

Velocity Data



WELL VELOCITY SURVEY

HUNT #1

EP 10 NT

Northern Territory

for

Pacific Oil and Gas Pty

recorded by

VELOCITY DATA PTY. LTD.

processed by



Integrated Seismic Technologies

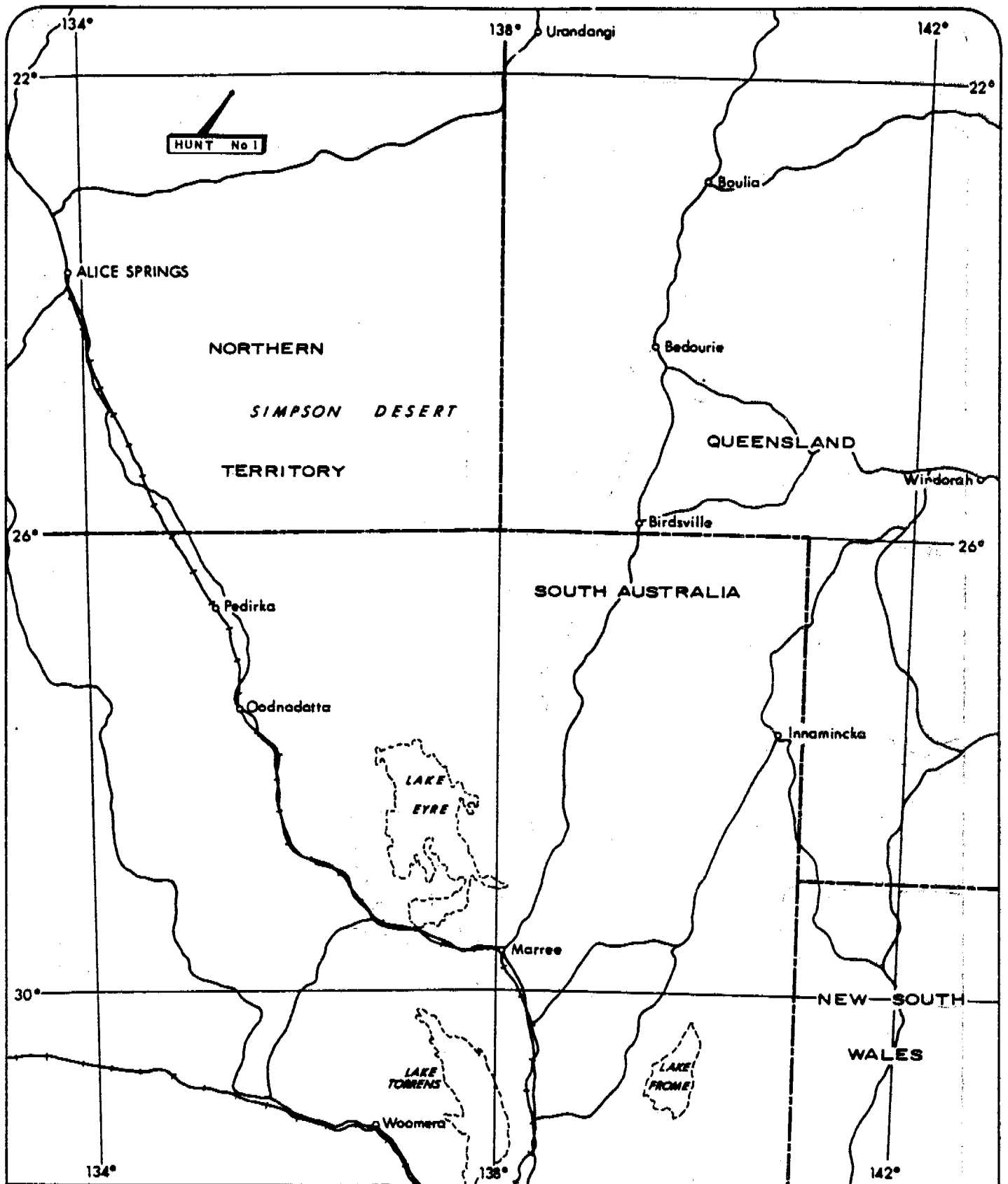
Brisbane, Australia

September 26, 1991

304415

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HUNT # 1
PACIFIC OIL & GAS
WELL LOCATION MAP

Scale 1:5000000

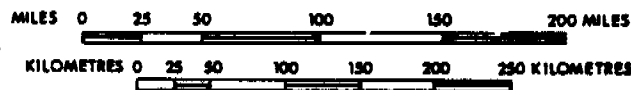
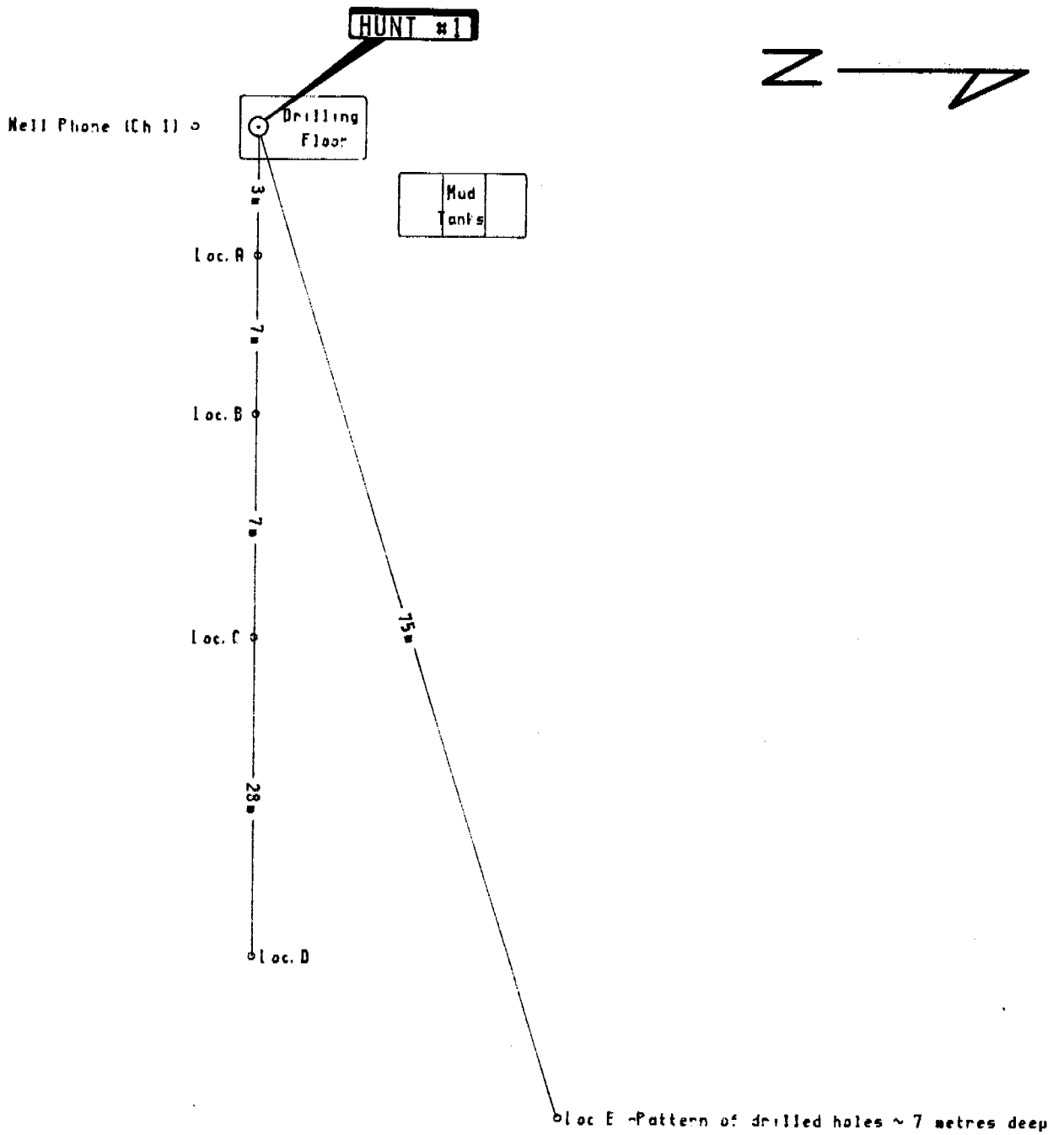


Figure 1



HUNT #1

PACIFIC OIL and GAS
 SHOT POINT LOCATION SKETCH



Figure 2

SUMMARY

Velocity Data Pty. Ltd. conducted a velocity survey for Pacific Oil & Gas Pty Ltd in the Hunt No.1 well, EP-10-NT, Georgina Basin, Northern Territory. The date of the survey was 26th May 1990.

The results of the survey, which are considered to be reliable, have been used to calibrate the sonic log.

Explosives were used as an energy source with shots being fired in the mud pit.

GENERAL INFORMATION

Name of Well	:	Hunt #1
Location (Figure 1)	:	EP 10 NT
Coordinates	:	Latitude 022 09' 37.3"
	:	Longitude 135 56' 28.0"
Date of Survey	:	May 26th 1991.
Wireline Logging	:	BPB # V333.
Weather	:	Fine
Operational Base	:	Brisbane
Operator	:	N. Delfos
Shooter	:	M. Ford
Client Representative	:	Mr. G. King

EQUIPMENT**Downhole Tool****FM Monoline (48 mm)****Sensors:**

4 SM6 4.5 Hz - 375 ohm connected in series parallel.

Preamplifier:

-48 dB fixed gain

Time Delay:

4 milliseconds

Reference Geophone

Mark Products L1 (4.5 Hz)

Recording Instrument

VDLS 11/10 software controlled digital recording system utilising SIE OPA-10 floating point amplifiers for digital recording and SIE OPA-4 amplifiers for analog presentation. The system includes a DEC LSI-11 CPU, twin cassette tape unit and printer.

RECORDING

Energy Source : Explosive, AN-60
 Shot Location : Mud pit
 Charge Size : 4 (125 grm) sticks
 Average Shot Depth : 6.2 metres
 Average Shot Offset : 75 metres
 Recording Geometry : Figure 2

Shots were recorded on digital cassette tape. Printouts of the shots used are included with this report. (Enclosure 2)

The sample rate was 1 ms with 0.5 ms sampling over a 200 ms window encompassing the first arrivals. The scale of the graphic display varies with signal strength and is noted on each playout.

The times were picked from the printouts using the numerical value of the signal strength. (Enclosure 2)

PROCESSING**Elevation Data**

Elevation of KB : 374.5 metres above sea level
 Elevation of Ground : 372.0 metres above sea level
 Elevation of Seismic Datum : 400.0 metres above sea level
 Depth Surveyed : 492.0 metres below KB
 Total Depth : 494.0 metres below KB
 Depth of Casing : 236.0 metres below KB
 Sonic Log Interval : 0.0 to 492.0 metres below KB

PROCESSING**Recorded Data**

Number of Shots Used : 20
 Number of Levels Recorded : 14
 Data Quality : Good
 Noise Level : Low

Correction for Instrument Delay and Shot Offset

The 'corrected' times shown on the calculation sheet have been obtained via:

- (i) Subtraction of the instrument delay (8 msec) from the recorded arrival times
- (ii) geometric correction for non-verticality of ray paths resulting from shot offset.
- (iii) shot static correction to correct for the depth of shot below ground level at the well head using a correction velocity of 1200.0 m/sec
- (iv) readdition of the instrument delay (8 msec).

Correction to Datum

A datum of 400.0 metres ASL was specified this level was not shot during the survey and information was used from the check shot at 30m below KB determine the effective datum correction. The datum is above ground and the calculation as follows:

$$\begin{aligned} \text{Datum time} &= - \left| \left((21.2 - 8) * 28 / 27.5 + 8 \right) - (2 * 8) \right| \\ &= -5.4 \text{msec} \end{aligned}$$

That is a proportionality of the corrected pick at 30m KB including allowances for the instrumentation delay.

PROCESSING

Calibration of Sonic Log - Method

The sonic log was modified to exclude data that lay within the bounds of the casing, some readings at TD were suspect and the resultant log was edited to an interval from 70.0 to 495.0 metres below KB.

Sonic times were adjusted to checkshot times using a polynomial derived least squares fit of the sonic transit times.

These differences arise as the sonic tool measures the local velocity characteristics of the formation with a high frequency signal, whereas the downhole geophone records the bulk velocity character using a signal of significantly lower frequency.

Calibration of Sonic Log - Results (Enclosure 1)

The discrepancies between shot and sonic interval velocities were generally small. The largest adjustment was $-55.0 \mu\text{s}/\text{metre}$ on the interval 367 to 387 metres below KB.

In aggregate, the shot and sonic interval times differed by 5.2 msec over the logged portion of the well.

PROCESSING**Trace Playouts (Figure 4)**

Figure 4A is a plot of all traces used. No filter or gain recovery has been applied.

Figure 4B is a plot to scale in depth and time of selected traces. No filter or gain recovery has been applied.

Figure 4C is a plot to scale in depth and time of selected traces with a 5 Hz - 40 Hz filter and a gain recovery function of t^2 applied.

Figure 4D is a plot of selected surface traces. No filter or gain recovery has been applied.



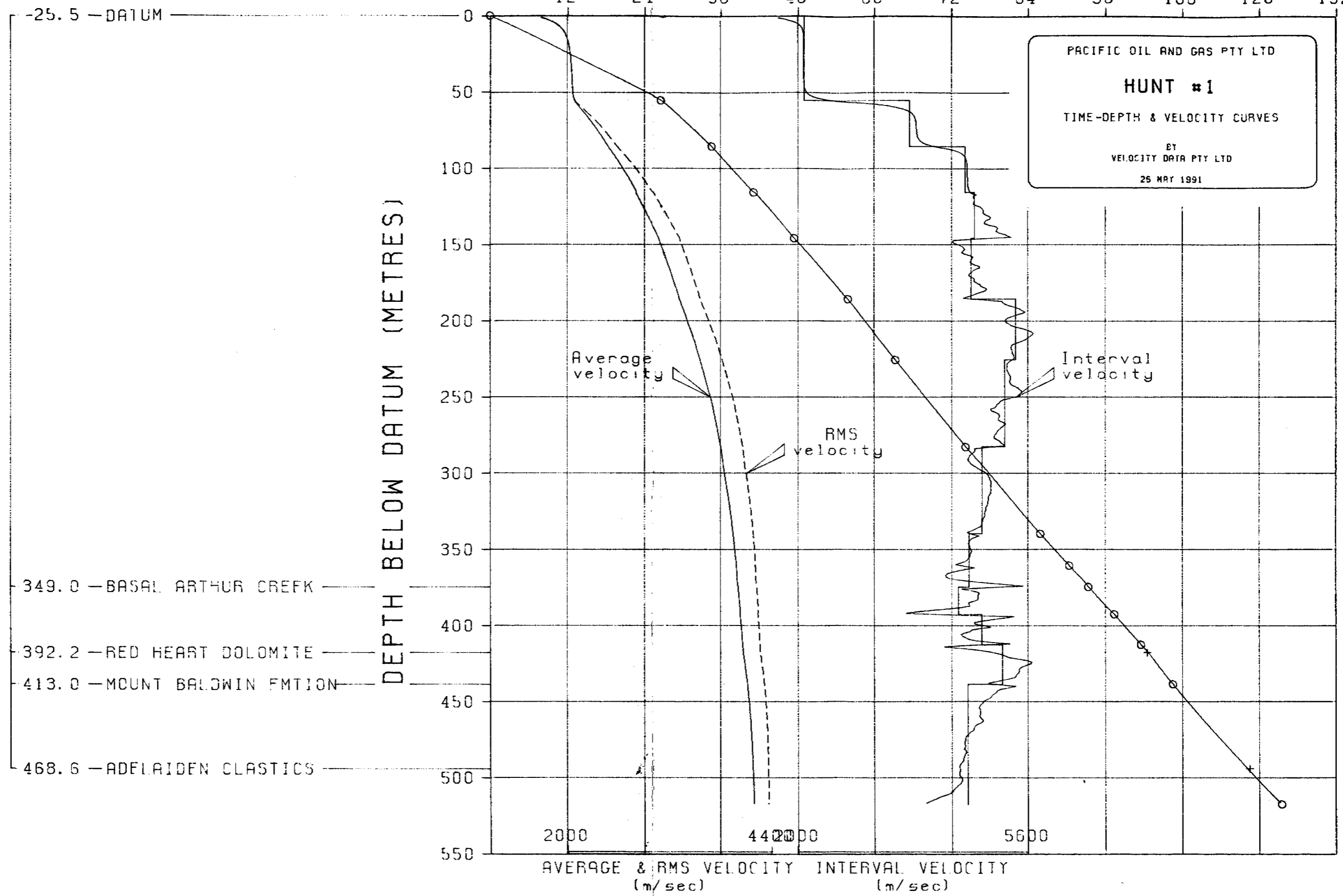
Geoffrey Bell
Geophysical Analyst.

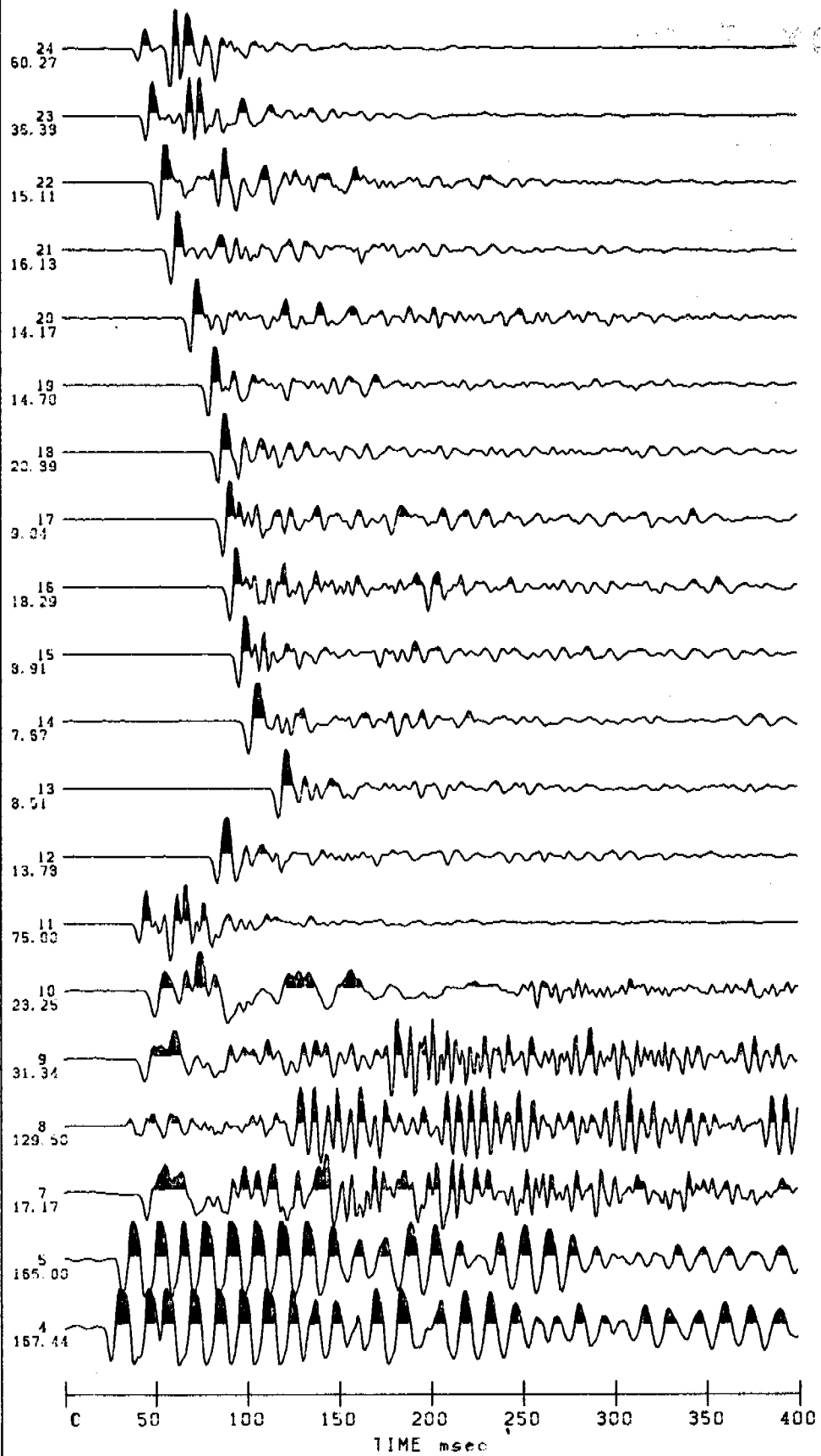
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+ SONIC POINT
O CHECK SHOT

ONE-WAY TIME (MSEC)

FIGURE 3



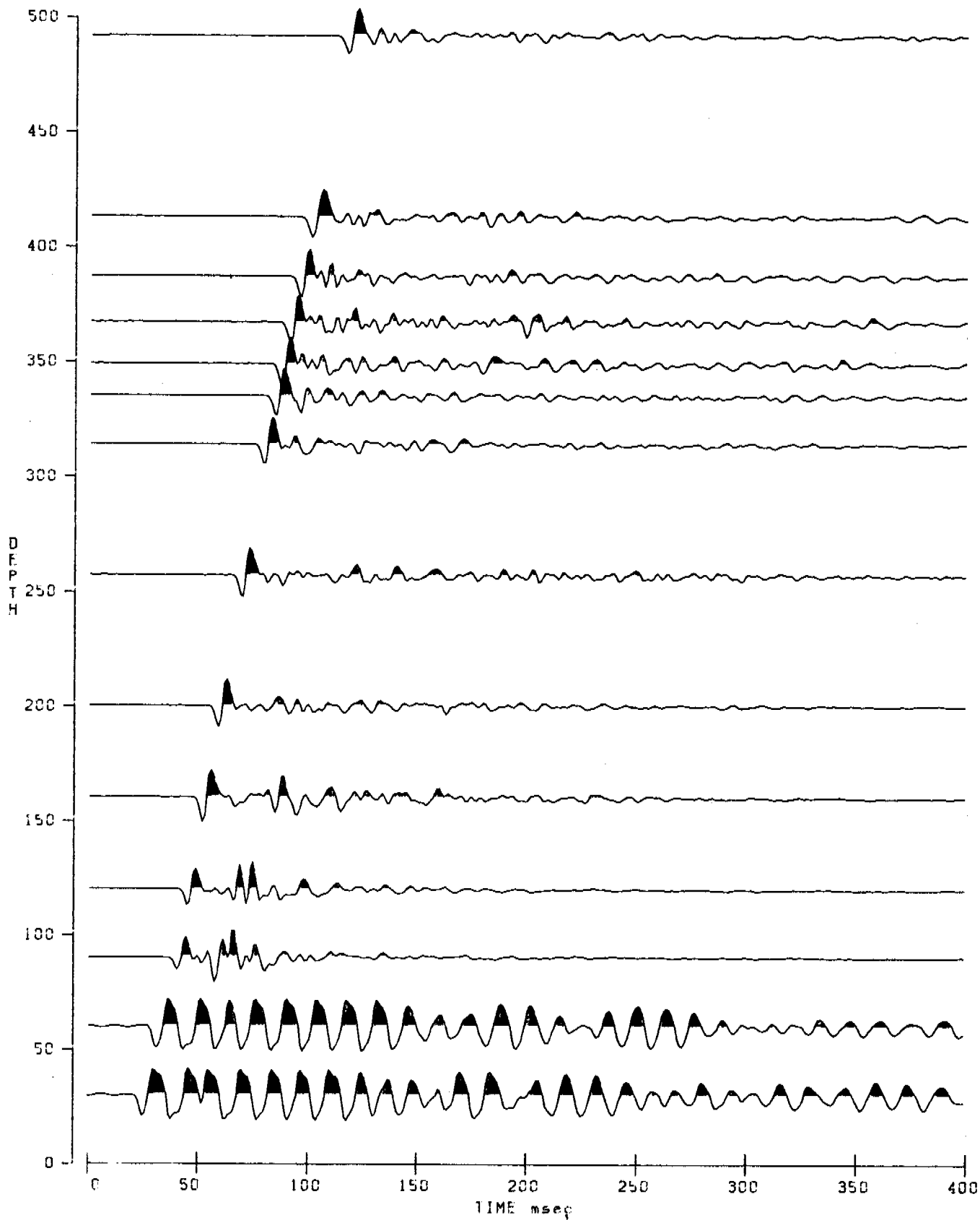


HUNT #1

VELOCITY SURVEY TRACE DISPLAY
 Filter OUT-OUT
 No gain recovery



Figure 4A



HUNT #1

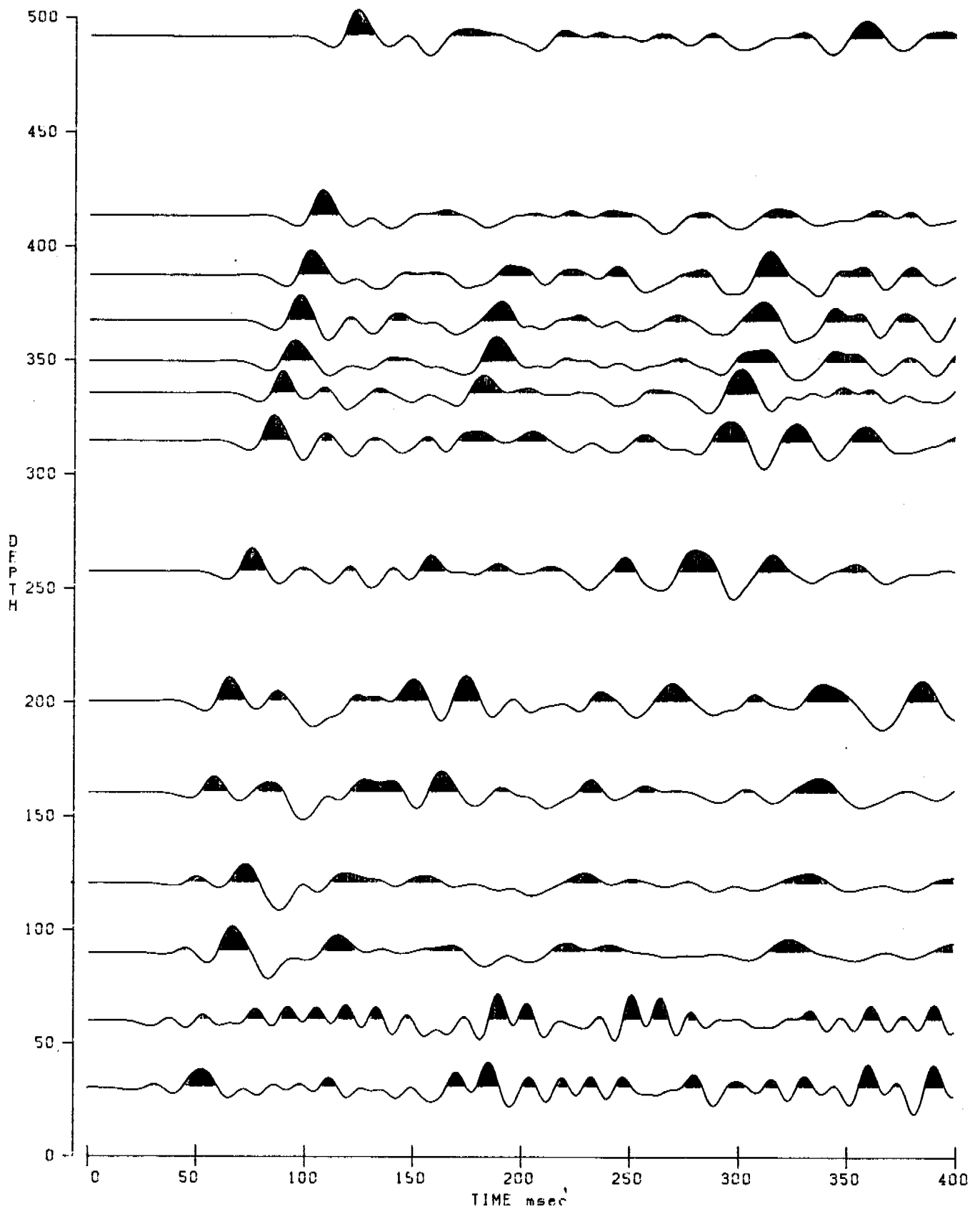
VELOCITY SURVEY TRACE DISPLAY

Filter OUT-OUT

No gain recovery



Figure 4B



HUNT #1

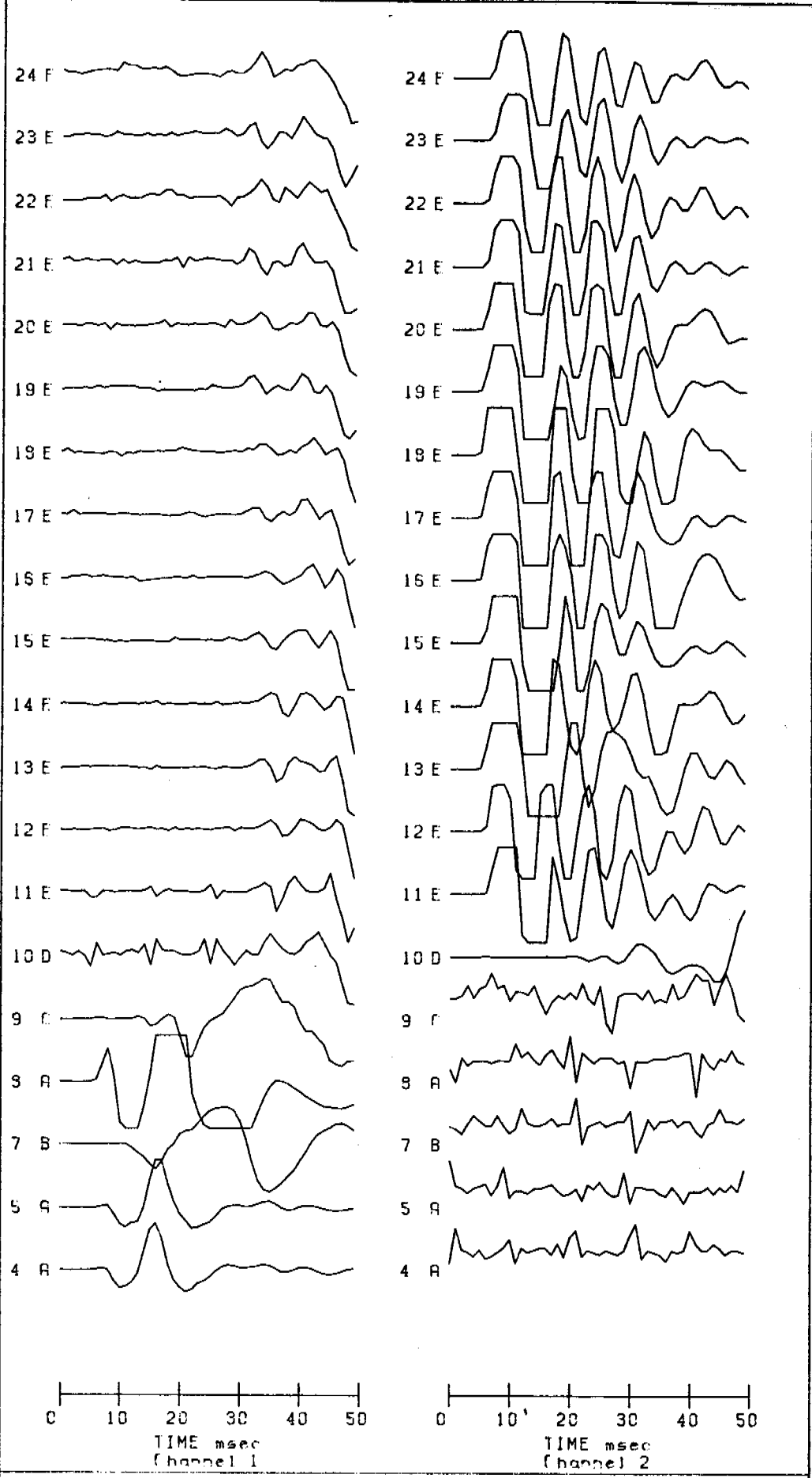
VELOCITY SURVEY TRACE DISPLAY

Filter 5-40

Gain $T^{2.0}$



Figure 40



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HUNT #1

VELOCITY SURVEY TRACE DISPLAY
 Auxiliary channels
 Filter OUT-OUT



Figure 4D

TABLE 1.

Time-Depth curve values

Page 1.

Well : HUNT #1

Survey units : METRES

Calibrated sonic interval velocities used from 116.0 to 517.0

Client : PACIFIC OIL AND GAS PTY LTD

Datum : 400.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
1.0	0.6	1688	1688	1688	41.0	19.9	2056	2058	2093
2.0	1.1	1744	1745	1804	42.0	20.4	2057	2059	2094
3.0	1.7	1790	1792	1891	43.0	20.9	2058	2060	2095
4.0	2.2	1829	1831	1934	44.0	21.4	2059	2061	2096
5.0	2.7	1860	1864	1998	45.0	21.8	2060	2062	2098
6.0	3.2	1886	1890	2028	46.0	22.3	2061	2062	2101
7.0	3.7	1908	1912	2049	47.0	22.8	2062	2063	2105
8.0	4.2	1926	1930	2063	48.0	23.3	2063	2064	2111
9.0	4.6	1941	1946	2073	49.0	23.7	2064	2065	2121
10.0	5.1	1954	1959	2079	50.0	24.2	2065	2067	2135
11.0	5.6	1965	1970	2084	51.0	24.7	2067	2069	2158
12.0	6.1	1975	1979	2087	52.0	25.1	2069	2071	2192
13.0	6.6	1983	1987	2088	53.0	25.6	2072	2074	2245
14.0	7.0	1991	1994	2090	54.0	26.0	2076	2078	2330
15.0	7.5	1997	2001	2091	55.0	26.4	2083	2085	2471
16.0	8.0	2003	2006	2091	56.0	26.8	2091	2095	2712
17.0	8.5	2008	2011	2092	57.0	27.1	2102	2109	3005
18.0	8.9	2012	2016	2092	58.0	27.4	2115	2125	3243
19.0	9.4	2016	2019	2092	59.0	27.7	2129	2142	3424
20.0	9.9	2020	2023	2092	60.0	28.0	2143	2161	3556
21.0	10.4	2023	2026	2092	61.0	28.3	2158	2181	3650
22.0	10.9	2026	2029	2092	62.0	28.5	2173	2200	3715
23.0	11.3	2029	2032	2092	63.0	28.8	2187	2219	3760
24.0	11.8	2031	2034	2092	64.0	29.1	2202	2239	3791
25.0	12.3	2034	2037	2092	65.0	29.3	2216	2258	3811
26.0	12.8	2036	2039	2092	66.0	29.6	2230	2276	3825
27.0	13.2	2038	2041	2092	67.0	29.9	2244	2294	3835
28.0	13.7	2040	2043	2092	68.0	30.1	2258	2312	3841
29.0	14.2	2042	2044	2092	69.0	30.4	2272	2330	3845
30.0	14.7	2043	2046	2092	70.0	30.6	2285	2347	3848
31.0	15.2	2045	2047	2092	71.0	30.9	2298	2363	3850
32.0	15.6	2046	2049	2092	72.0	31.2	2311	2380	3852
33.0	16.1	2048	2050	2092	73.0	31.4	2324	2395	3853
34.0	16.6	2049	2051	2092	74.0	31.7	2337	2411	3855
35.0	17.1	2050	2052	2092	75.0	31.9	2349	2426	3856
36.0	17.5	2051	2054	2092	76.0	32.2	2361	2441	3859
37.0	18.0	2052	2055	2093	77.0	32.4	2373	2456	3862
38.0	18.5	2054	2056	2093	78.0	32.7	2385	2470	3866
39.0	19.0	2054	2056	2093	79.0	33.0	2397	2484	3873
40.0	19.5	2055	2057	2093	80.0	33.2	2408	2498	3882

TABLE 1.

Time-Depth curve values

Page 2.

Well : HUNT #1

Client : PACIFIC OIL AND GAS PTY LTD

Survey units : METRES

Datum : 400.0

Calibrated sonic interval velocities used from 116.0 to 517.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
81.0	33.5	2419	2512	3897	121.0	42.3	2859	3041	4254
82.0	33.7	2431	2525	3920	122.0	42.6	2867	3049	4252
83.0	34.0	2442	2539	3954	123.0	42.8	2874	3057	4224
84.0	34.2	2454	2553	4007	124.0	43.0	2882	3065	4329
85.0	34.5	2465	2567	4088	125.0	43.3	2890	3073	4332
86.0	34.7	2477	2582	4214	126.0	43.5	2897	3082	4365
87.0	34.9	2489	2597	4348	127.0	43.7	2906	3090	4500
88.0	35.2	2502	2613	4444	128.0	43.9	2914	3101	4771
89.0	35.4	2515	2629	4511	129.0	44.1	2923	3111	4796
90.0	35.6	2527	2645	4556	130.0	44.4	2931	3119	4475
91.0	35.8	2540	2661	4587	131.0	44.6	2939	3127	4389
92.0	36.0	2552	2677	4608	132.0	44.8	2946	3134	4294
93.0	36.3	2564	2693	4622	133.0	45.0	2953	3141	4251
94.0	36.5	2577	2709	4631	134.0	45.3	2961	3150	4647
95.0	36.7	2589	2724	4637	135.0	45.5	2969	3159	4789
96.0	36.9	2601	2739	4641	136.0	45.7	2977	3169	4775
97.0	37.1	2613	2754	4644	137.0	45.9	2985	3177	4612
98.0	37.3	2624	2769	4646	138.0	46.1	2992	3184	4290
99.0	37.6	2636	2783	4647	139.0	46.4	2998	3190	4336
100.0	37.8	2647	2797	4648	140.0	46.6	3005	3197	4407
101.0	38.0	2659	2811	4649	141.0	46.8	3013	3207	4882
102.0	38.2	2670	2825	4649	142.0	47.0	3022	3218	5228
103.0	38.4	2681	2838	4650	143.0	47.2	3030	3226	4848
104.0	38.6	2692	2852	4650	144.0	47.4	3038	3235	4685
105.0	38.8	2703	2865	4650	145.0	47.6	3045	3243	4701
106.0	39.1	2714	2877	4651	146.0	47.8	3053	3251	4914
107.0	39.3	2724	2890	4651	147.0	48.0	3061	3261	4987
108.0	39.5	2735	2903	4652	148.0	48.2	3069	3269	4744
109.0	39.7	2745	2915	4653	149.0	48.4	3076	3277	4785
110.0	39.9	2755	2927	4655	150.0	48.6	3084	3285	4858
111.0	40.1	2765	2939	4657	151.0	48.9	3091	3293	4804
112.0	40.4	2776	2951	4661	152.0	49.1	3098	3300	4629
113.0	40.6	2786	2963	4667	153.0	49.3	3105	3309	4975
114.0	40.8	2795	2974	4676	154.0	49.5	3114	3319	5539
115.0	41.0	2805	2986	4690	155.0	49.6	3123	3330	5445
116.0	41.2	2817	2996	4709	156.0	49.8	3131	3339	5251
117.0	41.4	2826	3005	4452	157.0	50.0	3138	3347	4875
118.0	41.6	2835	3016	4592	158.0	50.2	3144	3353	4580
119.0	41.9	2843	3025	4396	159.0	50.5	3151	3360	4695
120.0	42.1	2851	3033	4206	160.0	50.7	3159	3369	5260

TABLE 1.

Time-Depth curve values

Page 3.

Well : HUNT #1

Client : PACIFIC OIL AND GAS PTY LTD

Survey units : METRES

Datum : 400.0

Calibrated sonic interval velocities used from 116.0 to 517.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
161.0	50.8	3167	3379	5304	201.0	58.6	3430	3665	4899
162.0	51.0	3175	3389	5336	202.0	58.8	3435	3670	4943
163.0	51.2	3183	3398	5352	203.0	59.0	3441	3675	5112
164.0	51.4	3191	3407	5311	204.0	59.2	3447	3682	5344
165.0	51.6	3198	3415	5142	205.0	59.4	3453	3689	5424
166.0	51.8	3205	3422	4990	206.0	59.6	3459	3695	5423
167.0	52.0	3212	3430	5074	207.0	59.7	3465	3701	5323
168.0	52.2	3220	3439	5336	208.0	59.9	3471	3708	5417
169.0	52.4	3228	3448	5359	209.0	60.1	3477	3715	5569
170.0	52.6	3234	3454	4890	210.0	60.3	3483	3722	5562
171.0	52.8	3240	3461	4878	211.0	60.5	3489	3728	5501
172.0	53.0	3247	3469	5136	212.0	60.7	3495	3734	5317
173.0	53.2	3254	3476	4944	213.0	60.9	3500	3740	5234
174.0	53.4	3260	3483	5041	214.0	61.0	3506	3745	5144
175.0	53.6	3268	3491	5425	215.0	61.2	3511	3750	5108
176.0	53.7	3276	3500	5527	216.0	61.4	3516	3756	5107
177.0	53.9	3283	3509	5446	217.0	61.6	3521	3760	5022
178.0	54.1	3290	3517	5330	218.0	61.8	3525	3765	5000
179.0	54.3	3297	3524	5318	219.0	62.0	3530	3770	4986
180.0	54.5	3304	3532	5298	220.0	62.2	3535	3774	5042
181.0	54.7	3311	3540	5281	221.0	62.4	3540	3780	5209
182.0	54.9	3318	3548	5419	222.0	62.6	3545	3785	5261
183.0	55.0	3325	3555	5402	223.0	62.8	3550	3790	5210
184.0	55.2	3332	3563	5223	224.0	63.0	3555	3795	5148
185.0	55.4	3337	3568	4898	225.0	63.2	3560	3800	5115
186.0	55.6	3343	3574	4746	226.0	63.4	3565	3805	5135
187.0	55.9	3348	3579	4739	227.0	63.6	3570	3809	5111
188.0	56.1	3353	3584	4675	228.0	63.8	3574	3814	5034
189.0	56.3	3358	3588	4626	229.0	64.0	3579	3818	4991
190.0	56.5	3364	3594	5044	230.0	64.2	3583	3822	4941
191.0	56.7	3371	3602	5510	231.0	64.4	3587	3826	4951
192.0	56.8	3377	3610	5505	232.0	64.6	3592	3830	4990
193.0	57.0	3384	3618	5576	233.0	64.8	3596	3835	5097
194.0	57.2	3391	3625	5526	234.0	65.0	3601	3840	5173
195.0	57.4	3398	3633	5502	235.0	65.2	3606	3844	5097
196.0	57.6	3404	3639	5233	236.0	65.4	3610	3848	5108
197.0	57.8	3409	3645	5005	237.0	65.6	3615	3853	5141
198.0	58.0	3415	3650	4960	238.0	65.8	3619	3857	5097
199.0	58.2	3420	3655	4796	239.0	66.0	3623	3861	5053
200.0	58.4	3425	3659	4777	240.0	66.2	3628	3865	5059

TABLE 1.

Time-Depth curve values

Page 4.

Well : HUNT #1

Client : PACIFIC OIL AND GAS PTY LTD

Survey units : METRES

Datum : 400.0

Calibrated sonic interval velocities used from 116.0 to 517.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
241.0	66.4	3632	3870	5087	281.0	74.4	3777	4005	5014
242.0	66.6	3636	3874	5124	282.0	74.6	3781	4009	5194
243.0	66.7	3641	3878	5054	283.0	74.8	3785	4012	5187
244.0	66.9	3645	3882	5048	284.0	75.0	3788	4015	5046
245.0	67.1	3649	3886	5246	285.0	75.2	3791	4018	5084
246.0	67.3	3654	3891	5313	286.0	75.4	3795	4021	5097
247.0	67.5	3659	3897	5574	287.0	75.6	3798	4024	5037
248.0	67.7	3664	3902	5497	288.0	75.8	3801	4027	5016
249.0	67.9	3668	3906	5267	289.0	76.0	3804	4030	4999
250.0	68.1	3673	3911	5348	290.0	76.2	3807	4033	4919
251.0	68.3	3677	3915	5071	291.0	76.4	3810	4035	4887
252.0	68.5	3681	3918	4942	292.0	76.6	3813	4038	4901
253.0	68.7	3685	3922	5005	293.0	76.8	3816	4041	4927
254.0	68.9	3688	3925	4728	294.0	77.0	3819	4043	4913
255.0	69.1	3690	3926	4478	295.0	77.2	3822	4046	4993
256.0	69.3	3694	3929	4727	296.0	77.4	3824	4049	5165
257.0	69.5	3697	3933	5045	297.0	77.6	3829	4052	5210
258.0	69.7	3701	3936	5046	298.0	77.8	3832	4054	5241
259.0	69.9	3705	3940	5035	299.0	77.9	3834	4059	5281
260.0	70.1	3709	3943	5020	300.0	78.1	3839	4063	5307
261.0	70.3	3712	3946	4707	301.0	78.3	3843	4066	5273
262.0	70.5	3714	3948	4509	302.0	78.5	3846	4069	5321
263.0	70.7	3717	3951	4795	303.0	78.7	3850	4073	5376
264.0	70.9	3721	3954	5072	304.0	78.9	3854	4076	5342
265.0	71.1	3725	3958	5151	305.0	79.1	3857	4080	5327
266.0	71.3	3729	3962	5130	306.0	79.3	3861	4083	5326
267.0	71.5	3733	3965	5023	307.0	79.4	3864	4087	5344
268.0	71.7	3736	3968	4955	308.0	79.6	3868	4090	5348
269.0	71.9	3739	3971	4969	309.0	79.8	3871	4094	5431
270.0	72.1	3743	3975	5039	310.0	80.0	3875	4097	5385
271.0	72.3	3747	3978	5040	311.0	80.2	3878	4100	5271
272.0	72.5	3750	3981	4907	312.0	80.4	3881	4104	5325
273.0	72.7	3753	3983	4783	313.0	80.6	3885	4107	5329
274.0	73.0	3756	3986	4821	314.0	80.8	3888	4110	5340
275.0	73.2	3759	3989	4869	315.0	80.9	3892	4114	5345
276.0	73.4	3762	3991	4803	316.0	81.1	3895	4117	5306
277.0	73.6	3765	3994	4821	317.0	81.3	3898	4120	5360
278.0	73.8	3768	3996	4840	318.0	81.5	3901	4123	5278
279.0	74.0	3771	3999	4843	319.0	81.7	3904	4126	5196
280.0	74.2	3774	4002	4931	320.0	81.9	3908	4129	5276

TABLE 1.

Time-Depth curve values

Page 5.

Well : HUNT #1

Client : PACIFIC OIL AND GAS PTY LTD

Survey units : METRES

Datum : 400.0

Calibrated sonic interval velocities used from 116.0 to 517.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
321.0	82.1	3911	4132	5303	361.0	90.2	4001	4208	4621
322.0	82.3	3914	4135	5275	362.0	90.5	4002	4209	4410
323.0	82.5	3917	4138	5276	363.0	90.7	4002	4209	4188
324.0	82.6	3920	4141	5291	364.0	90.9	4002	4209	4097
325.0	82.8	3923	4144	5265	365.0	91.2	4002	4208	3846
326.0	83.0	3926	4147	5223	366.0	91.5	4001	4206	3750
327.0	83.2	3929	4149	5214	367.0	91.7	4000	4205	3686
328.0	83.4	3932	4152	5182	368.0	92.0	3999	4203	3652
329.0	83.6	3935	4155	5182	369.0	92.3	3998	4202	3693
330.0	83.8	3938	4158	5241	370.0	92.5	3998	4201	3877
331.0	84.0	3941	4161	5288	371.0	92.8	3998	4201	4173
332.0	84.2	3944	4163	5283	372.0	93.0	3999	4201	4268
333.0	84.4	3947	4166	5129	373.0	93.2	4000	4202	4561
334.0	84.6	3950	4168	5151	374.0	93.4	4003	4205	5412
335.0	84.8	3952	4171	5191	375.0	93.6	4007	4209	5958
336.0	85.0	3955	4173	5074	376.0	93.8	4010	4212	5935
337.0	85.2	3958	4176	5131	377.0	93.9	4014	4216	5927
338.0	85.3	3960	4178	5200	378.0	94.1	4017	4220	5953
339.0	85.5	3963	4181	5022	379.0	94.3	4020	4223	5812
340.0	85.7	3965	4182	4835	380.0	94.4	4024	4227	5760
341.0	86.0	3967	4184	4820	381.0	94.6	4027	4230	5578
342.0	86.2	3969	4185	4691	382.0	94.8	4029	4232	5424
343.0	86.4	3971	4186	4616	383.0	95.0	4032	4235	5567
344.0	86.6	3972	4188	4750	384.0	95.2	4035	4238	5747
345.0	86.8	3974	4189	4627	385.0	95.3	4039	4242	5966
346.0	87.0	3976	4190	4586	386.0	95.5	4042	4246	5909
347.0	87.2	3977	4191	4648	387.0	95.7	4045	4249	5865
348.0	87.5	3979	4193	4713	388.0	95.9	4048	4251	5151
349.0	87.7	3981	4194	4762	389.0	96.1	4049	4253	4972
350.0	87.9	3983	4195	4693	390.0	96.2	4052	4256	5714
351.0	88.1	3985	4197	4767	391.0	96.4	4055	4258	5484
352.0	88.3	3986	4198	4761	392.0	96.6	4056	4259	4619
353.0	88.5	3988	4200	4732	393.0	96.9	4056	4259	3970
354.0	88.7	3990	4201	4758	394.0	97.2	4055	4257	3647
355.0	88.9	3992	4202	4707	395.0	97.5	4053	4255	3415
356.0	89.2	3993	4203	4566	396.0	97.7	4052	4253	3564
357.0	89.4	3995	4204	4594	397.0	98.0	4053	4253	4392
358.0	89.6	3996	4205	4676	398.0	98.2	4053	4253	4388
359.0	89.8	3998	4206	4651	399.0	98.5	4052	4252	3748
360.0	90.0	3999	4207	4571	400.0	98.7	4052	4251	3949

TABLE 1.

Time-Depth curve values

Page 6.

Well : HUNT #1

Client : PACIFIC OIL AND GAS PTY LTD

Survey units : METRES

Datum : 400.0

Calibrated sonic interval velocities used from 116.0 to 517.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
401.0	99.0	4052	4250	3848	441.0	106.9	4126	4326	4966
402.0	99.2	4050	4249	3604	442.0	107.1	4128	4327	5061
403.0	99.5	4050	4248	4019	443.0	107.3	4130	4329	5180
404.0	99.7	4052	4249	4765	444.0	107.5	4132	4331	5274
405.0	100.0	4052	4249	4108	445.0	107.7	4133	4332	5060
406.0	100.3	4050	4247	3330	446.0	107.9	4135	4333	4909
407.0	100.5	4048	4244	3385	447.0	108.1	4136	4334	4961
408.0	100.8	4046	4242	3530	448.0	108.3	4138	4336	4882
409.0	101.1	4044	4240	3382	449.0	108.5	4139	4336	4700
410.0	101.4	4043	4238	3454	450.0	108.7	4140	4337	4695
411.0	101.7	4042	4237	3832	451.0	108.9	4141	4338	4901
412.0	101.9	4043	4238	4529	452.0	109.1	4143	4339	4893
413.0	102.1	4046	4240	5396	453.0	109.3	4144	4340	4826
414.0	102.3	4048	4242	5349	454.0	109.5	4145	4341	4759
415.0	102.4	4051	4245	5539	455.0	109.7	4146	4342	4714
416.0	102.6	4053	4248	5492	456.0	109.9	4147	4343	4762
417.0	102.8	4056	4250	5298	457.0	110.2	4148	4343	4670
418.0	103.0	4058	4252	5416	458.0	110.4	4149	4344	4682
419.0	103.2	4061	4255	5500	459.0	110.6	4151	4345	4812
420.0	103.4	4063	4258	5724	460.0	110.8	4152	4346	4908
421.0	103.5	4067	4262	6380	461.0	111.0	4154	4347	4930
422.0	103.7	4071	4266	6697	462.0	111.2	4155	4348	4823
423.0	103.8	4074	4270	6411	463.0	111.4	4156	4349	4684
424.0	104.0	4077	4274	6130	464.0	111.6	4157	4350	4736
425.0	104.1	4081	4277	6193	465.0	111.8	4158	4351	4955
426.0	104.3	4084	4282	6608	466.0	112.0	4160	4352	4903
427.0	104.4	4088	4286	6770	467.0	112.2	4161	4352	4715
428.0	104.6	4091	4290	6117	468.0	112.5	4161	4353	4483
429.0	104.8	4094	4292	5621	469.0	112.7	4162	4353	4468
430.0	105.0	4097	4295	5805	470.0	112.9	4163	4354	4630
431.0	105.1	4100	4298	5939	471.0	113.1	4164	4354	4644
432.0	105.3	4103	4301	5945	472.0	113.3	4165	4355	4644
433.0	105.5	4106	4305	6000	473.0	113.5	4166	4355	4648
434.0	105.6	4109	4308	6236	474.0	113.8	4166	4356	4609
435.0	105.8	4112	4312	6501	475.0	114.0	4167	4356	4601
436.0	105.9	4116	4316	6412	476.0	114.2	4168	4357	4538
437.0	106.1	4119	4319	6016	477.0	114.4	4168	4356	4289
438.0	106.3	4121	4321	5421	478.0	114.7	4169	4357	4418
439.0	106.5	4123	4323	5072	479.0	114.9	4170	4357	4649
440.0	106.7	4124	4324	4953	480.0	115.1	4170	4357	4551

TABLE 1.

Time-Depth curve values

Page 7.

Well : HUNT #1

Client : PACIFIC OIL AND GAS PTY LTD

Survey units : METRES

Datum : 400.0

Calibrated sonic interval velocities used from 116.0 to 517.0

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
481.0	115.3	4171	4358	4580	499.0	119.3	4182	4363	4531
482.0	115.5	4172	4359	4693	500.0	119.5	4183	4363	4566
483.0	115.7	4173	4359	4676	501.0	119.8	4184	4364	4507
484.0	116.0	4174	4360	4530	502.0	120.0	4184	4364	4509
485.0	116.2	4174	4360	4464	503.0	120.2	4185	4364	4471
486.0	116.4	4175	4360	4490	504.0	120.4	4185	4364	4456
487.0	116.6	4176	4360	4543	505.0	120.6	4186	4365	4512
488.0	116.9	4176	4361	4498	506.0	120.9	4186	4365	4493
489.0	117.1	4177	4361	4441	507.0	121.1	4187	4365	4411
490.0	117.3	4177	4361	4499	508.0	121.3	4187	4365	4338
491.0	117.5	4178	4361	4604	509.0	121.6	4187	4365	4310
492.0	117.7	4179	4362	4617	510.0	121.8	4188	4365	4304
493.0	118.0	4180	4362	4494	511.0	122.0	4188	4364	4275
494.0	118.2	4180	4362	4313	512.0	122.3	4188	4364	4290
495.0	118.4	4180	4362	4290	513.0	122.5	4188	4364	4307
496.0	118.6	4180	4362	4443	514.0	122.7	4188	4364	4312
497.0	118.9	4181	4362	4521	515.0	123.0	4188	4364	4080
498.0	119.1	4182	4363	4484	516.0	123.2	4187	4363	3843

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WELSEIS PTY LTD

WELL SURVEY CALCULATIONS Page 1

Company : PACIFIC OIL AND GAS PTY LTD

Well : HUNT #1

Elevations : Datum : 400.0 Ground : 372.0 Kelly : 374.5

Shot data : Location	Elevation	Offset
A	372.0	3.0
B	372.0	10.0
C	372.0	17.0
D	372.0	45.0
E	372.0	75.0

Latitude : 022 09 37.3

Longitude : 135 56 28.0

Survey date : 26-MAY-91

Survey units : METRES

Times in milliseconds.

Rig identification : ROCKDRILL 21

Energy source : AN60

Logger : BPB V333

Near surface velocity

for shot statics: 1200

Instrument delay: 8.0 ms

SHOT CALCULATIONS

Shot No	Geophone depth		Shot Locn	Shot Depth	TIMES				Check shot interval		Velocities		
	Kelly	Datum			Record	Corr.	Avg.	Below datum	Distance	Time	Average	RMS	Interval
DATUM													
	-25.5	0.0					-5.4	0.0					
4	30.0	55.5	A	0.3	21.0	21.2	21.2	26.6	55.5	26.6	2086.5	2086.5	2086.5
5	60.0	85.5	A	0.3	29.0	29.2	29.2	34.6	30.0	8.0	2471.1	2568.7	3750.0
7	90.0	115.5	B	0.3	41.0	41.0	N/U		30.0	6.5			4615.4
8	90.0	115.5	A	0.3	34.0	34.2	N/U						
9	90.0	115.5	C	0.3	40.0	39.7	N/U						
10	90.0	115.5	D	0.3	45.0	41.1	N/U						
11	90.0	115.5	E	7.0	38.0	35.8							
24	90.0	115.5	E	6.9	38.0	35.7	35.7	41.1			2810.2	2987.2	
									30.0	6.3			4761.9
23	120.0	145.5	E	7.0	42.0	42.0	42.0	47.4			3069.6	3278.9	
									40.0	8.5			4705.9
22	160.0	185.5	E	7.0	49.0	50.5	50.5	55.9			3318.4	3533.3	
									40.0	7.4			5405.4
21	200.0	225.5	E	6.3	56.0	57.9	57.9	63.3			3562.4	3800.0	
									57.0	10.9			5229.4
20	257.0	282.5	E	6.3	66.0	68.8	68.8	74.2			3807.3	4041.8	
									57.0	11.7			4871.8
19	314.0	339.5	E	6.6	77.0	80.5	80.5	85.9			3952.3	4164.6	
									21.0	4.5			4666.7
12	335.0	360.5	E	6.4	81.0	84.5							
18	335.0	360.5	E	6.4	82.0	85.5	85.0	90.4			3987.8	4191.0	
									14.0	3.0			4666.7
BASAL ARTHUR CREEK													
17	349.0	374.5	E	6.9	84.0	88.0	88.0	93.4			4009.6	4207.1	
									18.0	4.0			4500.0
16	367.0	392.5	E	6.9	88.0	92.0	92.0	97.4			4029.8	4219.5	
									20.0	4.1			4878.1
15	387.0	412.5	E	6.9	92.0	96.1	96.1	101.5			4064.0	4248.1	
									26.0	5.0			5200.0
MOUNT BALDWIN FMTION													
14	413.0	438.5	E	6.7	97.0	101.1	101.1	106.5			4117.4	4297.5	

Company : PACIFIC OIL AND GAS PTY LTD
 Well : HUNT #1
 Elevations : Datum : 400.0 Ground : 372.0 Kelly : 374.5
 Shot data : Location Elevation Offset
 A 372.0 3.0
 B 372.0 10.0
 C 372.0 17.0
 D 372.0 45.0
 E 372.0 75.0

Latitude : 022 09 37.3
 Longitude : 135 56 28.0
 Rig identification : ROCKDRILL 21
 Energy source : AN60
 Logger : BPB V333
 Near surface velocity
 for shot statics: 1200
 Instrument delay: 8.0 ms

Survey date : 26-MAY-91
 Survey units : METRES
 Times in milliseconds.

SHOT CALCULATIONS

Shot No	Geophone depth		Shot Locn	Shot Depth	TIMES			Check shot interval		Velocities			
	Kelly	Datum			Record	Corr.	Avg.	Below datum	Distance	Time	Average	RMS	Interval
MOUNT BALDWIN FMTION													
14	413.0	438.5	E	6.7	97.0	101.1	101.1	106.5			4117.4	4297.5	
									79.0	17.0			4647.1
13	492.0	517.5	E	6.4	114.0	118.1	118.1	123.5			4190.3	4347.3	

Company : PACIFIC OIL AND GAS PTY LTD

Latitude : 022 09 37.3

Survey date : 26-MAY-91

Well : HUNT #1

Longitude : 135 56 28.0

Survey units : METRES

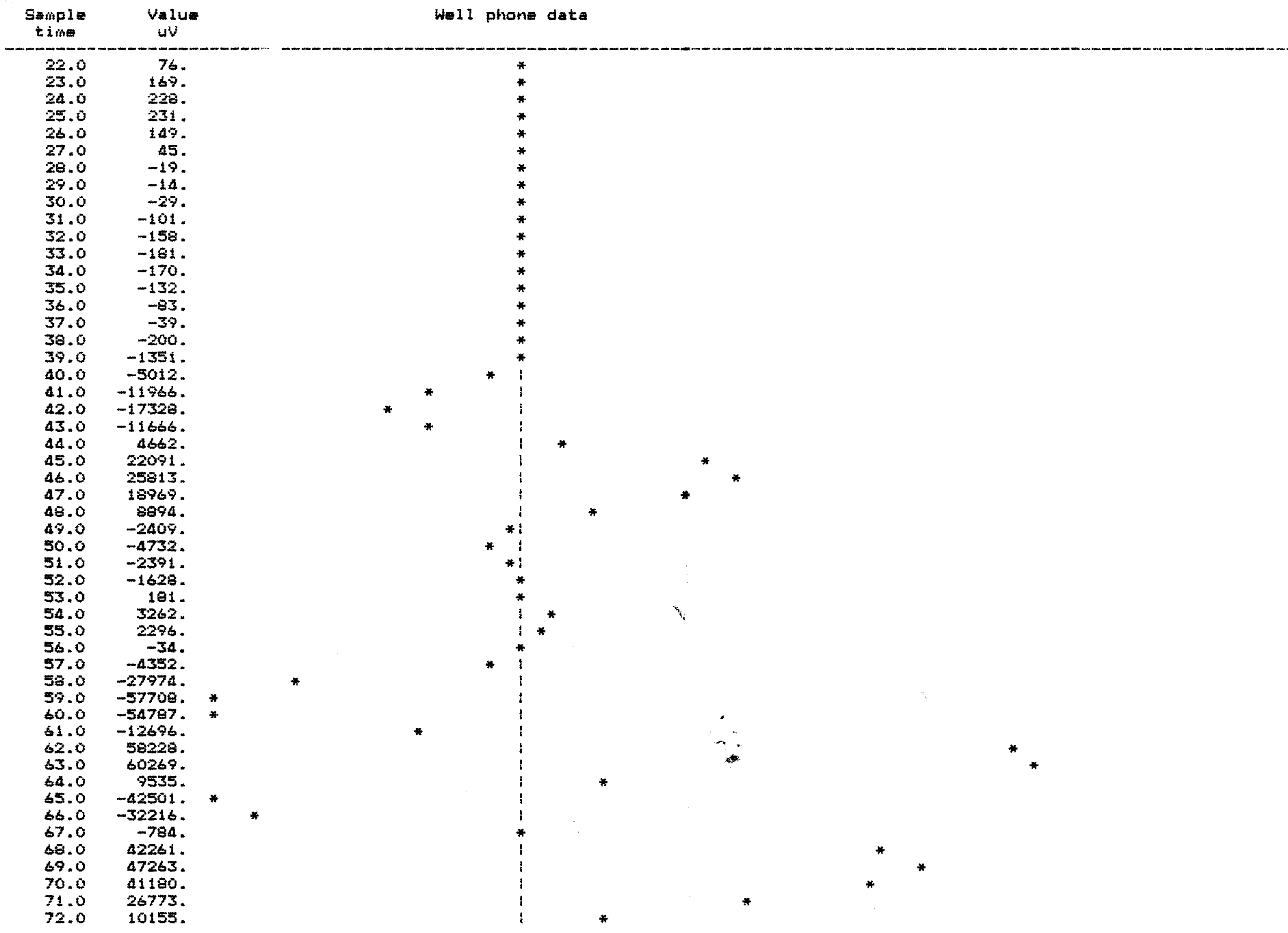
Elevations : Datum : 400.0 Ground : 372.0 Kelly : 374.5

Times in milliseconds.

SONIC DRIFT

Geophone depth		Check shot times		Check shot interval		Sonic	Interval sonic drift		Cumulative
Kelly	Datum	Average	Below datum	Distance	Time	Int. time	usec/m	msec	drift msec
DATUM									
-25.5	0.0	-5.4	0.0						
				55.5	26.6				
30.0	55.5	21.2	26.6	30.0	8.0				
60.0	85.5	29.2	34.6	30.0	6.5				
90.0	115.5	35.7	41.1	30.0	6.3	5.8	16.67	0.5	0.5
120.0	145.5	42.0	47.4	40.0	8.5	7.2	32.50	1.3	1.8
160.0	185.5	50.5	55.9	40.0	7.4	7.2	5.00	0.2	2.0
200.0	225.5	57.9	63.3	57.0	10.9	10.4	8.77	0.5	2.5
257.0	282.5	68.8	74.2	57.0	11.7	10.1	28.07	1.6	4.1
314.0	339.5	80.5	85.9	21.0	4.5	4.3	9.52	0.2	4.3
335.0	360.5	85.0	90.4	14.0	3.0	3.2	-14.29	-0.2	4.1
BASAL ARTHUR CREEK									
349.0	374.5	88.0	93.4	18.0	4.0	3.2	44.44	0.8	4.9
367.0	392.5	92.0	97.4	20.0	4.1	5.2	-55.00	-1.1	3.8
387.0	412.5	96.1	101.5	26.0	5.0	4.4	23.08	0.6	4.4
MOUNT BALDWIN FMTION									
413.0	438.5	101.1	106.5	79.0	17.0	16.2	10.13	0.8	5.2
492.0	517.5	118.1	123.5						

FIRST ARRIVAL PLOT - Shot 24 Level 90.0



TRACE DISPLAY.

SHOT 24 Time 06:21:40 Level : 90.0 Shot location : E
Shot depth : 6.9 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

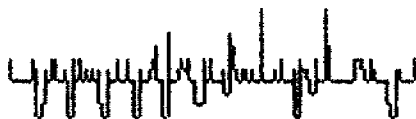
AUX. CHANNEL 1 Max. 571mV



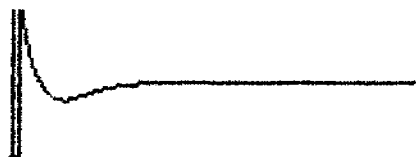
AUX. CHANNEL 2 Max. 10000mV



AUX. CHANNEL 3 Max. 29mV



AUX. CHANNEL 4 Max. 10000mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 60.269

FIRST ARRIVAL PLOT - Shot 23 Level 120.0

Sample time	Value μV	Well phone data
26.0	-12.	*
27.0	-71.	*
28.0	-123.	*
29.0	-123.	*
30.0	-114.	*
31.0	-115.	*
32.0	-83.	*
33.0	-31.	*
34.0	0.	*
35.0	5.	*
36.0	39.	*
37.0	89.	*
38.0	84.	*
39.0	43.	*
40.0	32.	*
41.0	63.	*
42.0	-46.	*
43.0	-720.	*
44.0	-4142.	*
45.0	-11816.	*
46.0	-21250.	*
47.0	-16928.	*
48.0	843.	*
49.0	22051.	*
50.0	27734.	*
51.0	20810.	*
52.0	12196.	*
53.0	1483.	*
54.0	-3932.	*
55.0	-3182.	*
56.0	-2634.	*
57.0	-3992.	*
58.0	-2054.	*
59.0	749.	*
60.0	-1916.	*
61.0	-6163.	*
62.0	-6863.	*
63.0	-5082.	*
64.0	-1336.	*
65.0	1551.	*
66.0	-4122.	*
67.0	-15247.	*
68.0	-11556.	*
69.0	12416.	*
70.0	32856.	*
71.0	19850.	*
72.0	-359.	*
73.0	-20410.	*
74.0	-6223.	*
75.0	28014.	*
76.0	36378.	*

TRACE DISPLAY.

SHOT 23 Time 06:17:34 Level : 120.0 Shot location : E
Shot depth : 7.0 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 64mV



AUX. CHANNEL 2 Max. 10000mV



AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 10000mV

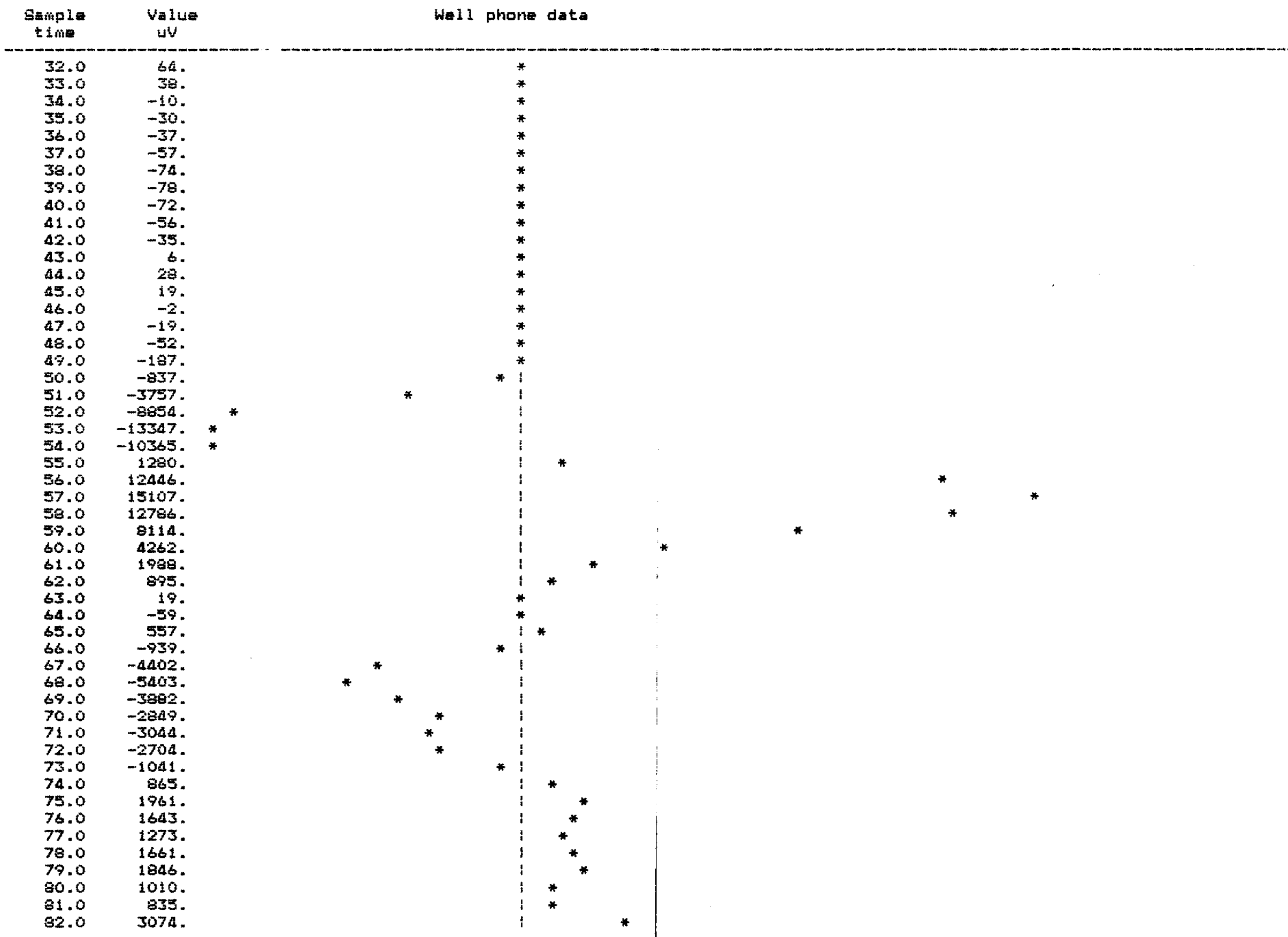


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 28.014

FIRST ARRIVAL PLOT - Shot 22 Level 160.0



TRACE DISPLAY

SHOT 22 Time 06:13:19 Level : 160.0 Shot location : E
Shot depth : 7.0 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

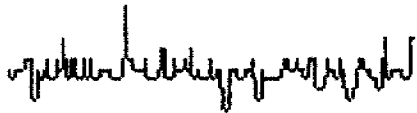
AUX. CHANNEL 1 Max. 57mV



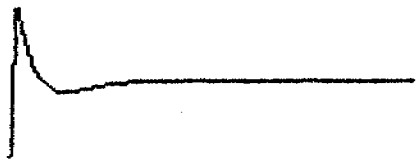
AUX. CHANNEL 2 Max. 1000mV



AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 1000mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 15.107

FIRST ARRIVAL PLOT - SHOT 21 Level 200.0

Well phone data

Sample Value
time UV

40.0	-55.
41.0	20.
42.0	75.
43.0	61.
44.0	-7.
45.0	-56.
46.0	-73.
47.0	-78.
48.0	-86.
49.0	-103.
50.0	-106.
51.0	-52.
52.0	33.
53.0	53.
54.0	31.
55.0	40.
56.0	-60.
57.0	-822.
58.0	-4072.
59.0	-8684.
60.0	-12526.
61.0	-9094.
62.0	769.
63.0	13557.
64.0	16128.
65.0	12836.
66.0	6193.
67.0	468.
68.0	-2504.
69.0	-1466.
70.0	-159.
71.0	185.
72.0	591.
73.0	304.
74.0	-1996.
75.0	-3289.
76.0	-2251.
77.0	-809.
78.0	136.
79.0	518.
80.0	-372.
81.0	-2331.
82.0	-3222.
83.0	-2239.
84.0	-917.
85.0	909.
86.0	3687.
87.0	5323.
88.0	5303.
89.0	4112.
90.0	1076.



TRACE DISPLAY

SHOT 21 Time 06:08:55 Level : 200.0 Shot location : E
Shot depth : 6.3 Charge size : 4.0
No. surface samples : 108 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 620mV



AUX. CHANNEL 2 Max. 10000mV



AUX. CHANNEL 3 Max. 20mV



AUX. CHANNEL 4 Max. 10000mV

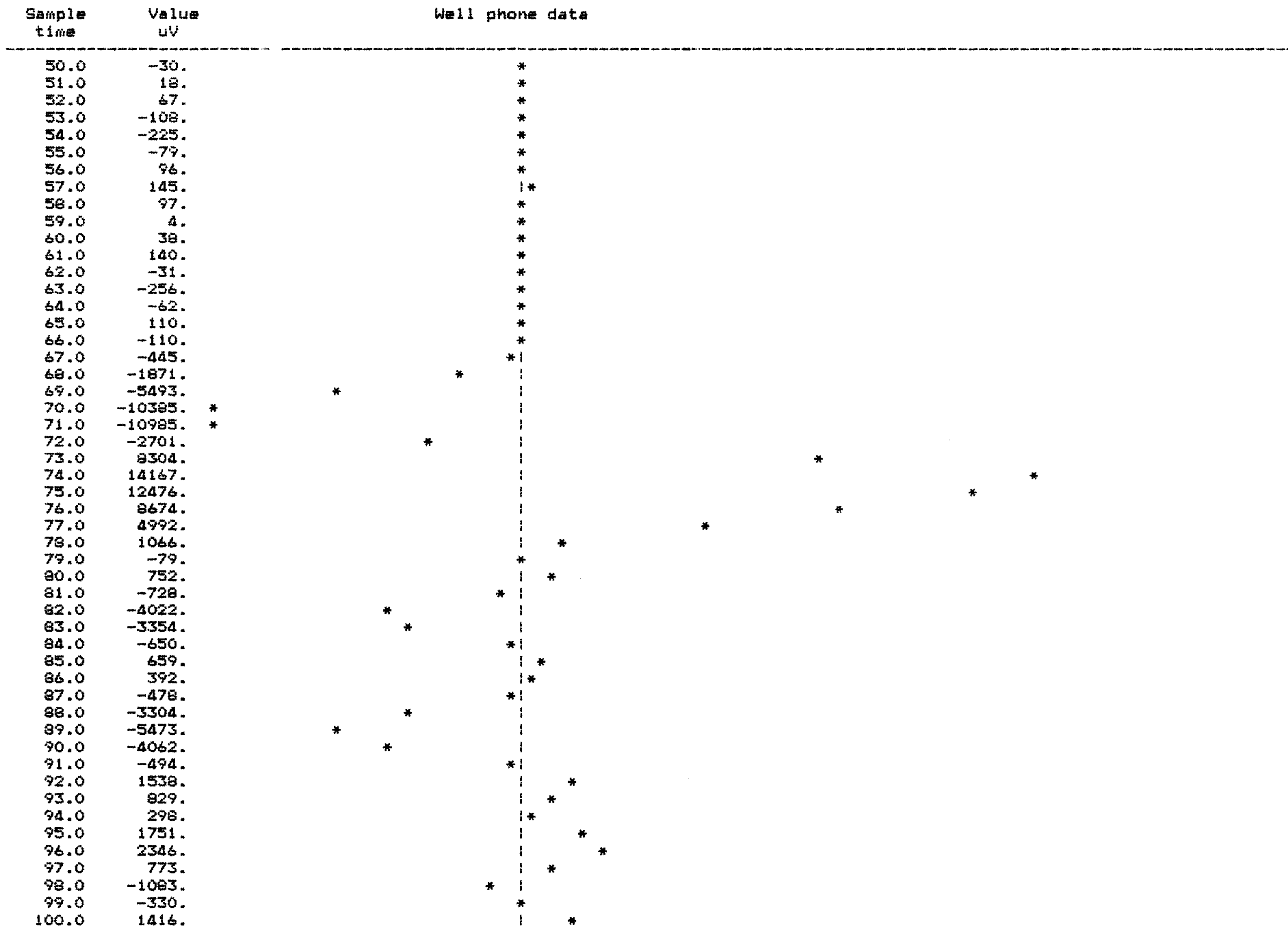


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 13.557

FIRST ARRIVAL PLOT - Shot 20 Level 257.0



TRACE DISPLAY

SHOT 19 Time 05:58:38 Level : 314.0 Shot location : E
Shot depth : 6.6 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 86mV



AUX. CHANNEL 2 Max. 1000mV



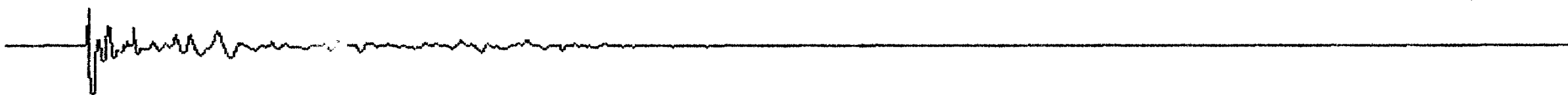
AUX. CHANNEL 3 Max. 25mV



AUX. CHANNEL 4 Max. 1000mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 13.196

TRACE DISPLAY

SHOT 20 Time 06:04:10 Level : 257.0 Shot location : E
Shot depth : 6.3 Charge size : 4.0
No. surface samples : 108 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

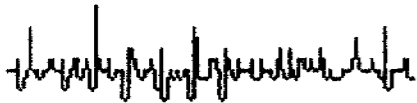
AUX. CHANNEL 1 Max. 75mV



AUX. CHANNEL 2 Max. 10000mV



AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 10000mV

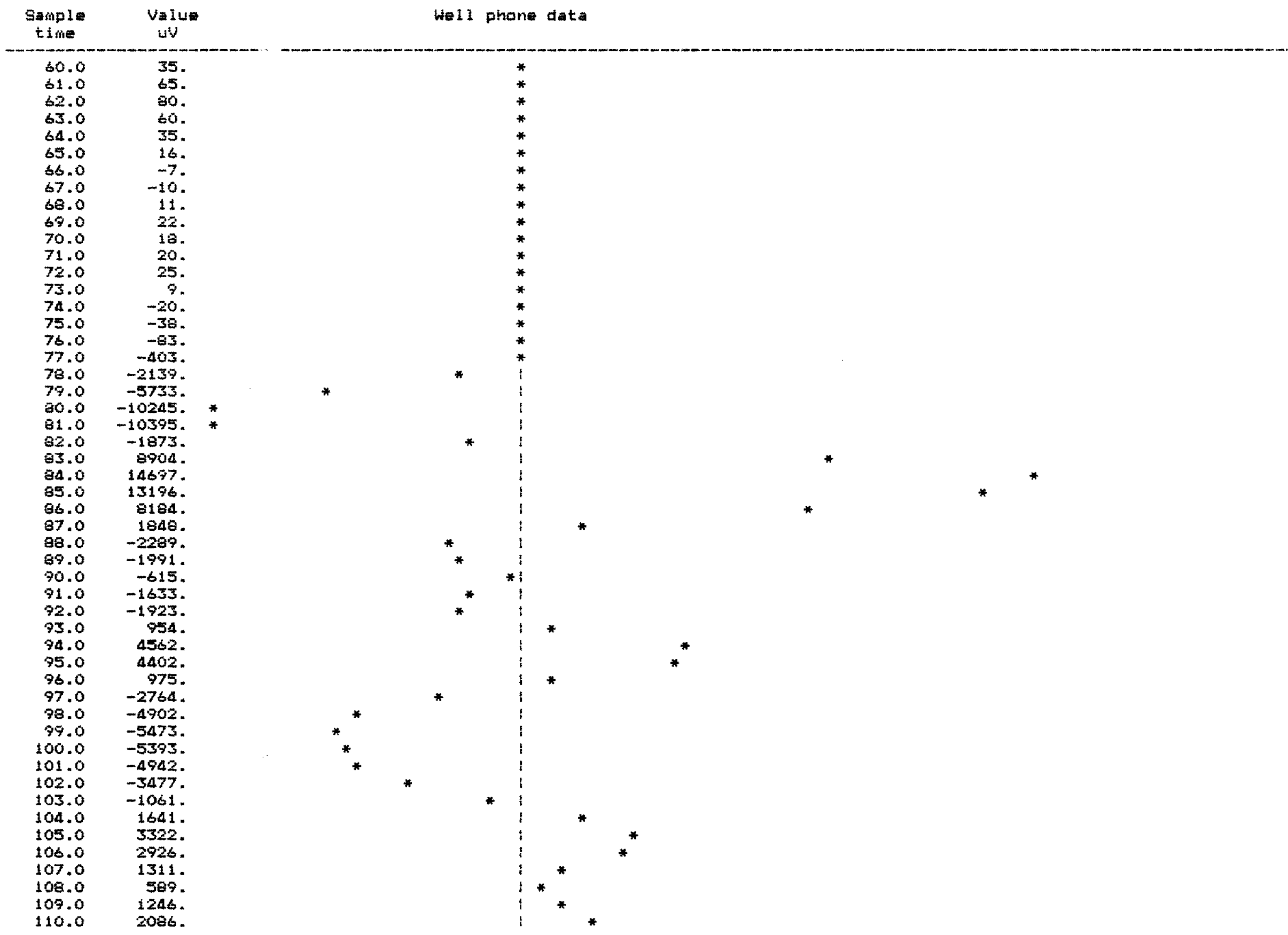


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 12.476

FIRST ARRIVAL PLOT - Shot 19 Level 314.0



FIRST ARRIVAL PLOT - Shot 18 Level 335.0

Sample time	Value UV	Well phone data
66.0	-4.	*
67.0	-3.	*
68.0	3.	*
69.0	-15.	*
70.0	17.	*
71.0	43.	*
72.0	-45.	*
73.0	-49.	*
74.0	59.	*
75.0	47.	*
76.0	-78.	*
77.0	-48.	*
78.0	9.	*
79.0	-63.	*
80.0	-33.	*
81.0	56.	*
82.0	-374.	*
83.0	-2626.	*
84.0	-7274.	*
85.0	-13647.	*
86.0	-14657.	*
87.0	-4222.	*
88.0	11666.	*
89.0	20890.	*
90.0	19530.	*
91.0	13747.	*
92.0	7334.	*
93.0	-418.	*
94.0	-3497.	*
95.0	-4532.	*
96.0	-9965.	*
97.0	-13026.	*
98.0	-6343.	*
99.0	3609.	*
100.0	6823.	*
101.0	4692.	*
102.0	548.	*
103.0	-4062.	*
104.0	-5082.	*
105.0	-4402.	*
106.0	-3041.	*
107.0	855.	*
108.0	4542.	*
109.0	6433.	*
110.0	5843.	*
111.0	3952.	*
112.0	499.	*
113.0	-3252.	*
114.0	-2399.	*
115.0	880.	*
116.0	2976.	*

TRACE DISPLAY.

SHOT 17 Time 05:49:20 Level : 349.0 Shot location : E
Shot depth : 6.9 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 834mV



AUX. CHANNEL 2 Max. 1000mV



AUX. CHANNEL 3 Max. 24mV



AUX. CHANNEL 4 Max. 620mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) | down hole channel - 7.354

TRACE DISPLAY.

SHOT 18 Time 05:53:51 Level : 335.0 Shot location : E
Shot depth : 6.4 Charge size : 4.0
No. surface samples : 108 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 116 mV



AUX. CHANNEL 2 Max. 10000 mV



AUX. CHANNEL 3 Max. 3 mV



AUX. CHANNEL 4 Max. 9995 mV

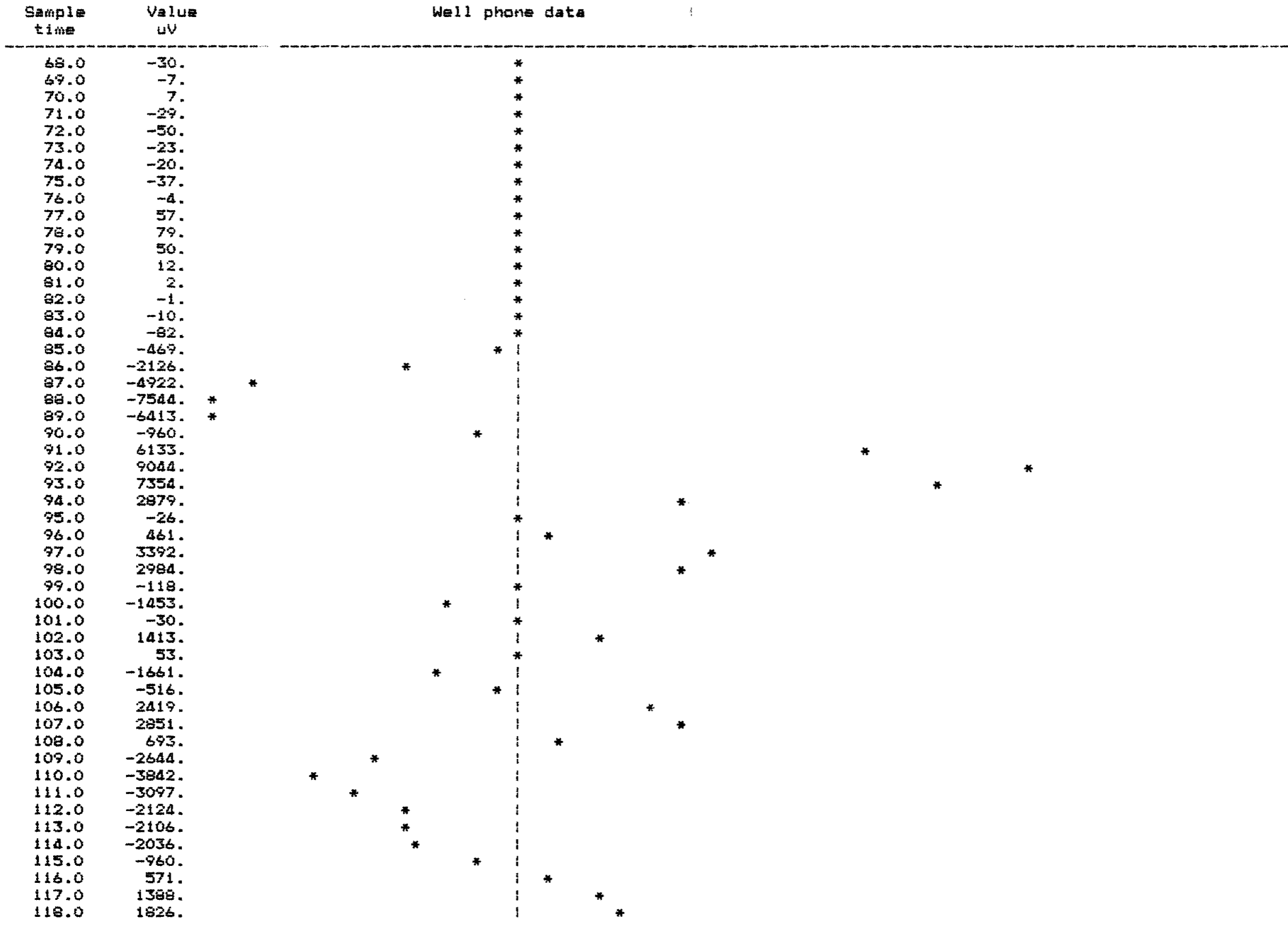


WELL PHONE CHANNEL - floating point amplifier

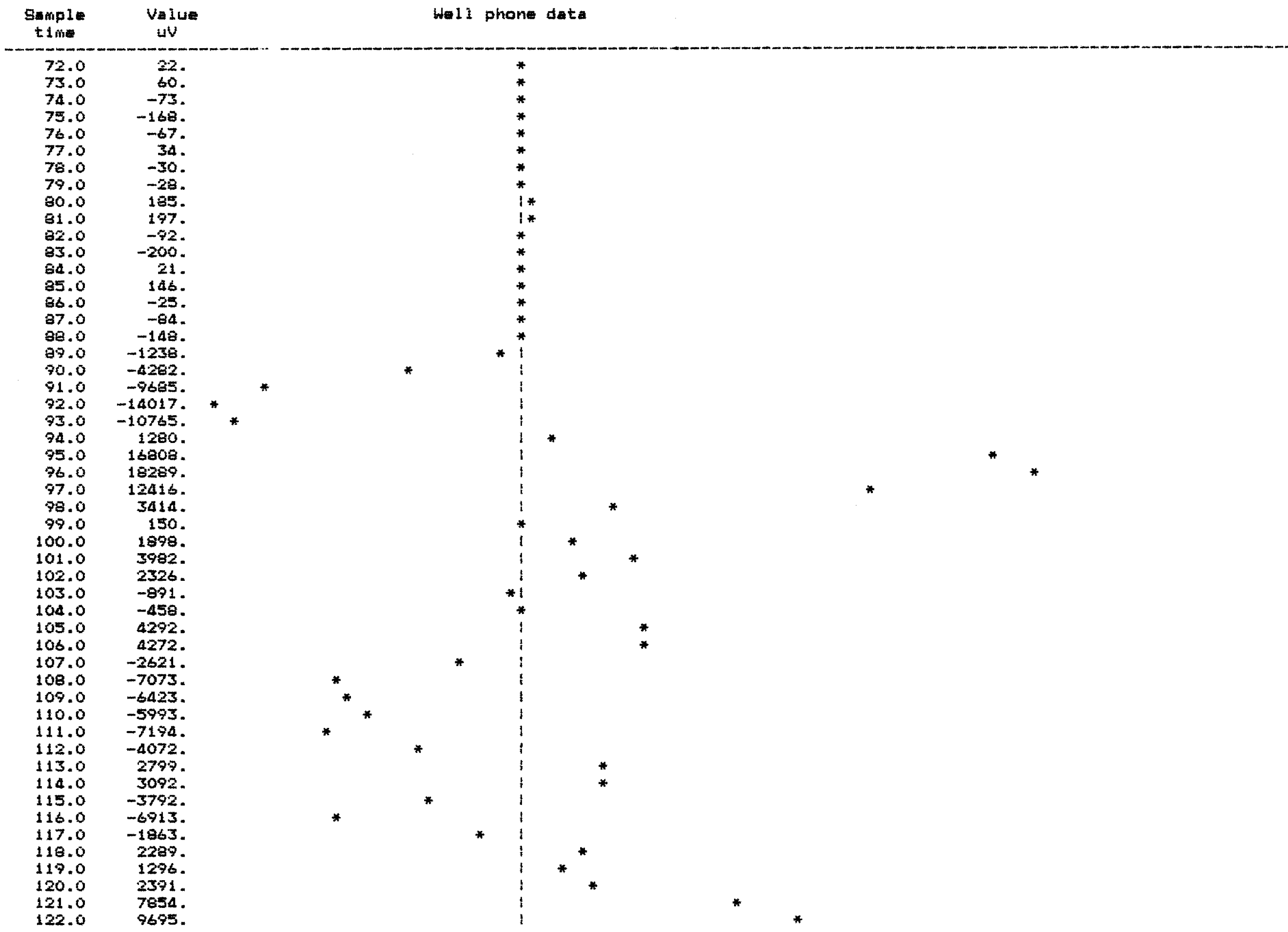


Data maximum (mV) : down hole channel - 20.890

FIRST ARRIVAL PLOT - Shot 17 Level 349.0



FIRST ARRIVAL PLOT - Shot 16 Level 367.0



TRACE DISPLAY.

SHOT 16 Time 05:44:07 Level : 367.0 Shot location : E
Shot depth : 6.9 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 1160mV



AUX. CHANNEL 2 Max. 10000mV



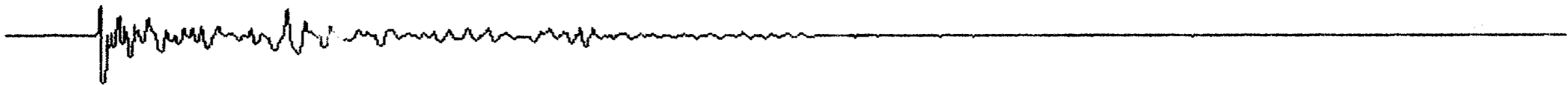
AUX. CHANNEL 3 Max. 20mV



AUX. CHANNEL 4 Max. 9990mV

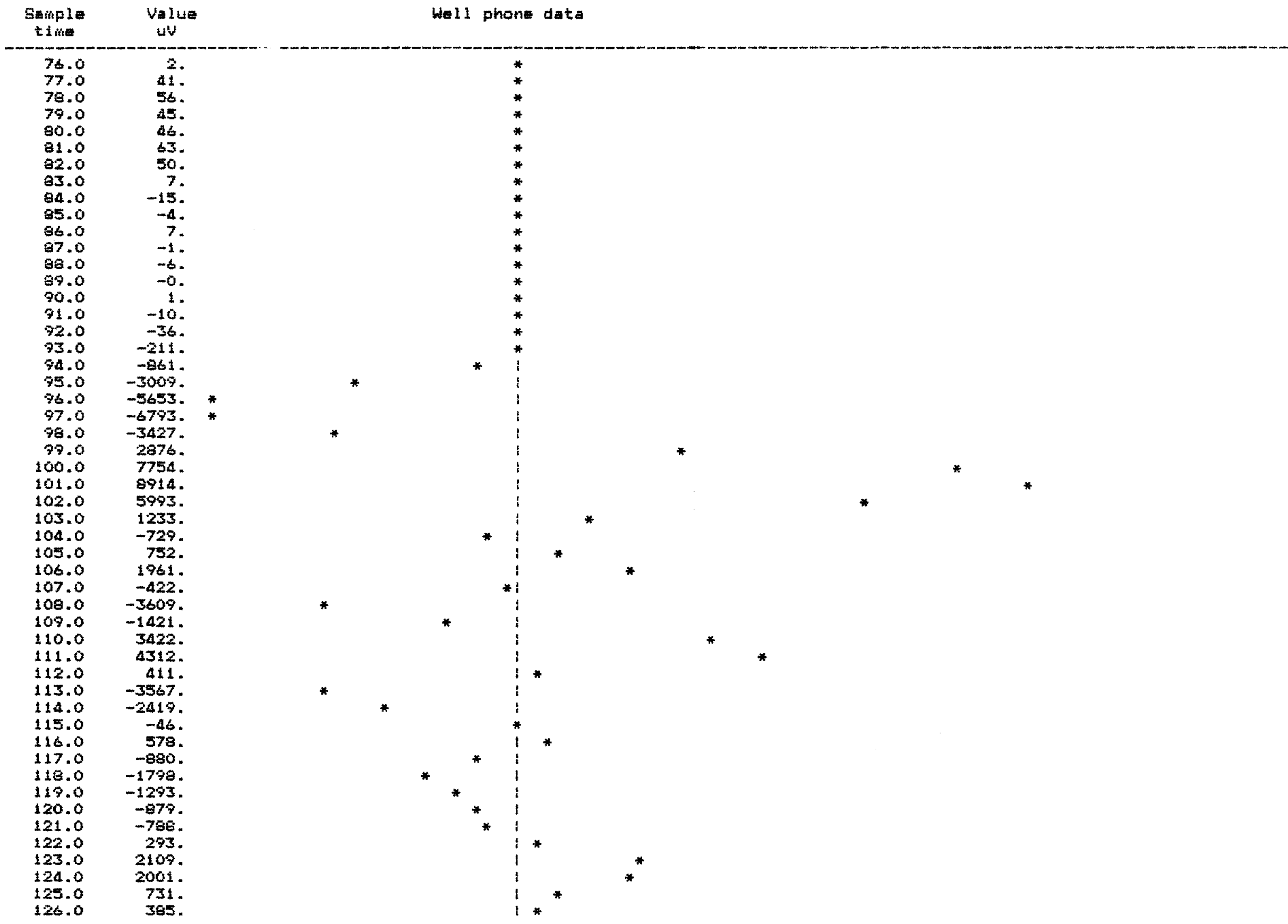


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 16.808

FIRST ARRIVAL PLOT - Shot 15 Level 387.0



TRACE DISPLAY

SHOT 15 Time 05:39:45 Level : 387.0 Shot location : E
Shot depth : 6.9 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 971mV



AUX. CHANNEL 2 Max. 10000mV



AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 10000mV

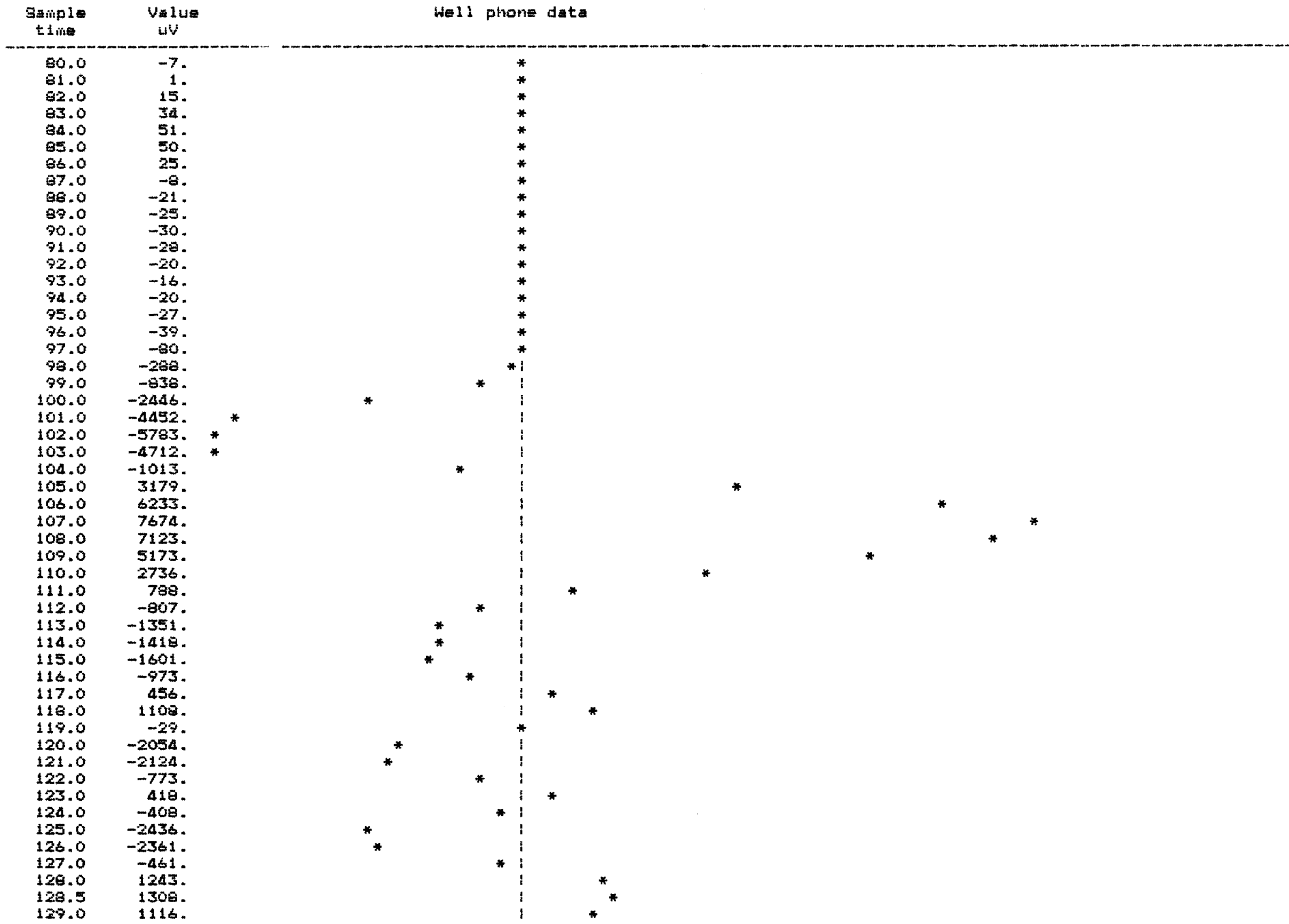


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 8.914

FIRST ARRIVAL PLOT - Shot 14 Level 413.0



TRACE DISPLAY.

SHOT 14 Time 05:35:06 Level : 413.0 Shot location : E
Shot depth : 6.7 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

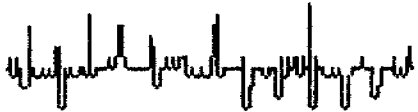
AUX. CHANNEL 1 Max. 961mV



AUX. CHANNEL 2 Max. 10000mV



AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 10000mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 7.674

FIRST ARRIVAL PLOT - Shot 13 Level 492.0

Sample time	Value uV	Well phone data
98.0	18.	*
99.0	11.	*
100.0	-1.	*
101.0	-11.	*
102.0	-7.	*
103.0	17.	*
104.0	32.	*
105.0	15.	*
106.0	-10.	*
107.0	-18.	*
108.0	-19.	*
109.0	-15.	*
110.0	1.	*
111.0	13.	*
112.0	12.	*
113.0	-14.	*
114.0	-147.	*
115.0	-594.	*
116.0	-2008.	*
117.0	-3982.	*
118.0	-5693.	*
119.0	-5123.	*
120.0	-1301.	*
121.0	3832.	*
122.0	7594.	*
123.0	8514.	*
124.0	6363.	*
125.0	2934.	*
126.0	918.	*
127.0	-146.	*
128.0	-1206.	*
128.5	-2003.	*
129.0	-2666.	*
129.5	-2991.	*
130.0	-2786.	*
130.5	-2006.	*
131.0	-693.	*
131.5	310.	*
132.0	1638.	*
132.5	2296.	*
133.0	2384.	*
133.5	1946.	*
134.0	1143.	*
134.5	354.	*
135.0	-681.	*
135.5	-1758.	*
136.0	-2331.	*
136.5	-2471.	*
137.0	-2124.	*
137.5	-1363.	*
138.0	-567.	*

TRACE DISPLAY

SHOT 13 Time 05:27:43 Level : 492.0 Shot location : E
Shot depth : 6.4 Charge size : 4.0
No. surface samples : 8 Down hole sample nos : 0 400 1008
Sample rates : 500 100 usec Delay : 0

AUX. CHANNEL 1 Max. 11 mV



AUX. CHANNEL 2 Max. 10000 mV



AUX. CHANNEL 3 Max. 25 mV



AUX. CHANNEL 4 Max. 348 mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 8.514

FIRST ARRIVAL PLOT - Shot 12 Level 335.0

Sample time	Value uV	Well phone data
64.0	1.	*
65.0	11.	*
66.0	16.	*
67.0	19.	*
68.0	18.	*
69.0	9.	*
70.0	4.	*
71.0	5.	*
72.0	-5.	*
73.0	-33.	*
74.0	-56.	*
75.0	-38.	*
76.0	6.	*
77.0	26.	*
78.0	21.	*
79.0	5.	*
80.0	-51.	*
81.0	-334.	*
82.0	-1603.	*
83.0	-4082.	*
84.0	-7354.	*
85.0	-8484.	*
86.0	-5223.	*
87.0	711.	*
88.0	6753.	*
89.0	10935.	*
90.0	13777.	*
91.0	13507.	*
92.0	8514.	*
93.0	11.	*
94.0	-5473.	*
95.0	-8084.	*
96.0	-7264.	*
97.0	-5072.	*
98.0	-3056.	*
99.0	-619.	*
100.0	2166.	*
101.0	3174.	*
102.0	480.	*
103.0	-2639.	*
104.0	-3139.	*
105.0	-1436.	*
106.0	73.	*
107.0	1358.	*
108.0	2676.	*
109.0	3529.	*
110.0	3284.	*
111.0	2206.	*
112.0	1168.	*
113.0	557.	*
114.0	-492.	*

TRACE DISPLAY.

SHOT 12 Time 05:13:52 Level : 335.0 Shot location : E
Shot depth : 6.4 Charge size : 4.0
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 68 mV



AUX. CHANNEL 2 Max. 10000 mV



AUX. CHANNEL 3 Max. 2 mV



AUX. CHANNEL 4 Max. 10000 mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 13.507

FIRST ARRIVAL PLOT - Shot 11 Level 90.0

Sample time	Value uV	Well phone data
22.0	-153.	*
23.0	-28.	*
24.0	60.	*
25.0	133.	*
26.0	227.	*
27.0	271.	*
28.0	197.	*
29.0	105.	*
30.0	83.	*
31.0	71.	*
32.0	29.	*
33.0	-17.	*
34.0	-52.	*
35.0	-128.	*
36.0	-173.	*
37.0	-174.	*
38.0	-418.	*
39.0	-2561.	*
40.0	-8794.	*
41.0	-23812.	*
42.0	-33696.	*
43.0	-25172.	*
44.0	1663.	*
45.0	41140.	*
46.0	55347.	*
47.0	39659.	*
48.0	14947.	*
49.0	-7003.	*
50.0	-6423.	*
51.0	2291.	*
52.0	-4527.	*
53.0	-18249.	*
54.0	-13387.	*
55.0	-433.	*
56.0	15207.	*
57.0	-1503.	*
58.0	-46383.	*
59.0	-70434.	*
60.0	-52025.	*
61.0	-10185.	*
62.0	32056.	*
63.0	49704.	*
64.0	25492.	*
65.0	-1281.	*
66.0	12136.	*
67.0	74917.	*
68.0	74997.	*
69.0	29895.	*
70.0	-8384.	*
71.0	-35457.	*
72.0	-23852.	*

TRACE DISPLAY.

SHOT 11 Time 05:00:43 Level : 90.0 Shot location : E
Shot depth : 7.0 Charge size : 4.0
No. surface samples : 18 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

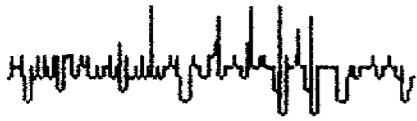
AUX. CHANNEL 1 Max. 31mV



AUX. CHANNEL 2 Max. 1000mV



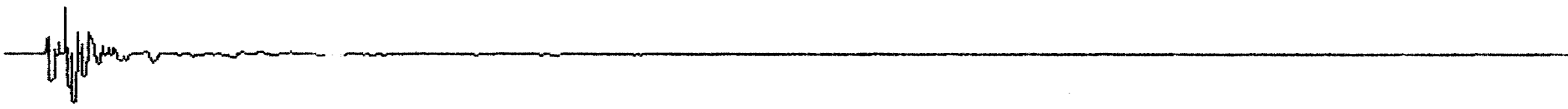
AUX. CHANNEL 3 Max. 2mV



AUX. CHANNEL 4 Max. 1000mV

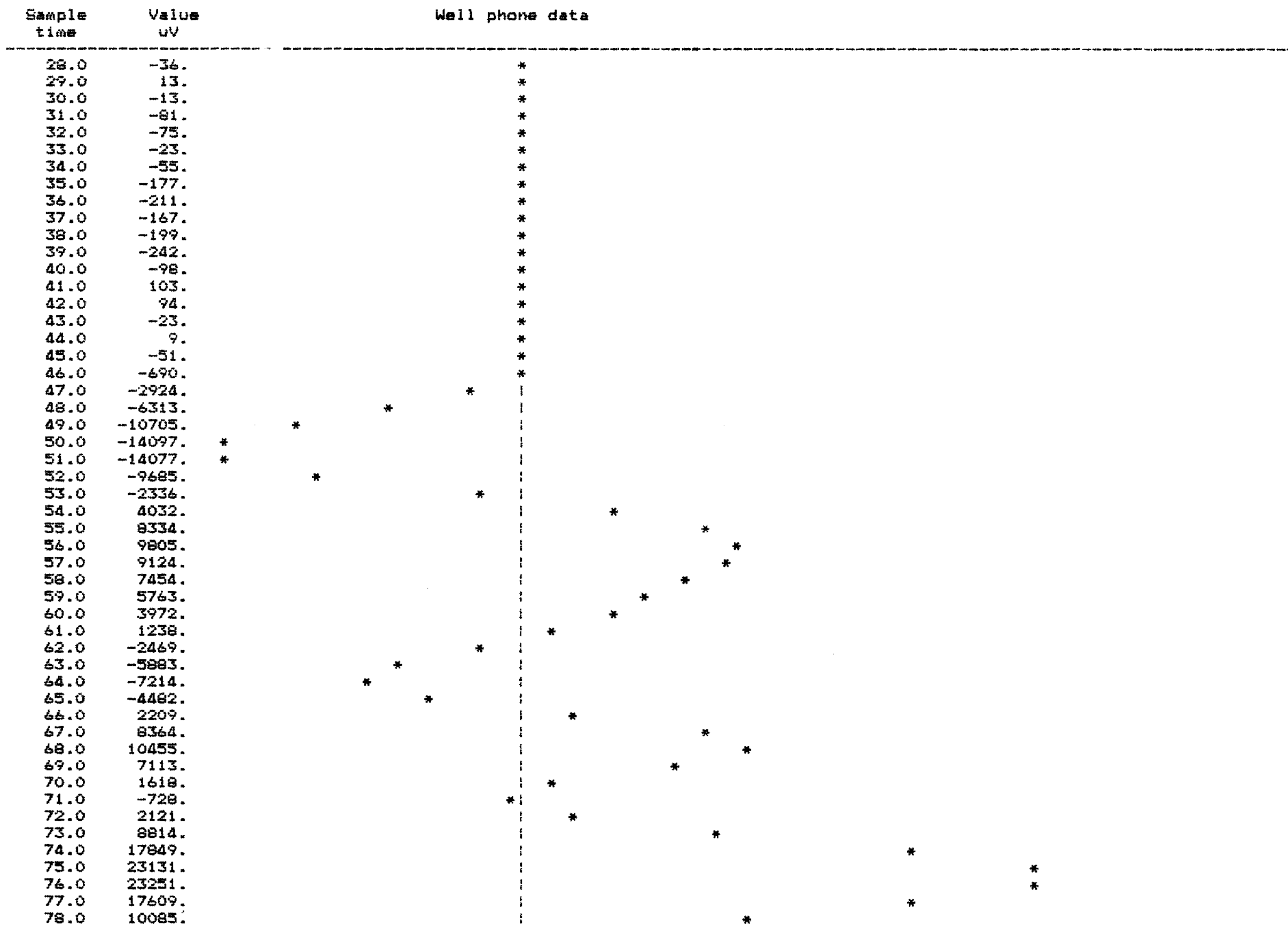


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 74.917

FIRST ARRIVAL PLOT - Shot 10 Level 90.0



TRACE DISPLAY

SHOT 10 Time 04:37:21 Level : 90.0 Shot location : D
Shot depth : 0.3 Charge size : 0.5
No. surface samples : 108 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 32mV



AUX. CHANNEL 2 Max. 195mV



AUX. CHANNEL 3 Max. 25mV



AUX. CHANNEL 4 Max. 999mV

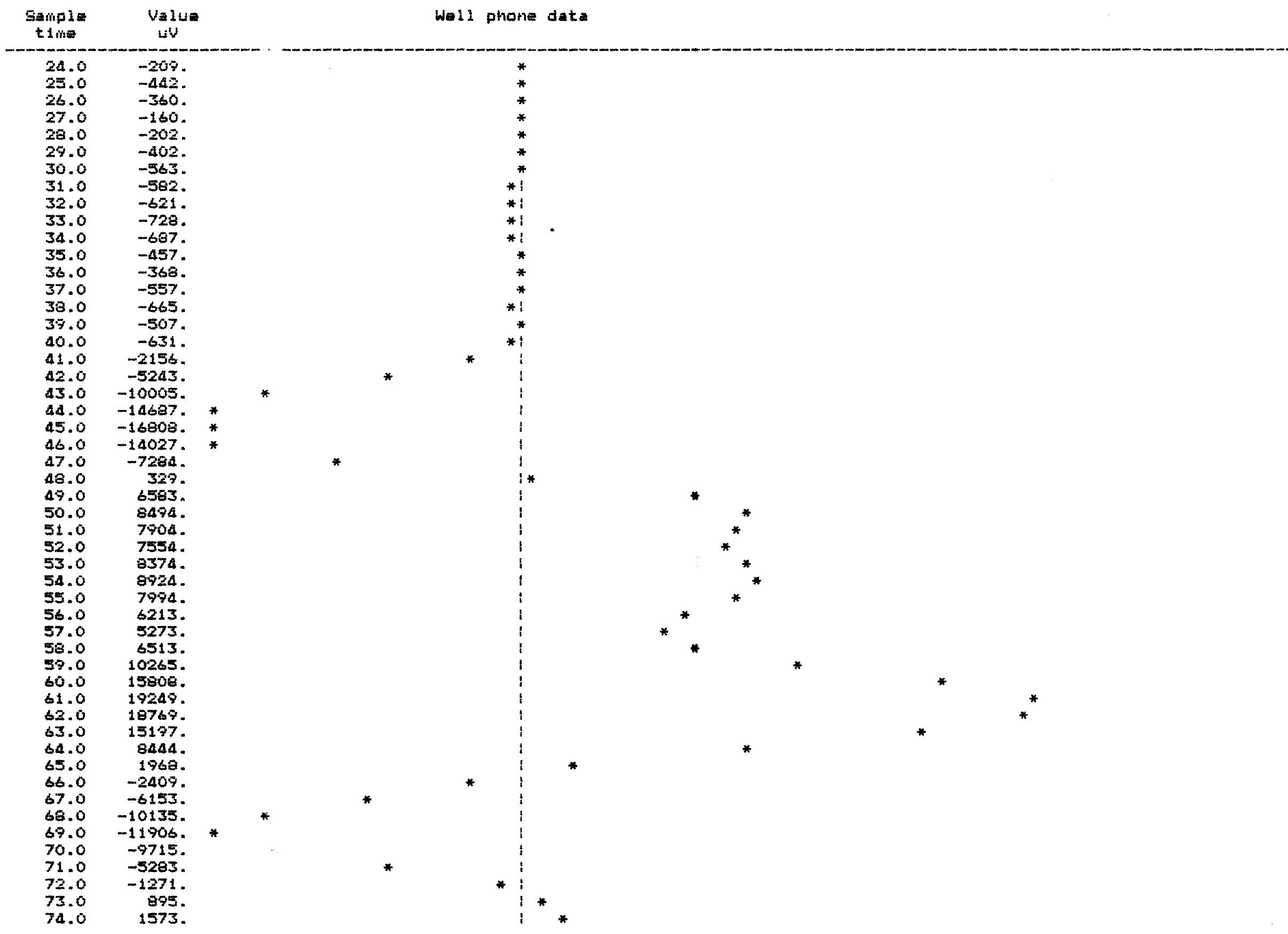


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 23.131

FIRST ARRIVAL PLOT - Shot 9 Level 90.0



TRACE DISPLAY

SHOT 9 Time 04:30:38 Level : 90.0 Shot location : C
Shot depth : 0.3 Charge size : G.DET
No. surface samples : 108 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 1191mV



AUX. CHANNEL 2 Max. 427mV



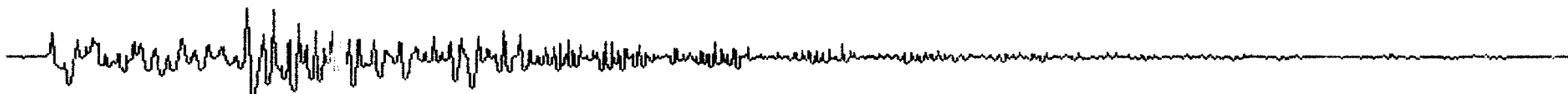
AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 6491mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 34.737

FIRST ARRIVAL PLOT - Shot 8 Level 90.0

Sample time	Value uV	Well phone data
18.0	62.	*
19.0	27.	*
20.0	-100.	*
21.0	-244.	*
22.0	-163.	*
23.0	119.	*
24.0	271.	*
25.0	184.	*
26.0	136.	*
27.0	276.	*
28.0	439.	*
29.0	429.	*
30.0	365.	*
31.0	389.	*
32.0	375.	*
33.0	141.	*
34.0	371.	*
35.0	4302.	*
36.0	12446.	*
37.0	21651.	*
38.0	13707.	*
39.0	-919.	*
40.0	-25933.	*
41.0	-26533.	*
42.0	-25953.	*
43.0	-30855.	*
44.0	-20450.	*
45.0	-538.	*
46.0	23051.	*
47.0	17569.	*
48.0	19890.	*
49.0	35297.	*
50.0	35938.	*
51.0	16208.	*
52.0	-268.	*
53.0	-8024.	*
54.0	-22931.	*
55.0	-37578.	*
56.0	-32376.	*
57.0	-10115.	*
58.0	23291.	*
59.0	35859.	*
60.0	32736.	*
61.0	27053.	*
62.0	27213.	*
63.0	23211.	*
64.0	8654.	*
65.0	-13447.	*
66.0	-25573.	*
67.0	-27173.	*
68.0	-22611.	*

TRACE DISPLAY

SHOT 8 Time 04:21:58 Level : 90.0 Shot location : A
Shot depth : 0.3 Charge size : G,DET
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 10000mV



AUX. CHANNEL 2 Max. 210mV



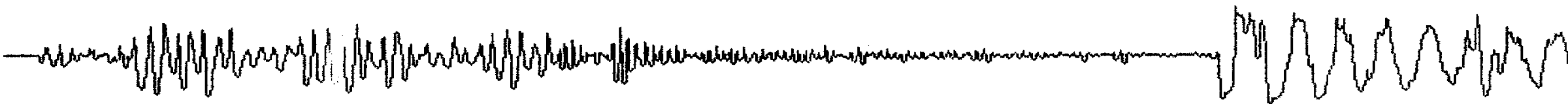
AUX. CHANNEL 3 Max. 30mV



AUX. CHANNEL 4 Max. 10000mV

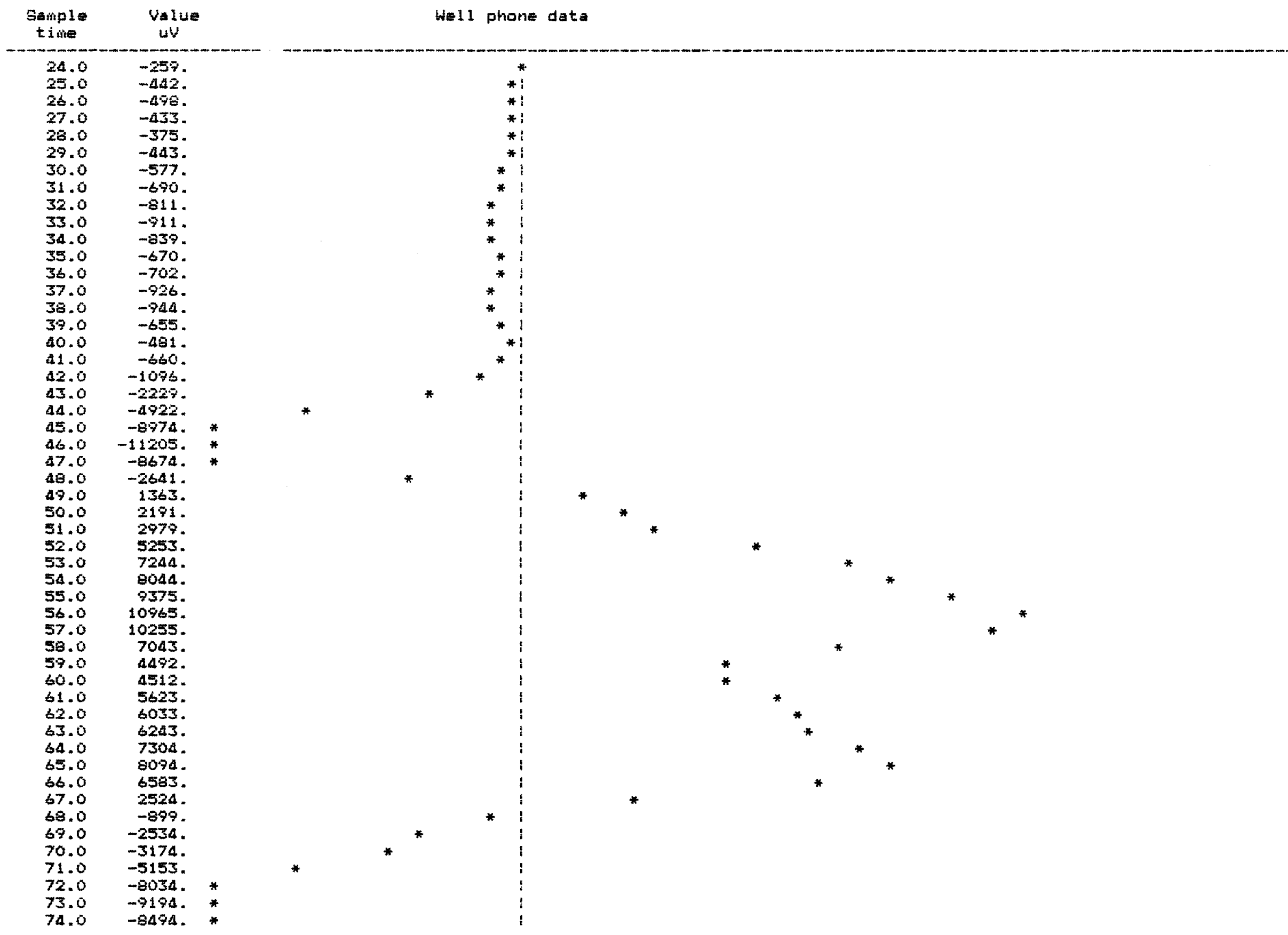


WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 159.118

FIRST ARRIVAL PLOT - Shot 7 Level 90.0



TRACE DISPLAY.

SHOT 7 Time 04:14:20 Level : 90.0 Shot location : B
Shot depth : 0.3 Charge size : G,DET
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 350 mV



AUX. CHANNEL 2 Max. 230 mV



AUX. CHANNEL 3 Max. 20 mV



AUX. CHANNEL 4 Max. 1000 mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 17.128

FIRST ARRIVAL PLOT - Shot 5 Level 60.0

Sample time	Value uV	Well phone data
12.0	2676.	*
13.0	4202.	*
14.0	4912.	*
15.0	4562.	*
16.0	2871.	*
17.0	389.	*
18.0	-2986.	*
19.0	-5383.	*
20.0	-6303.	*
21.0	-5203.	*
22.0	-2444.	*
23.0	249.	*
24.0	3054.	*
25.0	4582.	*
26.0	5223.	* *
27.0	5483.	* *
28.0	6413.	* *
29.0	4122.	*
30.0	-22011.	*
31.0	-74436.	*
32.0	-122780.	*
33.0	-132865.	*
34.0	-107413.	*
35.0	-58749.	*
36.0	3734.	*
37.0	111014.	*
38.0	164400.	*
39.0	150954.	*
40.0	122620.	*
41.0	98688.	*
42.0	47063.	*
43.0	-48744.	*
44.0	-133505.	*
45.0	-144871.	*
46.0	-122460.	*
47.0	-111334.	*
48.0	-112055.	*
49.0	-96847.	*
50.0	-43341.	*
51.0	52466.	*
52.0	145991.	*
53.0	166001.	*
54.0	139268.	*
55.0	118218.	*
56.0	95086.	*
57.0	32056.	*
58.0	-74036.	*
59.0	-140869.	*
60.0	-138148.	*
61.0	-110694.	*
62.0	-85562.	*

TRACE DISPLAY

SHOT 5 Time 04:07:50 Level : 60.0 Shot location : A
Shot depth : 0.3 Charge size : DET
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 510 mV



AUX. CHANNEL 2 Max. 9 mV



AUX. CHANNEL 3 Max. 2 mV



AUX. CHANNEL 4 Max. 900 mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 166.001

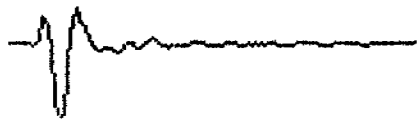
FIRST ARRIVAL PLOT - Shot 4 Level 30.0

Sample time	Value uV	Well phone data
4.0	-1353.	*
5.0	2061.	*
6.0	4922.	*
7.0	6743.	*
8.0	7164.	*
9.0	6013.	*
10.0	3087.	*
11.0	-285.	*
12.0	-3509.	*
13.0	-5223.	*
14.0	-5813.	*
15.0	-5032.	*
16.0	-2569.	*
17.0	-43.	*
18.0	2814.	*
19.0	3489.	*
20.0	2301.	*
21.0	271.	*
22.0	-849.	*
23.0	-4972.	*
24.0	-35297.	*
25.0	-89564.	* * *
26.0	-128703.	* * *
27.0	-117497.	* * *
28.0	-60590.	* * *
29.0	14977.	* * *
30.0	106772.	* * *
31.0	157837.	* * *
32.0	153355.	* * *
33.0	132705.	* * *
34.0	127102.	* * *
35.0	113816.	* * *
36.0	59349.	* * *
37.0	-747.	* * *
38.0	-128223.	* * *
39.0	-150474.	* * *
40.0	-128703.	* * *
41.0	-112055.	* * *
42.0	-113175.	* * *
43.0	-104131.	* * *
44.0	-57548.	* * *
45.0	-533.	* * *
46.0	132865.	* * *
47.0	167442.	* * *
48.0	145831.	* * *
49.0	120939.	* * *
50.0	102370.	* * *
51.0	56027.	* * *
52.0	265.	* * *
53.0	-54827.	* * *
54.0	-10165.	* * *

TRACE DISPLAY

SHOT 4 Time 04:03:48 Level : 30.0 Shot location : A
Shot depth : 0.3 Charge size : G,DET
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

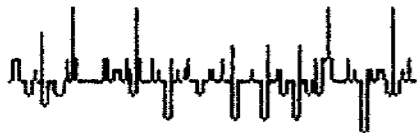
AUX. CHANNEL 1 Max. 541 mV



AUX. CHANNEL 2 Max. 10 mV



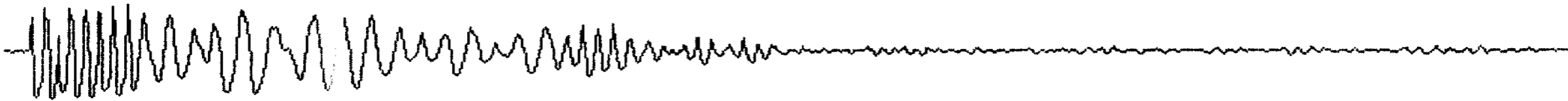
AUX. CHANNEL 3 Max. 2 mV



AUX. CHANNEL 4 Max. 877 mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 167.442

PR92/028B



Velocity Data Pty Ltd

WELL VELOCITY SURVEY

CLIENT : PACIFIC OIL AND GAS PTY LTD
WELL IDENTIFICATION : HUNT #1
SURVEY DATE : 26-MAY-91
SURVEY TIME : 02:50:00
SURVEY UNITS : METRES
AUTHORITY TO PROSPECT : P 10 NT

WELL LATITUDE : 022 09 7.3
WELL LONGITUDE : 135 56 8.0

KELLY ELEVATION : 374.5
GROUND ELEVATION : 372.0

WEATHER : FINE

ENERGY SOURCE : AN60

CLIENT REP : MR G W KING
OBSERVER : N DELFOS
SHOOTER : M FORD

RIG IDENTIFICATION : ROCK DRILL 21
CASING DEPTH : 236.5
LOGGING UNIT : BPB V333

RECORDING INSTRUMENTS : DLS11/10
SYSTEM DELAY TIME : 8 MSEC.
