

Scale 1:240 Imperial

Well Name: SCHOENBERGER #10-16  
Surface Location: SW NW SE SE Sec. 10 - 16S - 14W  
Bottom Location:  
API: 15-009-26214  
License Number: 33813  
Spud Date: 4/19/2018 Time: 8:45 PM  
Region: BARTON COUNTY KANSAS  
Drilling Completed: 4/24/2018 Time: 8:45 AM  
Surface Coordinates: 770' FSL & 1155' FEL  
Bottom Hole Coordinates:  
Ground Elevation: 1926.00ft  
K.B. Elevation: 1931.00ft  
Logged Interval: 2300.00ft To: 3450.00ft  
Total Depth: 3450.00ft  
Formation: LANSING - KANSAS CITY; ARBUCKLE  
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

**OPERATOR**

Company: JASON OIL COMPANY, LLC  
Address: P.O. BOX 701  
RUSSELL, KS 67665  
  
Contact Geologist: JIM SCHOENBERGER  
Contact Phone Nbr: (785) 483-4204  
Well Name: SCHOENBERGER #10-16  
Location: SW NW SE SE Sec. 10 - 16S - 14W  
API: 15-009-26214  
Pool: State: KANSAS Field: NUSS SOUTH  
Country: USA

**SURFACE CO-ORDINATES**

Well Type: Vertical  
Longitude: -98.8531071  
Latitude: 38.6688529  
N/S Co-ord: 770' FSL  
E/W Co-ord: 1155' FEL

**LOGGED BY**



Company: BIG CREEK CONSULTING, INC.  
Address: 1909 MAPLE  
ELLIS, KS 67637  
  
Phone Nbr: (785) 259-3737  
Logged By: GEOLOGIST Name: JEFF LAWLER

**CONTRACTOR**

Contractor: WW DRILLING  
Rig #: 2  
Rig Type: MUD ROTARY  
Spud Date: 4/19/2018 Time: 8:45 PM  
TD Date: 4/24/2018 Time: 8:45 AM  
Rig Release: 4/26/2018 Time: 5:30 AM

### ELEVATIONS

K.B. Elevation: 1931.00ft  
K.B. to Ground: 5.00ft

Ground Elevation: 1926.00ft

### NOTES

AFTER LOG ANALYSIS DECISION WAS MADE TO RUN PRODUCTION CASING AND FURTHER EVALUATE ZONES OF INTEREST UPON COMPLETION WITH PERFORATION.

RESPECTFULLY SUBMITTED,  
JEFF LAWLER

### WELL COPARISON SHEET

FORMATION	SCHOENBERGER 10-16								SWD				P&A JUNE 89'							
	NE SE 10-16-14				SE NW SE 10-16-14				SW SW SE 10-16-14				SW NW SE 10-16-14							
	1931		1926		1922		1896		1903		1900		1900		1900					
	LOGTOPS	SAMPLETOPS	COMP. CARD	LOG	SAMPL.	COMP. CARD	LOG	SAMPL.	COMP. CARD	LOG	SAMPL.	COMP. CARD	LOG	SAMPL.	COMP. CARD	LOG	SAMPL.			
ANHYDRITE TOP	898	1033	904	1027	887	1035	- 2	- 8	874	1022	+ 11	+ 5	899	1004	+ 29	+ 23	880	1020	+ 13	+ 7
BASE	927	1004	922	1009	917	1005	- 1	+ 4	905	991	+ 13	+ 18					907	993	+ 11	+ 16
TOPEKA	2841	-910	2842	-911	2835	-913	+ 3	+ 2	2811	-915	+ 5	+ 4	2825	-922	+ 12	+ 11	2815	-915	+ 5	+ 4
HEEBNER	3073	-1142	3074	-1143	3071	-1149	+ 7	+ 6	3044	-1148	+ 6	+ 5	3058	-1155	+ 13	+ 12	3047	-1147	+ 5	+ 4
TORONTO	3090	-1159	3093	-1162	3086	-1164	+ 5	+ 2	3061	-1165	+ 6	+ 3	3076	-1173	+ 14	+ 11	3066	-1166	+ 7	+ 4
LKC	3143	-1212	3144	-1213	3140	-1218	+ 6	+ 5	3115	-1219	+ 7	+ 6	3128	-1225	+ 13	+ 12	3118	-1218	+ 6	+ 5
BKC	3339	-1408	3341	-1410	3340	-1418	+ 10	+ 8	3326	-1430	+ 22	+ 20					3328	-1428	+ 20	+ 18
CONGLOMERATE	3353	-1422																		
REWORKED ARB	3357	-1426							3330	-1434	+ 8						3342	-1442	+ 16	
ARBUKLE	3359	-1428	3367	-1436	3352	-1430	+ 2	- 6	3364	-1468	+ 40	+ 32					3349	-1449	+ 21	+ 13
TOTAL DEPTH	3450	-1519	3450	-1519	3405	-1483	- 36	- 36	3600	-1704	+ 185	+ 185	3385	-1482	- 37	- 37	3450	-1550	+ 31	+ 31

### DST #1 LKC D - G 3616' - 3666'



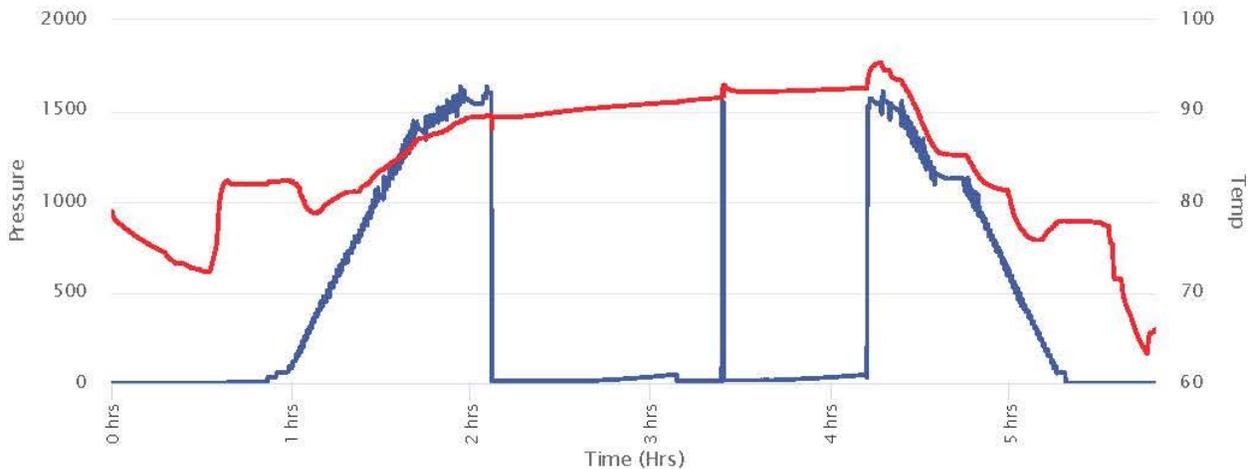
Company: Jason Oil Company ,  
LLC  
Lease: Schoenberger #10-16

SEC: 10 TWN: 16 S RNG: 14 W  
County: BARTON  
State: Kansas  
Drilling Contractor: VVV Drilling, LLC -  
Rig 2  
Elevation: 1928 Est  
Field Name: Nuss South  
Pool: Infield  
Job Number: 148

DATE  
April  
23  
2018

DST #1 Formation: LANS D-G Test Interval: 3216 - 3266' Total Depth: 3266'  
Time On: 14:30 04/23 Time Off: 20:05 04/23  
Time On Bottom: 16:27 04/23 Time Off Bottom: 18:27 04/23

Electronic Volume Estimate: 0' 1st Open Minutes: 30 0" at 30 min 1st Close Minutes: 30 0" at 30 min 2nd Open Minutes: 30 0" at 30 min 2nd Close Minutes: 30 0" at 30 min



— Press(Psla) — Temp(F)

**DST #1 LKC D - G 3616' - 3666'**



Company: Jason Oil Company ,  
 LLC  
 Lease: Schoenberger #10-16

SEC: 10 TWN: 16 S RNG: 14 W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC -  
 Rig 2  
 Elevation: 1928 Est  
 Field Name: Nuss South  
 Pool: Infield  
 Job Number: 148

DATE  
 April  
 23  
 2018

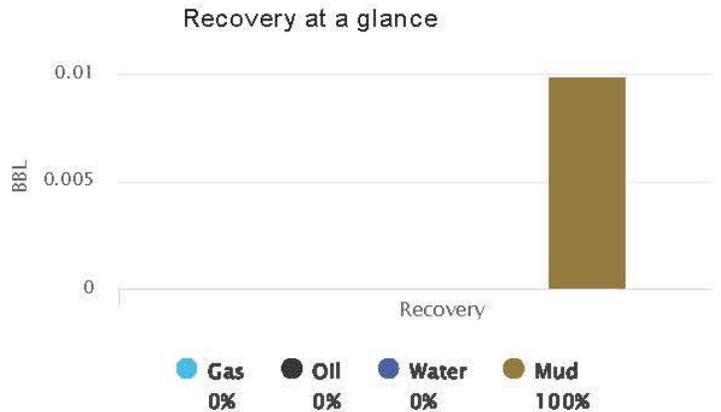
DST #1 Formation: LANS D- G Test Interval: 3216 - 3266' Total Depth: 3266'  
 Time On: 14:30 04/23 Time Off: 20:05 04/23  
 Time On Bottom: 16:27 04/23 Time Off Bottom: 18:27 04/23

<u>Recovered</u>		<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
<u>Foot</u>	<u>BBLs</u>					
2	0.00984	M	0	0	0	100

Total Recovered: 2 ft  
 Total Barrels Recovered: 0.00984

**Reversed Out**  
 NO

Initial Hydrostatic Pressure	1537	PSI
Initial Flow	11 to 13	PSI
Initial Closed in Pressure	50	PSI
Final Flow Pressure	13 to 17	PSI
Final Closed in Pressure	47	PSI
Final Hydrostatic Pressure	1532	PSI
Temperature	93	°F
Pressure Change Initial Close / Final Close	6.3	%



**DST #2 LKC H - K 3270' - 3328'**



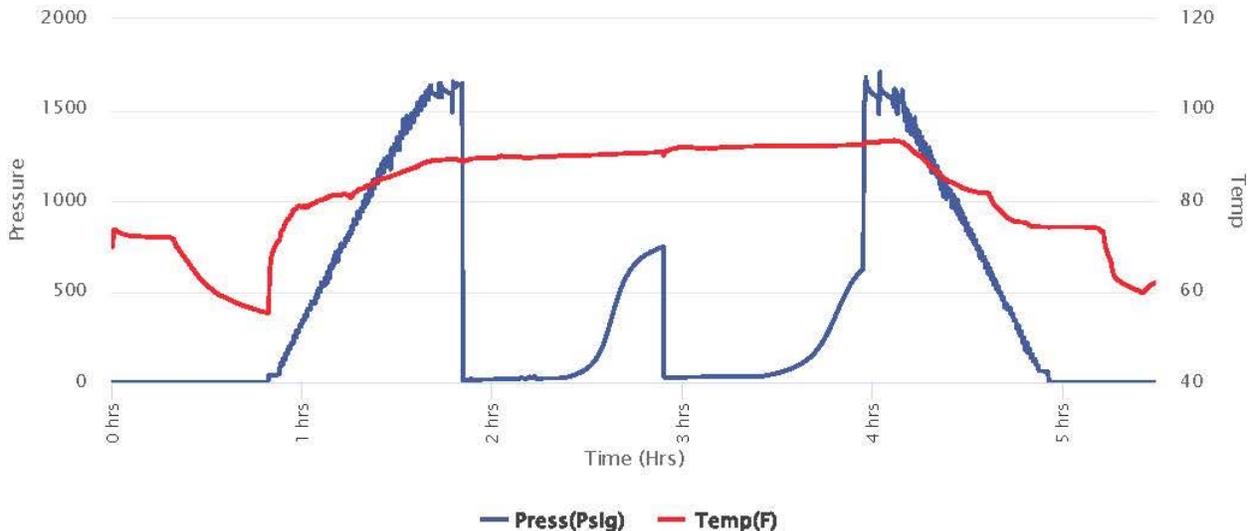
Company: Jason Oil Company ,  
 LLC  
 Lease: Schoenberger #10-16

SEC: 10 TWN: 16 S RNG: 14 W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC -  
 Rig 2  
 Elevation: 1928 Est  
 Field Name: Nuss South  
 Pool: Infield  
 Job Number: 148

<u>DATE</u>
April
24
2018

DST #2	Formation: LANS/KC H-K	Test Interval: 3270 - 3329'	Total Depth: 3329'
	Time On: 04:14 04/24	Time Off: 09:35 04/24	
	Time On Bottom: 06:00 04/24	Time Off Bottom: 08:00 04/24	

Electronic Volume Estimate:	<u>1st Open</u> Minutes: 30	1st Close Minutes: 30	<u>2nd Open</u> Minutes: 30	2nd Close Minutes: 30
42'	1.25" at 30 min	0" at 30 min	.48" at 30 min	0" at 30 min





**ROCK TYPES**



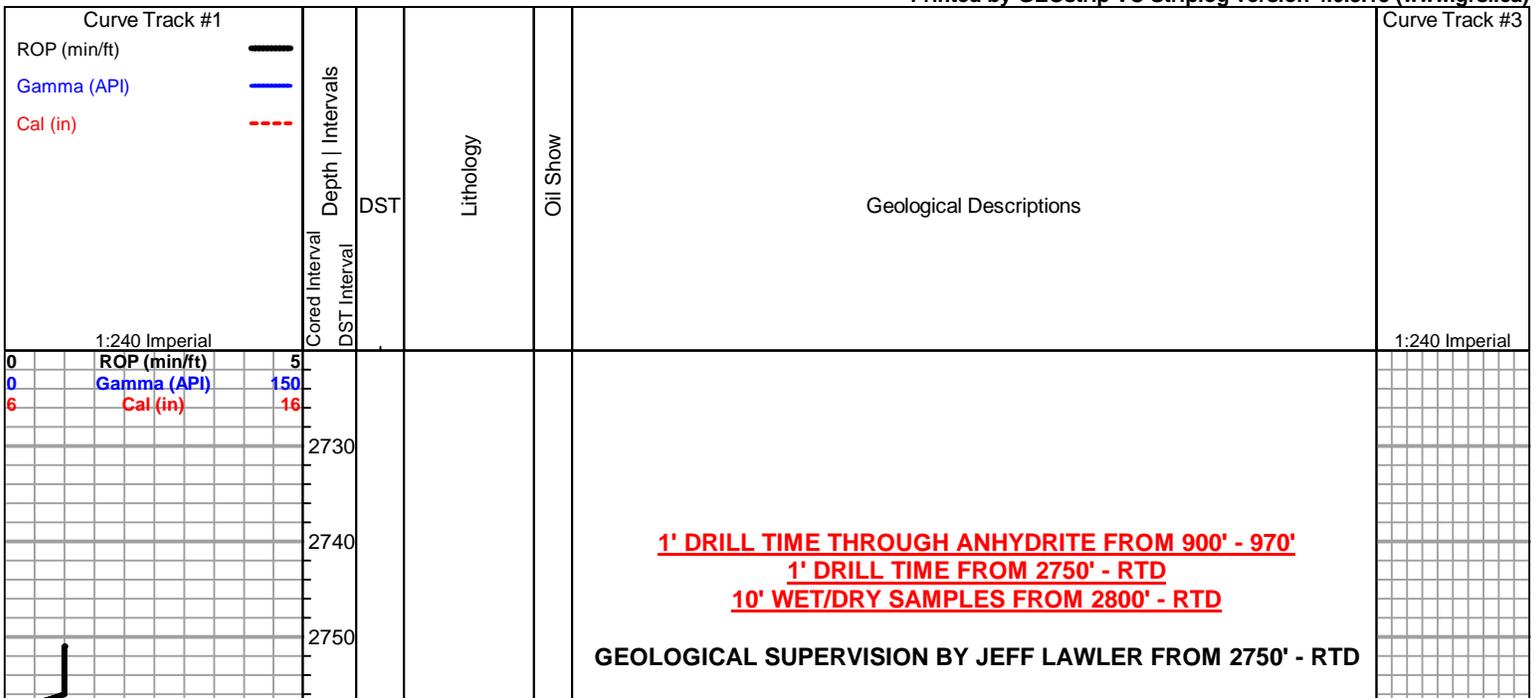
**OTHER SYMBOLS**

**MISC**

- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

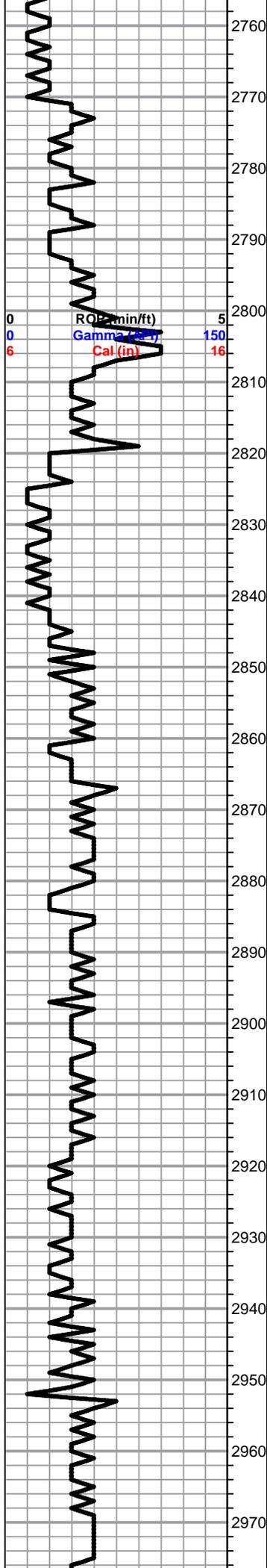
**DST**

- DST Int
- DST alt



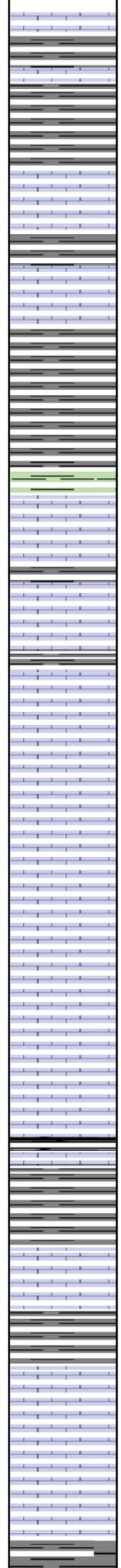
8 5/8" SURFACE PIPE SET @ 485' SURVEY 1 deg.

**ANHYDRITE TOP 904' (+1027) E-LOG 898' (+1033)**  
**ANHYDRITE BASE 922' (+1009) E-LOG 927' (+1004)**



ROF (min/ft) 5  
Gamma (cpm) 150  
Cal (in) 16

0  
6



Lm- Tan Cream, FXLN, dense, well cemented, sl fsl w/ sctrd XLN porosity, much argillaceous gray clumps

Lm- Buff Tan Cream, FXLN, fsl, dense XLN porosity, dove gray consolidated & well sorted micaceous Ss, barren

Sh- Gray, soft & silty, calcareous, dense & gritty, some sandy sh

**TOPEKA 2842' (-911) E-LOG 2841' (-910)** Lm- Cream Tan Gray, FXLN, dense, well cemented, sl fsl, poorly dev. w/ sctrd XLN porosity, barren

Lm- Cream Buff, FXLN, sl fsl, dense & well cemented, sctrd development & sctrd-dense XLN porosity, barren

Lm- Cream Off White, FXLN, dense, semi-gritty, poorly dev. w/ sctrd XLN porosity, barren

Lm- Cream VFXLN, A/A, Buff, arenaceous sl fsl Ls w/ consistent intergranular porosity, barren

Lm- Cream Buff, FXLN, dense, well cemented, poorly dev. w/ sctrd XLN porosity, fsl w/ sctrd secondary reXLN porosity, barren, several pcs of black chert/cherty Ls

Lm- A/A, few cream pcs w/ pyrite inclusions, sandy Ls, tight & poorly dev., micro XLN porosity

Lm- Cream Tan, FXLN, fsl, dense XLN porosity, barren

Lm- A/A chalky in part, dolomitic Ls w/ dense XLN porosity, sl granular, barren

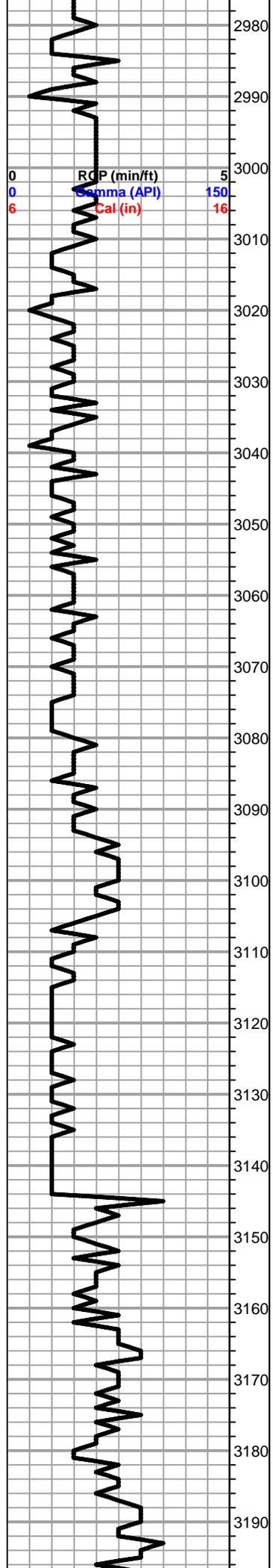
Sh- Black Gray Mint Green, dense & blocky

Lm- Cream Buff, VF-FXLN, dense, well cemented, fsl, poorly dev. w/ few pcs of trashy bioclastic, several pcs of dark var. colored chert/chery Ls

Lm- Cream VF-FXLN, dense, well cemented, mostly tight w/ sctrd XLN porosity, barren

Lm- Cream Buff, FXLN, fsl & sl unconsolidated, dense & poorly dev. w/ sctrd XLN porosity, barren, some chalky in part

Lm- Cream Buff, FXLN, fsl, some mod. dev., some poorly dev. sctrd XLN porosity, some soft white chalk



Sh- Gray Maroon Green, carbonaceous, argillaceous clumps, dense & blocky

Lm- Cream Off White, VF-FXLN, several pcs of porcelain like cherty Ls w/o vis. porosity, sl fsl, tight, sctrd XLN porosity, barren

Lm- Cream Off White, FXLN, fsl, mostly tight w/ sctrd XLN porosity, heavily mottled, barren

Lm- Cream Off White, FXLN, fsl, well dev. w/ dense XLN porosity, semi-crumbley, clean & barren

Lm- Cream Off White Buff, FXLN, sl fsl, mostly tight w/ sctrd XLN porosity, clean & barren

Lm- A/A chalky in part, Buff, VFXLN, dense, trashy bioclastic & fsl, well cemented, tight porcelain like cherty Ls w/o vis. porosity,

Lm- Cream Buff, FXLN, dense, well cemented, mostly tight w/ sctrd-dense XLN porosity, some chalky in part, mottling

Lm- Cream Off White, FXLN, sl fsl, poorly dev. w/ sctrd XLN porosity, clean & barren

**HEEBNER 3074' (-1143) E-LOG 3073' (-1142)** Sh- Black Gray Maroon, fissile & carbonaceous, gritty & earthy

**TORONTO 3093' (-1162) E-LOG 3090' (-1159)** Lm- Cream Off White, FXLN, mod. dev. w/ sctrd dnse XLN porosity, clean & barren

Lm- Off White, VF-FXLN, dense, well cemented, porcelain like cherty Ls w/ sctrd secondary reXLN porosity, TWO PCS W/ SCTRD LT ST, NSFO, NO ODR

Sh- Gray Maroon, gummy argillaceous clumps, sandy & gritty

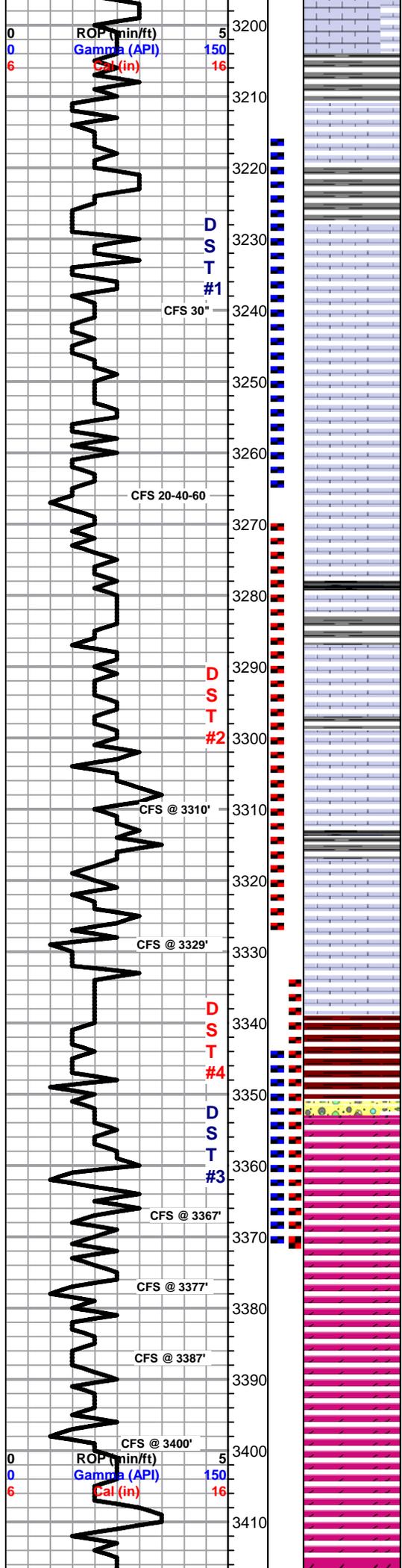
**LKC 3144 (-1213) E-LOG 3143' (-1212)** Lm- Cream Off White, FXLN, mod. well dev., loosely cemented & semi-crumbley, dense XLN & fn ppt intergranular

Lm- Cream Buff, VF-FXLN, dense well cemented & tight w/ poor vis. porosity, tight & fsl w/ poor sctrd XLN porosity, all clean & barren

Lm- Cream Off White, FXLN, fsl w/ crinoids & fusulinids, dense XLN & secondary reXLN porosity, few pcs sl chalky in part, clean & barren

Lm- Cream Off White Buff, fsl, poorly dev. w/ dense XLN porosity, barren, some sl chalky in part

Lm- Cream Off White, FXLN, mix of fsl w/ dense XLN porosity 2 PCS W/ LT SCTRD



STN, NSFO, NO ODR, 1 PCS w/ BLK RESIDUAL DO STN, & oomoldic w/ empty vugs, no intervugular connectivity

Lm- Cream, FXLN, fsl, well dev. w/ dense XLN & secondary reXLN porosity, clean & barren, several pcs tight, pristine & barren

Lm- Cream Off White, FXLN, well dev. w/ dense fn ppt & XLN porosity, well cemented, DRK SCTRD STN, TR GSY FO, FNT ODR

Lm- Cream Off White, VF-FXLN, dense, well cemented, mostly tight w/ sctrd lt XLN porosity, clean & barren

Lm- Cream Buff, FXLN, loosely cemented, crumbly & poorly dev. dense XLN porosity, sl chalky in part, 2-3 PCS W/ DRK SCTRD STN, NSFO, TR ODR

Lm- Cream Semi-Translucent, FXLN, fsl & oolitic, sctrd dev. w/ sctrd-dnse vry fn ppt & XLN porosity veins, 1-2 PCS W/ LT SCTRD STN, NSFO, TR ODR

Lm- Cream Off White, FXLN, dense, loosely cemented, chalky in part, barren

Sh- Black Gray Maroon, fissile & carbonaceous, gritty & calcareous

Lm- Off White, VF-FXLN, dense, well cemented, sctrd vry fn ppt & XLN porosity, WK BLK GSY STN, TR FO, WK ODR

Lm- Cream Off White, FXLN, oolitic, sctrd dev. from poor/no vis. porosity & barren to 2 pcs well dev. oolitic w/ ppt inter oolite porosity, DRK SAT STN, NSFO, WK ODR

Sh- Black Gray Maroon, fissile & carbonaceous, silty, gritty & earthy

Lm- Cream Tan, FXLN, sl oolitic, loosely cemented & semi-crumbly, LT SCTRD STN, NSFO, WK-FR ODR

Lm- Cream Tan, VF-FXLN, dnse, loosely-well cemented, poorly dev. w/ sctrd XLN porosity, chalky in part, clean & barren

**BKC 3341' (-1410) E-LOG 3339' (-1408)** Sh- Maroon Gray Green, gritty & earthy, dense & waxy

**CONGLOMERATE E-LOG 3353' (-1422)** Chert/ Dolomite, various dark colored fresh bedded chert & conglomerate w/ sub-rounded qtz inclusions & reworked chert, Dol- Cream Off White, FXLN, well cemented, poorly dev. w/ consistent micro XLN porosity, LT SCTRD STN, NSFO, GD ODR, few reworked pcs sl sandy, some w/ qtz inclusions A/A

**ARBUCKLE 3367' (-1436) E-LOG 3359' (-1428)** 3377' 20"- Dol- Cream Off White, F-MedXLN, mix of tight & mod. dev. & friable, consistent ppt inter granular porosity, LT BRWN SCTRD STN, NSFO, GD ODR, LT YLW FLOR., abundant soft white chalk

40"- Dol- Cream, F-MedXLN, mix of dense & well cemented, semi-sucrosic sctrd micro XLN, LT SCTRD STN, NSFO, GD ODR, friable, well dev. w/ consistent ppt inter XLN porosity, LT SCTRD STN, NSFO, GD ODR, LT YLW FLOR

60"- A/A w/ less chalk

3387' 20"- Dol- Tan, MedXLN, sucrosic & mostly well dev. w/ sctrd fn ppt inter XLN porosity, well cemented, massive, LT SCTRD STN, TR FO ON A FEW PCS, GD ODR, LT YWL HALO FLOR.

40"- A/A

60"- A/A

3400' 20"- Dol- Cream Tan, Med-CrsXLN, mostly friable, well dev. w/ consistent fn ppt & XLN porosity, sucrosic, SCTRD DRK STN, TR GSY FO, GD ODR

40"- Dol- Cream, Med-CrsXLN, well dev. w/ sctrd ppt inter XLN porosity, sucrosic, SCTRD DRK STN, FR SFO, GD ODR, several pcs of fresh bedded off white chert/dolomitic chert/cherty dolomite, & VFXLN, dense, well cemented, tight & barren 60"- A/A

Dol- Tan, FXLN, massive, vry well cemented, sctrd ppt sub-vuggy porosity, semi-

**SHORT TRIP SURVEY 1 1/4deg STRAP +0.54'**

**DST #1 LKC D-G 3616' - 3666' 2' MUD**

IFP: 11-13#  
FFP: 13-17#  
SIP: 50-47#

**DST #2 LKC H-K 3270' - 3329' 30-30-30-30**

**45' SLOCM (2% O, 98% M)**

IFP: 13-24#  
FFP: 27-34#  
SIP: 745-623#  
BHT: 93 deg

**DST #3 ARBUCKLE (STRADDLE) 3345' - 3372' MISRUN**

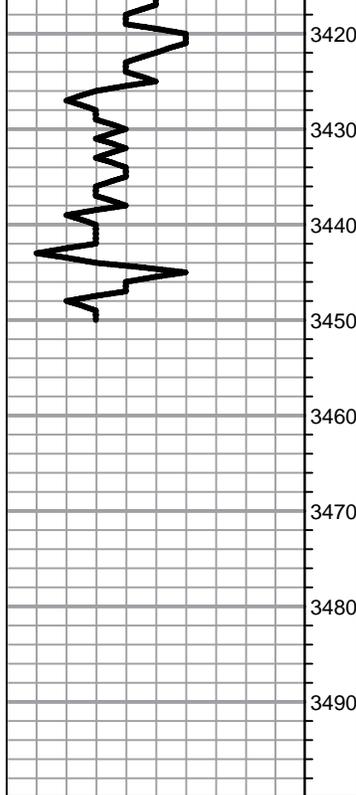
**382' MUD**

IFP: 20-22#  
FFP: N/A  
SIP: N/A

**DST #4 ARBUCKLE 3335' - 3372'**

**20' MUD**

IFP: 16-20#  
FFP: 19-20#  
SIP: 34-28#



sucrosic, DRK STN, SCTR D BLEEDING OIL, GD ODR, GD SHEEN ON WET CUP  
 A/A w/ sandy frosted dolomite, friable, SAT DRK STN, FR OIL UPON BREAK, GD ODR

Dol- White, VF-FXLN, most loosely cemented, friable, some well cemented & dense, consistent micro XLN porosity, mostly barren & pristine

Dol- Tan, F-MedXLN, dense, well cemented, mostly tight w/ consistent XLN porosity, barren

Dol- Cream Off White, VF-FXLN, dense, well cemented, tight w/ micro XLN porosity, barren

**RTD 3450' (-1519) LTD 3450' (-1519) @ 20:50 4/24/2018**

-  DST 3\_CHRT.jpg
-  DST 3\_RECOVERY.jpg
-  DST 4\_CHRT.jpg
-  DST 4\_RECOVERY.jpg

**DST 3\_CHRT.jpg**



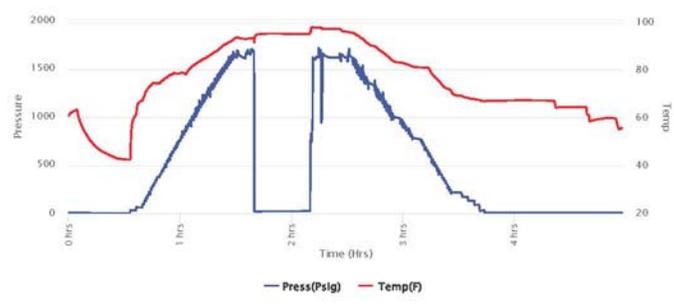
Company: Jason Oil Company LLC  
 Lease: Schoenberger #10-16

SEC: 10 TWN: 16S RNG: 14W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 2  
 Elevation: 1928 EGL  
 Field Name: Nuss South  
 Pool: Infield  
 Job Number: 148

**DATE**  
 April  
 25  
 2018

DST #3      Formation: ARBUCKLE      Test Interval: 3345 - 3372'      Total Depth: 3450'  
 Time On: 05:10 04/25      Time Off: 10:00 04/25  
 Time On Bottom: 06:45 04/25      Time Off Bottom: 07:30 04/25

Electronic Volume Estimate: 32'	<u>1st Open</u> Minutes: 25 1.3" at 25 min	1st Close N/A	<u>2nd Open</u> N/A	2nd Close N/A
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# DST 3\_RECOVERY.jpg



Company: Jason Oil Company  
 LLC  
 Lease: Schoenberger #10-16

SEC: 10 TWN: 16S RNG: 14W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC -  
 Rig 2  
 Elevation: 1928 EGL  
 Field Name: Nuss South  
 Pool: Infield  
 Job Number: 148

**DATE**  
 April  
 25  
 2018

DST #3 Formation: ARBUCKLE Test Interval: 3345 - 3372' Total Depth: 3450'  
 Time On: 05:10 04/25 Time Off: 10:00 04/25  
 Time On Bottom: 06:45 04/25 Time Off Bottom: 07:30 04/25

**Recovered**

Foot	BBLS	Description of Fluid	Gas %	Oil %	Water %	Mud %
382	4.32797	M	0	0	0	100

Total Recovered: 382 ft  
 Total Barrels Recovered: 4.32797

**Reversed Out**  
 NO

Recovery at a glance



Initial Hydrostatic Pressure	1623	PSI
Initial Flow	20 to 22	PSI
Initial Closed in Pressure	0	PSI
Final Flow Pressure	0	PSI
Final Closed in Pressure	0	PSI
Final Hydrostatic Pressure	1617	PSI
Temperature	96	°F
Pressure Change Initial Close / Final Close	0.0	%

# DST 4\_CHRT.jpg



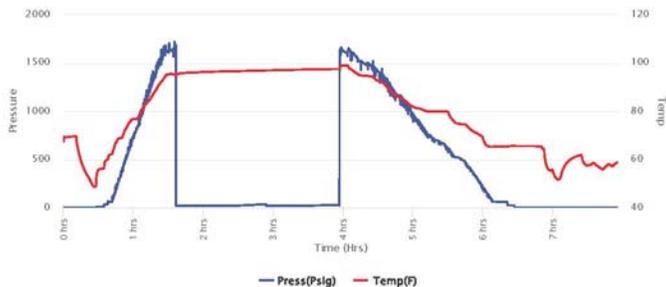
Company: Jason Oil Company ,  
 LLC  
 Lease: Schoenberger #10-16

SEC: 10 TWN: 16S RNG: 14W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC -  
 Rig 2  
 Elevation: 1928 EGL  
 Field Name: Nuss South  
 Pool: Infield  
 Job Number: 148

**DATE**  
 April  
 25  
 2018

DST #4      Formation: ARBUCKLE      Test Interval: 3335 - 3372'      Total Depth: 3450'  
 Time On: 10:20 04/25      Time Off: 18:06 04/25  
 Time On Bottom: 11:52 04/25      Time Off Bottom: 14:07 04/25

Electronic Volume Estimate:	1st Open Minutes: 45	1st Close Minutes: 30	2nd Open Minutes: 30	2nd Close Minutes: 30
15'	6" at 45 min	0" at 30 min	0" at 30 min	0" at 30 min



# DST 4\_RECOVERY.jpg



Company: Jason Oil Company  
 LLC  
 Lease: Schoenberger #10-16

SEC: 10 TWN: 16S RNG: 14W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC -  
 Rig 2  
 Elevation: 1928 EGL  
 Field Name: Nuss South  
 Pool: Infield  
 Job Number: 148

**DATE**  
 April  
 25  
 2018

DST #4      Formation: ARBUCKLE      Test Interval: 3335 - 3372'      Total Depth: 3450'  
 Time On: 10:20 04/25      Time Off: 18:06 04/25  
 Time On Bottom: 11:52 04/25      Time Off Bottom: 14:07 04/25

**Recovered**

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
20	0.0984	M	0	0	0	100

Total Recovered: 20 ft  
 Total Barrels Recovered: 0.0984

**Reversed Out**  
 NO

Initial Hydrostatic Pressure	1630	PSI
Initial Flow	16 to 20	PSI
Initial Closed in Pressure	34	PSI
Final Flow Pressure	19 to 20	PSI
Final Closed in Pressure	28	PSI
Final Hydrostatic Pressure	1619	PSI
Temperature	98	°F
Pressure Change Initial Close / Final Close	16.3	%

