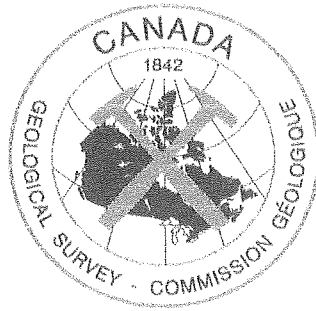


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Geological Survey of Canada open file # 3897

Vitrinite reflectance (R_o) of dispersed organics
from
Petro-Canada et al **North Banquereau I-13**

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June 2000

Vitrinite reflectance (Ro) of dispersed organics from Petro-Canada et al North Banquereau I-13

G.S.C. Locality No.: D214

Location: 44.20921°N, 58.53038°W

R.T. Elevation: 25m

Water Depth: 91m

Total Depth: 5202m

Sampled Interval: 650 - 5188m

Interval Studied: 850 - 5170m

Depth Units: Meters referenced to R.T.

Rig Release Date: December 28, 1982

Vitrinite reflectance has been determined on 32 rotary cuttings samples from Petro-Canada et al North Banquereau I-13 which was classified as a new field wildcat well and is located on the Scotian Slope approximately 404 km east-southeast of Halifax, Nova Scotia. Well status is 'Plugged and Abandoned'.

Sample preparation followed the procedures listed in Appendix I. Data acquisition and manipulation for this report used the Zeiss Photometer III system with a custom microcomputer interface for data storage and statistical summaries.

Analysis of the well reveals thermal maturation intervals given in Table I. Specific maturation levels, as set out in this report, are based on those of Dow (1977) with modified terminology (Appendix II).

Table I
Inferred Thermal Maturation Levels*

Depth in meters **	Vitrinite Reflectance (%Ro)	Maturity for oil generation*
91	0.19	'Sea floor'
160	0.20	
1240	0.30	immature
2010	0.40	immature approaching maturity
2600	0.50	marginally mature
3090	0.60	onset of significant oil generation
3860	0.80	peak of oil generation
4450	1.00	onset of significant wet gas generation
4940	1.20	onset of significant dry gas generation
5202	1.32	'T.D.'
(5250)	1.35	bottom oil window
(6300)	2.00	wet gas preservation limit
(7390)	3.00	dry gas preservation limit

* *Actual hydrocarbon products depend on type of organic matter present.*

** ()'s indicate depths which have been extrapolated at 0.163 log Ro/km.

Remarks

Sample coverage for vitrinite reflectance analysis (Figure 1, Table II) was very good over the section penetrated at North Banquereau I-13. The data were plotted on a log Ro vs. linear depth scale and a linear regression line was calculated and plotted through the data points (Figure 1). The 'error bars' displayed on the maturation profile indicate one standard deviation on either side of the mean (may be deceptively small for samples with very few readings). The slope of the maturation line is 0.163 log Ro/km.

Selection of the reflectance population which represents the maturation of the sediments was aided by the histogram plot (Figure 2). Plotting the histograms on a log reflectance scale helps reveal any linear trends that may be present in the Ro data. It also can help to demonstrate the effects of cavings, geology, casing points and other factors on the vitrinite reflectance populations.

These vitrinite reflectance data provide evidence that the thermal regime of the lower most section of North Banquereau I-13 between 2600 and 5202m (T.D.) is suitable for the generation and preservation of hydrocarbons assuming potential source rocks and traps are present.

References

Dow, W.G., 1977. Kerogen studies and geological interpretations. Journal of Geochemical Exploration, no. 7, p. 77-99.

MacLean, B.C. and Wade, J.A., 1993. East coast basin atlas series: seismic markers and stratigraphic picks in Scotian Basin wells. Atlantic Geoscience Centre, Geological Survey of Canada, 276 p.

c.c. K.D. McAlpine, MResG, Dartmouth
A.E. Jackson, MResG, Dartmouth
MResG Files, Dartmouth
Central Technical Files, Ottawa

K. Osadetz, ISPG, Calgary
S. Bigelow, CNSOPB, Halifax (3 copies)
C. Beaumont, Dalhousie Univ., Halifax

Table II

Summary of kerogen - based vitrinite reflectance

Sample Labels	Depths in meters	Mean Ro (SD) non-rotated	Number of Readings	
			Total	Edited
K0666A	850-860	0.25 (± 0.04)	14	14
K0666B	940-950	0.26 (± 0.03)	7	7
K0666C	1030-1040	0.29 (± 0.03)	10	10
K0667A	1120-1130	0.26 (± 0.03)	10	10
K0667B	1180-1220	0.30 (± 0.03)	10	10
K0667C	1330-1370	0.34 (± 0.04)	15	15
K0668A	1750-1790	0.39 (± 0.04)	12	9
K0668B	1870-1910	0.41 (± 0.03)	15	15
K0668C	2020-2030	0.43 (± 0.05)	13	13
K0669A	2110-2150	0.46 (± 0.03)	12	12
K0669B	2230-2270	0.45 (± 0.04)	16	16
K0669C	2560-2630	0.52 (± 0.05)	15	15
K0670A	2710-2750	0.53 (± 0.04)	15	15
K0670B	2845-2885	0.50 (± 0.03)	21	21
K0670C	2965-3005	0.55 (± 0.03)	17	17
K0671A	3085-3125	0.57 (± 0.05)	19	19
K0671B	3240-3280	0.59 (± 0.07)	18	18
K0671C	3360-3370	0.69 (± 0.05)	22	21
K0672A	3480-3490	0.69 (± 0.07)	26	25
K0672B	3600-3610	0.70 (± 0.06)	23	22
K0672C	3720-3730	0.75 (± 0.06)	23	20
K0673A	3840-3850	0.82 (± 0.05)	21	17
K0673B	3960-3970	0.83 (± 0.06)	23	20
K0673C	4110-4120	0.83 (± 0.06)	22	19
K0674A	4200-4210	0.92 (± 0.06)	18	15
K0674B	4320-4330	0.96 (± 0.06)	21	19
K0674C	4470-4480	1.05 (± 0.08)	22	22
K0675A	4560-4570	1.21 (± 0.05)	19	18
K0675B	4680-4690	1.16 (± 0.07)	16	16
K0675C	4800-4840	1.17 (± 0.08)	22	22
K0676A	4980-5020	1.16 (± 0.06)	15	14
K0676B	5130-5170	1.26 (± 0.06)	10	10

Table III

Formation Tops (MacLean and Wade, 1993)

Formation	Depth to top
Banquereau	in casing
Wyandot	1590
Dawson Canyon	1756
Petrel	1842
Logan Canyon	1954
Marmora	1954
Sable	2165
Cree	2262
Naskapi	3117
Missisauga	3460
Missisauga Upper ("O" Marker)	3460
Missisauga Middle	3785
Verrill Canyon	3870
(approx top of overpressure)	4148
Mic Mac	4350
	4919
Total Depth	5202

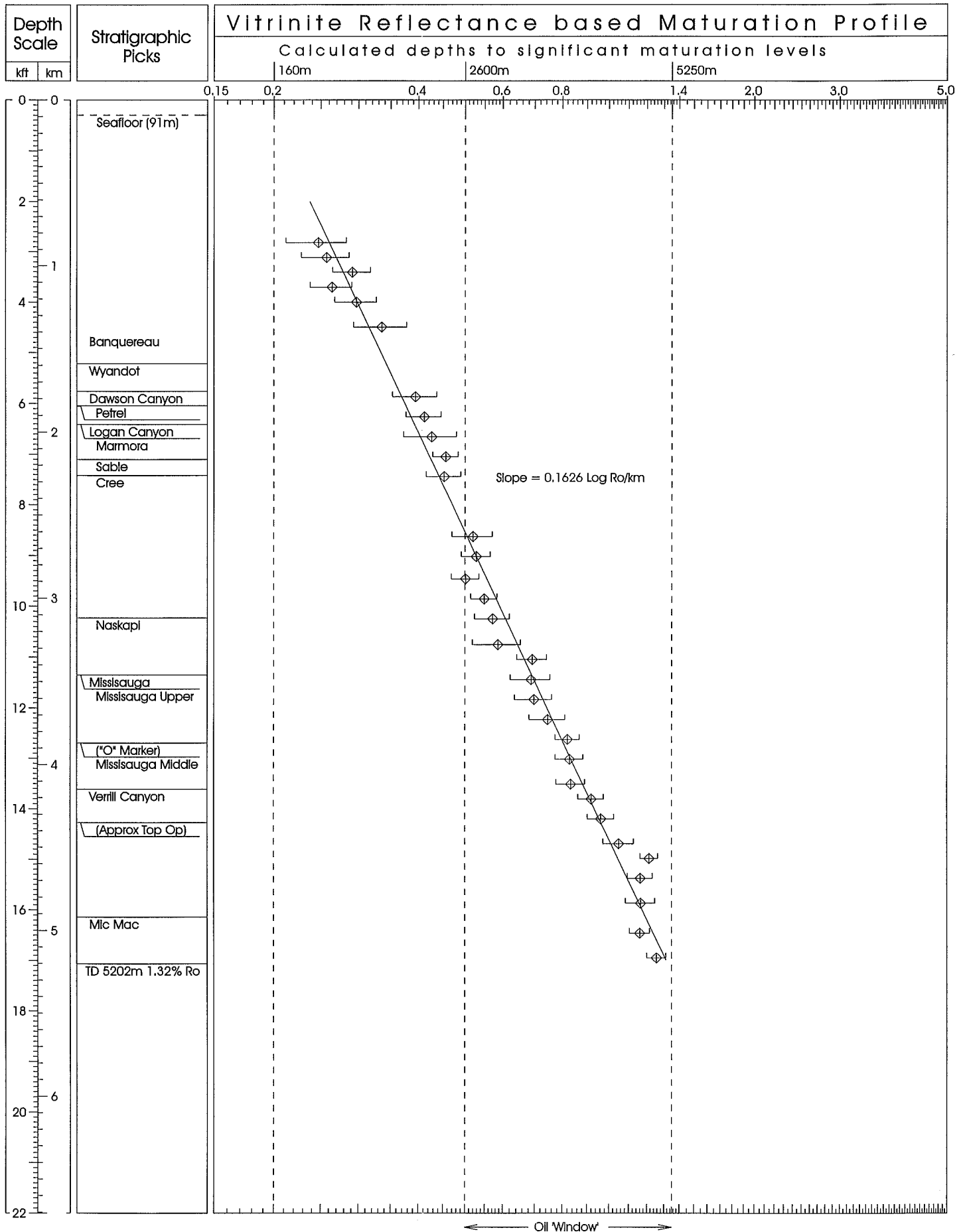


Fig. 1 NORTH BANQUEREAU I-13

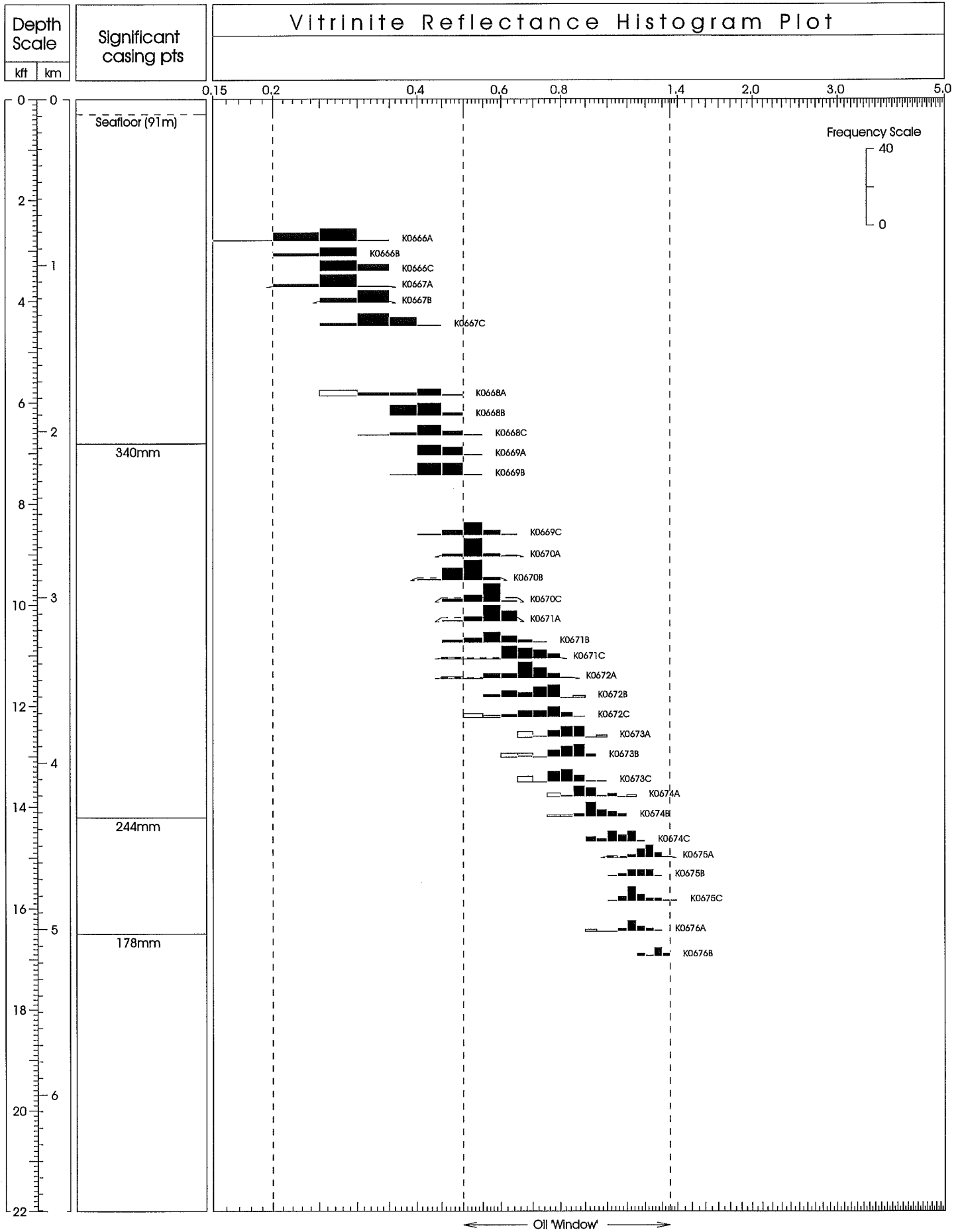


Fig. 2 NORTH BANQUEREAU I-13 <Histograms>

APPENDIX I

Sample Preparation Method

Kerogen Concentrate

Preliminary wash (preparation for cuttings)

Dry samples in oven (25 °C)

PALYNOLOGY Lab preparation

Place 20-30 grams 250 ml plastic beaker.

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

Wash (rinsed) 3 times.

Conc. HF overnight (removes silicates).

Wash (rinsed) 3 times.

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

Wash 3 times.

Transfer to 15 ml test tube with 4-5 ml 4% Alconox.

Differential centrifuge at 1500 rpm for 90 sec.

Decant.

Wash 3 times with centrifuging.

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

Centrifuge 1000 rpm, 8 min.

Float fraction into second test tube.

Wash 3 times with centrifuging.

Kerogen smear slide made.

Remaining kerogen material delivered to Organic Petrology Lab.

VITRINITE REFLECTANCE Lab preparation

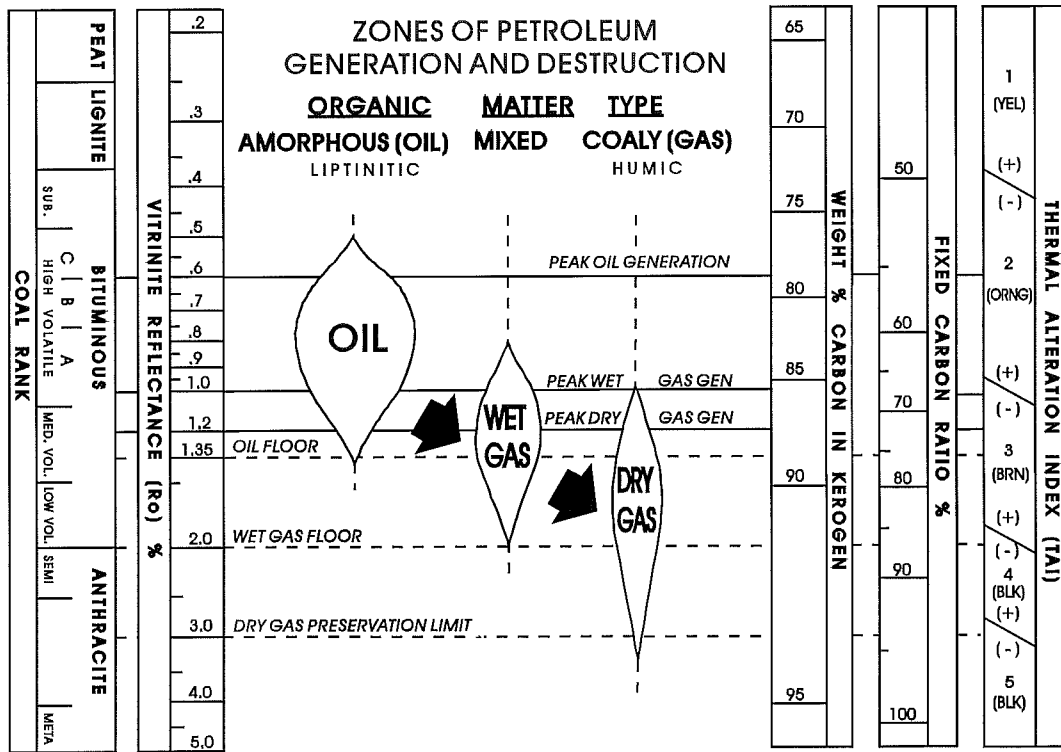
Pipette off excess water and prepare as 1" dia. plastic stubs (to fit polisher).

Freeze dry and fix material for polishing with epoxy resin.

Polish with diamond based suspension to obtain low relief, scratch free surface.

Examine under oil lens, incident light at approximately 1000x magnification.

APPENDIX II (Dow, 1977)

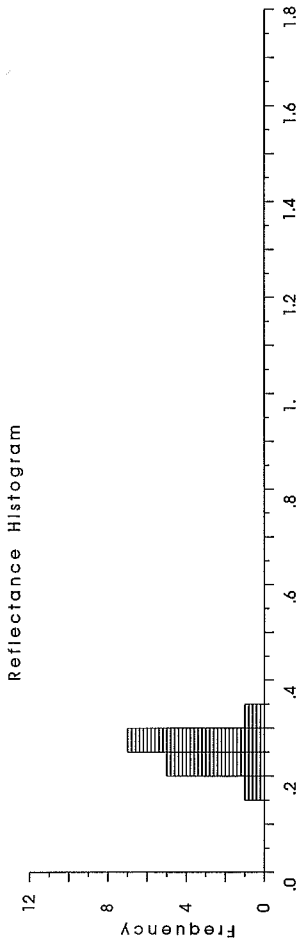


Note: In this report, the terminology used to describe the various maturation levels has been modified. The 'peak' designation, as used in this figure, has been changed to 'onset of significant' and 0.8 %Ro is herein used as the 'peak of oil generation' (Table I, Figure 1).

APPENDIX III
Reflectance Histograms

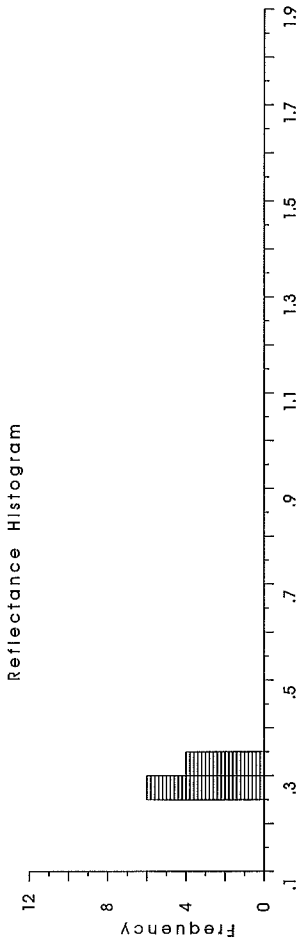
K0666A

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.19)	(0.21)	(0.21)	(0.22)	(0.22)	(0.23)	(0.25)	(0.25)	(0.25)	(0.27)
1	(0.28)	(0.28)	(0.29)	(0.31)						
Mean	.25	.04	1.4	.19	.31	Sum				
Total (Ediff)	.25	.04	1.4	.19	.31	3.46				3.46
Stand Dev		.04								
Pts		1.4	1.4							
Min										
Max										
Sum										



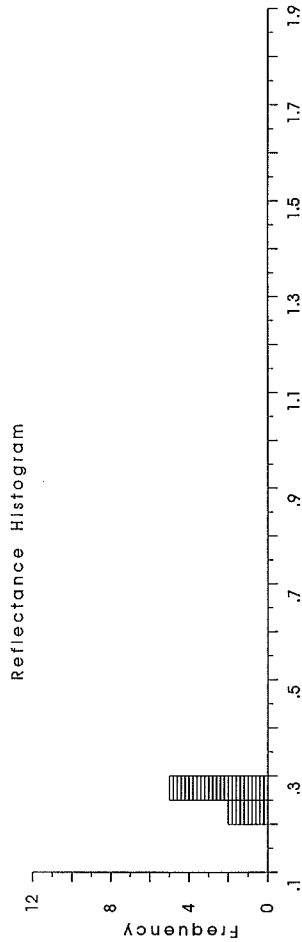
K0666C

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.26)	(0.27)	(0.27)	(0.28)	(0.28)	(0.28)	(0.30)	(0.30)	(0.33)	(0.34)
Mean	.29	.03	10	.26	.34	Sum				
Total (Ediff)	.29	.03	10	.26	.34	2.91				2.91
Stand Dev		.03								
Pts		10	10							
Min										
Max										
Sum										



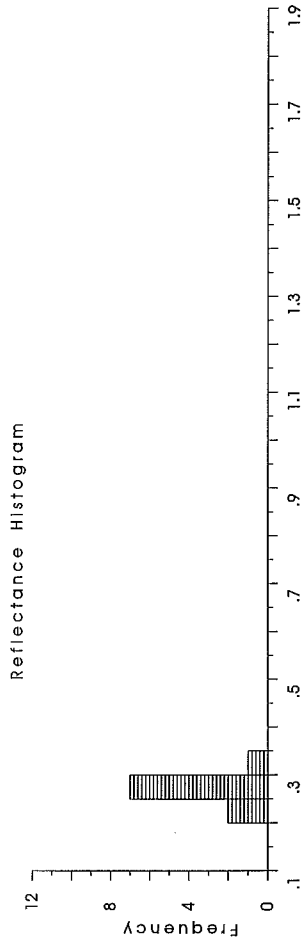
K0666B

Col >	1	2	3	4	5	6	7
Row	(0.22)	(0.22)	(0.25)	(0.26)	(0.27)	(0.29)	(0.29)
Mean	.26	.03	7	.22	.29	Sum	
Total (Ediff)	.26	.03	7	.22	.29	1.8	
Stand Dev		.03					
Pts		7	7				
Min							
Max							
Sum							



K0667A

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.22)	(0.23)	(0.25)	(0.26)	(0.26)	(0.26)	(0.28)	(0.29)	(0.29)	(0.30)
Mean	.26	.03	10	.22	.3	Sum				
Total (Ediff)	.26	.03	10	.22	.3	2.64				2.64
Stand Dev		.03								
Pts		10	10							
Min										
Max										
Sum										

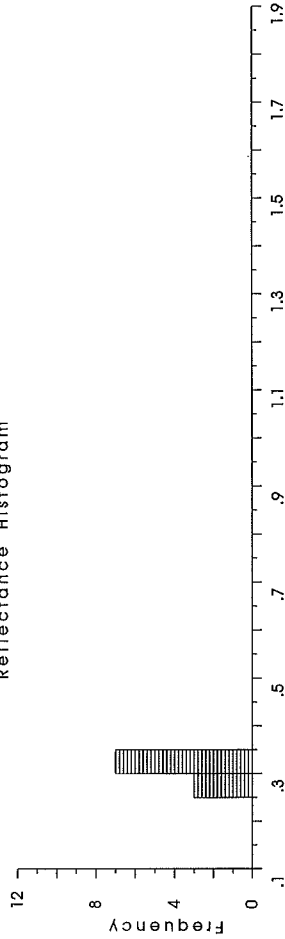


K0667B

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.25)	(0.26)	(0.28)	(0.30)	(0.30)	(0.30)	(0.30)	(0.30)	(0.33)	(0.35)

Total (Editt)	3	.03	10	.25	.35	2.97				
Mean	.3	.03	10	.25	.35	2.97				
Stand Dev		.03								
Pts			10							
Min				.25						
Max				.35						
Sum						2.97				

Reflectance Histogram

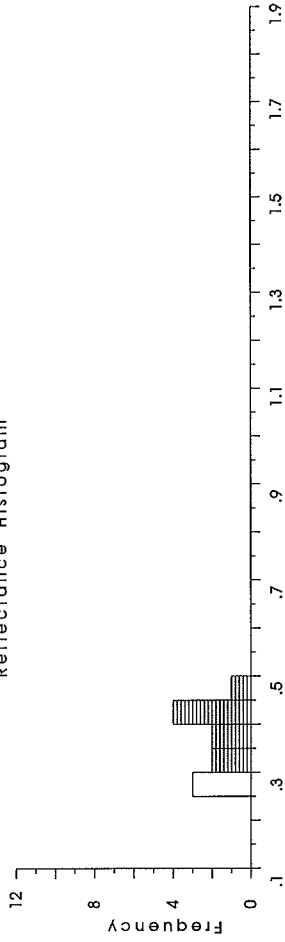


K0668A

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.43)	(0.28)	(0.29)	(0.34)	(0.35)	(0.37)	(0.37)	(0.40)	(0.40)	(0.42)

Total (Editt)	.37	.06	12	.26	.47	4.38				
Mean	.39	.04	12	.26	.47	4.38				
Stand Dev		.04								
Pts			12							
Min				.26						
Max				.47						
Sum						4.38				

Reflectance Histogram

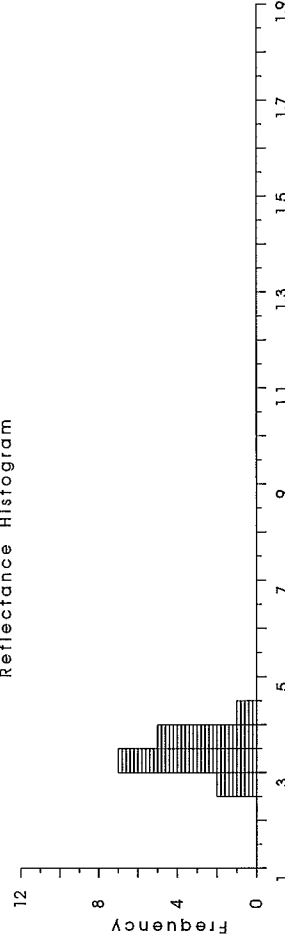


K0667C

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.27)	(0.27)	(0.30)	(0.30)	(0.30)	(0.31)	(0.32)	(0.34)	(0.35)	(0.37)

Total (Editt)	.34	.04	15	.27	.4	5.03				
Mean	.34	.04	15	.27	.4	5.03				
Stand Dev		.04								
Pts			15							
Min				.27						
Max				.4						
Sum						5.03				

Reflectance Histogram

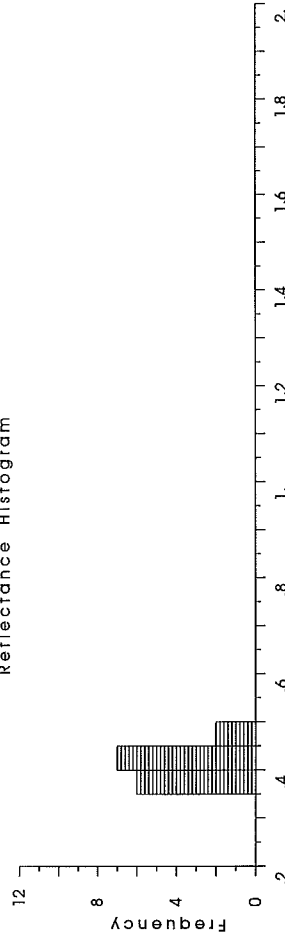


K0668B

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.38)	(0.38)	(0.38)	(0.39)	(0.39)	(0.39)	(0.40)	(0.40)	(0.40)	(0.41)

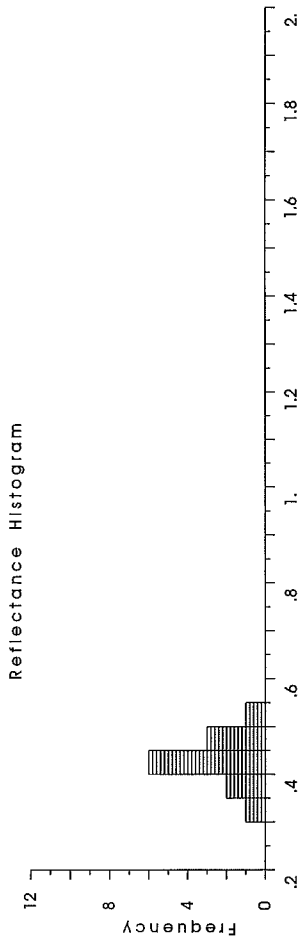
Total (Editt)	.41	.03	15	.38	.49	6.17				
Mean	.41	.03	15	.38	.49	6.17				
Stand Dev		.03								
Pts			15							
Min				.38						
Max				.49						
Sum						6.17				

Reflectance Histogram



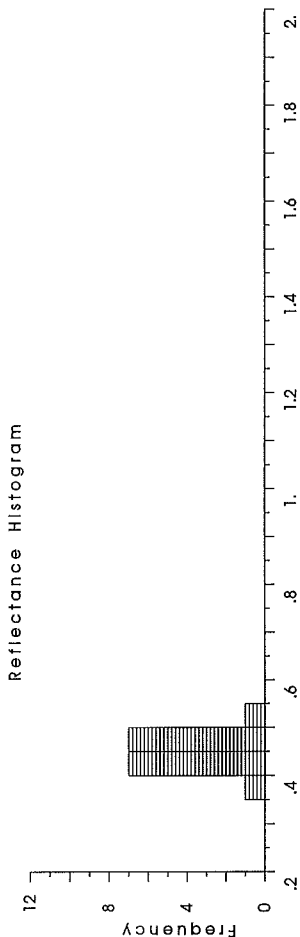
K0668C

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.32)	(0.36)	(0.38)	(0.41)	(0.42)	(0.42)	(0.42)	(0.43)	(0.45)	(0.46)
1	(0.47)	(0.47)	(0.53)							
Mean	.43									
Stand Dev	.05	.05								
Pts	13	13	13							
Min	.32									
Max	.53									
Sum	5.54									
(Edit)	.43	.05	.13	.32	.53	5.54				



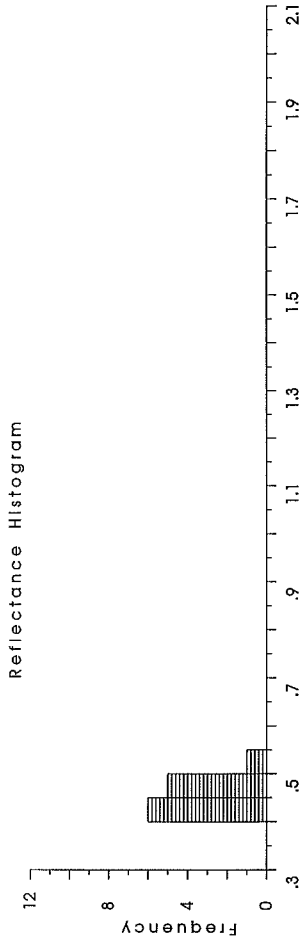
K0669B

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.39)	(0.41)	(0.42)	(0.42)	(0.42)	(0.43)	(0.44)	(0.45)	(0.46)	(0.47)
1	(0.47)	(0.47)	(0.48)	(0.48)	(0.49)	(0.54)				
Mean	.45									
Stand Dev	.04	.04								
Pts	16	16	16							
Min	.39									
Max	.54									
Sum	7.24									
(Edit)	.45	.04	.16	.39	.54	7.24				



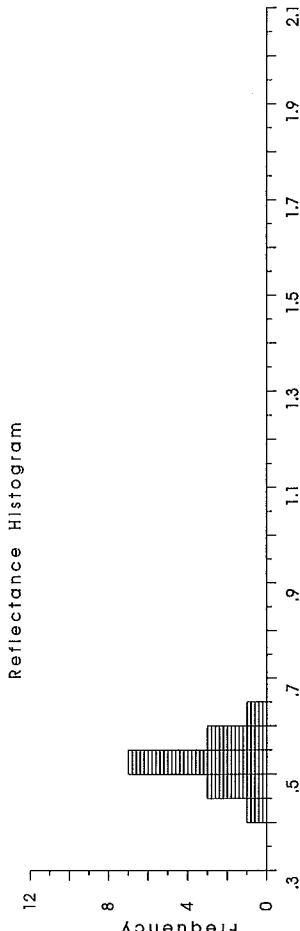
K0669A

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.42)	(0.42)	(0.43)	(0.43)	(0.44)	(0.45)	(0.47)	(0.47)	(0.47)	(0.48)
1	(0.49)	(0.50)								
Mean	.46									
Stand Dev	.03	.03								
Pts	12	12	12							
Min	.42									
Max	.5									
Sum	5.47									
(Edit)	.46	.03	.12	.42	.5	5.47				



K0669C

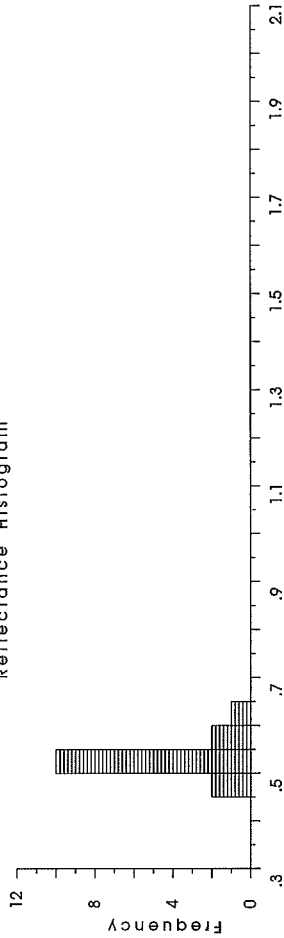
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Row	(0.41)	(0.46)	(0.48)	(0.48)	(0.50)	(0.51)	(0.52)	(0.53)	(0.53)	(0.53)
1	(0.54)	(0.55)	(0.56)	(0.59)	(0.61)					
Mean	.52									
Stand Dev	.05	.05								
Pts	15	15	15							
Min	.41									
Max	.61									
Sum	7.8									
(Edit)	.52	.05	.15	.41	.61	7.8				



K0670A

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.46)	(0.48)	(0.50)	(0.51)	(0.51)	(0.52)	(0.52)	(0.53)	(0.53)	(0.54)
1	(0.54)	(0.54)	(0.55)	(0.56)	(0.61)					
Mean	.53	.04	15	.46	.61	7.92				
Stand Dev	.53	.04	15	.46	.61	7.92				
Total (Editt)										

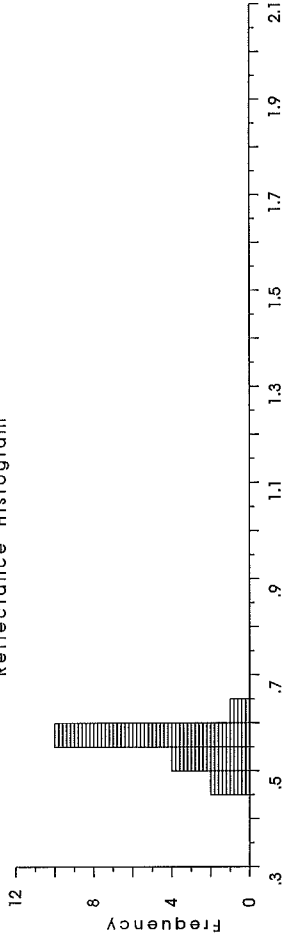
Reflectance Histogram



K0670C

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.47)	(0.49)	(0.52)	(0.52)	(0.53)	(0.54)	(0.55)	(0.55)	(0.55)	(0.55)
1	(0.57)	(0.57)	(0.57)	(0.58)	(0.58)	(0.59)	(0.60)			
Mean	.55	.03	17	.47	.6	9.33				
Stand Dev	.55	.03	17	.47	.6	9.33				
Total (Editt)										

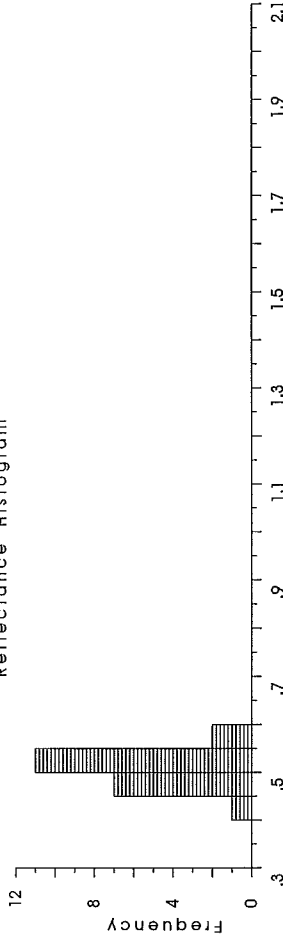
Reflectance Histogram



K0670B

Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.44)	(0.46)	(0.46)	(0.46)	(0.47)	(0.47)	(0.48)	(0.49)	(0.50)	(0.50)
1	(0.50)	(0.51)	(0.52)	(0.52)	(0.52)	(0.52)	(0.53)	(0.53)	(0.53)	(0.56)
2	(0.56)									
Mean	.5	.03	21	.44	.56	10.53				
Stand Dev	.5	.03	21	.44	.56	10.53				
Total (Editt)										

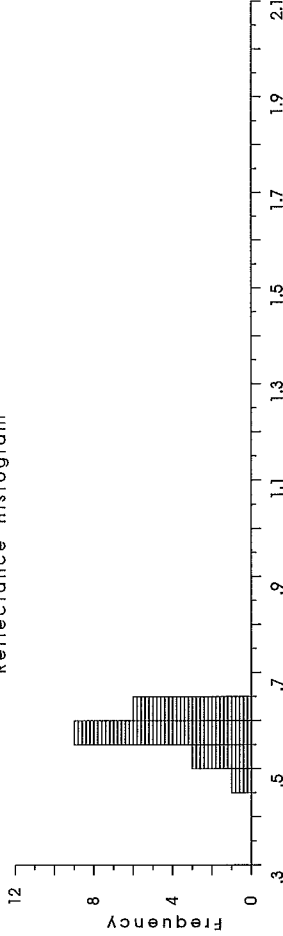
Reflectance Histogram



K0671A

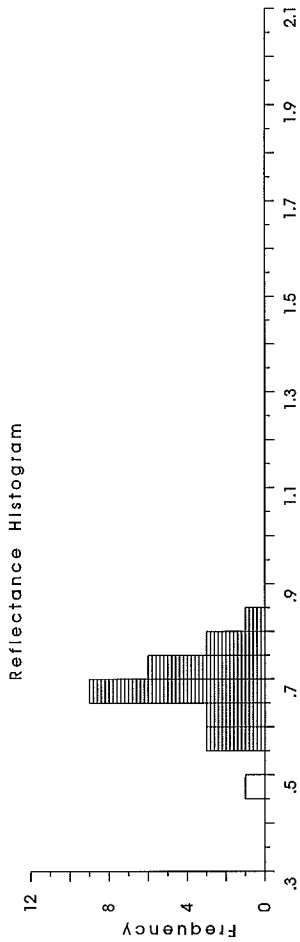
Col >	1	2	3	4	5	6	7	8	9	0
Row	(0.46)	(0.50)	(0.53)	(0.54)	(0.55)	(0.55)	(0.55)	(0.56)	(0.57)	(0.57)
1	(0.57)	(0.58)	(0.58)	(0.60)	(0.62)	(0.62)	(0.62)	(0.64)	(0.65)	(0.65)
Mean	.57	.05	19	.46	.65	10.86				
Stand Dev	.57	.05	19	.46	.65	10.86				
Total (Editt)										

Reflectance Histogram



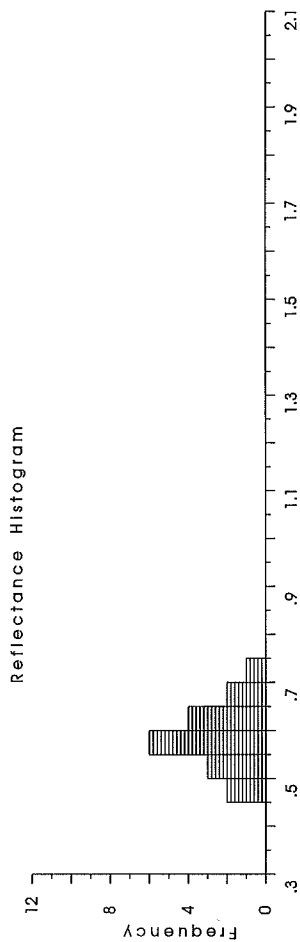
K0672A

Col >	1	2	3	4	5	6	7	8	9	0
Row 1	0.47 (0.67)	0.57 (0.68)	0.57 (0.68)	0.59 (0.70)	0.61 (0.70)	0.62 (0.70)	0.62 (0.71)	0.66 (0.71)	0.67 (0.72)	0.67 (0.74)
Row 2	0.74 (0.74)	0.74 (0.74)	0.75 (0.75)	0.77 (0.77)	0.78 (0.78)	0.83 (0.83)				
Mean	.68	.08	.26	.47	.83	Sum				
Stand Dev	.69	.07	.25	.57	.83	Ediff	17.67	17.2		
Total										



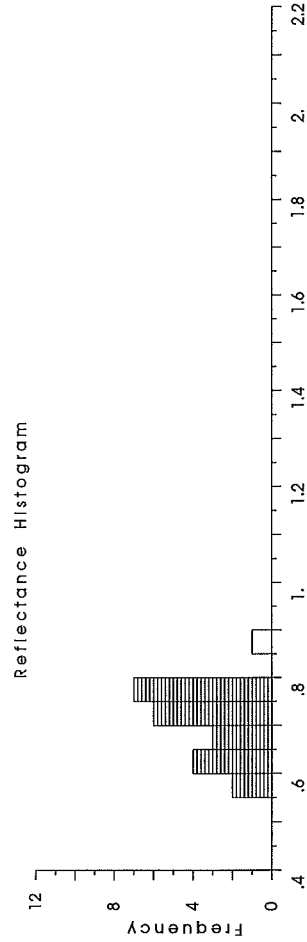
K0671B

Col >	1	2	3	4	5	6	7	8	9	0
Row 1	0.47 (0.59)	0.48 (0.61)	0.50 (0.62)	0.51 (0.63)	0.54 (0.65)	0.57 (0.66)	0.57 (0.68)	0.58 (0.71)	0.59 (0.71)	0.59 (0.59)
Mean	.59	.07	.18	.47	.71	Sum				
Stand Dev	.59	.07	.18	.47	.71	Ediff	10.55	10.55		
Total										



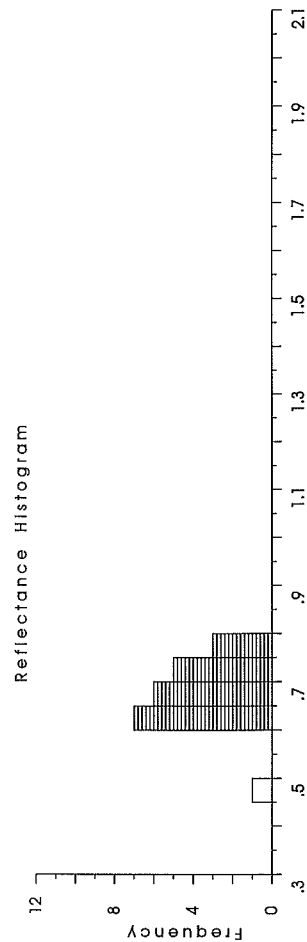
K0672E

Col >	1	2	3	4	5	6	7	8	9	0
Row 1	0.56 (0.72)	0.59 (0.72)	0.61 (0.72)	0.63 (0.73)	0.63 (0.73)	0.64 (0.75)	0.67 (0.75)	0.68 (0.75)	0.70 (0.76)	0.71 (0.76)
Row 2	0.77 (0.77)	0.77 (0.77)	0.87 (0.87)							
Mean	.71	.07	.23	.56	.77	Sum				
Stand Dev	.7	.06	.22	.56	.77	Ediff	16.22	15.35		
Total										



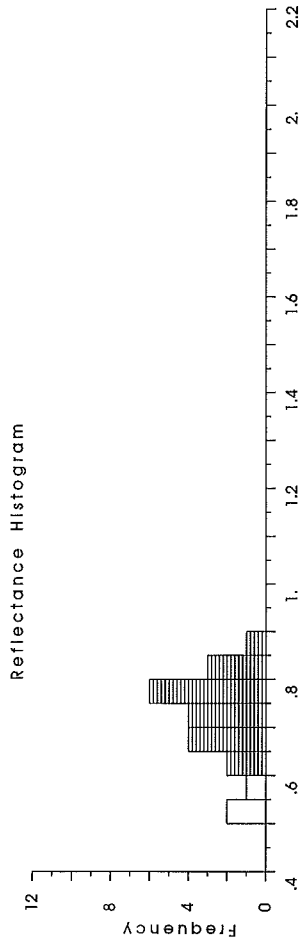
K0671C

Col >	1	2	3	4	5	6	7	8	9	0
Row 1	0.47 (0.68)	0.62 (0.70)	0.63 (0.70)	0.63 (0.70)	0.64 (0.71)	0.64 (0.71)	0.65 (0.72)	0.65 (0.73)	0.67 (0.74)	0.68 (0.77)
Row 2	0.78 (0.78)	0.78 (0.78)								
Mean	.68	.07	.22	.47	.78	Sum				
Stand Dev	.69	.05	.21	.62	.78	Ediff	14.53	14.53		
Total										



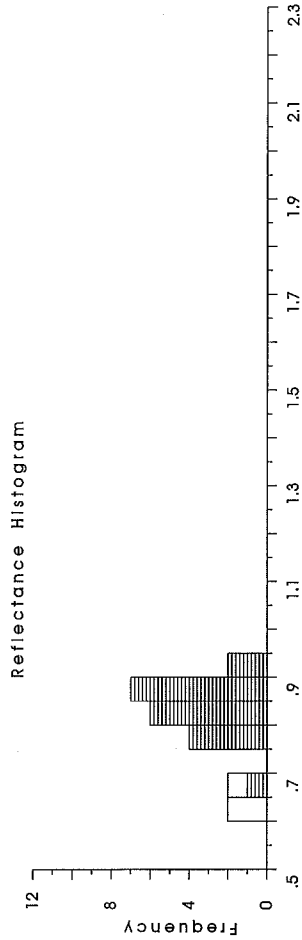
K0672C

Col >	Row	1	2	3	4	5	6	7	8	9	0
1	0.51 (0.73) (0.83)	0.52 (0.74) (0.84)	0.56 (0.74) (0.86)	0.64 (0.75) (0.86)	0.64 (0.76) (0.85)	0.66 (0.77) (0.86)	0.69 (0.77) (0.86)	0.69 (0.77) (0.86)	0.70 (0.79) (0.88)	0.70 (0.79) (0.88)	0.72 (0.83) (0.90)
2											
Total (Editt)	Mean .72 .75	Stand Dev .1 .06	Pts 23 20	Min .51 .64	Max .86 .86	Sum 16.51 14.92					



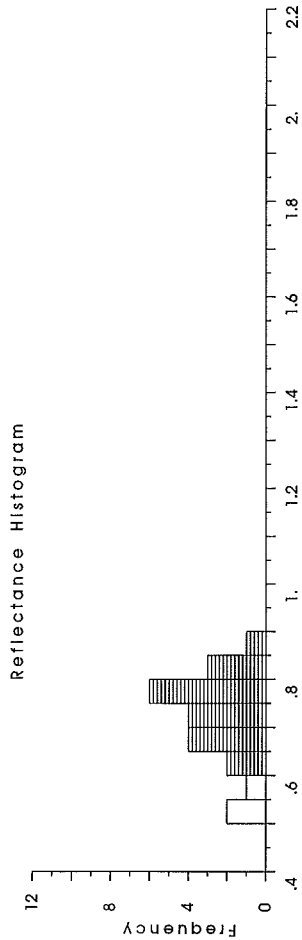
K0673B

Col >	Row	1	2	3	4	5	6	7	8	9	0
1	0.63 (0.80) (0.90)	0.63 (0.81) (0.91)	0.66 (0.82) (0.92)	0.70 (0.84) (0.92)	0.70 (0.84) (0.92)	0.76 (0.85) (0.92)	0.77 (0.85) (0.92)	0.79 (0.86) (0.92)	0.79 (0.86) (0.92)	0.80 (0.87) (0.92)	0.80 (0.88) (0.92)
2											
Total (Editt)	Mean .8 .83	Stand Dev .08 .06	Pts 23 20	Min .63 .7	Max .92 .92	Sum 18.5 16.58					



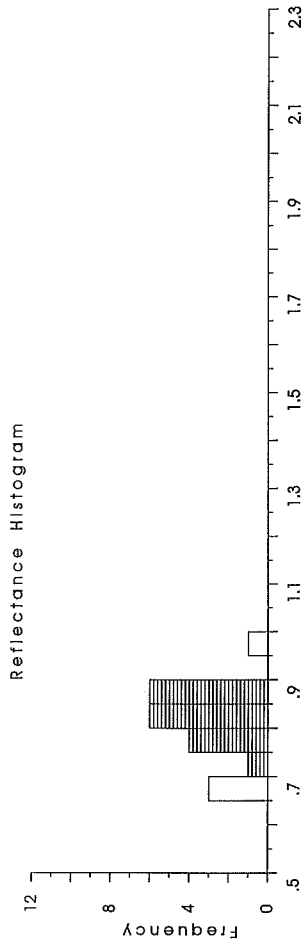
K0673A

Col >	Row	1	2	3	4	5	6	7	8	9	0
1	0.66 (0.81) (0.98)	0.68 (0.81) (0.81)	0.69 (0.82) (0.82)	0.72 (0.84) (0.84)	0.76 (0.85) (0.85)	0.77 (0.85) (0.85)	0.79 (0.88) (0.88)	0.79 (0.87) (0.87)	0.80 (0.88) (0.88)	0.80 (0.88) (0.88)	0.81 (0.90) (0.90)
2											
Total (Editt)	Mean .81 .82	Stand Dev .08 .05	Pts 21 17	Min .66 .72	Max .98 .9	Sum 16.96 13.95					



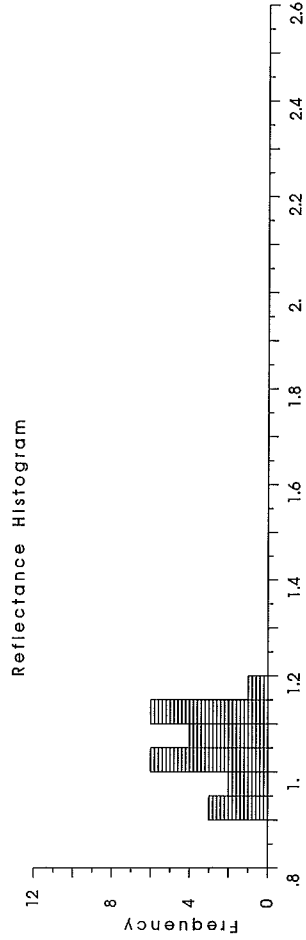
K0673C

Col >	Row	1	2	3	4	5	6	7	8	9	0
1	0.67 (0.81) (0.91)	0.68 (0.81) (0.96)	0.68 (0.82) (0.96)	0.76 (0.82) (0.96)	0.76 (0.82) (0.96)	0.77 (0.83) (0.96)	0.78 (0.84) (0.96)	0.78 (0.89) (0.96)	0.79 (0.89) (0.96)	0.79 (0.90) (0.96)	0.80 (0.90) (0.96)
2											
Total (Editt)	Mean .81 .83	Stand Dev .08 .06	Pts 22 19	Min .67 .76	Max .96 .96	Sum 17.88 15.85					



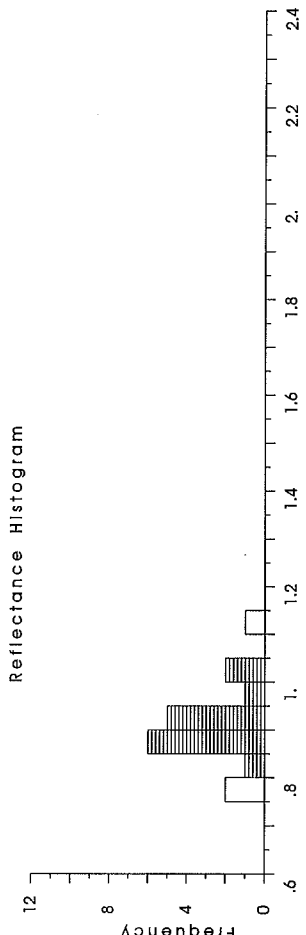
K0674C

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	2	3	4	5	6	7	8	9	0
	(0.91)	(0.92)	(0.93)	(0.96)	(0.99)	(1.00)	(1.01)	(1.01)	(1.04)	(1.05)
	(1.05)	(1.06)	(1.06)	(1.08)	(1.09)	(1.10)	(1.11)	(1.13)	(1.13)	(1.14)
	(1.15)	(1.17)								
Mean	1.05	.08	22	.91	1.17	23.09				
Stand Dev	1.05	.08	22	.91	1.17	23.09				
Total (Ediff)	1.05	.08	22	.91	1.17	23.09				



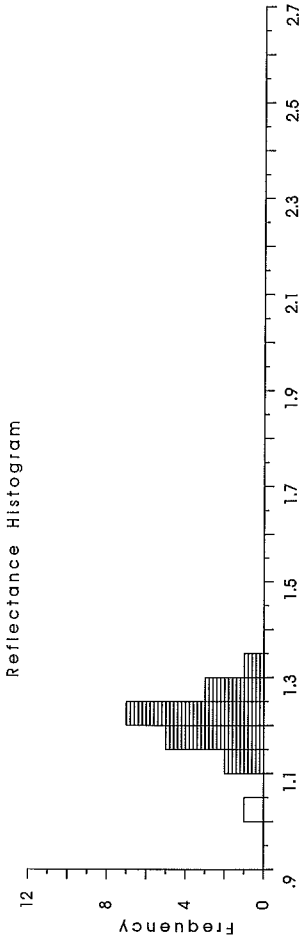
K0674A

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	2	3	4	5	6	7	8	9	0
	(0.92)	(0.92)	(0.82)	(0.87)	(0.87)	(0.88)	(0.90)	(0.90)	(0.90)	(0.91)
	(0.94)	(0.94)	(0.94)	(0.94)	(0.97)	(1.02)	(1.03)	1.10		
Mean	.91	.08	18	.79	1.1	16.47				
Stand Dev	.92	.06	15	.82	1.03	13.79				
Total (Ediff)	.92	.06	15	.82	1.03	13.79				



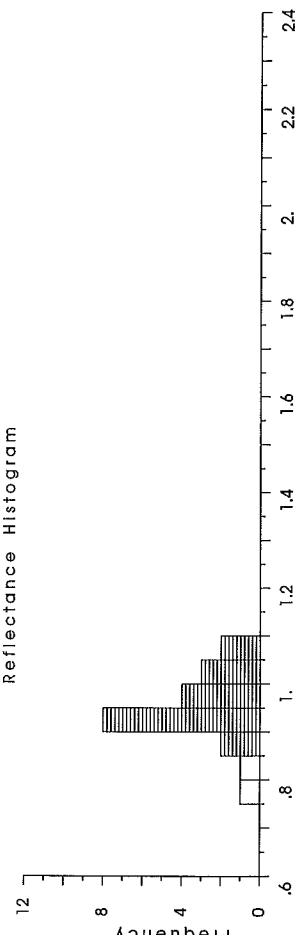
K0675A

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	2	3	4	5	6	7	8	9	0
	1.02	(1.12)	(1.15)	(1.17)	(1.17)	(1.18)	(1.18)	(1.19)	(1.21)	(1.21)
	(1.21)	(1.21)	(1.21)	(1.22)	(1.24)	(1.27)	(1.29)	(1.29)	(1.31)	(1.31)
Mean	1.2	.07	19	1.02	1.31	22.85				
Stand Dev	1.21	.05	18	1.12	1.31	21.83				
Total (Ediff)	1.21	.05	18	1.12	1.31	21.83				



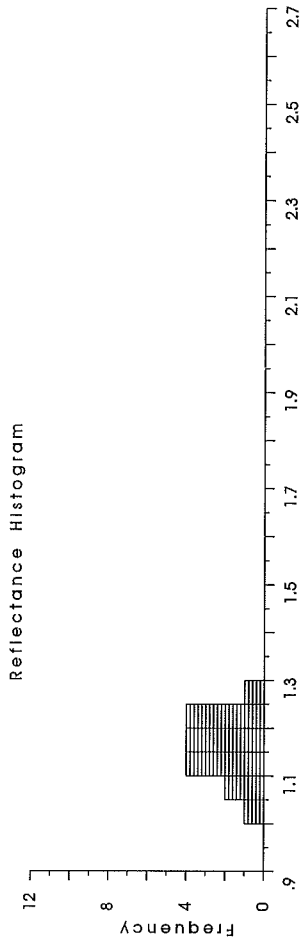
K0674B

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	2	3	4	5	6	7	8	9	0
	(0.94)	(0.95)	(0.87)	(0.90)	(0.91)	(0.91)	(0.92)	(0.92)	(0.93)	(0.93)
	(1.09)	(1.09)	(0.96)	(0.97)	(0.97)	(0.99)	(1.00)	(1.01)	(1.05)	(1.08)
Mean	.95	.07	21	.79	1.09	19.92				
Stand Dev	.96	.06	19	.87	1.09	18.3				
Total (Ediff)	.96	.06	19	.87	1.09	18.3				



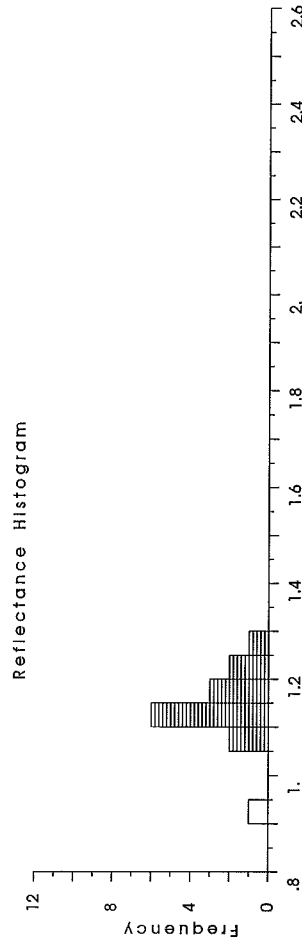
K0675B

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	1	1	1	1	1	1	1	1	1
	(1.03)	(1.06)	(1.09)	(1.12)	(1.13)	(1.13)	(1.15)	(1.16)	(1.18)	(1.18)
	(1.19)	(1.20)	(1.22)	(1.24)	(1.24)	(1.29)				
Mean	1.16	.07	1.6	1.03	1.29	1.861				
Stand Dev	1.16	.07	1.6	1.03	1.29	18.61				
Total (Ediff)	1.16	.07	1.6	1.03	1.29	18.61				



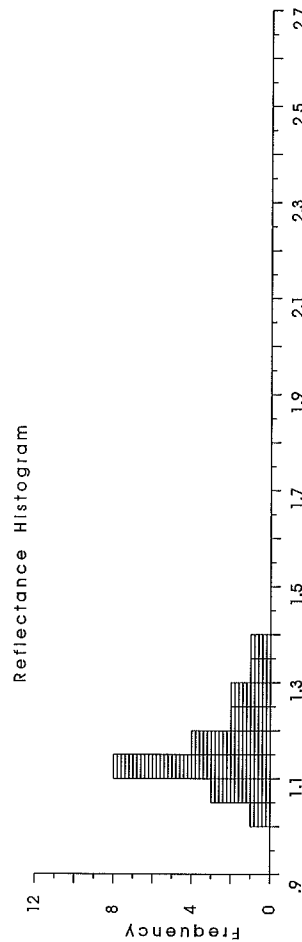
K0676A

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	1	1	1	1	1	1	1	1	1
	0.93	(1.08)	(1.08)	(1.11)	(1.12)	(1.13)	(1.14)	(1.15)	(1.15)	(1.18)
	(1.19)	(1.19)	(1.22)	(1.24)	(1.26)					
Mean	1.14	.08	15	Min	Max	Sum				
Stand Dev	1.16	.06	14	1.08	1.26	17.17				
Total (Ediff)	1.16	.06	14	1.08	1.26	16.24				



K0675C

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	1	1	1	1	1	1	1	1	1
	(1.02)	(1.06)	(1.09)	(1.09)	(1.11)	(1.12)	(1.13)	(1.13)	(1.14)	(1.14)
	(1.14)	(1.15)	(1.16)	(1.17)	(1.17)	(1.19)	(1.20)	(1.20)	(1.27)	(1.28)
	(1.32)	(1.35)								
Mean	1.17	.08	22	1.02	1.35	25.63				
Stand Dev	1.17	.08	22	1.02	1.35	25.63				
Total (Ediff)	1.17	.08	22	1.02	1.35	25.63				



K0676B

Col >	1	2	3	4	5	6	7	8	9	0
Row	1	1	1	1	1	1	1	1	1	1
	(1.16)	(1.16)	(1.23)	(1.25)	(1.28)	(1.28)	(1.29)	(1.29)	(1.31)	(1.31)
Mean	1.26	.06	10	Min	Max	Sum				
Stand Dev	1.26	.06	10	1.16	1.31	12.56				
Total (Ediff)	1.26	.06	10	1.16	1.31	12.56				

