

D-12

OPERATOR

CONOCO 9/11-1 D-12 Rpt Date 200.72

LOG

9/11 No. 1

BY

WCP

CONFIDENTIAL

LOCATION

NORWAY

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COMPANY.

SOURCE ROCKS

The cutting data are very questionable. From 3000 to 5100 there is a lot of drilling mud in the samples. From 5310-7200 the RASP (Resins + Asphaltenes) are abnormally low (~25% to 40%) suggesting oil contamination (Figure 1)

The sidewall core data looks reliable (Figure 1)

CONOCO NORWAY
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PALEOTEMPERATURES

A paleogradient of $3.4^{\circ}\text{F}/100$ feet exists between 3500 and 7200 feet (TD). A paleotemperature of 250°F is reached at 5310 (± 400); 300°F at 7200 (± 500) feet.

The sidewall core data and the cuttings data agree remarkably well — despite the mud contamination of the cuttings

REF. NO.	OPERATOR	LEASE	LOCATION	DEPTH	LITHOLOGY	Organic %	HC PPM	Asphalt %	Paraffin in HC%	SPGC E-O-M	OTHER
Conoco-	Pelican - T-4000	9/11-1	Norway								
	3060-7200		57° 00' 41" N, 14° 21' 11" W								
	TID 7200										
	20' 01293 A										
2878	13 3/8 @ 2-1/2										
139-1	15 3/8 @ 2-1/4			3060-90	57 4 mud cal	1.33	999	43	64	13	
2	RB 33		4017 EUGEN	3510-70	54 7 mud cal	3.17	979	62	75	5.1	
3			4338 FRASER	4020-80	54 6 silty mud cal	1.10	972	37	65	14	
4			4333 L. M. FRASER	4150-60	56 4 1/2 "	2.50	667	34	65	20	
5				5100-1.0	57 1/2 mud silty cal	0.81	993	31	72	18	
6			5216 MAESTRO	5310-70	54 5/8 "	0.86	1787	(27)	58	28	
7			5114 KUMAR	5820-80	57 5/8 "	0.93	2588	(15)	76	33	
8			6115 JULESS	6210-70	57 1/2 silty mud cal	0.75	1752	(23)	72	30	
9	4/1 6500-	2-1/2 @ 3-1/2 @ 1/2		6420-80	57 1/2 mud silty cal	1.01	1774	(27)	70	24	
10	4 2 6702-	1 @ 1/2 @ 1/2	5570	6600-60	"	1.13	1412	34	67	19	
11			6827 TRIASS	6810-70	"	2.58	4033	37	70	25	
12				7070-80	108 1/2 mud silty cal	0.64	3343	(20)	66	(25)	
13				7140-720	108 1/2 mud silty cal	0.51	3127	(22)	70	(24)	

CONOCO - PELICAN 9/11/51
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REF. NO.	OPERATOR	LEASE	LOCATION	DEPTH	LITHOLOGY	Organic %	HC PPM	Asphalt %	Paraffin in HC%	SPOC EOM	OTHER
2878	Conoco-Phillips-Tenn	9/11-1	N. Sea	800'							
141-1		SW 4	Swanton Creek								
2			1.05 OK	2640	147 3' sh. calc	1.19	142	71	31	4.1	
3	4017		2.30 OK	3700	577 2' lay sh. calc	3.91	36	99	100	3.3	
4	4358 PRISOC.		0.50	4230-40	500 sh. calc	0.33	<99	X	X	3.6	
5			0.60	4370-80	"	0.25	0	X	X	0.0	
6		19/27 OK 900	1.10	4450	147 10' sh. calc	0.65	138	61	47	5.4	
7	4503 2-11-1		0.60	4525	500 sh. calc	0.29	<80	X	X	2.8	
8			0.55 OK	4865	"	0.38	X	X	X		Not extracted
9			1.11 OK	4925-40	577 10' sh. calc	1.95	86	76	100	3.8	
10			0.39	5115-17	577 6' lay sh. calc	0.11	105	64	65	2.6	
11		7/5 504	1.03?	5190	124 10' sh. calc	0.78	104	69	73	4.2	
12	5346 ALBERTA 5794 L. CRET		0.89 OK	5230	"	0.86	X	X	X		Small Not extracted
13			0.93 OK	5836	"	0.86	X	X	X		↓
14			0.88 OK	5720	542 sh. calc	1.29	78	68	82	1.9	
15			0.87 OK	5860	577 sh. calc	0.83	57	99	60	3.4	
16			1.44 OK	5900	577 sh. calc	1.30	1427	41	82	1.8	
17			1.06 OK	6040	115 sh. calc	1.87	83	69	62	3.2	
18			2.00	6080	"	2.81	32	89	100	3.4	
19	61650 30 shale		1.50	600-612	"	0.71	497	53	68	1.2	
20	6113 40 shale 75 shale 50 shale		0.58 OK	6240	117 sh. calc	0.67	0	100	X	5.8	
21			0.41 OK	6310-20	"	0.47	23	91	90	6.3	
22			1.29 OK	6600-20	104 sh. calc	0.89	212	48	72	4.6	
23	6697 N. Sea		0.73 OK	6670	N3 "	1.11	432	82	20	2.1	
24			5.31 OK	6780	41 sh. calc	17.5	X	X	X		Small Not extracted
25	6697 76.145		2.00 OK	6796	114 sh. calc	4.79	99	81	56	1.2	
26			0.50	6828	117 sh. calc	0.32	627	62	90	5.2	?
27			0.60	7052	"	0.16	0	X	X	0.0	
28			0.00 OK	7053	"	0.05	0	X	X	0.0	

CONOCO

9/11/10.1

NORWAY

REF. NO.	OPERATOR	LEASE	LOCATION	DEPTH	LITHOLOGY	Organic %	HC PPM	Asphalt %	Paraffin in HC%	E-O-M	OTHER
2878	ConocoPhillips Texas	9/11-1	N. Sec								
142-1		SW4									
2			Outside Scraper	2878-141-1		1.05					
3				2		2.80					
4			Organic Carbon Only	3		0.71					
5				4		0.60					
6				5		1.18					
7				6		0.62					
8				7		0.55					
9				8		1.11					
10				9		0.39					
11				10		1.03					
12				11		0.89					
13				12		0.98					
14				13		0.88					
15				14		0.87					
16				15		1.44					
17				16		1.06					
18				17		2.00					
19				18		1.60					
20				19		0.58					
21				20		0.11					
22				21		1.27					
23				22		0.97					
24				23	Not able to sample	0.81					
25				24		2.97					
26				25		0.57					
27				26		1.19					
28				27		0.49					

Conoco 9/11 No. 1
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 Highway

OTCP=Outcrop
 RN=Roughneck Cuttings
 PE=Paper Envelope, Cuttings

C = Core
 SWC=Sidewall Core

"g" = (g-2) x 10⁴

GORC = (Spins/Gram Organic Carbon) x 10¹⁷

Book Page-No.	S.R. Cross Ref.	Spl. Type	QUALITY	LITHOLOGY <small>See SWC Supp</small>	DEPTH ft	% Org. C. off HF	% Org. C. bet HF	"g"	W (Gauss)	Raw Spin Density	Ng (GORC Units)	T"g" (°F)	REMARKS (Tng, Geol. Age, Unusual Features) Tx		
													Tng	Geol. Age	Unusual Features
101-13	2878 129-1	RN	POOR (SPIN)		3000-70	5.28	1.33	37.2	5.9	22 x 10 ⁸	4.2	170	202	(230)	181
-14	2	RN			3516-70	10.55	3.17	38.2	6.3	9.7 x 10 ⁶	9.0	149	272	(256)	190
-15	3				4020-20	4.57	1.10	37.6	6.4	2.8 x 10 ⁸	6.2	162	237	(248)	187
-16	4			4256 7/4 206	4520-60	11.56	0.50	35.8	6.1*	0.8	5.3	200	223	(238)	208 208
-17	5		FAIR		5100-60	2.65 2.7	0.81	34.1	6.2*	2.5	9.4	276	276	(257)	249
-18	6			5306 ndest 5714 LK	5310-70	3.71	2.86	33.1	5.6	4.0	10.6	257	287	258	257
-19	7			6115 Juh.	5820-80	1.98	0.97	33.1	6.2*	4.2	21.0	257	350	320	271
-20	8				6210-70	2.23	0.75	33.0	6.0*	3.9	17.6	259	334	288	269
-21	9				6420-80	4.43	1.01	32.6	5.8	5.1	11.5	268	294	262	266
-22	10				6600-60	6.20 6.22	1.13	31.6	5.1	5.7	9.1	281		257	278
-23	11		✓	6827 R	6810-70	13.46	2.58	32.0	6.1	17.0	12.5	281		268	277
-24	12		POOR (SPIN)		7020-80	7.20	0.64	31.8	6.3*	3.5	11.0	285		260	277
-25	13943	✓	POOR (SPIN)		7140-7200	2.00	3.54	32.6	6.0	1.7 ✓	8.5	268		253	263
-															
<i>* Signal more than one peak</i>															

ESR OF KEROGEN SUMMARY SHEET

Operator: Conoco Pell cant TEXACO
 Date: Oct-11-71 Loose
 Charge: 655-1-A 941-1

Book 2720 Page 1 of 2

OTCP=Outcrop
RN=Roughneck Cuttings
PE=Paper Envelope, Cuttings

C=Core
SWC=Sidewall Core

$$g'' = (g-2) \times 10^4$$

$$GORC = (\text{Spins/Gram Organic Carbon}) \times 10^{17}$$

Book Page-No.	S.R. Cross Ref.	Spl. Type	QUALITY	LITHOLOGY <small>See S. 14- Append</small>	DEPTH	% Org. C. off. HF	% Org. C. bet HF	"g" "	W (Gauss)	Raw Spin Density	Ng (GORC- Units)	T"g" (°F)	REMARKS (Tng, Geol. Age, Unusual Features)		
102-1	2878 244-1	SWC	EXCELL		2640'	10.07	1.19	32.8	5.2	8.1x10 ⁶	8.1	264	262		263
-2	141-2		↓		3700'	20.71 20.73	3.91	38.7	5.2	12.1x10 ⁶	8.8	138	270		182
-3	3		POOR	contam.	4230-40'	4.14	0.33	36.0	5.4	1.07x10 ⁶	3.0	175	172		187
-4	4		↓	↓	4370-80'	5.47	0.25	32.8	5.0	3.9	7.2	264	251		260
-5	5	✓	↓	↓	4450	4.81	0.15	34.7	5.5	2.7	5.7	223	230		225
-6	6		↓	↓	4525	3.33	0.29	35.3	5.4	1.5	4.6	210	210		210
-7	7		GOOD		4865'	3.85 3.72	0.78	33.4	5.3	3.3	8.6	257	268		257
-8	8		EXCELL.		4925-40'	8.10	0.85	33.7	5.7	8.6	11.0	245	271		260
-9	9		POOR	contam	5115-17'	0.83	0.11	34.6	~6	0.4	5.2	225	221	(287)	229
-10	10	✓	GOOD		5190'	5.64	0.78	33.3	5.7	6.1	11.0	253	291	(260)	255
-11	11		EXCELL	534C, m. 101 5794, 4.1K	5230'	7.23	0.86	32.8	5.4	7.11	9.8	244	(280)	258	262
-12	12				5800'	7.23 7.17	0.86	33.2	5.2	9.6	13.0	255	(305)	270	260
-13	13				5820	11.49	1.30	34.6	6.0	17.8	15.4	225	(321)	280	243
-14	14				5860'	11.28	0.60	33.9	5.5	18.0	16.0	240	(325)	283	254
-15	15	✓			5900'	8.83	1.78	33.4	5.5	8.3	10.0	251	(281)	258	253
-16	16	1	GOOD		6040	8.81	0.84	33.7	5.7	14.7	16.3	245	(326)	283	258
-17	17		POOR	contam	6080'	10.15 9.77	0.81	33.1	5.7	15.1	15.1	257		280	265
-18	18		↓	SHS JOL.	6100-6112'	7.38	0.91	32.6	5.5	12.6	17.1	268		287	274
-19	19		EXCELL		6240'	10.84	3.67	31.5	4.8	25.6	23.6	271		302	295
-20	20	✓			6300-20'	9.24	0.47	33.0	5.9	9.3	10.1	259		258	259
-21	21				6600-20'	8.44	0.69	31.8	4.4	11.4	13.5	285		271	280
-22	22				6670'	12.48 12.44	1.11	31.7	4.7	12.0	9.7	287		257	277
-23	23				6780'	70.3	2.75	31.0	3.4	360.0	51.2	302		332	312
-24	24		↓		6796'	35.11	4.49	31.7	6.5	107.	31.0	287		312	295
-25	25	✓	↓	6827Z	6828'	1.20	0.22	32.1	5.0	1.64	14.0	278		275	277
-26	26	1	POOR		7052'	10.73	0.16	31.8	4.7	0.83	1.12	285		171	247
-27	27	✓	FAIR		7083'	1.27 1.28	0.25	32.9	5.4	3.77	3.7	262		219	247

ESR OF KEROGEN SUMMARY SHEET

Date Oct-11-71
Operator Chico - Del Rio - Texas Co
Lease 9/11-1
Charge 655-1-4
Well NEWBY

CONOCO
9/11 No 1

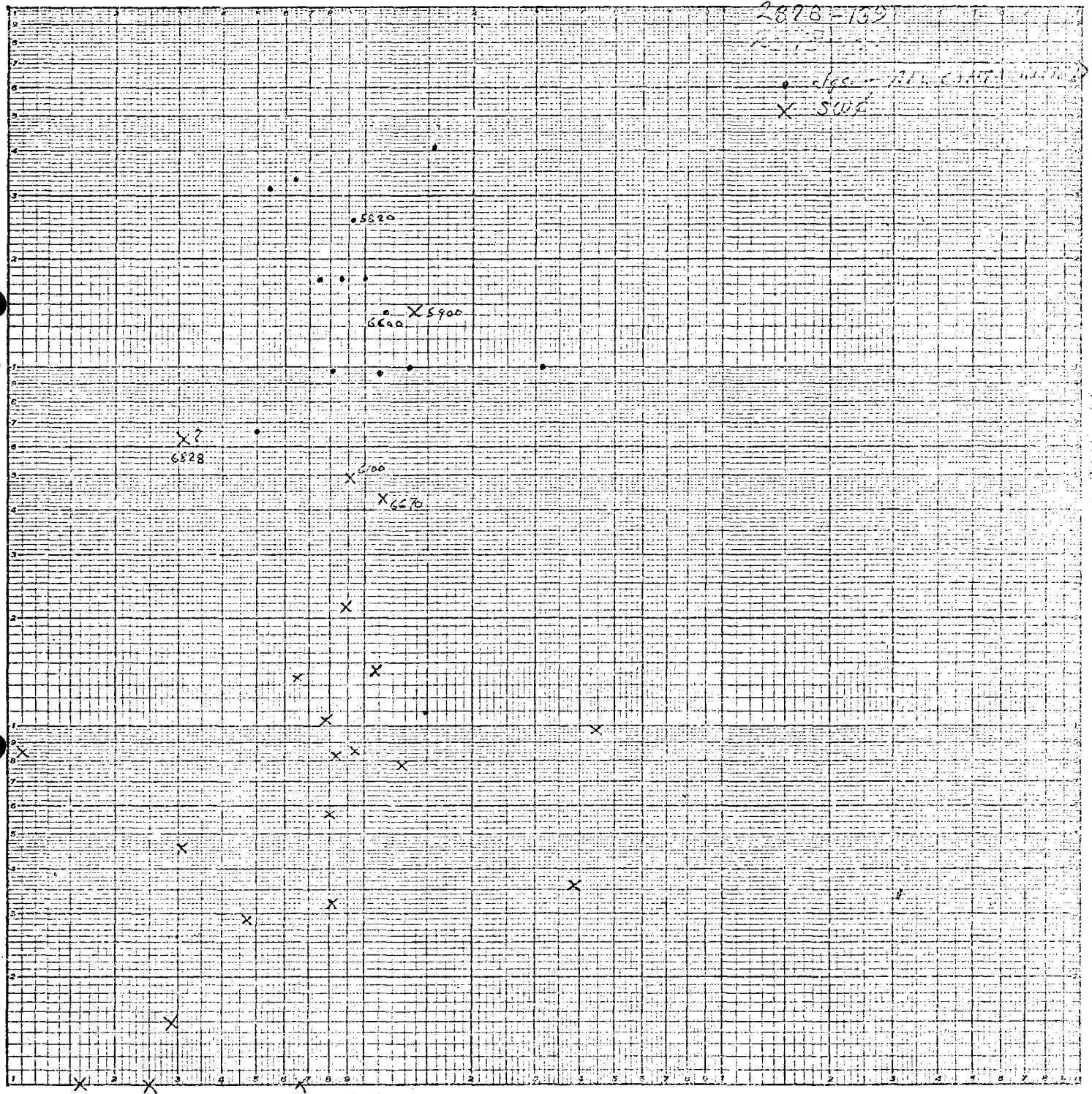
LOGARITHMIC SCALE COMPANY, INC. NEW YORK, N.Y. PRINTED IN U.S.A.

1000



100

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0.1



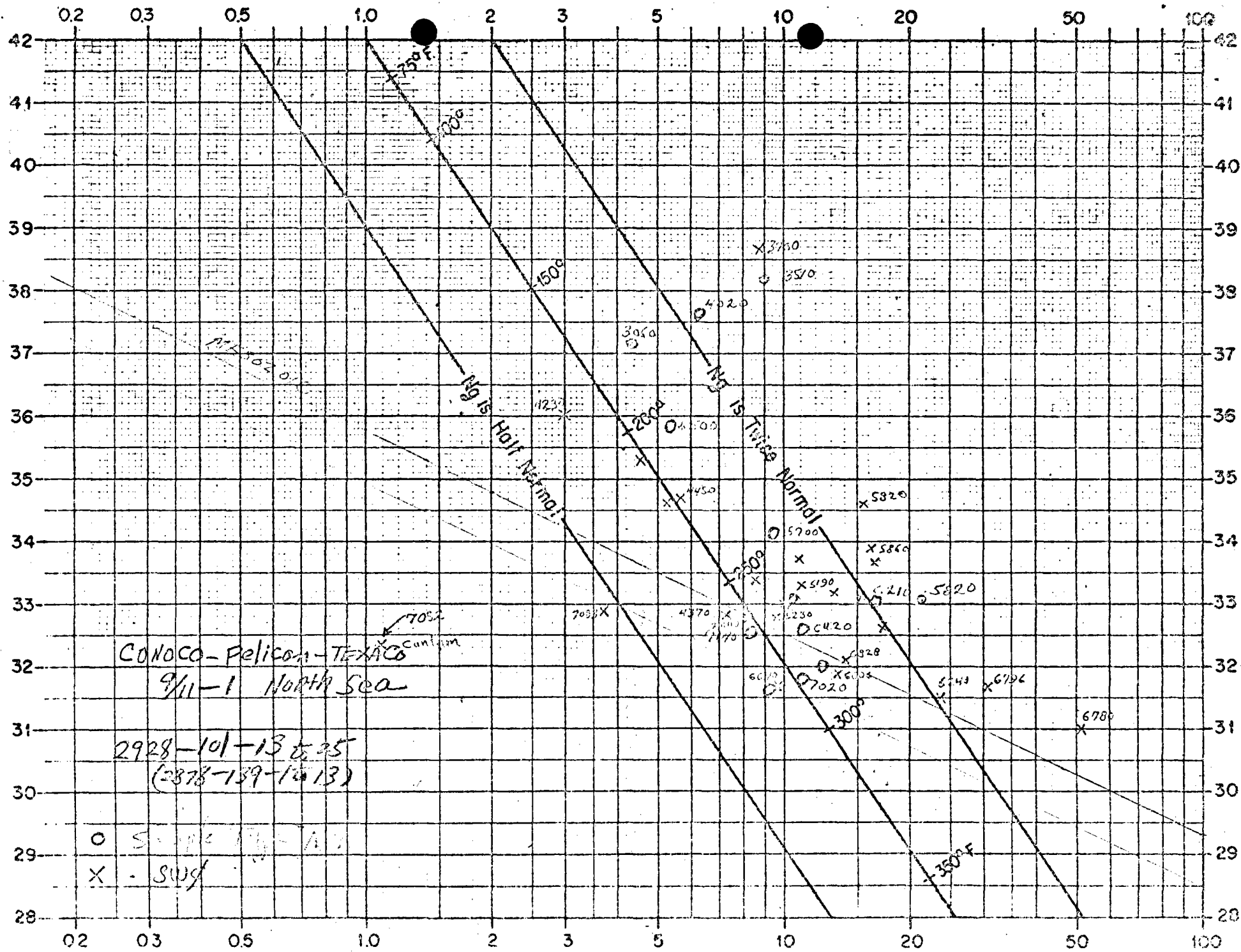
1.0

10.

96 Org C.

Figure 1

$\delta S = (S - 2.0000) \times 10^4$



1-101

DEPTH (FT.)



1000000

250

300

350

20033172

<u>Sample Depth</u> (Sieveail Cores)	<u>Age</u>	<u>Depositional Environment</u>	<u>Colour</u>	<u>Thermal Index</u>
5000	L. Aptian	Marine	Yellow/Amber	2.5
5100	Barremian	"	" "	2.5
5112	(?U) Barremian	"	" "	2.5
5117	Barremian	"	" "	2.5
5158	(?L) Barremian	"	" "	2.5
5200	(?L) Barremian	"	" "	2.5
5300	Valanginian	"	" "	2.5
6450	Berriasian	"	" "	2.5
6532	(?L) Berriasian	"	" "	2.5
<hr/>				
66000	? (U) Kimmeridgian	"	Grey-yellow/brown	2.7
6650	Upper Kimmeridgian	"	" " "	2.7
<hr/>				
6680	Bathonian	Paralic	Yellow/red brown	2.8
6695	-	" /Coal	" " "	2.8
6759	Bajocian/Callovia	" -	" " "	2.8
6767	-	"	" " "	2.8
6780	Bathonian	"	" " "	2.8
6796	-	" /Coal	-	-
6828	Bajocian/Callovia	"	-	-
6832	-	?Terrestrial Caved taxa only	-	-
6872	-	-	-	-
6995	CONOCO NORWAY Terrestrial		-	-
<hr/>				
7083	EXPLORATION LIBRARY Terrestrial		Insufficient organic residue	-