



Musgrove

Petroleum Geology
212 Main Street, Claflin KS

NOTES

Company: L&B Exploration, Inc.

Lease: Becker Trust # 19-2

Field: Oxhide

Location: N2-N2-SE-SW (1090' FSL & 3300' FEL)

Sec: 19 Twsp: 16S Rge: 8W

County: Ellsworth State: Kansas

GL: 1725' KB: 1736'

Contractor: Southwind Drilling, Inc. (Rig #9)

Spud: 08/25/2017 Comp: 08/30/2017

RTD: 3290' LTD: None

Mud Up: 2500' Type Mud: Chemical

API #: 15-053-21354-00-00

Surface Casing: 8 5/8" @288'

Production Casing: 5 1/2" @3285'

Electronic Surveys: None

Formation Testing: Diamond Testing, LLC

Samples Saved From: 2600' to RTD

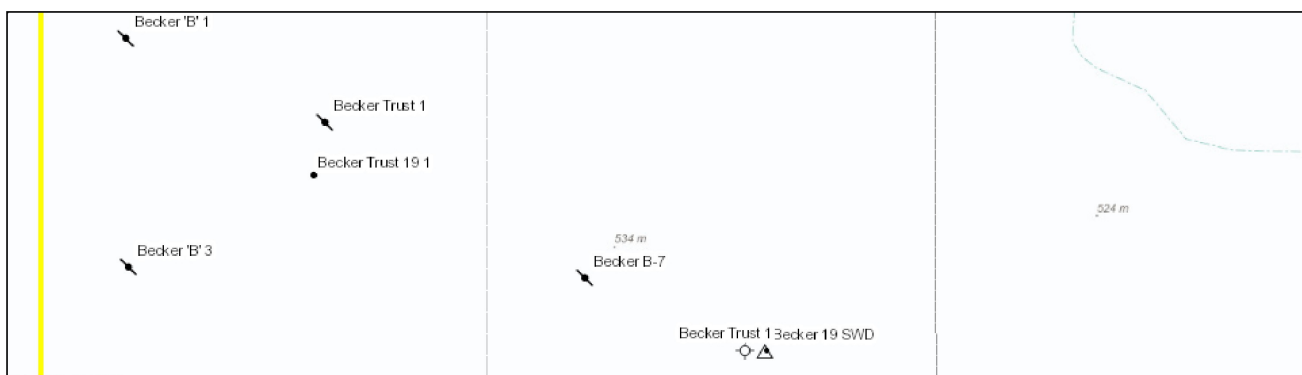
Drilling Time Kept From: 2600' to RTD

Samples Examined From: 2600' to RTD

Geological Supervision from: 2600' to RTD

Geologist on Well: Jim Musgrove (2600' -2810') Wyatt Urban (2810'-RTD)

LB Eploration, Inc. - Becker Trust # 19-2



S24 T16S-R9W

535 m

S 19-T16S-R8W
Becker B-6

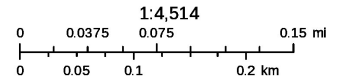
Becker B-8

Becker Trust 19 2

Becker B-5

Becker 1

Becker 2



LB Exploration , Inc

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
LB Exploration - Becker Trust# 19-2					LB Exploration-Becer Trust # 19-1				Mayfield Smith Drlg-Becker B# 5			
N2-N2-SE-SW 19-16S-8W					NW-SE-NW-SW 19-16S-8W				NE-SE-SW 19-16S-8W			
1736 KB					1705 KB				1711 KB			
					Structural Relationship				Structural Relationship			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Heebner	2638	-902			2613	-908	6		2617	-906	4	
Toronto					2634							
Douglas	2673	-937			2648	-943	6					
Brown Lime	2758	-1022			2735	-1030	8		2738	-1027	5	
Lansing	2773	-1037			2750				2754	-1043	6	
BKC	3080	-1344			3053	-1348	4		3057	-1346	2	
Marmaton	3107	-1371			3081	-1376	5					
Conglomerate	3128	-1392			3103	-1398	6		3136	-1425	33	
Chert. Cong.	3164	-1428			3131	-1426	-2					
Viola	3194	-1458			3164	-1459	1		3183	-1472	14	
Simpson	3226	-1490			3194	-1489	-1		3216	-1505	15	
Simpson Sd.	3253	-1517			3229	-1524	7					
Arbuckle	3283	-1547			3254	-1549	2		3263	-1552	5	
RTD	3290	-1554			3262	-1557	3		3270	-1559	5	
LTD												



Company: LB Exploration, Inc.
Lease: Becker Trust 19 #2

Tester: Michael Carroll
On-Site Contact: Musgrove Petroleum

SEC: 19 TWN: 16S RNG: 8W
County: ELLSWORTH
State: Kansas
Drilling Contractor: Southwind Drilling, Inc - Rig 9
Elevation: 1725 GL
Field Name: Oxhide
Pool: Infield
Job Number: 50

DATE
August
29
2017

DST #1 **Formation: Arbuckle** **Test Interval: 3207 - 3290'** **Total Depth: 3290'**
Time On: 20:23 08/29 Time Off: 02:26 08/30
Time On Bottom: 22:33 08/29 Time Off Bottom: 23:28 08/29

Mud Properties

Down Hole Makeup

Gas To Surface: NO

Tester Communication

Well Flow: NO

Default View

Electronic Volume Estimate:
1899'

1st Open
Minutes: 5
56.2" at 5 min

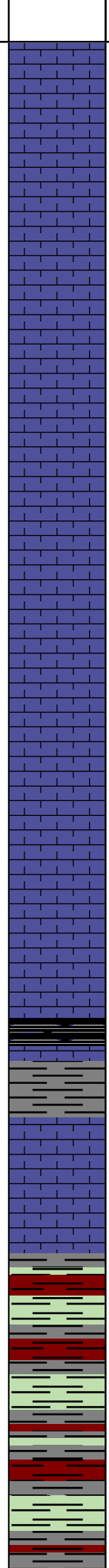
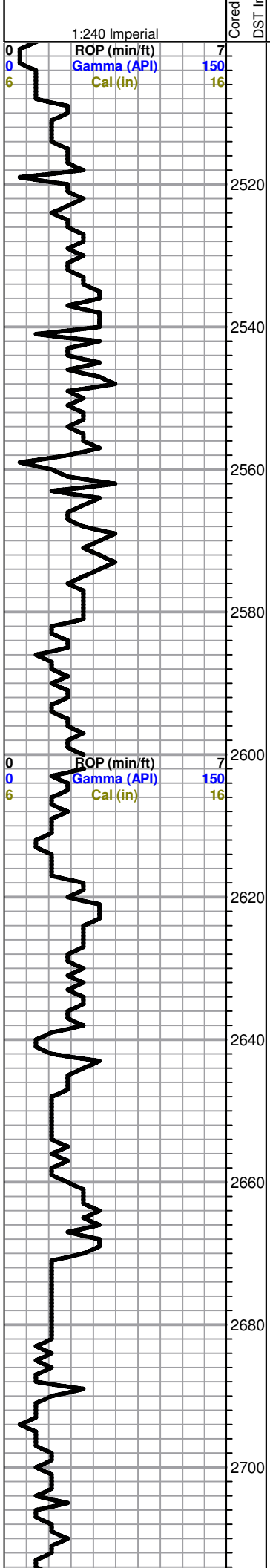
1st Close
Minutes: 15
0" at 15 min

2nd Open
Minutes: 15
199.2" at 15 min

2nd Close
Minutes: 20
.1" at 20 min

Download Recorder File



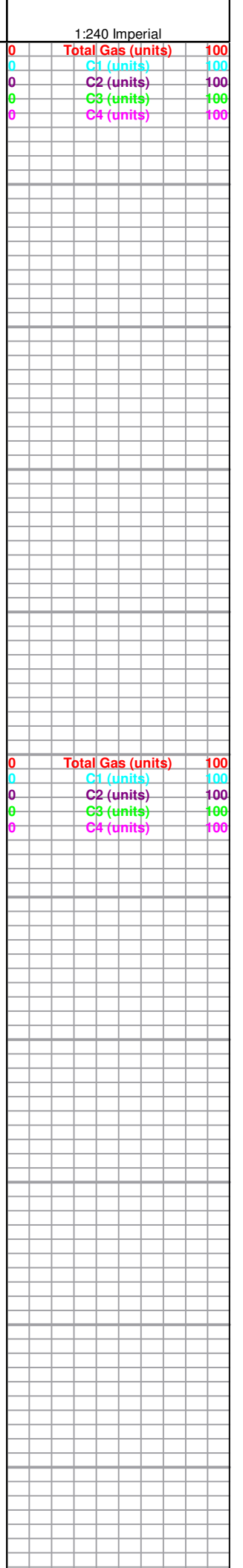


Heebner 2638.0 (-902.0)

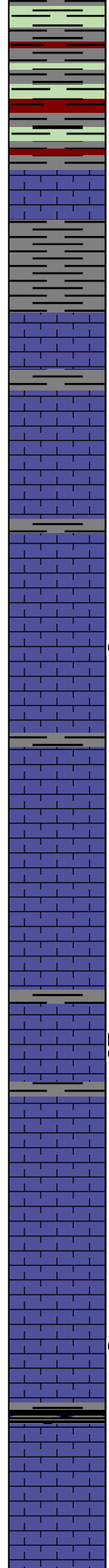
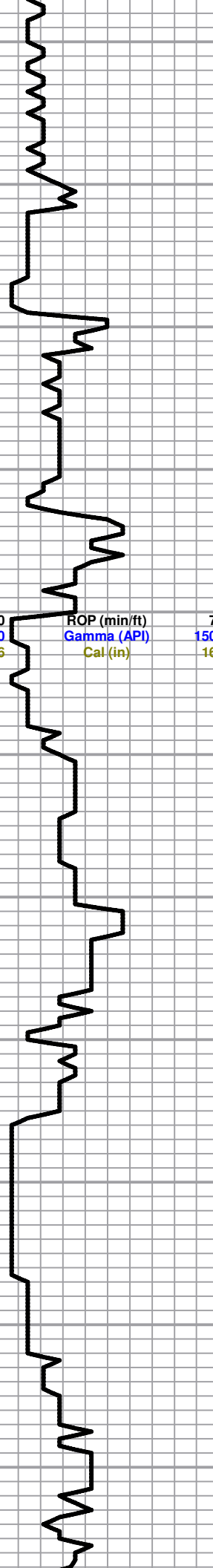
Sh, black carb
 Sh, gry, gryish, green
 LS, white, gry, fxl, few foss, chalky, no shows

Douglas 2672.0 (-936.0)

Sh, gry, maroon, grayish, green
 Sh, gry, greenish, a/a
 Sd, gry, white, tan, vfg, mica, "shaley", friable in parts



2720
2740
2760
2780
2800
2820
2840
2860
2880
2900
2920



Sh, a/a

LS, tan, fxl, foss, chalky, no shows

Sh, gry, dk gry, shale, +gry, mica silty sh.

Brown Lime 2758.0 (-1022.0)

LS, tan, fxl, chalky

Lansing 2773.0 (-1037.0)

LS, white, gry, fxl, foss, scattered porosity, no shows

○

LS, tan, brn, oom, light brown edge staining, nsfo, no odor

○

LS, tan, brn, fxl, few oom/ foss, tr. brn stain, lt. sppty (dead) blk sfo, no odor

○

LS, a/a, tr. brn stain, nsfo, ft. odor

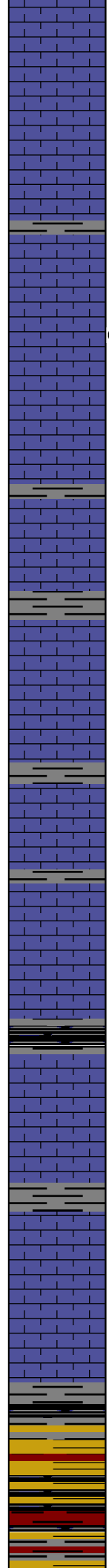
Slug black carb

LS, white, cream, fxl, poor - fair scattered p.p. porosity, chalky, no shows

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

2940
2960
2980
3000
3020
3040
3060
3080
3100
3120
3140

ROP (min/ft) 7
Gamma (API) 150
Cal (in) 16



LS, white, cream, fxl, foss/ool, poorly developed, poor visible porosity, tr. cherts, opaque, white, nsfo

LS, tan, brn, foss, oom, poorly developed vuggy porosity, poor visible porosity, tr. blk, gry stain, nsfo, no odor

LS, a/a, tr. sh, gry, greenish

Sh, gry, greenish, black carb

LS, cream, tan, buff, fxl, dense, poor visible porosity, dense, cherty tr. white, opaque cherts

LS, tan, ool, poor-fair scattered porosity, chalky, no shows

LS, tan, cream, fxl, dense, poor visible porosity, no shows

BKC 3080.0 (-1344.0)

Sh, blk, greenish, silty, tr. pyrite

LS, tan, buff, few mott. dense, poor visible porosity, cherty in pts

Sh, brn, greenish, gry, silty

Marmaton 3107.0 (-1371.0)

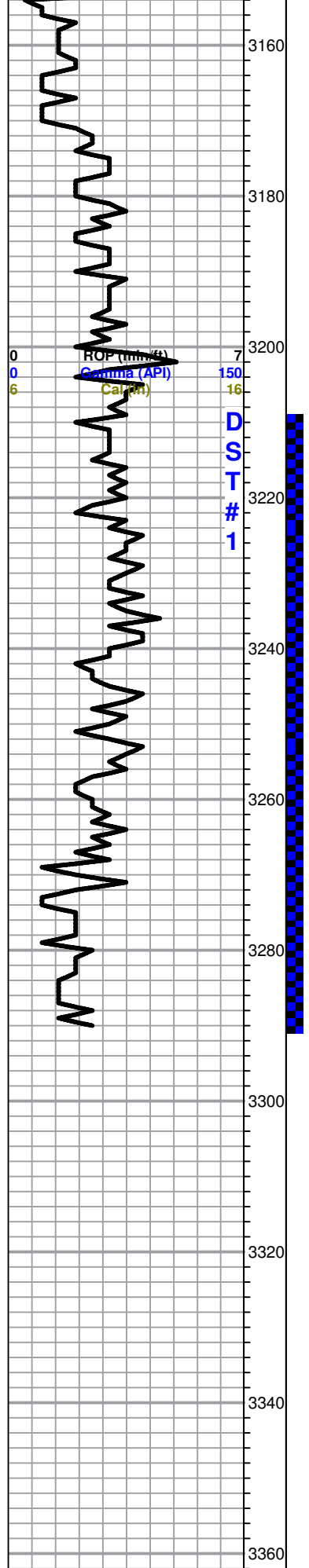
LS, tan, cream, foss, scattered vuggy oom type porosity, chalky, no shows

Conglomerate 3128.0 (-1392.0)

Slug soft maroon shale, greenish, black silty/ sdy

Sh, maroon, greenish, purple, silty

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



Cong. Chert 3164.0 (-1428.0)

Sh, a/a, tr. white, opaque, cherts, no sfo, (few ool. LS, cavings???)

Viola 3194.0 (-1455.0)

LS, white, foss, ool, poor visible porosity, chalky, no shows

LS, white, cream, fxl, dense, chalky, no shows

Simpson 3226.0 (-1490.0)

LS, a/a, tr. cherts, orange, red, opaque, no shows, no odor, (slug black carb)

Sh, a/a, tr. sd, clr, calc. nsfo, no odor

Simpson Sand 3253.0 (-1517.0)

Sd. gry, clr, sub rounded, fri, tr. brn stain, nsfo, no odor

Sd. gry, sub rounded, fri. well sorted, brn stain, sfo, ft. odor

Sd. clr, qtz, sub rounded, sorted, friable, brn stain, sfo, fair odor

Arbuckle 3283.0 (-1547.0)

Dol. tan, suc. fxl, poor-fair scattered p.p. porosity, brn stain, sfo, ft.-fair odor

RTD 3290.0 (-1554.0)

DST#1 3207- 3290

5-15-15-20

1st Open:
BOB 20 sec.

2nd Open:
BOB 15 sec.

Recovery:
715' Clean Oil

275' SLMCSLGCO
(14%G, 74%O, 12%M)

336' SLGCMCO
(13%G, 65%O, 22%M)

123'
SLGCSLOCHMCW
(5%G, 15%O, 50%W, 30%M)

Pressures:
ISIP 1126 psi
FSIP 1103 psi
IFP 163-322 psi
FFP 321-607 psi
HSH 1556-1545 psi

3380