MORNING DRILLING REPORT

For: H&D Exploration, LLC

SOUTHWIND DRILLING, INC.
RIG No. 6

Well Name: Nichols "A" #1
Location: 330' FNL & 1903' FEL
Section: 22-25S-12W
County: Stafford
API: 15-185-23834-00-00

Elevation: GL 1861'
KB 1869'
Est. TD: 4200'
Conductor: N/A
Surface Casing: Ran 16 joints of new 23#, 8 5/8" casing, Tally @ 652', Set @ 662', used 380 sacks of Common & _____, cement circulated, by Basic (Ticket #8794), plug down @ 1:00 pm on 10.04.13.

Production Info: Ran 95 joints of new 15.5#, 5 1/2" casing, Tally @ 4252', Set @ 4260', used 230 sacks of 60/40 Poz, 25% Defoamer, 18% salt, .75 CFP, 5# gilsonite, cemented by Basic (Ticket #9216), job complete @ 7:30am on 10.13.13.

Rotary Total Depth: 4275'
Log Total Depth: 4274'

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

Geologist: Jim Musgrove

7:00 A.M. Depth: 4275'

7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time: 10.03.13 @ 5:00pm	10/03/13 Day 1	10/04/13 Day 2	10/05/13 Day 3	10/06/13 Day 4	10/07/13 Day 5	10/08/13 Day 6	10/09/13 Day 7	10/10/13 Day 8	10/11/13 Day 9	10/12/13 Day 10	10/13/13 Day 11	Total
Total Depth (7:00am)	0	662	1100	2410	3032	3615	3810	4025	4130	4275	4275	
Daily Progress	662	438	1310	622	583	195	215	105	145	0	0	4275
Ft. Per Hr.	77.88	109.50	67.18	42.17	28.79	24.38	22.05	17.50	19.33	0.00	0.00	43.51
Current Operation (7:00am)	Rig Up	Wiper Trip	Drilling	Drilling	Drilling	Short Trip	TOWB	CFS	Drilling	CFS	Run Casing	
Formation	Surface	Sand / Anhydrite	Sand / Shale	Shale	Shale / Topeka	Lansing / KC	Lansing / KC	Mississippi	Simpson	Arbuckle	Arbuckle	
Fuel Used	214.67	204.34	358.71	441.01	319.79	228.16	319.79	228.16	224.21	216.77	0.00	2755.60
Survey (degree & depth)		1/2° @ 662'				1/2° @ 3615'				1/4° @ 4275'		
Mud Info												
Mud Cost	$0.00	$0.00	$4,724.40	$1,552.35	$773.40	$1,136.75	$0.00	$1,304.45	$0.00	$1,210.10	$0.00	$10,701.45
Weight (# / Gal)			8.9	8.9	9.3	9.4	8.9	9.4	9.4	9.4		
Vis (Funnel)			29	52	52	50	53	54	56	52		
Water Loss (cc)					9.2	8.8	9.2	10.8	9.6	10.0		
Bit #1												
Bit Make / Type	JZ Re-Tip											
Bit Size	12 1/4											
Bit Hours	8.50											8.50
Bit #2												
Bit Make / Type		JZ HA20-Q	JZ HA20-Q	JZ HA20-Q	JZ HA20-Q	JZ HA20-Q	JZ HA20-Q	JZ HA20-Q	JZ HA20-Q			
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		4.00	19.50	14.75	20.25	8.00	9.75	6.00	2.75			85.00
Bit #3												
Bit Make / Type									JZ HA20-Q			
Bit Size									7 7/8			
Bit Hours									4.75			4.75
Bit Cumulative Hours	8.50	4.00	19.50	14.75	20.25	8.00	9.75	6.00	7.50	0.00	0.00	98.25
Weight on Bit (WOB)	20,000	25,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000			
RPM	100	80	80	80	80	80	80	75	75			
Pump Pressure	800	600	650	750	850	900	800	850	900			
Drilling (Rotating) Hours	8.50	4.00	19.50	14.75	20.25	8.00	9.75	6.00	7.50	0.00	0.00	98.25
Daywork Hrs. (Operator's time)												
Rat Hole (>.75 Hrs)												0.00
Wait on Cement		12.00										12.00
Trip	1.00	1.00			1.25	6.25	6.75	9.00	8.25	4.25		37.75
Circulate		0.50			1.25	3.50	1.50	4.75	3.50	4.50		19.50
Tool						1.00	1.25	1.50	1.50			5.25
Testing						3.00	3.25	2.25	2.00			10.50
Clean Floor												0.00
Logging										5.25		5.25
LDDP / LDDC										3.75		3.75
Run Casing / Cement		2.50								3.75	0.50	6.75
Nipple Down / Jet Cellar										0.50		0.50
Set Slips											0.50	0.50
Wait on Loggers										1.25		1.25
Wait on Orders												0.00
Billable Hours	1.00	16.00	0.00	0.00	2.50	13.75	12.75	17.50	15.25	23.25	1.00	103.00
Non-Billable Hours (Southwind's time)												
Rig Up / Rig Down	9.50										7.00	16.50
Wait on Cement (if NC)												0.00
Drill Rat Hole (<.75 hrs)	0.50											0.50
Drill Plug		0.75										0.75
Circulate / Trip (Surface)	0.75	0.75										1.50
Rig Repair		1.00	1.00	4.50		1.25	0.75	0.25	1.00			9.75
Connections	3.00	1.25	2.25	1.75	1.25	0.75	0.75	0.25	0.25			11.50
Jet/Displace	0.25		1.25	1.00								2.50
Surveys		0.25				0.25				0.25		0.75
Rig Check												0.00
Circulate (NB)				0.50								0.50
Trip Time (NB)				1.50								1.50
Plugged Bit	0.50											0.50
Lost Circulation (< 2 hrs)												0.00
Lay Down Kelly / RH										0.50		0.50
Non-Billable Hrs.	14.50	4.00	4.50	9.25	1.25	2.25	1.50	0.50	1.25	0.75	7.00	46.75
Footage Cost	$ 9,599.00	$ 6,351.00	$ 18,995.00	$ 9,019.00	$ 8,453.50	$ 2,827.50	$ 3,117.50	$ 1,522.50	$ 2,102.50	$ -	$ -	$ 61,987.50
Daywork Cost	$ 350.00	$ 5,600.00	$ -	$ -	$ 875.00	$ 4,812.50	$ 4,462.50	$ 6,125.00	$ 5,337.50	$ 8,137.50	$ 350.00	$ 36,050.00
Combined Est. Cost*	$ 9,949.00	$ 11,951.00	$ 18,995.00	$ 9,019.00	$ 9,328.50	$ 7,640.00	$ 7,580.00	$ 7,647.50	$ 7,440.00	$ 8,137.50	$ 350.00	$ 98,037.50

*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: 3580' - 3615'
Recovery: 28' Mud with Trace of Oil

DST #2 Info -
Footage Interval: 3717' - 3810'
Recovery: 365' Muddy Water

DST #3 Info -
Footage Interval: 3990' - 4025'
Recovery: 509' Muddy Water with Slight Oil

DST #4 Info -
Footage Interval: 4090' - 4180
Recovery: 2250' Muddy Water

Anhydrite @ 656' - 695'

Displaced @ 2766' - 2798'

Musgrove PETROLEUM CORPORATION
Claflin, Kansas

COMPANY: H&D Exploration LLC

LEASE: Nichols "A" #1

FIELD: wildcat

LOCATION: W2-NE-NW-NE (330' FNL & 1903' FEL)

SEC: 22 TWSP: 25s RGE: 12w

COUNTY: Stafford STATE: Kansas

KB: 1869 GL: 1861

API # 15-185-23834-00-00

CONTRACTOR: Southwind Drilling Company (Rig #6)

Spud: 10-4-2013 Comp: 10-12-2013

RTD: 4275 LTD: 4274

Mud Up: 2800' Type Mud: Chemical was displaced

Samples Saved From: 2800'to RTD
Drilling Time Kept From: 2500' to RTD
Samples Examined From: 2800'to RTD
Geological Supervision From: 2800'to RTD
Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 662
Production Casing: 5 1/2" @

Electronic Surveys: By Pioneer Energy Services

NOTES

On the basis of DST 3 and after reviewing the electric logs it was reccomended by all parties involved in teh Nichols "A" 1, to run 5 1/2" production casing to further test the Mississippi zone.

Formation	Log Tops	Sub-Sea

Formation	Log Tops	Sub Sea
Heebner	3388	-1519
Toronto	3404	-1535
Douglas	3424	-1555
Brown Lime	3550	-1681
Lansing	3576	-1707
BKC	3868	-1999
Mississippi	4000	-2131
Viola	4049	-2180
Simpson Shale	4130	-2261
Simpson Sand	4151	-2282
Arbuckle	4216	-2347
RTD	4275	-2406
LTD	4274	-2405

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: nicholsa1dst1

TIME ON: 09:55
TIME OFF: 17:16

Company H & D Exploration LLC — Lease & Well No. Nichols "A" #1
Contractor Southwind Drilling Rig #6 — Charge to H & D Exploration LLC
Elevation 1869 KB — Formation Lan. B — Effective Pay -- Ft. — Ticket No. S0389
Date 10-8-13 — Sec. 22 — Twp. 25 S — Range 12 W — County Stafford — State KANSAS
Test Approved By Josh Austin — Diamond Representative Jacob McCallie

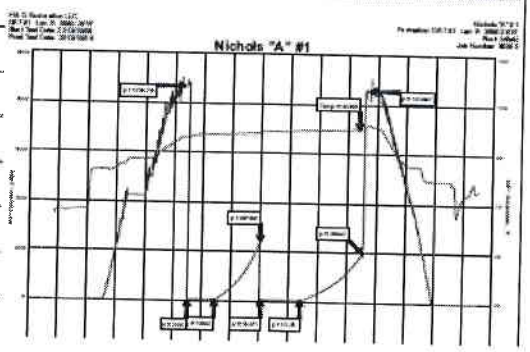
Formation Test No. 1 — Interval Tested from 3580 ft. to 3615 ft. — Total Depth 3615 ft.
Packer Depth 3575 ft. — Size 6 3/4 in. — Packer depth -- ft. — Size 6 3/4 in.
Packer Depth 3580 ft. — Size 6 3/4 in. — Packer depth -- ft. — Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 3568 ft. — Recorder Number 8471 — Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 3583 ft. — Recorder Number 5515 — Cap. 5,000 P.S.I.
Below Straddle Recorder Depth ft. — Recorder Number — Cap. P.S.I.

Mud Type CHEMICAL — Viscosity 52 — Drill Collar Length -- ft. — I.D. 2 1/4 in.
Weight 9.35 — Water Loss 8.8 cc. — Weight Pipe Length -- ft. — I.D. 2 7/8 in
Chlorides 7,000 P.P.M. — Drill Pipe Length 3554 ft. — I.D. 3 1/2 in
Jars: Make STERLING — Serial Number N/A — Test Tool Length 26 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: WSB- Built to 9" in 30 min — NOBB
2nd Open: 5 1/2" Blow- Built to BB in 21 1/4 min — NOBB

Recovered 166 ft. of GIP
Recovered 23 ft. of OSM 2% O 98% M
Recovered 23 ft. of TOTAL FLUID
Recovered ft. of
Recovered ft. of
Recovered ft. of
Remarks:



Tool Sample: 7% O 93% M

Time Set Packer(s) 12:15 PM A.M. P.M. Time Started Off Bottom 3:15 PM A.M. P.M. Maximum Temperature 108

Initial Hydrostatic Pressure (A) 1734 P.S.I.

Initial Flow Period Minutes 30 (B) 7 P.S.I. to (C) 12 P.S.I.

Initial Closed In Period Minutes 45 (D) 482 P.S.I.

Final Flow Period Minutes 45 (E) 14 P.S.I. to (F) 18 P.S.I.

Final Closed In Period Minutes 60 (G) 398 P.S.I.

Final Hydrostatic Pressure (H) 1714 P.S.I.

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: nicholsa1dst2

TIME ON: 08:33
TIME OFF: 16:24

Company H & D Exploration LLC Lease & Well No. Nichols "A" #1

Contractor Southwind Drilling Rig #6 Charge to H & D Exploration LLC

Elevation 1869 KB Formation Lan. H-J Effective Pay -- Ft. Ticket No. S0390

Date 10-9-13 Sec. 22 Twp. 25 S Range 12 W County Stafford State KANSAS

Test Approved By Josh Austin Diamond Representative Jacob McCallie

Formation Test No. 2 Interval Tested from 3717 ft. to 3810 ft. Total Depth 3810 ft.

Packer Depth 3712 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.

Packer Depth 3717 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3705 ft. Recorder Number 8471 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 3783 ft. Recorder Number 5515 Cap. 5,000 P.S.I.

Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 56 Drill Collar Length -- ft. I.D. 2 1/4 in.

Weight 9.3 Water Loss 9.2 cc. Weight Pipe Length -- ft. I.D. 2 7/8 in

Chlorides 7,700 P.P.M. Drill Pipe Length 3691 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number N/A Test Tool Length 26 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 93 (30.5p) 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: 3/4" Blow- Built to BB in 16 min NOBB

2nd Open: 3/4" Blow- Built to BB in 25 1/2 min NOBB

Recovered 113 ft. of HMCW 57% W 43% M

Recovered 252 ft. of SLMCW 83% W 17% M

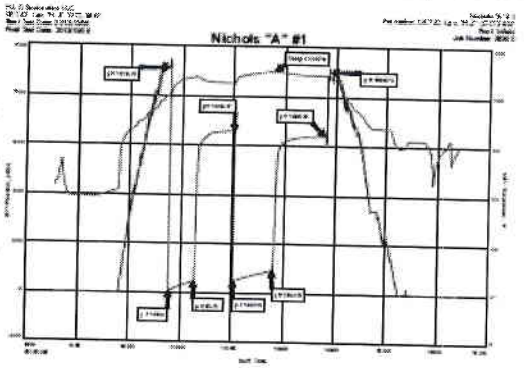
Recovered 365 ft. of TOTAL FLUID

Recovered ft. of

Recovered ft. of PH: 7

Recovered ft. of RW: .1 @ 82 degrees F

Remarks: CHLORIDES: 46,000 ppm



Tool Sample: 65% W 35% M

A.M. A.M.

Time Set Packer(s) 10:47 AM P.M. Time Started Off Bottom 1:47 PM P.M. Maximum Temperature 116

Initial Hydrostatic Pressure (A) 1819 P.S.I.

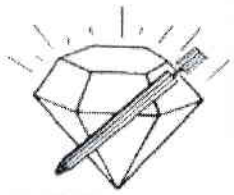
Initial Flow Period Minutes 30 (B) 13 P.S.I. to (C) 96 P.S.I.

Initial Closed In Period Minutes 45 (D) 1318 P.S.I.

Final Flow Period Minutes 45 (E) 102 P.S.I. to (F) 184 P.S.I.

Final Closed In Period Minutes 60 (G) 1287 P.S.I.

Final Hydrostatic Pressure (H) 1801 P.S.I.



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: nicholsa1dst3

TIME ON: 13:35
TIME OFF: 20:49

Company H & D Exploration LLC Lease & Well No. Nichols "A" #1

Contractor Southwind Drilling Rig #6 Charge to H & D Exploration LLC

Elevation 1869 KB Formation Miss Effective Pay -- Ft. Ticket No. S0391

Date 10-10-13 Sec. 22 Twp. 25 S Range 12 W County Stafford State KANSAS

Test Approved By Josh Austin Diamond Representative Jacob McCallie

Formation Test No. 3 Interval Tested from 3990 ft. to 4025 ft. Total Depth 4025 ft.

Packer Depth 3985 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.

Packer Depth 3990 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3978 ft. Recorder Number 8471 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 3993 ft. Recorder Number 5515 Cap. 5,000 P.S.I.

Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 44 Drill Collar Length -- ft. I.D. 2 1/4 in.

Weight 9.35 Water Loss 10.8 cc. Weight Pipe Length -- ft. I.D. 2 7/8 in

Chlorides 6,900 P.P.M. Drill Pipe Length 3964 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number N/A Test Tool Length 26 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: BB Immediate Gas to surface in 4 min 4 1/4" BB

2nd Open: BB Immediate BBBB

Recovered 68 ft. of M 100% M

Recovered 189 ft. of SLG&OCMCW 9% G 9% O 63% W 19% M

Recovered 252 ft. of SLMCSLOCW 9% O 86% W 5% M

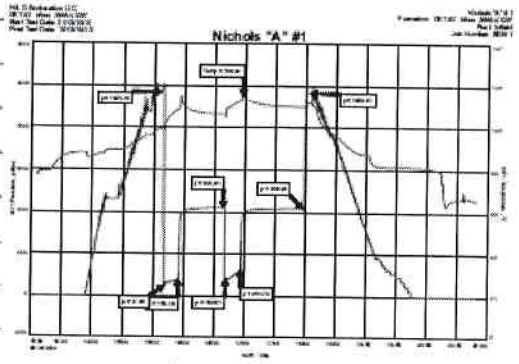
Recovered 509 ft. of TOTAL FLUID

Recovered ft. of

Recovered ft. of PH: 7 RW: .18 @ 72 degrees F

Remarks: CHLORIDES: 40,000 ppm

Tool Sample: Blew out



Time Set Packer(s) 3:41 PM A.M. P.M. Time Started Off Bottom 5:56 PM A.M. P.M. Maximum Temperature 121

Initial Hydrostatic Pressure (A) 1936 P.S.I.

Initial Flow Period	Minutes 15	(B)	98 P.S.I. to (C)	158 P.S.I.
Initial Closed In Period	Minutes 45	(D)	842 P.S.I.	
Final Flow Period	Minutes 15	(E)	163 P.S.I. to (F)	252 P.S.I.
Final Closed In Period	Minutes 60	(G)	836 P.S.I.	
Final Hydrostatic Pressure		(H)	1931 P.S.I.	

FINAL FLOW

Time O'Clock	Orifice Size	Gauge	CF/D
5	.25 in.	7 psi in.	25 MCF
10	" in.	14 psi in.	37.6 MCF
15	" in.	15 psi in.	39.2 MCF

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: nicholsa1dst4

TIME ON: 13:25
TIME OFF: 21:06

Company H & D Exploration LLC — Lease & Well No. Nichols "A" #1
Contractor Southwind Drilling Rig #6 — Charge to H & D Exploration LLC
Elevation 1869 KB — Formation Simp Sd. — Effective Pay -- Ft. — Ticket No. S0392
Date 10-11-13 — Sec. 22 — Twp. 25 S — Range 12 W — County Stafford — State KANSAS
Test Approved By Josh Austin — Diamond Representative Jacob McCallie

Formation Test No. 4 — Interval Tested from 4090 ft. to 4180 ft. — Total Depth 4180 ft.
Packer Depth 4085 ft. — Size 6 3/4 in. — Packer depth -- ft. — Size 6 3/4 in.
Packer Depth 4090 ft. — Size 6 3/4 in. — Packer depth -- ft. — Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4078 ft. — Recorder Number 8471 — Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 4155 ft. — Recorder Number 5515 — Cap. 5,000 P.S.I.
Below Straddle Recorder Depth ft. — Recorder Number — Cap. P.S.I.

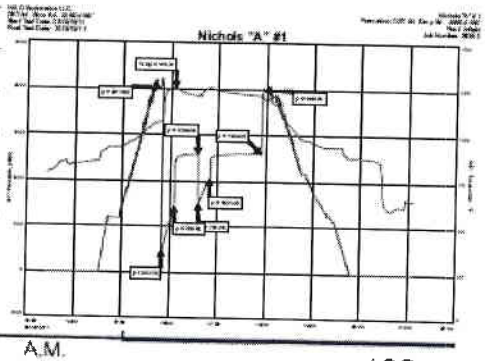
Mud Type CHEMICAL — Viscosity 48 — Drill Collar Length -- ft. — I.D. 2 1/4 in.
Weight 9.4 — Water Loss 9.6 cc. — Weight Pipe Length -- ft. — I.D. 2 7/8 in.
Chlorides 6,300 P.P.M. — Drill Pipe Length 4064 ft. — I.D. 3 1/2 in.
Jars: Make STERLING — Serial Number N/A — Test Tool Length 26 ft. — Tool Size 3 1/2-IF in.
Did Well Flow? NO — Reversed Out NO — Anchor Length 90 (27.5p) 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: 5" Blow- Built to BB in 1 min — 1/2" BB
2nd Open: 6" Blow- Built to BB in 1 min — WSBB

Recovered 63 ft. of GIP
Recovered 108 ft. of SLWCM 13% W 87% M
Recovered 252 ft. of HWCM 45% W 55% M
Recovered 1890 ft. of SLMCW 93% W 7% M
Recovered 2250 ft. of TOTAL FLUID
Recovered ft. of

Remarks: PH: 7 RW: .25 @ 68 degrees F Chlorides: 25,000 ppm

Tool Sample: 100% W



Time Set Packer(s) 3:51 PM A.M. P.M. — Time Started Off Bottom 5:51 PM A.M. P.M. — Maximum Temperature 126

Initial Hydrostatic Pressure ..... (A) 2012 P.S.I.

Initial Flow Period ..... Minutes 15 (B) 238 P.S.I. to (C) 721 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 1298 P.S.I.

Final Flow Period ..... Minutes 15 (E) 753 P.S.I. to (F) 1021 P.S.I.

Final Closed In Period ..... Minutes 60 (G) 1304 P.S.I.

Final Hydrostatic Pressure ..... (H) 1988 P.S.I.

ROCK TYPES

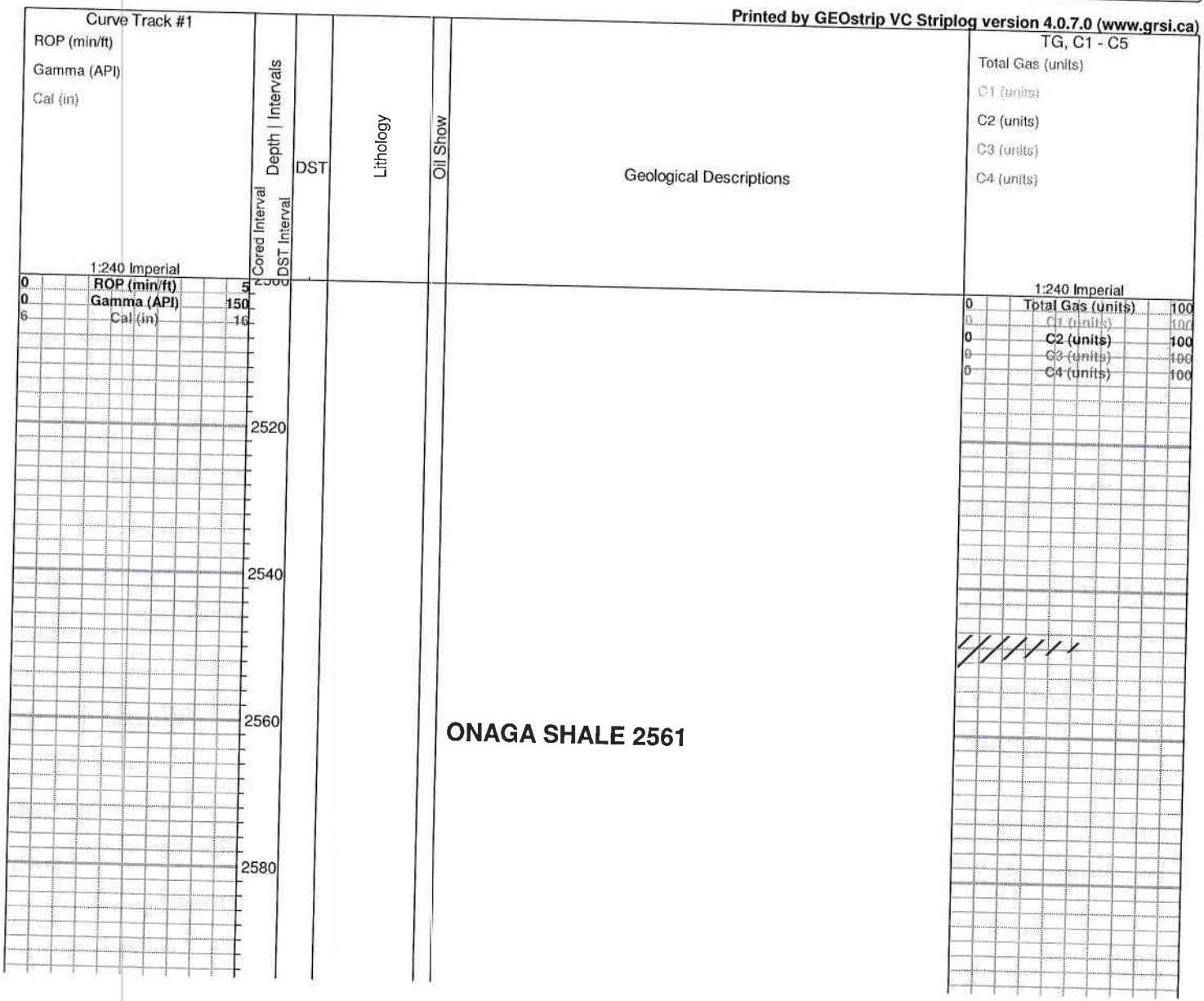
Cht
Congl
Chtcongl
Dolsec
Lmst fw7>
shale, grn
shale, gry
Carbon Sh
Ss
Sltst

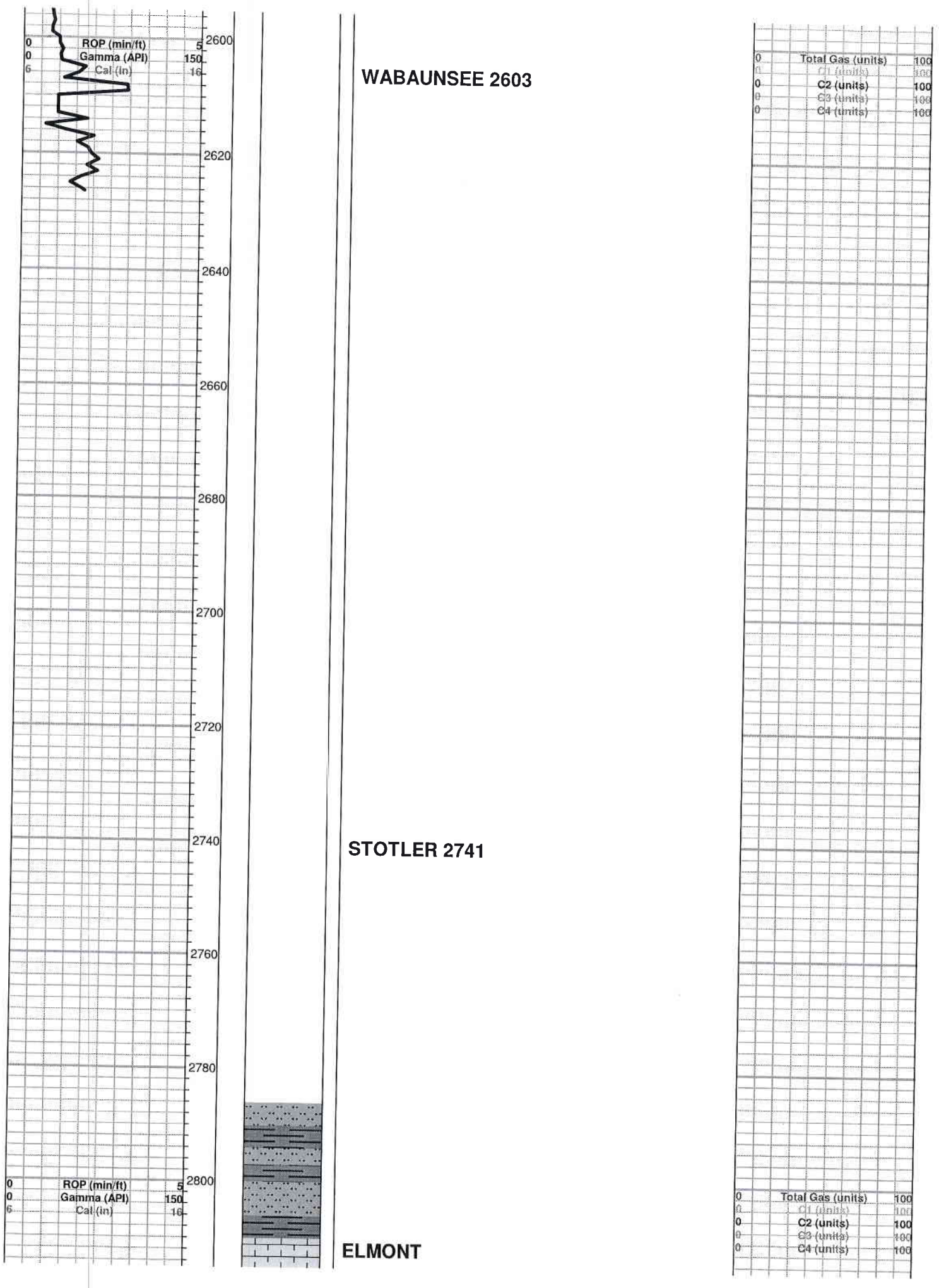
OTHER SYMBOLS

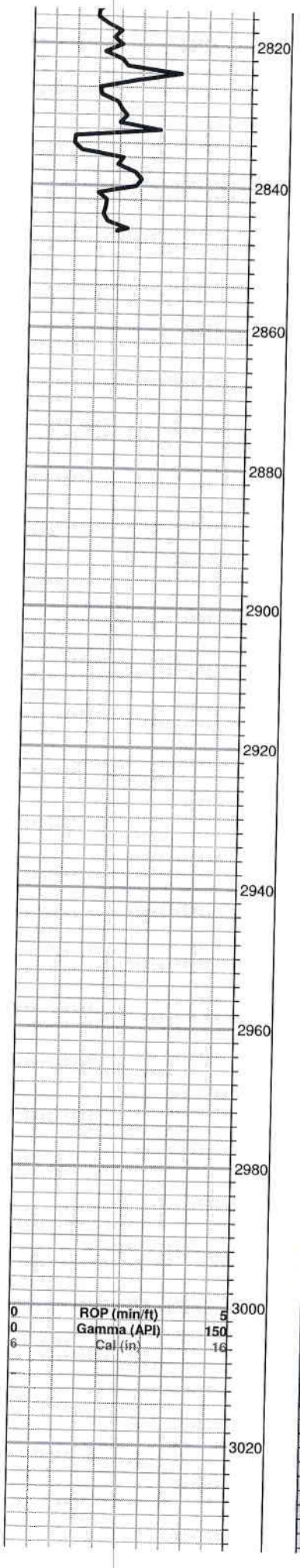
Oil Show
- Saturated Oil Show
- Good Oil Show
- Scattered Oil Show
- Spotty Free Oil Show
- Questionable SFO
- D Dead Oil Stn
- Fluorescence
- Gas

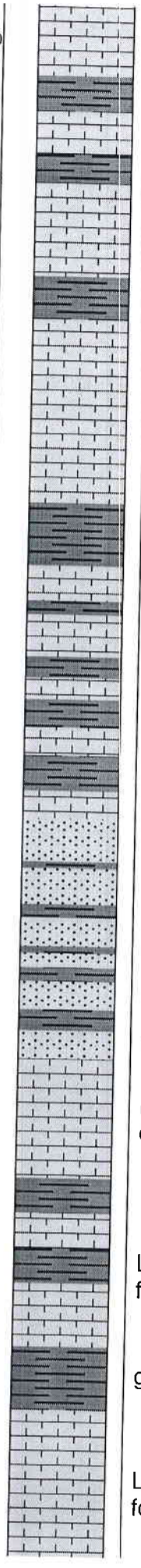
DST
- DST Int
- DST alt
- Core
- tail pipe

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




0
ROP (min/ft)
5
0
Gamma (API)
150
6
Cal (in)
16
2600
2620
2640
2660
2680
2700
2720
2740
2760
2780
2800
WABAUNSEE 2603
STOTLER 2741
ELMONT
Total Gas (units)
100
C1 (units)
100
C2 (units)
100
C3 (units)
100
C4 (units)
100





Limestone; grey-cream, chalky, fossiliferous in part

Limestone as above plus grey-green shale

variety color of shales

BERN 2864

Limestone; cream, fine xln, chalky, slighlty fossiliferous, trace fossil cast porosity, no shows

shale; grey-maroon-green

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

Limestone as above plus grey shale

SEVERY SHALE

Sand; greyish green, micaceous in part, shaley, no shows

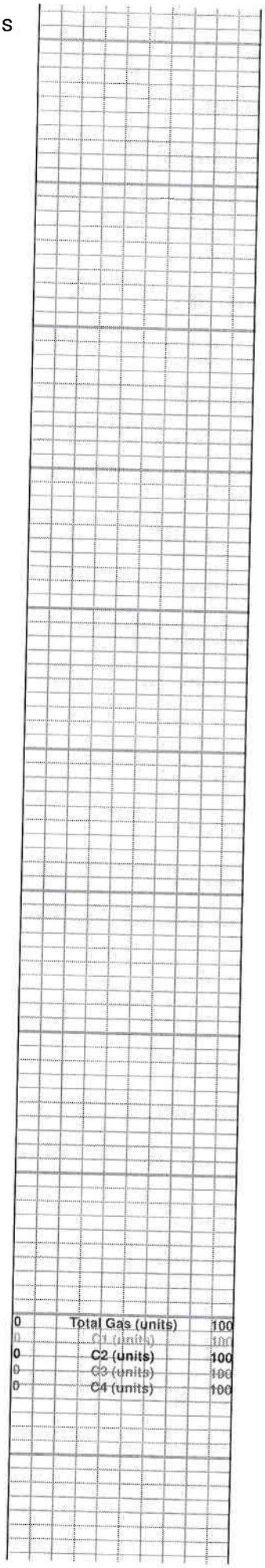
HOWARD

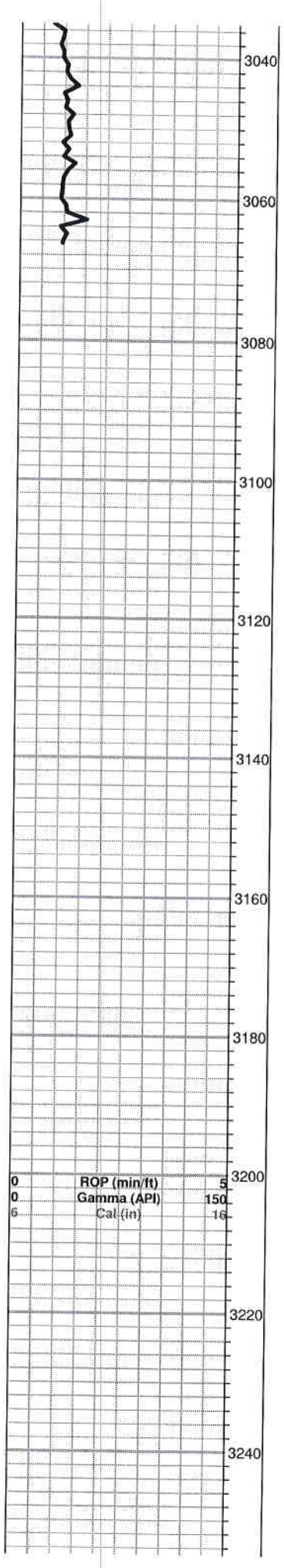
Limestone; cream, fossiliferous-oolitic, chalky, few scattered porosity

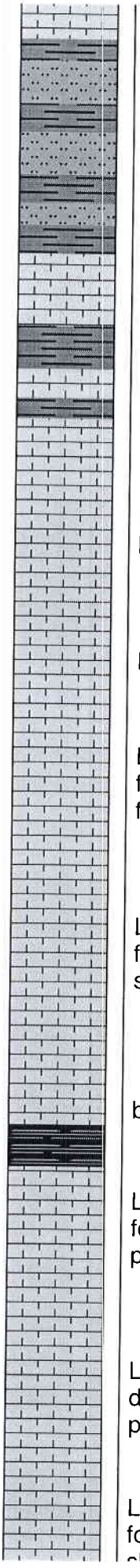
Limestone; cream-lt. grey, fine xln, chalky, fossiliferous, poor visible porosity

grey shale

Limestone; cream-lt. grey, fine xln, chalky, fossiliferous, poor visible porosity







Shale; grey-greyish green, silty in part

Shale as above plus Sand; greyish green, shaley, no shows

TOPEKA 3070 (-1201)

Limestone; cream-white-lt. grey, fine xln, chalky, poor visible porosity, no shows

grey-dark grey shale, micaceous in part

Limestone; cream-white, highly oolitic, dense, poor porosity, no shows

Limestone as above

Limestone; cream-tan, fine-medium xln, fossiliferous, granular in part, fair inter xln-fossil cast type porosity

Limestone; cream-buff, fine xln, chalky, fossiliferous in part, few granular pieces, no shows

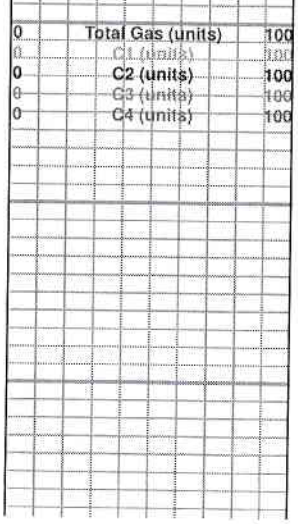
black-dark grey shale

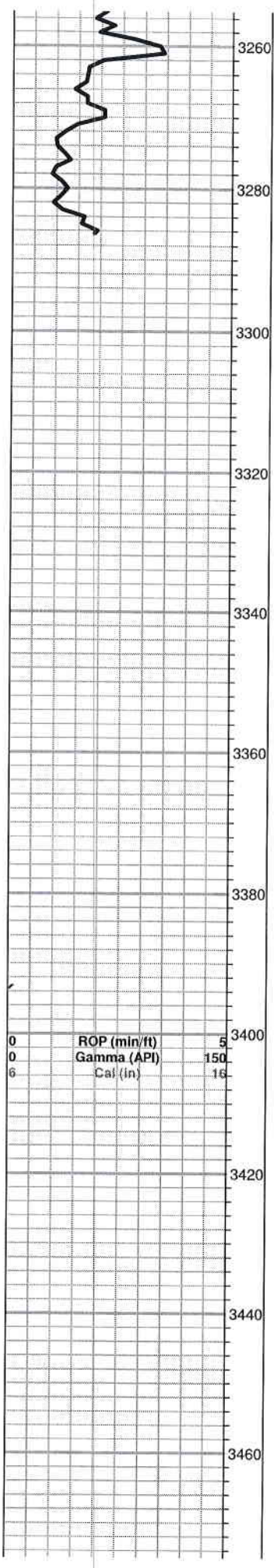
Limestone; cream-grey, highly oolitic-fossiliferous, chalky in part, good vuggy type pororsity, no shows

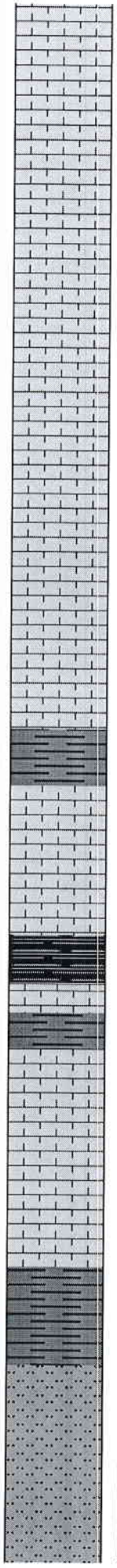
Limestone; lt. grey, chalky in part, fine xln, dense, slighlty fossiliferous, poor visible porosity, cherty, no shows

Limestone; cream-grey, fine-medium xln, fossiliferous, dense, few granular pieces, no shows

KB 1869







shows

Limestone; cream-buff, fine-medium xln, highly fossiliferous, chalky, few scattered fossil cast porosity, granular in part

Limestone; as above

Limestone; cream-lt. grey, fine-medium xln, chalky, granular, fossiliferous-oolitic, no shows

Limestone; as above, trace white-lt. grey boney chert

black-grey shale

Limestone; cream-white, fine xln, chalky, dense, plus white chalk

HEEBNER 3386 (-1517)

Black Carboniferous Shale

TORONTO 3405 (-1536)

Limestone; cream-lt. grey, chalky, few scattered porosity, plus white chalk

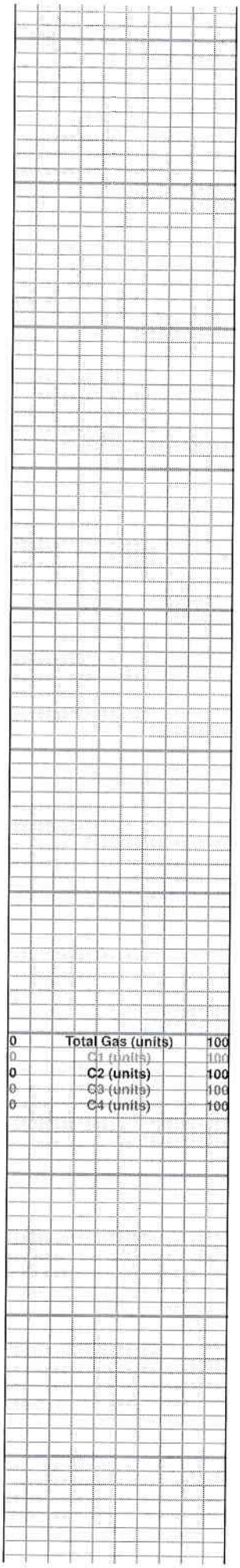
Limestone; grey, chalky, mottled, shaley in part

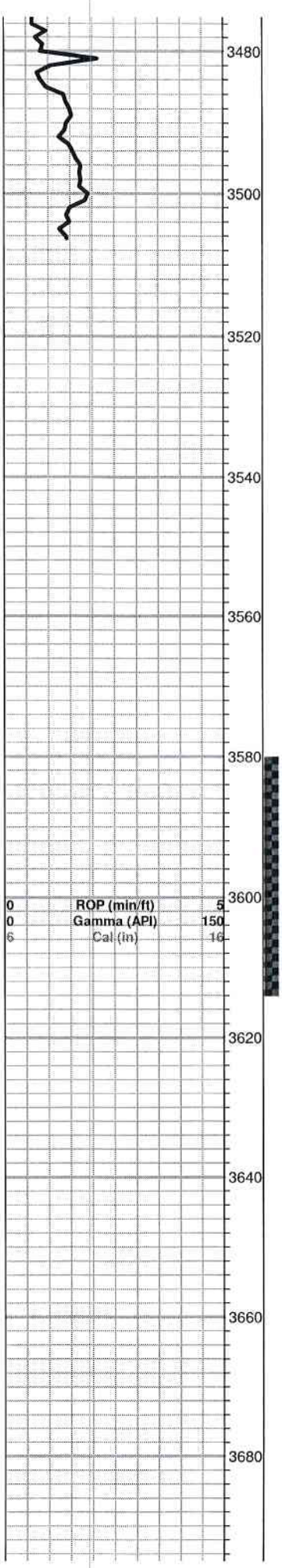
DOUGLAS 3435 (-1566)

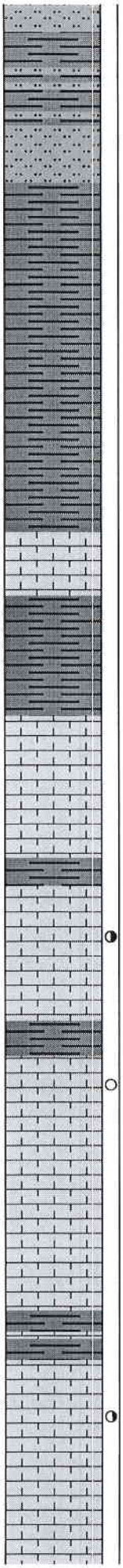
Shale; grey-green-maroon, soft, silty in part, few micaceous pieces

Siltstone; greyish-green, micaceous

Siltstone as above; grey-greyish green, micaceous, trace Sand; very fine grained,







silty, friable, no shows

Siltstone and Shale; as above

Shale; grey-green, silty, micaceous

Shale; as above

BROWN LIME 3550 (-1681)

Limestone; tan-brown, fine xln, dense, cherty in part, fossiliferous

Shale; grey-green

LANSING 3577 (-1708)

Limestone; grey-cream, fine xln, dense, slightly fossiliferous, poor porosity, cherty

Limestone; cream, fine-medium xln, few sparry calcite crystals, inter xln porosity, lt. brown stain, SFO, fair-good odor, trace gas bubbles

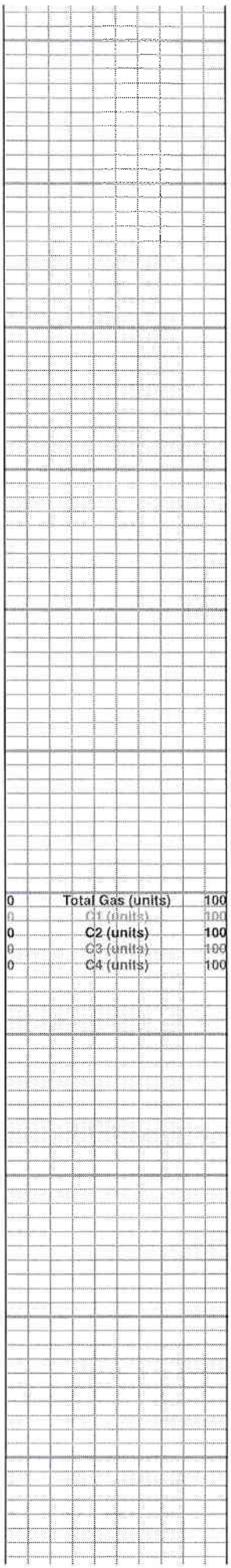
Limestone; tan-buff-cream, fine xln, slighlty oolitic-fossiliferous, chalky, dense, trace brown stain, NSFO, no odor

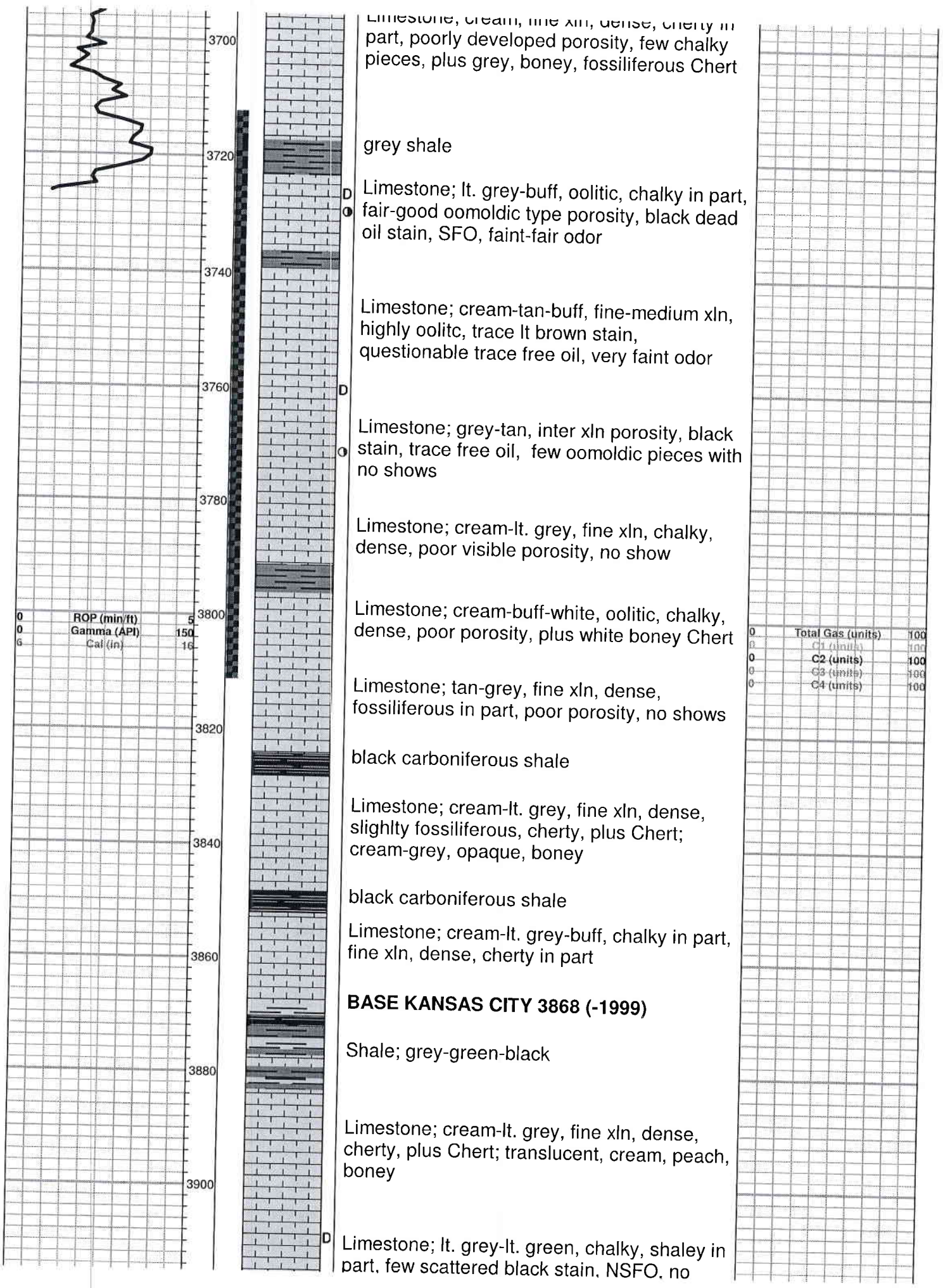
Limestone; cream-buff, fine xln, dense, cherty in part, no visible porosity, plus grey-tan, Chert

Limestone; as above

trace Limestone; highly oolitic, brown stain, slight SFO, no odor, plus Limestone; tan, fine xln, dense, cherty, no shows

Limestone; cream, fine xln, dense, cherty in





Limestone; cream, fine xln, dense, cherty in part, poorly developed porosity, few chalky pieces, plus grey, boney, fossiliferous Chert

grey shale

Limestone; lt. grey-buff, oolitic, chalky in part, fair-good oomoldic type porosity, black dead oil stain, SFO, faint-fair odor

Limestone; cream-tan-buff, fine-medium xln, highly oolitc, trace lt brown stain, questionable trace free oil, very faint odor

Limestone; grey-tan, inter xln porosity, black stain, trace free oil, few oomoldic pieces with no shows

Limestone; cream-lt. grey, fine xln, chalky, dense, poor visible porosity, no show

Limestone; cream-buff-white, oolitic, chalky, dense, poor porosity, plus white boney Chert

Limestone; tan-grey, fine xln, dense, fossiliferous in part, poor porosity, no shows

black carboniferous shale

Limestone; cream-lt. grey, fine xln, dense, slighlty fossiliferous, cherty, plus Chert; cream-grey, opaque, boney

black carboniferous shale

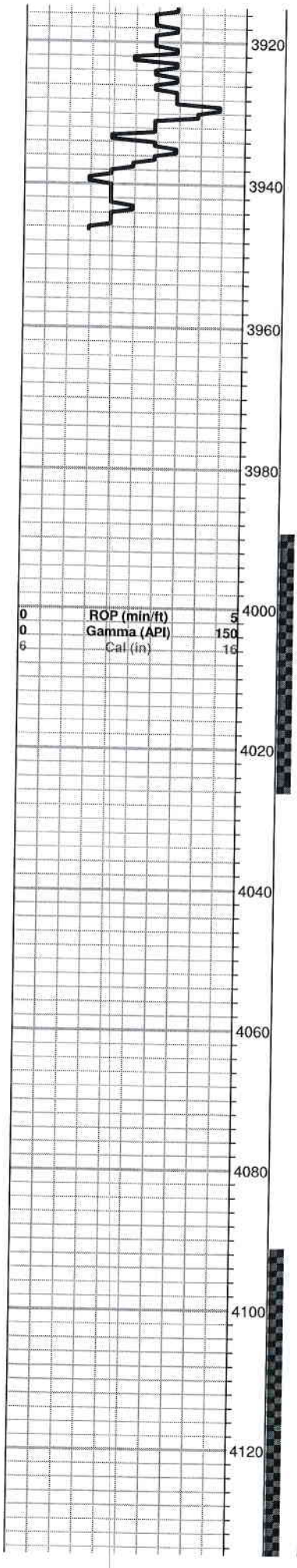
Limestone; cream-lt. grey-buff, chalky in part, fine xln, dense, cherty in part

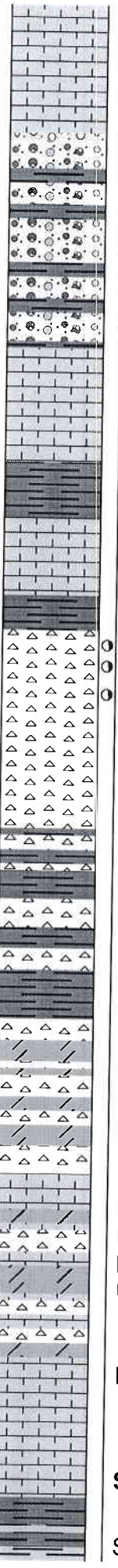
BASE KANSAS CITY 3868 (-1999)

Shale; grey-green-black

Limestone; cream-lt. grey, fine xln, dense, cherty, plus Chert; translucent, cream, peach, boney

Limestone; lt. grey-lt. green, chalky, shaley in part, few scattered black stain, NSFO, no





odor

Limestone; cream, fine xln, chalky, dense, plus Chert; orange, amber, translucent

Shale; brick red, green, maroon, grey, soft/gummy, plus Chert, yellow-orange

Limestone; buff-tan-cream, fine xln, chalky in part, dense, cherty, plus cream-smokey grey Chert

Shale, Limestone, and Chert as above plus white chalk

Shale; maroon-greyish green

MISSISSIPPI 4000 (-2131)

Chert; white-dull grey, boney/fresh, semi tripolitic in part, few weathered pieces, trace spotty free oil in weathered Chert, trace spotty free oil, no odor

Shale; maroon-green, grey, mustard, soft / clay

Shale; as above plus Chert; white-translucent, plus white chalk

VIOLA 4054 -2185

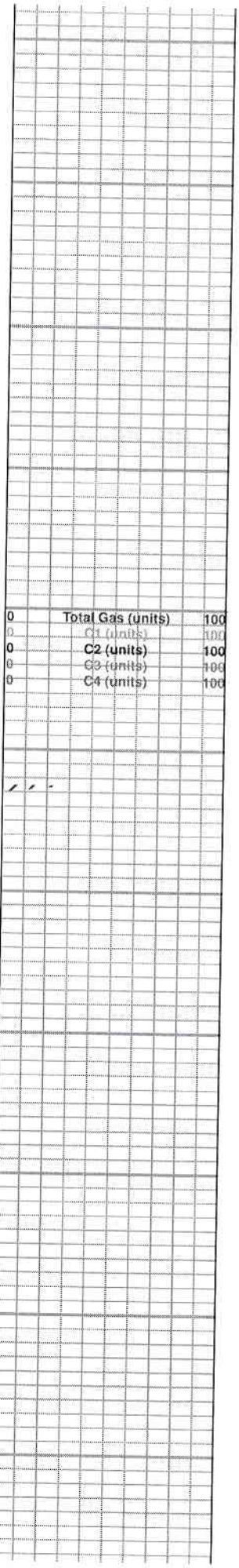
Chert; white, boney, semi tripolitic, plus Dolomite, grey, medium xln, dense, few scattered inter xln porosity, no shows

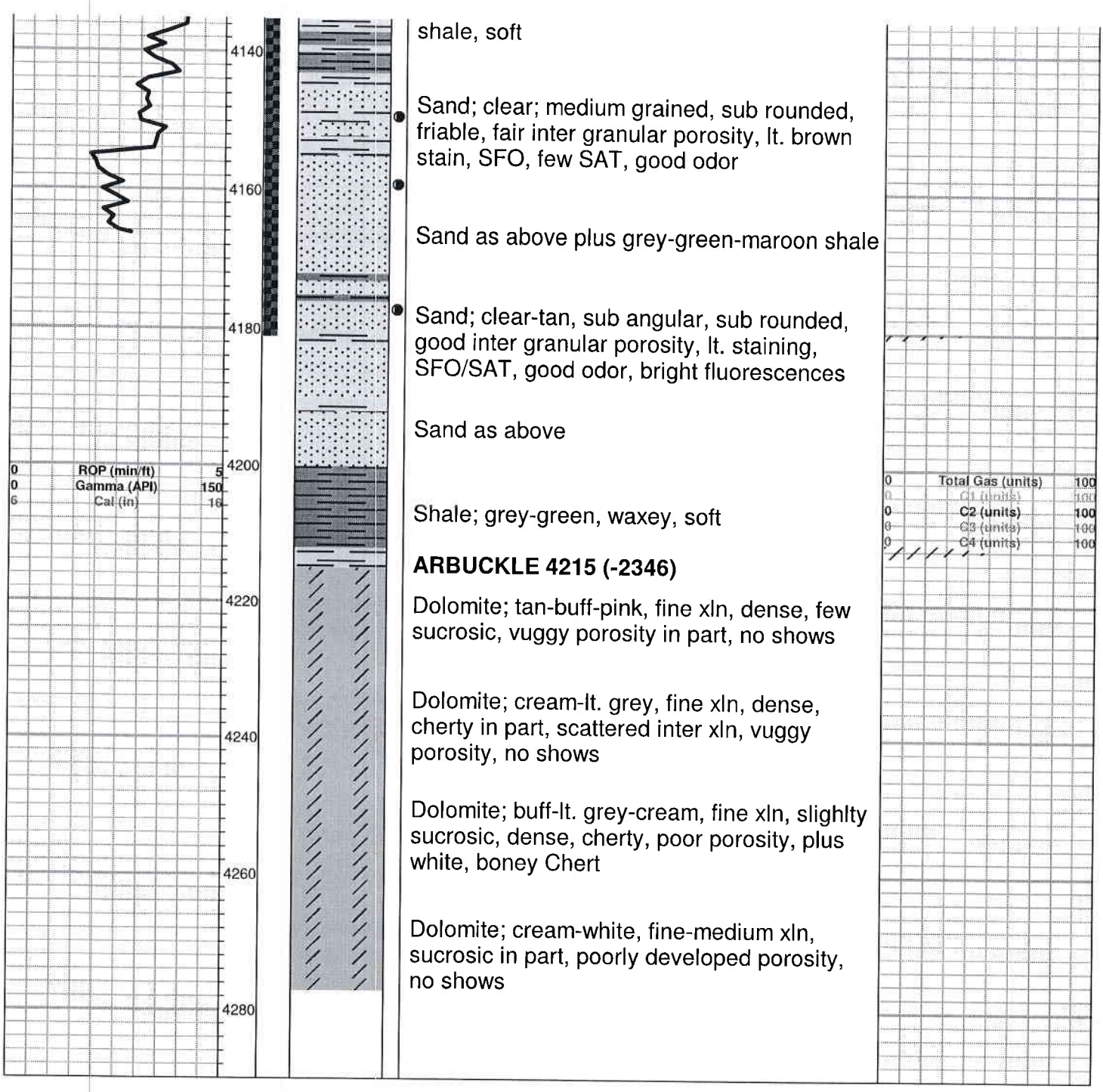
Limestone; cream-white, fine xln, chalky in part, cherty, dense, few fossiliferous pieces, plus trace Dolomitic Limestone; buff-grey, medium xln, no shows

Limestone; as above, plus white boney Chert

SIMPSON SHALE 4127 (-2258)

Shale; grey-green, waxey, plus maroon silty





shale, soft

Sand; clear; medium grained, sub rounded, friable, fair inter granular porosity, lt. brown stain, SFO, few SAT, good odor

Sand as above plus grey-green-maroon shale

Sand; clear-tan, sub angular, sub rounded, good inter granular porosity, lt. staining, SFO/SAT, good odor, bright fluorescences

Sand as above

Shale; grey-green, waxey, soft

ARBUCKLE 4215 (-2346)

Dolomite; tan-buff-pink, fine xln, dense, few sucrosic, vuggy porosity in part, no shows

Dolomite; cream-lt. grey, fine xln, dense, cherty in part, scattered inter xln, vuggy porosity, no shows

Dolomite; buff-lt. grey-cream, fine xln, slighlty sucrosic, dense, cherty, poor porosity, plus white, boney Chert

Dolomite; cream-white, fine-medium xln, sucrosic in part, poorly developed porosity, no shows