9/21/11

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 8996
Name: Mid Continent Resources Inc.
Address 1: P.O. Box 399
Address 2:
City: Garden City State: Ks. Zip: 67846 + ____
Contact Person: Jody Smith
Phone: (620) 275-2963
CONTRACTOR: License # 5822
Name: Val Energy Inc.
Wellsite Geologist: Jeff Lawler
Purchaser: NCRA

Designate Type of Completion:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] 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
- [ ] Conv. to GSW
- [ ] Plug Back: ____ Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

8/1/11	8/10/11	9/19/11
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 193-20804-00-00
Spot Description:
NW SE SE SW Sec. 31 Twp. 10 S. R. 31 [ ] East [x] West
502 Feet from [ ] North / [x] South Line of Section
2,202 Feet from [ ] East / [x] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[ ] NE [ ] NW [ ] SE [x] SW
County: Thomas
Lease Name: Moorhous Well #: 9-31
Field Name: Campus North
Producing Formation: Johnson
Elevation: Ground: 3017 Kelly Bushing: 3025
Total Depth: 4725 Plug Back Total Depth: 4689
Amount of Surface Pipe Set and Cemented at: 267 Feet
Multiple Stage Cementing Collar Used? [x] Yes [ ] No
If yes, show depth set: 2567' Feet
If Alternate II completion, cement circulated from: 2567'
feet depth to: surface w/ 260sx sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 14,000 ppm Fluid volume: 320 bbls
Dewatering method used: Evaporation
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. [ ] East [ ] West
County: Permit #:

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.

Signature:
Title: Foreman Date: 9/20/11

KCC Office Use ONLY

- [x] Letter of Confidentiality Received
  Date: 9/21/11 - 9/21/13
- [ ] Confidential Release Date:
- [x] Wireline Log Received
- [x] Geologist Report Received
- [ ] UIC Distribution
- ALT [ ] I [x] II [ ] III Approved by: NS Date: 9-28-11

Side Two

Operator Name: Mid Continent Resources Inc. Lease Name: Moorhous Well #: 9-31

Sec. 31 Twp. 10 S. R. 31 ☐ East ☑ West County: Thomas

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken (Attach Additional Sheets)	☑ Yes	☐ No
Samples Sent to Geological Survey	☐ Yes	☑ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Electric Log Submitted Electronically (If no, Submit Copy)	☑ Yes	☐ No

List All E. Logs Run:

Porosity, Sonic, Mico, Induction and bond.

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Topeka	3768'	-743
Heebner	3987'	-962
Lansing	4027'	-1002
Marm	4338'	-1313
Cherokee	4491'	-1466
Johnson	4566'	-1541
Cong	4622'	-1597

CASING RECORD ☑ New ☐ 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
surface	12 1/4	85/8	23#	267'	Common	185	3%CC,2%gel
Production	77/8	51/2	17#	4724	EA-2	175	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose: ___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4603'to 4612	15% FE	

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TUBING RECORD: Size:	Set At:	Packer At:	Liner Run:
23/8	4686'	None	☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR.	Producing Method:
NA	☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	10	0	40		

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DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease (If vented, Submit ACO-18.)	☐ Open Hole ☑ Perf. ☐ Dually Comp. (Submit ACO-5) ☐ Commingled (Submit ACO-4) ☐ Other (Specify)	4603' to 4612'

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

SWIFT Services, Inc.

CHARGE TO: Mid Continent Resources
ADDRESS
CITY, STATE, ZIP CODE

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TICKET 19743

PAGE 1

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SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Hays, Ks.	#9-31	Moorehaus	Thomas	Ks		8-10-11	Same
2. Ness City, Ks.	TICKET TYPE ☑ SERVICE ☐ SALES / CONTRACTOR: ValEnergy #4	RIG NAME/NO.	SHIPPED VIA CT	DELIVERED TO: Location		ORDER NO.	
3.	WELL TYPE: oil	WELL CATEGORY: Development	JOB PURPOSE: 2-stage		WELL PERMIT NO.	WELL LOCATION	
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE #111	80	mi			6 00	480 00
579		1			Pump Charge (2-stage)	1	ea	4725'		1850 00	1850 00
221		1			KCL	4	gal			25 60	100 00
281		1			Mudflush	500	gal			1 25	625 00
290		1			D-Air	5	gal			35 00	175 00
402		1			Centralizers	12	ea	5½"		70 00	840 00
403		1			Baskets	3	ea			250 00	750 00
407		1			Insert Float Shoe w/fill	1	ea			350 00	350 00
408		1			D.V. Tool & Plug set	1	ea			3000 00	3000 00
417		1			D.V. L.D. Plug & Baffle	1	ea			200 00	200 00
419		1			Rotating Head	1	ea			200 00	200 00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X

DATE SIGNED 8-10-11 | TIME SIGNED 1815 ☐ A.M. ☑ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 1	8570 00
2	~~8635 00~~
subtotal	10,997 50
	~~1720 00~~
Thomas TAX 7.3%	19,567 50
	1097 74
TOTAL	20,665 24

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR Nick Rooke | APPROVAL

Thank You!

SWIFT Services, Inc.

PO Box 466.
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 19743

CUSTOMER: Mid Continent Resources | WELL: #9-31 Moorehaus | DATE: 8-10-11 | PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	TIME	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
325		2				Standard Cement	175	sks			13 50	2362 50
330		2				SMD Cement	300	sks			16 50	4950 00
276		2				Flocele	125	#	¼	#/sk	2 00	250 00
283		2				Salt	900	#			20	180 00
284		2				Calseal	8	sks			35 00	280 00
292		2				Halad-322	100	#			7 75	775 00
581		2				SERVICE CHARGE 475 sks	CUBIC FEET				2 90	950 00
583		2				MILEAGE CHARGE TOTAL WEIGHT 31253 LOADED MILES 80	TON MILES				1 00	1250 00

CONTINUATION TOTAL ~~$6355~~ 56

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JOB LOG

SWIFT Services, Inc.

DATE 8-10-11 | PAGE NO. 1

CUSTOMER: Mid Continent Resources | WELL NO. #9-31 | LEASE: Maarchaus | JOB TYPE: 2-stage | TICKET NO. 19743

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1300							on loc w/FE
								RTD 4725'
								5½" x 17# x 4727' x 21'
								Cent. 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 58, 60
								Bask 5, 14, 58
								D.V. 59 @ 2568'
	1445							Start FE
	1720							Break Circulation
	1815	4.5	0				150	Start Preflushes 500 gal Mud flush 20 bbl KCL flush
		5.5	32/0				200	Start Cement 175 sks EA-2
	1831		42					End Cement
								Wash P+L / Drop LD Plug
	1835	6	0				100	Start Displacement w/tr
		6	50				100	Mud
		5	109				150	Catch Cement
	1855						~~700~~ 1500	Land Plug
								Release pressure / Float Held
	1857							Drop Opening Plug
	1900	2.5	7/5					Plug RH + MH 25/15 sks SMD
	1910						1100	Open DV
	1912	4	0				100	Start KCL Flush
	1917	6	20/0				150	Start Cement 260 sks SMD
	1940		150					End Cement
								Drop Closing Plug
	1943	5	0				100	Start Displacement
	1948	4	24				150	Circulate Cement
	1955		59				500/1500	Land Plug
								Close DV
								Release Pressure
								DV Closed
								Circulated 60 sks to pit
		Thank you						
		Nick, Josh, Lance & Joe						

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ALLIED CEMENTING CO., LLC. 043466

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Oakley

DATE 9-1-11	SEC. 31	TWP. 10	RANGE 31	CALLED OUT	ON LOCATION	JOB START 10:30pm	JOB FINISH 11:45pm
LEASE moorhouse	WELL # 4-31		LOCATION Oakley 1/4 E N TO			COUNTY Thomas	STATE KS
OLD OR NEW (Circle one)							

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CONTRACTOR Val Drilling Rig 4
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 220'
CASING SIZE 8⅝ DEPTH 220'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 16.24 BBL

OWNER same

CEMENT
AMOUNT ORDERED 145 sks com 3%cc 2%gel

COMMON	145 sks	@ 16.25	2356.25
POZMIX		@	
GEL	3 sks	@ 21.25	63.75
CHLORIDE	7 sks	@ 58.20	407.40
ASC		@	
HANDLING	195 sks	@ min	341.25
MILEAGE	195 sks/mile		42.90
		TOTAL	3364.30

EQUIPMENT

PUMP TRUCK CEMENTER Andrew
423-281 HELPER Jeff
BULK TRUCK
296 DRIVER Earl
BULK TRUCK
DRIVER

REMARKS:

Cement in cellar

thank you

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			1125.00
EXTRA FOOTAGE		@	
MILEAGE	2 miles x 2	@ 2.00	28.00
MANIFOLD	head	@	200.00
	Light Vehicle	@ 4.00	16.00
		@	
		TOTAL	1369.00

CHARGE TO: mid-continent Resources
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	TOTAL	

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME

SIGNATURE

NOTES

DST #1 LKC 'A-G'

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mid-Continent Resources

PO Box 399
Garden City, Ks 67846

ATTN: Jeff Lawler

Mourhous B 9-31

31 10s 31w Thomas ks

Job Ticket: 042247 DST#: 1

Test Start: 2011.08.05 @ 22:51:00

GENERAL INFORMATION:

Formation: LKC A-G
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:56:45
Time Test Ended: 06:51:30

Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 48

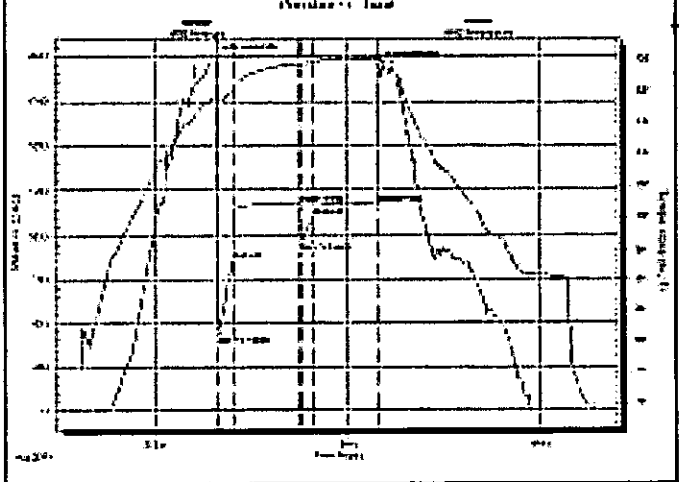
Interval: 4032.00 ft (MB) To 4170.00 ft (KB) (TVD)
Total Depth: 4170.00 ft (KB) (TVD)
Hole Diameter: 7.88 Inches Hole Condition: Fair

Reference Elevations: 3025.00 ft (KB)
3017.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 Inside
Press@Run Depth: 1108.35 psig @ 4033.00 ft (KB)
Start Date: 2011.08.05 End Date: 2011.08.06
Start Time: 22:51:05 End Time: 06:51:29

Capacity: 8000.00 psig
Last Calib.: 2011.08.05
Time On Btm: 2011.08.06 @ 00:57:30
Time Off Btm: 2011.08.06 @ 03:30:15

TEST COMMENT: IF: BOB @ 30 seconds.
ISI: No return blow.
FF: BOB @ 30 seconds.
FSI: No return blow.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1993.39	119.21	Initial Hydro-static
2	374.16	118.85	Open To Flow (1)
16	969.31	126.45	Shut-In(1)
78	1160.11	124.45	End Shut-In(1)
79	917.32	124.39	Open To Flow (2)
92	1108.35	124.72	Shut-In(2)
152	1181.03	126.21	End Shut-In(2)
153	1944.56	126.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2300.00	mcw 5m 95w	32.14

Gas Rates

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

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TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mid-Continent Resources

PO Box 399
Garden City, Ks 67846

ATTN: Jeff Lowrier

Mourhous B 9-31

31 10s 31w Thomas ks

Job Ticket: 042245 **DST#: 2**

Test Start: 2011.08.05 @ 16:46:00

GENERAL INFORMATION:

Formation: LKC H-I
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:33:00
Time Test Ended: 00:47:00

Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 46

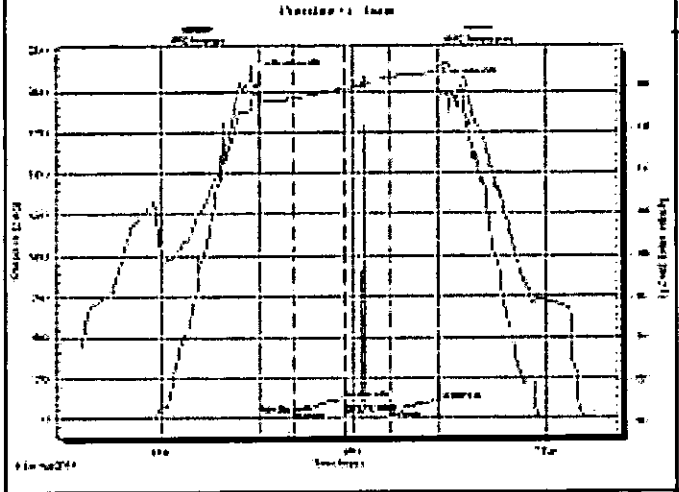
Interval: **4188.00 ft (KB) To 4225.00 ft (KB) (TVD)**
Total Depth: 4166.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3025.00 ft (KB)
3017.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 Inside
Press@Run Depth: 50.78 psig @ 4167.00 ft (KB)
Start Date: 2011.08.05 End Date: 2011.08.07
Start Time: 16:46:05 End Time: 00:45:59

Capacity: 5000.00 psig
Last Calib.: 2011.08.07
Time On Btm: 2011.08.05 @ 19:32:45
Time Off Btm: 2011.08.06 @ 22:19:30

TEST COMMENT: IF: Surface blow, died @ 17 minutes.
ISI: No return blow.
FF: Surface blow which died, flushed tool blow died again.
FSI: No return blow.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2166.70	119.03	Initial Hydro-static
1	38.53	118.31	Open To Flow (1)
32	48.96	118.55	Shut-In(1)
80	122.99	119.54	End Shut-In(1)
81	42.07	119.53	Open To Flow (2)
123	50.70	120.93	Shut-In(2)
167	110.96	121.54	End Shut-In(2)
167	2051.06	122.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100m (all spots in tool)	0.10

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mid-Continent Resources

PO Box 399
Garden City, Ks 67846

ATTN: Jeff Lawler

Mourhous B 3-31

31 10s 31w Thomas ks

Job Ticket: 042249 **DST#: 3**

Test Start: 2011.08.08 @ 03:27:00

GENERAL INFORMATION:

Formation: Pawnee, Myrtle, Pt 8
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:54:45
Time Test Ended: 10:19:30

Test Type: Conventional Bottom Hole
Tester: Bradley Walker
Unit No: 46

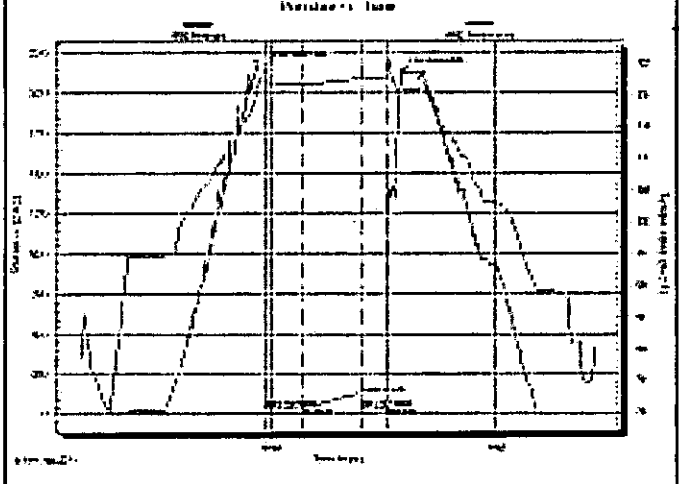
Interval: 4408.00 ft (KB) To 4480.00 ft (KB) (TVD)
Total Depth: 4480.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3025.00 ft (KB)
3017.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 Inside
Press@Run Depth: 42.77 psig @ 4409.00 ft (KB)
Start Date: 2011.08.08 End Date: 2011.08.08
Start Time: 03:27:05 End Time: 10:19:29

Capacity: 8000.00 psig
Last Calib.: 2011.08.08
Time On Btm: 2011.08.08 @ 05:54:30
Time Off Btm: 2011.08.08 @ 07:46:00

TEST COMMENT: IF: Surface blow, built to 1 inch, receded to surface blow.
ISI: No return blow.
FF: No blow, Flushed tool, Surface blow, died @ 5 minutes.
FSI: Lost packer seat while setting slips for tool turn.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2177.98	122.93	Initial Hydro-static
1	35.57	122.07	Open To Flow (1)
31	42.77	124.82	Shut-In(1)
77	1133.52	122.55	End Shut-In(1)
77	44.34	122.51	Open To Flow (2)
97	47.36	123.03	Shut-In(2)
111	2135.58	120.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1500.00	mud 100m	21.04

Gas Rates

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

OPERATOR

Company:	MID-CONTINENT RESOURCES, INC.		
Address:	P. O. BOX 399 GARDEN CITY, KS 67846		
Contact Geologist:	KEVIN WILES		
Contact Phone Nbr:	(620) 271-4407		
Well Name:	MOORHOUS 9-31		
Location:	NW SE SE SW 31-10S-31W	API:	15-193-20804
Pool:		Field:	CAMPUS NORTH
State:	Kansas	Country:	USA

Scale 1:240 Imperial

Well Name:	MOORHOUS 9-31		
Surface Location:	NW SE SE SW 31-10S-31W		
Bottom Location:			
API:	15-193-20804-00-00		
License Number:	8996		
Spud Date:	8/1/2011	Time:	7:00 AM
Region:	THOMAS		
Drilling Completed:	8/9/2011	Time:	6:47 PM
Surface Coordinates:	502 FSL & 2202 FWL		
Bottom Hole Coordinates:			
Ground Elevation:	3017.00ft		
K.B. Elevation:	3025.00ft		
Logged Interval:	0.00ft	To:	0.00ft
Total Depth:	4725.00ft		
Formation:			
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:	-100.8248969	Latitude:	39.1346833
N/S Co-ord:	502 FSL		
E/W Co-ord:	2202 FWL		

LOGGED BY

SOLUTIONS CONSULTING

Company:	SOLUTIONS CONSULTING		
Address:	108 W 35TH HAYS, KS 67601		
Phone Nbr:	(785) 259-3737		
Logged By:	Geologist	Name:	JEFF LAWLER

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CONTRACTOR

Contractor:	VAL ENERGY, INC.		
Rig #:	4		
Rig Type:	MUD ROTARY		
Spud Date:	8/1/2011	Time:	7:00 AM
TD Date:	8/9/2011	Time:	6:47 PM
Rig Release:		Time:	

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ELEVATIONS

K.B. Elevation:	3025.00ft	Ground Elevation:	3017.00ft
K.B. to Ground:	8.00ft		

NOTES

ROCK TYPES

Congl	Lmst fw7>	Carbon Sh	Ss
Chtcongl	shale, grn	shale, red	
Dolsec	shale, gry	Shcol	

ACCESSORIES

MINERAL
- Argillaceous
- Glauconite
- Siliceous
- Mica
- Argillaceous/Shale

FOSSIL
- Oolite
- Plant Remains

STRINGER
- Chert
- Dolomite
- Limestone
- Sandstone
- Shale
- green shale
- red shale
- carb shale

TEXTURE
- Chalky

OTHER SYMBOLS

DST
- DST Int
- DST alt
- Core

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #1	Depth | Intervals	DST	Lithology	Oil Show	Geological Descriptions	TG, C1 - C5
ROP (min/ft)	Cored Interval					Total Gas (units)
Gamma (API)	DST Interval					C1 (units)
Cal (in)						C2 (units)
						C3 (units)
						C4 (units)
1:240 Imperial						1:240 Imperial

Curve Track #1: 0 ROP (min/ft) 7; 0 Gamma (API) 150; 6 Cal (in) 16

Depth | Intervals: 3660, 3680, 3700, 3720, 3740

TG, C1 - C5: 0 Total Gas (units) 100; 0 C1 (units) 100; 0 C2 (units) 100; 0 C3 (units) 100; 0 C4 (units) 100

1' DRILL TIME 3675 - TD
10' WET/DRY SAMPLES 3700 - TD
JEFF LAWLER GEOLOGIC SUPERVISION FROM 3700 - TD

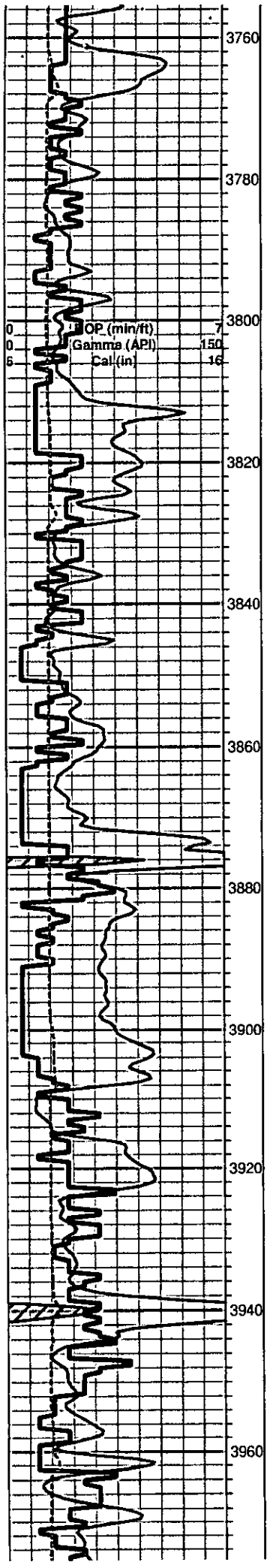
Lm/Sh- Off White Cream, abundant siliceous, medium grained & oolitic in part, friable, Clean & barren. Sh- Red Gray, fissle, smooth

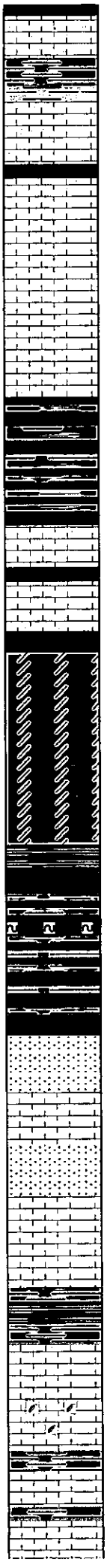
Sh- Red Brown Gray Lime Green, gritty & earthy, white silty chalk

Lm- Cream Off White Lt. Gray, VF grained, well cemented, samples ground up very fine, poor quality

Sh- Red Brown Lime Green, earthy & gritty, round edged, Tan VF grained Ss. moderatlely cemented w/ Ca

Lm- Off White Cream, silicious XLN, VF grained w/ interstitial porosity, Clean & barren





Lm- Off White Cream Tan Lt. Gray, Fossiliforous w/ crinoids, VF XLN w/ interstitial porosity, Gray - unconsolidated, micaceous

Sh- Black Red Lime Green, Carbonaceous, fissle, some smooth dense & chalky in part, slick, Lime Green pyritized & speckled

TOPEKA 3768' (-743) E-LOG 3768' (-743) Lm- Tan Cream, Medium XLN, oolitic in part, VF grianed & gritty

Sh- Red Brown Lime Green, Fissle, lime green speckled red shale, brown chalky lime, sticky

Lm- Off White Cream, VF XLN, good interstitial porosity, siliceous, clean & barren

Sh- Red Brown Gray, some gritty & round edged, some smooth & blocky, few chips of brown pyrite speckled Sh., few chips of dove gray speckled, VF grained Ss. poorly cemented

Lm- Off White Cream, siliceous cementation, XLN, oolitic in part, mostly well developed w/ good interstial porosity, some w/ micro vugular porosity

Sh- Red Brown Lt Purple Lime Green, thin slivers of fissle smooth various colored shales, some chalky in part.

Sh- Black Red Gray, fissle & blocky, carbonaceous, dove gray glauconite speckled quartz clusters, light tan speckled quartz clusters, some chalky in part

Ss- Dove Gray Lt Tan, VF grained, consolidated & moderately homogenous, poorly cemented & friable, NO ODR NSO CLEAN & BARREN

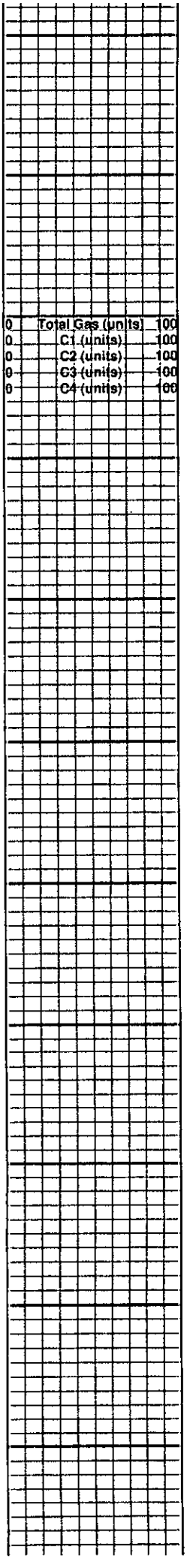
Lm- Cream Off White, VF XLN, siliceous & oolitic in part, mostly gritty & consolidated w/ good porosity, well developed. CLEAN & BARREN

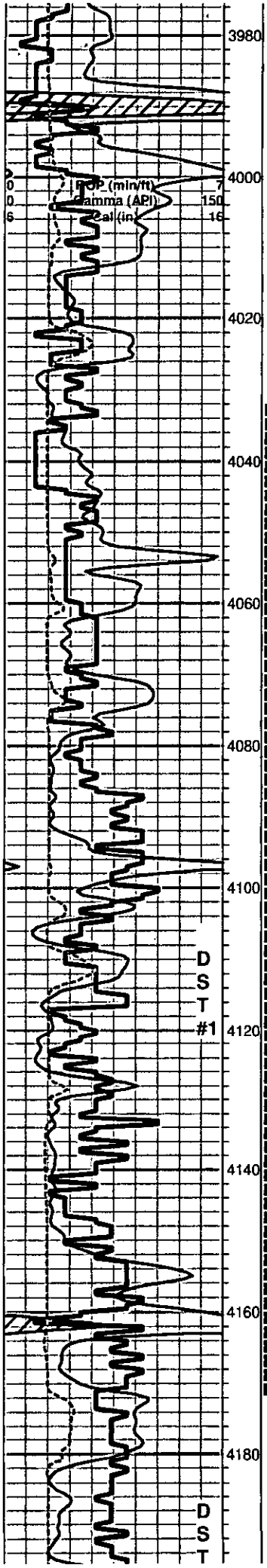
Ss- Dove Gray Lt Tan, VF grained & consolidated, poorly cemented & friable. NO ODR NSO CLEAN & BARREN

Lm- Off White Cream, mostly VF grained w/ pinpoint porosity, some XLN & moderately dense w/ little to no visable porosity,

Lm- Cream Off White, mostly dense & well cemented, adequately deveoloped w/ pinpoint porosity, slightly fossiliferous w/ flora remains clean & barren

Lm- Cream Tan Lt Gray, mostly dense VF grained & crypto crystalline, few chips w/ partial solution porosity & recrystalization, all w/ micro to no visible porosity





Lm- Cream Off White, dolomitic Ls, gritty & well cemented, well developed w/ micro vugular porosity, clean & barren

HEEBNER 3988' (-963) E-LOG 3987' (-962) Sh- Black Gray, Carbonaceous, fissle & slaty, Off White w/ mint green tint siltstone, chalky in part

Dolomite/Ls- Tan Cream, fine crystalline, round to sub-rounded, good porosity w/ partially scattered vugs, clean & barren

Sh- Red Brown Gray, fissle slivers, mostly smooth & round edged, earthy & agrillaceous, red quartzose/shale, w/ sub rounded quartz grains

TORONTO 4013' (-948) E-LOG 4013' (-948) Lm- Off White Cream, VF grained, minor amounts of XLN, little to no visible porosity, few chips of reworked semit-translucent chert w/ crinoids remnants

LANSING 4026' (-1001) E-LOG 4027' (-1002) Lm- Cream Tan Lt Gray, oolitic oolimoldic, slightly fossiliferous w/ fusulinids, well cemented & moderately dense w/ little to no visible porosity clean & barren. Abundant white chalky mud supported matrix siltstone

Lm- Cream Tan, VF XLN, minor solution porosity w/ littlte to no recrystalization, microcrystalline w/ no visible porosity. 1 chip w/ scattered DO STN in solution vein

Lm- Cream Off White Tan, VF XLN mostly dense crytpo crystalline, tight, poorly deveoloped, some oolitic to oolimoldic in part, XLN siliceous cementation & moderately dense, some brittle & friable, White- chalky silty, CLEAN & BARREN

Lm- Off White Cream Tan, Coarse XLN w/ interstitial vuggy porosity, 1 chip w/ scattered slight STN, NO ODR NO GAS KICK, microcrystalline, dense w/ no visible porosity

Lm- Off White Tan,VF - F XLN, pinpoint to micro solution vugs w/ partial recrystalization, moderately deveolped w/ scattered residual LT GSY STN, VRY FNT GSY ODR, some chips moderately dense w/ gilsonite stn. no visible porosity

Sh- Black Red Brown, Carbonaceous, abundant sticky chalk & lime, red wash & earthy

Lm- Off White, pinpoint porosity throughout, scattered dark & LT GST STN, FR ODR, NO GAS KICK, cloudy WET CUT & FLOR

Lm- Tan Cream, solution vugs w/ abundant recrystalization & pyritization, DRK SAT STN, NFO, ODR, CLOUDY WET CUT & FLOR

Lm- Cream Tan Lt Gray Pristine White, VF - Coarse XLN, almost semi-translucent, moderately dense, poorly deveolped, few chips slighty fossiliforous w/ crinoids, micro - crypto crystalline w/ little to no visible porosity, clean & barren

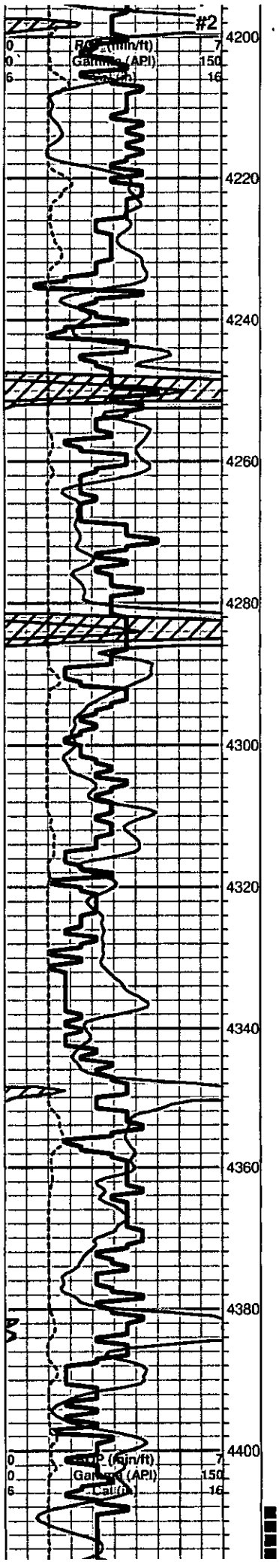
Lm- Tan Cream, medium - coarse XLN, mostly dense w/ partial XLN porosity, poorly developed,

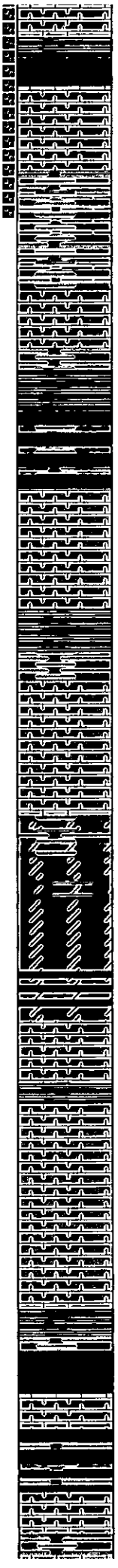
Sh- Black Red Gray, micaceous, earthy, blocky & smooth, agrillaceous, somewhat carbonaceous

Lm- Cream Tan Off White, VF XLN poorly developed & moderately dense, few chips of siliceous & oolitic in part w/ good interstitial micro vugular porosity, SLT SCATTERED GSY STN, FNT SULPHURIC ODR Maintaining ~20 units of background gas. Chert- Milky Gray to semi-translucent, fresh bedded.

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

SLOPE 3/4 dgr.
@ 4170'
BOARD 4170.61
STRAP 4167.04
Board + 3.57





Lm- Cream Tan Lt Gray, Fine, Medium, & Coarse XLN,scattered solution porosity w/ minimal recrystalization, PARTIALLY SCATTERED LT GSY XLN STN, FEW CHIPS W/ FO UPON CRUSH, 1 CHIP W/ SLT BLDNG FO, FNT SULPHURIC ODR, ~30 unit gas kick

Sh- Red Black Lime Green Gray, fissle & blocky to earthy & smooth, micaceous, abundant pyrite,

Lm- Buff Cream Lt Gray, VF XLN, poorly deveoloped mostly, fair amount of individual sub-angular & frosted quartz grains in bottom of tray, fair amount of white siltstone as well, NSO NO STN clean & barren

Sh- Black Gray Red Dove Gray, Carbonaceous, earthy & argillaceous, fissle & blocky, speckled dove gray Ss.

Lm- Buff Cream, VF XLN crypto crstyalline & XLN, poorly developed & mostly dense, no visible porosity, silty & chalky in part, few chips of semi-translucent to milky fresh bedded chert, CLEAN & BARREN

Lm- Buff Cream Lt Gray, VF - Med. grained, moderately dense & poorly developed, some slightly unconsolidated w/ partial bio-clastic mix speckled w/ few pyrite chips, pinpoint to no visible porosity, clean & barren

BKC 4299' (-1274) E-LOG 4308' (-1283) Sh- Black Brown Lime Green Gray, fissle & blocky carbonaceous, agillaceous red, gray, & brown sticky limes, Few pieces of brown well sorted & consolidated Ss, Ca cemented.

Dolomite/Sh- Red Brown Gray, abundant consolidated & well-sorted friable, loosely cemented, slightly earthy & gritty,

MARMATON 4336' (-1311) E-LOG 4338' (-1313) Lm- Cream Buff Tan, Medium XLN, poorly developed w/ pinpoint porosity. Gray- moderately dense w/ no visible porosity. NSO NO ODR, CLEAN & BARREN

Sh- Black Gray Brown Lime Green ,fissle, gritty, some white chalky lime

CFS @ 4350'

Lm- Buff Cream Golden Tan, silicious, mostly dense w/ no visible porosity, clean & barren

Lm- Buff Cream Tan, Medium - Coarse XLN, minor visible to pinpoint porosity, siliceous, chalky & silty in part, CLEAN & BARREN

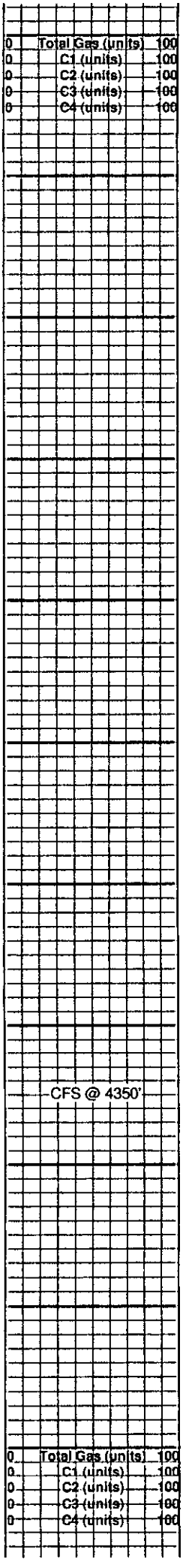
Sh- Red Brown Gray Black, abundant red wash, argillaceous & earthy. Fissle & blocky, some waxy, some sticky lime, small interbedded Ls lens, CLEAN & BARREN

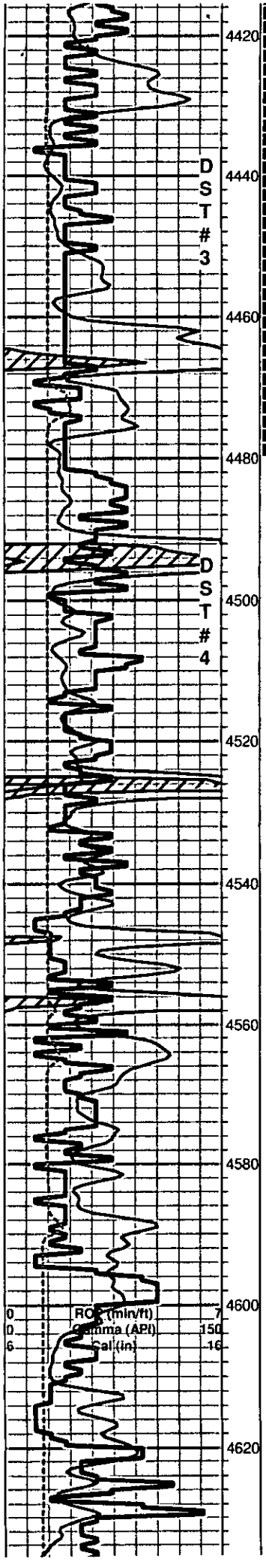
Lm- Cream Tan Buff, VF grained, XLN in part, mostly moderately dense & poorly developed w/ no visible porosity throughout, clean & barren

Sh- Black Gray Red Maroon, blocky & fissle, somewhat earthy

Lm- Buff Cream Lt Gray, poorly developed w/ little visible porosity, clean, NSO NO ODR, maintaining background of ~14 units gas.

Sh- Black Gray Red Maroon





Sh- Black Gray Red Pea Green, fissle, blocky & earthy, very waxy pea green shale

PAWNEE 4420' (-1395) E-LOG 4431' (-1406) Lm- Cream Buff Lt Gray, VF XLN, mostly dense, poorly developed & little to no visible porosity, partially speckled w/ gluaconite, NSO NO ODR, CLEAN & BARREN

CFS @ 4440'

MYRICK STATION Lm- Cream Buff, good interconnected vugular porosity throughout , VRY LT GSY STN, SATURATED IN PART, SFO upon crush, FEW GLOBULES FREE FLOATING IN TRAY, STRNG ODR W/ ~55 UNIT GAS KICK, INSTANT STRMN WET CUT W/ BRIGHT FLOR

FT. SCOTT 4451' (-1426) E-LOG 4468' (-1443) Lm- Cream Buff Tan, F-CRS XLN, w/ good interstital vugular soluiton porosity & recrystalization w/ in, moderately dense externally, LT GSY SCATTERED, GOOD ODR ~ 35 unit gas kick, WET CUT

Lm- Tan Brown, unconsolidate trasyh & reworked medium XLN

CFS @4480'
SLOPE 3/4 dgr
STRAP 4480.85
BOARD 4480.72
STRAP + .13

Lm- Cream Buff, Medium XLN, scattered micro vugular porosity w/ SCATTERED LT GSY STN, FAIR ODOR, SLOW CLOUDY WET CUT

CHEROKEE SHALE 4476' (-1451) E-LOG 4491' (-1466) Sh- Black, Abundant fissle carbonaceous shale

Lm- Tan Buff, mostly dense w/ solution & recrystalization porosity, SCATTERED VRYT LT & GSY STN w/in solution veins, developing better w/ increased porosity w/ depth in zone,CLOUDY WET CUT, FAINT - FAIR ODR, downgrading to partially oolitic & somewhat bio-clastic

CFS @ 4515'

Lm- Cream Buff, Med-Coarse XLN, mostly dense w/ little visible to pinpoint porosity, clean & barren, poorly developed. Interbedded shale lenses

Lm- Tan Lt Gray, heavily silicious,few chips of golden brown bedded chert, slightly fossilforous w/ crinoids, some bio-clastic trashy mix w/ interbedded shale lenses

Lm/Sh- Cream Buff, medium grained, clastic mix. Sh- Black, carbonaceous, fissly & blocky, pebbley clastic unconsolidated shale mix

Sh- Gray Red Lime Green Brown Peach, argillaceous & silty, chalky in part

JOHNSON ZONE 4553' (-1528) E-LOG 4566' (-1541) Lm- Tan Buff Cream, moderately dense w/ little to no visible porosity, few chips VF XLN w/ pinpoint porosity & SCATTERED STN, DRK VRY GSY STN, NFO, FNT ODR UPON CRUSH, heavy sulphuric odor

CFS @ 4570'

Lm/Ss- Cream Buff Tan, VF XLN, pinpoint porosity w/ scattered micro vugular porosity & slight recrystalization w/ in, VRY SCATTERED STN, SOME DO, SOME GILSONITE, FNT ODR

SAND- clear quartz clusters, very lightly Ca cemented, VF grained & well-sorted,VERY friable, SATURATED W/ SHOW OF LIVELY FREE OIL UPON CRUSH, INSTANT STREAMING WET CUT, FNT ODR, free oil disappears with depth, transgresses to DO. Clusters start clean & well sorted and digress to silty, less consolidated then mud supported grainstone with depth.

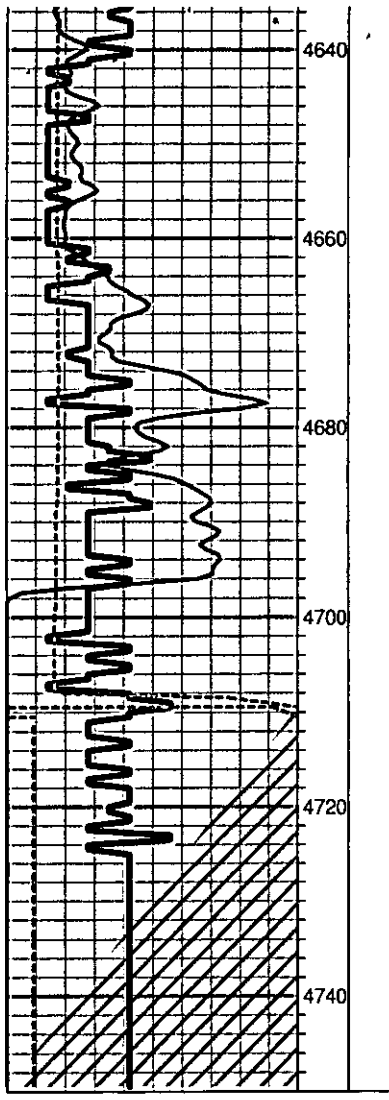
CFS @ 4595'

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

Sand- Clear, medium grain, sub-rounded, mostly consolidated, friable clusters, fairly speckled w/ glauconite & black mica, SATURATED STN W/ LIVELY FO, ABUNDNAT FO UPON CRUSH *NON Ca CEMENTED*

Sh- Black Red Gray Brown, fissle, blocky & dense

CONGLOMERATE 4620' (-1595) E-LOG 4622' (-1597) Ss/Sh- multi colored moderately dense & blocky shales. Ss- White Pink Lime Green Tan, somewhat friable, VF grained & well sorted & consolidated, mostly clean & barren. Some coarse angular to subangular individual crystals. Few pieces of light yellow bedded chert



Conglomerate- Ls- Tan Buff, VF grained, well sorted & consolidated w/ micro porosity, clean & barren. Dolomite- White Tan, sugary & sucrosic, well sorted, clean & barren. Sh- Lime Green Red Purple Yellow Gray Maroon, mostly blocky & smooth, partially fissle, Maroon- gritty quartzose & pebbly, Gray- pebbly & unconsolidated, partially dense. Chert- Salmon Golden Yellow, fresh bedded, angular. Ss- A/A w/ SFO UPON CRUSH

Conglomerate- Ls- Tan Cream, Med XLN w/ pinpoint porosity, slightly dolomitic & oolitic in part, some multi colored. Sh- Red Maroon Gray Brown, mostly slivers of fissle blocky, some argillaceous & earthy. Chert- Golden Brown Yellow Milky White, white reworked bedded.

Conglomerate- A/A w/ abundant silty, white chalky sticky lime & brown oolitic chert. Few pieces of Lt Gray Ls, bio-clastic mix.

Lm- Tan Cream, trashy reworked bio-clastic, siliceous fossil remnants

Conglomerate- Ls, Tan Lt Gray, trashy reworked, bio-clastic mix, fossil remnants. Sh- Multi colored, fissle & blocky to gritty & earthy. Chert- Milky White to Gray, reworked eroded & trashy.

RTD 4725' (-1700) LTD 4720' (-1695) @ 18:47 8-9-11