# **HALLIBURTON**

# Zero Offset VSP Report for

# **Great Bear Petroleum**

Well: Alcor #1

Area: Borough County, AK

## **Halliburton Energy Services**

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#### 1. ACQUISITION & PROCESSING

#### 1.1. <u>Data Acquisition Specifications</u>

Halliburton conducted a Zero offset VSP survey for Great Bear Petroleum in their **Alcor #1** well, located in Borough County, Alaska.

On August 27<sup>th</sup>, 2012 a ZVSP survey was run using a two level tool string consisting of the ASR tool. The ASR tool is a multi-component receiver consisting of two horizontal and one vertical geophone components. The survey was run from 400 ft to 10400 ft measured depth below KB (MDKB) with tools spaced out in 50 ft interval on the wireline. The model of the tool's geophones is SMC2400-OMNI, a geophone with a natural frequency of 15 Hz and manufactured by Geo Space. The geophone locations for the survey are displayed in Chart 2.

At the time of the run, the well had been drilled to a total depth of 10400.0 ft. All measured depths were referenced to the Kelly Bushing (KB) at an elevation of 199.0 ft above Mean Sea Level (MSL). Seismic Datum is 350.0 ft above MSL.

The Halliburton engineer operated two vibrators at a distance of 315.0 ft and at an azimuth of N187°. The vibrators were a type Failing Y2400 with Pelton Vib Pro source controller with digital control of phase locked ground electronics. The engineer acquired the data with a linear upsweep range of 4-80 Hz with a sweep length of 12 seconds. The taper length was 250 ms and the record length was 4 seconds. The source location diagram is shown in Chart 2.

During the downtrip, the tool string was stopped at a number of depths to check the equipment performance. To assure the tools were on depth, a gamma ray log was run by the seismic engineer. The recorded gamma ray log was compared to a reference gamma ray log to ensure a depth tie. Any discrepancy in the gamma ray tie was corrected for through a depth shift. The gamma ray log was run multiple times to ensure a depth tie before the recording of the seismic data proceeds.

The recording proceeded as the geophones were raised from the bottom hole location to the station depth of 400.0 ft MDKB. At each downhole station, the wireline cable was stopped, the geophone firmly clamped to the borehole wall by means of the remote control locking arm of the tool and the data was recorded. When necessary, the cable was slackened after the tools were locked in position to minimize cable-induced noise. An average minimum of four shots per level were acquired depending on the quality of the data

Below is the survey acquisition time range.

#### **Survey Time Range**

Run	Survey Type	Date &	Time	Date & Time			
		First L	evel	Last Le	evel		
1	Zero Offset VSP	08/27/12	13:49	08/27/12	20:40		

#### 1.2. Data Processing Specifications

For the survey, the downhole data acquired in the field were reformatted into the Halliburton processing system, correlated, displayed, edited, stacked and scaled (normalized) to the maximum amplitude.

The geometry was checked and corrected if needed. The downhole geophone traces for each depth level were stacked using a median summation technique and scaled (normalized) to the maximum amplitude. The first arrival times were picked from the stacked traces. This stacked, digital record was arranged according to decreasing depth.

The one-way recorded time from the source to the geophone picked from the raw stacked data are displayed in Plot 1. The transit times were corrected to vertical time below Seismic Datum by a two step process.

- 1) The standard straight ray method of correcting observed travel times to vertical assumes a constant velocity between the source and receiver and hence accommodates no refraction or ray bending. When the source-receiver offset is significant this assumption may become inaccurate due to ray refraction at non-normal incidence. In this case a more accurate curved ray method is employed to compute the travel time correction to vertical. The method is based on the ratio of rms to average velocity and an initial velocity model which is iteratively refined on a layer-by-layer basis to yield the final time, average, RMS, and interval velocities listed in the table 2 and also tabulated and displayed graphically in Chart 3.
- 2) The transit time from the previous step is then corrected to vertical time reference to seismic datum by a static correction computed from the source elevation, seismic datum elevation, and the elevation velocity. A static correction of 17.2 ms was applied to correct the vertical source – datum offset.

The well was considered to be **vertical** in all data computations. Table 1 shows the source–receiver geometry.

Table 2 shows P-wave results of the vertical computations for generating the one-way vertical time from datum. Table 2 also show the vertical time correction and source to datum time correction were added to the raw time pick to derive the vertical one way time. The results of the transit time corrections were summarized with the Averaged, RMS and Interval Velocities. This table represents the time-depth pairs.

Table 3 is the P-wave Depth/Time interpolated table calibrated in 10 ft intervals and Table 4 show the P-wave Time/Depth interpolated table calibrated in 2 ms intervals.

The accuracy of the depth markers were checked by comparing first-break times of the same levels occupied during the down and up runs. The average rate of error was found to be acceptable. Only the up-run, first arrival times were used for the final calculations.

#### 1.3. VSP Processing

#### **Total Wavefield**

After stacking, the first arrival was picked and the traces were sorted by depth. A compensation for amplitude decay due to spherical divergence using an exponential gain function of  $T^{**}1.7$  (where T is recorded time) was applied. After analyzing the data in the FK domain a zero phase trapezoidal bandpass filter with corner frequencies of 4, 8 – 80, 120 Hz was applied.

#### **Downgoing P-wavefield**

A 15-point median filter was applied to separate the downgoing P-wavefield from the total wavefield after using the first break pick (FBP) time to align the data at 100 ms.

#### **Deconvolved Downgoing P-Wavefield**

The VSP is unique in that it records the downgoing reverberant wavefield as well as the upgoing wavefield. The downgoing information can be used to design an operator that can provide effective deconvolution of the upgoing energy. This deconvolution was performed by using a deterministic process and is normally applied on a trace-by-trace basis.

The deterministic process provides source shaping as well as multiple suppression capabilities. The downgoing P-wavefield was carefully examined to determine the length of the deconvolution operator to apply to the data. The zero-offset VSP waveform looked reasonably consistent over the 1600 ms of live data after which it tends to vary with depth.

After testing several filter lengths, 1600 ms trace-by-trace deconvolution operator was computed and then applied to the downgoing P-wavefield with 3% white noise. The application of the deconvolution operator collapses the first 1600 ms of the P-wavefield into a band limited spike. A 4, 8-80, 120Hz zero phase bandpass filter immediately follows the deconvolution process.

#### **Upgoing P-wavefield**

After testing several filter lengths, 5-point median filter in pass mode was applied to enhance the upgoing P-wavefield after removing the downgoing P-wave.

#### **Deconvolved Upgoing P-Wavefield**

The deterministic deconvolution operator of 1600 ms long and 3% white noise, which was computed from, and tested on the downgoing P-wavefield, was applied to the enhanced upgoing P-wavefield on a trace by trace basis. An FK spectrum plot was then run to determine

the frequency content of the deconvolved upgoing P-wave. A zero phase trapezoidal bandpass filter with corner frequencies of 4, 8 – 80, 120 Hz was applied.

#### **Enhanced Deconvolved Upgoing P-Wavefield**

A 5-point median filter in pass mode was applied to enhance the deconvolved upgoing P-wavefield.

#### **VSP Corridor Stack**

The VSP upgoing wavefield at two-way time was then stacked to produce a single trace VSP corridor stack. This single trace was duplicated 15 times to make it easier to correlate with the surface seismic or synthetic seismogram data. To optimize the VSP corridor stack so that only the data with the highest signal to noise ratio data is included, a window located along the time-depth curve is determined. Any data outside this window along the time-depth depth curve was muted and the remaining data was stacked.

#### **Polarity Convention**

For data after deconvolution, normal polarity shows an increase in Acoustic Impedance (a positive reflection coefficient) as a peak. (see Figure 1).

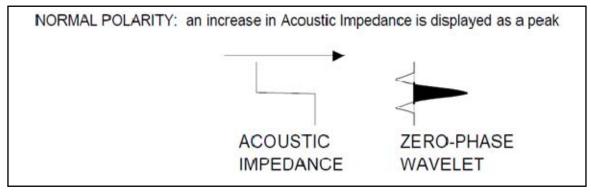


Figure 1. Polarity description.

#### 1.4. Operation Parameters

Company: Great Bear Petroleum Well: Alcor #1 **Well Location East:** -148°40'51.9" ft. 69°59'25.0" ft. **Well Location North** Field: North Slope Borough County: State:  $\mathsf{AK}$ **ZVSP Survey Type:** 

Well:

 Upper geophone Level (MD):
 400.0 ft.

 Lower geophone Level (MD):
 10400.0 ft.

 TD (MD):
 10400.0 ft.

**Elevations (above MSL)** 

Well Elevation (KB): 199.0 ft.
Seismic Reference Datum (SD): 350.0 ft.
Ground Level: 178.0 ft.
Correction Velocity: 10000.0 ft./sec.

Source:

Type: Vib
Source Elevation above MSL: 178.0 ft.
Source Depth: 0.0 ft.
Source Offset from well head: 315 ft.
Source Azimuth: N187°

Receiver / Recording:

Downhole Tool:

Overall Quality of Breaks:

Good
Surface Recorder Type:

GSP

Personnel:

Engineer: Jody Sylvester
Client Representative: Jim Stevens
Survey date: 08/27/2012

#### 2. VELOCITY ANALYSIS

CLIENT	Great Bear Petroleum
ACQUISITION CONTRACTOR	Halliburton Energy Services
WELL NAME	Alcor #1
FIELD	North Slope
LOCATION	Borough County, AK
SURVEY DATE	08/27/2012
SURVEY UNITS	ft.
RECEIVER REFERENCE ELEVATION	199.0
KB ELEVATION	199.0
DATUM ELEVATION (above MSL)	350.0
SOURCE ELEVATION (above MSL)	178.0
CORRECTION VELOCITY (ft./sec.)	10000
SOURCE TYPE	Vibroseis
GEOPHONE TYPE	ASR
SAMPLE INTERVAL (ms)	1
DATE OF VEL REPORT	08/28/2012
GEOPHYSICIST	Adekunle Adebowale

Table 1 - Source-Receiver Geometry

Company:

Well:

Great Bear Petroleum.

Alcor #1

Well reference elevation (KB): 199.00 ft (MSL)

Distance reference:

Wellhead

Offset:

Horizontal source-geophone distance

norizontal source-geophone distance

<	GEOPHO	ONE	>	>	OFFSET			
Measured Depth	Vertical Depth	RX (East+)	RY (North+)	Elevation		SX (East+)	SY (North+)	S-R
From KB	From KB			From MSL	Reference			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
400.0	400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
900.0	900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
1400.0	1400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
1900.0	1900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
2400.0	2400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
2900.0	2900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
3400.0	3400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
3900.0	3900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
4400.0	4400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
4850.0	4850.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
4900.0	4900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
4950.0	4950.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5000.0	5000.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5050.0	5050.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5100.0	5100.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5150.0	5150.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5200.0	5200.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5250.0	5250.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5300.0	5300.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5350.0	5350.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5400.0	5400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5450.0	5450.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5500.0	5500.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5550.0	5550.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5600.0	5600.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5650.0	5650.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3

<	GEOPHO	ONE	>	<	SOUR	OFFSET		
Measured	Vertical	RX	RY	Reference	Depth	SX	SY	S-R
Depth	Depth	(East+)	(North+)	Elevation	From	(East+)	(North+)	
From KB	From KB			From MSL	Reference			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5700.0	5700.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5750.0	5750.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5800.0	5800.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5850.0	5850.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5900.0	5900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
5950.0	5950.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6000.0	6000.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6050.0	6050.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6100.0	6100.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6150.0	6150.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6200.0	6200.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6250.0	6250.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6300.0	6300.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6350.0	6350.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6400.0	6400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6450.0	6450.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6500.0	6500.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6550.0	6550.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6600.0	6600.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6650.0	6650.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6700.0	6700.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6750.0	6750.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6800.0	6800.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6850.0	6850.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6900.0	6900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
6950.0	6950.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7000.0	7000.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7050.0	7050.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7100.0	7100.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7150.0	7150.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7200.0	7200.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7250.0	7250.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7300.0	7300.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7350.0	7350.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7400.0	7400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7450.0	7450.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
7500.0	7500.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3

<	GEOPH	ONE	>	><:								
Depth	Enom VD	(East+)	(North+)	Elevation	Depth From Reference	(East+)	(North+)	S-R				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)				
7550.0		0.0	0.0		0.0	-38.0	-313.0	315.3				
7600.0	7600.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7650.0	7650.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7700.0	7700.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7750.0	7750.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7800.0	7800.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7850.0	7850.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7900.0	7900.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
7950.0	7950.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
8000.0	8000.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8050.0	8050.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8100.0	8100.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8150.0	8150.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8200.0	8200.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8250.0	8250.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8300.0	8300.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
8350.0	8350.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8400.0	8400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
8450.0	8450.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
8500.0	8500.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8550.0	8550.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
8600.0	8600.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
8650.0	8650.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8700.0	8700.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8750.0	8750.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8800.0	8800.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8850.0	8850.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8900.0	8900.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
8950.0	8950.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
9000.0	9000.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
9050.0	9050.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
9100.0	9100.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				
9150.0	9150.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
9200.0	9200.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
9250.0	9250.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
9300.0	9300.0	0.0	0.0		0.0	-38.0	-313.0	315.3				
9350.0	9350.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3				

<	GEOPHO	ONE	>	<	SOUR	CE	>	OFFSET
Measured Depth From KB	Vertical Depth From KB	RX (East+)	RY (North+)	Reference Elevation From MSL	-	SX (East+)	SY (North+)	S-R
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9400.0	9400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9450.0 9500.0	9450.0 9500.0	0.0	0.0	178.0 178.0	0.0	-38.0 -38.0	-313.0 -313.0	315.3 315.3
9550.0	9550.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9600.0	9600.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9650.0	9650.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9700.0	9700.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9750.0	9750.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9800.0	9800.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9850.0	9850.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9900.0	9900.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
9950.0	9950.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10000.0	10000.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10050.0	10050.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10100.0	10100.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10150.0	10150.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10200.0	10200.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10250.0	10250.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10300.0	10300.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10350.0	10350.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3
10400.0	10400.0	0.0	0.0	178.0	0.0	-38.0	-313.0	315.3

Table 2- P-wave Time and Velocity Computation

Company: Great Bear Petroleum. Well: Alcor #1 Seismic reference datum: 350.00 ft (MSL) Source elevation: 178.00 ft (MSL) Source offset from wellhead: 315.00 ft Source azimuth: 187.00 deg Well reference elevation (KB): 199.00 ft (MSL) Correction velocity: 10000.0 ft/s Method of calculation: Curved rav Nomenclature MD: Measured depth of receiver below well reference TVD: True vertical depth of receiver below well reference True vertical depth of receiver below seismic datum TVDSD: Offset: Horizontal distance between source and receiver Tt: Time from source to receiver Vertical time from source to receiver Tv:Static time correction from source to seismic datum Ts: Tc: Corrected vertical time from seismic datum to receiver TWT: Two-way vertical time below seismic datum Average velocity Vave: DZ: Vertical depth interval DT: Vertical time interval Vint: Interval velocity RMS velocity Vrms:

		2											
MD (ft)	TVD (ft)	TVDSD (ft)	Offset (ft)	Tt (ms)	Tv (ms)	Ts (ms)	Tc (ms)	TWT (ms)	Vave (ft/s)	DZ (ft)	DT (ms)	Vint (ft/s)	Vrms (ft/s)
		0.0					0.0	0.0					
400.0	400.0	551.0	315.3	78.8	60.6	17.2	77.8	155.6	7081.1	551.0	77.8	7081.1	7081.1
900.0	900.0	1051.0	315.3	121.8	114.8	17.2	132.0	263.9	7963.7	500.0	54.2	9231.9	8033.6
1400.0	1400.0	1551.0	315.3	173.1	168.8	17.2	186.0	372.0	8339.0	500.0	54.0	9255.9	8407.0
1900.0	1900.0	2051.0	315.3	227.6	224.5	17.2	241.7	483.4	8486.4	500.0	55.7	8978.7	8542.1
2400.0	2400.0	2551.0	315.3	290.3	287.8	17.2	305.0	609.9	8364.7	500.0	63.3	7899.7	8412.8
2900.0	2900.0	3051.0	315.3	354.5	352.4	17.2	369.6	739.3	8254.0	500.0	64.7	7731.8	8297.7
3400.0	3400.0	3551.0	315.3	421.2	419.4	17.2	436.6	873.2	8133.5	500.0	66.9	7468.7	8176.1

MD (ft)	TVD (ft)	TVDSD (ft)	Offset (ft)	Tt (ms)	Tv (ms)	Ts (ms)	Tc (ms)	TWT (ms)	Vave (ft/s)	DZ (ft)	DT (ms)	Vint (ft/s)	Vrms (ft/s)
(10)	(10)	(10)	(10)	(1115)	(1110)	(IIID)	( 1110 )	( 1110 )	(10/5)	(10)	(1115)	(10/5)	(10/0)
3900.0	3900.0	4051.0	315.3	482.0	480.4	17.2	497.6	995.3	8140.4	500.0	61.1	8189.5	8177.7
4400.0	4400.0	4551.0	315.3	540.1	538.7	17.2	555.9	1111.9	8186.1	500.0	58.3	8575.7	8220.4
4850.0	4850.0	5001.0	315.3	589.6	588.3	17.2	605.5	1211.1	8258.8	450.0	49.6	9074.8	8293.6
4900.0	4900.0	5051.0	315.3	594.7	593.5	17.2	610.7	1221.4	8271.1	50.0	5.1	9716.6	8306.7
4950.0	4950.0	5101.0	315.3	599.8	598.6	17.2	615.8	1231.6	8283.2	50.0	5.1	9717.0	8319.4
5000.0	5000.0	5151.0	315.3	604.7	603.5	17.2	620.7	1241.4	8298.4	50.0	4.9	10206.9	8336.0
5050.0	5050.0	5201.0	315.3	609.7	608.5	17.2	625.7	1251.5	8311.7	50.0	5.0	9957.2	8350.3
5100.0	5100.0	5251.0	315.3	614.6	613.4	17.2	630.6	1261.3	8326.4	50.0	4.9	10208.1	8366.3
5150.0	5150.0	5301.0	315.3	619.6	618.5	17.2	635.7	1271.3	8339.3	50.0	5.0	9958.2	8380.0
5200.0	5200.0	5351.0	315.3	624.6	623.4	17.2	640.6	1281.2	8352.8	50.0		10082.8	8394.5
5250.0	5250.0	5401.0	315.3	629.5	628.4	17.2	645.6	1291.2	8366.1	50.0	5.0	10083.1	8408.8
5300.0	5300.0	5451.0	315.3	634.5	633.4	17.2	650.6	1301.2	8378.4	50.0	5.0	9960.1	8421.9
5350.0	5350.0	5501.0	315.3	639.3	638.2	17.2	655.4	1310.9	8392.9	50.0		10341.9	8437.6
5400.0	5400.0	5551.0	315.3	644.2	643.1	17.2	660.3	1320.7	8406.4	50.0		10212.0	8452.2
5450.0	5450.0	5601.0	315.3	649.0	648.0	17.2	665.2	1330.3	8420.5	50.0		10343.0	8467.4
5500.0	5500.0	5651.0	315.3	653.6	652.6	17.2	669.8	1339.5	8437.4	50.0		10899.7	8486.5
5550.0	5550.0	5701.0	315.3	658.3	657.3	17.2	674.5	1348.9	8452.6	50.0		10614.7	8503.2
5600.0	5600.0	5751.0	315.3	663.1	662.0	17.2	679.2	1358.5	8466.8	50.0		10464.2	8518.5
5650.0	5650.0	5801.0	315.3	667.7	666.6	17.2	683.8	1367.7	8483.1	50.0		10889.3	8536.7
5700.0	5700.0	5851.0	315.3	672.3	671.3	17.2	688.5	1377.0	8498.1	50.0		10696.2	8553.2
5750.0	5750.0	5901.0	315.3	676.8	675.8	17.2	693.0	1386.0	8514.9	50.0		11091.2	8572.1
5800.0	5800.0	5951.0	315.3	681.3	680.3	17.2	697.5	1395.0	8531.6	50.0		11091.9	8590.8
5850.0	5850.0	6001.0	315.3	685.8	684.8	17.2	702.0	1404.1	8548.0	50.0		11092.4	8609.1
5900.0	5900.0	6051.0	315.3	690.3	689.3	17.2	706.5	1413.0	8564.6	50.0		11166.2	8627.7
5950.0	5950.0	6101.0	315.3	694.8	693.9	17.2	711.1	1422.2	8579.9	50.0		10931.1	8644.5
6000.0	6000.0	6151.0	315.3	699.6	698.6	17.2	715.8	1431.6	8593.2	50.0		10596.4	8658.8
6050.0	6050.0	6201.0	315.3	704.1	703.2	17.2	720.4	1440.8	8607.8	50.0		10893.6	8674.9
6100.0	6100.0	6251.0	315.3	708.7	707.8	17.2	725.0	1449.9	8622.6	50.0		10960.9	8691.1
6150.0	6150.0	6301.0	315.3	713.2	712.3	17.2	729.5	1459.0	8637.6	50.0		11027.2	8707.6
6200.0	6200.0	6351.0	315.3	717.8	716.9	17.2	734.1	1468.1	8651.8	50.0		10926.8	8723.2
6250.0	6250.0	6401.0	315.3	722.4	721.5	17.2	738.7	1477.3	8665.6	50.0		10864.0	8738.1
6300.0	6300.0	6451.0	315.3	726.9	726.0	17.2	743.2	1486.3	8680.4	50.0		11096.9	8754.4
6350.0	6350.0	6501.0	315.3	731.4	730.5	17.2	747.7	1495.3	8695.0	50.0		11118.5	8770.5
6400.0 6450.0	6400.0 6450.0	6551.0 6601.0	315.3 315.3	735.9 740.5	735.0 739.6	17.2 17.2	752.2 756.8	1504.5 1513.6	8708.6 8722.1	50.0 50.0		10935.5 10935.3	8785.3 8799.8
6500.0	6500.0	6651.0	315.3	740.3	739.0	17.2	761.4	1522.9	8734.7	50.0		10933.3	8813.4
6550.0	6550.0	6701.0	315.3	745.1	744.2	17.2	765.9	1522.9	8748.6	50.0		11098.8	8828.5
6600.0	6600.0	6751.0	315.3	754.2	753.3	17.2	770.5	1531.9	8761.4	50.0		10898.4	8842.3
6650.0	6650.0	6801.0	315.3	754.2	757.9	17.2	770.3	1550.2	8774.1	50.0		10898.4	8855.9
6700.0	6700.0	6851.0	315.3	763.3	762.5	17.2	779.7	1550.2	8787.0	50.0		10990.4	8869.8
6750.0	6750.0	6901.0	315.3	763.3	762.5	17.2	784.3	1568.6	8799.0	50.0		10990.8	8882.5
6800.0	6800.0	6951.0	315.3	767.9	767.1	17.2	784.3	1577.8	8811.2	50.0		10809.2	8895.6
6850.0	6850.0	7001.0	315.3	772.5	776.2	17.2	793.4	1577.8	8824.2	50.0		11109.9	8909.7
0.000	0.000	7001.0	313.3	///.0	110.4	⊥/.∠	133.4	T300.8	0024.2	50.0	4.5	TTT09.9	0909./

MD	TVD	TVDSD	Offset	Tt	Tv	Ts	Tc	TWT	Vave	DZ	DT	Vint	Vrms
(ft)	(ft)	(ft)	(ft)	(ms)	(ms)	(ms)	(ms)	(ms)	(ft/s)	(ft)	(ms)	(ft/s)	(ft/s)
6900.0	6900.0	7051.0	315.3	781.6	780.8	17.2	798.0	1595.9	8836.3	50.0	4.6	10938.6	8922.6
6950.0	6950.0	7101.0	315.3	786.1	785.3	17.2	802.5	1605.1	8848.3	50.0		10939.0	8935.4
7000.0	7000.0	7151.0	315.3	790.7	789.9	17.2	807.1	1614.2	8860.1	50.0		10939.3	8948.0
7050.0	7050.0	7201.0	315.3	795.3	794.5	17.2	811.7	1623.3	8871.8	50.0	4.6	10939.3	8960.4
7100.0	7100.0	7251.0	315.3	799.8	799.0	17.2	816.2	1632.5	8883.4	50.0		10937.6	8972.7
7150.0	7150.0	7301.0	315.3	804.2	803.5	17.2	820.7	1641.3	8896.5	50.0		11322.2	8987.0
7200.0	7200.0	7351.0	315.3	808.7	808.0	17.2	825.2	1650.3	8908.5	50.0	4.5	11093.1	8999.9
7250.0	7250.0	7401.0	315.3	813.2	812.4	17.2	829.6	1659.2	8921.1	50.0		11260.5	9013.5
7300.0	7300.0	7451.0	315.3	817.6	816.8	17.2	834.0	1668.0	8934.0	50.0		11365.1	9027.5
7350.0	7350.0	7501.0	315.3	821.9	821.1	17.2	838.3	1676.6	8947.7	50.0		11593.4	9042.5
7400.0	7400.0	7551.0	315.3	826.2	825.5	17.2	842.7	1685.4	8960.7	50.0		11467.7	9056.8
7450.0	7450.0	7601.0	315.3	830.5	829.8	17.2	847.0	1694.0	8973.9	50.0		11530.3	9071.1
7500.0	7500.0	7651.0	315.3	834.9	834.2	17.2	851.4	1702.8	8986.1	50.0		11337.2	9084.3
7550.0	7550.0	7701.0	315.3	839.3	838.6	17.2	855.8	1711.5	8998.9	50.0		11507.2	9098.3
7600.0	7600.0	7751.0	315.3	843.6	842.9	17.2	860.1	1720.2	9011.7	50.0		11531.2	9112.2
7650.0	7650.0	7801.0	315.3	847.8	847.1	17.2	864.3	1728.5	9026.1	50.0		11991.4	9128.2
7700.0	7700.0	7851.0	315.3	851.9	851.2	17.2	868.4	1736.9	9040.3	50.0		11992.1	9144.1
7750.0	7750.0	7901.0	315.3	856.2	855.5	17.2	872.7	1745.4	9053.6	50.0		11757.5	9158.7
7800.0	7800.0	7951.0	315.3	860.4	859.7	17.2	876.9	1753.9	9066.9	50.0		11810.3	9173.3
7850.0	7850.0	8001.0	315.3	864.6	863.9	17.2	881.1	1762.2	9080.5	50.0		11938.7	9188.4
7900.0	7900.0	8051.0	315.3	868.9	868.3	17.2	885.5	1770.9	9092.5	50.0		11532.6	9201.4
7950.0 8000.0	7950.0	8101.0	315.3	873.2	872.5	17.2	889.7	1779.4 1787.9	9105.3	50.0		11758.5 11759.0	9215.3 9229.0
8050.0	8000.0 8050.0	8151.0 8201.0	315.3 315.3	877.4 881.8	876.8 881.2	17.2 17.2	894.0 898.4	1787.9	9117.9 9128.9	50.0 50.0		11759.0	9229.0
8100.0	8100.0	8251.0	315.3	886.0	885.3	17.2	902.5	1805.1	9141.9	50.0		11925.6	9255.0
8150.0	8150.0	8301.0	315.3	890.1	889.4	17.2	902.5	1813.3	9141.9	50.0		12237.9	9233.0
8200.0	8200.0	8351.0	315.3	894.0	893.4	17.2	910.6	1821.2	9170.9	50.0		12614.8	9270.0
8250.0	8250.0	8401.0	315.3	898.0	897.4	17.2	914.6	1829.2	9185.5	50.0		12492.9	9304.2
8300.0	8300.0	8451.0	315.3	902.1	901.5	17.2	918.7	1837.4	9199.1	50.0		12254.2	9319.4
8350.0	8350.0	8501.0	315.3	906.2	905.6	17.2	922.8	1845.5	9212.6	50.0		12253.7	9334.4
8400.0	8400.0	8551.0	315.3	910.3	909.7	17.2	926.9	1853.8	9225.5	50.0		12095.7	9348.5
8450.0	8450.0	8601.0	315.3	914.4	913.8	17.2	931.0	1862.0	9238.5	50.0		12180.5	9362.9
8500.0	8500.0	8651.0	315.3	918.6	918.0	17.2	935.2	1870.3	9250.9	50.0		12023.7	9376.4
8550.0	8550.0	8701.0	315.3	923.1	922.5	17.2	939.7	1879.4	9259.3	50.0		10989.5	9384.9
8600.0	8600.0	8751.0	315.3	927.7	927.1	17.2	944.3	1888.5	9267.6	50.0		10981.1	9393.2
8650.0	8650.0	8801.0	315.3	932.1	931.5	17.2	948.7	1897.4	9276.7	50.0	4.5	11191.1	9402.5
8700.0	8700.0	8851.0	315.3	937.0	936.4	17.2	953.6	1907.3	9281.4	50.0	4.9	10191.7	9406.7
8750.0	8750.0	8901.0	315.3	941.6	941.0	17.2	958.2	1916.3	9289.6	50.0		11006.2	9414.9
8800.0	8800.0	8951.0	315.3	946.3	945.7	17.2	962.9	1925.9	9295.6	50.0		10506.8	9420.6
8850.0	8850.0	9001.0	315.3	951.2	950.6	17.2	967.8	1935.7	9300.1	50.0	4.9	10198.5	9424.8
8900.0	8900.0	9051.0	315.3	956.3	955.8	17.2	973.0	1945.9	9302.6	50.0	5.1	9768.2	9426.6
8950.0	8950.0	9101.0	315.3	961.5	960.9	17.2	978.1	1956.1	9305.0	50.0	5.1	9768.5	9428.4
9000.0	9000.0	9151.0	315.3	966.9	966.3	17.2	983.5	1967.0	9304.7	50.0	5.4	9247.8	9427.4

MD	TVD	TVDSD	Offset	Tt	Tv	Ts	Tc	TWT	Vave	DZ	DT	Vint	Vrms
(ft)	(ft)	(ft)	(ft)	(ms)	(ms)	(ms)	(ms)	(ms)	(ft/s)	(ft)	(ms)	(ft/s)	(ft/s)
9050.0	9050.0	9201.0	315.3	972.0	971.4	17.2	988.6	1977.2	9307.1	50.0	5.1	9768.3	9429.2
9100.0	9100.0	9251.0	315.3	972.0	976.8	17.2	994.0	1988.0	9307.1	50.0	5.4	9248.0	9429.2
9150.0	9150.0	9301.0	315.3	982.6	982.1	17.2	999.3	1998.5	9300.8	50.0	5.3	9501.3	9428.6
9200.0	9200.0	9351.0	315.3	987.9	987.3	17.2	1004.5	2009.0	9307.8	50.0	5.2	9581.4	9429.4
9250.0	9250.0	9401.0	315.3	993.1	992.5	17.2	1004.3	2019.5	9310.3	50.0	5.3	9516.5	9429.4
9300.0	9300.0	9451.0	315.3	998.4	997.9	17.2	1015.1	2019.5	9310.3	50.0	5.3	9376.7	9429.9
9350.0	9350.0	9501.0	315.3	1003.7	1003.1	17.2	1013.1	2030.1	9310.7	50.0	5.3	9517.8	9429.0
9400.0	9400.0	9551.0	315.3	1003.7	1003.1	17.2	1020.3	2050.9	9314.1	50.0	5.1	9784.5	9430.1
9450.0	9450.0	9601.0	315.3	1014.0	1013.5	17.2	1023.4	2061.4	9315.2	50.0	5.2	9538.6	9432.4
9500.0	9500.0	9651.0	315.3	1014.0	1013.3	17.2	1036.7	2072.0	9315.2	50.0	5.3	9377.6	9432.1
9550.0	9550.0	9701.0	315.3	1019.4	1010.0	17.2	1041.3	2072.0	9316.6	50.0	5.3	9516.7	9432.1
9600.0	9600.0	9751.0	315.3	1024.0	1024.1	17.2	1041.3	2002.3	9316.9	50.0	5.3	9377.6	9432.3
9650.0	9650.0	9801.0	315.3	1035.2	1029.4	17.2	1051.8	2103.6	9318.2	50.0	5.2	9573.6	9433.0
9700.0	9700.0	9851.0	315.3	1040.3	1034.0	17.2	1057.0	2114.0	9319.7	50.0	5.2	9632.3	9434.0
9750.0	9750.0	9901.0	315.3	1040.3	1035.8	17.2	1062.3	2124.6	9320.5	50.0	5.3	9487.9	9434.2
9800.0	9800.0	9951.0	315.3	1050.9	1050.3	17.2	1067.5	2135.1	9321.5	50.0	5.3	9517.4	9434.7
9850.0	9850.0		315.3	1056.3	1055.7	17.2	1007.3	2145.9	9321.3	50.0	5.4	9242.8	9433.7
9900.0	9900.0		315.3	1061.6	1061.1	17.2	1072.3	2156.5	9321.1	50.0	5.3	9379.5	9433.4
9950.0	9950.0		315.3	1066.9	1066.3	17.2	1083.5	2167.1	9322.3	50.0	5.3	9502.7	9433.8
	10000.0		315.3	1072.3	1071.8	17.2	1089.0	2178.0	9321.3	50.0	5.5	9126.8	9432.2
	10050.0		315.3	1072.3	1077.1	17.2	1094.3	2188.7	9321.6	50.0	5.3	9374.2	9432.0
	10100.0		315.3	1082.9	1082.4	17.2	1099.6	2199.2	9322.5	50.0	5.3	9514.1	9432.4
	10150.0		315.3	1088.3	1087.7	17.2	1104.9	2209.9	9322.7	50.0	5.3	9362.1	9432.0
10200.0			315.3	1093.4	1092.9	17.2	1110.1	2220.3	9324.1	50.0	5.2	9635.0	9433.0
	10250.0		315.3	1098.7	1098.2	17.2	1115.4	2230.8	9325.0	50.0	5.3	9501.2	9433.3
	10300.0		315.3	1103.6	1103.1	17.2	1120.3	2240.6	9328.8	50.0		10200.4	9436.8
10350.0			315.3	1103.0	1108.0	17.2	1125.2	2250.3	9332.9	50.0		10272.1	9440.6
	10400.0		315.3	1113.2	1112.7	17.2	1129.9	2259.9	9337.6	50.0		10452.1	9445.1
10100.0	10100.0	10001.0	313.3			- / • 2	<i></i>	22000	2337.0	50.0	1.0	10102.1	7 1 1 3 . 1

Table 3 - P-wave Depth-Time Interpolation (10.0 ft)

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Company: Great Bear Petroleum. Well: Alcor #1

Well reference elevation (KB):

Seismic reference datum:

Correction velocity:

Depth interpolation interval:

199.00 ft (MSL)
350.00 ft (MSL)
10000.0 ft/s

Method of calculation: Curved ray

1001100 01 0							041 704 1	~1
Vertical Depth	Depth	Vertical 2-Way Time	Vertical   Depth	Depth	Vertical 2-Way Time	Vertical Depth	Depth	Vertical 2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
0.0	-151.0	0.0	250.0	99.0	70.6	500.0	349.0	141.2
10.0	-141.0	2.8	260.0	109.0	73.4	510.0	359.0	144.0
20.0	-131.0	5.6	270.0	119.0	76.3	520.0	369.0	146.9
30.0	-131.0	8.5	280.0	129.0	70.3	530.0	379.0	149.7
			290.0	139.0	81.9	540.0	389.0	152.5
40.0	-111.0	11.3				1		
50.0	-101.0	14.1	300.0	149.0	84.7	550.0	399.0	155.3
60.0	-91.0	16.9	310.0	159.0	87.6	560.0	409.0	157.6
70.0	-81.0	19.8	320.0	169.0	90.4	570.0	419.0	159.7
80.0	-71.0	22.6	330.0	179.0	93.2	580.0	429.0	161.9
90.0	-61.0	25.4	340.0	189.0	96.0	590.0	439.0	164.1
100.0	-51.0	28.2	350.0	199.0	98.9	600.0	449.0	166.2
110.0	-41.0	31.1	360.0	209.0	101.7	610.0	459.0	168.4
120.0	-31.0	33.9	370.0	219.0	104.5	620.0	469.0	170.6
130.0	-21.0	36.7	380.0	229.0	107.3	630.0	479.0	172.7
140.0	-11.0	39.5	390.0	239.0	110.2	640.0	489.0	174.9
150.0	-1.0	42.4	400.0	249.0	113.0	650.0	499.0	177.1
160.0	9.0	45.2	410.0	259.0	115.8	660.0	509.0	179.2
170.0	19.0	48.0	420.0	269.0	118.6	670.0	519.0	181.4
180.0	29.0	50.8	430.0	279.0	121.4	680.0	529.0	183.6
190.0	39.0	53.7	440.0	289.0	124.3	690.0	539.0	185.7
200.0	49.0	56.5	450.0	299.0	127.1	700.0	549.0	187.9
210.0	59.0	59.3	460.0	309.0	129.9	710.0	559.0	190.1
220.0	69.0	62.1	470.0	319.0	132.7	720.0	569.0	192.2
230.0	79.0	65.0	480.0	329.0	135.6	730.0	579.0	194.4
240.0	89.0	67.8	490.0	339.0	138.4	740.0	589.0	196.6
240.0	09.0	0/.0	490.0	339.0	130.4	/40.0	505.0	190.0

Vertical	Measured		Vertical	Measured		Vertical		Vertical
Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
750.0	599.0	198.7	1120.0	969.0	278.9	1490.0	1339.0	358.8
760.0	609.0	200.9	1130.0	979.0	281.0	1500.0	1349.0	361.0
770.0	619.0	203.1	1140.0	989.0	283.2	1510.0	1359.0	363.1
780.0	629.0	205.2	1150.0	999.0	285.3	1520.0	1369.0	365.3
790.0	639.0	207.4	1160.0	1009.0	287.5	1530.0	1379.0	367.4
800.0	649.0	209.6	1170.0	1019.0	289.7	1540.0	1389.0	369.6
810.0	659.0	211.7	1180.0	1029.0	291.8	1550.0	1399.0	371.8
820.0	669.0	213.9	1190.0	1039.0	294.0	1560.0	1409.0	374.0
830.0	679.0	216.1	1200.0	1049.0	296.1	1570.0	1419.0	376.2
840.0	689.0	218.2	1210.0	1059.0	298.3	1580.0	1429.0	378.4
850.0	699.0	220.4	1220.0	1069.0	300.5	1590.0	1439.0	380.7
860.0	709.0	222.6	1230.0	1079.0	302.6	1600.0	1449.0	382.9
870.0	719.0	224.7	1240.0	1089.0	304.8	1610.0	1459.0	385.1
880.0	729.0	226.9	1250.0	1099.0	306.9	1620.0	1469.0	387.4
890.0	739.0	229.1	1260.0	1109.0	309.1	1630.0	1479.0	389.6
900.0	749.0	231.2	1270.0	1119.0	311.3	1640.0	1489.0	391.8
910.0	759.0	233.4	1280.0	1129.0	313.4	1650.0	1499.0	394.0
920.0	769.0	235.6	1290.0	1139.0	315.6	1660.0	1509.0	396.3
930.0	779.0	237.7	1300.0	1149.0	317.7	1670.0	1519.0	398.5
940.0	789.0	239.9	1310.0	1159.0	319.9	1680.0	1529.0	400.7
950.0	799.0	242.1	1320.0	1169.0	322.1	1690.0	1539.0	402.9
960.0	809.0	244.2	1330.0	1179.0	324.2	1700.0	1549.0	405.2
970.0	819.0	246.4	1340.0	1189.0	326.4	1710.0	1559.0	407.4
980.0	829.0	248.6	1350.0	1199.0	328.6	1720.0	1569.0	409.6
990.0	839.0	250.7	1360.0	1209.0	330.7	1730.0	1579.0	411.9
1000.0	849.0	252.9	1370.0	1219.0	332.9	1740.0	1589.0	414.1
1010.0	859.0	255.1	1380.0	1229.0	335.0	1750.0	1599.0	416.3
1020.0	869.0	257.2	1390.0	1239.0	337.2	1760.0	1609.0	418.5
1030.0	879.0	259.4	1400.0	1249.0	339.4	1770.0	1619.0	420.8
1040.0	889.0	261.6	1410.0	1259.0	341.5	1780.0	1629.0	423.0
1050.0	899.0	263.7	1420.0	1269.0	343.7	1790.0	1639.0	425.2
1060.0	909.0	265.9	1430.0	1279.0	345.8	1800.0	1649.0	427.4
1070.0	919.0	268.1	1440.0	1289.0	348.0	1810.0	1659.0	429.7
1080.0	929.0	270.2	1450.0	1299.0	350.2	1820.0	1669.0	431.9
1090.0	939.0	272.4	1460.0	1309.0	352.3	1830.0	1679.0	434.1
1100.0	949.0	274.5	1470.0	1319.0	354.5	1840.0	1689.0	436.4
1110.0	959.0	276.7	1480.0	1329.0	356.6	1850.0	1699.0	438.6
			•			'		

Vertical	Measured		Vertical	Measured		Vertical	Measured	
Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
1860.0	1709.0	440.8	2230.0	2079.0	528.7	2600.0	2449.0	622.6
1870.0	1719.0	443.0	2240.0	2089.0	531.2	2610.0	2459.0	625.2
1880.0	1729.0	445.3	2250.0	2099.0	533.7	2620.0	2469.0	627.8
1890.0	1739.0	447.5	2260.0	2109.0	536.3	2630.0	2479.0	630.4
1900.0	1749.0	449.7	2270.0	2119.0	538.8	2640.0	2489.0	633.0
1910.0	1759.0	452.0	2280.0	2129.0	541.3	2650.0	2499.0	635.6
1920.0	1769.0	454.2	2290.0	2139.0	543.9	2660.0	2509.0	638.1
1930.0	1779.0	456.4	2300.0	2149.0	546.4	2670.0	2519.0	640.7
1940.0	1789.0	458.6	2310.0	2159.0	548.9	2680.0	2529.0	643.3
1950.0	1799.0	460.9	2320.0	2169.0	551.5	2690.0	2539.0	645.9
1960.0	1809.0	463.1	2330.0	2179.0	554.0	2700.0	2549.0	648.5
1970.0	1819.0	465.3	2340.0	2189.0	556.5	2710.0	2559.0	651.1
1980.0	1829.0	467.5	2350.0	2199.0	559.1	2720.0	2569.0	653.7
1990.0	1839.0	469.8	2360.0	2209.0	561.6	2730.0	2579.0	656.2
2000.0	1849.0	472.0	2370.0	2219.0	564.1	2740.0	2589.0	658.8
2010.0	1859.0	474.2	2380.0	2229.0	566.7	2750.0	2599.0	661.4
2020.0	1869.0	476.5	2390.0	2239.0	569.2	2760.0	2609.0	664.0
2030.0	1879.0	478.7	2400.0	2249.0	571.7	2770.0	2619.0	666.6
2040.0	1889.0	480.9	2410.0	2259.0	574.2	2780.0	2629.0	669.2
2050.0	1899.0	483.1	2420.0	2269.0	576.8	2790.0	2639.0	671.8
2060.0	1909.0	485.6	2430.0	2279.0	579.3	2800.0	2649.0	674.4
2070.0	1919.0	488.2	2440.0	2289.0	581.8	2810.0	2659.0	676.9
2080.0	1929.0	490.7	2450.0	2299.0	584.4	2820.0	2669.0	679.5
2090.0	1939.0	493.2	2460.0	2309.0	586.9	2830.0	2679.0	682.1
2100.0	1949.0	495.8	2470.0	2319.0	589.4	2840.0	2689.0	684.7
2110.0	1959.0	498.3	2480.0	2329.0	592.0	2850.0	2699.0	687.3
2120.0	1969.0	500.8	2490.0	2339.0	594.5	2860.0	2709.0	689.9
2130.0	1979.0	503.4	2500.0	2349.0	597.0	2870.0	2719.0	692.5
2140.0	1989.0	505.9	2510.0	2359.0	599.6	2880.0	2729.0	695.0
2150.0	1999.0	508.4	2520.0	2369.0	602.1	2890.0	2739.0	697.6
2160.0	2009.0	511.0	2530.0	2379.0	604.6	2900.0	2749.0	700.2
2170.0	2019.0	513.5	2540.0	2389.0	607.2	2910.0	2759.0	702.8
2180.0	2029.0	516.0	2550.0	2399.0	609.7	2920.0	2769.0	705.4
2190.0	2039.0	518.6	2560.0	2409.0	612.3	2930.0	2779.0	708.0
2200.0	2049.0	521.1	2570.0	2419.0	614.9	2940.0	2789.0	710.6
2210.0	2059.0	523.6	2580.0	2429.0	617.4	2950.0	2799.0	713.2
2220.0	2069.0	526.1	2590.0	2439.0	620.0	2960.0	2809.0	715.7

Vertical	Measured		Vertical	Measured		Vertical	Measured	
Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
2970.0	2819.0	718.3	3340.0	3189.0	816.7	3710.0	3559.0	912.0
2980.0	2829.0	720.9	3350.0	3199.0	819.3	3720.0	3569.0	914.4
2990.0	2839.0	723.5	3360.0	3209.0	822.0	3730.0	3579.0	916.9
3000.0	2849.0	726.1	3370.0	3219.0	824.7	3740.0	3589.0	919.3
3010.0	2859.0	728.7	3380.0	3229.0	827.4	3750.0	3599.0	921.8
3020.0	2869.0	731.3	3390.0	3239.0	830.1	3760.0	3609.0	924.2
3030.0	2879.0	733.8	3400.0	3249.0	832.7	3770.0	3619.0	926.7
3040.0	2889.0	736.4	3410.0	3259.0	835.4	3780.0	3629.0	929.1
3050.0	2899.0	739.0	3420.0	3269.0	838.1	3790.0	3639.0	931.5
3060.0	2909.0	741.7	3430.0	3279.0	840.8	3800.0	3649.0	934.0
3070.0	2919.0	744.4	3440.0	3289.0	843.4	3810.0	3659.0	936.4
3080.0	2929.0	747.0	3450.0	3299.0	846.1	3820.0	3669.0	938.9
3090.0	2939.0	749.7	3460.0	3309.0	848.8	3830.0	3679.0	941.3
3100.0	2949.0	752.4	3470.0	3319.0	851.5	3840.0	3689.0	943.8
3110.0	2959.0	755.1	3480.0	3329.0	854.2	3850.0	3699.0	946.2
3120.0	2969.0	757.8	3490.0	3339.0	856.8	3860.0	3709.0	948.6
3130.0	2979.0	760.4	3500.0	3349.0	859.5	3870.0	3719.0	951.1
3140.0	2989.0	763.1	3510.0	3359.0	862.2	3880.0	3729.0	953.5
3150.0	2999.0	765.8	3520.0	3369.0	864.9	3890.0	3739.0	956.0
3160.0	3009.0	768.5	3530.0	3379.0	867.6	3900.0	3749.0	958.4
3170.0	3019.0	771.1	3540.0	3389.0	870.2	3910.0	3759.0	960.8
3180.0	3029.0	773.8	3550.0	3399.0	872.9	3920.0	3769.0	963.3
3190.0	3039.0	776.5	3560.0	3409.0	875.4	3930.0	3779.0	965.7
3200.0	3049.0	779.2	3570.0	3419.0	877.8	3940.0	3789.0	968.2
3210.0	3059.0	781.9	3580.0	3429.0	880.3	3950.0	3799.0	970.6
3220.0	3069.0	784.5	3590.0	3439.0	882.7	3960.0	3809.0	973.1
3230.0	3079.0	787.2	3600.0	3449.0	885.1	3970.0	3819.0	975.5
3240.0	3089.0	789.9	3610.0	3459.0	887.6	3980.0	3829.0	977.9
3250.0	3099.0	792.6	3620.0	3469.0	890.0	3990.0	3839.0	980.4
3260.0	3109.0	795.2	3630.0	3479.0	892.5	4000.0	3849.0	982.8
3270.0	3119.0	797.9	3640.0	3489.0	894.9	4010.0	3859.0	985.3
3280.0	3129.0	800.6	3650.0	3499.0	897.4	4020.0	3869.0	987.7
3290.0	3139.0	803.3	3660.0	3509.0	899.8	4030.0	3879.0	990.2
3300.0	3149.0	806.0	3670.0	3519.0	902.2	4040.0	3889.0	992.6
3310.0	3159.0	808.6	3680.0	3529.0	904.7	4050.0	3899.0	995.0
3320.0	3169.0	811.3	3690.0	3539.0	907.1	4060.0	3909.0	997.4
3330.0	3179.0	814.0	3700.0	3549.0	909.6	4070.0	3919.0	999.7

Vertical	Measured		Vertical	Measured		Vertical	Measured	
Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
4080.0	3929.0	1002.0	4450.0	4299.0	1088.3	4820.0	4669.0	1171.2
4090.0	3939.0	1004.4	4460.0	4309.0	1090.7	4830.0	4679.0	1173.4
4100.0	3949.0	1006.7	4470.0	4319.0	1093.0	4840.0	4689.0	1175.6
4110.0	3959.0	1009.0	4480.0	4329.0	1095.3	4850.0	4699.0	1177.8
4120.0	3969.0	1011.4	4490.0	4339.0	1097.7	4860.0	4709.0	1180.0
4130.0	3979.0	1013.7	4500.0	4349.0	1100.0	4870.0	4719.0	1182.2
4140.0	3989.0	1016.0	4510.0	4359.0	1102.3	4880.0	4729.0	1184.4
4150.0	3999.0	1018.4	4520.0	4369.0	1104.7	4890.0	4739.0	1186.6
4160.0	4009.0	1020.7	4530.0	4379.0	1107.0	4900.0	4749.0	1188.8
4170.0	4019.0	1023.0	4540.0	4389.0	1109.3	4910.0	4759.0	1191.0
4180.0	4029.0	1025.4	4550.0	4399.0	1111.7	4920.0	4769.0	1193.2
4190.0	4039.0	1027.7	4560.0	4409.0	1113.9	4930.0	4779.0	1195.4
4200.0	4049.0	1030.0	4570.0	4419.0	1116.1	4940.0	4789.0	1197.6
4210.0	4059.0	1032.4	4580.0	4429.0	1118.3	4950.0	4799.0	1199.8
4220.0	4069.0	1034.7	4590.0	4439.0	1120.5	4960.0	4809.0	1202.0
4230.0	4079.0	1037.0	4600.0	4449.0	1122.7	4970.0	4819.0	1204.2
4240.0	4089.0	1039.4	4610.0	4459.0	1124.9	4980.0	4829.0	1206.4
4250.0	4099.0	1041.7	4620.0	4469.0	1127.1	4990.0	4839.0	1208.6
4260.0	4109.0	1044.0	4630.0	4479.0	1129.3	5000.0	4849.0	1210.8
4270.0	4119.0	1046.4	4640.0	4489.0	1131.5	5010.0	4859.0	1212.9
4280.0	4129.0	1048.7	4650.0	4499.0	1133.7	5020.0	4869.0	1215.0
4290.0	4139.0	1051.0	4660.0	4509.0	1135.9	5030.0	4879.0	1217.0
4300.0	4149.0	1053.4	4670.0	4519.0	1138.1	5040.0	4889.0	1219.1
4310.0	4159.0	1055.7	4680.0	4529.0	1140.3	5050.0	4899.0	1221.2
4320.0	4169.0	1058.0	4690.0	4539.0	1142.5	5060.0	4909.0	1223.2
4330.0	4179.0	1060.3	4700.0	4549.0	1144.7	5070.0	4919.0	1225.3
4340.0	4189.0	1062.7	4710.0	4559.0	1146.9	5080.0	4929.0	1227.3
4350.0	4199.0	1065.0	4720.0	4569.0	1149.1	5090.0	4939.0	1229.4
4360.0	4209.0	1067.3	4730.0	4579.0	1151.3	5100.0	4949.0	1231.4
4370.0	4219.0	1069.7	4740.0	4589.0	1153.5	5110.0	4959.0	1233.4
4380.0	4229.0	1072.0	4750.0	4599.0	1155.7	5120.0	4969.0	1235.4
4390.0	4239.0	1074.3	4760.0	4609.0	1158.0	5130.0	4979.0	1237.3
4400.0	4249.0	1076.7	4770.0	4619.0	1160.2	5140.0	4989.0	1239.3
4410.0	4259.0	1079.0	4780.0	4629.0	1162.4	5150.0	4999.0	1241.2
4420.0	4269.0	1081.3	4790.0	4639.0	1164.6	5160.0	5009.0	1243.3
4430.0	4279.0	1083.7	4800.0	4649.0	1166.8	5170.0	5019.0	1245.3
4440.0	4289.0	1086.0	4810.0	4659.0	1169.0	5180.0	5029.0	1247.3
			•			•		

Vertical	Measured		Vertical	Measured		Vertical	Measured	
Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
5190.0	5039.0	1249.3	5560.0	5409.0	1322.4	5930.0	5779.0	1391.3
5200.0	5049.0	1251.3	5570.0	5419.0	1324.3	5940.0	5789.0	1393.1
5210.0	5059.0	1253.3	5580.0	5429.0	1326.3	5950.0	5799.0	1394.9
5220.0	5069.0	1255.2	5590.0	5439.0	1328.2	5960.0	5809.0	1396.7
5230.0	5079.0	1257.2	5600.0	5449.0	1330.1	5970.0	5819.0	1398.5
5240.0	5089.0	1259.1	5610.0	5459.0	1332.0	5980.0	5829.0	1400.3
5250.0	5099.0	1261.1	5620.0	5469.0	1333.8	5990.0	5839.0	1402.1
5260.0	5109.0	1263.1	5630.0	5479.0	1335.7	6000.0	5849.0	1403.9
5270.0	5119.0	1265.1	5640.0	5489.0	1337.5	6010.0	5859.0	1405.7
5280.0	5129.0	1267.1	5650.0	5499.0	1339.3	6020.0	5869.0	1407.5
5290.0	5139.0	1269.1	5660.0	5509.0	1341.2	6030.0	5879.0	1409.3
5300.0	5149.0	1271.1	5670.0	5519.0	1343.1	6040.0	5889.0	1411.0
5310.0	5159.0	1273.1	5680.0	5529.0	1345.0	6050.0	5899.0	1412.8
5320.0	5169.0	1275.1	5690.0	5539.0	1346.9	6060.0	5909.0	1414.7
5330.0	5179.0	1277.1	5700.0	5549.0	1348.7	6070.0	5919.0	1416.5
5340.0	5189.0	1279.1	5710.0	5559.0	1350.6	6080.0	5929.0	1418.3
5350.0	5199.0	1281.0	5720.0	5569.0	1352.6	6090.0	5939.0	1420.2
5360.0	5209.0	1283.0	5730.0	5579.0	1354.5	6100.0	5949.0	1422.0
5370.0	5219.0	1285.0	5740.0	5589.0	1356.4	6110.0	5959.0	1423.9
5380.0	5229.0	1287.0	5750.0	5599.0	1358.3	6120.0	5969.0	1425.8
5390.0	5239.0	1289.0	5760.0	5609.0	1360.1	6130.0	5979.0	1427.6
5400.0	5249.0	1291.0	5770.0	5619.0	1362.0	6140.0	5989.0	1429.5
5410.0	5259.0	1293.0	5780.0	5629.0	1363.8	6150.0	5999.0	1431.4
5420.0	5269.0	1295.0	5790.0	5639.0	1365.6	6160.0	6009.0	1433.3
5430.0	5279.0	1297.0	5800.0	5649.0	1367.5	6170.0	6019.0	1435.1
5440.0	5289.0	1299.0	5810.0	5659.0	1369.4	6180.0	6029.0	1436.9
5450.0	5299.0	1301.0	5820.0	5669.0	1371.2	6190.0	6039.0	1438.8
5460.0	5309.0	1302.9	5830.0	5679.0	1373.1	6200.0	6049.0	1440.6
5470.0	5319.0	1304.9	5840.0	5689.0	1375.0	6210.0	6059.0	1442.4
5480.0	5329.0	1306.8	5850.0	5699.0	1376.8	6220.0	6069.0	1444.3
5490.0	5339.0	1308.7	5860.0	5709.0	1378.6	6230.0	6079.0	1446.1
5500.0	5349.0	1310.7	5870.0	5719.0	1380.4	6240.0	6089.0	1447.9
5510.0	5359.0	1312.6	5880.0	5729.0	1382.2	6250.0	6099.0	1449.7
5520.0	5369.0	1314.6	5890.0	5739.0	1384.0	6260.0	6109.0	1451.5
5530.0	5379.0	1316.6	5900.0	5749.0	1385.9	6270.0	6119.0	1453.4
5540.0	5389.0	1318.5	5910.0	5759.0	1387.7	6280.0	6129.0	1455.2
5550.0	5399.0	1320.5	5920.0	5769.0	1389.5	6290.0	6139.0	1457.0

Vertical	Measured		Vertical	Measured		Vertical	Measured	
Depth from	Depth from	2-Way Time from	Depth from	Depth from	2-Way Time from	Depth from	Depth from	2-Way Time from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	Datum   (ft)	(ft)	(ms)	Datum   (ft)	(ft)	(ms)
(IL)	(IL)	(IIIS)	(11)	(IL)	( 1118 )	(10)	(IL)	(IIIS)
6300.0	6149.0	1458.8	6670.0	6519.0	1526.3	7040.0	6889.0	1593.9
6310.0	6159.0	1460.6	6680.0	6529.0	1528.1	7050.0	6899.0	1595.7
6320.0	6169.0	1462.5	6690.0	6539.0	1529.9	7060.0	6909.0	1597.6
6330.0	6179.0	1464.3	6700.0	6549.0	1531.7	7070.0	6919.0	1599.4
6340.0	6189.0	1466.1	6710.0	6559.0	1533.5	7080.0	6929.0	1601.2
6350.0	6199.0	1467.9	6720.0	6569.0	1535.4	7090.0	6939.0	1603.0
6360.0	6209.0	1469.8	6730.0	6579.0	1537.2	7100.0	6949.0	1604.9
6370.0	6219.0	1471.6	6740.0	6589.0	1539.1	7110.0	6959.0	1606.7
6380.0	6229.0	1473.5	6750.0	6599.0	1540.9	7120.0	6969.0	1608.5
6390.0	6239.0	1475.3	6760.0	6609.0	1542.7	7130.0	6979.0	1610.4
6400.0	6249.0	1477.1	6770.0	6619.0	1544.6	7140.0	6989.0	1612.2
6410.0	6259.0	1479.0	6780.0	6629.0	1546.4	7150.0	6999.0	1614.0
6420.0	6269.0	1480.8	6790.0	6639.0	1548.2	7160.0	7009.0	1615.8
6430.0	6279.0	1482.6	6800.0	6649.0	1550.1	7170.0	7019.0	1617.7
6440.0	6289.0	1484.4	6810.0	6659.0	1551.9	7180.0	7029.0	1619.5
6450.0	6299.0	1486.2	6820.0	6669.0	1553.7	7190.0	7039.0	1621.3
6460.0	6309.0	1488.0	6830.0	6679.0	1555.5	7200.0	7049.0	1623.2
6470.0	6319.0	1489.8	6840.0	6689.0	1557.3	7210.0	7059.0	1625.0
6480.0	6329.0	1491.6	6850.0	6699.0	1559.2	7220.0	7069.0	1626.8
6490.0	6339.0	1493.4	6860.0	6709.0	1561.0	7230.0	7079.0	1628.6
6500.0	6349.0	1495.2	6870.0	6719.0	1562.9	7240.0	7089.0	1630.5
6510.0	6359.0	1497.0	6880.0	6729.0	1564.7	7250.0	7099.0	1632.3
6520.0	6369.0	1498.8	6890.0	6739.0	1566.6	7260.0	7109.0	1634.1
6530.0	6379.0	1500.6	6900.0	6749.0	1568.4	7270.0	7119.0	1635.8
6540.0	6389.0	1502.5	6910.0	6759.0	1570.2	7280.0	7129.0	1637.6
6550.0	6399.0	1504.3	6920.0	6769.0	1572.1	7290.0	7139.0	1639.4
6560.0	6409.0	1506.1	6930.0	6779.0	1573.9	7300.0	7149.0	1641.1
6570.0	6419.0	1508.0	6940.0	6789.0	1575.8	7310.0	7159.0	1642.9
6580.0	6429.0	1509.8	6950.0	6799.0	1577.6	7320.0	7169.0	1644.7
6590.0	6439.0	1511.6	6960.0	6809.0	1579.4	7330.0	7179.0	1646.5
6600.0	6449.0	1513.4	6970.0	6819.0	1581.2	7340.0	7189.0	1648.3
6610.0	6459.0	1515.3	6980.0	6829.0	1583.0	7350.0	7199.0	1650.1
6620.0	6469.0	1517.1	6990.0	6839.0	1584.8	7360.0	7209.0	1651.9
6630.0	6479.0	1519.0	7000.0	6849.0	1586.6	7370.0	7219.0	1653.7
6640.0	6489.0	1520.8	7010.0	6859.0	1588.4	7380.0	7229.0	1655.5
6650.0	6499.0	1522.7	7020.0	6869.0	1590.2	7390.0	7239.0	1657.3
6660.0	6509.0	1524.5	7030.0	6879.0	1592.1	7400.0	7249.0	1659.0

Vertical Depth	Measured Depth	Vertical 2-Way Time	Vertical   Depth	Measured Depth	Vertical 2-Way Time	Vertical   Depth	Measured Depth	Vertical 2-Way Time
from	from	from	Depth   from	from	from	Depth   from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	Datum   (ft)	(ft)	(ms)	Datum   (ft)	(ft)	(ms)
(10)	(10)	(IIIS)	(10)	(10)	( 1115 )	(10)	(10)	( IIIS )
7410.0	7259.0	1660.8	7780.0	7629.0	1725.0	8150.0	7999.0	1787.7
7420.0	7269.0	1662.6	7790.0	7639.0	1726.7	8160.0	8009.0	1789.5
7430.0	7279.0	1664.3	7800.0	7649.0	1728.4	8170.0	8019.0	1791.3
7440.0	7289.0	1666.1	7810.0	7659.0	1730.0	8180.0	8029.0	1793.0
7450.0	7299.0	1667.8	7820.0	7669.0	1731.7	8190.0	8039.0	1794.8
7460.0	7309.0	1669.6	7830.0	7679.0	1733.4	8200.0	8049.0	1796.5
7470.0	7319.0	1671.3	7840.0	7689.0	1735.1	8210.0	8059.0	1798.2
7480.0	7329.0	1673.0	7850.0	7699.0	1736.7	8220.0	8069.0	1799.9
7490.0	7339.0	1674.7	7860.0	7709.0	1738.4	8230.0	8079.0	1801.6
7500.0	7349.0	1676.5	7870.0	7719.0	1740.1	8240.0	8089.0	1803.2
7510.0	7359.0	1678.2	7880.0	7729.0	1741.8	8250.0	8099.0	1804.9
7520.0	7369.0	1679.9	7890.0	7739.0	1743.5	8260.0	8109.0	1806.6
7530.0	7379.0	1681.7	7900.0	7749.0	1745.2	8270.0	8119.0	1808.2
7540.0	7389.0	1683.4	7910.0	7759.0	1746.9	8280.0	8129.0	1809.8
7550.0	7399.0	1685.2	7920.0	7769.0	1748.6	8290.0	8139.0	1811.5
7560.0	7409.0	1686.9	7930.0	7779.0	1750.3	8300.0	8149.0	1813.1
7570.0	7419.0	1688.6	7940.0	7789.0	1752.0	8310.0	8159.0	1814.7
7580.0	7429.0	1690.4	7950.0	7799.0	1753.7	8320.0	8169.0	1816.3
7590.0	7439.0	1692.1	7960.0	7809.0	1755.4	8330.0	8179.0	1817.9
7600.0	7449.0	1693.9	7970.0	7819.0	1757.0	8340.0	8189.0	1819.4
7610.0	7459.0	1695.6	7980.0	7829.0	1758.7	8350.0	8199.0	1821.0
7620.0	7469.0	1697.4	7990.0	7839.0	1760.4	8360.0	8209.0	1822.6
7630.0	7479.0	1699.1	8000.0	7849.0	1762.1	8370.0	8219.0	1824.2
7640.0	7489.0	1700.9	8010.0	7859.0	1763.8	8380.0	8229.0	1825.8
7650.0	7499.0	1702.7	8020.0	7869.0	1765.5	8390.0	8239.0	1827.4
7660.0	7509.0	1704.4	8030.0	7879.0	1767.3	8400.0	8249.0	1829.0
7670.0	7519.0	1706.1	8040.0	7889.0	1769.0	8410.0	8259.0	1830.7
7680.0	7529.0	1707.9	8050.0	7899.0	1770.7	8420.0	8269.0	1832.3
7690.0	7539.0	1709.6	8060.0	7909.0	1772.4	8430.0	8279.0	1833.9
7700.0	7549.0	1711.4	8070.0	7919.0	1774.1	8440.0	8289.0	1835.6
7710.0	7559.0	1713.1	8080.0	7929.0	1775.8	8450.0	8299.0	1837.2
7720.0	7569.0	1714.8	8090.0	7939.0	1777.5	8460.0	8309.0	1838.8
7730.0	7579.0	1716.6	8100.0	7949.0	1779.2	8470.0	8319.0	1840.5
7740.0	7589.0	1718.3	8110.0	7959.0	1780.9	8480.0	8329.0	1842.1
7750.0	7599.0	1720.0	8120.0	7969.0	1782.6	8490.0	8339.0	1843.7
7760.0	7609.0	1721.7	8130.0	7979.0	1784.3	8500.0	8349.0	1845.3
7770.0	7619.0	1723.4	8140.0	7989.0	1786.0	8510.0	8359.0	1847.0

Vertical	Measured		Vertical	Measured		Vertical	Measured	
Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time
from	from	from	from	from	from	from	from	from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)
8520.0	8369.0	1848.7	8890.0	8739.0	1914.3	9260.0	9109.0	1989.9
8530.0	8379.0	1850.3	8900.0	8749.0	1916.2	9270.0	9119.0	1992.0
8540.0	8389.0	1852.0	8910.0	8759.0	1918.1	9280.0	9129.0	1994.1
8550.0	8399.0	1853.6	8920.0	8769.0	1920.0	9290.0	9139.0	1996.2
8560.0	8409.0	1855.3	8930.0	8779.0	1921.9	9300.0	9149.0	1998.3
8570.0	8419.0	1856.9	8940.0	8789.0	1923.8	9310.0	9159.0	2000.4
8580.0	8429.0	1858.5	8950.0	8799.0	1925.7	9320.0	9169.0	2002.5
8590.0	8439.0	1860.2	8960.0	8809.0	1927.6	9330.0	9179.0	2004.6
8600.0	8449.0	1861.8	8970.0	8819.0	1929.6	9340.0	9189.0	2006.7
8610.0	8459.0	1863.5	8980.0	8829.0	1931.6	9350.0	9199.0	2008.8
8620.0	8469.0	1865.2	8990.0	8839.0	1933.5	9360.0	9209.0	2010.9
8630.0	8479.0	1866.8	9000.0	8849.0	1935.5	9370.0	9219.0	2013.0
8640.0	8489.0	1868.5	9010.0	8859.0	1937.5	9380.0	9229.0	2015.1
8650.0	8499.0	1870.1	9020.0	8869.0	1939.6	9390.0	9239.0	2017.2
8660.0	8509.0	1871.9	9030.0	8879.0	1941.6	9400.0	9249.0	2019.3
8670.0	8519.0	1873.8	9040.0	8889.0	1943.7	9410.0	9259.0	2021.4
8680.0	8529.0	1875.6	9050.0	8899.0	1945.7	9420.0	9269.0	2023.5
8690.0	8539.0	1877.4	9060.0	8909.0	1947.7	9430.0	9279.0	2025.7
8700.0	8549.0	1879.2	9070.0	8919.0	1949.8	9440.0	9289.0	2027.8
8710.0	8559.0	1881.0	9080.0	8929.0	1951.8	9450.0	9299.0	2029.9
8720.0	8569.0	1882.9	9090.0	8939.0	1953.9	9460.0	9309.0	2032.0
8730.0	8579.0	1884.7	9100.0	8949.0	1955.9	9470.0	9319.0	2034.1
8740.0	8589.0	1886.5	9110.0	8959.0	1958.1	9480.0	9329.0	2036.2
8750.0	8599.0	1888.3	9120.0	8969.0	1960.3	9490.0	9339.0	2038.3
8760.0	8609.0	1890.1	9130.0	8979.0	1962.4	9500.0	9349.0	2040.4
8770.0	8619.0	1891.9	9140.0	8989.0	1964.6	9510.0	9359.0	2042.5
8780.0	8629.0	1893.7	9150.0	8999.0	1966.7	9520.0	9369.0	2044.5
8790.0	8639.0	1895.5	9160.0	9009.0	1968.8	9530.0	9379.0	2046.6
8800.0	8649.0	1897.3	9170.0	9019.0	1970.8	9540.0	9389.0	2048.6
8810.0	8659.0	1899.2	9180.0	9029.0	1972.9	9550.0	9399.0	2050.7
8820.0	8669.0	1901.2	9190.0	9039.0	1974.9	9560.0	9409.0	2052.8
8830.0	8679.0	1903.1	9200.0	9049.0	1977.0	9570.0	9419.0	2054.9
8840.0	8689.0	1905.1	9210.0	9059.0	1979.1	9580.0	9429.0	2056.9
8850.0	8699.0	1907.1	9220.0	9069.0	1981.3	9590.0	9439.0	2059.0
8860.0	8709.0	1908.9	9230.0	9079.0	1983.5	9600.0	9449.0	2061.1
8870.0	8719.0	1910.7	9240.0	9089.0	1985.6	9610.0	9459.0	2063.3
8880.0	8729.0	1912.5	9250.0	9099.0	1987.8	9620.0	9469.0	2065.4

Vertical	Measured		Vertical	Measured		Vertical		Vertical
Depth from	Depth from	2-Way Time from	Depth from	Depth from	2-Way Time from	Depth from	Depth from	2-Way Time from
Datum	KB	Datum	Datum	KB	Datum	Datum	KB	Datum
(ft)	(ft)	(ms)	Datum   (ft)	(ft)	(ms)	Datum   (ft)	(ft)	(ms)
(10)	(10)	( IIIS )	(10)	(10)	(IIIS)	(10)	(10)	(IIIS)
9630.0	9479.0	2067.5	9950.0	9799.0	2134.9	10270.0	10119.0	2203.3
9640.0	9489.0	2069.7	9960.0	9809.0	2137.0	10280.0	10129.0	2205.4
9650.0	9499.0	2071.8	9970.0	9819.0	2139.2	10290.0	10139.0	2207.5
9660.0	9509.0	2073.9	9980.0	9829.0	2141.3	10300.0	10149.0	2209.7
9670.0	9519.0	2076.0	9990.0	9839.0	2143.5	10310.0	10159.0	2211.8
9680.0	9529.0	2078.1	10000.0	9849.0	2145.7	10320.0	10169.0	2213.8
9690.0	9539.0	2080.2	10010.0	9859.0	2147.8	10330.0	10179.0	2215.9
9700.0	9549.0	2082.3	10020.0	9869.0	2149.9	10340.0	10189.0	2218.0
9710.0	9559.0	2084.4	10030.0	9879.0	2152.1	10350.0	10199.0	2220.1
9720.0	9569.0	2086.6	10040.0	9889.0	2154.2	10360.0	10209.0	2222.2
9730.0	9579.0	2088.7	10050.0	9899.0	2156.3	10370.0	10219.0	2224.3
9740.0	9589.0	2090.8	10060.0	9909.0	2158.4	10380.0	10229.0	2226.4
9750.0	9599.0	2093.0	10070.0	9919.0	2160.5	10390.0	10239.0	2228.5
9760.0	9609.0	2095.1	10080.0	9929.0	2162.6	10400.0	10249.0	2230.6
9770.0	9619.0	2097.2	10090.0	9939.0	2164.8	10410.0	10259.0	2232.6
9780.0	9629.0	2099.2	10100.0	9949.0	2166.9	10420.0	10269.0	2234.5
9790.0	9639.0	2101.3	10110.0	9959.0	2169.0	10430.0	10279.0	2236.5
9800.0	9649.0	2103.4	10120.0	9969.0	2171.2	10440.0	10289.0	2238.4
9810.0	9659.0	2105.5	10130.0	9979.0	2173.4	10450.0	10299.0	2240.4
9820.0	9669.0	2107.6	10140.0	9989.0	2175.6	10460.0	10309.0	2242.3
9830.0	9679.0	2109.7	10150.0	9999.0	2177.8	10470.0	10319.0	2244.3
9840.0	9689.0	2111.7	10160.0	10009.0	2179.9	10480.0	10329.0	2246.2
9850.0	9699.0	2113.8	10170.0	10019.0	2182.1	10490.0	10339.0	2248.2
9860.0	9709.0	2115.9	10180.0	10029.0	2184.2	10500.0	10349.0	2250.1
9870.0	9719.0	2118.0	10190.0	10039.0	2186.3	10510.0	10359.0	2252.0
9880.0	9729.0	2120.1	10200.0	10049.0	2188.5	10520.0	10369.0	2254.0
9890.0	9739.0	2122.2	10210.0	10059.0	2190.6	10530.0	10379.0	2255.9
9900.0	9749.0	2124.3	10220.0	10069.0	2192.7	10540.0	10389.0	2257.8
9910.0	9759.0	2126.4	10230.0	10079.0	2194.8	10550.0	10399.0	2259.7
9920.0	9769.0	2128.5	10240.0	10089.0	2196.9	10560.0	10409.0	2261.6
9930.0	9779.0	2130.6	10250.0	10099.0	2199.0	İ		
9940.0	9789.0	2132.8	10260.0	10109.0	2201.1	İ		

Table 4 - P-wave Time-Depth Interpolation (2.0 ms)

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Company: Great Bear Petroleum. Well: Alcor #1

Well reference elevation (KB):

Seismic reference datum:

Correction velocity:

Time interpolation interval:

199.00 ft (MSL)
350.00 ft (MSL)
10000.0 ft/s
2.0 ms

Method of calculation: Curved ray

Vertical Vertical Measured   Vertical Vertical Measured	Vertical Vertical Measured
2-Way Time Depth Depth 2-Way Time Depth Depth	2-Way Time Depth Depth
from from from from from	from from from
Datum Datum KB Datum Datum KB	Datum Datum KB
(ms) (ft) (ft) (ms) (ft) (ft)	(ms) $(ft)$ $(ft)$
0.0 0.0 -151.0   50.0 177.0 26.0	100.0 354.1 203.1
2.0 7.1 -143.9   52.0 184.1 33.1	102.0 361.1 210.1
4.0 14.2 -136.8   54.0 191.2 40.2	104.0 368.2 217.2
6.0 21.2 -129.8 56.0 198.3 47.3	106.0 375.3 224.3
8.0 28.3 -122.7 58.0 205.4 54.4	108.0 382.4 231.4
10.0 35.4 -115.6 60.0 212.4 61.4	110.0 389.5 238.5
12.0 42.5 -108.5 62.0 219.5 68.5	112.0 396.5 245.5
14.0 49.6 -101.4 64.0 226.6 75.6	114.0 403.6 252.6
16.0 56.6 -94.4 66.0 233.7 82.7	116.0 410.7 259.7
18.0 63.7 -87.3 68.0 240.8 89.8	118.0 417.8 266.8
20.0 70.8 -80.2 70.0 247.8 96.8	120.0 424.9 273.9
22.0 77.9 -73.1 72.0 254.9 103.9	122.0 431.9 280.9
24.0 85.0 -66.0 74.0 262.0 111.0	124.0 439.0 288.0
26.0 92.1 -58.9 76.0 269.1 118.1	126.0 446.1 295.1
28.0 99.1 -51.9 78.0 276.2 125.2	128.0 453.2 302.2
30.0 106.2 -44.8 80.0 283.2 132.2	130.0 460.3 309.3
32.0 113.3 -37.7 82.0 290.3 139.3	132.0 467.4 316.4
34.0 120.4 -30.6 84.0 297.4 146.4	134.0 474.4 323.4
36.0 127.5 -23.5 86.0 304.5 153.5	136.0 481.5 330.5
38.0 134.5 -16.5 88.0 311.6 160.6	138.0 488.6 337.6
40.0 141.6 -9.4 90.0 318.7 167.7	140.0 495.7 344.7
42.0 148.7 -2.3 92.0 325.7 174.7	142.0 502.8 351.8
44.0 155.8 4.8 94.0 332.8 181.8	144.0 509.8 358.8
46.0 162.9 11.9 96.0 339.9 188.9	146.0 516.9 365.9
48.0 169.9 18.9 98.0 347.0 196.0	148.0 524.0 373.0

	Vertical	Measured	Vertical		Measured	1	Vertical	Measured
2-Way Time from	Depth from	Depth from	2-Way Time from	Depth from	Depth	2-Way Time from	Depth from	Depth from
Datum	Datum	KB	Datum	Datum	from KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
(IIIS)	(IL)	(IL)	( IIIS )	(IL)	(IL)	( IIIS )	(IL)	(IL)
150.0	531.1	380.1	224.0	866.6	715.6	298.0	1208.6	1057.6
152.0	538.2	387.2	226.0	875.8	724.8	300.0	1217.9	1066.9
154.0	545.2	394.2	228.0	885.1	734.1	302.0	1227.1	1076.1
156.0	552.7	401.7	230.0	894.3	743.3	304.0	1236.4	1085.4
158.0	562.0	411.0	232.0	903.5	752.5	306.0	1245.6	1094.6
160.0	571.2	420.2	234.0	912.8	761.8	308.0	1254.9	1103.9
162.0	580.4	429.4	236.0	922.0	771.0	310.0	1264.1	1113.1
164.0	589.7	438.7	238.0	931.2	780.2	312.0	1273.4	1122.4
166.0	598.9	447.9	240.0	940.5	789.5	314.0	1282.7	1131.7
168.0	608.1	457.1	242.0	949.7	798.7	316.0	1291.9	1140.9
170.0	617.4	466.4	244.0	958.9	807.9	318.0	1301.2	1150.2
172.0	626.6	475.6	246.0	968.2	817.2	320.0	1310.4	1159.4
174.0	635.8	484.8	248.0	977.4	826.4	322.0	1319.7	1168.7
176.0	645.0	494.0	250.0	986.6	835.6	324.0	1328.9	1177.9
178.0	654.3	503.3	252.0	995.9	844.9	326.0	1338.2	1187.2
180.0	663.5	512.5	254.0	1005.1	854.1	328.0	1347.4	1196.4
182.0	672.7	521.7	256.0	1014.3	863.3	330.0	1356.7	1205.7
184.0	682.0	531.0	258.0	1023.6	872.6	332.0	1366.0	1215.0
186.0	691.2	540.2	260.0	1032.8	881.8	334.0	1375.2	1224.2
188.0	700.4	549.4	262.0	1042.0	891.0	336.0	1384.5	1233.5
190.0	709.7	558.7	264.0	1051.3	900.3	338.0	1393.7	1242.7
192.0	718.9	567.9	266.0	1060.5	909.5	340.0	1403.0	1252.0
194.0	728.1	577.1	268.0	1069.8	918.8	342.0	1412.2	1261.2
196.0	737.4	586.4	270.0	1079.0	928.0	344.0	1421.5	1270.5
198.0	746.6	595.6	272.0	1088.3	937.3	346.0	1430.7	1279.7
200.0	755.8	604.8	274.0	1097.5	946.5	348.0	1440.0	1289.0
202.0	765.1	614.1	276.0	1106.8	955.8	350.0	1449.3	1298.3
204.0	774.3	623.3	278.0	1116.0	965.0	352.0	1458.5	1307.5
206.0	783.5	632.5	280.0	1125.3	974.3	354.0	1467.8	1316.8
208.0	792.8	641.8	282.0	1134.6	983.6	356.0	1477.0	1326.0
210.0	802.0	651.0	284.0	1143.8	992.8	358.0	1486.3	1335.3
212.0	811.2	660.2	286.0	1153.1	1002.1	360.0	1495.5	1344.5
214.0	820.5	669.5	288.0	1162.3	1011.3	362.0	1504.8	1353.8
216.0	829.7	678.7	290.0	1171.6	1020.6	364.0	1514.0	1363.0
218.0	838.9	687.9	292.0	1180.8	1029.8	366.0	1523.3	1372.3
220.0	848.2	697.2	294.0	1190.1	1039.1	368.0	1532.6	1381.6
222.0	857.4	706.4	296.0	1199.3	1048.3	370.0	1541.8	1390.8

	Vertical	Measured	Vertical		Measured	1	Vertical	Measured
2-Way Time	Depth	Depth	2-Way Time		Depth	2-Way Time	Depth	Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
372.0	1551.1	1400.1	446.0	1883.3	1732.3	520.0	2195.7	2044.7
374.0	1560.0	1409.0	448.0	1892.3	1741.3	522.0	2203.6	2052.6
376.0	1569.0	1418.0	450.0	1901.2	1750.2	524.0	2211.5	2060.5
378.0	1578.0	1427.0	452.0	1910.2	1759.2	526.0	2219.4	2068.4
380.0	1587.0	1436.0	454.0	1919.2	1768.2	528.0	2227.3	2076.3
382.0	1596.0	1445.0	456.0	1928.2	1777.2	530.0	2235.2	2084.2
384.0	1604.9	1453.9	458.0	1937.2	1786.2	532.0	2243.1	2092.1
386.0	1613.9	1462.9	460.0	1946.1	1795.1	534.0	2251.0	2100.0
388.0	1622.9	1471.9	462.0	1955.1	1804.1	536.0	2258.9	2107.9
390.0	1631.9	1480.9	464.0	1964.1	1813.1	538.0	2266.8	2115.8
392.0	1640.9	1489.9	466.0	1973.1	1822.1	540.0	2274.7	2123.7
394.0	1649.8	1498.8	468.0	1982.0	1831.0	542.0	2282.6	2131.6
396.0	1658.8	1507.8	470.0	1991.0	1840.0	544.0	2290.5	2139.5
398.0	1667.8	1516.8	472.0	2000.0	1849.0	546.0	2298.4	2147.4
400.0	1676.8	1525.8	474.0	2009.0	1858.0	548.0	2306.3	2155.3
402.0	1685.8	1534.8	476.0	2018.0	1867.0	550.0	2314.2	2163.2
404.0	1694.7	1543.7	478.0	2026.9	1875.9	552.0	2322.1	2171.1
406.0	1703.7	1552.7	480.0	2035.9	1884.9	554.0	2330.0	2179.0
408.0	1712.7	1561.7	482.0	2044.9	1893.9	556.0	2337.9	2186.9
410.0	1721.7	1570.7	484.0	2053.5	1902.5	558.0	2345.8	2194.8
412.0	1730.6	1579.6	486.0	2061.4	1910.4	560.0	2353.7	2202.7
414.0	1739.6	1588.6	488.0	2069.3	1918.3	562.0	2361.6	2210.6
416.0	1748.6	1597.6	490.0	2077.2	1926.2	564.0	2369.5	2218.5
418.0	1757.6	1606.6	492.0	2085.1	1934.1	566.0	2377.4	2226.4
420.0	1766.6	1615.6	494.0	2093.0	1942.0	568.0	2385.3	2234.3
422.0	1775.5	1624.5	496.0	2100.9	1949.9	570.0	2393.2	2242.2
424.0	1784.5	1633.5	498.0	2108.8	1957.8	572.0	2401.1	2250.1
426.0	1793.5	1642.5	500.0	2116.7	1965.7	574.0	2409.0	2258.0
428.0	1802.5	1651.5	502.0	2124.6	1973.6	576.0	2416.9	2265.9
430.0	1811.5	1660.5	504.0	2132.5	1981.5	578.0	2424.8	2273.8
432.0	1820.4	1669.4	506.0	2140.4	1989.4	580.0	2432.7	2281.7
434.0	1829.4	1678.4	508.0	2148.3	1997.3	582.0	2440.6	2289.6
436.0	1838.4	1687.4	510.0	2156.2	2005.2	584.0	2448.5	2297.5
438.0	1847.4	1696.4	512.0	2164.1	2013.1	586.0	2456.4	2305.4
440.0	1856.3	1705.3	514.0	2172.0	2021.0	588.0	2464.3	2313.3
442.0	1865.3	1714.3	516.0	2179.9	2028.9	590.0	2472.2	2321.2
444.0	1874.3	1723.3	518.0	2187.8	2036.8	592.0	2480.1	2329.1

	Vertical	Measured	Vertical	Vertical	Measured	Vertical		Measured
2-Way Time	Depth	Depth	2-Way Time		Depth	2-Way Time		Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
594.0	2488.0	2337.0	668.0	2775.4	2624.4	742.0	3061.1	2910.1
596.0	2495.9	2344.9	670.0	2783.2	2632.2	744.0	3068.6	2917.6
598.0	2503.8	2352.8	672.0	2790.9	2639.9	746.0	3076.1	2925.1
600.0	2511.7	2360.7	674.0	2798.6	2647.6	748.0	3083.6	2932.6
602.0	2519.6	2368.6	676.0	2806.4	2655.4	750.0	3091.0	2940.0
604.0	2527.5	2376.5	678.0	2814.1	2663.1	752.0	3098.5	2947.5
606.0	2535.4	2384.4	680.0	2821.8	2670.8	754.0	3106.0	2955.0
608.0	2543.3	2392.3	682.0	2829.6	2678.6	756.0	3113.4	2962.4
610.0	2551.2	2400.2	684.0	2837.3	2686.3	758.0	3120.9	2969.9
612.0	2558.9	2407.9	686.0	2845.0	2694.0	760.0	3128.4	2977.4
614.0	2566.7	2415.7	688.0	2852.7	2701.7	762.0	3135.8	2984.8
616.0	2574.4	2423.4	690.0	2860.5	2709.5	764.0	3143.3	2992.3
618.0	2582.1	2431.1	692.0	2868.2	2717.2	766.0	3150.8	2999.8
620.0	2589.9	2438.9	694.0	2875.9	2724.9	768.0	3158.2	3007.2
622.0	2597.6	2446.6	696.0	2883.7	2732.7	770.0	3165.7	3014.7
624.0	2605.3	2454.3	698.0	2891.4	2740.4	772.0	3173.2	3022.2
626.0	2613.1	2462.1	700.0	2899.1	2748.1	774.0	3180.6	3029.6
628.0	2620.8	2469.8	702.0	2906.9	2755.9	776.0	3188.1	3037.1
630.0	2628.5	2477.5	704.0	2914.6	2763.6	778.0	3195.6	3044.6
632.0	2636.3	2485.3	706.0	2922.3	2771.3	780.0	3203.1	3052.1
634.0	2644.0	2493.0	708.0	2930.1	2779.1	782.0	3210.5	3059.5
636.0	2651.7	2500.7	710.0	2937.8	2786.8	784.0	3218.0	3067.0
638.0	2659.5	2508.5	712.0	2945.5	2794.5	786.0	3225.5	3074.5
640.0	2667.2	2516.2	714.0	2953.3	2802.3	788.0	3232.9	3081.9
642.0	2674.9	2523.9	716.0	2961.0	2810.0	790.0	3240.4	3089.4
644.0	2682.6	2531.6	718.0	2968.7	2817.7	792.0	3247.9	3096.9
646.0	2690.4	2539.4	720.0	2976.5	2825.5	794.0	3255.3	3104.3
648.0	2698.1	2547.1	722.0	2984.2	2833.2	796.0	3262.8	3111.8
650.0	2705.8	2554.8	724.0	2991.9	2840.9	798.0	3270.3	3119.3
652.0	2713.6	2562.6	726.0	2999.7	2848.7	800.0	3277.7	3126.7
654.0	2721.3	2570.3	728.0	3007.4	2856.4	802.0	3285.2	3134.2
656.0	2729.0	2578.0	730.0	3015.1	2864.1	804.0	3292.7	3141.7
658.0	2736.8	2585.8	732.0	3022.8	2871.8	806.0	3300.1	3149.1
660.0	2744.5	2593.5	734.0	3030.6	2879.6	808.0	3307.6	3156.6
662.0	2752.2	2601.2	736.0	3038.3	2887.3	810.0	3315.1	3164.1
664.0	2760.0	2609.0	738.0	3046.0	2895.0	812.0	3322.6	3171.6
666.0	2767.7	2616.7	740.0	3053.7	2902.7	814.0	3330.0	3179.0

Vertical	Vertical	Measured	Vertical	Vertical	Measured	Vertical	Vertical	Measured
2-Way Time	Depth	Depth	2-Way Time		Depth	2-Way Time		Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
816.0	3337.5	3186.5	890.0	3619.9	3468.9	964.0	3922.9	3771.9
818.0	3345.0	3194.0	892.0	3628.1	3477.1	966.0	3931.1	3780.1
820.0	3352.4	3201.4	894.0	3636.3	3485.3	968.0	3939.3	3788.3
822.0	3359.9	3208.9	896.0	3644.5	3493.5	970.0	3947.5	3796.5
824.0	3367.4	3216.4	898.0	3652.7	3501.7	972.0	3955.7	3804.7
826.0	3374.8	3223.8	900.0	3660.8	3509.8	974.0	3963.9	3812.9
828.0	3382.3	3231.3	902.0	3669.0	3518.0	976.0	3972.0	3821.0
830.0	3389.8	3238.8	904.0	3677.2	3526.2	978.0	3980.2	3829.2
832.0	3397.2	3246.2	906.0	3685.4	3534.4	980.0	3988.4	3837.4
834.0	3404.7	3253.7	908.0	3693.6	3542.6	982.0	3996.6	3845.6
836.0	3412.2	3261.2	910.0	3701.8	3550.8	984.0	4004.8	3853.8
838.0	3419.6	3268.6	912.0	3710.0	3559.0	986.0	4013.0	3862.0
840.0	3427.1	3276.1	914.0	3718.2	3567.2	988.0	4021.2	3870.2
842.0	3434.6	3283.6	916.0	3726.4	3575.4	990.0	4029.4	3878.4
844.0	3442.1	3291.1	918.0	3734.6	3583.6	992.0	4037.6	3886.6
846.0	3449.5	3298.5	920.0	3742.7	3591.7	994.0	4045.8	3894.8
848.0	3457.0	3306.0	922.0	3750.9	3599.9	996.0	4054.1	3903.1
850.0	3464.5	3313.5	924.0	3759.1	3608.1	998.0	4062.7	3911.7
852.0	3471.9	3320.9	926.0	3767.3	3616.3	1000.0	4071.2	3920.2
854.0	3479.4	3328.4	928.0	3775.5	3624.5	1002.0	4079.8	3928.8
856.0	3486.9	3335.9	930.0	3783.7	3632.7	1004.0	4088.4	3937.4
858.0	3494.3	3343.3	932.0	3791.9	3640.9	1006.0	4097.0	3946.0
860.0	3501.8	3350.8	934.0	3800.1	3649.1	1008.0	4105.5	3954.5
862.0	3509.3	3358.3	936.0	3808.3	3657.3	1010.0	4114.1	3963.1
864.0	3516.7	3365.7	938.0	3816.4	3665.4	1012.0	4122.7	3971.7
866.0	3524.2	3373.2	940.0	3824.6	3673.6	1014.0	4131.3	3980.3
868.0	3531.7	3380.7	942.0	3832.8	3681.8	1016.0	4139.8	3988.8
870.0	3539.1	3388.1	944.0	3841.0	3690.0	1018.0	4148.4	3997.4
872.0	3546.6	3395.6	946.0	3849.2	3698.2	1020.0	4157.0	4006.0
874.0	3554.4	3403.4	948.0	3857.4	3706.4	1022.0	4165.6	4014.6
876.0	3562.6	3411.6	950.0	3865.6	3714.6	1024.0	4174.1	4023.1
878.0	3570.8	3419.8	952.0	3873.8	3722.8	1026.0	4182.7	4031.7
880.0	3579.0	3428.0	954.0	3882.0	3731.0	1028.0	4191.3	4040.3
882.0	3587.1	3436.1	956.0	3890.2	3739.2	1030.0	4199.9	4048.9
884.0	3595.3	3444.3	958.0	3898.3	3747.3	1032.0	4208.4	4057.4
886.0	3603.5	3452.5	960.0	3906.5	3755.5	1034.0	4217.0	4066.0
888.0	3611.7	3460.7	962.0	3914.7	3763.7	1036.0	4225.6	4074.6

	Vertical	Measured		Vertical	Measured		Vertical	Measured
2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	_	Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
1038.0	4234.2	4083.2	1112.0	4551.5	4400.5	1186.0	4887.3	4736.3
1040.0	4242.7	4091.7	1114.0	4560.6	4409.6	1188.0	4896.3	4745.3
1042.0	4251.3	4100.3	1116.0	4569.6	4418.6	1190.0	4905.4	4754.4
1044.0	4259.9	4108.9	1118.0	4578.7	4427.7	1192.0	4914.5	4763.5
1046.0	4268.5	4117.5	1120.0	4587.8	4436.8	1194.0	4923.6	4772.6
1048.0	4277.0	4126.0	1122.0	4596.9	4445.9	1196.0	4932.6	4781.6
1050.0	4285.6	4134.6	1124.0	4605.9	4454.9	1198.0	4941.7	4790.7
1052.0	4294.2	4143.2	1126.0	4615.0	4464.0	1200.0	4950.8	4799.8
1054.0	4302.8	4151.8	1128.0	4624.1	4473.1	1202.0	4959.9	4808.9
1056.0	4311.4	4160.4	1130.0	4633.2	4482.2	1204.0	4968.9	4817.9
1058.0	4319.9	4168.9	1132.0	4642.2	4491.2	1206.0	4978.0	4827.0
1060.0	4328.5	4177.5	1134.0	4651.3	4500.3	1208.0	4987.1	4836.1
1062.0	4337.1	4186.1	1136.0	4660.4	4509.4	1210.0	4996.2	4845.2
1064.0	4345.7	4194.7	1138.0	4669.5	4518.5	1212.0	5005.5	4854.5
1066.0	4354.2	4203.2	1140.0	4678.5	4527.5	1214.0	5015.3	4864.3
1068.0	4362.8	4211.8	1142.0	4687.6	4536.6	1216.0	5025.0	4874.0
1070.0	4371.4	4220.4	1144.0	4696.7	4545.7	1218.0	5034.7	4883.7
1072.0	4380.0	4229.0	1146.0	4705.8	4554.8	1220.0	5044.4	4893.4
1074.0	4388.5	4237.5	1148.0	4714.8	4563.8	1222.0	5054.1	4903.1
1076.0	4397.1	4246.1	1150.0	4723.9	4572.9	1224.0	5063.8	4912.8
1078.0	4405.7	4254.7	1152.0	4733.0	4582.0	1226.0	5073.6	4922.6
1080.0	4414.3	4263.3	1154.0	4742.1	4591.1	1228.0	5083.3	4932.3
1082.0	4422.8	4271.8	1156.0	4751.1	4600.1	1230.0	5093.0	4942.0
1084.0	4431.4	4280.4	1158.0	4760.2	4609.2	1232.0	5102.8	4951.8
1086.0	4440.0	4289.0	1160.0	4769.3	4618.3	1234.0	5113.0	4962.0
1088.0	4448.6	4297.6	1162.0	4778.4	4627.4	1236.0	5123.2	4972.2
1090.0	4457.1	4306.1	1164.0	4787.4	4636.4	1238.0	5133.4	4982.4
1092.0	4465.7	4314.7	1166.0	4796.5	4645.5	1240.0	5143.6	4992.6
1094.0	4474.3	4323.3	1168.0	4805.6	4654.6	1242.0	5153.8	5002.8
1096.0	4482.9	4331.9	1170.0	4814.7	4663.7	1244.0	5163.7	5012.7
1098.0	4491.4	4340.4	1172.0	4823.7	4672.7	1246.0	5173.7	5022.7
1100.0	4500.0	4349.0	1174.0	4832.8	4681.8	1248.0	5183.6	5032.6
1102.0	4508.6	4357.6	1176.0	4841.9	4690.9	1250.0	5193.6	5042.6
1104.0	4517.2	4366.2	1178.0	4851.0	4700.0	1252.0	5203.6	5052.6
1106.0	4525.7	4374.7	1180.0	4860.0	4709.0	1254.0	5213.8	5062.8
1108.0	4534.3	4383.3	1182.0	4869.1	4718.1	1256.0	5224.0	5073.0
1110.0	4542.9	4391.9	1184.0	4878.2	4727.2	1258.0	5234.2	5083.2

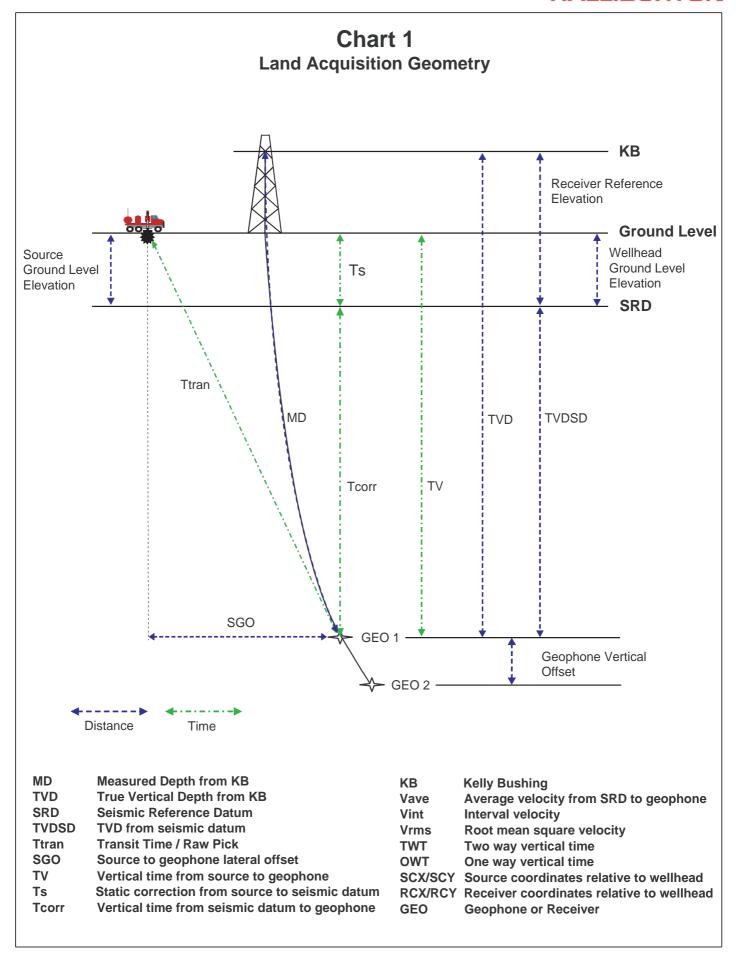
	Vertical	Measured		Vertical	Measured		Vertical	Measured
2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time	_	Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
1260.0	5244.4	5093.4	1334.0	5621.0	5470.0	1408.0	6023.0	5872.0
1262.0	5254.6	5103.6	1336.0	5631.9	5480.9	1410.0	6034.1	5883.1
1264.0	5264.5	5113.5	1338.0	5642.8	5491.8	1412.0	6045.3	5894.3
1266.0	5274.5	5123.5	1340.0	5653.6	5502.6	1414.0	6056.4	5905.4
1268.0	5284.4	5133.4	1342.0	5664.2	5513.2	1416.0	6067.3	5916.3
1270.0	5294.4	5143.4	1344.0	5674.8	5523.8	1418.0	6078.2	5927.2
1272.0	5304.4	5153.4	1346.0	5685.5	5534.5	1420.0	6089.2	5938.2
1274.0	5314.5	5163.5	1348.0	5696.1	5545.1	1422.0	6100.1	5949.1
1276.0	5324.6	5173.6	1350.0	5706.6	5555.6	1424.0	6110.7	5959.7
1278.0	5334.6	5183.6	1352.0	5717.1	5566.1	1426.0	6121.3	5970.3
1280.0	5344.7	5193.7	1354.0	5727.5	5576.5	1428.0	6131.9	5980.9
1282.0	5354.8	5203.8	1356.0	5738.0	5587.0	1430.0	6142.5	5991.5
1284.0	5364.9	5213.9	1358.0	5748.5	5597.5	1432.0	6153.2	6002.2
1286.0	5375.0	5224.0	1360.0	5759.3	5608.3	1434.0	6164.0	6013.0
1288.0	5385.1	5234.1	1362.0	5770.1	5619.1	1436.0	6174.9	6023.9
1290.0	5395.1	5244.1	1364.0	5781.0	5630.0	1438.0	6185.8	6034.8
1292.0	5405.2	5254.2	1366.0	5791.9	5640.9	1440.0	6196.7	6045.7
1294.0	5415.1	5264.1	1368.0	5802.8	5651.8	1442.0	6207.7	6056.7
1296.0	5425.1	5274.1	1370.0	5813.5	5662.5	1444.0	6218.6	6067.6
1298.0	5435.1	5284.1	1372.0	5824.2	5673.2	1446.0	6229.6	6078.6
1300.0	5445.0	5294.0	1374.0	5834.9	5683.9	1448.0	6240.5	6089.5
1302.0	5455.1	5304.1	1376.0	5845.6	5694.6	1450.0	6251.5	6100.5
1304.0	5465.5	5314.5	1378.0	5856.5	5705.5	1452.0	6262.5	6111.5
1306.0	5475.8	5324.8	1380.0	5867.5	5716.5	1454.0	6273.6	6122.6
1308.0	5486.1	5335.2	1382.0	5878.6	5727.6	1456.0	6284.6	6133.6
1310.0	5496.5	5345.5	1384.0	5889.7	5738.7	1458.0	6295.6	6144.6
1312.0	5506.8	5355.8	1386.0	5900.8	5749.8	1460.0	6306.6	6155.6
1314.0	5517.0	5366.0	1388.0	5911.9	5760.9	1462.0	6317.5	6166.5
1316.0	5527.2	5376.2	1390.0	5923.0	5772.0	1464.0	6328.4	6177.4
1318.0	5537.4	5386.4	1392.0	5934.1	5783.1	1466.0	6339.4	6188.4
1320.0	5547.6	5396.6	1394.0	5945.2	5794.2	1468.0	6350.3	6199.3
1322.0	5557.9	5406.9	1396.0	5956.3	5805.3	1470.0	6361.2	6210.2
1324.0	5568.3	5417.3	1398.0	5967.4	5816.4	1472.0	6372.0	6221.0
1326.0	5578.6	5427.6	1400.0	5978.5	5827.5	1474.0	6382.9	6231.9
1328.0	5588.9	5437.9	1402.0	5989.6	5838.6	1476.0	6393.8	6242.8
1330.0	5599.3	5448.3	1404.0	6000.6	5849.6	1478.0	6404.7	6253.7
1332.0	5610.1	5459.1	1406.0	6011.8	5860.8	1480.0	6415.8	6264.8

Vertical 2-Way Time	Vertical Depth	Measured Depth	Vertical   2-Way Time	Vertical Depth	Measured Depth	Vertical   2-Way Time		Measured Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
(1115)	(10)	(10)	( )	(10)	(10)	( )	(10)	(10)
1482.0	6426.9	6275.9	1556.0	6832.6	6681.6	1630.0	7237.4	7086.4
1484.0	6438.0	6287.0	1558.0	6843.6	6692.6	1632.0	7248.4	7097.4
1486.0	6449.1	6298.1	1560.0	6854.5	6703.5	1634.0	7259.6	7108.6
1488.0	6460.2	6309.2	1562.0	6865.3	6714.4	1636.0	7270.9	7119.9
1490.0	6471.3	6320.3	1564.0	6876.2	6725.2	1638.0	7282.2	7131.2
1492.0	6482.4	6331.4	1566.0	6887.0	6736.0	1640.0	7293.6	7142.6
1494.0	6493.6	6342.6	1568.0	6897.8	6746.8	1642.0	7304.8	7153.8
1496.0	6504.6	6353.6	1570.0	6908.7	6757.7	1644.0	7315.9	7164.9
1498.0	6515.6	6364.6	1572.0	6919.6	6768.6	1646.0	7327.0	7176.0
1500.0	6526.5	6375.5	1574.0	6930.5	6779.5	1648.0	7338.1	7187.1
1502.0	6537.4	6386.4	1576.0	6941.4	6790.4	1650.0	7349.2	7198.2
1504.0	6548.4	6397.4	1578.0	6952.3	6801.3	1652.0	7360.4	7209.4
1506.0	6559.3	6408.3	1580.0	6963.4	6812.4	1654.0	7371.7	7220.7
1508.0	6570.2	6419.2	1582.0	6974.5	6823.5	1656.0	7382.9	7231.9
1510.0	6581.2	6430.2	1584.0	6985.6	6834.6	1658.0	7394.2	7243.2
1512.0	6592.1	6441.1	1586.0	6996.7	6845.7	1660.0	7405.5	7254.5
1514.0	6603.0	6452.0	1588.0	7007.7	6856.7	1662.0	7416.9	7265.9
1516.0	6613.8	6462.8	1590.0	7018.7	6867.7	1664.0	7428.2	7277.2
1518.0	6624.6	6473.6	1592.0	7029.6	6878.6	1666.0	7439.6	7288.6
1520.0	6635.4	6484.4	1594.0	7040.5	6889.5	1668.0	7451.0	7300.0
1522.0	6646.2	6495.2	1596.0	7051.5	6900.5	1670.0	7462.6	7311.6
1524.0	6657.2	6506.2	1598.0	7062.4	6911.4	1672.0	7474.1	7323.1
1526.0	6668.3	6517.3	1600.0	7073.4	6922.4	1674.0	7485.7	7334.7
1528.0	6679.4	6528.4	1602.0	7084.3	6933.3	1676.0	7497.3	7346.3
1530.0	6690.5	6539.5	1604.0	7095.2	6944.2	1678.0	7508.8	7357.8
1532.0	6701.6	6550.6	1606.0	7106.2	6955.2	1680.0	7520.3	7369.3
1534.0	6712.5	6561.5	1608.0	7117.1	6966.1	1682.0	7531.8	7380.8
1536.0	6723.4	6572.4	1610.0	7128.0	6977.0	1684.0	7543.2	7392.2
1538.0	6734.3	6583.3	1612.0	7139.0	6988.0	1686.0	7554.7	7403.7
1540.0	6745.2	6594.2	1614.0	7149.9	6998.9	1688.0	7566.3	7415.3
1542.0	6756.1	6605.1	1616.0	7160.9	7009.9	1690.0	7577.8	7426.8
1544.0	6767.0	6616.0	1618.0	7171.8	7020.8	1692.0	7589.3	7438.3
1546.0	6777.9	6626.9	1620.0	7182.7	7031.7	1694.0	7600.9	7449.9
1548.0	6788.8	6637.8	1622.0	7193.7	7042.7	1696.0	7612.2	7461.2
1550.0	6799.7	6648.7	1624.0	7204.6	7053.6	1698.0	7623.5	7472.5
1552.0	6810.6	6659.6	1626.0	7215.6	7064.6	1700.0	7634.9	7483.9
1554.0	6821.6	6670.6	1628.0	7226.5	7075.5	1702.0	7646.2	7495.2

Vertical	Vertical	Measured	Vertical	Vertical	Measured	Vertical	Vertical	Measured
2-Way Time	Depth	Depth	2-Way Time	Depth	Depth	2-Way Time		Depth
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
1704.0	7657.6	7506.6	1778.0	8092.7	7941.7	1852.0	8540.2	8389.2
1706.0	7669.1	7518.1	1780.0	8104.5	7953.5	1854.0	8552.3	8401.3
1708.0	7680.7	7529.7	1782.0	8116.2	7965.2	1856.0	8564.5	8413.5
1710.0	7692.2	7541.2	1784.0	8128.0	7977.0	1858.0	8576.7	8425.7
1712.0	7703.7	7552.7	1786.0	8139.7	7988.7	1860.0	8588.9	8437.9
1714.0	7715.2	7564.2	1788.0	8151.5	8000.5	1862.0	8601.1	8450.1
1716.0	7726.7	7575.7	1790.0	8162.9	8011.9	1864.0	8613.1	8462.1
1718.0	7738.3	7587.3	1792.0	8174.2	8023.2	1866.0	8625.1	8474.1
1720.0	7749.8	7598.8	1794.0	8185.6	8034.6	1868.0	8637.1	8486.1
1722.0	7761.7	7610.7	1796.0	8197.0	8046.0	1870.0	8649.2	8498.2
1724.0	7773.7	7622.7	1798.0	8208.7	8057.7	1872.0	8660.3	8509.3
1726.0	7785.7	7634.7	1800.0	8220.7	8069.7	1874.0	8671.3	8520.3
1728.0	7797.7	7646.7	1802.0	8232.6	8081.6	1876.0	8682.3	8531.3
1730.0	7809.7	7658.7	1804.0	8244.5	8093.5	1878.0	8693.3	8542.3
1732.0	7821.7	7670.7	1806.0	8256.6	8105.6	1880.0	8704.3	8553.3
1734.0	7833.7	7682.7	1808.0	8268.8	8117.8	1882.0	8715.2	8564.2
1736.0	7845.7	7694.7	1810.0	8281.1	8130.1	1884.0	8726.2	8575.2
1738.0	7857.5	7706.5	1812.0	8293.3	8142.3	1886.0	8737.2	8586.2
1740.0	7869.3	7718.3	1814.0	8305.7	8154.7	1888.0	8748.2	8597.2
1742.0	7881.1	7730.1	1816.0	8318.3	8167.3	1890.0	8759.3	8608.3
1744.0	7892.8	7741.8	1818.0	8330.9	8179.9	1892.0	8770.5	8619.5
1746.0	7904.6	7753.6	1820.0	8343.5	8192.5	1894.0	8781.7	8630.7
1748.0	7916.4	7765.4	1822.0	8356.1	8205.1	1896.0	8792.9	8641.9
1750.0	7928.2	7777.2	1824.0	8368.6	8217.6	1898.0	8803.8	8652.8
1752.0	7940.0	7789.0	1826.0	8381.1	8230.1	1900.0	8814.0	8663.0
1754.0	7951.8	7800.8	1828.0	8393.6	8242.6	1902.0	8824.2	8673.2
1756.0	7963.8	7812.8	1830.0	8406.0	8255.0	1904.0	8834.4	8683.4
1758.0	7975.7	7824.7	1832.0	8418.2	8267.2	1906.0	8844.6	8693.6
1760.0	7987.7	7836.7	1834.0	8430.5	8279.5	1908.0	8855.1	8704.1
1762.0	7999.6	7848.6	1836.0	8442.7	8291.7	1910.0	8866.1	8715.1
1764.0	8011.2	7860.2	1838.0	8455.0	8304.0	1912.0	8877.1	8726.1
1766.0	8022.7	7871.7	1840.0	8467.2	8316.2	1914.0	8888.1	8737.1
1768.0	8034.2	7883.2	1842.0	8479.5	8328.5	1916.0	8899.1	8748.1
1770.0	8045.8	7894.8	1844.0	8491.7	8340.7	1918.0	8909.7	8758.7
1772.0	8057.4	7906.4	1846.0	8503.9	8352.9	1920.0	8920.2	8769.2
1774.0	8069.2	7918.2	1848.0	8516.0	8365.0	1922.0	8930.7	8779.7
1776.0	8080.9	7929.9	1850.0	8528.1	8377.1	1924.0	8941.2	8790.2

Vertical 2-Way Time	Vertical	Measured	Vertical	Vertical	Measured	Vertical	Vertical	Measured
2-way Time from	Depth from	Depth from	2-Way Time from	Depth from	Depth from	2-Way Time from	Depth from	Depth from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
	(ft)	(ft)	Datum   (ms)	(ft)	(ft)	1	(ft)	кв (ft)
(ms)	(IL)	(IL)	( IIIS )	(IL)	(IL)	(ms)	(IL)	(IL)
1926.0	8951.7	8800.7	2000.0	9308.0	9157.0	2074.0	9660.4	9509.4
1928.0	8961.9	8810.9	2002.0	9317.6	9166.6	2076.0	9670.0	9519.0
1930.0	8972.1	8821.1	2004.0	9327.2	9176.2	2078.0	9679.5	9528.5
1932.0	8982.3	8831.3	2006.0	9336.8	9185.8	2080.0	9689.0	9538.0
1934.0	8992.5	8841.5	2008.0	9346.4	9195.4	2082.0	9698.5	9547.5
1936.0	9002.6	8851.6	2010.0	9355.9	9204.9	2084.0	9707.9	9556.9
1938.0	9012.4	8861.4	2012.0	9365.4	9214.4	2086.0	9717.3	9566.3
1940.0	9022.1	8871.1	2014.0	9374.9	9223.9	2088.0	9726.7	9575.7
1942.0	9031.9	8880.9	2016.0	9384.5	9233.5	2090.0	9736.1	9585.1
1944.0	9041.7	8890.7	2018.0	9394.0	9243.0	2092.0	9745.4	9594.4
1946.0	9051.5	8900.5	2020.0	9403.4	9252.4	2094.0	9754.9	9603.9
1948.0	9061.2	8910.2	2022.0	9412.8	9261.8	2096.0	9764.5	9613.5
1950.0	9071.0	8920.0	2024.0	9422.2	9271.2	2098.0	9774.0	9623.0
1952.0	9080.8	8929.8	2026.0	9431.6	9280.6	2100.0	9783.6	9632.6
1954.0	9090.5	8939.5	2028.0	9441.0	9290.0	2102.0	9793.2	9642.2
1956.0	9100.3	8949.3	2030.0	9450.3	9299.3	2104.0	9802.8	9651.8
1958.0	9109.6	8958.6	2032.0	9459.8	9308.8	2106.0	9812.4	9661.4
1960.0	9118.8	8967.8	2034.0	9469.4	9318.4	2108.0	9822.0	9671.0
1962.0	9128.1	8977.1	2036.0	9478.9	9327.9	2110.0	9831.7	9680.7
1964.0	9137.3	8986.3	2038.0	9488.4	9337.4	2112.0	9841.3	9690.3
1966.0	9146.6	8995.6	2040.0	9497.9	9346.9	2114.0	9850.9	9699.9
1968.0	9156.1	9005.1	2042.0	9507.6	9356.6	2116.0	9860.4	9709.4
1970.0	9165.9	9014.9	2044.0	9517.4	9366.4	2118.0	9869.9	9718.9
1972.0	9175.6	9024.6	2046.0	9527.2	9376.2	2120.0	9879.4	9728.4
1974.0	9185.4	9034.4	2048.0	9537.0	9386.0	2122.0	9888.9	9737.9
1976.0	9195.2	9044.2	2050.0	9546.7	9395.7	2124.0	9898.4	9747.4
1978.0	9204.7	9053.7	2052.0	9556.4	9405.4	2126.0	9907.9	9756.9
1980.0	9214.0	9063.0	2054.0	9565.9	9414.9	2128.0	9917.4	9766.4
1982.0	9223.2	9072.2	2056.0	9575.5	9424.5	2130.0	9926.9	9775.9
1984.0	9232.5	9081.5	2058.0	9585.0	9434.0	2132.0	9936.4	9785.4
1986.0	9241.7	9090.7	2060.0	9594.5	9443.5	2134.0	9945.9	9794.9
1988.0	9251.0	9100.0	2062.0	9604.0	9453.0	2136.0	9955.3	9804.3
1990.0	9260.5	9109.5	2064.0	9613.4	9462.4	2138.0	9964.6	9813.6
1992.0	9270.0	9119.0	2066.0	9622.8	9471.8	2140.0	9973.8	9822.8
1994.0	9279.5	9128.5	2068.0	9632.2	9481.2	2142.0	9983.1	9832.1
1996.0	9289.0	9138.0	2070.0	9641.5	9490.5	2144.0	9992.3	9841.3
1998.0	9298.5	9147.5	2072.0	9650.9	9499.9	2146.0	10001.6	9850.6

77	77	Ma	1 77 2 1	77	M = = =	1 77	77	M = = =
Vertical 2-Way Time	Vertical Depth	Measured Depth	Vertical   2-Way Time	Vertical Depth	Measured Depth	Vertical   2-Way Time	Vertical Depth	Measured Depth
				-		! -	-	
from	from	from	from	from	from	from	from	from
Datum	Datum	KB	Datum	Datum	KB	Datum	Datum	KB
(ms)	(ft)	(ft)	(ms)	(ft)	(ft)	(ms)	(ft)	(ft)
2148.0	10010.9	9859.9	2186.0	10188.4	10037.4	2224.0	10368.8	10217.8
2150.0	10020.3	9869.3	2188.0	10197.8	10046.8	2226.0	10378.3	10227.3
2152.0	10029.7	9878.7	2190.0	10207.2	10056.2	2228.0	10387.8	10236.8
2154.0	10039.1	9888.1	2192.0	10216.7	10065.7	2230.0	10397.3	10246.3
2156.0	10048.5	9897.5	2194.0	10226.3	10075.3	2232.0	10407.2	10256.2
2158.0	10057.9	9906.9	2196.0	10235.8	10084.8	2234.0	10417.4	10266.4
2160.0	10067.4	9916.4	2198.0	10245.3	10094.3	2236.0	10427.6	10276.6
2162.0	10076.9	9925.9	2200.0	10254.7	10103.7	2238.0	10437.8	10286.8
2164.0	10086.4	9935.4	2202.0	10264.1	10113.1	2240.0	10448.0	10297.0
2166.0	10095.9	9944.9	2204.0	10273.5	10122.5	2242.0	10458.2	10307.2
2168.0	10105.3	9954.3	2206.0	10282.8	10131.8	2244.0	10468.5	10317.5
2170.0	10114.4	9963.4	2208.0	10292.2	10141.2	2246.0	10478.8	10327.8
2172.0	10123.5	9972.5	2210.0	10301.6	10150.6	2248.0	10489.1	10338.1
2174.0	10132.6	9981.6	2212.0	10311.2	10160.2	2250.0	10499.3	10348.3
2176.0	10141.8	9990.8	2214.0	10320.8	10169.8	2252.0	10509.8	10358.8
2178.0	10150.9	9999.9	2216.0	10330.5	10179.5	2254.0	10520.2	10369.2
2180.0	10160.3	10009.3	2218.0	10340.1	10189.1	2256.0	10530.7	10379.7
2182.0	10169.6	10018.6	2220.0	10349.7	10198.7	2258.0	10541.1	10390.1
2184.0	10179.0	10028.0	2222.0	10359.3	10208.3	2260.0	10551.6	10400.6



### **Chart 2-Source & Receiver Geometry**

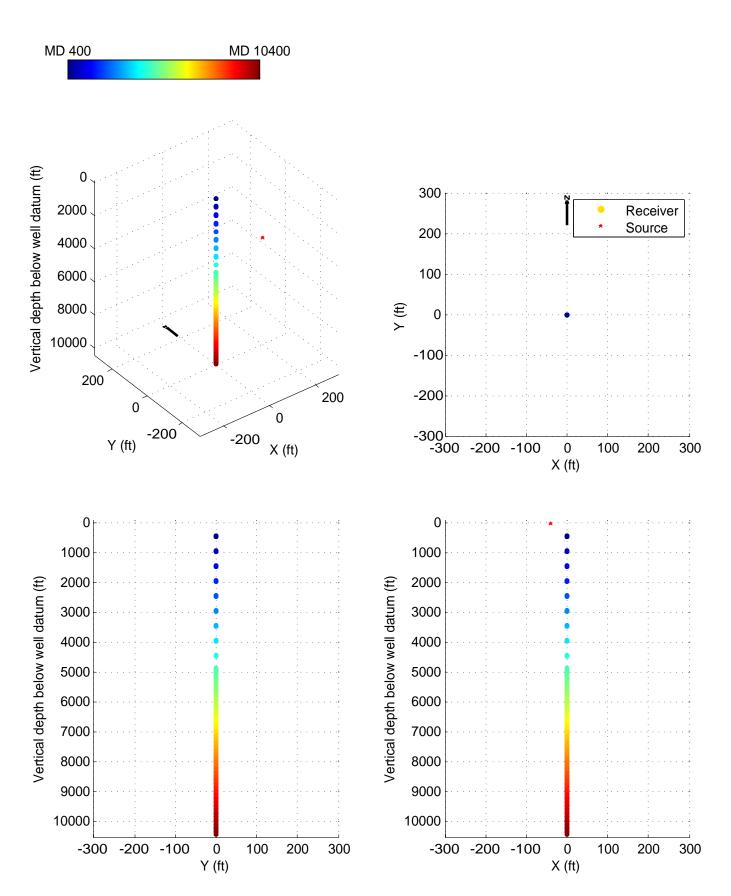


Chart 3
P-wave Time-Depth & Velocity Curves

