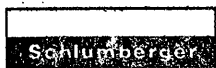


DEPT. NAT. RES & ENV  
PE907064

# SEISMIC COMPUTATIONS

SEISMIC COMPUTATIONS

Seismic Computations



OIL and GAS DIVISION

03 JAN 1986

BEACH PETROLEUM N.L.  
GEOGRAM PROCESSING REPORT

W919

WRIXONDALE - 1

FIELD : WILDCAT

COUNTRY : AUSTRALIA

COORDINATES : 037° 59' 42.8" S  
: 147° 29' 48.1" E

PERMIT : PEP - 107

DATE OF SURVEY : 19-OCTOBER-1985

REFERENCE NO. : 540421

# CONTENTS

- 1 Introduction
- 2 Data Acquisition
- 3 Check Shot Data
- 4 Sonic Calibration
- 5 Sonic Calibration Processing
- 6 Geogram Processing

## Additions

- Fig. 1 : Wavelet polarity convention
- Fig. 2 : Stacked checkshot data
- Fig. 3 : Stacked weathered zone data
- Fig. 4 : Weathered zone survey - velocity analysis
- Gun geometry sketch
- Colour Velocity Profile

## 1.0 INTRODUCTION

A velocity check shot survey was conducted in the WRIXONDALE - 1 well on 19-October-1985. Twenty two levels from 26.2 metres (SRD) to 965 metres below KB were shot using an airgun source. Seventeen of these levels have been used in the calibration of the sonic log.

The shot times and calibrated sonic times have been corrected to a nominal Mean Sea Level Datum.

## 2.0 DATA ACQUISITION

Table 1 : Field Equipment and Survey Parameters

Elevation SRD	Mean Sea Level
Elevation KB	26.2 metres AMSL
Elevation DF	26.0 metres AMSL
Elevation GL	22.2 metres AMSL
No. of Levels	22
Well Deviation	Nil
Total Depth	987.5 metres below KB
Energy Source	Bolt airgun, 200 cu.in.
Source Offset	40 metres
Source Depth	1.8 metres below GL
Source Azimuth	245°
Reference Sensor	Accelerometer
Sensor Offset	40 metres
Sensor Depth	1.8 metres below GL
Sensor Azimuth	245°
Downhole Geophone (WST Tool)	Geospace HS-1 High Temp. (350° F) Coil Resist. 225Ω ±10 % Natural Freq. 8-12 Hz Sensitivity 0.45 V/in/sec Maximum tilt angle 60°

Recording was made on the Schlumberger Computerized Service Unit (CSU) using LIS format.

### 2.1 Survey Details

The survey was shot as a standard onshore velocity survey. A weathering survey was conducted near the wellhead in order to estimate the near surface velocity. No major problems were noted during the survey.

### 3.0 CHECK SHOT DATA

A total of 22 check levels were shot during the survey. The transit times picked for the levels above 100 metres give unacceptable values for the corresponding interval velocities. The offset-depth ratio is high and hence because of refraction effects a linear ray path model is not valid.

The first breaks are breaking upwards for the top two shots. An explanation is that the seismic energy has a high horizontal component and the tool is responding predominantly to these components. The data quality of all levels below and including 65 metres is good. No shots above 165 metres have been included in the seismic calibration.

The levels at 185 and 633 were shot going into the well and were repeated coming out. There is good correlation with the repeated shots and all good shots have been included in the final stack. A plot of the stacked check shot data is displayed in figure 2.

Table 2

Level Depth (m below KB)	Stacked Shots	Rejected Shots	Quality	Comments
26.2	5	0	Poor	Omitted (SRD)
28	6	0	Poor	Omitted
35	2	0	Poor	Omitted
45	4	0	Poor	Omitted
65	10	0	Good	Omitted
105	3	0	Good	Omitted
125	3	0	Good	Omitted
165	3	0	Good	
185	6	0	Good	Shot going down
185	2	1	Good	
405	2	0	Good	
450	7	0	Good	
510	4	0	Good	
633	4	1	Good	Shot going down
633	3	0	Good	
770	8	0	Good	
788.5	3	0	Good	
805	2	0	Good	
865	3	1	Good	
880	3	0	Good	
905	2	0	Good	
930	3	0	Good	
953	6	1	Good	
965	5	1	Good	

Eleven shots were recorded on the surface at offsets of 3 metres to 33 metres to estimate the surface velocity (see figures 3 and 4).

## 4.0 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  $\mu sec/ft$ .
2.  **$\Delta T$  Minimum** In the case of negative drift a second method is used, called  $\Delta t$  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  $\Delta t$  values which are higher than a threshold, the  $\Delta t_{min}$ . Values of  $\Delta t$  which are lower than the threshold are not corrected. The correction is a reduction of the excess of  $\Delta t$  over  $\Delta t_{min}$ ,  $\Delta t - \Delta t_{min}$ .

$\Delta t - \Delta t_{min}$  is reduced through multiplication by a reduction coefficient which remains constant over the interval. This reduction coefficient, named  $G$ , can be 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  $\Delta t$  and  $\Delta t_{min}$ , only over the intervals where  $\Delta t > \Delta t_{min}$ .

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

## 5.0 SONIC CALIBRATION PROCESSING

### 5.1 Open Hole Logs

Both the sonic and density logs used have been edited prior to input into the WSC chain. The log quality was generally good. An anomalous peak in the density log at 912 metres has been removed.

Density log interval : 300 to 987 metres below KB  
Sonic log interval : 300 to 987 metres below KB

### 5.2 Weathered Zone Survey

A weathered zone survey was run near the wellhead using the airgun and a surface geophone placed at offsets of 3 to 33 metres from the gun. Results from this survey are displayed at figures 3 and 4 and indicate a near surface velocity of 660 metres/sec.

A shot was recorded in the well at SRD with a transit time of 55 milliseecs. Using a direct raypath length of 44.9 metres from gun to geophone a velocity of 816 metres/sec can be calculated. A linear raypath model, however, is not valid in the surface layers at high angles of incidence. The seismic energy may be refracted through deeper higher velocity layers to arrive at the downhole geophone earlier than the direct ray. Subsequently, this shot has not been used to determine the surface velocity.

### 5.3 Correction to Datum

Seismic Reference Datum (SRD) is at Mean Sea Level. The airgun was positioned 1.8 metres below GL. The transit time of the shot at SRD (26.2 metres) has not been used and a value of 68 milliseecs has been calculated by assuming a surface velocity of 660 metres/sec.

The final transit times are the vertical transit times to SRD and are corrected for source offset.

### 5.4 Imposed Shots

Two imposed shots were used in addition to the checkshot data to calibrate the sonic log.

1. SRD : depth 26.2 below KB, surface velocity 660 metres/sec
2. Top sonic : depth 300 metres below KB. The velocities above and below this level were chosen to maintain a linear sonic drift curve from this level down to lower check levels.

## 5.5 Sonic Calibration Results

The top of the sonic log (300 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. A list of shifts used on the sonic data is given below.

Depth Interval (m below KB)	Block Shift $\mu\text{sec}/\text{ft}$	$\Delta t_{min}$ $\mu\text{sec}/\text{ft}$	Equiv Block Shift $\mu\text{sec}/\text{ft}$
300-490	5.61	-	5.61
490-660	7.57	-	7.57
660-799	3.68	-	3.68
799-990	0.08	-	0.08

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



## 6.0 GEOGRAM PROCESSING

GEOGRAMS were generated using 50 and 100 hertz ricker wavelets. A time variant butterworth filter with the following parameters has been applied after convolution.

0-500 msec	22,28 - 95,105 hertz
500-1000 msec	18,24 - 95,105 hertz
1000-3000 msec	18,24 - 95,105 hertz

The 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:

- Time to depth conversion
- Generate reflection coefficients
- Generate attenuation coefficients
- Choose a suitable wavelet
- Convolution
- Output.

### 6.1 Time to Depth 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.

### 6.2 Primary Reflection Coefficients

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

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

where

- $\rho_1$  = density of the layer above the reflection interface
- $\rho_2$  = density of the layer below the reflection interface
- $\nu_1$  = compressional wave velocity of the layer above the reflection interface
- $\nu_2$  = 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.

### 6.3 Primaries with Transmission Loss

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

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

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

$$Primary_n = R_n \cdot A_{n-1}$$

### 6.4 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.

### 6.5 Multiples Only

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

### 6.6 Wavelet

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

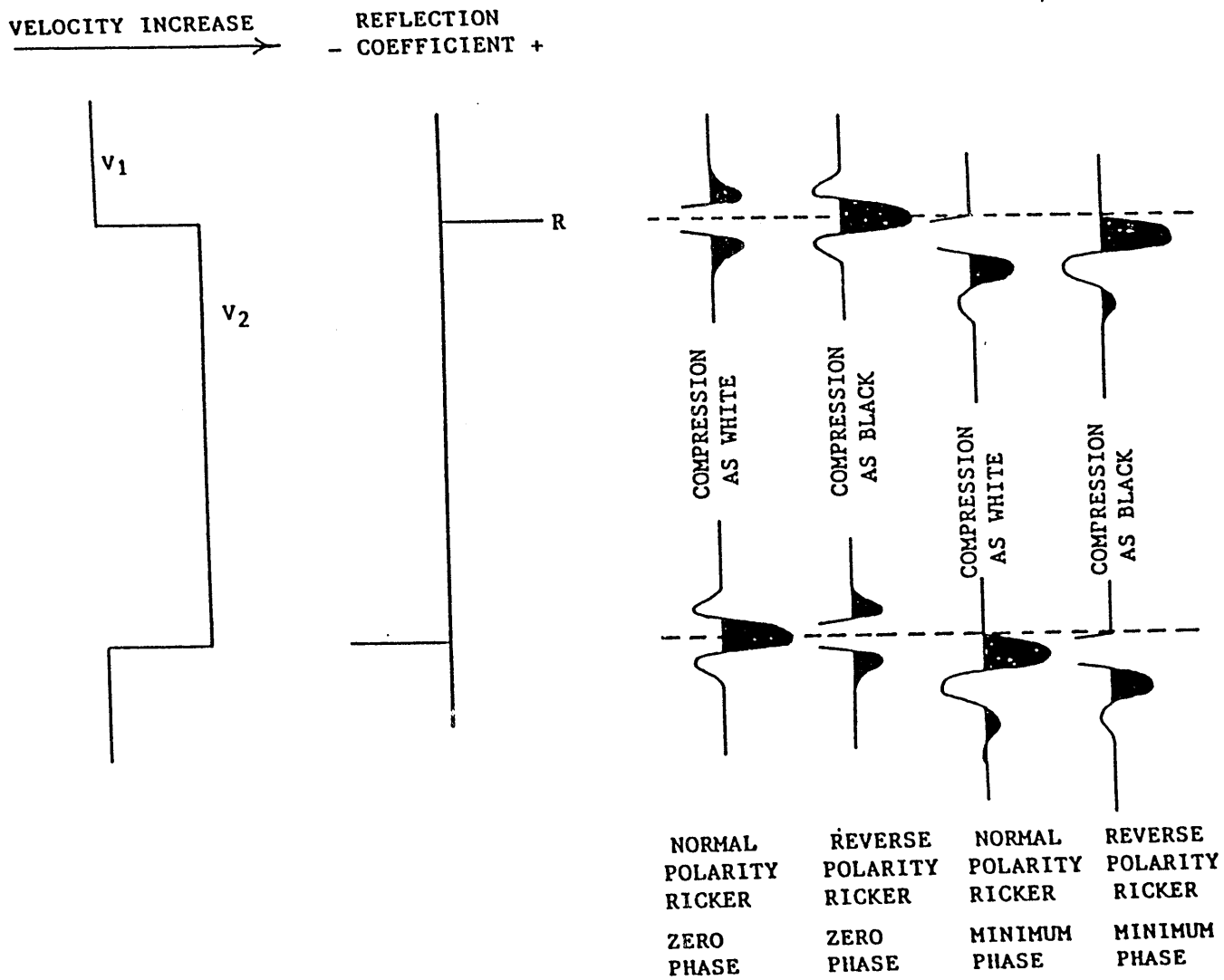
- Klauder wavelet
- Ricker zero phase wavelet
- Ricker minimum phase wavelet
- User defined wavelet.

All wavelets can be chosen with or without butterworth filtering and with user defined centre frequencies. Polarity conventions are shown in Figure 1. These GEOGRAMS were generated using zero and minimum phase ricker wavelets followed by a butterworth filter.

### 6.7 Convolution

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

SCHLUMBERGER WAVELET POLARITY CONVENTION



NOTE: WAVELET DISPLAYED UNDER GEOGRAMS ARE FOR A REFLECTION COEFFICIENT OF -0.5

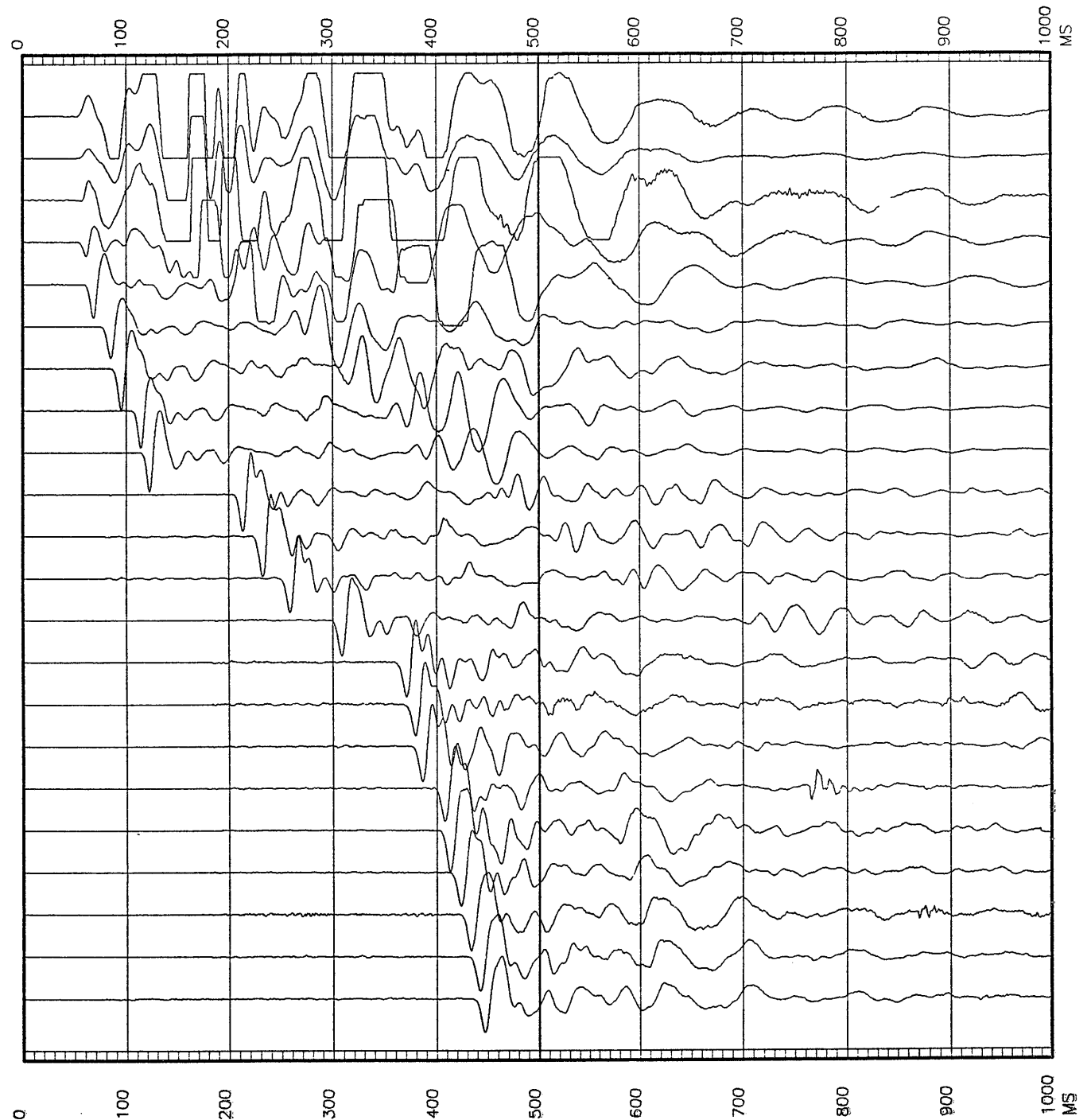
FIGURE 1

# WRIXONDALE - 1 STACKED CHECKSHOT DATA

FIGURE 2

25	26.2	0.055	32516.10
23	28.0	0.056	65367.17
20	35.0	0.058	16380.00
19	45.0	0.055	18818.85
18	65.0	0.062	18293.90
17	105.0	0.078	27963.66
16	125.0	0.088	18320.00
15	165.0	0.108	18332.09
14	185.0	0.117	24702.38
13	405.0	0.207	6128.00
12	450.0	0.225	4335.63
11	510.0	0.252	3521.90
10	633.0	0.302	2098.66
9	770.0	0.363	1626.68
8	788.5	0.371	1507.27
7	805.0	0.378	1627.50
6	865.0	0.401	1653.08
5	880.0	0.406	962.49
4	905.0	0.416	1509.50
3	930.0	0.426	951.05
2	953.0	0.435	983.34
1	965.0	0.439	1006.35

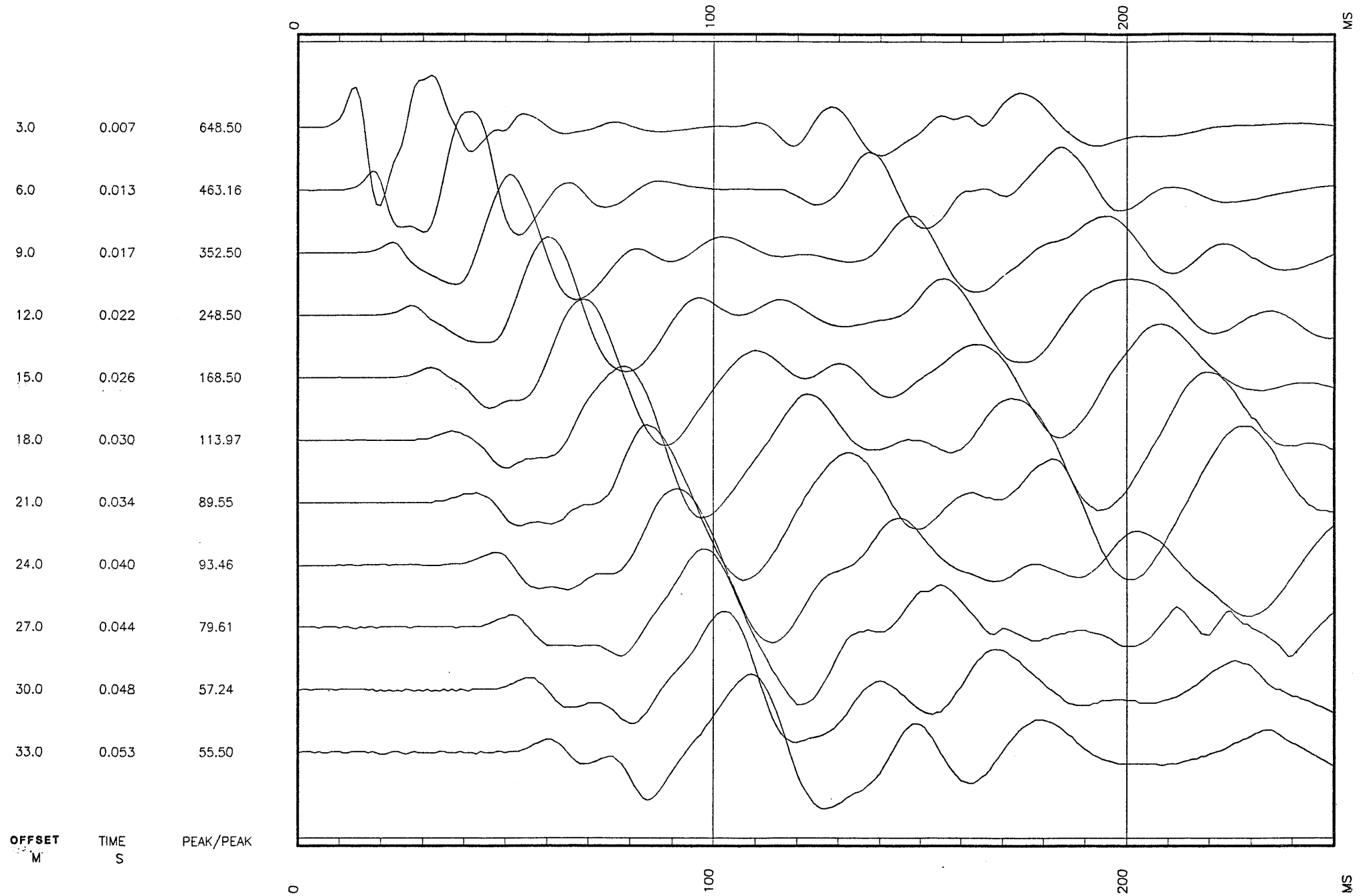
LEVEL DEPTH TIME PEAK/PEAK  
M S



WRIXONDALE - 1

WEATHERED ZONE SURVEY

FIGURE 3



WEATHERED ZONE SURVEY  
WRIXONDALE - 1  
Velocity Analysis

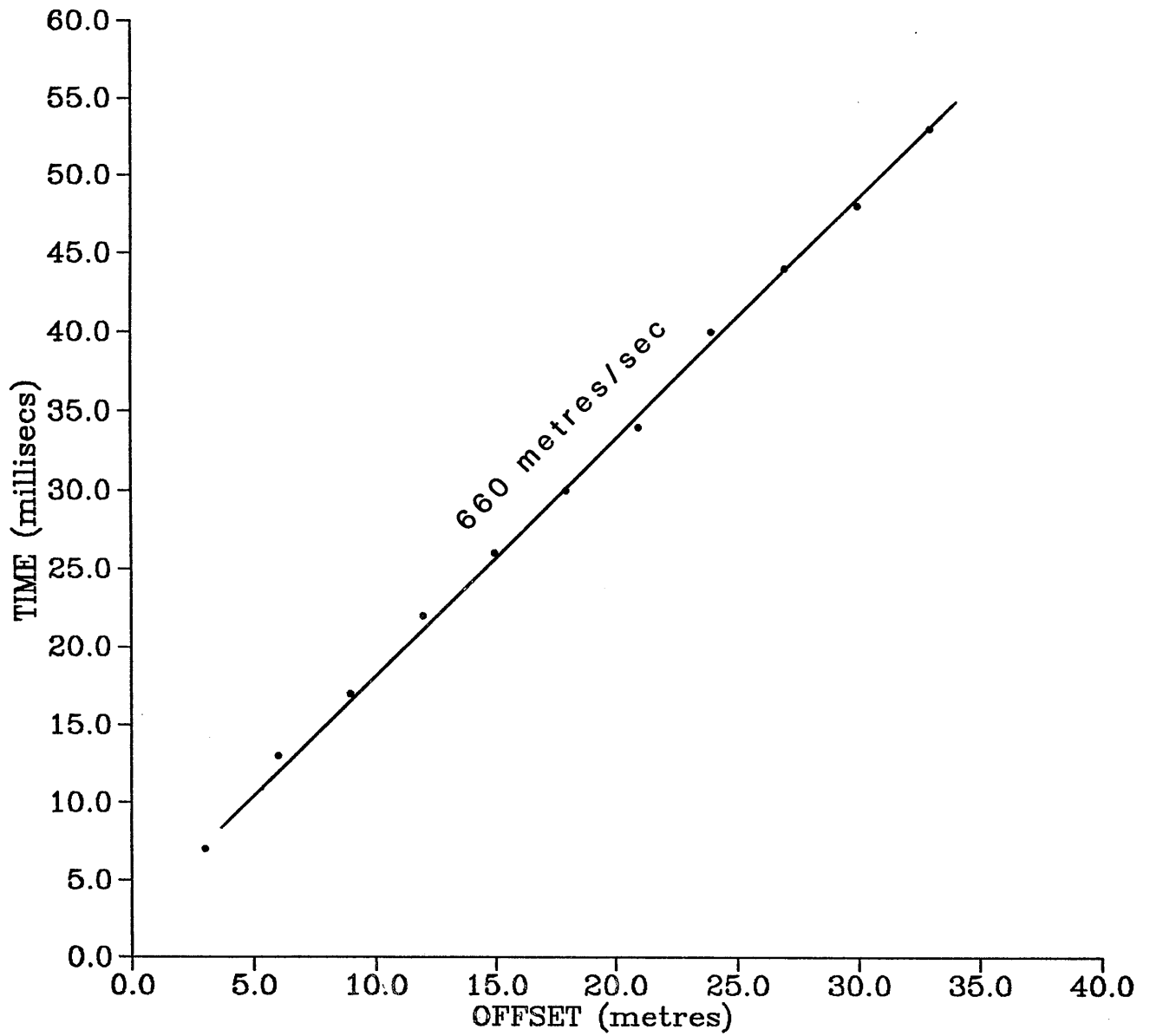


FIGURE 4



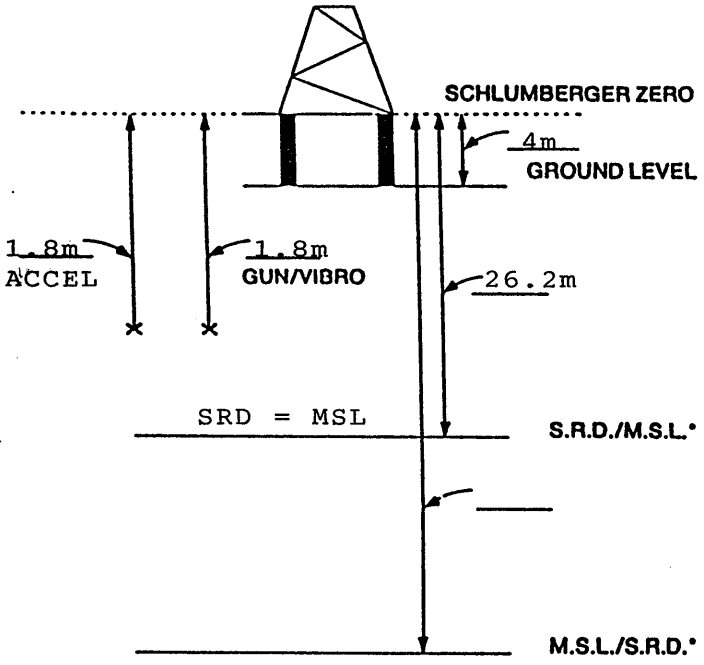
# GUN GEOMETRY SKETCH

CLIENT: BEACH PETROLEUM

WELL: WRIXONDALE #1

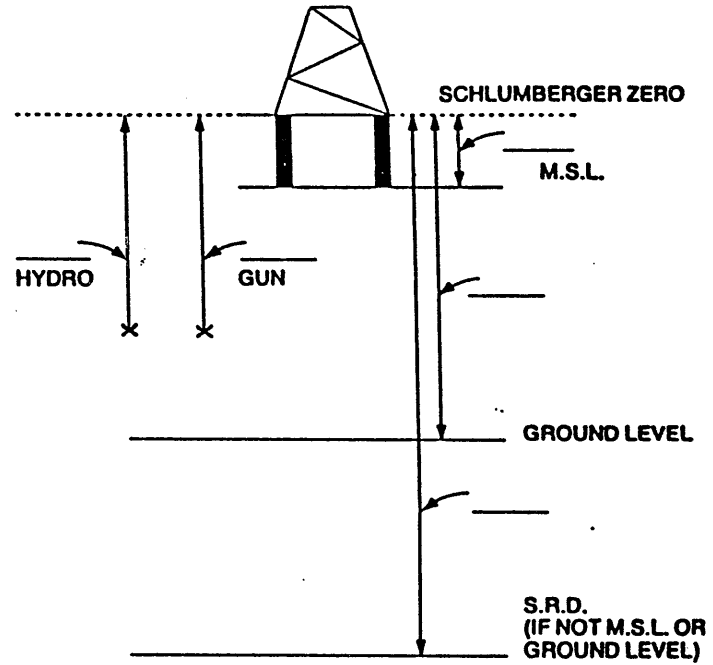
DATE: 17-10-85

LAND



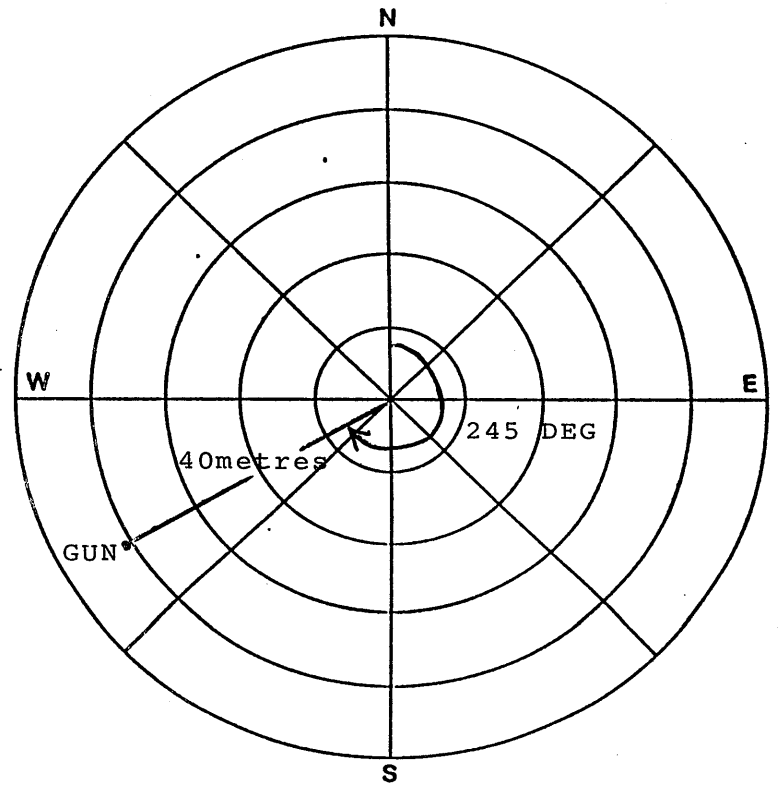
INDICATE ALL DISTANCES RELATIVE TO SCHLUMBERGER ZERO  
 \* DELETE AS APPLICABLE

OFFSHORE



INDICATE ALL DISTANCES RELATIVE TO SCHLUMBERGER ZERO

SHOT POS'N	GUN OFFSET	ACCEL OFFSET	GUN DEPTH	ACCEL DEPTH
1	40m	40m	1.8m	1.8m
2				
3				
4				
5				
6				
7				



INDICATE GUN/VIBRO AND HYDROPHONE OFFSET AND AZIMUTH RELATIVE TO NORTH

*Shots*



```
*****  
*                               *  
*                               *  
*                               *  
*                               *  
*****  
*                               *  
* SCHLUMBERGER                 *  
*                               *  
*****
```

GEOPHYSICAL AIRGUN REPORT

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 640,421

## 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  
 DEWEL - 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	:	26.2000	M
ELEV OF SRD AB. MSL(WST)	SRD	:	0	M
Elevation of Kelly Bushi	EKB	:	26.2000	M
ELEV OF GL AB. SRD(WST)	GL	:	22.2000	M
VEL SOURCE-HYDRO(WST)	VELHYD	:	1500.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	:	660.319	M/S

## (MATRIX PARAMETERS)

	SOURCE ELV M	SOURCE EW M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1	20.40	-36.25	-16.90	20.40	-36.25	-16.90

	TRT HYD-SC MS	TRT SC-SRD MS
1	0	-30.89

	MD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1	26.20	26.20	0	0	0
2	165.00	165.00	138.80	0	0
3	185.00	185.00	158.80	0	0
4	300.00	300.00	273.80	0	0
5	405.00	405.00	378.80	0	0
6	450.00	450.00	423.80	0	0
7	510.00	510.00	483.80	0	0
8	633.00	633.00	606.80	0	0
9	770.00	770.00	743.80	0	0
10	788.50	788.50	762.30	0	0
11	805.00	805.00	778.80	0	0
12	865.00	865.00	838.80	0	0
13	880.00	880.00	853.80	0	0
14	905.00	905.00	878.80	0	0
15	930.00	930.00	903.80	0	0
16	953.00	953.00	926.80	0	0
17	965.00	965.00	938.80	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	26.20	0	22.20	68.00	30.89	0				
2	165.00	138.80	161.00	108.00	104.74	73.85	1879	138.80	73.85	1879
3	185.00	158.80	181.00	117.00	114.19	83.30	1906	20.00	9.45	2117
4	300.00	273.80	296.00	163.70	162.21	131.31	2085	115.00	48.02	2395
5	405.00	378.80	401.00	207.00	205.97	175.07	2164	105.00	43.76	2399
6	450.00	423.80	446.00	225.00	224.09	193.20	2194	45.00	18.12	2483
7	510.00	483.80	506.00	252.00	251.21	220.32	2196	60.00	27.12	2213
8	633.00	606.80	629.00	302.00	301.39	270.49	2243	123.00	50.18	2451
9	770.00	743.80	766.00	363.00	362.50	331.61	2243	137.00	61.12	2242
10	788.50	762.30	784.50	371.00	370.52	339.62	2245	18.50	8.01	2309
11	805.00	778.80	801.00	378.00	377.53	346.63	2247	16.50	7.01	2353
12	865.00	838.80	861.00	401.00	400.57	369.67	2269	60.00	23.04	2604
13	880.00	853.80	876.00	406.00	405.58	374.68	2279	15.00	5.01	2994
14	905.00	878.80	901.00	416.00	415.59	384.69	2284	25.00	10.01	2497
15	930.00	903.80	926.00	426.00	425.60	394.71	2290	25.00	10.01	2497
16	953.00	926.80	949.00	435.00	434.61	403.72	2296	23.00	9.01	2552
17	965.00	938.80	961.00	439.00	438.62	407.72	2303	12.00	4.01	2996

*Drift*

DRIFT

```
*****  
*                                     *  
*                                     *  
*                                     *  
*****  
*          SCHLUMBERGER          *  
*                                     *  
*****
```

DRIFT COMPUTATION REPORT

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 540,421

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	:	26.2000	M
ELEV OF SRD AB. MSL(WST)	SRD	:	0	M
Elevation of Kelly Bushi	EKB	:	26.2000	M
ELEV OF GL AB. SRD(WST)	GL	:	22.2000	M
TOP OF ZONE PROCD (WST)	XSTART	:	0	M
BOT OF ZONE PROCD (WST)	XSTOP	:	0	M
RAW SONIC CH NAME (WST)	GAD001	:	DT.003.FUN.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/F
1	26.20	0	22.20	0	0	0	0
2	165.00	138.80	161.00	73.85	73.85	0	0
3	185.00	158.80	181.00	83.30	83.30	0	0
4	300.00	273.80	296.00	131.31	131.31	0	0
5	405.00	378.80	401.00	175.07	173.31	1.76	5.12
6	450.00	423.80	446.00	193.20	191.77	1.43	-2.29
7	510.00	483.80	506.00	220.32	215.82	4.49	15.59
8	633.00	606.80	629.00	270.49	263.06	7.44	7.29
9	770.00	743.80	766.00	331.61	323.67	7.94	1.11
10	788.50	762.30	784.50	339.62	330.84	8.79	13.98
11	805.00	778.80	801.00	346.63	337.61	9.03	4.45
12	865.00	838.80	861.00	369.67	359.73	9.94	4.63
13	880.00	853.80	876.00	374.68	365.97	8.71	-24.98
14	905.00	878.80	901.00	384.69	375.18	9.51	9.77
15	930.00	903.80	926.00	394.71	385.49	9.22	-3.56
16	953.00	926.80	949.00	403.72	393.83	9.89	8.92
17	965.00	938.80	961.00	407.72	398.33	9.40	-12.53
18	989.99	963.79	985.99	415.90	406.50	9.40	0



```
*****  
*                                     *  
*                                     *  
*                                     *  
*****  
*                                     *  
*   SCHLUMBERGER   *  
*                                     *  
*****
```

SONIC ADJUSTMENT PARAMETER REPORT

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 540,421

LONG DEFINITIONS

GLOBAL

SRCDFR - ORIGIN OF ADJUSTMENT DATA  
 CONADJ - CONSTANT ADJUSTMENT TO AUTOMATIC DELTA-T MINIMUM = 7.6 US/F  
 UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)

ZONE

ZDRIFT - USER DRIFT AT BOTTOM OF THE ZONE  
 ADJOPZ - TYPE OF ADJUSTMENT 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 GROUND 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)	SRCDFR	:	2.00000	
CONS SONIC ADJST (WST)	CONADJ	:	7.60000	US/F
UNIFORM EARTH VELOCITY	UNERTH	:	2133.60	M/S

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

USER DRIFT ZONE (WST)	ZDRIFT	:	9.450000	MS	990.000	-	799.000
			9.400000		799.000		660.000
			7.720000		660.000		490.000
			3.600000		490.000		300.000
			0		300.000		0
ADJUSMNT MODE (WST)	ADJOPZ	:	-999.2500		30479.7	-	0
USER DELTA-T MIN (WST)	ADJUSZ	:	-999.2500	US/F	30479.7	-	0
LAYER OPTION FLAG VELOC	LOFVEL	:	1.000000		30479.7	-	0
USER VELOC (WST)	LAYVEL	:	2395.000	M/S	300.000	-	185.000
			2117.000		185.000		165.000
			1879.000		165.000		26.2000

KNEE NUMBER	VERTICAL DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	DRIFT AT KNEE MS	BLOCKSHIFT USED US/F	DELTA-T MINIMUM USED US/F	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT US/F
2	300.00	273.80	296.00	0	0	0		0
3	490.00	463.80	486.00	3.50	5.61			5.61
4	660.00	633.80	656.00	7.72	7.57			7.57
5	799.00	772.80	795.00	9.40	3.68			3.68
6	990.00	963.80	986.00	9.45	.08			.08

```
*****  
*                                     *  
*                                     *  
*                                     *  
*****  
*                                     *  
*   SCHLUMBERGER   *  
*                                     *  
*****
```

VELOCITY REPORT

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 540,421

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	:	26.2000	M
ELEV OF SRD AB. MSL(WST)	SRD	:	0	M
Elevation of Kelly Bushi	EKB	:	26.2000	M
ELEV OF GL AB. SRD(WST)	GL	:	22.2000	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	:	2395.000	M/S	300.000	-	185.000
			2117.000		185.000	-	165.000
			1879.000		165.000	-	26.2000

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
1	26.20	0	22.20	0	0	0	0	1880
2	165.00	138.80	161.00	73.85	73.84	0	.01	2119
3	185.00	158.80	181.00	83.30	83.28	0	.02	2395
4	300.00	273.80	296.00	131.31	131.30	0	.01	2390
5	405.00	378.80	401.00	175.07	175.23	1.76	-.16	2333
6	450.00	423.80	446.00	193.20	194.52	1.43	-1.32	2373
7	510.00	483.80	506.00	220.32	219.80	4.49	.51	2446
8	633.00	606.80	629.00	270.49	270.09	7.44	.40	2188
9	770.00	743.80	766.00	331.61	332.71	7.94	-1.10	2504
10	788.50	762.30	784.50	339.62	340.10	8.79	-.47	2392
11	805.00	778.80	801.00	346.63	346.99	9.03	-.36	2710
12	865.00	838.80	861.00	369.67	369.14	9.94	.54	2403
13	880.00	853.80	876.00	374.68	375.38	8.71	-.70	2712
14	905.00	878.80	901.00	384.69	384.60	9.51	.10	2425
15	930.00	903.80	926.00	394.71	394.91	9.22	-.20	2757
16	953.00	926.80	949.00	403.72	403.25	9.89	.47	2665
17	965.00	938.80	961.00	407.72	407.76	9.40	-.03	3057
18	989.99	963.79	985.99	415.90	415.93	9.40	-.03	

*Time / Depth*

ANALYST: M. SANDERS

18-DEC-85 14:49:51

PROGRAM: GTRFRM 007.E08

```
*****  
*                                     *  
*                                     *  
*                                     *  
*                                     *  
*                                     *  
*          SCHLUMBERGER              *  
*                                     *  
*                                     *  
*                                     *  
*****
```

TIME CONVERTED VELOCITY REPORT

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 540,421



## 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	:	26,2000	M
ELEV OF SRD AB. MSL(WST)	SRD	:	0	M
ELEV OF GL AB. SRD(WST)	GL	:	22,2000	M
UNIFORM EARTH VELOCITY	UNERTH	:	2133.60	M/S
UNIFORM DENSITY VALUE	UNFDEN	:	2.30000	G/C3

## (MATRIX PARAMETERS)

MVOUT DIST  
M

1	914.4
2	1371.6
3	1828.8

COMPANY : BEACH PETROLEUM N.L.

WELL : WRIXONDALE - 1

PAGE 2

(ZONED PARAMETERS)		(VALUE)	(LIMITS)
LAYER OPTION FLAG VELOC	LOFVEL	: 1,000000	30479.7 - 0
USER VELOC (WST)	LAYVEL	: 2395.000 M/S	300.000 - 185.000
		2117.000	185.000 - 165.000
		1879.000	165.000 - 26.2000
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
								2134
0	26.22	.02						1859
2.00	28.08	1.88	1879	1859	489.93	735.89	981.85	1879
4.00	29.96	3.76	1879	1869	485.21	729.81	974.40	1879
6.00	31.84	5.64	1879	1873	482.34	726.47	970.62	1879
8.00	33.72	7.52	1879	1874	479.92	723.82	967.74	1879
10.00	35.60	9.40	1879	1875	477.69	721.44	965.22	1879
12.00	37.48	11.28	1879	1876	475.55	719.21	962.89	1879
14.00	39.36	13.16	1879	1877	473.48	717.05	960.66	1879
16.00	41.24	15.04	1879	1877	471.45	714.95	958.50	1879
18.00	43.12	16.92	1879	1877	469.44	712.89	956.38	1879
20.00	44.99	18.79	1879	1877	467.46	710.85	954.31	1879
22.00	46.87	20.67	1879	1878	465.50	708.83	952.25	1879
24.00	48.75	22.55	1879	1878	463.55	706.84	950.22	1879
26.00	50.63	24.43	1879	1878	461.62	704.85	948.20	1879
28.00	52.51	26.31	1879	1878	459.70	702.88	946.20	1879
30.00	54.39	28.19	1879	1878	457.80	700.92	944.21	1879
32.00	56.27	30.07	1879	1878	455.90	698.98	942.23	1879
34.00	58.15	31.95	1879	1878	454.02	697.04	940.25	1879
36.00	60.03	33.83	1879	1878	452.14	695.11	938.29	1879
38.00	61.91	35.71	1879	1878	450.28	693.18	936.34	1879
40.00	63.79	37.59	1879	1878	448.42	691.27	934.39	1879
42.00	65.67	39.47	1879	1879	446.58	689.36	932.45	1879
44.00	67.55	41.35	1879	1879	444.74	687.46	930.51	1879
46.00	69.43	43.23	1879	1879	442.92	685.57	928.58	

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	71.31	45.11	1879	1879	441.10	683.68	926.66	1879
50.00	73.19	46.99	1879	1879	439.29	681.81	924.74	1879
52.00	75.07	48.87	1879	1879	437.49	679.93	922.83	1879
54.00	76.95	50.75	1879	1879	435.70	678.07	920.93	1879
56.00	78.83	52.63	1879	1879	433.92	676.21	919.02	1879
58.00	80.70	54.50	1879	1879	432.14	674.35	917.13	1879
60.00	82.58	56.38	1879	1879	430.38	672.50	915.24	1879
62.00	84.46	58.26	1879	1879	428.62	670.66	913.35	1879
64.00	86.34	60.14	1879	1879	426.87	668.83	911.47	1879
66.00	88.22	62.02	1879	1879	425.13	667.00	909.59	1879
68.00	90.10	63.90	1879	1879	423.40	665.17	907.72	1879
70.00	91.98	65.78	1879	1879	421.68	663.35	905.85	1879
72.00	93.86	67.66	1879	1879	419.96	661.54	903.99	1879
74.00	95.74	69.54	1879	1879	418.26	659.73	902.13	1879
76.00	97.62	71.42	1879	1879	416.56	657.93	900.28	1879
78.00	99.50	73.30	1879	1879	414.86	656.14	898.43	1879
80.00	101.38	75.18	1879	1879	413.18	654.35	896.58	1879
82.00	103.26	77.06	1879	1879	411.51	652.56	894.74	1879
84.00	105.14	78.94	1879	1879	409.84	650.78	892.91	1879
86.00	107.02	80.82	1879	1879	408.18	649.01	891.07	1879
88.00	108.90	82.70	1879	1879	406.53	647.24	889.25	1879
90.00	110.78	84.58	1879	1879	404.89	645.48	887.42	1879
92.00	112.66	86.46	1879	1879	403.25	643.72	885.60	1879
94.00	114.54	88.34	1879	1879	401.63	641.97	883.79	1879

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	116.42	90.22	1879	1879	400.01	640.23	881.98	1879
98.00	118.29	92.09	1879	1879	398.40	638.49	880.17	1879
100.00	120.17	93.97	1879	1879	396.79	636.75	878.37	1879
102.00	122.05	95.85	1879	1879	395.20	635.02	876.57	1879
104.00	123.93	97.73	1879	1879	393.61	633.30	874.78	1879
106.00	125.81	99.61	1879	1879	392.03	631.58	872.99	1879
108.00	127.69	101.49	1879	1879	390.46	629.87	871.21	1879
110.00	129.57	103.37	1879	1879	388.89	628.16	869.42	1879
112.00	131.45	105.25	1879	1879	387.34	626.46	867.65	1879
114.00	133.33	107.13	1879	1879	385.79	624.76	865.88	1879
116.00	135.21	109.01	1879	1879	384.24	623.07	864.11	1879
118.00	137.09	110.89	1879	1879	382.71	621.39	862.34	1879
120.00	138.97	112.77	1879	1879	381.18	619.71	860.58	1879
122.00	140.85	114.65	1879	1879	379.67	618.03	858.83	1879
124.00	142.73	116.53	1879	1879	378.15	616.36	857.07	1879
126.00	144.61	118.41	1879	1879	376.65	614.70	855.33	1879
128.00	146.49	120.29	1879	1879	375.15	613.04	853.58	1879
130.00	148.37	122.17	1879	1879	373.67	611.39	851.84	1879
132.00	150.25	124.05	1879	1879	372.18	609.74	850.11	1879
134.00	152.13	125.93	1879	1879	370.71	608.09	848.38	1879
136.00	154.00	127.80	1879	1879	369.24	606.46	846.65	1879
138.00	155.88	129.68	1879	1879	367.78	604.82	844.92	1879
140.00	157.76	131.56	1879	1879	366.33	603.20	843.21	1879
142.00	159.64	133.44	1879	1879	364.89	601.57	841.49	1879

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
144.00	161.52	135.32	1879	1879	363.45	599.96	839.78	1879
146.00	163.40	137.20	1879	1879	362.02	598.34	838.07	1879
148.00	165.33	139.13	1880	1880	360.43	596.48	836.02	1930
150.00	167.45	141.25	1883	1883	358.18	593.60	832.60	2117
152.00	169.57	143.37	1886	1887	355.97	590.77	829.25	2117
154.00	171.68	145.48	1889	1890	353.80	587.98	825.95	2117
156.00	173.80	147.60	1892	1893	351.66	585.24	822.70	2117
158.00	175.92	149.72	1895	1896	349.55	582.54	819.51	2117
160.00	178.04	151.84	1898	1899	347.47	579.88	816.37	2117
162.00	180.15	153.95	1901	1902	345.42	577.26	813.27	2117
164.00	182.27	156.07	1903	1904	343.39	574.67	810.22	2117
166.00	184.39	158.19	1906	1907	341.40	572.12	807.22	2117
168.00	186.72	160.52	1911	1913	338.72	568.51	802.77	2335
170.00	189.12	162.92	1917	1919	335.89	564.65	797.99	2395
172.00	191.51	165.31	1922	1925	333.12	560.87	793.32	2395
174.00	193.91	167.71	1928	1931	330.41	557.18	788.75	2395
176.00	196.30	170.10	1933	1937	327.75	553.56	784.28	2395
178.00	198.70	172.50	1938	1943	325.15	550.02	779.91	2395
180.00	201.09	174.89	1943	1949	322.60	546.54	775.63	2395
182.00	203.49	177.29	1948	1954	320.10	543.14	771.43	2395
184.00	205.88	179.68	1953	1959	317.64	539.80	767.32	2395
186.00	208.28	182.08	1958	1965	315.23	536.52	763.29	2395
188.00	210.67	184.47	1962	1970	312.87	533.30	759.33	2395
190.00	213.07	186.87	1967	1975	310.54	530.14	755.45	2395

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
192.00	215.46	189.26	1971	1979	308.26	527.03	751.64	2395
194.00	217.86	191.66	1976	1984	306.02	523.98	747.89	2395
196.00	220.25	194.05	1980	1989	303.81	520.98	744.21	2395
198.00	222.65	196.45	1984	1993	301.64	518.02	740.59	2395
200.00	225.04	198.84	1988	1998	299.51	515.12	737.04	2395
202.00	227.44	201.24	1992	2002	297.41	512.26	733.54	2395
204.00	229.83	203.63	1996	2006	295.34	509.44	730.09	2395
206.00	232.23	206.03	2000	2010	293.31	506.67	726.70	2395
208.00	234.62	208.42	2004	2014	291.31	503.94	723.36	2395
210.00	237.02	210.82	2008	2018	289.34	501.25	720.08	2395
212.00	239.41	213.21	2011	2022	287.39	498.60	716.84	2395
214.00	241.81	215.61	2015	2026	285.48	495.99	713.65	2395
216.00	244.20	218.00	2019	2030	283.59	493.41	710.50	2395
218.00	246.60	220.40	2022	2033	281.73	490.87	707.40	2395
220.00	248.99	222.79	2025	2037	279.90	488.36	704.34	2395
222.00	251.39	225.19	2029	2041	278.09	485.89	701.32	2395
224.00	253.78	227.58	2032	2044	276.31	483.44	698.34	2395
226.00	256.18	229.98	2035	2047	274.55	481.03	695.40	2395
228.00	258.57	232.37	2038	2051	272.82	478.65	692.50	2395
230.00	260.97	234.77	2041	2054	271.10	476.30	689.63	2395
232.00	263.36	237.16	2044	2057	269.41	473.98	686.80	2395
234.00	265.76	239.56	2047	2060	267.75	471.69	684.00	2395
236.00	268.15	241.95	2050	2063	266.10	469.42	681.24	2395
238.00	270.55	244.35	2053	2066	264.48	467.18	678.51	2395

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
240.00	272.94	246.74	2056	2069	262.87	464.97	675.81	2395
242.00	275.34	249.14	2059	2072	261.29	462.78	673.15	2395
244.00	277.73	251.53	2062	2075	259.72	460.61	670.51	2395
246.00	280.13	253.93	2064	2078	258.17	458.47	667.90	2395
248.00	282.52	256.32	2067	2081	256.65	456.36	665.32	2395
250.00	284.92	258.72	2070	2083	255.14	454.26	662.77	2395
252.00	287.31	261.11	2072	2086	253.64	452.19	660.24	2395
254.00	289.71	263.51	2075	2089	252.17	450.15	657.75	2395
256.00	292.10	265.90	2077	2091	250.71	448.12	655.27	2395
258.00	294.50	268.30	2080	2094	249.27	446.11	652.82	2395
260.00	296.89	270.69	2082	2096	247.85	444.12	650.40	2395
262.00	299.29	273.09	2085	2099	246.44	442.16	648.00	2341
264.00	301.63	275.43	2087	2100	245.13	440.35	645.81	2355
266.00	303.98	277.78	2089	2102	243.81	438.51	643.59	2325
268.00	306.31	280.11	2090	2104	242.55	436.77	641.48	2293
270.00	308.60	282.40	2092	2106	241.34	435.11	639.50	2284
272.00	310.88	284.68	2093	2107	240.16	433.49	637.56	2244
274.00	313.13	286.93	2094	2108	239.05	431.97	635.75	2210
276.00	315.34	289.14	2095	2109	237.99	430.54	634.06	2225
278.00	317.56	291.36	2096	2110	236.92	429.08	632.33	2294
280.00	319.86	293.66	2098	2111	235.76	427.48	630.41	2288
282.00	322.15	295.95	2099	2112	234.63	425.90	628.52	2355
284.00	324.50	298.30	2101	2114	233.41	424.19	626.43	2447
286.00	326.95	300.75	2103	2117	232.08	422.29	624.09	



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
288.00	329.35	303.15	2105	2119	230.83	420.52	621.90	2401
290.00	331.72	305.52	2107	2121	229.63	418.81	619.82	2374
292.00	334.17	307.97	2109	2123	228.35	416.97	617.54	2446
294.00	336.58	310.38	2111	2125	227.12	415.21	615.38	2412
296.00	338.98	312.78	2113	2127	225.93	413.51	613.28	2397
298.00	341.39	315.19	2115	2129	224.72	411.78	611.15	2413
300.00	343.82	317.62	2117	2131	223.51	410.02	608.98	2435
302.00	346.24	320.04	2120	2133	222.32	408.31	606.87	2420
304.00	348.75	322.55	2122	2136	221.04	406.45	604.54	2502
306.00	351.22	325.02	2124	2138	219.82	404.67	602.32	2470
308.00	353.70	327.50	2127	2141	218.59	402.87	600.07	2488
310.00	356.18	329.98	2129	2143	217.39	401.11	597.88	2476
312.00	358.66	332.46	2131	2145	216.19	399.37	595.70	2479
314.00	361.21	335.01	2134	2148	214.93	397.49	593.34	2551
316.00	363.79	337.59	2137	2151	213.64	395.59	590.93	2575
318.00	366.28	340.08	2139	2154	212.48	393.87	588.78	2492
320.00	368.65	342.45	2140	2155	211.45	392.37	586.94	2377
322.00	371.15	344.95	2143	2157	210.29	390.67	584.80	2498
324.00	373.55	347.35	2144	2159	209.26	389.17	582.94	2397
326.00	375.97	349.77	2146	2161	208.21	387.63	581.03	2422
328.00	378.45	352.25	2148	2163	207.11	386.00	578.99	2481
330.00	380.94	354.74	2150	2165	206.01	384.37	576.94	2489
332.00	383.37	357.17	2152	2167	204.99	382.86	575.07	2424
334.00	385.72	359.52	2153	2168	204.05	381.49	573.37	2356

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	388.13	361.93	2154	2169	203.06	380.04	571.57	2408
338.00	390.44	364.24	2155	2170	202.18	378.75	569.99	2312
340.00	392.70	366.50	2156	2171	201.35	377.56	568.54	2263
342.00	395.06	368.86	2157	2172	200.44	376.22	566.88	2356
344.00	397.39	371.19	2158	2173	199.56	374.93	565.30	2328
346.00	399.70	373.50	2159	2174	198.71	373.68	563.76	2311
348.00	402.08	375.88	2160	2175	197.79	372.33	562.09	2378
350.00	404.43	378.23	2161	2176	196.92	371.03	560.48	2351
352.00	406.71	380.51	2162	2176	196.10	369.85	559.02	2285
354.00	409.00	382.80	2163	2177	195.29	368.66	557.56	2289
356.00	411.44	385.24	2164	2179	194.36	367.25	555.79	2437
358.00	413.81	387.61	2165	2180	193.49	365.95	554.18	2372
360.00	416.20	390.00	2167	2181	192.61	364.64	552.53	2390
362.00	418.41	392.21	2167	2181	191.89	363.60	551.27	2210
364.00	420.96	394.76	2169	2183	190.88	362.05	549.29	2549
366.00	423.30	397.10	2170	2184	190.07	360.83	547.77	2343
368.00	425.60	399.40	2171	2185	189.30	359.69	546.36	2294
370.00	427.87	401.67	2171	2185	188.55	358.57	544.99	2277
372.00	430.13	403.93	2172	2186	187.82	357.50	543.67	2253
374.00	432.57	406.37	2173	2187	186.94	356.16	541.96	2448
376.00	434.94	408.74	2174	2188	186.14	354.95	540.45	2361
378.00	437.14	410.94	2174	2188	185.46	353.95	539.23	2208
380.00	439.54	413.34	2175	2189	184.65	352.71	537.67	2393
382.00	441.96	415.76	2177	2191	183.82	351.44	536.06	2419

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
384.00	444.30	418.10	2178	2192	183.05	350.28	534.60	2347
386.00	446.68	420.48	2179	2193	182.27	349.09	533.10	2374
388.00	448.87	422.67	2179	2192	181.63	348.14	531.95	2188
390.00	451.11	424.91	2179	2193	180.96	347.13	530.69	2247
392.00	453.53	427.33	2180	2194	180.16	345.90	529.14	2414
394.00	455.90	429.70	2181	2195	179.40	344.74	527.66	2373
396.00	458.38	432.18	2183	2196	178.57	343.44	525.99	2483
398.00	460.84	434.64	2184	2198	177.76	342.18	524.38	2457
400.00	463.18	436.98	2185	2199	177.05	341.09	523.00	2335
402.00	465.44	439.24	2185	2199	176.39	340.09	521.76	2263
404.00	467.87	441.67	2187	2200	175.61	338.88	520.21	2436
406.00	470.27	444.07	2188	2201	174.88	337.74	518.75	2392
408.00	472.73	446.53	2189	2202	174.10	336.51	517.17	2461
410.00	475.15	448.95	2190	2204	173.34	335.34	515.67	2427
412.00	477.63	451.43	2191	2205	172.57	334.11	514.09	2473
414.00	480.05	453.85	2193	2206	171.83	332.96	512.60	2427
416.00	482.29	456.09	2193	2206	171.23	332.04	511.45	2232
418.00	484.54	458.34	2193	2206	170.62	331.10	510.28	2252
420.00	486.63	460.43	2193	2206	170.11	330.34	509.36	2090
422.00	488.91	462.71	2193	2206	169.49	329.38	508.15	2279
424.00	491.07	464.87	2193	2206	168.94	328.55	507.12	2165
426.00	493.36	467.16	2193	2206	168.32	327.59	505.90	2291
428.00	495.78	469.58	2194	2208	167.62	326.48	504.47	2418
430.00	498.18	471.98	2195	2208	166.94	325.40	503.09	2396



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	558.83	532.63	2219	2232	151.03	299.70	469.51	2547
482.00	561.29	535.09	2220	2233	150.43	298.72	468.21	2460
484.00	563.85	537.65	2222	2235	149.79	297.65	466.78	2556
486.00	566.14	539.94	2222	2235	149.29	296.84	465.72	2292
488.00	568.53	542.33	2223	2236	148.74	295.93	464.53	2394
490.00	571.02	544.82	2224	2237	148.15	294.95	463.22	2483
492.00	573.40	547.20	2224	2237	147.61	294.07	462.05	2387
494.00	575.77	549.57	2225	2238	147.09	293.20	460.92	2367
496.00	578.14	551.94	2226	2238	146.57	292.34	459.78	2371
498.00	580.59	554.39	2226	2239	146.01	291.41	458.54	2453
500.00	582.99	556.79	2227	2240	145.48	290.54	457.38	2399
502.00	585.38	559.18	2228	2241	144.96	289.67	456.23	2390
504.00	587.80	561.60	2229	2241	144.43	288.79	455.06	2413
506.00	590.25	564.05	2229	2242	143.88	287.87	453.83	2459
508.00	592.63	566.43	2230	2243	143.38	287.04	452.72	2378
510.00	595.33	569.13	2232	2245	142.72	285.90	451.17	2698
512.00	597.86	571.66	2233	2246	142.15	284.94	449.87	2531
514.00	600.36	574.16	2234	2247	141.60	284.01	448.62	2500
516.00	602.81	576.61	2235	2248	141.07	283.13	447.44	2451
518.00	605.32	579.12	2236	2249	140.52	282.20	446.18	2514
520.00	608.02	581.82	2238	2251	139.89	281.10	444.68	2694
522.00	610.64	584.44	2239	2252	139.30	280.09	443.30	2619
524.00	613.16	586.96	2240	2253	138.76	279.17	442.05	2518
526.00	615.62	589.42	2241	2254	138.25	278.31	440.89	2464

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	618.18	591.98	2242	2255	137.70	277.37	439.61	2557
530.00	620.84	594.64	2244	2257	137.10	276.34	438.20	2663
532.00	623.39	597.19	2245	2258	136.56	275.42	436.94	2554
534.00	625.93	599.73	2246	2259	136.04	274.51	435.70	2539
536.00	628.18	601.98	2246	2259	135.64	273.84	434.82	2247
538.00	630.46	604.26	2246	2259	135.22	273.15	433.90	2284
540.00	632.76	606.56	2247	2260	134.81	272.44	432.96	2301
542.00	635.28	609.08	2248	2261	134.30	271.57	431.77	2518
544.00	637.96	611.76	2249	2262	133.73	270.57	430.39	2675
546.00	640.53	614.32	2250	2263	133.21	269.67	429.16	2568
548.00	643.07	616.87	2251	2265	132.70	268.79	429.16	2549
550.00	645.53	619.33	2252	2265	132.23	267.99	426.86	2457
552.00	647.97	621.77	2253	2266	131.78	267.21	425.80	2438
554.00	650.32	624.12	2253	2266	131.36	266.50	424.83	2354
556.00	652.64	626.44	2253	2266	130.96	265.82	423.92	2312
558.00	654.96	628.76	2254	2267	130.55	265.13	422.99	2327
560.00	657.33	631.13	2254	2267	130.14	264.41	422.01	2372
562.00	659.63	633.43	2254	2267	129.75	263.74	421.12	2300
564.00	661.86	635.66	2254	2267	129.39	263.14	420.31	2225
566.00	664.08	637.88	2254	2267	129.03	262.53	419.51	2218
568.00	666.49	640.29	2255	2267	128.61	261.80	418.50	2416
570.00	668.91	642.71	2255	2268	128.18	261.06	417.49	2419
572.00	671.18	644.98	2255	2268	127.82	260.44	416.65	2263
574.00	673.42	647.22	2255	2268	127.46	259.83	415.84	2241

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
576.00	675.70	649.50	2255	2268	127.10	259.20	414.99	2280
578.00	677.92	651.72	2255	2268	126.75	258.61	414.20	2217
580.00	680.08	653.88	2255	2267	126.43	258.06	413.47	2166
582.00	682.18	655.98	2254	2267	126.13	257.56	412.80	2097
584.00	684.33	658.13	2254	2266	125.81	257.02	412.08	2150
586.00	686.56	660.36	2254	2266	125.47	256.43	411.28	2236
588.00	688.62	662.42	2253	2266	125.19	255.95	410.66	2054
590.00	690.73	664.53	2253	2265	124.89	255.44	409.98	2111
592.00	692.81	666.61	2252	2264	124.60	254.96	409.34	2076
594.00	695.04	668.84	2252	2264	124.26	254.37	408.55	2237
596.00	697.23	671.03	2252	2264	123.95	253.83	407.81	2186
598.00	699.35	673.15	2251	2264	123.65	253.32	407.14	2119
600.00	701.54	675.34	2251	2263	123.33	252.77	406.40	2188
602.00	703.67	677.47	2251	2263	123.03	252.26	405.71	2134
604.00	705.79	679.59	2250	2263	122.74	251.76	405.04	2121
606.00	707.95	681.75	2250	2262	122.43	251.23	404.33	2164
608.00	710.10	683.90	2250	2262	122.14	250.72	403.64	2143
610.00	712.15	685.95	2249	2261	121.87	250.26	403.03	2050
612.00	714.16	687.96	2248	2260	121.61	249.83	402.46	2009
614.00	716.24	690.04	2248	2260	121.34	249.35	401.82	2083
616.00	718.28	692.08	2247	2259	121.07	248.90	401.22	2044
618.00	720.34	694.14	2246	2259	120.81	248.45	400.62	2054
620.00	722.53	696.33	2246	2258	120.50	247.91	399.89	2192
622.00	724.59	698.39	2246	2258	120.24	247.46	399.28	2058

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	726.57	700.37	2245	2257	120.00	247.05	398.74	1983
626.00	728.62	702.42	2244	2256	119.73	246.60	398.13	2056
628.00	730.70	704.50	2244	2256	119.47	246.14	397.52	2071
630.00	732.84	706.64	2243	2255	119.18	245.64	396.84	2142
632.00	734.97	708.77	2243	2255	118.90	245.15	396.18	2137
634.00	737.04	710.84	2242	2254	118.64	244.70	395.57	2069
636.00	739.23	713.03	2242	2254	118.35	244.18	394.86	2184
638.00	741.41	715.21	2242	2254	118.06	243.67	394.16	2184
640.00	743.53	717.33	2242	2254	117.78	243.20	393.51	2115
642.00	745.56	719.36	2241	2253	117.54	242.77	392.94	2035
644.00	747.66	721.46	2241	2252	117.27	242.30	392.31	2100
646.00	749.85	723.65	2240	2252	116.98	241.80	391.61	2187
648.00	751.89	725.69	2240	2252	116.74	241.37	391.03	2039
650.00	753.94	727.74	2239	2251	116.49	240.93	390.44	2054
652.00	755.99	729.79	2239	2250	116.24	240.50	389.86	2048
654.00	758.06	731.86	2238	2250	115.99	240.06	389.26	2072
656.00	760.17	733.97	2238	2250	115.73	239.60	388.64	2108
658.00	762.28	736.08	2237	2249	115.47	239.15	388.01	2112
660.00	764.33	738.13	2237	2249	115.23	238.72	387.43	2053
662.00	766.45	740.25	2236	2248	114.97	238.26	386.79	2120
664.00	768.51	742.31	2236	2248	114.72	237.83	386.21	2056
666.00	770.71	744.51	2236	2247	114.44	237.33	385.52	2196
668.00	773.04	746.84	2236	2248	114.12	236.76	384.71	2335
670.00	775.51	749.31	2237	2248	113.77	236.11	383.79	2467



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	778.22	752.02	2238	2250	113.34	235.31	382.64	2717
674.00	780.74	754.54	2239	2251	112.97	234.64	381.68	2512
676.00	783.71	757.51	2241	2253	112.45	233.68	380.27	2973
678.00	786.12	759.92	2242	2254	112.13	233.08	379.42	2411
680.00	788.30	762.10	2241	2254	111.86	232.61	378.77	2174
682.00	790.80	764.60	2242	2254	111.51	231.96	377.84	2505
684.00	792.75	766.55	2241	2253	111.31	231.60	377.36	1951
686.00	794.78	768.58	2241	2253	111.08	231.21	376.81	2033
688.00	797.21	771.01	2241	2253	110.76	230.61	375.97	2423
690.00	799.56	773.36	2242	2254	110.45	230.06	375.18	2354
692.00	802.25	776.05	2243	2255	110.05	229.31	374.10	2689
694.00	805.02	778.82	2244	2257	109.63	228.52	372.95	2769
696.00	807.65	781.45	2246	2258	109.25	227.83	371.93	2627
698.00	810.21	784.01	2246	2259	108.90	227.17	370.98	2565
700.00	812.85	786.65	2248	2260	108.52	226.47	369.97	2638
702.00	815.55	789.35	2249	2261	108.13	225.74	368.91	2699
704.00	818.27	792.07	2250	2263	107.74	225.01	367.84	2721
706.00	820.85	794.65	2251	2264	107.39	224.35	366.89	2580
708.00	823.60	797.40	2253	2265	106.99	223.60	365.80	2757
710.00	826.40	800.20	2254	2267	106.58	222.84	364.67	2794
712.00	829.01	802.81	2255	2268	106.23	222.18	363.72	2611
714.00	831.72	805.52	2256	2269	105.85	221.47	362.68	2713
716.00	834.40	808.20	2258	2271	105.48	220.78	361.67	2677
718.00	837.16	810.96	2259	2272	105.10	220.05	360.60	2760

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	839.84	813.64	2260	2273	104.74	219.37	359.61	2684
722.00	842.63	816.43	2262	2275	104.35	218.64	358.53	2782
724.00	845.37	819.17	2263	2276	103.97	217.94	357.50	2741
726.00	848.13	821.93	2264	2278	103.60	217.22	356.45	2765
728.00	850.90	824.70	2266	2279	103.22	216.51	355.40	2769
730.00	853.70	827.50	2267	2281	102.84	215.79	354.33	2803
732.00	856.51	830.31	2269	2282	102.46	215.07	353.26	2803
734.00	859.17	832.97	2270	2284	102.12	214.42	352.32	2663
736.00	861.85	835.65	2271	2285	101.77	213.78	351.37	2684
738.00	864.62	838.42	2272	2286	101.41	213.09	350.36	2761
740.00	867.40	841.20	2274	2288	101.05	212.39	349.33	2789
742.00	870.00	843.80	2274	2289	100.73	211.81	348.46	2591
744.00	872.03	845.83	2274	2288	100.55	211.47	347.99	2034
746.00	874.04	847.84	2273	2287	100.37	211.14	347.53	2013
748.00	876.36	850.16	2273	2287	100.12	210.69	346.87	2321
750.00	879.05	852.85	2274	2289	99.79	210.06	345.95	2687
752.00	881.68	855.48	2275	2289	99.48	209.46	345.07	2629
754.00	884.34	858.14	2276	2291	99.16	208.85	344.17	2666
756.00	887.17	860.97	2278	2292	98.80	208.16	343.14	2830
758.00	889.89	863.69	2279	2293	98.47	207.53	342.20	2720
760.00	892.68	866.48	2280	2295	98.12	206.87	341.22	2784
762.00	895.30	869.10	2281	2296	97.82	206.30	340.38	2619
764.00	898.01	871.81	2282	2297	97.50	205.68	339.46	2714
766.00	900.80	874.60	2284	2298	97.16	205.03	338.49	2786

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	903.48	877.28	2285	2299	96.85	204.44	337.61	2684
770.00	905.97	879.77	2285	2300	96.58	203.94	336.87	2489
772.00	908.13	881.93	2285	2300	96.39	203.58	336.36	2156
774.00	910.20	884.00	2284	2299	96.21	203.25	335.89	2071
776.00	912.22	886.02	2284	2298	96.04	202.94	335.45	2026
778.00	914.24	888.04	2283	2298	95.88	202.63	335.01	2019
780.00	916.88	890.68	2284	2299	95.59	202.07	334.18	2634
782.00	919.81	893.61	2285	2300	95.22	201.37	333.13	2930
784.00	922.50	896.30	2286	2302	94.92	200.79	332.26	2697
786.00	924.96	898.76	2287	2302	94.67	200.32	331.57	2458
788.00	927.51	901.31	2288	2303	94.41	199.81	330.82	2545
790.00	930.25	904.05	2289	2304	94.10	199.22	329.93	2743
792.00	933.03	906.83	2290	2305	93.79	198.61	329.02	2778
794.00	935.98	909.78	2292	2307	93.43	197.92	327.98	2958
796.00	938.94	912.74	2293	2309	93.08	197.24	326.95	2951
798.00	941.68	915.48	2294	2310	92.78	196.66	326.07	2749
800.00	944.55	918.35	2296	2312	92.45	196.03	325.12	2863
802.00	947.22	921.02	2297	2313	92.17	195.48	324.31	2675
804.00	949.84	923.64	2298	2313	91.91	194.97	323.54	2614
806.00	952.33	926.13	2298	2314	91.67	194.51	322.86	2498
808.00	955.01	928.81	2299	2315	91.39	193.98	322.05	2674
810.00	957.66	931.46	2300	2316	91.12	193.45	321.27	2651
812.00	960.24	934.04	2301	2316	90.87	192.96	320.54	2585
814.00	962.89	936.70	2301	2317	90.60	192.45	319.77	2651

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	965.69	939.49	2303	2319	90.31	191.87	318.90	2793
818.00	968.38	942.18	2304	2320	90.04	191.35	318.11	2687
820.00	971.25	945.05	2305	2321	89.73	190.74	317.19	2875
822.00	974.21	948.01	2307	2323	89.40	190.10	316.22	2961
824.00	977.41	951.21	2309	2325	89.02	189.35	315.07	3200
826.00	980.44	954.24	2311	2327	88.68	188.69	314.06	3031
828.00	983.46	957.26	2312	2329	88.35	188.04	313.06	3022
830.00	986.74	960.54	2315	2332	87.96	187.27	311.88	3280

*Synthetic*

ANALYST: M. SANDERS

19-DEC-85 08:27:41

PROGRAM: GTRFRM 007.E08

```
*****  
*  
*  
*  
*****  
*  
* SCHLUMBERGER *  
*  
*****
```

SYNTHETIC SEISMOGRAM TABLE

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 540,421

ANALYST: M. SANDERS

19-DEC-85 08:27:41

PROGRAM: GTRFRM 007.E08

```
*****  
*                                     *  
*                                     *  
*                                     *  
*****  
*                                     *  
*   SCHLUMBERGER                     *  
*                                     *  
*****
```

SYNTHETIC SEISMOGRAM TABLE

COMPANY : BEACH PETROLEUM N.L.  
WELL : WRIXONDALE - 1  
FIELD : WILDCAT  
PERMIT : PEP-107  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: 540,421

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 :  
GRFO01- CHANNEL NAME FOR INPUT DENSITY LOG DATA  
GTRO01- CHANNEL NAME FOR INPUT SONIC LOG DATA  
G CURVE- 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

#### CHANNEL 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)	IGEOF	:	0	
INITIALIZE CDP LOGIC	ICDP	:	0	
CDP TIME	CDPTIM	:	200000	S
TIME SAMPLING (WST)	SRATE	:	200000	MS
TOP DEPTH OF PROCESSING	INIDEP	:	273.800	M
BOTTOM DEPTH OF PROCESSING	IGESTP	:	963.000	M
INITIAL TWO WAY TRAVEL T	INITAU	:	262620	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	:	2438.62	M/S
UNIFORM EARTH VELOCITY	UNERTH	:	2133.60	M/S
UNIFORM DENSITY VALUE	UNFDEN	:	2.30000	G/C3

(MATRIX PARAMETERS)

1 GR\*  
2 CALI,CUR,LOG,006.\*

(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 SUPPLIED DENSITY DA	LAYDEN	:	999.2500	G/C3	30479.7	-	0
USER VELOC (WST)	LAYVEL	:	2395.000	M/S	300.000	-	185.000
			2117.000		185.000		165.000
			1879.000		165.000		26.2000

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
264.6	276.16	2358	2,085	-.009	.99991	-.00943	-.00943	0
266.6	278.48	2323	2,076	-.004	.99989	-.00436	-.00445	-.00009
268.6	280.77	2286	2,092	.005	.99987	.00470	.00462	-.00008
270.6	283.06	2296	2,102	-.007	.99982	-.00691	-.00684	.00007
272.6	285.35	2281	2,087	-.011	.99970	-.01117	-.01126	-.00009
274.6	287.59	2241	2,077	-.010	.99959	-.01030	-.01059	-.00029
276.6	289.80	2215	2,059	.005	.99956	.00531	.00508	-.00023
278.6	292.03	2231	2,066	.025	.99895	.02485	.02492	.00006
280.6	294.35	2317	2,091	-.005	.99892	-.00499	-.00454	.00045
282.6	296.64	2295	2,089	.015	.99869	.01511	.01494	-.00018
284.6	299.01	2369	2,086	.021	.99824	.02135	.02119	-.00015
286.6	301.45	2441	2,114	-.010	.99813	-.01026	-.00934	.00092
288.6	303.86	2406	2,101	-.012	.99797	-.01246	-.01199	.00047
290.6	306.23	2367	2,083	.028	.99720	.02785	.02793	.00008
292.6	308.69	2462	2,117	-.015	.99698	-.01484	-.01407	.00078
294.6	311.10	2415	2,096	-.009	.99690	-.00860	-.00839	.00022
296.6	313.50	2393	2,079	.009	.99682	.00895	.00849	-.00046
298.6	315.91	2413	2,099	.012	.99668	.01180	.01095	-.00085
300.6	318.36	2445	2,120	-.013	.99651	-.01311	-.01332	-.00021
302.6	320.78	2423	2,085	.023	.99600	.02244	.02293	.00049
304.6	323.29	2511	2,104	-.012	.99586	-.01206	-.01268	-.00062
306.6	325.74	2449	2,106	.010	.99576	.00997	.00878	-.00119
308.6	328.25	2510	2,096	-.018	.99545	-.01761	-.01566	.00195
310.6	330.71	2465	2,060	.003	.99544	.00302	.00288	-.00013
		2499	2,045					

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
312.6	333.21	2557	2.081	.020	.99503	.02018	.01848	-.00170
314.6	335.77	2563	2.142	.016	.99478	.01568	.01750	.00182
316.6	338.33	2471	2.110	-.026	.99412	-.02574	-.02440	.00134
318.6	340.80	2375	2.086	-.025	.99347	-.02530	-.02926	-.00396
320.6	343.18	2499	2.102	.029	.99262	.02905	.02946	.00041
322.6	345.68	2390	2.072	-.029	.99177	-.02914	-.02762	.00152
324.6	348.07	2427	2.089	.012	.99163	.01148	.01155	.00007
326.6	350.50	2493	2.097	.015	.99140	.01517	.01350	-.00167
328.6	352.99	2515	2.112	.008	.99134	.00791	.00844	.00053
330.6	355.50	2384	2.072	-.036	.99004	-.03594	-.03723	-.00129
332.6	357.89	2343	2.056	-.013	.98988	-.01247	-.01164	.00084
334.6	360.23	2400	2.091	.020	.98946	.02024	.01805	-.00220
336.6	362.63	2292	2.077	-.026	.98877	-.02619	-.02483	.00136
338.6	364.92	2279	2.045	-.010	.98866	-.01035	-.00717	.00318
340.6	367.20	2369	2.081	.028	.98788	.02789	.02484	-.00305
342.6	369.57	2308	2.068	-.016	.98762	-.01597	-.01945	-.00348
344.6	371.88	2298	2.035	-.010	.98751	-.01012	-.00566	.00446
346.6	374.18	2386	2.048	.022	.98704	.02161	.02140	-.00020
348.6	376.56	2391	2.099	.013	.98686	.01324	.00937	-.00387
350.6	378.95	2243	2.018	-.052	.98423	-.05096	-.04737	.00359
352.6	381.20	2328	2.024	.020	.98384	.01967	.02247	.00280
354.6	383.52	2417	2.052	.026	.98319	.02527	.02147	-.00380
356.6	385.94	2392	2.080	.001	.98319	.00141	.00190	.00049
358.6	388.33	2340	2.051	-.018	.98288	-.01756	-.00961	.00795
360.6	390.67			-.010	.98277	-.00995	-.01498	-.00502

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
362.6	392.94	2270	2.072	.070	.97796	.06878	.06414	-.00464
364.6	395.47	2524	2.144	-.062	.97419	-.06074	-.05624	.00449
366.6	397.77	2300	2.078	.009	.97411	.00873	.01454	.00581
368.6	400.10	2332	2.086	-.029	.97329	-.02822	-.03773	-.00952
370.6	402.34	2245	2.045	.002	.97329	.00170	.00424	.00254
372.6	404.65	2307	1.997	.038	.97185	.03746	.04200	.00454
374.6	407.06	2413	2.062	-.022	.97138	-.02136	-.02302	-.00166
376.6	409.39	2325	2.048	-.014	.97120	-.01318	-.01895	-.00577
378.6	411.67	2277	2.036	.036	.96992	.03522	.03417	-.00105
380.6	414.04	2378	2.096	-.014	.96972	-.01403	-.00700	.00702
382.6	416.46	2415	2.005	-.008	.96966	-.00772	-.00936	-.00164
384.6	418.80	2344	2.032	.009	.96959	.00833	.00642	-.00190
386.6	421.19	2388	2.030	-.086	.96239	-.08356	-.08106	.00250
388.6	423.30	2105	1.937	.077	.95666	.07421	.07270	-.00151
390.6	425.59	2297	2.072	.036	.95541	.03459	.03241	-.00217
392.6	428.05	2455	2.084	-.022	.95495	-.02097	-.01652	.00444
394.6	430.39	2346	2.087	.047	.95288	.04451	.04435	-.00015
396.6	432.94	2545	2.112	-.034	.95181	-.03194	-.03088	.00107
398.6	435.34	2405	2.090	-.020	.95141	-.01949	-.02555	-.00606
400.6	437.63	2291	2.106	-.004	.95140	-.00341	.00002	.00343
402.6	439.97	2336	2.051	.022	.95093	.02107	.02938	.00831
404.6	442.39	2424	2.066	.009	.95085	.00863	.00389	-.00474
406.6	444.80	2408	2.117	.012	.95071	.01179	.00253	-.00926
408.6	447.26	2459	2.126	-.017	.95042	-.01634	.00063	.01697
		2445	2.065					

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
410.6	449.71	2451	2.114	.013	.95027	.01220	-.00204	-.01424
412.6	452.16	2407	2.036	-.028	.94953	-.02654	-.03150	-.00496
414.6	454.56	2236	2.070	-.028	.94876	-.02705	-.01419	.01286
416.6	456.80	2205	2.066	-.008	.94869	-.00763	-.01280	-.00516
418.6	459.01	2043	1.966	-.063	.94495	-.05957	-.06372	-.00415
420.6	461.05	2355	2.119	.108	.93392	.10211	.09989	-.00222
422.6	463.40	2121	1.990	-.083	.92743	-.07788	-.06964	.00824
424.6	465.52	2344	2.077	.071	.92275	.06583	.05058	-.01525
426.6	467.87	2430	2.110	.026	.92212	.02420	.03222	.00803
428.6	470.30	2416	2.110	-.003	.92211	-.00275	.00433	.00707
430.6	472.72	2446	2.105	.005	.92209	.00465	.00052	-.00413
432.6	475.16	2441	2.112	.001	.92209	.00053	.00582	.00530
434.6	477.60	2458	2.104	.001	.92209	.00127	.00630	.00503
436.6	480.06	2489	2.100	.005	.92206	.00496	.00845	.00349
438.6	482.55	2516	2.144	.016	.92183	.01458	.01245	-.00214
440.6	485.07	2574	2.150	.013	.92168	.01184	.00846	-.00338
442.6	487.64	2396	2.107	-.046	.91973	-.04236	-.04929	-.00693
444.6	490.04	2487	2.147	.028	.91901	.02581	.03394	.00813
446.6	492.52	2406	2.130	-.021	.91862	-.01884	-.02647	-.00763
448.6	494.93	2472	2.130	.013	.91845	.01240	.01327	.00087
450.6	497.40	2362	2.103	-.029	.91767	-.02683	-.00933	.01750
452.6	499.76	2434	2.165	.030	.91686	.02718	.00864	-.01853
454.6	502.20	2506	2.138	.008	.91680	.00768	.00625	-.00144
456.6	504.70	2298	2.113	-.049	.91458	-.04511	-.05167	-.00656
458.6	507.00			.014	.91441	.01249	.02680	.01431

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
460.6	509.33	2334	2.138	.023	.91393	.02102	.01155	-.00947
462.6	511.74	2407	2.171	-.017	.91368	-.01510	-.00824	.00686
464.6	514.12	2376	2.128	-.020	.91331	-.01835	-.01130	.00705
466.6	516.41	2296	2.115	-.006	.91327	-.00557	-.01799	-.01242
468.6	518.68	2265	2.118	.024	.91276	.02161	.02252	.00091
470.6	521.02	2337	2.152	.005	.91274	.00423	.01168	.00746
472.6	523.39	2373	2.139	.012	.91261	.01105	.00017	-.01088
474.6	525.80	2416	2.153	.021	.91222	.01895	.01527	-.00368
476.6	528.28	2477	2.189	.019	.91188	.01746	.03369	.01623
478.6	530.84	2561	2.200	-.010	.91179	-.00917	-.01181	-.00264
480.6	533.37	2528	2.184	-.031	.91092	-.02809	-.02194	.00615
482.6	535.77	2402	2.161	.055	.90821	.04974	.04008	-.00966
484.6	538.36	2584	2.241	-.079	.90261	-.07133	-.06425	.00708
486.6	540.67	2308	2.143	.025	.90206	.02223	.02641	.00418
488.6	543.05	2387	2.177	.010	.90197	.00880	-.01935	-.02815
490.6	545.49	2437	2.175	-.020	.90161	-.01804	-.00136	.01668
492.6	547.87	2382	2.138	-.009	.90155	-.00771	-.01420	-.00649
494.6	550.24	2368	2.114	0	.90155	-.00002	.00207	.00209
496.6	552.63	2389	2.095	.047	.89959	.04203	.05336	.01133
498.6	555.14	2508	2.191	-.039	.89823	-.03493	-.04655	-.01162
500.6	557.54	2401	2.117	.009	.89816	.00802	.02284	.01482
502.6	559.92	2383	2.172	-.008	.89811	-.00679	-.01821	-.01142
504.6	562.29	2365	2.156	.047	.89610	.04249	.03613	-.00636
506.6	564.77	2479	2.261	-.021	.89570	-.01895	-.00719	.01176
		2451	2.192					

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
508.6	567.22	2642	2,253	.051	.89333	.04601	.07028	.02428
510.6	569.86	2530	2,229	-.027	.89268	-.02421	-.06221	-.03800
512.6	572.39	2508	2,232	-.004	.89266	-.00354	.02023	.02377
514.6	574.90	2444	2,193	-.022	.89225	-.01924	-.01003	.00922
516.6	577.34	2593	2,248	.042	.89068	.03743	.01851	-.01892
518.6	579.94	2689	2,261	.021	.89028	.01879	.03057	.01178
520.6	582.62	2623	2,226	-.020	.88992	-.01802	-.03695	-.01892
522.6	585.25	2438	2,173	-.049	.88782	-.04317	-.02724	.01592
524.6	587.69	2464	2,188	.009	.88776	.00755	-.02306	-.03061
526.6	590.15	2659	2,261	.055	.88511	.04847	.06671	.01824
528.6	592.81	2592	2,253	-.015	.88492	-.01287	.01046	.02333
530.6	595.40	2515	2,226	-.021	.88453	-.01863	-.04160	-.02297
532.6	597.91	2514	2,209	-.004	.88452	-.00366	-.00189	.00177
534.6	600.43	2141	2,062	-.114	.87301	-.10091	-.09573	.00518
536.6	602.57	2420	2,233	.101	.86413	.08800	.05909	-.02891
538.6	604.99	2287	2,079	-.064	.86058	-.05543	-.03367	.02176
540.6	607.28	2660	2,209	.106	.85098	.09088	.07478	-.01610
542.6	609.94	2541	2,156	-.035	.84994	-.02978	.00056	.03034
544.6	612.48	2617	2,254	.037	.84878	.03141	.02834	-.00307
546.6	615.10	2531	2,214	-.026	.84821	-.02192	-.03299	-.01107
548.6	617.63	2346	2,187	-.044	.84657	-.03737	-.03533	.00204
550.6	619.97	2489	2,250	.044	.84494	.03715	.06169	.02454
552.6	622.46	2385	2,225	-.027	.84432	-.02286	-.04818	-.02532
554.6	624.85	2265	2,126	-.049	.84233	-.04101	-.05058	-.00957
556.6	627.11			.033	.84142	.02764	.04628	.01865



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
558.6	629.46	2345	2,193	.009	.84135	.00745	-.00704	-.01450
560.6	631.84	2389	2,190	-.033	.84044	-.02775	-.03332	-.00557
562.6	634.12	2271	2,157	-.052	.83820	-.04337	-.03526	.00811
564.6	636.27	2153	2,052	.089	.83160	.07436	.06543	-.00894
566.6	638.68	2410	2,190	-.029	.83089	-.02426	-.02115	.00311
568.6	641.02	2341	2,126	.002	.83089	.00138	-.01253	-.01392
570.6	643.35	2325	2,148	-.007	.83086	-.00552	.01144	.01696
572.6	645.63	2290	2,153	.018	.83057	.01535	.00328	-.01207
574.6	647.99	2353	2,174	-.070	.82650	-.05815	-.04382	.01434
576.6	650.15	2164	2,054	.034	.82553	.02836	.03152	.00316
578.6	652.39	2239	2,127	-.026	.82496	-.02159	-.03350	-.01192
580.6	654.56	2167	2,085	-.049	.82294	-.04082	-.04390	-.00308
582.6	656.61	2052	1,994	.063	.81967	.05187	.06018	.00832
584.6	658.83	2216	2,095	-.020	.81936	-.01606	.00782	.02387
586.6	660.99	2165	2,062	-.041	.81797	-.03371	-.06840	-.03469
588.6	663.05	2057	1,999	.029	.81728	.02378	.03217	.00839
590.6	665.17	2124	2,052	-.010	.81721	-.00784	-.01354	-.00571
592.6	667.27	2094	2,042	.046	.81546	.03778	.03128	-.00650
594.6	669.48	2216	2,117	-.015	.81528	-.01225	.00227	.01452
596.6	671.67	2186	2,082	-.010	.81519	-.00832	.00246	.01077
598.6	673.82	2157	2,068	.005	.81517	.00443	-.01209	-.01652
600.6	675.99	2167	2,081	-.003	.81516	-.00216	.01127	.01343
602.6	678.15	2160	2,076	-.010	.81508	-.00833	-.02328	-.01494
604.6	680.28	2125	2,067	-.011	.81498	-.00690	-.01420	-.00530
		2106	2,041					

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
606.6	682.38			.007	.81494	.00587	.02359	.01772
608.6	684.51	2128	2.049	-.021	.81459	-.01681	-.05374	-.03693
610.6	686.57	2058	2.033	-.022	.81419	-.01798	.01254	.03052
612.6	688.56	1992	2.010	.049	.81220	.04029	.02644	-.01384
614.6	690.68	2118	2.087	-.021	.81184	-.01718	.00243	.01962
616.6	692.74	2059	2.058	.012	.81171	.01008	-.01107	-.02116
618.6	694.81	2074	2.094	.016	.81149	.01338	.01938	.00600
620.6	696.94	2129	2.109	-.032	.81068	-.02557	-.00633	.01924
622.6	698.99	2051	2.056	-.014	.81054	-.01095	-.04475	-.03381
624.6	701.00	2009	2.043	.005	.81052	.00405	.03446	.03040
626.6	703.03	2029	2.043	.022	.81013	.01773	.00910	-.00863
628.6	705.10	2074	2.088	.037	.80899	.03033	.03128	.00095
630.6	707.28	2179	2.142	-.033	.80810	-.02690	-.00984	.01706
632.6	709.40	2115	2.064	.008	.80805	.00630	.01028	.00399
634.6	711.50	2109	2.103	.027	.80745	.02201	-.00183	-.02384
636.6	713.68	2174	2.154	-.007	.80741	-.00538	-.03045	-.02507
638.6	715.84	2157	2.142	-.013	.80727	-.01060	.04759	.05820
640.6	717.95	2110	2.133	-.033	.80640	-.02649	-.08612	-.05963
642.6	719.98	2032	2.075	.060	.80353	.04812	.07355	.02543
644.6	722.17	2189	2.170	-.038	.80236	-.03068	-.03896	-.00827
646.6	724.27	2098	2.097	-.026	.80183	-.02072	-.01336	.00736
648.6	726.31	2042	2.047	.011	.80173	.00885	-.00753	-.01639
650.6	728.38	2071	2.063	-.015	.80154	-.01221	-.00702	.00520
652.6	730.42	2038	2.033	.019	.80127	.01488	.03173	.01685
654.6	732.50	2080	2.068	.013	.80113	.01043	.00164	-.00879

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
656.6	734.62	2120	2.082	-.004	.80112	-.00286	-.01044	-.00758
658.6	736.71	2091	2.096	-.012	.80100	-.00998	-.01787	-.00789
660.6	738.77	2058	2.077	.006	.80097	.00444	.02554	.02110
662.6	740.88	2111	2.048	-.005	.80095	-.00413	-.00109	.00303
664.6	742.94	2067	2.070	.068	.79720	.05483	.06262	.00779
666.6	745.20	2259	2.172	.018	.79694	.01435	.01276	-.00159
668.6	747.53	2327	2.186	.092	.79021	.07321	.07668	.00346
670.6	750.17	2638	2.318	-.011	.79011	-.00900	-.00843	.00057
672.6	752.82	2650	2.256	-.020	.78981	-.01544	.00088	.01632
674.6	755.38	2559	2.247	.081	.78457	.06430	.05940	-.00490
676.6	758.23	2851	2.374	-.122	.77288	-.09579	-.08780	.00799
678.6	760.62	2390	2.215	-.110	.76351	-.08509	-.10667	-.02158
680.6	762.81	2188	1.940	.077	.75898	.05883	.06093	.00210
682.6	765.22	2417	2.050	-.280	.69965	-.21219	-.22544	-.01325
684.6	767.15	1930	1.445	.181	.67672	.12668	.05414	-.07255
686.6	769.23	2080	1.934	.167	.65774	.11332	.16832	.05500
688.6	771.77	2533	2.227	-.079	.65368	-.05170	-.00317	.04854
690.6	774.13	2365	2.038	.085	.64898	.05543	.00067	-.05476
692.6	776.88	2751	2.076	.011	.64890	.00703	.03192	.02489
694.6	779.62	2742	2.129	-.043	.64772	-.02771	-.01433	.01338
696.6	782.20	2577	2.079	.016	.64754	.01061	.03863	.02802
698.6	784.80	2602	2.128	-.016	.64737	-.01053	-.00639	.00414
700.6	787.41	2612	2.052	.043	.64615	.02808	.04359	.01551
702.6	790.16	2745	2.130	-.023	.64581	-.01494	-.02302	-.00809
		2666	2.094					

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
704.6	792.82	2627	2.112	-.003	.64580	-.00194	-.01044	-.00850
706.6	795.45	2779	2.156	.038	.64486	.02472	.02749	.00277
708.6	798.23	2740	2.142	-.010	.64479	-.00651	-.02865	-.02214
710.6	800.97	2640	2.107	-.027	.64433	-.01732	.00263	.01996
712.6	803.61	2690	2.111	.010	.64426	.00662	.00063	-.00599
714.6	806.30	2718	2.131	.010	.64419	.00639	-.01040	-.01679
716.6	809.02	2742	2.155	.010	.64413	.00634	.01913	.01279
718.6	811.76	2677	2.127	-.018	.64391	-.01189	-.00404	.00785
720.6	814.44	2788	2.165	.029	.64336	.01879	.02390	.00510
722.6	817.22	2753	2.164	-.006	.64334	-.00418	-.02551	-.02133
724.6	819.98	2766	2.174	.005	.64332	.00296	.03313	.03017
726.6	822.74	2753	2.152	-.007	.64329	-.00474	-.00707	-.00234
728.6	825.50	2832	2.176	.020	.64304	.01256	-.01825	-.03081
730.6	828.33	2772	2.162	-.014	.64292	-.00894	.03807	.04701
732.6	831.10	2656	2.128	-.029	.64237	-.01881	-.03297	-.01417
734.6	833.76	2678	2.147	.009	.64232	.00564	-.01080	-.01643
736.6	836.43	2804	2.157	.025	.64191	.01618	.02040	.00422
738.6	839.24	2848	2.149	.006	.64189	.00379	-.01025	-.01404
740.6	842.09	2339	1.687	-.216	.61190	-.13873	-.10481	.03392
742.6	844.42	2023	1.206	-.236	.57790	-.14424	-.23283	-.08859
744.6	846.45	2014	1.378	.065	.57550	.03728	.02548	-.01180
746.6	848.46	2498	2.228	.335	.51110	.19251	.18126	-.01125
748.6	850.96	2629	2.266	.034	.51052	.01727	.11069	.09342
750.6	853.59	2641	2.141	-.026	.51017	-.01332	-.04047	-.02716
752.6	856.23			.027	.50981	.01364	-.03129	-.04493

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
754.6	859.01	2779	2.146	-.011	.50975	-.00551	.05321	.05872
756.6	861.76	2750	2.122	.010	.50970	.00494	.01516	.01022
758.6	864.53	2770	2.148	-.008	.50967	-.00407	.00293	.00699
760.6	867.26	2731	2.144	-.045	.50862	-.02314	-.00599	.01715
762.6	869.88	2618	2.043	.040	.50779	.02052	.04621	.02568
764.6	872.62	2741	2.115	-.005	.50777	-.00266	-.02582	-.02316
766.6	875.30	2682	2.139	.043	.50684	.02175	.04089	.01914
768.6	878.07	2766	2.260	-.092	.50253	-.04673	-.05410	-.00738
770.6	880.46	2387	2.177	-.182	.48580	-.09169	-.11082	-.01913
772.6	882.55	2098	1.713	-.080	.48269	-.03890	-.04762	-.00872
774.6	884.61	2062	1.484	-.032	.48219	-.01547	-.04541	-.02995
776.6	886.63	2016	1.424	-.077	.47933	-.03716	-.02808	.00908
778.6	888.67	2040	1.206	.467	.37462	.22404	.16337	-.06066
780.6	891.56	2891	2.344	-.027	.37434	-.01024	.01975	.02999
782.6	894.43	2870	2.235	-.078	.37205	-.02924	-.01382	.01542
784.6	897.05	2619	2.094	-.023	.37186	-.00849	-.05410	-.04561
786.6	899.44	2392	2.191	.069	.37010	.02556	.08388	.05832
788.6	902.14	2693	2.233	-.008	.37008	-.00293	.05121	.05414
790.6	904.86	2721	2.175	.017	.36997	.00635	-.02722	-.03357
792.6	907.65	2790	2.196	.061	.36861	.02242	.11183	.08941
794.6	910.70	3050	2.268	-.047	.36779	-.01742	-.02204	-.00461
796.6	913.54	2847	2.210	-.028	.36751	-.01014	-.12110	-.11096
798.6	916.33	2782	2.140	.020	.36736	.00733	.05688	.04954
800.6	919.16	2832	2.189	-.017	.36725	-.00637	-.01029	-.00393
		2723	2.199					

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
802.6	921.88	2488	2.295	-.024	.36705	-.00870	.05607	.06477
804.6	924.37	2546	2.314	.016	.36695	.00579	.09628	.09049
806.6	926.92	2685	2.346	.033	.36655	.01226	-.08524	-.09750
808.6	929.60	2629	2.301	-.020	.36639	-.00746	.04625	.05371
810.6	932.23	2591	2.269	-.014	.36632	-.00521	-.07174	-.06653
812.6	934.82	2731	2.273	.027	.36605	.00996	-.00682	-.01678
814.6	937.55	2793	2.314	.020	.36590	.00742	.00859	.00117
816.6	940.35	2692	2.344	-.012	.36584	-.00440	.03203	.03644
818.6	943.04	2854	2.383	.037	.36534	.01364	-.02420	-.03784
820.6	945.89	3012	2.432	.037	.36483	.01359	.04030	.02671
822.6	948.90	3231	2.420	.033	.36445	.01186	.03899	.02713
824.6	952.13	2987	2.419	-.039	.36388	-.01437	-.00903	.00534
826.6	955.12	2984	2.314	-.023	.36369	-.00825	-.01673	-.00847
828.6	958.10	3443	2.450	.100	.36006	.03632	.01919	-.01713
830.6	961.55	3477	2.436	.002	.36006	.00077	-.00297	-.00374
832.6	965.02			0	0	0	.01111	.01111
834.6							.06171	.06171
836.6							.04379	.04379
838.6							-.09851	-.09851
840.6							.06797	.06797
842.6							.01751	.01751
844.6							-.04307	-.04307
846.6							.00653	.00653
848.6							-.01132	-.01132
850.6							-.02648	-.02648

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
852.6							.04423	.04423
854.6							.01522	.01522
856.6							-.02399	-.02399
858.6							-.00743	-.00743
860.6							.06193	.06193
862.6							-.06805	-.06805
864.6							.00244	.00244
866.6							-.02122	-.02122
868.6							.09377	.09377
870.6							-.01336	-.01336
872.6							-.02931	-.02931
874.6							.01706	.01706
876.6							-.03563	-.03563
878.6							-.08180	-.08180
880.6							.05205	.05205
882.6							-.00481	-.00481
884.6							-.03066	-.03066
886.6							.05742	.05742
888.6							.00950	.00950
890.6							.02844	.02844
892.6							-.00316	-.00316
894.6							-.08430	-.08430
896.6							.02705	.02705
898.6							-.01155	-.01155

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
900.6							.06284	.06284
902.6							.02360	.02360
904.6							.01284	.01284
906.6							-.00373	-.00373
908.6							-.05796	-.05796
910.6							.05026	.05026
912.6							-.03354	-.03354
914.6							-.01908	-.01908
916.6							.04231	.04231
918.6							-.01813	-.01813
920.6							-.06853	-.06853
922.6							.02995	.02995
924.6							.02088	.02088
926.6							-.03292	-.03292
928.6							.03187	.03187
930.6							-.03943	-.03943
932.6							.02804	.02804
934.6							.01478	.01478
936.6							-.01086	-.01086
938.6							.06314	.06314
940.6							-.01003	-.01003
942.6							.02864	.02864
944.6							-.07930	-.07930
946.6							.03688	.03688
948.6							.00470	.00470



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
950.6							-.08564	-.08564
952.6							.02342	.02342
954.6							.00441	.00441
956.6							.02905	.02905
958.6							.04725	.04725
960.6							-.00787	-.00787
962.6							-.02958	-.02958
964.6							-.00865	-.00865
966.6							-.02703	-.02703
968.6							-.03549	-.03549
970.6							.01693	.01693
972.6							.04841	.04841
974.6							-.04538	-.04538
976.6							.02926	.02926
978.6							.02475	.02475
980.6							-.00621	-.00621
982.6							.00103	.00103
984.6							.04552	.04552
986.6							.03654	.03654
988.6							-.03370	-.03370
990.6							-.02720	-.02720
992.6							.01576	.01576
994.6							-.07135	-.07135
996.6							.03579	.03579

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
998.6							-.01813	-.01813
1000.6							-.08064	-.08064
1002.6							.02033	.02033
1004.6							.05287	.05287
1006.6							.02705	.02705
1008.6							.03856	.03856
1010.6							-.01968	-.01968
1012.6							-.05975	-.05975
1014.6							.02344	.02344
1016.6							.03286	.03286
1018.6							-.00579	-.00579
1020.6							.03455	.03455
1022.6							.01466	.01466
1024.6							-.05593	-.05593
1026.6							.00380	.00380
1028.6							-.02608	-.02608
1030.6							.01354	.01354
1032.6							-.05390	-.05390
1034.6							.00005	.00005
1036.6							.03944	.03944
1038.6							.02273	.02273
1040.6							-.01596	-.01596
1042.6							-.07398	-.07398
1044.6							.01074	.01074
1046.6							.06597	.06597

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
1048.6							.01012	.01012
1050.6							-.00302	-.00302
1052.6							.03271	.03271
1054.6							-.01405	-.01405
1056.6							-.04642	-.04642
1058.6							.01079	.01079
1060.6							-.02287	-.02287
1062.6							.05831	.05831
1064.6							-.00639	-.00639
1066.6							-.08653	-.08653
1068.6							-.02046	-.02046
1070.6							.06025	.06025
1072.6							.01734	.01734
1074.6							-.01988	-.01988
1076.6							-.00117	-.00117
1078.6							.00637	.00637
1080.6							-.03437	-.03437
1082.6							-.00004	-.00004
1084.6							.08592	.08592
1086.6							-.04926	-.04926
1088.6							.01975	.01975
1090.6							.02351	.02351
1092.6							-.01626	-.01626
1094.6							.01826	.01826

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
1096.6							-.03877	-.03877
1098.6							-.06195	-.06195
1100.6							.02382	.02382
1102.6							.01589	.01589
1104.6							.03513	.03513
1106.6							.05077	.05077
1108.6							.00642	.00642
1110.6							-.05819	-.05819
1112.6							-.01572	-.01572
1114.6							.00133	.00133
1116.6							.03547	.03547

PE605006

This is an enclosure indicator page.  
The enclosure PE605006 is enclosed within the  
container PE907064 at this location in this  
document.

The enclosure PE605006 has the following characteristics:

ITEM\_BARCODE = PE605006  
CONTAINER\_BARCODE = PE907064  
    NAME = Velocity Profile  
    BASIN = GIPPSLAND  
    PERMIT = PEP/107  
    TYPE = WELL  
    SUBTYPE = VELOCITY\_CHART  
DESCRIPTION = Velocity Profile (enclosure from  
                  attachment to WCR) for Wrixondale-1  
REMARKS =  
DATE\_CREATED = 12/12/85  
DATE\_RECEIVED = 3/01/86  
    W\_NO = W919  
    WELL\_NAME = Wrixondale-1  
CONTRACTOR = SCHLUMBERGER  
CLIENT\_OP\_CO = BEACH PETROLEUM NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE605007

This is an enclosure indicator page.  
The enclosure PE605007 is enclosed within the  
container PE907064 at this location in this  
document.

The enclosure PE605007 has the following characteristics:

- ITEM\_BARCODE = PE605007
- CONTAINER\_BARCODE = PE907064
  - NAME = Geogram/Synthetic Seismogram
  - BASIN = GIPPSLAND
  - PERMIT = PEP/107
  - TYPE = WELL
  - SUBTYPE = SYNTH\_SEISMOGRAM
- DESCRIPTION = Geogram/Synthetic Seismogram, 7.5  
in/sec, (enclosure from attachment to  
WCR) for Wrixondale-1
- REMARKS =
- DATE\_CREATED = 29/10/85
- DATE\_RECEIVED = 3/01/86
  - W\_NO = W919
  - WELL\_NAME = Wrixondale-1
  - CONTRACTOR = SCHLUMBERGER
  - CLIENT\_OP\_CO = BEACH PETROLEUM NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE605008

This is an enclosure indicator page.  
The enclosure PE605008 is enclosed within the  
container PE907064 at this location in this  
document.

The enclosure PE605008 has the following characteristics:

- ITEM\_BARCODE = PE605008
- CONTAINER\_BARCODE = PE907064
  - NAME = Geogram/Synthetic Seismogram
  - BASIN = GIPPSLAND
  - PERMIT = PEP/107
  - TYPE = WELL
  - SUBTYPE = SYNTH\_SEISMOGRAM
- DESCRIPTION = Geogram/Synthetic Seismogram, 15 in/sec,  
(enclosure from attachment to WCR) for  
Wrixondale-1
- REMARKS =
- DATE\_CREATED = 29/10/85
- DATE\_RECEIVED = 3/01/86
  - W\_NO = W919
  - WELL\_NAME = Wrixondale-1
  - CONTRACTOR = SCHLUMBERGER
  - CLIENT\_OP\_CO = BEACH PETROLEUM NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE605009

This is an enclosure indicator page.  
The enclosure PE605009 is enclosed within the  
container PE907064 at this location in this  
document.

The enclosure PE605009 has the following characteristics:

- ITEM\_BARCODE = PE605009
- CONTAINER\_BARCODE = PE907064
- NAME = Seismic Calibration Log
- BASIN = GIPPSLAND
- PERMIT = PEP/107
- TYPE = WELL
- SUBTYPE = VELOCITY\_CHART
- DESCRIPTION = Seismic Calibraton Log (enclosure from  
attachment to WCR) for Wrixondale-1
- REMARKS =
- DATE\_CREATED = 12/12/85
- DATE\_RECEIVED = 3/01/86
- W\_NO = W919
- WELL\_NAME = Wrixondale-1
- CONTRACTOR = SCHLUMBERGER
- CLIENT\_OP\_CO = BEACH PETROLEUM NL

(Inserted by DNRE - Vic Govt Mines Dept)