



1102704

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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Quality Well Service, Inc.

Invoice

324 Simpson St.
Pratt, KS 67124

Date	Invoice #
8/17/2012	C-585

Bill To
Edison Operating
1223 N Rook Rd
Wichita, KS 67206

P.O. No.	Terms	Lease Name
		Schartz #1A-6

Description	Qty	Rate	Amount
Common	275	13.50	3,712.50T
Gel	5	20.50	102.50T
Calcium	10	53.00	530.00T
Flo-Seal	68.75	2.00	137.50T
8 5/8 Wooden Plug	1	85.00	85.00T
Handling	290	2.10	609.00
.08 * sacks * miles	4,400	0.08	352.00
SFC 0-500'	1	600.00	600.00
LMV	16	2.00	32.00
Pump Truck Mileage	16	8.00	128.00
Discount		-1.00	-685.13T
Discount		-1.00	-258.15
Discount Expires after 30 days from the date of the invoice		0.00	0.00
Schartz #1A-6			
Rice Co.			
Subtotal			\$5,345.22
Sales Tax (7.3%)			\$283.41
Total			\$5,628.63

Thank You for your business!

QUALITY WELL SERVICE, INC.

5626

Federal Tax I.D. # 481187368

Home Office 324 Simpson St., Pratt, KS 67124
 Heath's Cell 620-727-3410
 Office / Fax 620-672-3663

Rich's Cell 620-727-3409
 Brady's Cell 620-727-6964

Date	8-16-12	Sec.	6	Twp.	R0	Range	10	County	Rice	State	KS	On Location		Finish	8:15-8:45pm
Lease	SEPART 2		Well No.	1A-6		Location			Ellinwood US E to county line 3/4 S E1/4						
Contractor	Mallard														
Type Job	Surface														
Hole Size	10 1/4		T.D.	385											
Csg.	8 5/8		Depth	385											
Tbg. Size			Depth												
Tool			Depth												
Cement Left in Csg.	20 ct		Shoe Joint												
Meas Line			Displace												
EQUIPMENT															
Pumptrk	No.	8		Cady											
Bulktrk	No.	9		Brind											
Bulktrk	No.			Hearth											
Pickup	No.														
JOB SERVICES & REMARKS															
Rat Hole															
Mouse Hole															
Centralizers															
Baskets															
DV or Port Collar															
	Ran 9 Jts at 8 5/8 and landing J+														
	EST Circulation with mud pump														
	Hooked up and mixed 275sr - Shut														
	down and released plug - d.50 with														
	2 3/2 bbl at H20 and shut in @ 300 ps														
	AFU Inserts														
	Float Shoe														
	Latch Down														
	8 5/8 Wooden Plug														
	Cement Did Circulate to Surface														
	Pumptrk Charge Surface														
	Mileage 16														
	Tax														
	Discount														
	Total Charge														
X	Signature														

Quality Well Service, Inc.

324 Simpson St.
Pratt, KS 67124

Invoice

Date	Invoice #
7/13/2012	C-593

Bill To
Edison Operating 1223 N Rock Rd Wichita, KS 67206

P.O. No.	Terms	Lease Name
		Schartz #1-A6

Description	Qty	Rate	Amount
Common	110	13.50	1,485.00T
Poz	20	8.50	170.00T
Gel	4	20.50	82.00T
Salt	7	13.00	91.00T
Flo-Seal	12.5	2.00	25.00T
Kol-Seal	400	0.75	300.00T
Mud Flush	500	1.00	500.00T
5 1/2 Turbolizer	7	65.00	455.00T
5 1/2 AFU Float Shoe	1	275.00	275.00T
5 1/2 LD Plug & Baffle	1	225.00	225.00T
Longstring	1	1,750.00	1,750.00
Handling	141	2.10	296.10
.08 * sacks * miles	2,600	0.08	208.00
LMV	20	2.00	40.00
Pump Truck Mileage	20	8.00	160.00
Discount	360.8	-1.00	-360.80T
Discount	245.41	-1.00	-245.41
Discount Expires after 30 days from the date of the invoice		0.00	0.00
Schartz #1-A6 Rice Co.			

Thank You for your business!	Subtotal	\$5,455.89
	Sales Tax (7.3%)	\$237.05
	Total	\$5,692.94

QUALITY WELL SERVICE, INC.

5633

Federal Tax I.D. # 481187368

Home Office 324 Simpson St., Pratt, KS 67124

Heath's Cell 620-727-3410
Office / Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	8-22-12	Sec.	6	Twp.	20	Range	10	County	Rice	State	KS	On Location		Finish	10:00 - 11:00 hrs	
Lease	Schortz		Well No.	1-A6		Location	Rice county line 3/4 S E into									
Contractor	Mailord				Owner	To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.										
Type Job	Long string				T.D.	3390		Charge To	Edison Operating							
Hole Size					Depth	3394		Street								
Csg.	5 1/2 14"				Depth			City	State							
Tbg. Size					Depth			The above was done to satisfaction and supervision of owner agent or contractor.								
Tool	Insert @ 3374				Shoe Joint	15.69		Cement Amount Ordered 80 sr pro C								
Cement Left in Csg.					Displace	82.661		50 sr 60/40 4% gel 1/4" Flt								
Meas Line					EQUIPMENT											
Pumptrk	No.	8	Cody		Common	80 110										
Bulktrk	No.	9	Mike		Poz. Mix	20										
Bulktrk	No.	5	Richard		Gel.	4										
Pickup	No.				Calcium											
				JOB SERVICES & REMARKS				Hulls								
Rat Hole	30				Salt	7										
Mouse Hole	20				Flowseal	400# 12.50										
Centralizers					Kol-Seal	400lb										
Baskets					Mud CLR 48	500 gal mud Flush										
D/V or Port Collar					CFL-117 or CD110 CAF 38											
Ran 79 Jts at 5 1/2 14" casing hooked up and mixed 500 gal flush with 5 bbl H2O behind - then mixed 80 sr of pro C - knocked loose and washed pump and lines clean - hooked up and d.sp 82.661 H2O and plug lands @ 1500 psi - released and float held								Sand								
								Handling	141							
								Mileage	20		FLOAT EQUIPMENT					
								Guide Shoe								
								Centralizer	8-Turbo							
								Baskets								
								AFU Inserts								
				hooked up and plugged MH & RH				Float Shoe	1 - 5 1/2							
								Latch Down	1 - 5 1/2							
				Ran turbolizer's on Jts 1, 4, 5, 6, 7, 8, 9 and Plug Insert at 3374'												
								Pumptrk Charge	Long string							
								Mileage	20							
										Tax						
										Discount						
										Total Charge						
X Signature				Bob Kasper												



EDISON OPERATING COMPANY_{LLC}

Scale 1:240 (5"=100') Imperial

Well Name: Schartz #1A-6
Location: Sec. 06 - T20S - R10W, Rice County, KS
Licence Number: API No.: 15-159-22695-0000
Spud Date: August 16, 2012
Surface Coordinates: 660' FSL & 660' FWL (C SW SW)

Region: Chase-Silica
Drilling Completed: August 21, 2012

Bottom Hole Coordinates:

Ground Elevation (ft): 1777' K.B. Elevation (ft): 1782'
Logged Interval (ft): 2500' To: 3390' Total Depth (ft): 3388' (LTD)
Formation: Lansing & Arbuckle
Type of Drilling Fluid: Chemical Gel/Polymer

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Edison Operating Company, LLC
Address: 1223 N. Rock Road
Building I-100
Wichita, KS 67206

GEOLOGIST

Name: Derek W. Patterson
Company: Valhalla Exploration, LLC
Address: 133 N. Glendale
Wichita, KS 67208

REMARKS

After review of the open hole logs, sample evaluation, and DST results for the Schartz #1A-6, it was decided upon by operator to run 5 1/2" production casing to further evaluate the Arbuckle and multiple Lansing zones encountered while drilling said well.

The well samples were saved, submitted, and will be available for review at the Kansas Geologic Survey's Well Sample Library located in Wichita, KS.

Respectfully Submitted,

Derek W. Patterson

COMMENTS

Please Note: The RTD was 3390' and the LTD 3388'.

The drill time, gas curves, and DST intervals have been shifted 3' shallow/higher to correspond with the electric log curves. All connection and circulation points have also been moved to match the overall shift.



General Information

Service Companies

Drilling Contractor: Mallard, J V - Rig #1
Tool Pusher: Lavon Urban
Daylight Driller: Mark Elsen
Evening Driller: Justin McDonald
Morning Driller: Frank Symank
Relief: Kyle Stout

Drilling Fluid: Mud-Co/Service Mud
Engineer: Rick Hughes

Logging Company: Superior Well Services
Engineer: Jeff Luebbers
Logs Ran: DI, CDNL, Micro, Sonic

Gas Detector: Bluestem Environmental
Engineer: Sidney Eldelbrock
Unit: 0279
Operational By: 1930'

Testing Company: Trilobite Testing, Inc.
Tester: Leal Cason

Deviation Survey	
Depth	Survey
385'	1/2°
3110'	1°
RTD - 3390'	1°

Pipe Strap	
Depth	Pipe Strap
3110'	1.26' Short to Board

Bit Record								
Bit #	Size	Make	Type	Serial Number	Depth In	Depth Out	Feet	Hours
1	12 1/4"	Smith	RT	RT	0'	385'	385'	4.5
2	7 7/8"	Smith	F-27	PX0863	385'	3390'	3005'	62.5

Surface Casing	
8.16.2012	Ran 9 joints of new 24 #/ft 8 5/8" casing, tallying 378', set @ 385' KB. Cemented with 275 sacks common (3% Calcium Chloride, 2% gel). Cement did circulate. Plug down @ 2030 hrs 8.16.12.

Production Casing	
8.22.2012	Ran 80 joints of new 15.5 #/ft 5 1/2" production casing, set @ 3389' KB. Cemented with 80 sacks Pro C and 50 sacks for rathole/mousehole of 60/40 Poz (7% Calcium Chloride, 2% gel). Cement did circulate. Plug down @ 0955 hrs 8.22.12. By Quality Well Services, Inc.



Daily Drilling Report

Date	7:00 AM Depth	Previous 24 Hours of Operations
8.20.2012	3107'	<p>Drilling and connections Topeka and Heebner. Geologist Derek W. Patterson on location, 0820 hrs 8.19.12. Reset Bloodhound depth to correspond with geograph. Resume drilling and connections Heebner, Toronto, Douglas, Brown Lime, and into Lansing. Drilling and connections Lansing. CFS @ 3060' (LKC 'D'). Resume drilling and connections Lansing. CFS @ 3089' (LKC 'F'). Resume drilling and connections Lansing. CFS @ 3107' (LKC 'G'). Shows and gas kick warrant DST. CTCH, short trip (30 stands). CTCH, drop survey, strap out for DST #1, 0045 hrs 8.20.12. TIH with tool. Conducting DST #1.</p> <p>Made 298' over past 24 hrs of operations. WOB: 35k RPM: 60-65 PP: 900 SPM: 60 DMC: \$1,485.65 CMC: \$6,895.25</p>
8.21.2012	3281'	<p>Conducting DST #1, test successful. TIH with bit, CTCH, run in premix, resume drilling following DST #1, 1130 hrs 8.20.12. Drilling and connections Lansing. CFS @ 3163' (LKC 'H'). Resume drilling and connections Lansing. CFS @ 3205' (LKC 'J'). Resume drilling and connections Lansing, Base Kansas City, and into Arbuckle. CFS @ 3277' (Arb). CFS @ 3281' (Arb). Shows warrant DST. CTCH, TOH for DST #2, 0055 hrs 8.21.12. TIH with tool. Conducting DST #2.</p> <p>Made 174' over past 24 hrs of operations. WOB: 40k RPM: 60-65 PP: 900 SPM: 60 DMC: \$1,186.60 CMC: \$8,081.85</p>
8.22.2012	RTD - 3390' LTD - 3388'	<p>Conducting DST #2, test successful. TIH with bit, CTCH, resume drilling following DST #2, 1320 hrs 8.21.12. Drilling and connections Arbuckle. CFS @ 3331' (Arb). Resume drilling and connections ahead to RTD of 3390'. RTD reached, 1735 hrs 8.21.12. CTCH, drop survey, TOH for open hole logging operations, 1915 hrs 8.21.12. Rig up loggers. Commence open hole logging operations, 2045 hrs 8.21.12. Open hole logging operations complete, 0030 hrs 8.22.12. Orders received to run 5 1/2" production casing for further evaluation of the Schartz #1A-6.</p> <p>Geologist Derek W. Patterson off location, 0115 hrs 8.22.12.</p> <p>Made 107' over past 24 hrs of operations. WOB: 40k RPM: 60-65 PP: 900 SPM: 60 DMC: \$1,085.15 CMC: \$9,167.00</p>



Well Comparison Sheet

Drilling Well					Comparison Well				Comparison Well				
Edison Operating - Scharzt #1A-6 C SW SW Sec. 6 - T20S - R10W 1782 KB					Harvard Petroleum - Scharzt #1 W/2 SW SW Sec. 6 - T20S - R10W Oil - LKC 'D/E' 1783 KB				Tatlock J H - Berscheidt 'A' #2 NW SW SW Sec. 6 - T20S - R10W Oil - Arbuckle 1783 KB				
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log	
Topeka	2603	-821	2601	-819						2599	-816	-5	-3
King Hill	2702	-920	2699	-917	2698	-915	-5	-2		2697	-914	-6	-3
Queen Hill	2777	-995	2773	-991	2770	-987	-8	-4		2770	-987	-8	-4
Heebner	2866	-1084	2864	-1082	2860	-1077	-7	-5		2860	-1077	-7	-5
Toronto	2888	-1106	2885	-1103	2883	-1100	-6	-3		2883	-1100	-6	-3
Douglas	2895	-1113	2893	-1111	2892	-1109	-4	-2		2892	-1109	-4	-2
Brown Lime	2986	-1204	2983	-1201	2982	-1199	-5	-2		2980	-1197	-7	-4
Lansing	3020	-1238	3017	-1235	3015	-1232	-6	-3		3014	-1231	-7	-4
LKC 'B'	3033	-1251	3032	-1250	3030	-1247	-4	-3		3029	-1246	-5	-4
LKC 'D'	3053	-1271	3050	-1268	3046	-1263	-8	-5		3051	-1268	-3	0
LKC 'E'	3070	-1288	3068	-1286	3065	-1282	-6	-4		3064	-1281	-7	-5
LKC 'F'	3079	-1297	3079	-1297	3074	-1291	-6	-6		3076	-1293	-4	-4
LKC 'G'	3094	-1312	3093	-1311	3090	-1307	-5	-4		3091	-1308	-4	-3
Muncie Creek	3146	-1364	3143	-1361	3142	-1359	-5	-2		3139	-1356	-8	-5
LKC 'H'	3155	-1373	3154	-1372	3151	-1368	-5	-4		3150	-1367	-6	-5
Stark	3216	-1434	3212	-1430	3210	-1427	-7	-3		3209	-1426	-8	-4
LKC 'K'	3220	-1438	3217	-1435	3216	-1433	-5	-2		3214	-1431	-7	-4
Base Kansas City	3259	-1477	3253	-1471	3251	-1468	-9	-3		N/A	N/A	N/A	N/A
Arbuckle	3276	-1494	3273	-1491	3275	-1492	-2	1		(s) 3273	(s) -1490	-4	-1
Total Depth	3390	-1608	3388	-1606	3380	-1597	-11	-9		3279	-1496	-112	-110

(s) - Denotes sample top

Please Note: It is recommended that DST intervals be shifted 3' shallow/higher to correspond with the electric log curves.



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Edison Operating CO

6-20S-10W Rice

9427 E Cross Creek
Wichita, KS 67206

Schartz 1A-6

Job Ticket: 49560

DST#: 1

ATTN: Derek Patterson

Test Start: 2012.08.20 @ 01:25:14

GENERAL INFORMATION:

Formation: **Lansing "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:55:29

Time Test Ended: 08:43:59

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 45

Interval: 3088.00 ft (KB) To 3110.00 ft (KB) (TVD)

**CORRECTED
3085' - 3107'**

Reference Elevations: 1782.00 ft (KB)

Total Depth: 3110.00 ft (KB) (TVD)

1777.00 ft (CF)

Hole Diameter: 7.88 inches-Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6798

Inside

Press@RunDepth: 38.43 psig @ 3089.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.20 End Date: 2012.08.20

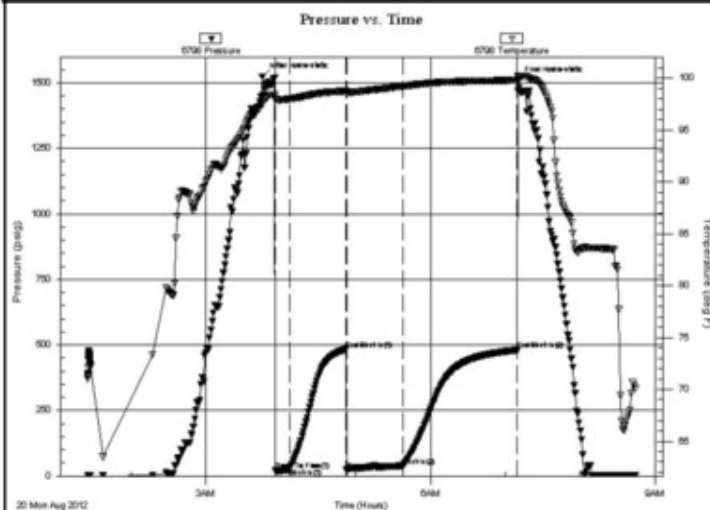
Last Calib.: 2012.08.20

Start Time: 01:25:15 End Time: 08:43:59

Time On Btm: 2012.08.20 @ 03:44:59

Time Off Btm: 2012.08.20 @ 07:10:14

TEST COMMENT: IF: Fair Blow , Built to 5 inches
ISl: No Blow Back
FF: Fair Blow , Built to 7 inches
FSl: No Blow Back



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1523.06	97.45	Initial Hydro-static
11	22.32	97.96	Open To Flow (1)
23	30.81	98.02	Shut-In(1)
67	483.31	98.78	End Shut-In(1)
68	21.11	98.60	Open To Flow (2)
113	38.43	99.23	Shut-In(2)
205	480.35	99.85	End Shut-In(2)
206	1505.52	100.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	199 GIP	0.00
40.00	Mud	0.20

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Edison Operating CO

6-20S-10W Rice

9427 E Cross Creek
Wichita, KS 67206

Schartz 1A-6

Job Ticket: 49561

DST#: 2

ATTN: Derek Patterson

Test Start: 2012.08.21 @ 01:54:50

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:10:20

Time Test Ended: 10:37:35

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: **3252.00 ft (KB) To 3284.00 ft (KB) (TVD)**

**CORRECTED
3249' - 3281'**

Reference Elevations: 1782.00 ft (KB)

Total Depth: 3284.00 ft (KB) (TVD)

1777.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: **6798**

Inside

Press@RunDepth: 1101.45 psig @ 3253.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.21

End Date:

2012.08.21

Last Calib.: 2012.08.21

Start Time: 01:54:51

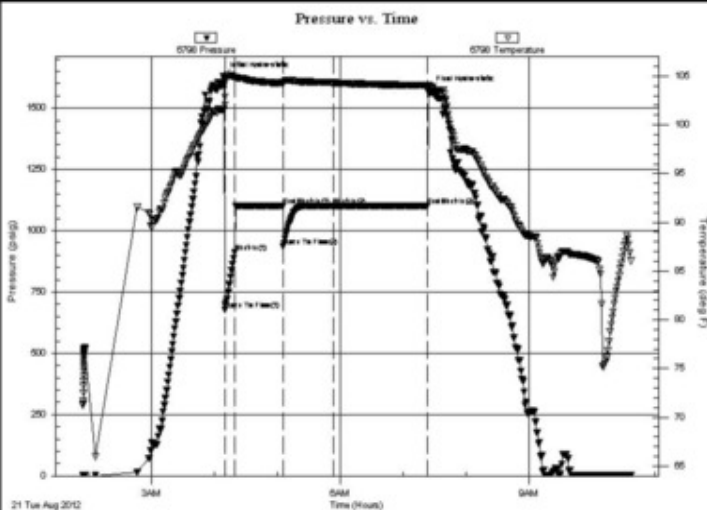
End Time:

10:37:35

Time On Btm: 2012.08.21 @ 04:08:35

Time Off Btm: 2012.08.21 @ 07:24:50

TEST COMMENT: IF: Strong Blow, BOB in 10 minutes
ISI: No Blow Back
FF: Strong Blow, BOB in 30 seconds
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1631.15	101.53	Initial Hydro-static
2	678.26	102.07	Open To Flow (1)
11	911.91	104.87	Shut-In(1)
57	1101.73	104.32	End Shut-In(1)
58	934.52	104.25	Open To Flow (2)
106	1101.45	104.33	Shut-In(2)
196	1101.85	104.05	End Shut-In(2)
197	1573.48	104.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	180 GIP	0.00
1451.00	Water	18.18
1029.00	GOMCW 10%G 5%O 14%M 71%W	14.43
186.00	GMOCW 15%G 10%M 25%O 50%W	2.61
25.00	MMCO 5%M 5%W 90%O	0.35

* Recovery from multiple tests

Gas Rates

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

ROCK TYPES

LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Sltstn
- Shale
- Sandylms
- Lms
- Gry sh
- Dtd
- Dol
- Carb sh
- pipesymbol

unknown lith

Red shale

FOSSIL

- Oomoldic
- Fuss
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

MINERAL

Sity

- Sand
- Dol
- Chlorite
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil

Sulphur
Tuff

STRINGER

- Red shale
- Sh
- Sandylms
- Lms
- Gryslt
- Grysh
- Dol
- Clystn
- Carbsh
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln

-
-
-
-
-
-

Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OIL SHOW

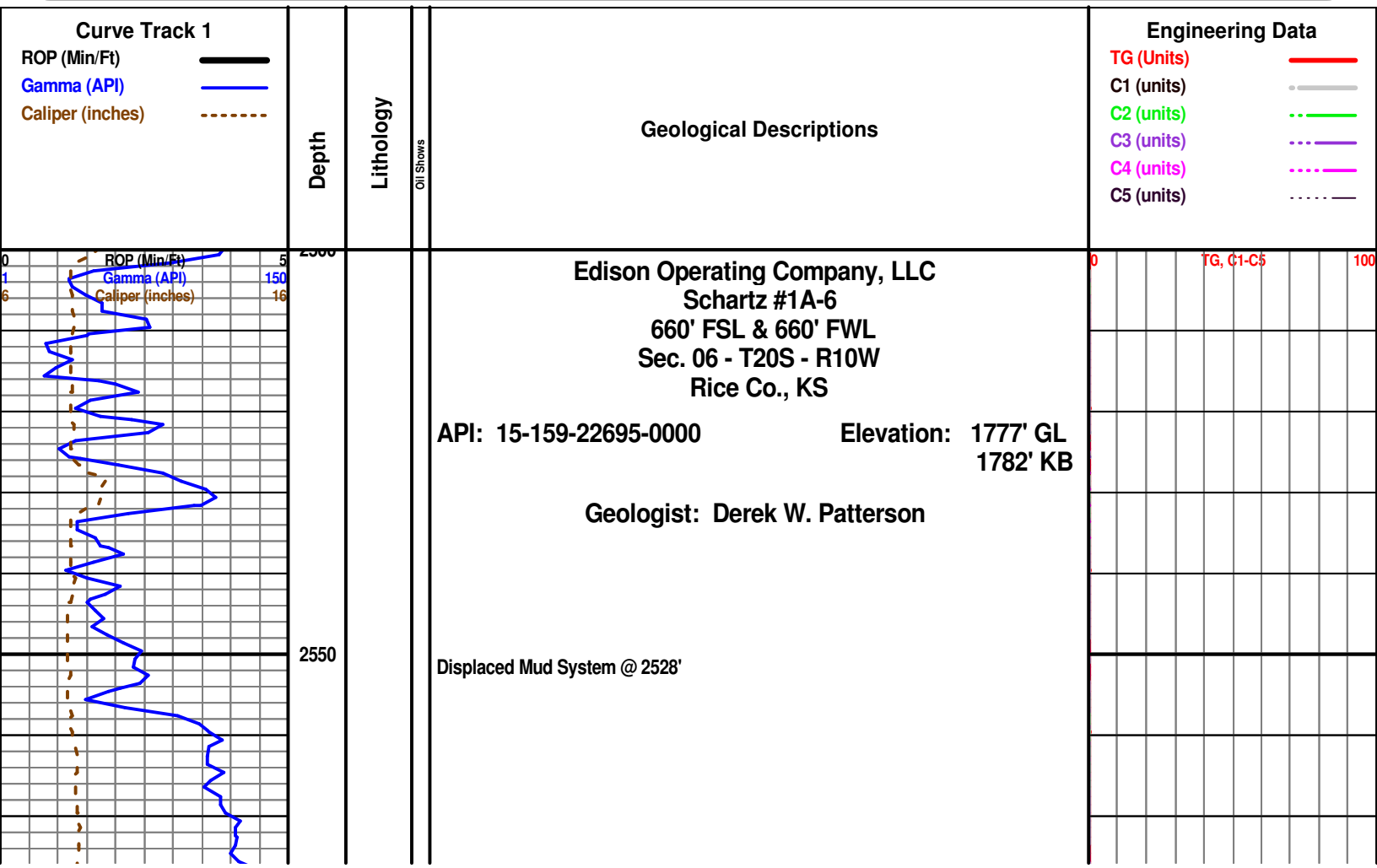
- Gas show
- Good
- Fair
- Poor
- Dead

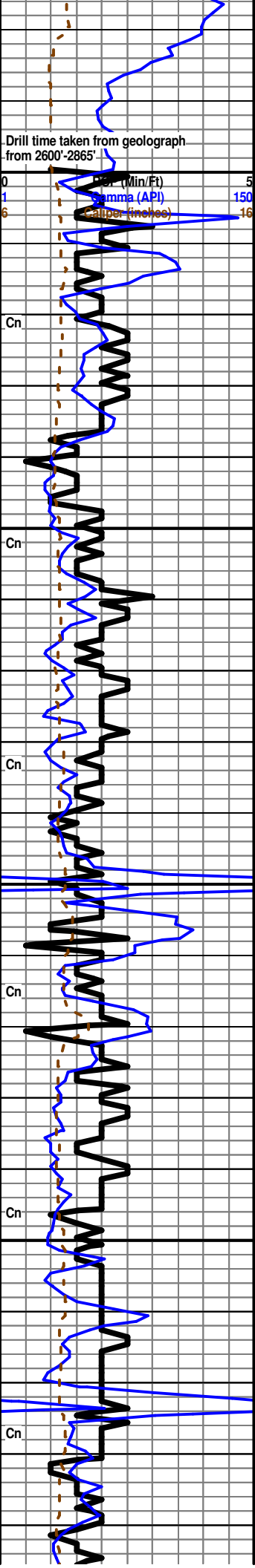
INTERVAL

- Dst
- Core
- Dst
- Straddle test

EVENT

- Rft
- Sidewall
- Dst
- Open hole
- Perforations





2600
2650
2700
2750

Topeka 2601 (-819)

Please Note:
Bloodhound was ~220' behind geograph when geologist arrived on location due to clicker malfunctioning. Geologist reset depth on Bloodhound @ 2865'. No gas data is available until 2865'

0 100
TG, C1-C5

Please Note: Lithology above 2700' from offset electric logs.
Start 10' Wet & Dry Samples @ 2700'

King Hill 2699 (-917)

Shale: black dk gray, carbonaceous, blocky, mostly hard with some slightly waxy, poor show bleeding gas bubbles upon break.

Limestone: It cream It tan off white, dense tight matrix, micro-vfxln, some grainy, fossiliferous, abundant 2ndary xln along edges, poor visible porosity, no shows noted, no fluorescence.

Shale: gray dk gray, mostly blocky and hard with some rounded and softer.

Limestone: It cream cream, dense to slightly friable matrix, vfxln, fossiliferous to sub-fossiliferous, poor interxn porosity, no shows noted, no fluorescence, with Chert: gray dk gray cream off white, fresh and sharp, heavily fossiliferous to barren, no shows noted.

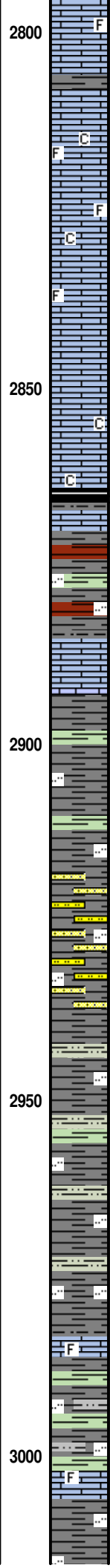
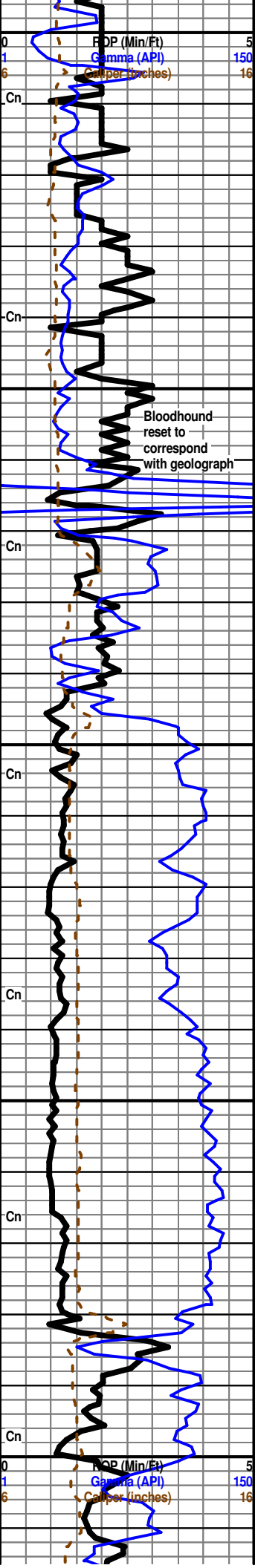
Limestone: cream It cream It tan, dense tight matrix, micro-vfxln, fossiliferous to heavily fossiliferous, poor visible porosity, no shows noted, no fluorescence, with continued scattered Chert.

Limestone: cream It tan, dense tight sub-cherty matrix, micro-vfxln, fossiliferous, poor visible porosity, no shows noted, no fluorescence, with continued scattered Chert as above.

Queen Hill 2773 (-991)

Shale: black, carbonaceous, blocky and hard, slightly waxy upon break, poor show bleeding gas bubbles upon break.

Limestone: cream tan, dense tight matrix, micro-vfxln, fossiliferous, some 2ndary xln along edges, poor visible porosity, no shows noted, no fluorescence.



Shale: gray dk gray, blocky to rounded, soft.

Limestone: cream lt cream lt tan off white, dense to slightly chalky matrix, micro-vfxln, fossiliferous to heavily fossiliferous, poor interxln porosity, no shows noted, no fluorescence.

Limestone: as above with scattered Limestone: cream tan, dense tight xln matrix, micro-cryptoxln, mostly barren, poor fracture porosity, slight golden brown stain with very poor show stringy lt brown oil upon break, poor spotty fluorescence, no cut fluorescence, no odor.

Geologist Derek W. Patterson On Location, 0820 hrs 8.19.12

INFLUX - Limestone: cream lt cream off white, softer sub-chalky to chalky matrix, microxln, mostly barren with some sub-fossiliferous, poor visible porosity, no shows noted, no fluorescence.

Heebner 2864 (-1082)

Shale: black dk gray, carbonaceous, blocky and hard, fair show bleeding gas bubbles upon break.

Shale: gray dk gray brick red dk green, blocky to rounded, hard to soft, some scattered silty material.

Toronto 2885 (-1103)

Limestone: lt cream off white, mostly dense matrix, vf-microxln, mostly barren, poor interxln porosity, poor black wormy edge stain, no fluorescence, no odor.

Douglas 2893 (-1111)

Shale: gray dk gray some dk green, blocky to rounded, hard to soft, silty in part, abundant amount of mushy material, sample washes dk gray.

Shale: gray dk gray some dk green, blocky to rounded, hard to soft, silty in part, abundant amount of mushy material, sample washes dk gray.

INFLUX - Sandstone/Siltstone stringers: lt tan clear silica grains in tan brown matrix, very dense and well cemented, vfgrained, poor intergranular porosity, poor show oil and gas from porosity with fair increase upon break, most shows are dead and tarry with some poor live stringy shows, spotty poor lt yellow fluorescence, fair forced greenish-white cut fluorescence, fair odor, with Shale: gray dk gray, blocky to rounded, mostly soft and mushy, becoming very silty, sample washes gray.

Shale: gray dk gray dk green, blocky to rounded, hard to soft, silty, abundant mushy material, with scattered Siltstone: gray dk gray, vfgrained, poor visible porosity, no shows noted, sample washes gray-dk gray, nearly all Sandstone/Siltstone as above drops out.

Brown Lime 2983 (-1201)

Limestone: tan brown, dense xln matrix, microxln, sub-fossiliferous to barren, poor interxln porosity, no shows noted, no fluorescence.

Predominately Shale: gray dk gray dk green, blocky to rounded, hard to soft, some silty, with scattered Siltstone: gray lt gray, blocky and dense, vfgrained, poor visible porosity, no shows noted.

Limestone: lt brown lt tan, dense tight matrix, micro-vfxln, fossiliferous, poor interxln porosity, no shows noted, no fluorescence, no cut fluorescence, grading to Shale: gray dk gray, blocky to rounded, mostly soft and silty.

No Gas Data Available Above This Point

Mud-Co Mud Ck @ 2831'
 0710 hrs 8.19.12
 Vis 44 Wt 9.0
 PV 12 YP 10
 WL 8.0 |
 Cake 1/32
 pH 10.5
 CHL 5,800 ppm
 Cal 20
 Sol 4.7
 LCM: Tr
 DMC: \$1,485.65
 CMC: \$6,895.25

Shale Kick

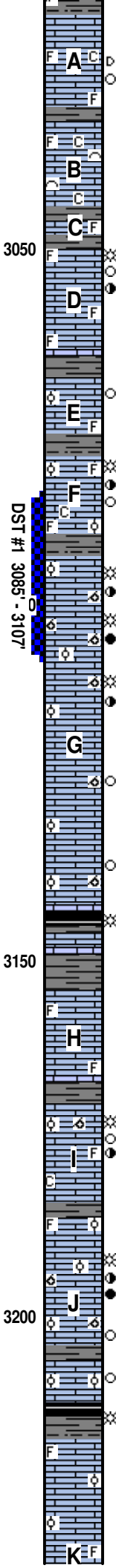
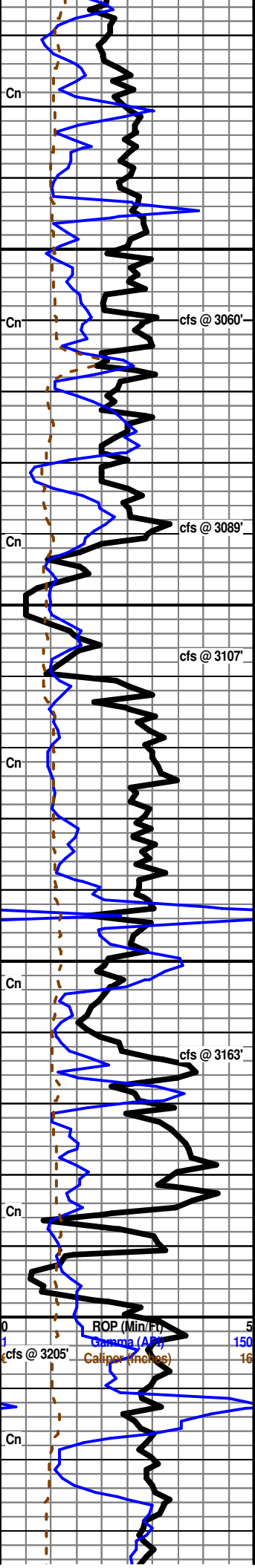
34 Total Units

38 Total Units

Note Scale Change

Scale Change TG, C1-C5

Lansing 3017 (-1235)



Limestone: cream lt cream, dense sub-chalky matrix, microxln, fossiliferous, overall poor interxln porosity with some scattered fair vuggy porosity, large amount has fair dead black gilsonitic staining along edges, very poor live show upon break in couple pieces, poor spotty lt yellow fluorescence, poor-no cut fluorescence, very faint odor.

Limestone: cream gray lt gray, mostly dense sub-chalky matrix, fossiliferous to heavily fossiliferous/bioclastic, scattered fair interfossiliferous porosity with some 2ndary xln fill around fossils, no shows noted, no fluorescence, no odor, and some loose Chalk in sample.

3060' cfs 0"/20" - Limestone: cream lt gray, mostly dense matrix, vfxln, some cherty in part, fossiliferous to heavily fossiliferous, scattered solution vugs, overall fair interxln/vuggy porosity, fair-good even lt brown saturated stain in most, very poor show lt brown free oil and gas from porosity with little increase upon break, most shows on break are stringy oil residue, spotty lt yellow fluorescence, fair forced bluish-white cut fluorescence, moderate odor.

Limestone: gray lt gray lt cream some mottled, mostly dense tight matrix, microxln, heavily fossiliferous/oolitic, fair amount of 2ndary xln, overall fair-poor interfossiliferous porosity, slight golden brown stain in majority of pieces, very poor show lt brown oil upon break in couple pieces, spotty lt yellow fluorescence, very poor-no cut fluorescence, faint gassy odor.

3089' cfs 0"/20" - Limestone: lt cream off white, softer sub-chalky matrix, micro-vfxln, heavily oolitic/fossiliferous, fair-good interfossiliferous porosity in most, fair brown saturated stain in porosity, very slight show oil and gas bubbles from porosity with fair increase upon break, some scattered free oil in tray, spotty bright lt yellow fluorescence, fair forced bluish-white cut fluorescence, fair gassy odor.

3089' cfs 40"/60" - Limestone: cream lt tan, becoming dense and tight, sub-fossiliferous, overall poor interxln/interfossiliferous porosity, few slightly stained pieces, no live shows noted, no fluorescence, no cut fluorescence, no odor.

3107' cfs 0"/20"/40" - Limestone: cream tan, dense to friable matrix, micro-vfxln, abundant oolitic good oomoldic development, good-excellent oomoldic/pinpoint/vuggy porosity with fair amount of 2ndary xln in porosity, even golden brown stain, fair-good show oil and gas from porosity with good-excellent increase upon break/under lamp, fair amount of free oil in tray, spotty bright lt yellow fluorescence, streaming milky-white cut fluorescence, moderate-strong odor.

Limestone: as above, decrease in oomoldic/vug development, still carrying fair-good shows in most pieces, moderate-strong odor.

Limestone: cream lt tan gray, dense to softer sub-chalky matrix, micro-vfxln, mostly barren, poor interxln porosity, no live shows noted, scattered black wormy stain along edges in a number of pieces, no fluorescence, no cut fluorescence, with scattered Limestone: lt cream cream, dense matrix, vfxln, oolitic with scattered fair oomoldic/vug development with associated fair porosity, poor-fair show oil and gas bubbles upon break, spotty lt yellow fluorescence, fair cut fluorescence, faint odor.

Limestone: mixed as above.

Muncie Creek 3143 (-1361)

Shale: black dk gray, blocky and hard with some slightly waxy, fair-good show bleeding gas bubbles with increase upon break.

3163' cfs 20"/40" - Limestone: cream lt cream tan dk gray lt brown, dense tight matrix, micro-cryptoxln, sub-fossiliferous with majority barren, some 2ndary xln fill, overall poor visible porosity, no shows noted, no fluorescence, no odor.

Limestone: as above, no shows noted.

Limestone: off white lt cream, softer sub-chalky matrix, vf-microxln, heavily fossiliferous/oolitic, scattered solution vugs with fair-good oomoldic development, fair oomoldic/vuggy/pinpoint porosity in most, slight golden brown saturated stain, poor-fair show oil and gas from porosity with fair increase upon break, spotty bright lt yellow fluorescence, fair bluish-white cut fluorescence, moderate gassy odor.

Limestone: cream lt cream lt tan, dense tighter matrix, microxln, heavily oolitic, scattered 2ndary xln, poor porosity, no shows noted, no fluorescence, no odor.

3205' cfs 0"/20" - Limestone: lt cream cream lt tan, dense sub-friable matrix, microxln, heavily oolitic with good oomoldic/vug development, good-excellent oomoldic/vuggy porosity, fair amount of 2ndary xln in porosity, even lt brown saturated stain, fair-good show oil and gas from porosity with good increase upon break, spotty-even bright lt green fluorescence, good forced bluish-white cut fluorescence, strong-moderate gassy odor.

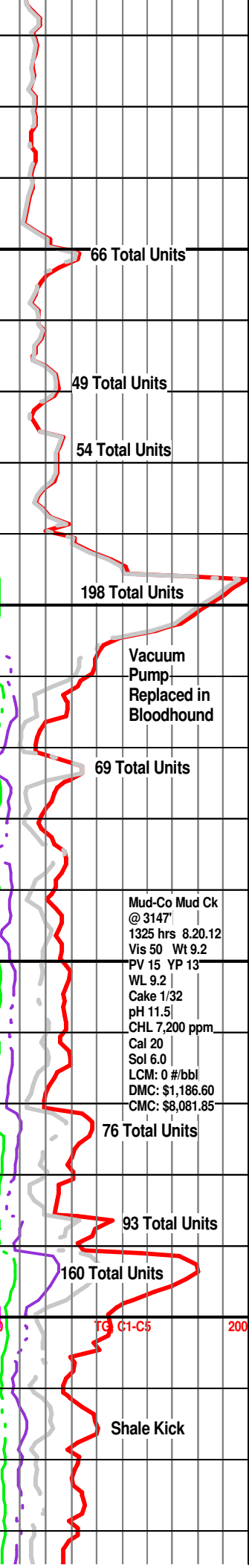
3205' cfs 40"/60" - Limestone: cream lt tan, dense tighter matrix, microxln, fair amount of oolitic material with overall decrease in oomoldic/vug development, poor interxln/vuggy porosity, only few pieces with poor golden brown staining along edges, no live shows noted, little-no fluorescence, fair gassy odor (from above?).

Stark 3212 (-1430)

Shale: black dk gray gray, some carbonaceous, mostly blocky and hard, fissile in part, fair show bleeding gas bubbles upon break in carbonaceous pieces.

Limestone: off white lt cream lt gray, dense tight matrix, microxln, fossiliferous with abundant oolitic material, scattered 2ndary xln, overall poor visible porosity, no shows noted, very poor-no mineral fluorescence.

Limestone: lt cream cream lt tan, dense tight matrix, microxln, fossiliferous with abundant oolitic material, scattered 2ndary xln, overall poor visible porosity, no shows noted, very poor-no mineral fluorescence, with 1 limestone piece, dense tight matrix, with some loose chalk in sample.



66 Total Units

49 Total Units

54 Total Units

198 Total Units

Vacuum Pump Replaced in Bloodhound

69 Total Units

Mud-Co Mud Ck @ 3147'
1325 hrs 8.20.12
Vis 50 Wt 9.2
PV 15 YP 13"
WL 9.2
Cake 1/32
pH 11.5
CHL 7,200 ppm
Cal 20
Sol 6.0
LCM: 0 #/bbl
DMC: \$1,186.60
CMC: \$8,081.85

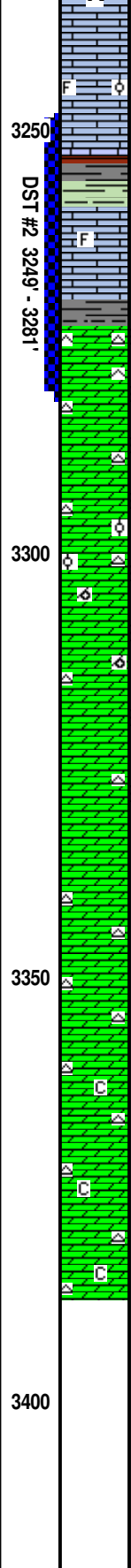
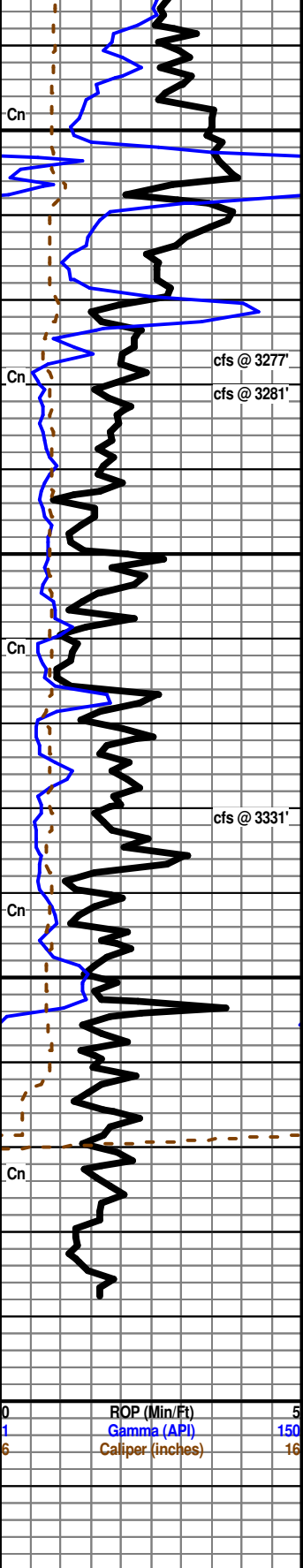
76 Total Units

93 Total Units

160 Total Units

TG C1-C5 200

Shale Kick



fluorescence, with Limestone: cream, dense tight matrix, cryptoxln to lithographic non-descript, barren, fair porosity, no shows noted, no fluorescence.

Limestone: cream lt cream, dense tight matrix, cryptoxln to lithographic non-descript, barren, fair amount of 2ndary xln along edges, poor-no visible porosity, no shows noted, no fluorescence.

Base Kansas City 3253 (-1471)

INFLUX - Shale: gray dk gray dk green brick red brown, blocky, hard to soft, abundant silty material, most fissile.

Limestone: cream lt gray lt tan, dense sub-cherty matrix, micro-cryptoxln, scattered sub-fossiliferous to mostly barren, fair amount of 2ndary xln along edges, poor visible porosity, no shows noted, no fluorescence, grading to Shale: gray dk gray, blocky, hard to soft, most fissile.

Arbuckle 3273 (-1491)

(3273'-3277') 3277' cfs 20"/40"/60" - Dolomite: cream lt tan, slightly dense and tight to fairly friable siliceous matrix, vf-f with scattered coarseln, fair-good rhombic with some scattered good sucrosic development, solution vugs, fair-excellent interxln/vuggy porosity, even saturated stain, free oil, good show oil and gas from porosity with good increase upon break/under lamp, even bright lt yellow fluorescence, good forced milky-white cut fluorescence, very strong oily-sulfur odor.

(3278'-3281') 3281' cfs 40"/60" - Dolomite: cream lt tan, dense to slightly friable matrix, f-coarseln, fair-good rhombic development in most, scattered solution vugs, good interxln/vuggy porosity, even saturated stain, abundant free oil in tray, good show oil and gas from porosity with good increase upon break/under lamp, even bright lt yellow fluorescence, good milky-white cut fluorescence, very strong oily-sulfur odor, with scattered Chert: white, fresh/sharp.

(3282'-3293') - Dolomite: cream lt tan, dense to slightly friable matrix, vf-coarseln, fair-good rhombic development in most, scattered solution vugs, good-fair interxln/vuggy porosity, even saturated stain, fair amount of free oil in tray, fair-good show oil and gas from porosity with good increase upon break/under lamp, even bright lt yellow fluorescence, fair milky-white cut fluorescence, strong oily-sulfur odor, with continued Chert: white, fresh and sharp, barren to oolitic.

(3294'-3300') - Dolomite: tan brown, mostly dense to sub-friable matrix, f-coarseln, overall good rhombic development, scattered solution vugs, INFLUX oolitic material, good interxln/vuggy porosity, even saturated stain, fair amount of free oil in tray, fair-good show oil and gas from porosity with good increase upon break/under lamp, even bright-dull yellow fluorescence, fair milky-white cut fluorescence, strong oily-sulfur odor, with Chert as above.

(3301'-3307') - Dolomite: cream lt tan, dense tighter matrix, vf-fxln, fair rhombic development in most, scattered solution vugs, trace oomoldic, overall fair interxln/vuggy porosity, fair saturated stain in most, fair show oil and gas from porosity with fair increase upon break, even dull whitish-yellow fluorescence, poor bluish-white cut fluorescence, moderate oily-sulfur odor, with continued Chert.

(3308'-3316') - Dolomite: as above, with INFLUX Dolomite: brown, friable matrix, vfxln, good sucrosic development, good interxln porosity, heavy brown saturated stain, good amount of free oil in tray, fair-good show oil and gas from porosity with increase upon break/under lamp, even bright lt yellow fluorescence, good milky-white cut fluorescence, strong oily-sulfur odor, with decrease in Chert.

(3317'-3336') - Dolomite: cream lt cream lt tan, slightly dense to friable matrix, vf-fxln, fair-good rhombic/sucrosic development, scattered solution vugs, good interxln/vuggy porosity in most, fair-good show oil and gas from porosity with increase upon break/under lamp, even bright lt yellow fluorescence, good forced milky-white cut fluorescence, strong oily-sulfur odor, most Chert drops out.

(3337'-3353') - Dolomite: cream tan, dense matrix, micro-fxln, fair rhombic development, fair-good interxln porosity, slightly saturated stain, very poor show oil from porosity with fair increase upon break/under lamp, even bright whitish-yellow fluorescence, good forced bluish-white cut fluorescence, moderate-strong oily-sulfur odor, with scattered Chert: white lt gray, fresh and sharp, barren to oolitic.

(3354'-3367') - Dolomite: lt cream tan, dense matrix, micro-vfxln, poor-fair rhombic development, poor interxln porosity, no shows noted, dull whitish-yellow mineral fluorescence, no cut fluorescence, very faint-no odor, with Chert and loose Chalk.

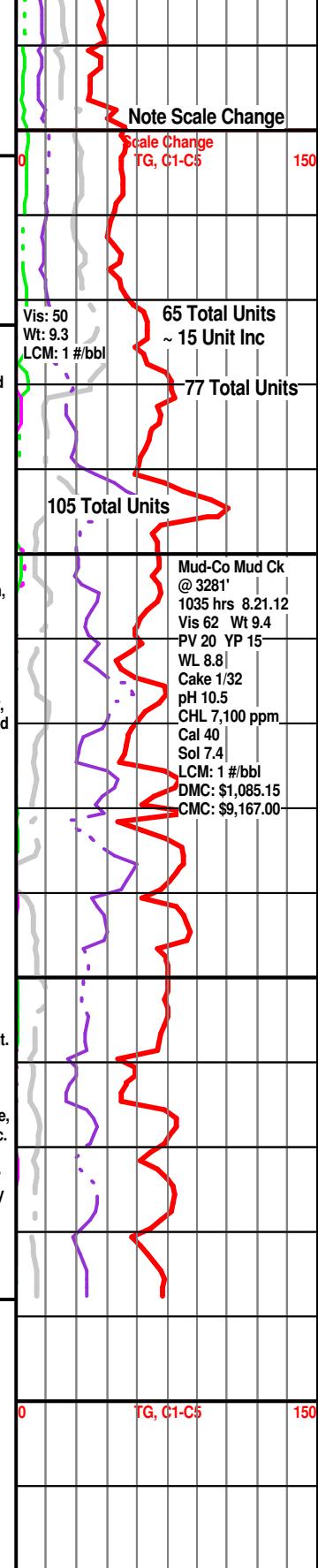
(3368'-3388') - Dolomite: off white lt cream, dense to slightly friable chalky matrix, vf-coarseln, fair-good rhombic development, fair-good interxln porosity, no shows noted, dull whitish-yellow mineral fluorescence, no cut fluorescence, no odor, with Chert and loose Chalk.

LTD 3388(-1606)
RTD 3390 (-1608)

Orders Received to Run 5 1/2" Production Casing For Further Evaluation

Geologist Derek W. Patterson Off Location, 0115 hrs 8.22.12

Respectfully Submitted,
Derek W. Patterson



Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

November 29, 2012

David Withrow
Edison Operating Company LLC
9427 E. Cross Creek
WICHITA, KS 67206

Re: ACO1
API 15-159-22695-00-00
Schartz 1A-6
SW/4 Sec.06-20S-10W
Rice County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
David Withrow