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MINERALS MGT. SERVICE  
VENTURA DISTRICT

SEISMIC VELOCITY SURVEY  
AND  
LOG CALIBRATION  
OCS-P-0322 No.1  
Federal County, California



CONDUCTED  
FOR  
Conoco, Inc.

BY



*Seismograph Service Corporation*

4380 SOUTH SYRACUSE, STE. 400 • DENVER, COLORADO 80237  
(303) 694-2332

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## INTRODUCTION

A Seismic Velocity Survey was conducted for Conoco, Inc. in their OCS-P-0322 #1 located in Federal County, California. The survey was conducted by the Velocity and Special Projects Division of Seismograph Service Corporation on January 16, 1983.

A borehole compensated Sonic Log, digitized and integrated from 2082 ft. R.T. to 9342 ft. R.T., was calibrated to the geophone survey data.

## OPERATION STATISTICS

Location:	x = 665,090 y = 835,095
Surface conditions:	Favorable
R.T. elevation:	37 ft.
Seismic datum elevation:	Sea Level
Survey based on:	R.T. elevation
Water depth:	1544 ft.
Casing depth:	Driller: 6800 ft. R.T. Logger: 6810 ft. R.T.
Well total depth:	Driller: 9344 ft. R.T. Logger: 9342 ft. R.T.
Air gun location:	83 ft. West
Depth of Air gun and time break hydrophone:	35 ft.
Number of levels tested:	24
Upper geophone level tested:	2500 ft. R.T.
Deepest geophone level tested:	9334 ft. R.T.
Quality of geophone tested:	Good ✓
Elevation velocity:	5000 ft./sec.

## INSTRUMENTATION

Energy source:	Bolt par model 1900C air gun
Air gun chamber used:	21,200 cubic inches
Gas pressure on gun:	9334 - 7400 = 1800 psi 7250 - 6500 = 1600 psi 6250 - 3500 = 1400 psi 3000 - = 1200 psi 2500 - = 800 psi
Pressure source:	Bottled gas
Time break hydrophone:	Attached to air gun
Downhole detector:	Six 15 Hz. geophones connected in parallel
Downhole amplification:	60 db
Borehole coupling:	Surface controlled locking arm
Surface amplification:	Floating point amplifier
Recording:	S.S.C. model IDPC-1100 floating point digital well survey recording system
Tape format:	9 track, 800 bpi, IBM compatible
Sample rate:	1 millisecond
Trace polarity:	
Digital tape playouts:	Time breaks: down Geophone breaks: down

## FIELD PROCEDURE

Standard practice, using the wall-coupled geophone, is to lower the instrument to the level to be tested, open the coupling device, slacken the cable, shoot, pick up the slack, retract the coupling device and then move to the next level where the cycle is repeated. Slackening the cable while the phone is coupled to the borehole wall minimizes the effect of cable-borne energy.

## RESULTS AND INTERPRETATION

### Seismic

The digital tape data have been edited, arranged according to depth and vertically stacked for each level producing a stacked trace display. A copy of this display, which is labeled Raw First Arrivals, is included in the report pocket. The data used for the calculations consists of the times picked from this display for each level. These time data are tabulated with the velocities and calculation steps on the velocity calculation sheets found in the appendix. Sea bed, at a reported depth of 1544 ft. below sea level, is considered a velocity interface, and the computed interval velocities shown in the tabulation include this level. A computer plot of the time-depth, average and interval velocities, with a reduced scale plot of the calibrated sonic log, is included in the report pocket.

## Sonic Log

The time-depth values obtained from the velocity survey are used to calibrate the raw sonic log. The measured timed intervals from the survey are compared with the corresponding integrated time intervals from the raw sonic log. A plot is made indicating the differences between the geophone data and the log, and from this plot adjustments are determined and applied to the log. This plot is labeled Deviation Plot and is included in the report pocket. The adjustments determined from the Deviation Plot are applied by moving the raw sonic log curve laterally in such a way that when reintegrated the log times will agree closely with the well geophone times. The lateral adjustments consist of a linear or differential shift.

Linear shifts are calculated using the equation:

$$\text{Shift} = \frac{t_{A2} - t_{A1}}{D_1 - D_2} \times 10^6$$

where D is the depth of the adjustment point, and  $t_A$  is the amount of time adjustment indicated by the adjustment point. The result is expressed in microseconds/ft. The linear shifts are applied only when the equation is positive as the log error in this case is assumed to be instrumental in origin. When the equation is negative a differential shift is used.

Differential shifts are calculated using the equation:

$$\% \text{ Shift} = \frac{(t_L - t_A)_2 - (t_L - t_A)_1}{t_{L2} - t_{L1}} \times 100$$

where  $t_L$  is the travel time from the raw sonic log at the adjustment point, and  $t_A$  is the amount of time adjustment indicated by the adjustment point. Differential shifts are applied whenever the calibration data indicates a shift towards higher velocities. The lower velocities, due to borehole effects, are assumed to have contributed more transit time error than higher velocities. Therefore, lower velocity sections of the log receive larger corrections than higher velocity sections. Differential shifts are expressed as a percentage of the raw sonic log values. In both equations above, subscript 1 corresponds with the shallow adjustment point, and subscript 2 corresponds with the deep adjustment point. (See Deviation Plot)

The adjustments to the log interval time data are listed on the calibrated log heading, and have been absorbed into the natural velocity contrasts as recorded on the sonic log. The total travel times for the geophone levels as shown by the calibrated log, and indicated time differences between the geophone and calibrated log data, are listed on the calibrated velocity log data sheets in the appendix. The time differences are minimal.

Three copies of the calibrated log are included in the report pocket: One at a linear depth scale of 1" = 100', one at a linear time scale of 2½" per second, two-way time, and one at a linear time scale of 5" per second, two-way time. A computer printout of the calibrated log data, listing one and two-way travel times, depth, interval and average velocities, is included in the appendix.

The results from the combined survey and sonic log are good, and the data are considered reliable.

Respectfully submitted,

Velocity and Special Projects  
Division of  
Seismograph Service Corporation

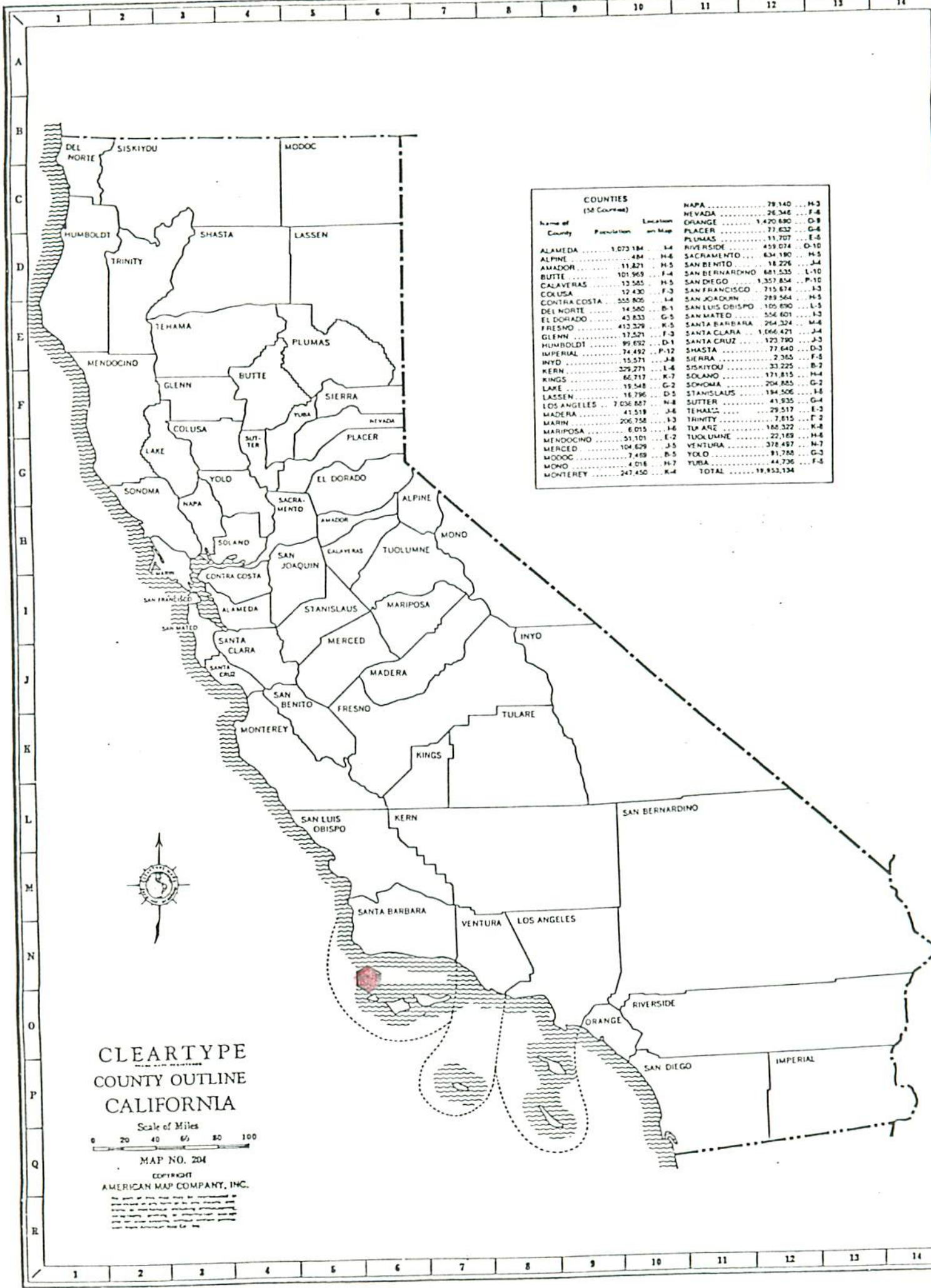
Date 2-14-83

By Judith Flaxbeard  
Judith Flaxbeard  
Velocity Analyst

Date 2-14-83

By P.K. Pendley  
P.K. Pendley  
Manager





COUNTIES (56 Counties)					
Name of County	Population	Location on Map			
ALAMEDA	1,073,184	H-4	NAPA	79,140	H-3
ALPINE	484	H-6	NEVADA	76,346	F-8
AMADOR	11,821	H-5	ORANGE	1,420,680	O-8
BUTTE	101,969	F-4	PLACER	77,632	G-6
CALAVERAS	13,585	H-5	PLUMAS	11,707	E-5
COLUSA	12,430	F-3	RIVERSIDE	459,074	O-10
CONTRA COSTA	555,805	L-4	SACRAMENTO	634,180	H-5
DEL NORTE	14,580	B-1	SAN BENITO	18,226	J-4
EL DORADO	43,833	G-5	SAN BERNARDINO	681,535	L-10
FRESNO	413,329	K-5	SAN DIEGO	1,357,854	P-10
GLENN	17,521	F-3	SAN FRANCISCO	715,674	I-3
HUMBOLDT	99,682	D-1	SAN JOAQUIN	289,564	H-5
IMPERIAL	74,492	P-12	SAN LUIS OBISPO	105,690	L-5
INYO	15,571	J-8	SAN MATEO	556,601	I-5
KERN	329,271	L-6	SANTA BARBARA	264,324	M-6
KINGS	66,717	K-7	SANTA CLARA	1,066,421	J-4
LAKE	19,548	G-2	SANTA CRUZ	123,790	J-3
LASSEN	18,796	D-5	SHASTA	77,640	D-3
LOS ANGELES	7,036,867	H-8	SIERRA	2,365	F-5
MADERA	41,519	J-6	SISKIYOU	33,225	B-2
MARIPOSA	206,758	H-8	SOLANO	171,815	H-4
MARIPOSA	6,015	H-6	SONOMA	204,855	G-2
MENDOCINO	51,101	E-2	STANISLAUS	184,506	L-6
MERCED	104,629	J-5	SUTTER	41,935	G-4
MODOC	7,489	B-5	TEHAMA	29,517	E-3
MONO	4,018	H-7	TRINITY	7,815	F-2
MONTEREY	247,450	K-4	TUOLUMNE	186,322	K-8
			TULARE	22,169	H-6
			VENTURA	378,487	M-7
			YUBA	81,788	G-3
			YUBA	44,736	F-8
			TOTAL	19,852,134	



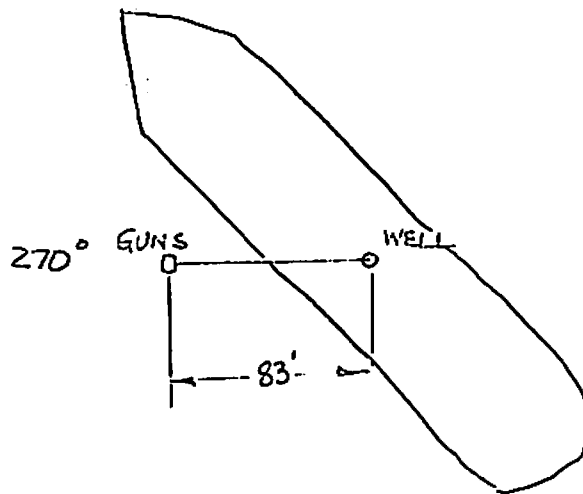
**CLEARTYPE  
COUNTY OUTLINE  
CALIFORNIA**

Scale of Miles  
0 20 40 60 80 100

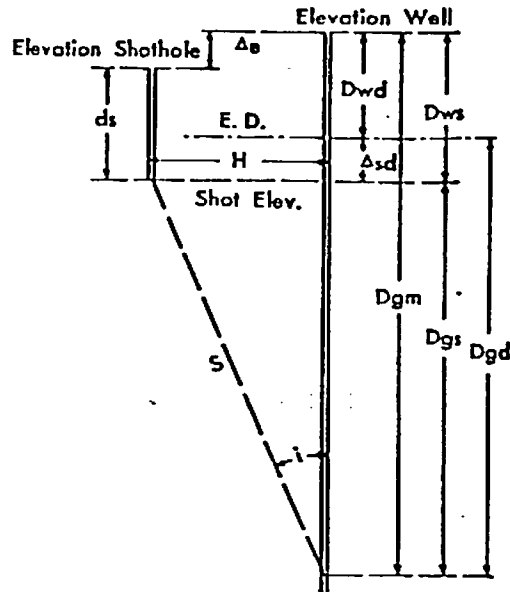
MAP NO. 204  
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CONOCO, INC.  
OCS-P-0322 #1  
Federal County, California



## CROSS-SECTION AND DEFINITION OF TERMS



- $D_{gm}$  = Geophone depth below well elevation  
 $D_{wd}$  = Difference between well elevation and elevation datum =  $E_w - ED$   
 $D_{gd}$  = Geophone depth below elevation datum =  $D_{gm} - D_{wd}$   
 $t_s$  = Uphole time in shothole  
 $t_r$  = Refraction time from reference geophone  
 $d_s$  = Depth of shot  
 $H$  = Horizontal distance from well to shothole  
 $\Delta_{sd}$  = Difference between shot elevation and elevation datum =  $E_s - d_s - ED$   
 $D_{gs}$  = Geophone depth below shot elevation =  $D_{gd} + \Delta_{sd}$   
 $\cos i$  =  $D_{gs} / \sqrt{H^2 + D_{gs}^2}$   
 $T$  = Observed travel time from shot to well geophone  
 $G_r$  = Quality grade of well geophone "break"  
 $T_{gs}$  = Travel time for  $D_{gs}$  distance =  $T \cos i$   
 $\Delta_{sd}/v_e$  = Time correction from shot to elevation datum  
 $T_{gd}$  = Travel time for  $D_{gd}$  distance =  $T_{gs} - \Delta_{sd}/v_e$   
 $v_a$  = Average velocity to depth  $D_{gd}$  =  $D_{gd}/T_{gd}$   
 $\Delta D_{gd}$  = Interval distance =  $D_{gd_n} - D_{gd_m}$   
 $\Delta T_{gd}$  = Interval time for  $\Delta D_{gd}$  distance =  $T_{gd_n} - T_{gd_m}$   
 $v_i$  = Interval velocity =  $\Delta D_{gd}/\Delta T_{gd}$   
 $S$  = Direct diagonal distance from shot to geophone =  $D_{gs}/\cos i$   
 $ED$  = Elevation or reference datum  
 $v_e$  = Elevation correction velocity  
 $\Delta_e$  = Difference between well elevation and shothole elevation =  $E_w - E_s$

SEISMOGRAPH SERVICE CORPORATION  
 VELOCITY AND SPECIAL PROJECTS DIVISION  
 VELOCITY COMPUTATION TABLE

PAGE NO. 1

CLIENT: CONOCO, INC.  
 LOCATION: X=665,090 Y=835,095  
 DATE OF SURVEY: JAN. 16, 1983  
 WELLSITE INFORMATION :

WELL: OCS-P-0322 NO.1  
 AREA: FEDERAL CO., CALIFORNIA

ALL UNITS IN FT., SEC, FT/SEC OR MICROSEC/FT

ELEVATION OF KELLY BUSHING      37  
 DATUM ELEVATION                    0  
 KB-DATUM ELEVATION DIFFERENCE    37  
 CORRECTION VELOCITY               5000

LVL NO.	MEAS DEPTH BELOW KB	VERT DEPTH BELOW KB	DEPTH BELOW DTM	SOURCE OFFSET	SOURCE ELEV	MEAS TIME	VERT TIME	TIME FROM DATUM	AVERAGE TIME FROM DATUM	AVERAGE VELOCITY	INTERVAL VELOCITY	INTERVAL TRANSIT TIME
1	1581	1581	1544	83	-35	0.3023	0.3018	0.3088	0.3088	4999	4999	200.028
2	2500	2500	2463	83	-35	0.4820	0.4817	0.4887	0.4887	5039	5109	195.729
3	3000	3000	2963	83	-35	0.5660	0.5658	0.5728	0.5728	5173	5948	168.108
4	3500	3500	3463	83	-35	0.6470	0.6468	0.6538	0.6538	5296	6169	162.075
5	4000	4000	3963	83	-35	0.7210	0.7208	0.7278	0.7278	5444	6754	148.057
6	4500	4500	4463	83	-35	0.8000	0.7999	0.8069	0.8069	5531	6327	158.041
7	5000	5000	4963	83	-35	0.8730	0.8729	0.8799	0.8799	5640	6847	146.033
8	5500	5500	5463	83	-35	0.9390	0.9389	0.9459	0.9459	5775	7574	132.028
9	6000	6000	5963	83	-35	1.0050	1.0049	1.0119	1.0119	5892	7574	132.023
10	6250	6250	6213	83	-35	1.0380	1.0379	1.0449	1.0449	5945	7574	132.020
11	6500	6500	6463	83	-35	1.0700	1.0699	1.0769	1.0769	6001	7811	128.017
12	6750	6750	6713	83	-35	1.1010	1.1009	1.1079	1.1079	6059	8063	124.017
13	6800	6800	6763	83	-35	1.1070	1.1069	1.1139	1.1139	6071	8332	120.015
14	7000	7000	6963	83	-35	1.1260	1.1259	1.1329	1.1329	6146	10524	95.016
15	7250	7250	7213	83	-35	1.1480	1.1479	1.1549	1.1549	6245	11361	88.016

LVL NO.	MEAS DEPTH BELOW KB	VERT DEPTH BELOW KB	DEPTH BELOW DTM	SOURCE OFFSET	SOURCE ELEV	MEAS TIME	VERT TIME	TIME FROM DATUM	AVERAGE TIME FROM DATUM	AVERAGE VELOCITY	INTERVAL VELOCITY	INTERVAL TRANSIT TIME
16	7400	7400	7363	83	-35	1.1590	1.1589	1.1659	1.1659	6315	13632	73.352
17	7500	7500	7463	83	-35	1.1680	1.1679	1.1749	1.1749	6351	11109	90.015
18	7750	7750	7713	83	-35	1.1910	1.1909	1.1979	1.1979	6438	10868	92.012
19	8000	8000	7963	83	-35	1.2150	1.2149	1.2219	1.2219	6516	10415	96.011
20	8250	8250	8213	83	-35	1.2410	1.2409	1.2479	1.2479	6581	9614	104.012
21	8500	8500	8463	83	-35	1.2660	1.2659	1.2729	1.2729	6648	9998	100.011
22	8750	8750	8713	83	-35	1.2840	1.2839	1.2909	1.2909	6749	13886	72.010
23	9000	9000	8963	83	-35	1.3030	1.3029	1.3099	1.3099	6842	13156	76.009
24	9250	9250	9213	83	-35	1.3210	1.3209	1.3279	1.3279	6937	13886	72.010
* 25	9334	9334	9297	83	-35	1.3330	1.3329	1.3399	1.3399	6938	6999	142.861

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\* This level not used in calibration of log.

CONOCO, INC.  
 OCS-P-0322 NO.1  
 FEDERAL CO., CALIFORNIA

PAGE 1

INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1	2	5.0	5000	5000
2	4	10.0	5000	5000
3	6	15.0	5000	5000
4	8	20.0	5000	5000
5	10	25.0	5000	5000
6	12	30.0	5000	5000
7	14	35.0	5000	5000
8	16	40.0	5000	5000
9	18	45.0	5000	5000
10	20	50.0	5000	5000
11	22	55.0	5000	5000
12	24	60.0	5000	5000
13	26	65.0	5000	5000
14	28	70.0	5000	5000
15	30	75.0	5000	5000
16	32	80.0	5000	5000
17	34	85.0	5000	5000
18	36	90.0	5000	5000
19	38	95.0	5000	5000
20	40	100.0	5000	5000
21	42	105.0	5000	5000
22	44	110.0	5000	5000
23	46	115.0	5000	5000
24	48	120.0	5000	5000
25	50	125.0	5000	5000
26	52	130.0	5000	5000
27	54	135.0	5000	5000
28	56	140.0	5000	5000
29	58	145.0	5000	5000
30	60	150.0	5000	5000
31	62	155.0	5000	5000
32	64	160.0	5000	5000
33	66	165.0	5000	5000
34	68	170.0	5000	5000
35	70	175.0	5000	5000
36	72	180.0	5000	5000
37	74	185.0	5000	5000
38	76	190.0	5000	5000
39	78	195.0	5000	5000
40	80	200.0	5000	5000
41	82	205.0	5000	5000
42	84	210.0	5000	5000
43	86	215.0	5000	5000
44	88	220.0	5000	5000
45	90	225.0	5000	5000
46	92	230.0	5000	5000
47	94	235.0	5000	5000
48	96	240.0	5000	5000
49	98	245.0	5000	5000
50	100	250.0	5000	5000

CONOCO, INC.  
 OCS-P-0322 NO.1  
 FEDERAL CO., CALIFORNIA

INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
51	102	255.0	5000	5000
52	104	260.0	5000	5000
53	106	265.0	5000	5000
54	108	270.0	5000	5000
55	110	275.0	5000	5000
56	112	280.0	5000	5000
57	114	285.0	5000	5000
58	116	290.0	5000	5000
59	118	295.0	5000	5000
60	120	300.0	5000	5000
61	122	305.0	5000	5000
62	124	310.0	5000	5000
63	126	315.0	5000	5000
64	128	320.0	5000	5000
65	130	325.0	5000	5000
66	132	330.0	5000	5000
67	134	335.0	5000	5000
68	136	340.0	5000	5000
69	138	345.0	5000	5000
70	140	350.0	5000	5000
71	142	355.0	5000	5000
72	144	360.0	5000	5000
73	146	365.0	5000	5000
74	148	370.0	5000	5000
75	150	375.0	5000	5000
76	152	380.0	5000	5000
77	154	385.0	5000	5000
78	156	390.0	5000	5000
79	158	395.0	5000	5000
80	160	400.0	5000	5000
81	162	405.0	5000	5000
82	164	410.0	5000	5000
83	166	415.0	5000	5000
84	168	420.0	5000	5000
85	170	425.0	5000	5000
86	172	430.0	5000	5000
87	174	435.0	5000	5000
88	176	440.0	5000	5000
89	178	445.0	5000	5000
90	180	450.0	5000	5000
91	182	455.0	5000	5000
92	184	460.0	5000	5000
93	186	465.0	5000	5000
94	188	470.0	5000	5000
95	190	475.0	5000	5000
96	192	480.0	5000	5000
97	194	485.0	5000	5000
98	196	490.0	5000	5000
99	198	495.0	5000	5000
100	200	500.0	5000	5000

CONOCO, INC.  
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PAGE 3

INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
101	202	505.0	5000	5000
102	204	510.0	5000	5000
103	206	515.0	5000	5000
104	208	520.0	5000	5000
105	210	525.0	5000	5000
106	212	530.0	5000	5000
107	214	535.0	5000	5000
108	216	540.0	5000	5000
109	218	545.0	5000	5000
110	220	550.0	5000	5000
111	222	555.0	5000	5000
112	224	560.0	5000	5000
113	226	565.0	5000	5000
114	228	570.0	5000	5000
115	230	575.0	5000	5000
116	232	580.0	5000	5000
117	234	585.0	5000	5000
118	236	590.0	5000	5000
119	238	595.0	5000	5000
120	240	600.0	5000	5000
121	242	605.0	5000	5000
122	244	610.0	5000	5000
123	246	615.0	5000	5000
124	248	620.0	5000	5000
125	250	625.0	5000	5000
126	252	630.0	5000	5000
127	254	635.0	5000	5000
128	256	640.0	5000	5000
129	258	645.0	5000	5000
130	260	650.0	5000	5000
131	262	655.0	5000	5000
132	264	660.0	5000	5000
133	266	665.0	5000	5000
134	268	670.0	5000	5000
135	270	675.0	5000	5000
136	272	680.0	5000	5000
137	274	685.0	5000	5000
138	276	690.0	5000	5000
139	278	695.0	5000	5000
140	280	700.0	5000	5000
141	282	705.0	5000	5000
142	284	710.0	5000	5000
143	286	715.0	5000	5000
144	288	720.0	5000	5000
145	290	725.0	5000	5000
146	292	730.0	5000	5000
147	294	735.0	5000	5000
148	296	740.0	5000	5000
149	298	745.0	5000	5000
150	300	750.0	5000	5000



CONOCO, INC.  
 OCS-P-0322 NO. 1  
 FEDERAL CO., CALIFORNIA

INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
151	302	755.0	5000	5000
152	304	760.0	5000	5000
153	306	765.0	5000	5000
154	308	770.0	5000	5000
155	310	775.0	5000	5000
156	312	780.0	5000	5000
157	314	785.0	5000	5000
158	316	790.0	5000	5000
159	318	795.0	5000	5000
160	320	800.0	5000	5000
161	322	805.0	5000	5000
162	324	810.0	5000	5000
163	326	815.0	5000	5000
164	328	820.0	5000	5000
165	330	825.0	5000	5000
166	332	830.0	5000	5000
167	334	835.0	5000	5000
168	336	840.0	5000	5000
169	338	845.0	5000	5000
170	340	850.0	5000	5000
171	342	855.0	5000	5000
172	344	860.0	5000	5000
173	346	865.0	5000	5000
174	348	870.0	5000	5000
175	350	875.0	5000	5000
176	352	880.0	5000	5000
177	354	885.0	5000	5000
178	356	890.0	5000	5000
179	358	895.0	5000	5000
180	360	900.0	5000	5000
181	362	905.0	5000	5000
182	364	910.0	5000	5000
183	366	915.0	5000	5000
184	368	920.0	5000	5000
185	370	925.0	5000	5000
186	372	930.0	5000	5000
187	374	935.0	5000	5000
188	376	940.0	5000	5000
189	378	945.0	5000	5000
190	380	950.0	5000	5000
191	382	955.0	5000	5000
192	384	960.0	5000	5000
193	386	965.0	5000	5000
194	388	970.0	5000	5000
195	390	975.0	5000	5000
196	392	980.0	5000	5000
197	394	985.0	5000	5000
198	396	990.0	5000	5000
199	398	995.0	5000	5000
200	400	1000.0	5000	5000

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
201	402	1005.0	5000	5000
202	404	1010.0	5000	5000
203	406	1015.0	5000	5000
204	408	1020.0	5000	5000
205	410	1025.0	5000	5000
206	412	1030.0	5000	5000
207	414	1035.0	5000	5000
208	416	1040.0	5000	5000
209	418	1045.0	5000	5000
210	420	1050.0	5000	5000
211	422	1055.0	5000	5000
212	424	1060.0	5000	5000
213	426	1065.0	5000	5000
214	428	1070.0	5000	5000
215	430	1075.0	5000	5000
216	432	1080.0	5000	5000
217	434	1085.0	5000	5000
218	436	1090.0	5000	5000
219	438	1095.0	5000	5000
220	440	1100.0	5000	5000
221	442	1105.0	5000	5000
222	444	1110.0	5000	5000
223	446	1115.0	5000	5000
224	448	1120.0	5000	5000
225	450	1125.0	5000	5000
226	452	1130.0	5000	5000
227	454	1135.0	5000	5000
228	456	1140.0	5000	5000
229	458	1145.0	5000	5000
230	460	1150.0	5000	5000
231	462	1155.0	5000	5000
232	464	1160.0	5000	5000
233	466	1165.0	5000	5000
234	468	1170.0	5000	5000
235	470	1175.0	5000	5000
236	472	1180.0	5000	5000
237	474	1185.0	5000	5000
238	476	1190.0	5000	5000
239	478	1195.0	5000	5000
240	480	1200.0	5000	5000
241	482	1205.0	5000	5000
242	484	1210.0	5000	5000
243	486	1215.0	5000	5000
244	488	1220.0	5000	5000
245	490	1225.0	5000	5000
246	492	1230.0	5000	5000
247	494	1235.0	5000	5000
248	496	1240.0	5000	5000
249	498	1245.0	5000	5000
250	500	1250.0	5000	5000

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
251	502	1255.0	5000	5000
252	504	1260.0	5000	5000
253	506	1265.0	5000	5000
254	508	1270.0	5000	5000
255	510	1275.0	5000	5000
256	512	1280.0	5000	5000
257	514	1285.0	5000	5000
258	516	1290.0	5000	5000
259	518	1295.0	5000	5000
260	520	1300.0	5000	5000
261	522	1305.0	5000	5000
262	524	1310.0	5000	5000
263	526	1315.0	5000	5000
264	528	1320.0	5000	5000
265	530	1325.0	5000	5000
266	532	1330.0	5000	5000
267	534	1335.0	5000	5000
268	536	1340.0	5000	5000
269	538	1345.0	5000	5000
270	540	1350.0	5000	5000
271	542	1355.0	5000	5000
272	544	1360.0	5000	5000
273	546	1365.0	5000	5000
274	548	1370.0	5000	5000
275	550	1375.0	5000	5000
276	552	1380.0	5000	5000
277	554	1385.0	5000	5000
278	556	1390.0	5000	5000
279	558	1395.0	5000	5000
280	560	1400.0	5000	5000
281	562	1405.0	5000	5000
282	564	1410.0	5000	5000
283	566	1415.0	5000	5000
284	568	1420.0	5000	5000
285	570	1425.0	5000	5000
286	572	1430.0	5000	5000
287	574	1435.0	5000	5000
288	576	1440.0	5000	5000
289	578	1445.0	5000	5000
290	580	1450.0	5000	5000
291	582	1455.0	5000	5000
292	584	1460.0	5000	5000
293	586	1465.0	5000	5000
294	588	1470.0	5000	5000
295	590	1475.0	5000	5000
296	592	1480.0	5000	5000
297	594	1485.0	5000	5000
298	596	1490.0	5000	5000
299	598	1495.0	5000	5000
300	600	1500.0	5000	5000

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
301	602	1505.0	5000	5000
302	604	1510.0	5000	5000
303	606	1515.0	5000	5000
304	608	1520.0	5000	5000
305	610	1525.0	5000	5000
306	612	1530.0	5000	5000
307	614	1535.0	5000	5000
308	616	1540.0	5000	5000
309	618	1545.0	5000	5000
310	620	1550.1	5087	5000
311	622	1555.2	5109	5001
312	624	1560.3	5109	5001
313	626	1565.4	5109	5001
314	628	1570.5	5109	5002
315	630	1575.6	5109	5002
316	632	1580.7	5109	5002
317	634	1585.9	5109	5003
318	636	1591.0	5109	5003
319	638	1596.1	5109	5003
320	640	1601.2	5109	5004
321	642	1606.3	5109	5004
322	644	1611.4	5109	5004
323	646	1616.5	5109	5005
324	648	1621.6	5109	5005
325	650	1626.7	5109	5005
326	652	1631.8	5109	5006
327	654	1636.9	5109	5006
328	656	1642.1	5109	5006
329	658	1647.2	5109	5007
330	660	1652.3	5109	5007
331	662	1657.4	5109	5007
332	664	1662.5	5109	5007
333	666	1667.6	5109	5008
334	668	1672.7	5109	5008
335	670	1677.8	5109	5008
336	672	1682.9	5109	5009
337	674	1688.0	5109	5009
338	676	1693.1	5109	5009
339	678	1698.3	5109	5010
340	680	1703.4	5109	5010
341	682	1708.5	5109	5010
342	684	1713.6	5109	5010
343	686	1718.7	5109	5011
344	688	1723.8	5109	5011
345	690	1728.9	5109	5011
346	692	1734.0	5109	5012
347	694	1739.1	5109	5012
348	696	1744.2	5109	5012
349	698	1749.3	5109	5012
350	700	1754.5	5109	5013

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
351	702	1759.6	5109	5013
352	704	1764.7	5109	5013
353	706	1769.8	5109	5014
354	708	1774.9	5109	5014
355	710	1780.0	5109	5014
356	712	1785.1	5109	5014
357	714	1790.2	5109	5015
358	716	1795.3	5109	5015
359	718	1800.4	5109	5015
360	720	1805.5	5109	5015
361	722	1810.7	5109	5016
362	724	1815.8	5109	5016
363	726	1820.9	5109	5016
364	728	1826.0	5109	5016
365	730	1831.1	5109	5017
366	732	1836.2	5109	5017
367	734	1841.3	5109	5017
368	736	1846.4	5109	5017
369	738	1851.5	5109	5018
370	740	1856.6	5109	5018
371	742	1861.7	5109	5018
372	744	1866.9	5109	5018
373	746	1872.0	5109	5019
374	748	1877.1	5109	5019
375	750	1882.2	5109	5019
376	752	1887.3	5109	5019
377	754	1892.4	5109	5020
378	756	1897.5	5109	5020
379	758	1902.6	5109	5020
380	760	1907.7	5109	5020
381	762	1912.8	5109	5021
382	764	1917.9	5109	5021
383	766	1923.1	5109	5021
384	768	1928.2	5109	5021
385	770	1933.3	5109	5021
386	772	1938.4	5109	5022
387	774	1943.5	5109	5022
388	776	1948.6	5109	5022
389	778	1953.7	5109	5022
390	780	1958.8	5109	5023
391	782	1963.9	5109	5023
392	784	1969.0	5109	5023
393	786	1974.1	5109	5023
394	788	1979.3	5109	5023
395	790	1984.4	5109	5024
396	792	1989.5	5109	5024
397	794	1994.6	5109	5024
398	796	1999.7	5109	5024
399	798	2004.8	5109	5025
400	800	2009.9	5109	5025

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
401	802	2015.0	5109	5025
402	804	2020.1	5109	5025
403	806	2025.2	5109	5025
404	808	2030.3	5109	5026
405	810	2035.5	5109	5026
406	812	2040.6	5109	5026
407	814	2045.5	4908	5026
408	816	2049.9	4476	5024
409	818	2054.4	4487	5023
410	820	2059.0	4544	5022
411	822	2063.4	4459	5021
412	824	2067.9	4469	5019
413	826	2072.5	4592	5018
414	828	2077.6	5069	5018
415	830	2082.2	4601	5017
416	832	2086.6	4422	5016
417	834	2090.9	4310	5014
418	836	2095.6	4688	5013
419	838	2101.1	5474	5014
420	840	2106.5	5455	5016
421	842	2111.9	5369	5016
422	844	2117.2	5366	5017
423	846	2122.6	5366	5018
424	848	2128.0	5428	5019
425	850	2133.4	5374	5020
426	852	2138.8	5334	5021
427	854	2143.6	4891	5020
428	856	2148.3	4629	5019
429	858	2152.7	4468	5018
430	860	2157.1	4404	5017
431	862	2161.6	4481	5015
432	864	2166.3	4647	5015
433	866	2171.7	5410	5015
434	868	2177.2	5495	5017
435	870	2182.7	5554	5018
436	872	2188.2	5466	5019
437	874	2193.6	5402	5020
438	876	2199.0	5403	5021
439	878	2204.2	5235	5021
440	880	2209.6	5358	5022
441	882	2214.9	5345	5023
442	884	2220.3	5343	5023
443	886	2225.7	5445	5024
444	888	2231.2	5514	5025
445	890	2236.6	5355	5026
446	892	2242.1	5528	5027
447	894	2247.6	5487	5028
448	896	2253.0	5425	5029
449	898	2258.4	5408	5030
450	900	2263.9	5467	5031

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
451	902	2269.2	5254	5031
452	904	2274.1	4944	5031
453	906	2279.1	4946	5031
454	908	2284.5	5440	5032
455	910	2289.9	5360	5033
456	912	2295.4	5511	5034
457	914	2300.9	5541	5035
458	916	2306.4	5517	5036
459	918	2311.9	5439	5037
460	920	2317.4	5556	5038
461	922	2323.0	5590	5039
462	924	2328.6	5579	5040
463	926	2334.1	5554	5041
464	928	2339.8	5613	5043
465	930	2345.4	5613	5044
466	932	2351.0	5618	5045
467	934	2356.5	5533	5046
468	936	2362.1	5625	5047
469	938	2367.7	5529	5048
470	940	2373.2	5508	5049
471	942	2378.7	5477	5050
472	944	2384.2	5498	5051
473	946	2389.8	5688	5053
474	948	2395.3	5495	5053
475	950	2400.8	5495	5054
476	952	2406.5	5626	5056
477	954	2412.0	5569	5057
478	956	<del>2417.7</del>	5663	<del>5058</del> 4977
479	958	2423.3	5640	5059
480	960	2428.8	5480	5060
481	962	2434.4	5580	5061
482	964	2440.1	5694	5062
483	966	2445.7	5568	5063
484	968	2451.1	5457	5064
485	970	2456.5	5431	5065
486	972	2462.0	5488	5066
487	974	2467.6	5548	5067
488	976	2473.2	5586	5068
489	978	2478.6	5416	5069
490	980	2484.0	5427	5069
491	982	2489.6	5564	5070
492	984	2495.2	5650	5072
493	986	2500.7	5529	5073
494	988	2506.2	5470	5073
495	990	2511.8	5534	5074
496	992	2517.3	5560	5075
497	994	2522.9	5608	5076
498	996	2528.5	5577	5077
499	998	2534.0	5471	5078
500	1000	2539.6	5634	5079

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
501	1002	2545.1	5486	5080
502	1004	2550.7	5590	5081
503	1006	2556.3	5659	5082
504	1008	2562.0	5658	5083
505	1010	2567.7	5705	5085
506	1012	2573.4	5688	5086
507	1014	2579.1	5681	5087
508	1016	2584.8	5714	5088
509	1018	2590.5	5714	5089
510	1020	2596.2	5725	5091
511	1022	2602.0	5727	5092
512	1024	2607.7	5727	5093
513	1026	2613.4	5751	5094
514	1028	2619.2	5751	5096
515	1030	2624.9	5734	5097
516	1032	2630.6	5690	5098
517	1034	2636.3	5673	5099
518	1036	2641.9	5625	5100
519	1038	2647.6	5654	5101
520	1040	2653.2	5677	5102
521	1042	2658.9	5619	5103
522	1044	2664.5	5681	5104
523	1046	2670.1	5609	5105
524	1048	2675.9	5720	5107
525	1050	2681.6	5732	5108
526	1052	2687.3	5733	5109
527	1054	2693.1	5797	5110
528	1056	2698.8	5675	5111
529	1058	2704.5	5703	5112
530	1060	2710.3	5796	5114
531	1062	2716.1	5787	5115
532	1064	2721.9	5802	5116
533	1066	2727.7	5790	5118
534	1068	2733.5	5782	5119
535	1070	2739.3	5808	5120
536	1072	2745.1	5807	5121
537	1074	2750.8	5762	5123
538	1076	2756.3	5508	5123
539	1078	2762.2	5821	5125
540	1080	2768.2	5999	5126
541	1082	2774.1	5930	5128
542	1084	2780.1	6022	5129
543	1086	2786.1	5982	5131
544	1088	2792.2	6085	5133
545	1090	2798.2	6039	5134
546	1092	2804.3	6116	5136
547	1094	2810.4	6057	5138
548	1096	2816.4	6014	5139
549	1098	2822.4	5946	5141
550	1100	2828.3	5990	5142



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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
551	1102	2834.4	6029	5144
552	1104	2840.4	6075	5146
553	1106	2846.5	6074	5147
554	1108	2852.6	6044	5149
555	1110	2858.8	6196	5151
556	1112	2864.9	6099	5153
557	1114	2870.9	6004	5154
558	1116	2876.8	5972	5156
559	1118	2882.8	6012	5157
560	1120	2889.1	6214	5159
561	1122	2895.1	6023	5161
562	1124	2900.8	5713	5162
563	1126	2905.5	4683	5161
564	1128	2909.9	4416	5159
565	1130	2916.4	6499	5162
566	1132	2922.6	6203	5164
567	1134	2928.6	6040	5165
568	1136	2934.7	6098	5167
569	1138	2940.9	6169	5169
570	1140	2947.1	6147	5170
571	1142	2953.1	6034	5172
572	1144	2958.8	5744	5173
573	1146	2964.7	5823	5174
574	1148	2970.9	6227	5176
575	1150	2977.1	6175	5177
576	1152	2983.0	5978	5179
577	1154	2989.1	6062	5180
578	1156	2995.0	5954	5182
579	1158	3001.1	6039	5183
580	1160	3007.3	6178	5185
581	1162	3013.4	6142	5187
582	1164	3019.4	5972	5188
583	1166	3025.6	6207	5190
584	1168	3031.6	5977	5191
585	1170	3036.8	5273	5191
586	1172	3042.3	5454	5192
587	1174	3047.8	5460	5192
588	1176	3053.6	5868	5193
589	1178	3059.6	6005	5195
590	1180	3065.7	6109	5196
591	1182	3071.8	6112	5198
592	1184	3078.0	6112	5199
593	1186	3084.1	6112	5201
594	1188	3090.2	6112	5202
595	1190	3096.3	6112	5204
596	1192	3102.4	6112	5205
597	1194	3108.5	6112	5207
598	1196	3114.6	6112	5208
599	1198	3120.7	6112	5210
600	1200	3126.8	6112	5211

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
601	1202	3133.0	6112	5213
602	1204	3139.1	6112	5214
603	1206	3145.2	6112	5216
604	1208	3151.3	6112	5217
605	1210	3157.4	6112	5219
606	1212	3163.5	6112	5220
607	1214	3169.6	6112	5222
608	1216	3175.7	6112	5223
609	1218	3181.9	6112	5225
610	1220	3188.0	6112	5226
611	1222	3194.1	6112	5228
612	1224	3200.2	6112	5229
613	1226	3206.3	6112	5231
614	1228	3212.4	6112	5232
615	1230	3218.5	6112	5233
616	1232	3224.6	6112	5235
617	1234	3230.7	6112	5236
618	1236	3236.9	6112	5238
619	1238	3243.0	6112	5239
620	1240	3249.1	6112	5240
621	1242	3255.2	6112	5242
622	1244	3261.3	6112	5243
623	1246	3267.4	6112	5245
624	1248	3273.5	6112	5246
625	1250	3279.6	6112	5247
626	1252	3285.8	6112	5249
627	1254	3291.9	6112	5250
628	1256	3298.2	6351	5252
629	1258	3304.9	6636	5254
630	1260	3311.4	6527	5256
631	1262	3317.8	6465	5258
632	1264	3324.3	6459	5260
633	1266	3330.7	6359	5262
634	1268	3336.9	6287	5263
635	1270	3343.3	6365	5265
636	1272	3349.6	6317	5267
637	1274	3356.0	6326	5268
638	1276	3362.4	6400	5270
639	1278	3368.8	6411	5272
640	1280	3375.0	6246	5273
641	1282	3381.3	6333	5275
642	1284	3387.6	6271	5277
643	1286	3394.0	6351	5278
644	1288	3400.4	6424	5280
645	1290	3406.9	6552	5282
646	1292	3413.6	6648	5284
647	1294	3420.4	6760	5286
648	1296	3427.0	6649	5289
649	1298	3433.6	6620	5291
650	1300	3440.0	6414	5292

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
651	1302	3446.7	6659	5294
652	1304	3453.1	6412	5296
653	1306	3459.4	6307	5298
654	1308	3465.8	6430	5299
655	1310	3472.3	6478	5301
656	1312	3478.7	6396	5303
657	1314	3485.2	6448	5305
658	1316	3491.6	6484	5306
659	1318	3498.0	6379	5308
660	1320	3504.4	6362	5310
661	1322	3510.9	6507	5311
662	1324	3517.2	6290	5313
663	1326	3523.5	6266	5314
664	1328	3530.0	6534	5316
665	1330	3536.5	6498	5318
666	1332	3543.0	6487	5320
667	1334	3549.4	6447	5321
668	1336	3555.9	6461	5323
669	1338	3562.4	6532	5325
670	1340	3569.1	6667	5327
671	1342	3575.5	6469	5329
672	1344	3582.1	6537	5330
673	1346	3588.3	6227	5332
674	1348	3594.7	6389	5333
675	1350	3601.3	6571	5335
676	1352	3608.1	6784	5337
677	1354	3614.6	6561	5339
678	1356	3621.2	6629	5341
679	1358	3627.7	6472	5343
680	1360	3634.1	6374	5344
681	1362	3640.7	6612	5346
682	1364	3647.4	6681	5348
683	1366	3653.9	6553	5350
684	1368	3660.4	6515	5352
685	1370	3667.0	6550	5353
686	1372	3673.7	6709	5355
687	1374	3680.4	6705	5357
688	1376	3687.2	6800	5359
689	1378	3693.9	6681	5361
690	1380	3699.2	5282	5361
691	1382	3704.0	4833	5360
692	1384	3708.4	4440	5359
693	1386	3714.2	5779	5360
694	1388	3721.1	6906	5362
695	1390	3728.2	7094	5364
696	1392	3735.2	6965	5367
697	1394	3742.1	6873	5369
698	1396	3748.7	6598	5371
699	1398	3755.2	6503	5372
700	1400	3761.8	6656	5374

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
701	1402	3769.3	7470	5377
702	1404	3776.2	6955	5379
703	1406	3783.2	6966	5382
704	1408	3790.4	7143	5384
705	1410	3797.3	6975	5386
706	1412	3804.4	7064	5389
707	1414	3811.5	7056	5391
708	1416	3818.4	6976	5393
709	1418	3825.5	7048	5396
710	1420	3832.8	7351	5398
711	1422	3840.6	7732	5402
712	1424	3848.3	7708	5405
713	1426	3855.5	7183	5407
714	1428	3862.0	6545	5409
715	1430	3868.5	6492	5410
716	1432	3874.7	6242	5412
717	1434	3881.2	6479	5413
718	1436	3888.0	6741	5415
719	1438	3894.9	6938	5417
720	1440	3901.8	6926	5419
721	1442	3908.7	6907	5421
722	1444	3915.7	7002	5423
723	1446	3922.6	6863	5425
724	1448	3929.4	6838	5427
725	1450	3936.4	6989	5430
726	1452	3943.3	6909	5432
727	1454	3950.1	6734	5433
728	1456	3957.0	6946	5435
729	1458	3963.5	6498	5437
730	1460	3969.9	6393	5438
731	1462	3976.7	6826	5440
732	1464	3983.4	6643	5442
733	1466	3989.8	6417	5443
734	1468	3996.3	6523	5445
735	1470	4003.1	6752	5446
736	1472	4009.7	6662	5448
737	1474	4016.3	6548	5449
738	1476	4023.1	6876	5451
739	1478	4030.1	6936	5453
740	1480	4037.0	6895	5455
741	1482	4044.2	7189	5458
742	1484	4051.1	6894	5460
743	1486	4057.9	6814	5461
744	1488	4064.6	6742	5463
745	1490	4071.0	6415	5464
746	1492	4077.8	6911	5466
747	1494	4084.6	6757	5468
748	1496	4091.2	6654	5470
749	1498	4098.0	6719	5471
750	1500	4104.1	6175	5472

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
751	1502	4110.9	6786	5474
752	1504	4117.7	6744	5476
753	1506	4124.4	6776	5477
754	1508	4131.3	6887	5479
755	1510	4138.1	6758	5481
756	1512	4144.7	6648	5482
757	1514	4151.5	6768	5484
758	1516	4158.2	6697	5486
759	1518	4165.0	6777	5487
760	1520	4171.9	6873	5489
761	1522	4178.8	6988	5491
762	1524	4185.5	6665	5493
763	1526	4192.0	6518	5494
764	1528	4198.9	6861	5496
765	1530	4205.7	6853	5498
766	1532	4212.5	6726	5499
767	1534	4219.3	6819	5501
768	1536	4226.2	6935	5503
769	1538	4233.2	6936	5505
770	1540	4240.0	6843	5506
771	1542	4246.4	6390	5508
772	1544	4252.3	5862	5508
773	1546	4258.9	6693	5510
774	1548	4265.8	6844	5511
775	1550	4272.7	6919	5513
776	1552	4279.5	6832	5515
777	1554	4286.4	6889	5517
778	1556	4293.1	6698	5518
779	1558	4299.8	6636	5520
780	1560	4306.0	6261	5521
781	1562	4311.8	5806	5521
782	1564	4317.9	6111	5522
783	1566	4323.9	6003	5522
784	1568	4329.9	5919	5523
785	1570	4334.7	4867	5522
786	1572	4340.0	5297	5522
787	1574	4346.3	6237	5523
788	1576	4352.7	6441	5524
789	1578	4359.3	6576	5525
790	1580	4365.8	6526	5526
791	1582	4372.3	6509	5528
792	1584	4378.8	6505	5529
793	1586	4385.3	6461	5530
794	1588	4391.8	6499	5531
795	1590	4398.2	6455	5532
796	1592	4404.7	6447	5534
797	1594	4411.0	6268	5534
798	1596	4415.9	4974	5534
799	1598	4420.9	5017	5533
800	1600	4426.0	5088	5533

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
801	1602	4430.5	4468	5531
802	1604	4435.0	4529	5530
803	1606	4441.5	6445	5531
804	1608	4448.2	6710	5533
805	1610	4455.0	6782	5534
806	1612	4461.8	6871	5536
807	1614	4468.6	6815	5537
808	1616	4475.3	6611	5539
809	1618	4484.2	8922	5543
810	1620	4491.2	7055	5545
811	1622	4497.9	6625	5546
812	1624	4504.4	6588	5547
813	1626	4510.7	6281	5548
814	1628	4517.2	6451	5549
815	1630	4523.8	6651	5551
816	1632	4530.6	6788	5552
817	1634	4537.6	6956	5554
818	1636	4544.5	6895	5556
819	1638	4551.3	6844	5557
820	1640	4558.2	6930	5559
821	1642	4565.0	6733	5560
822	1644	4571.6	6649	5562
823	1646	4578.2	6533	5563
824	1648	4584.3	6123	5563
825	1650	4590.3	5986	5564
826	1652	4596.1	5798	5564
827	1654	4602.8	6719	5566
828	1656	4609.5	6717	5567
829	1658	4616.2	6655	5568
830	1660	4622.9	6723	5570
831	1662	4630.9	7969	5573
832	1664	4637.5	6608	5574
833	1666	4644.3	6870	5575
834	1668	4651.3	6968	5577
835	1670	4658.3	6982	5579
836	1672	4665.2	6924	5580
837	1674	4672.1	6867	5582
838	1676	4678.3	6241	5583
839	1678	4684.7	6434	5584
840	1680	4691.8	7054	5585
841	1682	4698.9	7086	5587
842	1684	4706.0	7070	5589
843	1686	4712.9	6955	5591
844	1688	4719.7	6789	5592
845	1690	4726.5	6782	5593
846	1692	4733.4	6965	5595
847	1694	4740.5	7059	5597
848	1696	4747.5	7044	5599
849	1698	4754.4	6899	5600
850	1700	4761.4	6926	5602

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
851	1702	4768.4	6994	5603
852	1704	4775.3	6963	5605
853	1706	4781.8	6485	5606
854	1708	4788.4	6574	5607
855	1710	4795.2	6832	5608
856	1712	4802.1	6842	5610
857	1714	4808.8	6705	5611
858	1716	4815.3	6540	5612
859	1718	4821.6	6293	5613
860	1720	4828.1	6532	5614
861	1722	4835.0	6854	5616
862	1724	4841.8	6828	5617
863	1726	4848.8	6987	5619
864	1728	4855.8	7034	5620
865	1730	4862.8	6959	5622
866	1732	4869.6	6846	5623
867	1734	4876.5	6859	5625
868	1736	4883.5	7031	5626
869	1738	4890.6	7025	5628
870	1740	4897.6	7034	5629
871	1742	4904.6	6990	5631
872	1744	4911.5	6958	5632
873	1746	4918.3	6711	5634
874	1748	4924.8	6558	5635
875	1750	4931.6	6811	5636
876	1752	4938.6	6964	5638
877	1754	4945.6	6988	5639
878	1756	4952.5	6948	5641
879	1758	4959.3	6784	5642
880	1760	4966.1	6788	5643
881	1762	4975.2	9098	5647
882	1764	4982.1	6943	5649
883	1766	4989.0	6838	5650
884	1768	4996.0	7010	5652
885	1770	5003.0	7012	5653
886	1772	5009.9	6901	5655
887	1774	5016.8	6946	5656
888	1776	5023.5	6641	5657
889	1778	5030.3	6773	5658
890	1780	5037.3	7070	5660
891	1782	5044.4	7077	5662
892	1784	5051.3	6928	5663
893	1786	5060.8	9464	5667
894	1788	5068.0	7173	5669
895	1790	5075.1	7099	5670
896	1792	5082.1	7046	5672
897	1794	5089.4	7293	5674
898	1796	5096.4	7004	5675
899	1798	5103.5	7134	5677
900	1800	5112.1	8535	5680

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
901	1802	5119.9	7835	5682
902	1804	5127.1	7170	5684
903	1806	5134.1	7060	5685
904	1808	5141.3	7150	5687
905	1810	5148.2	6930	5689
906	1812	5153.8	5629	5689
907	1814	5160.3	6410	5689
908	1816	5167.2	6986	5691
909	1818	5175.2	7917	5693
910	1820	5183.0	7835	5696
911	1822	5190.8	7783	5698
912	1824	5198.7	7910	5700
913	1826	5206.5	7802	5703
914	1828	5214.0	7462	5705
915	1830	5220.9	6919	5706
916	1832	5229.0	8086	5708
917	1834	5235.1	6153	5709
918	1836	5242.4	7310	5711
919	1838	5250.0	7609	5713
920	1840	5257.8	7723	5715
921	1842	5265.3	7596	5717
922	1844	5273.0	7689	5719
923	1846	5280.7	7651	5721
924	1848	5288.4	7713	5723
925	1850	5296.1	7715	5726
926	1852	5303.9	7792	5728
927	1854	5311.8	7846	5730
928	1856	5319.5	7762	5732
929	1858	5327.3	7787	5734
930	1860	5335.2	7938	5737
931	1862	5343.3	8010	5739
932	1864	5351.5	8217	5742
933	1866	5359.4	7963	5744
934	1868	5367.4	7940	5747
935	1870	5375.7	8353	5749
936	1872	5384.3	8588	5752
937	1874	5392.3	7956	5755
938	1876	5400.1	7831	5757
939	1878	5407.9	7788	5759
940	1880	5415.5	7639	5761
941	1882	5423.2	7720	5763
942	1884	5431.1	7850	5765
943	1886	5438.9	7807	5768
944	1888	5446.7	7817	5770
945	1890	5454.6	7831	5772
946	1892	5462.6	7999	5774
947	1894	5471.6	9095	5778
948	1896	5479.4	7775	5780
949	1898	5487.0	7553	5782
950	1900	5494.5	7524	5784



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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
951	1902	5502.4	7903	5786
952	1904	5509.8	7382	5788
953	1906	5517.4	7627	5790
954	1908	5525.0	7638	5791
955	1910	5532.8	7711	5793
956	1912	5540.5	7739	5796
957	1914	5548.2	7723	5798
958	1916	5556.2	7938	5800
959	1918	5564.8	8604	5803
960	1920	5572.6	7882	5805
961	1922	5580.3	7663	5807
962	1924	5588.5	8237	5809
963	1926	5597.0	8447	5812
964	1928	5604.8	7794	5814
965	1930	5612.3	7556	5816
966	1932	5622.1	9753	5820
967	1934	5628.8	6668	5821
968	1936	5636.4	7679	5823
969	1938	5643.2	6718	5824
970	1940	5650.2	7058	5825
971	1942	5658.2	7982	5827
972	1944	5666.0	7760	5829
973	1946	5672.7	6692	5830
974	1948	5680.3	7615	5832
975	1950	5687.9	7627	5834
976	1952	5695.5	7596	5836
977	1954	5703.1	7628	5837
978	1956	5710.7	7578	5839
979	1958	5717.9	7173	5841
980	1960	5725.5	7621	5842
981	1962	5732.3	6797	5843
982	1964	5738.7	6406	5844
983	1966	5745.0	6293	5844
984	1968	5751.9	6913	5845
985	1970	5759.3	7412	5847
986	1972	5766.4	7057	5848
987	1974	5773.8	7451	5850
988	1976	5781.4	7602	5852
989	1978	5789.1	7662	5853
990	1980	5796.6	7500	5855
991	1982	5804.2	7580	5857
992	1984	5811.8	7658	5859
993	1986	5819.5	7672	5861
994	1988	5827.2	7722	5862
995	1990	5835.6	8421	5865
996	1992	5845.1	9470	5869
997	1994	5852.9	7784	5871
998	1996	5860.7	7855	5872
999	1998	5868.5	7777	5874
1000	2000	5876.2	7659	5876

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1001	2002	5882.9	6685	5877
1002	2004	5888.6	5751	5877
1003	2006	5896.2	7567	5879
1004	2008	5903.2	6989	5880
1005	2010	5909.7	6549	5880
1006	2012	5917.1	7406	5882
1007	2014	5924.9	7770	5884
1008	2016	5932.8	7885	5886
1009	2018	5940.7	7905	5888
1010	2020	5948.5	7848	5890
1011	2022	5956.4	7823	5892
1012	2024	5964.1	7717	5893
1013	2026	5970.2	6155	5894
1014	2028	5977.3	7114	5895
1015	2030	5985.3	7917	5897
1016	2032	5993.1	7864	5899
1017	2034	6001.0	7917	5901
1018	2036	6009.0	7981	5903
1019	2038	6016.9	7867	5905
1020	2040	6024.8	7921	5907
1021	2042	6032.8	7941	5909
1022	2044	6040.7	7921	5911
1023	2046	6048.6	7962	5913
1024	2048	6056.6	7978	5915
1025	2050	6064.5	7909	5917
1026	2052	6072.5	8017	5919
1027	2054	6080.6	8025	5921
1028	2056	6088.6	8084	5923
1029	2058	6096.7	8092	5925
1030	2060	6104.8	8011	5927
1031	2062	6112.7	7968	5929
1032	2064	6120.5	7740	5931
1033	2066	6128.2	7704	5932
1034	2068	6137.0	8821	5935
1035	2070	6144.3	7336	5937
1036	2072	6152.2	7911	5938
1037	2074	6159.3	7040	5940
1038	2076	6167.1	7790	5941
1039	2078	6175.4	8290	5944
1040	2080	6183.0	7637	5945
1041	2082	6190.8	7860	5947
1042	2084	6198.7	7855	5949
1043	2086	6206.6	7942	5951
1044	2088	6214.5	7881	5953
1045	2090	6222.6	8041	5955
1046	2092	6230.7	8106	5957
1047	2094	6238.8	8094	5959
1048	2096	6246.8	8058	5961
1049	2098	6254.8	8005	5963
1050	2100	6262.7	7854	5964

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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1051	2102	6270.2	7509	5966
1052	2104	6278.0	7777	5968
1053	2106	6285.1	7087	5969
1054	2108	6291.8	6748	5969
1055	2110	6299.6	7797	5971
1056	2112	6306.8	7222	5972
1057	2114	6314.6	7807	5974
1058	2116	6322.4	7800	5976
1059	2118	6330.4	8006	5978
1060	2120	6338.4	7953	5980
1061	2122	6346.3	7951	5981
1062	2124	6352.7	6356	5982
1063	2126	6357.5	4830	5981
1064	2128	6363.8	6301	5981
1065	2130	6370.6	6809	5982
1066	2132	6377.6	6960	5983
1067	2134	6385.5	7878	5985
1068	2136	6394.1	8631	5987
1069	2138	6402.3	8149	5989
1070	2140	6410.2	7993	5991
1071	2142	6419.0	8766	5993
1072	2144	6426.9	7875	5995
1073	2146	6435.1	8206	5997
1074	2148	6443.5	8366	5999
1075	2150	6451.7	8250	6002
1076	2152	6459.9	8193	6004
1077	2154	6468.9	9018	6006
1078	2156	6476.9	7945	6008
1079	2158	6485.0	8126	6010
1080	2160	6492.4	7433	6012
1081	2162	6499.3	6873	6012
1082	2164	<del>6506.7</del>	7392	<del>6014</del> 5978
1083	2166	6514.1	7416	6015
1084	2168	6521.8	7665	6016
1085	2170	6530.1	8373	6019
1086	2172	6538.4	8298	6021
1087	2174	6546.7	8263	6023
1088	2176	6554.7	7994	6025
1089	2178	6562.5	7766	6026
1090	2180	6570.3	7796	6028
1091	2182	6578.2	7964	6030
1092	2184	6586.2	7990	6031
1093	2186	6593.9	7729	6033
1094	2188	6601.7	7709	6034
1095	2190	6609.3	7663	6036
1096	2192	6617.0	7643	6037
1097	2194	6625.0	8003	6039
1098	2196	6633.3	8382	6041
1099	2198	6641.2	7902	6043
1100	2200	6648.9	7629	6044

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CONOCO, INC.  
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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1101	2202	6658.5	9590	6048
1102	2204	6666.9	8465	6050
1103	2205	6674.6	7697	6051
1104	2208	6681.6	6988	6052
1105	2210	6690.1	8527	6054
1106	2212	6698.2	8105	6056
1107	2214	6706.3	8082	6058
1108	2216	6715.0	8627	6060
1109	2218	6724.0	9049	6063
1110	2220	6733.0	9042	6066
1111	2222	6741.9	8834	6068
1112	2224	6752.0	10156	6072
1113	2226	6761.1	9034	6073
1114	2228	6770.5	9390	6078
1115	2230	6779.7	9262	6080
1116	2232	6789.0	9328	6083
1117	2234	6798.1	9039	6086
1118	2236	6807.2	9095	6089
1119	2238	6816.6	9452	6092
1120	2240	6825.6	8968	6094
1121	2242	6834.6	9013	6097
1122	2244	6843.0	8386	6099
1123	2246	6853.1	10089	6102
1124	2248	6863.1	10047	6106
1125	2250	6874.3	11187	6111
1126	2252	6885.1	10777	6115
1127	2254	6895.9	10842	6119
1128	2256	6905.7	9782	6122
1129	2258	6916.8	11056	6126
1130	2260	6927.2	10373	6130
1131	2262	6937.3	10185	6134
1132	2264	6948.6	11226	6138
1133	2266	6960.1	11489	6143
1134	2268	6970.1	10074	6146
1135	2270	6981.9	11801	6151
1136	2272	6993.5	11524	6156
1137	2274	7004.8	11320	6161
1138	2276	7016.1	11293	6165
1139	2278	7027.6	11499	6170
1140	2280	7037.2	9658	6173
1141	2282	7048.1	10885	6177
1142	2284	7058.7	10571	6181
1143	2286	7070.0	11343	6185
1144	2288	7080.8	10765	6189
1145	2290	7090.1	9343	6192
1146	2292	7101.7	11584	6197
1147	2294	7113.8	12092	6202
1148	2296	7124.4	10645	6206
1149	2298	7136.0	11545	6211
1150	2300	7146.9	10894	6215

COMOCO, INC.  
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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1151	2302	7157.3	10455	6218
1152	2304	7167.1	9764	6221
1153	2306	7180.8	13704	6228
1154	2308	7194.5	13709	6234
1155	2310	7209.7	15161	6242
1156	2312	7224.6	14889	6250
1157	2314	7240.9	16309	6258
1158	2316	7258.0	17105	6268
1159	2318	7273.7	15687	6276
1160	2320	7290.6	16878	6285
1161	2322	7305.4	14823	6292
1162	2324	7320.2	14814	6300
1163	2326	7333.7	13531	6306
1164	2328	7345.4	11682	6310
1165	2330	7356.9	11522	6315
1166	2332	7367.0	10046	6318
1167	2334	7378.1	11085	6322
1168	2336	7388.9	10864	6326
1169	2338	7400.7	11829	6331
1170	2340	7412.7	11972	6336
1171	2342	7423.9	11225	6340
1172	2344	7435.0	11077	6344
1173	2346	7445.8	10748	6348
1174	2348	7456.8	10984	6352
1175	2350	7468.8	12082	6356
1176	2352	7479.7	10835	6360
1177	2354	7490.9	11241	6364
1178	2356	7502.8	11852	6369
1179	2358	7514.1	11358	6373
1180	2360	7525.4	11308	6377
1181	2362	7536.3	10915	6381
1182	2364	7547.4	11096	6385
1183	2366	7558.2	10805	6389
1184	2368	7568.4	10189	6392
1185	2370	7579.0	10517	6396
1186	2372	7589.2	10292	6399
1187	2374	7599.7	10411	6402
1188	2376	7610.3	10623	6406
1189	2378	7621.5	11182	6410
1190	2380	7632.0	10577	6413
1191	2382	7644.3	12298	6418
1192	2384	7655.3	10989	6422
1193	2386	7666.9	11614	6427
1194	2388	7678.1	11130	6431
1195	2390	7689.5	11444	6435
1196	2392	7700.7	11236	6439
1197	2394	7712.3	11523	6443
1198	2396	7723.5	11219	6447
1199	2398	7734.2	10691	6451
1200	2400	7745.1	10910	6454

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CONOCO, INC.  
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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1201	2402	7756.2	11158	6458
1202	2404	7767.2	10960	6462
1203	2406	7778.0	10747	6465
1204	2408	7789.3	11339	6470
1205	2410	7799.6	10302	6473
1206	2412	7809.6	9977	6476
1207	2414	7820.0	10477	6479
1208	2416	7829.7	9642	6482
1209	2418	7838.7	8992	6484
1210	2420	7849.0	10272	6487
1211	2422	7859.8	10815	6490
1212	2424	7871.1	11296	6494
1213	2426	7881.7	10623	6498
1214	2428	7891.9	10217	6501
1215	2430	7902.5	10620	6504
1216	2432	7912.9	10333	6507
1217	2434	7923.1	10227	6510
1218	2436	7933.6	10505	6514
1219	2438	7944.1	10555	6517
1220	2440	7954.5	10305	6520
1221	2442	7964.8	10308	6523
1222	2444	7975.1	10320	6526
1223	2446	7984.7	9669	6529
1224	2448	7994.7	9959	6532
1225	2450	8003.4	8700	6533
1226	2452	8012.1	8739	6535
1227	2454	8020.2	8100	6536
1228	2456	8028.7	8407	6538
1229	2458	8038.2	9549	6540
1230	2460	8047.2	8960	6542
1231	2462	8057.2	10020	6545
1232	2464	8066.5	9302	6547
1233	2466	8075.5	9045	6549
1234	2468	8084.6	9028	6552
1235	2470	8093.9	9346	6554
1236	2472	8102.4	8507	6555
1237	2474	8110.3	7846	6556
1238	2476	8120.0	9781	6559
1239	2478	8130.3	10267	6562
1240	2480	8139.2	8935	6564
1241	2482	8148.2	8947	6566
1242	2484	8158.0	9806	6568
1243	2486	8167.9	9863	6571
1244	2488	8176.9	9028	6573
1245	2490	8186.3	9426	6575
1246	2492	8195.7	9360	6578
1247	2494	8204.9	9213	6580
1248	2496	8214.4	9524	6582
1249	2498	8223.6	9217	6584
1250	2500	8233.1	9491	6586

CONOCO, INC.  
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INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1251	2502	8242.8	9638	6589
1252	2504	8252.3	9581	6591
1253	2506	8261.7	9351	6594
1254	2508	8271.3	9643	6596
1255	2510	8281.0	9692	6598
1256	2512	8290.8	9826	6601
1257	2514	8300.6	9739	6603
1258	2516	8310.4	9844	6605
1259	2518	8319.9	9467	6608
1260	2520	8329.2	9267	6610
1261	2522	8339.3	10180	6613
1262	2524	8348.7	9352	6615
1263	2526	8357.9	9245	6618
1264	2528	8367.9	9942	6620
1265	2530	8377.2	9337	6622
1266	2532	8386.8	9570	6625
1267	2534	8396.5	9669	6627
1268	2536	8405.8	9340	6629
1269	2538	8414.9	9127	6631
1270	2540	8424.4	9519	6633
1271	2542	8435.9	11425	6637
1272	2544	8446.4	10525	6640
1273	2546	8458.2	11766	6644
1274	2548	8470.2	11997	6648
1275	2550	8483.7	13578	6654
1276	2552	8498.8	15080	6661
1277	2554	8513.2	14365	6667
1278	2556	8527.9	14694	6673
1279	2558	8541.0	13124	6678
1280	2560	8553.5	12480	6682
1281	2562	8567.6	14086	6688
1282	2564	8582.0	14389	6694
1283	2566	8596.3	14335	6700
1284	2568	8610.1	13771	6706
1285	2570	8624.7	14627	6712
1286	2572	8639.6	14958	6718
1287	2574	8654.8	15137	6725
1288	2576	8668.9	14091	6730
1289	2578	8683.1	14210	6736
1290	2580	8698.3	15176	6743
1291	2582	8712.9	14625	6749
1292	2584	8726.5	13595	6754
1293	2586	8740.5	14041	6760
1294	2588	8754.7	14164	6766
1295	2590	8768.9	14267	6771
1296	2592	8782.3	13347	6776
1297	2594	8797.0	14708	6783
1298	2596	8811.2	14205	6788
1299	2598	8824.8	13549	6794
1300	2600	8836.8	12077	6798

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CONOCO, INC.  
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 FEDERAL CO., CALIFORNIA

INTEGRATED ONE-WAY TIME (MS)	TWO-WAY TIME (MS)	DEPTH BELOW DATUM (FEET)	INTERVAL VELOCITY (FEET/SEC)	AVERAGE VELOCITY (FEET/SEC)
1301	2602	8849.8	12940	6802
1302	2604	8862.7	12943	6807
1303	2606	8876.7	13958	6812
1304	2608	8890.6	13886	6818
1305	2610	8903.3	12688	6822
1306	2612	8917.3	14090	6828
1307	2614	8930.5	13165	6833
1308	2616	8942.7	12147	6837
1309	2618	8954.5	11809	6841
1310	2620	8968.4	13910	6846
1311	2622	8982.4	14041	6852
1312	2624	8998.4	16018	6859
1313	2626	9012.1	13703	6864
1314	2628	9024.0	11835	6868
1315	2630	9037.5	13523	6873
1316	2632	9049.1	11635	6876
1317	2634	9061.6	12522	6881
1318	2636	9073.5	11861	6884
1319	2638	9084.9	11377	6888
1320	2640	9097.9	12992	6892
1321	2642	9111.0	13125	6897
1322	2644	9123.9	12890	6902
1323	2646	9136.6	12739	6906
1324	2648	9150.9	14282	6912
1325	2650	9165.1	14147	6917
1326	2652	9178.5	13450	6922
1327	2654	9194.4	15851	6929
1328	2656	9208.1	13693	6934
1329	2658	9222.0	13951	6939
1330	2660	9237.5	15474	6945
1331	2662	9250.6	13157	6950
1332	2664	9263.7	13079	6955
1333	2666	9277.3	13546	6960
1334	2668	9288.4	11160	6963
1335	2670	9298.6	10164	6965

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CONOCO, INC.  
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 FEDERAL COUNTY, CALIFORNIA

ELEV.		ELEV. DAT.	T.D.	DATE	
37 ft. R.T.		SEA LEVEL	9342	1/16/83	
DEPTH BELOW		ITEM	LOG Tgd	GEO. Tgd	DIFF.
R.T.	DATUM				
1581	1544	WATER DEPTH	0.3088	0.3088	.0000
2500	2463	GEOPHONE LEVEL	0.4862	0.4887	-.0025
3000	2963	" "	0.5727	0.5728	-.0001
3500	3463	" "	0.6536	0.6538	-.0002
4000	3963	" "	0.7289	0.7278	.0011
4500	4463	" "	0.8062	0.8069	-.0007
5000	4963	" "	0.8795	0.8799	-.0004
5500	5463	" "	0.9460	0.9459	.0001
6000	5963	" "	1.0119	1.0119	.0000
6250	6213	" "	1.0438	1.0449	-.0011
6500	6463	" "	1.0763	1.0769	-.0006
6750	6713	" "	1.1078	1.1079	-.0001
6800	6763	" "	1.1132	1.1139	-.0007
7000	6963	" "	1.1333	1.1329	.0004
7250	7213	" "	1.1552	1.1549	.0003
7400	7363	" "	1.1656	1.1659	-.0003
7500	7463	" "	1.1745	1.1749	-.0004
7750	7713	" "	1.1971	1.1979	-.0008
8000	7963	" "	1.2208	1.2219	-.0011
8250	8213	" "	1.2479	1.2479	.0000
8500	8463	" "	1.2734	1.2729	.0005
8750	8713	" "	1.2910	1.2909	.0001
9000	8963	" "	1.3096	1.3099	-.0003
9250	9213	" "	1.3284	1.3279	.0005
9334	9297	" "	*	*	

\* This level not used in calibration of log.