

APPENDIX-7 *1807 2017*

SYNTHETIC SEISMOGRAMS

Synthetic Seismograms

Appendix 7 of WCR.

Attachment to WCR

Velocity Data

DEPT. NAT. RES & ENV



PE906641



PETROBRAS

16 MAR 1993

SYNTHETIC SEISMOGRAMS

INGLEBY #1

PEP 100

VICTORIA

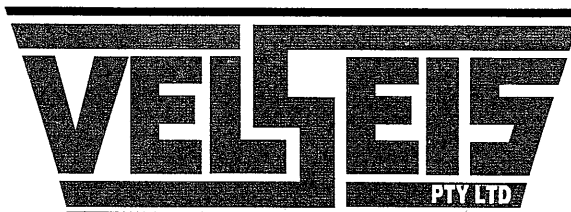
for

GAS and FUEL EXPLORATION NL

recorded by

VELOCITY DATA PTY. LTD.

processed by



Integrated Seismic Technologies

Brisbane, Australia

February 7, 1991

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SUMMARY

Synthetic seismograms have been produced for the Ingleby No1 well, PEP 100, Otway Basin, Victoria for Gas and Fuel Exploration NL .

These seismograms have been computed using a combination of check shot, sonic and density data. Velocity Data Pty Ltd acquired the check shot data and BPB Instruments provided the other wireline services.

The sonic data was calibrated using the check shot information. Reflection coefficients were derived from combinations of calibrated sonic and density data and then convolved with the specified wavelets to produce the synthetic seismograms. A number of trials were run before establishing the most appropriate wavelet.

GENERAL INFORMATION

Name of Well	:	INGLEBY #1
Location	:	PEP100, Otway Basin
Coordinates	:	Latitude 038 18 53.6 Longitude 143 47 44.8
Velocity Survey	:	Velocity Data Pty Ltd
Wireline Logging	:	BPB Instruments V1030
Elevation of KB	:	117.3m above sea level
Elevation of Ground	:	114.0m above sea level
Elevation of Seismic Datum	:	150.0m above sea level
Casing depth	:	63.5m below KB
Total Depth of well	:	326.5m below KB

CHECK SHOT DATA

Recorded by : Velocity Data Pty Ltd
Date : October 26th 1990
Energy Source : Explosive, AN-60
Shot Location : Mud pit
Charge Size : 0.25 (125 grm) sticks
Average Shot Depth : 2 metres
Average Shot Offset : 21 metres
Number of shots used : 24
Number of levels recorded : 20

SONIC DATA

Recorded by : BPB Instruments
Date : October 26th 1990
Top logged interval : 11.0m below KB
Bottom logged interval : 326.0m below KB
Logging units : microseconds/metre

DENSITY DATA

Recorded by : BPB Instruments
Top logged interval : 63.0m below KB
Bottom logged interval : 326.0m below KB
Logging units : grms/cc

CALIBRATION OF SONIC LOG

Method

The sonic log was extended to 560 metres below KB in order to get full wavelet response at the end of the sonic. The log was edited out above 117 metres in order to eliminate erroneous values.

Sonic times were adjusted to checkshot times using a least squares polynomial fit for the sonic transit times. This method being chosen over a linear correction as the latter tends to introduce fictitious interfaces at areas of high drift correction.

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.

Results

The discrepancies between shot and sonic interval velocities were generally small. The largest adjustment was 402 μ secs/metre on the interval 117.3 to 127 metres below KB. This value appears high however given that the interval over which it occurs is small, the value is acceptable.

In aggregate, the shot and sonic interval times differed by 8.1 msec over the logged portion of the well.

CALIBRATION OF DENSITY DATA

The density log had to be edited out in order to encompass the same range as the sonic. The density data is calibrated using the adjusted and integrated sonic time.

REFLECTION COEFFICIENT GENERATION

Reflection coefficients were generated from a combination of sonic and density data as noted on the display.

MULTIPLES

Only the primary response of the reflection coefficient series has been generated.

WAVELETS

A variety of wavelets were tried before the most suitable was chosen. A total of three are presented:

- 1) Bandpass 12-60Hz Zero Phase Reverse Polarity
- 2) Bandpass 12-60Hz Zero Phase Normal Polarity
- 3) Ricker 50Hz Zero Phase Normal Polarity

SEISMOGRAM DISPLAYS

The final displays show the contributing logs in schematic form with time scale. The seismogram is displayed for each wavelet against two way time below the check shot datum. Trace amplitudes are normalized against their maxima. The subdatum two way time of 125. msec for the start of the sonic was taken from the checkshot results. This value was adjusted to 105. msec to obtain an acceptable tie with the seismic section.

No seismic section was received and the initial trials were FAXED for approval.



Troy Peters
Geophysical Analyst.

TABLE 1.

Time-Depth curve values

Page 1.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
0.5	0.2	2338	2338	2338	20.5	7.3	2795	2798	2847
1.0	0.4	2399	2400	2464	21.0	7.5	2797	2799	2847
1.5	0.6	2451	2453	2562	21.5	7.7	2798	2800	2847
2.0	0.8	2495	2498	2637	22.0	7.9	2799	2801	2847
2.5	1.0	2533	2536	2694	22.5	8.0	2800	2802	2847
3.0	1.2	2564	2568	2736	23.0	8.2	2801	2803	2847
3.5	1.4	2591	2596	2767	23.5	8.4	2802	2804	2847
4.0	1.5	2615	2619	2789	24.0	8.6	2803	2805	2847
4.5	1.7	2635	2639	2806	24.5	8.7	2804	2806	2847
5.0	1.9	2652	2656	2817	25.0	8.9	2805	2807	2847
5.5	2.1	2667	2671	2826	25.5	9.1	2805	2807	2847
6.0	2.2	2680	2684	2832	26.0	9.3	2806	2808	2847
6.5	2.4	2691	2696	2836	26.5	9.4	2807	2809	2847
7.0	2.6	2701	2706	2840	27.0	9.6	2808	2810	2847
7.5	2.8	2710	2715	2842	27.5	9.8	2808	2810	2847
8.0	2.9	2718	2723	2843	28.0	10.0	2809	2811	2847
8.5	3.1	2725	2730	2845	28.5	10.1	2810	2812	2847
9.0	3.3	2732	2736	2845	29.0	10.3	2810	2812	2847
9.5	3.5	2737	2742	2846	29.5	10.5	2811	2813	2847
10.0	3.6	2743	2747	2846	30.0	10.7	2812	2813	2847
10.5	3.8	2748	2751	2847	30.5	10.8	2812	2814	2847
11.0	4.0	2752	2756	2847	31.0	11.0	2813	2814	2847
11.5	4.2	2756	2760	2847	31.5	11.2	2813	2815	2847
12.0	4.3	2760	2763	2847	32.0	11.4	2814	2816	2847
12.5	4.5	2763	2766	2847	32.5	11.5	2814	2816	2847
13.0	4.7	2766	2770	2847	33.0	11.7	2815	2816	2847
13.5	4.9	2769	2772	2847	33.5	11.9	2815	2817	2847
14.0	5.1	2772	2775	2847	34.0	12.1	2816	2817	2847
14.5	5.2	2774	2777	2847	34.5	12.3	2816	2818	2847
15.0	5.4	2777	2780	2847	35.0	12.4	2817	2818	2847
15.5	5.6	2779	2782	2847	35.5	12.6	2817	2819	2847
16.0	5.8	2781	2784	2847	36.0	12.8	2818	2819	2847
16.5	5.9	2783	2786	2847	36.5	13.0	2818	2819	2847
17.0	6.1	2785	2788	2847	37.0	13.1	2818	2820	2847
17.5	6.3	2787	2789	2847	37.5	13.3	2819	2820	2847
18.0	6.5	2788	2791	2847	38.0	13.5	2819	2821	2847
18.5	6.6	2790	2792	2847	38.5	13.7	2819	2821	2847
19.0	6.8	2791	2794	2847	39.0	13.8	2820	2821	2847
19.5	7.0	2793	2795	2847	39.5	14.0	2820	2822	2847
20.0	7.2	2794	2797	2847	40.0	14.2	2821	2822	2847

TABLE 1.

Time-Depth curve values

Well : INGLEBY #1
 Survey units : METRES
 Client : GAS & FUEL
 Datum : 150.0
 Calibrated sonic interval velocities used from 150.0 to 357.5

-----VELOCITIES-----					-----VELOCITIES-----				
Datum Depth	One-way time(ms)	Average	RMS	Interval	Datum Depth	One-way time(ms)	Average	RMS	Interval
40.5	14.4	2821	2822	2847	60.5	21.4	2830	2831	2847
41.0	14.5	2821	2822	2847	61.0	21.6	2830	2831	2847
41.5	14.7	2821	2823	2847	61.5	21.7	2830	2831	2847
42.0	14.9	2822	2823	2847	62.0	21.9	2830	2831	2847
42.5	15.1	2822	2823	2847	62.5	22.1	2830	2831	2847
43.0	15.2	2822	2824	2847	63.0	22.3	2830	2831	2847
43.5	15.4	2823	2824	2847	63.5	22.4	2830	2831	2847
44.0	15.6	2823	2824	2847	64.0	22.6	2831	2831	2847
44.5	15.8	2823	2824	2847	64.5	22.8	2831	2832	2847
45.0	15.9	2823	2825	2847	65.0	23.0	2831	2832	2847
45.5	16.1	2824	2825	2847	65.5	23.1	2831	2832	2848
46.0	16.3	2824	2825	2848	66.0	23.3	2831	2832	2847
46.5	16.5	2824	2825	2847	66.5	23.5	2831	2832	2847
47.0	16.6	2824	2826	2847	67.0	23.7	2831	2832	2847
47.5	16.8	2825	2826	2847	67.5	23.8	2831	2832	2847
48.0	17.0	2825	2826	2847	68.0	24.0	2832	2832	2847
48.5	17.2	2825	2826	2847	68.5	24.2	2832	2832	2848
49.0	17.3	2825	2827	2848	69.0	24.4	2832	2833	2847
49.5	17.5	2826	2827	2847	69.5	24.5	2832	2833	2847
50.0	17.7	2826	2827	2847	70.0	24.7	2832	2833	2847
50.5	17.9	2826	2827	2848	70.5	24.9	2832	2833	2847
51.0	18.0	2826	2827	2847	71.0	25.1	2832	2833	2847
51.5	18.2	2826	2828	2847	71.5	25.2	2832	2833	2848
52.0	18.4	2827	2828	2847	72.0	25.4	2832	2833	2847
52.5	18.6	2827	2828	2847	72.5	25.6	2833	2833	2847
53.0	18.7	2827	2828	2847	73.0	25.8	2833	2833	2847
53.5	18.9	2827	2828	2847	73.5	25.9	2833	2834	2847
54.0	19.1	2827	2828	2848	74.0	26.1	2833	2834	2847
54.5	19.3	2828	2829	2847	74.5	26.3	2833	2834	2848
55.0	19.4	2828	2829	2847	75.0	26.5	2833	2834	2847
55.5	19.6	2828	2829	2847	75.5	26.6	2833	2834	2847
56.0	19.8	2828	2829	2847	76.0	26.8	2833	2834	2847
56.5	20.0	2828	2829	2847	76.5	27.0	2833	2834	2847
57.0	20.2	2828	2829	2848	77.0	27.2	2833	2834	2847
57.5	20.3	2829	2830	2847	77.5	27.4	2833	2834	2848
58.0	20.5	2829	2830	2847	78.0	27.5	2834	2834	2847
58.5	20.7	2829	2830	2847	78.5	27.7	2834	2834	2847
59.0	20.9	2829	2830	2847	79.0	27.9	2834	2834	2847
59.5	21.0	2829	2830	2847	79.5	28.1	2834	2835	2847
60.0	21.2	2829	2830	2848	80.0	28.2	2834	2835	2847

TABLE 1.

Time-Depth curve values

Page 3.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
80.5	28.4	2834	2835	2848	100.5	35.4	2837	2837	2850
81.0	28.6	2834	2835	2847	101.0	35.6	2837	2837	2850
81.5	28.8	2834	2835	2847	101.5	35.8	2837	2837	2851
82.0	28.9	2834	2835	2847	102.0	36.0	2837	2837	2853
82.5	29.1	2834	2835	2847	102.5	36.1	2837	2838	2855
83.0	29.3	2834	2835	2848	103.0	36.3	2837	2838	2858
83.5	29.5	2834	2835	2847	103.5	36.5	2837	2838	2863
84.0	29.6	2835	2835	2847	104.0	36.7	2837	2838	2869
84.5	29.8	2835	2835	2847	104.5	36.8	2838	2838	2878
85.0	30.0	2835	2835	2847	105.0	37.0	2838	2838	2890
85.5	30.2	2835	2835	2847	105.5	37.2	2838	2839	2907
86.0	30.3	2835	2836	2848	106.0	37.3	2839	2839	2932
86.5	30.5	2835	2836	2847	106.5	37.5	2839	2840	2967
87.0	30.7	2835	2836	2847	107.0	37.7	2840	2841	3017
87.5	30.9	2835	2836	2847	107.5	37.8	2841	2842	3091
88.0	31.0	2835	2836	2847	108.0	38.0	2842	2843	3200
88.5	31.2	2835	2836	2847	108.5	38.1	2845	2845	3366
89.0	31.4	2835	2836	2848	109.0	38.3	2847	2849	3621
89.5	31.6	2835	2836	2847	109.5	38.4	2851	2853	3904
90.0	31.7	2835	2836	2847	110.0	38.5	2855	2858	4136
90.5	31.9	2835	2836	2847	110.5	38.6	2859	2863	4320
91.0	32.1	2836	2836	2847	111.0	38.8	2864	2869	4462
91.5	32.3	2836	2836	2847	111.5	38.9	2869	2875	4568
92.0	32.4	2836	2836	2847	112.0	39.0	2874	2882	4647
92.5	32.6	2836	2836	2848	112.5	39.1	2879	2888	4704
93.0	32.8	2836	2836	2847	113.0	39.2	2884	2895	4744
93.5	33.0	2836	2836	2847	113.5	39.3	2889	2901	4771
94.0	33.1	2836	2837	2847	114.0	39.4	2894	2908	4788
94.5	33.3	2836	2837	2848	114.5	39.5	2899	2915	4796
95.0	33.5	2836	2837	2848	115.0	39.6	2904	2921	4797
95.5	33.7	2836	2837	2848	115.5	39.7	2909	2928	4790
96.0	33.8	2836	2837	2848	116.0	39.8	2914	2934	4775
96.5	34.0	2836	2837	2848	116.5	39.9	2918	2940	4749
97.0	34.2	2836	2837	2848	117.0	40.0	2923	2946	4711
97.5	34.4	2836	2837	2848	117.5	40.1	2928	2952	4658
98.0	34.6	2836	2837	2848	118.0	40.2	2932	2958	4583
98.5	34.7	2836	2837	2848	118.5	40.4	2937	2963	4481
99.0	34.9	2837	2837	2848	119.0	40.5	2941	2968	4346
99.5	35.1	2837	2837	2849	119.5	40.6	2944	2972	4170
100.0	35.3	2837	2837	2849	120.0	40.7	2947	2976	3946

TABLE 1.

Time-Depth curve values

Page 4.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
120.5	40.9	2950	2978	3669	140.5	56.9	2467	2614	1165
121.0	41.0	2951	2980	3342	141.0	57.4	2458	2607	1165
121.5	41.2	2951	2980	2971	141.5	57.8	2448	2599	1166
122.0	41.4	2949	2978	2572	142.0	58.2	2439	2591	1167
122.5	41.6	2945	2974	2165	142.5	58.7	2429	2584	1167
123.0	41.9	2937	2968	1762	143.0	59.1	2420	2576	1168
123.5	42.2	2926	2959	1525	143.5	59.5	2411	2569	1170
124.0	42.6	2913	2949	1381	144.0	59.9	2402	2562	1172
124.5	43.0	2899	2939	1294	144.5	60.4	2394	2554	1175
125.0	43.4	2883	2927	1238	145.0	60.8	2385	2547	1179
125.5	43.8	2867	2916	1201	145.5	61.2	2377	2540	1184
126.0	44.2	2851	2904	1175	146.0	61.6	2369	2534	1192
126.5	44.6	2834	2892	1158	146.5	62.0	2361	2527	1203
127.0	45.1	2818	2880	1146	147.0	62.5	2354	2521	1219
127.5	45.5	2802	2869	1138	147.5	62.9	2346	2515	1242
128.0	45.9	2786	2857	1132	148.0	63.3	2340	2509	1276
128.5	46.4	2770	2845	1127	148.5	63.6	2334	2503	1326
129.0	46.8	2754	2834	1124	149.0	64.0	2329	2499	1404
129.5	47.3	2739	2823	1122	149.5	64.3	2325	2495	1529
130.0	47.7	2724	2811	1121	150.0	62.2	2413	2517	1746
130.5	48.2	2709	2801	1120	150.5	62.4	2414	2517	2495
131.0	48.6	2694	2790	1119	151.0	62.5	2415	2518	2821
131.5	49.1	2680	2779	1119	151.5	62.7	2415	2518	2585
132.0	49.5	2666	2768	1119	152.0	62.9	2415	2517	2276
132.5	50.0	2652	2758	1120	152.5	63.2	2414	2516	2119
133.0	50.4	2639	2748	1120	153.0	63.4	2412	2514	1999
133.5	50.9	2625	2738	1122	153.5	63.7	2410	2512	1969
134.0	51.3	2612	2728	1123	154.0	63.9	2409	2510	2030
134.5	51.7	2599	2718	1126	154.5	64.2	2408	2509	2133
135.0	52.2	2587	2709	1129	155.0	64.4	2407	2508	2129
135.5	52.6	2575	2699	1134	155.5	64.7	2405	2506	1932
136.0	53.1	2563	2690	1141	156.0	64.9	2403	2503	1848
136.5	53.5	2551	2681	1148	156.5	65.2	2400	2501	1809
137.0	53.9	2540	2672	1153	157.0	65.5	2397	2498	1787
137.5	54.4	2529	2664	1156	157.5	65.8	2395	2496	1800
138.0	54.8	2518	2655	1159	158.0	66.0	2392	2493	1806
138.5	55.2	2508	2647	1161	158.5	66.3	2390	2491	1818
139.0	55.7	2497	2639	1162	159.0	66.6	2388	2488	1805
139.5	56.1	2487	2630	1163	159.5	66.9	2385	2486	1824
140.0	56.5	2477	2622	1164	160.0	67.1	2384	2484	1986

TABLE 1.

Time-Depth curve values

Page 5.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
160.5	67.4	2383	2483	2084	180.5	77.9	2318	2413	2246
161.0	67.6	2382	2481	2077	181.0	78.1	2318	2413	2379
161.5	67.8	2381	2480	2074	181.5	78.3	2318	2412	2104
162.0	68.1	2379	2479	2069	182.0	78.6	2317	2411	1934
162.5	68.3	2378	2477	2063	182.5	78.8	2315	2410	1892
163.0	68.6	2377	2476	2058	183.0	79.1	2314	2408	1915
163.5	68.8	2376	2475	2052	183.5	79.3	2313	2407	2152
164.0	69.1	2375	2473	2051	184.0	79.6	2313	2407	2199
164.5	69.3	2374	2472	2050	184.5	79.8	2312	2406	2028
165.0	69.6	2372	2470	1991	185.0	80.1	2311	2404	1957
165.5	69.8	2370	2468	1788	185.5	80.3	2310	2403	1884
166.0	70.1	2367	2465	1731	186.0	80.6	2308	2401	1813
166.5	70.4	2365	2463	1768	186.5	80.9	2306	2399	1760
167.0	70.7	2363	2461	1781	187.0	81.2	2304	2397	1747
167.5	71.0	2360	2458	1784	187.5	81.4	2302	2395	1751
168.0	71.2	2358	2456	1773	188.0	81.7	2300	2393	1706
168.5	71.5	2356	2454	1753	188.5	82.0	2298	2391	1674
169.0	71.8	2354	2452	1894	189.0	82.3	2295	2389	1648
169.5	72.0	2353	2451	2023	189.5	82.6	2293	2386	1648
170.0	72.3	2352	2449	2019	190.0	83.0	2290	2384	1630
170.5	72.5	2350	2448	1986	190.5	83.3	2288	2381	1622
171.0	72.8	2349	2446	1990	191.0	83.6	2285	2379	1616
171.5	73.0	2348	2445	1994	191.5	83.9	2283	2377	1612
172.0	73.3	2347	2443	2000	192.0	84.2	2281	2374	1625
172.5	73.5	2346	2442	2019	192.5	84.5	2278	2372	1665
173.0	73.8	2345	2441	2027	193.0	84.8	2276	2370	1694
173.5	74.0	2343	2440	2008	193.5	85.1	2274	2368	1704
174.0	74.3	2342	2438	1973	194.0	85.4	2273	2366	1732
174.5	74.6	2341	2436	1880	194.5	85.7	2271	2365	1739
175.0	74.8	2339	2435	1866	195.0	85.9	2269	2363	1734
175.5	75.1	2337	2433	1827	195.5	86.2	2267	2361	1723
176.0	75.4	2335	2431	1786	196.0	86.5	2265	2359	1699
176.5	75.7	2333	2428	1778	196.5	86.8	2263	2357	1693
177.0	75.9	2331	2426	1794	197.0	87.1	2261	2355	1690
177.5	76.2	2329	2425	1830	197.5	87.4	2259	2353	1684
178.0	76.5	2327	2422	1744	198.0	87.7	2257	2351	1702
178.5	76.8	2324	2420	1689	198.5	88.0	2256	2349	1704
179.0	77.1	2322	2418	1699	199.0	88.3	2254	2348	1715
179.5	77.4	2320	2415	1744	199.5	88.6	2252	2346	1706
180.0	77.6	2318	2414	1901	200.0	88.9	2250	2344	1693

TABLE 1.

Time-Depth curve values

Page 6.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
200.5	89.2	2248	2342	1693	220.5	100.0	2206	2295	1700
201.0	89.5	2246	2340	1699	221.0	100.3	2204	2293	1694
201.5	89.8	2245	2338	1702	221.5	100.6	2203	2292	1683
202.0	90.1	2243	2337	1703	222.0	100.9	2201	2290	1633
202.5	90.4	2241	2335	1697	222.5	101.2	2199	2288	1611
203.0	90.7	2239	2333	1681	223.0	101.5	2197	2287	1623
203.5	91.0	2237	2331	1666	223.5	101.8	2196	2285	1632
204.0	91.3	2236	2329	1669	224.0	102.1	2194	2283	1629
204.5	91.6	2234	2327	1678	224.5	102.4	2192	2282	1635
205.0	91.8	2233	2326	1853	225.0	102.7	2191	2280	1629
205.5	92.1	2232	2325	2030	225.5	103.0	2189	2278	1611
206.0	92.3	2232	2325	2046	226.0	103.3	2187	2277	1611
206.5	92.6	2231	2324	1901	226.5	103.6	2186	2275	1694
207.0	92.9	2229	2322	1749	227.0	103.9	2185	2274	1780
207.5	93.2	2228	2320	1714	227.5	104.2	2184	2273	1767
208.0	93.4	2226	2319	1688	228.0	104.5	2182	2271	1706
208.5	93.7	2224	2317	1678	228.5	104.8	2180	2270	1587
209.0	94.0	2222	2315	1678	229.0	105.1	2179	2268	1560
209.5	94.3	2221	2313	1674	229.5	105.4	2177	2266	1598
210.0	94.6	2219	2312	1674	230.0	105.7	2175	2264	1613
210.5	94.9	2218	2310	1796	230.5	106.0	2174	2263	1757
211.0	95.2	2217	2310	1994	231.0	106.3	2173	2262	1906
211.5	95.4	2217	2309	2045	231.5	106.6	2172	2261	1807
212.0	95.7	2216	2308	1955	232.0	106.8	2171	2260	1735
212.5	95.9	2215	2307	1894	232.5	107.1	2170	2259	1738
213.0	96.2	2215	2306	2004	233.0	107.4	2169	2257	1704
213.5	96.4	2214	2306	2077	233.5	107.7	2167	2256	1631
214.0	96.7	2214	2305	2075	234.0	108.1	2166	2254	1597
214.5	96.9	2213	2305	2050	234.5	108.3	2164	2253	1706
215.0	97.2	2213	2304	2053	235.0	108.6	2164	2252	1877
215.5	97.4	2213	2303	2071	235.5	108.9	2163	2251	1927
216.0	97.6	2212	2303	2050	236.0	109.1	2163	2251	1913
216.5	97.9	2212	2302	2020	236.5	109.4	2162	2250	1834
217.0	98.1	2211	2301	2009	237.0	109.7	2161	2249	1768
217.5	98.4	2211	2301	2016	237.5	110.0	2159	2247	1665
218.0	98.6	2210	2300	2053	238.0	110.3	2158	2246	1610
218.5	98.9	2210	2300	2057	238.5	110.6	2156	2244	1616
219.0	99.1	2209	2299	2010	239.0	110.9	2155	2243	1682
219.5	99.4	2209	2298	1877	239.5	111.2	2155	2242	1954
220.0	99.7	2207	2297	1755	240.0	111.4	2155	2242	2210

TABLE 1.

Time-Depth curve values

Page 7.

Well : INGLEBY #1

Survey units : METRES

Calibrated sonic interval velocities

Client : GAS & FUEL

Datum : 150.0

used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
240.5	111.6	2155	2242	2129	260.5	121.0	2153	2241	2738
241.0	111.9	2154	2241	1901	261.0	121.2	2154	2242	2653
241.5	112.2	2153	2240	1769	261.5	121.3	2155	2243	2996
242.0	112.5	2152	2239	1703	262.0	121.5	2157	2245	3470
242.5	112.7	2151	2238	1856	262.5	121.6	2159	2248	3941
243.0	113.0	2151	2238	2173	263.0	121.7	2161	2251	4783
243.5	113.2	2152	2238	2427	263.5	121.8	2163	2255	5601
244.0	113.4	2152	2239	2406	264.0	121.9	2166	2260	6012
244.5	113.6	2152	2238	2047	264.5	122.0	2169	2265	6024
245.0	113.9	2151	2237	1782	265.0	122.1	2171	2269	5845
245.5	114.2	2150	2236	1707	265.5	122.1	2174	2274	5824
246.0	114.5	2149	2235	1661	266.0	122.2	2176	2278	5595
246.5	114.8	2148	2234	1803	266.5	122.3	2178	2281	4301
247.0	115.0	2147	2233	1958	267.0	122.5	2179	2282	3112
247.5	115.3	2147	2233	1955	267.5	122.7	2181	2283	3229
248.0	115.5	2146	2232	1941	268.0	122.8	2183	2286	4191
248.5	115.8	2146	2231	1937	268.5	122.9	2185	2289	4824
249.0	116.1	2146	2231	1934	269.0	123.0	2187	2292	3864
249.5	116.3	2145	2230	1940	269.5	123.2	2188	2292	2700
250.0	116.6	2145	2230	1936	270.0	123.4	2188	2293	2446
250.5	116.8	2144	2229	1918	270.5	123.6	2189	2293	2546
251.0	117.1	2144	2228	1910	271.0	123.8	2189	2293	2505
251.5	117.4	2143	2228	1903	271.5	124.0	2189	2294	2481
252.0	117.6	2143	2227	1906	272.0	124.2	2190	2293	2222
252.5	117.9	2142	2226	1882	272.5	124.5	2189	2293	1894
253.0	118.2	2141	2225	1843	273.0	124.8	2188	2292	1828
253.5	118.4	2140	2224	1730	273.5	125.0	2188	2291	2037
254.0	118.7	2139	2223	1654	274.0	125.2	2188	2291	2233
254.5	119.0	2138	2222	1719	274.5	125.5	2188	2291	2273
255.0	119.3	2137	2221	1819	275.0	125.7	2188	2291	2267
255.5	119.5	2137	2221	2107	275.5	125.9	2188	2291	2302
256.0	119.8	2138	2221	2474	276.0	126.1	2189	2291	2319
256.5	119.9	2139	2222	2863	276.5	126.3	2189	2291	2250
257.0	120.1	2140	2224	3346	277.0	126.5	2189	2291	2344
257.5	120.2	2142	2227	4116	277.5	126.7	2189	2292	2481
258.0	120.3	2144	2230	4494	278.0	126.9	2190	2292	2437
258.5	120.4	2147	2233	4189	278.5	127.2	2190	2292	2357
259.0	120.5	2149	2236	4261	279.0	127.4	2190	2292	2403
259.5	120.7	2151	2239	4340	279.5	127.6	2191	2292	2439
260.0	120.8	2152	2241	3558	280.0	127.8	2191	2292	2389

TABLE 1.

Time-Depth curve values

Page 8.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
280.5	128.0	2192	2293	2380	300.5	137.0	2194	2288	2027
281.0	128.2	2192	2293	2373	301.0	137.2	2193	2288	2071
281.5	128.4	2192	2293	2357	301.5	137.5	2193	2288	2078
282.0	128.6	2193	2293	2533	302.0	137.7	2193	2287	2140
282.5	128.8	2193	2294	2526	302.5	137.9	2193	2287	2229
283.0	129.0	2193	2294	2388	303.0	138.1	2193	2287	2218
283.5	129.2	2194	2294	2317	303.5	138.4	2193	2287	2169
284.0	129.5	2194	2294	2237	304.0	138.6	2193	2287	2157
284.5	129.7	2194	2294	2183	304.5	138.8	2193	2287	2135
285.0	129.9	2194	2293	2133	305.0	139.1	2193	2287	2332
285.5	130.2	2194	2293	2172	305.5	139.3	2194	2287	2530
286.0	130.4	2194	2293	2295	306.0	139.5	2194	2287	2341
286.5	130.6	2194	2293	2316	306.5	139.7	2194	2287	2218
287.0	130.8	2194	2293	2253	307.0	139.9	2194	2287	2228
287.5	131.0	2194	2293	2210	307.5	140.1	2194	2287	2265
288.0	131.3	2194	2293	2318	308.0	140.4	2194	2287	2280
288.5	131.5	2194	2293	2297	308.5	140.6	2194	2287	2279
289.0	131.7	2194	2293	2183	309.0	140.8	2194	2287	2199
289.5	131.9	2194	2293	2199	309.5	141.0	2194	2286	2098
290.0	132.1	2195	2293	2242	310.0	141.3	2194	2286	2035
290.5	132.4	2195	2292	2258	310.5	141.5	2194	2286	2061
291.0	132.6	2195	2292	2231	311.0	141.8	2194	2285	2094
291.5	132.8	2194	2292	1998	311.5	142.0	2194	2285	2135
292.0	133.1	2194	2291	2030	312.0	142.2	2194	2285	2175
292.5	133.3	2194	2291	2271	312.5	142.5	2193	2285	2157
293.0	133.5	2194	2291	2256	313.0	142.7	2193	2284	2141
293.5	133.8	2194	2291	2150	313.5	142.9	2193	2284	2181
294.0	134.0	2194	2291	2173	314.0	143.2	2193	2284	2192
294.5	134.2	2194	2291	2177	314.5	143.4	2193	2284	2194
295.0	134.4	2194	2291	2222	315.0	143.6	2194	2284	2307
295.5	134.7	2194	2290	2180	315.5	143.8	2194	2284	2450
296.0	134.9	2194	2290	2131	316.0	144.0	2194	2284	2299
296.5	135.1	2194	2290	2124	316.5	144.3	2194	2284	2181
297.0	135.4	2194	2290	2199	317.0	144.5	2194	2284	2249
297.5	135.6	2194	2290	2296	317.5	144.7	2194	2284	2342
298.0	135.8	2194	2290	2282	318.0	144.9	2195	2284	2398
298.5	136.0	2194	2290	2241	318.5	145.1	2195	2285	2390
299.0	136.3	2194	2290	2264	319.0	145.3	2195	2285	2355
299.5	136.5	2194	2289	2154	319.5	145.5	2195	2285	2413
300.0	136.7	2194	2289	2015	320.0	145.7	2196	2285	2361

TABLE 1.

Time-Depth curve values

Page 9.

Well : INGLEBY #1

Client : GAS & FUEL

Survey units : METRES

Datum : 150.0

Calibrated sonic interval velocities used from 150.0 to 357.5

Datum Depth	One-way time(ms)	-----VELOCITIES-----			Datum Depth	One-way time(ms)	-----VELOCITIES-----		
		Average	RMS	Interval			Average	RMS	Interval
320.5	146.0	2196	2285	2311	339.0	154.4	2196	2280	2218
321.0	146.2	2196	2285	2258	339.5	154.6	2196	2280	2217
321.5	146.4	2196	2285	2166	340.0	154.8	2196	2280	2164
322.0	146.6	2196	2285	2216	340.5	155.1	2196	2280	2132
322.5	146.8	2196	2285	2322	341.0	155.3	2195	2279	2114
323.0	147.1	2196	2285	2357	341.5	155.6	2195	2279	2103
323.5	147.3	2197	2285	2321	342.0	155.8	2195	2279	2048
324.0	147.5	2197	2285	2265	342.5	156.0	2195	2278	2014
324.5	147.7	2197	2285	2211	343.0	156.3	2195	2278	2051
325.0	148.0	2197	2285	2168	343.5	156.5	2194	2278	2130
325.5	148.2	2197	2284	2131	344.0	156.8	2194	2278	2192
326.0	148.4	2196	2284	2111	344.5	157.0	2195	2278	2280
326.5	148.7	2196	2284	2117	345.0	157.2	2195	2278	2144
327.0	148.9	2196	2284	2152	345.5	157.5	2194	2277	2021
327.5	149.1	2196	2284	2268	346.0	157.7	2194	2277	1997
328.0	149.3	2196	2284	2301	346.5	158.0	2193	2276	1883
328.5	149.6	2197	2284	2263	347.0	158.2	2193	2276	1899
329.0	149.8	2197	2283	2215	347.5	158.5	2193	2275	1991
329.5	150.0	2196	2283	2143	348.0	158.7	2192	2275	1918
330.0	150.3	2196	2283	2062	348.5	159.0	2192	2274	1863
330.5	150.5	2196	2283	2079	349.0	159.3	2191	2273	1864
331.0	150.7	2196	2282	2050	349.5	159.6	2191	2273	1861
331.5	151.0	2196	2282	2033	350.0	159.8	2190	2272	1858
332.0	151.2	2195	2282	2137	350.5	160.1	2189	2271	1856
332.5	151.4	2195	2281	2181	351.0	160.4	2189	2271	1853
333.0	151.7	2195	2281	2127	351.5	160.6	2188	2270	1850
333.5	151.9	2195	2281	2101	352.0	160.9	2188	2270	1848
334.0	152.1	2195	2281	2187	352.5	161.2	2187	2269	1845
334.5	152.4	2195	2281	2223	353.0	161.4	2187	2268	1843
335.0	152.6	2195	2281	2178	353.5	161.7	2186	2268	1840
335.5	152.8	2195	2280	2185	354.0	162.0	2185	2267	1838
336.0	153.1	2195	2280	2196	354.5	162.3	2185	2266	1835
336.5	153.3	2195	2280	2300	355.0	162.5	2184	2266	1833
337.0	153.5	2196	2281	2416	355.5	162.8	2184	2265	1830
337.5	153.7	2196	2281	2260	356.0	163.1	2183	2264	1827
338.0	153.9	2196	2280	2173	356.5	163.4	2182	2264	1825
338.5	154.2	2196	2280	2175	357.0	163.6	2182	2263	1822

PE906642

This is an enclosure indicator page.
The enclosure PE906642 is enclosed within the
container PE906641 at this location in this
document.

The enclosure PE906642 has the following characteristics:

ITEM_BARCODE = PE906642
CONTAINER_BARCODE = PE906641
NAME = Shot Calculations, 1 of 2
BASIN = OTWAY
PERMIT = PEP100
TYPE = WELL
SUBTYPE = DIAGRAM
DESCRIPTION = Shot Calculations, 1 of 2, Appendix 7,
Ingleby-1
REMARKS =
DATE_CREATED = 26/10/90
DATE_RECEIVED = 16/03/93
W_NO = W1038
WELL_NAME = INGLEBY-1
CONTRACTOR = VELSEIS PTY LTD
CLIENT_OP_CO = GAS AND FUEL EXPLORATION NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE906643

This is an enclosure indicator page.
The enclosure PE906643 is enclosed within the
container PE906641 at this location in this
document.

The enclosure PE906643 has the following characteristics:

ITEM_BARCODE = PE906643
CONTAINER_BARCODE = PE906641
NAME = Shot Calculations, 2 of 2
BASIN = OTWAY
PERMIT = PEP100
TYPE = WELL
SUBTYPE = DIAGRAM
DESCRIPTION = Shot Calculations, 2 of 2, Appendix 7,
Ingleby-1
REMARKS =
DATE_CREATED = 26/10/90
DATE_RECEIVED = 16/03/93
W_NO = W1038
WELL_NAME = INGLEBY-1
CONTRACTOR = VELSEIS PTY LTD
CLIENT_OP_CO = GAS AND FUEL EXPLORATION NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE906644

This is an enclosure indicator page.
The enclosure PE906644 is enclosed within the
container PE906641 at this location in this
document.

The enclosure PE906644 has the following characteristics:

ITEM_BARCODE = PE906644
CONTAINER_BARCODE = PE906641
NAME = Sonic Drift Data
BASIN = OTWAY
PERMIT = PEP100
TYPE = WELL
SUBTYPE = DIAGRAM
DESCRIPTION = Sonic Drift Data, Appendix 7, Ingleby-1
REMARKS =
DATE_CREATED = 26/10/90
DATE_RECEIVED = 16/03/93
W_NO = W1038
WELL_NAME = INGLEBY-1
CONTRACTOR = VELSEIS PTY LTD
CLIENT_OP_CO = GAS AND FUEL EXPLORATION NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE906645

This is an enclosure indicator page.
The enclosure PE906645 is enclosed within the
container PE906641 at this location in this
document.

The enclosure PE906645 has the following characteristics:

ITEM_BARCODE = PE906645
CONTAINER_BARCODE = PE906641
NAME = Sonic Calibrations Data, 1 of 2
BASIN = OTWAY
PERMIT = PEP100
TYPE = WELL
SUBTYPE = DIAGRAM
DESCRIPTION = Sonic Calibrations Data, 1 of 2,
Appendix 7, Ingleby-1
REMARKS =
DATE_CREATED = 26/10/90
DATE_RECEIVED = 16/03/93
W_NO = W1038
WELL_NAME = INGLEBY-1
CONTRACTOR = VELSEIS PTY LTD
CLIENT_OP_CO = GAS AND FUEL EXPLORATION NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE906646

This is an enclosure indicator page.
The enclosure PE906646 is enclosed within the
container PE906641 at this location in this
document.

The enclosure PE906646 has the following characteristics:

ITEM_BARCODE = PE906646
CONTAINER_BARCODE = PE906641
 NAME = Sonic Calibrations Data, 2 of 2
 BASIN = OTWAY
 PERMIT = PEP100
 TYPE = WELL
 SUBTYPE = DIAGRAM
 DESCRIPTION = Sonic Calibrations Data, 2 of 2,
 Appendix 7, Ingleby-1
 REMARKS =
 DATE_CREATED = 26/10/90
 DATE_RECEIVED = 16/03/93
 W_NO = W1038
 WELL_NAME = INGLEBY-1
 CONTRACTOR = VELSEIS PTY LTD
 CLIENT_OP_CO = GAS AND FUEL EXPLORATION NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE907935

This is an enclosure indicator page.
The enclosure PE907935 is enclosed within the
container PE906641 at this location in this
document.

The enclosure PE907935 has the following characteristics:

ITEM_BARCODE = PE907935
CONTAINER_BARCODE = PE906641
NAME = Synthetic Seismigram
BASIN = OTWAY
PERMIT = PEP100
TYPE = WELL
SUBTYPE = SYNTH_SEISMOGRAM
DESCRIPTION = Synthetic Seismogram (enclosure from
Appendix 7 of WCR) for Ingleby-1
REMARKS =
DATE_CREATED = 7/02/91
DATE_RECEIVED = 16/03/93
W_NO = W1038
WELL_NAME = INGLEBY-1
CONTRACTOR = VELSEIS PTY LTD
CLIENT_OP_CO = GAS AND FUEL EXPLORATION NL

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