New Mexico Bureau of Mines and Mineral Resources
Open File Report No. OF-259

ORGANIC GEOCHEMICAL ANALYSES OF THE KERADAMEX NO. SM32-1 URANIUM TEST (CIBOLA COUNTY), CONTINENTAL OIL CO. NO. 1 L-BAR WELL (SANDOVAL COUNTY), AND RICHFIELD OIL CO. NO. 1 DROUGHT BOOTH WELL (McKINLEY COUNTY), NEW MEXICO

By Stephen R. Jacobson, James D. Saxton,
and Katherine M. Tully
Chevron U.S.A., Inc.
Denver, Colorado

and John R. Allen
Dow Geochemical Services, Inc.
The Woodlands, Texas.

October 23, 1985

BIOSTRATIGRAPHIC STUDY NO. 1478 October 23, 1985
P4978-P4979-P4980

Keradamex

LOCATION: SM 32-1
Sec. 32-13N-8W
~~Valencia~~ Cibola Co., New Mexico P4978

Continental Oil #1 L-Bar
Sec. 2-13N-4W
Sandoval Co., New Mexico P4979

Richfield Oil Drought Booth #1
Sec. 4-15N-6W
McKinley Co., New Mexico P4980

PROBLEM: Fifteen cutting samples submitted by K. Tully for determination of maturity (TAI-Vo) and microscopic Organic analysis (MOA) indices.

RESULTS: (Maturity-Kerogen Types- Amount of Organics)

Keradamex SM 32-1

Maturity (TAI-Vo Tmax-Production Index)

Sample	Interval	Age	TAI	Vo	Tmax	Prod. Index S1/(S1 + S2)
P4978-1	2330-2350	Cret. Dakota	2.7 Oil gen. zone	-	428°C	0.27
P4978-2	2350-2500	Jur. Morrison	2.9 Oil gen. zone	-	427°C	0.29
P4978-3	2500-2680	Jur. Morrison	2.8-2.9 Oil gen. zone	-	428°C	0.24

NOTE: PI values are within COFRC parameters 0.1-0.4, oil generative zone.

Tmax values indicate sampled intervals to be immature; however, lost circulation material (walnut husk) is common in these samples and this material is pyrolyzed at a lower temperature than most "in place" hydrocarbons thus lowering the Tmax values.

TB
D
P
CMTV

Kerogen Types (MOA-Hydrogen Index)

Sample	Interval	Age	MOA 1	II	III	IV	Hydro. Index S2/TOC x 100
P4978-1	2330-2350	Cret. Dakota	0	45	45?	10	134 0-150 gas prone. Lost circ. mat. common
P4978-2	2350-2500	Jur. Morrison	0	45	45?	10	114? 0-150 gas prone. TOC less than 1% Lost circ. mat. common
P4978-3	2500-2680	Jur. Morrison	0	80	10	10	116? TOC less than 1%

Amount of Organics (TOC-Organic Yield-S2)

Sample	Interval	Age	TOC	Organic Yield (ml/10g)	S2 (mg/g)
P4978-1	2330-2350	Cret. Dakota	1.22(1-2,good)	1.4	1.64(0-2.5,poor)
P4978-2	2350-2500	Jur. Morrison	0.86(0-5.1,fair)	1.0	0.98(0-2.5,poor)
P4978-3	2500-2680	Jur. Morrison	0.97(0.5-1,fair)	0.83	1.13(0-2.5,poor)

Continental Oil #1 L-Bar

Maturity (TAI-Vo-Tmax-Production Index)

Sample	Interval	Age	TAI	Vo	Tmax	Prod. Index S1/(S1 + S2)
P4979-1	1140-1220	Jur. Todilto			425°C	0.29
P4979-2	4900-5099	Penn. Madera			370°C?*	0.64?*
P4979-3	5100-5295	Penn. Madera	2.9-3.0 Oil gen. zone		332°C?*	0.70?*
P4979-4	5300-5499	Penn. Madera	2.9-3.4 Oil gen. zone	(0.7)	321°C?*	0.63?*
P4979-5	5500-5699	Penn. Madera			321°C?*	0.70?*
P4979-6	5700-7899	Penn. Madera	2.9-3.1 Oil gen. zone		312°C?*	0.65?*
P4979-7	5900-5979	Penn. Madera	2.9-3.1 Oil gen. zone		380°C?*	0.63?*
P4979-8	5980-6149	Penn. Sandia	3.2-3.6 Wet Gas gen. zone		381°C?*	0.56?*
P4979-9	6150-6220	Pre-Cambrian	3.6-3.7 See Note Wet Gas gen. zone		395°C?*	0.53?*

Note: * Samples 2-9 are based on very low S2 values and are of little value
Sample (9) was submitted as a pre-Cambrian sample but the assemblage is very much the same as in the Penn. intervals above. TAI is based on the most mature "darkest" Lycospora sp. (Carboniferous palynomorph) present.

Percentage estimates of the various kerogens (MOA) also suggests the sample interval 6-9 is very much the same and not representative of the stated intervals.

Kerogen Type (MOA-Hydrogen Index)

Sample	Interval	Age	MOA 1	II	III	IV	Hydro. Index (S2/TOC) x 100
P4979-1	1140-1220	Jur. Todilto	0	80			279?*
P4979-2	4900-5099	Penn. Madera	0			90	62?*
P4979-3	5100-5295	Penn. Madera	0	20	20	60	50?*
P4979-4	5300-5499	Penn. Madera	0	15	15	70	52?*
P4979-5	5500-5699	Penn. Madera	0			90	38?*
P4979-6	5700-7899	Penn. Madera	0	20	20	60	42?*
P4979-7	5900-5979	Penn. Madera	0	20	20	60	50?*
P4979-8	5980-6149	Penn. Sandia	0	20	20	60	45?*
P4979-9	6150-6220	Pre-Cambrian	0	20	20	60	52?*

Note: * based on low S2 or TOC values, indices are of little value!

Amount of organics (TOC-Organic Yield-S2)

Sample	Interval	Age	TOC	Organic Yield (ml/10g)	S2 (mg/g)
P4979-1	1140-1220	Jur. Todilto	0.33(0-0.5,poor)	trace	0.92(0-2.5,poor)
P4979-2	4900-5099	Penn. Madera	0.21(0-0.5,poor)	0.30	0.13(0-2.5,poor)
P4979-3	5100-5295	Penn. Madera	0.18(0-0.5,poor)	0.14	0.09(0-2.5,poor)
P4979-4	5300-5499	Penn. Madera	0.25(0-0.5,poor)	0.31	0.13(0-2.5,poor)
P4979-5	5500-5699	Penn. Madera	0.26(0-0.5,poor)	0.24	0.10(0-2.5,poor)
P4979-6	5700-7899	Penn. Madera	0.26(0-0.5,poor)	0.17	0.11(0-2.5,poor)
P4979-7	5900-5979	Penn. Madera	0.20(0-0.5,poor)	0.31	0.10(0-2.5,poor)
P4979-8	5980-6149	Penn. Sandia	0.31(0-0.5,poor)	0.25	0.14(0-2.5,poor)
P4979-9	6150-6220	Pre-Cambrian	0.33(0-0.5,poor)	0.25	0.14(0-2.5,poor)

Note: Yield values are not calibrated to any other organic quantity measurements such as TOC or S2. These results are only of value for comparisons of one sample to another sample in the same suite.

Richfield Oil Draight Brooth #1

Maturity (TAI-Vo-Tmax-Prod. Index)

Sample	Interval	Age	TAI	Vo	Tmax	Prod. Index S1/(S1 + S2)
P4980-1	1250-1450	Cret. Mancos	2.7 Oil gen. zone	-	427°C	0.14
P4980-2	2800-2850	Jur. Todilto	2.6-2.7 Oil gen. zone	-	428°C	0.25
P4980-3	6600-6700	Penn. Madera	2.9-3.1 Oil gen. zone	-	394°C?*	0.50?*

Note: * based on low S2 values, indices are of little value.

Kerogen Type (MOA-Hydrogen Index)

Sample	Interval	Age	MOA I	II	III	IV	Hydro. Index (S2/TOC) x 100
P4980-1	1250-1450	Cret. Mancos	0	85			228
P4980-2	2800-2850	Jur. Todilto	0	85			193?*
P4980-3	6600-6700	Penn. Madera	0			80	68?*

Note: * based on low TOC and or S2 values.

Amount of Organics (TOC-Organic Yield-S2)

Sample	Interval	Age	TOC	Organic Yield (ml/10g)	S2 (mg/g)
P4980-1	1250-1450	Cret. Mancos	1.48(1-2,good)	2.0	3.37(2.5-5,fair)
P4980-2	2800-2850	Jur. Todilto	0.94(0.5-1,fair)	2.5	1.81(0-2.5,poor)
P4980-3	6600-6700	Penn. Madera	0.22(0-0.5,poor)	0.63	0.15(0-2.5,poor)

DATA:

SM 32-1 Sec. 32-13N-8W Valencia Co., New Mexico

Sample	Maturity	
P4978-1	TAI	2.7 Oil generative zone
	Vo	-
	Tmax	428°C.
	PI	0.27 (0.1-0.4, oil gen. zone).

Kerogen Type, MOA

1	0	Note: lost circ. material present. Probably walnut material.
11	45% oil prone	
111	45% gas prone	
1V	10% inert	

HI 134 (0-150 indicates gas prone kerogen).

Amount of organics

WT % TOC	1.22 (1-2,good).
Organic yield	1.4 ml/10 g.
S2	1.64 mg/g (0-2.5,poor).

Sample	Maturity	
P4978-2 2350-2500 Jur. Morrison	TAI	2.9 Oil gen. zone
	Vo	-
	Tmax	427°C.
	PI	0.29 (0.1-0.4, oil gen. zone).

Kerogen Type, MOA

1	0	Note: lost circ. material present. Probably walnut material.
11	45% oil prone	
111	45% gas prone	
1V	10% inert	

HI 114% TOC less than 1%.

Amount of organics

WT % TOC	0.86 (0.5-1,fair)
Organic yield	1.0 ml/10 g.
S2	0.98 mg/g (0-2.5,poor)

Sample	Maturity	
P4978-3	TAI	2.8-2.9 Oil gen. zone
2500-2680	Vo	-
Jur.	Tmax	428°C
Morrison	PI	0.24 (0.1-0.4, oil gen. zone)

Kerogen Type, MOA	
I	0
II	80% oil prone
III	10% gas prone
IV	10% inert

HI 116? TOC less than 1%.

Amount of organics	
WT % TOC	0.97 (0.5-1, fair)
Organic yield	0.83 ml/10 g.
S2	1.13 mg/g(0-2.5, poor)

Continental Oil #1 L-Bar Cattle Co., Sec. 2-13N-4W
Sandoval Co., New Mexico

Sample	Maturity	
P4979-1	TAI	- Poor recovery of palynomorphs
1140-1220	Vo	-
Jur.	Tmax	425°C
Todilto	PI	0.29 (0.1-0.4, oil gen. zone)

Kerogen Type, MOA

1	0
11	80% oil prone
111	
1V	

HI 279? TOC less than 1%.

Amount of Organics

WT % TOC	0.33 (0-0.5,poor)
Organic yield	Trace
S2	0.92 mg/g (0-2.5,poor)

Sample	Maturity	
P4979-2	TAI	-
4900-5099	Vo	-
Penn.	Tmax	370°C? Low S2 value
Madera	PI	0.64? Low S2 value

Kerogen Type, MOA

1	5% oil prone
11	5% oil prone
111	
1V	90% inert

Note: Florescence indicates an intermediate type 1 and 11 kerogen (algal) present

HI 62? TOC less than 1%, low S2 value

Amount of Organics

WT % TOC	0.21 (0-0.5,poor)
Organic yield	0.30 ml/10 g
S2	0.13 mg/g(0-2.5,poor)

Sample	Maturity	
P4979-3	TAI	2.9-3.0 Oil gen. zone
5100-5295	Vo	-
Penn.	Tmax	332°C? Low S2 value
Madera	PI	0.70? Low S2 value

Kerogen Type, MOA	
1	0
11	20% oil prone
111	20% gas prone
1V	60% inert

HI 50% TOC less than 1%, low S2 value

Amount of Organics	
WT % TOC	0.08(0-0.5,poor)
Organic yield	0.14 ml/10 g
S2	0.09 mg/g (0-2.5,poor)

Sample	Maturity		
P4979-4	TAI	2.9-3.4 Oil gen. zone	
5300-5499	Vo	0.7 = TAI, 2.7 Oil gen. zone	Note: histogram indicates a fairly
Penn.	Tmax	321°C? Low S2 value	broad range of maturities to
Madera	PI	0.63? Low S2 value	be present on the plug.

Kerogen Type, MOA	
1	0
11	15% oil prone
111	15% gas prone
1V	70% inert

HI 52? TOC less than 1%, low S2 value.

Amount of Organics	
WT % TOC	0.25(0-0.5,poor)
Organic yield	0.31 ml/10 g.
S2	0.13 mg/g(0-2.5,poor)

Sample	Maturity	
P4979-5	TAI	-
5500-5699	Vo	-
Penn.	Tmax	321°C? Low S2 value
Madera	PI	0.70? Low S2 value

Kerogen Type, MOA	
I	0
II	
III	
IV	90% inert

HI 38? TOC less than 1%, low S2 value

Amount of Organics	
WT % TOC	0.26 (0-0.5,poor)
Organic yield	0.24 ml/10 g
S2	0.10 mg/g(0-2.5,poor)

Sample	Maturity	
P4979-6	TAI	2.9-3.1 Oil gen. zone
5700-5899	Vo	-
Penn.	Tmax	312°C? Low S2 value
Madera	PI	0.65? Low S2 value

Kerogen Type, MOA	
I	0
II	20% oil prone
III	20% gas prone
IV	60% inert

HI 42? TOC less than 1%, low S2 value

Amount of Organics	
WT % TOC	0.26 (0-0.5,poor)
Organic yield	0.17 ml/10 g
S2	0.11 mg/g (0-.5,poor)

Sample	Maturity	
P4979-7	TAI	2.9-3.1 Oil gen. zone
5900-5979	Vo	-
Penn.	Tmax	380°C? Low S2 value
Madera	PI	0.63? Low S2 value

Kerogen Type, MOA	
1	0
11	20% oil prone
111	20% gas prone
1V	60% inert

HI 50? TOC less than 1%, low S2 value

Amount of Organics	
WT % TOC	0.20(0-0.5,poor)
Organic yield	0.31 ml/10 g
S2	0.10 mg/g (0-2.5,poor)

Sample	Maturity	
P4979-8	TAI	3.2-3.6 Wet gas gen. zone
5980-6149	Vo	-
Penn.	Tmax	381°C? Low S2 value
Sandia	PI	0.56? Low S2 value

Kerogen Type, MOA	
1	0
11	20% oil prone
111	20% gas prone
1V	60% inert

HI 45? TOC less than 1%, low S2 value

Amount of Organics	
WT % TOC	0.31 (0-0.5,poor)
Organic yield	0.25 ml/10 g
S2	0.15 mg/g (0-2.5,poor)

Sample	Maturity		
P4979-9	TAI	3.6-3.7 Wet gas gen. zone	Note: none of this data is based on
6150-6220	Vo	-	Pre-Cambrian palynomorphs, as-
Pre-	Tmax	395°C? Low S2 value	semblage is the same as above
Cambrian	PI	0.53? Low S2 value	samples.

Kerogen Type, MOA

1	0
11	20% oil prone
111	20% gas prone
1V	60% inert

HI 52? TOC less than 1%, low S2 value

Amount of Organics

WT % TOC	0.33 (0-0.5,poor)
Organic yield	0.25 ml/10 g
S2	0.17 mg/g(0-2.5,poor)

Richfield Oil #1 Drought Booth Sec. 4-15N-6W
McKinley Co., New Mexico

Sample	Maturity	
P4980-1	TAI	2.7 Early oil gen. zone
1250-1450	Vo	-
Cret.	Tmax	427°C immature
Mancos	PI	0.14 (0.1-0.4, oil gen. zone)

Kerogen Type, MOA

I	0
II	85% oil prone
III	
IV	

HI 228 (150-300, indicates mixed oil-gas prone kerogen).

Amount of Organics

WT % TOC	1.48 (1-2,good)
Organic yield	2.00 ml/10 g
S2	3.37 mg/g(2.5-5,fair).

Sample	Maturity	
P4980-2	TAI	2.6-2.7 Early oil gen. zone
2800-2850	Vo	-
Jur.	Tmax	428°C. Immature
Todilto	PI	0.25 (0.1-0.4, oil gen. zone)

Kerogen Type, MOA

I	0
II	85% oil prone
III	-
IV	

HI 193? TOC less than 1%
(150-300, indicates mixed oil-gas prone kerogen).

Amount of Organics

WT % TOC	0.94 (0.5-1,fair)
Organic yield	2.5 ml/10 g
S2	1.81 mg/g (0-2.5,poor)

Sample	Maturity	
P4980-3	TAI	2.9-3.1 Oil gen. zone
6600-6700	Vo	-
Penn.	Tmax	394°C? Low S2 value
Madera	PI	0.50? Low S2 value

Kerogen Type, MOA	
I	0
II	
III	
IV	80% inert

HI	68? TOC less than 1%, low S2 value.

Amount of Organics	
WT % TOC	0.22 (0-0.5,poor)
Organic yield	0.63 ml/10 g
S2	0.15 mg/g(0-2.5,poor)

ATTACHMENTS: DGSI report dated October 8, 1985
Table 1, COFRC Geochemical Parameters.
Fig. 1, TAI-Vo Equivalency Chart.
Fig. 19, HI Tmax Plot.

J. D. SAXTON

JDS:nw
Attachments

DGSI
1544 Sawdust Road, Suite 402 ☐ Post Office Box 7568 ☐ The Woodlands, Texas 77387 ☐ (713) 363-2176 ☐ Telex: 881137 DGSI

S. R. Jacobson
Chevron U.S.A.
P. O. Box 599
Denver, CO 20201

October 8, 1985

Dear Mr. Jacobson:

Enclosed are the TOC and RE data on the samples you sent us, along with an invoice for the work performed. The samples will be returned under separate cover.

We thank you for giving us the opportunity to serve you and hope we may serve you again soon.

Sincerely,

John R. Allen
Lab Manager

JRA/ma

Biostudy 1478

ORGANIC CARBON AND ROCK-EVAL PYROLYSIS DATA

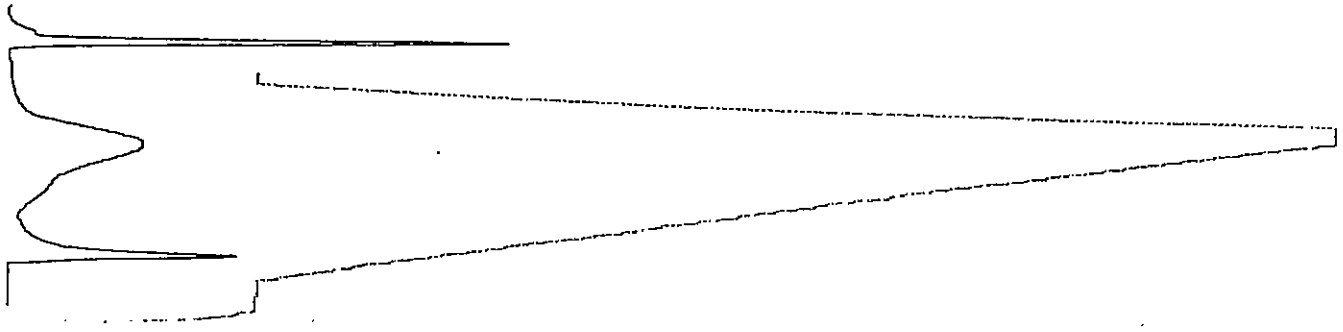
CHEVRON U.S.A.

Project : DGSI/85/131

SAMPLE IDENTIFICATION DEPTH (Feet)	TOC Wt%	S1 mg/g	S2 mg/g	S3 mg/g	T-max degC	S1/TOC	S2/TOC HI	S3/TOC OI	S2/S3	S1/S1+S2 PI
P4978- 1 : -	1.22	0.60	1.64	1.07	428	49	134	88	1.53	0.27
P4978- 2 : -	0.86	0.40	0.98	0.74	427	47	114	86	1.32	0.29
P4978- 3 : -	0.97	0.36	1.13	0.17	428	37	116	18	6.65	0.24
P4979- 1 : -	0.33	0.37	0.92	0.20	425	112	279	61	4.60	0.29
P4979- 2 : -	0.21	0.23	0.13	0.06	370	110	62	29	2.17	0.64
P4979- 3 : -	0.18	0.21	0.09	0.21	332	117	50	117	0.43	0.70
P4979- 4 : -	0.25	0.22	0.13	0.07	321	88	52	28	1.86	0.63
P4979- 5 : -	0.26	0.23	0.10	0.14	321	88	38	54	0.71	0.70
P4979- 6 : -	0.26	0.20	0.11	0.20	312	77	42	77	0.55	0.65
P4979- 7 : -	0.20	0.17	0.10	0.27	380	85	50	135	0.37	0.63
P4979- 8 : -	0.31	0.18	0.14	0.16	381	58	45	52	0.88	0.56
P4979- 9 : -	0.33	0.19	0.17	0.28	395	58	52	85	0.61	0.53
P4980- 1 : -	1.48	0.54	3.37	0.76	427	36	228	51	4.43	0.14
P4980- 2 : -	0.94	0.59	1.81	0.60	428	63	193	64	3.02	0.25
P4980- 3 : -	0.22	0.15	0.15	0.76	394	68	68	345	0.20	0.50
P4981- 1 : -	1.32	0.17	1.08	0.92	429	13	82	70	1.17	0.14
P4981- 2 : -	1.18	0.14	1.21	0.76	432	12	103	64	1.59	0.10
P4981- 3 : -	1.22	0.38	1.58	0.76	428	31	130	62	2.08	0.19
P4981- 4 : -	1.23	0.24	1.69	0.65	429	20	137	53	2.60	0.12
P4981- 5 : -	0.14	0.11	0.13	0.65	393	79	93	464	0.20	0.46
P4981- 6 : -	0.15	0.08	0.09	0.48	311	53	60	320	0.19	0.47
P4981- 7 : -	0.12	0.05	0.06	0.28	286	42	50	233	0.21	0.45
P4981- 8 : -	0.23	0.23	0.15	1.23	335	100	65	535	0.12	0.61
P4981- 9 : -	0.16	0.16	0.18	0.72	359	100	113	450	0.25	0.47
P4981-10 : -	0.11	0.07	0.09	0.16	271	64	82	145	0.56	0.44
P4981-11 : -	0.10	0.07	0.04	0.87	403	70	40	870	0.05	0.64
P4981-12 : -	0.32	0.52	0.51	0.62	353	163	159	194	0.82	0.50
P4981-13 : -	0.22	0.24	0.33	0.25	353	109	150	114	1.32	0.42
P4981-14 : -	0.18	0.04	0.07	0.23	380	22	39	128	0.30	0.36
P4981-15 : -	0.17	0.06	0.05	0.43	277	35	29	253	0.12	0.55
P4981-16 : -	0.15	0.04	0.03	0.21	277	27	20	140	0.14	0.57
P4981-17 : -	0.13	0.04	0.03	0.32	300	31	23	246	0.09	0.57
P4981-18 : -	0.10	0.02	0.01	0.50	253	20	10	500	0.02	0.67
P4981-19 : -	0.31	0.25	0.51	0.50	404	81	165	161	1.02	0.33
P4981-20 : -	0.12	0.03	0.03	0.52	348	25	25	433	0.06	0.50

DATE: 10-05-90 ANALYSIS CYCLE : 1 SCALE = 1/32

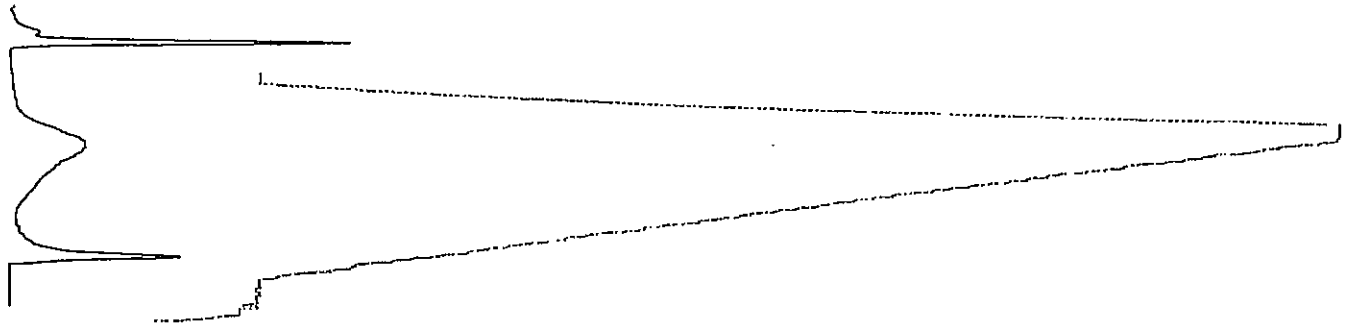
DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
1	102.2	428	0.60	1.64	1.07	0.27	1.53	0.18			



PH978-1

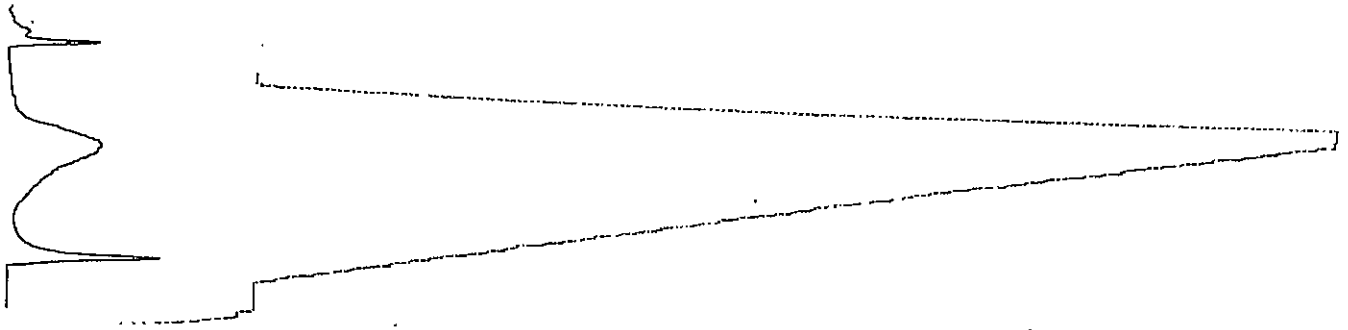
DATE: 10/30/90 ANALYSIS CYCLE: 1 SCALE = 100.0

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
2	102.8	427	0.40	0.98	0.74	0.29	1.32	0.11			



PH998-2

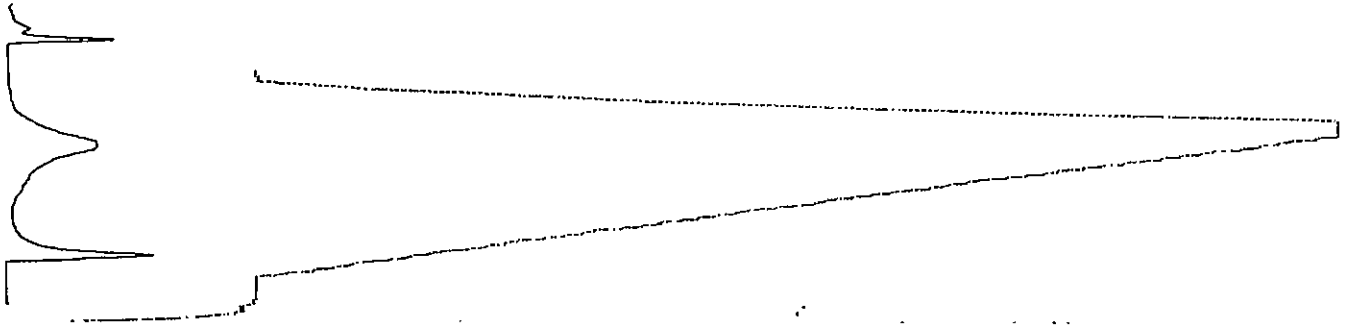
DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
3	191.0	428	0.36	1.13	0.17	0.24	6.64	0.12			



PH978-3

DATE: 19-03-93 ANALYSIS CYCLE : 1 SCALE : 1/1

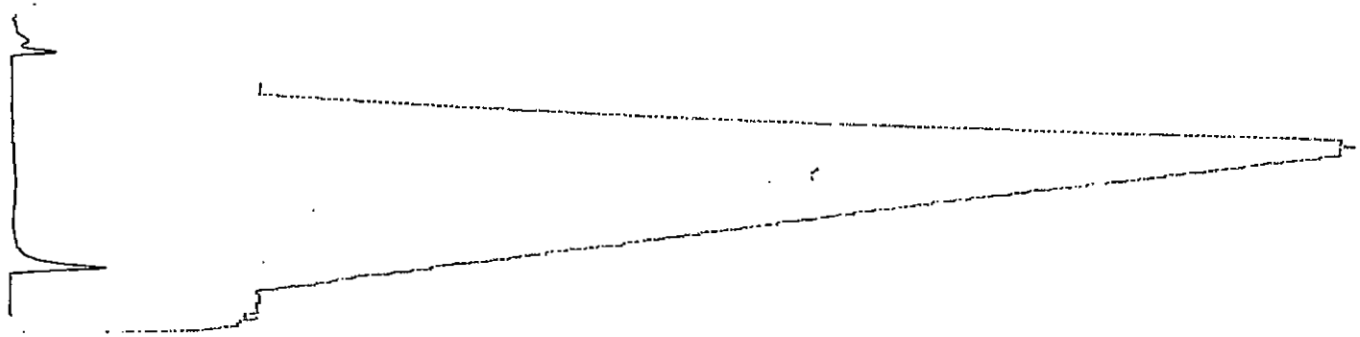
DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
4	100.0	425	0.37	0.92	0.20	0.29	4.60	0.10			



PH979-1

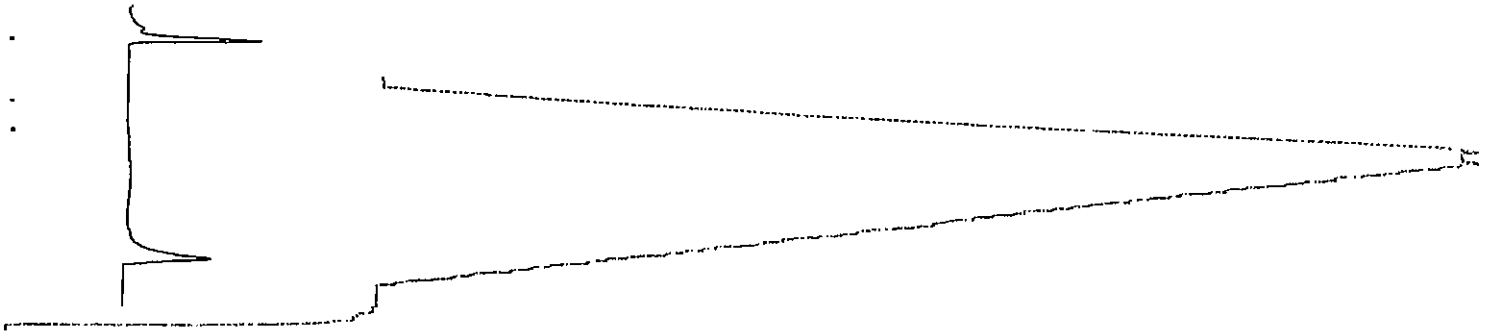
DATE: 10-03-85 ANALYSIS CYCLE : 1 SCALE = 1/32

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
5	101.6	370	0.23	0.13	0.06	0.64	2.16	0.03			



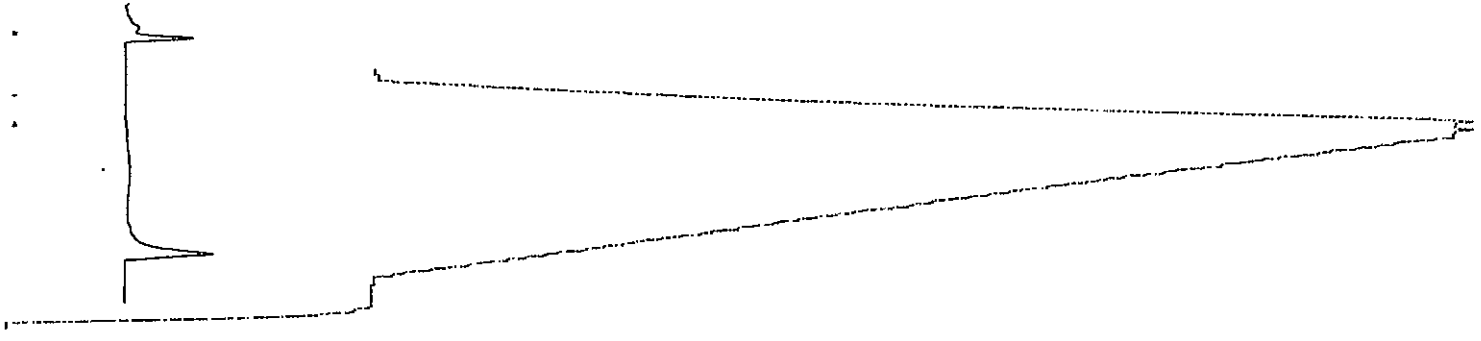
PH979-2

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
6	102.1	332	0.21	0.09	0.21	0.70	0.42	0.02			



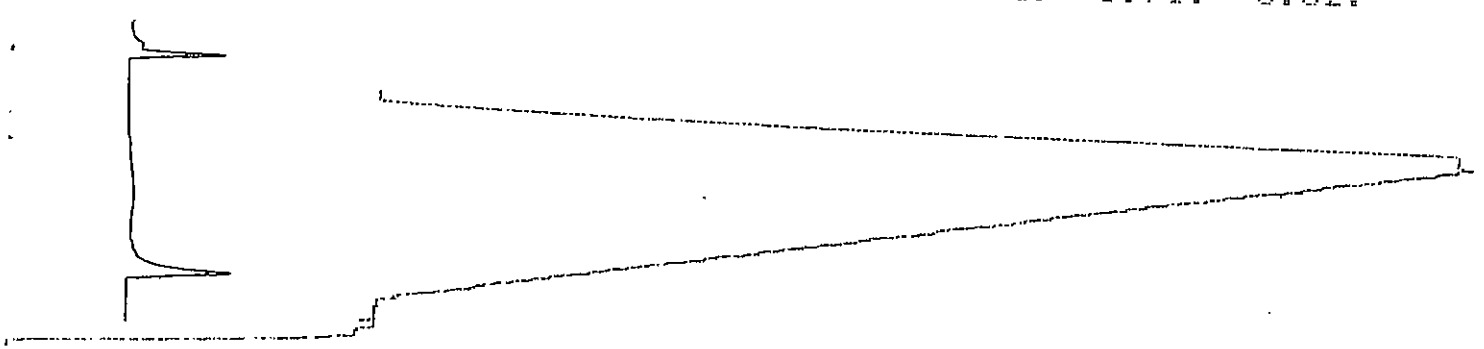
PH979-3

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
7	101.8	321	0.22	0.13	0.07	0.65	1.95	0.02			



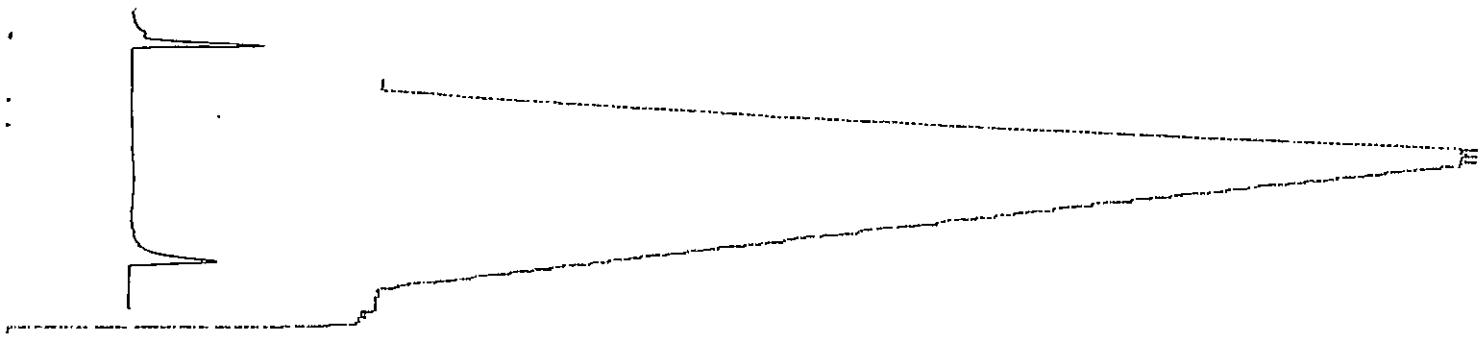
PH979-4

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
0	02.6	321	0.23	0.10	0.14	0.72	0.71	0.02			



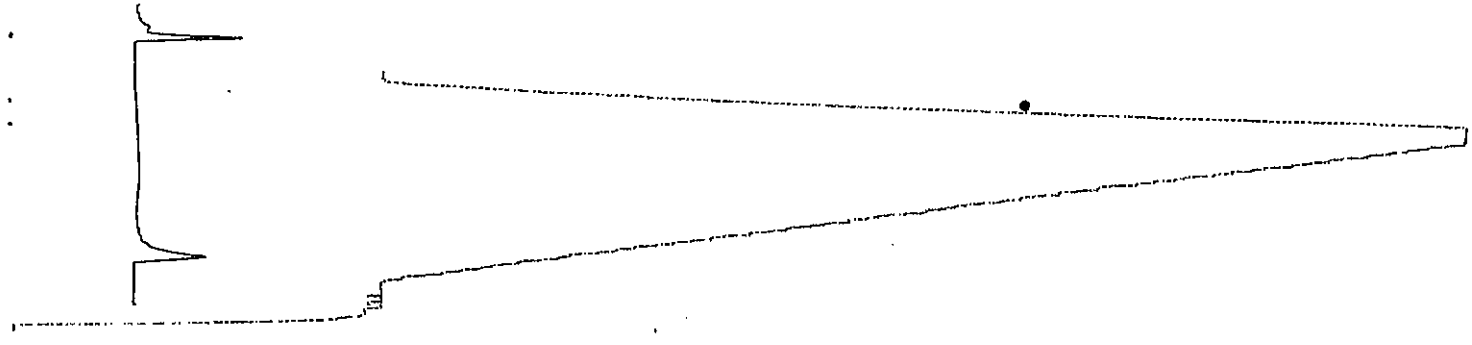
PH999-5

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
9	191.7	312	0.28	0.11	0.20	0.67	0.55	0.02			



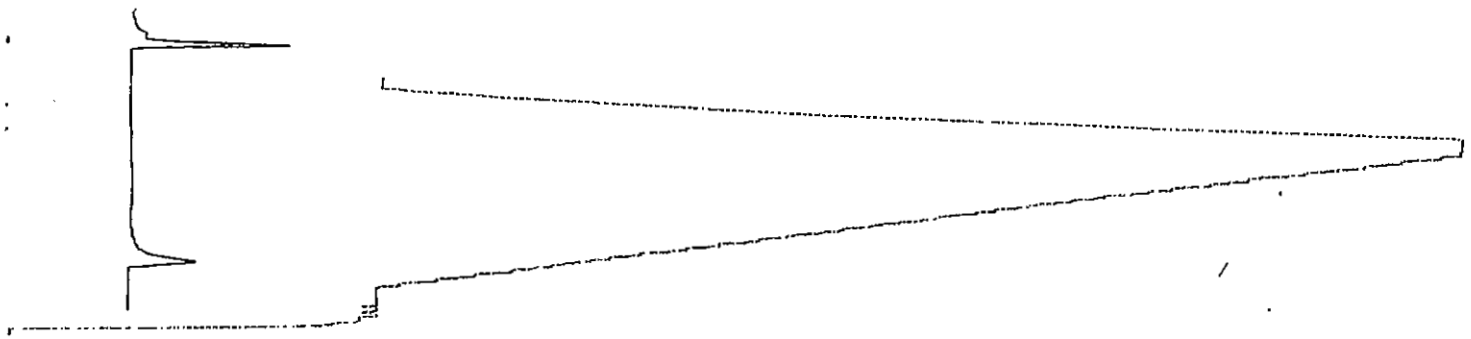
PH979-6

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
1101.1	381		0.18	0.14	0.16	0.56	0.87	0.82			



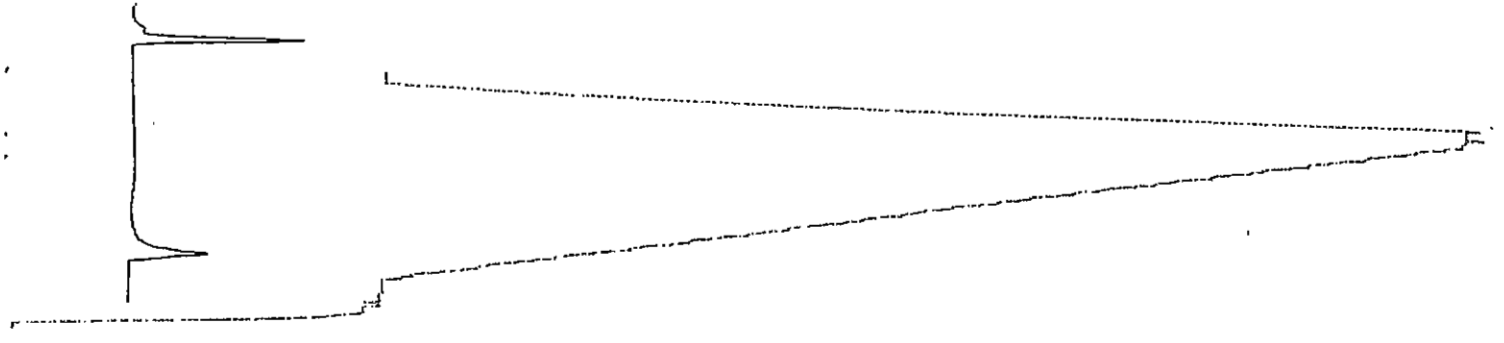
PH979-8

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
10	186.4	328	0.17	0.10	0.27	0.65	0.37	0.02			



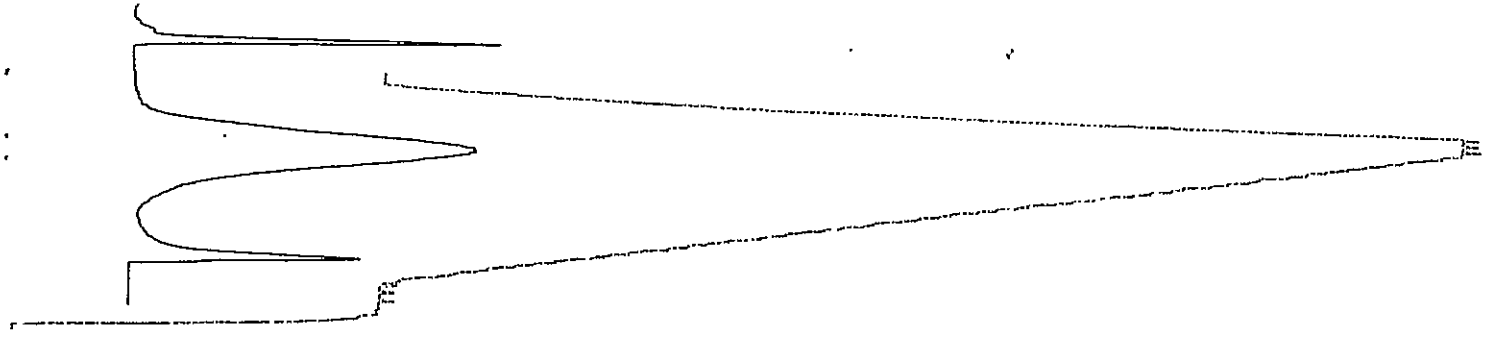
PH979-7

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
2	32.5	395	0.19	0.17	0.28	0.53	0.60	0.03			



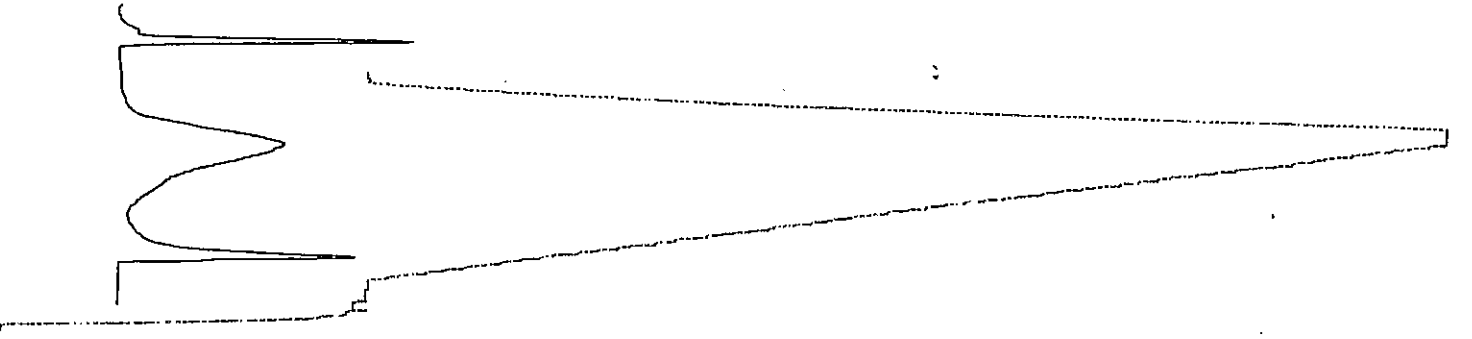
PH979-9

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
13	101.5	427	0.54	3.37	0.76	0.14	4.43	0.32			



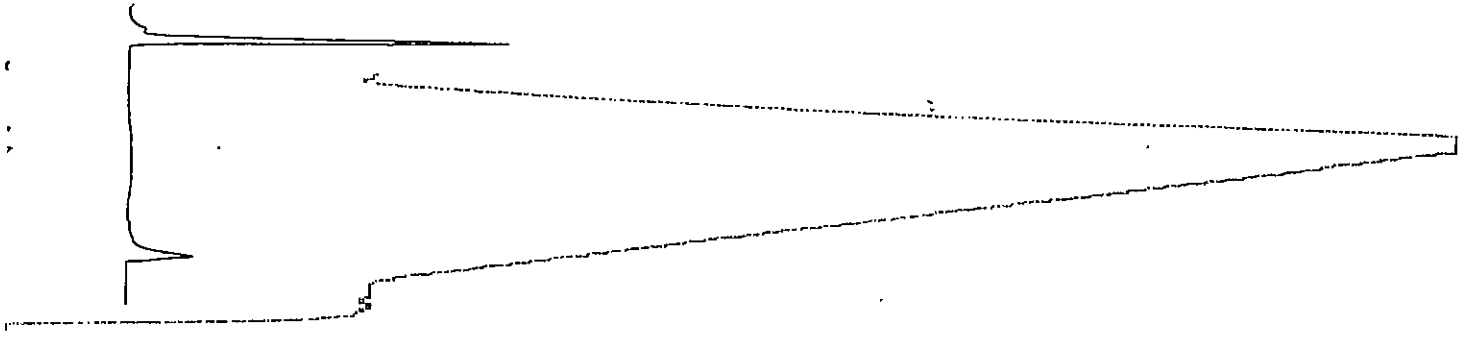
PH980-1

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
14	101.0	428	0.59	1.81	0.60	0.25	3.01	0.20			



PH980-2

DEPTH	QTY	TMAX	S 1	S 2	S 3	P I	S2/S3	P C	TOC	H I	O I
15	100.2	394	9.15	9.15	0.76	0.50	0.19	0.02			



PH980-3