



Scale 1:240 Imperial

Well Name: MCCUE #1
Surface Location: E2 SW NW Sec. 27 - 6W - 20
Bottom Location:
API: 15-163-24193
License Number: 34916
Spud Date: 3/28/2014 Time: 1:45 PM
Region: ROOKS COUNTY
Drilling Completed: 4/1/2014 Time: 3:30 PM
Surface Coordinates: 1980' FNL & 990' FWL
Bottom Hole Coordinates:
Ground Elevation: 2178.00ft
K.B. Elevation: 2183.00ft
Logged Interval: 3050.00ft To: 3728.00ft
Total Depth: 3730.00ft
Formation: LANSING - KANSAS CITY
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: FOURWINDS OIL CORPORATION
Address: PO BOX 1063
HAYS, KS 67601
Contact Geologist: DANIEL WINDHOLZ
Contact Phone Nbr: (785) 259-8403
Well Name: MCCUE #1
Location: E2 SW NW Sec. 27 - 6W - 20 API: 15-163-24193
Pool: LOCLELA
State: KANSAS Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.5428173 Latitude: 39.5046068
N/S Co-ord: 1980' FNL
E/W Co-ord: 990' FWL

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, LLC
Rig #: 6
Rig Type: MUD / ROTARY
Spud Date: 3/28/2014 Time: 1:45 PM

ELEVATIONS

K.B. Elevation: 2183.00ft
K.B. to Ground: 5.00ft

Ground Elevation: 2178.00ft

NOTES

**** NOTE: THERE IS APPROXIMATE 3' - 4' UPHOLE CORRECTION TO CORRELATE DRILL TIME WITH LOG CURVES****


AFTER LOG ANALYSIS DECISION WAS MADE TO ATTEMPT STRADDLE DST'S TO EVALUATE MULTIPLE ZONES OF INTEREST. AFTER SEVERAL FAILED ATTEMPTS DECISION WAS MADE TO RUN 4 1/2" PRODUCTION PIPE AND EVALUATE ZONES WITH PERORATION.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

FORMATION	MCCUE#1				BACH OIL PRODUCTION				KENNY BROWN ENTERPRISES				LIBERTY OPERATIONS				SINCLAIR PRAIRIE OIL CO.											
	LOG TOPS		SAMPLE TOPS		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.							
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM						
	LOG TOPS	SAMPLE TOPS	LOGS	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.					
ANHYDRITE TOP	1787	396	1789	394	1735	405	-	9	-	11	1763	402	-	6	-	8	1754	398	-	2	-	4	1776	417	-	21	-	23
BASE	1804	379	1808	375	1764	376	+	3	-	1	1803	362	+	17	+	13	1785	367	+	12	+	8						
TOPEKA	3187	-1004	3179	-996	3136	-996	-	8	+	0	3168	-1003	-	1	+	7	3158	-1006	+	2	+	10	3200	-1007	+	3	+	11
HEEBNER SHALE	3388	-1205	3391	-1208	3331	-1191	-	14	-	17	3369	-1204	-	1	-	4	3358	-1206	+	1	-	2						
TORONTO	3413	-1230	3415	-1232	3359	-1219	-	11	-	13	3389	-1224	-	6	-	8	3381	-1229	-	1	-	3						
LKC	3427	-1244	3427	-1244	3371	-1231	-	13	-	13	3408	-1243	-	1	-	1	3396	-1244	+	0	+	0	3440	-1247	+	3	+	3
BKC	3627	-1444	3634	-1451	3570	-1430	-	14	-	21	3635	-1470	+	26	+	19	3598	-1446	+	2	-	5	3640	-1447	+	3	-	4
ARBUCKLE	3678	-1495	3673	-1490	3606	-1466	-	29	-	24	3654	-1489	-	6	-	1	3654	-1502	+	7	+	12	3740	-1547	+	52	+	57
TOTAL DEPTH	3728	-1545	3730	-1547	3664	-1524	-	21	-	23	3682	-1517	-	28	-	30	3710	-1558	+	13	+	11	3800	-1607	+	62	+	60

DST #1 LKC I - J 3570' - 3635' (MISRUN)

	DRILL STEM TEST REPORT	
	FourWinds Oil Corporation P. O. Box 1063 Hays KS 67601 ATTN: Jeff Lawler	27 6s 20w Rooks MCCue 1 Job Ticket: 57578 DST#: 1 Test Start: 2014.04.01 @ 05:48:00

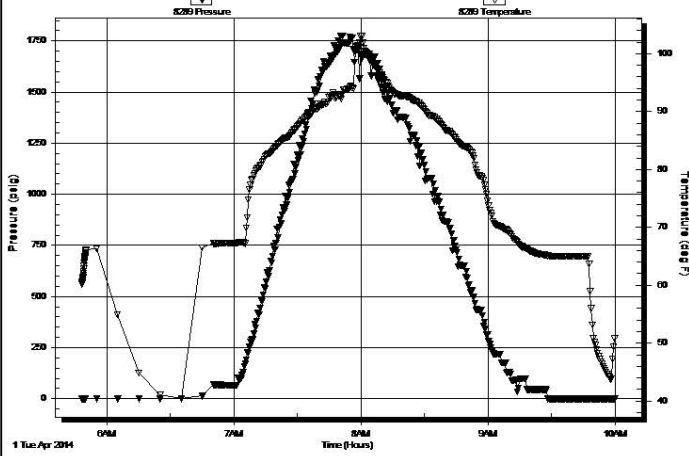
GENERAL INFORMATION:

Formation: **LKC "I - K"**
 Deviated: No Whipstock: 2183.00 ft (KB)
 Time Tool Opened: 07:56:00
 Time Test Ended: 10:00:00
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jim Svaty
 Unit No: 76
 Interval: 3570.00 ft (KB) To 3635.00 ft (KB) (TVD)
 Total Depth: 3635.00 ft (KB) (TVD)
 Reference Elevations: 2183.00 ft (KB)
 2178.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8289 Outside

Press@RunDepth: psig @ 3574.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.01 End Date: 2014.04.01 Last Calib.: 2014.04.01
 Start Time: 05:48:02 End Time: 10:00:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: Mss-Run Packers Failed



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
434.00	Mud 100%	4.98

Gas Rates


Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc

Ref. No: 57578

Printed: 2014.04.01 @ 10:19:22

DST #2 LKC J - ARBUCKLE 3585' - 3697' (STRADDLE) MISRUN



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FourWinds Oil Corporation
 P. O. Box 1063
 Hays KS 67601
 ATTN: Jeff Lawler

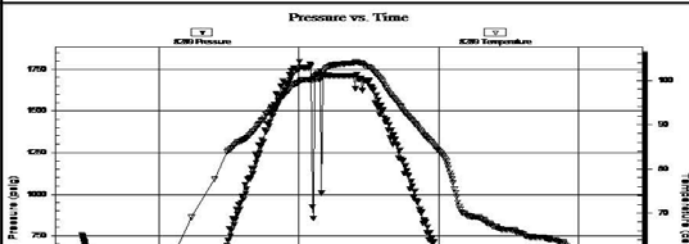
27 6s 20w Rooks
McCue 1
 Job Ticket: 57579 **DST#: 2**
 Test Start: 2014.04.01 @ 23:27:00

GENERAL INFORMATION:

Formation: LKC "J & K" Arbuck	Test Type: Conventional Straddle (Reset)
Deviated: No Whipstock: 2183.00 ft (KB)	Tester: Jim Svaty
Time Tool Opened: 01:05:00	Unit No: 76
Time Test Ended: 03:16:00	Reference Elevations: 2183.00 ft (KB)
Interval: 3585.00 ft (KB) To 3697.00 ft (KB) (TVD)	2178.00 ft (CF)
Total Depth: 3729.00 ft (KB) (TVD)	KB to GR/CF: 5.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Fair

Serial #: 8289 Outside	Capacity: 8000.00 psig
Press@RunDepth: psig @ 3595.00 ft (KB)	Last Calib.: 2014.04.02
Start Date: 2014.04.01 End Date: 2014.04.02	Time On Btm:
Start Time: 23:27:02 End Time: 03:16:00	Time Off Btm:

TEST COMMENT: Miss-Run Packers Failed



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery			Gas Rates		
Length (ft)	Description	Volume (bbl)	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
279.00	Mud 100%	2.80			

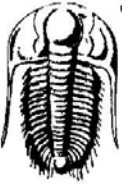
* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 57580

Printed: 2014.04.02 @ 09:22:18

DST #4 LKC H - ARBUCKLE 3535' - 3698' (STRADDLE)

 <p style="font-size: 24pt; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT	
	FourWinds Oil Corporation P. O. Box 1063 Hays KS 67601 ATTN: Jeff Lawler	27 6s 20w Rooks McCue 1 Job Ticket: 57581 DST#: 4 Test Start: 2014.04.02 @ 14:07:00

GENERAL INFORMATION:

Formation: **LKC " H - Arbuckle "**
 Deviated: No Whipstock: 2183.00 ft (KB)
 Time Tool Opened: 15:52:15
 Time Test Ended: 20:05:00

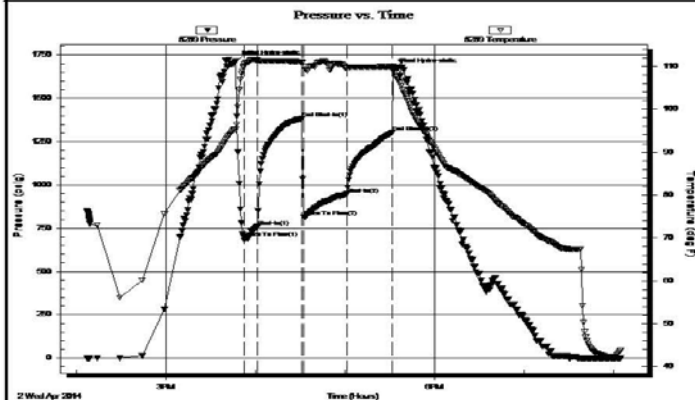
Interval: 3535.00 ft (KB) To 3698.00 ft (KB) (TVD)
 Total Depth: 3728.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2183.00 ft (KB)
 2178.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8289 Outside

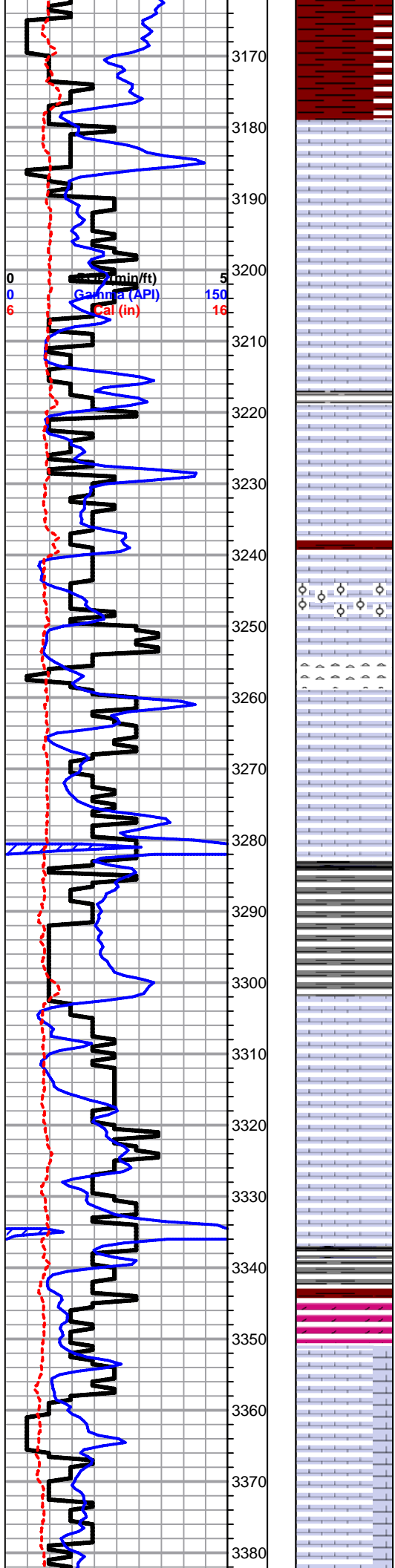
Press@RunDepth: 947.57 psig @ 3536.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2014.04.02 End Date: 2014.04.02	Last Calib.: 2014.04.02
Start Time: 14:07:02 End Time: 20:05:00	Time On Btm: 2014.04.02 @ 15:46:45
	Time Off Btm: 2014.04.02 @ 17:32:15

TEST COMMENT: 15-IFP- BOB in 44 sec.
 30-ISIP- Weak Surface Blow Died in 2 min.
 30-FFP- BOB in 20 sec.
 30-FSIP- No Blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.25	95.23	Initial Hydro-static
6	696.99	109.98	Open To Flow (1)
15	759.76	111.30	Shut-In(1)
45	1383.14	111.07	End Shut-In(1)
46	816.18	109.93	Open To Flow (2)
75	947.57	109.64	Shut-In(2)
105	1302.62	109.89	End Shut-In(2)
106	1668.08	109.98	Final Hydro-static

Recovery			Gas Rates		
Length (ft)	Description	Volume (bbl)	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1907.00	Mud 100%	25.64			



Sh- Maroon Brick Red Gray, gritty & earthy, gummy wash & sandy lime

TOPEKA 3179' (-996) E-LOG 3187' (-1004) Lm- Cream Lt Yellow, FXLN, sl fsl arenaceous ls, poorly dev. well-loosely cemented, some sl chalky in part, barren

Lm- Tan Lt & Drk Gray, VF-FXLN, dense, poorly dev. fsl ls, sl trashy w/ fsl frag., poor vis. porosity, some chalky in part

Lm- A/A w/ increasing amount of silty mud supported matrix w/o vis. porosity, chalky in part

Lm- Cream Lt Gray, dense, poorly dev. & loosely cemented, no vis. porosity, chalky in part, much soft mud supported matrix w/o vis. porosity & soft white chalk

Sh- Black Drk Gray, silty & soft, calcareous

Lm- Cream Lt Gray, Vf Grn FXLN, trashy loosely cemented mix, sl fsl & chalky in part

Lm- Dove Gray arenaceous ls, loosely cemented w/ consistant intergranular porosity throughout, sl chalky in part

Lm- Cream, FXLN, dense, mod. well cemented, fsl & oolitic, massive, mod. dev. w/ dense XLN porosity, poor effective porosity, barren, much soft white chalk

Chert- Tan, vitreous fresh bedded chert, few pcs sl fsl w/ fusulinids

Lm- Cream Off White, VFXLN, dense, sl fsl, sl chalky, poor dev. & tight w/ micro XLN porosity, some w/ secondary recrystallization porosity, barren

Lm- Dove Gray Cream, A/A, w/ sl fsl tight cherty ls w/ micro XLN porosity

Sh- Black, dense, fissile, & carbonaceous

Sh- Lt Gray, gummy sandy lime

Lm- Cream Tan, Crypto-FXLN, dense, poorly dev. & tight mix, some sl fsl ls w/ micro XLN porosity & cherty ls w/ trace of recrystallization porosity

Lm- Cream Off White, VF-FXLN, massive, sl granular, mostly well cemented & tight, oolitic, sctrd clear sparry replacement cementation, micro XLN porosity, barren

Sh- Black Gray Maroon Lm Green, fissile & carbonaceous, gummy wash, gritty & earthy

Dolo- Cream, VFXLN, dense, vry well cemented sub-sucrosic dolomite w/ consistant micro XLN porosity, barren, much soft white chalk

Lm- Cream Off White, VFXLN, dense, vry well cemented, sl fsl, poorly dev. & tight w/ micro XLN porosity

Lm- Cream Off White, VFXLN, oolitic, massive, vry well cemented, poorly dev. w/ sctrd micro XLN porosity, sctrd sparry replacement cementation, barren, much soft white chalk

Dolo- Cream, VFXLN, sub-sucrosic w/ consistant micro XLN porosity, vry well cemented, barren, abundant soft white chalk

Lm- Cream Off White, Vf Grn, dense, loosely cemented, silty, mud supported matrix, sl fsl & sl

unconsolidated, no vis. porosity, much soft white chalk

HEEBNER 3391' (-1208) E-LOG 3388' (-1205) Sh- Black Gray Maroon, silty & carbonaceous, soft wash, gritty & earthy

Sh- Lt Gray Lm Green Brown Maroon, gummy argillaceous clumps, gritty & earthy

TORONTO 3415' (-1232) E-LOG 3413' (-1230) Lm- Cream Off White, FXLN, fsl & oolitic, mod. dev. w/ sctrd fn ppt inter oolite porosity, some loosely cemented, WK SCTRD STN, NSFO, TR ODR SL INCREASING UNDER LAMP, LT OIL SHEEN ON TOP OF WET CUP, DULL YLW FLOR., several pcs golden brown & milky white fresh bedded chert

LKC 3427' (-1244) E-LOG 3427' (-1244) Lm- Cream Lt Gray, FXLN, fsl w/ fusulinds, dense, most well cemented, poorly dev. w/ sctrd XLN porosity, barren

Lm- Cream Off White, FXLN, sl oolitic, mod. dev. w/ sctrd inter fsl porosity, loosely-well cemented, WK SPOTTY STN, NSFO, FR ODR, LT OILY SHEEN ON TOP OF WET CUP, LT YLW FLOR. W/ SL STRM WET CUT

Lm- Off White Cream, VF-FXLN, sl fsl, mostly tight, vry clean, poor vis. porosity, some soft white chalk

Sh- Black Gray Maroon, silty & soft, gritty & earthy

Lm- Cream Tan, FXLN, oolitic, sctrd mod. dev., rare sctrd ppt inter oolite porosity, WK SPOTTY STN, NSFO, NO ODR, some densely packed oolitic biomicrite

Sh- Gray Maroon, silty & soft, gummy argillaceous clumps

Lm- Cream Off White, F-MED XLN, fsl & oolitic, most poorly dev. w/ sctrd inter oolite FXLN porosity, SCTRD SPOTTY STN, NSFO, NO ODR, some w/ decreasing dev. & chalky in part

Lm- Tan Cream, FXLN, fsl & sl oolitic, poorly dev., mostly well cemented, sctrd XLN porosity, some secondary recrystallization porosity, SCTRD BLK STN, NSFO, NO ODR, WK YLW FLOR., 2-3 W/ FEW GSY BUBBLES UPON CRUSH

Lm- Cream Tan, VF-FXLN, oolitic & densely packed, poorly dev. w/ micro XLN & XLN porosity, vry clean, barren, some chalky in part, several pcs procelain like cherty ls w/o vis. porosity

Lm- Cream Off White, VF-FXLN, dense tight mix, most vry well cemented, sl fsl, poorly dev. w/ minimal vis. porosity, mod. amount of soft white chalk, all vry clean & barren,

Lm- A/A

Sh- Black Gray Maroon Lm Green, dense, fissile & carbonaceous, gummy wash, gritty & earthy

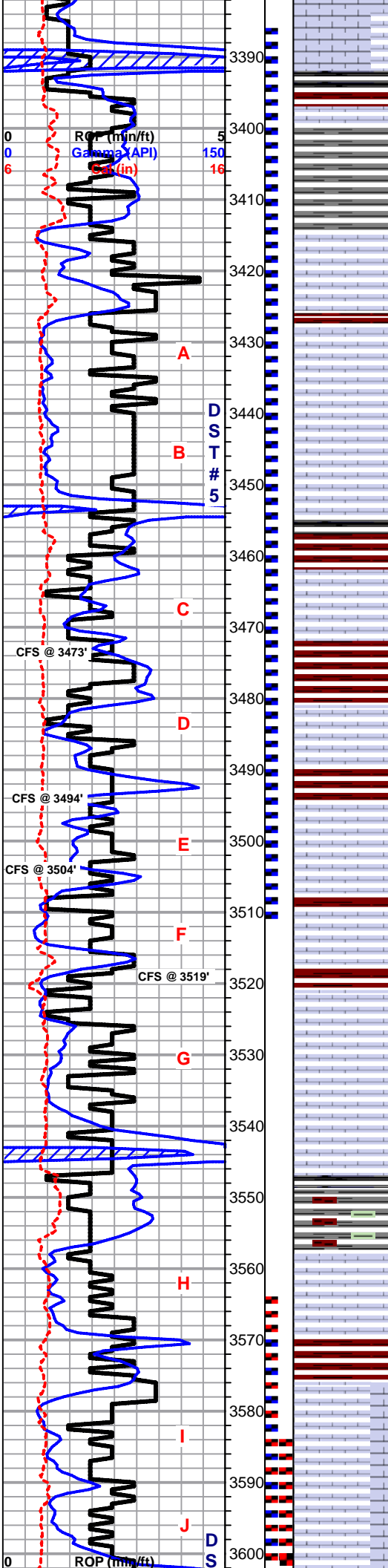
Lm- Cream Tan, VF-FXLN, dense, sl fsl, mostly tight w/ micro XLN & sctrd XLN porosity, few pcs of golden brown chert/cherty ls w/o vis. porosity

Lm- Gray, FXLN, fsl, dense, sl unconsolidated w/ fsl fragments, sl trashy, XLN porosity

Lm- Cream off White, FXLN, fsl, sctrd inter fsl XLN & fn ppt porosity, mod. dev., loosely-well cemented, some chalky in part, SCTRD LT STN, NSFO, FNT-FR ODR

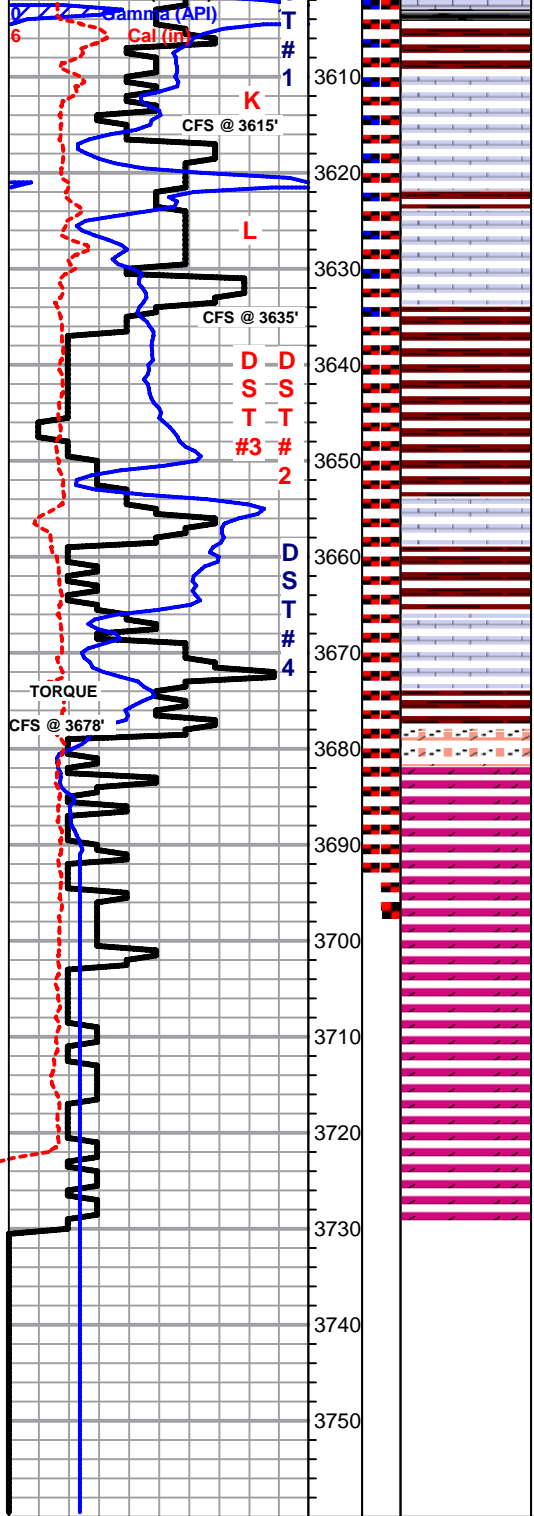
Lm- Tan Cream, VF-FXLN, sl fsl & oolitic, sctrd XLN & fn ppt inter oolite porosity, some sl chalky in part, WK SPOTTY STN, 1-2 PCS W/ TR FO, NO ODR

Lm- Cream Gray, F-MED XLN, fsl w/ fusulinids, well cemented, sctrd XLN porosity, few w/ sctrd secondary recrystallization porosity, LT SCTRD STN, NO SEQ, TR ODR



DST #5 (STRADDLE) TORONTO - LKC F MISRUN 3386' - 3512' SEE CHARTS BELOW

SHORT TRIP SURVEY 3/4 dgr. (MISRUN)



secondary recrystallization porosity, LT SCTRD STN, NO SFO, FR ODR

Sh- Black Gray Maroon, fissile & carbonaceous, gummy washy, gritty & earthy

Lm- Cream Off White, VF-FXLN Vf Grn, dense, tight w/ minimal vis. porosity, some soft white chalk, vry clean, barren

Lm- Cream Off White, FXLN, sl fsl, loosely cemented, spkld w/ gluaconite, poor sctrd XLN porosity, 2-3 w/ WK SPOTTY STN, NSFO, NO ODR

BKC 3634' (-1451) E-LOG 3627' (-1444) Sh- Maroon Gray, gummy lime, dense & waxy, sl trashy, some sl pebbly

Sh- A/A

Lm- White, VFXLN, dense, vry well cemented, sl unconsolidated & spkld, tight w/ sctrd micro XLN porosity, barren

Sh- Maroon, gritty & earthy, gummy lime

Lm- White, VF-FXLN, dense, well cemented, sctrd fn ppt porosity, DRK SCTRD STN, NSFO, NO ODR, FNT YLW FLOR.

ARBUCKLE 3674' (-1490) E-LOG 3678' (-1495) Dol- Cream Tan, VFXLN, dense, good dolomitic cementation, fn-med rounded qtz. inclusions, poor vis. porosity, DRK SCTRD STN, SL SFO UPON CRUSH, NO ODR, WK YLW FLOR UPON CRUSH

Dol- mix of Cream VFXLN, dense tight dolomite w/ minimal vis. porosity, barren, & clear to frosted fn grn, most w/ lt dolomitic cementation & sandy, well dev. w/ consistant intergranular porosity throughout, BLK DO STN, NSFO, NO ODR, WK HALO FLOR., few pcs of salmon colored cherty dolomite w/o vis. porosity

Dol- Cream Pink, VFXLN, dense, vry well cemented, mostly tight w/ minimal micro XLN porosity, few w/ small round-angular qtz. inclusions, barren

Dol- Cream Off White, MED-CRS XLN, vry well cemented, mod. dev. w/ sctrd ppt porosity, WK SCTRD DO STN, NSFO, NO ODR

Dol- Cream, VFXLN, dense, vry well cemented, mostly tight w/ micro XLN porosity at best, barren

Dol- A/A w/ few pcs of well dev. oolitic dolomite w/ GD inter oolite porosity, barren

RTD 3730' (-1547) LTD 3728' (-1545) @ 15:30 4/1/2014

- DST #2_STRDL_PKR.jpg
- DST #3_STRDL_PKR.jpg
- DST #4_STRDL_PKR.jpg
- DST #5_TOR_LKC_F.jpg
- DST #5_STRDL_PKR.jpg

DST #1
LKC I - L
3570' - 3635'

SEE CHARTS BELOW

**** AFTER SHORT TRIP @ 3635' TIH & LOST CIRC. APPROX. 160 bbl****

DST #2 (STRADDLE) MISRUN

LKC J - ARBUCKLE 3585' - 3697'

SEE CHARTS BELOW

DST #3 (STRADDLE) MISRUN

LKC I - ARBUCKLE 3565' - 3694'

SEE CHARTS BELOW

DST #4 (STRADDLE)

LKC H - ARBUCKLE 3535' - 3698'

15-30-30-30

1907' MUD

IFP: 696-7115#
FFP: 816-947#
SIP: 1383-1302#
HYD: 1713-1668#
BHT: 110 dgr.

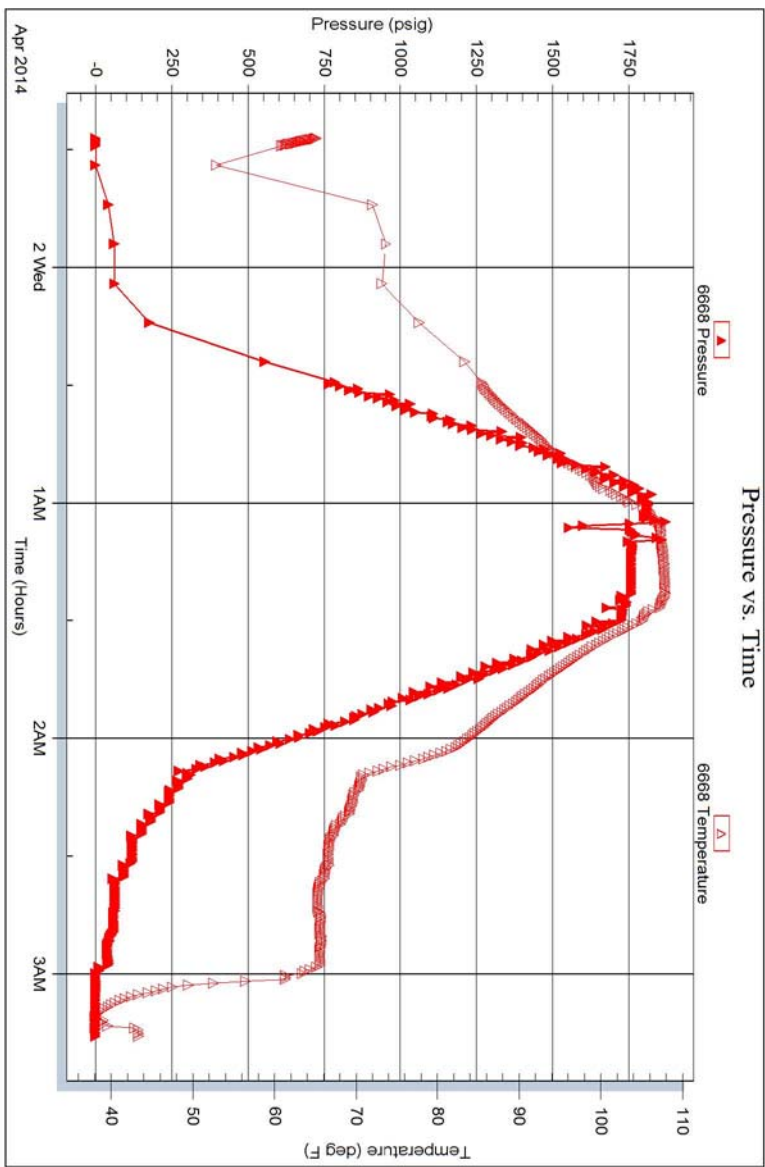
SEE CHARTS BELOW

Serial #: 6668

Below /str fault/frnds Oil Corporation

McQue 1

DST Test Number: 2



Trioble Testing, Inc

Ref No: 57579

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DST #3_STRDL_PKR.jpg

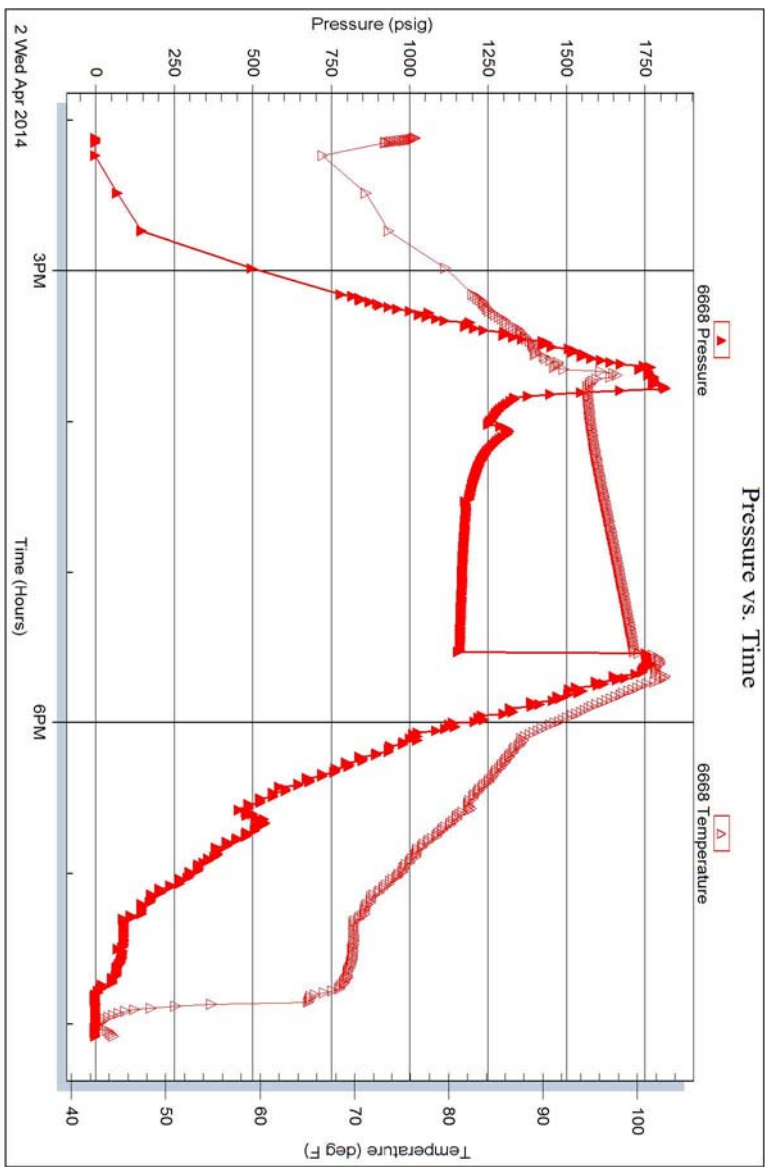


Serial #: 6668

Below /str faculty/nds Oil Corporation

McQue 1

DST Test Number: 4



Trioble Testing, Inc

Ref No: 57581

Printed: 2014-04-02 @ 20:23:10

