28	2031	2051	161.69	327.02	520.00	2194
656.00	688.42	666.42	2032	2052	161.26	326.28	519.00	2146
658.00	690.54	668.54	2032	2052	160.83	325.56	518.04	2117
660.00	692.67	670.67	2032	2052	160.41	324.83	517.06	2135
662.00	694.81	672.81	2033	2052	159.98	324.11	516.08	2137
664.00	696.88	674.88	2033	2052	159.58	323.44	515.18	2070
666.00	699.07	677.07	2033	2053	159.14	322.67	514.14	2189
668.00	701.35	679.35	2034	2054	158.65	321.83	512.99	2279
670.00	703.29	681.29	2034	2053	158.32	321.27	512.25	1940

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
672.00	705.27	683.27	2034	2053	157.96	320.67	511.47	1984
674.00	707.27	685.27	2033	2053	157.61	320.07	510.67	1994
676.00	709.23	687.23	2033	2053	157.26	319.50	509.91	1967
678.00	711.20	689.20	2033	2052	156.92	318.92	509.14	1969
680.00	713.20	691.20	2033	2052	156.57	318.32	508.35	1993
682.00	715.31	693.31	2033	2052	156.17	317.64	507.42	2117
684.00	717.27	695.27	2033	2052	155.83	317.07	506.68	1958
686.00	719.26	697.26	2033	2052	155.49	316.49	505.90	1988
688.00	721.37	699.37	2033	2052	155.10	315.82	504.99	2108
690.00	723.39	701.39	2033	2052	154.74	315.21	504.17	2024
692.00	725.29	703.29	2033	2052	154.43	314.69	503.49	1903
694.00	727.19	705.19	2032	2051	154.13	314.18	502.81	1901
696.00	729.15	707.15	2032	2051	153.80	313.62	502.07	1960
698.00	731.15	709.15	2032	2051	153.46	313.04	501.29	2001
700.00	733.09	711.09	2032	2050	153.14	312.50	500.58	1936
702.00	735.07	713.07	2032	2050	152.81	311.93	499.82	1981
704.00	737.04	715.04	2031	2050	152.48	311.38	499.08	1966
706.00	739.11	717.11	2031	2050	152.12	310.75	498.23	2073
708.00	741.40	719.40	2032	2051	151.67	309.95	497.12	2292
710.00	743.46	721.46	2032	2051	151.31	309.34	496.29	2060
712.00	745.51	723.51	2032	2051	150.96	308.73	495.47	2051
714.00	747.57	725.57	2032	2051	150.61	308.12	494.63	2061
716.00	749.63	727.63	2032	2051	150.26	307.52	493.81	2057
718.00	752.10	730.10	2034	2052	149.74	306.59	492.50	2469

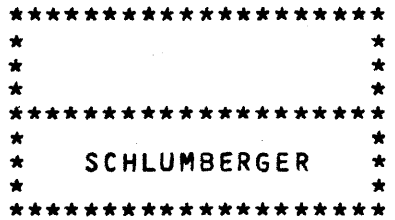
TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
720.00	754.58	732.58	2035	2053	149.22	305.66	491.19	2478
722.00	757.30	735.30	2037	2056	148.59	304.52	489.56	2726
724.00	760.50	738.50	2040	2060	147.72	302.92	487.23	3194
726.00	763.77	741.77	2043	2064	146.82	301.25	484.79	3277
728.00	766.84	744.84	2046	2067	146.04	299.81	482.72	3064
730.00	769.83	747.83	2049	2071	145.31	298.46	480.76	2995
732.00	772.74	750.74	2051	2073	144.62	297.21	478.95	2909
734.00	775.66	753.66	2054	2076	143.94	295.96	477.14	2915
736.00	778.67	756.67	2056	2079	143.22	294.62	475.20	3016
738.00	781.52	759.52	2058	2082	142.58	293.45	473.51	2846
740.00	784.53	762.53	2061	2085	141.87	292.15	471.61	3009
742.00	787.42	765.42	2063	2087	141.23	290.96	469.89	2894
744.00	790.47	768.47	2066	2090	140.52	289.64	467.97	3045
746.00	793.45	771.45	2068	2093	139.84	288.40	466.16	2979
748.00	796.53	774.53	2071	2097	139.13	287.07	464.22	3083
750.00	799.59	777.59	2074	2100	138.43	285.77	462.32	3064
752.00	801.94	779.94	2074	2100	138.03	285.06	461.32	2344
754.00	804.28	782.28	2075	2101	137.64	284.35	460.31	2343
756.00	806.81	784.81	2076	2102	137.19	283.51	459.12	2526
758.00	809.34	787.34	2077	2104	136.73	282.68	457.92	2534
760.00	811.87	789.87	2079	2105	136.27	281.84	456.73	2534
762.00	814.21	792.21	2079	2106	135.89	281.16	455.75	2335
764.00	816.52	794.52	2080	2106	135.52	280.49	454.81	2312
766.00	818.78	796.78	2080	2106	135.18	279.86	453.92	2253

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
768.00	821.23	799.23	2081	2107	134.76	279.10	452.83	2459
770.00	823.51	801.51	2082	2108	134.41	278.46	451.93	2275
772.00	825.95	803.95	2083	2109	134.00	277.72	450.87	2441
774.00	828.53	806.53	2084	2110	133.55	276.88	449.66	2580
776.00	831.04	809.04	2085	2111	133.12	276.10	448.53	2511
778.00	833.48	811.48	2086	2112	132.72	275.37	447.48	2444
780.00	835.94	813.94	2087	2113	132.32	274.63	446.42	2457
782.00	838.36	816.36	2088	2114	131.93	273.92	445.41	2416
784.00	841.06	819.06	2089	2116	131.45	273.02	444.10	2703
786.00	843.77	821.77	2091	2117	130.96	272.11	442.78	2710
788.00	846.58	824.58	2093	2120	130.45	271.15	441.37	2807
790.00	849.23	827.23	2094	2121	129.99	270.30	440.13	2655
792.00	851.83	829.83	2096	2122	129.56	269.49	438.96	2594
794.00	854.38	832.38	2097	2124	129.14	268.72	437.84	2556
796.00	856.92	834.92	2098	2125	128.73	267.96	436.74	2540
798.00	859.37	837.37	2099	2126	128.35	267.27	435.74	2450
800.00	861.89	839.89	2100	2127	127.96	266.53	434.67	2517
802.00	864.41	842.41	2101	2128	127.56	265.79	433.61	2526
804.00	866.89	844.89	2102	2129	127.18	265.09	432.59	2479
806.00	869.28	847.28	2102	2129	126.83	264.45	431.66	2383
808.00	871.82	849.82	2104	2130	126.44	263.71	430.59	2541
810.00	874.39	852.39	2105	2132	126.04	262.96	429.50	2574
812.00	876.53	854.53	2105	2132	125.77	262.47	428.80	2137
814.00	878.82	856.82	2105	2132	125.45	261.89	427.98	2290

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
816.00	881.36	859.36	2106	2133	125.07	261.17	426.93	2537
818.00	883.90	861.90	2107	2134	124.68	260.45	425.88	2545
820.00	886.31	864.31	2108	2135	124.34	259.81	424.95	2412
822.00	888.90	866.90	2109	2136	123.95	259.08	423.87	2584
824.00	891.47	869.47	2110	2137	123.56	258.35	422.82	2568
826.00	893.87	871.87	2111	2138	123.22	257.73	421.91	2406
828.00	896.41	874.41	2112	2139	122.85	257.03	420.89	2542
830.00	898.98	876.98	2113	2140	122.47	256.31	419.84	2571

Synthetic

ANALYST: M. SANDERS 14-JUL-87 15:17:00 PROGRAM: GMULTP 006.E06



SYNTHETIC SEISMOGRAM TABLE

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 570705

ANALYST: M. SANDERS 14-JUL-87 15:17:00 PROGRAM: GMULTP 006.E06

SCHLUMBERGER

SYNTHETIC SEISMOGRAM TABLE

COMPANY : LASMO ENERGY
WELL : PATRICIA - 1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 57C705

THE HEADINGS AND FLAGS SHOWN IN THE DATA LIST ARE DEFINED
AS FOLLOWS:

IGEOFL- FLAG INDICATING MODE OF PROCESSING
IGEOFL = 0 WST DATA AVAILABLE AND PROCESSED
IGEOFL = 1 WST DATA NOT AVAILABLE

LOG INPUT DATA :
GRFOO1- CHANNEL NAME FOR INPUT DENSITY LOG DATA
GTROC1- CHANNEL NAME FOR INPUT SONIC LOG DATA
GCURVE- CORRELATION LOG NAMES

USER DEFINED MODELING

LOFVEL- LAYER OPTION FLAG FOR VELOCITY
LOFDEN- LAYER OPTION FLAG FOR DENSITY
LAYVEL- LAYERED VELOCITY VALUES FOR USER SUPPLIED ZONE LIMIT
WITH RESPECT TO SONIC LOG DATA
LAYDEN- LAYERED DENSITY VALUES FOR USER SUPPLIED ZONE LIMITS
WITH RESPECT TO SONIC LOG DATA
UNERTH- UNIFORM EARTH VELOCITY
UNFDEN- UNIFORM EARTH DENSITY
SRATE SAMPLING RATE IN MS
INIDEP START DEPTH FOR COMPUTING SYNTHETIC SEISMOGRAM
WITH RESPECT TO SONIC LOG DATA
IGESTP STOP DEPTH FOR COMPUTING SYNTHETIC SEISMOGRAM
WITH RESPECT TO SONIC LOG DATA
INITAU TWO WAY TRAVEL TIME FROM TOP SONIC TO SRD
EKB ELEVATION OF KELLY BUSHING WITH RESPECT TO
MEAN SEA LEVEL
SRDGEO SEISMIC REFERENCE DEPTH WITH RESPECT TO
MEAN SEA LEVEL
ICDP FLAG FOR COMPUTING RESIDUAL MULTIPLES
CDPTIM TWO WAY TIME INTERVAL FOR COMPUTATION OF
RESIDUAL MULTIPLES
SCRTIM SURFACE REFLECTOR TWO WAY TIME ABOVE INITAU
SCREFL SURFACE REFLECTION COEFFICIENT
RCMAX REFLECTION COEFFICIENTS THAT ARE EQUAL TO OR
GREATER THAN THIS VALUE SHALL BE FLAGGED

NOTE IN CASE OF MODELING A SYNTHETIC SEISMOGRAM WITHOUT
SONIC LOG DATA ,THE DEPTH REFERENCES SHALL BE USER
DEFINED

OUTPUT DATA

RMSVWE ROOT MEAN SQUARE VELOCITY FOUND FOR THE WELL
SRDTIM TWO WAY TRANSIT TIME BETWEEN INIDEP AND SRDGEO

CHANNNEL NAMES

TWOT- TWO WAY TRAVEL TIME
DSRD- DEPTH OF COMPUTED DATA WITH RESPECT TO SRD
INTV- INTERVAL VELOCITY ON A TIME SCALE
RHOT- INTERVAL DENSITY ON A TIME SCALE
REFL- REFLECTION COEFFICIENT AT GIVEN TWO WAY TRAVEL TIMES
ATTE- ATTENUATION COEFFICIENT AT GIVEN TWO WAY TRAVEL TIMES
PRIM- SYNTHETIC SEISMOGRAM - PRIMARIES
MULT- SYNTHETIC SEISMOGRAM - PRIMARIES + MULTIPLES
MUON- MULTIPLES ONLY

CHANNEL NAMES

CHAN 1 - TWOT.GMU.002.*
CHAN 2 - DSRD.GRF.006.*
CHAN 3 - INTV.GRF.007.*
CHAN 4 - RHOT.GRF.001.*
CHAN 5 - REFL.GRF.001.*
CHAN 6 - ATTE.GRF.001.*
CHAN 7 - PRIM.GRF.001.*
CHAN 8 - MULT.GMU.001.*
CHAN 9 - MUON.GMU.001.*

(GLOBAL PARAMETERS)		(VALUE)	
MODE OF PROC (GEOGRAM)	IGEOFL	0	
INITIALIZE CDP LOGIC	ICDP	0	
CDP TIME	CDPTIM	.200000	S
TIME SAMPLING (WST)	SRATE	2.00000	MS
TOP DEPTH OF PROCESSING	INIDEP	198.000	M
BOTTOM DEPTH OF PROCESSI	IGESTP	872.000	M
INITIAL TWO WAY TRAVEL T	INITAU	.23280	S
SRD FOR GEOGRAM	SRDGEO	-30479.7	M
ELEVATION OF KELLY BUSHI	EKB	0	M
SRD TIME	SRDTIM	0	MS
SURFACE COEFFICIENT OF R	SCRTIM	0	MS
SURFACE COEFFICIENT OF R	SCREFL	-1.00000	
REFLECTION COEFF MAXIMUM	RCMAX	.300000	
RMS VELOCITY IN WELL	RMSVWE	2288.01	M/S
UNIFORM EARTH VELOCITY	UNERTH	2133.60	M/S
UNIFORM DENSITY VALUE	UNFDEN	2.30000	G/C3

(MATRIX PARAMETERS)

1 GR*
2 CALI*

(ZONED PARAMETERS)		(VALUE)		(LIMITS)	
LAYER OPTION FLAG DENS	LOFDEN	:-1.000000		30479.7 -	0
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7 -	0
USER SUFPLIED DENSITY DA	LAYDEN	:-999.2500	G/C3	30479.7 -	0
USER VELOC (WST)	LAYVEL	: 1802.000	M/S	220.000 -	73.0000
		1480.000		73.0000	0

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2218	2.100					
234.1	200.22			-.023	.99949	-.02264	-.02264	0
		2120	2.100					
236.1	202.34			.028	.99869	.02830	.02779	-.00051
		2243	2.100					
238.1	204.58			-.046	.99656	-.04611	-.04482	.00129
		2045	2.100					
240.1	206.63			.038	.99513	.03777	.03480	-.00296
		2206	2.100					
242.1	208.83			-.043	.99326	-.04315	-.03870	.00445
		2023	2.100					
244.1	210.86			.018	.99292	.01819	.01173	-.00645
		2098	2.100					
246.1	212.95			.011	.99281	.01050	.01725	.00675
		2143	2.100					
248.1	215.10			-.017	.99252	-.01689	-.02225	-.00536
		2072	2.100					
250.1	217.17			.015	.99229	.01522	.01765	.00243
		2136	2.100					
252.1	219.30			.022	.99182	.02153	.02229	.00076
		2231	2.100					
254.1	221.54			-.021	.99139	-.02078	-.02228	-.00150
		2139	2.100					
256.1	223.68			-.021	.99094	-.02119	-.01988	.00131
		2050	2.100					
258.1	225.72			.039	.98940	.03897	.03797	-.00100
		2218	2.100					
260.1	227.94			-.017	.98912	-.01668	-.01503	.00165
		2144	2.100					
262.1	230.09			.008	.98906	.00760	.00578	-.00182
		2177	2.100					
264.1	232.26			.020	.98865	.02027	.02347	.00320
		2268	2.100					
266.1	234.53			-.005	.98862	-.00523	-.00963	-.00440
		2245	2.100					
268.1	236.78			.007	.98857	.00735	.01230	.00495
		2278	2.100					
270.1	239.06			.004	.98855	.00424	.00337	-.00088
		2298	2.100					
272.1	241.35			.013	.98839	.01247	.00916	-.00332
		2356	2.100					
274.1	243.71			.013	.98823	.01252	.01966	.00714
		2417	2.100					
276.1	246.13			.008	.98817	.00775	.00461	-.00314
		2455	2.100					
278.1	248.58			-.016	.98792	-.01559	-.01670	-.00112
		2379	2.100					
280.1	250.96			-.016	.98766	-.01604	-.01406	.00198
		2303	2.100					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
282.1	253.26			.036	.98640	.03540	.03501	-.00039
		2474	2.100					
284.1	255.74			-.040	.98479	-.03974	-.03976	-.00003
		2283	2.100					
286.1	258.02			-.012	.98466	-.01164	-.01432	-.00268
		2229	2.100					
288.1	260.25			.028	.98390	.02722	.03091	.00369
		2356	2.100					
290.1	262.61			-.026	.98326	-.02520	-.03088	-.00568
		2238	2.100					
292.1	264.84			.005	.98323	.00538	.00851	.00313
		2263	2.100					
294.1	267.11			-.023	.98270	-.02280	-.02346	-.00066
		2160	2.100					
296.1	269.27			.028	.98193	.02752	.02068	-.00685
		2285	2.100					
298.1	271.55			-.044	.98001	-.04347	-.03068	.01279
		2091	2.100					
300.1	273.64			.016	.97975	.01576	.00201	-.01375
		2159	2.100					
302.1	275.80			-.013	.97958	-.01296	-.00741	.00555
		2103	2.100					
304.1	277.91			-.007	.97953	-.00684	-.00958	-.00274
		2074	2.100					
306.1	279.98			.018	.97921	.01766	.02147	.00381
		2150	2.100					
308.1	282.13			-.028	.97843	-.02775	-.03532	-.00757
		2032	2.100					
310.1	284.16			.015	.97822	.01444	.01703	.00259
		2092	2.100					
312.1	286.25			.003	.97821	.00279	.00943	.00665
		2104	2.100					
314.1	288.36			.014	.97800	.01415	.00213	-.01202
		2166	2.100					
316.1	290.52			-.004	.97799	-.00387	.00820	.01206
		2149	2.100					
318.1	292.67			-.004	.97797	-.00392	-.00966	-.00574
		2132	2.100					
320.1	294.80			.003	.97796	.00315	.00547	.00231
		2146	2.100					
322.1	296.95			-.010	.97785	-.01027	-.00810	.00216
		2101	2.100					
324.1	299.05			.010	.97775	.00987	.00759	-.00228
		2144	2.100					
326.1	301.20			.007	.97770	.00715	.00996	.00281
		2176	2.100					
328.1	303.37			-.011	.97759	-.01056	-.00998	.00059
		2129	2.100					
330.1	305.50			.008	.97752	.00783	.00948	.00165

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2164	2.100					
332.1	307.66	2106	2.100	-.014	.97735	-.01325	-.01850	-.00525
334.1	309.77	2093	2.100	-.003	.97734	-.00286	.00251	.00537
336.1	311.86	2120	2.100	.006	.97730	.00610	.00837	.00227
338.1	313.98	2108	2.100	-.003	.97729	-.00265	-.01003	-.00737
340.1	316.09	2087	2.100	-.005	.97727	-.00485	.00283	.00769
342.1	318.18	2010	2.100	-.019	.97692	-.01847	-.02180	-.00333
344.1	320.19	2132	2.100	.030	.97606	.02889	.02645	-.00244
346.1	322.32	2301	2.100	.038	.97465	.03711	.03986	.00275
348.1	324.62	2280	2.100	-.005	.97463	-.00448	-.00350	.00098
350.1	326.90	2574	2.100	.061	.97105	.05913	.05913	0
352.1	329.48	2330	2.100	-.050	.96864	-.04834	-.04643	.00191
354.1	331.81	2404	2.100	.016	.96840	.01519	.01147	-.00372
356.1	334.21	2333	2.100	-.015	.96818	-.01455	-.01111	.00344
358.1	336.54	2536	2.100	.042	.96650	.04036	.03595	-.00441
360.1	339.08	2226	2.100	-.065	.96239	-.06301	-.05377	.00924
362.1	341.31	2289	2.100	.014	.96220	.01354	-.00064	-.01418
364.1	343.59	2660	2.100	.075	.95681	.07202	.08099	.00897
366.1	346.25	2248	2.100	-.084	.95008	-.08024	-.08249	-.00225
368.1	348.50	2301	2.100	.012	.94995	.01106	.00721	-.00385
370.1	350.80	2168	2.100	-.030	.94911	-.02828	-.02517	.00310
372.1	352.97	2220	2.100	.012	.94898	.01134	.00286	-.00848
374.1	355.19	2263	2.100	.010	.94889	.00909	.02709	.01800
376.1	357.46	2163	2.100	-.023	.94840	-.02146	-.04238	-.02092
378.1	359.62	2152	2.100	-.003	.94840	-.00242	.00257	.00498

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
380.1	361.77			-.012	.94825	-.01169	-.00514	.00656
		2100	2.100					
382.1	363.87			-.001	.94825	-.00081	-.01307	-.01226
		2096	2.100					
384.1	365.97			.013	.94809	.01245	.01529	.00284
		2152	2.100					
386.1	368.12			-.008	.94803	-.00747	-.00371	.00376
		2118	2.100					
388.1	370.24			.028	.94731	.02609	.02103	-.00507
		2238	2.100					
390.1	372.48			-.036	.94607	-.03424	-.03596	-.00172
		2082	2.100					
392.1	374.56			.012	.94593	.01171	.01372	.00201
		2134	2.100					
394.1	376.69			-.003	.94592	-.00248	-.00388	-.00140
		2123	2.100					
396.1	378.82			-.030	.94507	-.02839	-.02851	-.00012
		1999	2.100					
398.1	380.82			.037	.94376	.03523	.04265	.00742
		2154	2.100					
400.1	382.97			.048	.94159	.04525	.03745	-.00780
		2371	2.100					
402.1	385.34			.025	.94099	.02370	.03614	.01243
		2494	2.100					
404.1	387.84			-.110	.92967	-.10323	-.09942	.00381
		2001	2.100					
406.1	389.84			.016	.92944	.01443	-.00578	-.02021
		2064	2.100					
408.1	391.90			.014	.92926	.01312	.02888	.01576
		2123	2.100					
410.1	394.02			-.010	.92917	-.00908	-.00711	.00197
		2082	2.100					
412.1	396.10			-.008	.92910	-.00780	-.00197	.00583
		2047	2.100					
414.1	398.15			.024	.92855	.02267	-.00059	-.02326
		2150	2.100					
416.1	400.30			.020	.92818	.01862	.04829	.02968
		2238	2.100					
418.1	402.54			-.024	.92763	-.02264	-.03322	-.01058
		2131	2.100					
420.1	404.67			-.046	.92565	-.04276	-.05159	-.00884
		1943	2.100					
422.1	406.61			.061	.92225	.05614	.06672	.01058
		2194	2.100					
424.1	408.81			.072	.91752	.06606	.06874	.00268
		2533	2.100					
426.1	411.34			-.074	.91248	-.06800	-.06163	.00636
		2183	2.100					
428.1	413.52			-.039	.91109	-.03560	-.05898	-.02339

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2019	2.100					
430.1	415.54	2052	2.100	.008	.91103	.00735	.01894	.01160
432.1	417.59	2065	2.100	.003	.91102	.00291	-.01100	-.01390
434.1	419.66	2014	2.100	-.013	.91088	-.01152	.00266	.01418
436.1	421.67	2026	2.100	.003	.91087	.00278	-.00585	-.00863
438.1	423.70	2056	2.100	.007	.91082	.00670	-.00571	-.01242
440.1	425.75	2222	2.100	.039	.90944	.03537	.05750	.02213
442.1	427.98	2216	2.100	-.001	.90944	-.00126	-.02038	-.01911
444.1	430.19	2281	2.100	.015	.90925	.01322	.01461	.00139
446.1	432.47	2252	2.100	-.007	.90921	-.00597	.01963	.02561
448.1	434.73	2223	2.100	-.006	.90917	-.00587	-.02074	-.01487
450.1	436.95	2172	2.100	-.011	.90905	-.01045	-.00927	.00118
452.1	439.12	2166	2.100	-.001	.90905	-.00131	-.00496	-.00365
454.1	441.29	2562	2.100	.084	.90266	.07623	.08747	.01124
456.1	443.85	2288	2.100	-.057	.89977	-.05102	-.05250	-.00148
458.1	446.14	2350	2.100	.013	.89962	.01193	-.00031	-.01223
460.1	448.49	2278	2.100	-.016	.89940	-.01400	.00597	.01997
462.1	450.76	2213	2.100	-.014	.89921	-.01299	-.03778	-.02479
464.1	452.98	2086	2.100	-.029	.89843	-.02649	-.00790	.01858
466.1	455.06	2147	2.100	.014	.89825	.01284	-.00817	-.02102
468.1	457.21	2128	2.100	-.004	.89823	-.00403	.00071	.00474
470.1	459.34	2327	2.100	.045	.89643	.04024	.05738	.01714
472.1	461.67	2168	2.100	-.035	.89531	-.03166	-.04831	-.01665
474.1	463.83	2295	2.100	.028	.89458	.02550	.02807	.00257
476.1	466.13	2304	2.100	.002	.89458	.00172	.00881	.00709

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
478.1	468.43			.008	.89451	.00759	.00790	.00031
		2344	2.100					
480.1	470.78			-.031	.89364	-.02799	-.03653	-.00853
		2202	2.100					
482.1	472.98			-.008	.89357	-.00756	-.01157	-.00401
		2165	2.100					
484.1	475.14			.002	.89357	.00190	.01381	.01192
		2174	2.100					
486.1	477.32			.015	.89337	.01325	.00506	-.00819
		2239	2.100					
488.1	479.56			-.016	.89315	-.01410	-.00426	.00983
		2170	2.100					
490.1	481.73			-.009	.89308	-.00816	-.02283	-.01467
		2130	2.100					
492.1	483.86			-.007	.89304	-.00612	.00769	.01381
		2101	2.100					
494.1	485.96			.024	.89251	.02156	.02113	-.00043
		2205	2.100					
496.1	488.16			.037	.89130	.03295	.01743	-.01553
		2374	2.100					
498.1	490.54			-.027	.89066	-.02378	-.00158	.02219
		2251	2.100					
500.1	492.79			-.023	.89020	-.02028	-.02623	-.00595
		2151	2.100					
502.1	494.94			.045	.88837	.04038	.04749	.00711
		2355	2.100					
504.1	497.29			.007	.88833	.00588	-.00738	-.01326
		2387	2.100					
506.1	499.68			-.018	.88805	-.01574	-.01059	.00514
		2304	2.100					
508.1	501.98			-.020	.88769	-.01802	.00225	.02027
		2212	2.100					
510.1	504.20			.025	.88712	.02234	-.00023	-.02257
		2326	2.100					
512.1	506.52			.004	.88711	.00340	.01567	.01227
		2344	2.100					
514.1	508.87			.012	.88699	.01024	-.00380	-.01403
		2399	2.100					
516.1	511.27			.063	.88348	.05582	.05903	.00321
		2721	2.100					
518.1	513.99			-.060	.88032	-.05286	-.04092	.01194
		2414	2.100					
520.1	516.40			-.030	.87955	-.02601	-.04115	-.01514
		2275	2.100					
522.1	518.68			-.001	.87955	-.00091	.02541	.02632
		2271	2.100					
524.1	520.95			.053	.87706	.04680	.02658	-.02021
		2526	2.100					
526.1	523.47			-.023	.87660	-.02011	-.01098	.00913

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2412	2.100					
528.1	525.88			.083	.87061	.07247	.06429	-.00818
		2847	2.100					
530.1	528.73			-.035	.86954	-.03045	-.01966	.01079
		2655	2.100					
532.1	531.39			-.089	.86264	-.07745	-.08324	-.00579
		2221	2.100					
534.1	533.61			.035	.86156	.03052	.01426	-.01626
		2384	2.100					
536.1	535.99			-.004	.86155	-.00317	.01660	.01977
		2366	2.100					
538.1	538.36			-.037	.86040	-.03150	-.04709	-.01559
		2199	2.100					
540.1	540.56			-.025	.85986	-.02144	-.02229	-.00085
		2092	2.100					
542.1	542.65			.020	.85951	.01751	-.00625	-.02377
		2179	2.100					
544.1	544.83			.027	.85890	.02280	.05115	.02834
		2298	2.100					
546.1	547.13			.038	.85768	.03247	.04541	.01294
		2479	2.100					
548.1	549.60			-.067	.85388	-.05708	-.08557	-.02849
		2169	2.100					
550.1	551.77			.091	.84676	.07796	.09562	.01766
		2605	2.100					
552.1	554.38			-.075	.84203	-.06329	-.03991	.02338
		2243	2.100					
554.1	556.62			.001	.84203	.00085	-.04978	-.05063
		2247	2.100					
556.1	558.87			-.018	.84176	-.01513	.00665	.02179
		2168	2.100					
558.1	561.04			.021	.84138	.01768	.00072	-.01695
		2261	2.100					
560.1	563.30			-.003	.84138	-.00259	.01994	.02254
		2247	2.100					
562.1	565.54			.009	.84131	.00740	.01014	.00273
		2287	2.100					
564.1	567.83			.097	.83344	.08135	.07157	-.00978
		2777	2.100					
566.1	570.61			-.133	.81869	-.11088	-.11237	-.00149
		2125	2.100					
568.1	572.73			-.052	.81646	-.04271	-.05432	-.01160
		1914	2.100					
570.1	574.65			.019	.81618	.01529	.02498	.00969
		1987	2.100					
572.1	576.63			.031	.81537	.02563	-.00986	-.03550
		2116	2.100					
574.1	578.75			-.011	.81527	-.00938	.05560	.06497
		2068	2.100					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
576.1	580.82			-.039	.81405	-.03143	-.06863	-.03720
		1914	2.100					
578.1	582.73			.050	.81205	.04038	.02831	-.01207
		2090	2.124					
580.1	584.82			.084	.80626	.06856	.09392	.02535
		2421	2.171					
582.1	587.24			-.117	.79527	-.09412	-.07186	.02226
		1975	2.106					
584.1	589.22			.090	.78879	.07180	.03446	-.03735
		2302	2.166					
586.1	591.52			-.004	.78878	-.00314	.01855	.02170
		2295	2.154					
588.1	593.81			.030	.78805	.02396	.03150	.00754
		2306	2.279					
590.1	596.12			.011	.78795	.00901	.01529	.00629
		2459	2.186					
592.1	598.58			-.069	.78417	-.05456	-.07927	-.02471
		2164	2.163					
594.1	600.74			.022	.78379	.01724	.02112	.00388
		2254	2.169					
596.1	603.00			.005	.78377	.00364	.03542	.03178
		2254	2.190					
598.1	605.25			.066	.78033	.05196	.04300	-.00895
		2399	2.349					
600.1	607.65			-.054	.77802	-.04244	-.05384	-.01141
		2267	2.230					
602.1	609.92			.011	.77793	.00832	.00289	-.00543
		2278	2.267					
604.1	612.19			-.074	.77370	-.05742	-.02293	.03449
		2126	2.095					
606.1	614.32			0	.77370	-.00008	-.05671	-.05662
		2126	2.095					
608.1	616.45			.021	.77334	.01648	.02627	.00979
		212	2.186					
610.1	618.57			-.008	.77330	-.00595	-.01149	-.00554
		2126	2.153					
612.1	620.70			-.019	.77303	-.01432	.02657	.04090
		2065	2.135					
614.1	622.76			.002	.77303	.00159	-.04694	-.04853
		2090	2.118					
616.1	624.85			-.029	.77239	-.02229	-.02264	-.00034
		1989	2.101					
618.1	626.84			.001	.77239	.00043	.02661	.02618
		2007	2.085					
620.1	628.85			-.002	.77238	-.00184	-.02864	-.02681
		2014	2.068					
622.1	630.86			-.015	.77221	-.01153	-.01564	-.00411
		2020	2.001					
624.1	632.88			.004	.77220	.00308	-.01222	-.01531

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2063	1.976					
626.1	634.95			.022	.77181	.01734	.05044	.03311
		2040	2.089					
628.1	636.99			-.013	.77167	-.01029	-.04019	-.02989
		2020	2.054					
630.1	639.01			-.025	.77119	-.01926	-.01170	.00756
		1964	2.010					
632.1	640.97			.052	.76914	.03979	.04603	.00624
		2092	2.093					
634.1	643.06			-.001	.76914	-.00096	-.00746	-.00650
		2077	2.102					
636.1	645.14			-.010	.76906	-.00790	.00232	.01021
		2055	2.082					
638.1	647.19			.044	.76759	.03354	.02375	-.00979
		2191	2.130					
640.1	649.39			.006	.76757	.00440	.01694	.01254
		2209	2.137					
642.1	651.59			-.053	.76543	-.04051	-.02680	.01371
		2085	2.038					
644.1	653.68			.005	.76541	.00409	-.01209	-.01618
		2032	2.113					
646.1	655.71			-.003	.76540	-.00256	-.00579	-.00323
		2004	2.128					
648.1	657.71			.017	.76517	.01334	.02272	.00938
		2090	2.113					
650.1	659.80			.089	.75907	.06832	.11116	.04284
		2317	2.280					
652.1	662.12			-.056	.75667	-.04265	-.05481	-.01216
		2194	2.152					
654.1	664.31			-.009	.75660	-.00717	-.01574	-.00857
		2147	2.157					
656.1	666.46			-.016	.75640	-.01236	.01200	.02436
		2118	2.116					
658.1	668.58			.018	.75616	.01348	-.01446	-.02795
		2136	2.175					
660.1	670.72			-.005	.75614	-.00374	.00193	.00566
		2134	2.156					
662.1	672.85			.015	.75598	.01104	.00172	-.00932
		2073	2.285					
664.1	674.92			.031	.75525	.02355	.02986	.00631
		2186	2.306					
666.1	677.11			.045	.75371	.03405	.05130	.01725
		2275	2.425					
668.1	679.38			-.131	.74072	-.09895	-.12772	-.02877
		1950	2.173					
670.1	681.33			-.003	.74071	-.00231	-.00384	-.00153
		1984	2.122					
672.1	683.32			.003	.74071	.00215	.01510	.01295
		1994	2.123					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
674.1	685.31			-.015	.74055	-.01075	-.00300	.00775
		1965	2.093					
676.1	687.28			.006	.74053	.00411	-.05761	-.06172
		1971	2.111					
678.1	689.25			0	.74053	.00008	.00949	.00941
		1991	2.089					
680.1	691.24			.064	.73754	.04706	.07194	.02487
		2115	2.233					
682.1	693.35			-.050	.73568	-.03703	-.05636	-.01933
		1961	2.179					
684.1	695.31			-.002	.73568	-.00156	.02573	.02729
		1987	2.141					
686.1	697.30			.042	.73436	.03105	.01531	-.01574
		2104	2.201					
688.1	699.40			-.021	.73404	-.01550	.01000	.02550
		2029	2.188					
690.1	701.43			-.031	.73335	-.02240	-.02253	-.00013
		1903	2.194					
692.1	703.34			-.011	.73326	-.00822	-.04102	-.03280
		1901	2.148					
694.1	705.24			.015	.73311	.01070	-.00197	-.01267
		1958	2.147					
696.1	707.20			0	.73311	.00018	.00337	.00319
		2001	2.102					
698.1	709.20			-.027	.73257	-.01975	.01282	.03256
		1936	2.059					
700.1	711.13			.031	.73186	.02279	.00614	-.01665
		1981	2.142					
702.1	713.11			-.009	.73181	-.00637	-.00341	.00296
		1966	2.120					
704.1	715.08			.039	.73071	.02834	.02603	-.00231
		2068	2.178					
706.1	717.15			.127	.71894	.09274	.07123	-.02151
		2294	2.534					
708.1	719.44			-.070	.71545	-.05011	.02819	.07830
		2061	2.453					
710.1	721.50			-.042	.71418	-.03019	-.04128	-.01109
		2051	2.265					
712.1	723.55			-.004	.71417	-.00257	-.04635	-.04378
		2058	2.242					
714.1	725.61			.006	.71414	.00458	.01046	.00588
		2060	2.268					
716.1	727.67			.093	.70801	.06616	.05408	-.01208
		2464	2.284					
718.1	730.14			-.008	.70797	-.00533	.06140	.06673
		2475	2.239					
720.1	732.61			.040	.70682	.02847	-.03735	-.06582
		2719	2.209					
722.1	735.33			.117	.69720	.08247	.15311	.07064

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3187	2.383					
724.1	738.52	3280	2.299	-.003	.69719	-.00241	.03904	.04145
726.1	741.80	3070	2.339	-.025	.69677	-.01711	-.04948	-.03237
728.1	744.87	2996	2.312	-.018	.69655	-.01248	.00805	.02053
730.1	747.86	2909	2.276	-.023	.69619	-.01581	-.04880	-.03299
732.1	750.77	2912	2.255	-.004	.69618	-.00289	.03666	.03956
734.1	753.68	3016	2.326	.033	.69541	.02305	.01519	-.00786
736.1	756.70	2846	2.237	-.049	.69378	-.03374	-.06240	-.02866
738.1	759.55	3007	2.327	.047	.69223	.03273	.04106	.00833
740.1	762.55	2900	2.210	-.044	.69090	-.03039	-.04142	-.01103
742.1	765.45	3039	2.305	.045	.68953	.03076	.00896	-.02180
744.1	768.49	2978	2.163	-.042	.68832	-.02891	.00844	.03735
746.1	771.47	3084	2.315	.051	.68651	.03530	.03885	.00356
748.1	774.55	3070	2.360	.007	.68647	.00514	.00255	-.00259
750.1	777.62	2350	2.175	-.173	.66596	-.11865	-.14672	-.02808
752.1	779.97	2344	2.214	.008	.66592	.00513	.00910	.00396
754.1	782.32	2522	2.183	.030	.66533	.01977	-.02129	-.04106
756.1	784.84	2533	2.183	.002	.66533	.00147	-.01323	-.01470
758.1	787.37	2535	2.157	-.006	.66531	-.00377	.03274	.03652
760.1	789.91	2339	2.169	-.037	.66438	-.02490	-.00981	.01509
762.1	792.25	2312	2.191	-.001	.66438	-.00064	-.03712	-.03648
764.1	794.56	2253	2.121	-.029	.66381	-.01936	-.05268	-.03332
766.1	796.81	2459	2.239	.071	.66049	.04697	.05146	.00449
768.1	799.27	2275	2.132	-.063	.65784	-.04186	-.03147	.01039
770.1	801.55	2438	2.178	.045	.65648	.02991	.06073	.03081

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
772.1	803.98			.034	.65573	.02210	-.02333	-.04543
		2580	2.202					
774.1	806.56			-.019	.65549	-.01254	.05155	.06409
		2514	2.175					
776.1	809.08			-.013	.65538	-.00838	.00083	.00921
		2442	2.183					
778.1	811.52			.013	.65528	.00843	-.02330	-.03173
		2458	2.225					
780.1	813.98			-.014	.65515	-.00906	-.01435	-.00528
		2415	2.202					
782.1	816.39			.060	.65277	.03946	.05391	.01445
		2699	2.224					
784.1	819.09			-.005	.65276	-.00310	.04914	.05225
		2712	2.192					
786.1	821.80			.015	.65262	.00969	-.01633	-.02602
		2804	2.184					
788.1	824.61			-.027	.65212	-.01790	-.01889	-.00098
		2656	2.182					
790.1	827.26			-.006	.65210	-.00372	.01369	.01740
		2596	2.208					
792.1	829.86			-.003	.65210	-.00205	-.02569	-.02364
		2557	2.227					
794.1	832.42			-.004	.65209	-.00268	.03660	.03929
		2540	2.224					
796.1	834.96			-.009	.65203	-.00590	-.03285	-.02695
		2450	2.264					
798.1	837.41			-.002	.65203	-.00104	-.02860	-.02757
		2518	2.196					
800.1	839.92			.013	.65193	.00818	.03020	.02202
		2525	2.245					
802.1	842.45			-.010	.65187	-.00622	-.05093	-.04471
		2482	2.241					
804.1	844.93			-.048	.65035	-.03151	.02687	.05838
		2381	2.120					
806.1	847.31			.053	.64854	.03425	-.00107	-.03531
		2539	2.210					
808.1	849.85			.011	.64846	.00741	-.00911	-.01652
		2572	2.232					
810.1	852.42			-.136	.63647	-.08817	-.06208	.02609
		2148	2.033					
812.1	854.57			.034	.63574	.02149	-.00309	-.02458
		2282	2.047					
814.1	856.85			.095	.62995	.06067	.08240	.02173
		2537	2.230					
816.1	859.39			-.002	.62995	-.00117	-.03043	-.02927
		2545	2.214					
818.1	861.94			-.041	.62890	-.02579	-.00510	.02070
		2415	2.151					
820.1	864.35			.034	.62816	.02147	.00558	-.01589

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2580	2.155					
822.1	866.93			-.004	.62815	-.00265	-.00400	-.00135
		2571	2.145					
824.1	869.50			-.032	.62752	-.01994	.01645	.03638
		2407	2.150					
826.1	871.91			-.003	.62751	-.00170	-.03089	-.02919
		2394	2.150					
828.1	874.30			0	0	0	-.00745	-.00745
830.1							.01878	.01878
832.1							-.00859	-.00859
834.1							-.03270	-.03270
836.1							.04902	.04902
838.1							.01018	.01018
840.1							-.05747	-.05747
842.1							-.02056	-.02056
844.1							.05628	.05628
846.1							.01492	.01492
848.1							-.06011	-.06011
850.1							.03671	.03671
852.1							.04076	.04076
854.1							-.04247	-.04247
856.1							-.02317	-.02317
858.1							.00477	.00477
860.1							.03451	.03451
862.1							-.00134	-.00134
864.1							-.03955	-.03955
866.1							.05704	.05704
868.1							.00442	.00442

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
870.1							-.03565	-.03565
872.1							-.00033	-.00033
874.1							-.01432	-.01432
876.1							-.00275	-.00275
878.1							.02528	.02528
880.1							.03419	.03419
882.1							-.01412	-.01412
884.1							.01063	.01063
886.1							.00968	.00968
888.1							-.06429	-.06429
890.1							.04910	.04910
892.1							-.04214	-.04214
894.1							.02888	.02888
896.1							.02165	.02165
898.1							-.02809	-.02809
900.1							.00627	.00627
902.1							-.02353	-.02353
904.1							.01549	.01549
906.1							.01620	.01620
908.1							-.04931	-.04931
910.1							.03087	.03087
912.1							-.00657	-.00657
914.1							-.02344	-.02344
916.1							.01089	.01089
918.1							.02920	.02920

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
920.1							.02566	.02566
922.1							-.03997	-.03997
924.1							.03114	.03114
926.1							-.03649	-.03649
928.1							-.01787	-.01787
930.1							-.00698	-.00698
932.1							.03123	.03123
934.1							.00692	.00692
936.1							-.03178	-.03178
938.1							.02049	.02049
940.1							-.00152	-.00152
942.1							.01518	.01518
944.1							-.05803	-.05803
946.1							.02598	.02598
948.1							.01669	.01669
950.1							-.04879	-.04879
952.1							.06494	.06494
954.1							.00152	.00152
956.1							-.03444	-.03444
958.1							.02425	.02425
960.1							.00039	.00039
962.1							-.00978	-.00978
964.1							-.00345	-.00345
966.1							.02831	.02831

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
968.1							-.04262	-.04262
970.1							.02399	.02399
972.1							.04924	.04924
974.1							-.01998	-.01998
976.1							-.01827	-.01827
978.1							-.01014	-.01014
980.1							-.00285	-.00285
982.1							-.00191	-.00191
984.1							-.01455	-.01455
986.1							.02918	.02918
988.1							-.00063	-.00063
990.1							-.01328	-.01328
992.1							-.04067	-.04067
994.1							.05431	.05431
996.1							-.03137	-.03137
998.1							-.06311	-.06311
1000.1							.08502	.08502
1002.1							-.02402	-.02402
1004.1							-.03250	-.03250
1006.1							.01707	.01707
1008.1							-.00771	-.00771
1010.1							.02963	.02963
1012.1							-.03709	-.03709
1014.1							.01589	.01589
1016.1							.01062	.01062

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1018.1							-.01313	-.01313
1020.1							-.00018	-.00018
1022.1							.04120	.04120
1024.1							.04582	.04582
1026.1							-.03227	-.03227
1028.1							-.04004	-.04004
1030.1							.02503	.02503
1032.1							.04337	.04337
1034.1							.00020	.00020
1036.1							-.08766	-.08766
1038.1							.04145	.04145
1040.1							.03313	.03313
1042.1							-.01200	-.01200
1044.1							.00749	.00749
1046.1							-.00156	-.00156
1048.1							.02217	.02217
1050.1							-.05086	-.05086
1052.1							-.00097	-.00097
1054.1							.01081	.01081
1056.1							-.00752	-.00752
1058.1							.00480	.00480
1060.1							.00426	.00426
1062.1							.01158	.01158
1064.1							-.02978	-.02978

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1066.1							-.01226	-.01226
1068.1							.04191	.04191
1070.1							-.05668	-.05668
1072.1							.00428	.00428
1074.1							.00994	.00994
1076.1							.01444	.01444
1078.1							-.00447	-.00447
1080.1							-.01692	-.01692
1082.1							.05938	.05938
1084.1							-.05220	-.05220
1086.1							-.00828	-.00828
1088.1							-.00366	-.00366
1090.1							.01690	.01690
1092.1							.03812	.03812
1094.1							.00590	.00590
1096.1							-.01092	-.01092
1098.1							-.01566	-.01566
1100.1							.00609	.00609
1102.1							.00714	.00714
1104.1							.00140	.00140
1106.1							.03070	.03070
1108.1							-.00649	-.00649
1110.1							.00833	.00833
1112.1							-.01997	-.01997
1114.1							-.00958	-.00958

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1116.1							.03246	.03246
1118.1							-.01190	-.01190
1120.1							.02906	.02906
1122.1							-.04700	-.04700
1124.1							-.01467	-.01467
1126.1							.01821	.01821

PE906989

This is an enclosure indicator page.
The enclosure PE906989 is enclosed within the container PE906975 at this location in this document.

The enclosure PE906989 has the following characteristics:

ITEM_BARCODE	= PE906989
CONTAINER_BARCODE	= PE906975
NAME	= Geogram/Synthetic Seismogram
BASIN	= GIPPSLAND
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Geogram/Synthetic Seismogram, 60Hz, (enclosure from attachment to WCR) for Patricia-1
REMARKS	=
DATE_CREATED	= 6/07/87
DATE_RECEIVED	= 17/08/87
W_NO	= W963
WELL_NAME	= PATRICIA-1
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= LASMO ENERGY AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906990

This is an enclosure indicator page.
The enclosure PE906990 is enclosed within the container PE906975 at this location in this document.

The enclosure PE906990 has the following characteristics:

ITEM_BARCODE	= PE906990
CONTAINER_BARCODE	= PE906975
NAME	= Geogram/Synthetic Seismogram
BASIN	= GIPPSLAND
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Geogram/Synthetic Seismogram, 40Hz, (enclosure from attachment to WCR) for Patricia-1
REMARKS	=
DATE_CREATED	= 6/07/87
DATE_RECEIVED	= 17/08/87
W_NO	= W963
WELL_NAME	= PATRICIA-1
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= LASMO ENERGY AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906991

This is an enclosure indicator page.
The enclosure PE906991 is enclosed within the container PE906975 at this location in this document.

The enclosure PE906991 has the following characteristics:

ITEM_BARCODE	= PE906991
CONTAINER_BARCODE	= PE906975
NAME	= Geogram/Synthetic Seismogram
BASIN	= GIPPSLAND
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Geogram/Synthetic Seismogram, 50Hz, (enclosure from attachment to WCR) for Patricia-1
REMARKS	=
DATE_CREATED	= 6/07/87
DATE_RECEIVED	= 17/08/87
W_NO	= W963
WELL_NAME	= PATRICIA-1
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= LASMO ENERGY AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906992

This is an enclosure indicator page.
The enclosure PE906992 is enclosed within the container PE906975 at this location in this document.

The enclosure PE906992 has the following characteristics:

ITEM_BARCODE	= PE906992
CONTAINER_BARCODE	= PE906975
NAME	= Seismic Calibration Log
BASIN	= GIPPSLAND
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Seismic Calibration Log, Adjusted Continuous Velocity Log, (enclosure from attachment to WCR) for Patricia-1
REMARKS	=
DATE_CREATED	= 6/07/87
DATE_RECEIVED	= 17/08/87
W_NO	= W963
WELL_NAME	= PATRICIA-1
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= LASMO ENERGY AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906993

This is an enclosure indicator page.
The enclosure PE906993 is enclosed within the container PE906975 at this location in this document.

The enclosure PE906993 has the following characteristics:

ITEM_BARCODE	= PE906993
CONTAINER_BARCODE	= PE906975
NAME	= Seismic Calibration Log
BASIN	= GIPPSLAND
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Seismic Calibration Log (enclosure from attachment to WCR) for Patricia-1
REMARKS	=
DATE_CREATED	= 6/07/87
DATE_RECEIVED	= 17/08/87
W_NO	= W963
WELL_NAME	= PATRICIA-1
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= LASMO ENERGY AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)