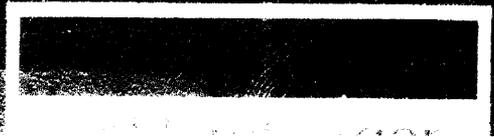


DEPT. NAT. RES. & ENV.  
PI 905928

# SEISMIC COMPUTATIONS

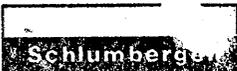




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**PETROLEUM DIVISION**

**15 MAY 1986**

**HARTOGEN ENERGY LIMITED**

**VSP / SONIC CALIBRATION / GEOGRAM PROCESSING REPORT**

**BURONG #1**

**FIELD : WILDCAT**  
**COUNTRY : AUSTRALIA**  
**COORDINATES : 38 18' 38.84" S**  
**: 147 11' 51.68" E**  
**PERMIT : ATP 247P**  
**DATE OF SURVEY : 8-NOVEMBER-1985**  
**REFERENCE NO. : VSP 540435**  
**: GEOGRAM 540439**

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- 1 Introduction
- 2 Data Acquisition
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- 4 VSP Processing
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- 7 Geogram Processing

## **Additions**

**Fig. 1 : Wavelet polarity convention**

**Fig. 2 : Stacked Data below 3236 feet - Not used in VSP**

**Well seismic service computation request**

**Well seismic service field report**

**Gun geometry sketch**

**Colour Velocity Profile**

## 1.0 INTRODUCTION

A Vertical Seismic Profile was shot in the BURONG #1 well on 8-November-1985. A total of 57 levels were shot between 500 and 4125 feet below KB with only 24 levels, between 2020 and 3225 feet below KB, being used in the final VSP processing.

The VSP was shot using an airgun source. All shot times have been corrected to the vertical and to a nominal Mean Sea Level datum.

A walkaway VSP was also planned using a Vibroseis source. Technical problems with the Vibroseis caused this survey to be aborted and limited the data set to only a few shots. Hence no processing was carried out on this data.

### VSP Objectives:

- to obtain a high resolution time-depth curve. As the levels are separated by an average of 7milliseconds, 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 (radius 20 feet).
- to determine the multiple content of the area by analysis of the downgoing wavetrains.

In addition to the above the VSP has other applications:

- Further analysis of the downgoing wavetrain provides information on the earth filtering of the seismic wave versus depth.
- The VSP has the properties of being Vertical, therefore minimising the effects of moveout. This simplifies greatly the analysis of highly dipping reflectors, and also the interpretation of data recorded in faulted areas.
- One of the most important applications of VSP's is the analysis of reflected signals below the sensor.
- As the VSP can be considered the optimum seismic expression at the wellbore it may be used as the input for further studies such as:-
  - Inversion
  - Trace Attributes
  - Power Spectra
  - Attenuation

## 2.0 DATA ACQUISITION

**Table 1 : Field Equipment and Survey Parameters**

---

Elevation SRD	Mean Sea Level
Elevation KB	129.0 feet AMSL
Elevation DF	128.0 feet AMSL
Elevation GL	115.0 feet AMSL
Well Deviation	Nil
Total Depth	4130 feet below KB
Energy Source	Bolt airgun, 200 cu.in.
Source Offset	155.35 feet
Source Depth	8.64 feet below GL
Source Azimuth	330°
Reference Sensor	Gun Hydrophone
Sensor Offset	158.65 feet
Sensor Depth	8.64 feet below GL
Sensor Azimuth	330°
Downhole Geophone (WST tool)	Geospace HS-1 High Temp. (350° F) Coil Resist. 225Ω +10 % Natural Freq. 8-12 Hz Sensitivity 52 V/m/sec Maximum tilt angle 60°
Downhole Geophone (SAT tool)	Sensors High Temp. (350° F) Natural Freq. 8-12 Hz Sensitivity 83 V/m/sec Maximum tilt angle 15°

---

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

## 2.1 Survey Details

This survey was shot as a standard land Vertical Seismic Profile. The gun was positioned in a mud pit 155.3 feet from the wellhead. Two different downhole tools have been used during the survey. From 4125 to 2075 feet below KB the Well Seismic Tool (WST) consisting of four geophones all in vertical orientation has been used. Above this, in order to obtain improved coupling, the triaxial Seismic Acquisition Tool (SAT) which contains three orthogonally orientated geophones, has been used.

The tape data containing those levels recorded with the SAT tool was totally corrupted and hence this data could not be used in the VSP processing. However for the sonic calibration processing, transit times were obtained from the field print.

Below 3225 feet below KB the VSP data recorded with the WST tool was corrupted during recording. These levels were not used in the VSP processing but the first breaks were picked for use in the sonic calibration (see figure 2.). Between 2020 and 3225 feet below KB the stacked data was of good quality and has been used in the VSP processing.

### 3.0 VSP SHOT DATA

A total of 24 VSP check levels between 2020 and 3225 feet have been used in the final VSP processing. This data is generally of good quality and a plot of the stacked data is included as PLOT 1.0 of the VSP displays.

**Table 2**

Level Depth (ft below KB)	Stacked Shots	Rejected Shots	Quality	Comments
2020	2	4	Good	
2075	4	5	Good	
2120	5	0	Good	
2155	4	1	Good	
2160	2	3	Good	
2225	3	2	Good	
2270	4	1	Good	
2335	4	3	Good	
2378	4	1	Good	
2430	3	5	Good	
2485	3	3	Good	
2540	5	0	Good	
2594	4	1	Good	
2648	5	0	Good	
2694	5	0	Good	
2740	3	2	Good	
2794	4	3	Good	
2844	3	2	Good	
2896	5	3	Good	
2952	4	1	Good	
3012	5	0	Good	
3090.6	3	2	Good	
3124	3	1	Good	
3174	4	2	Good	
3225	3	0	Good	

## 4.0 VSP PROCESSING

### 4.1 PLOT 1 - STACKED DATA

Only data between 2020 feet and 3225 feet below KB has been used in the VSP processing chain. All the shots at each level, excluding those with a high level of noise are stacked using an average stacking method. Labelled depths are measured depths referenced to Kelly Bushing.

### 4.2 PLOT 2 - BPF , TAR and NORMALISATION

Plot 2 data is displayed in One Way Time and corrected to SRD.

A Band Pass Filter of bandwidth 14-64 Hz is applied to the data to eliminate high and low frequency noise.

True Amplitude Recovery is a time variant gain function to compensate for spherical spreading and attenuation losses. The amplitude at time T is multiplied by  $(\frac{T}{T_0})^\alpha$  where  $T_0$  is the first break time and  $\alpha$  is the TAR factor.

Band Pass Filter : 14-64Hertz  
TAR Factor : 1.2

### 4.3 PLOT 3 - VELOCITY FILTER

A 7 level median velocity filter is used to separate the upgoing and downgoing components of the total wavefield. Data from this stage is displayed in Two Way Time.

### 4.4 PLOT 4 - WAVESHAPE DECONVOLUTION

The objective of deconvolution is to remove multiples and to shape the seismic signal to a zero phase wavelet. The parameters for the deconvolution are selected from the downgoing signals after velocity filtering.

The Waveshape Deconvolution parameters used:

Window : 2.0 seconds  
Wavelet : Zero Phase 14-64 Hertz

#### 4.5 PLOTS 5/6 - MONTAGE INCLUDING CORRIDOR STACKS AND GEOGRAM

Automatic gain control (AGC) using a window of 400 ms has been applied to the upgoing events after deconvolution.

The upgoing events after waveshape deconvolution are stacked and displayed alongside the deconvolved upgoing wavefield. Two stacks are made, one using all data and the other using the first 100ms of each wavetrain. The latter should simulate the reflectors at the borehole.

Alongside this data are Geogram traces convolved using a 15 - 70 Hz Klauder wavelet. Relevant log data has also been displayed.

Both polarities of this data have been displayed.

All plots are displayed at a time scale of 15cm/sec.

## 5.0 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:  $\Delta t = G(\Delta t - \Delta t_{min}) + \Delta t_{min}$ .

## 6.0 SONIC CALIBRATION PROCESSING

### 6.1 Open Hole Logs

Both sonic and density logs have been edited prior to input into the WSC chain. The sonic has been edited primarily for noise spikes as well as where affected by poor hole conditions, notably 2165 - 2202 and 2258 - 2272 feet below KB.

No density data was available above 1586 feet below KB and hence for Geogram purposes a constant value of 2.062 g/cc has been imposed. In places the density log is greatly affected by poor hole conditions and hence has been patched over the following zones: 2288 - 2294, 3100 - 3105, 3180 - 3184, 3195 - 3200 feet below KB.

Density log interval : 1586 to 4130 feet below KB  
Sonic log interval : 762 to 4130 feet below KB

### 6.2 Correction to Datum

Seismic Reference Datum (SRD) is at Mean Sea Level. The airgun was positioned 8.6 feet below Ground Level (106.4 feet above SRD). Using a correction velocity of 6233.6 feet/sec (1900 metres/sec) as supplied by HARTOGEN ENERGY LIMITED, a correction of -17.07 msec has been applied to all transit times to correct from gun to SRD.

### 6.3 Sonic Calibration Results

The top of the sonic log (762.0 feet 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. The check level at 3886 feet below KB lies 3msec from the adjusted drift curve. Although the stacked data at this level appears good it would be unreasonable to apply the shifts indicated. Hence, at this depth, a general trend of calibration has been followed .

Table 3

Depth Interval (ft below KB)	Block Shift $\mu\text{sec}/\text{ft}$	$\Delta t_{min}$ $\mu\text{sec}/\text{ft}$	Equip Block Shift $\mu\text{sec}/\text{ft}$
762-1223	-	116.65	-3.47
1223-1575	6.82	-	6.82
1575-1790	7.91	-	7.91
1790-2012	0	-	0
2012-2164	16.45	-	16.45
2164-3586	-	117.13	-2.74
3586-4130	-	84.13	-6.07

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

## 7.0 GEOGRAM PROCESSING

Geograms were generated using a 15-70 Hz Klauder wavelet. The presentation includes normal and reverse polarity at a time scale of 15 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:

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

### 7.1 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.

### 7.2 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.

### 7.3 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:

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

### 7.4 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.

### 7.5 Multiples Only

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

### 7.6 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 Klauder wavelets.

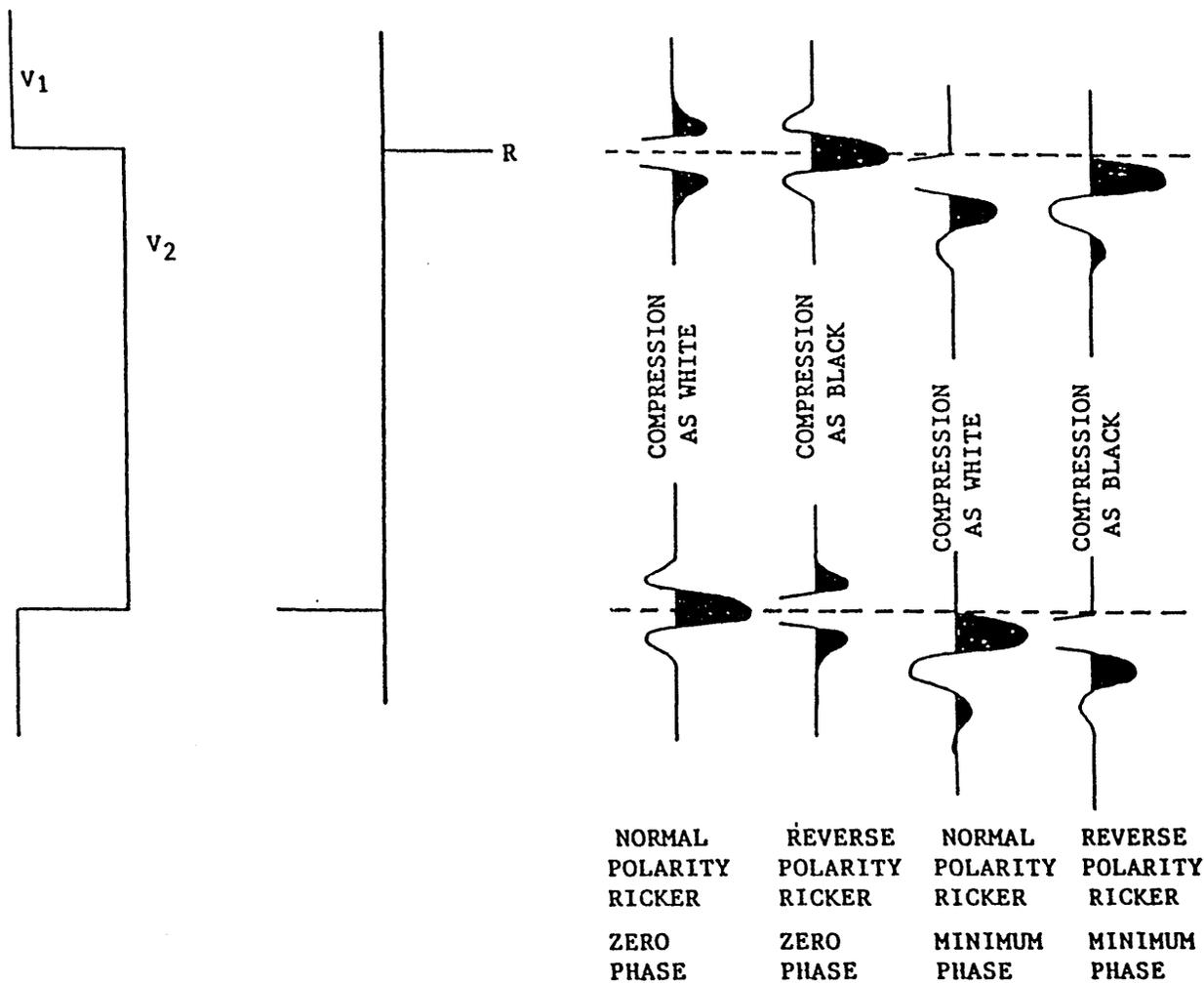
### 7.7 Convolution

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

SCHLUMBERGER WAVELET POLARITY CONVENTION

VELOCITY INCREASE →

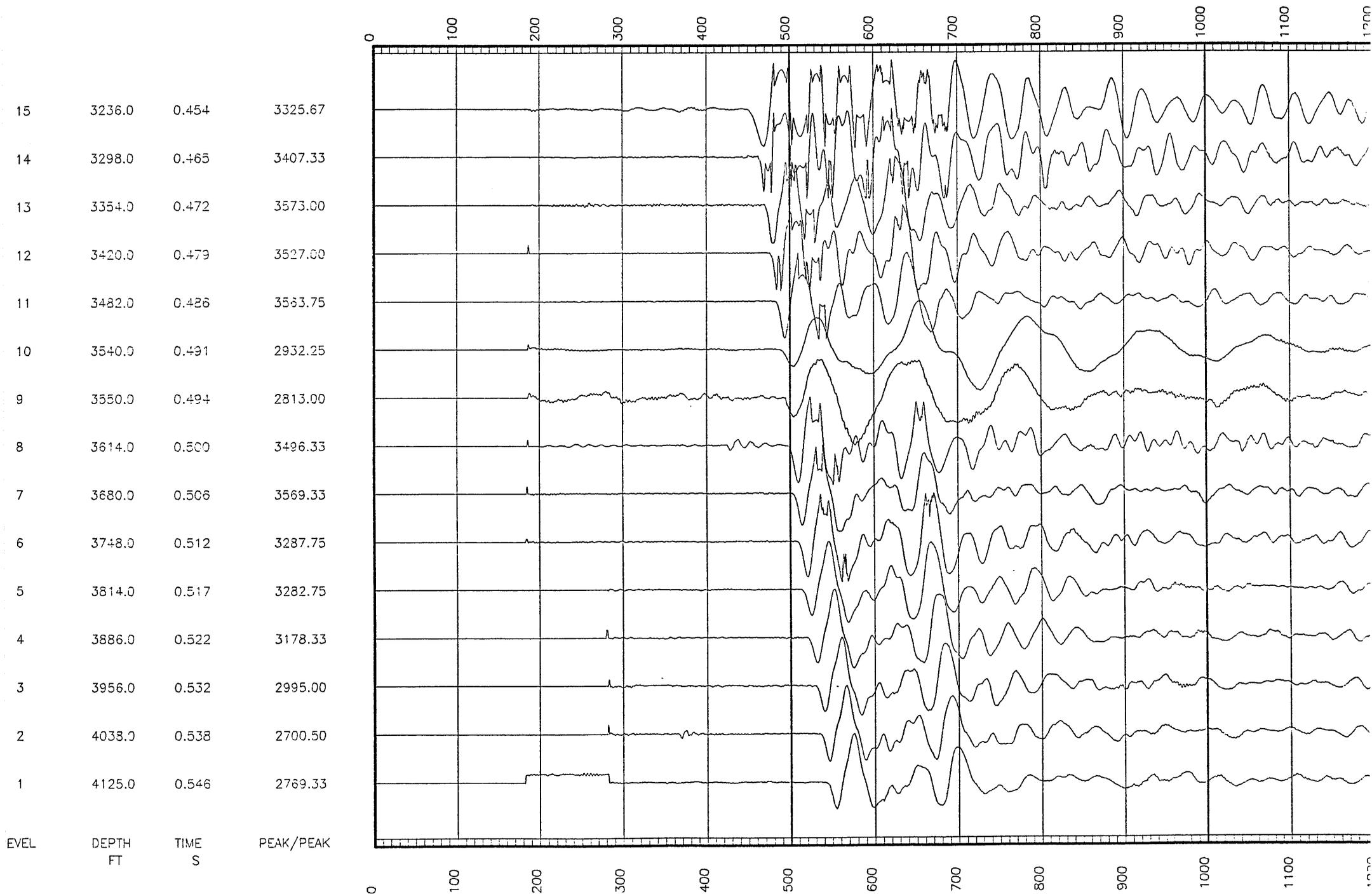
REFLECTION  
- COEFFICIENT +

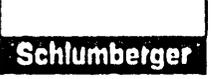


NOTE: WAVELET DISPLAYED UNDER GEOGRAMS ARE FOR A REFLECTION COEFFICIENT OF -0.5

FIGURE 1

Figure 2: Stacked Data Below 3236 feet - Not used in VSP





# WELL SEISMIC SERVICE COMPUTATION REQUEST

COMPANY: HARTOGEN CONTACT: S. GREAVES  
 WELL: BURONG #1  
 FIELD/COUNTRY: WILDCAT/AUSTRALIA  
 LOCATION/DIVISION: OEA/ANZ  
 DATE WST JOB: 8-NOV-85  
 DATE SENT: \_\_\_\_\_  
 BY: \_\_\_\_\_

NUMBER OF COPIES OF RESULTS (CLIENT)				
PRODUCT	REPORTS	PLOT TRANSP.	PLOT PRINT	TAPE
WSE				#1 x 1
WSC	5	1	5	#2 x 1
GEO	5	1	5	
VSP	5	1	5	

DATA SUPPLIED FOR INTERVALS TO BE PROCESSED

	FROM	TO
A. LOGS : DENSITY	4130	1586
SONIC	4130	762
B. SHOTS	4125	500

UNITS: FEET  METRES   
 CLIENT TAPE: \_\_\_\_\_ FORMAT: TAPE #1  TAPE #2   
 SEG Y  LIS   
 DENSITY 1600 BPI  1600 BPI

**SONIC CALIBRATION BY WST (WSC)** URGENT? YES  NO   
 IS A WELL SEISMIC EDIT (WSE) REQUESTED? YES  NO   
 (WSE IS RECOMMENDED WHERE FIELD STACK QUALITY IS AFFECTED BY BAD HOLE CONDITIONS)  
 REQUESTED TIME ORIGIN (SRD) \_\_\_\_\_ METRES ABOVE/BELOW MEAN SEA LEVEL (MSL)  
 STATIC CORRECTION TO BE APPLIED : -  
 \_\_\_\_\_ MILLISECONDS FROM GROUND LEVEL OR

LAYER	VELOCITY	FROM	TO
1			
2			
3			

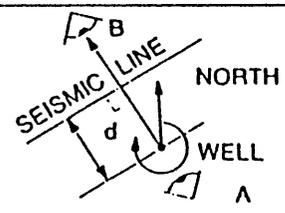
TRUE VERTICAL DEPTH (TVD) CORRECTION? YES  NO  (TVD IS RECOMMENDED IF DEVIATION EXCEEDS 5°)  
 DEVIATION DATA SUPPLIED? YES  NO   
 11 INCH WSC DISPLAY DEPTH SCALES TO BE USED (UP TO TWO) 1/5000  1/1000  OTHER   
 22 INCH WIDE TIME/DEPTH DISPLAY SPECIAL TIME FUNCTION? (T-DEPTH/VELOCITY) YES  NO  VELOCITY   
 22 INCH WIDE GEOLOGICAL INTERVAL VELOCITY DISPLAY? YES  NO  GEOLOGICAL MARKERS SUPPLIED   
 SPECIAL SCALES TO BE USED? SPECIFY \_\_\_\_\_

**GEOGRAM** URGENT? YES  NO   
 FREQUENCY TEST TO BE SUPPLIED BEFORE FINALIZATION (8 BAND WIDTHS) YES  NO   
 FINAL GEOGRAM PARAMETERS : -  
 (ONE GEOGRAM INCLUDES DISPLAYS IN BOTH POLARITIES FOR EACH OF PRIMARIES, PRIMARIES + MULTIPLES, PRIMARIES WITH TRANSMISSION LOSS, MULTIPLES ONLY FOR THE CHOSEN WAVELET AND T.V.F.)

WAVELET	FREQ.	T.	T. LOW	T. HIGH	F. LOW	F. HIGH
KLAUDER <input type="checkbox"/>						
MIN PHASE <input type="checkbox"/>						
ZERO PHASE <input type="checkbox"/>						
OTHER: _____						

SCALE IS 10 CM/SEC + ONE OTHER - SPECIFY \_\_\_\_\_

DIP OPTION YES  NO   
 SEISMIC LINE NUMBER \_\_\_\_\_  
 (ENCLOSE WELL LOCATION MAP VERSUS SEISMIC LINE)  
 DISTANCE BETWEEN TRACES \_\_\_\_\_  
 SECTION PERSPECTIVE: SEEN FROM A  FROM B   
 SPECIAL REQUESTS: \_\_\_\_\_



d \_\_\_\_\_  
 α \_\_\_\_\_  
 α (CLOCKWISE)

**VERTICAL SEISMIC PROFILE** URGENT? YES  NO   
 UP TO 3 VELOCITY FILTER TESTS WILL BE SENT PROVISIONALLY  
 SPECIFY NUMBER OF TRACES IN WINDOW REQUIRED 3  5  7  9  11   
 TIME VARIANT FILTER (TVF) TO BE APPLIED ON FINAL DISPLAY : -  
 SCALE IS 10 CM/SEC + ONE OTHER. SPECIFY \_\_\_\_\_  
 SPECIAL REQUESTS?

TIME 1	TIME 2	FLOW	F. HIGH

ENCLOSE SEISMIC SECTION. INDICATE RELATION TO WELL ON A DIAGRAM

COMPANY	WELL	DATE	LOCATION	ENGINEER	WITNESSED BY
HARTOGEN	BURONG #1	8-NOV-85	QEA	A. JAMES	OWEN NUGENT
FEET <input type="checkbox"/> METRES <input type="checkbox"/>	JACK UP <input type="checkbox"/>	SHIP <input type="checkbox"/>	WEATHER:		
	PLATFORM <input type="checkbox"/>	SEMI-SUB <input type="checkbox"/>			

SCHLUMBERGER ZERO KELLY BUSHING AT ELEVATION 129 FEET RELATIVE TO MEAN SEA LEVEL (M.S.L.)  
 LOG MEASURED FROM KB AT ELEVATION 0 FEET RELATIVE TO SCHLUMBERGER ZERO  
 DRILLING MEASURED FROM KB AT ELEVATION 0 FEET RELATIVE TO SCHLUMBERGER ZERO

SOURCE		TIDE INFORMATION		DISTANCE	HOUR	DATE
GUN TYPE	WATER <input type="checkbox"/> AIR <input type="checkbox"/>	TIDE LEVEL TO M.S.L.				
VOLUME	x _____ CU INCHES	(RECORD IF LEVEL VARIES MORE THAN 2 METRES DURING SURVEY)				
PRESSURE	_____ BARS					
VIBRATOR TYPE	_____					
SWEEP LENGTH	_____ SECONDS					
FROM	_____ HZ TO _____ HZ	CSU SOFTWARE VERSION: 28.2		MAX. HOLE DEV: -	AZIM:	

NOTE: SHOTS HIGHLY RECOMMENDED AT TD, TOP EACH SONIC, ABOVE AND BELOW BAD HOLE INTERVALS

### UNCORRECTED RESULTS

Quality: G = Good, P = Poor, U = Unsatisfactory

SHOT NO.	DEPTH	GUN PRESSURE	FILTERS	TRANSIT TIME	HOUR SHOT	FILE	STACK	STACKED SHOTS	QUALITY / REMARKS
	4125		OFF	546.3	8:41	3	2	11 - 15	USING WST
	4038		"	538.4	8:52	3	3	16 - 20	TOOL
	3956		"	533.2	9:01	3	4	21, 23, 24	
	3886		"	525.8	9:09	3	5	25 - 29	
	3886		"	518.8	9:16	3	6	25 - 36	
	3748		"	512.0	9:28	3	7	42 - 46	
	3680		"	507.0	9:37	3	8	47, 48, 50	
	3614		"	501.5	9:43	3	9	51, 53 - 56	
	3540		"	492.0	9:55	3	10	60 - 65	
	3482		"	488.1	10:55	3	11	67 - 71	
	3225		"	458.9	10:56	4	15	99 - 101	
	3174		"	453.2	11:01	4	16	103 - 105, 107	
	3124		"	446.2	11:05	4	17	108 - 111	
	3090.6		"	438.1	11:10	4	18	112 - 116	
	3012		"	431.0	11:14	4	19	117 - 121	
	2952		"	425.0	11:19	4	20	122 - 126	
	2896		"	418.2	11:25	4	21	127 - 134	
	2844		"	410.6	11:28	4	22	135 - 139	
	2794		"	403.6	11:33	4	23	140 - 146	
	2740		"	395.8	11:37	4	24	147 - 151	
	2694		"	390.8	11:40	4	25	152 - 156	
	2648		"	383.2	11:43	4	26	157 - 161	
	2594		"	376.4	11:45	4	27	162 - 166	
	2540		"	369.6	11:49	4	28	167 - 171	
	2485		"	362.8	11:51	4	29	172 - 176	
	2430		"	355.8	11:55	4	30	177, 179-184	
	2378		"	360.6	11:59	4	31	185 - 189	
	2335		"	344.8	12:02	4	32	190 - 196	
	2270		"	335.0	12:04	4	33	197 - 201	
	2225		"	329.5	12:07	4	34	202 - 206	
	2155		"	318.0	12:15	4	35	212 - 216	
	2120		"	313.4	12:19	4	36	217 - 221	
	2075		"	307.9	12:26	4	37	223 - 228, 230	



COMPANY	WELL	DATE	LOCATION	ENGINEER	WITNESSED BY
HARTOGEN	BURONG 1	8-NOV-85	OEA	A. JAMES	OWEN NUGENT
FEET <input type="checkbox"/> METRES <input type="checkbox"/>	JACK UP <input type="checkbox"/>	SHIP <input type="checkbox"/>	PLATFORM <input type="checkbox"/>	SEMI-SUB <input type="checkbox"/>	WEATHER:

SCHLUMBERGER ZERO KELLY BUSHING AT ELEVATION 129 FEET RELATIVE TO MEAN SEA LEVEL (M.S.L.)  
 LOG MEASURED FROM KB AT ELEVATION 0 FEET RELATIVE TO SCHLUMBERGER ZERO  
 DRILLING MEASURED FROM KB AT ELEVATION 0 FEET RELATIVE TO SCHLUMBERGER ZERO

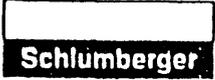
SOURCE		TIDEL INFORMATION		DISTANCE	HOUR	DATE
GUN TYPE	WATER <input type="checkbox"/> AIR <input type="checkbox"/>	TIDE LEVEL TO M.S.L.				
VOLUME	x _____ CU INCHES	(RECORD IF LEVEL VARIES MORE THAN 2 METRES DURING SURVEY)				
PRESSURE	_____ BARS					
VIBRATOR TYPE	_____					
SWEEP LENGTH	_____ SECONDS					
FROM	_____ HZ TO _____ HZ	CSU SOFTWARE VERSION: 28.2		MAX. HOLE DEV:		AZIM:

NOTE: SHOTS HIGHLY RECOMMENDED AT TD, TOP EACH SONIC, ABOVE AND BELOW BAD HOLE INTERVALS

UNCORRECTED RESULTS

Quality: G = Good, P = Poor, U = Unsatisfactory

SHOT NO.	DEPTH	OFFSET	FILTERS	TRANSIT TIME	HOUR SHOT	FILE	STACK	STACKED SHOTS	QUALITY / REMARKS
		WALKAWAY	VSP						
	1700	78m							
	1700	100m							
	1700	150m							
	1700	175m							
	1700	200m							
	1700	225m		298.6					
	1700	250m		301.4					
	1700	275m		304.8					
	1650	78m							
	1650	100m							
	1650	125m		287.0					
	1650	150m		291.5					
	1650	175m		290.3					
	1650	200m		292.6					
	1650	225m		293.8					
	1650	250m							
	1650	275m		299.0					
	1600	78m		267.2					
	1600	100m							
	1600	125m		280.4					
	1600	150m							
	1600	175m							

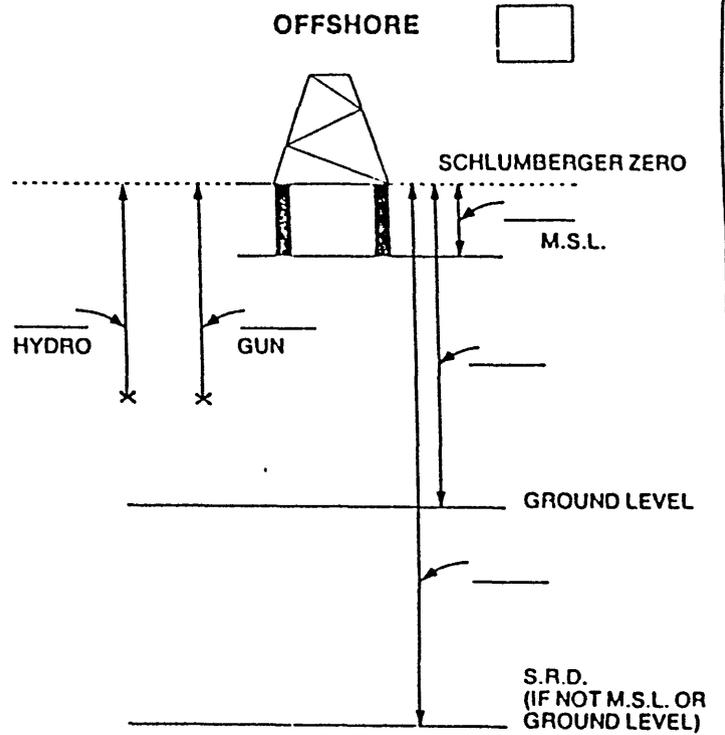
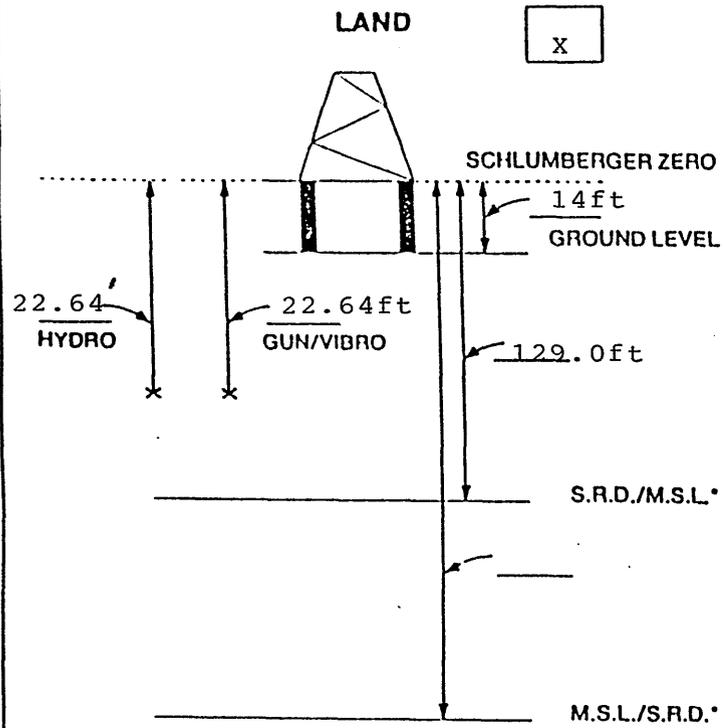


# GUN GEOMETRY SKETCH

CLIENT: HARTOGEN ENERGY LTD.

WELL: BURONG #1

DATE: 8-NOV-85

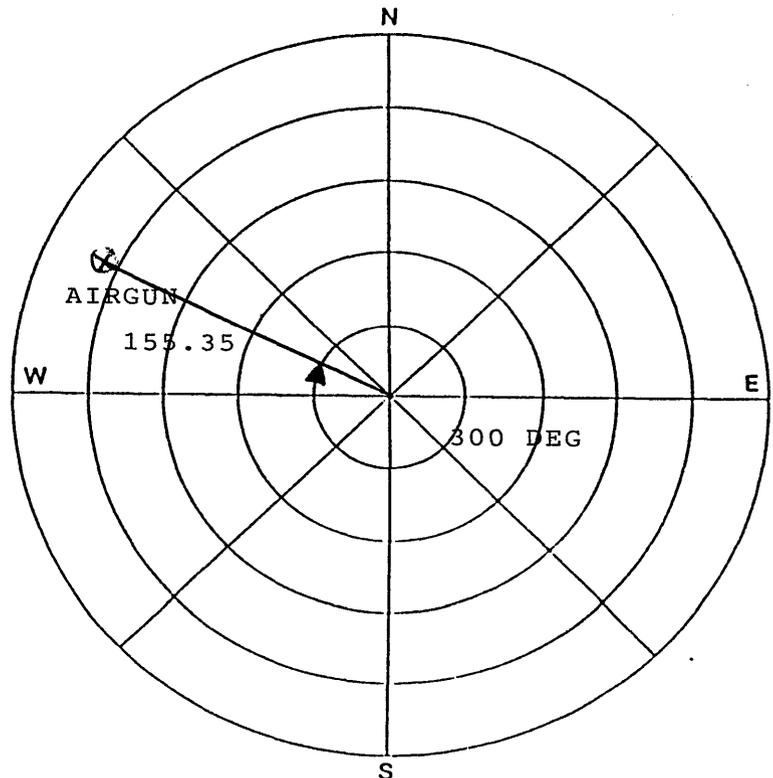


INDICATE ALL DISTANCES RELATIVE TO SCHLUMBERGER ZERO

INDICATE ALL DISTANCES RELATIVE TO SCHLUMBERGER ZERO

\* DELETE AS APPLICABLE

SHOT POS'N	GUN OFFSET	HYDRO OFFSET	GUN DEPTH	HYDRO DEPTH
1	155.35'	158.65'	BELOW KB 22.64'	22.64'
2				
3				
4				
5				
6				
7				



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

SHOTS

ANALYST: R.BUNT

24-NOV-85 15:06:25

PROGRAM: GSHOT 007.E07

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*                                     *  
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*                                     *  
*   SCHLUMBERGER   *  
*                                     *  
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GEOPHYSICAL AIRGUN REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURONG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A.640,439

## 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 BOREHOLE AXIS IN EW DIRECTION (CF. GUNELZ)  
 HYDNSZ - HYDROPHONE DISTANCE FROM THE BOREHOLE AXIS IN NS DIRECTION (CF. GUNELZ)  
 TRTHYD - TRAVEL TIME FROM THE HYDROPHONE TO THE SOURCE  
 TRTSRD - TRAVEL TIME FROM THE SOURCE TO THE SRD  
 DEWVEL - DEVIATED WELL DATA PER SHOT : MEAS. DEPTH, VERT. DEPTH, EW, NS

## SAMPLED

SHOT.GSH - Shot number  
 DKB.GSH - MEASURED DEPTH FROM KELLY-BUSHING  
 SRD.GSH - Depth from SRD  
 DEL.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	:	129.000	FT
ELEV OF SRD AB. MSL(WST)	SRD	:	0	FT
Elevation of Kelly Bushi	EKB	:	129.000	FT
ELEV OF GL AB. SRD(WST)	GL	:	115.000	FT
VEL SOURCE-HYDRO(WST)	VELHYD	:	5000.00	FT/S
VEL SOURCE-SRD (WST)	VELSUR	:	6233.60	FT/S

## (MATRIX PARAMETERS)

	SOURCE ELV FT	SOURCE EW FT	SOURCE NS FT	HYDRO ELEV FT	HYDRO EW FT	HYDRO NS FT
1	106.4	-134.5	77.7	106.4	-137.4	79.3

	TRT HYD-SC MS	TRT SC-SRD MS
1	.66	-17.07

	MD @ KB FT	VD @ KB FT	VD @ SRD FT	E-W COORD FT	N-S COORD FT
1	500.0	500.0	371.0	0	0
2	800.0	800.0	671.0	0	0
3	1100.0	1100.0	971.0	0	0
4	1155.0	1155.0	1026.0	0	0
5	1210.0	1210.0	1081.0	0	0
6	1270.0	1270.0	1141.0	0	0
7	1326.0	1326.0	1197.0	0	0
8	1384.0	1384.0	1255.0	0	0
9	1444.0	1444.0	1315.0	0	0
10	1504.0	1504.0	1375.0	0	0
11	1560.0	1560.0	1431.0	0	0
12	1624.0	1624.0	1495.0	0	0
13	1684.0	1684.0	1555.0	0	0
14	1729.6	1729.6	1600.6	0	0
15	1789.7	1789.7	1660.7	0	0
16	1840.0	1840.0	1711.0	0	0
17	1896.0	1896.0	1767.0	0	0
18	1930.0	1930.0	1801.0	0	0
19	1978.0	1978.0	1849.0	0	0
20	2020.0	2020.0	1891.0	0	0
21	2075.0	2075.0	1946.0	0	0
22	2120.0	2120.0	1991.0	0	0
23	2155.0	2155.0	2026.0	0	0
24	2225.0	2225.0	2096.0	0	0
25	2270.0	2270.0	2141.0	0	0
26	2335.0	2335.0	2206.0	0	0
27	2378.0	2378.0	2249.0	0	0
28	2430.0	2430.0	2301.0	0	0
29	2485.0	2485.0	2356.0	0	0
30	2540.0	2540.0	2411.0	0	0
31	2594.0	2594.0	2465.0	0	0
32	2648.0	2648.0	2519.0	0	0
33	2694.0	2694.0	2565.0	0	0

34	2740.0	2740.0	2611.0	0	0
35	2794.0	2794.0	2665.0	0	0
36	2844.0	2844.0	2715.0	0	0
37	2896.0	2896.0	2767.0	0	0
38	2952.0	2952.0	2823.0	0	0
39	3012.0	3012.0	2883.0	0	0
40	3090.6	3090.6	2961.6	0	0
41	3124.0	3124.0	2995.0	0	0
42	3174.0	3174.0	3045.0	0	0
43	3225.0	3225.0	3096.0	0	0
44	3298.0	3298.0	3169.0	0	0
45	3354.0	3354.0	3225.0	0	0
46	3420.0	3420.0	3291.0	0	0
47	3482.0	3482.0	3353.0	0	0
48	3540.0	3540.0	3411.0	0	0
49	3614.0	3614.0	3485.0	0	0
50	3680.0	3680.0	3551.0	0	0
51	3748.0	3748.0	3619.0	0	0
52	3814.0	3814.0	3685.0	0	0
53	3886.0	3886.0	3757.0	0	0
54	3956.0	3956.0	3827.0	0	0
55	4038.0	4038.0	3909.0	0	0
56	4125.0	4125.0	3996.0	0	0

LEVEL NUMBER	MEASUR DEPTH FROM KB FT	VERTIC DEPTH FROM SRD FT	VERTIC DEPTH FROM GL FT	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO FT/S	DELTA DEPTH BETWEEN SHOTS FT	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS FT/S
1	500.0	371.0	486.0	97.00	92.87	75.80	4895	300.0	47.03	6379
2	800.0	671.0	786.0	142.00	139.89	122.83	5463	300.0	34.96	8582
3	1100.0	971.0	1086.0	176.00	174.85	157.78	6154	55.0	7.10	7742
4	1155.0	1026.0	1141.0	183.00	181.96	164.89	6222	55.0	8.08	6803
5	1210.0	1081.0	1196.0	191.00	190.04	172.97	6250	60.0	7.10	8455
6	1270.0	1141.0	1256.0	198.00	197.14	180.07	6336	56.0	7.08	7912
7	1326.0	1197.0	1312.0	205.00	204.21	187.15	6396	58.0	7.07	8199
8	1384.0	1255.0	1370.0	212.00	211.29	194.22	6462	60.0	7.07	8486
9	1444.0	1315.0	1430.0	219.00	218.36	201.29	6533	60.0	8.06	7445
10	1504.0	1375.0	1490.0	227.00	226.42	209.35	6568	56.0	6.06	9244
11	1560.0	1431.0	1546.0	233.00	232.48	215.41	6643	64.0	9.05	7072
12	1624.0	1495.0	1610.0	242.00	241.53	224.46	6661	60.0	8.05	7458
13	1684.0	1555.0	1670.0	250.00	249.57	232.50	6688	45.6	6.03	7559
14	1729.6	1600.6	1715.6	256.00	255.60	238.53	6710	60.1	9.04	6651
15	1789.7	1660.7	1775.7	265.00	264.64	247.57	6708	50.3	6.03	8337
16	1840.0	1711.0	1826.0	271.00	270.67	253.60	6747	56.0	8.03	6973
17	1896.0	1767.0	1882.0	279.00	278.70	261.63	6754	34.0	6.01	5654
18	1930.0	1801.0	1916.0	285.00	284.72	267.65	6729	48.0	6.03	7965
19	1978.0	1849.0	1964.0	291.00	290.74	273.68	6756	42.0	9.01	4661
20	2020.0	1891.0	2006.0	300.00	299.75	282.69	6689	55.0	7.03	7826
21	2075.0	1946.0	2061.0	307.00	306.78	289.71	6717	45.0	6.02	7474
22	2120.0	1991.0	2106.0	313.00	312.80	295.73	6732	35.0	5.01	6980
23	2155.0	2026.0	2141.0	318.00	317.82	300.75	6737	70.0	11.03	6349
24	2225.0	2096.0	2211.0	329.00	328.84	311.77	6723			

LEVEL NUMBER	MEASUR DEPTH FROM KB FT	VERTIC DEPTH FROM SRD FT	VERTIC DEPTH FROM GL FT	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO FT/S	DELTA DEPTH BETWEEN SHOTS FT	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS FT/S
25	2270.0	2141.0	2256.0	335.00	334.86	317.79	6737	45.0	6.02	7478
26	2335.0	2206.0	2321.0	344.00	343.88	326.82	6750	65.0	9.02	7203
27	2378.0	2249.0	2364.0	350.00	349.90	332.83	6757	43.0	6.01	7149
28	2430.0	2301.0	2416.0	356.00	355.92	338.85	6791	52.0	6.02	8638
29	2485.0	2356.0	2471.0	363.00	362.94	345.87	6812	55.0	7.02	7836
30	2540.0	2411.0	2526.0	370.00	369.96	352.89	6832	55.0	7.02	7837
31	2594.0	2465.0	2580.0	376.00	375.97	358.91	6868	54.0	6.02	8973
32	2648.0	2519.0	2634.0	383.00	382.99	365.92	6884	54.0	7.02	7697
33	2694.0	2565.0	2680.0	390.00	390.00	372.93	6878	46.0	7.01	6561
34	2740.0	2611.0	2726.0	396.00	396.01	378.94	6890	46.0	6.01	7651
35	2794.0	2665.0	2780.0	404.00	404.03	386.96	6887	54.0	8.01	6740
36	2844.0	2715.0	2830.0	410.00	410.04	392.97	6909	50.0	6.01	8315
37	2896.0	2767.0	2882.0	418.00	418.05	400.98	6901	52.0	8.01	6491
38	2952.0	2823.0	2938.0	424.00	424.06	407.00	6936	56.0	6.01	9311
39	3012.0	2883.0	2998.0	431.00	431.08	414.01	6964	60.0	7.01	8554
40	3090.6	2961.6	3076.6	440.00	440.10	423.03	7001	78.6	9.02	8716
41	3124.0	2995.0	3110.0	446.00	446.10	429.03	6981	33.4	6.00	5562
42	3174.0	3045.0	3160.0	452.00	452.11	435.04	6999	50.0	6.01	8319
43	3225.0	3096.0	3211.0	459.00	459.12	442.05	7004	51.0	7.01	7276
44	3298.0	3169.0	3284.0	465.00	465.14	448.07	7073	73.0	6.02	12132
45	3354.0	3225.0	3340.0	472.00	472.15	455.08	7087	56.0	7.01	7989
46	3420.0	3291.0	3406.0	479.00	479.16	462.09	7122	66.0	7.01	9412
47	3482.0	3353.0	3468.0	486.00	486.17	469.10	7148	62.0	7.01	8844
48	3540.0	3411.0	3526.0	491.00	491.18	474.11	7194	58.0	5.01	11574

LEVEL NUMBER	MEASUR DEPTH FROM KB FT	VERTIC DEPTH FROM SRD FT	VERTIC DEPTH FROM GL FT	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO FT/S	DELTA DEPTH BETWEEN SHOTS FT	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS FT/S
49	3614.0	3485.0	3600.0	500.00	500.19	483.12	7213	74.0	9.01	8212
50	3680.0	3551.0	3666.0	506.00	506.20	489.13	7260	66.0	6.01	10979
51	3748.0	3619.0	3734.0	512.00	512.21	495.15	7309	68.0	6.01	11312
52	3814.0	3685.0	3800.0	517.00	517.23	500.16	7368	66.0	5.01	13171
53	3886.0	3757.0	3872.0	522.00	522.24	505.17	7437	72.0	5.01	14366
54	3956.0	3827.0	3942.0	532.00	532.25	515.18	7429	70.0	10.01	6995
55	4038.0	3909.0	4024.0	538.00	538.26	521.19	7500	82.0	6.01	13639
56	4125.0	3996.0	4111.0	546.00	546.27	529.20	7551	87.0	8.01	10860

DRIFT

DRIFT

ANALYST: R.BUNT

24-NOV-85 15:09:06

PROGRAM: GDRIFT 007.E09

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*   SCHLUMBERGER                     *  
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DRIFT COMPUTATION REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURONG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A.540,439

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	:	129.000	FT
ELEV OF SRD AB. MSL(WST)	SRD	:	0	FT
Elevation of Kelly Bushi	EKB	:	129.000	FT
ELEV OF GL AB. SRD(WST)	GL	:	115.000	FT
TOP OF ZONE PROCD (WST)	XSTART	:	0	FT
BOT OF ZONE PROCD (WST)	XSTOP	:	0	FT
RAW SONIC CH NAME (WST)	GAD001	:	DT.BHC.004.IPA.FUN.FLP.*	
UNIFORM DENSITY VALUE	UNFDEN	:	2.30000	G/C3

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

LAYER OPTION FLAG DENS	LOFDEN	:	1.000000		99999.0	-	0
USER SUPPLIED DENSITY DA	LAYDEN	:	-999.2500	G/C3	99999.0	-	0

LEVEL NUMBER	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHFT CORRECTION US/F
1	500.0	371.0	486.0	75.80	75.80	0	0
2	762.0	633.0	748.0	116.87	116.87	0	0
3	800.0	671.0	786.0	122.83	121.48	1.34	35.37
4	1100.0	971.0	1086.0	157.78	160.17	-2.39	-12.45
5	1155.0	1026.0	1141.0	164.89	167.09	-2.20	3.46
6	1210.0	1081.0	1196.0	172.97	173.97	-1.00	21.87
7	1270.0	1141.0	1256.0	180.07	181.40	-1.33	-5.52
8	1326.0	1197.0	1312.0	187.15	188.09	-.94	6.91
9	1384.0	1255.0	1370.0	194.22	195.02	-.80	2.34
10	1444.0	1315.0	1430.0	201.29	202.06	-.77	.53
11	1504.0	1375.0	1490.0	209.35	209.13	.22	16.47
12	1560.0	1431.0	1546.0	215.41	215.90	-.49	-12.61
13	1624.0	1495.0	1610.0	224.46	223.11	1.35	28.68
14	1684.0	1555.0	1670.0	232.50	230.31	2.19	14.12
15	1729.6	1600.6	1715.6	238.53	236.04	2.50	6.72
16	1789.7	1660.7	1775.7	247.57	244.10	3.47	16.11
17	1840.0	1711.0	1826.0	253.60	251.38	2.23	-24.66
18	1896.0	1767.0	1882.0	261.63	259.83	1.81	-7.46
19	1930.0	1801.0	1916.0	267.65	264.82	2.83	29.87
20	1978.0	1849.0	1964.0	273.68	272.15	1.53	-27.04
21	2020.0	1891.0	2006.0	282.69	278.58	4.10	61.32
22	2075.0	1946.0	2061.0	289.71	285.83	3.89	-3.94
23	2120.0	1991.0	2106.0	295.73	291.80	3.93	.99
24	2155.0	2026.0	2141.0	300.75	296.01	4.74	23.16

LEVEL NUMBER	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHFT CORRECTION US/F
							7.55
25	2225.0	2096.0	2211.0	311.77	306.50	5.27	-14.45
26	2270.0	2141.0	2256.0	317.79	313.17	4.62	4.65
27	2335.0	2206.0	2321.0	326.82	321.89	4.92	7.19
28	2378.0	2249.0	2364.0	332.83	327.60	5.23	-14.48
29	2430.0	2301.0	2416.0	338.85	334.37	4.48	1.07
30	2485.0	2356.0	2471.0	345.87	341.33	4.54	-.03
31	2540.0	2411.0	2526.0	352.89	348.35	4.54	-17.51
32	2594.0	2465.0	2580.0	358.91	355.32	3.59	-2.82
33	2648.0	2519.0	2634.0	365.92	362.48	3.44	3.57
34	2694.0	2565.0	2680.0	372.93	369.33	3.60	-22.22
35	2740.0	2611.0	2726.0	378.94	376.37	2.58	19.19
36	2794.0	2665.0	2780.0	386.96	383.34	3.62	-25.26
37	2844.0	2715.0	2830.0	392.97	390.62	2.35	21.58
38	2896.0	2767.0	2882.0	400.98	397.51	3.47	-18.60
39	2952.0	2823.0	2938.0	407.00	404.56	2.43	1.95
40	3012.0	2883.0	2998.0	414.01	411.46	2.55	-13.99
41	3090.6	2961.6	3076.6	423.03	421.58	1.45	57.16
42	3124.0	2995.0	3110.0	429.03	425.67	3.36	-17.24
43	3174.0	3045.0	3160.0	435.04	432.54	2.50	25.57
44	3225.0	3096.0	3211.0	442.05	438.25	3.80	-32.29
45	3298.0	3169.0	3284.0	448.07	446.62	1.44	-.09
46	3354.0	3225.0	3340.0	455.08	453.64	1.44	.70
47	3420.0	3291.0	3406.0	462.09	460.60	1.49	.32
48	3482.0	3353.0	3468.0	469.10	467.60	1.51	

LEVEL NUMBER	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHFT CORRECTION US/F
49	3540.0	3411.0	3526.0	474.11	473.51	.60	-15.55
50	3614.0	3485.0	3600.0	483.12	481.55	1.57	13.05
51	3680.0	3551.0	3666.0	489.13	488.52	.61	-14.53
52	3748.0	3619.0	3734.0	495.15	495.62	-.47	-15.93
53	3814.0	3685.0	3800.0	500.16	502.58	-2.42	-29.58
54	3886.0	3757.0	3872.0	505.17	509.67	-4.50	-28.86
55	3956.0	3827.0	3942.0	515.18	516.52	-1.34	45.16
56	4038.0	3909.0	4024.0	521.19	523.63	-2.44	-13.45
57	4125.0	3996.0	4111.0	529.20	531.05	-1.85	6.79
58	4130.0	4001.0	4116.0	529.67	531.52	-1.85	0

ANALYST: R.BUNT

24-NOV-85 16:15:47

PROGRAM: GADJST 008.E07

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

SONIC ADJUSTMENT PARAMETER REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURONG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A.540,439

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 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)	SRCDRF	:	2.000000	
CONS SONIC ADJST (WST)	CONADJ	:	7.500000	US/F
UNIFORM EARTH VELOCITY	UNERTH	:	7000.00	FT/S

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

USER DRIFT ZONE (WST)	ZDRIFT	:	-2.200000 MS	4130.00	-	3586.00
			1.100000	3586.00		2164.00
			5.000000	2164.00		2012.00
			2.500000	2012.00		1790.00
			2.500000	1790.00		1575.00
			.8000000	1575.00		1223.00
			-1.600000	1223.00		762.000
			0	762.000		0
ADJUSMNT MODE (WST)	ADJOPZ	:	-999.2500	99999.0	-	0
USER DELTA-T MIN (WST)	ADJUSZ	:	-999.2500 US/F	99999.0	-	0
LAYER OPTION FLAG VELOC	LOFVEL	:	1.000000	99999.0	-	0
USER VELOC (WST)	LAYVEL	:	4895.000 FT/S	99999.0	-	0

KNEE NUMBER	VERTICAL DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	DRIFT AT KNEE MS	BLOCKSHIFT USED US/F	DELTA-T MINIMUM USED US/F	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT US/F
					Ø			Ø
2	762.Ø	633.Ø	748.Ø	Ø		116.65	.69	-3.47
3	1223.Ø	1Ø94.Ø	12Ø9.Ø	-1.6Ø	6.82			6.82
4	1575.Ø	1446.Ø	1561.Ø	.8Ø	7.91			7.91
5	179Ø.Ø	1661.Ø	1776.Ø	2.5Ø	Ø			Ø
6	2Ø12.Ø	1883.Ø	1998.Ø	2.5Ø	16.45			16.45
7	2164.Ø	2Ø35.Ø	215Ø.Ø	5.ØØ		117.13	.8Ø	-2.74
8	3586.Ø	3457.Ø	3572.Ø	1.1Ø		84.13	.58	-6.Ø7
9	413Ø.Ø	4ØØ1.Ø	4116.Ø	-2.2Ø				

ANALYST: R.BUNT

24-NOV-85 16:16:09

PROGRAM: GADJST 008.E07

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

VELOCITY REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURONG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A.540,439

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	:	129.000	FT
ELEV OF SRD AB. MSL(WST)	SRD	:	0	FT
Elevation of Kelly Bushi	EKB	:	129.000	FT
ELEV OF GL AB. SRD(WST)	GL	:	115.000	FT
UNIFORM EARTH VELOCITY	UNERTH	:	7000.00	FT/S

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

LAYER OPTION FLAG VELOC	LOFVEL	:	1.000000	99999.0	-	0	
USER VELOC (WST)	LAYVEL	:	4895.000	FT/S	99999.0	-	0

LEVEL NUMBER	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	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 FT/S
1	500.0	371.0	486.0	75.80	75.80	0	0	4895
2	762.0	633.0	748.0	116.87	116.87	0	0	6379
3	800.0	671.0	786.0	122.83	121.39	1.34	1.43	8401
4	1100.0	971.0	1086.0	157.78	158.94	-2.39	-1.15	7991
5	1155.0	1026.0	1141.0	164.89	165.70	-2.20	-.81	8135
6	1210.0	1081.0	1196.0	172.97	172.43	-1.00	.54	8162
7	1270.0	1141.0	1256.0	180.07	180.12	-1.33	-.05	7811
8	1326.0	1197.0	1312.0	187.15	187.19	-.94	-.04	7918
9	1384.0	1255.0	1370.0	194.22	194.52	-.80	-.30	7908
10	1444.0	1315.0	1430.0	201.29	201.97	-.77	-.68	8055
11	1504.0	1375.0	1490.0	209.35	209.45	.22	-.10	8022
12	1560.0	1431.0	1546.0	215.41	216.60	-.49	-1.19	7837
13	1624.0	1495.0	1610.0	224.46	224.30	1.35	.16	8307
14	1684.0	1555.0	1670.0	232.50	231.97	2.19	.53	7821
15	1729.6	1600.6	1715.6	238.53	238.06	2.50	.48	7492
16	1789.7	1660.7	1775.7	247.57	246.60	3.47	.97	7036
17	1840.0	1711.0	1826.0	253.60	253.88	2.23	-.27	6913
18	1896.0	1767.0	1882.0	261.63	262.33	1.81	-.69	6629
19	1930.0	1801.0	1916.0	267.65	267.32	2.83	.33	6803
20	1978.0	1849.0	1964.0	273.68	274.65	1.53	-.97	6553
21	2020.0	1891.0	2006.0	282.69	281.21	4.10	1.47	6396
22	2075.0	1946.0	2061.0	289.71	289.36	3.89	.35	6749
23	2120.0	1991.0	2106.0	295.73	296.08	3.93	-.35	6700
24	2155.0	2026.0	2141.0	300.75	300.86	4.74	-.11	7323

LEVEL NUMBER	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	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 FT/S
								6846
25	2225.0	2096.0	2211.0	311.77	311.09	5.27	.69	7042
26	2270.0	2141.0	2256.0	317.79	317.48	4.62	.32	7646
27	2335.0	2206.0	2321.0	326.82	325.98	4.92	.84	7716
28	2378.0	2249.0	2364.0	332.83	331.55	5.23	1.28	7835
29	2430.0	2301.0	2416.0	338.85	338.19	4.48	.66	8021
30	2485.0	2356.0	2471.0	345.87	345.04	4.54	.83	7966
31	2540.0	2411.0	2526.0	352.89	351.95	4.54	.94	7898
32	2594.0	2465.0	2580.0	358.91	358.78	3.59	.12	7714
33	2648.0	2519.0	2634.0	365.92	365.78	3.44	.14	7016
34	2694.0	2565.0	2680.0	372.93	372.34	3.60	.59	6859
35	2740.0	2611.0	2726.0	378.94	379.05	2.58	-1.0	7909
36	2794.0	2665.0	2780.0	386.96	385.88	3.62	1.08	7149
37	2844.0	2715.0	2830.0	392.97	392.87	2.35	.10	7727
38	2896.0	2767.0	2882.0	400.98	399.60	3.47	1.38	8093
39	2952.0	2823.0	2938.0	407.00	406.52	2.43	.48	8713
40	3012.0	2883.0	2998.0	414.01	413.41	2.55	.60	7962
41	3090.6	2961.6	3076.6	423.03	423.28	1.45	-.25	8321
42	3124.0	2995.0	3110.0	429.03	427.29	3.36	1.74	7535
43	3174.0	3045.0	3160.0	435.04	433.93	2.50	1.12	8979
44	3225.0	3096.0	3211.0	442.05	439.61	3.80	2.45	8746
45	3298.0	3169.0	3284.0	448.07	447.95	1.44	.12	8178
46	3354.0	3225.0	3340.0	455.08	454.80	1.44	.28	9505
47	3420.0	3291.0	3406.0	462.09	461.74	1.49	.35	8918
48	3482.0	3353.0	3468.0	469.10	468.70	1.51	.41	

LEVEL NUMBER	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	VERTICAL DEPTH FROM GL FT	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 FT/S
								9808
49	3540.0	3411.0	3526.0	474.11	474.61	.60	-.50	
								9609
50	3614.0	3485.0	3600.0	483.12	482.31	1.57	.81	
								10354
51	3680.0	3551.0	3666.0	489.13	488.68	.61	.45	
								10451
52	3748.0	3619.0	3734.0	495.15	495.19	-.47	-.04	
								10365
53	3814.0	3685.0	3800.0	500.16	501.56	-2.42	-1.40	
								10817
54	3886.0	3757.0	3872.0	505.17	508.21	-4.50	-3.04	
								10866
55	3956.0	3827.0	3942.0	515.18	514.66	-1.34	.52	
								11807
56	4038.0	3909.0	4024.0	521.19	521.60	-2.44	-.41	
								11962
57	4125.0	3996.0	4111.0	529.20	528.87	-1.85	.33	
								11120
58	4130.0	4001.0	4116.0	529.67	529.32	-1.85	.35	

TIME / DEPTH

TIME/DEPTH

SYNTHETIC

SYNTHETIC

PE602724

This is an enclosure indicator page.  
The enclosure PE602724 is enclosed within the  
container PE903928 at this location in this  
document.

The enclosure PE602724 has the following characteristics:

ITEM\_BARCODE = PE602724  
CONTAINER\_BARCODE = PE903928  
NAME = Burong 1 Velocity Profile Log (Colour)  
BASIN = GIPPSLAND  
PERMIT = PEP109  
TYPE = WELL  
SUBTYPE = WELL\_LOG  
DESCRIPTION = Burong 1 Colour Velocity Profile  
REMARKS =  
DATE\_CREATED = 24/11/85  
DATE\_RECEIVED = 15/05/86  
W\_NO = W922  
WELL\_NAME = Burong-1  
CONTRACTOR = Schlumberger  
CLIENT\_OP\_CO = Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE602725

This is an enclosure indicator page.  
The enclosure PE602725 is enclosed within the  
container PE903928 at this location in this  
document.

The enclosure PE602725 has the following characteristics:

ITEM\_BARCODE = PE602725  
CONTAINER\_BARCODE = PE903928  
    NAME = Burong 1 Vertical Seismic Profile  
    BASIN = GIPPSLAND  
    PERMIT = PEP109  
    TYPE = WELL  
    SUBTYPE = WELL\_LOG  
DESCRIPTION = Burong 1 Vertical Seismic Profile  
              recorded with Air Gun source  
REMARKS =  
DATE\_CREATED = 24/11/85  
DATE\_RECEIVED = 15/05/86  
    W\_NO = W922  
    WELL\_NAME = Burong-1  
    CONTRACTOR = Schlumberger  
    CLIENT\_OP\_CO = Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE602726

This is an enclosure indicator page.  
The enclosure PE602726 is enclosed within the  
container PE903928 at this location in this  
document.

The enclosure PE602726 has the following characteristics:

- ITEM\_BARCODE = PE602726
- CONTAINER\_BARCODE = PE903928
  - NAME = Burong 1 Geogram (Synthetic Seismogram)
  - BASIN = GIPPSLAND
  - PERMIT = PEP109
  - TYPE = WELL
  - SUBTYPE = SYNTH\_SEISMOGRAM
- DESCRIPTION = Burong 1 Geogram (Synthetic Seismogram)
- REMARKS =
- DATE\_CREATED = 24/11/85
- DATE\_RECEIVED = 15/11/86
- W\_NO = W922
- WELL\_NAME = Burong-1
- CONTRACTOR = Schlumberger
- CLIENT\_OP\_CO = Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE602727

This is an enclosure indicator page.  
The enclosure PE602727 is enclosed within the  
container PE903928 at this location in this  
document.

The enclosure PE602727 has the following characteristics:

ITEM\_BARCODE = PE602727  
CONTAINER\_BARCODE = PE903928  
    NAME = Burong 1 Seismic Calibration Log  
    BASIN = GIPPSLAND  
    PERMIT = PEP109  
    TYPE = WELL  
    SUBTYPE = WELL\_LOG  
    DESCRIPTION = Burong 1 Seismic Calibration Log  
                  (Adjusted Continuous Velocity Log)  
    REMARKS =  
    DATE\_CREATED = 24/11/85  
    DATE\_RECEIVED = 15/05/86  
    W\_NO = W922  
    WELL\_NAME = Burong-1  
    CONTRACTOR = Schlumberger  
    CLIENT\_OP\_CO = Hartogen Energy Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

ANALYST: R. BUNT

24-NOV-85 16:19:50

PROGRAM: GTRFRM 007.E08

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

TIME CONVERTED VELOCITY REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURUNG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A.540,439

ANALYST: R. BUNT

24-NOV-85 16:19:50

PROGRAM: GTRFRM 007.E08

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

TIME CONVERTED VELOCITY REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURUNG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A.540,439

ANALYST: R.BUNT

24-NOV-85 16:19:50

PROGRAM: GTRFRM 007.E08

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

TIME CONVERTED VELOCITY REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURONG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A,540,439

ANALYST: R.BUNT

24-NOV-85 16:19:50

PROGRAM: GTRFRM 007.E08

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

TIME CONVERTED VELOCITY REPORT

COMPANY : HARTOGEN ENERGY LIMITED  
WELL : BURONG - 1  
FIELD : WILDCAT  
COUNTY : -  
STATE : VICTORIA  
COUNTRY : AUSTRALIA  
REFERENCE: FS2A,540,439

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 (GIRFES)  
 UNFDEN - UNIFORM DENSITY VALUE

MATRIX  
 MVODIS - MOVE-OUT DISTANCE FROM BOREHOLE

ZONE  
 LOPVEL - 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  
 MVGT - NORMAL MOVE-OUT  
 MVDT - NORMAL MOVE-OUT  
 INTV - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)

(VALUE)

ELEV OF KB AB. MSL (WST)	KB	:	129.000	FT
ELEV OF SRD AB. MSL (WST)	SRD	:	0	FT
ELEV OF GL AB. SRD (WST)	GL	:	115.000	FT
UNIFORM EARTH VELOCITY	UNERTH	:	7000.00	FT/S
UNIFORM DENSITY VALUE	UNFDEN	:	2.30000	G/C3

(MATRIX PARAMETERS)

MVOUT DIST  
 FT

1	3000.0
2	4500.0
3	6000.0

LONG DEFINITIONS

GLOBAL  
 B - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL  
 RD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL  
 L - ELEVATION OF USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD  
 NERTH - UNIFORM EARTH VELOCITY (GIRFRS)  
 UNEDEN - UNIFORM DENSITY VALUE

MATRIX  
 VODIS - MOVE-OUT DISTANCE FROM BOREHOLE

ZONE  
 DFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER  
 AYVEL - USER SUPPLIED VELOCITY DATA  
 OFDEN - LAYER OPTION FLAG FOR DENSITY : -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER  
 AYDEN - USER SUPPLIED DENSITY DATA

SAMPLED  
 WOT - TWO WAY TRAVEL TIME (RELATIVE TO THE SEISMIC REFERENCE)  
 KB - MEASURED DEPTH FROM KELLY-BUSHING  
 SRD - DEPTH FROM SRD  
 VGV - AVERAGE SEISMIC VELOCITY  
 MSV - ROOT MEAN SQUARE VELOCITY (SEISMIC)  
 VOT - NORMAL MOVE-OUT  
 VOT - NORMAL MOVE-OUT  
 VOT - NORMAL MOVE-OUT  
 NIV - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)		(VALUE)	
LEV OF KB AB. MSL (WST)	KB	:	129.000 FT
LEV OF SRD AB. MSL (WST)	SRD	:	0 FT
LEV OF GL AB. SRD (WST)	GL	:	115.000 FT
UNIFORM EARTH VELOCITY	UNERTH	:	7000.00 FT/S
UNIFORM DENSITY VALUE	UNEDEN	:	2.30000 G/C3

(MATRIX PARAMETERS)

MVCUT DIST	
FT	
1	3000.0
2	4500.0
3	6000.0

COMPANY : HARTOGEN ENERGY LIMITED

WELL : BURONG - 1

PAGE 2

(ZONED PARAMETERS)	(VALUE)	(LIMITS)
LAYER OPTION FLAG VELOC LCFVEL	: 1.000000	99999.0 - 0
USER VELOC (WST) LAYVEL	: 4895.000 FT/S	99999.0 - 0
LAYER OPTION FLAG DENS LCFDEN	: -1.000000	99999.0 - 0
USER SUPPLIED DENSITY DA LAYDEN	: -999.2500 G/C3	99999.0 - 0

COMPANY : HARTOGEN ENERGY LIMITED

WELL : BURONG - 1

PAGE 2

(ZONED PARAMETERS)	(VALUE)	(LIMITS)
AYER OPTION FLAG VELOC LCFVEL	: 1.000000	99999.0 - 0
SER VELOC (WST) LAYVEL	: 4895.000 FT/S	99999.0 - 0
AYER OPTION FLAG DENS LCFDEN	: -1.000000	99999.0 - 0
SER SUPPLIED DENSITY DA LAYDEN	: -999.2500 G/C3	99999.0 - 0

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
0	129.0	39.3m	0					4895
2.00	133.9	4.9	4895	4895	610.87	917.31	1223.74	4895
4.00	138.8	9.8	4895	4895	608.88	915.31	1221.75	4895
6.00	143.7	14.7	4895	4895	606.90	913.32	1219.76	4895
8.00	148.6	19.6	4895	4895	604.92	911.34	1217.77	4895
10.00	153.5	24.5	4895	4895	602.95	909.36	1215.78	4895
12.00	158.4	29.4	4895	4895	600.99	907.38	1213.80	4895
14.00	163.3	34.3	4895	4895	599.03	905.41	1211.82	4895
16.00	168.2	39.2	4895	4895	597.08	903.44	1209.84	4895
18.00	173.1	44.1	4895	4895	595.13	901.48	1207.87	4895
20.00	178.0	49.0	4895	4895	593.20	899.52	1205.90	4895
22.00	182.8	53.8	4895	4895	591.26	897.57	1203.94	4895
24.00	187.7	58.7	4895	4895	589.34	895.62	1201.98	4895
26.00	192.6	63.6	4895	4895	587.42	893.67	1200.02	4895
28.00	197.5	68.5	4895	4895	585.51	891.73	1198.06	4895
30.00	202.4	73.4	4895	4895	583.60	889.79	1196.11	4895
32.00	207.3	78.3	4895	4895	581.71	887.86	1194.16	4895
34.00	212.2	83.2	4895	4895	579.81	885.93	1192.21	4895
36.00	217.1	88.1	4895	4895	577.93	884.01	1190.27	4895
38.00	222.0	93.0	4895	4895	576.05	882.09	1188.33	4895
40.00	226.9	97.9	4895	4895	574.17	880.18	1186.39	4895
42.00	231.8	102.8	4895	4895	572.31	878.26	1184.46	4895
44.00	236.7	107.7	4895	4895	570.45	876.36	1182.53	4895
46.00	241.6	112.6	4895	4895	568.59	874.46	1180.60	4895

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
0	129.0	39.3m	0					4895
2.00	133.9	4.9	4895	4895	610.87	917.31	1223.74	4895
4.00	138.8	9.8	4895	4895	608.88	915.31	1221.75	4895
6.00	143.7	14.7	4895	4895	606.90	913.32	1219.76	4895
8.00	148.6	19.6	4895	4895	604.92	911.34	1217.77	4895
10.00	153.5	24.5	4895	4895	602.95	909.36	1215.78	4895
12.00	158.4	29.4	4895	4895	600.99	907.38	1213.80	4895
14.00	163.3	34.3	4895	4895	599.03	905.41	1211.82	4895
16.00	168.2	39.2	4895	4895	597.08	903.44	1209.84	4895
18.00	173.1	44.1	4895	4895	595.13	901.48	1207.87	4895
20.00	178.0	49.0	4895	4895	593.20	899.52	1205.90	4895
22.00	182.8	53.8	4895	4895	591.26	897.57	1203.94	4895
24.00	187.7	58.7	4895	4895	589.34	895.62	1201.98	4895
26.00	192.6	63.6	4895	4895	587.42	893.67	1200.02	4895
28.00	197.5	68.5	4895	4895	585.51	891.73	1198.06	4895
30.00	202.4	73.4	4895	4895	583.60	889.79	1196.11	4895
32.00	207.3	78.3	4895	4895	581.71	887.86	1194.16	4895
34.00	212.2	83.2	4895	4895	579.81	885.93	1192.21	4895
36.00	217.1	88.1	4895	4895	577.93	884.01	1190.27	4895
38.00	222.0	93.0	4895	4895	576.05	882.09	1188.33	4895
40.00	226.9	97.9	4895	4895	574.17	880.18	1186.39	4895
42.00	231.8	102.8	4895	4895	572.31	878.26	1184.46	4895
44.00	236.7	107.7	4895	4895	570.45	876.36	1182.53	4895
46.00	241.6	112.6	4895	4895	568.59	874.46	1180.60	4895

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FI	VERTICAL DEPTH FROM SRD FI	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
48.00	246.5	117.5	4895	4895	566.75	872.56	1178.68	4895
50.00	251.4	122.4	4895	4895	564.91	870.66	1176.76	4895
52.00	256.3	127.3	4895	4895	563.07	868.77	1174.84	4895
54.00	261.2	132.2	4895	4895	561.24	866.89	1172.93	4895
56.00	266.1	137.1	4895	4895	559.42	865.01	1171.02	4895
58.00	271.0	142.0	4895	4895	557.61	863.13	1169.11	4895
60.00	275.9	146.9	4895	4895	555.80	861.26	1167.21	4895
62.00	280.7	151.7	4895	4895	554.00	859.39	1165.31	4895
64.00	285.6	156.6	4895	4895	552.20	857.53	1163.41	4895
66.00	290.5	161.5	4895	4895	550.41	855.67	1161.52	4895
68.00	295.4	166.4	4895	4895	548.63	853.82	1159.63	4895
70.00	300.3	171.3	4895	4895	546.85	851.97	1157.74	4895
72.00	305.2	176.2	4895	4895	545.09	850.12	1155.85	4895
74.00	310.1	181.1	4895	4895	543.32	848.28	1153.97	4895
76.00	315.0	186.0	4895	4895	541.56	846.44	1152.09	4895
78.00	319.9	190.9	4895	4895	539.81	844.61	1150.22	4895
80.00	324.8	195.8	4895	4895	538.07	842.78	1148.35	4895
82.00	329.7	200.7	4895	4895	536.33	840.96	1146.48	4895
84.00	334.6	205.6	4895	4895	534.60	839.14	1144.62	4895
86.00	339.5	210.5	4895	4895	532.87	837.32	1142.75	4895
88.00	344.4	215.4	4895	4895	531.16	835.51	1140.90	4895
90.00	349.3	220.3	4895	4895	529.44	833.70	1139.04	4895
92.00	354.2	225.2	4895	4895	527.74	831.90	1137.19	4895
94.00	359.1	230.1	4895	4895	526.04	830.10	1135.34	4895

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FI	VERTICAL DEPTH FROM SRD FI	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
48.00	246.5	117.5	4895	4895	566.75	872.56	1178.68	4895
50.00	251.4	122.4	4895	4895	564.91	870.66	1176.76	4895
52.00	256.3	127.3	4895	4895	563.07	868.77	1174.84	4895
54.00	261.2	132.2	4895	4895	561.24	866.89	1172.93	4895
56.00	266.1	137.1	4895	4895	559.42	865.01	1171.02	4895
58.00	271.0	142.0	4895	4895	557.61	863.13	1169.11	4895
60.00	275.9	146.9	4895	4895	555.80	861.26	1167.21	4895
62.00	280.7	151.7	4895	4895	554.00	859.39	1165.31	4895
64.00	285.6	156.6	4895	4895	552.20	857.53	1163.41	4895
66.00	290.5	161.5	4895	4895	550.41	855.67	1161.52	4895
68.00	295.4	166.4	4895	4895	548.63	853.82	1159.63	4895
70.00	300.3	171.3	4895	4895	546.85	851.97	1157.74	4895
72.00	305.2	176.2	4895	4895	545.09	850.12	1155.85	4895
74.00	310.1	181.1	4895	4895	543.32	848.28	1153.97	4895
76.00	315.0	186.0	4895	4895	541.56	846.44	1152.09	4895
78.00	319.9	190.9	4895	4895	539.81	844.61	1150.22	4895
80.00	324.8	195.8	4895	4895	538.07	842.78	1148.35	4895
82.00	329.7	200.7	4895	4895	536.33	840.96	1146.48	4895
84.00	334.6	205.6	4895	4895	534.60	839.14	1144.62	4895
86.00	339.5	210.5	4895	4895	532.87	837.32	1142.75	4895
88.00	344.4	215.4	4895	4895	531.16	835.51	1140.90	4895
90.00	349.3	220.3	4895	4895	529.44	833.70	1139.04	4895
92.00	354.2	225.2	4895	4895	527.74	831.90	1137.19	4895
94.00	359.1	230.1	4895	4895	526.04	830.10	1135.34	4895

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEU FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
96.00	364.0	235.0	4895	4895	524.34	828.30	1133.49	4895
98.00	368.9	239.9	4895	4895	522.66	826.51	1131.65	4895
100.00	373.8	244.8	4895	4895	520.97	824.73	1129.81	4895
102.00	378.6	249.6	4895	4895	519.30	822.95	1127.98	4895
104.00	383.5	254.5	4895	4895	517.63	821.17	1126.14	4895
106.00	388.4	259.4	4895	4895	515.97	819.40	1124.32	4895
108.00	393.3 <i>119.9</i>	264.3	4895	4895	514.31	817.63	1122.49	4895
110.00	398.2	269.2	4895	4895	512.66	815.86	1120.67	4895
112.00	403.1	274.1	4895	4895	511.02	814.10	1118.85	4895
114.00	408.0	279.0	4895	4895	509.38	812.35	1117.03	4895
116.00	412.9	283.9	4895	4895	507.75	810.60	1115.22	4895
118.00	417.8	288.8	4895	4895	506.13	808.85	1113.41	4895
120.00	422.7	293.7	4895	4895	504.51	807.10	1111.60	4895
122.00	427.6	298.6	4895	4895	502.90	805.37	1109.80	4895
124.00	432.5	303.5	4895	4895	501.29	803.63	1108.00	4895
126.00	437.4	308.4	4895	4895	499.69	801.90	1106.20	4895
128.00	442.3	313.3	4895	4895	498.09	800.17	1104.41	4895
130.00	447.2	318.2	4895	4895	496.51	798.45	1102.62	4895
132.00	452.1	323.1	4895	4895	494.92	796.73	1100.83	4895
134.00	457.0	328.0	4895	4895	493.35	795.02	1099.04	4895
136.00	461.9 <i>140.8</i>	332.9	4895	4895	491.78	793.31	1097.26	4895
138.00	466.8	337.8	4895	4895	490.21	791.61	1095.48	4895
140.00	471.7	342.7	4895	4895	488.66	789.90	1093.71	4895
142.00	476.5	347.5	4895	4895	487.11	788.21	1091.94	4895

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
96.00	364.0	235.0	4895	4895	524.34	828.30	1133.49	4895
98.00	368.9	239.9	4895	4895	522.66	826.51	1131.65	4895
100.00	373.8	244.8	4895	4895	520.97	824.73	1129.81	4895
102.00	378.6	249.6	4895	4895	519.30	822.95	1127.98	4895
104.00	383.5	254.5	4895	4895	517.63	821.17	1126.14	4895
106.00	388.4	259.4	4895	4895	515.97	819.40	1124.32	4895
108.00	393.3 <i>119.9</i>	264.3	4895	4895	514.31	817.63	1122.49	4895
110.00	398.2	269.2	4895	4895	512.66	815.86	1120.67	4895
112.00	403.1	274.1	4895	4895	511.02	814.10	1118.85	4895
114.00	408.0	279.0	4895	4895	509.38	812.35	1117.03	4895
116.00	412.9	283.9	4895	4895	507.75	810.60	1115.22	4895
118.00	417.8	288.8	4895	4895	506.13	808.85	1113.41	4895
120.00	422.7	293.7	4895	4895	504.51	807.10	1111.60	4895
122.00	427.6	298.6	4895	4895	502.90	805.37	1109.80	4895
124.00	432.5	303.5	4895	4895	501.29	803.63	1108.00	4895
126.00	437.4	308.4	4895	4895	499.69	801.90	1106.20	4895
128.00	442.3	313.3	4895	4895	498.09	800.17	1104.41	4895
130.00	447.2	318.2	4895	4895	496.51	798.45	1102.62	4895
132.00	452.1	323.1	4895	4895	494.92	796.73	1100.83	4895
134.00	457.0	328.0	4895	4895	493.35	795.02	1099.04	4895
136.00	461.9 <i>140.8</i>	332.9	4895	4895	491.78	793.31	1097.26	4895
138.00	466.8	337.8	4895	4895	490.21	791.61	1095.48	4895
140.00	471.7	342.7	4895	4895	488.66	789.90	1093.71	4895
142.00	476.5	347.5	4895	4895	487.11	788.21	1091.94	4895

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM SRD FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/Geo FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
144.00	481.4	352.4	4895	4895	485.56	786.52	1090.17	4895
146.00	486.3	357.3	4895	4895	484.02	784.83	1088.41	4895
148.00	491.2	362.2	4895	4895	482.49	783.14	1086.64	4895
150.00	496.1	367.1	4895	4895	480.96	781.46	1084.88	4895
152.00	501.3	372.3	4899	4899	478.93	779.01	1082.09	5204
154.00	507.7	378.7	4918	4921	474.75	773.28	1074.88	6379
156.00	514.1	385.1	4937	4943	470.68	767.70	1067.90	6379
158.00	520.5	391.5	4955	4963	466.73	762.29	1061.11	6379
160.00	526.8	397.8	4973	4984	462.87	757.02	1054.52	6379
162.00	533.2	404.2	4990	5003	459.11	751.89	1048.11	6379
164.00	539.6	410.6	5007	5022	455.44	746.89	1041.87	6379
166.00	546.0	417.0	5024	5041	451.86	742.01	1035.80	6379
168.00	552.4	423.4	5040	5059	448.36	737.26	1029.88	6379
170.00	558.7	429.7	5056	5076	444.94	732.61	1024.11	6379
172.00	565.1	436.1	5071	5093	441.59	728.08	1018.48	6379
174.00	571.5	442.5	5086	5110	438.32	723.64	1012.98	6379
176.00	577.9	448.9	5101	5126	435.12	719.30	1007.60	6379
178.00	584.3	455.3	5115	5142	431.98	715.06	1002.35	6379
180.00	590.6	461.6	5129	5157	428.90	710.91	997.22	6379
182.00	597.0	468.0	5143	5172	425.89	706.84	992.19	6379
184.00	603.4	474.4	5156	5187	422.93	702.85	987.27	6379
186.00	609.8	480.8	5170	5201	420.03	698.94	982.46	6379
188.00	616.2	487.2	5183	5215	417.18	695.10	977.74	6379
190.00	622.5	493.5	5195	5229	414.38	691.34	973.11	6379

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM SRD FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEU FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
144.00	481.4	352.4	4895	4895	485.56	786.52	1090.17	4895
146.00	486.3	357.3	4895	4895	484.02	784.83	1088.41	4895
148.00	491.2	362.2	4895	4895	482.49	783.14	1086.64	4895
150.00	496.1	367.1	4895	4895	480.96	781.46	1084.88	4895
152.00	501.3	372.3	4899	4899	478.93	779.01	1082.09	5204
154.00	507.7	378.7	4918	4921	474.75	773.28	1074.88	6379
156.00	514.1	385.1	4937	4943	470.68	767.70	1067.90	6379
158.00	520.5	391.5	4955	4963	466.73	762.29	1061.11	6379
160.00	526.8	397.8	4973	4984	462.87	757.02	1054.52	6379
162.00	533.2	404.2	4990	5003	459.11	751.89	1048.11	6379
164.00	539.6	410.6	5007	5022	455.44	746.89	1041.87	6379
166.00	546.0	417.0	5024	5041	451.86	742.01	1035.80	6379
168.00	552.4	423.4	5040	5059	448.36	737.26	1029.88	6379
170.00	558.7	429.7	5056	5076	444.94	732.61	1024.11	6379
172.00	565.1	436.1	5071	5093	441.59	728.08	1018.48	6379
174.00	571.5	442.5	5086	5110	438.32	723.64	1012.98	6379
176.00	577.9	448.9	5101	5126	435.12	719.30	1007.60	6379
178.00	584.3	455.3	5115	5142	431.98	715.06	1002.35	6379
180.00	590.6	461.6	5129	5157	428.90	710.91	997.22	6379
182.00	597.0	468.0	5143	5172	425.89	706.84	992.19	6379
184.00	603.4	474.4	5156	5187	422.93	702.85	987.27	6379
186.00	609.8	480.8	5170	5201	420.03	698.94	982.46	6379
188.00	616.2	487.2	5183	5215	417.18	695.10	977.74	6379
190.00	622.5	493.5	5195	5229	414.38	691.34	973.11	6379

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
192.00	628.9	499.9	5207	5242	411.64	687.64	968.57	6379
194.00	635.3	506.3	5220	5255	408.94	684.01	964.11	6379
196.00	641.7	512.7	5231	5268	406.28	680.45	959.74	6379
198.00	648.1	519.1	5243	5280	403.67	676.94	955.45	6379
200.00	654.4	199.5 525.4	5254	5292	401.11	673.50	951.23	6379
202.00	660.8	531.8	5265	5304	398.58	670.11	947.08	6379
204.00	667.2	538.2	5276	5316	396.10	666.77	943.01	6379
206.00	673.6	544.6	5287	5327	393.65	663.49	939.00	6379
208.00	679.9	550.9	5298	5338	391.24	660.26	935.06	6379
210.00	686.3	557.3	5308	5349	388.87	657.08	931.18	6379
212.00	692.7	563.7	5318	5360	386.53	653.95	927.36	6379
214.00	699.1	570.1	5328	5370	384.23	650.86	923.60	6379
216.00	705.5	576.5	5338	5380	381.96	647.82	919.89	6379
218.00	711.8	582.8	5347	5390	379.72	644.82	916.25	6379
220.00	718.2	589.2	5357	5400	377.51	641.86	912.65	6379
222.00	724.6	220.9 595.6	5366	5410	375.34	638.94	909.10	6379
224.00	731.0	602.0	5375	5419	373.19	636.06	905.61	6379
226.00	737.4	608.4	5384	5428	371.07	633.22	902.16	6379
228.00	743.7	614.7	5392	5438	368.98	630.42	898.76	6379
230.00	750.1	621.1	5401	5446	366.91	627.65	895.40	6379
232.00	756.5	627.5	5409	5455	364.88	624.92	892.09	6743
234.00	763.2	634.2	5421	5467	362.52	621.68	888.08	9055
236.00	772.3	643.3	5452	5508	357.63	614.45	878.67	7961
238.00	780.3	651.3	5473	5533	354.16	609.44	872.25	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
192.00	628.9	499.9	5207	5242	411.64	687.64	968.57	6379
194.00	635.3	506.3	5220	5255	408.94	684.01	964.11	6379
196.00	641.7	512.7	5231	5268	406.28	680.45	959.74	6379
198.00	648.1	519.1	5243	5280	403.67	676.94	955.45	6379
200.00	654.4	199.5 525.4	5254	5292	401.11	673.50	951.23	6379
202.00	660.8	531.8	5265	5304	398.58	670.11	947.08	6379
204.00	667.2	538.2	5276	5316	396.10	666.77	943.01	6379
206.00	673.6	544.6	5287	5327	393.65	663.49	939.00	6379
208.00	679.9	550.9	5298	5338	391.24	660.26	935.06	6379
210.00	686.3	557.3	5308	5349	388.87	657.08	931.18	6379
212.00	692.7	563.7	5318	5360	386.53	653.95	927.36	6379
214.00	699.1	570.1	5328	5370	384.23	650.86	923.60	6379
216.00	705.5	576.5	5338	5380	381.96	647.82	919.89	6379
218.00	711.8	582.8	5347	5390	379.72	644.82	916.25	6379
220.00	718.2	589.2	5357	5400	377.51	641.86	912.65	6379
222.00	724.6	220.9 595.6	5366	5410	375.34	638.94	909.10	6379
224.00	731.0	602.0	5375	5419	373.19	636.06	905.61	6379
226.00	737.4	608.4	5384	5428	371.07	633.22	902.16	6379
228.00	743.7	614.7	5392	5438	368.98	630.42	898.76	6379
230.00	750.1	621.1	5401	5446	366.91	627.65	895.40	6379
232.00	756.5	627.5	5409	5455	364.88	624.92	892.09	6743
234.00	763.2	634.2	5421	5467	362.52	621.68	888.08	9055
236.00	772.3	643.3	5452	5508	357.63	614.45	878.67	7961
238.00	780.3	651.3	5473	5533	354.16	609.44	872.25	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
240.00	788.2	240.2 659.2	5494	5557	350.76	604.55	865.99	7962
242.00	796.6	667.6	5518	5587	346.99	599.04	858.89	8397
244.00	805.1	676.1	5542	5616	343.24	593.55	851.81	8467
246.00	813.5	684.5	5565	5645	339.63	588.28	845.01	8424
248.00	821.8	692.8	5587	5671	336.24	583.35	838.67	8287
250.00	830.0	701.0	5608	5696	333.01	578.65	832.65	8210
252.00	837.7	708.7	5625	5715	330.30	574.76	827.71	7727
254.00	845.9	716.9	5645	5738	327.23	570.31	822.01	8174
256.00	854.0	260.3 725.0	5664	5760	324.33	566.09	816.62	8072
258.00	862.0	733.0	5682	5781	321.52	562.02	811.43	8027
260.00	869.9	740.9	5699	5801	318.86	558.19	806.55	7913
262.00	877.9	748.9	5717	5820	316.21	554.35	801.67	7965
264.00	885.8	756.8	5733	5839	313.68	550.70	797.02	7883
266.00	893.4	764.4	5748	5855	311.35	547.36	792.80	7680
268.00	901.3	772.3	5763	5872	308.95	543.90	788.41	7823
270.00	909.2	780.2	5779	5889	306.52	540.39	783.95	7911
272.00	917.0	279.5 788.0	5794	5906	304.18	537.01	779.67	7850
274.00	924.7	795.7	5808	5921	302.04	533.93	775.79	7640
276.00	932.7	803.7	5824	5938	299.67	530.48	771.40	7998
278.00	940.7	811.7	5839	5956	297.33	527.08	767.07	8009
280.00	948.5	819.5	5854	5972	295.14	523.90	763.04	7863
282.00	957.0	828.0	5872	5993	292.57	520.12	758.17	8444
284.00	965.0	836.0	5887	6009	290.36	516.89	754.06	8008
286.00	972.9	843.9	5901	6025	288.24	513.80	750.15	7918

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
240.00	788.2	240.2 659.2	5494	5557	350.76	604.55	865.99	7962
242.00	796.6	667.6	5518	5587	346.99	599.04	858.89	8397
244.00	805.1	676.1	5542	5616	343.24	593.55	851.81	8467
246.00	813.5	684.5	5565	5645	339.63	588.28	845.01	8424
248.00	821.8	692.8	5587	5671	336.24	583.35	838.67	8287
250.00	830.0	701.0	5608	5696	333.01	578.65	832.65	8210
252.00	837.7	708.7	5625	5715	330.30	574.76	827.71	7727
254.00	845.9	716.9	5645	5738	327.23	570.31	822.01	8174
256.00	854.0	260.3 725.0	5664	5760	324.33	566.09	816.62	8072
258.00	862.0	733.0	5682	5781	321.52	562.02	811.43	8027
260.00	869.9	740.9	5699	5801	318.86	558.19	806.55	7913
262.00	877.9	748.9	5717	5820	316.21	554.35	801.67	7965
264.00	885.8	756.8	5733	5839	313.68	550.70	797.02	7883
266.00	893.4	764.4	5748	5855	311.35	547.36	792.80	7680
268.00	901.3	772.3	5763	5872	308.95	543.90	788.41	7823
270.00	909.2	780.2	5779	5889	306.52	540.39	783.95	7911
272.00	917.0	279.5 788.0	5794	5906	304.18	537.01	779.67	7850
274.00	924.7	795.7	5808	5921	302.04	533.93	775.79	7640
276.00	932.7	803.7	5824	5938	299.67	530.48	771.40	7998
278.00	940.7	811.7	5839	5956	297.33	527.08	767.07	8009
280.00	948.5	819.5	5854	5972	295.14	523.90	763.04	7863
282.00	957.0	828.0	5872	5993	292.57	520.12	758.17	8444
284.00	965.0	836.0	5887	6009	290.36	516.89	754.06	8008
286.00	972.9	843.9	5901	6025	288.24	513.80	750.15	7918

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								7628
288.00	980.5	851.5	5913	6037	286.34	511.07	746.71	8002
300 } 290.00	988.5	301.3 859.5	5928	6053	284.23	507.99	742.78	7631
292.00	996.2	867.2	5940	6065	282.38	505.32	739.43	7749
294.00	1003.9	874.9	5952	6078	280.49	502.58	735.97	7946
296.00	1011.9	882.9	5965	6093	278.50	499.68	732.29	8150
298.00	1020.0	891.0	5980	6109	276.43	496.62	728.38	8186
300.00	1028.2	899.2	5995	6125	274.36	493.57	724.48	7875
302.00	1036.1	907.1	6007	6138	272.51	490.86	721.05	8048
304.00	1044.1	915.1	6021	6153	270.59	488.03	717.44	7920
320 } 306.00	1052.0	320.6 923.0	6033	6166	268.76	485.36	714.05	8017
308.00	1060.1	931.1	6046	6180	266.91	482.63	710.58	8128
310.00	1068.2	939.2	6059	6194	265.03	479.84	707.01	7906
312.00	1076.1	947.1	6071	6207	263.29	477.29	703.77	8283
314.00	1084.4	955.4	6085	6222	261.37	474.43	700.11	7876
316.00	1092.3	963.3	6097	6234	259.70	471.97	696.99	8344
318.00	1100.6	971.6	6111	6250	257.81	469.14	693.35	8292
320.00	1108.9	979.9	6124	6264	255.97	466.39	689.83	8346
340 } 322.00	1117.2	340.5 988.2	6138	6280	254.13	463.63	686.29	7947
324.00	1125.2	996.2	6149	6291	252.52	461.25	683.25	8026
326.00	1133.2	1004.2	6161	6303	250.89	458.83	680.16	8254
328.00	1141.5	1012.5	6174	6317	249.17	456.25	676.86	8015
330.00	1149.5	1020.5	6185	6329	247.59	453.90	673.86	8051
332.00	1157.5	1028.5	6196	6340	246.01	451.54	670.86	8381
334.00	1165.9	1036.9	6209	6355	244.30	448.96	667.53	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
288.00	980.5	851.5	5913	6037	286.34	511.07	746.71	7628
290.00	988.5 <i>301.3</i>	859.5	5928	6053	284.23	507.99	742.78	8002
292.00	996.2	867.2	5940	6065	282.38	505.32	739.43	7631
294.00	1003.9	874.9	5952	6078	280.49	502.58	735.97	7749
296.00	1011.9	882.9	5965	6093	278.50	499.68	732.29	7946
298.00	1020.0	891.0	5980	6109	276.43	496.62	728.38	8150
300.00	1028.2	899.2	5995	6125	274.36	493.57	724.48	8186
302.00	1036.1	907.1	6007	6138	272.51	490.86	721.05	7875
304.00	1044.1	915.1	6021	6153	270.59	488.03	717.44	8048
306.00	1052.0 <i>320.6</i>	923.0	6033	6166	268.76	485.36	714.05	7920
308.00	1060.1	931.1	6046	6180	266.91	482.63	710.58	8017
310.00	1068.2	939.2	6059	6194	265.03	479.84	707.01	8128
312.00	1076.1	947.1	6071	6207	263.29	477.29	703.77	7906
314.00	1084.4	955.4	6085	6222	261.37	474.43	700.11	8283
316.00	1092.3	963.3	6097	6234	259.70	471.97	696.99	7876
318.00	1100.6	971.6	6111	6250	257.81	469.14	693.35	8344
320.00	1108.9	979.9	6124	6264	255.97	466.39	689.83	8292
322.00	1117.2 <i>340.5</i>	988.2	6138	6280	254.13	463.63	686.29	8346
324.00	1125.2	996.2	6149	6291	252.52	461.25	683.25	7947
326.00	1133.2	1004.2	6161	6303	250.89	458.83	680.16	8026
328.00	1141.5	1012.5	6174	6317	249.17	456.25	676.86	8254
330.00	1149.5	1020.5	6185	6329	247.59	453.90	673.86	8015
332.00	1157.5	1028.5	6196	6340	246.01	451.54	670.86	8051
334.00	1165.9	1036.9	6209	6355	244.30	448.96	667.53	8381

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEG FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								8281
336.00	1174.2	1045.2	6221	6368	242.66	446.49	664.36	8353
338.00	1182.5	360.41053.5	6234	6381	241.01	444.00	661.15	8141
340.00	1190.7	1061.7	6245	6393	239.48	441.70	658.20	7878
342.00	1198.6	1069.6	6255	6403	238.08	439.61	655.55	7940
344.00	1206.5	1077.5	6265	6413	236.68	437.50	652.86	7817
346.00	1214.3	1085.3	6274	6422	235.34	435.50	650.33	7898
348.00	1222.2	1093.2	6283	6431	233.98	433.47	647.74	7870
350.00	1230.1	1101.1	6292	6440	232.65	431.48	645.20	7770
352.00	1237.9	1108.9	6300	6449	231.37	429.57	642.78	7872
354.00	1245.7	379.71116.7	6309	6458	230.07	427.61	640.28	7766
356.00	1253.5	1124.5	6317	6466	228.82	425.74	637.91	7869
358.00	1261.4	1132.4	6326	6474	227.55	423.82	635.47	7809
360.00	1269.2	1140.2	6334	6483	226.31	421.96	633.10	8150
362.00	1277.3	1148.3	6344	6493	224.96	419.90	630.45	7902
364.00	1285.2	1156.2	6353	6502	223.72	418.02	628.05	7989
366.00	1293.2	1164.2	6362	6511	222.46	416.10	625.59	7926
368.00	1301.1	1172.1	6370	6519	221.23	414.24	623.21	7718
370.00	1308.9	1179.9	6378	6526	220.09	412.53	621.03	7707
372.00	1316.6	401.31187.6	6385	6533	218.97	410.83	618.88	7963
374.00	1324.5	1195.5	6393	6542	217.77	409.00	616.53	8053
376.00	1332.6	1203.6	6402	6551	216.55	407.13	614.12	8113
378.00	1340.7	1211.7	6411	6560	215.33	405.25	611.69	7771
380.00	1348.5	1219.5	6418	6567	214.23	403.58	609.56	7866
382.00	1356.3	1227.3	6426	6574	213.11	401.87	607.37	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEG FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
336.00	1174.2	1045.2	6221	6368	242.66	446.49	664.36	8281
338.00	1182.5	360.41053.5	6234	6381	241.01	444.00	661.15	8353
340.00	1190.7	1061.7	6245	6393	239.48	441.70	658.20	8141
342.00	1198.6	1069.6	6255	6403	238.08	439.61	655.55	7878
344.00	1206.5	1077.5	6265	6413	236.68	437.50	652.86	7940
346.00	1214.3	1085.3	6274	6422	235.34	435.50	650.33	7817
348.00	1222.2	1093.2	6283	6431	233.98	433.47	647.74	7898
350.00	1230.1	1101.1	6292	6440	232.65	431.48	645.20	7870
352.00	1237.9	1108.9	6300	6449	231.37	429.57	642.78	7770
354.00	1245.7	379.71116.7	6309	6458	230.07	427.61	640.28	7872
356.00	1253.5	1124.5	6317	6466	228.82	425.74	637.91	7766
358.00	1261.4	1132.4	6326	6474	227.55	423.82	635.47	7869
360.00	1269.2	1140.2	6334	6483	226.31	421.96	633.10	7809
362.00	1277.3	1148.3	6344	6493	224.96	419.90	630.45	8150
364.00	1285.2	1156.2	6353	6502	223.72	418.02	628.05	7902
366.00	1293.2	1164.2	6362	6511	222.46	416.10	625.59	7989
368.00	1301.1	1172.1	6370	6519	221.23	414.24	623.21	7926
370.00	1308.9	1179.9	6378	6526	220.09	412.53	621.03	7718
372.00	1316.6	401.31187.6	6385	6533	218.97	410.83	618.88	7707
374.00	1324.5	1195.5	6393	6542	217.77	409.00	616.53	7963
376.00	1332.6	1203.6	6402	6551	216.55	407.13	614.12	8053
378.00	1340.7	1211.7	6411	6560	215.33	405.25	611.69	8113
380.00	1348.5	1219.5	6418	6567	214.23	403.58	609.56	7771
382.00	1356.3	1227.3	6426	6574	213.11	401.87	607.37	7866

TWO-WAY TRAVEL TIME FROM SRD PS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
384.00	1364.1	1235.1	6433	6581	212.03	400.21	605.26	7801
386.00	1371.9	1242.9	6440	6588	210.95	398.57	603.16	7799
420 388.00	1380.0	420.6 1251.0	6448	6596	209.81	396.80	600.87	8054
390.00	1388.1	1259.1	6457	6605	208.66	395.02	598.57	8107
392.00	1396.2	1267.2	6465	6614	207.52	393.25	596.27	8119
394.00	1404.2	1275.2	6473	6621	206.44	391.58	594.12	7962
396.00	1412.3	1283.3	6481	6630	205.31	389.82	591.85	8146
398.00	1420.1	1291.1	6488	6636	204.31	388.29	589.88	7762
400.00	1428.2	1299.2	6496	6644	203.22	386.59	587.68	8092
402.00	1436.2	1307.2	6503	6652	202.17	384.96	585.56	8009
440 404.00	1444.4	440.3 1315.4	6512	6660	201.08	383.25	583.34	8177
406.00	1452.6	1323.6	6520	6668	199.99	381.54	581.11	8206
408.00	1460.8	1331.8	6529	6677	198.90	379.82	578.87	8251
410.00	1468.8	1339.8	6536	6684	197.89	378.24	576.83	8012
412.00	1477.0	1348.0	6544	6693	196.83	376.57	574.65	8216
414.00	1484.9	1355.9	6550	6699	195.88	375.08	572.72	7898
416.00	1492.8	1363.8	6557	6705	194.95	373.63	570.85	7819
418.00	1500.6	1371.6	6563	6711	194.03	372.19	568.94	7827
460 420.00	1508.3	460.7 1379.3	6568	6716	193.15	370.81	567.21	7730
422.00	1516.0	1387.0	6574	6721	192.27	369.45	565.46	7705
424.00	1523.9	1394.9	6580	6727	191.36	368.02	563.60	7880
426.00	1532.0	1403.0	6587	6734	190.40	366.50	561.62	8095
428.00	1539.7	1410.7	6592	6739	189.55	365.15	559.88	7742
430.00	1547.6	1418.6	6598	6744	188.68	363.79	558.11	7810

TWO-WAY TRAVEL TIME FROM SRD PS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
384.00	1364.1	1235.1	6433	6581	212.03	400.21	605.26	7801
386.00	1371.9	1242.9	6440	6588	210.95	398.57	603.16	7799
388.00	1380.0	1251.0	6448	6596	209.81	396.80	600.87	8054
390.00	1388.1	1259.1	6457	6605	208.66	395.02	598.57	8107
392.00	1396.2	1267.2	6465	6614	207.52	393.25	596.27	8119
394.00	1404.2	1275.2	6473	6621	206.44	391.58	594.12	7962
396.00	1412.3	1283.3	6481	6630	205.31	389.82	591.85	8146
398.00	1420.1	1291.1	6488	6636	204.31	388.29	589.88	7762
400.00	1428.2	1299.2	6496	6644	203.22	386.59	587.68	8092
402.00	1436.2	1307.2	6503	6652	202.17	384.96	585.56	8009
404.00	1444.4	1315.4	6512	6660	201.08	383.25	583.34	8177
406.00	1452.6	1323.6	6520	6668	199.99	381.54	581.11	8206
408.00	1460.8	1331.8	6529	6677	198.90	379.82	578.87	8251
410.00	1468.8	1339.8	6536	6684	197.89	378.24	576.83	8012
412.00	1477.0	1348.0	6544	6693	196.83	376.57	574.65	8216
414.00	1484.9	1355.9	6550	6699	195.88	375.08	572.72	7898
416.00	1492.8	1363.8	6557	6705	194.95	373.63	570.85	7819
418.00	1500.6	1371.6	6563	6711	194.03	372.19	568.94	7827
420.00	1508.3	1379.3	6568	6716	193.15	370.81	567.21	7730
422.00	1516.0	1387.0	6574	6721	192.27	369.45	565.46	7705
424.00	1523.9	1394.9	6580	6727	191.36	368.02	563.60	7880
426.00	1532.0	1403.0	6587	6734	190.40	366.50	561.62	8095
428.00	1539.7	1410.7	6592	6739	189.55	365.15	559.88	7742
430.00	1547.6	1418.6	6598	6744	188.68	363.79	558.11	7810

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRC/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
432.00	1555.5	1426.5	6604	6750	187.78	362.36	556.25	7964
434.00	1563.2	1434.2	6609	6755	186.97	361.09	554.61	7639
436.00	1571.6	1442.6	6617	6763	185.97	359.48	552.49	8407
438.00	1579.6	1450.6	6624	6770	185.08	358.06	550.63	8036
440.00	1587.8	1458.8	6631	6777	184.16	356.59	548.70	8165
442.00	1595.7	1466.7	6636	6782	183.32	355.25	546.95	7899
444.00	1603.9	1474.9	6644	6789	182.41	353.78	545.01	8212
446.00	1612.8	1483.8	6654	6800	181.32	351.99	542.62	8940
448.00	1621.4	1492.4	6663	6810	180.32	350.37	540.45	8635
450.00	1629.9	1500.9	6671	6818	179.38	348.83	538.41	8458
452.00	1637.9	1508.9	6677	6824	178.55	347.50	536.66	8023
454.00	1646.1	1517.1	6683	6830	177.69	346.11	534.83	8172
456.00	1654.4	1525.4	6691	6838	176.80	344.67	532.91	8338
458.00	1662.4	1533.4	6696	6843	176.02	343.40	531.26	7921
460.00	1670.0	1541.0	6700	6846	175.31	342.27	529.78	7612
462.00	1677.5	1548.5	6703	6849	174.63	341.19	528.39	7485
464.00	1684.2	1555.2	6704	6849	174.09	340.36	527.35	6793
466.00	1691.8	1562.8	6707	6852	173.42	339.28	525.94	7528
468.00	1698.8	1569.8	6709	6853	172.84	338.37	524.78	7061
470.00	1706.5	1577.5	6713	6857	172.13	337.23	523.30	7693
472.00	1713.8	1584.8	6715	6859	171.51	336.25	522.03	7301
474.00	1721.5	1592.5	6719	6862	170.83	335.15	520.58	7645
476.00	1729.2	1600.2	6723	6866	170.14	334.04	519.13	7681
478.00	1736.6	1607.6	6726	6868	169.51	333.01	517.80	7463

490

560

570

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
432.00	1555.5	1426.5	6604	6750	187.78	362.36	556.25	7964
434.00	1563.2	1434.2	6609	6755	186.97	361.09	554.61	7639
436.00	1571.6	1442.6	6617	6763	185.97	359.48	552.49	8407
438.00	1579.6	1450.6	6624	6770	185.08	358.06	550.63	8036
440.00	1587.8	1458.8	6631	6777	184.16	356.59	548.70	8165
442.00	1595.7	1466.7	6636	6782	183.32	355.25	546.95	7899
444.00	1603.9	1474.9	6644	6789	182.41	353.78	545.01	8212
446.00	1612.8	1483.8	6654	6800	181.32	351.99	542.62	8940
448.00	1621.4	1492.4	6663	6810	180.32	350.37	540.45	8635
450.00	1629.9	1500.9	6671	6818	179.38	348.83	538.41	8458
452.00	1637.9	1508.9	6677	6824	178.55	347.50	536.66	8023
454.00	1646.1	1517.1	6683	6830	177.69	346.11	534.83	8172
456.00	1654.4	1525.4	6691	6838	176.80	344.67	532.91	8338
458.00	1662.4	1533.4	6696	6843	176.02	343.40	531.26	7921
460.00	1670.0	1541.0	6700	6846	175.31	342.27	529.78	7612
462.00	1677.5	1548.5	6703	6849	174.63	341.19	528.39	7485
464.00	1684.2	1555.2	6704	6849	174.09	340.36	527.35	6793
466.00	1691.8	1562.8	6707	6852	173.42	339.28	525.94	7528
468.00	1698.8	1569.8	6709	6853	172.84	338.37	524.78	7061
470.00	1706.5	1577.5	6713	6857	172.13	337.23	523.30	7693
472.00	1713.8	1584.8	6715	6859	171.51	336.25	522.03	7301
474.00	1721.5	1592.5	6719	6862	170.83	335.15	520.58	7645
476.00	1729.2	1600.2	6723	6866	170.14	334.04	519.13	7681
478.00	1736.6	1607.6	6726	6868	169.51	333.01	517.80	7463

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
480.00	1743.6	1614.6	6728	6869	168.96	332.16	516.70	6986
482.00	1750.8	1621.8	6730	6870	168.38	331.23	515.51	7206
484.00	1757.7	1628.7	6730	6870	167.87	330.43	514.49	6837
486.00	1764.6	1635.6	6731	6870	167.35	329.59	513.43	6950
540 488.00	1771.6	540-1 1642.6	6732	6871	166.82	328.76	512.36	6955
490.00	1778.7	1649.7	6733	6872	166.27	327.87	511.22	7136
492.00	1785.6	1656.6	6734	6872	165.76	327.07	510.20	6876
494.00	1792.4	1663.4	6734	6872	165.27	326.30	509.21	6794
496.00	1799.6	1670.6	6736	6873	164.71	325.40	508.05	7199
498.00	1806.8	1677.8	6738	6875	164.15	324.49	506.87	7248
500.00	1813.8	1684.8	6739	6875	163.64	323.67	505.81	6990
502.00	1820.6	1691.6	6739	6875	163.16	322.92	504.85	6772
504.00	1827.1	1698.1	6739	6873	162.73	322.23	503.99	6541
506.00	1834.0	559-0 1705.0	6739	6873	162.24	321.46	503.00	6866
560 508.00	1840.9	1711.9	6740	6874	161.74	320.66	501.97	6952
510.00	1847.8	1718.8	6740	6874	161.26	319.88	500.97	6886
512.00	1854.5	1725.5	6740	6873	160.81	319.16	500.05	6707
514.00	1861.3	1732.3	6740	6872	160.35	318.43	499.12	6739
516.00	1867.6	1738.6	6739	6870	159.96	317.82	498.36	6310
518.00	1874.4	1745.4	6739	6870	159.50	317.09	497.42	6784
520.00	1881.1	1752.1	6739	6870	159.05	316.36	496.48	6774
522.00	1887.7	1758.7	6738	6868	158.63	315.69	495.64	6539
524.00	1893.8	1764.8	6736	6866	158.27	315.13	494.94	6180
580 526.00	1900.6	579-3 1771.6	6736	6866	157.82	314.41	494.02	6754

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
480.00	1743.6	1614.6	6728	6869	168.96	332.16	516.70	6986
482.00	1750.8	1621.8	6730	6870	168.38	331.23	515.51	7206
484.00	1757.7	1628.7	6730	6870	167.87	330.43	514.49	6837
486.00	1764.6	1635.6	6731	6870	167.35	329.59	513.43	6950
488.00	1771.6	1642.6	6732	6871	166.82	328.76	512.36	6955
490.00	1778.7	1649.7	6733	6872	166.27	327.87	511.22	7136
492.00	1785.6	1656.6	6734	6872	165.76	327.07	510.20	6876
494.00	1792.4	1663.4	6734	6872	165.27	326.30	509.21	6794
496.00	1799.6	1670.6	6736	6873	164.71	325.40	508.05	7199
498.00	1806.8	1677.8	6738	6875	164.15	324.49	506.87	7248
500.00	1813.8	1684.8	6739	6875	163.64	323.67	505.81	6990
502.00	1820.6	1691.6	6739	6875	163.16	322.92	504.85	6772
504.00	1827.1	1698.1	6739	6873	162.73	322.23	503.99	6541
506.00	1834.0	1705.0	6739	6873	162.24	321.46	503.00	6866
508.00	1840.9	1711.9	6740	6874	161.74	320.66	501.97	6952
510.00	1847.8	1718.8	6740	6874	161.26	319.88	500.97	6886
512.00	1854.5	1725.5	6740	6873	160.81	319.16	500.05	6707
514.00	1861.3	1732.3	6740	6872	160.35	318.43	499.12	6739
516.00	1867.6	1738.6	6739	6870	159.96	317.82	498.36	6310
518.00	1874.4	1745.4	6739	6870	159.50	317.09	497.42	6784
520.00	1881.1	1752.1	6739	6870	159.05	316.36	496.48	6774
522.00	1887.7	1758.7	6738	6868	158.63	315.69	495.64	6539
524.00	1893.8	1764.8	6736	6866	158.27	315.13	494.94	6180
526.00	1900.6	1771.6	6736	6866	157.82	314.41	494.02	6754

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KF FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								6718
528.00	1907.3	1778.3	6736	6865	157.39	313.71	493.11	6636
530.00	1914.0	1785.0	6736	6864	156.96	313.02	492.24	6931
532.00	1920.9	1791.9	6736	6864	156.50	312.26	491.25	6845
534.00	1927.7	1798.7	6737	6864	156.05	311.53	490.30	6727
536.00	1934.5	1805.5	6737	6864	155.62	310.83	489.40	7130
538.00	1941.6	1812.6	6738	6865	155.13	310.03	488.33	6395
540.00	1948.0	1819.0	6737	6863	154.75	309.42	487.57	6006
542.00	1954.0	1825.0	6734	6860	154.42	308.91	486.94	6382
544.00	1960.4	1831.4	6733	6858	154.05	308.31	486.18	7125
546.00	1967.5	1838.5	6734	6859	153.57	307.52	485.13	6394
600 548.00	1973.9	1844.9	6733	6858	153.19	306.92	484.37	6473
550.00	1980.4	1851.4	6732	6856	152.81	306.30	483.58	6406
552.00	1986.8	1857.8	6731	6855	152.44	305.70	482.81	6429
554.00	1993.2	1864.2	6730	6853	152.07	305.10	482.04	6514
556.00	1999.7	1870.7	6729	6852	151.69	304.48	481.24	6601
558.00	2006.3	1877.3	6729	6851	151.29	303.84	480.41	6436
560.00	2012.7	1883.7	6728	6850	150.92	303.24	479.64	5906
562.00	2018.7	1889.7	6725	6847	150.62	302.77	479.06	6640
564.00	2025.3	1896.3	6724	6846	150.23	302.12	478.22	6859
620 566.00	2032.2	1903.2	6725	6846	149.81	301.42	477.29	6271
568.00	2038.4	1909.4	6723	6844	149.47	300.87	476.54	6934
570.00	2045.4	1916.4	6724	6844	149.04	300.15	475.64	6835
572.00	2052.2	1923.2	6724	6844	148.63	299.47	474.74	6821
574.00	2059.0	1930.0	6725	6844	148.22	298.79	473.84	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KF FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
528.00	1907.3	1778.3	6736	6865	157.39	313.71	493.11	6718
530.00	1914.0	1785.0	6736	6864	156.96	313.02	492.24	6636
532.00	1920.9	1791.9	6736	6864	156.50	312.26	491.25	6931
534.00	1927.7	1798.7	6737	6864	156.05	311.53	490.30	6845
536.00	1934.5	1805.5	6737	6864	155.62	310.83	489.40	6727
538.00	1941.6	1812.6	6738	6865	155.13	310.03	488.33	7130
540.00	1948.0	1819.0	6737	6863	154.75	309.42	487.57	6395
542.00	1954.0	1825.0	6734	6860	154.42	308.91	486.94	6006
544.00	1960.4	1831.4	6733	6858	154.05	308.31	486.18	6382
546.00	1967.5	1838.5	6734	6859	153.57	307.52	485.13	7125
548.00	1973.9	1844.9	6733	6858	153.19	306.92	484.37	6394
550.00	1980.4	1851.4	6732	6856	152.81	306.30	483.58	6473
552.00	1986.8	1857.8	6731	6855	152.44	305.70	482.81	6406
554.00	1993.2	1864.2	6730	6853	152.07	305.10	482.04	6429
556.00	1999.7	1870.7	6729	6852	151.69	304.48	481.24	6514
558.00	2006.3	1877.3	6729	6851	151.29	303.84	480.41	6601
560.00	2012.7	1883.7	6728	6850	150.92	303.24	479.64	6436
562.00	2018.7	1889.7	6725	6847	150.62	302.77	479.06	5906
564.00	2025.3	1896.3	6724	6846	150.23	302.12	478.22	6640
566.00	2032.2	1903.2	6725	6846	149.81	301.42	477.29	6859
568.00	2038.4	1909.4	6723	6844	149.47	300.87	476.59	6271
570.00	2045.4	1916.4	6724	6844	149.04	300.15	475.64	6934
572.00	2052.2	1923.2	6724	6844	148.63	299.47	474.74	6835
574.00	2059.0	1930.0	6725	6844	148.22	298.79	473.84	6821

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEQ FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								6929
576.00	2065.9	1936.9	6726	6845	147.80	298.08	472.91	6611
578.00	2072.6	1943.6	6725	6844	147.42	297.46	472.09	6713
580.00	2079.3	1950.3	6725	6843	147.03	296.81	471.24	6701
582.00	2086.0	1957.0	6725	6843	146.65	296.17	470.40	6794
584.00	2092.8	1963.8	6725	6843	146.25	295.51	469.52	6636
586.00	2099.4	1970.4	6725	6842	145.88	294.89	468.71	6730
588.00	2106.1	1977.1	6725	6842	145.50	294.25	467.86	6586
590.00	2112.7	1983.7	6724	6841	145.13	293.64	467.07	6725
592.00	2119.4	1990.4	6724	6840	144.76	293.01	466.22	7308
594.00	2126.7	1997.7	6726	6842	144.30	292.23	465.17	6483
596.00	2133.2	2004.2	6726	6841	143.96	291.66	464.42	6279
598.00	2139.5	2010.5	6724	6839	143.64	291.13	463.74	6862
600.00	2146.4	2017.4	6725	6839	143.25	290.47	462.86	9497
602.00	2155.9	2026.9	6734	6850	142.46	289.07	460.87	6552
604.00	2162.4	2033.4	6733	6849	142.12	288.49	460.11	6647
606.00	2169.1	2040.1	6733	6848	141.76	287.89	459.31	6701
608.00	2175.8	2046.8	6733	6846	141.40	287.28	458.50	6740
610.00	2182.5	2053.5	6733	6847	141.04	286.67	457.68	6779
612.00	2189.3	2060.3	6733	6847	140.67	286.04	456.85	6819
614.00	2196.1	2067.1	6733	6847	140.30	285.42	456.00	6859
616.00	2203.0	2074.0	6734	6847	139.93	284.78	455.15	6900
618.00	2209.9	2080.9	6734	6847	139.56	284.14	454.28	7505
620.00	2217.4	2088.4	6737	6849	139.11	283.35	453.20	7052
622.00	2224.4	2095.4	6738	6850	138.72	282.66	452.29	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEQ FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								6929
576.00	2065.9	1936.9	6726	6845	147.80	298.08	472.91	6611
578.00	2072.6	1943.6	6725	6844	147.42	297.46	472.09	6713
580.00	2079.3	1950.3	6725	6843	147.03	296.81	471.24	6701
582.00	2086.0	1957.0	6725	6843	146.65	296.17	470.40	6794
584.00	2092.8	1963.8	6725	6843	146.25	295.51	469.52	6636
586.00	2099.4	1970.4	6725	6842	145.88	294.89	468.71	6730
588.00	2106.1	1977.1	6725	6842	145.50	294.25	467.86	6586
590.00	2112.7	1983.7	6724	6841	145.13	293.64	467.07	6725
592.00	2119.4	1990.4	6724	6840	144.76	293.01	466.22	7308
594.00	2126.7	1997.7	6726	6842	144.30	292.23	465.17	6483
596.00	2133.2	2004.2	6726	6841	143.96	291.66	464.42	6279
598.00	2139.5	2010.5	6724	6839	143.64	291.13	463.74	6862
600.00	2146.4	2017.4	6725	6839	143.25	290.47	462.86	9497
602.00	2155.9	2026.9	6734	6850	142.46	289.07	460.87	6552
604.00	2162.4	2033.4	6733	6849	142.12	288.49	460.11	6647
606.00	2169.1	2040.1	6733	6848	141.76	287.89	459.31	6701
608.00	2175.8	2046.8	6733	6846	141.40	287.28	458.50	6740
610.00	2182.5	2053.5	6733	6847	141.04	286.67	457.68	6779
612.00	2189.3	2060.3	6733	6847	140.67	286.04	456.85	6819
614.00	2196.1	2067.1	6733	6847	140.30	285.42	456.00	6859
616.00	2203.0	2074.0	6734	6847	139.93	284.78	455.15	7505
618.00	2209.9	2080.9	6734	6847	139.56	284.14	454.28	7052
620.00	2217.4	2088.4	6737	6849	139.11	283.35	453.20	
622.00	2224.4	2095.4	6738	6850	138.72	282.66	452.29	

	TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FI	VERTICAL DEPTH FROM SRD FI	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
									7427
680	624.00	2231.9	680-2102.9	6740	6852	138.28	281.92	451.25	7353
	626.00	2239.2	2110.2	6742	6854	137.86	281.19	450.24	7024
	628.00	2246.2	2117.2	6743	6854	137.48	280.53	449.35	7061
	630.00	2253.3	2124.3	6744	6855	137.10	279.87	448.45	6852
	632.00	2260.1	2131.1	6744	6855	136.74	279.25	447.62	6702
	634.00	2266.8	2137.8	6744	6854	136.40	278.67	446.84	6802
	636.00	2273.6	2144.6	6744	6854	136.05	278.08	446.03	7467
	638.00	2281.1	2152.1	6746	6856	135.63	277.33	445.00	7409
	640.00	2288.5	2159.5	6749	6858	135.22	276.60	443.99	7698
700	642.00	2296.2	699-2167.2	6751	6861	134.77	275.81	442.89	7918
	644.00	2304.1	2175.1	6755	6864	134.30	274.97	441.71	7342
	646.00	2311.5	2182.5	6757	6866	133.90	274.27	440.74	7999
	648.00	2319.5	2190.5	6761	6870	133.42	273.42	439.55	7896
	650.00	2327.4	2198.4	6764	6873	132.96	272.59	438.39	7869
	652.00	2335.2	2206.2	6768	6876	132.50	271.78	437.26	7773
	654.00	2343.0	2214.0	6771	6879	132.06	271.00	436.16	7872
	656.00	2350.9	2221.9	6774	6882	131.62	270.20	435.03	7748
	658.00	2358.6	2229.6	6777	6885	131.18	269.43	433.95	7646
720	660.00	2366.3	721-2237.3	6780	6888	130.77	268.69	432.91	7500
	662.00	2373.8	2244.8	6782	6890	130.37	267.98	431.93	7836
	664.00	2381.6	2252.6	6785	6893	129.94	267.20	430.83	7898
	666.00	2389.5	2260.5	6788	6896	129.50	266.41	429.72	7706
	668.00	2397.2	2268.2	6791	6898	129.09	265.67	428.68	7774
	670.00	2405.0	2276.0	6794	6901	128.67	264.92	427.62	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FI	VERTICAL DEPTH FROM SRD FI	AVERAGE VELOCITY SRO/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
624.00	2231.9	680.3 2102.9	6740	6852	138.28	281.92	451.25	7427
626.00	2239.2	2110.2	6742	6854	137.86	281.19	450.24	7353
628.00	2246.2	2117.2	6743	6854	137.48	280.53	449.35	7024
630.00	2253.3	2124.3	6744	6855	137.10	279.87	448.45	7061
632.00	2260.1	2131.1	6744	6855	136.74	279.25	447.62	6852
634.00	2266.8	2137.8	6744	6854	136.40	278.67	446.84	6702
636.00	2273.6	2144.6	6744	6854	136.05	278.08	446.03	6802
638.00	2281.1	2152.1	6746	6856	135.63	277.33	445.00	7467
640.00	2288.5	2159.5	6749	6858	135.22	276.60	443.99	7409
642.00	2296.2	699.9 2167.2	6751	6861	134.77	275.81	442.89	7698
644.00	2304.1	2175.1	6755	6864	134.30	274.97	441.71	7918
646.00	2311.5	2182.5	6757	6866	133.90	274.27	440.74	7342
648.00	2319.5	2190.5	6761	6870	133.42	273.42	439.55	7999
650.00	2327.4	2198.4	6764	6873	132.96	272.59	438.39	7896
652.00	2335.2	2206.2	6768	6876	132.50	271.78	437.26	7869
654.00	2343.0	2214.0	6771	6879	132.06	271.00	436.16	7773
656.00	2350.9	2221.9	6774	6882	131.62	270.20	435.03	7872
658.00	2358.6	2229.6	6777	6885	131.18	269.43	433.95	7748
660.00	2366.3	2237.3	6780	6888	130.77	268.69	432.91	7646
662.00	2373.8	2244.8	6782	6890	130.37	267.98	431.93	7500
664.00	2381.6	2252.6	6785	6893	129.94	267.20	430.83	7836
666.00	2389.5	2260.5	6788	6896	129.50	266.41	429.72	7898
668.00	2397.2	2268.2	6791	6898	129.09	265.67	428.68	7706
670.00	2405.0	2276.0	6794	6901	128.67	264.92	427.62	7774

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								8026
672.00	2413.0	2284.0	6798	6905	128.22	264.12	426.48	7647
674.00	2420.7	2291.7	6800	6907	127.82	263.40	425.48	7898
740 676.00	2428.6	2299.6	6803	6910	127.40	262.64	424.39	7730
678.00	2436.3	2307.3	6806	6913	127.00	261.91	423.37	8035
680.00	2444.3	2315.3	6810	6916	126.56	261.12	422.25	8173
682.00	2452.5	2323.5	6814	6920	126.11	260.31	421.09	7625
684.00	2460.1	2331.1	6816	6923	125.73	259.62	420.11	8156
686.00	2468.3	2339.3	6820	6927	125.29	258.81	418.97	8141
688.00	2476.4	2347.4	6824	6930	124.85	258.02	417.84	8277
690.00	2484.7	2355.7	6828	6935	124.40	257.20	416.66	8019
760 692.00	2492.7	2363.7	6832	6938	123.99	256.44	415.58	7911
694.00	2500.6	2371.6	6835	6941	123.58	255.71	414.54	7988
696.00	2508.6	2379.6	6838	6944	123.18	254.97	413.48	8062
698.00	2516.7	2387.7	6841	6948	122.76	254.21	412.40	7870
700.00	2524.6	2395.6	6844	6951	122.37	253.50	411.39	7913
702.00	2532.5	2403.5	6847	6953	121.98	252.79	410.37	7987
704.00	2540.5	2411.5	6851	6957	121.58	252.06	409.33	8065
706.00	2548.5	2419.5	6854	6960	121.18	251.32	408.27	7663
760 708.00	2556.2	2427.2	6856	6962	120.82	250.67	407.34	7952
710.00	2564.1	2435.1	6860	6965	120.43	249.96	406.32	7976
712.00	2572.1	2443.1	6863	6968	120.05	249.25	405.31	8030
714.00	2580.1	2451.1	6866	6971	119.66	248.53	404.28	7893
716.00	2588.0	2459.0	6869	6974	119.28	247.85	403.30	7700
718.00	2595.7	2466.7	6871	6976	118.93	247.20	402.38	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								8026
672.00	2413.0	2284.0	6798	6905	128.22	264.12	426.48	7647
674.00	2420.7	2291.7	6800	6907	127.82	263.40	425.48	7898
676.00	2428.6	2299.6	6803	6910	127.40	262.64	424.39	7730
678.00	2436.3	2307.3	6806	6913	127.00	261.91	423.37	8035
680.00	2444.3	2315.3	6810	6916	126.56	261.12	422.25	8173
682.00	2452.5	2323.5	6814	6920	126.11	260.31	421.09	7625
684.00	2460.1	2331.1	6816	6923	125.73	259.62	420.11	8156
686.00	2468.3	2339.3	6820	6927	125.29	258.81	418.97	8141
688.00	2476.4	2347.4	6824	6930	124.85	258.02	417.84	8277
690.00	2484.7	2355.7	6828	6935	124.40	257.20	416.66	8019
692.00	2492.7	2363.7	6832	6938	123.99	256.44	415.58	7911
694.00	2500.6	2371.6	6835	6941	123.58	255.71	414.54	7988
696.00	2508.6	2379.6	6838	6944	123.18	254.97	413.48	8062
698.00	2516.7	2387.7	6841	6948	122.76	254.21	412.40	7870
700.00	2524.6	2395.6	6844	6951	122.37	253.50	411.39	7913
702.00	2532.5	2403.5	6847	6953	121.98	252.79	410.37	7987
704.00	2540.5	2411.5	6851	6957	121.58	252.06	409.33	8065
706.00	2548.5	2419.5	6854	6960	121.18	251.32	408.27	7663
708.00	2556.2	2427.2	6856	6962	120.82	250.67	407.34	7952
710.00	2564.1	2435.1	6860	6965	120.43	249.96	406.32	7976
712.00	2572.1	2443.1	6863	6968	120.05	249.25	405.31	8030
714.00	2580.1	2451.1	6866	6971	119.66	248.53	404.28	7893
716.00	2588.0	2459.0	6869	6974	119.28	247.85	403.30	7700
718.00	2595.7	2466.7	6871	6976	118.93	247.20	402.38	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/Geo FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								7865
720.00	2603.6	2474.6	6874	6979	118.56	246.53	401.41	7887
722.00	2611.5	2482.5	6877	6981	118.20	245.85	400.44	7736
724.00	2619.2	2490.2	6879	6984	117.85	245.21	399.52	7602
80 726.00	2626.8	2497.8	6881	6985	117.51	244.60	398.65	7813
728.00	2634.6	2505.6	6884	6988	117.16	243.95	397.71	7512
730.00	2642.1	2513.1	6885	6989	116.84	243.36	396.87	7513
732.00	2649.7	2520.7	6887	6991	116.52	242.77	396.03	7474
734.00	2657.1	2528.1	6889	6992	116.20	242.19	395.20	6999
736.00	2664.1	2535.1	6889	6992	115.93	241.69	394.50	6726
738.00	2670.9	2541.9	6889	6992	115.68	241.24	393.87	6868
740.00	2677.7	2548.7	6888	6991	115.42	240.77	393.20	7368
742.00	2685.1	2556.1	6890	6992	115.11	240.22	392.41	6750
820 744.00	2691.8	2562.8	6889	6992	114.87	239.77	391.78	6599
746.00	2698.4	2569.4	6889	6991	114.63	239.34	391.19	6427
748.00	2704.9	2575.9	6887	6989	114.41	238.94	390.63	6494
750.00	2711.4	2582.4	6886	6988	114.18	238.54	390.07	6488
752.00	2717.9	2588.9	6885	6987	113.96	238.13	389.50	6650
754.00	2724.5	2595.5	6885	6986	113.72	237.70	388.90	7544
756.00	2732.0	2603.0	6886	6987	113.41	237.13	388.08	7639
758.00	2739.7	2610.7	6886	6989	113.10	236.55	387.24	7935
760.00	2747.6	2618.6	6891	6992	112.76	235.92	386.32	7821
210 762.00	2755.4	2626.4	6894	6994	112.43	235.31	385.43	8123
764.00	2763.6	2634.6	6897	6997	112.08	234.65	384.47	7953
766.00	2771.5	2642.5	6900	7000	111.75	234.02	383.56	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
								7865
720.00	2603.6	2474.6	6874	6979	118.56	246.53	401.41	7887
722.00	2611.5	2482.5	6877	6981	118.20	245.85	400.44	7736
724.00	2619.2	2490.2	6879	6984	117.85	245.21	399.52	7602
726.00	2626.8	2497.8	6881	6985	117.51	244.60	398.65	7813
728.00	2634.6	2505.6	6884	6988	117.16	243.95	397.71	7512
730.00	2642.1	2513.1	6885	6989	116.84	243.36	396.87	7513
732.00	2649.7	2520.7	6887	6991	116.52	242.77	396.03	7474
734.00	2657.1	2528.1	6889	6992	116.20	242.19	395.20	6999
736.00	2664.1	2535.1	6889	6992	115.93	241.69	394.50	6726
738.00	2670.9	2541.9	6889	6992	115.68	241.24	393.87	6868
740.00	2677.7	2548.7	6888	6991	115.42	240.77	393.20	7368
742.00	2685.1	2556.1	6890	6992	115.11	240.22	392.41	6750
744.00	2691.8	2562.8	6889	6992	114.87	239.77	391.78	6599
746.00	2698.4	2569.4	6889	6991	114.63	239.34	391.19	6427
748.00	2704.9	2575.9	6887	6989	114.41	238.94	390.63	6494
750.00	2711.4	2582.4	6886	6988	114.18	238.54	390.07	6488
752.00	2717.9	2588.9	6885	6987	113.96	238.13	389.50	6650
754.00	2724.5	2595.5	6885	6986	113.72	237.70	388.90	7544
756.00	2732.0	2603.0	6886	6987	113.41	237.13	388.08	7639
758.00	2739.7	2610.7	6886	6989	113.10	236.55	387.24	7935
760.00	2747.6	2618.6	6891	6992	112.76	235.92	386.32	7821
762.00	2755.4	2626.4	6894	6994	112.43	235.31	385.43	8123
764.00	2763.6	2634.6	6897	6997	112.08	234.65	384.47	7953
766.00	2771.5	2642.5	6900	7000	111.75	234.02	383.56	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
768.00	2779.9	2650.9	6903	7004	111.37	233.32	382.53	8380
770.00	2787.4	2658.4	6905	7005	111.08	232.78	381.76	7457
772.00	2794.9	2665.9	6907	7007	110.79	232.23	380.95	7579
774.00	2801.9	2672.9	6907	7006	110.54	231.78	380.31	6916
776.00	2808.8	2679.8	6907	7006	110.30	231.34	379.68	6906
778.00	2816.0	2687.0	6907	7007	110.04	230.85	378.98	7198
780.00	2823.5	2694.5	6909	7008	109.75	230.31	378.19	7558
782.00	2830.8	2701.8	6910	7009	109.48	229.80	377.46	7333
784.00	2837.8	2708.8	6910	7009	109.24	229.36	376.83	6916
786.00	2845.0	2716.0	6911	7009	108.98	228.88	376.14	7196
788.00	2852.6	2723.6	6913	7011	108.69	228.33	375.34	7673
790.00	2860.5	2731.5	6915	7013	108.38	227.74	374.48	7895
792.00	2868.5	2739.5	6918	7016	108.06	227.14	373.60	8007
794.00	2876.2	2747.2	6920	7018	107.77	226.60	372.80	7668
796.00	2883.7	2754.7	6921	7019	107.49	226.08	372.05	7500
798.00	2891.3	2762.3	6923	7021	107.21	225.55	371.27	7645
800.00	2899.1	2770.1	6925	7023	106.91	224.99	370.45	7800
802.00	2907.1	2778.1	6928	7025	106.61	224.41	369.60	7961
804.00	2914.9	2785.9	6930	7027	106.31	223.85	368.79	7820
806.00	2922.6	2793.6	6932	7029	106.04	223.33	368.02	7624
808.00	2930.4	2801.4	6934	7031	105.75	222.78	367.22	7809
810.00	2938.3	2809.3	6936	7033	105.45	222.22	366.39	7917
812.00	2947.3	2818.3	6942	7039	105.06	221.47	365.27	9032
814.00	2956.2	2827.2	6947	7044	104.69	220.75	364.19	8916

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
768.00	2779.9	2650.9	6903	7004	111.37	233.32	382.53	8380
770.00	2787.4	2658.4	6905	7005	111.08	232.78	381.76	7457
772.00	2794.9	2665.9	6907	7007	110.79	232.23	380.95	7579
774.00	2801.9	2672.9	6907	7006	110.54	231.78	380.31	6916
776.00	2808.8	2679.8	6907	7006	110.30	231.34	379.68	6906
778.00	2816.0	2687.0	6907	7007	110.04	230.85	378.98	7198
780.00	2823.5	2694.5	6909	7008	109.75	230.31	378.19	7558
782.00	2830.8	2701.8	6910	7009	109.48	229.80	377.46	7333
784.00	2837.8	2708.8	6910	7009	109.24	229.36	376.83	6916
786.00	2845.0	2716.0	6911	7009	108.98	228.88	376.14	7196
788.00	2852.6	2723.6	6913	7011	108.69	228.33	375.34	7673
790.00	2860.5	2731.5	6915	7013	108.38	227.74	374.48	7895
792.00	2868.5	2739.5	6918	7016	108.06	227.14	373.60	8007
794.00	2876.2	2747.2	6920	7018	107.77	226.60	372.80	7668
796.00	2883.7	2754.7	6921	7019	107.49	226.08	372.05	7500
798.00	2891.3	2762.3	6923	7021	107.21	225.55	371.27	7645
800.00	2899.1	2770.1	6925	7023	106.91	224.99	370.45	7800
802.00	2907.1	2778.1	6928	7025	106.61	224.41	369.60	7961
804.00	2914.9	2785.9	6930	7027	106.31	223.85	368.79	7820
806.00	2922.6	2793.6	6932	7029	106.04	223.33	368.02	7624
808.00	2930.4	2801.4	6934	7031	105.75	222.78	367.22	7809
810.00	2938.3	2809.3	6936	7033	105.45	222.22	366.39	7917
812.00	2947.3	2818.3	6942	7039	105.06	221.47	365.27	9032
814.00	2956.2	2827.2	6947	7044	104.69	220.75	364.19	8916

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
816.00	2964.8	2835.8	6950	7048	104.35	220.10	363.23	8532
818.00	2973.3	2844.3	6954	7052	104.01	219.45	362.26	8540
820.00	2982.0	2853.0	6958	7056	103.66	218.79	361.27	8660
822.00	2990.8	2861.8	6963	7061	103.30	218.10	360.23	8840
824.00	3000.1	2871.1	6969	7068	102.91	217.34	359.09	9271
826.00	3008.6	2879.6	6972	7071	102.58	216.70	358.15	8540
970 828.00	3017.3	2888.3	6977	7076	102.24	216.06	357.17	8664
830.00	3025.7	2896.7	6980	7079	101.93	215.45	356.27	8399
832.00	3032.5	2903.5	6980	7079	101.72	215.07	355.72	6837
834.00	3039.3	2910.3	6979	7078	101.52	214.70	355.18	6788
836.00	3046.8	2917.8	6980	7079	101.28	214.24	354.50	7484
838.00	3055.9	2926.9	6986	7085	100.91	213.52	353.42	9153
840.00	3065.3	2936.3	6991	7091	100.53	212.78	352.30	9357
842.00	3073.4	2944.4	6994	7093	100.25	212.24	351.50	8064
970 844.00	3080.2	2951.2	6993	7093	100.05	211.87	350.96	6854
846.00	3087.7	2958.7	6995	7094	99.82	211.42	350.30	7472
848.00	3098.6	2969.6	7004	7105	99.31	210.41	348.76	10881
850.00	3106.9	2977.9	7007	7108	99.01	209.85	347.91	8362
852.00	3115.2	2986.2	7010	7111	98.73	209.29	347.08	8265
854.00	3122.1	2993.1	7010	7111	98.53	208.93	346.55	6873
856.00	3128.9	2999.9	7009	7110	98.34	208.57	346.02	6884
858.00	3135.8	3006.8	7009	7110	98.15	208.21	345.49	6851
860.00	3142.6	3013.6	7008	7109	97.96	207.85	344.97	6833
970 862.00	3149.6	3020.6	7008	7109	97.77	207.48	344.43	6972

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
816.00	2964.8	2835.8	6950	7048	104.35	220.10	363.23	8532
818.00	2973.3	2844.3	6954	7052	104.01	219.45	362.26	8540
820.00	2982.0	2853.0	6958	7056	103.66	218.79	361.27	8660
822.00	2990.8	2861.8	6963	7061	103.30	218.10	360.23	8840
824.00	3000.1	2871.1	6969	7068	102.91	217.34	359.09	9271
826.00	3008.6	2879.6	6972	7071	102.58	216.70	358.15	8540
828.00	3017.3	2888.3	6977	7076	102.24	216.06	357.17	8664
830.00	3025.7	2896.7	6980	7079	101.93	215.45	356.27	8399
832.00	3032.5	2903.5	6980	7079	101.72	215.07	355.72	6837
834.00	3039.3	2910.3	6979	7078	101.52	214.70	355.18	6788
836.00	3046.8	2917.8	6980	7079	101.28	214.24	354.50	7484
838.00	3055.9	2926.9	6986	7085	100.91	213.52	353.42	9153
840.00	3065.3	2936.3	6991	7091	100.53	212.78	352.30	9357
842.00	3073.4	2944.4	6994	7093	100.25	212.24	351.50	8064
844.00	3080.2	2951.2	6993	7093	100.05	211.87	350.96	6854
846.00	3087.7	2958.7	6995	7094	99.82	211.42	350.30	7472
848.00	3098.6	2969.6	7004	7105	99.31	210.41	348.76	10881
850.00	3106.9	2977.9	7007	7108	99.01	209.85	347.91	8362
852.00	3115.2	2986.2	7010	7111	98.73	209.29	347.08	8265
854.00	3122.1	2993.1	7010	7111	98.53	208.93	346.55	6873
856.00	3128.9	2999.9	7009	7110	98.34	208.57	346.02	6884
858.00	3135.8	3006.8	7009	7110	98.15	208.21	345.49	6851
860.00	3142.6	3013.6	7008	7109	97.96	207.85	344.97	6833
862.00	3149.6	3020.6	7008	7109	97.77	207.48	344.43	6972

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEU FT/S	RHS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
864.00	3156.4	3027.4	7008	7108	97.58	207.12	343.91	6821
866.00	3165.2	3036.2	7012	7112	97.26	206.51	342.98	8783
868.00	3174.8	3045.8	7018	7119	96.89	205.77	341.86	9608
870.00	3183.8	3054.8	7023	7124	96.56	205.13	340.89	9019
872.00	3192.8	3063.8	7027	7129	96.24	204.50	339.93	8970
874.00	3202.3	3073.3	7033	7135	95.88	203.80	338.86	9479
876.00	3211.3	3082.3	7037	7140	95.56	203.18	337.92	8975
878.00	3220.5	3091.5	7042	7145	95.23	202.52	336.92	9211
880.00	3228.6	3099.6	7045	7148	94.97	202.02	336.16	8182
882.00	3236.5	3107.5	7047	7149	94.73	201.56	335.47	7897
884.00	3245.3	3116.3	7050	7153	94.44	200.98	334.59	8729
886.00	3254.4	3125.4	7055	7159	94.11	200.35	333.63	9144
888.00	3263.2	3134.2	7059	7163	93.82	199.78	332.77	8743
890.00	3271.9	3142.9	7063	7166	93.54	199.22	331.92	8697
892.00	3280.6	3151.6	7066	7170	93.25	198.65	331.05	8788
894.00	3289.3	3160.3	7070	7174	92.97	198.11	330.22	8645
896.00	3298.5	3169.5	7075	7179	92.65	197.48	329.26	9245
898.00	3306.7	3177.7	7077	7182	92.41	197.01	328.55	8120
900.00	3313.6	3184.6	7077	7181	92.24	196.68	328.07	6893
902.00	3320.4	3191.4	7076	7180	92.07	196.36	327.59	6866
904.00	3327.4	3198.4	7076	7180	91.89	196.02	327.09	6988
906.00	3337.1	3208.1	7082	7186	91.55	195.34	326.04	9685
908.00	3346.6	3217.6	7087	7192	91.23	194.70	325.05	9492
910.00	3355.9	3226.9	7092	7198	90.91	194.08	324.11	9323

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEU FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
864.00	3156.4	3027.4	7008	7108	97.58	207.12	343.91	6821
866.00	3165.2	3036.2	7012	7112	97.26	206.51	342.98	8783
868.00	3174.8	3045.8	7018	7119	96.89	205.77	341.86	9608
870.00	3183.8	3054.8	7023	7124	96.56	205.13	340.89	9019
872.00	3192.8	3063.8	7027	7129	96.24	204.50	339.93	8970
874.00	3202.3	3073.3	7033	7135	95.88	203.80	338.86	9479
876.00	3211.3	3082.3	7037	7140	95.56	203.18	337.92	8975
878.00	3220.5	3091.5	7042	7145	95.23	202.52	336.92	9211
880.00	3228.6	3099.6	7045	7148	94.97	202.02	336.16	8182
882.00	3236.5	3107.5	7047	7149	94.73	201.56	335.47	7897
884.00	3245.3	3116.3	7050	7153	94.44	200.98	334.59	8729
886.00	3254.4	3125.4	7055	7159	94.11	200.35	333.63	9144
888.00	3263.2	3134.2	7059	7163	93.82	199.78	332.77	8743
890.00	3271.9	3142.9	7063	7166	93.54	199.22	331.92	8697
892.00	3280.6	3151.6	7066	7170	93.25	198.65	331.05	8788
894.00	3289.3	3160.3	7070	7174	92.97	198.11	330.22	8645
896.00	3298.5	3169.5	7075	7179	92.65	197.48	329.26	9245
898.00	3306.7	3177.7	7077	7182	92.41	197.01	328.55	8120
900.00	3313.6	3184.6	7077	7181	92.24	196.68	328.07	6893
902.00	3320.4	3191.4	7076	7180	92.07	196.36	327.59	6866
904.00	3327.4	3198.4	7076	7180	91.89	196.02	327.09	6988
906.00	3337.1	3208.1	7082	7186	91.55	195.34	326.04	9685
908.00	3346.6	3217.6	7087	7192	91.23	194.70	325.05	9492
910.00	3355.9	3226.9	7092	7198	90.91	194.08	324.11	9323

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
912.00	3365.3	3236.3	7097	7203	90.60	193.46	323.15	9365
914.00	3375.7	3246.7	7104	7212	90.21	192.69	321.96	10448
916.00	3385.0	3256.0	7109	7217	89.91	192.09	321.04	9277
918.00	3395.0	3266.0	7115	7224	89.56	191.39	319.96	9999
920.00	3404.3	3275.3	7120	7229	89.26	190.80	319.04	9311
1040 922.00	3414.3	<del>3285.3</del>	7126	7236	88.92	190.11	317.98	9986
924.00	3421.6	3292.8	7127	7237	88.73	189.74	317.42	7536
926.00	3430.7	3301.7	7131	7241	88.46	189.21	316.62	8844
928.00	3440.6	3311.6	7137	7248	88.12	188.54	315.57	9974
930.00	3448.8	3319.8	7139	7250	87.90	188.10	314.90	8205
932.00	3457.7	3328.7	7143	7254	87.64	187.58	314.10	8876
934.00	3466.7	3337.7	7147	7258	87.37	187.05	313.30	8935
1060 936.00	3475.9	<del>3346.9</del>	7152	7263	87.09	186.49	312.42	9277
938.00	3485.2	3356.2	7156	7268	86.81	185.93	311.56	9248
940.00	3495.1	3366.1	7162	7275	86.49	185.28	310.56	9962
942.00	3506.1	3377.1	7170	7284	86.09	184.49	309.32	10983
944.00	3515.3	3386.3	7174	7289	85.82	183.96	308.49	9196
946.00	3524.4	3395.4	7178	7293	85.56	183.43	307.68	9069
948.00	3534.4	3405.4	7184	7300	85.25	182.80	306.70	9963
1080 950.00	3543.7	<del>3414.7</del>	7189	7305	84.97	182.26	305.86	9297
952.00	3553.3	3424.3	7194	7310	84.68	181.68	304.96	9655
954.00	3562.2	3433.2	7198	7314	84.44	181.18	304.19	8937
956.00	3571.5	3442.5	7202	7319	84.17	180.66	303.38	9233
958.00	3581.2	3452.2	7207	7324	83.89	180.08	302.48	9694

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
912.00	3365.3	3236.3	7097	7203	90.60	193.46	323.15	9365
914.00	3375.7	3246.7	7104	7212	90.21	192.69	321.96	10448
916.00	3385.0	3256.0	7109	7217	89.91	192.09	321.04	9277
918.00	3395.0	3266.0	7115	7224	89.56	191.39	319.96	9999
920.00	3404.3	3275.3	7120	7229	89.26	190.80	319.04	9311
u <sub>o</sub> 922.00	3414.31 <sup>0.40</sup>	3285.3	7126	7236	88.92	190.11	317.98	9986
924.00	3421.6	3292.8	7127	7237	88.73	189.74	317.42	7536
926.00	3430.7	3301.7	7131	7241	88.46	189.21	316.62	8844
928.00	3440.6	3311.6	7137	7248	88.12	188.54	315.57	9974
930.00	3448.8	3319.8	7139	7250	87.90	188.10	314.90	8205
932.00	3457.7	3328.7	7143	7254	87.64	187.58	314.10	8876
934.00	3466.7	3337.7	7147	7258	87.37	187.05	313.30	8935
u <sub>o</sub> 936.00	3475.91 <sup>0.59</sup>	3346.9	7152	7263	87.09	186.49	312.42	9277
938.00	3485.2	3356.2	7156	7268	86.81	185.93	311.56	9248
940.00	3495.1	3366.1	7162	7275	86.49	185.28	310.56	9962
942.00	3506.1	3377.1	7170	7284	86.09	184.49	309.32	10983
944.00	3515.3	3386.3	7174	7289	85.82	183.96	308.49	9196
946.00	3524.4	3395.4	7178	7293	85.56	183.43	307.68	9069
948.00	3534.4	3405.4	7184	7300	85.25	182.80	306.70	9963
u <sub>o</sub> 950.00	3543.71 <sup>0.80</sup>	3414.7	7189	7305	84.97	182.26	305.86	9297
952.00	3553.3	3424.3	7194	7310	84.68	181.68	304.96	9655
954.00	3562.2	3433.2	7198	7314	84.44	181.18	304.19	8937
956.00	3571.5	3442.5	7202	7319	84.17	180.66	303.38	9233
958.00	3581.2	3452.2	7207	7324	83.89	180.08	302.48	9694

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GE0 FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
960.00	3591.2	3462.2	7213	7331	83.58	179.46	301.52	10026
962.00	3601.1	3472.1	7218	7337	83.28	178.87	300.59	9870
1100 964.00	3611.1	3482.1	7224	7344	82.98	178.26	299.64	10047
966.00	3621.7	3492.7	7231	7352	82.64	177.58	298.57	10622
968.00	3631.7	3502.7	7237	7359	82.35	176.98	297.64	10008
970.00	3642.0	3513.0	7243	7366	82.04	176.36	296.66	10226
972.00	3652.3	3523.3	7250	7373	81.72	175.72	295.67	10367
974.00	3663.1	3534.1	7257	7382	81.39	175.04	294.60	10753
1120 976.00	3673.4	3544.4	7263	7389	81.08	174.42	293.63	10322
978.00	3683.2	3554.2	7268	7395	80.81	173.88	292.78	9738
980.00	3693.4	3564.4	7274	7402	80.51	173.27	291.83	10266
982.00	3704.4	3575.4	7282	7411	80.17	172.58	290.74	10987
984.00	3714.5	3585.5	7288	7417	79.89	172.01	289.84	10057
986.00	3725.9	3596.9	7296	7427	79.53	171.27	288.68	11419
1140 988.00	3736.1	3607.1	7302	7434	79.24	170.69	287.76	10212
990.00	3746.1	3617.1	7307	7440	78.97	170.14	286.90	10000
992.00	3756.7	3627.7	7314	7448	78.66	169.52	285.92	10624
994.00	3766.9	3637.9	7320	7454	78.38	168.96	285.03	10149
996.00	3777.0	3648.0	7325	7461	78.11	168.40	284.16	10124
998.00	3788.2	3659.2	7333	7470	77.77	167.72	283.07	11239
1000.00	3797.9	3668.9	7338	7475	77.53	167.22	282.29	9685
1160 1002.00	3808.3	3679.3	7344	7482	77.25	166.65	281.39	10370
1004.00	3818.7	3689.7	7350	7489	76.97	166.08	280.49	10407
1006.00	3829.7	3700.7	7357	7498	76.65	165.44	279.47	11018

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GE0 FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
960.00	3591.2	3462.2	7213	7331	83.58	179.46	301.52	10026
962.00	3601.1	3472.1	7218	7337	83.28	178.87	300.59	9870
0 964.00	3611.1	3482.1	7224	7344	82.98	178.26	299.64	10047
966.00	3621.7	3492.7	7231	7352	82.64	177.58	298.57	10622
968.00	3631.7	3502.7	7237	7359	82.35	176.98	297.64	10008
970.00	3642.0	3513.0	7243	7366	82.04	176.36	296.66	10226
972.00	3652.3	3523.3	7250	7373	81.72	175.72	295.67	10367
974.00	3663.1	3534.1	7257	7382	81.39	175.04	294.60	10753
10 976.00	3673.4	3544.4	7263	7389	81.08	174.42	293.63	10322
978.00	3683.2	3554.2	7268	7395	80.81	173.88	292.78	9738
980.00	3693.4	3564.4	7274	7402	80.51	173.27	291.83	10266
982.00	3704.4	3575.4	7282	7411	80.17	172.58	290.74	10987
984.00	3714.5	3585.5	7288	7417	79.89	172.01	289.84	10057
986.00	3725.9	3596.9	7296	7427	79.53	171.27	288.68	11419
10 988.00	3736.1	3607.1	7302	7434	79.24	170.69	287.76	10212
990.00	3746.1	3617.1	7307	7440	78.97	170.14	286.90	10000
992.00	3756.7	3627.7	7314	7448	78.66	169.52	285.92	10624
994.00	3766.9	3637.9	7320	7454	78.38	168.96	285.03	10149
996.00	3777.0	3648.0	7325	7461	78.11	168.40	284.16	10124
998.00	3788.2	3659.2	7333	7470	77.77	167.72	283.07	11239
1000.00	3797.9	3668.9	7338	7475	77.53	167.22	282.29	9685
0 1002.00	3808.3	3679.3	7344	7482	77.25	166.65	281.39	10370
1004.00	3818.7	3689.7	7350	7489	76.97	166.08	280.49	10407
1006.00	3829.7	3700.7	7357	7498	76.65	165.44	279.47	11018

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
1008.00	3840.4	3711.4	7364	7505	76.36	164.84	278.53	10709
1010.00	3851.2	3722.2	7371	7513	76.06	164.23	277.57	10819
1012.00	3861.9	3732.9	7377	7521	75.78	163.65	276.64	10664
1140 1014.00	3873.0	1180.53744.0	7385	7530	75.47	163.02	275.64	11093
1016.00	3883.8	3754.8	7391	7538	75.18	162.42	274.69	10847
1018.00	3894.3	3765.3	7397	7544	74.91	161.88	273.83	10420
1020.00	3904.9	3775.9	7404	7551	74.64	161.32	272.94	10589
1022.00	3915.3	3786.3	7410	7558	74.37	160.78	272.09	10425
1024.00	3926.1	3797.1	7416	7566	74.09	160.20	271.17	10828
1200 1026.00	3936.9	1200.03807.9	7423	7574	73.81	159.63	270.26	10831
1028.00	3948.3	3819.3	7431	7583	73.50	158.99	269.25	11375
1030.00	3960.5	3831.5	7440	7594	73.15	158.28	268.11	12156
1032.00	3972.7	3843.7	7449	7606	72.80	157.56	266.95	12235
1034.00	3983.7	3854.7	7456	7614	72.53	156.99	266.05	10949
1036.00	3994.7	3865.7	7463	7622	72.24	156.41	265.13	11072
1220 1038.00	4006.4	1220.13877.4	7471	7632	71.93	155.77	264.10	11692
1040.00	4019.4	3890.4	7482	7646	71.55	154.98	262.83	12991
1042.00	4031.2	3902.2	7490	7656	71.24	154.34	261.80	11813
1044.00	4042.6	3913.6	7497	7665	70.95	153.74	260.85	11419
1046.00	4054.4	3925.4	7506	7675	70.65	153.11	259.85	11760
1240 1048.00	4065.7	1240.23936.7	7513	7684	70.37	152.54	258.94	11253
1050.00	4076.6	3947.6	7519	7691	70.11	152.01	258.09	10939
1052.00	4088.8	3959.8	7528	7702	69.79	151.35	257.02	12251
1054.00	4101.2	1241.23972.2	7537	7714	69.46	150.67	255.94	12352

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
1008.00	3840.4	3711.4	7364	7505	76.36	164.84	278.53	10709
1010.00	3851.2	3722.2	7371	7513	76.06	164.23	277.57	10819
1012.00	3861.9	3732.9	7377	7521	75.78	163.65	276.64	10664
1014.00	3873.0	3744.0	7385	7530	75.47	163.02	275.64	11093
1016.00	3883.8	3754.8	7391	7538	75.18	162.42	274.69	10847
1018.00	3894.3	3765.3	7397	7544	74.91	161.88	273.83	10420
1020.00	3904.9	3775.9	7404	7551	74.64	161.32	272.94	10589
1022.00	3915.3	3786.3	7410	7558	74.37	160.78	272.09	10425
1024.00	3926.1	3797.1	7416	7566	74.09	160.20	271.17	10828
1026.00	3936.9	3807.9	7423	7574	73.81	159.63	270.26	10831
1028.00	3948.3	3819.3	7431	7583	73.50	158.99	269.25	11375
1030.00	3960.5	3831.5	7440	7594	73.15	158.28	268.11	12156
1032.00	3972.7	3843.7	7449	7606	72.80	157.56	266.95	12235
1034.00	3983.7	3854.7	7456	7614	72.53	156.99	266.05	10949
1036.00	3994.7	3865.7	7463	7622	72.24	156.41	265.13	11072
1038.00	4006.4	3877.4	7471	7632	71.93	155.77	264.10	11692
1040.00	4019.4	3890.4	7482	7646	71.55	154.98	262.83	12991
1042.00	4031.2	3902.2	7490	7656	71.24	154.34	261.80	11813
1044.00	4042.6	3913.6	7497	7665	70.95	153.74	260.85	11419
1046.00	4054.4	3925.4	7506	7675	70.65	153.11	259.85	11760
1048.00	4065.7	3936.7	7513	7684	70.37	152.54	258.94	11253
1050.00	4076.6	3947.6	7519	7691	70.11	152.01	258.09	10939
1052.00	4088.8	3959.8	7528	7702	69.79	151.35	257.02	12251
1054.00	4101.2	3972.2	7537	7714	69.46	150.67	255.94	12352

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
1056.00	4115.0	3986.0	7549	7730	69.06	149.84	254.59	13814
1058.00	4126.5	3997.5	7557	7739	68.79	149.27	253.67	11490
1048.00	4065.7	3936.7	7513	7684	70.37	152.54	258.94	11253
1050.00	4076.6	3947.6	7519	7691	70.11	152.01	258.09	10939
1052.00	4088.8	3959.8	7528	7702	69.79	151.35	257.02	12251
1054.00	4101.2	3972.2	7537	7714	69.46	150.67	255.94	12352

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB FT	VERTICAL DEPTH FROM SRD FT	AVERAGE VELOCITY SRD/GEO FT/S	RMS VELOCITY FT/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY FT/S
1056.00	4115.0	3986.0	7549	7730	69.06	149.84	254.59	13814
1058.00	4126.5	3997.5	7557	7739	68.79	149.27	253.67	11490

1048.00	4065.7	3936.7	7513	7684	70.37	152.54	258.94	11253
1050.00	4076.6	3947.6	7519	7691	70.11	152.01	258.09	10939
1052.00	4088.8	3959.8	7528	7702	69.79	151.35	257.02	12251
1054.00	4101.2	3972.2	7537	7714	69.46	150.67	255.94	12352