

MORNING DRILLING REPORT

SOUTHWIND DRILLING, INC.

For: H&D Exploration, LLC

RIG No. 6

Well Name: **Hearn-Dabes Unit #1**
 Location: **142' FSL & 2284' FWL**
 Section: **3-25S-12W**
 County: **Stafford**
 API: **15-185-23852-00-00**

Elevation: **GL 1868'**
KB 1876'
 Est. TD: **4300'**
 Conductor: **N/A**

Rig No. 6 (Pusher Wes Pfaff) 620 566-7094
 Rig No. 6 (Doghouse) 620 566-7156
 Southwind Drilling Office 620 564-3800



Surface Casing: Ran 16 joints of new 23#, 8 5/8" casing. Tally @ 670', Set @ 680', used 325 sacks of Acon, 3% cc, 1/4 CF, used 150 sacks of Common, 2% cc, 1/4 CF, cement circulated, by Basic (Ticket #9879), plug down @ 6:15 am on 01.25.14.

Production Info: Ran 75 joints of 5 1/2" casing. Tally @ 4218', Set @ 4218', used 175 sacks of AA2 w/ 5% Flo, 2% Defoamer, 10% salt, 5% Gilsomite, 30 sacks for Rat hole, cemented, by Basic (Ticket #9854). Job complete @ 7:45 pm on 02.01.14.

Rotary Total Depth: **4220'**
 Log Total Depth: **4216'**

Geologist: **Jim Musgrove**

7:00 A.M. Depth: 4220'		7:00 A.M. Current Operation: TEAR DOWN								Total
Spud Date & Time:	01/24/14	01/25/14	01/26/14	01/27/14	01/28/14	01/29/14	01/30/14	01/31/14	02/01/14	
01/24/2014 @ 12:30 PM	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	
Total Depth (7:00am)	0	680	1615	2530	3310	3580	3810	3996	4220	4220
Daily Progress	680	935	915	780	270	230	186	224		38.80
Ft. Per Hr.	90.67	110.00	46.33	36.71	22.98	17.36	14.31	16.29	#DIV/0!	
Current Operation (7:00am)	Rig Up	WOC	Drilling	Drilling	Drilling	DST #1	TIWT	Drilling	Arbuckle	
Formation	Surface	Surface	Sand / Shale	Shale	Shale	Lansing	Lansing	Viola / Simpson		
Fuel Used	421.84	220.45	373.81	402.99	320.33	252.27	300.56	406.58	183.20	2882.02
Survey (degree & depth)	1' @ 680'				1' @ 3580'			1 1/4' @ 4220'		
Mud Info										
Mud Cost	\$0.00	\$580.50	\$2,370.80	\$2,369.75	\$0.00	\$255.65	\$55.15	\$1,577.05		\$7,228.90
Weight (# / Gal)	10.0	9.3	9.7	8.9	9.1	9.1	9.0	9.2		
Vls (Funnel)	41	28	28	52	58	61	62	50		
Water Loss (cc)					8.0	7.6	8.0	8.8		
Bit #1										
Bit Make / Type	JZ Tooth ReTip									
Bit Size	12 1/4									7.50
Bit Hours	7.50									
Bit #2										
Bit Make / Type		JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	
Bit Size		7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours		8.50	19.75	21.25	11.75	13.25	13.00	13.75		101.25
Bit Cumulative Hours	7.50	8.50	19.75	21.25	11.75	13.25	13.00	13.75	0.00	108.75
Weight on Bit (WOB)	20,000	32,000	35,000	35,000	35,000	35,000	35,000	35,000		
RPM	100	80	80	80	80	80	80	70		
Pump Pressure	450	600	650	600	600	600	750	1000		
Drilling (Rotating) Hours	7.50	8.50	19.75	21.25	11.75	13.25	13.00	13.75	0.00	108.75
Daywork Hrs. (Operator's time)										
Rat Hole (>.75 Hrs)										0.00
Wait on Cement	0.75	11.25								12.00
Trip					5.00	5.25	4.50	2.00	2.25	19.00
Circulate					2.75	2.50	1.75	1.75	1.00	9.75
Tool					0.75	1.25	0.75	0.50		3.25
Testing					2.75	0.50	3.00			6.25
Clean Floor										0.00
Logging								5.00		5.00
LDDP / LDDC									3.75	3.75
Run Casing / Cement	2.25								4.75	7.00
Nipple Down / Jet Cellar									0.50	0.50
Set Slips / Jet Pits									1.00	1.00
Wait on Loggers										0.00
Wait on Orders										0.00
Billable Hours	3.00	11.25	0.00	0.00	11.25	9.50	10.00	9.25	13.25	67.50
Non-Billable Hours (Southwind's time)										
Rig Up / Rig Down	5.25								2.25	7.50
Wait on Cement (if NC)		1.25								1.25
Drill Rat Hole (<.75 hrs)	0.25									0.25
Drill Plug		0.25								0.25
Circulate / Trip (Surface)	1.50									1.50
Rig Repair	2.75		0.50			0.50	0.50			4.25
Connections	3.00	2.50	2.75	1.75	0.75	0.75	0.50	0.75		12.75
Jet/Displace	0.50	0.25	1.00	1.00						2.75
Surveys	0.25				0.25			0.25		0.75
Rig Check										0.00
Circulate (NB)										0.00
Trip Time (NB)										0.00
Plugged Bit										0.00
Lost Circulation (< 2 hrs)									0.50	0.50
Lay Down Kelly / RH										0.00
Non-Billable Hrs.	13.50	4.25	4.25	2.75	1.00	1.25	1.00	1.00	2.75	31.75
Footage Cost	\$ 9,520.00	\$ 13,090.00	\$ 12,810.00	\$ 10,920.00	\$ 3,780.00	\$ 3,220.00	\$ 2,604.00	\$ 3,136.00	\$ -	\$ 59,080.00
Daywork Cost	\$ 1,050.00	\$ 3,937.50	\$ -	\$ -	\$ 3,937.50	\$ 3,325.00	\$ 3,500.00	\$ 3,237.50	\$ 4,637.50	\$ 23,625.00
Combined Est. Cost*	\$ 10,570.00	\$ 17,027.50	\$ 12,810.00	\$ 10,920.00	\$ 7,717.50	\$ 6,545.00	\$ 6,104.00	\$ 6,373.50	\$ 4,637.50	\$ 82,705.00

*Please note that this is estimated footage & daywork cost only. Additional charges will apply on invoice (fuel surcharge, water transfer pump, etc)

DST #1 Info -

Footage Interval: 3545' - 3580' Lansing "B"
 Recovery: 1240' Gas in Pipe
 15' Mud

DST #2 Info -

Footage Interval: 3745' - 3810' Lansing "K-L"
 Recovery: 870' Oil Cut Mud

Anhydrite @ 670'

Displaced @ 2644'

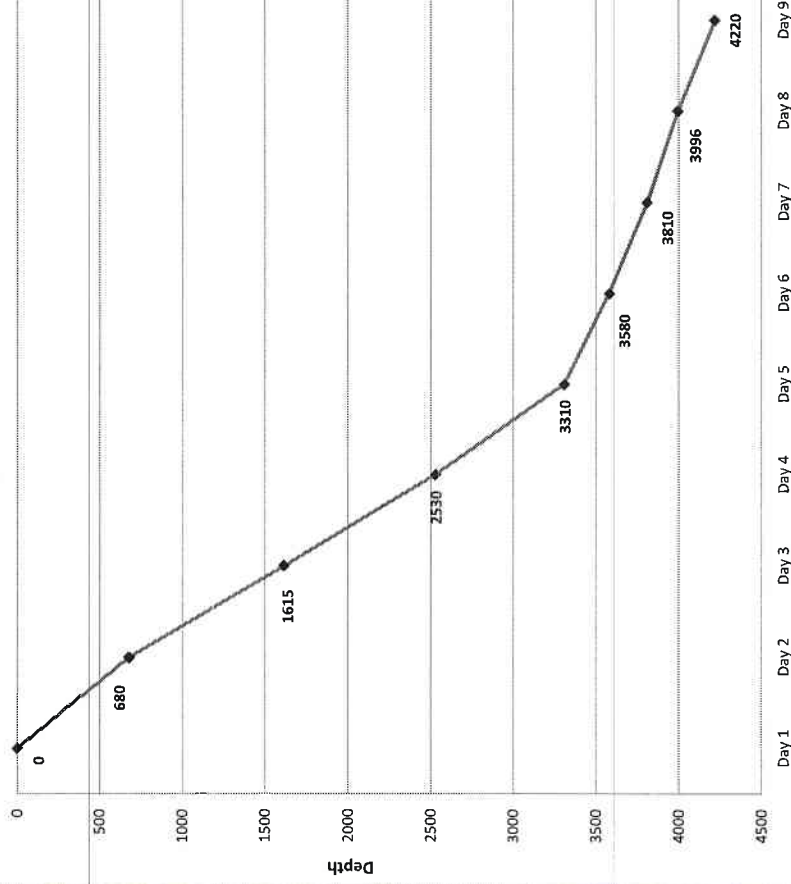


Job Summary Graphical Report

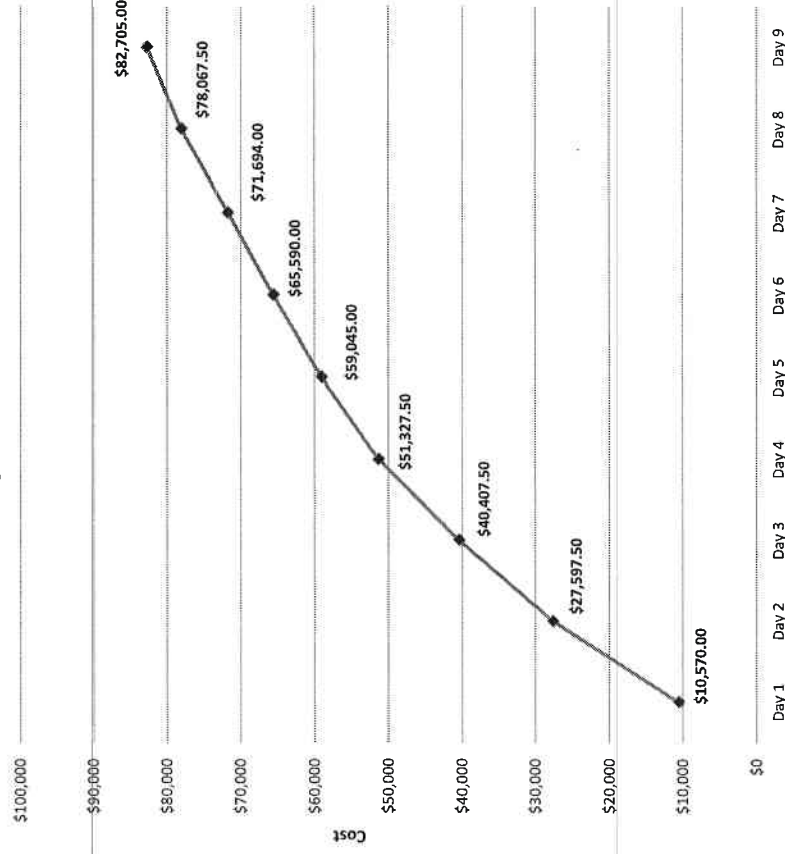
Southwind Rig #6

Hearn-Debes Unit #1

Days vs Depth



Days vs Cost



H&D Exploration, LLC well comparison sheet

On the basis of the positive drill stem test and after reviewing the electric logs, it was recommended by all parties involved in the Hearn-Debes Unit #1 to set and cement 5 1/2" production casing at the rotary total depth 4220'

NOTES

Electronic Surveys: By Pioneer Energy Services

Surface Casing: 8 5/8" @680
Production Casing: 5 1/2" @

Geologist on Well: Josh Austin
Geological Supervision From: 3200' to RTD
Samples Examined From: 3200' to RTD
Drilling Time Kept From: 3200' to RTD
Samples Saved From: 3200' to RTD

Mud Up: 2800' Type Mud: Chemical was displaced

RTD: 4220 LTD: 4216

Spud: 01/24/2014 Comp: 02/01/2014

CONTRACTOR: Southwind Drilling Company (Rig #6)

API # 15-185-23852-00-00

KB: 1876 GL: 1868

COUNTRY: Stafford STATE: Kansas

SEC: 3 TWSP: 25 RGE: 12W

LOCATION: SW-SE-SW (142' FSL & 2284' FWL)

FIELD: Wildcat

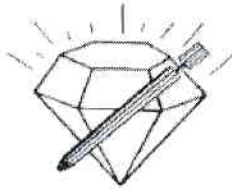
LEASE: Hearn-Debes Unit #1

COMPANY: H&D Exploration LLC

PETROLEUM CORPORATION
Clifton, Kansas



Hearn-Debes unit #1					BONANZA OIL CORP Fritzemeier #1 SW SW SE				Hilderbrand #1			
1876 KB					1877 KB		Structural Relationship		1876 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Sample	Sub-Sea	Sample	Log	Sample	Sub-Sea	Sample	Log
Heebner	3361	-1485	3360	-1484	3368	-1491	6	7	3357	-1481	-3	-3
Toronto	3375	-1499	3375	-1499	3377	-1500	1	1	3371	-1495	-4	-4
Douglas	3393	-1517	3394	-1518	3402	-1525	8	7	3394	-1518	0	0
Brown Lime	3517	-1641	3514	-1638	3520	-1643	2	5	3512	-1636	-2	-2
Lansing	3539	-1663	3538	-1662	3544	-1667	4	5	3536	-1660	-2	-2
Base KC	3803	-1927	3804	-1928	3808	-1931	4	3	3804	-1928	0	0
Viola	3969	-2093	3966	-2090	3972	-2095	2	5	3952	-2076	-14	-14
Simpson Shale	4077	-2201	4076	-2200	4081	-2204	3	4	4072	-2196	-4	-4
Arbuckle	4146	-2270	4144	-2268	4144	-2267	-3	-1	4136	-2260	-8	-8
Total Depth	4220	-2344	4216	-2340	4176	-2299			4214	-2338		



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: HDU1DST1

TIME ON: 1:03 AM
TIME OFF: 9:20 AM

Company HD Exploration LLC Lease & Well No. Hearn-Debes Unit #1
Contractor Southwind Drilling Rig #6 Charge to HD Exploration LLC
Elevation 1876' KB Formation Lansing "B" Effective Pay _____ Ft. Ticket No. F237
Date 1-29-14 Sec. 3 Twp. 25 S Range 12 W County Stafford State KANSAS
Test Approved By Josh Austin Diamond Representative Jake Fahrenbruch

Formation Test No. ONE Interval Tested from 3545 ft. to 3580 ft. Total Depth 3580 ft.
Packer Depth 3540 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3545 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____

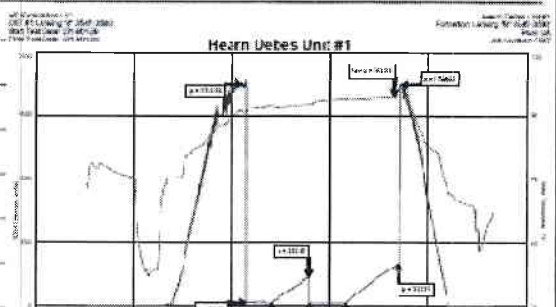
Top Recorder Depth (Inside) 3531 ft. Recorder Number 5951 Cap. 5,000 P.S.I.
Bottom Recorder Depth (Outside) 3546 ft. Recorder Number 5584 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chemical Viscosity 61 (1.5# LCM) Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight 9.0 Water Loss 8.0 cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides 5800 P.P.M. Drill Pipe Length 3520 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number _____ Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 35 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Fairly strong blow, B.O.B. in 6 minutes. Very weak surface blow-back.
2nd Open: Strong blow, B.O.B. immediately. No G.T.S. Very weak surface blow-back.

Recovered 15 ft. of Drilling Mud
Recovered _____ ft. of 1200' G.I.P.
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____

Remarks:



Time Set Packer(s) 8:00 AM ^{A.M.}/_{P.M.} Time Started Off Bottom 11:00 AM ^{A.M.}/_{P.M.} Maximum Temperature 108 Deg F

Initial Hydrostatic Pressure..... (A) 1895 P.S.I.

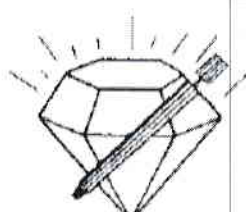
Initial Flow Period..... Minutes 30 (B) 78 P.S.I. to (C) 161 P.S.I.

Initial Closed In Period..... Minutes 45 (D) 1204 P.S.I.

Final Flow Period..... Minutes 45 (E) 129 P.S.I. to (F) 202 P.S.I.

Final Closed In Period..... Minutes 60 (G) 1186 P.S.I.

Final Hydrostatic Pressure..... (H) 1876 P.S.I.



DIAMOND TESTING
P. O. Box 157
HOISINGTON, KANSAS 67544
(316) 653-7550
GAS VOLUME REPORT

Company H D Exploration LLC Lease & Well No. Hearn-Debes Unit #1

Date 1-30-14 Sec. 3 Twp. 25S Rge. 12W Location _____ County Stafford State KS

Drilling Contractor Southwind #6 Formation Lansing "K&L" DST No. 2

Remarks: G.T.S. 18 minutes into initial flow period. Gas sample recovered.

INITIAL FLOW

Time O'Clock	Orifice Size	Gauge	CF/D
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	

FINAL FLOW

Time O'Clock	Orifice Size	Gauge	CF/D
	.25 in.	PSI in.	
9:20am	" in.	10 in.	30,800
9:30am	" in.	19 in.	45,500
9:40am	" in.	19 in.	45,500
*9:50am	" in.	17 in.	42,400
10:00am	" in.	16 in.	40,900
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	

*SAMPLE TAKEN

FINAL FLOW

ROCK TYPES

Cht
 Lmst fw7>
 shale, gry
 Ss
 Dolsec
 shale, grn
 Carbon Sh

OTHER SYMBOLS

Oil Show

- Even Stn
- Spotted Stn 50-75
- Spotted Stn 25-50

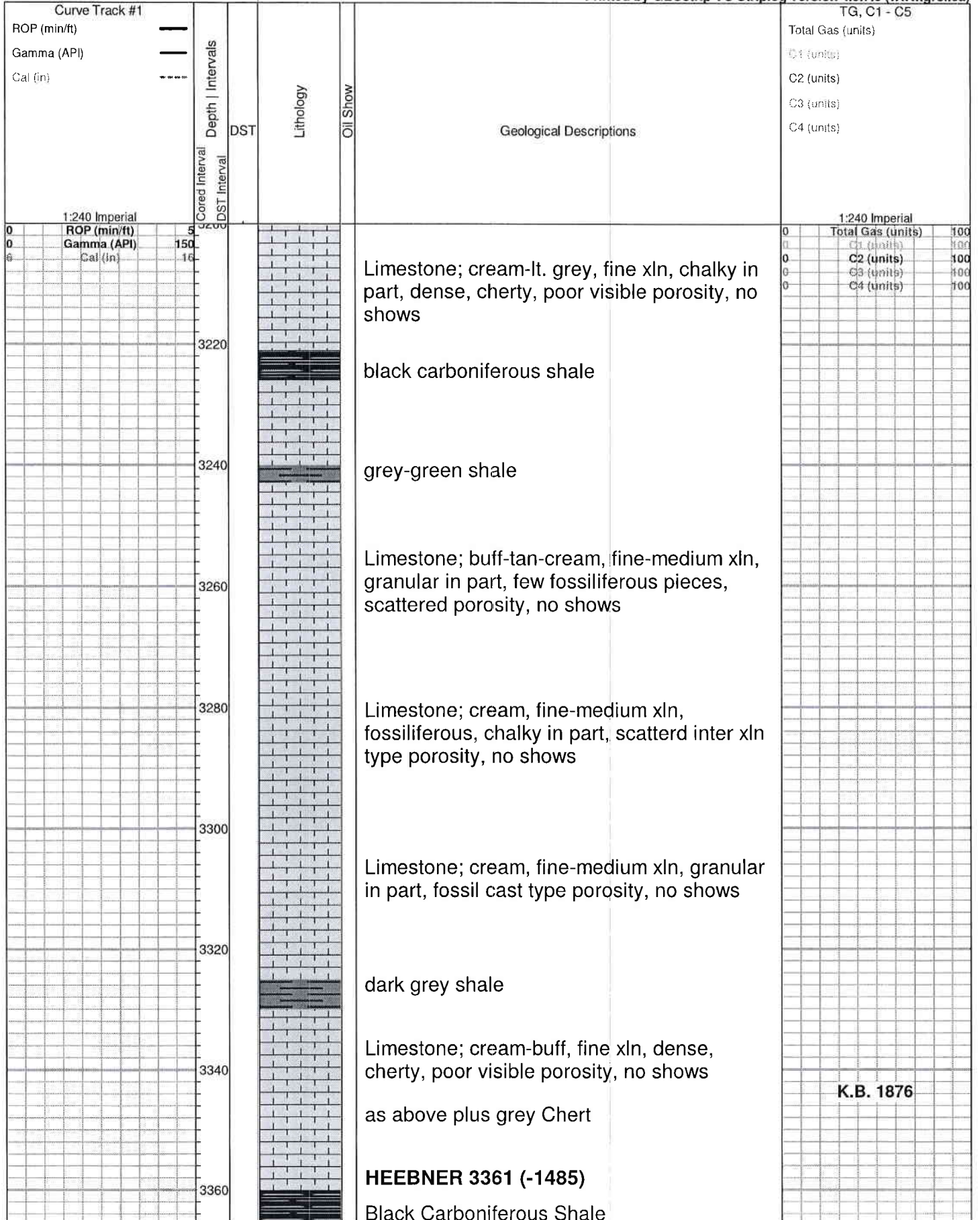
DST

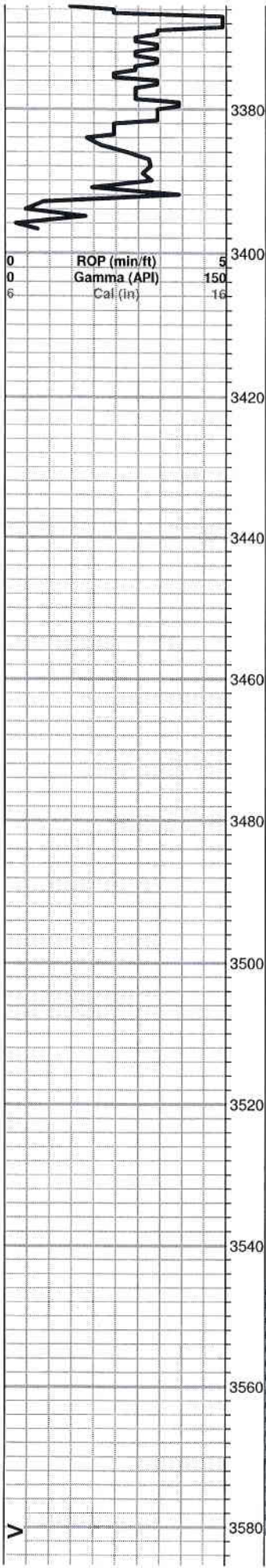
- DST Int
- DST alt
- Core

- Spotted Stn 1-25
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- * Gas

|| tail pipe

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





TORONTO 3375 (-1499)

Limestone; cream-white, fine xln, chalky, fossiliferous in part, spotty brown SFO, faint odor, few pin point-inter xln type porosity

DOUGLAS 3393 (-1517)

Shale; grey-greyish green, soft, silty, micaceous

Sand; grey-greyish green, very fine grained, sub rounded, sub angular, micaceous, poor inter granular porosity, no shows

Shale; grey-dark grey, silty in part, slightly micaceous

Shale; grey-dark grey, silty, micaceous

shale as above

BROWN LIME 3517 (-1641)

Limestone; buff-tan, fine xln, dense, fossiliferous, cherty

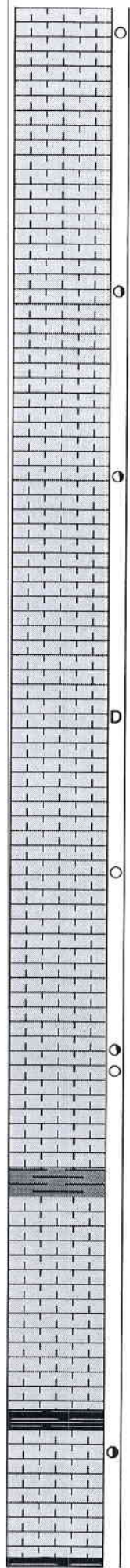
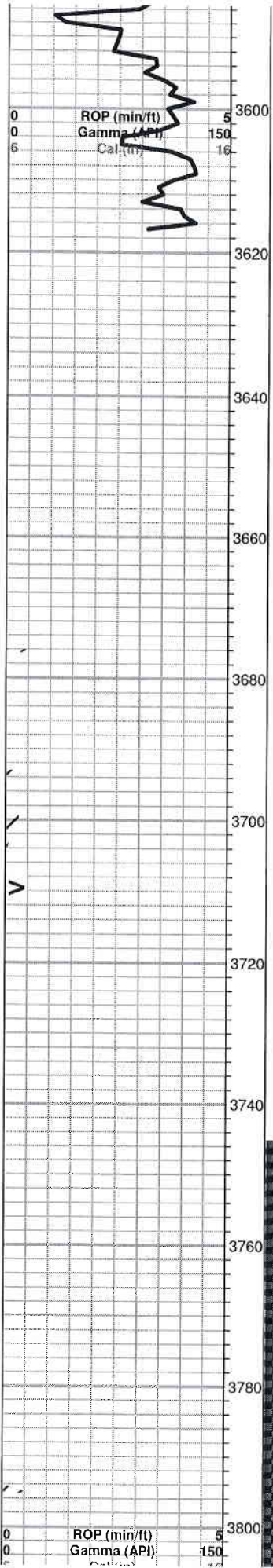
LANSING 3539 (-1663)

Limestone; cream-tan, fine xln, dense, fossiliferous in part

grey shale

Limestone; grey-cream, fine xln, vuggy-inter xln porosity, lt brown stain, SFO, faint-fair odor, trace gas bubbles

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



○ Limestone; cream-grey-tan, fine xln, oolitic in part, questionable trace brown stain, nsfo

Limestone; cream, fine xln, chalky, dense, plus white boney Chert

○ Limestone; cream-buff, fine-medium xln, granular, poorly deviated porosity, brown-grey stain, trace spotty free oil, faint-fair odor

○ Limestone; buff-tan, fine xln, dense, trace brown stain, trace spotty free oil, faint odor

Limestone; cream, fine xln, dense, cherty

○ Limestone; white-grey, fine xln, chalky, oolitic, black stain, NSFO, no odor

○ Limestone; cream, oolitic, chalky in part, few scattered porosity, questionable trace brown stain, NSFO, very faint odor

○ Limestone; cream, chalky, oomoldic, few oolitic, fair oomoldic porosity, trace brown stain, questionable trace free oil, very faint odor

grey shale

Limestone; cream, oomoldic/oolitic, fair oomoldic porosity, questionable trace brown stain, NSFO, no odor

Limestone; cream-buff-tan, fine xln, dense, cherty, no visible porosity, no shows, plus grey Chert

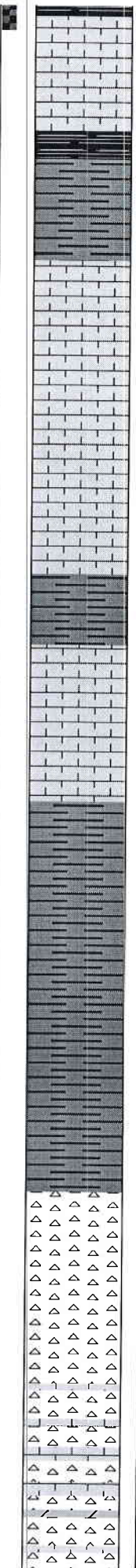
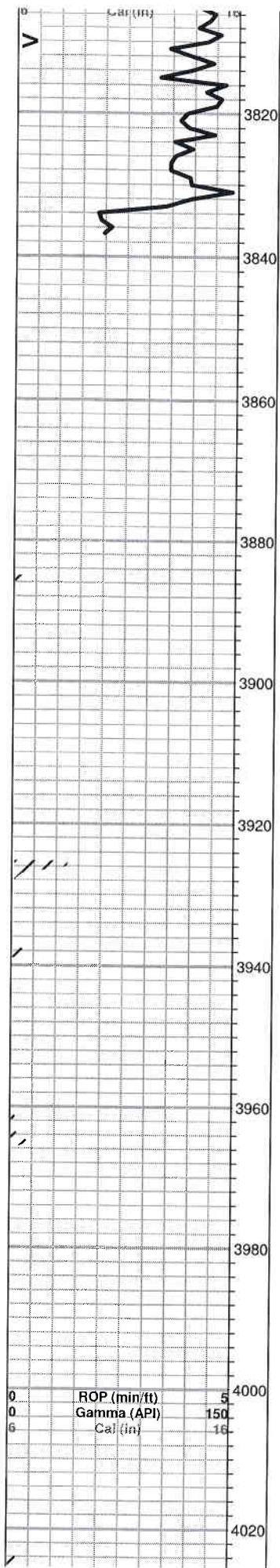
black carboniferous shale

○ Limestone; buff-grey, fine-medium xln, fair inter xln porosity, brown-black stain, SFO, faint-fair odor

BKC 3803 (-1947)

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



black carboniferous shale

Limestone; grey-cream, fine xln, chalky, dense

black carboniferous shale

Shale; grey-greyish green

Limestone; cream-white, fine xln, chalky, dense, slightly fossiliferous, few scattered porosity, no shows

Limestone; cream, fine xln, dense, cherty, poor porosity, no shows, plus Orange Chert

Limestone and Chert as above

Shale; grey-green, plus gummy/soft shale

Limestone; grey-cream, fine xln, chalky in part, slightly fossiliferous, poor porosity, no shows,

Shale; brick red-grey-green, soft, waxey

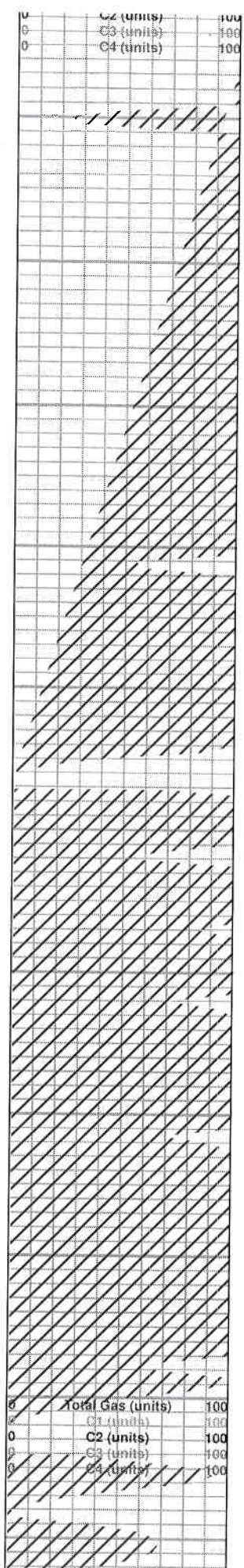
Shale; as above

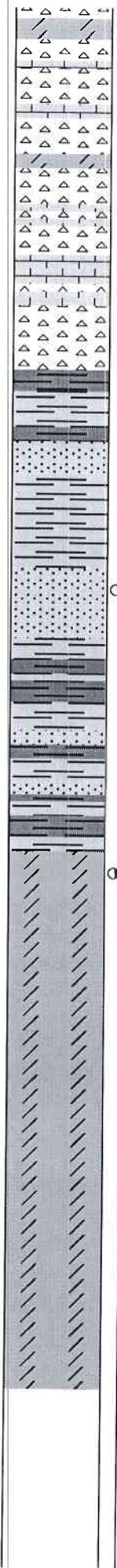
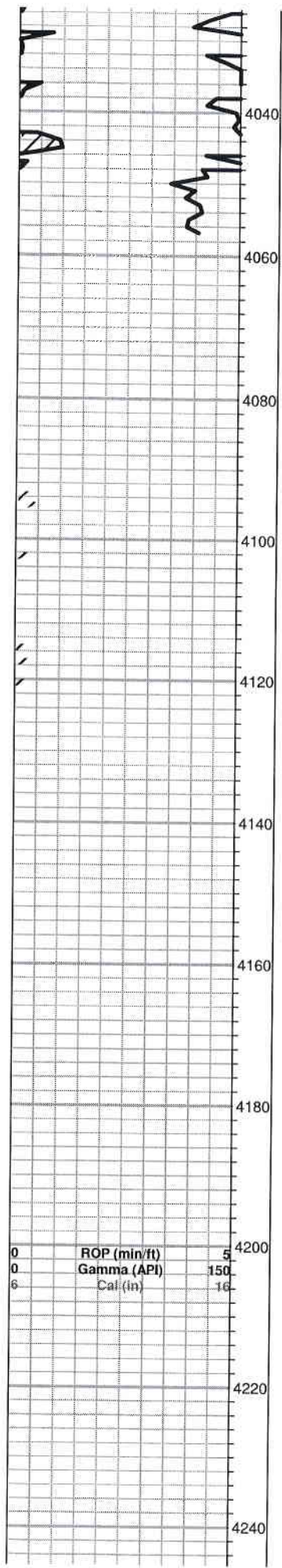
Shale; grey-green-maroon, soft, waxey

VIOLA 3969 (-2093)

Chert; cream-lt. grey, boney, semi tripolitic, few scattered porosity, golden brown stain, questionable trace free oil, gassy odor

Chert as above, plus Limestone; cream, fine xln, chalky, dense





Chert; white-cream, semi tripolitic, boney, few pieces Dolomite; cream, fine-medium xln, sucrosic, no shows

Limestone; lt. grey-cream, fine xln, dense, cherty, plus Chert; white-cream, boney, semi tripolitic

SIMPSON SHALE 4077 (-2201)

Shale; grey-green, micaceous, soft/gummy

Sand; cream-grey, very fine grained, sub rounded, sub angular, micaceous in part, fair inter granular porosity, black-dark grey stain, trace spotty free oil, very faint odor

Shale; variety of colors, plus Sand; cream, fine-medium grained, sub angular, sub rounded, dolomitic in part, friable in part, fair inter granular porosity, no shows

ARBUCKLE 4146 (-2270)

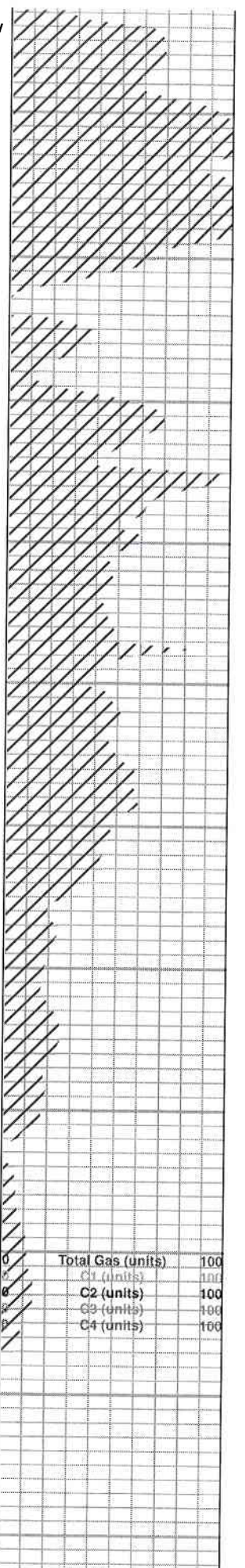
Dolomite; buff-grey, fine xln, sucrosic, dense, poorly developed porosity, few vuggy porosity, trace spotty stain, trace spotty free oil, faint odor

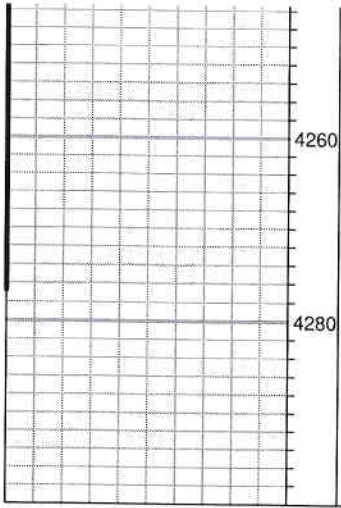
Dolomite; grey-cream, fine xln, sucrosic, poorly developed porosity, dense, plus white Chert, no shows

Dolomite; cream-buff, fine xln, slightly sucrosic, dense, poor porosity, no shows

Dolomite; as above, few scattered white-lt. grey boney Chert

ROTARY TOTAL DEPTH 4220 (-2344)





4260

4280

