



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1174338
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1174338

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method: Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Edison Operating Company LLC
Well Name	Rixon 1-16
Doc ID	1174338

All Electric Logs Run

Dual
CDNL
Micro
Sonic



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET

1718 09567 A

DATE _____ TICKET NO. _____

DATE OF JOB <u>12-13-13</u> DISTRICT <u>Pratt</u>		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:							
CUSTOMER <u>EDISON OPERATING CO. INC</u>		LEASE <u>RISON</u> WELL NO. <u>1-16</u>							
ADDRESS		COUNTY <u>STAFFORD</u> STATE <u>KS</u>							
CITY STATE		SERVICE CREW <u>MATT, McGraw, Young, Eggen</u>							
AUTHORIZED BY		JOB TYPE: <u>CAW L.S.</u>							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
<u>37856</u>	<u>.5</u>						<u>12-13-13</u>		<u>11:30</u>
						ARRIVED AT JOB		AM	<u>4:30</u>
<u>77686/19905</u>	<u>.5</u>					START OPERATION		AM	<u>8:50</u>
						FINISH OPERATION		AM	<u>9:30</u>
<u>19960/21010</u>	<u>.5</u>					RELEASED		AM	<u>10:15</u>
						MILES FROM STATION TO WELL			<u>25</u>

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Bob Kasper
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 105	AA-2 CMC	SK	150		2550 00
CP 103	60/40 POZ	SK	50		600 00
CC 105	C41-P Deforma	LB	36		144 00
CC 111	SAIT	LB	684		342 00
CC 115	C-44	LB	141		726 15
CC 129	FLASQUW Fluid 10SS	LB	71		532 50
CC 201	Silsonite	LB	750		502 50
CF 607	LATCH DOWN PLUG 5/2	ea	1		400 00
CF 1251	Auto 44 float 5400 5/2	ea	1		360 00
CF 1651	Turbolizer 5/2	ea	9		990 00
CC 155	SuperKush II	SAI	500		765 00
E 100	P.H. Miles	MIL	25		106 25
E 101	Heavy eq. Miles	M	50		350 00
E 113	PROP + BULK Delivery	TR	230		368 00
ce 205	Depth Charge 4000-5000'	4000	1		2,520 00
ce 240	Blend + Mix Charge	SK	200		280 00
ce 504	PLUG CONTAINER UTILIZATION	PLUG	1		250 00
5003	Service SUPERVISE	ea	1		175 00

SUB TOTAL KA 8,971 05

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		

SERVICE REPRESENTATIVE Mike Matrosi THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY Bob Kasper
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 09333 A

DATE _____ TICKET NO. _____

DATE OF JOB 12-5-13		DISTRICT Pratt		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:					
CUSTOMER Edison Operating		LEASE Rixon		116 WELL NO.					
ADDRESS		COUNTY Stafford		STATE KS					
CITY		STATE		SERVICE CREW E D Steve Joe					
AUTHORIZED BY		JOB TYPE: CNW Surface							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE 12-4-13	AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	TIME 11:30
19889-19843	25min					ARRIVED AT JOB	12-5-13	AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	100
19959-19860	25min					START OPERATION		AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	320
28443						FINISH OPERATION		AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	345
						RELEASED		AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	445
						MILES FROM STATION TO WELL			25

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: X
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 103	60/40 P02	SK	300		3,600 00
CC 102	celloflake	lb	75		277 50
CC 109	calcium chloride	lb	774		812 70
CF 153	wooden plug	ea	1		160 00
E 100	Pickup mileage	mi	25		106 25
E 101	Heavy mileage	mi	50		350 00
E 113	Bulk Delivery	TM	323		516 00
CE 200	Depth Charge	4hr	1		1,000 00
CE 240	Mixing Charge	SK	300		420 00
CE 504	Plug container	JOB	1		250 00
S 003	Supervisor	ea	1		175 00

SUB TOTAL 5,750 59

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	

SERVICE REPRESENTATIVE _____ THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: X *Richard L. Dotz*
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

Morning Dinner: Kent Urban
Relief:

Engineer: Jeff Gronewag
Logs Ran: DIL, DUCP, MEL, BHCS

Gas Detector: Bluestem Environmental
Engineer: Sidney Edelbrock
Unit: 0199
Operational By: 1800'

Testing Company: Superior Testing
Tester: Gene Budig

Deviation Survey	
Depth	Survey
325'	1°
3772'	1 1/4°
RTD 4218'	1 1/4°

Pipe Strap	
Depth	Pipe Strap
3737'	0.94 long to board

Bit Record								
Bit #	Size	Make	Type	Serial Number	Depth In	Depth Out	Feet	Hours
1	12 1/4"	RT	Tooth	RR	0	325	325	
2	7 7/8"	F27	Tooth	PY9749	325	4218	3893	

Surface Casing	
12/4/2013	Ran 7 joints of 24#, 8 5/8" surface casing, Set @ 325'. Used 300 sacks 60/40 Poz, 3% cc, 1/4# cellflake, cement did circulate, by Basic. Plug down @ 0330 hrs on 12.05.13.

Production Casing	
12/13/2013	Ran 99 joints of 15.5#, 5 1/2" production casing, Set @ 4217'. Used 200 sacks total, 30 sacks rathole, 20 sacks mousehole, 150 sacks casing with AA-2, cement did circulate, job completed at 2125 hrs 12.13.13.

DAILY DRILLING REPORT

Date	0700 Hrs Depth	Previous 24 Hours of Operations
12/9/2013	3544'	Drilling and connections Topeka. Displace mud by 3200'. Geologist Adam G. Nighswonger on location 1830 hrs 12.08.13 drilling @ 3275'. Drilling and connections Topeka, Heebner, Toronto, Douglas, and into Brown Lime. CTCH, begin short trip @ 3544'. Made 572' in past 24 hrs of operations. DMC: \$4,423.95 CMC: \$6,556.45
12/10/2013	3737'	Break water freezing, down for maintenance. Complete short trip for 30 stands; back to bottom, CTCH, resume drilling and connections 1845 hrs Brown Lime and into upper Lansing zones. CFS @ 3643' (LKC 'F') & 3692' (LKC 'H'). Resume drilling and connections lower Lansing zones. CFS @ 3737' (LKC 'J'). Shows warrant test. CTCH, drop survey and strap out for DST #1. Made 193' in past 24 hrs of operations. DMC: \$887.35 CMC: \$7,443.80
12/11/2013	3772'	Conduct DST #1; test successful. Recovered 1750' gas and 130' mud from DST #1. Back to bottom; CTCH. Resume drilling and connections lower Lansing zones. CFS @ 3772' (LKC 'K'). Shows warrant test. CTCH, drop survey (previous survey failed) and TOH for DST #2. Recovered 350' gas and 65' mud from DST #2. Made 35' in past 24 hrs of operations. DMC: \$464.15 CMC: \$7,907.95
12/12/2013	4118'	Back to bottom; CTCH. Resume drilling and connections lower Lansing, basal Pennsylvanian, and into Viola. CFS @ 3955' & 3982' (VIOL). Resume drilling and connections Viola, Simpson, and into Arbuckle. CFS @ 4118' (ARBK). Shows warrant test. CTCH and TOH for DST #3. Made 346' in past 24 hrs of operations. DMC: \$681.45 CMC: \$8,589.40
12/13/2013	RTD 4218'	Conduct DST #3. Recovered 340' HOCWM, 240' OCMW & 120' water from DST #3. Back to bottom; CTCH. Resume drilling and connections Arbuckle. Rotary total depth of 4218' reached 0100 hrs 12.13.13. CTCH, drop survey and TOH for logs. Geologist off location 0530 hrs on 12.13.13. Commence open hole logging operations 0600 hrs, job completed 1015 hrs 12.13.13. Made 100' in past 24 hrs of operations. DMC: \$1,556.20 CMC: \$10,145.60

WELL COMPARISON SHEET

Drilling Well	Comparison Well	Comparison Well	Comparison Well
Edison Operating Co - Rixon #1-16 Sec. 16 - T24S - R13W 240' ENL & 125' FWL	Kan-Ex, Inc. - B.O.C.C. Sec. 16 - T24S - R13W C.N.C.N.E.C.F.	Mallard Drilling Co. - Delp #1 Sec. 16 - T24S - R13W C.N.C.N.E.C.F.	Edison Operating Co - Waite #1A-21 Sec. 21 - T24S - R13W 220' ENL & 145' FWL

1923 KB					1927 KB				1926 KB				1928 KB			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Sample	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Topeka	3073	-1150	3074	-1151	Not Called				Not Called				3062	-1134	-16	-17
Heebner	3394	-1471	3394	-1471	3408	-1481	10	10	3396	-1470	-1	-1	3383	-1455	-16	-16
Toronto	3417	-1494	3411	-1488	3428	-1501	7	13	Not Called				3398	-1470	-24	-18
Brown Lime	3530	-1607	3531	-1608	3547	-1620	13	12	Not Called				3523	-1595	-12	-13
Lansing	3554	-1631	3555	-1632	3575	-1648	17	16	3559	-1633	2	1	3547	-1619	-12	-13
LKC 'B'	3575	-1652	3579	-1656	3598	-1671	19	15	Not Called				3572	-1644	-8	-12
LKC 'F'	3628	-1705	3633	-1710	3650	-1723	18	13	Not Called				3623	-1695	-10	-15
LKC 'G'	3646	-1723	3645	-1722	3668	-1741	18	19	Not Called				3645	-1717	-6	-5
Muncie Creek	3680	-1757	3680	-1757	3704	-1777	20	20	3696	-1770	10	9	3681	-1753	-4	-4
LKC 'H'	3683	-1760	3684	-1761	3709	-1782	22	21	Not Called				3684	-1756	-4	-5
LKC 'I'	3702	-1779	3700	-1777	3728	-1801	22	24	Not Called				Not Present (?)			
LKC 'J'	3718	-1795	3718	-1795	3742	-1815	20	20	Not Called				3712	-1784	-11	-11
Stark	3744	-1821	3746	-1823	3773	-1846	25	23	Not Called				3746	-1818	-3	-5
LKC 'K'	3749	-1826	3755	-1832	3782	-1855	29	23	Not Called				3752	-1824	-2	-8
Hushpuckney	3780	-1857	3786	-1863	3810	-1883	26	20	Not Called				3782	-1854	-3	-9
LKC 'L'	3791	-1868	3794	-1871	3818	-1891	23	20	Not Called				3791	-1863	-5	-8
Base Kansas City	3798	-1875	3803	-1880	3827	-1900	25	20	3832	-1906	31	26	3800	-1872	-3	-8
Viola	3904	-1981	3908	-1985	3960	-2033	52	48	3926	-2000	19	15	3897	-1969	-12	-16
Simpson	4042	-2119	4056	-2133	4093	-2166	47	33	4068	-2142	23	9	4040	-2112	-7	-21
Arbuckle	4110	-2187	4112	-2189	4146	-2219	32	30	4119	-2193	6	4	4078	-2150	-37	-39
Total Depth	4218	-2295	4219	-2296	4171	-2244			4160	-2234			4183	-2255		

ROCK TYPES

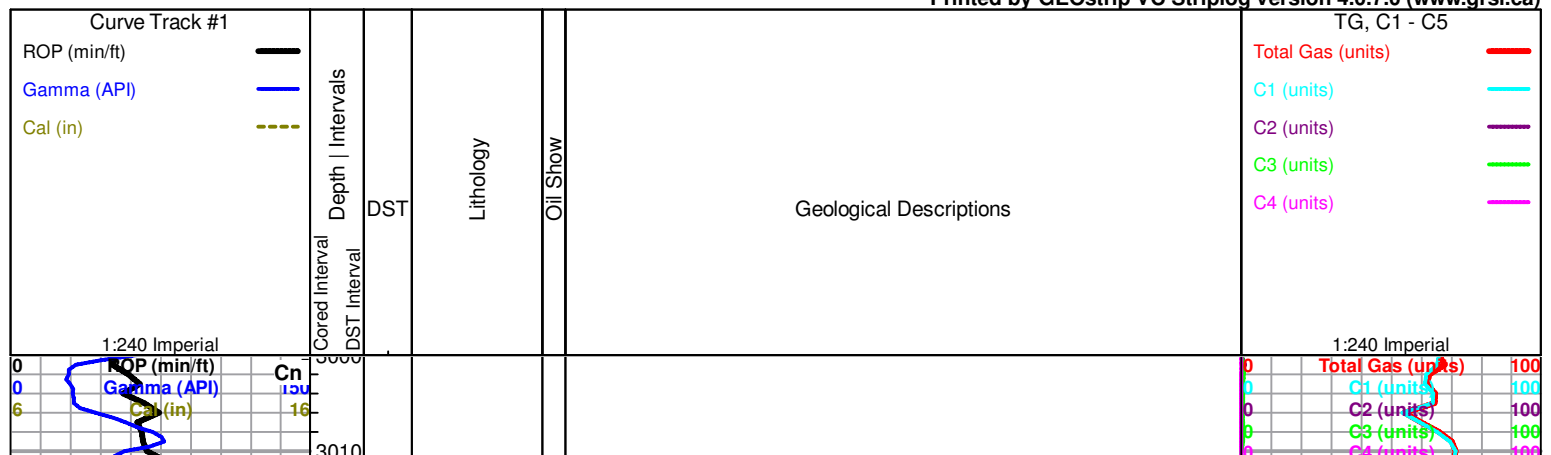
	Cht		LMST1		Ss		SHALE GRA
	Chtcong1		LMST2		SHALE CAR		SHALE PUR
	DOL2		LMST3		SHALE GRN		SHALE RED

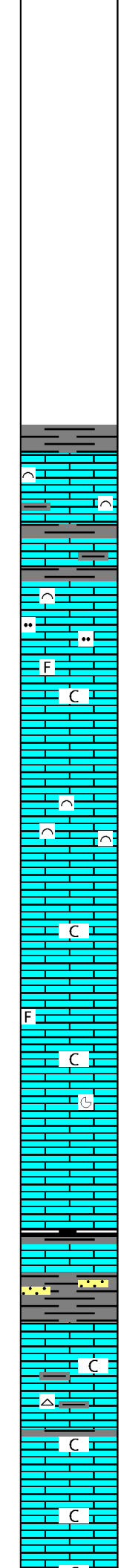
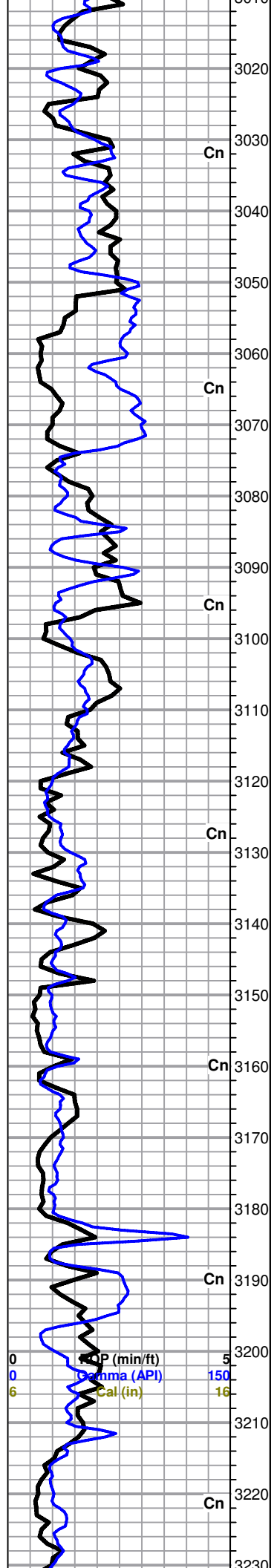
ACCESSORIES

MINERAL	FOSSIL	STRINGER	TEXTURE
⊥ Calcareous	⊖ Bioclastic or Fragmental	Conglomerate	C Chalky
⊞ Chert, tripolitic	⊖ Cephalopod	Limestone1	L Lithogr
⊞ Dolomitic	F Fossils < 20%	Limestone2	
P Pyrite	⊖ Oolite	Sandstone	
• Sandy	⊖ Oomoldic	Shale Gray	
• Silty	⊗ Sponge Spicules	Shale Red	
⊞ Varicolored chert			
△ Chert White			

OTHER SYMBOLS

MISC	DST
Daily Report	DST1
Digital Photo	DST2
Document	Core
Folder	tail pipe
Link	
Vertical Log File	
Horizontal Log File	
Core Log File	
Drill Cuttings Rpt	





Topeka 3074' (-1151)

Limestone: light gray, some cream white, hard and dense, fine-xlyn, densely fossiliferous to bioclastic in part, poor inter-fossil porosity, no shows noted, lower part with trace shaley material

Start 10' wet & dry samples @ 3100'

Limestone: cream white, some light gray, dense chalky matrix, micro to fine-xlyn, fossiliferous in upper part, with Shale: dark gray, blocky and hard, silty in part

Limestone: gray to dark gray, dense matrix, fine-xlyn, densely fossiliferous to bioclastic in part, few parts friable, fair inter-fossil porosity, no shows noted, with Shale as above

Limestone: cream white to light tan, micro to fine-xlyn, dense chalky matrix, trace loose chalk, poor to fair inter-xlyn porosity, no shows noted, with interbedded Shale as above

Limestone: cream white and light tan, fine-xlyn, dense chalky matrix, trace loose chalk, few parts largely fossiliferous, poor inter-xlyn porosity, no shows noted

King Hill Shale 3183' (-1260)

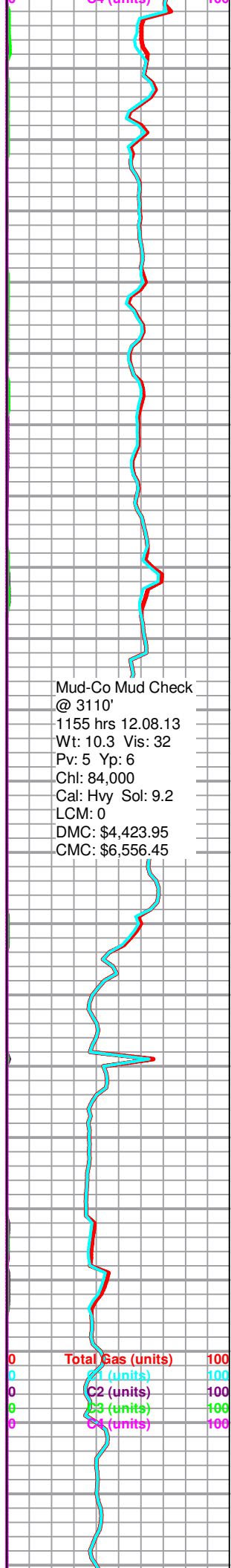
Shale: black carb to dark gray, mostly blocky and soft, some splintery, no show gas

Shale: gray to dark gray, blocky to soft, with few pieces Sandstone: dark tan, vf-grained, poorly sorted and cemented, fair inter-granular porosity, no shows noted

Displace mud system by 3200'

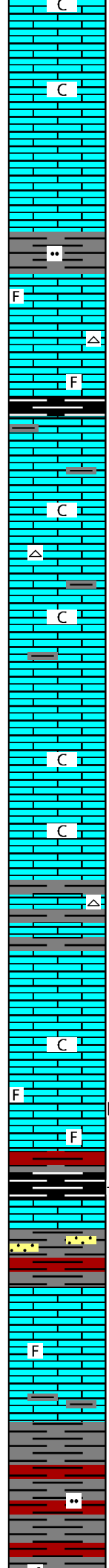
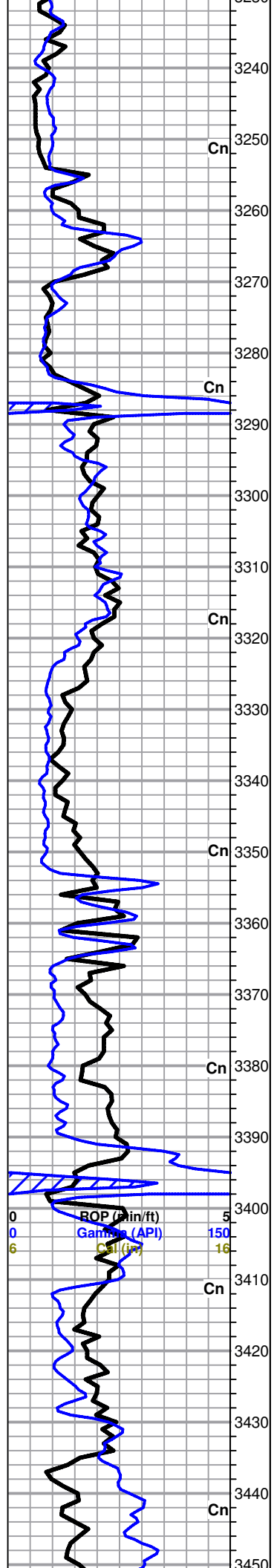
Limestone: cream white, micro to fine-xlyn, dense chalky matrix, some loose chalk, trace cherty, lower part with increase in chalky content, poor to fair inter-xlyn porosity, no shows noted

Limestone: cream white, micro-xlyn, chalky matrix, gummy in part, abundant chalky material, poor inter-xlyn porosity, no shows noted



Mud-Co Mud Check @ 3110'
 1155 hrs 12.08.13
 Wt: 10.3 Vis: 32
 Pv: 5 Yp: 6
 Chl: 84,000
 Cal: Hvy Sol: 9.2
 LCM: 0
 DMC: \$4,423.95
 CMC: \$6,556.45

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



Limestone: as above, increase in chalky content, abundant loose Chalk

Limestone: light tan to tan, fine-xlyn, dense tight matrix, few parts grainy, fossiliferous in part, poor to fair inter-xlyn porosity, no shows noted, and Shale: light gray, blocky and hard, few parts silty

Geologist on location 1830 hrs 12.08.13 @ 3275'

Queen Hill Shale 3286' (-1463)

Shale: black carb, some dark gray, blocky and hard, no show of gas

Limestone: white to light tan, fine-xlyn, dense grainy matrix, fossiliferous in part, few parts shaley, poor visible porosity, no shows noted

Limestone: cream white to light tan, micro-xlyn, dense chalky matrix, few parts cherty, fair inter-xlyn porosity, no shows noted

Limestone: as above, increase in chalky content, shaley in part

Limestone: cream white, micro-xlyn, dense chalky matrix, most parts friable, trace loose Chalk, poor to fair inter-xlyn porosity, no shows noted

Shale: dark gray and red, blocky and hard, with interbedded Limestone: light gray and light tan, micro-xlyn, dense tight matrix, cherty in part, fair inter-xlyn porosity, no shows noted

Limestone: cream white to light tan, micro-xlyn, hard dense chalky matrix, poor to fair pinpoint porosity, no shows noted

Limestone: light tan to tan, fine-xlyn, dense grainy matrix, few parts fossiliferous, poor to fair inter-xlyn porosity, scattered dead stains, no live shows noted

Heebner 3394' (-1471)

Shale: black carb to dark gray, some red, blocky and hard, good show of gas upon break, with interbedded Limestone: light tan, micro-xlyn, dense and hard, few parts grainy, poor visible porosity, no shows noted, and trace Sandstone: clusters, n/s

Toronto Lime 3411' (-1488)

Limestone: light gray, micro to fine-xlyn, hard dense matrix, few parts fossiliferous, poor to fair inter-xlyn porosity with trace fair vuggy porosity, no shows noted, lower part shaley

Douglas 3430' (-1507)

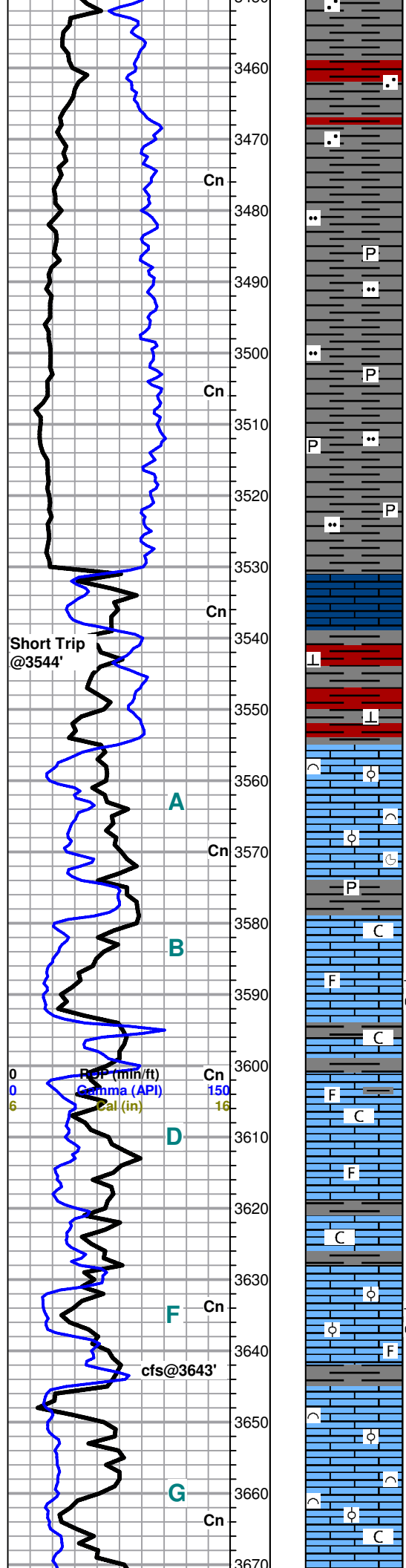
Shale: dark gray and brick red, blocky and hard, silty to sandy in part, sample washes brownish red

Adjusted Bloodhound

Shale kick

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

0 ROP (ft/min) 5
 0 Gamma (API) 150
 6 Cal (in) 16



Shale: dark gray, some red, blocky to rounded, mostly hard, sandy, sample washes dark gray

Shale: dark gray, blocky and hard, silty in part, few parts pyritic, sample washes dark gray

Shale: as above, slight increase in pyritic material

Brown Lime 3531' (-1608)

Limestone: light tan to brown, some gray, hard dense matrix, grainy texture, poor visible porosity, no shows noted

Shale: gray, light gray, and brownish red, blocky to rounded, mostly soft, calcareous in part, sample washes brownish red

Lansing 3555' (-1632)

Limestone: light to dark gray, fine-xlyn, hard dense matrix, densely fossiliferous to bioclastic in part, few parts oolitic, poor visible porosity, no shows noted, lower part with large fossils in part, and Shale: gray to light gray, blocky, mostly fissile, some hard and pyritic

Limestone: cream white, micro-xlyn, dense chalky matrix, sub-friable in part to trace loose chalky material, poor pinpoint porosity, no shows noted

Limestone: cream white, chalky matrix, few parts friable, fine-xlyn, trace fossiliferous, fair vuggy porosity, very light staining along edges, very slight show of gas upon break, no fluorescence, faint odor, with interbedded Shale as above in lower part

Limestone: light gray and light tan, micro to fine-xlyn, dense chalky matrix, few parts fossiliferous, fair inter-xlyn porosity, no shows noted, shaley

Limestone: light tan to tan, micro-xlyn, dense tight matrix, grainy texture, trace fossiliferous, poor inter-xlyn porosity, no shows noted

Shale: as above, with interbedded Limestone: cream white, micro-xlyn, dense chalky matrix, few parts friable, poor visible porosity, no shows noted

cfs@3643' - Limestone: light tan, some cream white, fine-xlyn, dense grainy matrix, fossiliferous to oolitic, scattered fair to good vuggy porosity, trace fair staining along edges, no fluorescence, very slight show of gas upon break, very faint odor

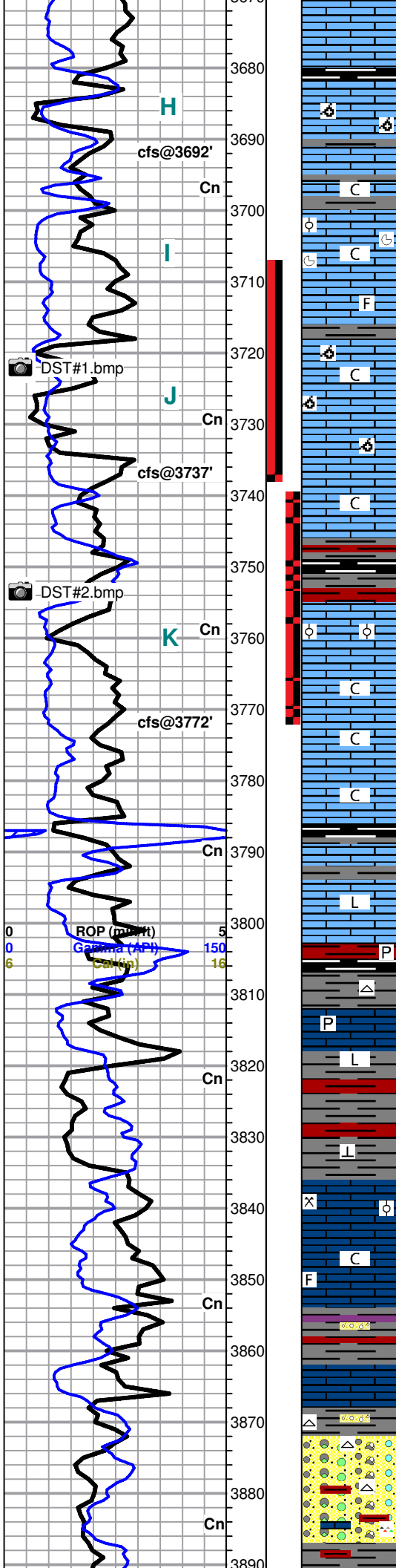
Limestone: light tan, fine-xlyn, densely fossiliferous to bioclastic and oolitic in part, few parts friable, fair inter-fossil porosity and trace good vuggy porosity, no shows noted, buildup of chalky matrix in lower part

Limestone: tan to brown, hard dense matrix, crypto-micro-xlyn, sub-grainy to nondescript in part, poor visible porosity, no shows noted

Mud-Co Mud Check
 @3544'
 0720 hrs 12.09.13
 Wt: 8.9 Vis: 69
 Pv: 19 Yp: 18
 pH: 9.0 WL: 7.6
 Cake 1/32nd
 Chl: 6,400 Cal: 20
 Sol: 3.3 LCM: Tr
 DMC: \$887.35
 CMC: \$7,443.80

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

61 total units



Muncie Creek Shale 3680' (-1757)

Shale: black carb and light gray, blocky and hard, no gas show
 cfs@3692' - Limestone: white to light tan, fine-xlyn, hard dense matrix, fair to good oomoldic development & porosity, trace fair vuggy porosity, black tarry dead oil stains in part, very slight show of gas upon break, faint odor, lower part hard dense & chalky

Shale: dark gray, blocky and hard, with interbedded Limestone: cream white, dense chalky matrix, fine-xlyn, oolitic in part, n/s

Limestone: cream white and light tan, micro-xlyn, dense chalky matrix, fossiliferous in part, trace friable, fair inter-xlyn porosity, trace spotty staining (?), no fluorescence, no odor, interbedded Shale as above in lower part

Limestone: cream white, micro-xlyn, dense chalky matrix, few parts with poor oomoldic development and porosity, friable in part, no shows noted

cfs@ 3737' - Limestone: cream white to light tan, fine-xlyn, sli friable matrix, good oomoldic development & porosity in part, fair light brown staining, trace free oil upon break, no fluorescence, no cut, fair odor

Stark Shale 3746' (-1823)

Shale: black carb and dark gray, some red, blocky and hard, slight show of gas upon break

Limestone: cream white, micro-xlyn, dense chalky matrix, few parts friable, poor inter-xlyn porosity, no shows noted

cfs@3772' - Limestone: cream white, fine-xlyn, dense matrix, oolitic in part, trace friable, fair inter-xlyn with scattered good vuggy porosity, light brown spotty stains in part, no fluorescence, very faint odor, lower part Limestone: cream white, micro-xlyn, hard dense chalky matrix, poor visible porosity, no shows noted

Hushpuckney Shale 3786' (-1863)

Shale: black carb, blocky and hard, trace gray and frissile, slight show of gas upon break

Limestone: cream white, some gray and tan, micro-xlyn, hard dense matrix, grainy texture to sub-lithographic in part, poor inter-xlyn with trace fair vuggy porosity, no shows noted

Base Kansas City 3803' (-1880)

Shale: dark gray to red, some black carb, blocky and hard, few parts pyritic

Limestone: gray and light tan, fine-xlyn, hard dense matrix, grainy to sub-lithographic, chety in part, poor visible porosity, no shows noted, with interbedded Shale as above, sample washes dark gray

Shale: light to dark gray, some red, blocky to rounded, mostly soft, few parts calcareous

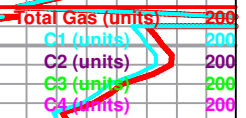
Limestone: light gray and light tan, hard dense chalky matrix, micro to fine-xlyn, fossiliferous to oolitic in part, poor visible porosity, no shows noted

Shale: gray to dark gray, some red, trace purple, blocky and hard, with few pieces red cherty Conglomerate

Conglomerate: red shaley matrix, with Limestone: cream white to light gray, hard and dense, grainy in part, poor to fair pinpoint porosity, no shows noted, and Chert: white, some light green, heavily weathered to tripolitic, poor visible porosity, no shows noted, sample washes red-brown

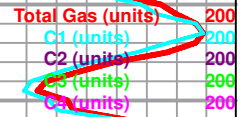
Mud-Co Mud Check @3737'
 Wt: 9.25 Vis: 58
 Pv: 15 YP: 18
 pH: 10 WL: 9.6
 Cake 1/32nd
 Chl: 7,200 Cal: 0
 Sol: 6.3 LCM: 0
 DMC: \$464.15
 CMC: \$7,907.95

Note Scale Change



Contaminated mud system

Mud-Co Mud Check @3772'
 0810 hrs 12.11.13
 Wt: 9.1 Vis: 49
 Pv: 10 Yp: 23
 pH: 9.0 WL: 14.2
 Cake 1/32nd
 Chl: 12,800 Cal: 240
 Sol: 5.0 LCM: Tr
 DMC: \$681.45
 CMC: \$8,589.40



Conglomerate: as above, with dark gray blocky Shale

(3889-3908') Conglomerate and Shale as above, with increase in Chert: white, opaque, mostly sharp and fresh, trace tripolitic

Viola 3908' (-1985)

Chert: bone white, some orange in lower part, opaque, mostly weathered to tripolitic, some sharp and fresh, few parts limey, fair vuggy porosity with associated staining, poor to fair show free light brown oil and gas building under lamp, dull yellow fluorescence, no odor

cfs@3955' 15/30" - Chert: bone white and gray, trace orange, opaque, weathered and tripolitic in part, most sharp and fresh, poor visible porosity, scattered spotty stains, slight show of gas building under lamp, dull yellow fluorescence, no odor, with Limestone: light to dark gray, hard and dense, fine-xlyn, cherty in part, few parts dolomitic, poor visible porosity, no shows noted, lower part carrying much multicolored Shale

cfs@3955' 45/60" - Chert: bone white, light gray, and tan, some orange and green, opaque to sub-translucent, heavily weathered to tripolitic in part, limey in part, poor to fair vuggy porosity, no shows noted

Chert: as above, decrease in weathered texture and increase in sharp and fresh pieces, no shows noted, sample carrying some multicolored Shale

cfs@3982' - Chert: bone white, some orange and pink, opaque to sub-translucent, mostly sharp and fresh, trace weathered, limey in part, poor visible porosity, no shows noted, lower part Limestone: cream white, crypto-micro-xlyn, hard dense chalky matrix, poor visible porosity, no shows noted

Limestone: cream white and light gray, hard dense chalky matrix, poor pinpoint porosity, no shows noted, with Chert as above

Limestone and Chert as above, with few pieces dark gray Shale

Limestone: light gray, some cream white, hard dense matrix, few parts dolomitic, poor visible porosity, no shows noted, with varicolored Chert as above

Limestone and Chert as above, increase in Shale: dark gray, some red and light green, blocky and hard

mostly Limestone and Chert as above, with increase in Shale: dark gray, some brick red to light green, blocky and hard, trace sandy

Simpson 4056' (-2133)

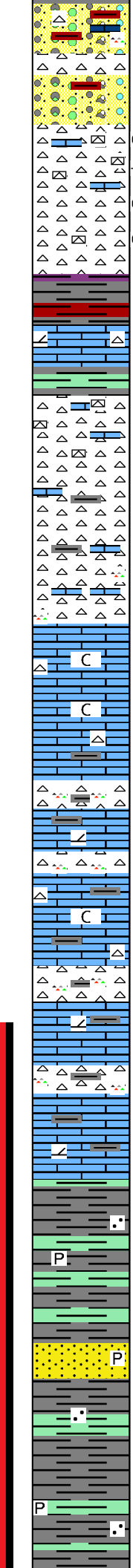
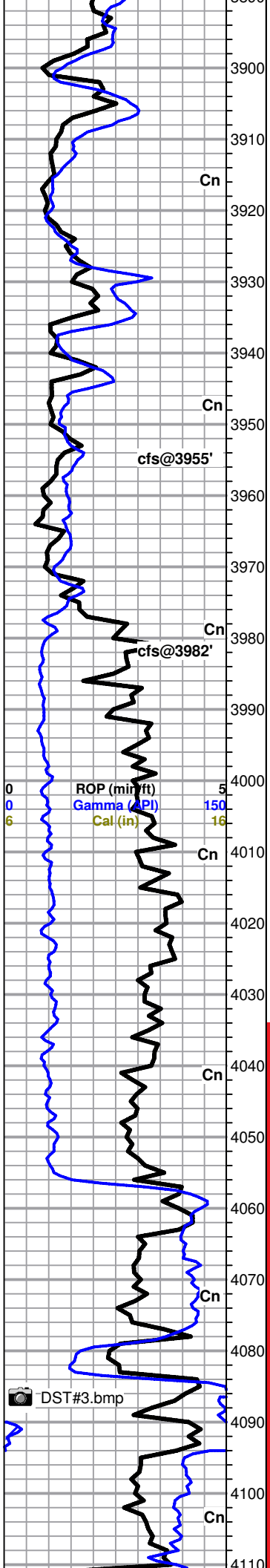
Shale: gray to dark gray and teal green, blocky and hard, sandy in part, few parts pyritic

Shale: teal green, some dark gray, blocky and hard, pyritic in part, with Sandstone: light gray to dark tan, crse-grained, poorly sorted and moderately cemented, mostly rounded, poor inter-granular porosity, no shows noted

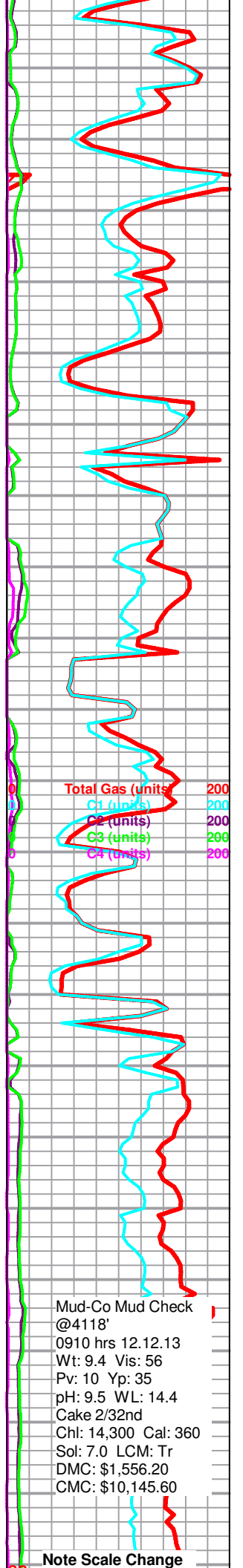
Shale: dark gray, some teal green and red, blocky and hard, pyritic in part, with Sandstone as above

Shale: mostly dark gray, some teal green, few parts sandy, trace pyritic, blocky and hard

Arbuckle 4112' (-2189)



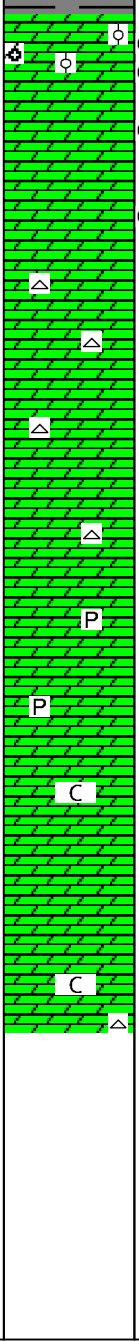
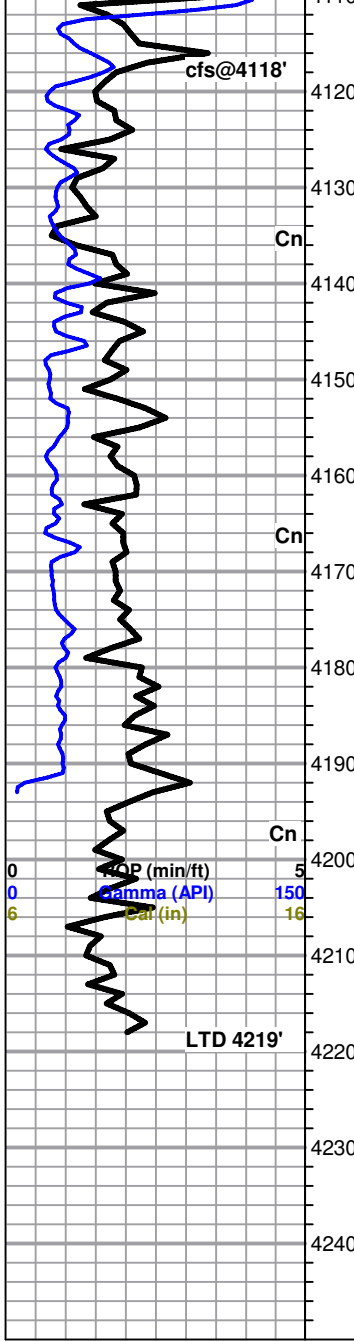
Vertical text descriptions of rock layers and their characteristics, including lithology and porosity details.



Mud-Co Mud Check @4118' 0910 hrs 12.12.13 Wt: 9.4 Vis: 56 Pv: 10 Yp: 35 pH: 9.5 WL: 14.4 Cake 2/32nd Chl: 14,300 Cal: 360 Sol: 7.0 LCM: Tr DMC: \$1,556.20 CMC: \$10,145.60

Note Scale Change

Arbuckle 4112 (-2169)



cfs@4118' - Dolomite: light gray and light tan, hard dense matrix, fine-crse-xlyn, poor rhombic development, oolitic in part with trace fair oomoldic development & porosity, trace good vuggy porosity, re-xlyzed in part, fair even staining in part, no free oil, bright green-yellow fluorescence, good odor

(4119-29') Dolomite: off white to light tan, dense matrix, v.fine-xlyn, sli sucrosic to friable in part, poor rhombic development & porosity, scattered spotty stains, green-yellow fluorescence, fair odor

(4130-39') Dolomite: mostly tan, dense matrix, fine-xlyn, fair rhombic development & poor associated porosity, trace fair to good vuggy porosity, scattered spotty stains, green-yellow fluorescence, fair odor

(4140-49') Dolomite: light gray and light tan, hard dense matrix, vf-fine-xlyn, fair rhombic development & poor associated porosity, cherty in part, very faint odor, no visible shows noted

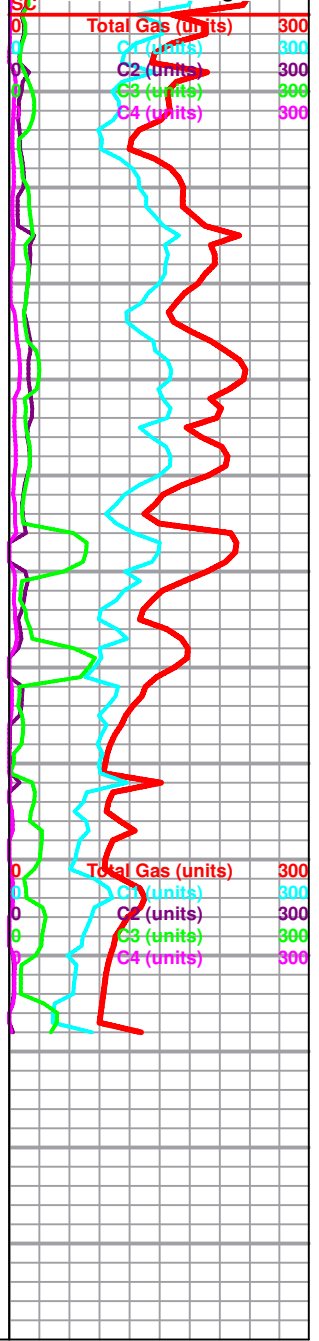
(4150-59') Dolomite: light tan to tan, hard dense matrix, fine-crse-xlyn, fair rhombic development and trace good associated porosity, cherty in part, very faint odor, no visible shows noted

(4160-71') Dolomite: tan and gray, hard dense matrix, fine-xlyn, fair rhombic development and poor associated porosity, cherty in part, no shows noted

(4172-89') Dolomite: tan and gray, hard dense matrix, crse-xlyn, good rhombic development and scattered fair associated porosity, few parts pyritic, no shows noted

(4190-97') Dolomite: cream white to light tan, dense matrix, fine-crse-xlyn, fair rhombic development and porosity, chalky in part, no shows noted

(4198-4208') Dolomite: light tan to tan, hard and dense, crse-xlyn, good rhombic development with scattered fair to good associated porosity, no shows noted



Rotary Total Depth 4218' (-2295)

Sample descriptions continued:

(4209-18') Dolomite: cream white, dense matrix, vf-fine-xlyn, poor rhombic development and porosity, few parts chalky, trace cherty, no shows noted

Orders received to run 5 1/2" production casing

**Respectfully submitted,
Adam G. Nighswonger**

	DRILL STEM TEST REPORT	
	Edison Operating Company LLC 8100 East 22nd Steet North Building 1900 Wichita, Kansas 67226 A TTN: Adam Nighswonger	16-24s-13w Stafford Rixon #1-16 Job Ticket: 18178 DST#: 1 Test Start: 2013.12.08 @ 00:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:00:00
 Time Test Ended: 00:00:00

Interval: 3707.00 ft (KB) To 3737.00 ft (KB) (TVD)
 Total Depth: 3737.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches -hole Condition: Fair

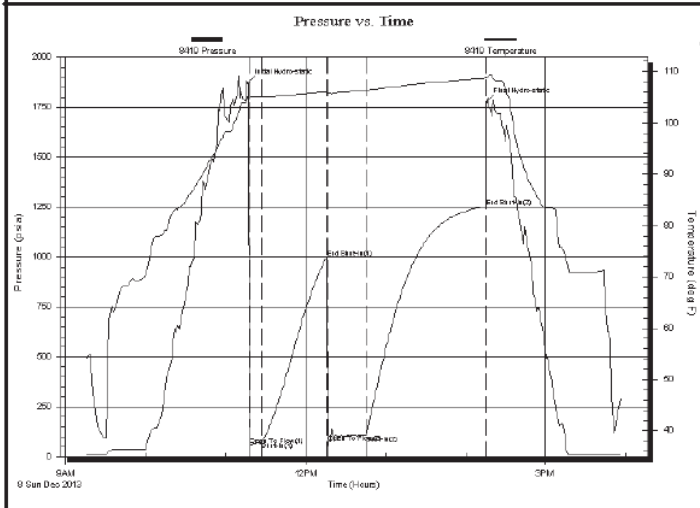
Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 3335

Reference Elevations: 1925.00 ft (KB)
 1920.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8419 Inside

Press@RunDepth: 1252.46 psia @ 3733.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.08 End Date: 2013.12.08 Last Calib.: 2013.12.08
 Start Time: 09:15:00 End Time: 15:56:30 Time On Btm: 2013.12.08 @ 11:16:30
 Time Off Btm: 2013.12.08 @ 14:16:00

TEST COMMENT: 1st Opening 10 Minutes-Weak building blow built to 8 inches into the water
 1st Shut-In 45 Minutes-No blow back
 2nd Opening 30 Minutes-Strong blow bleed it off after 5 min. fair blow built to the bottom of the bucket in 3 minutes
 2nd Shut-In 90 Minutes-No blow back

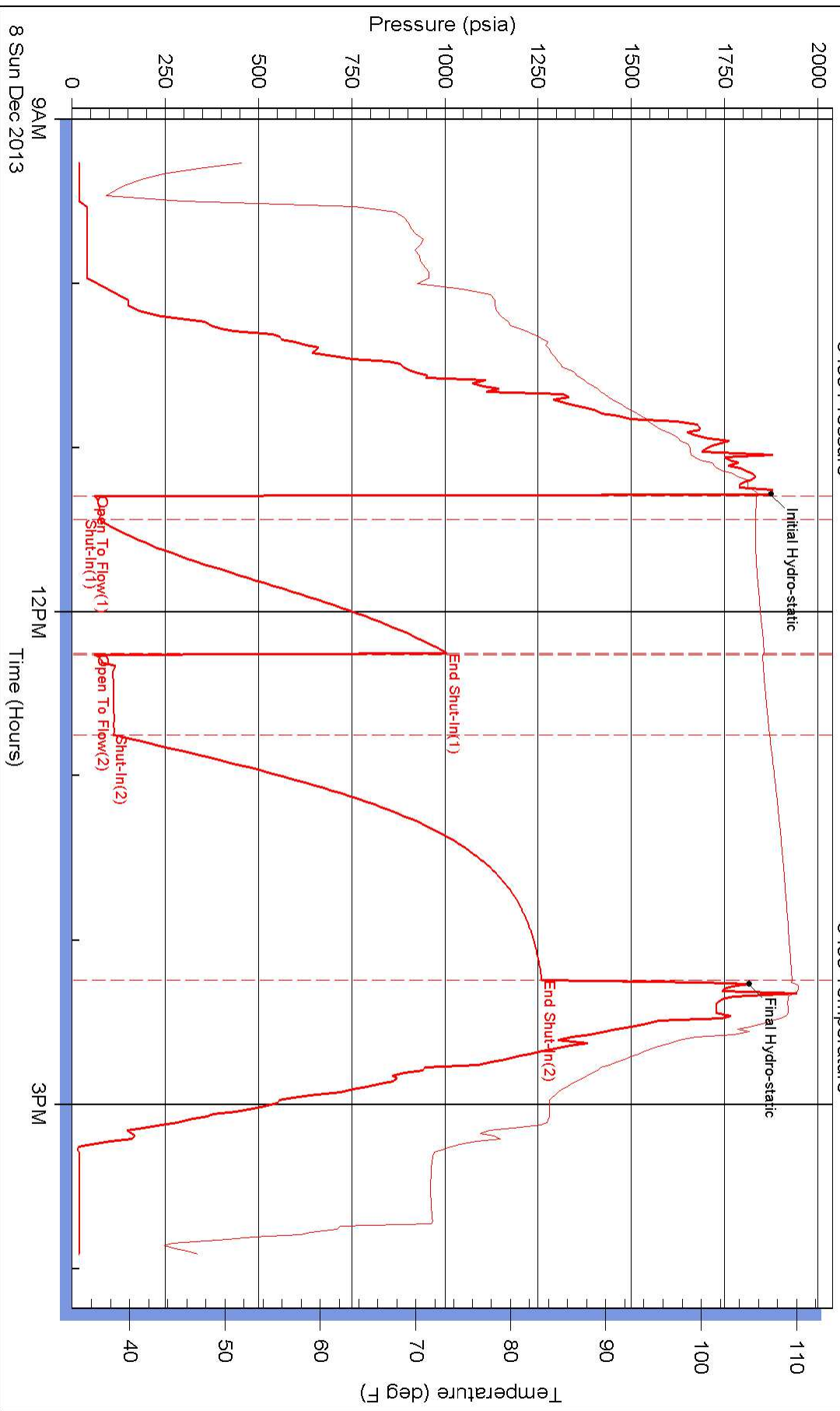


PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1873.24	105.41	Initial Hydro-static
2	54.81	105.15	Open To Flow (1)
11	72.50	105.07	Shut-In(1)
59	996.75	106.09	End Shut-In(1)
61	71.31	105.82	Open To Flow (2)
89	107.09	106.36	Shut-In(2)
179	1252.46	108.68	End Shut-In(2)
180	1777.49	108.79	Final Hydro-static

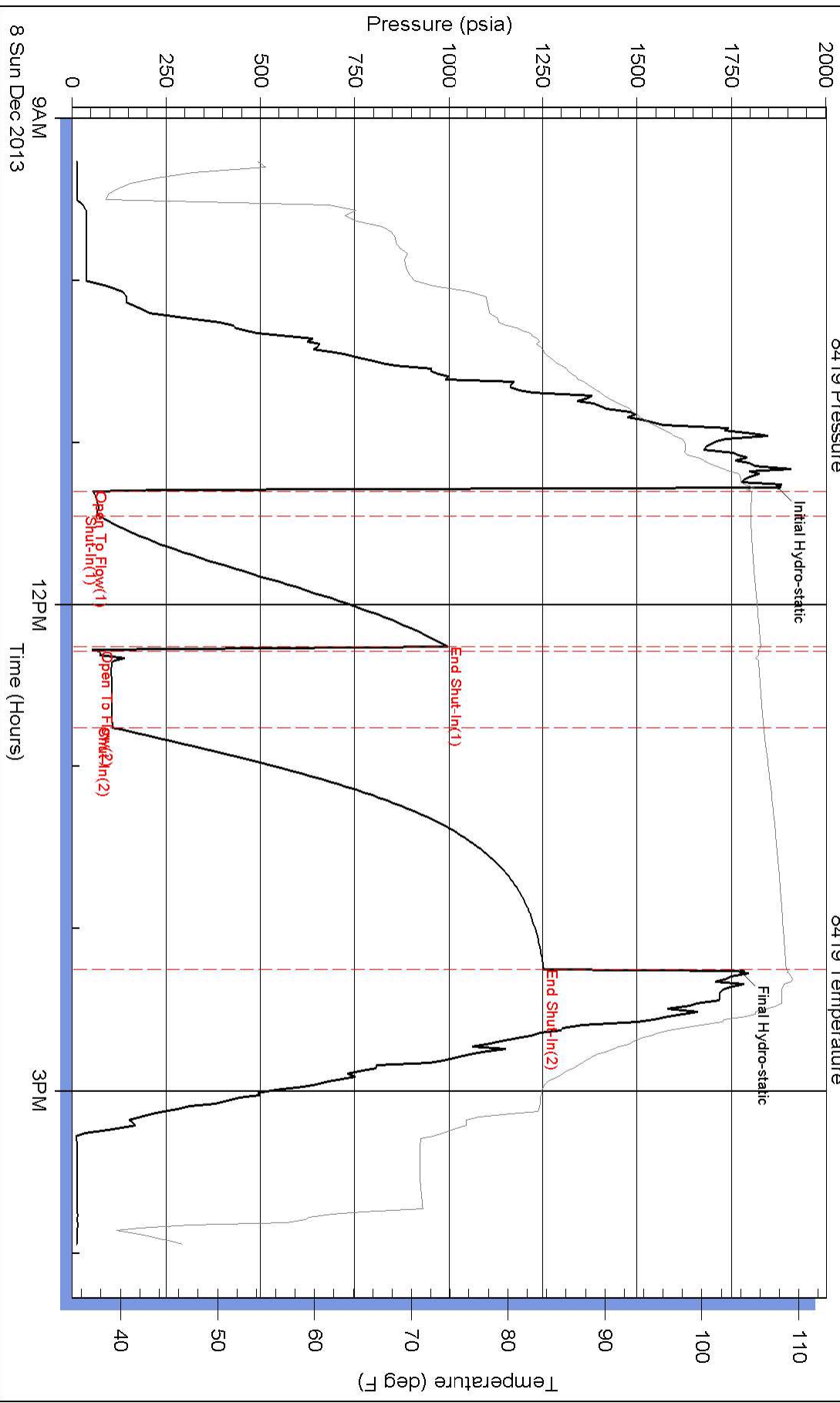
Recovery		
Length (ft)	Description	Volume (bbl)
0.00	1750 feet of gas in the pipe	0.00
130.00	feet of drillin mud	0.64

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18178

DST#: 1

Test Start: 2013.12.08 @ 00:00:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 58.00 sec/qt
 Water Loss: 9.60 in³
 Resistivity: ohm.m
 Salinity: ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	1750 feet of gas in the pipe	0.000
130.00	feet of drillin mud	0.639

Total Length: 130.00 ft Total Volume: 0.639 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18178

DST#: 1

Test Start: 2013.12.08 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3453.00 ft	Diameter: 3.80 inches	Volume: 48.44 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.86 inches	Volume: 0.00 bbl	Weight set on Packer: 2000.00 lb
Drill Collar:	Length: 241.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 49.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3707.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3684.00	
Hydraulic Tool	5.00			3689.00	
Jars	6.00			3695.00	
Safety Joint	2.00			3697.00	
Packer	5.00			3702.00	28.00 Bottom Of Top Packer
Packer	5.00			3707.00	
Perforations	25.00			3732.00	
Recorder	1.00	8419	Inside	3733.00	
Recorder	1.00	8405	Outside	3734.00	
Bullnose	3.00			3737.00	30.00 Bottom Packers & Anchor
Total Tool Length:	58.00				



DRILL STEM TEST REPORT

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18178

DST#: 1

Test Start: 2013.12.08 @ 00:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335

Interval: 3707.00 ft (KB) To 3737.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3737.00 ft (KB) (TVD)

1920.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8405 Outside

Press @ RunDepth: 1260.08 psia @ 3734.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.12.08

End Date: 2013.12.08

Last Calib.: 2013.12.08

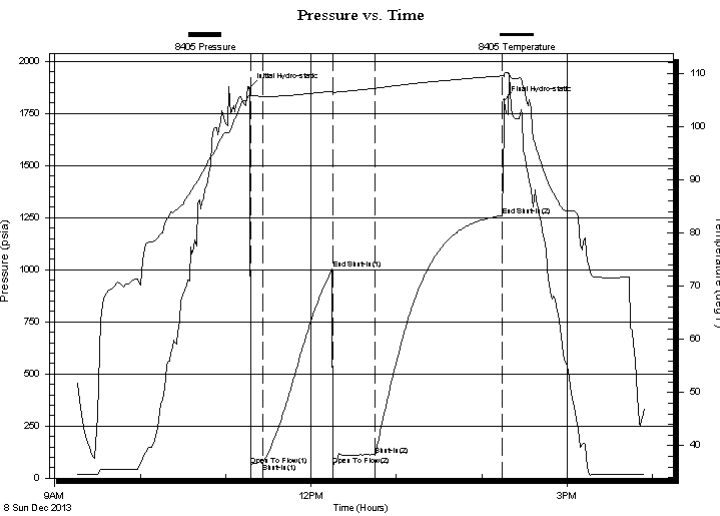
Start Time: 09:15:00

End Time: 15:54:30

Time On Btm: 2013.12.08 @ 11:17:00

Time Off Btm: 2013.12.08 @ 14:16:00

TEST COMMENT: 1st Opening 10 Minutes-Weak building blow built to 8 inches into the water
 1st Shut-In 45 Minutes-No blow back
 2nd Opening 30 Minutes-Strong blow bleed it off after 5 min. fair blow built to the bottom of the bucket in 3 minutes
 2nd Shut-In 90 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1872.58	105.99	Initial Hydro-static
1	60.33	105.73	Open To Flow (1)
9	73.31	105.67	Shut-In(1)
58	1003.88	106.61	End Shut-In(1)
59	61.33	106.41	Open To Flow (2)
88	110.79	107.15	Shut-In(2)
178	1260.08	109.50	End Shut-In(2)
179	1813.89	109.97	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	1750 feet of gas in the pipe	0.00
130.00	feet of drillin mud	0.64

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



DRILL STEM TEST REPORT

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18178

DST#: 1

Test Start: 2013.12.08 @ 00:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335

Interval: 3707.00 ft (KB) To 3737.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3737.00 ft (KB) (TVD)

1920.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8419 Inside

Press @ RunDepth: 1252.46 psia @ 3733.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.12.08

End Date: 2013.12.08

Last Calib.: 2013.12.08

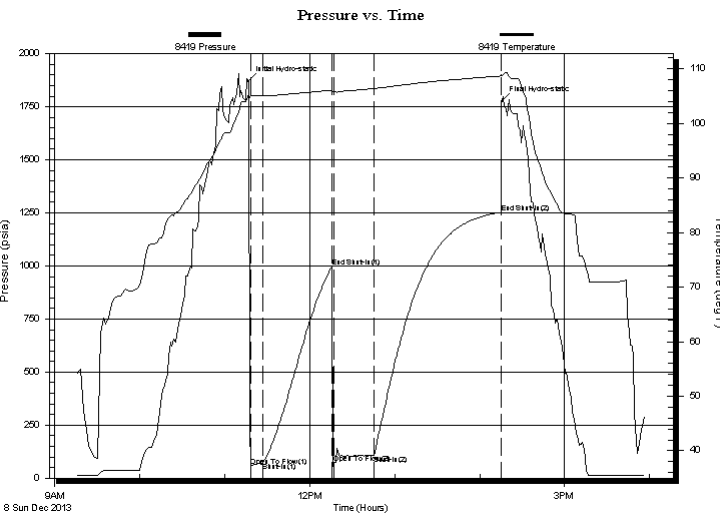
Start Time: 09:15:00

End Time: 15:56:30

Time On Btm: 2013.12.08 @ 11:16:30

Time Off Btm: 2013.12.08 @ 14:16:00

TEST COMMENT: 1st Opening 10 Minutes-Weak building blow built to 8 inches into the water
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 2nd Opening 30 Minutes-Strong blow bleed it off after 5 min. fair blow built to the bottom of the bucket in 3 minutes
 2nd Shut-In 90 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1873.24	105.41	Initial Hydro-static
2	54.81	105.15	Open To Flow (1)
11	72.50	105.07	Shut-In(1)
59	996.75	106.09	End Shut-In(1)
61	71.31	105.82	Open To Flow (2)
89	107.09	106.36	Shut-In(2)
179	1252.46	108.68	End Shut-In(2)
180	1777.49	108.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	1750 feet of gas in the pipe	0.00
130.00	feet of drillin mud	0.64

Gas Rates

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



DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 East 22nd Steet North
Building 1900
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Rixon #1-16

16-24s-13w Stafford

Start Date: 2013.12.08 @ 00:00:00

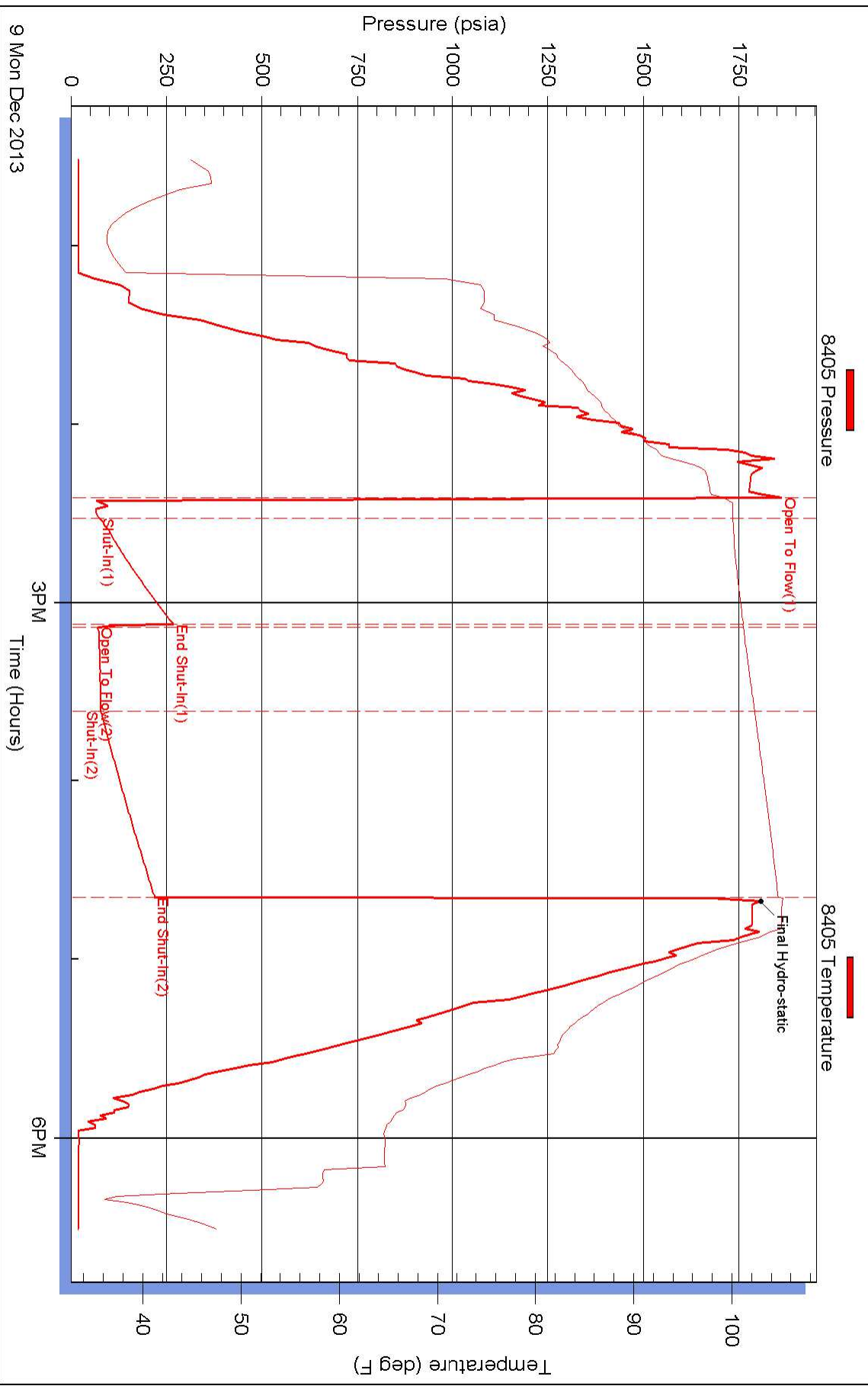
End Date: 2013.12.08 @ 00:00:00

Job Ticket #: 18178 DST #: 1

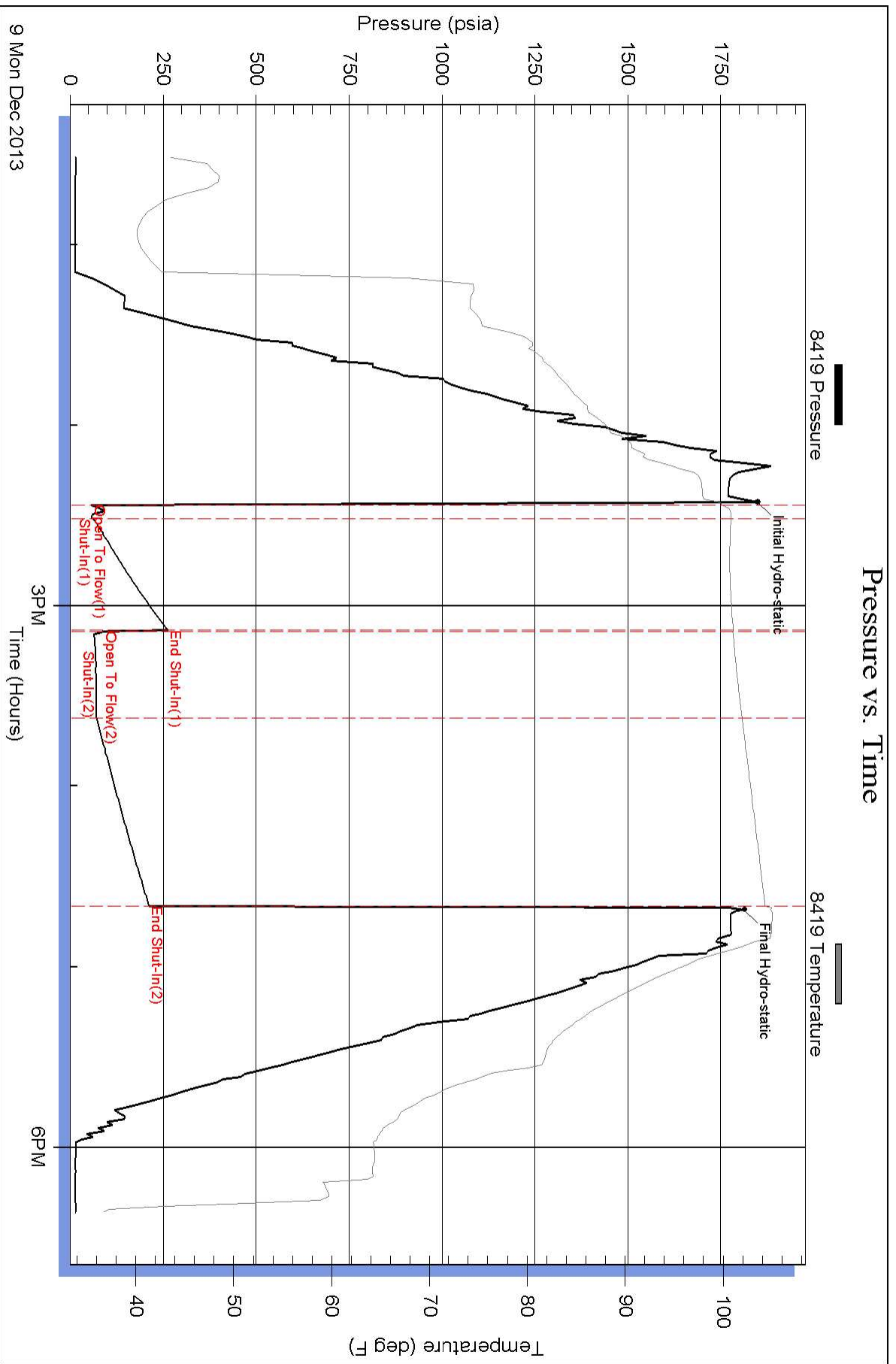
Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.12.08 @ 15:54:28

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
Building 1900
Wichita, Kansas 67226
ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18179

DST#: 2

Test Start: 2013.12.09 @ 00:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 58.00 sec/qt
Water Loss: 9.60 in³
Resistivity: ohm.m
Salinity: 7200.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psia

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	350 gas in the pipe	0.000
65.00	mud	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18179

DST#: 2

Test Start: 2013.12.09 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3488.00 ft	Diameter: 3.80 inches	Volume: 48.93 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.86 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 241.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 50.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3740.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3717.00	
Hydraulic Tool	5.00			3722.00	
Jars	6.00			3728.00	
Safety Joint	2.00			3730.00	
Packer	5.00			3735.00	28.00 Bottom Of Top Packer
Packer	5.00			3740.00	
Perforations	27.00			3767.00	
Recorder	1.00	8419	Inside	3768.00	
Recorder	1.00	8405	Outside	3769.00	
Bullnose	3.00			3772.00	32.00 Bottom Packers & Anchor
Total Tool Length:	60.00				



DRILL STEM TEST REPORT

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18179

DST#: 2

Test Start: 2013.12.09 @ 00:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig 66

Unit No: 3335

Interval: 3740.00 ft (KB) To 3772.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: ft (KB) (TVD)

1920.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8405 Outside

Press @ RunDepth: 218.83 psia @ 3769.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.12.09

End Date: 2013.12.09

Last Calib.: 2013.12.09

Start Time: 12:30:00

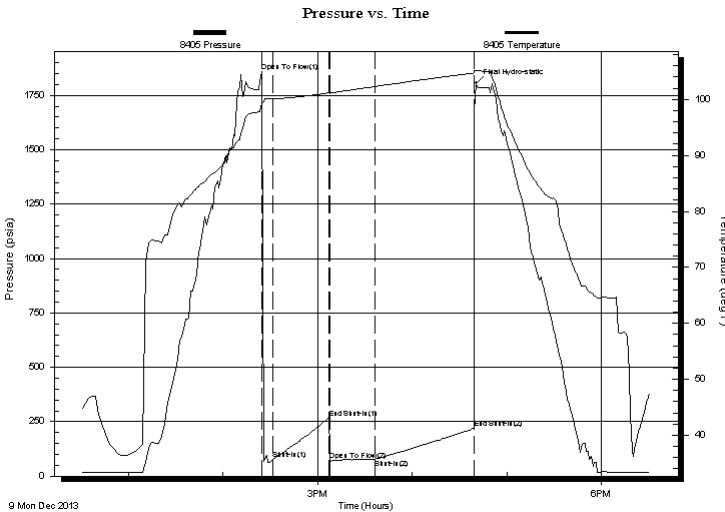
End Time: 18:31:00

Time On Btm:

Time Off Btm: 2013.12.09 @ 16:40:30

TEST COMMENT: 1st Opening 10 Minutes-Weak Surface Bloe
 1st Shut-In 30 Minutes-No blow back
 2nd Opening 30 Minutes-w eak building blow built to 8 inches into the w ater
 2nd Shut-In 60 Minutes- No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1861.64	99.17	Open To Flow (1)
7	75.60	100.11	Shut-In(1)
43	268.02	101.15	End Shut-In(1)
44	71.59	101.14	Open To Flow (2)
72	77.45	102.30	Shut-In(2)
135	218.83	104.71	End Shut-In(2)
136	1806.25	105.13	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	350 gas in the pipe	0.00
65.00	mud	0.32

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



DRILL STEM TEST REPORT

Edison Operating Company LLC

16-24s-13w Stafford

8100 East 22nd Steet North
 Building 1900
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Rixon #1-16

Job Ticket: 18179

DST#: 2

Test Start: 2013.12.09 @ 00:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig 66

Unit No: 3335

Interval: 3740.00 ft (KB) To 3772.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: ft (KB) (TVD)

1920.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8419 Inside

Press @ RunDepth: 212.49 psia @ 3768.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.12.09

End Date: 2013.12.09

Last Calib.: 2013.12.09

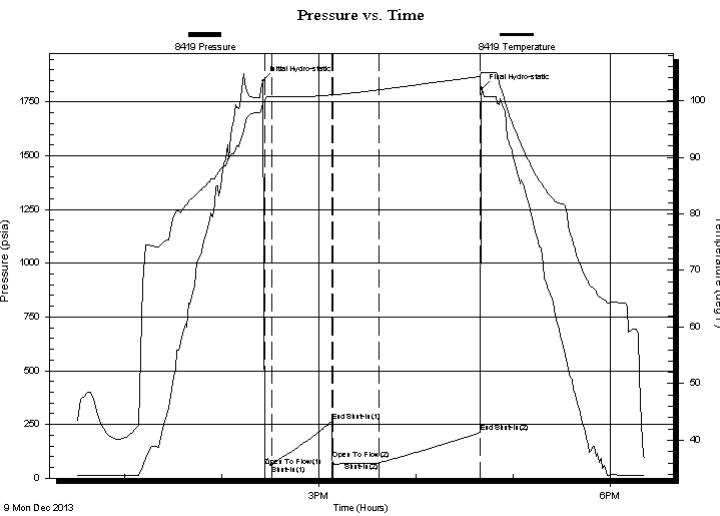
Start Time: 12:30:00

End Time: 18:22:00

Time On Btm: 2013.12.09 @ 14:25:30

Time Off Btm: 2013.12.09 @ 16:41:00

TEST COMMENT: 1st Opening 10 Minutes-Weak Surface Bloe
 1st Shut-In 30 Minutes-No blow back
 2nd Opening 30 Minutes-w eak building blow built to 8 inches into the w ater
 2nd Shut-In 60 Minutes- No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1848.00	99.67	Initial Hydro-static
1	57.41	99.90	Open To Flow (1)
6	61.03	100.77	Shut-In(1)
43	262.51	101.03	End Shut-In(1)
43	89.28	100.98	Open To Flow (2)
72	71.57	101.92	Shut-In(2)
135	212.49	104.27	End Shut-In(2)
136	1812.39	104.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	350 gas in the pipe	0.00
65.00	mud	0.32

Gas Rates

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



DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 East 22nd Steet North
Building 1900
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Rixon #1-16

16-24s-13w Stafford

Start Date: 2013.12.09 @ 00:00:00

End Date: 2013.12.09 @ 00:00:00

Job Ticket #: 18179 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.12.09 @ 06:28:55