



Musgrove

**PETROLEUM
CORPORATION**
Clatlin, Kansas

NOTES

Company: K&N Petroleum, Inc

Lease: Tony Klepper #4-1

Field: None

Location: NW-SW-SE-SE (558' FSL & 1215' FEL)

Sec: 4 Twsp: 19S Rge: 11W

County: Barton State: Kansas

KB: 1797' GL: 1790'

API #: 15-009-25962-00-00

Contractor: Southwind Drilling Inc. (Rig #6)

Spud: 4/07/2014 Comp: 4/14/2014

RTD: 3475' LTD: 3474'

Mud Up: 2600' Type Mud: Chemical

Samples Saved From: 2700' to RTD

Drilling Time Kept From: 2700' to RTD

Samples Examined From: 2700' to RTD

Geological Supervision from: 2700' to RTD

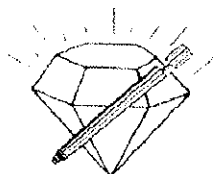
Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8@368'

Electronic Surveys: Logged by Pioneer Energy Services: DIL/MEL/BHCS/CNL/DNL

K&N Petroleum, Inc. Well Comparison

K&N Petroleum- T. Klepper 4-11 NW-SW-SE-SE 4-19S-11W					COMPARISON WELL Henderson Oil Co.- #1 Klepper SW-SW-SE 4-19S-11W				COMPARISON WELL Alva Oil Corp- Musenberg 1 C-SW-SW-SW 3-19S-11W			
1797 KB					1776 KB		Structural Relationship		1788 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Top Anhydrite	604	1193	600	1197	585	1191	-2	6				
Heebner	2958	-1161	2959	-1162	2957	-1181	20	19	2954	-1166	5	4
Toronto	2978	-1181	2975	-1178					2975	-1187	6	9
Douglas	2989	-1192	2990	-1193								
Brown Lime	3081	-1284	3080	-1283								
Lansing	3094	-1297	3096	-1299	3095	-1319	22	20	3087	-1299	2	0
BKC	3358	-1561	3358	-1561					3354	-1566	5	5
Cong. Sd.	3386	-1589	3376	-1579								
Arbuckle	3412	-1615	3406	-1609	3392	-1616	1	7	3400	-1612	-3	3
RTD	3495	-1698	3495	-1698	3411	-1635	-63	-63	3900	-2112	414	414
LTD	3474	-1677	3474	-1677					3898	-2110	433	433



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

DRILL-STEM TEST TICKET
FILE: Tony Klepper 4-1 Dst 3

TIME ON: 02:30

TIME OFF: 07:11

Company **K & N Petroleum**

Lease & Well No. **Tony Klepper 4-1**

Contractor **Southwind Drilling Rig 6**

Charge to **K & N Petroleum**

Elevation **KB 1797**

Formation

LKC "HIJ"

Effective Pay

Ft. Ticket No. **RR023**

Date **04/13/2014**

Sec. **4**

Twp

19

S. Range

11

W. County

Barton

State

KANSAS

Test Approved By

Diamond Representative

Ricky Ray

Formation Test No. **3** Interval Tested from **3228** ft. to **3310** ft. Total Depth **3310** ft.

Packer Depth **3223** ft. Size **6 3/4** in. Packer depth ft. Size **6 3/4** in.

Packer Depth **3228** ft. Size **6 3/4** in. Packer depth ft. Size **6 3/4** in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) **3308** ft. Recorder Number **5515** Cap **5,000** P.S.I.

Bottom Recorder Depth (Outside) **3296** ft. Recorder Number **5586** Cap **5,000** P.S.I.

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

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

Weight **9.2** Water Loss **10.8** cc. Weight Pipe Length ft. I.D. **2 7/8** in.

Chlorides **6000** P.P.M. Drill Pipe Length **3195** ft. I.D. **3 1/2** in.

Jars: Make **STERLING** Serial Number **4** Test Tool Length **33** ft. Tool Size **3 1/2-IF** in.

Did Well Flow? **NA** Reversed Out **NA** Anchor Length **82A (19.5P)** 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: **1/4" Blow** Built to **6 1/4** in 30 mins **NOBB**

2nd Open: **WSB** Built to **6 1/4** in 45 min **NOBB**

Recovered **129** ft. of **HWCM 65%W 35% M**

Recovered **129** ft. of **Total Fluid**

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Ph:9 RW: .29 @ 61 Deg

Price Job

Chlorides: 26000 PPM

Other Charges

Remarks:

Insurance

TOOL SAMPLE: 1%O 89% W 10% M

Total

Time Set Packer(s) **2:54 AM** A.M. P.M. Time Started Off Bottom **5:24 AM** A.M. P.M. Maximum Temperature **104**

Initial Hydrostatic Pressure (A) **1528** P.S.I.

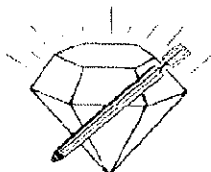
Initial Flow Period Minutes **30** (B) **12** P.S.I. to (C) **40** P.S.I.

Initial Closed In Period Minutes **30** (D) **706** P.S.I.

Final Flow Period Minutes **45** (E) **43** P.S.I. to (F) **73** P.S.I.

Final Closed In Period Minutes **45** (G) **685** P.S.I.

Final Hydrostatic Pressure (H) **1522** P.S.I.



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE Tony Klepper 4-1 Dst 2

TIME ON: 02:30

TIME OFF: 08:41

Company K & N Petroleum Lease & Well No. Tony Klepper 4-1
Contractor Southwind Drilling Rig 6 Charge to K & N Petroleum
Elevation KB 1797 Formation Doug/Snd & Lan "A-C" Effective Pay _____ Ft. Ticket No. RR022
Date 04/12/2014 Sec. 4 Twp. 19 S Range 11 W County Barton State KANSAS
Test Approved By _____ Diamond Representative Ricky Ray

Formation Test No. 2 Interval Tested from 2986 ft. to 3135 ft. Total Depth 3135 ft.
Packer Depth 2981 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 2986 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2966 ft. Recorder Number 5515 Cap 5,000 P.S.I.
Bottom Recorder Depth (Outside) 3112 ft. Recorder Number 5586 Cap 5,000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap _____ P.S.I.

Mud Type Chem Viscosity 45 Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight 9.2 Water Loss 8.8 cc Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides 4000 P.P.M. Drill Pipe Length 2953 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NA Reversed Out NA Anchor Length 149A (24P) 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: 1/4" Blow Built to 2 1/4" in 30 mins NOBB
2nd Open: 1/4" Blow Built to 1 1/4" in 45 mins NOBB

Recovered 39 ft. of MUD 100% M (few oil specks)

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of PH: 9

Recovered _____ ft. of RW: .36 @ 61 degrees F

Recovered _____ ft. of CHLORIDES: 20,000 ppm

Remarks: _____

Price Job

Other Charges

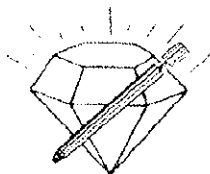
Insurance

TOOL SAMPLE: 1% O 25% W 74% M

Total

Time Set Packer(s) 4:12 AM A.M. P.M. Time Started Off Bottom 6:42 AM A.M. P.M. Maximum Temperature 97

Initial Hydrostatic Pressure _____ (A) 1403 P.S.I.
Initial Flow Period _____ Minutes 30 (B) 11 P.S.I. to (C) 20 P.S.I.
Initial Closed In Period _____ Minutes 30 (D) 624 P.S.I.
Final Flow Period _____ Minutes 45 (E) 22 P.S.I. to (F) 29 P.S.I.
Final Closed In Period _____ Minutes 45 (G) 588 P.S.I.
Final Hydrostatic Pressure _____ (H) 1393 P.S.I.



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

DRILL-STEM TEST TICKET
FILE: Tony Klepper 4-1 Dst 4

TIME ON: 4-13 19:57

TIME OFF: 4-14 03:20

Company **K & N Petroleum** Lease & Well No. **Tony Klepper 4-1**
Contractor **Southwind Drilling Rig 6** Charge to **K & N Petroleum**
Elevation **KB 1797** Formation **Penn Cong** Effective Pay **ft** Ticket No. **SO443**
Date **04/13/2014** Sec **4** Twp. **19 S** Range **11 W** County **Barton** State **KANSAS**
Test Approved By **Jacob McCallie** Diamond Representative

Formation Test No. **4** Interval Tested from **3330** ft. to **3423** ft. Total Depth **3423** ft.

Packer Depth **3325** ft. Size **6 3/4** in. Packer depth **ft** Size **6 3/4** in.

Packer Depth **3330** ft. Size **6 3/4** in. Packer depth **ft** Size **6 3/4** in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) **3311** ft. Recorder Number **5515** Cap. **5,000** P.S.I.

Bottom Recorder Depth (Outside) **3396** ft. Recorder Number **5586** Cap. **5,000** P.S.I.

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

Mud Type **Chem** Viscosity **48** Drill Collar Length **ft** I.D. **2 1/4** in.

Weight **9.4** Water Loss **10.4** cc. Weight Pipe Length **ft** I.D. **2 7/8** in.

Chordes **9,000** P.P.M. Drill Pipe Length **3297** ft. I.D. **3 1/2** in.

Jars: Make **STERLING** Serial Number **4** Test Tool Length **33** ft. Tool Size **3 1/2-IF** in.

Did Well Flow? **NA** Reversed Out **NA** Anchor Length **93 (30.5a)** 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: **1/4" Blow- Built to 2 1/4" in 30 min** **NOBB**

2nd Open: **WSB- Built to 3/4" in 45 min** **NOBB**

Recovered **30** ft. of **SLWCM** **2% W 98% M (few oil specks)**

Recovered **ft.** of

Recovered **ft.** of

Recovered **ft.** of

Recovered **ft.** of

Recovered **ft.** of

Remarks:

Price Job

Other Charges

Insurance

Total:

TOOL SAMPLE: **3% W 97% M (few oil specks)**

Time Set Packer(s) **4-13 10:34 PM** A.M. P.M. Time Started Off Bottom **4-14 1:34 AM** A.M. P.M. Maximum Temperature **103**

Initial Hydrostatic Pressure (A) **1591** P.S.I.

Initial Flow Period Minutes **30** (B) **14** P.S.I. to (C) **21** P.S.I.

Initial Closed In Period Minutes **45** (D) **708** P.S.I.

Final Flow Period Minutes **45** (E) **20** P.S.I. to (F) **24** P.S.I.

Final Closed In Period Minutes **60** (G) **564** P.S.I.

Final Hydrostatic Pressure (H) **1589** P.S.I.

ROCK TYPES

 Dolprim	 shale, grn	 Carbon Sh	 Shcol
 Lmst fw<7	 shale, gry	 shale, red	 Ss

ACCESSORIES

MINERAL

• Sandy

FOSSIL

F Fossils < 20%
 φ Oolite
 Oomoldic

STRINGER

~ Chert
 ••• Sandstone

TEXTURE

FX Finexln

OTHER SYMBOLS

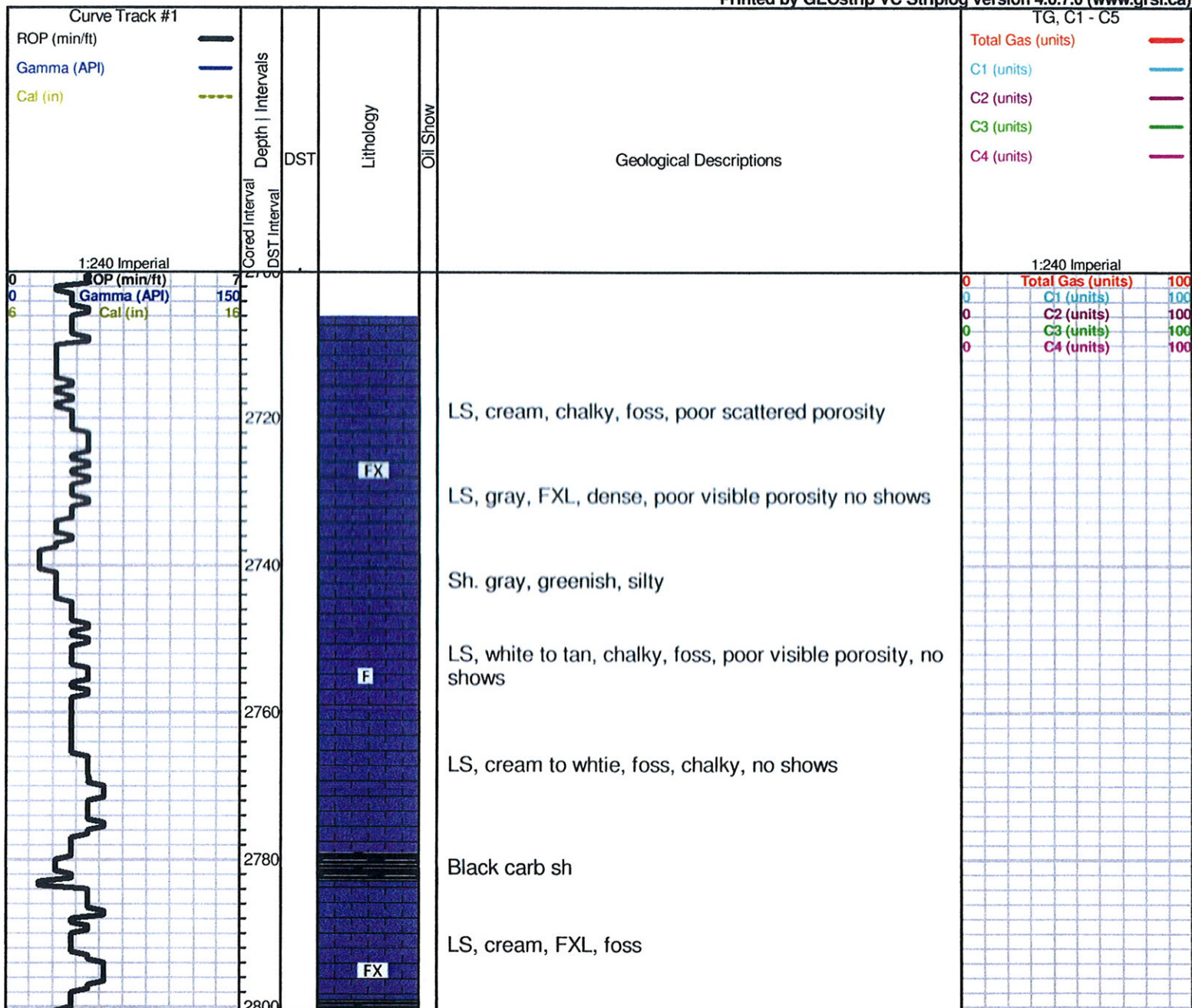
Oil Show

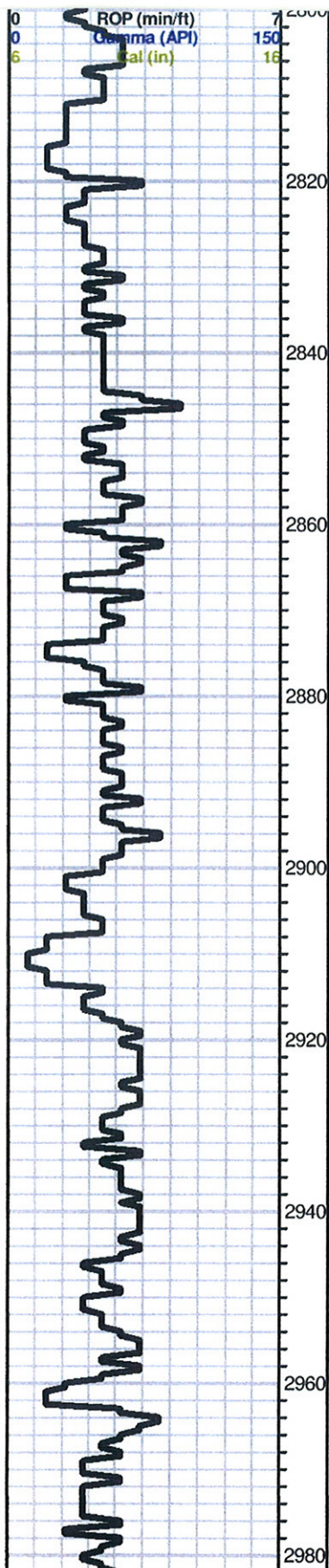
● Good Show
 ● Fair Show
 ● Poor Show
 ○ Spotted or Trace
 ○ Questionable Strn
 D Dead Oil Strn
 ■ Fluorescence
 * Gas

DST

■ DST Int
 ■ DST alt
 ■ Core
 || tail pipe

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Sh. gray silty tr. Sd. gray f. grain, well sorted, no shows

LS, tan to cream, FXL, foss, poor visible porosity, no shows

LS, tan, FXL, chalky, foss, poor visible porosity, no shows

Black carb Sh.

LS, cream to tan, FXL, dense, poor visible porosity no shows

LS, tan, chalky, FXL, dense, foss, P.P. porosity, trc. brown stain, NSFO, no odor

LS, tan FXL, foss, dense, chalky in parts, poor scattered porosity, no shows

LS, tan, few ool, poor vuggy porosity, no shows

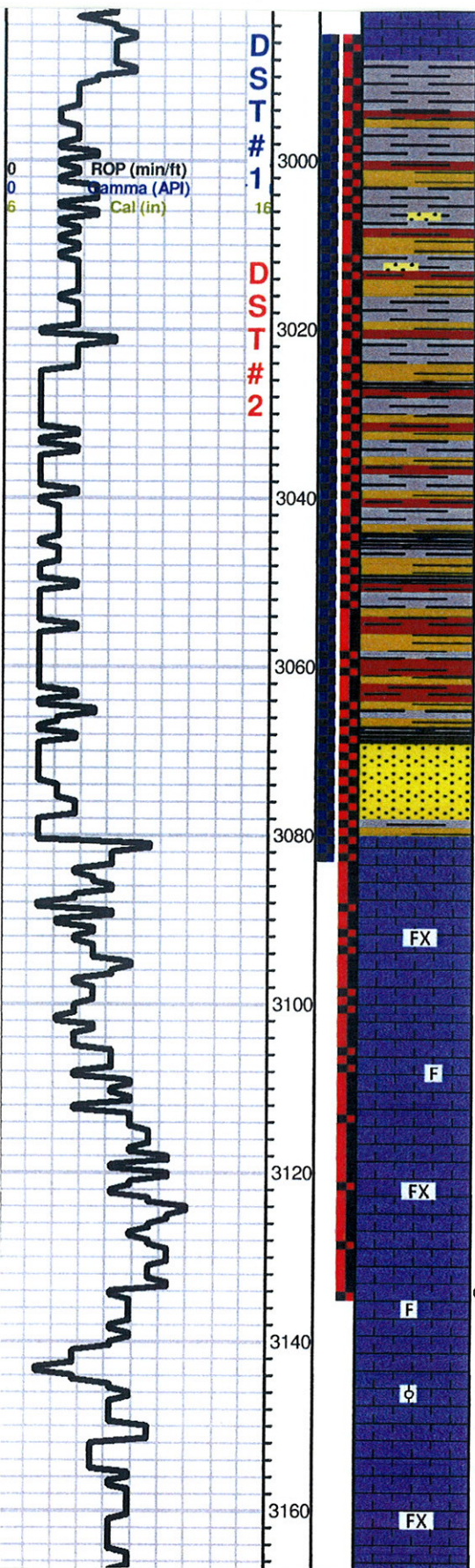
Heebner 2958 (-1161)

Black carb sh.

Toronto 2978 (-1181)

LS, cream to tan, chalky, few foss, poor visible porosity, no shows

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



Douglas 2989 (-1192)

Sh. maroon, gray, greenish, silty

Sd. gray, f. grain, well sorted, no shows

Sh. maroon, gray, greenish

Sh. maroon gray, greenish,

Sh. gray, silty, maroon, greenish, waxy

Sd. gray, F. grain, well sorted, SFO, strong odor,

BROWN LIME 3081 (-1284)

LS, tan to brown, FXL, cherty, dense, poor visible porosity, no shows

LANSING 3094 (-1297)

LS, cream to white, FXL, dense, poor visible porosity, foss, no shows

LS, cream, FXL, dense, poor visible porosity, cherty in parts, trc. brn stain, NSFO, no odor

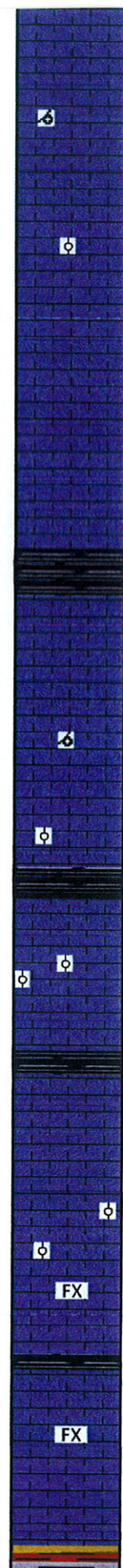
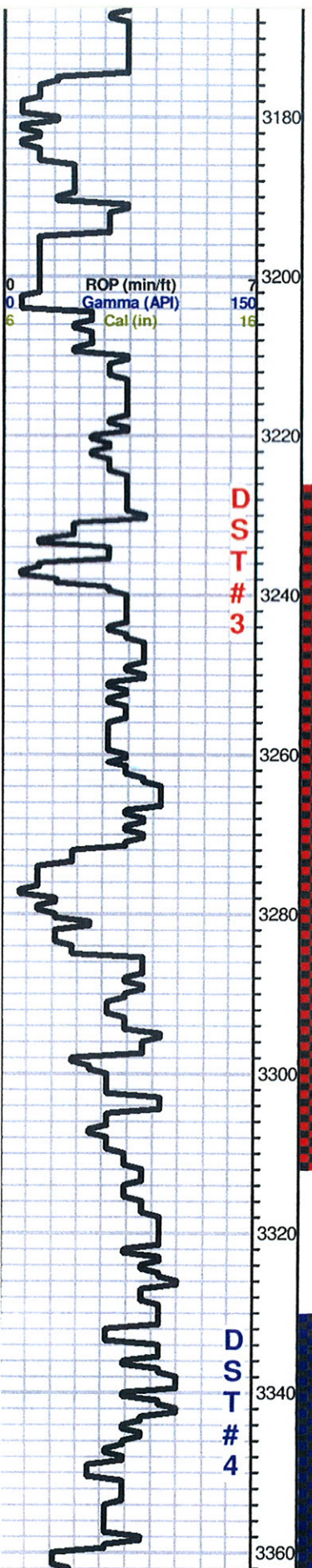
LS, cream to white, FXL, chalky in pts, trc SFO, Lt. black stain, odor??

LS, white, ool, FXL, poor scattered porosity, cherty dense, no shows, no odor

LS, cream to tan, FXL, foss, few ool poorly developed, poor scatterd porosity, no shows

DST #1 MISRUN

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



LS, tan, oom, chalky, good vuggy porosity, barren

LS, tan, ool, fair oom vuggy porosity, chalky in parts, no shows

LS, tan to brown, FXL, poor scatterd porosity, dns, Lt. trc. SFO, trc. black stain, no odor

Black carb Sh.

LS, tan , vuggy porosity, dense, no shows

LS, ool, FXL poor scattered porosity, foss, SFO, odor??? trc. brn stain

LS, tan to white, ool, FXL, dense, in parts, chalky vuggy porosity, Lt. brown stain, no odor, NSFO

SH. black, gray, greenish, silty

LS, cream to tan, FXL, ool, poorly developed, poor scatterd porosity, no shows,

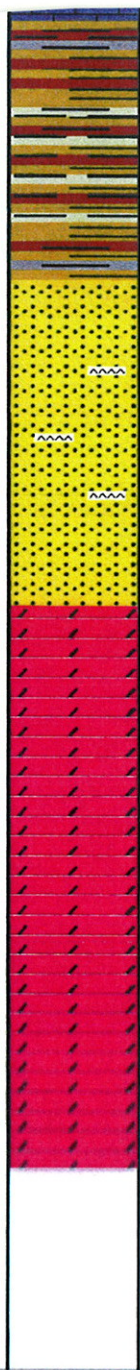
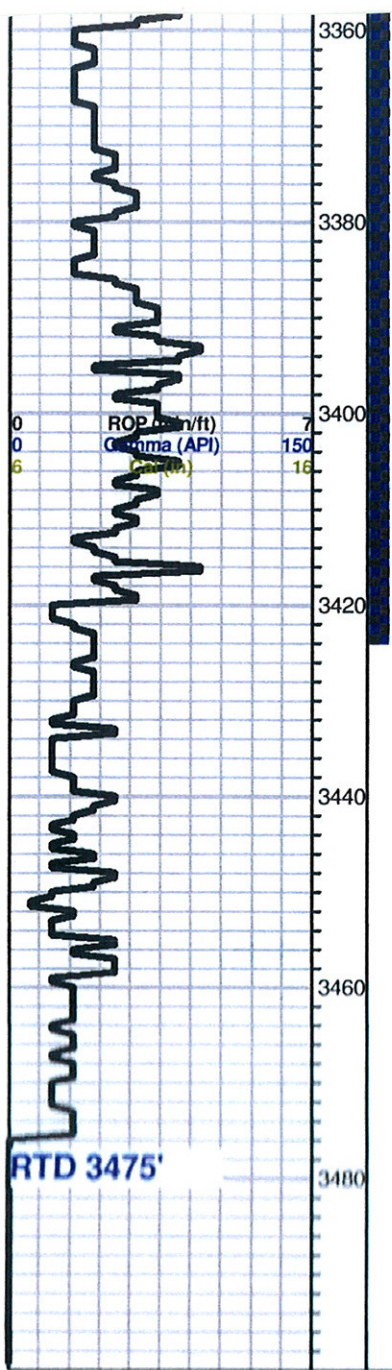
LS, cream to tan, FXL, poor visible porosity, cherty, no shows,

LS, cream to tan, FXL, dense, few foss, poor visible porosity, no shows

BKC 3358 (-1561)

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

CFS 20-40-60



BKC 3358 (-1561)

Slug soft maroon sh.

Sh. maroon, grenish, gray, soft

Cong. Sd. 3386 (-1589)

Sh. maroon, greenish, trc. sd. white, well sorted, trc, black stain, NSFO

- Sd. gray to tan, sub rounded, F.grain, well sorted, no odor,
- Trc. chert, orange, rose, opaque ool chert
- Sd, white to cream V. F. grain, well sorted, Lt. SFO, no odor

ARBUCKLE 3412 (-1615)

Dol. tan, FXL, suc. poor visible porosity, barren, no shows

Dol, tan, FXL, suc, poor visible porosity, no shows

Dol, tan, suc. FXL, dense, poor visible porosity, no shows

Dol, tan FXL, dense, poor visible porosity, no shows

CFS 20-40-60

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

CFS 20-40-60

CFS 20-40-60

CFS 20-40-60