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Report No. EPGS-DOM.27-84PHH

Vitrinite reflectance (Ro) on the
dispersed organics in the Mobil et
al. West Flying Foam L-23

Vitrinite reflectance (Ro) on the dispersed organics in Mobil et al. West Flying Foam L-23 well.

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GSC Locality No.: D205

Location: 47°02'43.7"N; 48°49'17.2"W

R.T. Elevation: 26.8m

Sample Interval: 520-4550m

Total Depth: 4554m

Water Depth: 92m

Release Date: May 11, 1984

Interval Studied: 1500-4500m

Vitrinite reflectance has been determined on 24 samples (25 samples available) from Mobil et al. West Flying Foam L-23 well, which is classified as a wildcat well and is located on the Grand Banks (approximately 180 nautical miles east of St. John's, Newfoundland).

Statistical analysis and data acquisition from the Zeiss Photomultiplier 01 system was significantly improved using a Vic-20 microcomputer which reads the digital display signal directly. The selected values are stored, statistically analyzed and a sample report printed. Interfacing of the Vic-20 and the digital display unit was achieved by a BCD to ASCII conversion circuitry developed by Dave Heffler and implemented by Tony Atkinson of the A.G.C. Program Support group.

Sample preparation was carried out as given in Appendix I. The analysis of the well revealed the thermal maturation intervals given in Table I. Specific maturation levels as set out were based on those proposed by Dow (1977).

TABLE I

Inferred Thermal Maturation Levels

<u>Projected:</u>			
350-1300m	0.3 - 0.4	% Ro	immature
<u>Determined:</u>			
1300-2050m	0.4 - 0.5	% Ro	immature approaching maturity
2050-2570m	0.5 - 0.58	% Ro	marginally mature
2570-3090m	0.85 - 1.0	% Ro	mature for oil generation
3090m	1.0	% Ro	peak of wet gas generation
3760m	1.25	% Ro	peak of dry gas generation
4150m	1.35	% Ro	oil floor
4554m	1.47 (T.D.)	% Ro	within wet gas window
<u>Projected:</u>			
5680m	2.0	% Ro	wet gas floor
7100m	3.0	% Ro	dry gas floor

Remarks

This well has yielded a very complete coverage of vitrinite reflectance data. The data, consisting of 24 samples (Table II), constitutes a fairly continuous thermal maturation curve (Figure 1), with the exception of a significant jump in Ro at 2570m. As a result of this jump two distinct maturation intervals occur. The upper interval ranges from 1500 to 2550m and the lower from 2670 to 4500m (T.D. 4554m). It is interesting to note that despite this sudden increase in Ro with depth the slopes of the intervals are essentially the same.

An unconformity separating Lower and Upper Cretaceous strata occurs at 2570m K.B. (D. McAlpine, pers. comm., 1984). Seismic sections suggest that at least 1000m of the Lower Cretaceous section may be eroded, but this may not totally account for the apparent increase in reflectance between 2550 and 2670m. Modelling will be undertaken to assess the possible effects of this break in sedimentation on the maturation profile.

Some samples did not yield enough vitrinite fragments to give a clear indication of vitrinite reflectance. To increase the number of readings the pellets were reground and polished, but low kerogen abundances meant that minimal additional readings were obtained from the residue.

References

Avery, M.P., 1984. Vitrinite reflectance (Ro) on the dispersed organics in the Mobil-Texaco-Pex Olympia A-12. Report No. EPGS-DOM.17-84MPA, 3 pages, 3 tables, 1 figure, 2 Appendix.

Dow, W.G., 1977. Kerogen studies and geological interpretations. Journal of Geochemical Exploration, no. 7, p. 79-99.

Mobil Oil Canada Ltd., 1982. Well History Report Mobil et al. West Flying Foam L-23, Open File Report, Department of Energy Mines and Resources, Ottawa.

October 17, 1984

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PHH/nk

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Art Jackson, E.P.G.S., Dartmouth
Central Technical Files, Ottawa
E.P.G.S. Files, Dartmouth

TABLE II

Data Summary

DEPTH IN METRES	MEAN RANDOM Ro	STANDARD DEVIATION	NUMBER OF READINGS	
			MEASURED	AFTER EDITING
1500	.42	.06	35	23
1610	.42	.05	34	16
1740	.44	.04	29	15
1830	.46	.05	29	22
1950	.49	.06	38	38
2100	.54	.05	81	70
2190	.54	.05	45	44
2280	.52	.05	26	21
2430	.54	.04	78	23
2550	.55	.04	99	38
2670	.88	.05	99	19
2820	.86	.06	62	13
2910	.99	.09	43	23
3000	.93	.06	97	34
3120	1.07	.04	66	12
3270	1.06	.08	50	22
3360	.99	.06	99	32
3510	1.13	.07	99	32
3630	1.18	.05	40	12
3720	1.14	.06	99	22
4050	1.3	.07	99	11
4230	1.35	.09	67	26
4350	1.35	.07	47	18
4500	1.47	.11	99	40

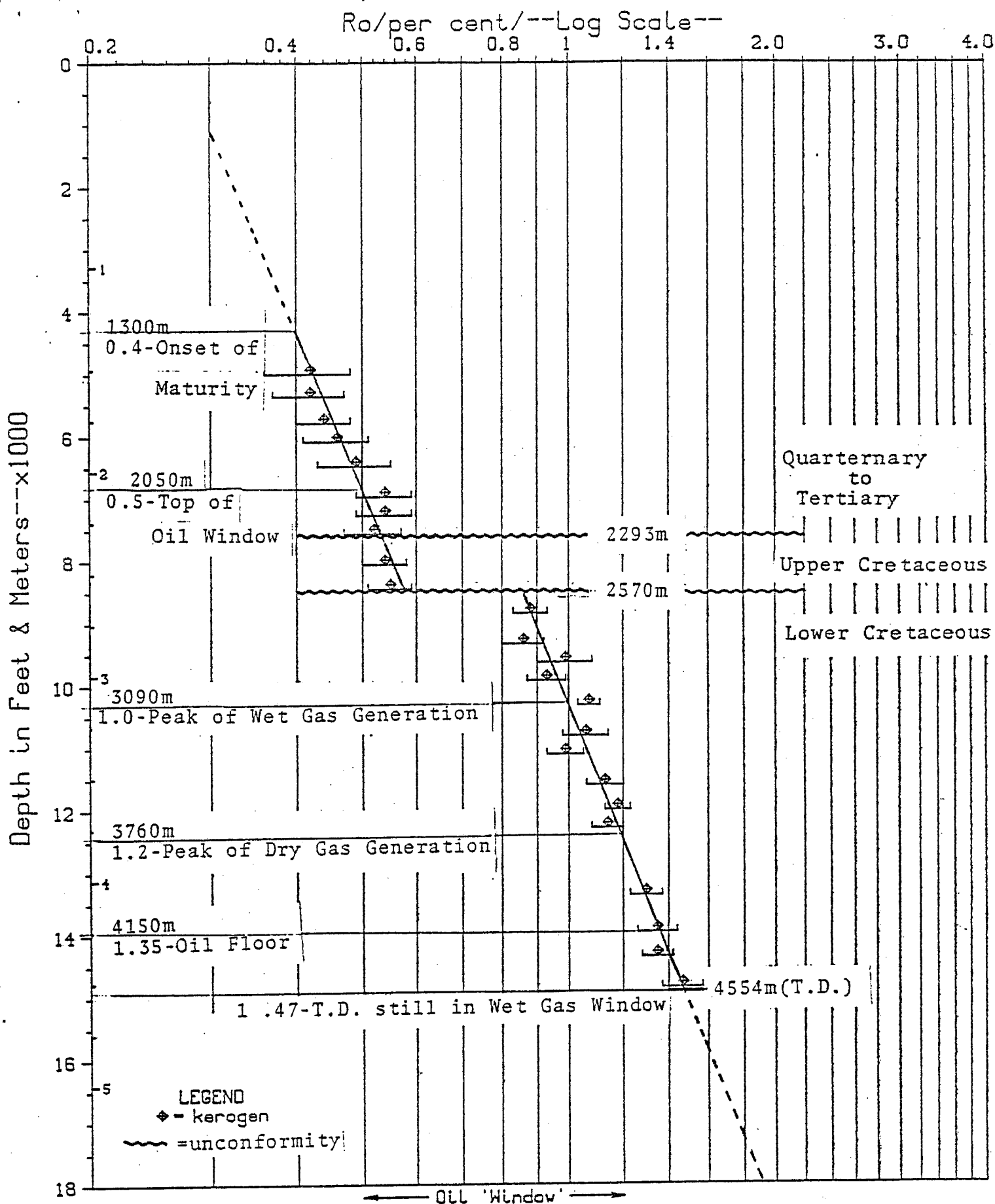


Fig. 1 West Flying Foam L-23

(NOTE: Ages obtained from Well History Report Mobil et al. West Flying Foam L-23)

APPENDIX I

Sample Preparation Method

COGLA Lab preparation

Preliminary Wash

Samples dried in oven

Split: a. all of coarse to Petrology Lab

b. $\frac{1}{2}$ medium to Palynology Lab

c. rest of medium and all of fine combined for Micropaleo Lab

Split "b" is delivered to Palynology Lab and treated as follows:

PALYNOLOGY Lab preparation

20-30 grams placed in 250ml plastic beaker.

Add 10% HCl till reaction ceases (removes carbonates).

Washed (rinsed) 3 times.

Conc. HF overnight (removes silicates).

Washed (rinsed) 3 times.

Heated (60-65°C) conc. HCl (remove fluorides caused by HF).

Washed 3 times.

Then put into 15ml test tube with 4-5ml 4% Alconox.

Differential centrifuge at 1500rpm for 90 sec.

Decant.

Wash 3 times with centrifuging.

Float off organic fraction using 2.0 S.G. ZnBr solution.

Centrifuge 1000rpm, 8 min.

Float fraction into second test tube.

Wash 3 times with centrifuging.

Kerogen smear slide made.

Remaining kerogen material delivered to Vitrinite Reflectance Lab.

VITRINITE REFLECTANCE Lab preparation

Excess water pipetted off.

Freeze dried.

Mounted using epoxy resin (EPO-TEK 301) in predrilled plastic stubs.

Polished using modified coal petrology polishing methods.

Examined under oil lens at approximately 800x mag'n.

APPENDIX II

Vitrinite Reflectance Histograms

Total Population

FILE >>K01590

DEPTH 1460-1500M- W.FLYING FOAM- TRISH HARRISON- MAY-24-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.92	.97	.44	.35	.73	.6	.46	.43	.37	.53
1	.4	1.02	.65	.41	.4	.35	.45	.4	.33	.36
2	.43	.93	.36	.2	.17	1.09	.55	.4	.41	.48
3	.4	.47	.94	.51	.59					

NUMBER OF READINGS = 35

MINIMUM = .17 MAXIMUM = 1.09

MEAN = .53

STANDARD DEVIATION = .23

REFLECTOGRAM

	0	10	20	30	40	44
.15 - .19 = 1	!					
.2 - .24 = 1	!					
.25 - .29 = 0						
.3 - .34 = 1	!					
.35 - .39 = 5	!	!	!	!	!	!
.4 - .44 = 10	!	!	!	!	!	!
.45 - .49 = 4	!	!	!	!		
.5 - .54 = 2	!	!				
.55 - .59 = 2	!	!				
.6 - .64 = 1	!					
.65 - .69 = 1	!					
.7 - .74 = 1	!					
.75 - .79 = 0						
.8 - .84 = 0						
.85 - .89 = 0						
.9 - .94 = 3	!	!	!			
.95 - .99 = 1	!					
1 - 1.04 = 1	!					
1.05 - 1.09 = 1	!					

FILE >>K0160A

DEPTH 1500-1610M- W.FLYING FOAM- TRISH HARRISON- MAY-24-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.23	.27	.36	.37	.37	.37	.38	.38	.39	.4.
1	.4	.44	.45	.45	.46	.46	.49	.51	.55	.58
2	.59	.6	.6	.61	.62	.67	.71	.72	.75	.79
3	.87	.97	1.03	1.04						

NUMBER OF READINGS = 34

MINIMUM = .23 MAXIMUM = 1.04

MEAN = .56

STANDARD DEVIATION = .21

REFLECTOGRAM

	0	10	20	30	40	44
.2	-	.24	=	1	!	!
.25	-	.29	=	1	!	!
.3	-	.34	=	0	!	!
.35	-	.39	=	7	!	!
.4	-	.44	=	3	!	!
.45	-	.49	=	5	!	!
.5	-	.54	=	1	!	!
.55	-	.59	=	3	!	!
.6	-	.64	=	4	!	!
.65	-	.69	=	1	!	!
.7	-	.74	=	2	!	!
.75	-	.79	=	2	!	!
.8	-	.84	=	0	!	!
.85	-	.89	=	1	!	!
.9	-	.94	=	0	!	!
.95	-	.99	=	1	!	!
1	-	1.04	=	2	!	!

FILE >>K01608

DEPTH 1700-1740M- W.FLYING FOAM- TRISH HARRISON- MAY-28-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.36	.38	.39	.39	.41	.42	.45	.45	.45	.46
1	.47	.47	.48	.49	.5	.61	.76	.78	.78	.82
2	.82	.86	.91	.91	.93	.94	.96	1.04	1.14	

NUMBER OF READINGS = 29

MINIMUM = .36 MAXIMUM = 1.14

MEAN = .65

STANDARD DEVIATION = .24

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.35 - .39 = 4						
.4 - .44 = 2						
.45 - .49 = 8						
.5 - .54 = 1						
.55 - .59 = 0						
.6 - .64 = 1						
.65 - .69 = 0						
.7 - .74 = 0						
.75 - .79 = 3						
.8 - .84 = 2						
.85 - .89 = 1						
.9 - .94 = 4						
.95 - .99 = 1						
1 - 1.04 = 1						
1.05 - 1.09 = 0						
1.1 - 1.14 = 1						

FILE >>K01600

DEPTH 1820-1830M- W.FLYING FOAM- TRISH HARRISON- MAY-28-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.15	.22	.35	.36	.41	.43	.43	.44	.44	.44
1	.44	.45	.45	.46	.46	.46	.48	.48	.5	.5
2	.51	.52	.53	.55	.66	.69	.74	.87	1.11	

NUMBER OF READINGS = 29

MINIMUM = .15 MAXIMUM = 1.11

MEAN = .5

STANDARD DEVIATION = .18

REFLECTOGRAM

	0	10	20	30	40	44
.15 - .19 = 1	!					
.2 - .24 = 1	!					
.25 - .29 = 0	!					
.3 - .34 = 0	!					
.35 - .39 = 2	!!					
.4 - .44 = 7	!!!!!!!					
.45 - .49 = 7	!!!!!!!					
.5 - .54 = 5	!!!!!					
.55 - .59 = 1	!					
.6 - .64 = 0	!					
.65 - .69 = 2	!!					
.7 - .74 = 1	!					
.75 - .79 = 0	!					
.8 - .84 = 0	!					
.85 - .89 = 1	!					
.9 - .94 = 0	!					
.95 - .99 = 0	!					
1 - 1.04 = 0	!					
1.05 - 1.09 = 0	!					
1.1 - 1.14 = 1	!					

45-54

FILE >>R0161A

DEPTH 1940-1950M- W.FLYING FOAM- TRISH HARRISON- JUNE-21-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.37	.38	.38	.4	.42	.43	.44	.44	.45	.45
1	.45	.45	.45	.45	.47	.47	.47	.48	.49	.49
2	.49	.5	.51	.51	.52	.52	.52	.52	.53	.53
3	.53	.53	.54	.55	.55	.57	.59	.59		

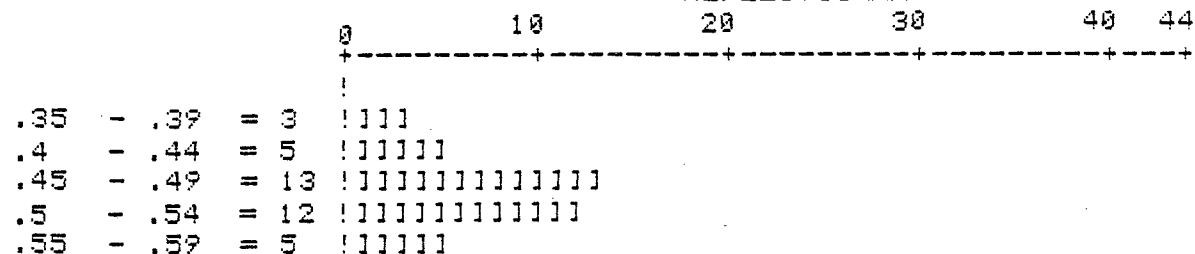
NUMBER OF READINGS = 38

MINIMUM = .37 MAXIMUM = .59

MEAN = .49

STANDARD DEVIATION = .06

REFLECTOGRAM



FILE >>K0161B

DEPTH 2060-2100M- W.FLYING FOAM- TRISH HARRISON- MAY-29-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.33	.37	.37	.38	.41	.42	.43	.46	.46	.46
1	.47	.48	.48	.49	.49	.49	.49	.49	.5	.5
2	.5	.5	.5	.51	.51	.51	.51	.51	.52	.52
3	.52	.52	.52	.52	.53	.53	.53	.53	.53	.54
4	.54	.54	.54	.55	.55	.55	.55	.55	.55	.56
5	.56	.57	.57	.57	.57	.57	.58	.58	.58	.59
6	.59	.59	.59	.6	.6	.6	.6	.6	.61	.61
7	.62	.64	.65	.66	.86	1.01	1.06	1.09	1.12	1.13
8	1.15									

NUMBER OF READINGS = 81

MINIMUM = .33 MAXIMUM = 1.15

MEAN = .57

STANDARD DEVIATION = .17

REFLECTOGRAM

	0	10	20	30	40	44
.3 - .34 = 1	!					
.35 - .39 = 3	!!!					
.4 - .44 = 3	!!!					
.45 - .49 = 11	!!!!!!!!!!!!					
.5 - .54 = 25	!!!!!!!!!!!!!!!!!!!!					
.55 - .59 = 20	!!!!!!!!!!!!!!!!!!!!					
.6 - .64 = 9	!!!!!!!					
.65 - .69 = 2	!!					
.7 - .74 = 0	!					
.75 - .79 = 0	!					
.8 - .84 = 0	!					
.85 - .89 = 1	!					
.9 - .94 = 0	!					
.95 - .99 = 0	!					
1 - 1.04 = 1	!					
1.05 - 1.09 = 2	!!					
1.1 - 1.14 = 2	!!					
1.15 - 1.19 = 1	!					

FILE >>K0161C

DEPTH 2180-2190M- W.FLYING FOAM- TRISH HARRISON- MAY-29-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.24	.43	.44	.45	.45	.46	.47	.48	.5	.5
1	.51	.51	.51	.52	.52	.52	.52	.52	.52	.52
2	.52	.53	.54	.54	.54	.55	.55	.55	.56	.56
3	.57	.57	.57	.58	.58	.58	.59	.59	.6	.61
4	.61	.61	.63	.63	.65					

NUMBER OF READINGS = 45

MINIMUM = .24 MAXIMUM = .65

MEAN = .53

STANDARD DEVIATION = .07

REFLECTOGRAM

	0	10	20	30	40	44
.2 - .24 = 1						
.25 - .29 = 0						
.3 - .34 = 0						
.35 - .39 = 0						
.4 - .44 = 2						
.45 - .49 = 5						
.5 - .54 = 17						
.55 - .59 = 13						
.6 - .64 = 6						
.65 - .69 = 1						

FILE >>TH162A

DEPTH 2270-2280M- W.FLYING FOAM- TRISH HARRISON- JULY-19-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.42	.45	.45	.49	.49	.5	.51	.52	.52	.52
1	.52	.54	.54	.54	.55	.55	.55	.57	.57	.59
2	.6	.68	.7	.92	.95	1.14				

NUMBER OF READINGS = 26

MINIMUM = .42 MAXIMUM = 1.14

MEAN = .59

STANDARD DEVIATION = .17

REFLECTOGRAM

	0	10	20	30	40	44
.4	-	.44	=	1	!	!
.45	-	.49	=	4	!	!!!!
.5	-	.54	=	9	!	!!!!!!
.55	-	.59	=	6	!	!!!!!!
.6	-	.64	=	1	!	!
.65	-	.69	=	1	!	!
.7	-	.74	=	1	!	!
.75	-	.79	=	0	!	!
.8	-	.84	=	0	!	!
.85	-	.89	=	0	!	!
.9	-	.94	=	1	!	!
.95	-	.99	=	1	!	!
1	-	1.04	=	0	!	!
1.05	-	1.09	=	0	!	!
1.1	-	1.14	=	1	!	!

FILE >>TH162B

DEPTH 2420-2430M- W.FLYING FOAM- TRISH HARRISON- JULY-19-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.47	.47	.49	.49	.49	.51	.52	.52	.53	.53
1	.53	.54	.54	.56	.56	.57	.57	.58	.59	.6
2	.6	.61	.62	.68	.7	.7	.7	.71	.72	.74
3	.77	.8	.8	.83	.84	.85	.85	.85	.88	.92
4	.95	.95	.97	.98	.99	.99	1	1	1.01	1.02
5	1.03	1.03	1.04	1.06	1.09	1.13	1.13	1.14	1.15	1.16
6	1.18	1.18	1.19	1.21	1.21	1.22	1.22	1.24	1.28	1.29
7	1.3	1.32	1.34	1.36	1.4	1.41	1.42	1.43		

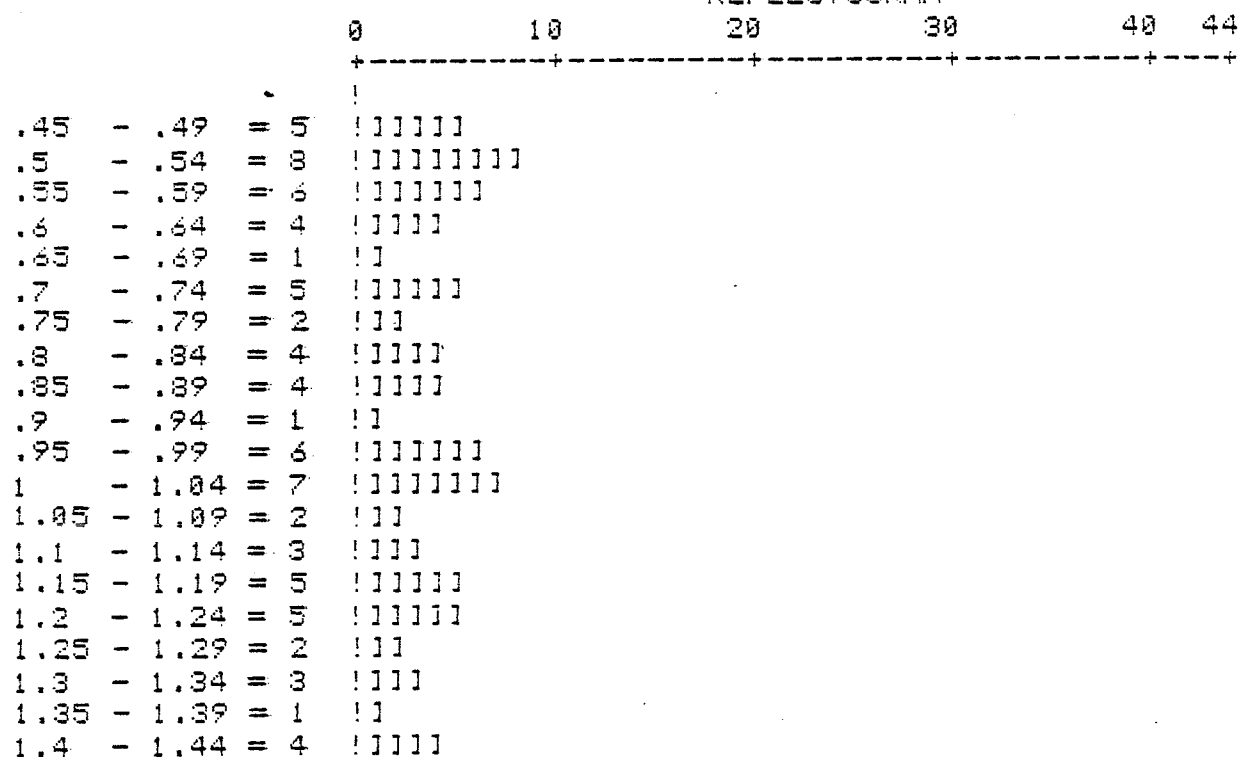
NUMBER OF READINGS = 78

MINIMUM = .47 MAXIMUM = 1.43

MEAN = .9

STANDARD DEVIATION = .29

REFLECTOGRAM



FILE >>TH1620

DEPTH 2540-2550M- W.FLYING FOAM- TRISH HARRISON- JULY-18-84

CDL>	1	2	3	4	5	6	7	8	9	0
ROW	.37	.43	.43	.43	.47	.47	.47	.48	.49	.5
1	.51	.52	.52	.52	.53	.53	.53	.54	.54	.54
2	.55	.55	.55	.55	.55	.55	.55	.56	.56	.56
3	.57	.57	.57	.58	.59	.59	.59	.59	.59	.59
4	.59	.61	.65	.69	.7	.71	.75	.8	.81	.83
5	.83	.85	.87	.87	.89	.91	.94	.95	.96	.97
6	.99	1	1.04	1.05	1.06	1.07	1.08	1.09	1.11	1.12
7	1.13	1.14	1.15	1.15	1.16	1.17	1.19	1.2	1.2	1.21
8	1.21	1.24	1.24	1.24	1.25	1.25	1.28	1.33	1.37	1.37
9	1.38	1.39	1.42	1.45	1.47	1.49	1.52	1.68	1.76	

NUMBER OF READINGS = 99

MINIMUM = .37 MAXIMUM = 1.76

MEAN = .87

STANDARD DEVIATION = .35

REFLECTOGRAM

	0	10	20	30	40	44
.35 - .39 = 1	!					
.4 - .44 = 3	!!!!					
.45 - .49 = 5	!!!!!!					
.5 - .54 = 11	!!!!!!!!!!!!					
.55 - .59 = 21	!!!!!!!!!!!!!!!!!!!!					
.6 - .64 = 1	!					
.65 - .69 = 2	!!					
.7 - .74 = 2	!!					
.75 - .79 = 1	!					
.8 - .84 = 4	!!!!					
.85 - .89 = 4	!!!!					
.9 - .94 = 2	!!					
.95 - .99 = 4	!!!!					
1 - 1.04 = 2	!!					
1.05 - 1.09 = 5	!!!!!!					
1.1 - 1.14 = 4	!!!!					
1.15 - 1.19 = 5	!!!!!!					
1.2 - 1.24 = 7	!!!!!!!					
1.25 - 1.29 = 3	!!!					
1.3 - 1.34 = 1	!					
1.35 - 1.39 = 4	!!!!					
1.4 - 1.44 = 1	!					
1.45 - 1.49 = 3	!!!					
1.5 - 1.54 = 1	!					
1.55 - 1.59 = 0						
1.6 - 1.64 = 0						
1.65 - 1.69 = 1	!					
1.7 - 1.74 = 0						
1.75 - 1.79 = 1	!					

FILE >>TH163A

DEPTH 2660-2670M- W.FLYING FOAM- TRISH HARRISON- JULY-18-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.42	.47	.51	.54	.55	.55	.55	.56	.56	.58
1	.59	.61	.62	.62	.66	.66	.66	.66	.67	.7
2	.7	.71	.72	.72	.74	.75	.76	.77	.79	.8
3	.82	.84	.85	.85	.86	.87	.87	.88	.9	.9
4	.9	.91	.94	.95	.95	.95	.95	.97	.97	.97
5	.98	.98	.99	1	1	1.01	1.01	1.02	1.04	1.04
6	1.04	1.04	1.06	1.06	1.07	1.07	1.08	1.08	1.09	1.09
7	1.1	1.11	1.11	1.12	1.12	1.13	1.13	1.13	1.14	1.16
8	1.17	1.18	1.21	1.22	1.24	1.25	1.27	1.27	1.28	1.32
9	1.32	1.34	1.34	1.36	1.37	1.38	1.46	1.46	1.46	

NUMBER OF READINGS = 99

MINIMUM = .42 MAXIMUM = 1.46

MEAN = .95

STANDARD DEVIATION = .25

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
	!					
.4 - .44 = 1	!					
.45 - .49 = 1	!					
.5 - .54 = 2	!!					
.55 - .59 = 7	!!!!!!					
.6 - .64 = 3	!!!					
.65 - .69 = 5	!!!!!					
.7 - .74 = 6	!!!!!!					
.75 - .79 = 4	!!!!					
.8 - .84 = 3	!!!					
.85 - .89 = 6	!!!!!!					
.9 - .94 = 5	!!!!!					
.95 - .99 = 10	!!!!!!	!!!!!!				
1 - 1.04 = 9	!!!!!!	!!!!!!				
1.05 - 1.09 = 8	!!!!!!	!!!!!!				
1.1 - 1.14 = 9	!!!!!!	!!!!!!				
1.15 - 1.19 = 3	!!!					
1.2 - 1.24 = 3	!!!					
1.25 - 1.29 = 4	!!!!					
1.3 - 1.34 = 4	!!!!					
1.35 - 1.39 = 3	!!!					
1.4 - 1.44 = 0	!					
1.45 - 1.49 = 3	!!!					

FILE >>TM163B

DEPTH 2780-2820M- W.FLYING FOAM- TRISH HARRISON- JULY-13-84 .

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.53	.53	.57	.58	.62	.63	.64	.68	.68	.68
1	.69	.69	.7	.71	.72	.77	.79	.8	.82	.83
2	.85	.86	.87	.88	.92	.92	.93	.95	.97	.98
3	1	1	1.01	1.02	1.02	1.02	1.02	1.04	1.04	1.05
4	1.05	1.06	1.09	1.09	1.1	1.11	1.11	1.13	1.14	1.14
5	1.18	1.19	1.2	1.2	1.25	1.25	1.26	1.26	1.27	1.3
6	1.4	1.44								

NUMBER OF READINGS = 62

MINIMUM = .53 MAXIMUM = 1.44

MEAN = .96

STANDARD DEVIATION = .23

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
.5 - .54 = 2	!!					
.55 - .59 = 2	!!					
.6 - .64 = 3	!!!					
.65 - .69 = 5	!!!!					
.7 - .74 = 3	!!!					
.75 - .79 = 2	!!					
.8 - .84 = 3	!!!					
.85 - .89 = 4	!!!!					
.9 - .94 = 3	!!!					
.95 - .99 = 3	!!!					
1 - 1.04 = 9	!!!!!!					
1.05 - 1.09 = 5	!!!!					
1.1 - 1.14 = 6	!!!!!!					
1.15 - 1.19 = 2	!!					
1.2 - 1.24 = 2	!!					
1.25 - 1.29 = 5	!!!!					
1.3 - 1.34 = 1	!					
1.35 - 1.39 = 0						
1.4 - 1.44 = 2	!!					

FILE >>TH163C

DEPTH 2900-2910M- W.FLYING FOAM- TRISH HARRISON- JULY-12-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.54	.7	.76	.81	.86	.88	.91	.92	.92	.94
1	.95	.96	.97	.98	.99	1.01	1.03	1.04	1.05	1.06
2	1.07	1.07	1.08	1.09	1.12	1.13	1.24	1.26	1.28	1.29
3	1.3	1.3	1.32	1.34	1.38	1.41	1.47	1.51	1.53	1.54
4	1.54	1.55	1.64							

NUMBER OF READINGS = 43

MINIMUM = .54 MAXIMUM = 1.64

MEAN = 1.13

STANDARD DEVIATION = .26

REFLECTOGRAM

	0	10	20	30	40	44
.5 - .54 = 1	!					
.55 - .59 = 0	!					
.6 - .64 = 0	!					
.65 - .69 = 0	!					
.7 - .74 = 1	!!					
.75 - .79 = 1	!!					
.8 - .84 = 1	!!					
.85 - .89 = 2	!!!					
.9 - .94 = 4	!!!!					
.95 - .99 = 5	!!!!!					
1 - 1.04 = 3	!!!					
1.05 - 1.09 = 6	!!!!!!					
1.1 - 1.14 = 2	!!					
1.15 - 1.19 = 0	!					
1.2 - 1.24 = 1	!!					
1.25 - 1.29 = 3	!!!					
1.3 - 1.34 = 4	!!!!					
1.35 - 1.39 = 1	!!					
1.4 - 1.44 = 1	!!					
1.45 - 1.49 = 1	!!					
1.5 - 1.54 = 4	!!!!					
1.55 - 1.59 = 1	!!					
1.6 - 1.64 = 1	!!					

FILE >>TH164A

DEPTH 2990-3000M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.55	.61	.62	.63	.66	.67	.69	.69	.69	.7
1	.7	.71	.75	.76	.77	.78	.78	.79	.8	.8
2	.81	.81	.82	.83	.84	.84	.84	.84	.85	.88
3	.89	.89	.89	.9	.9	.91	.92	.92	.93	.93
4	.93	.93	.94	.94	.95	.95	.98	.98	.98	.99
5	.99	1	1.01	1.02	1.02	1.02	1.04	1.05	1.06	1.06
6	1.06	1.06	1.07	1.07	1.07	1.08	1.09	1.09	1.1	1.1
7	1.1	1.11	1.14	1.15	1.17	1.17	1.17	1.2	1.21	1.22
8	1.24	1.26	1.28	1.28	1.3	1.34	1.36	1.38	1.41	1.43
9	1.43	1.44	1.48	1.48	1.56	1.6	1.71			

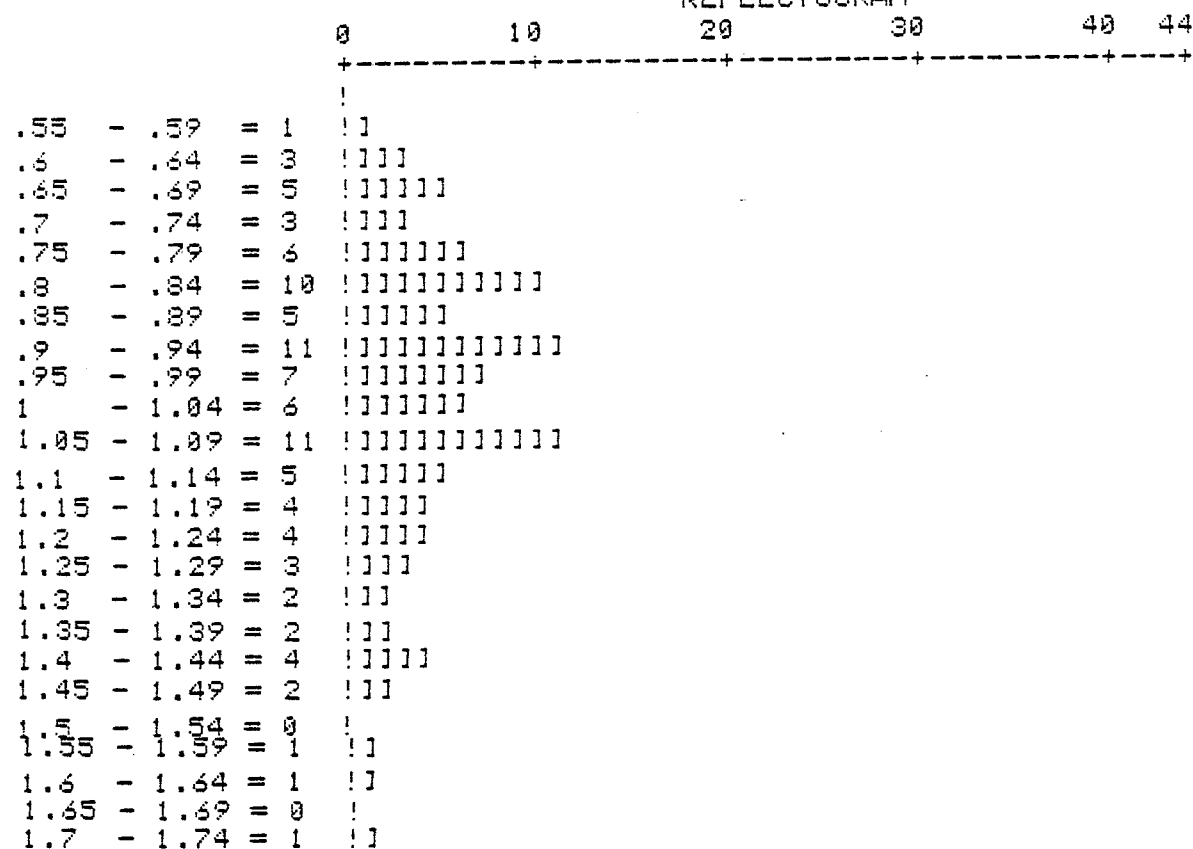
NUMBER OF READINGS = 97

MINIMUM = .55 MAXIMUM = 1.71

MEAN = 1.01

STANDARD DEVIATION = .24

REFLECTOGRAM



FILE >>TH164B

DEPTH 3110-3120M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.52	.62	.74	.75	.76	.86	.87	.88	.89	.92
1	1.13	1.13	1.16	1.17	1.18	1.18	1.19	1.2	1.21	1.21
2	1.21	1.23	1.24	1.24	1.24	1.26	1.28	1.31	1.33	1.34
3	1.35	1.35	1.36	1.36	1.37	1.37	1.38	1.38	1.38	1.39
4	1.4	1.4	1.41	1.41	1.42	1.44	1.46	1.49	1.49	1.49
5	1.49	1.52	1.52	1.56	1.59	1.64				

NUMBER OF READINGS = 66

MINIMUM = .52 MAXIMUM = 1.64

MEAN = 1.22

STANDARD DEVIATION = .24

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
	!					
.5 - .54 = 1	!					
.55 - .59 = 0	!					
.6 - .64 = 1	!					
.65 - .69 = 0	!					
.7 - .74 = 1	!					
.75 - .79 = 2	!!					
.8 - .84 = 0	!					
.85 - .89 = 4	!!!!					
.9 - .94 = 1	!					
.95 - .99 = 0	!					
1 - 1.04 = 3	!!!					
1.05 - 1.09 = 6	!!!!!!					
1.1 - 1.14 = 3	!!!					
1.15 - 1.19 = 5	!!!!!					
1.2 - 1.24 = 8	!!!!!!!					
1.25 - 1.29 = 2	!!					
1.3 - 1.34 = 3	!!!					
1.35 - 1.39 = 10	!!!!!!!					
1.4 - 1.44 = 6	!!!!!!					
1.45 - 1.49 = 5	!!!!!					
1.5 - 1.54 = 2	!!					
1.55 - 1.59 = 2	!!					
1.6 - 1.64 = 1	!					

FILE >>TH1640

DEPTH 3230-3270M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.72	.84	.86	.93	.94	.94	.96	.97	1.01	1.02
1	1.04	1.05	1.05	1.05	1.06	1.08	1.09	1.11	1.12	1.12
2	1.14	1.14	1.15	1.17	1.18	1.23	1.25	1.26	1.26	1.32
3	1.33	1.34	1.34	1.35	1.35	1.35	1.36	1.38	1.42	1.42
4	1.42	1.45	1.45	1.47	1.52	1.53	1.54	1.59	1.59	1.62

NUMBER OF READINGS = 50

MINIMUM = .72 MAXIMUM = 1.62

MEAN = 1.22

STANDARD DEVIATION = .22

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
.7	-	.74	=	1	!	!
.75	-	.79	=	0	!	!
.8	-	.84	=	1	!	!
.85	-	.89	=	1	!	!
.9	-	.94	=	3	!	!
.95	-	.99	=	2	!	!
1	-	1.04	=	3	!	!
1.05	-	1.09	=	6	!	!
1.1	-	1.14	=	5	!	!
1.15	-	1.19	=	3	!	!
1.2	-	1.24	=	1	!	!
1.25	-	1.29	=	3	!	!
1.3	-	1.34	=	4	!	!
1.35	-	1.39	=	5	!	!
1.4	-	1.44	=	3	!	!
1.45	-	1.49	=	3	!	!
1.5	-	1.54	=	3	!	!
1.55	-	1.59	=	2	!	!
1.6	-	1.64	=	1	!	!

FILE >>TH165A

DEPTH 3350-3360M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84.

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.46	.59	.65	.69	.74	.77	.79	.81	.81	.83
1	.83	.84	.85	.85	.86	.87	.88	.88	.89	.9
2	.9	.9	.92	.92	.93	.95	.95	.95	.98	.97
3	.97	.97	.98	.99	.99	.99	.99	1	1.01	1.02
4	1.02	1.03	1.03	1.05	1.05	1.05	1.07	1.07	1.08	1.09
5	1.09	1.1	1.1	1.11	1.11	1.11	1.11	1.12	1.12	1.13
6	1.14	1.15	1.15	1.15	1.17	1.19	1.19	1.21	1.21	1.22
7	1.23	1.23	1.24	1.25	1.26	1.27	1.27	1.28	1.28	1.28
8	1.3	1.3	1.31	1.32	1.34	1.4	1.43	1.44	1.45	1.46
9	1.46	1.49	1.52	1.58	1.58	1.63	1.63	1.69	1.74	

NUMBER OF READINGS = 99

MINIMUM = .46 MAXIMUM = 1.74

MEAN = 1.1

STANDARD DEVIATION = .25

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
.45 - .49 = 1	!					
.5 - .54 = 0	!					
.55 - .59 = 1	!					
.6 - .64 = 0	!					
.65 - .69 = 2	!!					
.7 - .74 = 1	!					
.75 - .79 = 2	!!					
.8 - .84 = 5	!!!!					
.85 - .89 = 7	!!!!					
.9 - .94 = 6	!!!!					
.95 - .99 = 12	!!!!	!!!!				
1 - 1.04 = 6	!!!!					
1.05 - 1.09 = 8	!!!!	!!!!				
1.1 - 1.14 = 10	!!!!	!!!!	!!!!			
1.15 - 1.19 = 6	!!!!					
1.2 - 1.24 = 6	!!!!					
1.25 - 1.29 = 7	!!!!	!!!!				
1.3 - 1.34 = 5	!!!!					
1.35 - 1.39 = 0	!					
1.4 - 1.44 = 3	!!!					
1.45 - 1.49 = 4	!!!!					
1.5 - 1.54 = 1	!					
1.55 - 1.59 = 2	!!					
1.6 - 1.64 = 2	!!					
1.65 - 1.69 = 1	!					
1.7 - 1.74 = 1	!					

FILE >>TH165B

DEPTH 3470-3510M- W.FLYING FOAM- TRISH HARRISON- JULY-25-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.61	.67	.67	.68	.69	.7	.72	.72	.78	.79
1	.8	.82	.82	.83	.83	.88	.9	.91	.96	1.01
2	1.02	1.03	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.1
3	1.1	1.11	1.11	1.11	1.13	1.14	1.14	1.14	1.15	1.16
4	1.17	1.17	1.17	1.18	1.19	1.21	1.21	1.22	1.23	1.23
5	1.24	1.25	1.26	1.26	1.27	1.27	1.27	1.28	1.28	1.28
6	1.28	1.28	1.29	1.3	1.31	1.33	1.33	1.33	1.38	1.38
7	1.4	1.41	1.43	1.43	1.44	1.45	1.47	1.48	1.49	1.49
8	1.49	1.49	1.49	1.49	1.5	1.53	1.53	1.54	1.56	1.59
9	1.59	1.61	1.61	1.63	1.65	1.65	1.66	1.7	1.79	

NUMBER OF READINGS = 99

MINIMUM = .61 MAXIMUM = 1.79

MEAN = 1.21

STANDARD DEVIATION = .28

REFLECTOGRAM

	0	10	20	30	40	44
.6 - .64 = 1	!					
.65 - .69 = 4	!!!!					
.7 - .74 = 3	!!!					
.75 - .79 = 2	!!					
.8 - .84 = 5	!!!!!					
.85 - .89 = 1	!					
.9 - .94 = 2	!!					
.95 - .99 = 1	!					
1 - 1.04 = 5	!!!!!					
1.05 - 1.09 = 5	!!!!!					
1.1 - 1.14 = 9	!!!!!!!					
1.15 - 1.19 = 7	!!!!!!!					
1.2 - 1.24 = 6	!!!!!!					
1.25 - 1.29 = 12	!!!!!!!!!!!!					
1.3 - 1.34 = 5	!!!!!					
1.35 - 1.39 = 2	!!					
1.4 - 1.44 = 5	!!!!!					
1.45 - 1.49 = 9	!!!!!!!					
1.5 - 1.54 = 4	!!!!					
1.55 - 1.59 = 3	!!!					
1.6 - 1.64 = 3	!!!					
1.65 - 1.69 = 3	!!!					
1.7 - 1.74 = 1	!					
1.75 - 1.79 = 1	!					

FILE >>TH1650

DEPTH 3590-3630M- W.FLYING FOAM- TRISH HARRISON- JULY-13-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.51	.52	.54	.65	.71	.72	.77	.8	.82	.85
1	.88	.89	.9	.91	.91	.96	.99	1	1	1.01
2	1.09	1.11	1.11	1.18	1.18	1.19	1.19	1.19	1.2	1.22
3	1.22	1.23	1.32	1.32	1.34	1.44	1.49	1.52	1.57	1.58

NUMBER OF READINGS = 40

MINIMUM = .51 MAXIMUM = 1.58

MEAN = 1.05

STANDARD DEVIATION = .28

REFLECTOGRAM

	0	10	20	30	40	44
.5 - .54 = 3	!!!					
.55 - .59 = 0	!					
.6 - .64 = 0	!					
.65 - .69 = 1	!!					
.7 - .74 = 2	!!!					
.75 - .79 = 1	!!					
.8 - .84 = 2	!!!					
.85 - .89 = 3	!!!!					
.9 - .94 = 3	!!!!					
.95 - .99 = 2	!!!					
1 - 1.04 = 3	!!!!					
1.05 - 1.09 = 1	!!					
1.1 - 1.14 = 2	!!!					
1.15 - 1.19 = 5	!!!!!!					
1.2 - 1.24 = 4	!!!!					
1.25 - 1.29 = 0	!					
1.3 - 1.34 = 3	!!!					
1.35 - 1.39 = 0	!					
1.4 - 1.44 = 1	!!					
1.45 - 1.49 = 1	!!					
1.5 - 1.54 = 1	!!					
1.55 - 1.59 = 2	!!!					

FILE >>K0166A

DEPTH 3680-3720M- W.FLYING FOAM- TRISH HARRISON- JUNE-4-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.35	.36	.37	.42	.45	.49	.52	.53	.53	.56
1	.56	.57	.6	.6	.6	.61	.61	.61	.61	.63
2	.65	.65	.66	.66	.67	.68	.68	.68	.69	.69
3	.7	.7	.7	.7	.7	.71	.71	.71	.72	.73
4	.74	.74	.75	.76	.77	.77	.77	.79	.79	.79
5	.79	.8	.81	.82	.83	.83	.85	.85	.86	.93
6	.96	.97	.99	1	1	1.05	1.07	1.07	1.07	1.08
7	1.1	1.11	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.17
8	1.17	1.18	1.18	1.19	1.2	1.2	1.28	1.3	1.34	1.4
9	1.41	1.42	1.43	1.43	1.43	1.43	1.44	1.49	1.49	

NUMBER OF READINGS = 99

MINIMUM = .35 MAXIMUM = 1.49

MEAN = .88

STANDARD DEVIATION = .3

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
	!					
.35 - .39 = 3	! ! ! !					
.4 - .44 = 1	! !					
.45 - .49 = 2	! ! !					
.5 - .54 = 3	! ! ! !					
.55 - .59 = 3	! ! ! !					
.6 - .64 = 8	! ! ! ! ! ! ! !					
.65 - .69 = 10	! ! ! ! ! ! ! ! ! !					
.7 - .74 = 12	! ! ! ! ! ! ! ! ! ! ! !					
.75 - .79 = 9	! ! ! ! ! ! ! ! !					
.8 - .84 = 5	! ! ! ! !					
.85 - .89 = 3	! ! ! !					
.9 - .94 = 1	! !					
.95 - .99 = 3	! ! ! !					
1 - 1.04 = 2	! ! !					
1.05 - 1.09 = 5	! ! ! ! !					
1.1 - 1.14 = 6	! ! ! ! ! !					
1.15 - 1.19 = 8	! ! ! ! ! ! ! !					
1.2 - 1.24 = 2	! ! !					
1.25 - 1.29 = 1	! !					
1.3 - 1.34 = 2	! ! !					
1.35 - 1.39 = 0	!					
1.4 - 1.44 = 8	! ! ! ! ! ! ! !					
1.45 - 1.49 = 2	! ! !					

FILE >>K0166C

DEPTH 4040-4050M- W.FLYING FOAM- TRISH HARRISON- JUNE-4-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.33	.35	.35	.43	.5	.51	.53	.54	.55	.56
1	.56	.57	.57	.58	.58	.59	.6	.61	.61	.61
2	.62	.62	.63	.65	.65	.66	.66	.66	.67	.67
3	.67	.67	.68	.68	.68	.68	.68	.68	.69	.69
4	.7	.71	.71	.71	.72	.73	.74	.74	.75	.76
5	.76	.77	.77	.78	.78	.78	.78	.8	.8	.81
6	.81	.81	.82	.82	.83	.83	.84	.86	.87	.87
7	.88	.93	.94	.97	.99	1	1.01	1.03	1.04	1.04
8	1.05	1.06	1.09	1.18	1.23	1.27	1.27	1.28	1.29	1.3
9	1.32	1.38	1.4	1.41	1.5	1.5	1.56	1.57	1.59	

NUMBER OF READINGS = 99

MINIMUM = .33 MAXIMUM = 1.59

MEAN = .83

STANDARD DEVIATION = .29

REFLECTOGRAM

	0	10	20	30	40	44
.3 - .34 = 1	!					
.35 - .39 = 2	!!					
.4 - .44 = 1	!					
.45 - .49 = 0						
.5 - .54 = 4	!!!!					
.55 - .59 = 8	!!!!!!!!					
.6 - .64 = 7	!!!!!!!					
.65 - .69 = 17	!!!!!!!!!!!!!!!!!!!!					
.7 - .74 = 8	!!!!!!!!					
.75 - .79 = 9	!!!!!!!!					
.8 - .84 = 10	!!!!!!!!					
.85 - .89 = 4	!!!!					
.9 - .94 = 2	!!					
.95 - .99 = 2	!!					
1 - 1.04 = 5	!!!!					
1.05 - 1.09 = 3	!!!					
1.1 - 1.14 = 0						
1.15 - 1.19 = 1	!					
1.2 - 1.24 = 1	!					
1.25 - 1.29 = 4	!!!!					
1.3 - 1.34 = 2	!!					
1.35 - 1.39 = 1	!					
1.4 - 1.44 = 2	!!					
1.45 - 1.49 = 0						
1.5 - 1.54 = 2	!!					
1.55 - 1.59 = 3	!!!					

FILE >>K0167A

DEPTH 4220-4230M- W.FLYING FOAM- TRISH HARRISON- JUNE-5-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.52	.55	.57	.59	.59	.59	.61	.63	.64	.64
1	.64	.64	.66	.67	.69	.69	.71	.71	.73	.73
2	.74	.75	.77	.79	.8	.84	.84	.86	.95	.97
3	.99	1	1.02	1.02	1.04	1.05	1.05	1.06	1.06	1.07
4	1.12	1.23	1.23	1.23	1.23	1.25	1.26	1.26	1.26	1.28
5	1.32	1.34	1.34	1.34	1.35	1.37	1.38	1.38	1.39	1.4
6	1.4	1.43	1.45	1.46	1.49	1.51	1.52			

NUMBER OF READINGS = 67

MINIMUM = .52 MAXIMUM = 1.52

MEAN = 1.01

STANDARD DEVIATION = .31

REFLECTOGRAM

	0	10	20	30	40	44
.5	-	.54	=	1	!	!
.55	-	.59	=	5	!	!
.6	-	.64	=	6	!	!
.65	-	.69	=	4	!	!
.7	-	.74	=	5	!	!
.75	-	.79	=	3	!	!
.8	-	.84	=	3	!	!
.85	-	.89	=	1	!	!
.9	-	.94	=	0	!	!
.95	-	.99	=	3	!	!
1	-	1.04	=	4	!	!
1.05	-	1.09	=	5	!	!
1.1	-	1.14	=	1	!	!
1.15	-	1.19	=	0	!	!
1.2	-	1.24	=	4	!	!
1.25	-	1.29	=	5	!	!
1.3	-	1.34	=	4	!	!
1.35	-	1.39	=	5	!	!
1.4	-	1.44	=	3	!	!
1.45	-	1.49	=	3	!	!
1.5	-	1.54	=	2	!	!

FILE >>TH1679

DEPTH 4340-4350M- W.FLYING FOAM- TRISH HARRISON- JULY-12-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.7	.71	.72	.74	.77	.77	.78	.81	.84	.89
1	.92	1.01	1.06	1.09	1.13	1.15	1.23	1.25	1.27	1.27
2	1.28	1.29	1.32	1.34	1.34	1.36	1.36	1.38	1.39	1.4
3	1.43	1.43	1.44	1.46	1.51	1.52	1.53	1.55	1.58	1.59
4	1.6	1.61	1.64	1.65	1.74	1.76	1.9			

NUMBER OF READINGS = 47

MINIMUM = .7 MAXIMUM = 1.9

MEAN = 1.27

STANDARD DEVIATION = .32

REFLECTOGRAM

			0	10	20	30	40	44
			+	+	+	+	+	+
.7	-	.74	=	4				
.75	-	.79	=	3				
.8	-	.84	=	2				
.85	-	.89	=	1				
.9	-	.94	=	1				
.95	-	.99	=	0				
1	-	1.04	=	1				
1.05	-	1.09	=	2				
1.1	-	1.14	=	1				
1.15	-	1.19	=	1				
1.2	-	1.24	=	1				
1.25	-	1.29	=	5				
1.3	-	1.34	=	3				
1.35	-	1.39	=	4				
1.4	-	1.44	=	4				
1.45	-	1.49	=	1				
1.5	-	1.54	=	3				
1.55	-	1.59	=	3				
1.6	-	1.64	=	3				
1.65	-	1.69	=	1				
1.7	-	1.74	=	1				
1.75	-	1.79	=	1				
1.8	-	1.84	=	0				
1.85	-	1.89	=	0				
1.9	-	1.94	=	1				

FILE >>TH167C

DEPTH 4460-4500M- W.FLYING FOAM- TRISH HARRISON- JULY-12-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.64	.66	.72	.72	.73	.73	.74	.74	.75	.75
1	.77	.8	.8	.82	.83	.85	.88	.89	.89	.9
2	.91	.91	.93	.93	.95	.95	.96	.97	.98	.99
3	.99	1	1	1.01	1.01	1.03	1.03	1.04	1.06	1.08
4	1.09	1.11	1.12	1.12	1.17	1.19	1.2	1.23	1.25	1.28
5	1.3	1.31	1.32	1.33	1.33	1.36	1.38	1.38	1.39	1.41
6	1.42	1.43	1.44	1.44	1.44	1.46	1.46	1.47	1.48	1.49
7	1.5	1.51	1.53	1.53	1.53	1.53	1.53	1.54	1.55	1.56
8	1.57	1.58	1.59	1.61	1.62	1.63	1.66	1.68	1.71	1.71
9	1.72	1.74	1.75	1.76	1.76	1.76	1.77	1.8	1.88	

NUMBER OF READINGS = 99

MINIMUM = .64 MAXIMUM = 1.88

MEAN = 1.24

STANDARD DEVIATION = .34

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
.6 - .64 = 1	!!					
.65 - .69 = 1	!!					
.7 - .74 = 6	!!!!!!					
.75 - .79 = 3	!!!					
.8 - .84 = 4	!!!!					
.85 - .89 = 4	!!!!					
.9 - .94 = 5	!!!!!					
.95 - .99 = 7	!!!!!!!					
1 - 1.04 = 7	!!!!!!!					
1.05 - 1.09 = 3	!!!					
1.1 - 1.14 = 3	!!!					
1.15 - 1.19 = 2	!!					
1.2 - 1.24 = 2	!!					
1.25 - 1.29 = 2	!!					
1.3 - 1.34 = 5	!!!!!					
1.35 - 1.39 = 4	!!!!					
1.4 - 1.44 = 6	!!!!!!					
1.45 - 1.49 = 5	!!!!!					
1.5 - 1.54 = 8	!!!!!!!					
1.55 - 1.59 = 5	!!!!!					
1.6 - 1.64 = 3	!!!					
1.65 - 1.69 = 2	!!					
1.7 - 1.74 = 4	!!!!					
1.75 - 1.79 = 5	!!!!!					
1.8 - 1.84 = 1	!!					
1.85 - 1.89 = 1	!!					

APPENDIX III

Vitrinite Reflectance Histograms

Edited Population

FILE >>E01590

DEPTH 1460-1500M- W.FLYING FOAM- TRISH HARRISON- MAY-24-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.44	.35	.46	.43	.37	.53	.4	.41	.4	.35
1	.45	.4	.33	.36	.43	.36	.55	.4	.41	.48
2	.4	.47	.51							

NUMBER OF READINGS = 23

MINIMUM = .44 MAXIMUM = .51

MEAN = .42

STANDARD DEVIATION = .06

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
	!					
.4 - .44 = 10	!	!	!	!	!	!
.45 - .47 = 4	!	!	!	!		
.5 - .54 = 2	!	!				

FILE >>E0160A

DEPTH 1580-1610M- W.FLYING FOAM- TRISH HARRISON- MAY-24-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.36	.37	.37	.37	.38	.38	.39	.4	.4	.44
1	.45	.45	.46	.46	.49	.51				

NUMBER OF READINGS = 16

MINIMUM = .36 MAXIMUM = .51

MEAN = .42

STANDARD DEVIATION = .05

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.35 - .39 = 7	1111111					
.4 - .44 = 3	111					
.45 - .49 = 5	11111					
.5 - .54 = 1	1					

FILE >>E01608

DEPTH 1700-1740M- W.FLYING FOAM- TRISH HARRISON- MAY-28-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.36	.38	.39	.39	.41	.42	.45	.45	.45	.46
1	.47	.47	.48	.49	.5					

NUMBER OF READINGS = 15

MINIMUM = .36 MAXIMUM = .5

MEAN = .44

STANDARD DEVIATION = .04

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.35 - .39 = 4						
.4 - .44 = 2						
.45 - .49 = 8						
.5 - .54 = 1						

FILE >>E01600

DEPTH 1820-1830M- W.FLYING FOAM- TRISH HARRISON- MAY-28-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.35	.36	.41	.43	.43	.44	.44	.44	.44	.45
1	.45	.46	.46	.46	.48	.48	.5	.5	.51	.52
2	.53	.55								

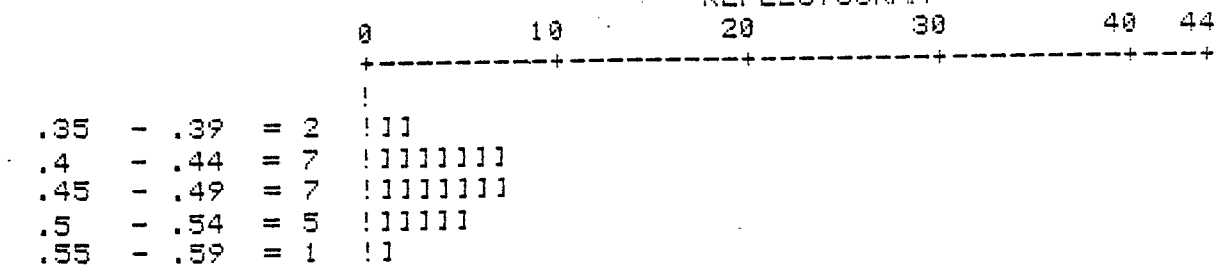
NUMBER OF READINGS = 22

MINIMUM = .35 MAXIMUM = .55

MEAN = .46

STANDARD DEVIATION = .05

REFLECTOGRAM



FILE >>E0161A

DEPTH 1940-1950M- W.FLYING FOAM- TRISH HARRISON- JUNE-21-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.37	.38	.38	.4	.42	.43	.44	.44	.45	.45
1	.45	.45	.45	.45	.47	.47	.47	.48	.49	.49
2	.49	.5	.51	.51	.52	.52	.52	.52	.53	.53
3	.53	.53	.54	.55	.55	.57	.59	.59		

NUMBER OF READINGS = 38

MINIMUM = .37 - MAXIMUM = .59

MEAN = .49

STANDARD DEVIATION = .06

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.35 - .39 = 3						
.4 - .44 = 5						
.45 - .49 = 13						
.5 - .54 = 12						
.55 - .59 = 5						

FILE >>E01618

DEPTH 2060-2100M- W.FLYING FOAM- TRISH HARRISON- MAY-29-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.41	.42	.43	.46	.46	.46	.47	.48	.48	.49
1	.49	.49	.49	.49	.5	.5	.5	.5	.5	.51
2	.51	.51	.51	.51	.52	.52	.52	.52	.52	.52
3	.53	.53	.53	.53	.53	.54	.54	.54	.54	.55
4	.55	.55	.55	.55	.55	.56	.56	.57	.57	.57
5	.57	.57	.58	.58	.58	.59	.59	.59	.59	.6
6	.6	.6	.6	.6	.61	.61	.62	.64	.65	.66

NUMBER OF READINGS = 70

MINIMUM = .41 MAXIMUM = .66

MEAN = .54

STANDARD DEVIATION = .05

REFLECTOGRAM

	0	10	20	30	40	44
.4	-	.44	= 3	!111		
.45	-	.49	= 11	!1111111111		
.5	-	.54	= 25	!111111111111111111111111		
.55	-	.59	= 20	!11111111111111111111		
.6	-	.64	= 9	!111111111		
.65	-	.69	= 2	!11		

FILE >>E0161C

DEPTH 2180-2190M- W.FLYING FOAM- TRISH HARRISON- MAY-29-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.43	.44	.45	.45	.46	.47	.48	.5	.5	.51
1	.51	.51	.52	.52	.52	.52	.52	.52	.52	.52
2	.53	.54	.54	.54	.55	.55	.55	.56	.56	.57
3	.57	.57	.58	.58	.58	.59	.59	.6	.61	.61
4	.61	.63	.63	.65						

NUMBER OF READINGS = 44

MINIMUM = .43 MAXIMUM = .65

MEAN = .54

STANDARD DEVIATION = .05

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.4	-	.44	=	2	!!	
.45	-	.49	=	5	!!!!	
.5	-	.54	=	17	!!!!!!!!!!!!!!!!!!!!	
.55	-	.59	=	13	!!!!!!!!!!!!	
.6	-	.64	=	6	!!!!	
.65	-	.69	=	1	!!	

FILE >>EH162A

DEPTH 2270-2280M- W.FLYING FOAM- TRISH HARRISON- JULY-19-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.42	.45	.45	.49	.49	.5	.51	.52	.52	.52
1	.52	.54	.54	.54	.55	.55	.55	.57	.57	.59
2	.6									

NUMBER OF READINGS = 21

MINIMUM = .42 MAXIMUM = .6

MEAN = .52

STANDARD DEVIATION = .05

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
	!					
.4 - .44 = 1	!	!				
.45 - .49 = 4	!	!	!	!	!	
.5 - .54 = 9	!	!	!	!	!	!
.55 - .59 = 6	!	!	!	!	!	!
.6 - .64 = 1	!	!				

FILE >>2H1628

DEPTH 2429-2439M- W.FLYING FOAM- TRISH HARRISON- JULY-19-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.47	.47	.49	.49	.49	.51	.52	.52	.53	.53
1	.53	.54	.54	.56	.56	.57	.57	.58	.59	.6
2	.6	.61	.62							

NUMBER OF READINGS = 29

MINIMUM = .47 MAXIMUM = .62

MEAN = .54

STANDARD DEVIATION = .04

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.45 - .49 = 5	11111					
.5 - .54 = 8	111111111					
.55 - .59 = 6	1111111					
.6 - .64 = 4	11111					

FILE >>EH162C

DEPTH 2540-2550M- W.FLYING FOAM- TRISH HARRISON- JULY-18-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.47	.47	.47	.48	.49	.5	.51	.52	.52	.52
1	.53	.53	.53	.54	.54	.54	.55	.55	.55	.55
2	.55	.55	.55	.56	.56	.56	.57	.57	.57	.58
3	.59	.59	.59	.59	.59	.59	.59	.61		

NUMBER OF READINGS = 38

MINIMUM = .47 MAXIMUM = .61

MEAN = .55

STANDARD DEVIATION = .04

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.45 - .49 = 5						
.5 - .54 = 11						
.55 - .59 = 21						
.6 - .64 = 1						

FILE >>EH168A

DEPTH 2660-2670M- W.FLYING FOAM- TRISH HARRISON- JULY-18-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.79	.8	.82	.84	.85	.85	.86	.87	.87	.88
1	.9	.9	.9	.91	.94	.95	.95	.95	.95	.

NUMBER OF READINGS = 19

MINIMUM = .79 MAXIMUM = .95

MEAN = .86

STANDARD DEVIATION = .05

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.75 - .79 = 1	1					
.8 - .84 = 3	1	1	1			
.85 - .89 = 6	1	1	1	1	1	1
.9 - .94 = 5	1	1	1	1	1	
.95 - .99 = 4	1	1	1	1		

FILE >>EM1438

DEPTH 2780-2820M- W.FLYING FOAM- TRISH HARRISON- JULY-13-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.77	.79	.8	.82	.83	.85	.86	.87	.88	.92
1	.92	.93	.95							

NUMBER OF READINGS = 13

MINIMUM = .77 MAXIMUM = .95

MEAN = .86

STANDARD DEVIATION = .06

REFLECTOGRAM

	0	10	20	30	40	44
	+	+	+	+	+	+
.75 - .79 = 2	!!					
.8 - .84 = 3	!!!					
.85 - .89 = 4	!!!!					
.9 - .94 = 3	!!!					
.95 - .99 = 1	!					

FILE >>EH163C

DEPTH 2900-2910M- W.FLYING FOAM- TRISH HARRISON- JULY-12-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.81	.86	.88	.91	.92	.92	.94	.95	.96	.97
1	.98	.99	1.01	1.03	1.04	1.05	1.06	1.07	1.07	1.08
2	1.09	1.12	1.13							

NUMBER OF READINGS = 23

MINIMUM = .81 MAXIMUM = 1.13

MEAN = .99

STANDARD DEVIATION = .09

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.8 - .84 = 1						
.85 - .89 = 2						
.9 - .94 = 4						
.95 - .99 = 5						
1 - 1.04 = 4						
1.05 - 1.09 = 5						
1.1 - 1.14 = 2						

FILE >>EH164A

DEPTH 2990-3000M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.83	.84	.84	.84	.84	.85	.88	.89	.89	.89
1	.9	.9	.91	.92	.92	.93	.93	.93	.93	.94
2	.94	.95	.95	.98	.98	.98	.99	.99	1	1.01
3	1.02	1.02	1.02	1.04						

NUMBER OF READINGS = 34

MINIMUM = .83 MAXIMUM = 1.04

MEAN = .93

STANDARD DEVIATION = .06

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.8 - .84 = 5	!	!	!	!	!	!
.85 - .89 = 5	!	!	!	!	!	!
.9 - .94 = 11	!	!	!	!	!	!
.95 - .99 = 7	!	!	!	!	!	!
1 - 1.04 = 6	!	!	!	!	!	!

FILE >>EH1645

DEPTH 3110-3120M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1	1.03	1.04	1.05	1.05	1.07	1.08	1.09	1.09	1.11
1	1.13	1.13								

NUMBER OF READINGS = 12

MINIMUM = 1 MAXIMUM = 1.13

MEAN = 1.07

STANDARD DEVIATION = .04

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
1	- 1.04 = 5					
1.05	- 1.09 = 4					
1.1	- 1.14 = 3					

FILE >>EH164C

DEPTH 3230-3270M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.93	.94	.94	.96	.97	1.01	1.02	1.04	1.05	1.05
1	1.05	1.06	1.08	1.09	1.11	1.12	1.12	1.14	1.14	1.15
2	1.17	1.18								

NUMBER OF READINGS = 22

MINIMUM = .93 MAXIMUM = 1.18

MEAN = 1.06

STANDARD DEVIATION = .08

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
.9	-	.94	=	3	!111	
.95	-	.99	=	2	!11	
1	-	1.04	=	6	!111111	
1.05	-	1.09	=	3	!111	
1.1	-	1.14	=	5	!11111	
1.15	-	1.19	=	3	!111	

FILE >>EH165A

DEPTH 3350-3360M- W.FLYING FOAM- TRISH HARRISON- JULY-16-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	.9	.9	.9	.92	.92	.93	.95	.95	.96	.96
1	.97	.97	.97	.98	.99	.99	.99	.99	1	1.01
2	1.02	1.02	1.03	1.03	1.05	1.05	1.05	1.07	1.07	1.08
3	1.09	1.09								

NUMBER OF READINGS = 32

MINIMUM = .9 MAXIMUM = 1.09

MEAN = .99

STANDARD DEVIATION = .06

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
	!					
.9 - .94 = 6	!	!	!	!	!	!
.95 - .99 = 12	!	!	!	!	!	!
1 - 1.04 = 9	!	!	!	!	!	!
1.05 - 1.09 = 5	!	!	!	!	!	!

FILE >>EH165B

DEPTH 3470-3510M- W.FLYING FOAM- TRISH HARRISON- JULY-25-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.01	1.02	1.03	1.03	1.04	1.05	1.06	1.07	1.08	1.09
1	1.1	1.1	1.11	1.11	1.11	1.13	1.14	1.14	1.14	1.15
2	1.16	1.17	1.17	1.17	1.18	1.19	1.21	1.21	1.22	1.23
3	1.23	1.24								

NUMBER OF READINGS = 32

MINIMUM = 1.01 MAXIMUM = 1.24

MEAN = 1.13

STANDARD DEVIATION = .07

REFLECTOGRAM

	0	10	20	30	40	44
1	- 1.04 = 6					
1.05	- 1.09 = 4					
1.1	- 1.14 = 9					
1.15	- 1.19 = 7					
1.2	- 1.24 = 6					

FILE >>EH1650

DEPTH 3590-3630M- W.FLYING FOAM- TRISH HARRISON- JULY-13-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.09	1.11	1.11	1.18	1.18	1.19	1.19	1.19	1.2	1.22
1	1.22	1.23								

NUMBER OF READINGS = 12

MINIMUM = 1.09 MAXIMUM = 1.23

MEAN = 1.18

STANDARD DEVIATION = .05

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
1.05 - 1.09 = 1						
1.1 - 1.14 = 2						
1.15 - 1.19 = 5						
1.2 - 1.24 = 4						

FILE >>E0166A

DEPTH 3680-3720M- W.FLYING FOAM- TRISH HARRISON- JUNE-4-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.05	1.07	1.07	1.07	1.08	1.1	1.11	1.11	1.12	1.13
1	1.14	1.15	1.16	1.17	1.17	1.17	1.18	1.18	1.19	1.2
2	1.2	1.28								

NUMBER OF READINGS = 22

MINIMUM = 1.05 MAXIMUM = 1.28

MEAN = 1.14

STANDARD DEVIATION = .06

REFLECTOGRAM

	0	10	20	30	40	44
1	- 1.04 = 1	!!				
1.05	- 1.09 = 4	!!!!				
1.1	- 1.14 = 6	!!!!!!				
1.15	- 1.19 = 8	!!!!!!!				
1.2	- 1.24 = 2	!!				
1.25	- 1.29 = 1	!!				

FILE >>E0166C

DEPTH 4040-4050M- W.FLYING FOAM- TRISH HARRISON- JUNE-4-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.18	1.23	1.27	1.27	1.28	1.29	1.3	1.32	1.38	1.4
1	1.41									

NUMBER OF READINGS = 11

MINIMUM = 1.18 MAXIMUM = 1.41

MEAN = 1.3

STANDARD DEVIATION = .07

REFLECTOGRAM

	0	10	20	30	40	44
1.15 - 1.19 = 1	!]					
1.2 - 1.24 = 1	!]					
1.25 - 1.29 = 4	!]]]]					
1.3 - 1.34 = 2	!]]					
1.35 - 1.39 = 1	!]					
1.4 - 1.44 = 2	!]]					

FILE >>E0167A

DEPTH 4220-4230M- W.FLYING FOAM- TRISH HARRISON- JUNE-5-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.23	1.23	1.23	1.23	1.25	1.26	1.26	1.26	1.28	1.32
1	1.34	1.34	1.34	1.35	1.37	1.38	1.38	1.39	1.4	1.4
2	1.43	1.45	1.46	1.49	1.51	1.52				

NUMBER OF READINGS = 26

MINIMUM = 1.23 MAXIMUM = 1.52

MEAN = 1.35

STANDARD DEVIATION = .09

REFLECTOGRAM

	0	10	20	30	40	44
1.2 - 1.24 = 4						
1.25 - 1.29 = 5						
1.3 - 1.34 = 4						
1.35 - 1.39 = 5						
1.4 - 1.44 = 3						
1.45 - 1.49 = 3						
1.5 - 1.54 = 2						

FILE >>EH1678

DEPTH 4340-4350M- W.FLYING FOAM- TRISH HARRISON- JULY-12-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.23	1.25	1.27	1.27	1.28	1.29	1.32	1.34	1.34	1.36
1	1.36	1.38	1.39	1.4	1.43	1.43	1.44	1.46		

NUMBER OF READINGS = 18

MINIMUM = 1.23 MAXIMUM = 1.46

MEAN = 1.35

STANDARD DEVIATION = .07

REFLECTOGRAM

	0	10	20	30	40	44
1.2 - 1.24 = 1	!					
1.25 - 1.29 = 5	!	!	!	!	!	!
1.3 - 1.34 = 3	!	!	!			
1.35 - 1.39 = 4	!	!	!	!		
1.4 - 1.44 = 4	!	!	!	!		
1.45 - 1.49 = 1	!					

FILE >>EH167C

DEPTH 4460-4500M- W.FLYING FOAM- TRISH HARRISON- JULY-12-84

COL>	1	2	3	4	5	6	7	8	9	0
ROW	1.25	1.28	1.3	1.31	1.32	1.33	1.33	1.34	1.38	1.38
1	1.39	1.41	1.42	1.43	1.44	1.44	1.44	1.46	1.46	1.47
2	1.48	1.49	1.5	1.51	1.53	1.53	1.53	1.53	1.53	1.54
3	1.55	1.56	1.57	1.58	1.59	1.61	1.62	1.63	1.66	1.68

NUMBER OF READINGS = 40

MINIMUM = 1.25 MAXIMUM = 1.68

MEAN = 1.47

STANDARD DEVIATION = .11

REFLECTOGRAM

	0	10	20	30	40	44
	+-----+-----+-----+-----+-----+					
1.25 - 1.29 = 2						
1.3 - 1.34 = 5						
1.35 - 1.39 = 4						
1.4 - 1.44 = 6						
1.45 - 1.49 = 5						
1.5 - 1.54 = 8						
1.55 - 1.59 = 5						
1.6 - 1.64 = 3						
1.65 - 1.69 = 2						