

**Ritchie Exploration, Inc.  
Mense-Albers No. 1  
2160' FNL and 2420' FWL  
150'N & 110'E of SE SE NW  
Sec 24 T10S R30W  
Sheridan County, Kansas**

Geological Report  
by

Macklin M. Armstrong, P.G.  
License Number 743

Scale 1:240 Imperial

Well Name:	Mense-Albers No. 1	
Surface Location:	Sec 24 T10S R30W	
Bottom Location:	2160' FNL and 2420' FWL	
API:	15-179-21405	
License Number:	4767	
Spud Date:	5/12/2015	Time: 8:15 AM
Region:	Sheridan County, Kansas	
Drilling Completed:	5/20/2015	Time: 2:37 AM
Surface Coordinates:		
Bottom Hole Coordinates:		
Ground Elevation:	2842.00ft	
K.B. Elevation:	2847.00ft	
Logged Interval:	3400.00ft	To: 4600.00ft
Total Depth:	4600.00ft	
Formation:	Mississippi	
Drilling Fluid Type:	Chemical/Fresh Water Gel	

**OPERATOR**

Company: Ritchie Exploration, Inc.  
Address: 800 East 22nd Street North, Building 700  
Wichita, Kansas 67226

Contact Geologist:	Mike Engelbrecht	
Contact Phone Nbr:	316-691-9500	
Well Name:	Mense-Albers No. 1	
Location:	Sec 24 T10S R30W	API: 15-179-21405
Pool:	Oil	Field: Wildcat
State:	Kansas	Country: USA

**SURFACE CO-ORDINATES**

Well Type: Vertical  
Longitude: 100.619760341      Latitude: 39.170651466  
N/S Co-ord:  
E/W Co-ord:

**CONTRACTOR**

Contractor: WW Drilling, LLC  
Rig #: 8  
Rig Type: mud rotary  
Spud Date: 5/12/2015      Time: 8:15 AM  
TD Date: 5/20/2015      Time: 2:37 AM  
Rig Release: 5/21/2015      Time: 1:30 AM

**ELEVATIONS**

K.B. Elevation: 2847.00ft      Ground Elevation: 2842.00ft  
K.B. to Ground: 5.00ft

**NOTES**

Date	Depth at 7 am	Activity
5-12-15	MIRT	Spud at 8:15 pm
5-13-15	1361	Drilling
5-14-15	2950	Drilling
5-15-15	3705	Drilling
5-16-15	3970	TOH after DST No. 1
5-17-15	4088	CFS
5-18-15	4202	TOH for DST No. 4
5-19-15	4340	Drilling
5-20-15	4600	TOH for Log
5-21-15	4600	Set 5 1/2"

Surface Casing: 8 5/8" 23# at 220'  
Production Casing: 5 1/2" 15.5# at 4582'

Deviation: 220' - 1/2°  
3970' - 1 1/4°  
4600' - 1°

Bit Record:	Make	Size	Type	Depth In	Depth Out	Hours
	Smith	12 1/4"	RR	Surface	220	2 1/4
	Smith	7 7/8"	F-27	220	4600	99 1/4

**Drill Stem Tests:**

DST No. 1 3950 to 3970 Lansing A, C Zones  
30-45-45-60  
Recovery: 530' Water (Chl 115,000 ppm)  
IHP 1886      FHP 1883  
IFP 11-135      FFP 138-253  
ISIP 1221      FSIP 1207  
Temp 127°

DST No. 2 3994 to 4014 Lansing E, F Zones  
30-45-30-45  
Recovery: 10' Mud  
IHP 1905      FHP 1891  
IFP 9-12      FFP 12-18  
ISIP 921      FSIP 872  
Temp 114°

DST No. 3 4060 to 4088 Lansing H Zone  
30-45-45-60  
Recovery: 190' Water (Chl 82,000 ppm)

Recovery: 150 water (Oil 62,000 ppm)  
 IHP 1931 FHP 1923  
 IFP 10-69 FFP 72-103  
 ISIP 1320 FSIP 1318  
 Temp 126°

DST No. 4 4173 to 4202 Lansing L Zone  
 30-45-45-60

Recovery: 1270' CGO (10%G, 90%O - 39 degree gravity)  
 210' GMCO (10%G, 25%M, 65%O)

IHP 2043 FHP 2039  
 IFP 74-319 FFP 334-586  
 ISIP 1256 FSIP 1222  
 Temp 131°









Formation	Sample	E-Log	Datum	Well 1	Well 2	Well 3	Well 4
Anhydrite	2426	2425	+422	-4	+3	-20	-32
Base/Anhydrite	2456	2453	+394	-2	+6	-15	-26
Stotler	3554	3550	-703	-1	-2	-32	-20
Topeka	3681	3678	-831	0	-1	-33	-20
Heebner	3894	3891	-1044	+6	+6	-29	-16
Toronto	3928	3926	-1079	-9	-5	-36	-23
Lansing	3941	3940	-1093	-4	+1	-37	-23
Muncie Creek	4163	4162	-1215	-1	+1	-34	-18
Stark	4149	4146	-1299	-1	+1	-34	-16
Hushpuckney	4180	4178	-1331	0	+1	-34	-12
Base/Kansas City	4204	4202	-1355	-1	0	-34	-11
Marmaton	4234	4232	-1385	-1		-36	-9
Altamont	4252	4250	-1403	-4		-36	-9
Pawnee	4321	4318	-1471	+3		-29	-10
Myrick Station	4374	4373	-1526	+2		-27	-8
Fort Scott	4401	4400	-1553	-1		-34	-10
Cherokee Shale	4429	4426	-1579	+2		-30	-8
Mississippi	4493	4492	-1645	-3		-25	
Total Depth	4600	4600	-1753				

Well 1: Samuel Gary Jr. & Associates Kevin Zerr No. 1-25 700' FNL and 760' FWL Sec 25 T10S R30W  
 Well 2: Samuel Gary Jr. & Associates Caldwell No. 1-18 1800' FNL and 430' FWL Sec 18 T10S R29W  
 Well 3: Samuel Gary Jr. & Associates Fellhoelter No. 1-15 1660' FSL and 220' FEL Sec 15 T10S R30W  
 Well 4: Samuel Gary Jr. & Associates K & K Farms No. 1-25 640' FSL and 790' FWL Sec 25 T10S R30W

Pipe was set to further test the Lansing zone.

Respectfully submitted,  
 Macklin M. Armstrong

### ROCK TYPES

 Cht vari	 shale, grn	 Carbon Sh	 Shcol
 Lmst fw7>	 shale, gry	 shale, red	 Ss

### ACCESSORIES

#### MINERAL

▲ Chert, dark  
 ∩ Glauconite  
 P Pyrite  
 △ Chert White

#### FOSSIL

F Fossils < 20%  
 ∅ Oolite  
 ⚙ Oomoldic

#### STRINGER




••• Sandstone  
 ••• Siltstone

#### TEXTURE

C Chalky


### OTHER SYMBOLS

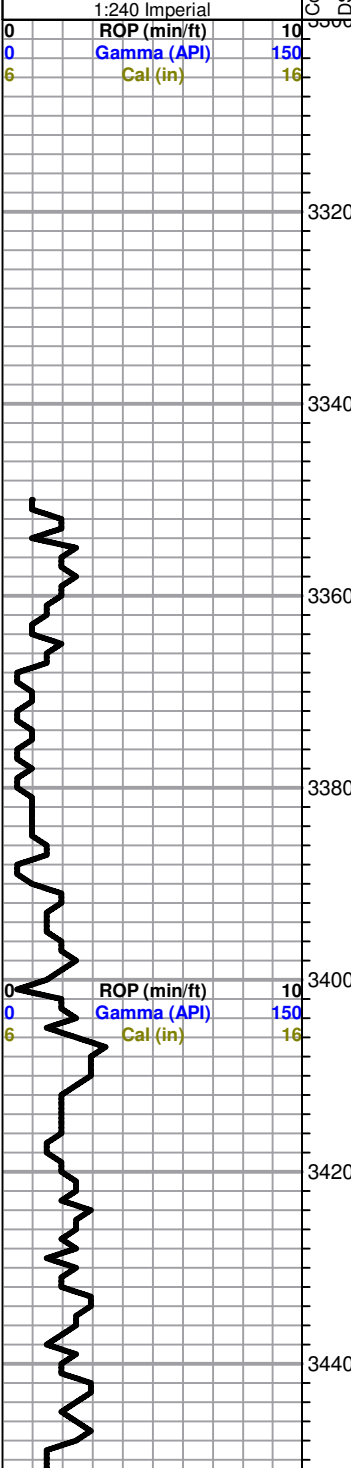
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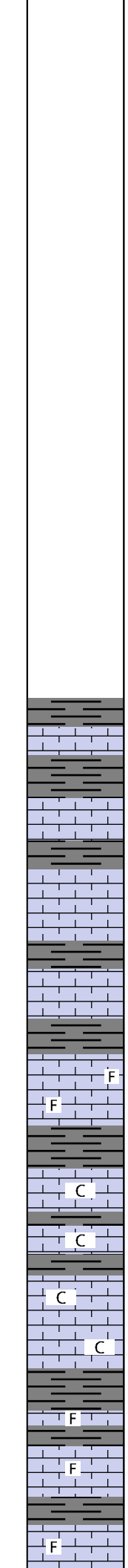
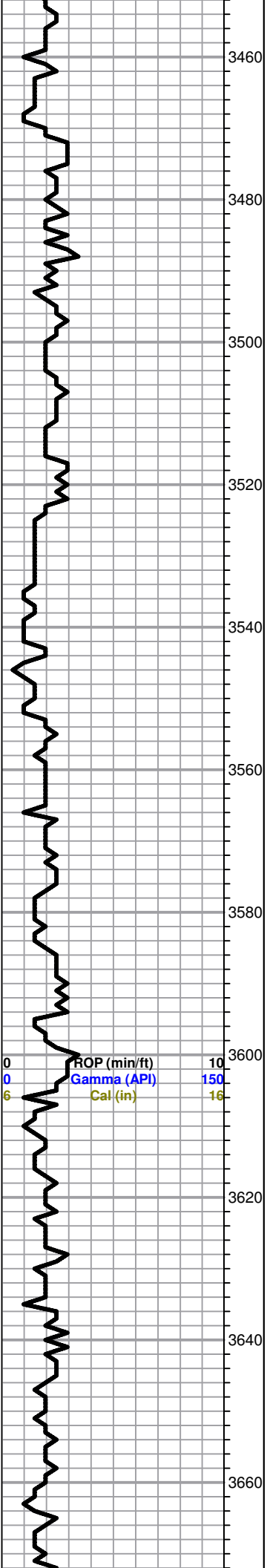
 Daily Report  
 Digital Photo  
 Document

#### DST

 DST Int  
 DST alt  
 Core

-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
-  Core Log File
-  Drill Cuttings Rpt

	Curve Track #1	Depth   Intervals	DST	Lithology	Oil Show	Geological Descriptions	Comment
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>ROP (min/ft) <span style="color: black;">—</span></p> <p>Gamma (API) <span style="color: blue;">—</span></p> <p>Cal (in) <span style="color: green;">- - -</span></p> </div> <div style="width: 5%; text-align: center;"> <p>0</p> <p>0</p> <p>6</p> </div> <div style="width: 45%; text-align: right;"> <p>ROP (min/ft) 10</p> <p>Gamma (API) 150</p> <p>Cal (in) 16</p> </div> </div> <p style="text-align: center; margin-top: 10px;">1:240 Imperial</p> 						<p><b>Ritchie Exploration, Inc.</b>  <b>Mense-Albers No. 1</b>  <b>2160' FNL and 2420' FWL</b>  <b>150'N &amp; 110'E of SE SE NW</b>  <b>Sec 24 T10S R30W</b>  <b>Sheridan County, Kansas</b></p> <p><b>GL 2842 KB 2847</b></p>	<p>Mud Program:            Kansas Drilling            Technologies            Chemical Gel/Premix</p> <p>Sample Cuttings:            KGS Well Sample Library</p> <p>Testing: Diamond Testing</p> <p>Electric Logs:            Pioneer Energy Services            Company            DIL            CNL/CDL</p> <p>Deviation:            220' - 1/2°            3970' - 1 1/4°            4600' - 1°</p>



----- **Stotler 3554 -707** -----

Ls-lt gry/gry fxln mhd no por

Sh-gry/dk gry

Ls-lt gry/gry fxln mhd/dns no por

Sh-gry/dk gry

Ls-crm/lt gry fxln mhd no por

Sh-gry/dk gry

Ls-crm/lt gry fxln dns no por

Sh-gry/dk gry

Ls-lt gry/crm fxln dns sl fos no por

Ls-lt gry/crm fxln mhd sl fos no por

Sh-gry/dk gry

Ls-crm/lt gry fxln mhd sl clky no por

Sh-gry/dk gry

Ls-crm/lt gry fxln mhd/dns sl clky no por

Sh-gry/dk gry

Ls-crm/lt tan fxln mhd sl clky no por

Ls-crm/lt gry fxln mhd/dns sl clky no por

Sh-gry/dk gry

Ls-lt gry/tan fxln mhd sl fos no por

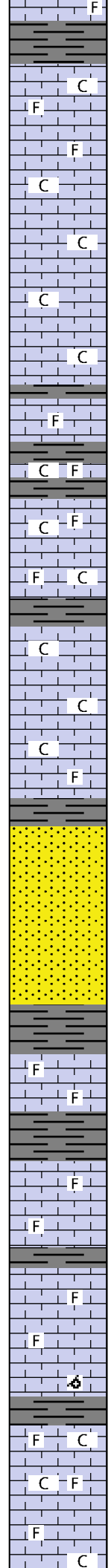
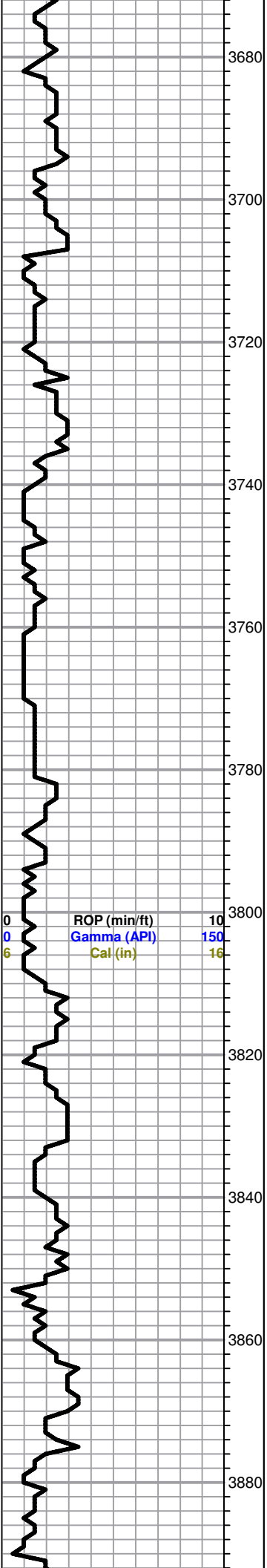
Sh-gry/dk gry

Ls-lt gry/tan fxln mhd/ds sl fos no por

Sh-gry/dk gry

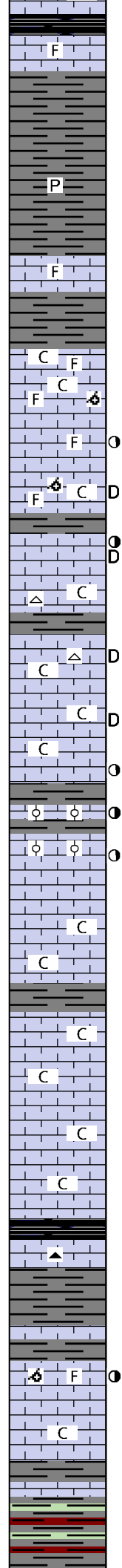
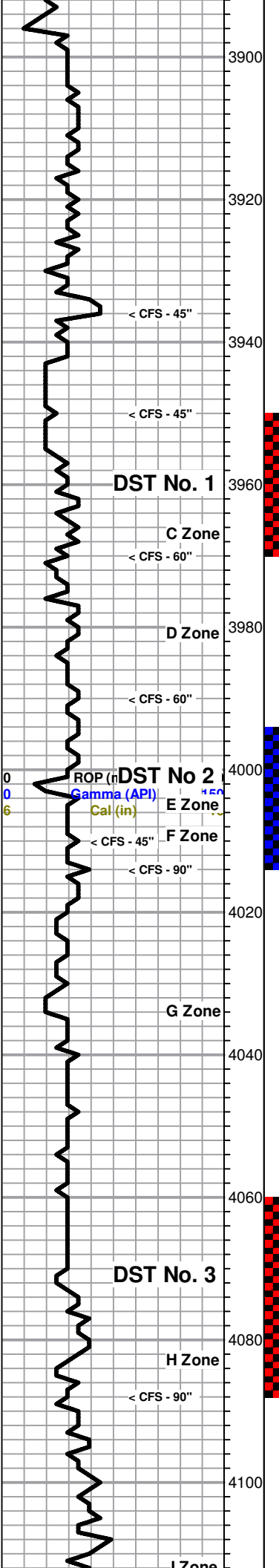
Ls-lt gry/tan f/mxln mhd sl fos no por

All formation tops on this geological log have been correlated back to the electric log



Sh-gry/dk gry  
 ----- **Topeka 3681 -834** -----  
 Ls-lt gry/tan f/mxln mhd sl clky no por  
 Ls-lt gry/tan f/mxln mhd/dns sl fos no por  
 Ls-AA  
 Ls-crm/lt tan f/mxln mhd sl clky no por  
 Ls-lt gry/tan fxln dns sl clky no por  
 Ls-crm/tan fxln soft/mhd sl clky no por  
 Ls-crm/tan fxln mhd sl clky no por  
 Sh-gry/dk gry  
 Ls-crm/tan fxln mhd/dns sl fos no por  
 Sh-gry/dk gry  
 Ls-crm/lt tan f/mxln mhd sl clky sl fos no por  
 Sh-gry/dk gry  
 Ls-crm/lt tan f/mxln mhd sl fos no por sm Ls-wt fxln soft clky  
 Ls-AA  
 Sh-gry/dk gry  
 Ls-wt/crm fxln soft clky no por  
 Ls-AA  
 Ls-wt/crm fxln soft/mhd clky no por  
 Ls-crm/lt tan fxln dns sl fos no por  
 Sh-gry/dk gry  
 Ss-lt gry fgrn sub ang to sub rnd sl fri to tite cement  
 Ss-AA  
 Ss-lt gry/gry fgrn sub ang to sub rnd sl fri to tite cement  
 Ss-AA  
 Sh-gry/dk gry  
 Ls-lt gry f/mxln mhd sl fos no por  
 Ls-crm/tan f/mxln dns sl fos no por  
 Sh-gry/dk gry  
 Ls-crm/tan f/mxln mhd sl fos no por  
 Ls-crm/lt tan f/mxln dns sl fos no por  
 Sh-gry/dk gry  
 Ls-lt gry f/mxln mhd sl fos fr inter xln por nsfo  
 Ls-lt gry f/mxln mhd/dns sl fos no por  
 Ls-lt gryf/mxln dns with blk oom no por  
 Sh-gry/dk gry  
 Ls-lt gry/crm fxln mhd sl clky sl fos no por  
 Ls-lt gry/crm fxln mhd sl clky sl fos no por  
 Ls-AA

**Mud Data at 3724'**  
 7:30 am 5-15-15  
 Wt 8.8 Vis 54 WL 7.2  
 pH 10.5 Chl 1500 Sol 3.5%  
 YP 16 LCM 2.5#



Sh-blk carb  
Ls-lt gry/tan f/xln mhd/dns sl fos no por

Sh-gry/dk gry

Sh-AA

Sh-gry/dk gry sm Pyrite

Sh-AA

----- **Toronto 3928 -1081** -----

Ls-lt gry/tan f/mxln mhd/dns fos no por sm Ls-lt gry mott red br fxln mhd no por

Sh-gry/dk gry

----- **Lansina 3941 -1094** -----

Ls-lt gry/crm f/mxln mhd/dns sl fos no por sm Ls-wt fxln soft clky

Ls-lt gry/crm/wt f/mxln mhd sl clky sl fos fr inter xln por nsfo sm Ls-tan fxln mhd fos oom no por

Ls-lt gry/tan fxln mhd no por sm Ls-brn/lt brn f/mxln mhd sl fos no por and sm Ls-crm (3 pcs) fxln mhd fr inter xln por sl cut ssfo on brk

Ls-lt gry/tan f/mxln mhd/dns no por sm Ls-tan fxln mhd fos oom no por and Ls-lt gry/wt fxln mhd sl clky sl gils no por

Sh-gry/dk gry

Ls-tan fxln mhd pr inter xln por brn spt stn sl cut sl/fr sfo on brk no odor and sm Ls-lt gry/wt fxln mhd high gils no por

Ls-crm fxln dns sl clky no por sm Ls-wt fxln soft clky no por and Cht-wt fsh opa

Sh-gry/dk gry

Ls-crm fxln dns sl clky no por sm Cht-wt fsh opa and sm Ls-wt fxln dns sl clky highly gils no por

Ls-crm/lt gry fxln dns sl clky no por sm Ls-wt fxln soft clky no por

Ls-lt gry/crm fxln dns sl clky no por sm Ls-lt gry fxln dns sl gils

Ls-crm/lt gry fxln dns sl clky no por sm Ls-wt fxln soft clky no por

Ls-lt gry fxln mhd fr vug por dk brn spt stn fr cut sl/fr sfo on brk no odor

Sh-gry/dk gry

Ls-lt gry fxln mhd ool fr inter ool por dk brn spt stn fsfo on brk faint odor

Sh-gry/dk gry

Ls-lt gry/tan fxln mhd mhd/dns sl fos no por sm Ls-lt gry fxln mhd ool fr inter ool por brn spt stn sl cut ssfo on brk no odor

Ls-lt gry/tan f/mxln dns no por

Ls-lt gry/crm fxln mhd/dns sl clky no por

Ls-AA wm Ls-wt fxln soft clky no por

Sh-gry/dk gry

Ls-lt gry/crm fxln dns sl clky no por sm Ls-wt fxln soft clky no por

Ls-AA

Ls-lt gry/crm fxln dns sl clky no por

Ls-AA

----- **Muncie Creek 4063 -1216** -----

Ls-tan/gry fx/n dns no por sm Cht-gry/brn fsh opa

Sh-gry/dk gry

Ls-tan fxln dns no por

Sh-gry/dk gry

Ls-tan f/mxln mhd fos oom fr inter fos/vug por lt brn spt stn fr cut fsfo on brk sl odor

Ls-lt gry/tan fxln mhd/dns no por

Ls-lt gry/crm fxln dns no por sm Ls-wt fxln soft clky no por

Sh-gry/dk gry

Ls-lt gry/gry fxln dns no por

Sh-gry/grn/mar

**DST No. 1**

3950 to 3970  
30-45-45-60  
1st Open: BOB in 17.5"  
2nd Open: BOB in 31"  
Recovery:  
530' W (Chl 115,000 ppm)  
IHP 1886 FHP 1883  
IFP 11-135 IFP 138-253  
ISIP 1221 FSIP 1207  
Temp 127°

**DST No. 2**

3994 to 4014  
30-45-30-45  
1st Open: Surface blow  
2nd Open: No blow, flushed  
tool, no help  
Recovery: 10' Mud  
IHP 1905 FHP 1891  
IFP 9-12 FFP 12-18  
ISIP 921 FSIP 872  
Temp 114°

**DST No. 3**

4060 to 4088  
30-45-45-60  
1st Open: Fair blow,  
building to 5.5"  
2nd Open: Fair blow,  
building to 6"  
Recovery:  
190' W (Chl 82,000 ppm)  
IHP 1931 FHP 1923  
IFP 10-69 FFP 72-103  
ISIP 1320 FSIP 1318  
Temp 126°

**DST No. 1**

3950 to 3970  
30-45-45-60  
1st Open: BOB in 17.5"  
2nd Open: BOB in 31"  
Recovery:  
530' W (Chl 115,000 ppm)  
IHP 1886 FHP 1883  
IFP 11-135 IFP 138-253  
ISIP 1221 FSIP 1207  
Temp 127°

Pulled 50 stand short trip at 3970', then cir for test - 90"

Pipe Strap at 3970'  
Short 0.45'

**Mud Data at 3970'**

11:00 am 5-16-15  
Wt 9 Vis 47 WL 7.2  
pH 10 Chl 3000 Sol 4.8%  
YP 15 LCM 2#

**DST No. 2**

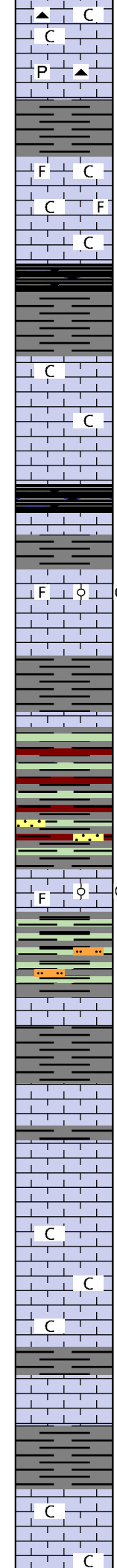
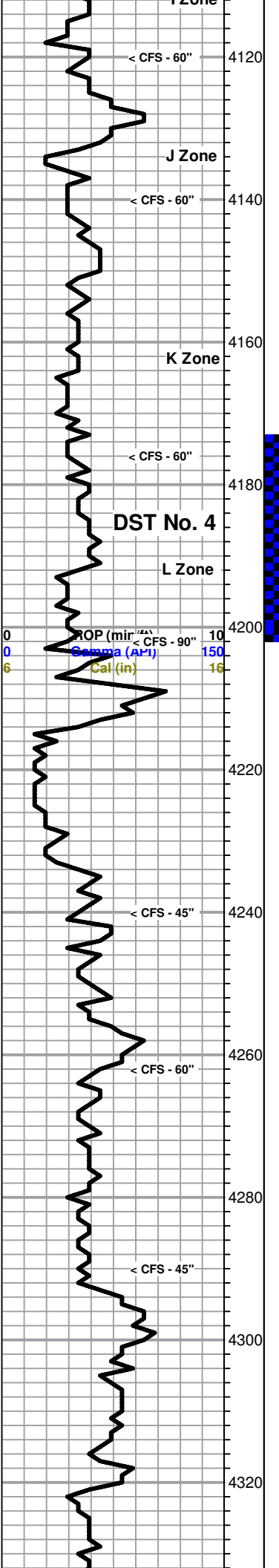
3994 to 4014  
30-45-30-45  
1st Open: Surface blow  
2nd Open: No blow, flushed  
tool, no help  
Recovery: 10' Mud  
IHP 1905 FHP 1891  
IFP 9-12 FFP 12-18  
ISIP 921 FSIP 872  
Temp 114°

**DST No. 3**

4060 to 4088  
30-45-45-60  
1st Open: Fair blow,  
building to 5.5"  
2nd Open: Fair blow,  
building to 6"  
Recovery:  
190' W (Chl 82,000 ppm)  
IHP 1931 FHP 1923  
IFP 10-69 FFP 72-103  
ISIP 1320 FSIP 1318  
Temp 126°

**Mud Data at 4088'**

12:00 pm 5-17-15  
Wt 8.9 Vis 60 WL 7.2  
pH 10.5 Chl 2000 Sol 4.2%  
YP 20 LCM 2#

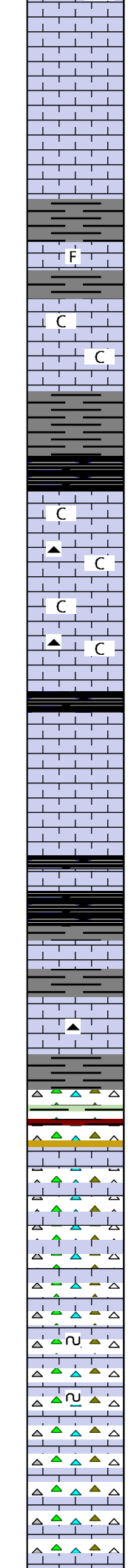
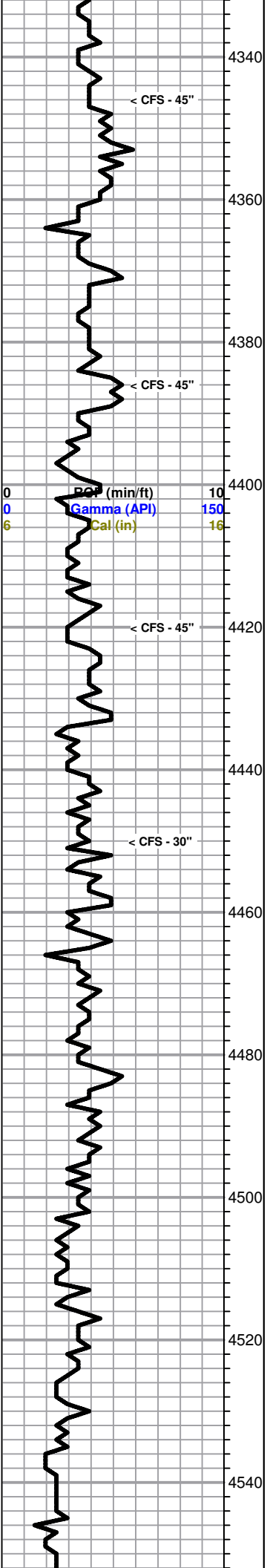


Ls-lt gry/crm fxl n dns sl clky no por sm Cht-lt gry/tan fsh opa q  
 Ls-lt gry/crm fxl n mhd sl clky no por  
 Ls-lt gry/crm fxl n dns no por sm Cht-tan fsh opa q and Pyrite  
 Sh-gry/dk gry  
 Ls-crm/wt fxl n soft/mhd clky sl fos no por  
 Ls-crm/wt fxl n mhd sl clky sl fos no por  
 Ls-crm/wt/lt gry fxl n dns sl clky no por  
 ----- Stark 4149 -1302 -----  
 Sh-blk carb  
 Sh-gry/dk gry  
 Ls-lt gry/crm/lt tan fxl n mhd/dns sl clky no por  
 Ls-AA sm Ls-wt fxl n soft clky no por  
 Ls-lt gry/gry fxl n dns no por  
 ----- Hushpuckney 4180 -1333 -----  
 Sh-blk carb  
 Ls-lt gry/gry fxl n dns no por  
 Sh-gry/dk gry  
 Ls-tan fxl n mhd fos ool fr inter ool por dk brn spt stn fr cut fr/gd  
 show fo and gas bub on brk sl odor  
 Ls-lt gry/tan fxl n dns no por  
 ----- Base/Kansas City 4204 -1357 -----  
 Sh-gry/dk gry  
 Ls-lt gry/gry fxl n dns no por  
 Sh-gry/grn/sm red and mar  
 Sh-AA  
 Sh-AA sm Ss-red brn fgrn sub ang sl sity tite cement  
 ----- Marmaton 4234 -1387 -----  
 Ls-lt gry/gry f/mxl n mhd/dns sl fos no por with sm Ls-tan (3 pcs) fxl n fos  
 sl ool pr inter ool por lt brn spt stn sl cut ssfo and gas bub on brk no odor  
 Sh-gry/dk gry/grn  
 Sh-AA sm Silt-lt gry  
 ----- Altamont 4252 -1405 -----  
 Ls-tan/lt gry fxl n mhd/dns no por  
 Sh-gry/dk gry  
 Ls-crm/lt tan fxl n mhd/dns no por  
 Sh-gry/dk gry  
 Ls-lt gry tan fxl n dns no por  
 Ls-AA  
 Ls-lt gry/tan fxl n mhd/dns sl clky no por  
 Ls-AA  
 Ls-lt gry/tan fxl n dns sl clky no por  
 Sh-gry/dk gry  
 Ls-lt gry/tan fxl n mhd/dns no por  
 Sh-gry/dk gry  
 ----- Pawnee 4321 -1474 -----  
 Ls-crm/lt tan fxl n mhd/dns sl clky no por  
 Ls-lt gry/lt tan fxl n mhd/dns sl clky no por

**DST No. 4**  
 4173 to 4202  
 30-45-45-60  
 1st Open: BOB in 1.5"  
 2nd Open: BOB in 2.5" GTS  
 in 12" of 2nd Shut-in  
 Recovery:  
 1270' CGO (10%G, 90%O  
 39 degree gravity)  
 210' GMCO (10%G, 25%M  
 65%O)  
 IHP 2043 FHP 2039  
 IFP 74-319 FFP 334-586  
 ISIP 1256 FSIP 1222  
 Temp 131 °

**Mud Data at 4202'**  
 10:00 am 5-18-15  
 Wt 9.1 Vis 50 WL 7.2  
 pH 10 Chl 4000 Sol 5.4%  
 YP 18 LCM 1.5#





Ls-lt gry/gry fxln mhd/dns no por

Ls-AA

Ls-lt gry/gry/tan fxln dns no por

Ls-AA

Sh-gry/dk gry

Ls-lt gry/gry f/mxln dns sl fos no por

----- **Myrick Station 4374 -1527** -----

Ls-lt gry/lt tan fxln dns no por sm Ls-wt fxln soft clky

Ls-AA

Ls-lt gry/lt tan fxln dns no por

Sh-gry/dk gry

Sh-blk carb

----- **Fort Scott 4401 -1554** -----

Ls-lt gry/crm f/mxln mhd sl clky no por

Ls-lt gry/gry f/mxln mhd/dns sl clky no por sm Cht-lt gry/gry fsh semi trans

Ls-lt gry/crm fxln dns sl clky no por

Ls-lt gry/crm fxln mhd/dns sl clky no por sm Cht-lt gry/gry fsh opa

Ls-lt gry/crm fxln dns no por

----- **Cherokee Shale 4429 -1582** -----

Ls-lt gry/brn fxln dns no por

Ls-lt gry/lt tan fxln mhd/dns no por

Ls-lt gry/lt tan fxln dns no por

Ls-AA

Sh-blk carb

Ls-lt gry/tan fxln dns no por

Sh-blk carb

Sh-gry/dk gry

Ls-lt gry/gry/tan f/mxln dns no por

Sh-gry/dk gry

Ls-lt gry/tan fxln dns no por sm Cht-tan fsh opa

Sh-gry/dk gry

Sh-gry/grn/mar sm yel and Cht-wt/tan/lt org fsh opa

----- **Mississippi 4493 -1646** -----

Ls-wt/crm mxln mhd sl clky no por and Cht-wt/crm/tan fsh opa

Ls and Cht-AA

Ls-crm/wt mxln mhd sl clky no por and Cht-wt/lt gry/tan fsh opa

Ls and Cht-AA

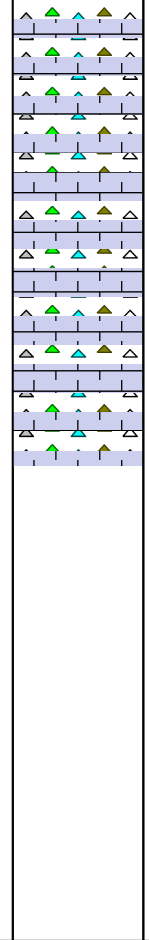
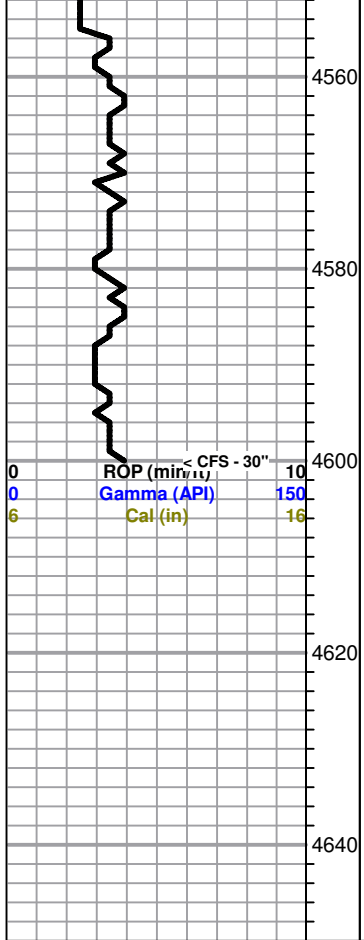
Ls-tan/wt fxln mhd sl clky no por sm Ls-lt gry fxln mhd with glau specks no por and Cht-wt/tan/lt gry fsh opa

Ls-AA

Ls-crm/wt/tan fxln mhd sl clky no por and Cht-lt gry/wt fsh opa

Ls and Cht-AA

**Mud Data at 4366'**  
 10:00 am 5-19-15  
 Wt 9.4 Vis 58 WL 8.0  
 pH 9 Chl 5000 Sol 7.5%  
 YP 14 LCM 1.5#



Ls-crm/wt fxln mhd sl clky no por and Cht-wt/lt gry fsh opa

Ls and Cht-AA

Ls-cr/wt fxln mhd sl clky no por and Cht-wt/lt gry fsh opa

Ls and Cht-AA

Ls-crm/wt fxln mhd sl clky no pro and Cht-lt gry/gry fsh opa

Ls and Cht-AA

----- RTD 4600 -1753 -----

Finished drilling at 2:37 am on 5-20-15. Pulled 10 stand short trip, then circulated for log 90 minutes.

Finished Logging at 10:28 am on 5-20-15

-  menalb1dst1all-1.jpg
-  menalb1dst2all-1.jpg
-  menalb1dst3all-1.jpg
-  menalb1dst4all-1.jpg

# DIAMOND TESTING GENERAL REPORT

**Jake Fahrenbruch, Tester**

Cell: (620) 282-8977 / Office: (800) 542-7313



## TEST INFORMATION

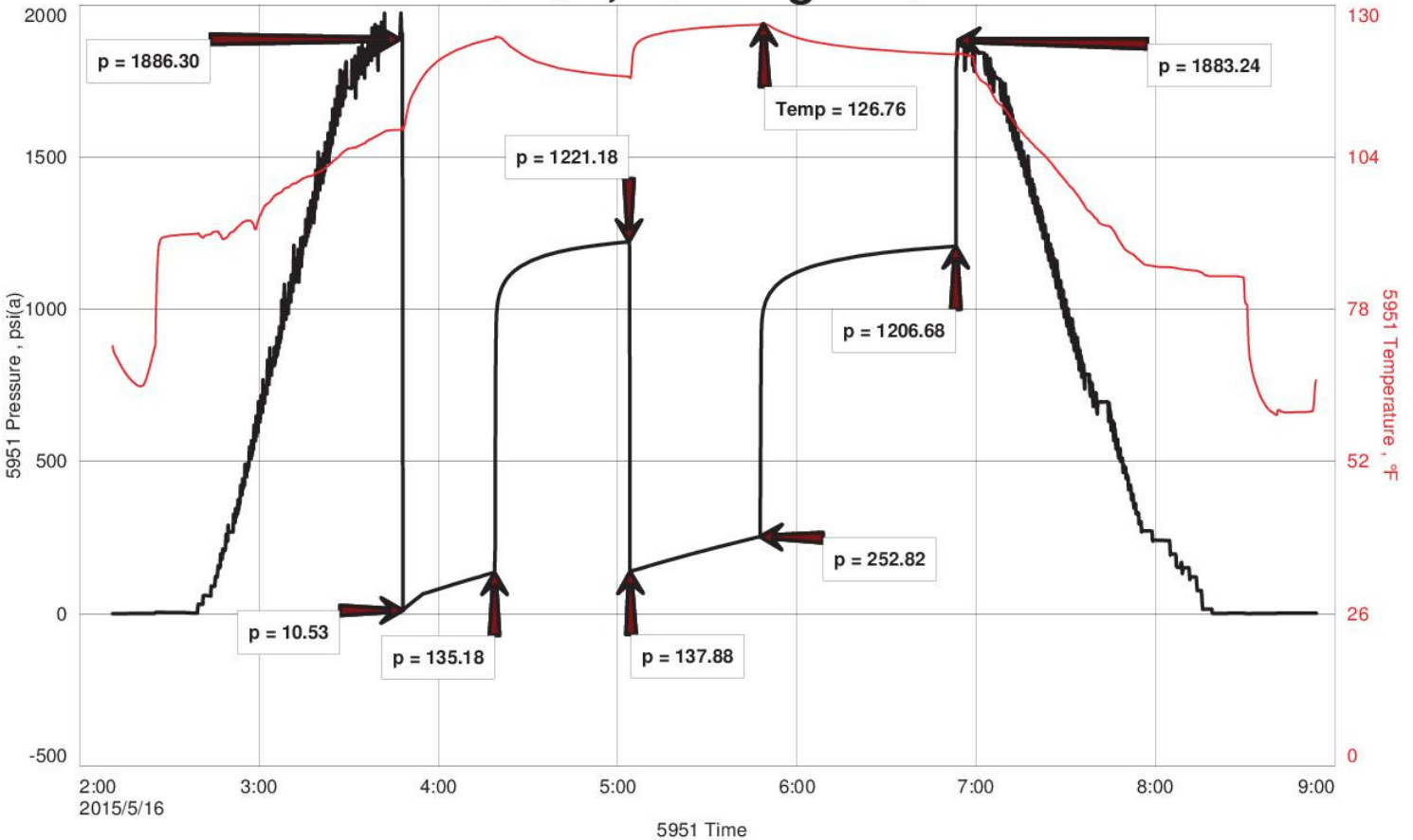
<b>Well Name</b>	Mense-Albers #1
<b>Company Name</b>	Ritchie Exploration, Inc.
<b>Formation</b>	Lansing "A-C" 3950'-3970'
<b>Test Type</b>	Bottom-Hole w/J&J
<b>Surface Location</b>	Sec 24-10s-30w-Sheridan Co.-KS
<b>KB Elevation (SL)</b>	2847.000
<b>Gauge Name</b>	5951
<b>Start Test Date</b>	2015/05/16
<b>Start Test Time</b>	02:11:00
<b>Final Test Date</b>	2015/05/16
<b>Final Test Time</b>	08:57:00
<b>Job Number</b>	F384
<b>Contact</b>	Justin Clegg
<b>Site Contact</b>	Mac Armstrong

## TEST RESULTS

Initial flow, blow at BOB in 17.5 minutes. Surface blowback, died.  
Final flow, blow at BOB in 31 minutes. No blowback.

Recovered 530' of salt water, 100% wtr  
RW: .09 ohm @ 55 F  
PH: 7.0  
Chlorides: 115,000 PPM

## DST #1, Lansing "A-C"

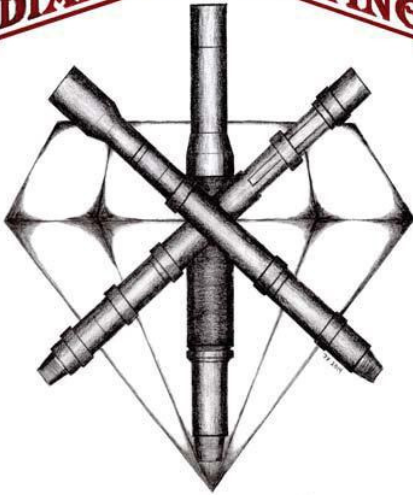


# DIAMOND TESTING GENERAL REPORT

**Jake Fahrenbruch, Tester**

Cell: (620) 282-8977 / Office: (800) 542-7313

**DIAMOND TESTING**



## TEST INFORMATION

<b>Well Name</b>	Mense-Albers #1
<b>Company Name</b>	Ritchie Exploration, Inc.
<b>Formation</b>	Lansing "E&F" 3994'-4014'
<b>Test Type</b>	Bottom Hole w/J&J
<b>Surface Location</b>	Sec 24-10s-30w-Sheridan Co.-KS
<b>KB Elevation (SL)</b>	2847.000
<b>Gauge Name</b>	5951
<b>Start Test Date</b>	2015/05/16
<b>Start Test Time</b>	17:52:00
<b>Final Test Date</b>	2015/05/17
<b>Final Test Time</b>	00:07:00
<b>Job Number</b>	F385
<b>Contact</b>	Justin Clegg
<b>Site Contact</b>	Mac Armstrong

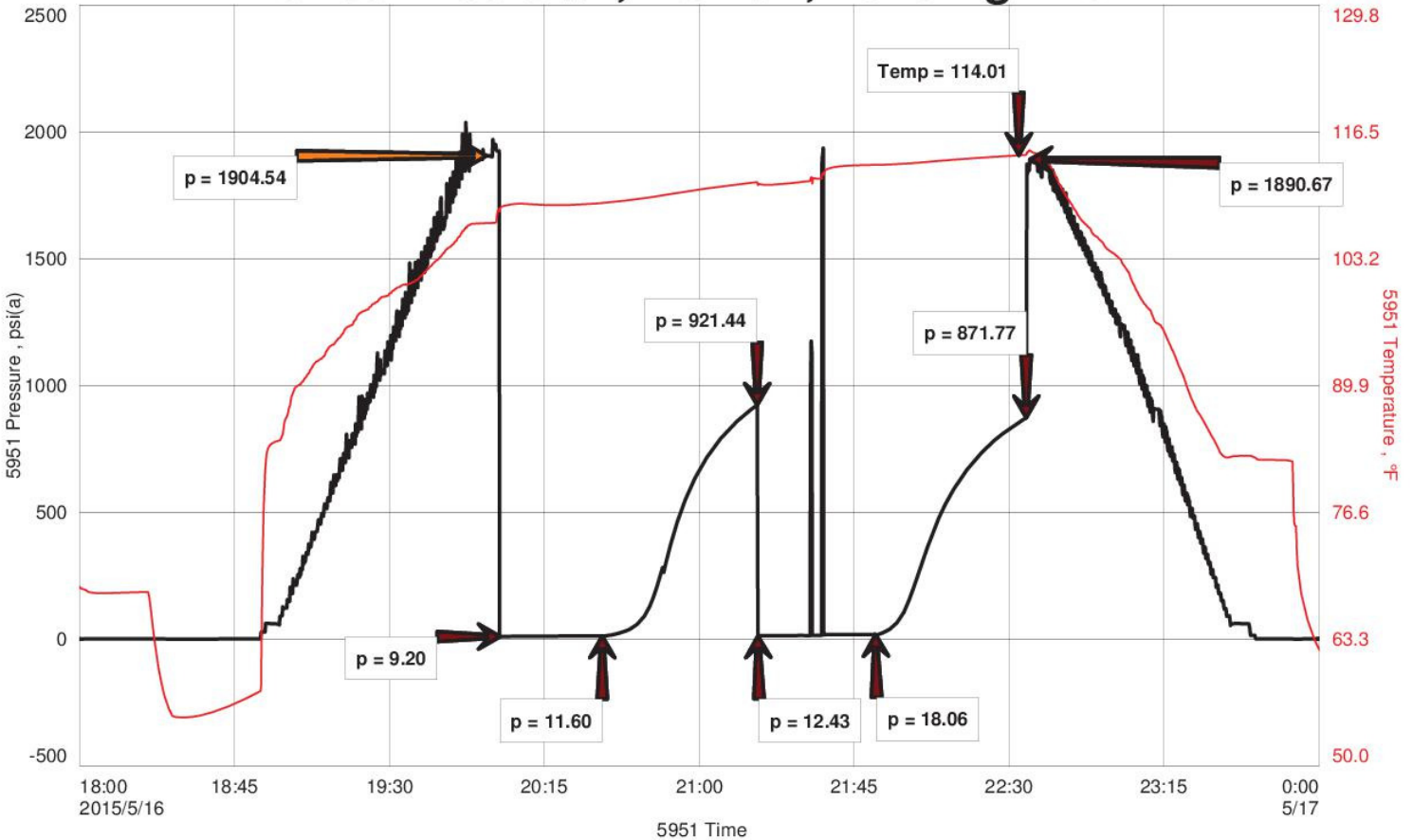
## TEST RESULTS

Initial flow, surface blow.

Final flow, no blow, flushed tool, surge blow, no blow.

Recovered 10' of mud, 100% mud

## Mense-Albers #1, DST #2, Lansing "E&F"

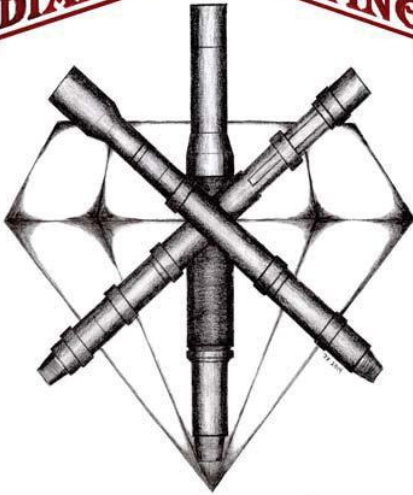


# DIAMOND TESTING GENERAL REPORT

**Jake Fahrenbruch, Tester**

Cell: (620) 282-8977 / Office: (800) 542-7313

**DIAMOND TESTING**



## TEST INFORMATION

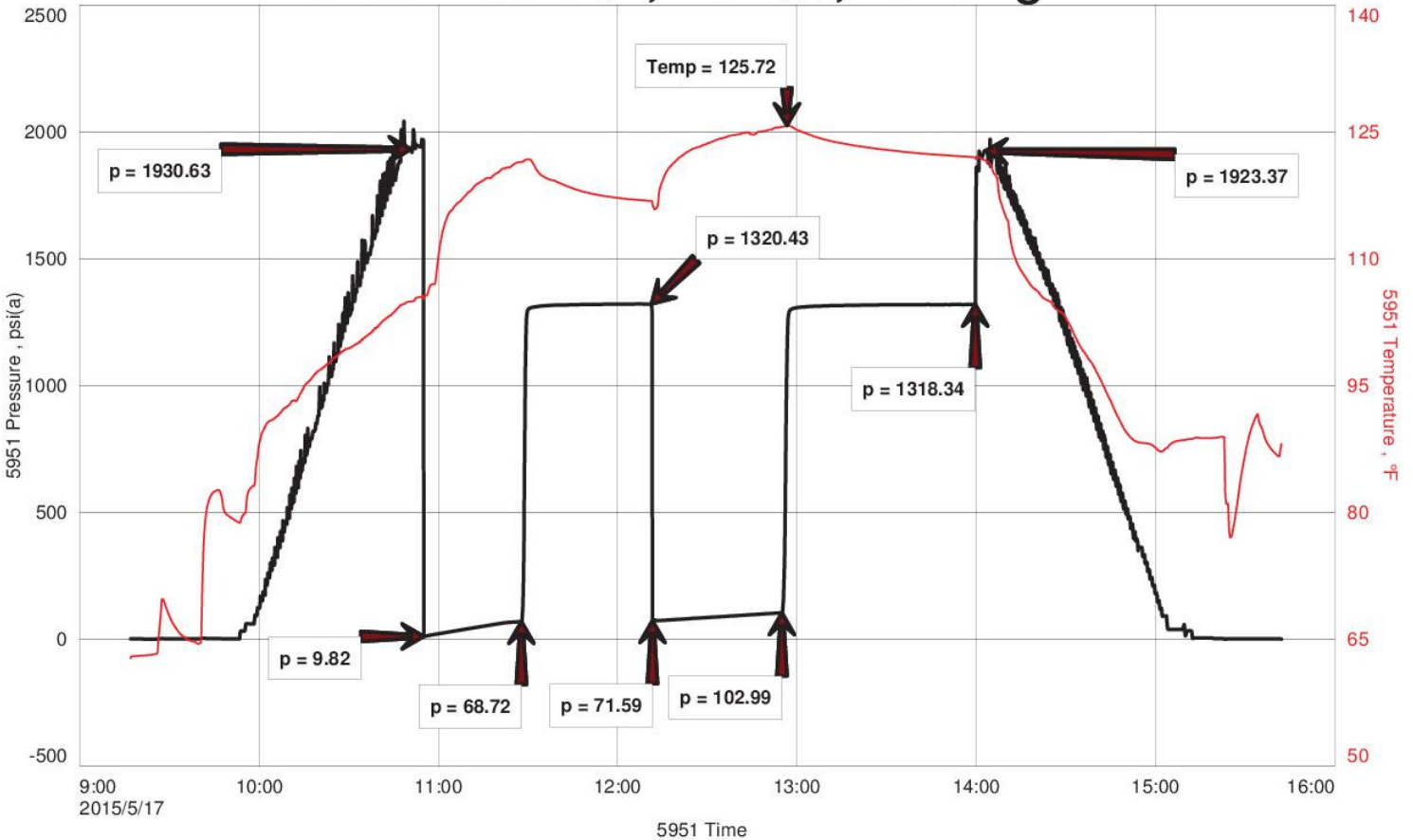
<b>Well Name</b>	Mense-Albers #1
<b>Company Name</b>	Ritchie Exploration, Inc.
<b>Formation</b>	Lansing "H" 4060'-4088'
<b>Test Type</b>	Bottom-Hole w/J&J
<b>Surface Location</b>	Sec 24-10s-30w-Sheridan Co.-KS
<b>KB Elevation (SL)</b>	2847.000
<b>Gauge Name</b>	5951
<b>Start Test Date</b>	2015/05/17
<b>Start Test Time</b>	09:17:00
<b>Final Test Date</b>	2015/05/17
<b>Final Test Time</b>	15:43:00
<b>Job Number</b>	F386
<b>Contact</b>	Justin Clegg
<b>Site Contact</b>	Mac Armstrong

## TEST RESULTS

Initial flow, blow increased to 5.5". No blowback.  
 Final flow, blow increased to 6". No blowback.

Recovered 190' of salt water, 100%w  
 RW: .12 ohm @ 60 F  
 PH: 7.0  
 Chlorides: 82,000 PPM

## Mense-Albers #1, DST #3, Lansing "H"



# DIAMOND TESTING GENERAL REPORT

**Jake Fahrenbruch, Tester**

Cell: (620) 282-8977 / Office: (800) 542-7313



## TEST INFORMATION

<b>Well Name</b>	Mense-Albers #1
<b>Company Name</b>	Ritchie Exploration, Inc.
<b>Formation</b>	Lansing "L" 4173'-4202'
<b>Test Type</b>	Bottom-Hole w/J&J
<b>Surface Location</b>	Sec 24-10s-30w-Sheridan Co.-KS
<b>KB Elevation (SL)</b>	2847.000
<b>Gauge Name</b>	5951
<b>Start Test Date</b>	2015/05/18
<b>Start Test Time</b>	07:08:00
<b>Final Test Date</b>	2015/05/18
<b>Final Test Time</b>	14:55:00
<b>Job Number</b>	F387
<b>Contact</b>	Justin Clegg
<b>Site Contact</b>	Mac Armstrong

## TEST RESULTS

Initial flow, B.O.B. in 1.5 minutes. Blowback at B.O.B. in 13 minutes.  
 Final flow, B.O.B. in 2.5 minutes. Blowback at B.O.B. in 12 minutes. G.T.S.

**TOTAL RECOVERED FLUID: 1480'**

1270' Clean Gassy Oil 10% g, 90%o  
 210' Gas Cut Mud Cut Oil 10% g, 65% o, 25%m  
 ---- Gravity: 39 @ 60 F

## Mense-Albers #1, DST #4, Lansing "L"

